Control and signalling components

Catalogue

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Schneider Electric

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Control and signalling components

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2 – Control stations and enclosures

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Control and signalling units Ø 22, Harmony® XB4, metal

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Control and signalling units Ø 22, Harmony® XB5, plastic

■ Complete units and separate heads for:

- □ Spring return pushbuttons . . . . . *page 1/136*
- □ Illuminated pushbuttons, spring return:
  - with integral LED . . . . . *page 1/141*
  - with BA 9s base fitting . . . . . *page 1/143*
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■ Specific functions

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Control and signalling units Ø 22, Harmony® XB7

■ Monolithic pushbuttons, switches and pilot lights, type XB7 E . . . . . *page 1/214*

Control and signalling units Ø 30, Harmony® 9001K and 9001 SK

■ Pushbuttons, switches and pilot lights with chromium plated metal bezel and with screw clamp terminals . . . . . *page 1/226*

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Control and signalling units

Applications	Pilot lights	Pushbuttons, selector switches and pilot lights			Biometric switches
					
Description of range	■ LED pilot lights	■ Pushbuttons ■ Multiple-headed pushbuttons ■ Emergency Stop buttons ■ Emergency switching off pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights			Fingerprint readers biometric switches 24V ⎓
Features – Products	Monolithic, compact, low consumption	Complete units or sub-assemblies (body + head)			Monolithic
– Bezel	Double insulated		Metal, chromium plated or black	Double insulated	Double insulated, dark grey
– Shape of head	Circular	Circular, square or rectangular	Circular	Circular or square	–
Drilling or cut-out for fixing	Ø 8 and Ø 12	Ø 16	Ø 22		
Degree of protection – Conforming to IEC 60529	IP 40 IP 65 with seal	IP 65	IP 66		IP 65
Cabling	Tags for 2.8 x 0.5 mm connectors, or threaded connector	Faston connectors Solder pins for printed circuit boards	Spring clamp terminal connections Screw clamp terminal connections Faston connectors Connector With adaptor for printed circuit board		Cable or connectors
Mounting – Panel thickness	1…8 mm	1…6 mm			
Type references	**XVL A**	**XB6**	**XB4**	**XB5**	**XB5 S**
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(1) Wireless and batteryless pushbutton and receiver ready-paired at the factory.

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Wireless and batteryless pushbuttons	Pushbuttons, selector switches and pilot lights	Joystick controllers	Pushbuttons, selector switches and pilot lights	Cam switches
				
Wireless and batteryless and pushbuttons 24 V ⎓ or 24... 240 V ∿ / ⎓	■ Pushbuttons ■ Emergency switching off pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights	■ 2 or 4 direction ■ Stay put or spring return	■ Pushbuttons ■ Emergency Stop buttons ■ Emergency switching off pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights	■ Switches ■ Stepping switches ■ Reversing and changeover switches ■ Ammeter switches ■ Voltmeter switches ■ Reversing switches ■ Star-delta and reversing star-delta switches ■ Pole change switches
Ready-to-use packs *(1)* and «components» range	Monolithic	Complete units or sub-assemblies (body + head with lever)		Complete units or sub-assemblies (body + head)	Complete units or sub-assemblies (body + front panel + head)
Metal, chromium plated or double insulated, black	Double insulated, black	Metal, chromium plated	Double insulated, black	Metal, chromium plated or double insulated, black	
Transmitter with circular head	Circular	Circular		Hexagonal	Square
Ø 22				Ø 30	Ø 16 or Ø 22: series K10 Ø 22 and multifixing: series K1/K2 4 holes, 48 or 68 centres: series K30…K150
IP 65	IP 65 (pushbuttons, pilot lights, selector switches) IP 54 (Emergency switching off pushbuttons)	IP 65	IP 66	IP 65	IP 65	IP 65: series K10 IP 40, IP 65 with seal: series K1/K2 IP 40: series K30…K150
Wireless (transmitter) Through cable (receiver)	Screw and captive clamp terminal connections Forked U type tag connections Faston clip connections (pilot lights)	Screw and captive clamp terminal connections				
1…6 mm						0.5…6 mm (depending on model)
XB5 R, XB4 R	**XB7**	**XD4 PA**	**XD2 GA**	**XD5 PA**	**9001 K, 9001 SK**	**K10, K1, K2, K30, K50, K63, K115, K150**
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Control and signalling units Ø 8 and 12
LED pilot lights

Presentation

This range of LED pilot lights meets the latest requirements in signalling techniques.

Due to their small size, Ø 8 and Ø 12 fixing pilot lights are particularly suitable for the following applications:
- Mounting on small control panels.
- Shallow depth mounting.
- Where a large number of signalling units are required on a control panel (low power dissipation).

Small diameter LED pilot lights also have sealed front faces (IP 65 option available). An unsealed Ø 8 mm fixing model with protruding LED and black bezel is however also available.

Advantages:
LED pilot lights have many advantages:
- Very long life and low maintenance costs (bulb test procedure no longer required),
- Highly resistant to shocks, vibrations, and overvoltage.
- Low power consumption which, for example, allows direct compatibility with programmable controller outputs.
- No sudden failures.

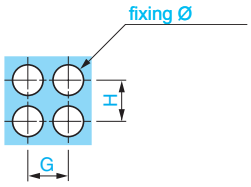
Quick installation assisted by tag connectors suitable for soldered connections on Ø 8 mm pilot lights, or by threaded connectors on Ø 12 mm pilot lights.
Safe connection due to integral ballast resistor and reverse polarity protection device.

Characteristics

Product certifications			UL (Recognized), CSA
Protective treatment	Standard version		"TC"
Ambient air temperature	Operation	**°C**	- 25…+ 70
	Storage	**°C**	- 40…+ 70
Electric shock protection	Conforming to IEC 61140		Class III
Degree of protection	Conforming to IEC 60529		IP 40 (IP 65 with seal)
Current consumption		**mA**	5 V: 25 12 V: 18 24 V: 18 48 V: 10
Rated insulation voltage	Conforming to EN/IEC 60947-1		Ui: 50 V
Service life			≥ 100 000 hours
Voltage limits including ripple (on ⎓)			0.8 Un ≤ U ≤ 1.1 Un
Terminal referencing			Polarity marked +/–, for Ø 8 pilot lights, the "+ "corresponds to the longer tag
Cabling	**XVL A1●●, XVL A2●●**		Tags for 2.8 x 0.5 Faston connectors, or for soldered connections (dual purpose)
	XVL A3●●		Threaded connectors, capacity: min. 1 x 0.2 mm², max. 1 x 1.5 mm²

Dimensions

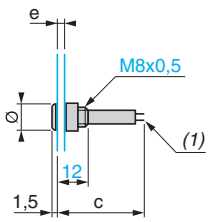
Panel drilling



(mm)	Ø min	G min	H min
XVL A1●●	8.2	12.5	12.5
XVL A2●●	8.2	10.5	10.5
XVL A3●●	12.2	16.5	16.5

LED pilot lights

XVL A1●●, A2●●

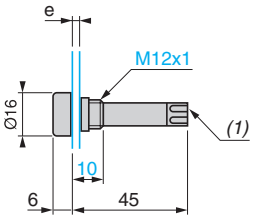


(mm)	c	Ø
XVL A1●●	32	12
XVL A2●●	34	10

e = panel thickness: 1 to 8 mm

(1) Tags for Faston connectors or soldered connections

XVL A3●●



e = panel thickness: 1 to 8 mm

(1) Threaded connector

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Control and signalling units Ø 8 and 12
LED pilot lights


XVL A1●●

References

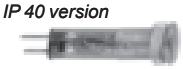
Pilot lights with black bezel, protruding LED

Description	Supply voltage ⎓	Colour	Reference	Weight kg
Ø 8 mm **Degree of protection:** □ IP 40 (with integral ballast resistor and reverse polarity protection diode)	5 V	Green	**XVL A113**	0.003
		Red	**XVL A114**	0.003
		Yellow	**XVL A115**	0.003
	12 V	Green	**XVL A123**	0.003
		Red	**XVL A124**	0.003
		Yellow	**XVL A125**	0.003
	24 V	Green	**XVL A133**	0.003
		Red	**XVL A134**	0.003
		Yellow	**XVL A135**	0.003
	48 V	Green	**XVL A143**	0.003
		Red	**XVL A144**	0.003
		Yellow	**XVL A145**	0.003

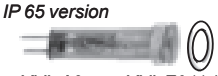
Pilot lights with integral lens cap, covered LED

Description	Supply voltage ⎓	Colour	Reference	Weight kg
Ø 8 mm **Degree of protection:** □ IP 40 □ IP 65 with seal XVL Z911 *(1)* (with integral ballast resistor and reverse polarity protection diode)	5 V	Green	**XVL A213**	0.003
		Red	**XVL A214**	0.003
		Yellow	**XVL A215**	0.003
	12 V	Green	**XVL A223**	0.003
		Red	**XVL A224**	0.003
		Yellow	**XVL A225**	0.003
	24 V	Green	**XVL A233**	0.003
		Red	**XVL A234**	0.003
		Yellow	**XVL A235**	0.003
	48 V	Green	**XVL A243**	0.003
		Red	**XVL A244**	0.003
		Yellow	**XVL A245**	0.003

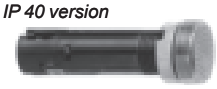
IP 40 version


XVL A2●●

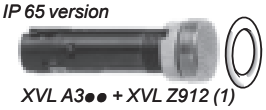
IP 65 version


XVL A2●● + XVL Z911 (1)

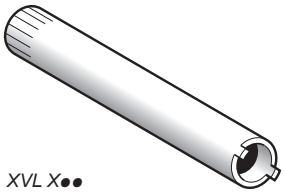
IP 40 version


XVL A3●●

IP 65 version


XVL A3●● + XVL Z912 (1)

Description	Supply voltage ⎓	Colour	Reference	Weight kg
Ø 12 mm **Degree of protection:** □ IP 40 □ IP 65 with seal XVL Z912 *(1)* (with integral ballast resistor and reverse polarity protection diode)	5 V	Green	**XVL A313**	0.007
		Red	**XVL A314**	0.007
		Yellow	**XVL A315**	0.007
	12 V	Green	**XVL A323**	0.007
		Red	**XVL A324**	0.007
		Yellow	**XVL A325**	0.007
	24 V	Green	**XVL A333**	0.007
		Red	**XVL A334**	0.007
		Yellow	**XVL A335**	0.007
	48 V	Green	**XVL A343**	0.007
		Red	**XVL A344**	0.007
		Yellow	**XVL A345**	0.007


XVL X●●


XVL Z91●

Separate components

Description	For use with	Sold in lots of	Unit reference	Weight kg
Tightening tools (sold singly)	Ø 8 mm pilot lights	1	**XVL X08**	0.015
	Ø 12 mm pilot lights	1	**XVL X12**	0.030
Seals (IP 65)	Ø 8 mm pilot lights	10	**XVL Z911**	0.001
	Ø 12 mm pilot lights	10	**XVL Z912**	0.001
Other versions	Ø 8 and Ø 12 mm LED pilot lights, without resistor, without reverse polarity protection diode (max. direct current: 30 mA ⎓). Please consult your customer care centre.			

(1) To be ordered separately.

Presentation: page 1/4

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Control and signalling units Ø 16

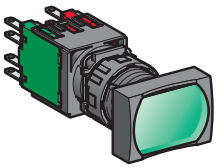
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights

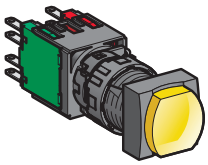
Description

Complete units XB6 pushbuttons, switches and pilot lights

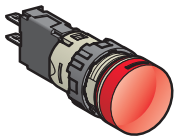
The Ø 16 range of double insulated control and signalling units comprises:



XB6 D with rectangular head

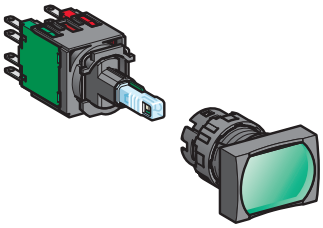


XB6 C with square head

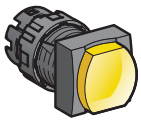


XB6 A with circular head

Sub-assemblies for user assembly ZB6 pushbuttons, switches and pilot lights Body + head sub-assemblies



ZB6 D with rectangular head



ZB6 C with square head

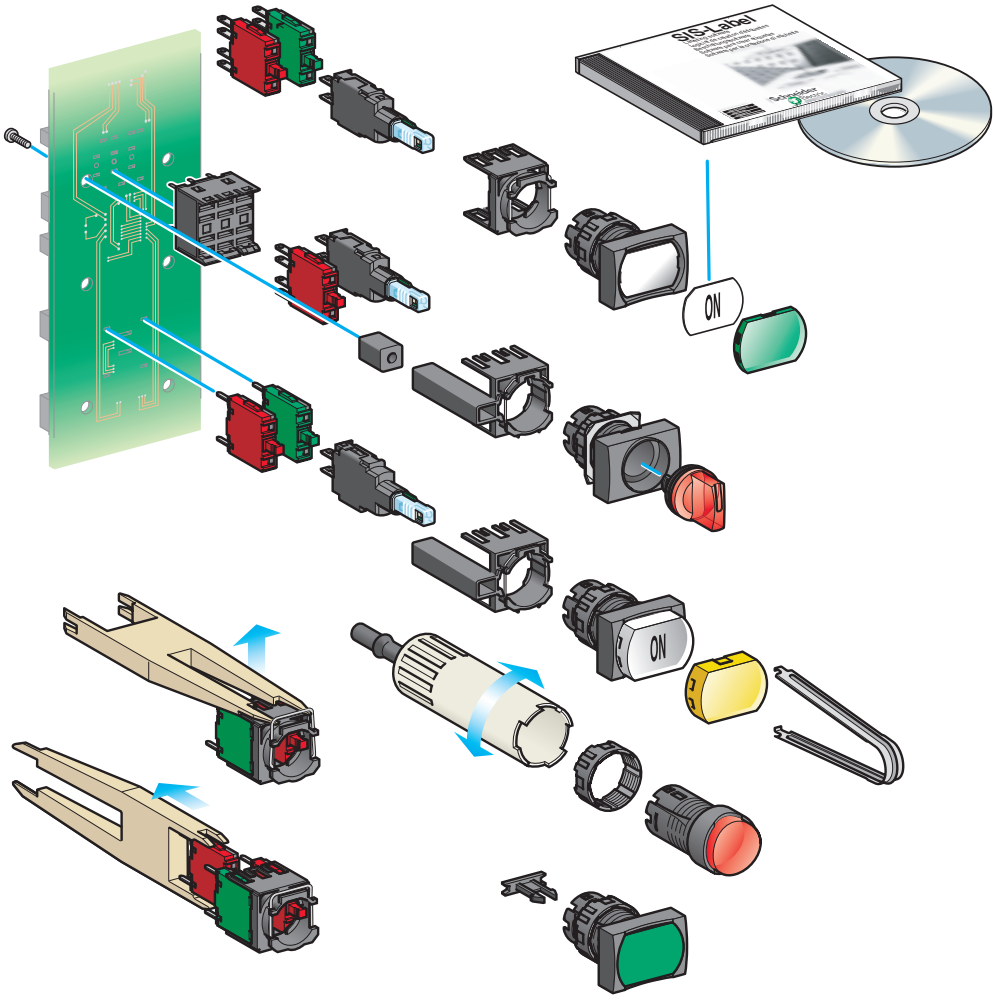


ZB6 A with circular head

ZB component parts and accessories
Any of the pushbuttons, switches or pilot lights in the range may be adapted by replacing certain component parts, such as:

For heads
- Caps or lenses
- Legends
  - Pre-printed legends
  - Special legends produced using labelling software
- Link enabling operation of the 3rd contact (cannot be fitted on illuminated pushbuttons)

For bodies
- LED, incandescent and neon bulbs
- N/C or N/O contact blocks, max. 3 contacts per block, with Faston connector or for printed circuit board
- Silver or gold flashed N/C or N/O contact blocks



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Mounting : page 1/43

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Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot lights

Schematic library

Contact functions (pushbuttons and Emergency stop pushbuttons)



Pushbutton
N/O contact



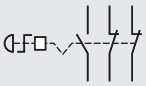
Latching pushbutton
N/O contact



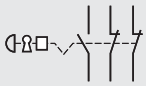
Pushbutton
N/C contact



Mushroom head spring return
N/O contact



Mushroom head Emergency stop
Turn to release, trigger action
N/O + 2 N/C contacts



Mushroom head Emergency stop
Turn to release, trigger action key release
N/O + 2 N/C contacts

Contact functions (selector switches)



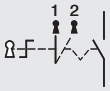
Selector switch
2-position stay put
N/O contact



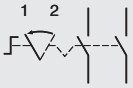
Selector switch
3-position stay put
N/O + N/C contacts



Selector switch
3-position
2 spring return to centre



Selector switch
2-position stay put,
key withdrawal from both positions
N/O contact



Selector switch
2-position stay put
N/O + N/O contacts

Signalling functions



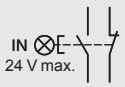
Incandescent or neon pilot light



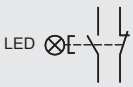
230 V neon pilot light



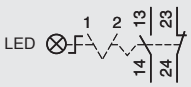
Combined functions, contact + signalling (pushbuttons and selector switches)



Illuminated pushbutton
BA 9s incandescent bulb
N/O + N/C contacts



Illuminated pushbutton with LED
N/O + N/C contacts



Illuminated selector switch
2-position stay put with LED
N/O + N/C contacts

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot lights

1

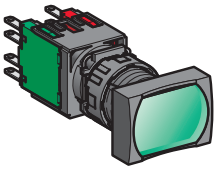
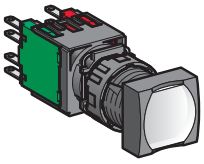
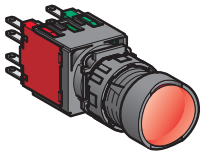
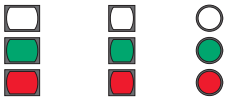
Complete units

Combined functions (contact + signalling)

Illuminated pushbuttons with rectangular, square or circular head

Head colours

Illuminated pushbuttons

Protected LED

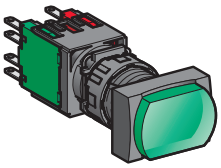
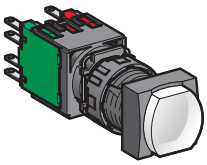
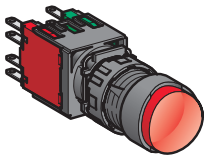
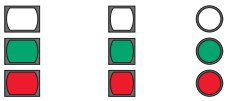
Flush push with integral LED, spring return

XB6 DW●●●● page 1/14	**XB6 CW●●●●** page 1/14	**XB6 AW●●●●** page 1/14

Protected LED

Flush push with integral LED, latching

XB6 DF●●●● page 1/16	**XB6 CF●●●●** page 1/16	**XB6 AF●●●●** page 1/14

Protected LED

Projecting push with integral LED, spring return

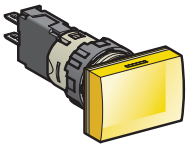
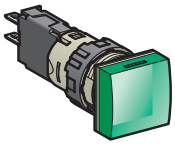
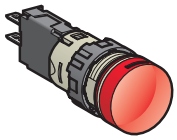
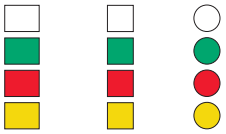
XB6 DE●●●● page 1/14	**XB6 CE●●●●** page 1/14	**XB6 AE●●●●** page 1/14

Signalling functions

Pilot lights with rectangular, square or circular head

Head colours

Pilot lights

Protected LED

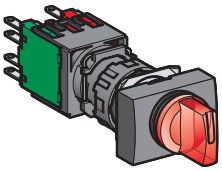
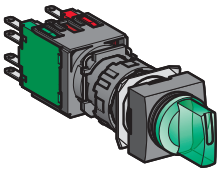
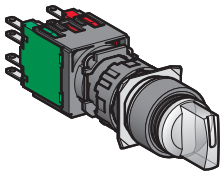
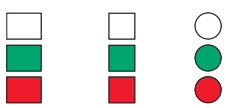
With integral LED

XB6 DV●●● page 1/17	**XB6 CV●●●** page 1/17	**XB6 AV●●●** page 1/17

Illuminated selector switches with rectangular, square or circular head

Head colours

Illuminated selector switches

With integral LED

XB6 DK●●●●● page 1/23	**XB6 CK●●●●●** page 1/23	**XB6 AK●●●●●** page 1/23

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Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot lights

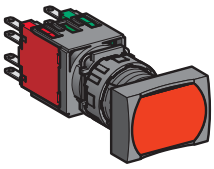
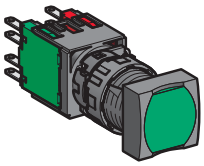
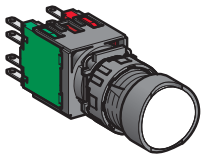
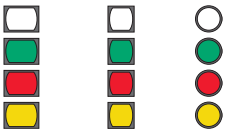
Complete units (continued)

Contact functions

Pushbuttons with rectangular, square or circular head

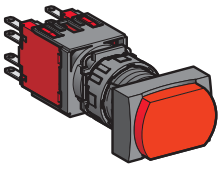
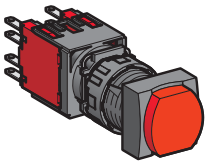
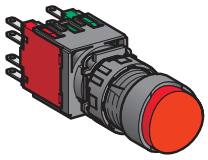
Head colours

Pushbuttons, spring return

Flush push

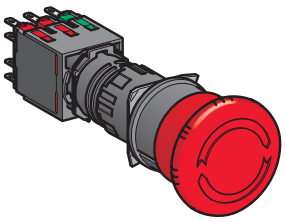
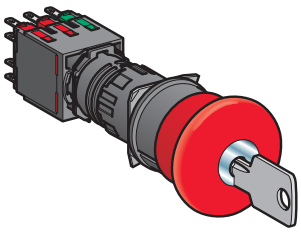
XB6 DA●●●	XB6 CA●●●	XB6 AA●●●
page 1/18	page 1/18	page 1/18


Projecting push

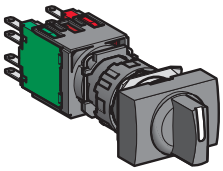
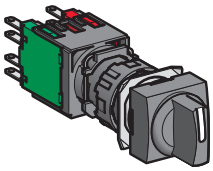
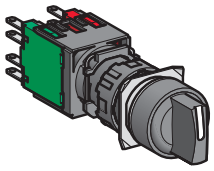
XB6 DL42B	XB6 CL42B	XB6 AL42B
page 1/18	page 1/18	page 1/18

Mushroom head, Emergency stop, latching and trigger action, Ø 30 pushbuttons

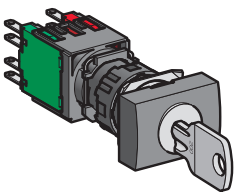
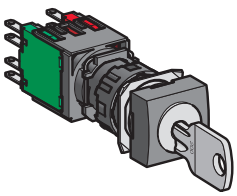
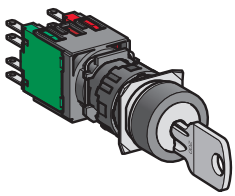

Turn to release (EN/ISO 13850)	Key release (EN/ISO 13850)
XB6 AS8349B	XB6 AS9349B
page 1/20	page 1/20

Selector switches and key switches


Standard handle operator

XB6 DD●●●	XB6 CD●●●	XB6 AD●●●
page 1/21	page 1/21	page 1/21


Key switches

XB6 DG●●●	XB6 CG●●●	XB6 AG●●●
page 1/25	page 1/25	page 1/25

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Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot lights

Illuminated units for user assembly

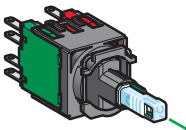
Combined functions (contact + signalling)

Body sub-assemblies | **Head sub-assemblies, rectangular, square or circular** | **Head colours**

For illuminated pushbuttons and selector switches

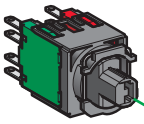
Protected LED

With integral LED

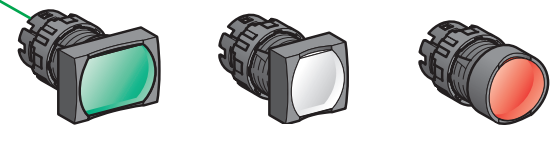


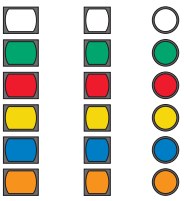
Faston
ZB6 ZB●●B
page 1/28

Direct supply for incandescent bulb



Faston
ZB6 ZH●●B
page 1/28





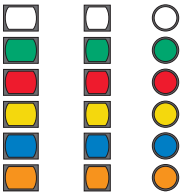
Flush push, spring return

ZB6 DW●	ZB6 CW●	ZB6 AW●
page 1/15	page 1/15	page 1/15

Flush push, latching

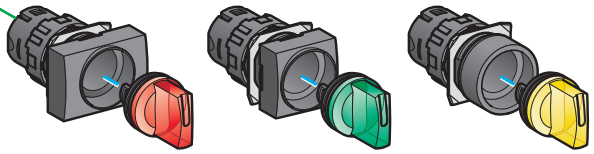
ZB6 DF●●●B	ZB6 CF●●●B	ZB6 AF●●●B
page 1/16	page 1/16	page 1/16

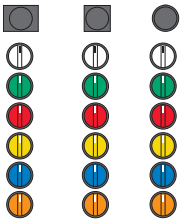




Projecting push, spring return

ZB6 DE●	ZB6 CE●	ZB6 AE●
page 1/15	page 1/15	page 1/15





Without handle

ZB6 DD0●	ZB6 CD●●	ZB6 AD●●
page 1/24	page 1/24	page 1/24

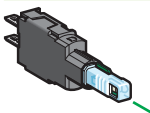
Signalling functions

Body sub-assemblies | **Head sub-assemblies, rectangular, square or circular** | **Head colours**

For pilot lights

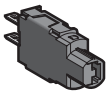
Protected LED

With integral LED

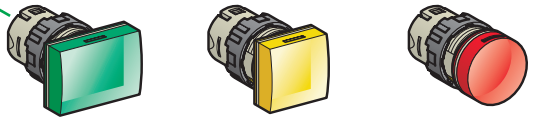


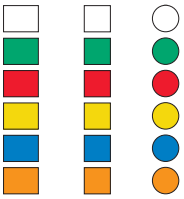
Faston
ZB6 E●●B
page 1/29

Direct supply for incandescent bulb or with resistor



Faston
ZB6 E●0B
page 1/29





ZB6 DV●	ZB6 CV●	ZB6 AV●
page 1/17	page 1/17	page 1/17

Characteristics: page 1/12 | References: page 1/14 | Dimensions: page 1/38 | Mounting : page 1/43

Schneider Electric

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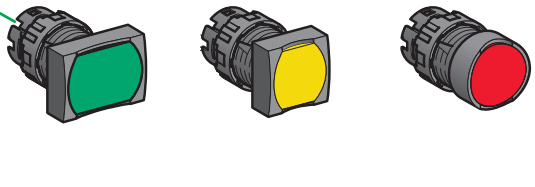
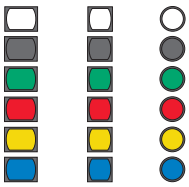
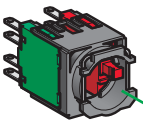
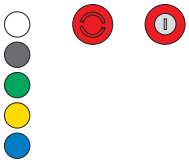
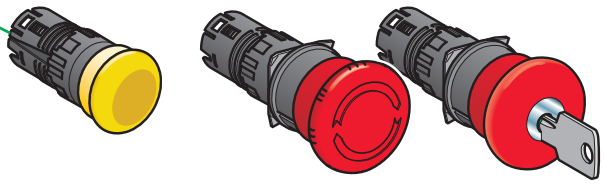
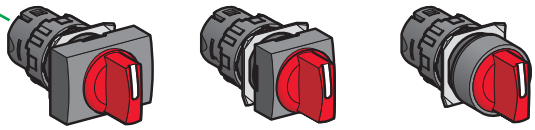
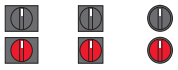
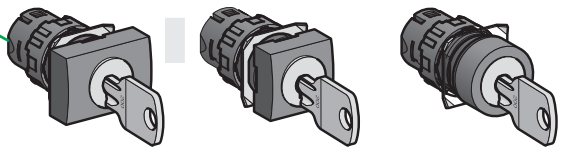
Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot light

Non illuminated units for user assembly

Contact functions

	Body sub-assemblies	Head sub-assemblies, rectangular, square or circular	Head colours
For pushbuttons	Direct supply for incandescent bulb		
		Flush push, spring return **ZB6 DA●** **page 1/19** **ZB6 CA●** **page 1/19** **ZB6 AA●** **page 1/19**	
	Faston **ZB6 Z●B** **page 1/28**		
For mushroom head pushbuttons and Emergency stop heads			
		Spring return Ø 24 **ZB6 AC●** **page 1/19** Latching, trigger action Ø 30 (EN/ISO 13850) Turn to release **ZB6 AS834** **page 1/20** Key release **ZB6 AS934** **page 1/20**	
For selector switches and key switches			
		Standard handle operator **ZB6 DD●●** **page 1/22** **ZB6 CD●●** **page 1/22** **ZB6 AD●●** **page 1/22**	
			
		Key switches **ZB6 DG●●** **page 1/25** **ZB6 CG●●** **page 1/26** **ZB6 AG●●** **page 1/27**	

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Control and signalling units Ø 16
Harmony® XB6, plastic
Pushbuttons, switches and pilot lights

Environment			
Conforming to standards			EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-5 EN/IEC 60204-1 and EN/ISO 13850 (trigger action and mechanical latching Emergency stop pushbuttons) JIS C 4520 and 852 UL 508, CSA C22-2 n° 14
Product certifications			UL, CSA, CCC, GOST
Protective treatment standard version			"TC"
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 70
Vibration resistance	Conforming to IEC 60068-2-6		(2…500 Hz) 3 mm peak to peak or 5 gn
Electric shock resistance	Conforming to IEC 60068-2-27		Half sine wave 11 ms, 50 gn Half sine wave 18 ms, 30 gn
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to IEC 60529 Conforming to UL 50 and CSA C22-2 n° 94		IP 65 NEMA type 4, 4X and 13 (except key switches)
Mechanical life (in operating cycles)	Spring return pushbuttons		2 million
	Latching pushbuttons		300 000
	Key switches		200 000
	Selector switches, standard handle		500 000
	Emergency stop mushroom head pushbuttons		100 000
Mounting positions			All positions
Electrical characteristics of LED pilot lights			
Voltage limits			⎓ 12…24 V : 6…30 V ∿ 48…120 V : 40…132 V ∿ 230-240 V : 195…264 V
Current consumption	⎓ 24 V	**mA**	15
Surge withstand	Conforming to IEC 61000-4-5	**kV**	2 (in free air / 1 (direct contact)
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	**V/m**	10
Resistance to electrostatic discharges	Conforming to IEC 61000-2-6	**kV**	8/6
Electromagnetic emission	Conforming to IEC 55011		Class B
Electrical characteristics of contacts			
Rated operational characteristics	∿ AC-15		B300 or Ue = 240 V and Ie = 1.5 A or Ue 120 V and Ie = 3 A
	⎓ DC-13		R300 or Ue = 250 V and Ie = 0.1 A or Ue = 125 V and Ie = 0.22 A
Rated insulation voltage	Conforming to EN/IEC 60947-1		Ui = 250 degree of pollution 3 (Except pilot lights with incandescent or neon bulb: degree of pollution 2)

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Schneider Electric

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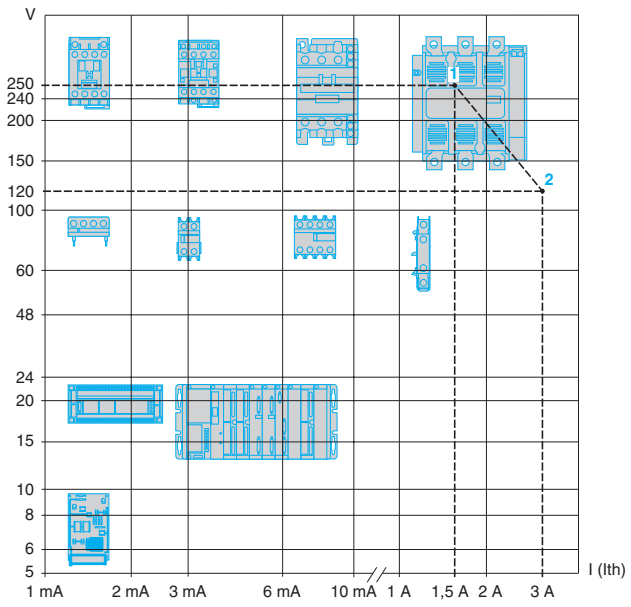
Electrical characteristics of contacts (continued)

Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 4
Contact material	Normal environment and usage		Silver alloy
	Chemically corrosive environment or infrequent operation		Gold flashed
Contact operation	N/C or N/O		Slow break, with indication of change of state by the tactile feedback on push and audible signal
Differential travel of contacts	With pushbutton head	**mm**	Changing N/C state: 1 Changing N/O state: 2 Total travel: 3.5
Operating force	N/C contact	**N**	2.5
	N/O contact	**N**	1.6
	Pushbutton head + N/O contact	**N**	3.5
	Pushbutton head + N/C contact	**N**	4.5
Positive operation	Conforming to EN/IEC 60947-5-1 appendix K	**N**	Contact with positive opening operation Positive opening force: 20
Terminal referencing	Conforming to EN 50005 and EN 50013		
Short-circuit protection	Cartridge fuse mounted upstream		6A gG
Electrical reliability	Failure rate Conforming to IEC 60947-5-4		With confidence level of 90 %: $\lambda_{90} = 10^{-8}$ 5 V - 1 mA, defect contact voltage drop = 0.5 V
Cabling		**mm**	By Faston connectors 2.8 x 0.5 By pins for printed circuit board connection 1 x 0.5
Electrical durability	Conforming to EN/IEC 60947-5-1 Appendix C Utilisation category AC-15 & DC-13 Operating rate 3600 operating cycles/hour. Load factor 0.5		1 million operating cycles - 200 VA-230 V



1 Switching capacity conforming to EN/IEC 60947-5-1, utilisation category AC-15, DC-13

B300	240 V	1.5 A
R300	250 V	0.1 A

2 Switching capacity conforming to EN/IEC 60947-5-1, utilisation category AC-15, DC-13

B300	120 V	3 A
R300	125 V	0.22 A

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Control and signalling units Ø 16

Harmony® XB6, plastic

Illuminated pushbuttons, spring return, with integral LED

Illuminated pushbuttons, spring return (with 12…24 V LED included)

Shape of head	Type of push	Type of contacts N/O	Type of contacts N/C	Colour of push	Reference	Weight kg
Complete units						
 XB6 DW●●●B	**Flush**	1	–	White	**XB6 DW1B1B** (ZB6 ZB11B + ZB6 DW1)	0.022
				Green	**XB6 DW3B1B** (ZB6 ZB31B + ZB6 DW3)	0.022
		–	1	Red	**XB6 DW4B2B** (ZB6 ZB42B + ZB6 DW4)	0.022
		1	1	White	**XB6 DW1B5B** (ZB6 ZB15B + ZB6 DW1)	0.025
				Green	**XB6 DW3B5B** (ZB6 ZB35B + ZB6 DW3)	0.025
				Red	**XB6 DW4B5B** (ZB6 ZB45B + ZB6 DW4)	0.025
 XB6 CW●●●B	**Flush**	1	–	White	**XB6 CW1B1B** (ZB6 ZB11B + ZB6 CW1)	0.022
				Green	**XB6 CW3B1B** (ZB6 ZB31B + ZB6 CW3)	0.022
		–	1	Red	**XB6 CW4B2B** (ZB6 ZB42B + ZB6 CW4)	0.022
		1	1	White	**XB6 CW1B5B** (ZB6 ZB15B + ZB6 CW1)	0.025
				Green	**XB6 CW3B5B** (ZB6 ZB35B + ZB6 CW3)	0.025
				Red	**XB6 CW4B5B** (ZB6 ZB45B + ZB6 CW4)	0.025
 XB6 AW●●●B	**Flush**	1	–	White	**XB6 AW1B1B** (ZB6 ZB11B + ZB6 AW1)	0.022
				Green	**XB6 AW3B1B** (ZB6 ZB31B + ZB6 AW3)	0.022
		–	1	Red	**XB6 AW4B2B** (ZB6 ZB42B + ZB6 AW4)	0.022
		1	1	White	**XB6 AW1B5B** (ZB6 ZB15B + ZB6 AW1)	0.025
				Green	**XB6 AW3B5B** (ZB6 ZB35B + ZB6 AW3)	0.025
				Red	**XB6 AW4B5B** (ZB6 ZB45B + ZB6 AW4)	0.025
 XB6 DE●●●B	**Projecting**	1	–	Green	**XB6 DE3B1B** (ZB6 ZB31B + ZB6 DE3)	0.022
		–	1	Red	**XB6 DE4B2B** (ZB6 ZB42B + ZB6 DE4)	0.022
		1	1	White	**XB6 DE1B5B** (ZB6 ZB15B + ZB6 DE1)	0.025
				Green	**XB6 DE3B5B** (ZB6 ZB35B + ZB6 DE3)	0.025
				Red	**XB6 DE4B5B** (ZB6 ZB45B + ZB6 DE4)	0.025
 XB6 CE●●●B	**Projecting**	1	–	Green	**XB6 CE3B1B** (ZB6 ZB31B + ZB6 CE3)	0.022
		–	1	Red	**XB6 CE4B2B** (ZB6 ZB42B + ZB6 CE4)	0.022
		1	1	White	**XB6 CE1B5B** (ZB6 ZB15B + ZB6 CE1)	0.025
				Green	**XB6 CE3B5B** (ZB6 ZB35B + ZB6 CE3)	0.025
				Red	**XB6 CE4B5B** (ZB6 ZB45B + ZB6 CE4)	0.025
 XB6 AE●●●B	**Projecting**	1	–	Green	**XB6 AE3B1B** (ZB6 ZB31B + ZB6 AE3)	0.022
		–	1	Red	**XB6 AE4B2B** (ZB6 ZB42B + ZB6 AE4)	0.022
		1	1	White	**XB6 AE1B5B** (ZB6 ZB15B + ZB6 AE1)	0.025
				Green	**XB6 AE3B5B** (ZB6 ZB35B + ZB6 AE3)	0.025
				Red	**XB6 AE4B5B** (ZB6 ZB45B + ZB6 AE4)	0.025

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Control and signalling units Ø 16

Harmony® XB6, plastic

Illuminated pushbuttons, spring return, with integral LED

Illuminated pushbuttons, spring return (with 12...24 V LED included) *(continued)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only				
 527574 *ZB6 DW●*	**Flush**	White	**ZB6 DW1**	0.016
		Green	**ZB6 DW3**	0.016
		Red	**ZB6 DW4**	0.016
		Yellow	**ZB6 DW5**	0.016
		Blue	**ZB6 DW6**	0.016
		Orange	**ZB6 DW8**	0.016
		6 colours *(1)*	**ZB6 DW9**	0.016
		Without cap *(2)*	**ZB6 DW0**	0.016
 524575 *ZB6 CW●*	**Flush**	White	**ZB6 CW1**	0.016
		Green	**ZB6 CW3**	0.016
		Red	**ZB6 CW4**	0.016
		Yellow	**ZB6 CW5**	0.016
		Blue	**ZB6 CW6**	0.016
		Orange	**ZB6 CW8**	0.016
		6 colours *(1)*	**ZB6 CW9**	0.016
		Without cap *(2)*	**ZB6 CW0**	0.016
 524576 *ZB6 AW●*	**Flush**	White	**ZB6 AW1**	0.016
		Green	**ZB6 AW3**	0.016
		Red	**ZB6 AW4**	0.016
		Yellow	**ZB6 AW5**	0.016
		Blue	**ZB6 AW6**	0.016
		Orange	**ZB6 AW8**	0.016
		6 colours *(1)*	**ZB6 AW9**	0.016
		Without cap *(2)*	**ZB6 AW0**	0.016
 524577 *ZB6 DE●*	**Projecting**	White	**ZB6 DE1**	0.016
		Green	**ZB6 DE3**	0.016
		Red	**ZB6 DE4**	0.016
		Yellow	**ZB6 DE5**	0.016
		Blue	**ZB6 DE6**	0.016
		Orange	**ZB6 DE8**	0.016
		6 colours *(1)*	**ZB6 DE9**	0.016
		Without cap *(2)*	**ZB6 DW0**	0.016
 524578 *ZB6 CE●*	**Projecting**	White	**ZB6 CE1**	0.016
		Green	**ZB6 CE3**	0.016
		Red	**ZB6 CE4**	0.016
		Yellow	**ZB6 CE5**	0.016
		Blue	**ZB6 CE6**	0.016
		Orange	**ZB6 CE8**	0.016
		6 colours *(1)*	**ZB6 CE9**	0.016
		Without cap *(2)*	**ZB6 CW0**	0.016
 524579 *ZB6 AE●*	**Projecting**	White	**ZB6 AE1**	0.016
		Green	**ZB6 AE3**	0.016
		Red	**ZB6 AE4**	0.016
		Yellow	**ZB6 AE5**	0.016
		Blue	**ZB6 AE6**	0.016
		Orange	**ZB6 AE8**	0.016
		6 colours *(1)*	**ZB6 AE9**	0.016
		Without cap *(2)*	**ZB6 AW0**	0.016

(1) 6 different coloured caps included with head (white, green, red, yellow, blue and orange), not fitted.
(2) To order caps separately, see page 1/30.

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Control and signalling units Ø 16

Harmony® XB6, plastic

Illuminated pushbuttons, latching, with integral LED

Illuminated pushbuttons, latching (with 12…24 V LED included)

Shape of head	Type of push	Type of contacts N/O	Type of contacts N/C	Colour of push	Reference	Weight kg
Complete units						
 *XB6 DF●●●B*	**Flush**	1	–	Green	**XB6 DF3B1B** (ZB6 ZB31B + ZB6 DF3)	0.022
		–	1	Red	**XB6 DF4B2B** (ZB6 ZB42B + ZB6 DF4)	0.022
		1	1	White	**XB6 DF1B5B** (ZB6 ZB15B + ZB6 DF1)	0.025
				Green	**XB6 DF3B5B** (ZB6 ZB35B + ZB6 DF3)	0.025
				Red	**XB6 DF4B5B** (ZB6 ZB45B + ZB6 DF4)	0.025
 *XB6 CF●●●B*	**Flush**	1	–	Green	**XB6 CF3B1B** (ZB6 ZB31B + ZB6 CF3)	0.022
		–	1	Red	**XB6 CF4B2B** (ZB6 ZB42B + ZB6 CF4)	0.022
		1	1	White	**XB6 CF1B5B** (ZB6 ZB15B + ZB6 CF1)	0.025
				Green	**XB6 CF3B5B** (ZB6 ZB35B + ZB6 CF3)	0.025
				Red	**XB6 CF4B5B** (ZB6 ZB45B + ZB6 CF4)	0.025
 *XB6 AF●●●B*	**Flush**	1	–	Green	**XB6 AF3B1B** (ZB6 ZB31B + ZB6 AF3)	0.022
		–	1	Red	**XB6 AF4B2B** (ZB6 ZB42B + ZB6 AF4)	0.022
		1	1	White	**XB6 AF1B5B** (ZB6 ZB15B + ZB6 AF1)	0.025
				Green	**XB6 AF3B5B** (ZB6 ZB35B + ZB6 AF3)	0.025
				Red	**XB6 AF4B5B** (ZB6 ZB45B + ZB6 AF4)	0.025

Shape of head	Type of push	Colour	Reference	Weight kg
Heads only				
 *ZB6 DF●*	**Flush**	White	**ZB6 DF1**	0.016
		Green	**ZB6 DF3**	0.016
		Red	**ZB6 DF4**	0.016
		Yellow	**ZB6 DF5**	0.016
		Blue	**ZB6 DF6**	0.016
		Orange	**ZB6 DF8**	0.016
		6 colours *(1)*	**ZB6 DF9**	0.016
		Without cap *(2)*	**ZB6 DF0**	0.016
 *ZB6 CF●*	**Flush**	White	**ZB6 CF1**	0.016
		Green	**ZB6 CF3**	0.016
		Red	**ZB6 CF4**	0.016
		Yellow	**ZB6 CF5**	0.016
		Blue	**ZB6 CF6**	0.016
		Orange	**ZB6 CF8**	0.016
		6 colours *(1)*	**ZB6 CF9**	0.016
		Without cap *(2)*	**ZB6 CF0**	0.016
 *ZB6 AF●*	**Flush**	White	**ZB6 AF1**	0.016
		Green	**ZB6 AF3**	0.016
		Red	**ZB6 AF4**	0.016
		Yellow	**ZB6 AF5**	0.016
		Blue	**ZB6 AF6**	0.016
		Orange	**ZB6 AF8**	0.016
		6 colours *(1)*	**ZB6 AF9**	0.016
		Without cap *(2)*	**ZB6 AF0**	0.016

(1) 6 different coloured caps included with head (white, green, red, yellow, blue and orange), not fitted.
(2) To order caps separately, see page 1/30.

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Control and signalling units Ø 16

Harmony® XB6, plastic

Pilot lights with integral LED

524580

XB6 DV●BB

524581

XB6 CV●BB

524582

XB6 AV●BB

524583

ZB6 DV●

524584

ZB6 CV●

524585

ZB6 AV●

Pilot lights (with 12...24 V LED included)

Shape of head	Colour of lens cap	Reference	Weight kg
Complete units			
▭	White	**XB6 DV1BB** (ZB6 EB1B + ZB6 DV1)	0.015
	Green	**XB6 DV3BB** (ZB6 EB3B + ZB6 DV3)	0.015
	Red	**XB6 DV4BB** (ZB6 EB4B + ZB6 DV4)	0.015
	Yellow	**XB6 DV5BB** (ZB6 EB5B + ZB6 DV5)	0.015
▭	White	**XB6 CV1BB** (ZB6 EB1B + ZB6 CV1)	0.015
	Green	**XB6 CV3BB** (ZB6 EB3B + ZB6 CV3)	0.015
	Red	**XB6 CV4BB** (ZB6 EB4B + ZB6 CV4)	0.015
	Yellow	**XB6 CV5BB** (ZB6 EB5B + ZB6 CV5)	0.015
●	White	**XB6 AV1BB** (ZB6 EB1B + ZB6 AV1)	0.015
	Green	**XB6 AV3BB** (ZB6 EB3B + ZB6 AV3)	0.015
	Red	**XB6 AV4BB** (ZB6 EB4B + ZB6 AV4)	0.015
	Yellow	**XB6 AV5BB** (ZB6 EB5B + ZB6 AV5)	0.015
Heads only			
▭	White	**ZB6 DV1**	0.015
	Green	**ZB6 DV3**	0.015
	Red	**ZB6 DV4**	0.015
	Yellow	**ZB6 DV5**	0.015
	Blue	**ZB6 DV6**	0.015
	Orange	**ZB6 DV8**	0.015
	6 colours *(1)*	**ZB6 DV9**	0.015
	Without lens cap *(2)*	**ZB6 DV0**	0.015
▭	White	**ZB6 CV1**	0.015
	Green	**ZB6 CV3**	0.015
	Red	**ZB6 CV4**	0.015
	Yellow	**ZB6 CV5**	0.015
	Blue	**ZB6 CV6**	0.015
	Orange	**ZB6 CV8**	0.015
	6 colours *(1)*	**ZB6 CV9**	0.015
	Without lens cap *(2)*	**ZB6 CV0**	0.015
●	White	**ZB6 AV1**	0.015
	Green	**ZB6 AV3**	0.015
	Red	**ZB6 AV4**	0.015
	Yellow	**ZB6 AV5**	0.015
	Blue	**ZB6 AV6**	0.015
	Orange	**ZB6 AV8**	0.015
	6 colours *(1)*	**ZB6 AV9**	0.015
	Without lens cap *(2)*	**ZB6 AV0**	0.015

(1) 6 different coloured lens caps included with head (white, green, red, yellow, blue and orange), not fitted.
(2) To order lens caps separately, see page 1/30.

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Pushbuttons, spring return

Shape of head	Type of push	Type of contacts N/O	Type of contacts N/C	Colour	Reference	Weight kg
Complete units						
 *XB6 DA●●B*	**Flush**	1	–	White	**XB6 DA11B** (ZB6 Z1B + ZB6 DA1)	0.019
				Green	**XB6 DA31B** (ZB6 Z1B + ZB6 DA3)	0.019
		–	1	Black	**XB6 DA22B** (ZB6 Z2B + ZB6 DA2)	0.019
				Red	**XB6 DA42B** (ZB6 Z2B + ZB6 DA4)	0.019
		1	1	White	**XB6 DA15B** (ZB6 Z5B + ZB6 DA1)	0.022
				Black	**XB6 DA25B** (ZB6 Z5B + ZB6 DA2)	0.022
				Green	**XB6 DA35B** (ZB6 Z5B + ZB6 DA3)	0.022
				Red	**XB6 DA45B** (ZB6 Z5B + ZB6 DA4)	0.022
 *XB6 CA●●B*	**Flush**	1	–	White	**XB6 CA11B** (ZB6 Z1B + ZB6 CA1)	0.019
				Green	**XB6 CA31B** (ZB6 Z1B + ZB6 CA3)	0.019
		–	1	Black	**XB6 CA22B** (ZB6 Z2B + ZB6 CA2)	0.019
				Red	**XB6 CA42B** (ZB6 Z2B + ZB6 CA4)	0.019
		1	1	White	**XB6 CA15B** (ZB6 Z5B + ZB6 CA1)	0.022
				Black	**XB6 CA25B** (ZB6 Z5B + ZB6 CA2)	0.022
				Green	**XB6 CA35B** (ZB6 Z5B + ZB6 CA3)	0.022
				Red	**XB6 CA45B** (ZB6 Z5B + ZB6 CA4)	0.022
 *XB6 AA●●B*	**Flush**	1	–	White	**XB6 AA11B** (ZB6 Z1B + ZB6 AA1)	0.019
				Green	**XB6 AA31B** (ZB6 Z1B + ZB6 AA3)	0.019
		–	1	Black	**XB6 AA22B** (ZB6 Z2B + ZB6 AA2)	0.019
				Red	**XB6 AA42B** (ZB6 Z2B + ZB6 AA4)	0.019
		1	1	White	**XB6 AA15B** (ZB6 Z5B + ZB6 AA1)	0.022
				Black	**XB6 AA25B** (ZB6 Z5B + ZB6 AA2)	0.022
				Green	**XB6 AA35B** (ZB6 Z5B + ZB6 AA3)	0.022
				Red	**XB6 AA45B** (ZB6 Z5B + ZB6 AA4)	0.022
	Projecting	–	1	Red	**XB6 DL42B**	0.020
	Projecting	–	1	Red	**XB6 CL42B**	0.020
	Projecting	–	1	Red	**XB6 AL42B**	0.020

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Control and signalling units Ø 16

Harmony® XB6, plastic

Pushbuttons, spring return

Pushbuttons, spring return *(continued)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only				
 *ZB6 DA●*	**Flush**	White	**ZB6 DA1**	0.016
		Black	**ZB6 DA2**	0.016
		Green	**ZB6 DA3**	0.016
		Red	**ZB6 DA4**	0.016
		Yellow	**ZB6 DA5**	0.016
		Blue	**ZB6 DA6**	0.016
		6 colours *(1)*	**ZB6 DA9**	0.016
		Without cap *(2)*	**ZB6 DA0**	0.016
 *ZB6 CA●*	**Flush**	White	**ZB6 CA1**	0.016
		Black	**ZB6 CA2**	0.016
		Green	**ZB6 CA3**	0.016
		Red	**ZB6 CA4**	0.016
		Yellow	**ZB6 CA5**	0.016
		Blue	**ZB6 CA6**	0.016
		6 colours *(1)*	**ZB6 CA9**	0.016
		Without cap *(2)*	**ZB6 CA0**	0.016
 *ZB6 AA●*	**Flush**	White	**ZB6 AA1**	0.016
		Black	**ZB6 AA2**	0.016
		Green	**ZB6 AA3**	0.016
		Red	**ZB6 AA4**	0.016
		Yellow	**ZB6 AA5**	0.016
		Blue	**ZB6 AA6**	0.016
		6 colours *(1)*	**ZB6 AA9**	0.016
		Without cap *(2)*	**ZB6 AA0**	0.016
 *ZB6 AC●*	**Ø 24 mm mushroom head**	White	**ZB6 AC1**	0,020
		Black	**ZB6 AC2**	0,020
		Green	**ZB6 AC3**	0,020
		Yellow	**ZB6 AC5**	0,020
		Blue	**ZB6 AC6**	0,020

(1) 6 different coloured lens caps included with head (white, green, red, yellow, blue and orange), not fitted.
(2) To order lens caps separately, see page 1/30.

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Control and signalling units Ø 16

Harmony® XB6, plastic
Emergency stop devices
Conforming to EN/IEC 60204-1 and EN/ISO 13850 and to Machinery Directive 98/37/EC

Emergency stop trigger action and mechanical latching pushbuttons conform to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 98/37/EC and to standard EN/IEC 60947-5-5. Please consult your customer care centre for a full explanation of these standards and directives.

Emergency stop trigger action and mechanical latching pushbuttons

Shape of head	Type of reset	Type of contacts N/O	Type of contacts N/C	Diameter of push mm	Colour	Reference	Weight kg
Complete units							
	Turn to release	1	2	30	Red	**XB6 AS8349B** (ZB6 Z4B + ZB6 AS834)	0.041
	Key release (key n° 200)	1	2	30	Red	**XB6 AS9349B** (ZB6 Z4B + ZB6 AS934)	0.056

524592
XB6 AS8349B

524593
XB6 AS9349B

Shape of head	Type of reset	Diameter of push mm	Colour of cap	Reference	Weight kg
Heads only					
	Turn to release	30	Red	**ZB6 AS834**	0.035
	Key release (key n° 200)	30	Red	**ZB6 AS934**	0.050

524594
ZB6 AS834

524595
ZB6 AS934

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Control and signalling units Ø 16

Harmony® XB6, plastic

Selector switches with standard handle


524597

XB6 DD●●●B


524598

XB6 CD●●●B


524599

XB6 AD●●●B

Selector switches with standard handle (switching angle: 60°)

Shape of head	Colour of handle	Type of contacts N/O	Type of contacts N/C	Number and type of positions	Reference	Weight kg
Complete units						
	**Black**	1	–	2 - stay put 	**XB6 DD221B** (ZB6 Z1B + ZB6 DD22)	0.021
		1	1	2 - stay put 	**XB6 DD225B** (ZB6 Z5B + ZB6 DD22)	0.024
				3 - stay put 	**XB6 DD235B** (ZB6 Z5B + ZB6 DD23)	0.024
	**Black**	1	–	2 - stay put 	**XB6 CD221B** (ZB6 Z1B + ZB6 CD22)	0.021
		1	1	2 - stay put 	**XB6 CD225B** (ZB6 Z5B + ZB6 CD22)	0.024
				3 - stay put 	**XB6 CD235B** (ZB6 Z5B + ZB6 CD23)	0.024
	**Black**	1	–	2 - stay put 	**XB6 AD221B** (ZB6 Z1B + ZB6 AD22)	0.021
		1	1	2 - stay put 	**XB6 AD225B** (ZB6 Z5B + ZB6 AD22)	0.024
				3 - stay put 	**XB6 AD235B** (ZB6 Z5B + ZB6 AD23)	0.024

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Control and signalling units Ø 16

Harmony® XB6, plastic

Selector switches with standard handle

1

524600

ZB6 DD●●

524601

ZB6 CD●●

524602

ZB6 AD●●

Selector switches with standard handle *(continued)*

Shape of head	Number and type of positions	Colour of handle	Reference	Weight kg
Heads only (switching angle: stay put positions 60°, spring return positions 45°)				
	2 - stay put	Black	**ZB6 DD22**	0.018
		Red	**ZB6 DD42**	0.018
	3 - stay put	Black	**ZB6 DD23**	0.018
		Red	**ZB6 DD43**	0.018
	2 - spring return to centre	Black	**ZB6 DD24**	0.018
		Red	**ZB6 DD44**	0.018
	3 - spring return to centre	Black	**ZB6 DD25**	0.018
		Red	**ZB6 DD45**	0.018
	3 - spring return from right to centre	Black	**ZB6 DD26**	0.018
		Red	**ZB6 DD46**	0.018
	3 - spring return from left to centre	Black	**ZB6 DD27**	0.018
		Red	**ZB6 DD47**	0.018
	2 - stay put	Black	**ZB6 CD22**	0.018
		Red	**ZB6 CD42**	0.018
	3 - stay put	Black	**ZB6 CD23**	0.018
		Red	**ZB6 CD43**	0.018
	2 - spring return to centre	Black	**ZB6 CD24**	0.018
		Red	**ZB6 CD44**	0.018
	3 - spring return to centre	Black	**ZB6 CD25**	0.018
		Red	**ZB6 CD45**	0.018
	3 - spring return from right to centre	Black	**ZB6 CD26**	0.018
		Red	**ZB6 CD46**	0.018
	3 - spring return from left to centre	Black	**ZB6 CD27**	0.018
		Red	**ZB6 CD47**	0.018
	2 - stay put	Black	**ZB6 AD22**	0.018
		Red	**ZB6 AD42**	0.018
	3 - stay put	Black	**ZB6 AD23**	0.018
		Red	**ZB6 AD43**	0.018
	2 - spring return to centre	Black	**ZB6 AD24**	0.018
		Red	**ZB6 AD44**	0.018
	3 - spring return to centre	Black	**ZB6 AD25**	0.018
		Red	**ZB6 AD45**	0.018
	3 - spring return from right to centre	Black	**ZB6 AD26**	0.018
		Red	**ZB6 AD46**	0.018
	3 - spring return from left to centre	Black	**ZB6 AD27**	0.018
		Red	**ZB6 AD47**	0.018
Heads only (switching angle: stay put positions 90°)				
	2 - stay put	Black	**ZB6 DD28**	0.018
		Red	**ZB6 DD48**	0.018
	2 - stay put	Black	**ZB6 CD28**	0.018
		Red	**ZB6 CD48**	0.018
	2 - stay put	Black	**ZB6 AD28**	0.018
		Red	**ZB6 AD48**	0.018

521999

ZB6 DP2

Heads + mounting base for potentiometer

Shape of head	Description	For use with	Reference	Weight kg
	For potentiometer with shaft length 5…8 mm (potentiometer not included)	Ø 6.35 mm shaft	**ZB6 DP2**	0.032

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Control and signalling units Ø 16

Harmony® XB6, plastic

Illuminated selector switches



XB6 DK●●●●B



XB6 CK●●●●B



XB6 AK●●●●B

Illuminated selector switches (with 12…24 V LED included) ▲

Shape of head	Colour of push	Type of contacts N/O	Type of contacts N/C	Number and type of positions	Reference (1)	Weight kg
Complete units (switching angle: stay put positions 60°)						
	White	1	1	2 - stay put	**XB6 DK1B25B** (ZB6 YK1 + ZB6 DD02 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 DK3B25B** (ZB6 YK3 + ZB6 DD02 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 DK4B25B** (ZB6 YK4 + ZB6 DD02 + ZB6 ZB45B)	0.024
	White	1	1	3 - stay put	**XB6 DK1B35B** (ZB6 YK1 + ZB6 DD03 + ZB6 ZB15B)	0.024
	Green	1	1	3 - stay put	**XB6 DK3B35B** (ZB6 YK3 + ZB6 DD03 + ZB6 ZB35B)	0.024
	Red	1	1	3 - stay put	**XB6 DK4B35B** (ZB6 YK4 + ZB6 DD03 + ZB6 ZB45B)	0.024
	White	1	1	2 - stay put	**XB6 CK1B25B** (ZB6 YK1 + ZB6 CD02 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 CK3B25B** (ZB6 YK3 + ZB6 CD02 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 CK4B25B** (ZB6 YK4 + ZB6 CD02 + ZB6ZB45B)	0.024
	White	1	1	3 - stay put	**XB6 CK1B35B** (ZB6 YK1 + ZB6 CD03 + ZB6 ZB15B)	0.024
	Green	1	1	3 - stay put	**XB6 CK3B35B** (ZB6 YK3 + ZB6 CD03 + ZB6 ZB35B)	0.024
	Red	1	1	3 - stay put	**XB6 CK4B35B** (ZB6 YK4 + ZB6 CD03 + ZB6 ZB45B)	0.024
	White	1	1	2 - stay put	**XB6 AK1B25B** (ZB6 YK1 + ZB6 AD02 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 AK3B25B** (ZB6 YK3 + ZB6 AD02 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 AK4B25B** (ZB6 YK4 + ZB6 AD02 + ZB6 ZB45B)	0.024
	White	1	1	3 - stay put	**XB6 AK1B35B** (ZB6 YK1 + ZB6 AD03 + ZB6 ZB15B)	0.024
	Green	1	1	3 - stay put	**XB6 AK3B35B** (ZB6 YK3 + ZB6 AD03 + ZB6 ZB35B)	0.024
	Red	1	1	3 - stay put	**XB6 AK4B35B** (ZB6 YK4 + ZB6 AD03 + ZB6 ZB45B)	0.024
Complete units (switching angle: stay put positions 90°)						
	White	1	1	2 - stay put	**XB6 DK1B85B** (ZB6 YK1 + ZB6 DD08 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 DK3B85B** (ZB6 YK3 + ZB6 DD08 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 DK4B85B** (ZB6 YK4+ ZB6 DD08 + ZB6 ZB45B)	0.024
	White	1	1	2 - stay put	**XB6 CK1B85B** (ZB6 YK1 + ZB6 CD08 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 CK3B85B** (ZB6 YK3 + ZB6 CD08 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 CK4B85B** (ZB6 YK4 + ZB6 CD08 + ZB6 ZB45B)	0.024
	White	1	1	2 - stay put	**XB6 AK1B85B** (ZB6 YK1 + ZB6 AD08 + ZB6 ZB15B)	0.024
	Green	1	1	2 - stay put	**XB6 AK3B85B** (ZB6 YK3 + ZB6 AD08 + ZB6 ZB35B)	0.024
	Red	1	1	2 - stay put	**XB6 AK4B85B** (ZB6 YK4 + ZB6 AD08 + ZB6 ZB45B)	0.024

(1) The reference of the complete selector switch is shown on the 1st line. The references of handles + heads + bodies are shown in brackets below.

▲ Available: 1st half 2011

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1

524603

ZB6 YK●

Handles

Description	Colour	Sold in lots of	Unit reference	Weight kg
Component parts				
Handles for illuminated selector switches *(1)*	White	5	**ZB6 YK1**	0.002
	Green	5	**ZB6 YK3**	0.002
	Red	5	**ZB6 YK4**	0.002
	Yellow	5	**ZB6 YK5**	0.002
	Blue	5	**ZB6 YK6**	0.002
	Orange	5	**ZB6 YK8**	0.002
Replacement parts				
Handles for non illuminated selector switches *(2)*	Black	1	**ZB6 YD2**	0.002
	Red	1	**ZB6 YD4**	0.002

Heads for selector switches, without handle *(3)*

Shape of head	Number and type of positions	Reference	Weight kg
Heads only (switching angle: stay put positions 60°, spring return positions 45°)			
	2 - stay put	**ZB6 DD02**	0.016
	3 - stay put	**ZB6 DD03**	0.016
	2 - spring return to centre	**ZB6 DD04**	0.016
	3 - spring return to centre	**ZB6 DD05**	0.016
	3 - spring return from right to centre	**ZB6 DD06**	0.016
	3 - spring return from left to centre	**ZB6 DD07**	0.016
	2 - stay put	**ZB6 CD02**	0.016
	3 - stay put	**ZB6 CD03**	0.016
	2 - spring return to centre	**ZB6 CD04**	0.016
	3 - spring return to centre	**ZB6 CD05**	0.016
	3 - spring return from right to centre	**ZB6 CD06**	0.016
	3 - spring return from left to centre	**ZB6 CD07**	0.016
	2 - stay put	**ZB6 AD02**	0.016
	3 - stay put	**ZB6 AD03**	0.016
	2 - spring return to centre	**ZB6 AD04**	0.016
	3 - spring return to centre	**ZB6 AD05**	0.016
	3 - spring return from right to centre	**ZB6 AD06**	0.016
	3 - spring return from left to centre	**ZB6 AD07**	0.016
Heads only (switching angle: stay put positions 90°)			
	2 - stay put	**ZB6 DD08**	0.016
	2 - stay put	**ZB6 CD08**	0.016
	2 - stay put	**ZB6 AD08**	0.016

524604

ZB6 DD0●

524605

ZB6 CD0●

524606

ZB6 AD0●

(1) Handle for use in conjunction with a head without a handle (see page 1/23), and a body sub-assembly for illuminated pushbuttons (see page 1/28)
(2) Handle for use in conjunction with a head without a handle (see page 1/23), and a body sub-assembly for non illuminated pushbuttons (see page 1/28)
(3) Handle to be ordered separately (see page 1/23) for bodies with 2 contact blocks maximum.

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Control and signalling units Ø 16

Harmony® XB6, plastic

Key switches

524607
XB6 DG●●B

524607
XB6 CG●●B

524628
XB6 AG●●B

524609
ZB6 DG●

Key switches (Ronis key n° 200) *(1) (2)*

Shape of head	Number and type of positions		Type of contacts N/O	Type of contacts N/C	Reference	Weight kg
Complete units (switching angle: 70°)						
	2 - stay put		1	1	**XB6 DGC5B** (ZB6 Z5B + ZB6 DGC)	0.036
	3 - stay put		1	1	**XB6 DGH5B** (ZB6 Z5B + ZB6 DGH)	0.036
	2 - stay put		1	1	**XB6 CGC5B** (ZB6 Z5B + ZB6 CGC)	0.036
	3 - stay put		1	1	**XB6 CGH5B** (ZB6 Z5B + ZB6 CGH)	0.036
	2 - stay put		1	1	**XB6 AGC5B** (ZB6 Z5B + ZB6 AGC)	0.036
	3 - stay put		1	1	**XB6 AGH5B** (ZB6 Z5B + ZB6 AGH)	0.036

Shape of head	Number and type of positions *(3)*		Key withdrawal	Reference	Weight kg
Heads only (switching angle: stay put positions 70°, spring return positions 45°)					
	2 - stay put		RH position	**ZB6 DGA**	0.030
			Centre position	**ZB6 DGB** *(4)*	0.030
			Both positions	**ZB6 DGC** *(4)*	0.030
	2 - spring return		Centre position	**ZB6 DGL**	0.030
	3 - stay put		LH position	**ZB6 DGD**	0.030
			Centre position	**ZB6 DGE** *(4)*	0.030
			LH and Centre positions	**ZB6 DGF**	0.030
			RH position	**ZB6 DGG**	0.030
			All positions	**ZB6 DGH** *(4)*	0.030
			RH and LH positions	**ZB6 DGJ**	0.030
			RH and Centre positions	**ZB6 DGK**	0.030
	3 - spring return from left to centre		RH position	**ZB6 DGM**	0.030
			Centre position	**ZB6 DGN**	0.030
			RH and Centre positions	**ZB6 DGP**	0.030
	3 - spring return from right to centre		LH position	**ZB6 DGQ**	0.030
			Centre position	**ZB6 DGR**	0.030
			LH and Centre positions	**ZB6 DGS**	0.030
	3 - spring return to centre		Centre position	**ZB6 DGT**	0.030

(1) Key n° 200, withdrawal from all positions.
*(2) To order a key switch with DOM 311 key, add the suffix **1** to the references selected above. Example: **ZB6 DGA1**.*
(3) The symbol ⚷ indicates the key withdrawal position.
*(4) Also available with Ronis key numbers: 201, 202 and 203. To order, add the key number to the end of the reference. Example: for key switch **ZB6 DGB** with Ronis key n° 201, the reference becomes: **ZB6 DGB201***

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1



ZB6 CG●

Key switches (Ronis key n° 200) *(1) (2) (continued)*

Shape of head	Number and type of positions *(3)*	Key withdrawal	Reference	Weight kg
Heads only (switching angle: stay put positions 70°, spring return positions 45°) *(continued)*				
	2 - stay put	RH position	**ZB6 CGA**	0.030
		Centre position	**ZB6 CGB *(4)***	0.030
		Both positions	**ZB6 CGC *(4)***	0.030
	2 - spring return	Centre position	**ZB6 CGL**	0.030
	3 - stay put	LH position	**ZB6 CGD**	0.030
		Centre position	**ZB6 CGE** *(4)*	0.030
		LH and Centre positions	**ZB6 CGF**	0.030
		RH position	**ZB6 CGG**	0.030
		All positions	**ZB6 CGH** *(4)*	0.030
		RH and LH positions	**ZB6 CGJ**	0.030
		RH and Centre positions	**ZB6 CGK**	0.030
	3 - spring return from left to centre	RH position	**ZB6 CGM**	0.030
		Centre position	**ZB6 CGN**	0.030
		RH and Centre positions	**ZB6 CGP**	0.030
	3 - spring return from right to centre	LH position	**ZB6 CGQ**	0.030
		Centre position	**ZB6 CGR**	0.030
		LH and Centre positions	**ZB6 CGS**	0.030
	3 - spring return to centre	Centre position	**ZB6 CGT**	0.030

(1) Key n° 200, withdrawal from all positions.
*(2) To order a key switch with DOM 311 key, add the suffix **1** to the references selected above. Example: **ZB6 CGA1**.*
(3) The symbol ⚷ indicates the key withdrawal position.
*(4) Also available with Ronis key numbers: 201, 202 and 203. To order, add the key number to the end of the reference. Example: for key switch **ZB6 CGB** with Ronis key n° 201, the reference becomes: **ZB6 CGB201**.*

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524611

ZB6 AG●

Key switches (Ronis key n° 200) *(continued)* *(1)*

Shape of head	Number and type of positions *(3)*	Key withdrawal	Reference	Weight kg
Heads only (switching angle: stay put positions 70°, spring return positions 45°) *(continued)*				
	2 - stay put	RH position	**ZB6 AGA**	0.030
		Centre position	**ZB6 AGB** *(2)*	0.030
		Both positions	**ZB6 AGC** *(2)*	0.030
	2 - spring return from right to centre	Centre position	**ZB6 AGL**	0.030
	3 - stay put	LH position	**ZB6 AGD**	0.030
		Centre position	**ZB6 AGE** *(2)*	0.030
		LH and Centre positions	**ZB6 AGF**	0.030
		RH position	**ZB6 AGG**	0.030
		All positions	**ZB6 AGH** *(2)*	0.030
		RH and LH positions	**ZB6 AGJ**	0.030
		RH and Centre positions	**ZB6 AGK**	0.030
	3 - spring return from left to centre	RH position	**ZB6 AGM**	0.030
		Centre position	**ZB6 AGN**	0.030
		RH and Centre positions	**ZB6 AGP**	0.030
	3 - spring return from right to centre	Left-hand position	**ZB6 AGQ**	0.030
		Centre position	**ZB6 AGR**	0.030
		LH and Centre positions	**ZB6 AGS**	0.030
	3 - spring return to centre	Centre position	**ZB6 AGT**	0.030

*(1) To order a key switch with DOM 311 key, add the suffix **1** to the references selected above. Example: **ZB6 AGA1**.*
(2) Also available with Ronis key numbers: 201, 202 and 203. To order, add the key number to the end of the reference.
*Example: for key switch **ZB6 AGB** with Ronis key n° 201, the reference becomes: **ZB6 AGB201**.*
(3) The symbol ⍐ indicates the key withdrawal position.

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Control and signalling units Ø 16

Harmony® XB6, plastic

Complete bodies for pushbuttons

To combine with heads: see page 1/14

Complete bodies for illuminated pushbuttons *(1)*

Description	Supply voltage V	Type of contacts N/O	Type of contacts N/C	Colour of light source	Reference	Weight kg
Faston connectors						
Fixing collar + contact block + LED *(2)*	≂ 12…24	1	–	White	**ZB6 ZB11B**	0.006
				Green	**ZB6 ZB31B**	0.006
				Yellow	**ZB6 ZB51B**	0.006
		–	1	Red	**ZB6 ZB42B**	0.006
				Yellow	**ZB6 ZB52B**	0.006
		1	1	White	**ZB6 ZB15B**	0.009
				Green	**ZB6 ZB35B**	0.009
				Red	**ZB6 ZB45B**	0.009
				Yellow	**ZB6 ZB55B**	0.009
				Blue	**ZB6 ZB65B**	0.009
Direct supply Fixing collar + contact block for incandescent bulb (not included) T1 1/4 *(3)*	3…24	1	–	–	**ZB6 ZH01B**	0.006
		–	1	–	**ZB6 ZH02B**	0.006
		1	1	–	**ZB6 ZH05B**	0.009

524612

ZB6 ZB●●B

524613

ZB6 ZH●●B

Complete bodies for pushbuttons or selector switches

Description	Supply voltage V	Type of contacts N/O	Type of contacts N/C	Reference	Weight kg
Faston connectors					
Direct supply Fixing collar + contact block	⩽ 250	1	–	**ZB6 Z1B**	0.004
		–	1	**ZB6 Z2B**	0.004
		2	–	**ZB6 Z3B**	0.006
		–	2	**ZB6 Z4B**	0.006
		1	1	**ZB6 Z5B**	0.006

524614

ZB6 Z●B

Accessories

Description	Application	Sold in lots of	Unit reference	Weight kg
Body/fixing collar	For mounting contact blocks and light source	10	**ZB6 Y009**	0.002
Body bracket (fixing screws included)	Printed circuit board mounting	4	**ZB6 Y011**	0.010

819715

ZB6 Y009

819714

ZB6 Y011

(1) It is possible to assemble illuminated selector switches by using an illuminated pushbutton body sub-assembly in conjunction with a selector switch head supplied without handle + a transparent handle (see page 1/24).
(2) The colour of the LED must be the same as that of the pushbutton cap.
(3) Bulb to be ordered separately (see page 1/37).

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Control and signalling units Ø 16
Harmony® XB6, plastic
Complete bodies for pilot lights

To combine with heads: see page 1/14

Complete bodies for pilot lights (light source)

Description	Supply voltage V	Sold in lots of	Colour of light source	Unit reference	Weight kg
Faston connectors (direct mounting by the head)					
Integral LED *(1)*	≂ 12…24	5	White	**ZB6 EB1B**	0.003
			Green	**ZB6 EB3B**	0.003
			Red	**ZB6 EB4B**	0.003
			Yellow	**ZB6 EB5B**	0.003
			Blue	**ZB6 EB6B**	0.003
			Orange	**ZB6 EB8B**	0.003
	~ 48…120	5	White	**ZB6 EG1B**	0.003
			Green	**ZB6 EG3B**	0.003
			Red	**ZB6 EG4B**	0.003
			Yellow	**ZB6 EG5B**	0.003
			Blue	**ZB6 EG6B**	0.003
			Orange	**ZB6 EG8B**	0.003
	~ 230…240	5	White	**ZB6 EM1B**	0.003
			Green	**ZB6 EM3B**	0.003
			Red	**ZB6 EM4B**	0.003
			Yellow	**ZB6 EM5B**	0.003
			Blue	**ZB6 EM6B**	0.003
			Orange	**ZB6 EM8B**	0.003
With resistor for 95 V neon bulb (not included) T1 1/4 *(2) (3)*	~ 120	5	–	**ZB6 EG0B**	0.003
	~ 230	5	–	**ZB6 EM0B**	0.003
Direct supply for 0.6 W max. incandescent bulb (not included) T1 1/4 *(2)*	≂ ≤ 24	5	–	**ZB6 EH0B**	0.003
Pins for printed circuit board connection (mounting by the body, see page 1/28)					
Integral LED *(1)*	≂ 12…24	5	White	**ZB6 EB1A**	0,003
			Green	**ZB6 EB3A**	0.003
			Red	**ZB6 EB4A**	0.003
			Yellow	**ZB6 EB5A**	0.003
			Blue	**ZB6 EB6A**	0.003
			Orange	**ZB6 EB8A**	0.003
Direct supply for 0.6 W max. incandescent bulb (not included) T1 1/4 *(2)*	≂ 3…24	5	–	**ZB6 EH0A**	0.003

524615
ZB6 EB●B

524616
ZB6 E●B

524617
ZB6 EB●A

524618
ZB6 E●B

Separate contact blocks

Type of contacts	For use with bodies	Type of contacts N/O	Type of contacts N/C	Sold in lots of	Unit reference	Weight kg
Silver alloy	Faston	1	–	10	**ZB6 E1B**	0.004
		–	1	10	**ZB6 E2B**	0.004
	Printed circuit ZB6 Y011	1	–	10	**ZB6 E1A**	0.004
		–	1	10	**ZB6 E2A**	0.004
Gold flashed	Faston	1	–	10	**ZB6 E1E**	0.004
		–	1	10	**ZB6 E2E**	0.004
	Printed circuit ZB6 Y011	1	–	10	**ZB6 E1D**	0.004
		–	1	10	**ZB6 E2D**	0.004

524619
ZB6 E●B

524620
ZB6 E●A

(1) The colour of the LED must be the same as that of the pushbutton cap.
(2) Bulb to be ordered separately (see page 1/37).
(3) Neon bulbs must only be used with red, yellow or white lens caps.

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Control and signalling units Ø 16

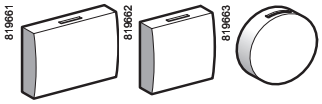
Harmony® XB6, plastic

Accessories for heads

Unmarked lens caps and caps

To combine with heads: see page 1/14

Unmarked lens caps



ZB6 YDV1 ZB6 YCV1 ZB6 YAV1

Application	Colour of lens cap	Sold in lots of	Unit reference Head	Head	Head	Weight kg
Pilot lights	White	10	**ZB6 YDV1**	**ZB6 YCV1**	**ZB6 YAV1**	0.001
	Green	10	**ZB6 YDV3**	**ZB6 YCV3**	**ZB6 YAV3**	0.001
	Red	10	**ZB6 YDV4**	**ZB6 YCV4**	**ZB6 YAV4**	0.001
	Yellow	10	**ZB6 YDV5**	**ZB6 YCV5**	**ZB6 YAV5**	0.001
	Blue	10	**ZB6 YDV6**	**ZB6 YCV6**	**ZB6 YAV6**	0.001
	Orange	10	**ZB6 YDV8**	**ZB6 YCV8**	**ZB6 YAV8**	0.001

Pushbutton caps - unmarked



ZB6 YDW1 ZB6 YCW1 ZB6 YAW1

Application	Colour of cap	Sold in lots of	Unit reference Head	Head	Head	Weight kg
Illuminated pushbuttons, with flush push	White	10	**ZB6 YDW1**	**ZB6 YCW1**	**ZB6 YAW1**	0.001
	Green	10	**ZB6 YDW3**	**ZB6 YCW3**	**ZB6 YAW3**	0.001
	Red	10	**ZB6 YDW4**	**ZB6 YCW4**	**ZB6 YAW4**	0.001
	Yellow	10	**ZB6 YDW5**	**ZB6 YCW5**	**ZB6 YAW5**	0.001
	Blue	10	**ZB6 YDW6**	**ZB6 YCW6**	**ZB6 YAW6**	0.001
	Orange	10	**ZB6 YDW8**	**ZB6 YCW8**	**ZB6 YAW8**	0.001



ZB6 YDE1 ZB6 YCE1 ZB6 YAE1

Application	Colour of cap	Sold in lots of	Unit reference Head	Head	Head	Weight kg
Illuminated pushbuttons, with projecting push	White	10	**ZB6 YDE1**	**ZB6 YCE1**	**ZB6 YAE1**	0.001
	Green	10	**ZB6 YDE3**	**ZB6 YCE3**	**ZB6 YAE3**	0.001
	Red	10	**ZB6 YDE4**	**ZB6 YCE4**	**ZB6 YAE4**	0.001
	Yellow	10	**ZB6 YDE5**	**ZB6 YCE5**	**ZB6 YAE5**	0.001
	Blue	10	**ZB6 YDE6**	**ZB6 YCE6**	**ZB6 YAE6**	0.001
	Orange	10	**ZB6 YDE8**	**ZB6 YCE8**	**ZB6 YAE8**	0.001



ZB6 YDA1 ZB6 YCA1 ZB6 YAA1

Application	Colour of cap	Sold in lots of	Unit reference Head	Head	Head	Weight kg
Non illuminated pushbuttons	White	10	**ZB6 YDA1**	**ZB6 YCA1**	**ZB6 YAA1**	0.001
	Black	10	**ZB6 YDA2**	**ZB6 YCA2**	**ZB6 YAA2**	0.001
	Green	10	**ZB6 YDA3**	**ZB6 YCA3**	**ZB6 YAA3**	0.001
	Red	10	**ZB6 YDA4**	**ZB6 YCA4**	**ZB6 YAA4**	0.001
	Yellow	10	**ZB6 YDA5**	**ZB6 YCA5**	**ZB6 YAA5**	0.001
	Blue	10	**ZB6 YDA6**	**ZB6 YCA6**	**ZB6 YAA6**	0.001

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Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: marked pushbutton caps

To combine with heads: see page 1/14

Pushbutton caps - marked

Marking	Colour of cap	Sold in lots of	Unit reference			Weight kg
White on coloured cap Black on white cap			Head 	Head 	Head 	
For non illuminated, flush pushbuttons						
0	White	10	**ZB6 YD100**	**ZB6 YC100**	**ZB6 YA100**	0.001
	Black	10	**ZB6 YD200**	**ZB6 YC200**	**ZB6 YA200**	0.001
1	White	10	**ZB6 YD101**	**ZB6 YC101**	**ZB6 YA101**	0.001
	Black	10	**ZB6 YD201**	**ZB6 YC201**	**ZB6 YA201**	0.001
2	White	10	**ZB6 YD102**	**ZB6 YC102**	**ZB6 YA102**	0.001
	Black	10	**ZB6 YD202**	**ZB6 YC202**	**ZB6 YA202**	0.001
3	White	10	**ZB6 YD103**	**ZB6 YC103**	**ZB6 YA103**	0.001
	Black	10	**ZB6 YD203**	**ZB6 YC203**	**ZB6 YA203**	0.001
4	White	10	**ZB6 YD104**	**ZB6 YC104**	**ZB6 YA104**	0.001
	Black	10	**ZB6 YD204**	**ZB6 YC204**	**ZB6 YA204**	0.001
5	White	10	**ZB6 YD105**	**ZB6 YC105**	**ZB6 YA105**	0.001
	Black	10	**ZB6 YD205**	**ZB6 YC205**	**ZB6 YA205**	0.001
6	White	10	**ZB6 YD106**	**ZB6 YC106**	**ZB6 YA106**	0.001
	Black	10	**ZB6 YD206**	**ZB6 YC206**	**ZB6 YA206**	0.001
7	White	10	**ZB6 YD107**	**ZB6 YC107**	**ZB6 YA107**	0.001
	Black	10	**ZB6 YD207**	**ZB6 YC207**	**ZB6 YA207**	0.001
8	White	10	**ZB6 YD108**	**ZB6 YC108**	**ZB6 YA108**	0.001
	Black	10	**ZB6 YD208**	**ZB6 YC208**	**ZB6 YA208**	0.001
9	White	10	**ZB6 YD109**	**ZB6 YC109**	**ZB6 YA109**	0.001
	Black	10	**ZB6 YD209**	**ZB6 YC209**	**ZB6 YA209**	0.001
I	White	10	**ZB6 YD111**	**ZB6 YC111**	**ZB6 YA111**	0.001
	Green	10	**ZB6 YD311**	**ZB6 YC311**	**ZB6 YA311**	0.001
O	Black	10	**ZB6 YD210**	**ZB6 YC210**	**ZB6 YA210**	0.001
	Red	10	**ZB6 YD410**	**ZB6 YC410**	**ZB6 YA410**	0.001

819685



ZB6 YD●10●

819684



ZB6 YC●10●

819683



ZB6 YA●10●

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Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: marked pushbutton caps

To combine with heads: see page 1/14

524248



ZB6 YD●16

819690



ZB6 YC●17

819691



ZB6 YA●18

Pushbutton caps - marked *(continued)*

Marking	Colour of cap	Sold in lots of	Unit reference			Weight kg
White on coloured cap Black on white cap	–	–	Head 	Head 	Head 	
For non illuminated, flush pushbuttons *(continued)*						
II	White	5	**ZB6 YD112**	**ZB6 YC112**	**ZB6 YA112**	0.001
	Black	5	**ZB6 YD212**	**ZB6 YC212**	**ZB6 YA212**	0.001
III	White	5	**ZB6 YD113**	**ZB6 YC113**	**ZB6 YA113**	0.001
	Black	5	**ZB6 YD213**	**ZB6 YC213**	**ZB6 YA213**	0.001
+	White	5	**ZB6 YD114**	**ZB6 YC114**	**ZB6 YA114**	0.001
	Black	5	**ZB6 YD214**	**ZB6 YC214**	**ZB6 YA214**	0.001
-	White	5	**ZB6 YD115**	**ZB6 YC115**	**ZB6 YA115**	0.001
	Black	5	**ZB6 YD215**	**ZB6 YC215**	**ZB6 YA215**	0.001
MARCHE	White	5	**ZB6 YD116**	**ZB6 YC116**	**ZB6 YA116**	0.001
	Green	5	**ZB6 YD316**	**ZB6 YC316**	**ZB6 YA316**	0.001
ON	White	5	**ZB6 YD117**	**ZB6 YC117**	**ZB6 YA117**	0.001
	Green	5	**ZB6 YD317**	**ZB6 YC317**	**ZB6 YA317**	0.001
START	Green	5	**ZB6 YD340**	**ZB6 YC340**	**ZB6 YA340**	0.001
EIN	White	5	**ZB6 YD118**	**ZB6 YC118**	**ZB6 YA118**	0.001
	Green	5	**ZB6 YD318**	**ZB6 YC318**	**ZB6 YA318**	0.001
ARRET	Black	5	**ZB6 YD223**	**ZB6 YC223**	**ZB6 YA223**	0.001
	Red	5	**ZB6 YD423**	**ZB6 YC423**	**ZB6 YA423**	0.001
STOP	Red	5	**ZB6 YD441**	**ZB6 YC441**	**ZB6 YA441**	0.001
OFF	Black	5	**ZB6 YD224**	**ZB6 YC224**	**ZB6 YA224**	0.001
	Red	5	**ZB6 YD424**	**ZB6 YC424**	**ZB6 YA424**	0.001
AUS	Black	5	**ZB6 YD225**	**ZB6 YC225**	**ZB6 YA225**	0.001
	Red	5	**ZB6 YD425**	**ZB6 YC425**	**ZB6 YA425**	0.001
R	Blue	5	**ZB6 YD626**	**ZB6 YC626**	**ZB6 YA626**	0.001
MONTEE	White	5	**ZB6 YD129**	**ZB6 YC129**	**ZB6 YA129**	0.001
	Black	5	**ZB6 YD229**	**ZB6 YC229**	**ZB6 YA229**	0.001

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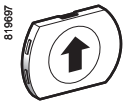
Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: marked pushbutton caps

To combine with heads: see page 1/14



ZB6 YD●19



ZB6 YC●19



ZB6 YA●19

Pushbutton caps - marked *(continued)*

Marking	Colour of cap	Sold in lots of	Unit reference			Weight kg
White on coloured cap Black on white cap	–	–	Head 	Head 	Head 	
For non illuminated, flush pushbuttons *(continued)*						
UP	White	5	**ZB6 YD127**	**ZB6 YC127**	**ZB6 YA127**	0.001
	Black	5	**ZB6 YD227**	**ZB6 YC227**	**ZB6 YA227**	0.001
DESCENTE	White	5	**ZB6 YD130**	**ZB6 YC130**	**ZB6 YA130**	0.001
	Black	5	**ZB6 YD230**	**ZB6 YC230**	**ZB6 YA230**	0.001
DOWN	White	5	**ZB6 YD128**	**ZB6 YC128**	**ZB6 YA128**	0.001
	Black	5	**ZB6 YD228**	**ZB6 YC228**	**ZB6 YA228**	0.001
AB	White	5	**ZB6 YD134**	**ZB6 YC134**	**ZB6 YA134**	0.001
	Black	5	**ZB6 YD234**	**ZB6 YC234**	**ZB6 YA234**	0.001
FERME	White	5	**ZB6 YD133**	**ZB6 YC133**	**ZB6 YA133**	0.001
	Black	5	**ZB6 YD233**	**ZB6 YC233**	**ZB6 YA233**	0.001
CLOSE	White	5	**ZB6 YD132**	**ZB6 YC132**	**ZB6 YA132**	0.001
	Black	5	**ZB6 YD232**	**ZB6 YC232**	**ZB6 YA232**	0.001
ZU	White	5	**ZB6 YD131**	**ZB6 YC131**	**ZB6 YA131**	0.001
	Black	5	**ZB6 YD231**	**ZB6 YC231**	**ZB6 YA231**	0.001
↑	White	5	**ZB6 YD119**	**ZB6 YC119**	**ZB6 YA119**	0.001
	Black	5	**ZB6 YD219**	**ZB6 YC219**	**ZB6 YA219**	0.001
↓	White	5	**ZB6 YD120**	**ZB6 YC120**	**ZB6 YA120**	0.001
	Black	5	**ZB6 YD220**	**ZB6 YC220**	**ZB6 YA220**	0.001
→	White	5	**ZB6 YD121**	**ZB6 YC121**	**ZB6 YA121**	0.001
	Black	5	**ZB6 YD221**	**ZB6 YC221**	**ZB6 YA221**	0.001
←	White	5	**ZB6 YD122**	**ZB6 YC122**	**ZB6 YA122**	0.001
	Black	5	**ZB6 YD222**	**ZB6 YC222**	**ZB6 YA222**	0.001

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Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: legends and legend holder, 8 x 21 mm marked legends

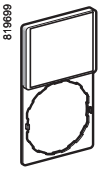
To combine with heads: see page 1/14



ZB6 YD20

Legend holder 24 x 48 mm (size 1) for 8 x 21 mm legend *(1)*

Description	Colour of legend	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZB6 YD20**	0.001
With blank legend	White or yellow background	10	**ZB6 YD21**	0.001
	Black or red background	10	**ZB6 YD22**	0.001



ZB6 YD3●

Legend holder 24 x 36 mm (size 2) for 16 x 21 mm legend *(1)*

Description	Colour of legend	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZB6 YD30**	0.001
With blank legend	White or yellow background	10	**ZB6 YD31**	0.001
	Black or red background	10	**ZB6 YD32**	0.001



ZB6 Y1001



ZB6 Y3001

Blank legends

Dimensions	For use with	Colour	Sold in lots of	Unit reference	Weight kg
8 x 21 mm	Size 1 legend holder ZB6 YD20	Yellow or white background	20	**ZB6 Y1001**	0.001
		Black or red background	20	**ZB6 Y2001**	0.001
16 x 21 mm	Size 2 legend holder ZB6 YD30	Yellow or white background	20	**ZB6 Y4001**	0.001
		Black or red background	20	**ZB6 Y3001**	0.001

Legends for engraving *(2)*

Dimensions	For use with	Colour	Sold in lots of	Unit reference	Weight kg
8 x 21 mm	Size 1 legend holder ZB6 YD20	Yellow or white background	10	**ZB6 Y1900**	0.001
		Black or red background	10	**ZB6 Y2900**	0.001
16 x 21 mm	Size 2 legend holder ZB6 YD30	Yellow or white background	10	**ZB6 Y4900**	0.001
		Black or red background	10	**ZB6 Y3900**	0.001



ZB6 Y2178

8 x 21 mm marked legends (for "size 1" 24 x 28 mm legend holders ZB6 YD20)

Colour	Language	Marking	Sold in lots of	Unit reference	Weight kg
Black or red background *(3)*	International	O-I	5	**ZB6 Y2178**	0.001
		I-II	5	**ZB6 Y2179**	0.001
		I-O-II	5	**ZB6 Y2186**	0.001
		← O →	5	**ZB6 Y2190**	0.001

(1) For legends, see below and also following page.

(2) Pre-engraved legends. When ordering, clearly state the background colour, text to be engraved: (either 1 line for 8 x 21 mm or 2 lines for 16 x 21 mm legends - in both cases, 10 characters max. per line) and the quantity. Minimum quantity: 25 identical legends.

(3) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

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Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: 8 x 21 mm marked legends

To combine with heads: see page 1/14

8 x 21 mm marked legends (for "size 1" 24 x 28 mm legend holders ZB6 YD20) *(continued)*

Colour	Language	Marking	Sold in lots of	Unit reference	Weight kg
Black or red background *(1)*	French	ARRET	5	**ZB6 Y2104**	0.001
		ARRIERE	5	**ZB6 Y2106**	0.001
		AVANT	5	**ZB6 Y2105**	0.001
		DEFAUT	5	**ZB6 Y2134**	0.001
		DESCENTE	5	**ZB6 Y2108**	0.001
		DROITE	5	**ZB6 Y2109**	0.001
		EN SERVICE	5	**ZB6 Y2111**	0.001
		FERME	5	**ZB6 Y2114**	0.001
		GAUCHE	5	**ZB6 Y2110**	0.001
		HORS SERVICE	5	**ZB6 Y2112**	0.001
		OUVERT	5	**ZB6 Y2113**	0.001
		MAIN-O-AUTO	5	**ZB6 Y2187**	0.001
		MARCHE	5	**ZB6 Y2103**	0.001
		MONTEE	5	**ZB6 Y2107**	0.001
		REARMEMENT	5	**ZB6 Y2123**	0.001
	English	HAND-O-AUTO	5	**ZB6 Y2387**	0.001
		CLOSE	5	**ZB6 Y2314**	0.001
		DOWN	5	**ZB6 Y2308**	0.001
		FORWARD	5	**ZB6 Y2305**	0.001
		FAULT	5	**ZB6 Y2334**	0.001
		LEFT	5	**ZB6 Y2310**	0.001
		OFF	5	**ZB6 Y2312**	0.001
		ON	5	**ZB6 Y2303**	0.001
		OPEN	5	**ZB6 Y2313**	0.001
		RESET	5	**ZB6 Y2323**	0.001
		REVERSE	5	**ZB6 Y2306**	0.001
		RIGHT	5	**ZB6 Y2309**	0.001
		RUN	5	**ZB6 Y2311**	0.001
		STOP	5	**ZB6 Y2304**	0.001
		UP	5	**ZB6 Y2307**	0.001
	German	AB	5	**ZB6 Y2208**	0.001
		AUF	5	**ZB6 Y2207**	0.001
		AUS	5	**ZB6 Y2212**	0.001
		BETRIEB	5	**ZB6 Y2211**	0.001
		EIN	5	**ZB6 Y2203**	0.001
		HALT	5	**ZB6 Y2204**	0.001
		HAND-O-AUTO	5	**ZB6 Y2287**	0.001
		LINKS	5	**ZB6 Y2210**	0.001
		ÖFFNEN	5	**ZB6 Y2213**	0.001
		RECHTS	5	**ZB6 Y2209**	0.001
		RÜCKSTELLUNG	5	**ZB6 Y2223**	0.001
		SCHLIESSEN	5	**ZB6 Y2214**	0.001
		STÖRUNG	5	**ZB6 Y2234**	0.001
		VOR	5	**ZB6 Y2205**	0.001
		ZURÜCK	5	**ZB6 Y2206**	0.001
	Spanish	ADELANTE	5	**ZB6 Y2405**	0.001
		APERTURA	5	**ZB6 Y2413**	0.001
		ATRAS	5	**ZB6 Y2406**	0.001
		BAJADA	5	**ZB6 Y2408**	0.001
		CIERRE	5	**ZB6 Y2414**	0.001
		DEFECTO	5	**ZB6 Y2434**	0.001
		DERECHA	5	**ZB6 Y2409**	0.001
		EN SERVICIO	5	**ZB6 Y2411**	0.001
		FUERA SERV.	5	**ZB6 Y2412**	0.001
		IZQUIERDA	5	**ZB6 Y2410**	0.001
		MARCHA	5	**ZB6 Y2403**	0.001
		PARADA	5	**ZB6 Y2404**	0.001
		REARME	5	**ZB6 Y2423**	0.001
		SUBIDA	5	**ZB6 Y2405**	0.001



ZB6 Y2104



ZB6 Y2304



ZB6 Y2204



ZB6 Y2404

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

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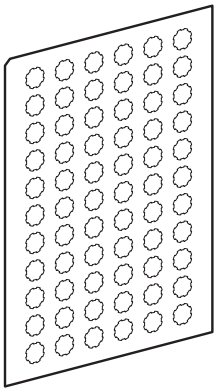
Control and signalling units Ø 16

Harmony® XB6, plastic

Accessories for heads: legends for insertion, for printing, pre-printed, labelling software, circular legends

To combine with heads: see page 1/14

819709



ZB6 YA003

Sheets of peel-off legends

Description	Application	Sold in lots of	Unit reference	Weight kg
Sheets of 66 peel-off, transparent, self-adhesive legends	Rectangular pilot lights	10	**ZB6 YD003**	0.030
	Square pilot lights	10	**ZB6 YC003**	0.030
	Circular pilot lights	10	**ZB6 YA003**	0.030
	Rectangular illuminated pushbuttons	10	**ZB6 YD013**	0.030
	Square illuminated pushbuttons	10	**ZB6 YC013**	0.030
	Circular illuminated pushbuttons	10	**ZB6 YA013**	0.030

"SIS Label" labelling software

Application	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	**XBY 2U**	0.100

563627



XBY 2U

Circular legends for Emergency Stop mushroom head pushbuttons (yellow)

Diameter mm	Marking on yellow background	Reference	Weight kg
45	Without *(1)*	**ZB6 Y7001**	0.001
	ARRET D'URGENCE *(1)*	**ZB6 Y7130**	0.001
	EMERGENCY STOP *(1)*	**ZB6 Y7330**	0.001
	PARADA EMERGENCIA *(1)*	**ZB6 Y7430**	0.001
	ARRESTO EMERGENZA *(1)*	**ZB6 Y7630**	0.001
	NOT-HALT *(1)*	**ZB6 Y7230**	0.001

DF540624



ZB6 Y7130

(1) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

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Control and signalling units Ø 16

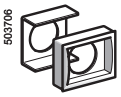
Harmony® XB6, plastic

Accessories for pushbuttons and pilot lights

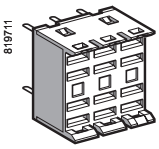
To combine with heads: see page 1/14



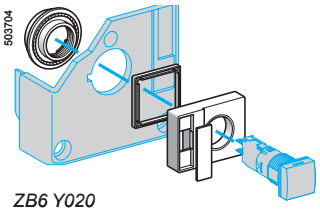
ZB6 YC002



ZB6 YD002



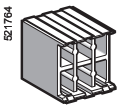
ZB6 Y010



ZB6 Y020



ZB6 Y007



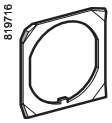
ZB6 Y001



ZB6 YA001



ZB6 YD001



ZB6 Y003



ZB6 Y005

Mounting accessories

Description	Application		Sold in lots of	Unit reference	Weight kg
Adapters for flush mounting	For flush mounting a circular pushbutton, switch or pilot light in a Ø 22 mm hole		10	**ZB6 YA002**	0.030
	For flush mounting a square pushbutton, switch or pilot light in a 21 x 21 square hole		5	**ZB6 YC002**	0.032
	For flush mounting a rectangular pushbutton, switch or pilot light in a 21 x 27 rectangular hole		5	**ZB6 YD002**	0.032
Plug-in socket adapter	Printed circuit board mounting		10	**ZB6 Y010**	0.004
Dummy contact block housing (without contacts)	Printed circuit board mounting	Without pins for printed circuit	10	**ZB6 Y006**	0.001
		With pins for printed circuit	10	**ZB6 Y006A**	0.001
Adapter for XAL control station (Ø 22 to Ø 16 reducer)	Ø 16 circular, square or rectangular units		5	**ZB6 Y020**	0.038

Bulbs

Description	Voltage	Sold in lots of	Unit reference	Weight kg
Incandescent bulbs 2-pin T1 1/4	6 V	6	**ZB6 YA006**	0.002
	12 V	10	**ZB6 YJ012**	0.002
	24 V *(1)*	20	**ZB6 YB028**	0.002
Neon bulbs	110/230V *(2)*	5	**ZB6 YG095**	0.002

Accessories for key switches

Description	Application	Sold in lots of	Unit reference	Weight kg
Ronis key n° 200	Key switches	2	**ZB6 Y007**	0.006
Ronis key n° 201	Key switches	2	**ZB6 Y201**	0.006
Ronis key n° 202	Key switches	2	**ZB6 Y202**	0.006
Ronis key n° 203	Key switches	2	**ZB6 Y203**	0.006
DOM 311 key	Key switches	2	**ZB6 Y008**	0.006

Protection accessories

Description	Application	Sold in lots of	Unit reference	Weight kg
Protective cover	Protection of contacts against direct finger contact	10	**ZB6 Y001**	0.005
Protective shutters *(3)*	Circular or square pushbuttons and switches	1	**ZB6 YA001**	0.003
	Rectangular pushbuttons and switches	1	**ZB6 YD001**	0.003

Miscellaneous accessories

Description	Application	Sold in lots of	Unit reference	Weight kg
Anti-rotation plate	Selector switches, Emergency stop buttons	10	**ZB6 Y003**	0.001
Nut	Securing head on support	10	**ZB6 Y002**	0.001
Dismantling tool	Removal of contact blocks from body/fixing collar	5	**ZB6 Y018**	0.005
Extractor	Removal of pushbutton caps	5	**ZB6 Y016**	0.010
Bezel tightening tool + bulb extractor	Tightening and slackening the bezel and changing bulbs	2	**ZB6 Y905**	0.006
Metal assembly tool	Tightening of fixing nut	1	**ZB6 Y906**	0.022
Dismantling tool kit, comprising 3 tools	Removal of contacts, fixing nuts and pushbutton caps	1	**ZB6 Y019**	0.030
Female Faston connector	–	100	**ZB6 Y004**	0.002
Blanking plug	–	10	**ZB6 Y005**	0.001

(1) 28 V bulb supplied for use on 24 V.
(2) 95 V bulb supplied for use on 110/230 V.
(3) The thickness of the protective shutters must be taken into account when fitting with plug-in socket adapter (ZB6 Y010).

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Control and signalling units Ø 16

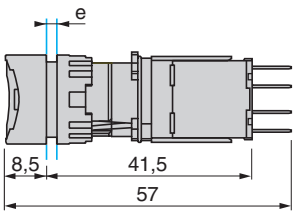
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights: complete units, XB6

Pushbuttons (illuminated and non illuminated)

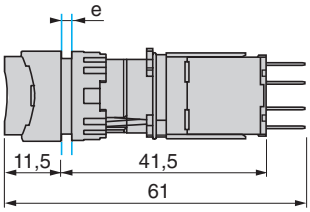
Rectangular head

XB6 DW●●●●, DF●●●●, DA●●

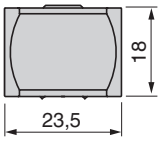


e: panel thickness 1 to 6 mm

XB6 DE●●●●

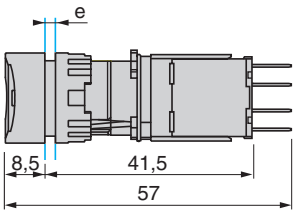


Common face view



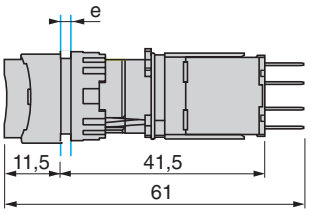
Square head

XB6 CW●●●●, CF●●●●, CA●●

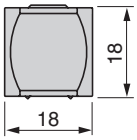


e: panel thickness 1 to 6 mm

XB6 CE●●●●

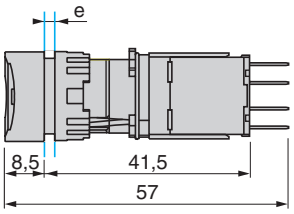


Common face view



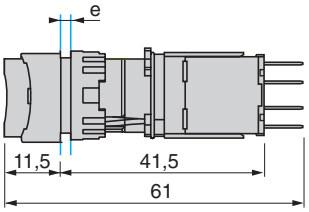
Circular head

XB6 AW●●●●, AF●●●●, AA●●

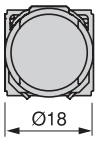


e: panel thickness 1 to 6 mm

XB6 AE●●●●

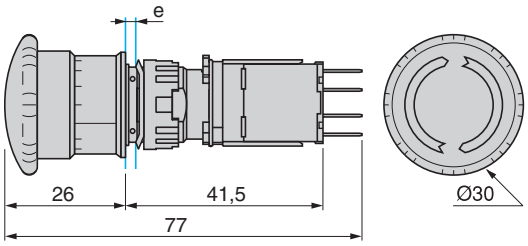


Common face view

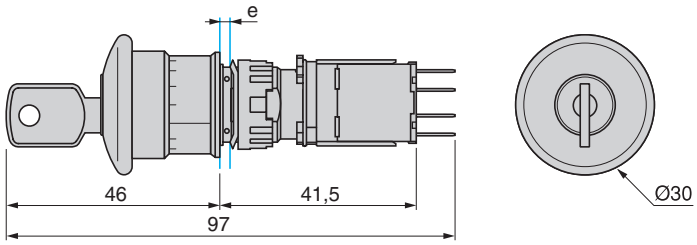


Mushroom head pushbuttons

XB6 AS8349B



XB6 AS9349B

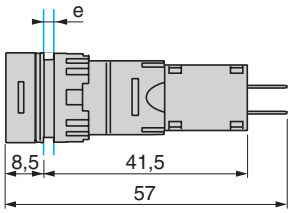


e: panel thickness 1 to 6 mm

Pilot lights

Common side view

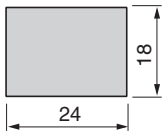
XB6 DV●●●, XB6 CV●●●



e: panel thickness 1 to 6 mm

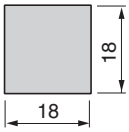
Rectangular head

XB6 DV●●●



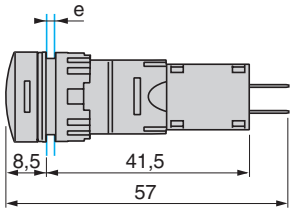
Square head

XB6 CV●●●

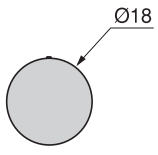


Circular head

XB6 AV●●●



e: panel thickness 1 to 6 mm



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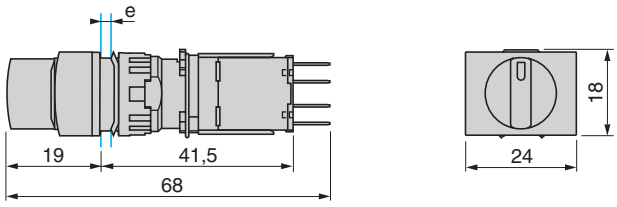
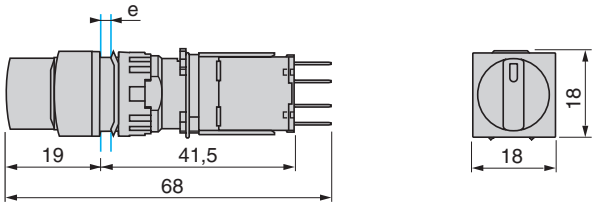
Selector switches, standard handle (illuminated and non illuminated)

Rectangular head
XB6 DD●●●●, XB6 DK●●●●●

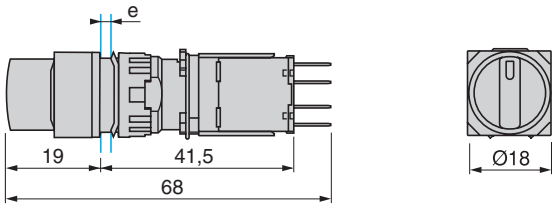


Square head
XB6 CD●●●●, XB6 CK●●●●●



e: panel thickness 1 to 6 mm

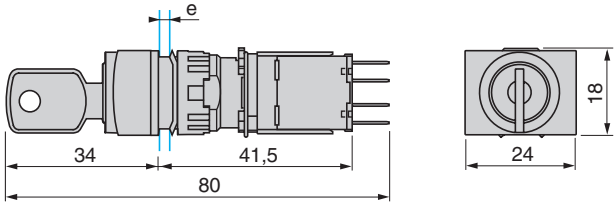
Circular head
XB6 AD●●●●, XB6 AK●●●●●



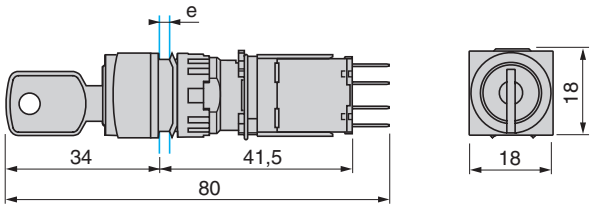
e: panel thickness 1 to 6 mm

Key switches

Rectangular head
XB6 DG●●●

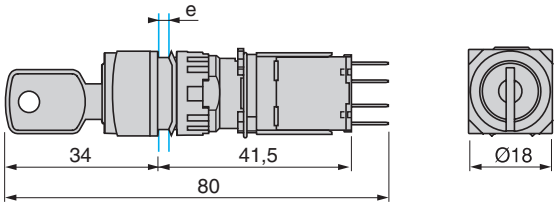


Square head
XB6 CG●●●



e: panel thickness 1 to 6 mm

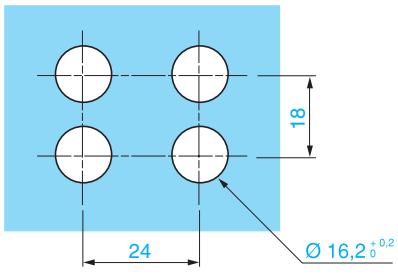
Circular head
XB6 AG●●●



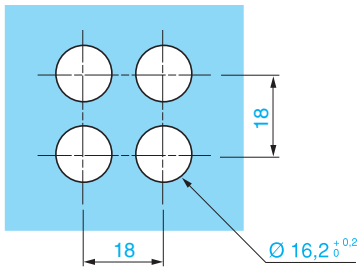
e: panel thickness 1 to 6 mm

Panel cut-out and mounting

For rectangular head



For square or circular head



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Control and signalling units Ø 16

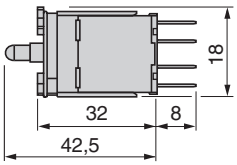
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB6

Pushbuttons

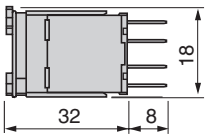
Bodies for illuminated pushbuttons

ZB6 Z●●●B



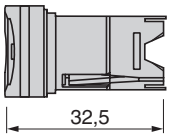
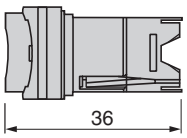
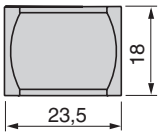
Bodies for non illuminated pushbuttons

ZB6 Z●B

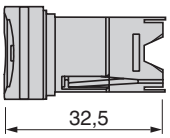
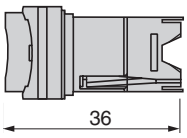
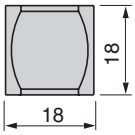


Heads for illuminated and non illuminated pushbuttons

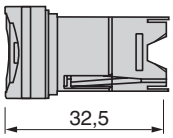
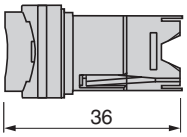
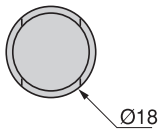
Rectangular

ZB6 DW●, DF●, DA●	ZB6 DE●	Common face view
		

Square

ZB6 CW●, CF●, CA●	ZB6 CE●	Common face view
		

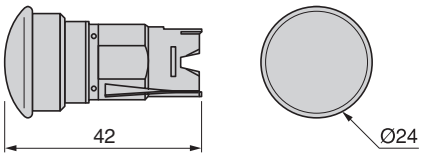
Circular

ZB6 AW●, AF●, AA●	ZB6 AE●	Common face view
		

Heads for mushroom head pushbuttons

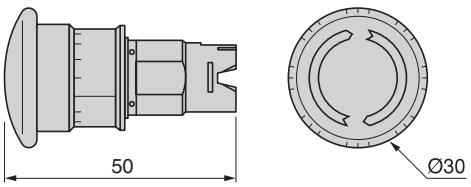
Spring return

ZB6 AC●

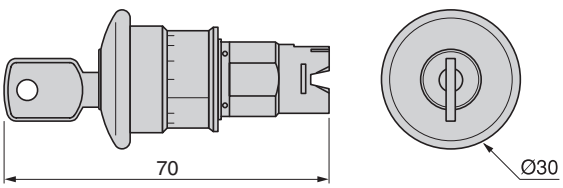


Trigger action

ZB6 AS834



ZB6 AS934



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Control and signalling units Ø 16

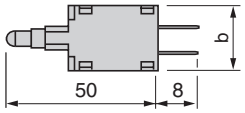
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB6

Pilot lights

Bodies

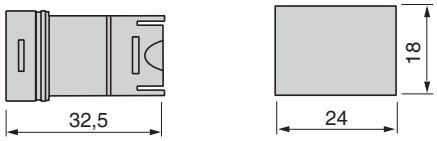
ZB6 EB●●



	b
ZB6 E●●B	13.5
ZB6 EB●A	15.5

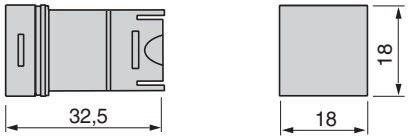
Rectangular head

ZB6 DV●



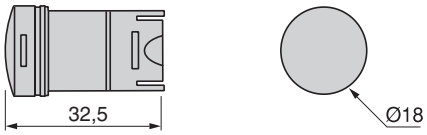
Square head

ZB6 CV●



Circular head

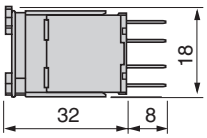
ZB6 AV●



Selector switches, standard handle (illuminated and non illuminated)

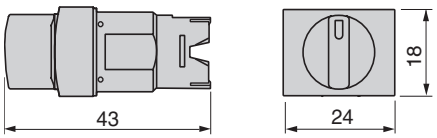
Bodies

ZB6 Z●B



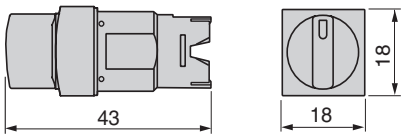
Rectangular head

ZB6 DD●●



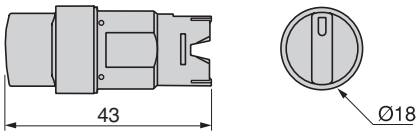
Square head

ZB6 CD●●



Circular head

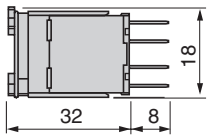
ZB6 AD●●



Key switches

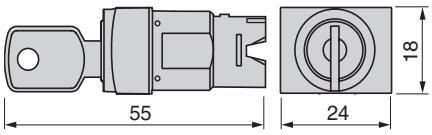
Bodies

ZB6 Z●B



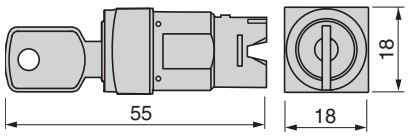
Rectangular head

ZB6 DG●



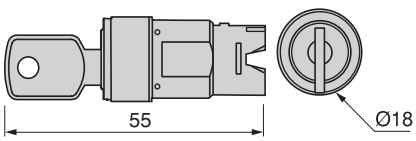
Square head

ZB6 CG●



Circular head

ZB6 AG●



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Control and signalling units Ø 16

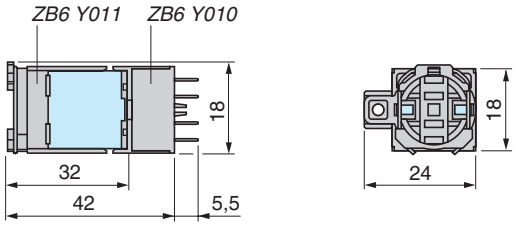
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights: accessories, ZB6

1

Plug-in socket adaptor for printed circuit board mounting and body bracket

ZB6 Y010 + ZB6 Y011



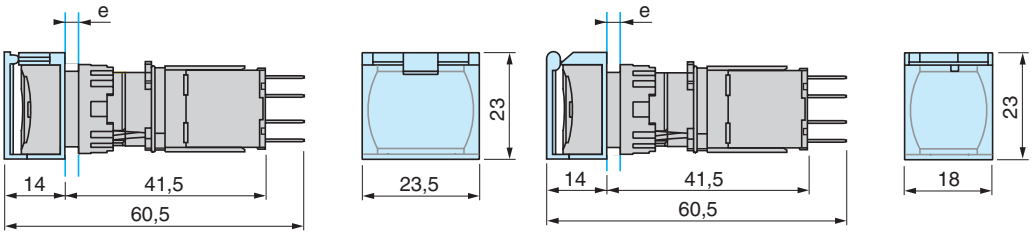
Protective shutter

For rectangular head

ZB6 YD001

For square or circular head

ZB6 YA001

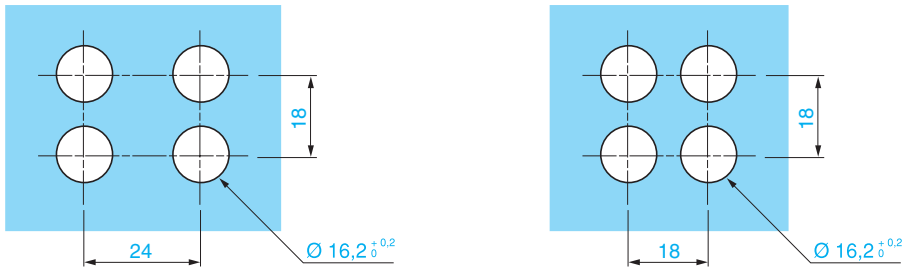


e: panel thickness 1 to 6 mm

Panel cut-out and mounting

Rectangular head

Square or circular head



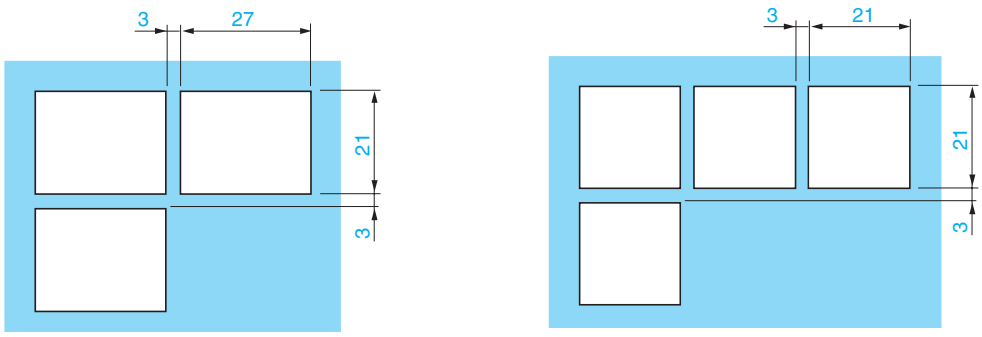
With flush mounting kit

For rectangular head

ZB6 YD002

For square head

ZB6 YC002



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Control and signalling units Ø 16

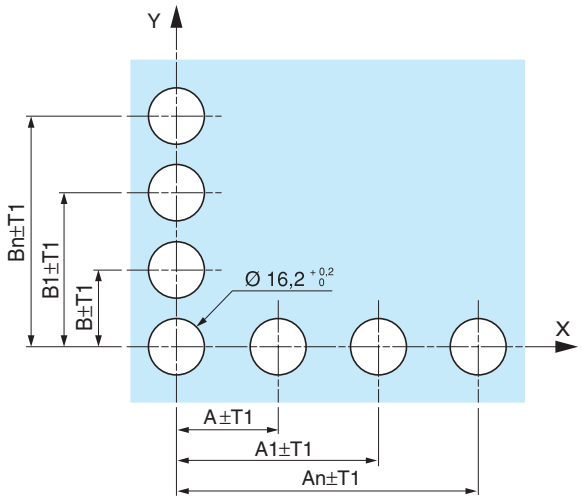
Harmony® XB6, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB6

Pushbuttons, switches and pilot lights for printed circuit board connection

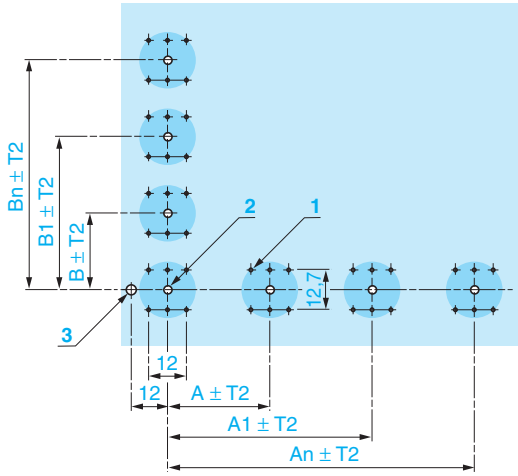
Front panel cut-out (viewed from installer's side)

Dimensions in mm



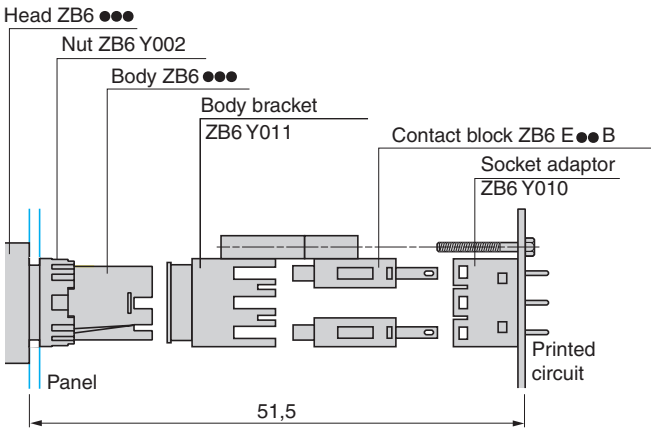
Printed circuit board drillings (viewed from electrical block side) *(1)*

Dimensions in mm

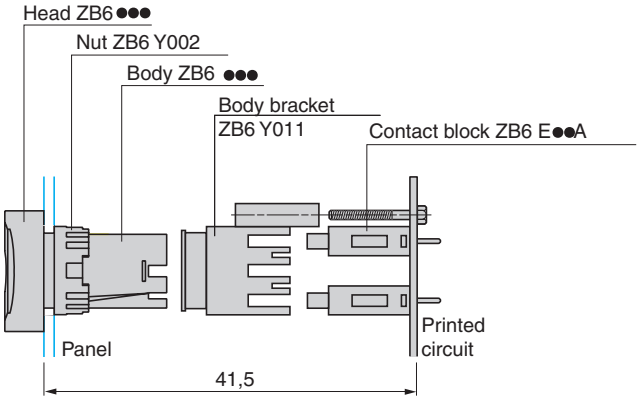


Mounting with body bracket

With socket adaptor ZB6 Y010



Direct mounting without socket adaptor ZB6 Y010



A: 24 minimum for rectangular heads
18 minimum for square or circular heads

B:: 18 minimum

1 6 x Ø 1.1 mm holes.

2 1 x Ø 2.6 $^{0}_{0.2}$ hole for locating pin, only when using socket adaptor ZB6 Y010.

3 1 x Ø 3.2 $^{0}_{0.2}$ hole for fixing of printed circuit board onto the front panel using body bracket ZB6 Y011.
This hole must be drilled on the left-hand side, when heads are positioned at the normal angle.
Fit a body bracket ZB6 Y011 every 72 mm maximum for cut-outs on 24 mm centres (rectangular heads) and 54 mm maximum for cut-outs on 18 mm centres (square or circular heads).

General tolerances of the panel and printed circuit board: T1, T2

The cumulative tolerance must not exceed 0.3 mm: **T1 + T2 = 0.3 mm maximum.**

Installation precautions:

Thickness of printed circuit board: 1.6 mm minimum.

(1) The cut-out dimensions are the same for direct mounting and for mounting using socket adaptor ZB6 Y010.

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Control and signalling units Ø 22

Harmony® XB4, metal

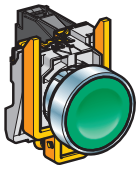
Pushbuttons, switches and pilot lights

1

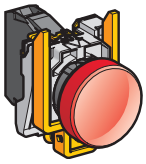
Description

The Ø 22 range of metal control and signalling units comprises:

Complete units with chromium plated metal bezel, XB4 B

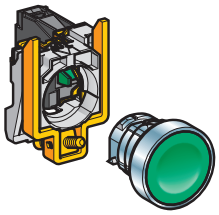


Pushbuttons and switches

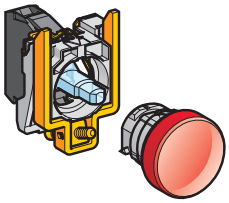


Pilot lights

Sub-assemblies with chromium plated or black metal bezel, ZB4 B

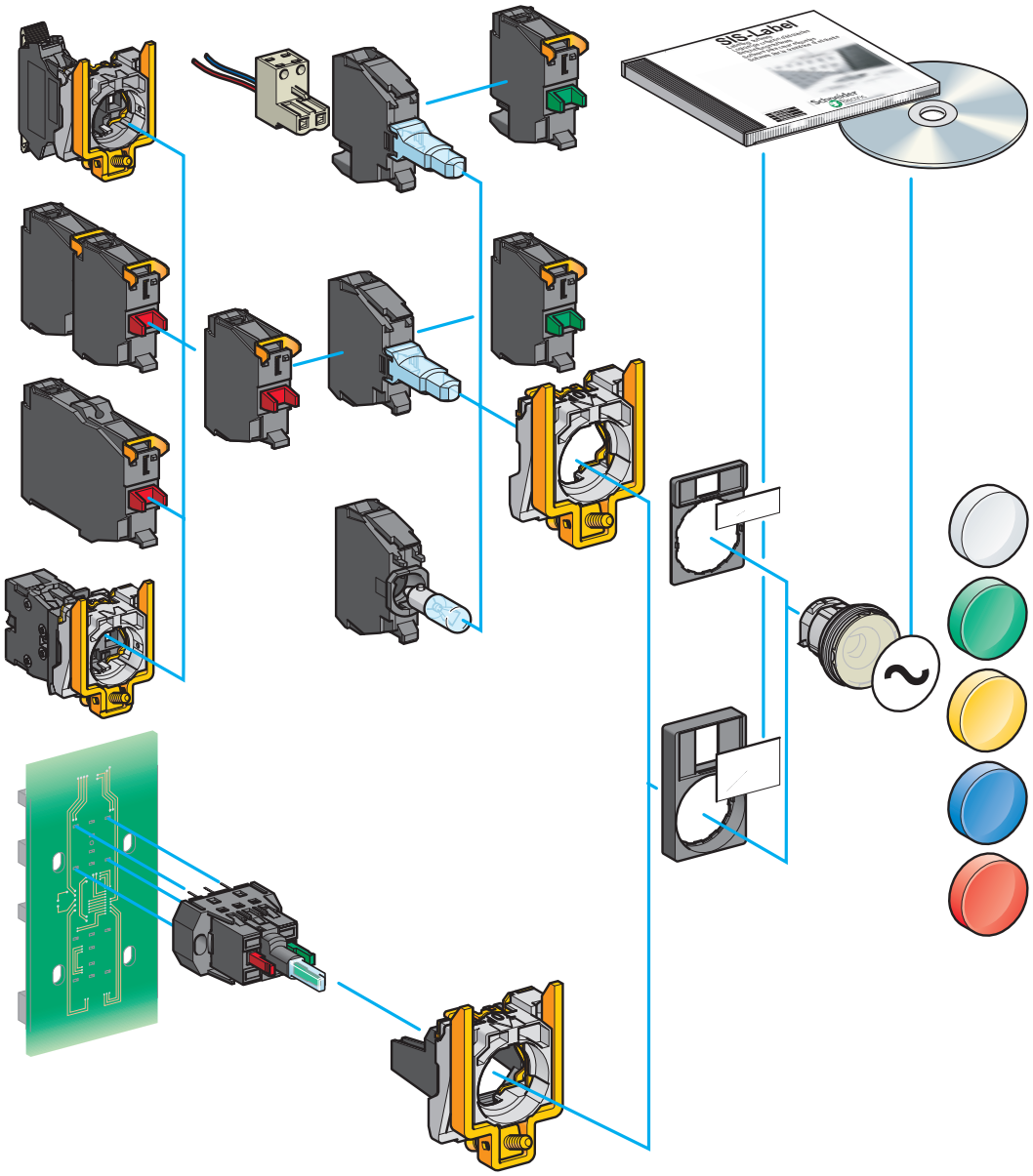


Pushbuttons and switches: body + head sub-assemblies



Pilot lights: body + head sub-assemblies

ZB component parts and accessories



Characteristics : page 1/52
References : page 1/58
Dimensions : page 1/106

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Control and signalling units Ø 22
Harmony® XB4, metal
Pushbuttons, switches and pilot lights

Schematic library

Contact functions (pushbuttons, Emergency stop and Emergency switching off pushbuttons)



Pushbutton
N/O contact



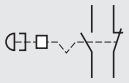
Pushbutton
N/C contact



Mushroom head spring return
N/O contact



Emergency switching off
mushroom head pushbutton-
Push-pull N/C contact



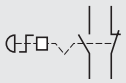
Emergency stop trigger
action mushroom head - Push-pull
N/O + N/C contacts



Emergency switching off
- Turn to release
N/C contact



Emergency switching off
- Turn to release, with key
N/C contact



Emergency stop trigger action
mushroom head - Turn to release
N/O + N/C contacts



Emergency stop trigger
action mushroom head
Turn to release, with key
N/O + N/C contacts



Double-headed pushbutton
N/O + N/C contacts

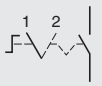


Early make contact block
N/O contact

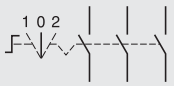


Late break contact block
N/C contact

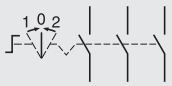
Contact functions (selector switches)



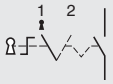
Selector switch 2-position stay put
N/O contact



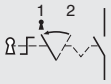
Selector switch 3-position stay put
N/O+N/O+N/O contacts



Selector switch 3-position
2 spring return to centre
N/O+N/O+N/O contacts



Selector switch 2-position stay put,
key withdrawal from LH position -
N/O contact



Selector switch 2-position spring return from right to left,
key withdrawal from LH position
N/O contact

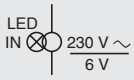
Signalling functions



Pilot light with BA 9s
incandescent bulb

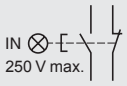


LED pilot light

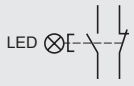


Pilot light with integral transformer 230 V primary, 6 V secondary
BA 9s bulb, incandescent or LED

Combined functions, contact + signalling (pushbuttons and selector switches)



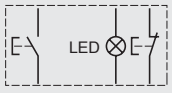
Illuminated pushbutton,
BA 9s incandescent bulb
N/O+N/C contacts



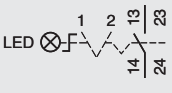
Illuminated pushbutton
LED - N/O+ N/C contacts



Illuminated pushbutton with integral transformer
230 V ~ 50/60 Hz primary, 6 V secondary
BA 9s bulb, incandescent or LED - N/O+ N/C contacts



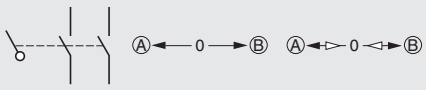
Double-headed pushbutton with LED pilot light



Illuminated selector switch with LED, 2-position stay put
N/O + N/C contacts

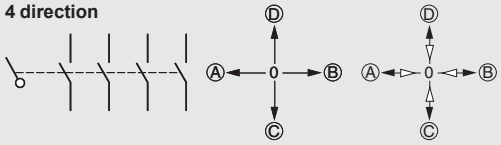
Joystick controller functions

2 direction



Without spring return With spring return

4 direction



Without spring return With spring return

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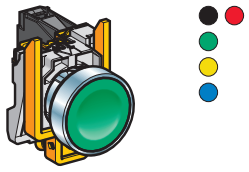
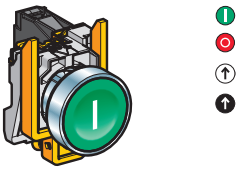
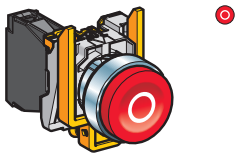
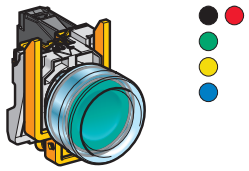
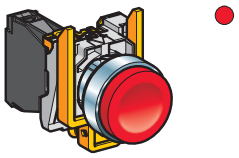
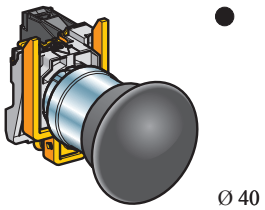
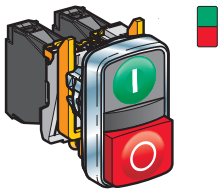
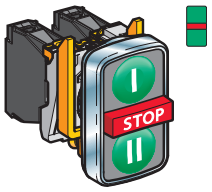
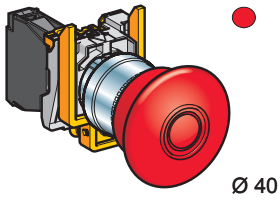
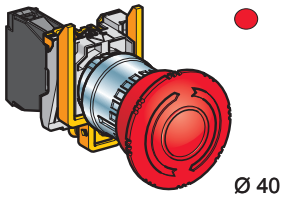
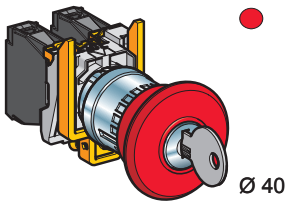
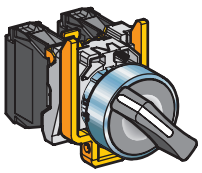
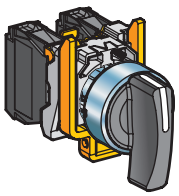
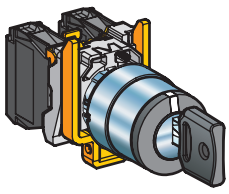
Control and signalling units Ø 22

Harmony® XB4, metal

Pushbuttons, switches and pilot lights: complete units, XB4 B

Complete units	Contact functions		
Pushbuttons, spring return, with chromium plated metal bezel			
	Flush push, unmarked **XB4 BA●1/BA42** **see page 1/58**	Flush push, with marking **XB4 BA3311** **see page 1/60**	Projecting push, with marking **XB4 BL4322** **see page 1/60**
			
	Booted flush push **XB4 BP●1/BP42** **see page 1/59**	Projecting push, unmarked **XB4 BL42** **see page 1/59**	Mushroom head **XB4 BC21** **see page 1/66**
Multiple-headed pushbuttons, spring return, with chromium plated metal bezel			
	Double-headed **XB4 BL73415** **see page 1/65**	Triple-headed **XB4 BA731327/XB4 BA711237** **see page 1/65**	
Emergency Stop or Emergency switching off mushroom head pushbuttons, Ø 40, with chromium plated metal bezel			
Emergency stop trigger action and mechanical latching	Push-pull (EN/ISO 13850) **XB4 BT845** **see page 1/68**	Turn to release (EN/ISO 13850) **XB4 BS844●** **see page 1/68**	Key release (EN/ISO 13850) **XB4 BS9445** **see page 1/68**
Emergency switching off mechanical latching	Push-pull (IEC 60364-5-53) **XB4 BT42** **see page 1/69**	Turn to release (IEC 60364-5-53) **XB4 BS542** **see page 1/69**	Key release (IEC 60364-5-53) **XB4 BS142** **see page 1/69**
Selector switches and key switches, with chromium plated metal bezel			
	Standard handle, black **XB4 BD●●** **see page 1/72**	Long handle, black **XB4 BJ●●** **see page 1/73**	Key switch **XB4 BG●●** **see page 1/74**

Characteristics : page 1/52
References : page 1/58
Dimensions : page 1/111

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Control and signalling units Ø 22

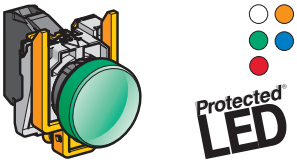
Harmony® XB4, metal

Pushbuttons, switches and pilot lights: complete units, XB4 B

Complete units

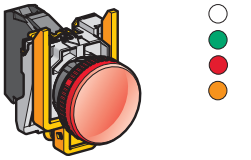
Signalling functions

Pilot lights



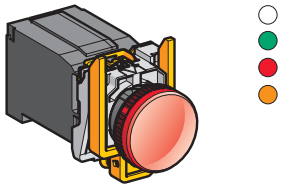
Integral LED

XB4 BVB●/BVG●/BVM●
see page 1/78



For bulb with BA 9s base fitting
Direct supply

XB4 BV6●
see page 1/79



Via integral transformer with secondary

XB4 BV3●/BV4●
see page 1/79

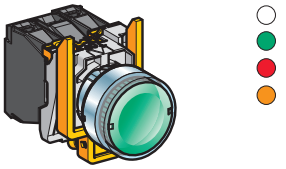
Combined functions (contact + signalling)

Illuminated pushbuttons, spring return, flush push, chromium plated metal bezel



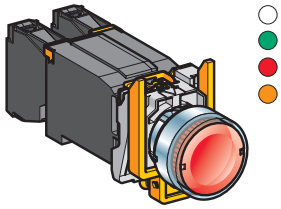
Integral LED

XB4 BW3●B5/BW3●G5/BW3●M5
see page 1/61



For bulb with BA 9s base fitting
Direct supply

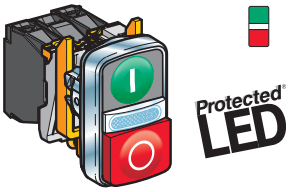
XB4 BW3●65
see page 1/63



Via integral transformer

XB4 BW3●35/BW3●45
see page 1/63

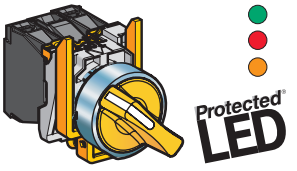
Double-headed pushbuttons + pilot light block, spring return, chromium plated metal bezel



Integral LED

XB4 BW73731●5
see page 1/64

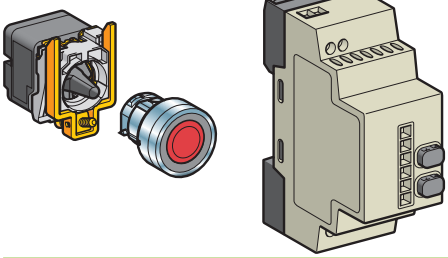
Illuminated selector switches with standard handle, chromium plated metal bezel



Integral LED

XB4 BK12●●5, XB4 BK13●●5
see page 1/76

Wireless and batteryless pushbutton



Ready-to-use packs

XB4 R●●●●
see page 1/208

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Control and signalling units Ø 22

Harmony® XB4, metal

Pushbuttons, switches and pilot lights: sub-assemblies, ZB4 B

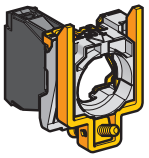
Non illuminated units for user assembly

Contact functions

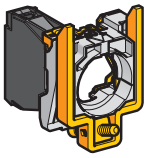
Body sub-assemblies

Head sub-assemblies, chromium plated or black metal bezel

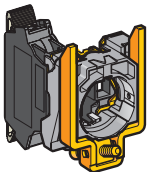
For pushbuttons, spring return, unmarked



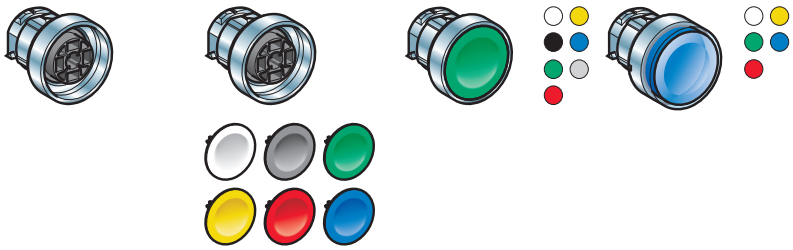
Screw clamp terminals
ZB4 BZ10●/BZ141
page 1/82



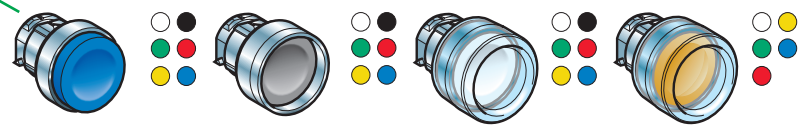
Faston
ZB4 BZ10●3
page 1/86



Spring clamp terminals
ZBE 10●5
ZB4 BZ10●5
page 1/84

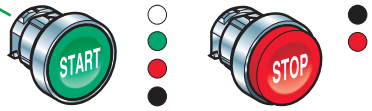


Flush push without cap	Flush push with set of 6 caps	Flush push	Flush push for insertion of legend
ZB4 BA0 **page 1/58**	**ZB4 BA9** **page 1/58**	**ZB4 BA●** **page 1/58**	**ZB4 BA●8** **page 1/58**



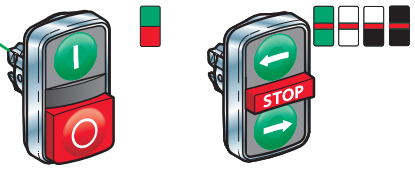
Projecting push	Recessed push	Booted flush/ projecting push	Booted flush push for insertion of legend
ZB4 BL● **page 1/58**	**ZB4 BA●6** **page 1/59**	**ZB4 BP●/ BP●S** **page 1/59**	**ZB4 BP●8** **page 1/59**

For pushbuttons, spring return, with marking



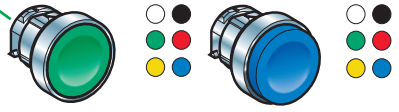
Flush push	Projecting push
ZB4 BA●3●/BA●4● **ZB4 BA334/335** **page 1/60**	**ZB4 BL●3●** **page 1/60**

For multiple-headed pushbuttons, spring return



Double-headed pushbuttons	Triple-headed pushbuttons
ZB4 BA7●●● **ZB4 BA79** **ZB4 BL734●** **page 1/64**	**ZB4 BA7313●** **ZB4 BA711●●** **ZB4 BA72124** **ZB4 BA791** **page 1/65**

For "push-push to release" pushbuttons



Flush push	Projecting push
ZB4 BH0● **page 1/70**	**ZB4 BH●** **page 1/70**

Characteristics : page 1/52
References : page 1/58
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Pushbuttons, switches and pilot lights: sub-assemblies, ZB4 B

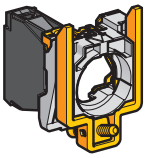
Non illuminated units for user assembly *(continued)*

Contact functions

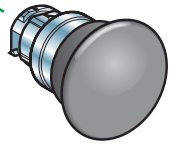
Body sub-assemblies

Head sub-assemblies, chromium plated or black metal bezel

For mushroom head pushbuttons

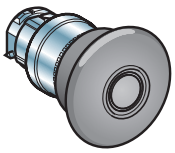


Screw clamp terminals
ZB4 BZ10●/BZ141
page 1/82



Ø 30
Ø 40
Ø 60

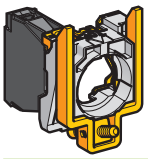
Spring return
ZB4 BC●/BR●
see page 1/66



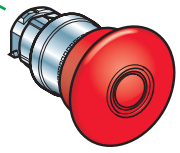
Ø 30
Ø 40
Ø 60

Latching
ZB4 B●2/BS●2/BS55
see page 1/67

For Emergency Stop or Emergency switching off mushroom head pushbuttons

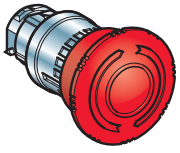


Faston
ZB4 BZ10●3
page 1/86



Ø 30
Ø 40
Ø 60

Push-pull (EN/ISO 13850)
ZB4 BT84
see page 1/68



Ø 30
Ø 40
Ø 60

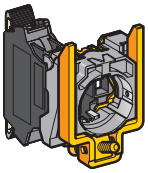
Turn to release (EN/ISO 13850)
ZB4 BS8●4
see page 1/68

Emergency stop trigger action and mechanical latching

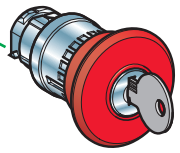
Emergency switching off mechanical latching

Push-pull (IEC 60364-5-3)
ZB4 BT4/BX4
see page 1/69

Turn to releasel (IEC 60364-5-3)
ZB4 BS44/BS54/BS64
see page 1/69



Spring clamp terminals
ZBE 10●5
ZB4 BZ10●5
page 1/84



Ø 30
Ø 40
Ø 60

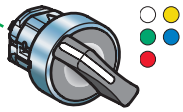
Key release (EN/ISO 13850)
ZB4 BS9●4
see page 1/68

Emergency stop trigger action and mechanical latching

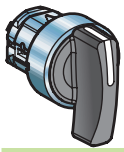
Emergency switching off mechanical latching

Key release (IEC 60364-5-3)
ZB4 BS74/BS14/BS24
see page 1/69

For selector switches and key switches

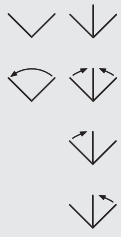


Standard black handle *(1)*
ZB4 BD●
page 1/72

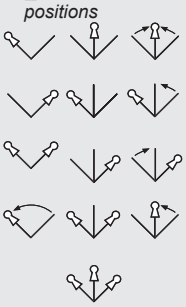


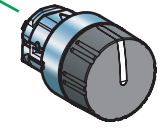
Long black handle *(1)*
ZB4 BJ●
page 1/73

(1) Switch handle and knob positions

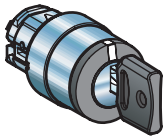


(2) Key switch positions
Key withdrawal positions



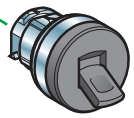


Knurled black knob *(1)*
ZB4 BD●9
page 1/75



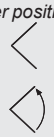
Key switch *(2)*
ZB4 BG●●/
BG●TEC10
page 1/74

For toggle switches



2-position lever *(3)*
ZB4 BD●8, see page 1/75

(3) Lever positions



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Control and signalling units Ø 22

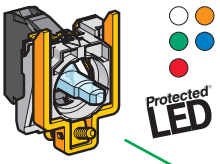
Harmony® XB4, metal

Pushbuttons, switches and pilot lights: sub-assemblies, ZB4 B

Pilot lights for user assembly

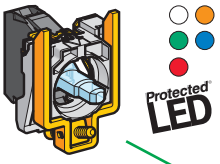
Signalling functions

Body sub-assemblies with integral LED



Connection: screw clamp terminals

ZB4 BVJ/BVB/BVG/BVM
see page 1/90

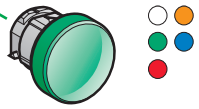


Connection: plug-in connector

ZB4 BVB●4/BVG●4/BVM●4

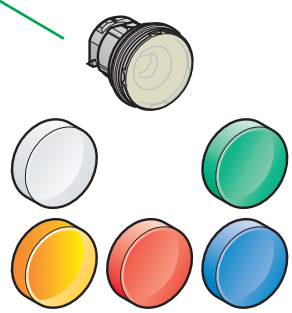
please consult your customer care centre

Head sub-assemblies



With lens fitted

ZB4 BV0●3
see page 1/78



With 5 separate lenses, not fitted

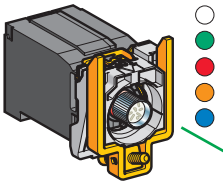
ZB4 BV003
see page 1/78

Body sub-assemblies for BA 9s bulb



Direct supply
Connection: screw clamp terminals

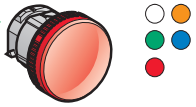
ZB4 BV6
see page 1/93



Via integral transformer
Connection: screw clamp terminals

ZB4 BV●D●
see page 1/93

Head sub-assemblies



With lens fitted

ZB4 BV0●, ZB4 BV0●S
see page 1/79

Characteristics : page 1/52
References : page 1/58
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Pushbuttons, switches and pilot lights: sub-assemblies, ZB4 B

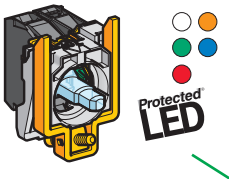
Illuminated pushbuttons for user assembly

Combined functions (contact + signalling)

Body sub-assemblies with integral LED

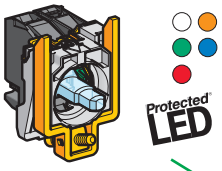
Head sub-assemblies, chromium plated or black metal bezel

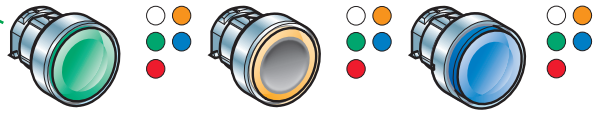
For illuminated pushbuttons, spring return



Screw clamp terminals

ZB4 BW0B/BW0G/ BW0M
page 1/88

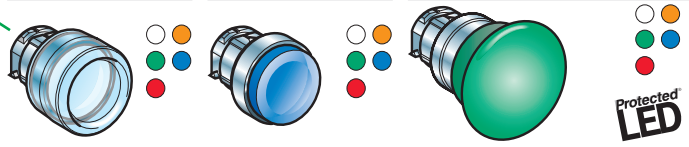




Flush push
ZB4 BW3●3
page 1/62

Flush push with illuminated ring
ZB4 BW9●3
page 1/62

Flush push for insertion of legend
ZB4 BA●8
page 1/62



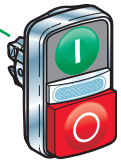
Booted flush push
ZB4 BW5●3
page 1/62

Projecting push
ZB4 BW1●3,
ZB4 BW1●3S
page 1/62

Mushroom head, spring return
ZB4 BW4●3
page 1/66

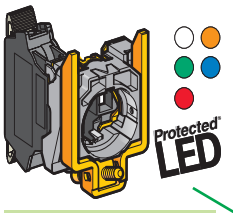
For illuminated double-headed pushbuttons, spring return

Plug-in connector
ZB4 BW0B●●4
please consult your customer care centre

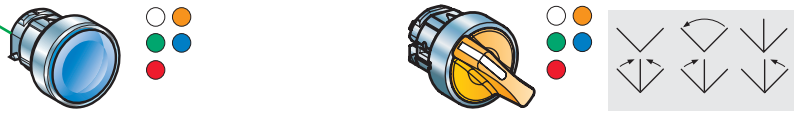


Double-headed (flush/flush push) + central pilot light
Double-headed (flush/projecting push) + central pilot light
ZB4 BW7A17●● / ZB4 BW7A374● / ZB4 BW7A9, see page 1/64
ZB4 BW7L374●, see page 1/64

For illuminated "push-push to release" pushbuttons and illuminated selector switches with standard handle



Spring clamp terminals
ZBV ●●●
page 1/84



Flush or projecting "push-push to release"
ZB4 BH0●3/BH●3
see page 1/71

Selector switches with standard handle
ZB4 BK1●●3
see page 1/76

For illuminated mushroom head pushbuttons



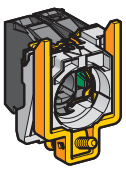
Mushroom head, latching
ZB4 BW6●3
see page 1/67

Emergency switching off, mechanical latching, push-pull
ZB4 BW643
see page 1/69

Body sub-assemblies for BA 9s bulb

Head sub-assemblies, chromium plated or black metal bezel

For illuminated pushbuttons, spring return



Direct supply or via integral transformer
Screw clamp terminals
ZB4 BW0●●●
page 1/92



Flush push
ZB4 BW3●,
ZB4 BW3●S
page 1/63

Projecting push
ZB4 BW1●,
ZB4 BW1●S
page 1/63

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Control and signalling units Ø 22
Harmony® XB4 metal
Pushbuttons, switches and pilot lights

Environment

Protective treatment standard version			"TH" treatment
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 70: LED and neon bulb versions - 25…+ 55: incandescent bulb version
Electric shock protection	Conforming to IEC 61140		Class I
Degree of protection	Conforming to IEC 60529		IP 66 IP 69 K (Selector switches and multiple-headed pushbuttons)
	Conforming to NEMA		NEMA type 4X and 13, unless otherwise stated
Resistance to high pressure washer		**Pa**	70×10^5 (70 bar); distance: 0.1 m Temperature: 55°C
Mechanical shock protection	Conforming to IEC 50102		Non illuminated heads: IK 03 Illuminated heads: IK 05 Selector switch heads: IK 06
Conforming to standards	UL, CSA, GOST, CCC and CE		EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5, EN/IEC 60204-1 and EN/ISO 13850 (Emergency stop trigger action and mechanical latching pushbuttons, see page 1/68), IEC 60364-5-53 (Emergency switching off mechanical latching pushbuttons, see page 1/69) UL 508, CSA C22-2 n° 14, GB 14048.5
Product certifications	UL Listed, CSA		Standard single contacts with screw clamp and spring terminals: A600; Q600 Double contacts with screw clamp terminals: A600; Q600 Light blocks with screw clamp terminals Joystick controllers XD4 PA/ZD4 PA: A600; R300 Special contact blocks: □ ZBE 201: A300; Q300 □ ZBE 202: A600; Q600 Single contacts for high power switching: □ ZBE 501 and ZBE 502: A300; P300
	UL Recognized, CSA		Standard single contacts for plug-in connector: A300; R300 Standard contacts for printed circuit board: B300; R300
	BV, RINA, LROS, DNV, GL, GOST, CCC		Standard single contacts and double contacts with screw clamp or spring terminals:
Terminal referencing	Conforming to EN 50005 and EN 50013		

Characteristics of contact or combined contact and signalling functions (see page 1/56)

Mechanical characteristics

Contact operation	N/C or N/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 appendix K		All functions incorporating a N/C contact have positive opening operation
Operating travel (to change the electrical state)	Pushbutton	**mm**	Changing N/C state: 1.5 Changing N/O state: 2.6 Total travel: 4.3
Operating force	Pushbutton	**N**	Changing N/C state: 3.5 Changing N/O state: 3.8
	Additional contact only (extra to change state)	**N**	Single N/C contact: 2 Single N/O contact: 2.3
		N	Double N/C contact: 3.4 Double N/O contact: 5 Double contact N/C + N/O: 4.6
	Emergency stop or Emergency switching off with N/C + N/O	**N**	Standard push-pull: 45 Trigger action push-pull: 50
		N	Standard turn to release and key release: 40 Trigger action turn to release and key release, "trigger action": 44

General: page 1/44 References: page 1/58 Dimensions: page 1/106

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Characteristics of contact or combined contact and signalling functions (continued) (see page 1/56)

Mechanical characteristics (continued)

Operating torque (to change the electrical state)	Selector switches		**N.m**	N/O contact: 0.14
	Additional contact only		**N.m**	N/O contact: 0.05
Mechanical durability (in millions of operating cycles)	Pushbutton	Spring return		5
		Multiple-headed		1
		Push-push to release		0.5
	Selector switch	Non illuminated		1
		Illuminated		0.5
	Toggle switch			0.5
	Emergency Stop or Emergency switching off pushbutton			0.3 with 3 contacts
	Joystick controller			1
	Standard contact block only			5
	Low power switching contact block only (dust protected)			0.5
Vibration resistance	Conforming to IEC 60068-2-6			Frequency: 2 to 500 Hz: 5 gn
Mechanical shock resistance	Conforming to IEC 60068-2-27			All functions except mushroom head pushbuttons, spring return: □ half sine wave acceleration 11 ms: 50 gn □ half sine wave acceleration 18 ms: 30 gn
				Mushroom head pushbutton, spring return: □ half sine wave acceleration 11 ms: 10 gn

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Standard block with screw clamp or spring terminals: Min: 1 x 0.22 without cable end Max: 2 x 1.5 with cable end Cross headed screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (maxi 1.2 N.m) Contact blocks for high power switching: Min: 1 x 0.5 without cable end Max: 2 x 2.5 with or without cable end
Contact material	Silver alloy (Ag / Ni)		Standard single and double blocks with screw clamp or spring terminals Blocks for plug-in connector Standard blocks for printed circuit board connection
	Gold flashed (Ag / Ni / Au)		Low power switching contact blocks with screw clamp terminals Low power switching contact blocks for printed circuit board connection
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	Standard single and double blocks with screw clamp or spring terminals: 10 (gG cartridge fuse conforming to IEC 60269-1) Blocks for plug-in connector: 4 (gG cartridge fuse conforming to IEC 60269-1) Standard blocks for printed circuit board connection: 4 (gG cartridge fuse conforming to IEC 60269-1)
Rated thermal current	Conforming to EN/IEC 60947-5-1	**A**	Standard single and double blocks with screw clamp or spring terminals: 10 Blocks for plug-in connector: 10 Standard blocks for printed circuit board connection: 6
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Standard single and double blocks with screw clamp or spring terminals: Ui = 600, degree of pollution 3 Blocks for plug-in connector or Faston connectors: Standard blocks for printed circuit board connection Contact blocks for high-power switching: Ui = 250, degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Standard single and double blocks with screw clamp or spring terminals:Uimp = 6 Blocks for plug-in connector Standard blocks for printed circuit board connection Contact blocks for high-power switching applications: Uimp = 4

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1

Characteristics of contact or combined contact and signalling functions (continued) (see page 1/56)

Electrical characteristics (continued)

Rated operational characteristics Conforming to EN/IEC 60947-5-1		a.c. supply: utilisation category AC-15		**Standard single and double blocks with screw clamp or spring terminals:** A600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A **Blocks for plug-in connector:** A300: Ue = 120 V and Ie = 6 A or Ue = 240 V and Ie = 3 A **Standard blocks for printed circuit board connection:** B300: Ue = 120 V and Ie = 3 A or Ue = 240 V and Ie = 1.5 A **Special contact blocks:** □ ZBE 201: A300: Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A (with insulation voltage Ui = 500 V) □ ZBE 202: A600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A **Contact blocks for high power switching:** □ ZBE 50●: A300: Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A
		d.c.supply: utilisation category DC-13		**Standard single and double blocks with screw clamp or spring terminals** Q600: Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.27 A or Ue = 125 V and Ie = 0.55 A **Joystick controllers XD4 PA/ZD4 PA:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Blocks for plug-in connector:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Standard blocks for printed circuit board connection:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Special contact blocks:** □ ZBE 201: Q300; Ue = 125 V and Ie = 0.55 A or Ue = 250 V and Ie = 0.27 A □ ZBE 202: Q600; Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.27 A or Ue = 125 V and Ie = 0.55 A **Contact block for high power switching:** □ ZBE 50●: P300: Ue = 125 V and Ie = 1.1 A or Ue = 250 V and Ie = 0.55 A
Characteristics of special contact blocks	Low power switching		**VA** **A** **V**	P max: 12 I max: 0.1 U max: 24
	High power switching Conforming to EN/IEC 60947-5-1	100 000 operating cycles Load factor: 0.5 Operating rate: 900 cycles/hour	**VA** **A** **V**	P max: 240 I max: 10 U: 24 ⎓
Electrical durability Conforming to EN/IEC 60947-5-1 appendix C Operating rate 3600 operating cycles/hour Load factor: 0.5		a.c. supply for 1 million operating cycles utilisation category AC-15		Standard single blocks with screw clamp or spring terminals: **V** 24 | 120 | 230 **A** 4 | 3 | 2
				Standard double blocks with screw clamp terminals and blocks for plug-in connector: **V** 24 | 120 | 230 **A** 3 | 1.5 | 1
		d.c. supply for 1 million operating cycles utilisation category DC-13		Standard single blocks with screw clamp or spring terminals: **V** 24 | 110 **A** 0.5 | 0.2
				Standard double blocks with screw clamp terminals and blocks four plug-in connector: **V** 24 | 110 **A** 0.4 | 0.15
Electrical reliability Failure rate Conforming to EN/IEC 60947-5-4	In clean environment	Standard blocks		- at 17 V and 5 mA, with confidence level of 90 %: $\lambda_{90} = 10^{-8}$, defect contact voltage drop = 1.7 V - at 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 10^{-7}$, defect contact voltage drop = 1 V
				At 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 5.10^{-8}$, defect contact voltage drop = 1 V
		Special blocks with gold flashed contacts for low power switching		At 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 5.10^{-8}$, defect contact voltage drop = 1 V
	In dusty environment	Special blocks with gold flashed contacts and dust protection for low power switching only		At 5 V and 1 mA, $\lambda < 10^{-7}$

General: page 1/44 References: page 1/58 Dimensions: page 1/106

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Characteristics of illuminated units (pilot lights)

Mechanical characteristics

Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 12 to 500 Hz: 5 gn
Mechanical shock resistance	Conforming to IEC 60068-2-27		Half sine wave acceleration 11 ms: 50 gn Half sine wave acceleration 18 ms: 30 gn

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Screw clamp and spring terminals Min: 1 x 0.22 without cable end (1 x 0.34 for linking) Max: 2 x 1.5 with cable end
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Direct supply pilot light blocks (BA 9s bulb): Ui = 250, degree of pollution 3 Pilot light blocks with integral LED: Ui = 250, degree of pollution 3 Pilot light blocks with transformer: Ui = 600, degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Direct supply pilot light blocks (BA 9s bulb): Uimp = 4 Pilot light blocks with integral LED: Uimp = 4 Pilot light blocks with transformer: Uimp = 6

Specific characteristics of single light blocks with integral LED

Voltage limits	For rated voltage	**V**	12 V: 10 to 15 ⎓ and 10.2 to13.8 ∿ 24 V: 19.2 to 30 ⎓ and 21.6 to 26.4 ∿ 24 to 120 V: 19.2 to 132 ⎓ and 21.6 to 132 ∿ 110 to 120 V: 94 to 132 ∿ 230/240 V: 195 to 264 ∿
Current consumption	Applicable to all colours	**mA**	Blocks with ⎓ 12 V supply: 18 Blocks with ⎓ 24 V supply: 18 Blocks with ∿ 120 V supply: 14 Blocks with ∿ 240 V supply: 14
Service life	At rated voltage and at an ambient temperature of 25 °C	**H**	100 000
Surge withstand	Conforming to IEC 61000-4-5	**kV**	1
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	**V/m**	10
Resistance to electrostatic discharges	Conforming to IEC 61000-2-6	**kV**	8: in free air, in insulating parts 6: on contact, on metal parts
Direct parallel connection across inductive load e.g.: contactor coil or solenoid	Maximum power of load	**VA**	For high power applications (≥ 30 VA), a **ZBZ V●** LED suppressor must be connected across the light block terminals (see page 1/83)
Electromagnetic emission	Conforming to IEC 55011		Class B

Specific characteristics

Body/fixing collar

Tightening torque of fixing screw		**N.m**	0.8 (max 1.2)

Hour counters and annunciators

Voltage limits	Hour counter and annunciator		± 10% of the nominal voltage
Current consumption	Hour counter	**mA**	XB5 DSB: 7 to 15 XB5 DSG: 8 XB5 DSM: 8
	Annunciator	**mA**	5

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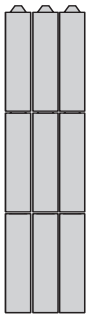
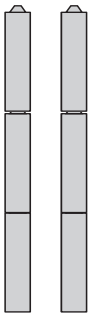
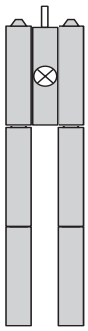
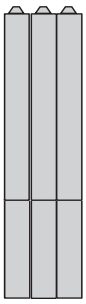
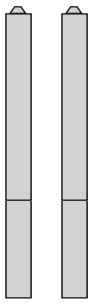
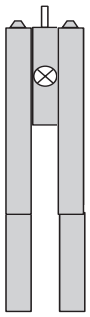
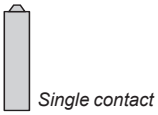
Control and signalling units Ø 22

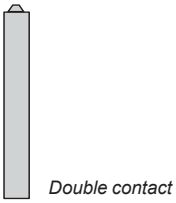
Harmony® XB4 metal

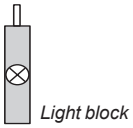
Contact mounting - Contact sequence

Maximum recommended configurations guaranteeing achievement of catalogue characteristics

Unit type (complete units XB4 B, heads ZB4 B)		Pushbuttons, spring return XB4 BA●, ZB4 BA●, (except ZB4 BA●8) XB4 BC●, ZB4 BC●, XB4 BL●, ZB4 BL●, XB4 BP●, ZB4 BP●, ZB4 BR● Triple-headed pushbuttons XB4 BA731327, XB4 BA711137, ZB4 BA7313●, ZB4 BA7111●, ZB4 BA72124, ZB4 BA791	Double-headed pushbuttons XB4 BL73415, ZB4 BA712●, ZB4 B●734●, ZB4 BA79	Illuminated pushbuttons, spring return XB4 BW●, ZB4 BW●, ZB4 BA●8 Double-headed pushbuttons + pilot light block XB4 BW73731●5, ZB4 BW7A17●●, ZB4 BW7●374●, ZB4 BW7A9
Solution using single contacts				
Solution using single and double contacts				
Maximum recommended configurations	Single contacts	9	6	6
	Double contacts + single contacts	3 + 3	2 + 2	2 + 2
	Light block	–	–	1



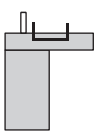
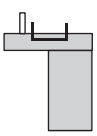
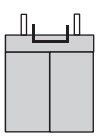






Possible configurations for high power switching contacts *(1) (2)*

High power switching contact blocks with screw clamp terminal connections:
ZBE 501, ZBE 502, ZBE 503, ZBE 504 and ZBE 505
High power switching contact blocks with connection by Faston connectors:
ZBE 5013, ZBE 5023, ZBE 5033, ZBE 5043 and ZBE 5053

		
1 N/O	1 N/C	1 N/O + N/C 1 N/O + N/O 1 N/C + N/C

(1) The configurations are not upgradable and cannot be combined with other types of contact and signalling functions.
(2) High power switching contacts are not compatible with Harmony triple-headed pushbuttons.

General : page 1/44 | Characteristics : page 1/52 | References : page 1/58 | Dimensions : page 1/106

Schneider Electric

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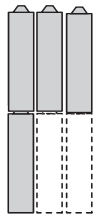
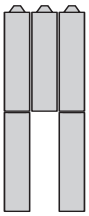
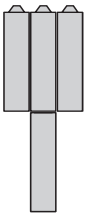
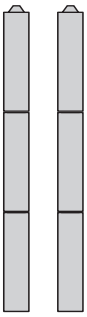
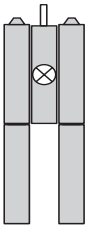
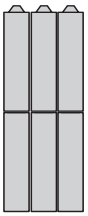
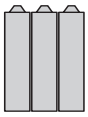
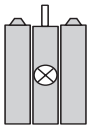
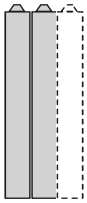
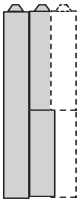
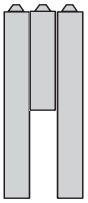
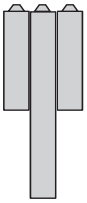
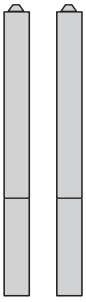
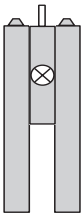
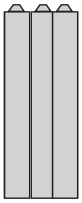
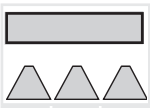
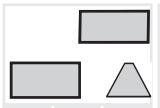
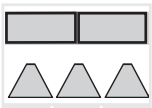
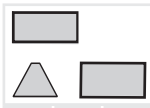
	Emergency stop or Emergency switching off XB4BT●, ZB4BT●, XB4BS●, ZB4BS●		Selector switches ■ Standard handle XB4 BD●, ZB4 BD●, ■ Long handle XB4 BJ●, ZB4 BJ●, ■ Knurled knob ZB4 BD●9, ■ Key switch XB4 BG●, ZB4 BG●			Illuminated selector switches, standard handle XB4 BK●, ZB4 BK●	Toggle switches ZB4 BD●8	Pushbuttons, push-push ZB4 BH●	Illuminated pushbuttons, push-push ZB4 BH●3
									
								–	–
	4	4	5	4	6	4	6	3	2
	2 + 0	1 + 2	2 + 1	1 + 2	2 + 2	2 + 0	3 + 0	–	–
	–	–	–	–	–	1	–	–	1

Sequence of contacts fitted to selector switch bodies

Unit type			Selector switches													
			2-position						3-position							
			315°			45°			315°			0°			45°	
Push	Position	Top															
		Bottom														
	Location		L	C	R	L	C	R	L	C	R	L	C	R	L	C	R
	State		0	0	0	1	1	1	1	1	0	0	0	0	0	1	1
Contacts	N/O		□	□	□	■	■	■	■	■	□	□	□	□	□	■	■
	N/C		■	■	■	□	□	□	□	□	■	■	■	■	■	□	□

L left, C centre, R right
□ open, ■ closed

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Control and signalling units Ø 22

Harmony® XB4, metal

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

Pushbuttons with flush push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Flush	1	–	White	**XB4 BA11** (ZB4 BZ101 + ZB4 BA1)	0.080
				Black	**XB4 BA21** (ZB4 BZ101 + ZB4 BA2)	0.080
				Green	**XB4 BA31** (ZB4 BZ101 + ZB4 BA3)	0.080
				Yellow	**XB4 BA51** (ZB4 BZ101 + ZB4 BA5)	0.080
				Blue	**XB4 BA61** (ZB4 BZ101 + ZB4 BA6)	0.080
		–	1	Red	**XB4 BA42** (ZB4 BZ102 + ZB4 BA4)	0.080
Heads only						
	Without cap *(2)*			–	**ZB4 BA0**	0.028
	Flush, with set of 6 coloured caps			6 colours *(3)*	**ZB4 BA9**	0.038
	Flush			White	**ZB4 BA1**	0.029
				Black	**ZB4 BA2**	0.029
				Green	**ZB4 BA3**	0.029
				Red	**ZB4 BA4**	0.029
				Yellow	**ZB4 BA5**	0.029
				Blue	**ZB4 BA6**	0.029
				Grey	**ZB4 BA8**	0.029
	Flush with transparent cap for insertion of legend *(4)*			White	**ZB4 BA18**	0.028
				Green	**ZB4 BA38**	0.028
				Red	**ZB4 BA48**	0.028
				Yellow	**ZB4 BA58**	0.028
				Blue	**ZB4 BA68**	0.028
	Flush (high bezel)			White	**ZB4 BA14**	0.034
				Black	**ZB4 BA24**	0.034
				Green	**ZB4 BA34**	0.034
				Red	**ZB4 BA44**	0.034
				Yellow	**ZB4 BA54**	0.034
				Blue	**ZB4 BA64**	0.034

814084



XB4 BA31

814141



ZB4 BA0

814142



ZB4 BA4

814143



ZB4 BA38

103541



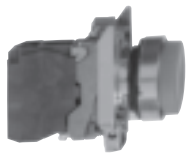
ZB4 BA34

Pushbuttons with projecting push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Projecting	–	1	Red	**XB4 BL42** (ZB4 BZ102 + ZB4 BL4)	0.081
Heads only						
	Projecting			White	**ZB4 BL1**	0.030
				Black	**ZB4 BL2**	0.030
				Green	**ZB4 BL3**	0.030
				Red	**ZB4 BL4**	0.030
				Yellow	**ZB4 BL5**	0.030
				Blue	**ZB4 BL6**	0.030

814087



XB4 BL42

109495



ZB4 BL1

Heads with black metal bezel

To order, add a figure **7** to the references listed from above.
Example: **ZB4 BA0** becomes **ZB4 BA07**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Coloured cap to be ordered separately: see page 1/94.
(3) Head supplied with 6 different coloured caps (white, black, green, red, yellow, blue) not fitted.
(4) For legend ordering information, see page 1/101.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94


814146

ZB4 BA36

Pushbuttons with recessed push *(1)*

High guard

Shape of head	Type of push	Colour	Reference	Weight kg
Heads only				
	Recessed (high guard)	White	**ZB4 BA16**	0.034
		Black	**ZB4 BA26**	0.034
		Green	**ZB4 BA36**	0.034
		Red	**ZB4 BA46**	0.034
		Yellow	**ZB4 BA56**	0.034
		Blue	**ZB4 BA66**	0.034


110009

XB4 BP21

Pushbuttons with silicone booted head for severe environments *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Booted, clear silicone (colour of push unobscured)	1	–	Black	**XB4 BP21** (ZB4 BZ101 + ZB4 BP2)	0.082
				Green	**XB4 BP31** (ZB4 BZ101 + ZB4 BP3)	0.082
				Yellow	**XB4 BP51** (ZB4 BZ101 + ZB4 BP5)	0.082
				Blue	**XB4 BP61** (ZB4 BZ101 + ZB4 BP6)	0.082
		–	1	Red	**XB4 BP42** (ZB4 BZ102 + ZB4 BP4)	0.082
Silicone booted heads only, with increased protection (IP 69K)						
Flush	**Clear boot** *(2)* For insertion of protected legend within head *(3)*			White	**ZB4 BP18**	0.034
				Green	**ZB4 BP38**	0.034
				Red	**ZB4 BP48**	0.034
				Yellow	**ZB4 BP58**	0.034
				Blue	**ZB4 BP68**	0.034
Projecting	**Clear boot** *(2)*			White	**ZB4 BP1**	0.031
				Black	**ZB4 BP2**	0.031
				Green	**ZB4 BP3**	0.031
				Red	**ZB4 BP4**	0.031
				Yellow	**ZB4 BP5**	0.031
				Blue	**ZB4 BP6**	0.031


814144

ZB4 BP18


103542

ZB4 BP2S

Shape of head	Type of push	Colour	Reference	Weight kg
Silicone booted heads only, standard for mouting with legend holder (IP 66)				
Flush	**Coloured boot** *(4)*	White	**ZB4 BP1S**	0.034
		Black	**ZB4 BP2S**	0.034
		Green	**ZB4 BP3S**	0.034
		Red	**ZB4 BP4S**	0.034
		Yellow	**ZB4 BP5S**	0.034
		Blue	**ZB4 BP6S**	0.034
	Clear membrane *(4)* For insertion of protected legend within head *(3)*	White	**ZB4 BP183**	0.026
		Green	**ZB4 BP383**	0.026
		Red	**ZB4 BP483**	0.026
		Yellow	**ZB4 BP583**	0.026
		Blue	**ZB4 BP683**	0.026


109496

ZB4 BP183

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BP18** becomes **ZB4 BP187**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Permissible panel thickness 1 to 5 mm, cannot be used with legend holders.
(3) To order a legend for insertion within the head, see page 1/101.
(4) Replacement of silicone protection element without dismantling head, see page 1/95.

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Control and signalling units Ø 22

Harmony® XB4, metal

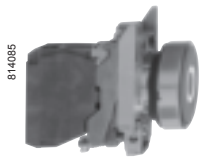
Spring return pushbuttons, with marking

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

Pushbuttons with flush or projecting push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Marking Text (colour)	Colour of push	Reference	Weight kg
Complete units							
	Flush	1	–	"I" (white)	Green	**XB4 BA3311** (ZB4 BZ101 + ZB4 BA331)	0.080
	Flush	–	1	"O" (white)	Red	**XB4 BA4322** (ZB4 BZ102 + ZB4 BA432)	0.080
	Projecting	1	1	"O" (white)	Red	**XB4 BL4325** ▲ (ZB4 BZ105 + ZB4 BL432)	0.080
	Flush *(2)*	1	–	↑ (black)	White	**XB4 BA3341** (ZB4 BZ101 + ZB4 BA334)	0.080
	Flush *(2)*	1	–	↓ (white)	Black	**XB4 BA3351** (ZB4 BZ101 + ZB4 BA335)	0.080
Heads only							
	Flush			"I" (white)	Green	**ZB4 BA331**	0.029
				"I" (black)	White	**ZB4 BA131**	0.029
				"II" (white)	Green	**ZB4 BA336**	0.029
				"II" (black)	White	**ZB4 BA136**	0.029
				"START" (white)	Green	**ZB4 BA333**	0.029
				"START" (black)	White	**ZB4 BA133**	0.029
				"ON" (white)	Green	**ZB4 BA341**	0.029
				"ON" (black)	White	**ZB4 BA141**	0.029
				"MARCHE" (white)	Green	**ZB4 BA342**	0.029
				"MARCHE" (black)	White	**ZB4 BA142**	0.029
				(white)	Black	**ZB4 BA245**	0.029
				(black)	White	**ZB4 BA145**	0.029
				"O" (white)	Red	**ZB4 BA432**	0.029
					Black	**ZB4 BA232**	0.029
				"ARRET" (white)	Red	**ZB4 BA433**	0.029
					Black	**ZB4 BA233**	0.029
				"STOP" (white)	Red	**ZB4 BA434**	0.029
					Black	**ZB4 BA234**	0.029
				"OFF" (white)	Red	**ZB4 BA435**	0.029
					Black	**ZB4 BA235**	0.029
				↑ (black) *(2)*	White	**ZB4 BA334**	0.029
				↓ (white) *(2)*	Black	**ZB4 BA335**	0.029
	Projecting			"O" (white)	Red	**ZB4 BL432**	0.030
					Black	**ZB4 BL232**	0.030
				"ARRET" (white)	Red	**ZB4 BL433**	0.030
					Black	**ZB4 BL233**	0.030
				"STOP" (white)	Red	**ZB4 BL434**	0.030
					Black	**ZB4 BL234**	0.030
				"OFF" (white)	Red	**ZB4 BL435**	0.030
					Black	**ZB4 BL235**	0.030


814085

XB4 BA4322


814151

ZB4 BA331


537899

ZB4 BA334


814153

ZB4 BL432

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BA331** becomes **ZB4 BA3317**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Product supplied with cap not clipped-in, allowing orientation through 360° in 90° steps.

▲ Available: 1st quarter 2011.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

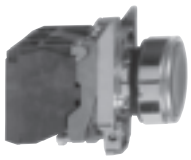
For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

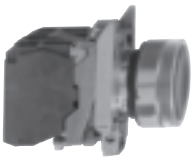
Harmony® XB4, metal

Illuminated pushbuttons, spring return, with integral LED

Assembly of other products using:
body/contact assemblies: see page 1/82
combined sub-assemblies: see page 1/88
accessories: see page 1/94



XB4 BW33B5



XB4 BW34G5

Illuminated pushbuttons with flush push *(1)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Supply voltage V	Colour of push	Reference	Weight kg
Complete units - With plain lens							
	Integral LED	1	1	⎓ 24 50/60 Hz	White	**XB4 BW31B5** (ZB4 BW0B15 + ZB4 BW313)	0.097
					Green	**XB4 BW33B5** (ZB4 BW0B35 + ZB4 BW333)	0.097
					Red	**XB4 BW34B5** (ZB4 BW0B45 + ZB4 BW343)	0.097
					Orange	**XB4 BW35B5** (ZB4 BW0B55 + ZB4 BW353)	0.097
					Blue	**XB4 BW36B5** (ZB4 BW0B65 + ZB4 BW363)	0.097
				∿ 110...120 50/60 Hz	White	**XB4 BW31G5** (ZB4 BW0G15 + ZB4 BW313)	0.097
					Green	**XB4 BW33G5** (ZB4 BW0G35 + ZB4 BW333)	0.097
					Red	**XB4 BW34G5** (ZB4 BW0G45 + ZB4 BW343)	0.097
					Orange	**XB4 BW35G5** (ZB4 BW0G55 + ZB4 BW353)	0.097
					Blue	**XB4 BW36G5** (ZB4 BW0G65 + ZB4 BW363)	0.097
				∿ 230...240 50/60 Hz	White	**XB4 BW31M5** (ZB4 BW0M15 + ZB4 BW313)	0.097
					Green	**XB4 BW33M5** (ZB4 BW0M35 + ZB4 BW333)	0.097
					Red	**XB4 BW34M5** (ZB4 BW0M45 + ZB4 BW343)	0.097
					Orange	**XB4 BW35M5** (ZB4 BW0M55 + ZB4 BW353)	0.097
					Blue	**XB4 BW36M5** (ZB4 BW0M65 + ZB4 BW363)	0.097

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

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Control and signalling units Ø 22

Harmony® XB4, metal

Illuminated pushbuttons, spring return, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/88
accessories: see page 1/94



ZB4 BW333



ZB4 BW563



ZB4 BW113

Illuminated pushbuttons with flush push *(1)*

Shape of head	Type of push	Colour	Reference	Weight kg
Heads only *(2)* **- With plain lens**				
	Flush	White	**ZB4 BW313**	0.026
		Green	**ZB4 BW333**	0.026
		Red	**ZB4 BW343**	0.026
		Orange	**ZB4 BW353**	0.026
		Blue	**ZB4 BW363**	0.026
	Flush with illuminated ring	White	**ZB4 BW913**	0.026
		Green	**ZB4 BW933**	0.026
		Red	**ZB4 BW943**	0.026
		Orange	**ZB4 BW953**	0.026
		Blue	**ZB4 BW963**	0.026
	Flush with clear boot (IP 69K)	White	**ZB4 BW513**	0.031
		Green	**ZB4 BW533**	0.031
		Red	**ZB4 BW543**	0.031
		Orange	**ZB4 BW553**	0.031
		Blue	**ZB4 BW563**	0.031
	Flush for insertion of legend *(3)* **(IP 69K)**	White	**ZB4 BA18**	0.028
		Green	**ZB4 BA38**	0.028
		Red	**ZB4 BA48**	0.028
		Orange	**ZB4 BA58**	0.028
		Blue	**ZB4 BA68**	0.028
Heads only *(2)* **- With grooved lens** *(4)*				
	Flush	White	**ZB4 BW313S**	0.026
		Green	**ZB4 BW333S**	0.026
		Red	**ZB4 BW343S**	0.026
		Orange	**ZB4 BW353S**	0.026
		Blue	**ZB4 BW363S**	0.026

Illuminated pushbuttons with projecting push *(1)*

Shape of head	Type of push	Colour	Reference	Weight kg
Heads only *(2)* **- With plain lens**				
	Projecting	White	**ZB4 BW113**	0.029
		Green	**ZB4 BW133**	0.029
		Red	**ZB4 BW143**	0.029
		Orange	**ZB4 BW153**	0.029
		Blue	**ZB4 BW163**	0.029
Heads only *(2)* **- With grooved lens** *(4)*				
	Projecting	White	**ZB4 BW113S**	0.026
		Green	**ZB4 BW133S**	0.026
		Red	**ZB4 BW143S**	0.026
		Orange	**ZB4 BW153S**	0.026
		Blue	**ZB4 BW163S**	0.026

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BW313** becomes **ZB4 BW3137**.
Example 2: **ZB4 BW313S** becomes **ZB4 BW313S7**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Only for use with bodies comprising a light source with integral LED.
(3) For legend ordering information, see page 1/96.
(4) For use in bright ambient light conditions (outdoors in sunlight, for example).

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Illuminated pushbuttons, spring return, with BA 9s base fitting

Assembly of other products using:
combined sub-assemblies: see page 1/88
accessories: see page 1/94



XB4 BW3545



ZB4 BW33



ZB4 BW14

Illuminated pushbuttons with flush push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Supply voltage V	Colour of push	Reference	Weight kg
Complete units - With plain lens							
	Direct supply for bulb with BA 9s base fitting, 2.4 W max **(bulb not included)**	1	1	≤ 250	White	**XB4 BW3165** (ZB4 BW065 + ZB4 BW31)	0.097
					Green	**XB4 BW3365** (ZB4 BW065 + ZB4 BW33)	0.097
					Red	**XB4 BW3465** (ZB4 BW065 + ZB4 BW34)	0.097
					Orange	**XB4 BW3565** (ZB4 BW065 + ZB4 BW35)	0.097
	Via integral transformer 1.2 VA, 6 V secondary, incandescent bulb with BA 9s base fitting **(bulb included)**	1	1	∼110…120 50/60 Hz	White	**XB4 BW3135** (ZB4 BW035 + ZB4 BW31)	0.169
					Green	**XB4 BW3335** (ZB4 BW035 + ZB4 BW33)	0.169
					Red	**XB4 BW3435** (ZB4 BW035 + ZB4 BW34)	0.169
					Orange	**XB4 BW3535** (ZB4 BW035 + ZB4 BW35)	0.169
				∼ 230 50 Hz ∼220…240 60 Hz	White	**XB4 BW3145** (ZB4 BW045 + ZB4 BW31)	0.170
					Green	**XB4 BW3345** (ZB4 BW045 + ZB4 BW33)	0.170
					Red	**XB4 BW3445** (ZB4 BW045 + ZB4 BW34)	0.170
					Orange	**XB4 BW3545** (ZB4 BW045 + ZB4 BW35)	0.170
Heads only *(2)* **- With plain lens**							
	Flush				White	**ZB4 BW31**	0.027
					Green	**ZB4 BW33**	0.027
					Red	**ZB4 BW34**	0.027
					Orange	**ZB4 BW35**	0.027
					Blue	**ZB4 BW36**	0.027
					Clear	**ZB4 BW37**	0.027
Heads only *(2)* **- With grooved lens** *(3)*							
	Flush				White	**ZB4 BW31S**	0.027
					Green	**ZB4 BW33S**	0.027
					Red	**ZB4 BW34S**	0.027
					Orange	**ZB4 BW35S**	0.027
					Blue	**ZB4 BW36S**	0.027
					Clear	**ZB4 BW37S**	0.027

Illuminated pushbuttons with projecting push *(1)*

Heads only *(2)* **- With plain lens**							
	Projecting				White	**ZB4 BW11**	0.028
					Green	**ZB4 BW13**	0.028
					Red	**ZB4 BW14**	0.028
					Orange	**ZB4 BW15**	0.028
					Blue	**ZB4 BW16**	0.028
					Clear	**ZB4 BW17**	0.028
Heads only *(2)* **- With grooved lens** *(3)*							
	Projecting				White	**ZB4 BW11S**	0.027
					Green	**ZB4 BW13S**	0.027
					Red	**ZB4 BW14S**	0.027
					Orange	**ZB4 BW15S**	0.027
					Blue	**ZB4 BW16S**	0.027
					Clear	**ZB4 BW17S**	0.027

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BW31** becomes **ZB4 BW317**. Example 2: **ZB4 BW31S** becomes **ZB4 BW31S7**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Only for use with bodies comprising a light source with BA9s base fitting bulb (incandescent, neon or LED).
(3) For use in bright ambient light conditions (outdoors in sunlight, for example).

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4 metal

Multiple-headed pushbuttons, spring return

User assembly of other units, using:
body-contact assemblies: see page 1/82
combined sub-assemblies: see page 1/88

569134

XB4 BL73415

569136

ZB4 BA7121

569138

ZB4 BL7341

569140

XB4 BW73731●5

569142

ZB4 BW7A1721

569150

ZB4 BW7A3741

Double-headed pushbuttons *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Colour and marking of caps *(2)*	Reference	Weight kg
Complete units						
	2 pushes (1 flush black + 1 projecting red)	1	1	White “I” on green background White “0” on red background	**XB4 BL73415**	0.116
Heads only						
	2 flush black pushes			White background + black background, unmarked	**ZB4 BA7120**	0.056
				Black “I” on white background White “0” on black background	**ZB4 BA7121**	0.056
				Green background + red background, unmarked	**ZB4 BA7340**	0.056
				White “I” on green background White “0” on red background	**ZB4 BA7341**	0.056
				Without cap *(3)*	**ZB4 BA79**	0.056
	1 flush black push 1 projecting red push			Green background + red background, unmarked	**ZB4 BL7340**	0.056
				White “I” on green background White “0” on red background	**ZB4 BL7341**	0.056

Double-headed pushbuttons + 1 white central pilot light block *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Colour and marking of caps *(2)*	Pilot light voltage V	Reference	Weight kg
Complete units							
Protected LED	**1 flush black push 1 projecting red push 1 white central pilot light block**	1	1	White “I” on green background White “0” on red background	24	**XB4 BW73731B5**	0.130
					120	**XB4 BW73731G5**	0.130
					240	**XB4 BW73731M5**	0.130
Heads only *(5)*							
Protected LED	**2 flush black pushes 1 clear central pilot light** *(4)*			White background + black background, unmarked		**ZB4 BW7A1720**	0.056
				Black “I” on white background White “0” on black background		**ZB4 BW7A1721**	0.056
				Green background + red background, unmarked		**ZB4 BW7A3740**	0.056
				White “I” on green background White “0” on red background		**ZB4 BW7A3741**	0.056
				Black “⬆” on white background White “⇩” on black background		**ZB4 BW7A1724**	0.056
				Black “+” on white background Black “–” on white background		**ZB4 BW7A1715**	0.056
				Without cap *(3)*		**ZB4 BW7A9**	0.056
Protected LED	**1 flush black push 1 projecting red push 1 clear central pilot light** *(4)*			Green background + red background, unmarked		**ZB4 BW7L3740**	0.056
				White “I” on green background White “0” on red background		**ZB4 BW7L3741**	0.056

Heads with black metal bezel

To order, add the suffix **7** to the references selected above. Example: **ZB4 BA7120** becomes **ZB4 BA71207**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) These caps are fitted by Schneider Electric and cannot be removed (risk of damage).
(3) Caps to be ordered separately: see page opposite.
(4) Colour of centrally positioned pilot light determined by the colour of the LED incorporated in the body sub-assembly.
(5) Only for use with bodies comprising a light source with integral LED.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22
Harmony® XB4 metal
Multiple-headed pushbuttons, spring return

User assembly of other units, using:
body-contact assemblies: see page 1/82
combined sub-assemblies: see page 1/88

Triple-headed pushbuttons (1) (2)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	N/C	N/O	Colour and marking of caps (3)	Reference	Weight kg
Complete units							
	**2 flush black pushes + 1 central projecting red push marked "Stop" in white**	1	1	1	White "I" on green background White "II" on green background	**XB4 BA731327**	0.128
					Black "➡" on white background White "⇦" on black background	**XB4 BA711237**	0.128
Heads only							
	**2 flush black pushes + 1 central projecting red push marked "Stop" in white**				White "I" on green background White "II" on green background	**ZB4 BA73132**	0.056
					White "⇦" on green background White "⇨" on green background	**ZB4 BA73133**	0.056
					White "⇧" on green background White "⇩" on green background	**ZB4 BA73134**	0.056
					White "+" on green background White "–" on green background	**ZB4 BA73135**	0.056
					Black "+" on white background Black "–" on white background	**ZB4 BA71115**	0.056
					Black "➡" on white background White "⇦" on black background	**ZB4 BA71123**	0.056
					Black "⇧" on white background White "⇩" on black background	**ZB4 BA71124**	0.056
					White "⇧" on black background White "⇩" on black background	**ZB4 BA72124**	0.056
					Without cap (4)	**ZB4 BA791**	0.056

569144


XB4 BA731327

569146


ZB4 BA73133

569148


ZB4 BA71124

Specific accessories for multiple-headed pushbuttons

Description	Background colour	Marking	Sold in lots of	Reference	Weight kg
Caps only for clip-on mounting (5) on: - ZB4 BA79 double-headed pushbuttons - ZB4 BW7A9 double-headed pushbuttons + central pilot light block - ZB4 BA791 triple-headed pushbuttons	White	Unmarked	10	**ZBA 71**	0.010
		"I" black	10	**ZBA 7131**	0.010
		"➡" black	10	**ZBA 7134**	0.010
		"+" black	10	**ZBA 7138**	0.010
	Black	Unmarked	10	**ZBA 72**	0.010
		"O" white	10	**ZBA 7232**	0.010
		"+" white	10	**ZBA 7233**	0.010
		"⇨" white	10	**ZBA 7235**	0.010
		"I" white	10	**ZBA 7237**	0.010
	Green	Unmarked	10	**ZBA 73**	0.010
		"I" white	10	**ZBA 7331**	0.010
		"+" white	10	**ZBA 7333**	0.010
		"⇧" white	10	**ZBA 7335**	0.010
		"II" white	10	**ZBA 7336**	0.010
	Red	Unmarked	10	**ZBA 74**	0.010
		"O" white	10	**ZBA 7432**	0.010
	Yellow	Unmarked	10	**ZBA 75**	0.010
	Blue	Unmarked	10	**ZBA 76**	0.010
Clear silicone boots (6)	For 2 flush pushes	–	10	**ZBA 708**	0.055
	For 3 pushes	–	10	**ZBA 709**	0.055
	For 1 flush push + 1 projecting push	–	10	**ZBA 710**	0.055

540585

ZBA 7235

569178

ZBA 7432

540598

ZBA 709

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.
Example: **ZB4 BA73132** becomes **ZB4 BA731327**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Not compatible with high power switching contacts and contacts for printed circuit board.
(3) These caps are fitted by Schneider Electric and cannot be removed (risk of damage).
(4) Caps to be ordered separately: see accessories on this page.
(5) Can be clipped-in at 90° steps, through 360°.
(6) Can be replaced without dismantling the head.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22
Harmony® XB4, metal
Mushroom head pushbuttons, spring return

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

814088

XB4 BC21

814166

ZB4 BC24

814167

ZB4 BC2

814168

ZB4 BR2

103543

ZB4 BR216

103544

ZB4 BW443

Mushroom head pushbuttons *(1) (2)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Push Ø (mm)	Push Colour	Reference	Weight kg
Complete units							
	**Mushroom head**	1	–	40	Black	**XB4 BC21** (ZB4 BZ101 + ZB4 BC2)	0.122
Heads only							
	**Mushroom head**			30	Black	**ZB4 BC24**	0.075
					Green	**ZB4 BC34**	0.075
					Red	**ZB4 BC44**	0.075
					Yellow	**ZB4 BC54**	0.075
					Blue	**ZB4 BC64**	0.075
				40	Black	**ZB4 BC2**	0.074
					Green	**ZB4 BC3**	0.074
					Red	**ZB4 BC4**	0.074
					Yellow	**ZB4 BC5**	0.074
					Blue	**ZB4 BC6**	0.074
				60	Black	**ZB4 BR2**	0.093
					Green	**ZB4 BR3**	0.093
					Red	**ZB4 BR4**	0.093
					Yellow	**ZB4 BR5**	0.093
					Blue	**ZB4 BR6**	0.093
				60 *(3)* Hemispherical	Black	**ZB4 BR216**	0.054
					Green	**ZB4 BR316**	0.054
					Red	**ZB4 BR416**	0.054
					Yellow	**ZB4 BR516**	0.054
					Blue	**ZB4 BR616**	0.054

Illuminated mushroom head pushbuttons *(1) (2)*
Integral LED

Shape of head	Type of push	Push Ø (mm)	Push Colour	Reference	Weight kg
Heads only *(4)*					
	**Mushroom head**	40	White	**ZB4 BW413**	0.051
			Green	**ZB4 BW433**	0.051
			Red	**ZB4 BW443**	0.051
			Orange	**ZB4 BW453**	0.051
			Blue	**ZB4 BW463**	0.051

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BC24** becomes **ZB4 BC247**.

(1) These pushbuttons and heads cannot be used for an Emergency Stop function. Therefore, it is recommended that a legend with a black or white background is used.
(2) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(3) Ergonomic product used in two-handed control applications. Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head: 6.
(4) Only for use with bodies comprising a light block with integral LED.

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22
Harmony® XB4, metal
Mushroom head pushbuttons, latching

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94



ZB4 BT2



ZB4 BS62



ZB4 BS72

Mushroom head pushbuttons *(1) (2)*

Shape of head	Type of reset	Push Ø (mm)	Colour	Reference	Weight kg
Heads only					
	Push-pull	40	Black	**ZB4 BT2**	0.077
		60	Black	**ZB4 BX2**	0.095
	Turn to release	30	Black	**ZB4 BS42**	0.066
		40	Black	**ZB4 BS52**	0.070
		40	Yellow	**ZB4 BS55**	0.070
		60	Black	**ZB4 BS62**	0.090
	Key release (key n° 455) *(2 keys included with head) (3)* *(5)*	30	Black	**ZB4 BS72**	0.066
		40	Black	**ZB4 BS12** *(4)*	0.070
		60	Black	**ZB4 BS22**	0.090

Illuminated mushroom head pushbuttons *(1) (2)*
Integral LED

Shape of head	Type of reset	Push Ø (mm)	Colour	Reference	Weight kg
Heads only					
	Mushroom head	40	White	**ZB4 BW613**	0.051
			Green	**ZB4 BW633**	0.051
			Orange	**ZB4 BW653**	0.051
			Blue	**ZB4 BW663**	0.051

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BT2** becomes **ZB4 BT27**.

(1) These pushbuttons and heads cannot be used for an Emergency Stop function.
Therefore, it is recommended that a legend with a black or white background is used.
(2) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(3) For specific keys with other numbers, please consult your customer care centre.
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: To order a Ø 40 black mushroom head for a latching pushbutton, with release by key n° 421E, the reference becomes: **ZB4 BS1212**.*
(5) The symbol indicates key withdrawal position(s).

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal
Emergency stop devices
Conforming to EN/IEC 60204-1 and EN/ISO 13850 and Machinery Directive 2006/42/EC

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see pages 1/102 and 1/103

Mushroom head Emergency stop trigger action and mechanical latching pushbuttons conform to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 2006/42/EC and to standard EN/IEC 60947-5-5. Please consult your customer care centre for a full explanation of these standards and directives.


550275

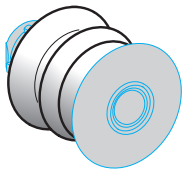
XB4 BT845


550276

XB4 BS9445


550278

ZB4 BS834



ZBZ ●8

Emergency stop trigger action and mechanical latching pushbuttons *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Type of contact N/O	Type of contact N/C	Push Ø (mm)	Push Colour	Reference	Weight kg
Complete units							
	Push-pull	1	1	40	Red	**XB4 BT845** (ZB4 BZ105 + ZB4 BT84)	0.136
	Turn to release	1	1	40	Red	**XB4 BS8445** (ZB4 BZ105 + ZB4 BS844)	0.130
		–	2	40	Red	**XB4 BS8444** (ZB4 BZ104 + ZB4 BS844)	0.130
		1	2	40	Red	**XB4 BS84441** (ZB4 BZ141 + ZB4 BS844)	0.140
	Key release (key n° 455) *(3)*	1	1	40	Red	**XB4 BS9445** (ZB4 BZ105 + ZB4 BS944)	0.170
Heads only							
Shape of head	**Type of reset**			**Push Ø mm**	**Push Colour**	**Reference**	**Weight kg**
	Push-pull			30	Red	**ZB4 BT844**	0.078
				40	Red	**ZB4 BT84**	0.078
				60	Red	**ZB4 BX84**	0.098
	Turn to release			30	Red	**ZB4 BS834**	0.068
				40	Red	**ZB4 BS844**	0.073
				60	Red	**ZB4 BS864**	0.093
	Key release (key n° 455) 2 keys included with head *(5)* *(3)*			30	Red	**ZB4 BS934**	0.094
				40	Red	**ZB4 BS944** *(4)*	0.098
				60	Red	**ZB4 BS964**	0.118

Bellows for harsh environments (IP 69K) *(6)*

For use in	Material	Colour	Sold in lots of	Unit reference	Weight kg
Environments subject to humidity, dust, high pressure cleaning, etc.	Silicone	Red	2	**ZBZ 48**	0.009
	EPDM	Black	2	**ZBZ 28**	0.009
		Yellow	2	**ZBZ 58**	0.009

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BT844** becomes **ZB4 BT8447**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) It is recommended that a legend or yellow background is used.
(3) The symbol ⚷ indicates key withdrawal position(s).
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*- key n° 4A185: add suffix **D** to the reference.*
*Example: To order a Ø 40 red mushroom head for a trigger action and mechanical latching Emergency stop pushbutton, with release by key n° 421E, the reference becomes: **ZB4 BS94412**.*
(5) For specific keys with other numbers, please consult your customer care centre.
(6) Not compatible with Ø 30 pushbutton.

General : page 1/44 | Characteristics : page 1/52 | Dimensions : page 1/106

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB4, metal

Emergency switching off devices

Conforming to IEC 60364-5-53

Assembly of other products using:
body/contact assemblies: see page 1/82
combined sub-assemblies: see page 1/86
accessories: see pages 1/102 and 1/103

Mushroom head switching off mechanical latching pushbuttons conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5. Please consult your customer care centre for a full explanation of these standards and directives.


550277

XB4 BS542


550279

ZB4 BT4


550280

ZB4 BS64


550281

ZB4 BS74

Emergency switching off, mechanical latching pushbuttons *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Type of contact N/O	Type of contact N/C	Push Ø mm	Push Colour	Reference	Weight kg
Complete units							
	Push-pull	–	1	40	Red	**XB4 BT42** (ZB4 BZ102 + ZB4 BT4)	0.125
	Turn to release	–	1	40	Red	**XB4 BS542** (ZB4 BZ102 + ZB4 BS54)	0.118
	Key release (key n° 455) *(3)*	–	1	40	Red	**XB4 BS142** (ZB4 BZ102 + ZB4 BS14)	0.133
Heads only							
	Push-pull			30	Red	**ZB4 BT44**	0.077
				40	Red	**ZB4 BT4**	0.077
				60	Red	**ZB4 BX4**	0.095
	Turn to release			30	Red	**ZB4 BS44**	0.066
				40	Red	**ZB4 BS54**	0.070
				60	Red	**ZB4 BS64**	0.090
	Key release (key n° 455) 2 keys included with head *(5)* *(3)*			30	Red	**ZB4 BS74**	0.066
				40	Red	**ZB4 BS14** *(4)*	0.070
				60	Red	**ZB4 BS24**	0.090

Illuminated Emergency switching off, mechanical latching pushbuttons *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Push Ø mm	Push Colour	Reference	Weight kg
Heads only *(6)*					
Protected LED	**Push-pull**	40	Red	**ZB4 BW643**	0.051

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BT4** becomes **ZB4 BT47**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) It is recommended that a legend or yellow background is used.
(3) The symbol ⚷ indicates key withdrawal position(s).
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: To order a Ø 40 red mushroom head for a mechanical latching Emergency switching off pushbutton, with release by key n° 421E, the reference becomes: **ZB4 BS1412**.*
(5) For specific keys with other numbers, please consult your customer care centre.
(6) Only for use with bodies comprising a light source with integral LED.

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Control and signalling units Ø 22
Harmony® XB4, metal
Pushbuttons, push-push

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94


814154

ZB4 BH02

Pushbuttons with flush push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only				
	Without cap *(2)*	–	**ZB4 BH0**	0.028
	Flush	White	**ZB4 BH01**	0.029
		Black	**ZB4 BH02**	0.029
		Green	**ZB4 BH03**	0.029
		Red	**ZB4 BH04**	0.029
		Yellow	**ZB4 BH05**	0.029
		Blue	**ZB4 BH06**	0.029


523792

ZB4 BH6

Pushbuttons with projecting push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only				
	Projecting	White	**ZB4 BH1**	0.029
		Black	**ZB4 BH2**	0.029
		Green	**ZB4 BH3**	0.029
		Red	**ZB4 BH4**	0.029
		Yellow	**ZB4 BH5**	0.029
		Blue	**ZB4 BH6**	0.029

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BH01** becomes **ZB4 BH017**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Caps to be ordered separately, see page 1/94.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Illuminated pushbuttons, push-push, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/82
accessories: see page 1/94

Illuminated pushbuttons with flush push (1)

Shape of head	Type of push	Colour of lens	Reference	Weight kg
Heads only (2)				
	Flush	White	**ZB4 BH013**	0.026
		Green	**ZB4 BH033**	0.026
		Red	**ZB4 BH043**	0.026
		Orange	**ZB4 BH053**	0.026
		Blue	**ZB4 BH063**	0.026



ZB4 BH033

Illuminated pushbuttons with projecting push (1)

Shape of head	Type of push	Colour of lens	Reference	Weight kg
Heads only (2)				
	Projecting	White	**ZB4 BH13**	0.026
		Green	**ZB4 BH33**	0.026
		Red	**ZB4 BH43**	0.026
		Orange	**ZB4 BH53**	0.026
		Blue	**ZB4 BH63**	0.026



ZB4 BH63

Heads with black metal bezel

To order, add a figure **7** to the references selected above.
Example: **ZB4 BH013** becomes **ZB4 BH0137**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Only for use with bodies comprising a light source with integral LED.

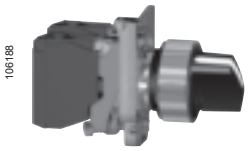
For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Selector switches with standard handle

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94


106188

XB4 BD33


106195

ZB4 BD4

Selector switches with standard handle *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type		Reference	Weight kg
Complete units								
	**Standard handle, black**	1	–	2-position 90°	Stay put		**XB4 BD21** (ZB4 BZ101 + ZB4 BD2)	0.095
		1	–		Spring return from right to left		**XB4 BD41** (ZB4 BZ101 + ZB4 BD4)	0.100
		1	1		Stay put		**XB4 BD25** (ZB4 BZ105 + ZB4 BD2)	0.095
		2	–	3-position ± 45°	Stay put		**XB4 BD33** (ZB4 BZ103 + ZB4 BD3)	0.095
					Spring return to centre		**XB4 BD53** (ZB4 BZ103 + ZB4 BD5)	0.095
Heads only								
	**Standard handle, black**			2-position 90°	Stay put		**ZB4 BD2**	0.040
					Spring return from right to left		**ZB4 BD4**	0.045
				3-position ± 45°	Stay put		**ZB4 BD3**	0.040
					Spring return to centre		**ZB4 BD5**	0.040
					Spring return from left to centre		**ZB4 BD7**	0.040
					Spring return from right to centre		**ZB4 BD8**	0.040

Heads only with other coloured handles



Standard handle, white	add suffix **01** to the reference, example: **ZB4 BD201**
Standard handle, green	add suffix **03** to the reference, example: **ZB4 BD203**
Standard handle, red	add suffix **04** to the reference, example: **ZB4 BD204**
Standard handle, yellow	add suffix **05** to the reference, example: **ZB4 BD205**
Standard handle, blue	add suffix **06** to the reference, example: **ZB4 BD206**

Heads with black metal bezel

For heads with standard black handle only. To order, add the suffix 7 to the references selected from above.
Example: **ZB4 BD2** becomes **ZB4 BD27**.

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

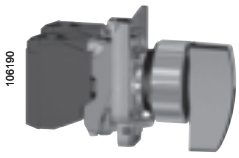
For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Selector switches with long handle: normal and padlockable

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94


106190

ZB4 BJ21


106196

ZB4 BJ3


106197

ZB4 BJ291

Selector switches with long handle *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type	Reference	Weight kg
Complete units							
	**Long handle, black**	1	–	2-position 90°	Stay put 	**XB4 BJ21** (ZB4 BZ101 + ZB4 BJ2)	0.096
		2	–	3-position ± 45°	Stay put 	**XB4 BJ33** (ZB4 BZ103 + ZB4 BJ3)	0.096
					Spring return to centre 	**XB4 BJ53** (ZB4 BZ103 + ZB4 BJ5)	0.096
Heads only							
	**Long handle, black**			2-position 90°	Stay put 	**ZB4 BJ2**	0.040
					Spring return from right to left 	**ZB4 BJ4**	0.045
				3-position ± 45°	Stay put 	**ZB4 BJ3**	0.040
					Spring return to centre 	**ZB4 BJ5**	0.040
					Spring return from left to centre 	**ZB4 BJ7**	0.040
					Spring return from right to centre 	**ZB4 BJ8**	0.040
	**Long handle, padlockable** *(2)*			2-position 90°	Stay put 	**ZB4 BJ291**	0.048
						ZB4 BJ292	0.048
						**ZB4 BJ294**	0.048
					Spring return from right to left 	**ZB4 BJ491**	0.054
				3-position ± 45°	Stay put 	**ZB4 BJ391**	0.048
						**ZB4 BJ392**	0.048
						**ZB4 BJ393**	0.048
						**ZB4 BJ394**	0.048
						**ZB4 BJ395**	0.048
						**ZB4 BJ396**	0.048
						**ZB4 BJ397**	0.048
					Spring return to centre 	**ZB4 BJ593**	0.048
					Spring return from right to centre 	**ZB4 BJ891**	0.048
						**ZB4 BJ893**	0.048
						**ZB4 BJ895**	0.048
					Spring return from left to centre 	**ZB4 BJ792**	0.048
						**ZB4 BJ793**	0.048
						**ZB4 BJ796**	0.048

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BJ2** becomes **ZB4 BJ27**.

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

(2) The symbol ⚷ indicates the padlocking positions.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Key switches

Key n° 455, 421E, 458A, 520E, 3131A

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

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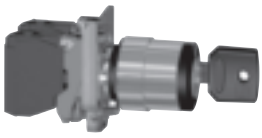

106189

XB4 BG33


106199

ZB4 BG0

Key switches *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type		Reference	Weight kg
Complete units								
	Key switch with key n° 455	1	–	2-positio 90°	Stay put		**XB4 BG21** (ZB4 BZ101 + ZB4 BG2)	0.153
							XB4 BG41 (ZB4 BZ101 + ZB4 BG4)	0.153
					Spring return to left		**XB4 BG61** (ZB4 BZ101 + ZB4 BG6)	0.153
		2	–	3-position ± 45°	Stay put		**XB4 BG03** (ZB4 BZ103 + ZB4 BG0)	0.153
							XB4 BG33 (ZB4 BZ103 + ZB4 BG3)	0.153
Heads only								
	Key switch with key n° 455 *(3) (4)*			2-position 90°	Stay put		**ZB4 BG2**	0.098
							ZB4 BG02	0.098
							ZB4 BG4	0.098
					Spring return from right to left		**ZB4 BG6**	0.098
				3-position ± 45°	Stay put		**ZB4 BG0**	0.098
							ZB4 BG03	0.098
							ZB4 BG04	0.098
							ZB4 BG3	0.098
							ZB4 BG5	0.098
							ZB4 BG9	0.098
							ZB4 BG09	0.098
					Spring return from left to centre		**ZB4 BG1**	0.098
							ZB4 BG01	0.098
					Spring return to centre		**ZB4 BG7**	0.098
					Spring return from right to centre		**ZB4 BG8**	0.098
							ZB4 BG05	0.098
							ZB4 BG08	0.098

Heads with black metal bezel

To order, add a figure **7** to the references selected from above. Example: **ZB4 BG2** becomes **ZB4 BG27**.

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

(2) The symbol indicates key withdrawal position(s).

(3) Other key numbers:
- *key n° 421E: add suffix **12** to the reference.*
- *key n° 458A: add suffix **10** to the reference.*
- *key n° 520E: add suffix **14** to the reference.*
- *key n° 3131A: add suffix **20** to the reference.*

*Example: For a switch head with key n° 421E, 2-position stay put, with key withdrawal from the left-hand position, the reference becomes: **ZB4 BG212**.*

(4) For specific keys with other numbers, please consult your customer care centre..

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Key switches with key TEC10

Selector switches with knurled knob - Toggle switches

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

Key switches with key TEC10

Shape of head	Type of operator	Positions: Number	Positions: Type		Reference	Weight kg
Heads only						
	**Key switch with key TEC10**	2-position 90°	Stay put		**ZB4 BG2TEC10**	0.160
					**ZB4 BG4TEC10**	0.160
			Spring return from right to left		**ZB4 BG6TEC10**	0.170
		3-position ± 45°	Stay put		**ZB4 BG0TEC10**	0.160
					**ZB4 BG3TEC10**	0.160
					**ZB4 BG5TEC10**	0.160
					**ZB4 BG9TEC10**	0.160
			Spring return to centre		**ZB4 BG7TEC10**	0.170
			Spring return from right to centre		**ZB4 BG05TEC10**	0.170

Selector switches with knurled knob *(1)*

Shape of head	Type of operator	Positions: Number	Positions: Type		Reference	Weight kg
Heads only						
	**Black knurled knob**	2-position 90°	Stay put		**ZB4 BD29**	0.043
			Spring return from right to left		**ZB4 BD49**	0.050
		3-position ± 45°	Stay put		**ZB4 BD39**	0.040
			Spring return to centre		**ZB4 BD59**	0.040
			Spring return from left to centre		**ZB4 BD79**	0.040
			Spring return from right to centre		**ZB4 BD89**	0.040

106198



ZB4 BD29

Toggle switches *(1)*

Shape of head	Type of operator	Positions: Number	Positions: Type		Reference	Weight kg
Heads only						
	**Black lever**	2-position 90°	Stay put		**ZB4 BD28**	0.026
			Spring return		**ZB4 BD48**	0.026

814205



ZB4 BD28

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BD29** becomes **ZB4 BD297**.

For the references with key TEC10, add the 7 before TEC10.
Example: **ZB4 BG2TEC10** becomes **ZB4 BG27TEC10**.

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

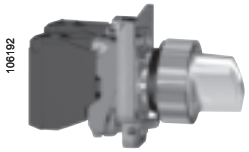
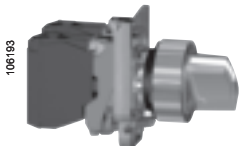
Harmony® XB4, metal

Illuminated selector switches with standard handle, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/82
accessories: see page 1/94

Illuminated selector switches with standard handle, with integral LED *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number Type	Supply voltage V	Colour of handle	Reference	Weight kg
Complete units								
 106192	**Standard handle**	1	1	2-position Stay put 90°	⎓ 24 (50/60 Hz)	Green	**XB4 BK123B5** (ZB4 BW0B35 + ZB4 BK1233)	0.101
						Red	**XB4 BK124B5** (ZB4 BW0B45 + ZB4 BK1243)	0.101
						Orange	**XB4 BK125B5** (ZB4 BW0B55 + ZB4 BK1253)	0.101
					∿ 110...120 (50/60 Hz)	Green	**XB4 BK123G5** (ZB4 BW0G35 + ZB4 BK1233)	0.101
						Red	**XB4 BK124G5** (ZB4 BW0G45 + ZB4 BK1243)	0.101
						Orange	**XB4 BK125G5** (ZB4 BW0G55 + ZB4 BK1253)	0.101
					∿ 230...240 (50/60 Hz)	Green	**XB4 BK123M5** (ZB4 BW0M35 + ZB4 BK1233)	0.101
						Red	**XB4 BK124M5** (ZB4 BW0M45 + ZB4 BK1243)	0.101
						Orange	**XB4 BK125M5** (ZB4 BW0M55 + ZB4 BK1253)	0.101
XB4 BK123B5								
 106193		1	1	3-position Stay put ± 45°	⎓ 24 (50/60 Hz)	Green	**XB4 BK133B5** (ZB4 BW0B35 + ZB4 BK1333)	0.101
						Red	**XB4 BK134B5** (ZB4 BW0B45 + ZB4 BK1343)	0.101
						Orange	**XB4 BK135B5** (ZB4 BW0B55 + ZB4 BK1353)	0.101
					∿ 110...120 (50/60 Hz)	Green	**XB4 BK133G5** (ZB4 BW0G35 + ZB4 BK1333)	0.101
						Red	**XB4 BK134G5** (ZB4 BW0G45 + ZB4 BK1343)	0.101
						Orange	**XB4 BK135G5** (ZB4 BW0G55 + ZB4 BK1353)	0.101
					∿ 230...240 (50/60 Hz)	Green	**XB4 BK133M5** (ZB4 BW0M35 + ZB4 BK1333)	0.101
						Red	**XB4 BK134M5** (ZB4 BW0M45 + ZB4 BK1343)	0.101
						Orange	**XB4 BK135M5** (ZB4 BW0M55 + ZB4 BK1353)	0.101
XB4 BK134B5								

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Illuminated selector switches with standard handle, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/82
accessories: see page 1/94

Illuminated selector switches with standard handle, with integral LED (continued) (1)

Shape of head	Type of operator	Positions: Number	Positions: Type	Colour of handle	Reference	Weight kg
Heads only (2)						
	Standard handle	2-position 90°	Stay put	White	**ZB4 BK1213**	0.036
				Green	**ZB4 BK1233**	0.036
				Red	**ZB4 BK1243**	0.036
				Orange	**ZB4 BK1253**	0.036
				Blue	**ZB4 BK1263**	0.036
			Spring return from right to left	White	**ZB4 BK1413**	0.037
				Green	**ZB4 BK1433**	0.037
				Red	**ZB4 BK1443**	0.037
				Orange	**ZB4 BK1453**	0.037
				Blue	**ZB4 BK1463**	0.037
		3-position ± 45°	Stay put	White	**ZB4 BK1313**	0.036
				Green	**ZB4 BK1333**	0.036
				Red	**ZB4 BK1343**	0.036
				Orange	**ZB4 BK1353**	0.036
				Blue	**ZB4 BK1363**	0.036
			Spring return to centre	White	**ZB4 BK1513**	0.036
				Green	**ZB4 BK1533**	0.036
				Red	**ZB4 BK1543**	0.036
				Orange	**ZB4 BK1553**	0.036
				Blue	**ZB4 BK1563**	0.036
			Spring return from right to centre	White	**ZB4 BK1813**	0.036
				Green	**ZB4 BK1833**	0.036
				Red	**ZB4 BK1843**	0.036
				Orange	**ZB4 BK1853**	0.036
				Blue	**ZB4 BK1863**	0.036
			Spring return from left to centre	White	**ZB4 BK1713**	0.036
				Green	**ZB4 BK1733**	0.036
				Red	**ZB4 BK1743**	0.036
				Orange	**ZB4 BK1753**	0.036
				Blue	**ZB4 BK1763**	0.036

106200



ZB4 BK1343

Heads with black metal bezel

To order, add a figure **7** to the references selected from above.
Example: **ZB4 BK1213** becomes **ZB4 BK12137**.

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/56.
(2) Only for use with bodies comprising a light source with integral LED.

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Control and signalling units Ø 22
Harmony® XB4, metal
Pilot lights with integral LED

Assembly of other products using:
body/light assemblies: see page 1/90
accessories: see pages 1/94 and 1/96

814114



XB4 BVB5

Pilot lights with integral LED
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Complete units

■ With plain lens

Shape of head	Supply voltage V	Colour	Reference	Weight kg
Protected LED	⎓ 24 (50/60 Hz)	White	**XB4 BVB1** (ZB4 BVB1 + ZB4 BV013)	0.080
		Green	**XB4 BVB3** (ZB4 BVB3 + ZB4 BV033)	0.080
		Red	**XB4 BVB4** (ZB4 BVB4 + ZB4 BV043)	0.080
		Orange	**XB4 BVB5** (ZB4 BVB5 + ZB4 BV053)	0.080
		Blue	**XB4 BVB6** (ZB4 BVB6 + ZB4 BV063)	0.080
	~ 110...120 (50/60 Hz)	White	**XB4 BVG1** (ZB4 BVG1 + ZB4 BV013)	0.080
		Green	**XB4 BVG3** (ZB4 BVG3 + ZB4 BV033)	0.080
		Red	**XB4 BVG4** (ZB4 BVG4 + ZB4 BV043)	0.080
		Orange	**XB4 BVG5** (ZB4 BVG5 + ZB4 BV053)	0.080
		Blue	**XB4 BVG6** (ZB4 BVG6 + ZB4 BV063)	0.080
	~ 230...240 (50/60 Hz)	White	**XB4 BVM1** (ZB4 BVM1 + ZB4 BV013)	0.080
		Green	**XB4 BVM3** (ZB4 BVM3 + ZB4 BV033)	0.080
		Red	**XB4 BVM4** (ZB4 BVM4 + ZB4 BV043)	0.080
		Orange	**XB4 BVM5** (ZB4 BVM5 + ZB4 BV053)	0.080
		Blue	**XB4 BVM6** (ZB4 BVM6 + ZB4 BV063)	0.080

Heads only *(1)*

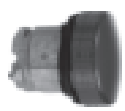
Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
■ With plain lens				
	Integral LED only Protected LED	White	**ZB4 BV013**	0.026
		Green	**ZB4 BV033**	0.026
		Red	**ZB4 BV043**	0.026
		Orange	**ZB4 BV053**	0.026
		Blue	**ZB4 BV063**	0.026
		5 colours *(2) (3)*	**ZB4 BV003**	0.026
■ With plain lens, for insertion of legend *(3)*				
	Integral LED only Protected LED	White	**ZB4 BV013E**	0.026
		Green	**ZB4 BV033E**	0.026
		Red	**ZB4 BV043E**	0.026
		Orange	**ZB4 BV053E**	0.026
		Blue	**ZB4 BV063E**	0.026
■ With grooved lens *(4)*				
	Integral LED only Protected LED	White	**ZB4 BV013S**	0.026
		Green	**ZB4 BV033S**	0.026
		Red	**ZB4 BV043S**	0.026
		Orange	**ZB4 BV053S**	0.026
		Blue	**ZB4 BV063S**	0.026

814213



ZB4 BV063

523768



ZB4 BV043S

(1) Only for use with bodies comprising a light source with integral LED.
(2) Head supplied with 5 different coloured lenses (white, green, red, orange, blue) not fitted, for insertion of legend.
(3) For legend ordering information: see page 1/96.
(4) For use in bright ambient light conditions (outdoors in sunlight, for example).

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Pilot lights with integral LED and with BA 9s base fitting

Assembly of other products using:
body/light assemblies: see page 1/91
accessories: see pages 1/94 and 1/96



XB4 BV5B●

Pilot lights with integral LED and transformer (1.2 VA, 24 V secondary)

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Supply voltage V	Colour	Reference (1)	Weight kg
Complete units - With plain lens				
Protected LED	∼ 400 - 50 Hz (1)	White	**XB4 BV5B1**	0.172
		Green	**XB4 BV5B3**	0.172
		Red	**XB4 BV5B4**	0.172
		Orange	**XB4 BV5B5**	0.172
		Blue	**XB4 BV5B6**	0.172

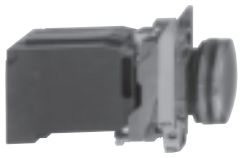
Pilot lights with BA 9s base fitting, with plain or grooved lens

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Supply voltage V	Colour	Reference	Weight kg
Complete units - With plain lens				
■ Direct supply, for BA 9s bulb, U ⩽ 250 V, 2.4 W max (bulb not included)				
	≤ 250	White	**XB4 BV61** (ZB4 BV6 + ZB4 BV01)	0.075
		Green	**XB4 BV63** (ZB4 BV6 + ZB4 BV03)	0.075
		Red	**XB4 BV64** (ZB4 BV6 + ZB4 BV04)	0.075
		Orange	**XB4 BV65** (ZB4 BV6 + ZB4 BV05)	0.075
■ Via integral transformer, 1.2 VA, 6 V secondary, with BA 9s incandescent bulb (included)				
	∼ 110...120 - 50/60 Hz	White	**XB4 BV31** (ZB4 BV3 + ZB4 BV01)	0.152
		Green	**XB4 BV33** (ZB4 BV3 + ZB4 BV03)	0.152
		Red	**XB4 BV34** (ZB4 BV3 + ZB4 BV04)	0.152
		Orange	**XB4 BV35** (ZB4 BV3 + ZB4 BV05)	0.152
	∼ 230 - 50 Hz ∼ 220...240 - 60 Hz	White	**XB4 BV41** (ZB4 BV4 + ZB4 BV01)	0.152
		Green	**XB4 BV43** (ZB4 BV4 + ZB4 BV03)	0.152
		Red	**XB4 BV44** (ZB4 BV4 + ZB4 BV04)	0.152
		Orange	**XB4 BV45** (ZB4 BV4 + ZB4 BV05)	0.152



XB4 BV64

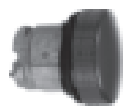


XB4 BV33

Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
Heads only (2)				
■ With plain lens				
	With BA 9s base fitting	White	**ZB4 BV01**	0.027
		Green	**ZB4 BV03**	0.027
		Red	**ZB4 BV04**	0.027
		Orange	**ZB4 BV05**	0.027
		Blue	**ZB4 BV06**	0.027
		Clear	**ZB4 BV07**	0.027
■ With grooved lens (3)				
	With BA 9s base fitting	White	**ZB4 BV01S**	0.027
		Green	**ZB4 BV03S**	0.027
		Red	**ZB4 BV04S**	0.027
		Orange	**ZB4 BV05S**	0.027
		Blue	**ZB4 BV06S**	0.027
		Clear	**ZB4 BV07S**	0.027



ZB4 BV04



ZB4 BV06S

(1) Tor order ∼ 440...460 V - 60 Hz tranformer blocks, please replace «5» in the reference by «8». Example: XB4 BV5B1 becomes XB4 BV8B1. To order ∼ 550...600 V - 60 Hz blocks, please replace «5» by «9». Example: XB4 BV5B1 becomes XB4 BV9B1.

(2) Only for use with bodies comprising a light source with BA 9s base fitting (incandescent, neon or LED).

(3) For use in bright ambient light conditions (outdoors in sunlight, for example).

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Control and signalling units Ø 22

Harmony® XB4, metal

Specific functions

Pushbuttons for manual overload reset, hour counters, buzzers, fuse carrier

Assembly of other products using:
body/contact assemblies: see page 1/82
accessories: see page 1/94

814340

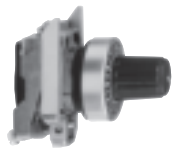


XB4 BA8●1

Manual overload reset pushbuttons

Shape of head	Travel mm	Actuation distance mm	Colour	Reference	Weight kg
With flush push					
	10	6…16	Black	**XB4 BA821**	0.037
			Red	**XB4 BA841**	0.037
			Blue	**XB4 BA861**	0.037
		16…26	Black	**XB4 BA822**	0.038
			Red	**XB4 BA842**	0.038
			Blue	**XB4 BA862**	0.038
	14	30…130	Black	**XB4 BA921**	0.058
			Red	**XB4 BA941**	0.058
			Blue	**XB4 BA961**	0.058
		130…257	Black	**XB4 BA922**	0.071
			Red	**XB4 BA942**	0.071
			Blue	**XB4 BA962**	0.071

814341



ZB4 BD912

Heads + mounting base for potentiometer *(1)*

Shape of head	Description	For use with	Reference	Weight kg
	For potentiometer with shaft length 45 to 50 mm	Ø 6 mm shaft	**ZB4 BD912**	0.080
		Ø 6.35 mm shaft	**ZB4 BD922**	0.080

814343



XB5 DS●

Hour counters

Characteristics	Supply voltage V	Reference	Weight kg
Indication 0…9999.9	⎓ 12…24 - 50/60 Hz	**XB5 DSB**	0.045
	∿ 120 -60 Hz	**XB5 DSG**	0.045
	∿ 230…240 -50 Hz	**XB5 DSM**	0.045

814344



XB5 KS●

Annunciators (IP 40 NEMA 1)

85 db buzzer: 4 kHz, with continuous or intermittent operation (connection diagram: see page 1/114)	⎓ 24 - 50/60 Hz	**XB5 KSB**	0.035
	∿ 120 - 50/60 Hz	**XB5 KSG**	0.035
	∿ 230…240 -50 Hz	**XB5 KSM**	0.035

814344



XB5 DT1S

Fuse carrier

Description	For use with	Reference	Weight kg
Fuse carrier	5 x 20 mm fuse 6.3 A - 250 V	**XB5 DT1S**	0.022

(1) Potentiometer not included.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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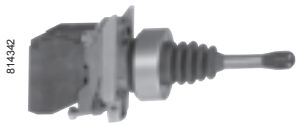
Control and signalling units Ø 22

Harmony® XB4, metal

Specific functions

Joystick controllers, wobblesticks

Assembly of other products using: accessories: see page 1/94


814342

XD4 PA12

Joystick controllers (with 54 mm long operating shaft) *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Operation	Spring return to zero position	Reference	Weight kg
Complete products				
2-direction	1 notch 1 N/O contact per direction	Without	**XD4 PA12**	0.116
		With	**XD4 PA22**	0.116
4-direction	1 notch 1 N/O contact per direction	Without	**XD4 PA14**	0.133
		With	**XD4 PA24**	0.133


814346

ZD4 PA103


814348

ZD4 PA203

Sub-assemblies for joystick controllers

Description	Functions	Reference	Weight kg
Complete body/contact assemblies	2-direction	**ZD4 PA103**	0.049
	4-direction	**ZD4 PA203**	0.058
Complete head assemblies with operating shaft	2-direction, stay put	**ZD4 PA12**	0.022
	2-direction, spring return to zero position	**ZD4 PA22**	0.022
	4-direction, stay put	**ZD4 PA14**	0.022
	4-direction, spring return to zero position	**ZD4 PA24**	0.022

Description	Functions		Reference	Weight kg
Legends 30 x 48 mm for engraving	2-direction	Black one side Red reverse	**ZBG 2201**	0.001
		White one side Yellow reverse	**ZBG 2401**	0.001
Legends 48 x 48 mm for engraving	4-direction	Black one side Red reverse	**ZBG 4201**	0.002
		White one side Yellow reverse	**ZBG 4401**	0.002


814347

ZD4 PA12


109497

ZB4 BB2

Wobblestick heads

Shape of head	For use with	Colour	Reference	Weight kg
	Omnidirectional, spring return	Black	**ZB4 BB2**	0.058
		Red	**ZB4 BB4**	0.058

(1) Must not be used with standard contact blocks ZBE 10● (single) or ZBE 20● (double).

Other versions Joystick controllers and complete body/contact assemblies for joystick controllers with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

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Control and signalling units Ø 22

Harmony® XB4, metal

Body/contact assemblies - Screw clamp terminal connections

To combine with heads, see pages 1/58 to 1/80

814264



ZB4 BZ009

814265



ZBE 101

814267



ZBE 203

814133



ZB4 BZ101

814265



ZBE 201

814346



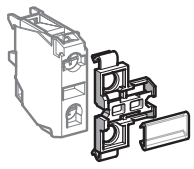
ZB4 BZ106

PF080706



ZBE 501

814262



ZBZ 001

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB4 BZ009**	0.038

Contact functions *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 101**	0.011
		–	1	5	**ZBE 102**	0.011
	Double	2	–	5	**ZBE 203**	0.020
		–	2	5	**ZBE 204**	0.020
		1	1	5	**ZBE 205**	0.020
	Single with body/fixing collar	1	–	1	**ZB4 BZ101**	0.053
		–	1	1	**ZB4 BZ102**	0.053
		2	–	1	**ZB4 BZ103**	0.062
		–	2	1	**ZB4 BZ104**	0.062
		1	1	1	**ZB4 BZ105**	0.062
		1	2	1	**ZB4 BZ141**	0.072

Contacts for specific applications

Application	Type of contact	Description	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	Standard	1	–	5	**ZBE 1016**	0.012
			–	1	5	**ZBE 1026**	0.012
		Dusty environment *(2)* (IP5X, 50 µm dust)	1	–	5	**ZBE 1016P**	0.012
			–	1	5	**ZBE 1026P**	0.012
Staggered contacts	Single	Early make N/O	1	–	5	**ZBE 201**	0.011
		Late break N/C	–	1	5	**ZBE 202**	0.011
	Single with body/fixing collar	Overlapping N/O+N/C	1	1	5	**ZB4 BZ106**	0.062
		Staggered N/O+N/O	2	–	5	**ZB4 BZ107**	0.062
High power switching	Single	Standard *(3)*	1	–	1	**ZBE 501**	0.020
			–	1	1	**ZBE 502**	0.020
			2	–	1	**ZBE 503**	0.032
			–	2	1	**ZBE 504**	0.032
			1	1	1	**ZBE 505**	0.032
Additional contact blocks for high power switching	Single	Standard *(4)*	1	–	1	**ZB2 BE101**	0.020
			–	1	1	**ZB2 BE102**	0.020

Clip-on legend holder, sheet of blank legends and labelling software

Description	Sold in lots of	Unit reference	Weight kg
Clip-on legend-holder for electrical blocks with screw clamp terminal connections *(5)***. For identification of an XB4 B control or signalling unit**	10	**ZBZ 001**	0.001
Sheet of 50 blank legends for legend holder ZBZ 001	10	**ZBY 001**	0.023
«SIS Label» labelling software for legend design (ZBY 001 legends) (for design of legends in English, French, German, Italian, Spanish)	1	**XBY 2U**	0.100

1) The contact blocks enable variable composition of body/contact assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contacts occupy the first 2 rows). Maximum number of contacts is specified on page 1/56.

(2) It is not possible to fit an additional contact block on the back of these contact blocks.

(3) It is not possible to use these contacts with light blocks.

(4) To be fitted on the back of ZBE 50● contacts.

(5) This legend holder is not compatible with high power switching contacts.

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

Schneider Electric

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Control and signalling units Ø 22
Harmony® XB4, metal
Light blocks - “Test light” - Protection

To combine with heads, see page 1/62

814273



ZBV B●

Light blocks with screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 12 (50/60 Hz)	White	5	**ZBV J1**	0.017
		Green	5	**ZBV J3**	0.017
		Red	5	**ZBV J4**	0.017
		Orange	5	**ZBV J5**	0.017
		Blue	5	**ZBV J6**	0.017
	⎓ 24 (50/60 Hz)	White	5	**ZBV B1**	0.017
		Green	5	**ZBV B3**	0.017
		Red	5	**ZBV B4**	0.017
		Orange	5	**ZBV B5**	0.017
		Blue	5	**ZBV B6**	0.017
	⎓ 24…120 (50/60 Hz)	White	5	**ZBV BG1**	0.017
		Green	5	**ZBV BG3**	0.017
		Red	5	**ZBV BG4**	0.017
		Orange	5	**ZBV BG5**	0.017
		Blue	5	**ZBV BG6**	0.017
	~ 110...120 (50/60 Hz)	White	5	**ZBV G1**	0.017
		Green	5	**ZBV G3**	0.017
		Red	5	**ZBV G4**	0.017
		Orange	5	**ZBV G5**	0.017
		Blue	5	**ZBV G6**	0.017
	~ 230...240 (50/60 Hz)	White	5	**ZBV M1**	0.017
		Green	5	**ZBV M3**	0.017
		Red	5	**ZBV M4**	0.017
		Orange	5	**ZBV M5**	0.017
		Blue	5	**ZBV M6**	0.017

080705



ZBV 5B

Flashing light blocks with screw clamp terminal connections (Schneider Electric anti-retightening system)

Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV 18B1**	0.017
		Green	5	**ZBV 18B3**	0.017
		Red	5	**ZBV 18B4**	0.017
		Orange	5	**ZBV 18B5**	0.017
		Blue	5	**ZBV 18B6**	0.017
	~ 110...120 (50/60 Hz)	White	5	**ZBV 18G1**	0.017
		Green	5	**ZBV 18G3**	0.017
		Red	5	**ZBV 18G4**	0.017
		Orange	5	**ZBV 18G5**	0.017
		Blue	5	**ZBV 18G6**	0.017
	~ 230...240 (50/60 Hz)	White	5	**ZBV 18M1**	0.017
		Green	5	**ZBV 18M3**	0.017
		Red	5	**ZBV 18M4**	0.017
		Orange	5	**ZBV 18M5**	0.017
		Blue	5	**ZBV 18M6**	0.017

522067



ZBZ G156

Transformer blocks for 24 V light blocks *(1)*

For use with	Supply voltage V	Description	Référence	Weight kg
Light blocks with integral LED	~ 400 V - 50 Hz	Transformer 400 V - 24 V ~	**ZBV 5B** *(2)*	0.090

522068



ZBZ M156

Blocks for “test light” function

Light blocks	⎓ 12 and 24 ⎓ 24…120	Single module, 1 connecting wire	**ZBZ G156** *(3)*	0.010
Light blocks with integral LED	~ 48…230	Double module, with connecting wires	**ZBZ M156** *(4)*	0.010

814274



ZBZ V●

LED suppressors

For use with	Supply voltage V	Level of protection	Reference	Weight kg
Light blocks with integral LED fitted with screw clamp terminal connections	~ 120	25…120 VA	**ZBZ VG**	0.010
	~ 230	30…230 VA	**ZBZ VM**	0.010

(1) To be used with 2 dummy contact blocks ZBE 000.

(2) To order ~ 440...460 V - 60 Hz transformer blocks, please replace «5» in the reference by «8» : ZBV 5B becomes ZBV 8B.
To order ~ 550...600 V - 60 Hz transformer blocks, please replace «5» by «9» : ZBV 5B becomes ZBV 9B.

*(3) Block for use with ⎓ light blocks with integral LED types **ZBV J●**, **ZBV B●**, **ZVB BG●** or with direct supply light block for BA 9s bulb, **ZBV 6**.*

*(4) Block for use ~ light blocks integral LED types **ZBV G●**, **ZBV M●**, see connection on page 1/114.*

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Control and signalling units Ø 22

Harmony® XB4, metal

Body/contact assemblies - Spring clamp terminal connections

To combine with heads, see pages 1/58 to 1/80

814264



ZB4 BZ009

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB4 BZ009**	0.038

Contact functions

Spring clamp terminal connections *(1)*

Contacts for standard applications

PF107777



ZBE 1015

PF107779



ZB4 BZ1015

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	4	**ZBE 1015**	0.011
		–	1	4	**ZBE 1025**	0.011
	Single with body/fixing collar	1	–	1	**ZB4 BZ1015**	0.053
		–	1	1	**ZB4 BZ1025**	0.053
		2	–	1	**ZB4 BZ1035**	0.062
		–	2	1	**ZB4 BZ1045**	0.062
		1	1	1	**ZB4 BZ1055**	0.062

Light blocks

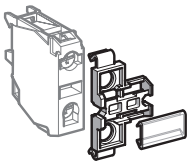
Spring clamp terminal connections *(1)*

PF080711



ZBV B35

814262



ZBZ 001

Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 12 (50/60 Hz)	White	4	**ZBV J15**	0.016
		Green	4	**ZBV J35**	0.016
		Red	4	**ZBV J45**	0.016
		Orange	4	**ZBV J55**	0.016
		Blue	4	**ZBV J65**	0.016
	⎓ 24 (50/60 Hz)	White	4	**ZBV B15**	0.016
		Green	4	**ZBV B35**	0.016
		Red	4	**ZBV B45**	0.016
		Orange	4	**ZBV B55**	0.016
		Blue	4	**ZBV B65**	0.016
	~ 110...120 (50/60 Hz)	White	4	**ZBV G15**	0.016
		Green	4	**ZBV G35**	0.016
		Red	4	**ZBV G45**	0.016
		Orange	4	**ZBV G55**	0.016
		Blue	4	**ZBV G65**	0.016
	~ 230...240 (50/60 Hz)	White	4	**ZBV M15**	0.016
		Green	4	**ZBV M35**	0.016
		Red	4	**ZBV M45**	0.016
		Orange	4	**ZBV M55**	0.016
		Blue	4	**ZBV M65**	0.016
Integral LED + body/fixing collar	~ 110...120 (50/60 Hz)	Green	4	**ZB4 BVG35**	0.053
		Red	4	**ZB4 BVG45**	0.053

Sheet of 50 blank legends

For use with	Sold in lots of	Unit reference	Weight kg
Legend holder ZBZ 001	10	**ZBY 001**	0.023

"SIS Label" labelling software (for legends ZBY 001)

For legend design for English, French, German, Italian, Spanish	10	**XBY 2U**	0.100

540548



XBY 2U

(1) It is not possible to fit an additional block on the back of these contact or light blocks.

General : page 1/44 | Characteristics : page 1/52 | Dimensions : page 1/106

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB4, metal

Body/contact assemblies for printed circuit board

To combine with heads, see pages 1/58 to 1/80

814264



ZB4 BZ009

814286



ZB4 BZ079 + ZB4 BZ009

540159



ZBZ 01●

814287



ZBE 701

814288



ZBE 702

814289



ZBV B●7

Body/fixing collar and accessories specifically for printed circuit board mounting *(1)*

Accessories required when using adaptor (socket) ZBZ 010

Description	For use with	Sold in lots of	Unit reference	Weight kg
Body/fixing collar	Electrical block (contact or light)	10	**ZB4 BZ009**	0.006
Fixing collar/pillar	Printed circuit board support (fixing screw ZBZ 006 to be ordered separately)	10	**ZB4 BZ079**	0.003
Fixing screw for printed circuit board	Fixing collar/pillar ZB4 BZ079	10	**ZBZ 006**	0.011

Adapter (socket) *(1)*

For use with	Thickness of printed circuit board (mm)	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	1.6 ± 0.2	10	**ZBZ 010**	0.008
	2.2 ± 0.2	10	**ZBZ 011**	0.008
	3.2 ± 0.2	10	**ZBZ 012**	0.008

Contact functions *(1)*

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 701**	0.011
		–	1	5	**ZBE 702**	0.011

Contacts for specific applications

Application	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	1	–	5	**ZBE 7016**	0.012
		–	1	5	**ZBE 7026**	0.012

Light blocks *(1)*

Description	Supply voltage V	Colour of LED	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV B17**	0.004
		Green	5	**ZBV B37**	0.004
		Red	5	**ZBV B47**	0.004
		Orange	5	**ZBV B57**	0.004
		Blue	5	**ZBV B67**	0.004

(1) For details of support drilling and of printed circuit board: see page 1/108.

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Control and signalling units Ø 22
Harmony® XB4, metal
Body/contact assemblies - Faston connectors

To combine with heads, see pages 1/58 to 1/80


PF080708

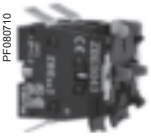
ZBE 1023


PF080709

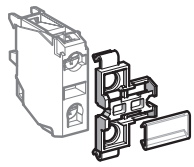
ZBE 2043


PF080704

ZB4 BZ1043


PF080710

ZBE 5043


814262

ZBZ 001


540548

XBY 2U

Contact functions *(1)*
Faston connectors (6.35 or 2 x 2.8 mm) (Schneider Electric anti-retightening system)

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 1013**	0.011
		–	1	5	**ZBE 1023**	0.011
	Double	2	–	5	**ZBE 2033**	0.020
		–	2	5	**ZBE 2043**	0.020
		1	1	5	**ZBE 2053**	0.020
	Single with body/fixing collar	1	–	1	**ZB4 BZ1013** *(2)*	0.053
		–	1	1	**ZB4 BZ1023** *(2)*	0.053
		2	–	1	**ZB4 BZ1033**	0.062
		–	2	1	**ZB4 BZ1043**	0.062
		1	1	1	**ZB4 BZ1053**	0.062

Contacts for specific applications

Application	Type of contact	Description	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	Standard	1	–	5	**ZBE 10163** *(2)*	0.012
			–	1	5	**ZBE 10263** *(2)*	0.012
		Dusty environments *(3)* (IP5X, 50 µm dust)	1	–	5	**ZBE 1016P3** *(2)*	0.012
			–	1	5	**ZBE 1026P3** *(2)*	0.012
Staggered contacts	Single	Early make N/O	1	–	5	**ZBE 2013** *(2)*	0.011
		Late break N/C	–	1	5	**ZBE 2023** *(2)*	0.011
High power switching	Single	Standard *(4)*	1	–	1	**ZBE 5013**	0,021
			–	1	1	**ZBE 5023**	0,021
			2	–	1	**ZBE 5033**	0,033
			–	2	1	**ZBE 5043**	0,033
			1	1	1	**ZBE 5053**	0,033

Clip-on legend holder for electrical blocks with screw clamp terminal connections *(5)*

For use with	Sold in lots of	Unit reference	Weight kg
Identification of an XB4 B control or signalling unit	10	**ZBZ 001**	0.001

Sheet of 50 blank legends

Legend holder ZBZ 001	10	**ZBY 001**	0.023

"SIS Label" labelling software (for legends **ZBY 001**)

For legend design for English, French, German, Italian, Spanish	1	**XBY 2U**	0.100

(1) The contact blocks enable variable composition of body/contact assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contacts occupy the first 2 rows).
*(2) To order products with screw clamp terminal connections for lugs, replace the **3** at the end of the reference with a **9**. Example: **ZBE 1013** becomes **ZBE 1019**.*
(3) It is not possible to fit an additional contact block on the back of these contact blocks.
(4) It is not possible to use these contacts with light blocks.
(5) This legend holder is not compatible with high power switching contact blocks.

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

Schneider Electric

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Control and signalling units Ø 22
Harmony® XB4, metal
Body/contact assemblies - Plug-in connector

To combine with heads, see pages 1/58 to 1/80

814264



ZB4 BZ009

814278



ZBE 1014

814279



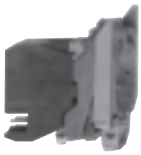
ZBE 1024

814135



ZB4 BZ1014

814136



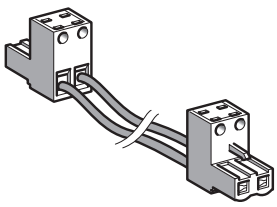
ZB4 BZ1024

814280



ZBV B●4

530719



APE 1C2250

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB4 BZ009**	0.038

Contact functions
Plug-in connector *(1)*

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	**5**	**ZBE 1014**	0.011
		–	1	**5**	**ZBE 1024**	0.011
	Single with body/fixing collar	1	–	**1**	**ZB4 BZ1014**	0.050
		–	1	**1**	**ZB4 BZ1024**	0.050
		2	–	**1**	**ZB4 BZ1034**	0.058
		–	2	**1**	**ZB4 BZ1044**	0.058
		1	1	**1**	**ZB4 BZ1054**	0.058
		1	2	**1**	**ZB4 BZ1414**	0.064

Light blocks
Plug-in connector

Description	Supply voltage (V)	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV B14**	0.016
		Green	5	**ZBV B34**	0.016
		Red	5	**ZBV B44**	0.016
		Orange	5	**ZBV B54**	0.016
		Blue	5	**ZBV B64**	0.016
	~ 110…120 (50/60 Hz)	White	5	**ZBV G14**	0.016
		Green	5	**ZBV G34**	0.016
		Red	5	**ZBV G44**	0.016
		Orange	5	**ZBV G54**	0.016
		Blue	5	**ZBV G64**	0.016
	~ 230…240 (50/60 Hz)	White	5	**ZBV M14**	0.016
		Green	5	**ZBV M34**	0.016
		Red	5	**ZBV M44**	0.016
		Orange	5	**ZBV M54**	0.016
		Blue	5	**ZBV M64**	0.016

Connecting cables and connector

Description	Number of connectors	Wire c.s.a. mm²	Length mm	Sold in lots of	Unit reference	Weight kg
Cables with connectors 2-pin, 5.08 mm pitch	1	0.75	500	8	**APE 1C2150**	0.120
	2	0.75	500	8	**APE 1C2250**	0.180
Spring terminal connector 2-pin, 5.08 mm pitch	–	0.2 to 2.5	–	10	**APE 1PRE21**	0.003

(1) It is not possible to fit an additional contact block on the back of these contact blocks.

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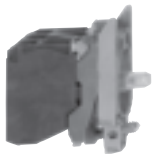
Control and signalling units Ø 22

Harmony® XB4, metal

Body/contact assemblies + light blocks with integral LED

To combine with:
heads, see pages 1/61 to 1/77
contacts, see page 1/82



ZB4 BW0●●3

Complete body/contact assemblies and light blocks *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight
	V					kg
Direct supply						
Integral LED Protected LED	⎓ 24 (50/60 Hz)	1	–	White	**ZB4 BW0B11**	0.064
				Green	**ZB4 BW0B31**	0.064
				Red	**ZB4 BW0B41**	0.064
				Orange	**ZB4 BW0B51**	0.064
				Blue	**ZB4 BW0B61**	0.064
		–	1	White	**ZB4 BW0B12**	0.064
				Green	**ZB4 BW0B32**	0.064
				Red	**ZB4 BW0B42**	0.064
				Orange	**ZB4 BW0B52**	0.064
				Blue	**ZB4 BW0B62**	0.064
		2	–	White	**ZB4 BW0B13**	0.074
				Green	**ZB4 BW0B33**	0.074
				Red	**ZB4 BW0B43**	0.074
				Orange	**ZB4 BW0B53**	0.074
				Blue	**ZB4 BW0B63**	0.074
		1	1	White	**ZB4 BW0B15**	0.074
				Green	**ZB4 BW0B35**	0.074
				Red	**ZB4 BW0B45**	0.074
				Orange	**ZB4 BW0B55**	0.074
				Blue	**ZB4 BW0B65**	0.074
	∿ 110...120 (50/60 Hz)	1	–	White	**ZB4 BW0G11**	0.064
				Green	**ZB4 BW0G31**	0.064
				Red	**ZB4 BW0G41**	0.064
				Orange	**ZB4 BW0G51**	0.064
				Blue	**ZB4 BW0G61**	0.064
		–	1	White	**ZB4 BW0G12**	0.064
				Green	**ZB4 BW0G32**	0.064
				Red	**ZB4 BW0G42**	0.064
				Orange	**ZB4 BW0G52**	0.064
				Blue	**ZB4 BW0G62**	0.064
		2	–	White	**ZB4 BW0G13**	0.074
				Green	**ZB4 BW0G33**	0.074
				Red	**ZB4 BW0G43**	0.074
				Orange	**ZB4 BW0G53**	0.074
				Blue	**ZB4 BW0G63**	0.074
		1	1	White	**ZB4 BW0G15**	0.074
				Green	**ZB4 BW0G35**	0.074
				Red	**ZB4 BW0G45**	0.074
				Orange	**ZB4 BW0G55**	0.074
				Blue	**ZB4 BW0G65**	0.074

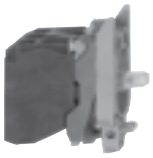
Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

(1) Can be fitted with additional contact blocks: see page 1/82.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22
Harmony® XB4, metal
Body/contact assemblies + light blocks with integral LED

To combine with:
heads, see pages 1/61 to 1/77
contacts, see page 1/82



ZB4 BW0●●3

Complete body/contact assemblies and light blocks *(1) (continued)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight
	V					kg
Direct supply *(continued)*						
Integral LED Protected LED	∼ 230…240 (50/60 Hz)	1	–	White	**ZB4 BW0M11**	0.064
				Green	**ZB4 BW0M31**	0.064
				Red	**ZB4 BW0M41**	0.064
				Orange	**ZB4 BW0M51**	0.064
				Blue	**ZB4 BW0M61**	0.064
		–	1	White	**ZB4 BW0M12**	0.064
				Green	**ZB4 BW0M32**	0.064
				Red	**ZB4 BW0M42**	0.064
				Orange	**ZB4 BW0M52**	0.064
				Blue	**ZB4 BW0M62**	0.064
		2	–	White	**ZB4 BW0M13**	0.074
				Green	**ZB4 BW0M33**	0.074
				Red	**ZB4 BW0M43**	0.074
				Orange	**ZB4 BW0M53**	0.074
				Blue	**ZB4 BW0M63**	0.074
		1	1	White	**ZB4 BW0M15**	0.074
				Green	**ZB4 BW0M35**	0.074
				Red	**ZB4 BW0M45**	0.074
				Orange	**ZB4 BW0M55**	0.074
				Blue	**ZB4 BW0M65**	0.074

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

(1) Can be fitted with additional contact blocks: see page 1/82.

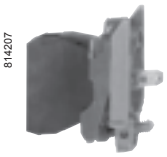
For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4, metal

Body/light assemblies for pilot lights with integral LED

To combine with:
heads, see page 1/78
contacts, see page 1/82



ZB4 BV●●

Complete light bodies (fixing collar + light block with integral LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	≂ 12 (50/60 Hz)	White	**ZB4 BVJ1**	0.054
		Green	**ZB4 BVJ3**	0.054
		Red	**ZB4 BVJ4**	0.054
		Orange	**ZB4 BVJ5**	0.054
		Blue	**ZB4 BVJ6**	0.054
	≂ 24 *(1)* (50/60 Hz)	White	**ZB4 BVB1**	0.054
		Green	**ZB4 BVB3**	0.054
		Red	**ZB4 BVB4**	0.054
		Orange	**ZB4 BVB5**	0.054
		Blue	**ZB4 BVB6**	0.054
	≂24…120 (50/60 Hz)	White	**ZB4 BVBG1**	0.054
		Green	**ZB4 BVBG3**	0.054
		Red	**ZB4 BVBG4**	0.054
		Orange	**ZB4 BVBG5**	0.054
		Blue	**ZB4 BVBG6**	0.054
	~ 110...120 *(1)* (50/60 Hz)	White	**ZB4 BVG1**	0.054
		Green	**ZB4 BVG3**	0.054
		Red	**ZB4 BVG4**	0.054
		Orange	**ZB4 BVG5**	0.054
		Blue	**ZB4 BVG6**	0.054
	~ 230…240 *(1)* (50/60 Hz)	White	**ZB4 BVM1**	0.054
		Green	**ZB4 BVM3**	0.054
		Red	**ZB4 BVM4**	0.054
		Orange	**ZB4 BVM5**	0.054
		Blue	**ZB4 BVM6**	0.054

(1) Complete bodies with Faston connector terminals (6.35 or 2 x 2.8), see page 1/86.

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4, metal

Body/light assemblies for pilot lights with integral LED

To combine with:
heads, see page 1/78
contacts, see page 1/82



ZB4 BVB●156

Complete light bodies with 3-terminal "test" function

(fixing collar + light block with integral LED + pre-wired block for "test light" function)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	⎓ 24 *(1)* (50/60 Hz)	White	**ZB4 BVB1156**	0.054
		Green	**ZB4 BVB3156**	0.054
		Red	**ZB4 BVB4156**	0.054
		Orange	**ZB4 BVB5156**	0.054
		Blue	**ZB4 BVB6156**	0.054

Complete bodies with flashing pilot light (fixing collar + light block with integral LED)

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	⎓ 24 (50/60 Hz)	White	**ZB4 BV18B1**	0.054
		Green	**ZB4 BV18B3**	0.054
		Red	**ZB4 BV18B4**	0.054
		Orange	**ZB4 BV18B5**	0.054
		Blue	**ZB4 BV18B6**	0.054
	~ 110…120 (50/60 Hz)	White	**ZB4 BV18G1**	0.054
		Green	**ZB4 BV18G3**	0.054
		Red	**ZB4 BV18G4**	0.054
		Orange	**ZB4 BV18G5**	0.054
		Blue	**ZB4 BV18G6**	0.054
	~ 230…240 (50/60 Hz)	White	**ZB4 BV18M1**	0.054
		Green	**ZB4 BV18M3**	0.054
		Red	**ZB4 BV18M4**	0.054
		Orange	**ZB4 BV18M5**	0.054
		Blue	**ZB4 BV18M6**	0.054

*(1) For a ~ 120 or 230 V supply, use complete body **ZB4 BVG●** or **ZB4 BVM●** with block for "test light" function type **ZBZ M156**, see page 1/90 and 1/83.*

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Control and signalling units Ø 22

Harmony® XB4, metal

Body/contact assemblies + light blocks with BA 9s base fitting

To combine with:
heads, see page 1/63
contacts, see page 1/82



ZB4 BW06●



ZB4 BW0●5

Complete body/contact assemblies and light blocks *(1)*

For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight kg
Direct supply						
BA9s base fitting bulb, 2.4 W max, not included *(2)*	≤ 250	1	–	–	**ZB4 BW061**	0.063
		–	1	–	**ZB4 BW062**	0.063
		2	–	–	**ZB4 BW063**	0.073
		1	1	–	**ZB4 BW065**	0.073
Supply via integral transformer (1.2 VA, 6 V secondary)						
BA9s base fitting incandescent bulb, included	∼ 110…120 50/60 Hz	1	–	–	**ZB4 BW031**	0.141
		1	1	–	**ZB4 BW035**	0.151
	∼ 230 50 Hz ∼ 220…240 60 Hz	1	–	–	**ZB4 BW041**	0.141
		1	1	–	**ZB4 BW045**	0.151
	∼ 400 50 Hz	1	–	–	**ZB4 BW051**	0.141
		1	1	–	**ZB4 BW055**	0.151
BA9s base fitting LED, included	∼ 110…120 50/60 Hz	1	1	White	**ZB4 BW03D15**	0.151
				Green	**ZB4 BW03D35**	0.151
				Red	**ZB4 BW03D45**	0.151
				Orange	**ZB4 BW03D55**	0.151
				Blue	**ZB4 BW03D65**	0.151
	∼ 230 50 Hz ∼ 220…240 60 Hz	1	1	White	**ZB4 BW04D15**	0.151
				Green	**ZB4 BW04D35**	0.151
				Red	**ZB4 BW04D45**	0.151
				Orange	**ZB4 BW04D55**	0.151
				Blue	**ZB4 BW04D65**	0.151
	∼ 400 50/60 Hz	1	1	White	**ZB4 BW05D15**	0.152
				Green	**ZB4 BW05D35**	0.152
				Red	**ZB4 BW05D45**	0.152
				Orange	**ZB4 BW05D55**	0.152
				Blue	**ZB4 BW05D65**	0.152
Other versions	Complete bodies with integral transformer incorporating Faston connector terminals (6.35 or 2 x 2.8). Please consult your customer care centre.					

(1) Can be fitted with additional contact blocks: see page 1/82.
(2) Bulb to be ordered separately: see page 1/104.

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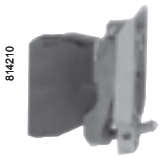
Control and signalling units Ø 22
Harmony® XB4, metal
Light bodies for pilot lights with BA 9s base fitting

To combine with:
heads, see page 1/79
contacts, see page 1/82

Light blocks
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Supply voltage V	Sold in lots of	Unit reference	Weight kg
Direct supply for BA 9s base fitting bulb, 2.4 W max., not included *(1)*	⩽ 250	5	**ZBV 6**	0.016

Complete light bodies (fixing collar + light block)
For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)


814210

ZB4 BV6

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Direct supply				
BA 9s base fitting bulb, 2.4 W max, not included *(1)*	⩽ 250	–	**ZB4 BV6**	0.052
Supply via integral transformer (1.2 VA, 6 V secondary)				
BA 9s base fitting incandescent bulb, included	∿ 110…120 -50/60 Hz	–	**ZB4 BV3**	0.130
	∿ 230 - 50 Hz ∿ 220…240 - 60 Hz	–	**ZB4 BV4**	0.130
	∿ 400 - 50 Hz	–	**ZB4 BV5**	0.131
	∿ 440…480 - 60 Hz	–	**ZB4 BV8**	0.128
	∿ 550…600 - 60 Hz	–	**ZB4 BV9**	0.131


814211

ZB4 BV●

BA 9s base fitting LED, included	∿ 110…120 - 50/60 Hz	White	**ZB4 BV3D1**	0.134
		Green	**ZB4 BV3D3**	0.134
		Red	**ZB4 BV3D4**	0.134
		Orange	**ZB4 BV3D5**	0.134
		Blue	**ZB4 BV3D6**	0.134
	∿ 230 - 50 Hz ∿ 220…240 - 60 Hz	White	**ZB4 BV4D1**	0.134
		Green	**ZB4 BV4D3**	0.134
		Red	**ZB4 BV4D4**	0.134
		Orange	**ZB4 BV4D5**	0.134
		Blue	**ZB4 BV4D6**	0.134
	∿ 400 - 50/60 Hz	White	**ZB4 BV5D1**	0.134
		Green	**ZB4 BV5D3**	0.134
		Red	**ZB4 BV5D4**	0.134
		Orange	**ZB4 BV5D5**	0.134
		Blue	**ZB4 BV5D6**	0.134

Complete light bodies with 3-terminal “test” function (fixing collar + light block)
For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)


522070

ZB4 BV156

Direct supply				
BA 9s base fitting bulb, 2.4 W max, not included *(1)*	⩽ 250	–	**ZB4 BV156**	0.062

(1) Bulb to be ordered separately, see page 1/104.

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8), *see page 1/86.*

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Control and signalling units Ø 22

Harmony® XB4 metal

Accessories for heads: caps

814292

ZBA ●

814293

ZBL ●

814294

ZBA ●33

Pushbutton caps - unmarked

For use with	Type of push	Colour	Sold in lots of	Unit reference	Weight kg
ZB4 BA0 pushbutton heads supplied without cap	Flush	White	10	**ZBA 1**	0.001
		Black	10	**ZBA 2**	0.001
		Green	10	**ZBA 3**	0.001
		Red	10	**ZBA 4**	0.001
		Yellow	10	**ZBA 5**	0.001
		Blue	10	**ZBA 6**	0.001
		6 colours *(1)*	1	**ZBA 9**	0.006
	Projecting	White	10	**ZBL 1**	0.001
		Black	10	**ZBL 2**	0.001
		Green	10	**ZBL 3**	0.001
		Red	10	**ZBL 4**	0.001
		Yellow	10	**ZBL 5**	0.001
		Blue	10	**ZBL 6**	0.001
		6 colours *(1)*	1	**ZBL 9**	0.006

Pushbutton caps - marked

For use with	Type of push	Marking		Colour of cap	Unit reference	Weight kg
		Text	Colour			
ZB4 BA0 pushbutton heads supplied without cap (sold in lots of 10)	Flush	I *(2)*	White	Green	**ZBA 331**	0.001
			Black	White	**ZBA 131**	0.001
		II	White	Green	**ZBA 336**	0.001
			Black	White	**ZBA 136**	0.001
		III	White	Green	**ZBA 337**	0.001
			Black	White	**ZBA 137**	0.001
		IV	White	Green	**ZBA 338**	0.001
			Black	White	**ZBA 138**	0.001
		START *(2)*	White	Green	**ZBA 333**	0.001
			Black	White	**ZBA 133**	0.001
		ON	White	Green	**ZBA 341**	0.001
			Black	White	**ZBA 141**	0.001
		MARCHE	White	Green	**ZBA 342**	0.001
			Black	White	**ZBA 142**	0.001
		UP *(2)*	Black	White	**ZBA 343**	0.001
		DOWN *(2)*	White	Black	**ZBA 344**	0.001
		⏉ *(2)*	White	Black	**ZBA 245**	0.001
			Black	White	**ZBA 145**	0.001
		⬆ *(3)*	White	Black	**ZBA 335**	0.001
			Black	White	**ZBA 334**	0.001
		O *(2)*	White	Red	**ZBA 432**	0.001
				Black	**ZBA 232**	0.001
		ARRET	White	Red	**ZBA 433**	0.001
				Black	**ZBA 233**	0.001
		STOP *(2)*	White	Red	**ZBA 434**	0.001
				Black	**ZBA 234**	0.001
		OFF	White	Red	**ZBA 435**	0.001
				Black	**ZBA 235**	0.001
		⏀	White	Green	**ZBA 346**	0.001
		R *(2)*	White	Blue	**ZBA 639**	0.001
		+	White	Black	**ZBA 2934**	0.001
		–	White	Black	**ZBA 2935**	0.001

(1) Set of 6 different coloured caps: white, black, green, red, yellow, blue.
(2) Double injection moulded marking.
(3) Can be clipped-in at 90° steps, through 360°

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

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Control and signalling units Ø 22
Harmony® XB4 metal
Accessories for heads: boots, lens caps

814334



ZBP 0

Transparent boots for pushbuttons *(1)*

Description	For use with pushbutton types	Sold in lots of	Unit reference	Weight kg
Single boots *(2)*	Flush with circular head	10	**ZBP A**	0.002
	Projecting with circular head and push-push version	10	**ZBP 0**	0.002
	Flush or projecting with circular head for food industry applications	10	**ZBP 0A**	0.002

Coloured boots

Description	Colour	For use with	Sold in lots of	Unit reference	Weight kg
Coloured boots (can be replaced without dismantling the head)	White	ZB4 BP1S	10	**ZBP 011**	0.003
	Black	ZB4 BP2S	10	**ZBP 012**	0.003
	Green	ZB4 BP3S	10	**ZBP 013**	0.003
	Red	ZB4 BP4S	10	**ZBP 014**	0.003
	Yellow	ZB4 BP5S	10	**ZBP 015**	0.003
	Blue	ZB4 BP6S	10	**ZBP 016**	0.003
Clear membrane	Transparent	ZB4 BP●83	10	**ZBP 017** ▲	0.003

DF540779



ZBV 01●3

Lens caps

For use with	Colour	Sold in lots of	Unit reference	Weight kg
Lens caps for light sources with integral LED				
Pilot lights	White	10	**ZBV 0113**	0.002
	Green	10	**ZBV 0133**	0.002
	Red	10	**ZBV 0143**	0.002
	Orange	10	**ZBV 0153**	0.002
	Blue	10	**ZBV 0163**	0.002
	5 different coloured grooved lenses *(3)*	5	**ZBV 0103S**	0.010
Illuminated pushbuttons, with flush push	White	10	**ZBW 9113**	0.002
	Green	10	**ZBW 9133**	0.002
	Red	10	**ZBW 9143**	0.002
	Orange	10	**ZBW 9153**	0.002
	Blue	10	**ZBW 9163**	0.002
Illuminated pushbuttons, with projecting push	White	10	**ZBW 9313**	0.002
	Green	10	**ZBW 9333**	0.002
	Red	10	**ZBW 9343**	0.002
	Orange	10	**ZBW 9353**	0.002
	Blue	10	**ZBW 9363**	0.002
Lens caps for light sources with BA 9s base fitting				
Pilot lights	White	10	**ZBV 011**	0.002
	Green	10	**ZBV 013**	0.002
	Red	10	**ZBV 014**	0.002
	Orange	10	**ZBV 015**	0.002
	Blue	10	**ZBV 016**	0.002
	Clear	10	**ZBV 017**	0.002
Pushbuttons, illuminated, with flush push	White	10	**ZBW 911**	0.002
	Green	10	**ZBW 913**	0.002
	Red	10	**ZBW 914**	0.002
	Orange	10	**ZBW 915**	0.002
	Blue	10	**ZBW 916**	0.002
	Clear	10	**ZBW 917**	0.002
Pushbuttons, illuminated, with projecting push	White	10	**ZBW 931**	0.002
	Green	10	**ZBW 933**	0.002
	Red	10	**ZBW 934**	0.002
	Orange	10	**ZBW 935**	0.002
	Blue	10	**ZBW 936**	0.002
	Clear	10	**ZBW 937**	0.002

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ZBV 01●

(1) Boots for multiple-headed pushbuttons: see page 1/65.
(2) Permissible panel thickness 1 to 5 mm, cannot be used with legend holders.
(3) Clear, green, red, orange, blue.

▲ Available: 1st quarter 2011.

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Control and signalling units Ø 22

Harmony® XB4 metal

8 x 27 mm legends with 30 x 40 mm legend holders

814302



ZBZ 34

814303



ZBY ●H101

30 x 40 mm legend holders (flush mounting with bezel) for 8 x 27 mm legends *(1)*

Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	**ZBZ 34**	0.003
With blank legend	Black or red background	–	10	**ZBY 2H101**	0.004
	White or yellow background	–	10	**ZBY 4H101**	0.004

Standard (30 x 40 mm) legend holders for 8 x 27 mm legends *(1)*

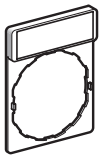
Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	**ZBZ 32**	0.001
With blank legend (for engraving)	Black or red background	–	10	**ZBY 2101**	0.002
	White or yellow background	–	10	**ZBY 4101**	0.002
With 8 x 27 mm legend (with International marking)	Black or red background *(2)*	O (black background)	1	**ZBY 2146**	0.002
		O (red background)	1	**ZBY 2931**	0.002
		I	1	**ZBY 2147**	0.002
		II	1	**ZBY 2148**	0.002
		O-I	1	**ZBY 2178**	0.002
		I-II	1	**ZBY 2179**	0.002
		I-O-II	1	**ZBY 2186**	0.002
		AUTO	1	**ZBY 2115**	0.002
		STOP	1	**ZBY 2304**	0.002
	Yellow background	⏻	1	**ZBY 4140** *(3)*	0.002
With 8 x 27 mm legend (with French language marking)	Black or red background *(2)*	ARRET (red backgr.)	1	**ZBY 2104**	0.002
		ARRET (black backgr.)	1	**ZBY 0104**	0.002
		ARRET GENERAL	1	**ZBY 2129**	0.002
		ARRET REARMEMENT	1	**ZBY 2133**	0.002
		ARRET-MARCHE	1	**ZBY 2166**	0.002
		ARRIERE	1	**ZBY 2106**	0.002
		AUTO CYCLE-CYCLE	1	**ZBY 2198**	0.002
		AUTO CYCLE-MAIN	1	**ZBY 2199**	0.002
		AUTO-MAIN	1	**ZBY 2164**	0.002
		AUTO-O-MAIN	1	**ZBY 2185**	0.002
		AVANT	1	**ZBY 2105**	0.002
		AVANT-O-ARRIERE	1	**ZBY 2184**	0.002
		C-P-C-NORMAL	1	**ZBY 2165**	0.002
		CYCLE-MAIN	1	**ZBY 2197**	0.002
		DECLENCHEMENT	1	**ZBY 2132**	0.002
		DEFAUT (black backgr.)	1	**ZBY 2134**	0.002
		DEFAUT (red backgr.)	1	**ZBY 2135**	0.002
		DEPART CYCLE	1	**ZBY 2195**	0.002
		DESCENTE	1	**ZBY 2108**	0.002
		DROITE	1	**ZBY 2109**	0.002
		ENCLENCHEMENT	1	**ZBY 2131**	0.002
		EN SERVICE	1	**ZBY 2111**	0.002
		FERMETURE	1	**ZBY 2114**	0.002
		GAUCHE	1	**ZBY 2110**	0.002
		HORS SERVICE	1	**ZBY 2112**	0.002
		HORS-EN	1	**ZBY 2167**	0.002
		LENT	1	**ZBY 2127**	0.002
		MAIN	1	**ZBY 2116**	0.002
		MARCHE	1	**ZBY 2103**	0.002
		MONTEE	1	**ZBY 2107**	0.002
		OUVERTURE	1	**ZBY 2113**	0.002
		PHASE / PHASE	1	**ZBY 2196**	0.002
		REARMEMENT (red background)	1	**ZBY 2123**	0.002
		REARMEMENT (black background)	1	**ZBY 0123**	0.002
		SOUS TENSION	1	**ZBY 2126**	0.002
		VITE	1	**ZBY 2128**	0.002
	Red background	ARRET D'URGENCE	1	**ZBY 2130** *(3)*	0.002

814295



ZBZ 32

814296



ZBY ●101

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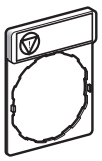

ZBY 4140

814297



ZBY 2107

(1) For legends, see pages 1/98 to 1/100.

(2) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

*(3) **For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⏻ has been added.***

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4 metal

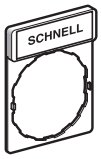
8 x 27 mm legends with 30 x 40 mm legend holders

814300



ZBY 2303

814299



ZBY 2228

Standard (30 x 40 mm) legend holders with 8 x 27 mm legends *(continued)*

Description	Legend		Reference	Weight kg
	Colour	Marking		
With legend (with English language marking)	Black or red background *(1)*	AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		CLOSE	**ZBY 2314**	0.002
		DOWN	**ZBY 2308**	0.002
		FAST	**ZBY 2328**	0.002
		FORWARD	**ZBY 2305**	0.002
		HAND	**ZBY 2316**	0.002
		HAND-OFF-AUTO	**ZBY 2387**	0.002
		INCH	**ZBY 2321**	0.002
		LEFT	**ZBY 2310**	0.002
		OFF	**ZBY 2312**	0.002
		OFF-ON	**ZBY 2367**	0.002
		ON	**ZBY 2311**	0.002
		OPEN	**ZBY 2313**	0.002
		POWER ON	**ZBY 2326**	0.002
		RESET (red background)	**ZBY 2323**	0.002
		RESET (black background)	**ZBY 2322**	0.002
		REVERSE	**ZBY 2306**	0.002
		RIGHT	**ZBY 2309**	0.002
		RUN	**ZBY 2334**	0.002
		SLOW	**ZBY 2327**	0.002
		START	**ZBY 2303**	0.002
		STOP-START	**ZBY 2366**	0.002
		UP	**ZBY 2307**	0.002
	Red background	EMERGENCY STOP	**ZBY 2330** *(2)*	0.002
With legend (with German language marking)	Black or red background *(1)*	AB	**ZBY 2208**	0.002
		AUF	**ZBY 2207**	0.002
		AUS	**ZBY 2204**	0.002
		AUS-EIN	**ZBY 2266**	0.002
		AUS-IN BETRIEB	**ZBY 2267**	0.002
		AUS-RÜCKSTELLUNG	**ZBY 2233**	0.002
		AUSSCHALTEN	**ZBY 2232**	0.002
		AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		AUTOZYKL-HAND	**ZBY 2299**	0.002
		AUTOZYKL- 1 ZYKL	**ZBY 2298**	0.002
		C-P-C-NORMAL	**ZBY 2265**	0.002
		EIN	**ZBY 2203**	0.002
		EINSCHALTEN	**ZBY 2231**	0.002
		HAND	**ZBY 2316**	0.002
		LANGSAM	**ZBY 2227**	0.002
		LINKS	**ZBY 2210**	0.002
		NOT-AUS (red background)	**ZBY 2230**	0.002
		ÖFFNEN	**ZBY 2213**	0.002
		RECHTS	**ZBY 2209**	0.002
		RÜCKSTELLUNG	**ZBY 2223**	0.002
		SCHLIESSEN	**ZBY 2214**	0.002
		SCHNELL	**ZBY 2228**	0.002
		SPANNUNG EIN	**ZBY 2226**	0.002
		STEUERUNG AUS	**ZBY 2212**	0.002
		STEUERUNG EIN	**ZBY 2211**	0.002
		STÖRUNG (black background)	**ZBY 2234**	0.002
		STÖRUNG (red background)	**ZBY 2235**	0.002
		VOR	**ZBY 2205**	0.002
		VOR-O-ZURÜCK	**ZBY 2284**	0.002
		ZURÜCK	**ZBY 2206**	0.002
		ZYKLUS-HAND	**ZBY 2297**	0.002
		ZYKLUSSTART	**ZBY 2295**	0.002
	Red background	NOT-HALT	**ZBY 2229** *(2)*	0.002
	Yellow background	NOT-HALT	**ZBY 22420001** *(2)*	0.002

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

(2) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

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Control and signalling units Ø 22
Harmony® XB4 metal
Legends 8 x 27 mm

814310


ZBY 02178

DF540629

ZBY 0140

814311


ZBY 0●104

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34)

Language	Colour of background	Marking	Reference	Weight kg
Without	White or yellow	–	**ZBY 0102**	0.001
International	Black or red *(1)*	O (black background)	**ZBY 02146**	0.001
		O (red background)	**ZBY 02931**	0.001
		I	**ZBY 02147**	0.001
		II	**ZBY 02148**	0.001
		O-I	**ZBY 02178**	0.001
		I-II	**ZBY 02179**	0.001
		I-O-II	**ZBY 02186**	0.001
		AUTO	**ZBY 02115**	0.001
		STOP	**ZBY 02304**	0.001
	Yellow	⏻	**ZBY 0140** *(2)*	0.001
French	Black or red *(1)*	ARRET (red background)	**ZBY 02104**	0.001
		ARRET (black background)	**ZBY 00104**	0.001
		ARRET GENERAL	**ZBY 02129**	0.001
		ARRET REARMEMENT	**ZBY 02133**	0.001
		ARRET-MARCHE	**ZBY 02166**	0.001
		ARRIERE	**ZBY 02106**	0.001
		AUTO CYCLE-CYCLE	**ZBY 02198**	0.001
		AUTO CYCLE-MAIN	**ZBY 02199**	0.001
		AUTO-MAIN	**ZBY 02164**	0.001
		AUTO-O-MAIN	**ZBY 02185**	0.001
		AVANT	**ZBY 02105**	0.001
		AVANT-O-ARRIERE	**ZBY 02184**	0.001
		C-P-C-NORMAL	**ZBY 02165**	0.001
		CYCLE-MAIN	**ZBY 02197**	0.001
		DECLENCHEMENT	**ZBY 02132**	0.001
		DEFAUT (black background)	**ZBY 02134**	0.001
		DEFAUT (red background)	**ZBY 02135**	0.001
		DEPART CYCLE	**ZBY 02195**	0.001
		DESCENTE	**ZBY 02108**	0.001
		DROITE	**ZBY 02109**	0.001
		ENCLENCHEMENT	**ZBY 02131**	0.001
		EN SERVICE	**ZBY 02111**	0.001
		FERMETURE	**ZBY 02114**	0.001
		GAUCHE	**ZBY 02110**	0.001
		HORS SERVICE	**ZBY 02112**	0.001
		HORS-EN	**ZBY 02167**	0.001
		LENT	**ZBY 02127**	0.001
		MAIN	**ZBY 02116**	0.001
		MARCHE	**ZBY 02103**	0.001
		MONTEE	**ZBY 02107**	0.001
		OUVERTURE	**ZBY 02113**	0.001
		PHASE / PHASE	**ZBY 02196**	0.001
		REARMEMENT (red background)	**ZBY 02123**	0.001
		REARMEMENT (black background)	**ZBY 00123**	0.001
		SOUS TENSION	**ZBY 02126**	0.001
		VITE	**ZBY 02128**	0.001
	Red	ARRET D'URGENCE	**ZBY 02130** *(2)*	0.001

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

(2) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⏻ has been added.***

General : page 1/44
Characteristics : page 1/52
Dimensions : page 1/106

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Control and signalling units Ø 22

Harmony® XB4 metal

Legends 8 x 27 mm

814313



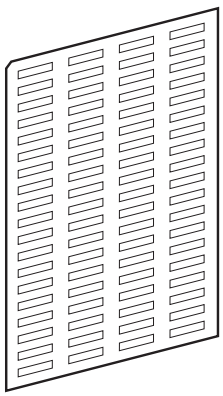
ZBY 02303

814314



ZBY 02228

814309



ZBY 4100

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34) *(continued)*

Language	Colour of background	Marking	Reference	Weight kg
English	Black or red *(1)*	AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		CLOSE	**ZBY 02314**	0.001
		DOWN	**ZBY 02308**	0.001
		FAST	**ZBY 02328**	0.001
		FORWARD	**ZBY 02305**	0.001
		HAND	**ZBY 02316**	0.001
		HAND-OFF-AUTO	**ZBY 02387**	0.001
		INCH	**ZBY 02321**	0.001
		LEFT	**ZBY 02310**	0.001
		OFF	**ZBY 02312**	0.001
		OFF-ON	**ZBY 02367**	0.001
		ON	**ZBY 02311**	0.001
		OPEN	**ZBY 02313**	0.001
		POWER ON	**ZBY 02326**	0.001
		RESET (red background)	**ZBY 02323**	0.001
		RESET (black background)	**ZBY 02322**	0.001
		REVERSE	**ZBY 02306**	0.001
		RIGHT	**ZBY 02309**	0.001
		RUN	**ZBY 02334**	0.001
		SLOW	**ZBY 02327**	0.001
		START	**ZBY 02303**	0.001
		STOP-START	**ZBY 02366**	0.001
		UP	**ZBY 02307**	0.001
	Red	EMERGENCY STOP	**ZBY 02330** *(2)*	0.001
German	Black or red *(1)*	AB	**ZBY 02208**	0.001
		AUF	**ZBY 02207**	0.001
		AUS	**ZBY 02204**	0.001
		AUS-EIN	**ZBY 02266**	0.001
		AUS-IN BETRIEB	**ZBY 02267**	0.001
		AUS-RÜCKSTELLUNG	**ZBY 02233**	0.001
		AUSSCHALTEN	**ZBY 02232**	0.001
		AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		AUTOZYKL-HAND	**ZBY 02299**	0.001
		AUTOZYKL- 1 ZYKL	**ZBY 02298**	0.001
		C-P-C-NORMAL	**ZBY 02265**	0.001
		EIN	**ZBY 02203**	0.001
		EINSCHALTEN	**ZBY 02231**	0.001
		HAND	**ZBY 02316**	0.001
		LANGSAM	**ZBY 02227**	0.001
		LINKS	**ZBY 02210**	0.001
		NOT-AUS (red background)	**ZBY 02230**	0.001
		ÖFFNEN	**ZBY 02213**	0.001
		RECHTS	**ZBY 02209**	0.001
		RÜCKSTELLUNG	**ZBY 02223**	0.001
		SCHLIESSEN	**ZBY 02214**	0.001
		SCHNELL	**ZBY 02228**	0.001
		SPANNUNG EIN	**ZBY 02226**	0.001
		STEUERUNG AUS	**ZBY 02212**	0.001
		STEUERUNG EIN	**ZBY 02211**	0.001
		STÖRUNG (black background)	**ZBY 02234**	0.001
		STÖRUNG (red background)	**ZBY 02235**	0.001
		VOR	**ZBY 02205**	0.001
		VOR-O-ZURÜCK	**ZBY 02284**	0.001
		ZURÜCK	**ZBY 02206**	0.001
		ZYKLUS-HAND	**ZBY 02297**	0.001
		ZYKLUSSTART	**ZBY 02295**	0.001
	Red	NOT-HALT	**ZBY 02229** *(2)*	0.001
	Yellow	NOT-HALT	**ZBY 022420001** *(2)*	0.001

Sheets of peel-off legends (with backing board and protective transparent cover)

Description	For use with	Sold in lots of	Unit reference	Weight kg
Sheet of 76 legends 8 x 27 mm	30 x 40 mm legend holder ZBZ 32 and ZBZ 34	10	**ZBY 4100**	0.043

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

*(2) **For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

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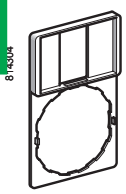
Control and signalling units Ø 22

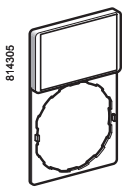
Harmony® XB4 metal

Legend holders for 18 x 27 mm legends

18 x 27 mm legends for engraving or printing



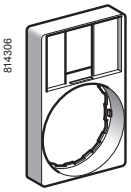
ZBZ 33



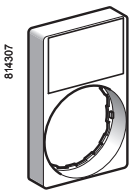
ZBY 610●

Standard (30 x 50 mm) legend holders for 18 x 27 mm legends

Description	Colour of background	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZBZ 33**	0.001
With blank legend	Black or red	10	**ZBY 6101**	0.002
	White or yellow	10	**ZBY 6102**	0.002
	Yellow	10	**ZBY 6140** *(1)*	0.002



ZBZ 35



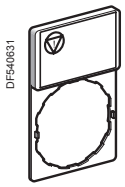
ZBY 6H10●

30 x 50 mm legend holder (flush mounting with bezel) for 18 x 27 mm legends

Description	Color of background	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZBZ 35**	0.003
With blank legend	Black or red	10	**ZBY 6H101**	0.004
	White or yellow	10	**ZBY 6H102**	0.004

18 x 27 mm legends for engraving (for 30 x 50 mm legend-holders)

Color	Language	Marking	Sold in lots of	Unit reference	Weight kg
Black or red background	–	Without	10	**ZBY 0501**	0.001
White or yellow background	–	Without	10	**ZBY 0502**	0.001
Yellow background	International	⊽	10	**ZBY 5140** *(1)*	0.001
	French	ARRET D'URGENCE	10	**ZBY 55130** *(1)*	0.001
	English	EMERGENCY STOP	10	**ZBY 55330** *(1)*	0.001



ZBY 6140

Sheets of peel-off legends 18 x 27 mm (with backing board and protective transparent cover)

Description	For use with	Sold in lots of	Unit reference	Weight kg
Sheet of 40 legends 18 x 27 mm	30 x 50 mm legend holder ZBZ 33 and ZBZ 35	10	**ZBY 5100**	0.044

(1) ***For complying with EN/ISO 13850 standard. paragraph 4.4.6.. Emergency Stop function logo ⊽ has been added.***

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

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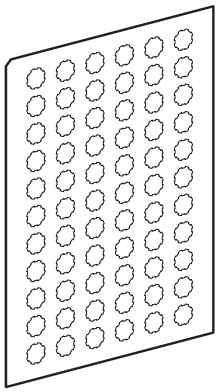
Control and signalling units Ø 22

Harmony® XB4 metal

Legends, for insertion, for printing, pre-printed, labelling software, circular legends

814316



ZBY 1101

Legends for XB4 B pushbuttons, illuminated pushbuttons and pilot lights

Description	Language	Marking	Sold in lots of	Unit reference	Weight kg
Sheets of 66 circular peel-off, transparent, self-adhesive legends	–	Without	10	**ZBY 1101**	0.017
Strips of 66 circular peel-off, transparent , self-adhesive legends	International	O	10	**ZBY 1146**	0.017
		I	10	**ZBY 1147**	0.017
		II	10	**ZBY 1148**	0.017
		III	10	**ZBY 1149**	0.017
		STOP	10	**ZBY 1304**	0.017
		⬆	10	**ZBY 1912**	0.017
	French	ARRET	10	**ZBY 1104**	0.017
		ARRIERE	10	**ZBY 1106**	0.017
		AUTO	10	**ZBY 1115**	0.017
		AVANT	10	**ZBY 1105**	0.017
		DESCENTE	10	**ZBY 1108**	0.017
		MAIN	10	**ZBY 1116**	0.017
		MARCHE	10	**ZBY 1103**	0.017
		MONTEE	10	**ZBY 1107**	0.017
	English	HAND	10	**ZBY 1316**	0.017
		OFF	10	**ZBY 1312**	0.017
		ON	10	**ZBY 1311**	0.017
		START	10	**ZBY 1303**	0.017
	German	AB	10	**ZBY 1208**	0.017
		AUF	10	**ZBY 1207**	0.017
		AUS	10	**ZBY 1204**	0.017
		EIN	10	**ZBY 1203**	0.017
		ZU	10	**ZBY 1214**	0.017

540548



XBY 2U

"SIS Label" labelling software

Application	For use with	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	ZBY 1101, ZBY 001, ZBY 0101, ZBY 0102, ZBY 5101, ZBY 5102, ZBY 4100 and ZBY 5100	**XBY 2U**	0.100

Circular, yellow legends for mushroom head pushbuttons

Used for "Emergency stop" function *(1)*

Diameter mm	Conforming to standards	Marking on yellow background	Reference	Weight kg
60	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 9140**	0.004
		ARRET D'URGENCE	**ZBY 9130**	0.004
		EMERGENCY STOP	**ZBY 9330**	0.004
		NOT-HALT	**ZBY 9230**	0.004
		PARADA DE EMERGENCIA	**ZBY 9430**	0.004
		ARRESTO DE EMERGENZA	**ZBY 9630**	0.004
90	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 8140**	0.008
		ARRET D'URGENCE	**ZBY 8130**	0.008
		EMERGENCY STOP	**ZBY 8330**	0.008
		NOT-HALT	**ZBY 8230**	0.008
		PARADA DE EMERGENCIA	**ZBY 8430**	0.008
		ARRESTO DE EMERGENZA	**ZBY 8630**	0.008

539640



ZBY 9130

Used for "Emergency switching off" function

60	EN/IEC 60204-1	–	**ZBY 9101**	0.004
		COUPURE D'URGENCE	**ZBY 9160**	0.004
		EMERGENCY SWITCHING OFF	**ZBY 9360**	0.004
		NOT-AUS	**ZBY 9260**	0.004
		DESCONEXION DE EMERGENCIA	**ZBY 9460**	0.004
		INTERRUZIONE DI EMERGENZA	**ZBY 9660**	0.004
90	EN/IEC 60204-1	–	**ZBY 8101**	0.008
		COUPURE D'URGENCE	**ZBY 8160**	0.008
		EMERGENCY SWITCHING OFF	**ZBY 8360**	0.008
		NOT-AUS	**ZBY 8260**	0.008
		DESCONEXION DE EMERGENCIA	**ZBY 8460**	0.008
		INTERRUZIONE DI EMERGENZA	**ZBY 8660**	0.008

539642



ZBY 9160

(1) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⏚ has been added.***

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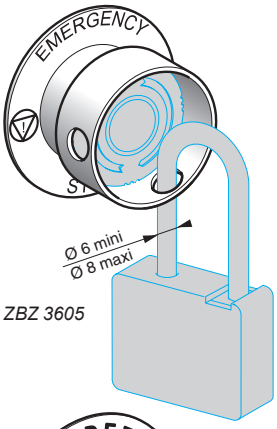
Control and signalling units Ø 22
Harmony® XB4 metal
Accessories for pushbuttons

DF539643



ZBZ 3605

DF539640



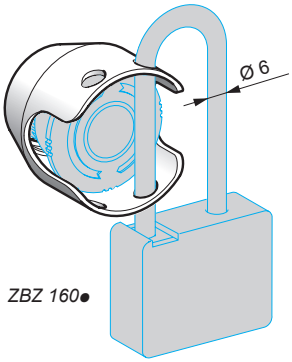
ZBY 9130T

DF539642



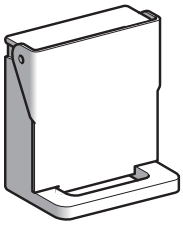
ZBZ 9160T

DF540769



ZBZ 160●

501566



ZB4 BZ64

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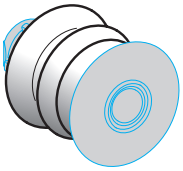

ZBZ ●8

Accessories for mushroom head pushbuttons

Description	For use with	Colour	Reference	Weight kg
Padlocking kit *(1) (2)* (padlockable)	Emergency stop *(3)* and Emergency switching off function *(4)*, only with the following Ø 40 trigger action pushbuttons: XB4 BS844●, XB4 BS9445, ZB4 BS844, ZB4 BS944.	Yellow	**ZBZ 3605**	0.045

Description	Marking	Colour	Reference	Weight kg
Ø 60 mm legend for padlocking device ZBZ 3605 For Emergency stop function *(3)*	Without	Yellow	**ZBY 9140T**	0.004
	ARRET D'URGENCE	Yellow	**ZBY 9130T**	0.004
	EMERGENCY STOP	Yellow	**ZBY 9330T**	0.004
	NOT-HALT	Yellow	**ZBY 9230T**	0.004
Ø 60 mm legend for padlocking device ZBZ 3605 For Emergency switching off function *(4)*	Without	Yellow	**ZBY 9101T**	0.004
	COUPURE D'URGENCE	Yellow	**ZBY 9160T**	0.004
	EMERGENCY SWITCHING OFF	Yellow	**ZBY 9360T**	0.004
	NOT-AUS	Yellow	**ZBY 9260T**	0.004
Metal guards Padlockable *(2)*	Emergency stop function, only with the following Ø 40 trigger action pushbuttons: XB4 BT8●, XB4 BS8●, XB4 BS9●, ZB4 BT8●, ZB4 BS8●, ZB4 BS9●.	Chromium plated	**ZBZ 1600**	0.046
		Black	**ZBZ 1602**	0.046
		Red	**ZBZ 1604**	0.046
		Blue	**ZBZ 1606**	0.046

Other accessories

Description	For use with	Colour	Reference	Weight kg
Plastic guard	Selector switches and key switches	Black	**ZBZ 2102**	0.005
Padlockable flaps	Pushbuttons	Black	**ZB4 BZ62**	0.076
		Red	**ZB4 BZ64**	0.076
		Yellow	**ZB4 BZ65**	0.076
		Blue	**ZB4 BZ66**	0.076

Description	Application	Material	Colour	Sold in lots of	Unit reference	Weight kg
Bellows seals for harsh environments (IP 69K) *(5)*	Environments subject to humidity, dust, high-pressure cleaning etc…	Silicone	Red	2	**ZBZ 48**	0.009
			Black	2	**ZBZ 28**	0.009
		EPDM	Yellow	2	**ZBZ 58**	0.009

*(1) Standard circular legends are not compatible with this product. Use special legends **ZBY 9●●●T**.*
(2) No isolation function is possible when this guard is fitted.
(3) Ensures conformity with standards EN/IEC 60204-1 and EN/ISO 13850.
(4) Ensures conformity with standard EN/IEC 60204-1.
*(5) Only when mounted on control stations. Use special legends **ZBY 9●●●T**.*

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

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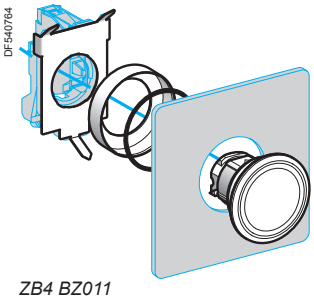
Control and signalling units Ø 22
Harmony® XB4 metal
Accessories for pushbuttons


DF540770

ZB5 SZ3


DF540765

ZB4 BZ007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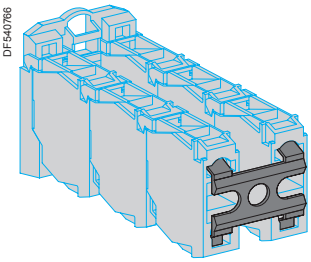
ZB4 BZ011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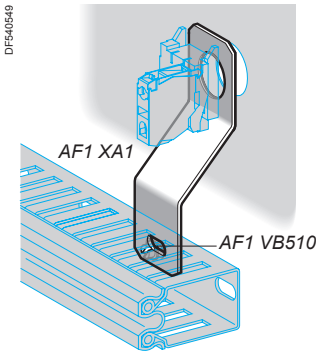
ZBZ 007



DF540549

Other accessories (continued)

Description	For use with	Colour	Sold in lots of	Unit reference	Weight kg
Metal circular blanking plug	Ø 22 control and signalling units	Chromium plated	10	**ZB4 SZ3**	0.023
		Black	10	**ZB4 SZ37**	0.023
Plastic circular blanking plug (with fixing nut)	Ø 22 control and signalling units	Black	10	**ZB5 SZ3**	0.009
Liquid spray protective washer to be fitted under the head	Ø 22 control and signalling units	Chromium plated	50	**ZB4 BZ007**	0.010
		Black	50	**ZB4 BZ0077**	0.010
Flush mounting kit	Pushbutton ZB4 B● with head mounted flush with bezel	Chromium plated	1	**ZB4 BZ011**	0.007
		Black	1	**ZB4 BZ0117**	0.007
Adapter (Ø 30 to Ø 22 reducer)	All pushbuttons	Chromium plated	1	**ZB4 BZ012**	–
Plastic clips	2 or 3 levels of contact blocks ZBE 10● in high vibration environment	–	10	**ZBZ 007**	–
Dummy contact block	Contact blocks ZBE 10● and transformer blocks ZBV 5B	–	5	**ZBE 000**	–
Set of tabs for Faston connection	Contact blocks ZBE 10● and light blocks ZBV ●	–	10	**ZBE 003**	–

Description	Application	Sold in lots of	Unit reference	Weight kg
Cable ducting support	Fixing beneath head	10	**AF1 XA1**	0.030
M5 x 10 screw, with hexagonal slotted head	For fixing cable ducting	100	**AF1 VB510**	0.003
Support	For XB4B pushbuttons, switches and pilot lights	1	**DX1 AP52**	0.160
Boot for contact block ZBE 10● and ZBE 10● 3 *(1)*	For protection against dusty environment	1	**ZBZ 60 ▲**	0.098

(1) Restriction for use: refer to the product instruction sheet on www.schneider-electric.com.

▲ Available: 2nd quarter 2011.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB4 metal

Accessories for illuminated pushbuttons: bulbs

DF540771

DL1 CJ0●●●

DF540772

DL1 CE●●●

DF540773

DL1 CF●●●

DF540774

XBF X13

DF540768

ZBZ 8

Bulbs with BA 9s base fitting and associated accessories

Description	Characteristics	Colour	Sold in lots of	Unit reference	Weight kg
LEDs	≂ 24 V	White	1	**DL1 CJ0241**	0.002
		Green	1	**DL1 CJ0243**	0.002
		Red	1	**DL1 CJ0244**	0.002
		Orange	1	**DL1 CJ0245**	0.002
		Blue	1	**DL1 CJ0246**	0.002
	≂ 48 V	Green	1	**DL1 CJ0483**	0.002
		Red	1	**DL1 CJ0484**	0.002
		Orange	1	**DL1 CJ0485**	0.002
	6 V - 1.2 W	White	1	**DL1 CD0061**	0.002
		Green	1	**DL1 CD0063**	0.002
		Red	1	**DL1 CD0064**	0.002
		Orange	1	**DL1 CD0065**	0.002
		Blue	1	**DL1 CD0066**	0.002
Incandescent bulbs	6 V - 1.2 W	–	10	**DL1 CB006**	0.002
	24 V - 2 W	–	10	**DL1 CE024**	0.002
	120…130 V 2.4 W	–	10	**DL1 CE130**	0.002
Neon bulbs	120…130 V	–	10	**DL1 CF110**	0.002
	230…240 V	–	10	**DL1 CF220**	0.002
Bulb extractor	–	–	1	**XBF X13**	0.005
Lens cap tightening tool	Illuminated pushbuttons, with flush push	–	1	**ZBZ 8**	0.009

General : page 1/44 Characteristics : page 1/52 Dimensions : page 1/106

Schneider Electric

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Control and signalling units Ø 22
Harmony® XB4 metal
Accessories for pushbuttons: keys

PF523999



ZBG 455

PF523999



ZBD LU1

PF523999



ZBG 455P

PF100233



ZBG P

PF100232



ZBD D2

Replacement keys

Description	Key number	Reference	Weight kg
For latching mushroom head pushbuttons and selector switches			
Sets of 2 keys	455	**ZBG 455**	0.013
	421E	**ZBG 421E**	0.014
	458A	**ZBG 458A**	0.014
	520E	**ZBG 520E**	0.014
	3131A	**ZBG 3131A**	0.014
	4A185	**ZBD A185**	0.014
	LU1	**ZBD LU1**	0.014
	LU2	**ZBD LU2**	0.014
	LU3	**ZBD LU3**	0.014
	LU4	**ZBD LU4**	0.014
	LU5	**ZBD LU5**	0.014
	LU6	**ZBD LU6**	0.014
	LU7	**ZBD LU7**	0.014
	LU8	**ZBD LU8**	0.014
	LU9	**ZBD LU9**	0.014
	LU10	**ZBD LU10**	0.014
	LU11	**ZBD LU11**	0.014
	LU12	**ZBD LU12**	0.014
	LU13	**ZBD LU13**	0.014
	LU14	**ZBD LU14**	0.014
	8D1	**ZBD 8D1**	0.014
	Specific key *(1)*	**ZBG K**	0.014
For booted selector switches			
Sets of 2 keys, one of which supplied booted (rubber boot)	455	**ZBG 455P**	–
	421E	**ZBG 421EP**	–
	458A	**ZBG 458AP**	–
	520E	**ZBG 520EP**	–
	3131A	**ZBG 3131AP**	–

Accessory for key switches *(2)*

Description	Function	Reference	Weight kg
Keyhole cover (rubber cover)	Protection of lock barrel when no key inserted in lock	**ZBG P**	0.005

Boot for standard handle

Description	For use with	Sold in lots of	Unit reference	Weight kg
Boot for standard handle	**ZB4 BD●●**	5	**ZBD D2**	0.005

(1) Key number to be added when ordering.
(2) Not compatible with products with key TEC10.

For reference only. www.fengshengelectric.com.sg

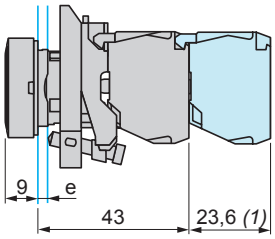
Control and signalling units Ø 22

Harmony® XB4 metal

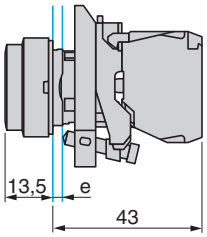
Pushbuttons, switches and pilot lights: complete units, XB4 B

Pushbuttons, spring return

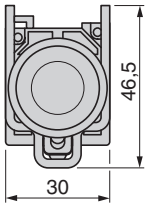
XB4 BA●●



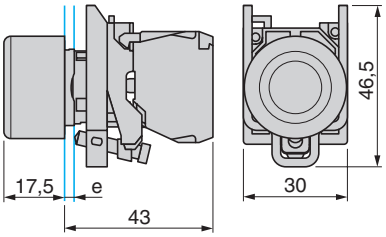
XB4 BL●●



Common face view



XB4 BP●●



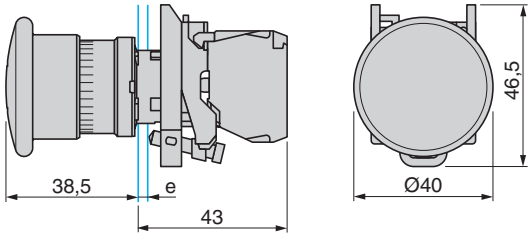
e: clamping thickness: 1 to 6 mm

(1) Additional row of contacts or double contact.

e: clamping thickness: 1 to 6 mm

Mushroom head pushbuttons, spring return

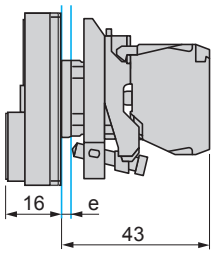
XB4 BC21



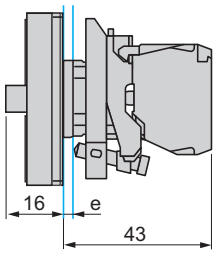
e: clamping thickness: 1 to 6 mm

Multiple-headed pushbuttons (double or triple), spring return

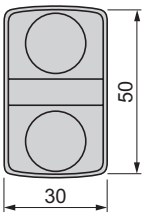
XB4 BL73415, XB4 BW73731●5



XB4 BA731327, XB4 BA711237



Common face view

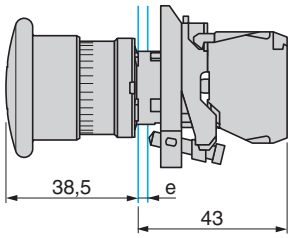


e: clamping thickness: 1 to 6 mm

Emergency stop mushroom head pushbuttons, trigger action and mechanical latching

Push-pull

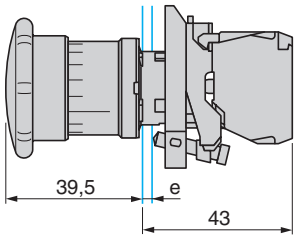
XB4 BT845



e: clamping thickness: 1 to 6 mm

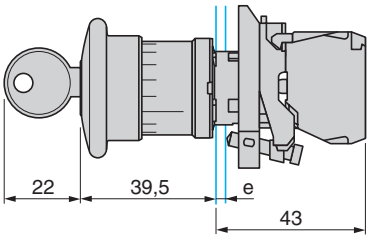
Turn to release

XB4 BS84441, BS8444, BS8445



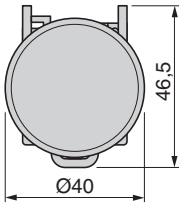
Key release

XB4 BS9445



e: clamping thickness: 1 to 6 mm

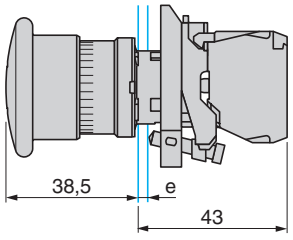
Common face view



Emergency switching off mushroom head pushbuttons, mechanical latching

Push-pull

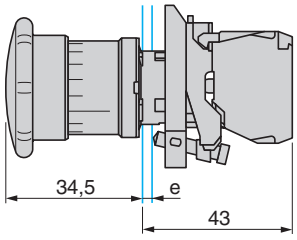
XB4 BT42



e: clamping thickness: 1 to 6 mm

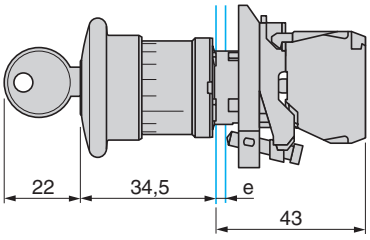
Turn to release

XB4BS542



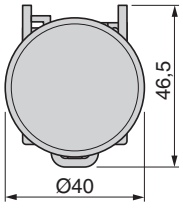
Key release

XB4 BS142



e: clamping thickness: 1 to 6 mm

Common face view



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Characterisics: page 1/52
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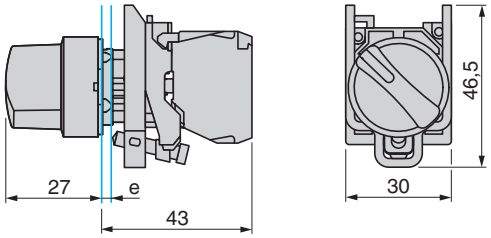
Selector switches

Standard handle operator

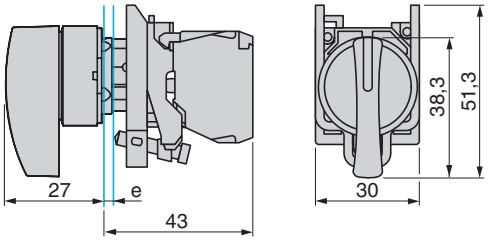
XB4 BD●●



e: clamping thickness: 1 to 6 mm

Long handle operator

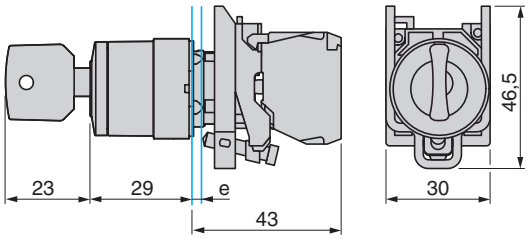
XB4 BJ●●



e: clamping thickness: 1 to 6 mm

Key switches

XB4 BG●●



e: clamping thickness: 1 to 6 mm

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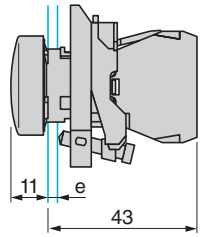
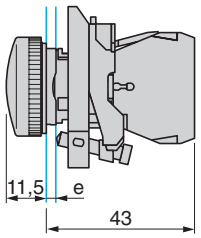
1

Pilot lights

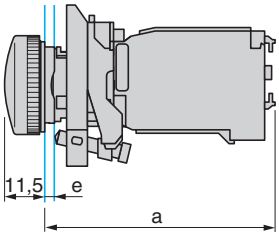
Integral LED
XB4 BVB●, BVG●, BVM●



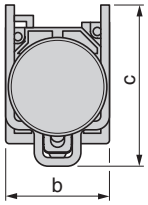
Direct supply
XB4 BV6●



Via integral transformer
XB4 BV3●, BV4●



Common face view



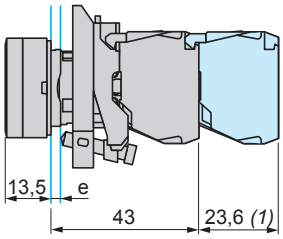
	a	b	c
XB4 BV●●	66	30	46,5
XB4 BV5B●	89,6	40	46,5

e: clamping thickness: 1 to 6 mm

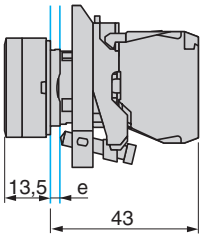
e: clamping thickness: 1 to 6 mm

Illuminated pushbuttons, spring return

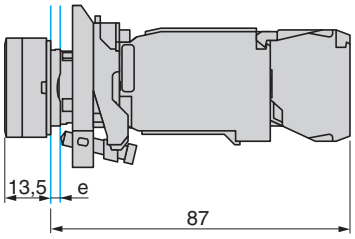
Integral LED
XB4 BWB3●●5



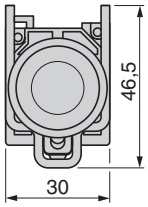
Direct supply
XB4 BW3●65



Via integral transformer
XB4 BW3●●5



Common face view



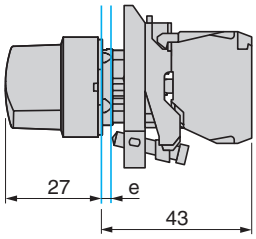
e: clamping thickness: 1 to 6 mm

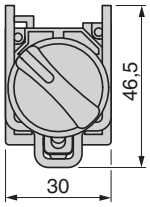
(1) Additional row of contacts or double contact

e: clamping thickness: 1 to 6 mm

Illuminated selector switches

Integral LED
XB4 BK12●●5



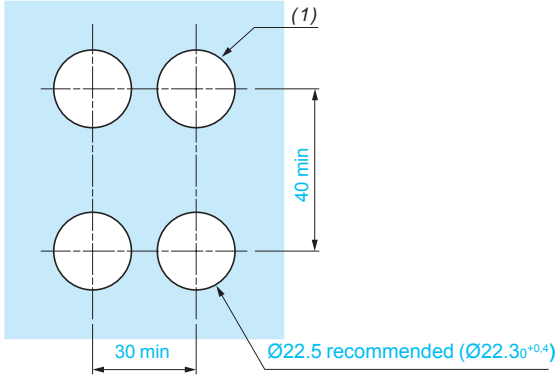


e: clamping thickness: 1 to 6 mm

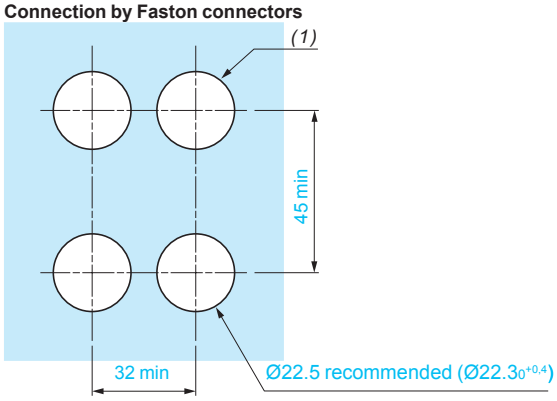
e: clamping thickness: 1 to 6 mm

Panel cut-out for pushbuttons, switches and pilot lights (finished holes, ready for installation)

Connection by screw clamp terminals or plug-in connectors or on printed circuit board



Connection by Faston connectors



(1) Diameter on finished panel or support.

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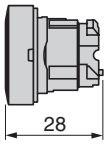
Control and signalling units Ø 22

Harmony® XB4 metal

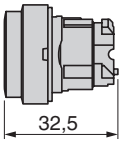
Pushbuttons, switches and pilot lights: sub-assemblies, ZB4 B

Heads for spring return pushbuttons

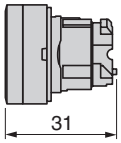
ZB4 BA●, ZB4 BA●●●ZB4 BA●8



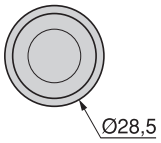
ZB4 BL●, ZB4 BL●●●



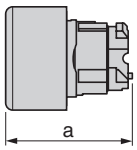
ZB4 BA●4, ZB4 BA●6

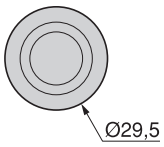


Common face view



ZB4 BP●●, ZB4 BP●S, ZB4 BP●83, ZB4 BP●

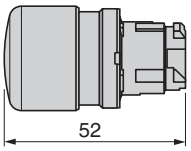


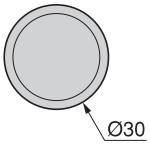


ZB4	a
BP●●	36.5
BP●S	33
BP●83	32
BP●	35

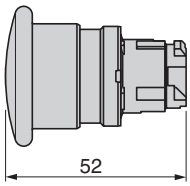
Mushroom heads for spring return pushbuttons

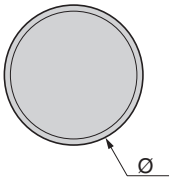
ZB4 BC●4





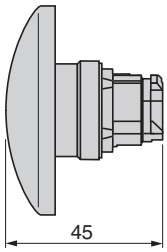
ZB4 BC●, ZB4 BR●

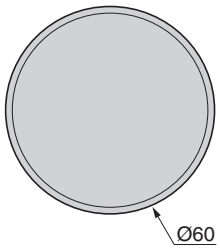




ZB4	Ø
BC●	40
BR●	60

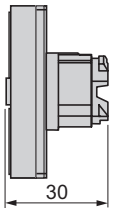
ZB4 BR●16



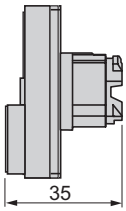


Heads for double-headed, spring return pushbuttons

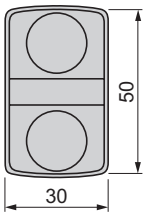
ZB4 BA712●, ZB4 BA734●, ZB4 BA79



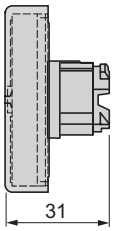
ZB4 BL734●



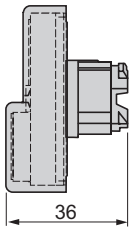
Common face view



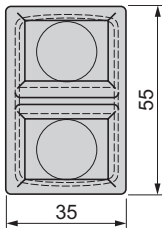
ZB4 BA712●, ZB4 BA734●, ZB4 BA79 + boot ZBA708



ZB4 BL734● + boot ZBA710

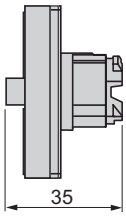


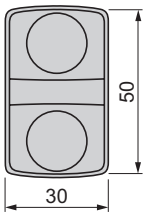
Common face view



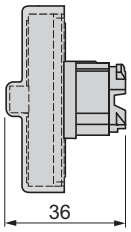
Heads for triple-headed, spring return pushbuttons

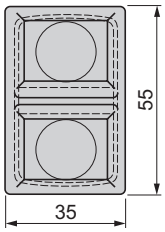
ZB4 BA7313●, ZB4 BA711●●, ZB4 BA72124, ZB4 BA791





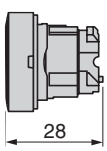
ZB4 BA7313●, ZB4 BA711●●, ZB4 BA72124, ZB4 BA791 + boot ZBA709



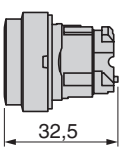


Heads for “push-push to release” pushbuttons

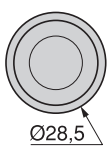
ZB4 BH0●



ZB4 BH●



Common face view



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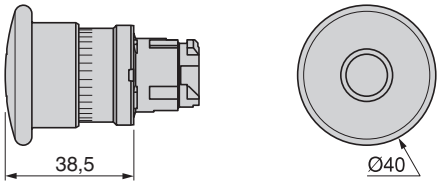
Mushroom heads for Emergency stop, trigger action and mechanical latching pushbuttons

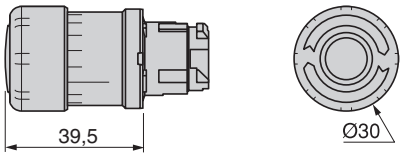
"Push-pull"

ZB4 BT84

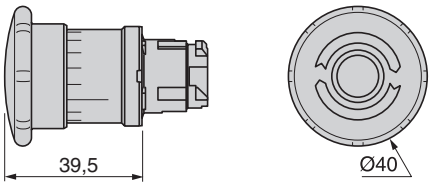


Turn to release

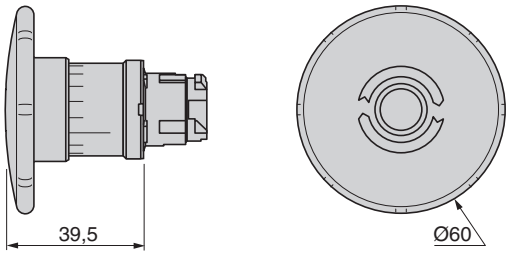
ZB4 BS834



ZB4 BS844

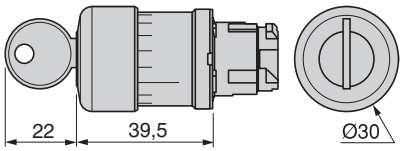


ZB4 BS864



Key release

ZB4 BS934



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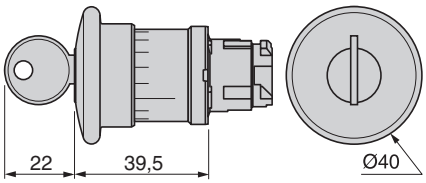
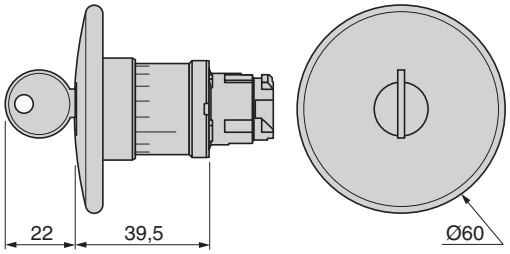


ZB4 BS964



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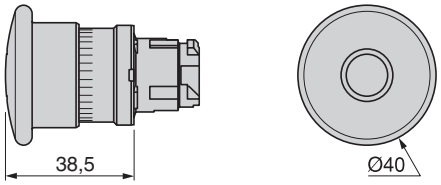
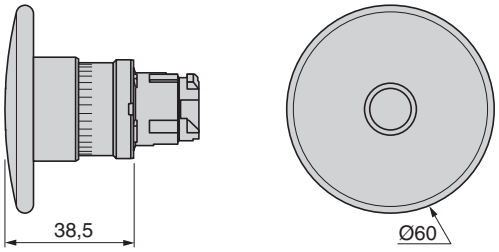
Mushroom heads for Emergency switching off, mechanical latching pushbuttons

Push-pull

ZB4 BT4

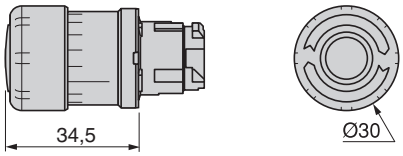


ZB4 BX4

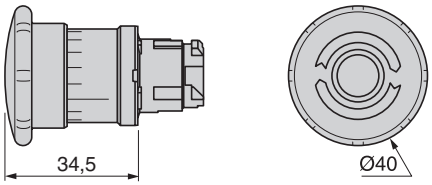


Turn to release

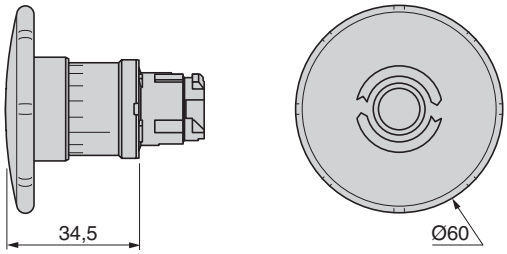
ZB4 BS44



ZB4 BS54

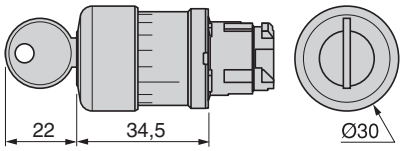


ZB4 BS64

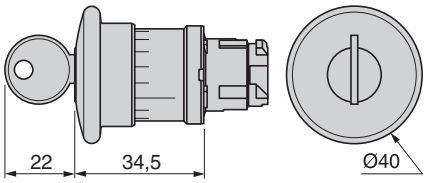


Key release

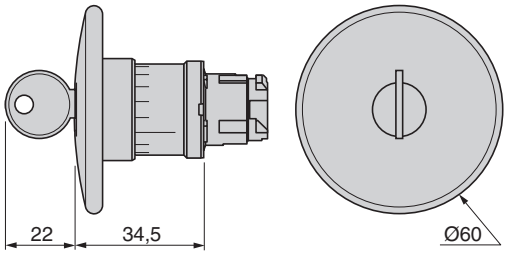
ZB4 BS74



ZB4 BS14



ZB4 BS24



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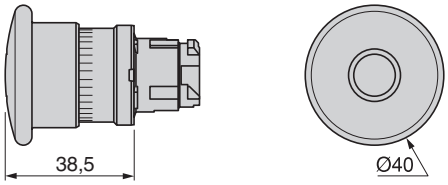
1

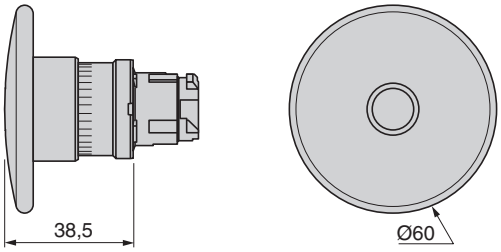
Mushroom heads for latching pushbuttons *(1)*

Push-pull

ZB4 BT2

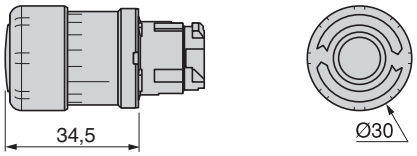


ZB4 BX2

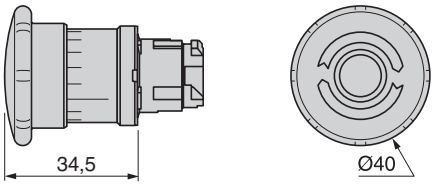


Turn to release

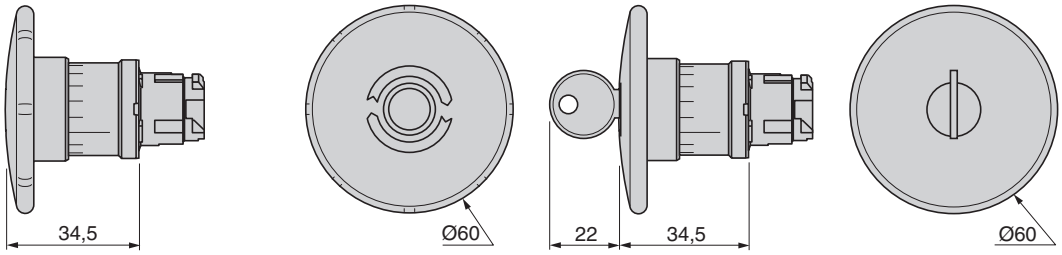
ZB4 BS42



ZB4 BS52, ZB4 BS55

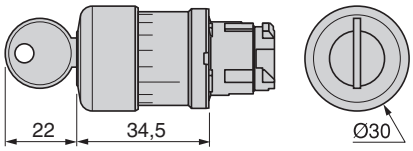


ZB4 BS62

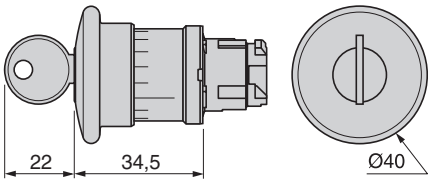


Key release

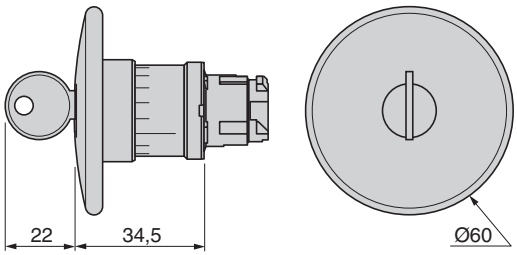
ZB4 BS72



ZB4 BS12



ZB4 BS22



(1) Red mushroom heads for Emergency stop and Emergency switching off, latching pushbuttons: see pages 1/110 and 1/111.

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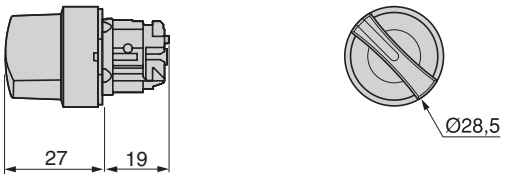
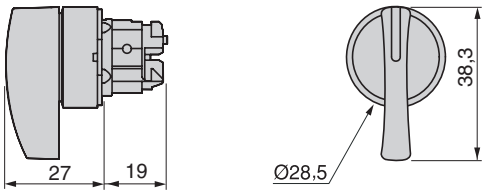
Heads for selector switches

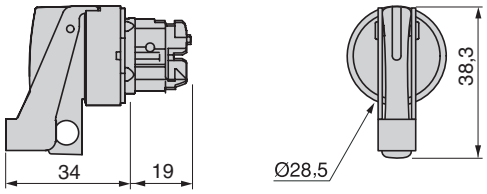
Standard handle operator
ZB4 BD●, ZB4 BD0●M



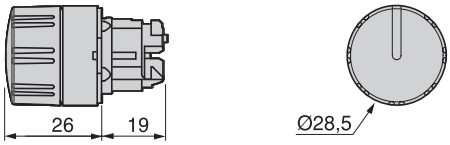
Long handle operator
ZB4 BJ●, ZB4 BD0●M



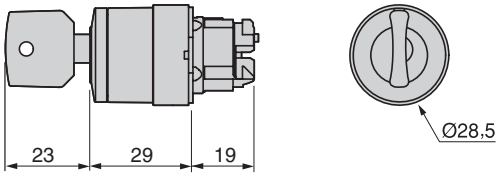
Padlockable long handle operator (6.35 mm shank max.)
ZB4 BJ●9●



Black knurled knob
ZB4 BD●9



Key switches
ZB4 BG●, ZB4 BG0●, ZB4 BG0●M

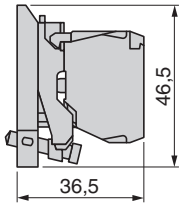


Heads for toggle switches
ZB4 BD●8

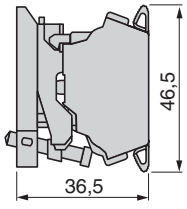


Bodies for pushbuttons and switches

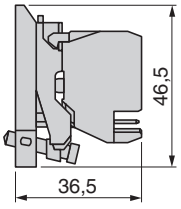
Screw clamp terminal connections
ZB4 BZ10●, ZB4 BZ141



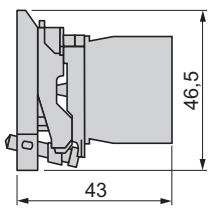
Spring terminal connections
ZB4 BZ10●5



Plug-in connector
ZB4 BZ10●4, ZB4 BZ1414



High power switching with screw clamp terminal connections
ZBE 50● block + ZB4 BZ009 body



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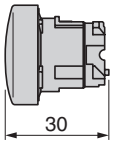
1

Heads for pilot lights, with light source

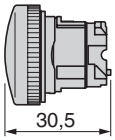
Integral LED

ZB4 BV0●3, ZB4 BV0●3S

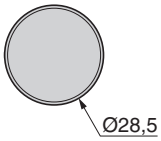


Incandescent, neon or LED

ZB4 BV0●, ZB4 BV0●S



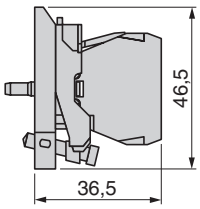
Common face view



Bodies for pilot lights, screw clamp terminal connections

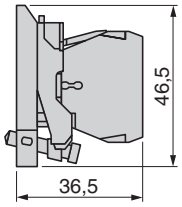
Integral LED

ZB4 BV●●



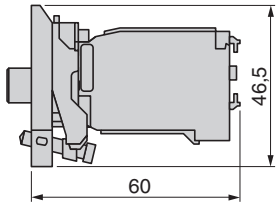
Direct supply, for BA 9s bulb

ZB4 BV6



Via integral transformer, for BA 9s bulb

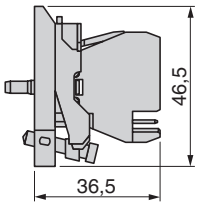
ZB4 BV●, ZB4 BV●D●



Light block + body/fixing collar for pilot lights, plug-in connector

Integral LED

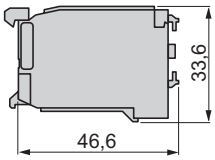
ZBV ●●4 light block + ZB4 BZ009 body/fixing collar



Transformer blocks

For 24 V light blocks with integral LED

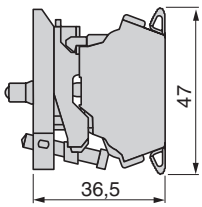
ZBV 5B, ZBV 8B, ZBV 9B



Light block + body/fixing collar for pilot lights, spring terminal connections

Integral LED

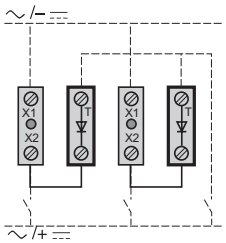
ZBV ●●5 light block + ZB4 BZ009 body/fixing collar



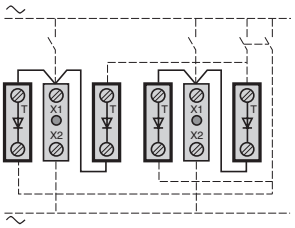
Connections

Blocks for "test light" function

ZBZ G156



ZBZ M156



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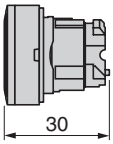
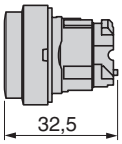
Heads for spring return illuminated pushbuttons, for light source types

LED

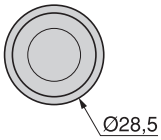
ZB4 BW3●3, ZB4 BW3●3S
ZB4 BW5●3, ZB4 BA●8



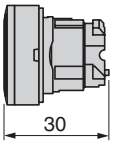
ZB4 BW1●3, ZB4 BL●8

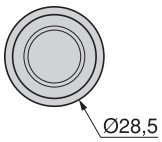


Common face view



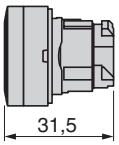
ZB4 BW9●3



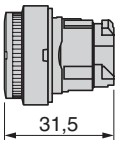


Incandescent or neon

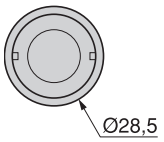
ZB4 BW3●3, ZB4 BW3●S



ZB4 BW1●

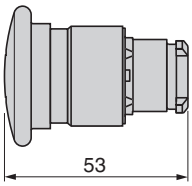


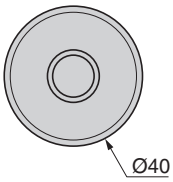
Common face view



Heads for Ø 40 mm mushroom head illuminated pushbuttons with LED

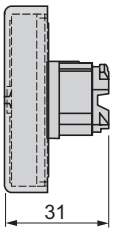
ZB4 BW4●3, ZB4 BW6●3



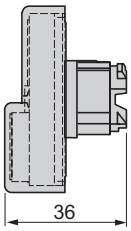


Heads for double-headed pushbuttons + pilot light

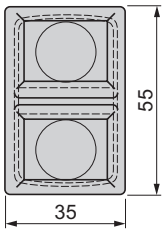
ZB4 BW7A374●,
ZB4 BW7A17●●,
ZB4 BW7A9



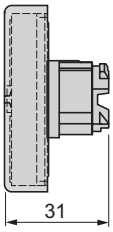
ZB4 BW7L374●



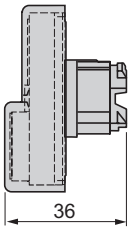
Common face view



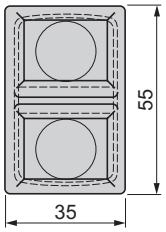
ZB4 BW7A374●,
ZB4 BW7A17●●,
ZB4 BW7A9
+ boot ZBA 708



ZB4 BW7L374●
+ boot ZBA 710

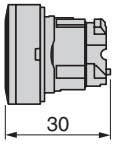


Common face view

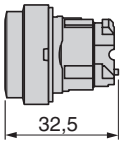


Heads for illuminated “push-push to release” pushbuttons

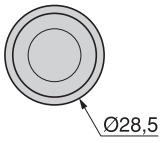
ZB4 BH0●3



ZB4 BH●3

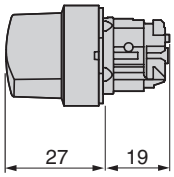


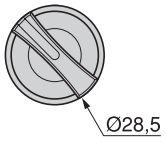
Common face view



Heads for illuminated selector switches with standard handle

ZB4 BK1●●●3





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Control and signalling units Ø 22

Harmony® XB4 metal

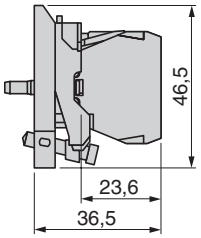
Pushbuttons, switches and pilot lights: complete units, XB4 B

Bodies for illuminated pushbuttons and switches

Screw clamp terminal connections

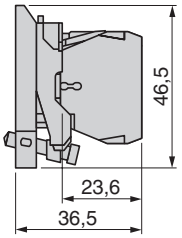
Integral LED

ZB4 BW0●●●



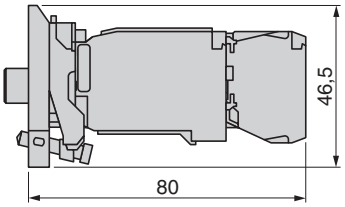
Direct supply, BA 9s bulb

ZB4 BW06●



Via integral transformer, BA 9s bulb

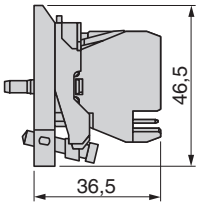
ZB4 BW0●●, BW0●D●●



Plug-in connector

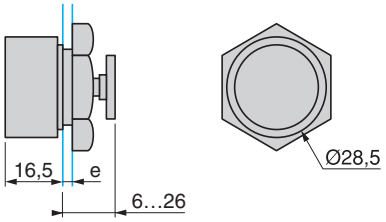
Integral LED

ZB4 BW0●●●4

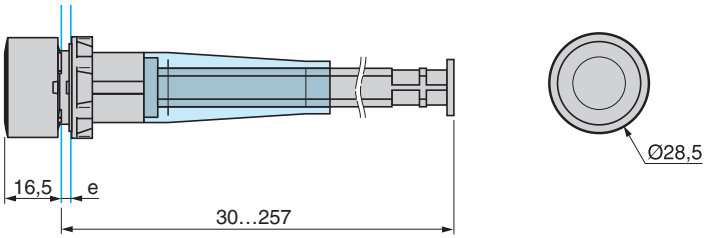


Manual overload reset buttons

XB4 BA8●●



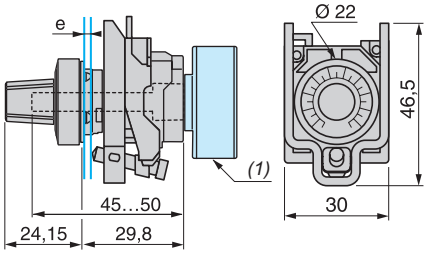
XB4 BA9●●



e: panel thickness 1 to 6 mm

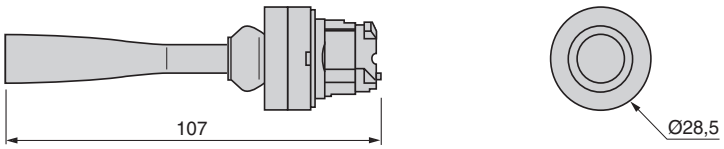
Heads + mounting base for potentiometer

ZB4 BD9●2



Wobblestick head

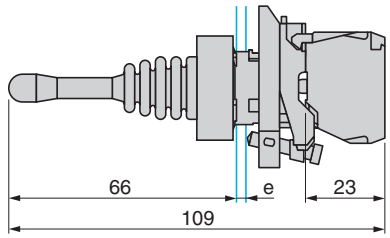
ZB4 BB●



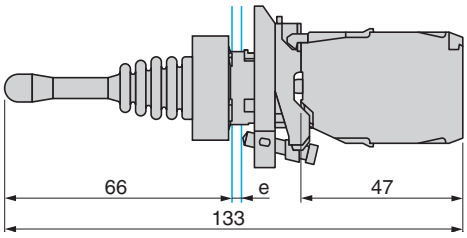
(1) Potentiometer not included.

Joystick controllers

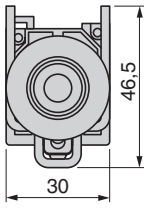
XD4 PA●2



XD4 PA●4



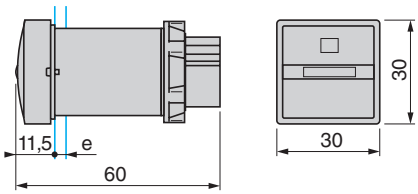
Common face view



e: panel thickness 1 to 6 mm

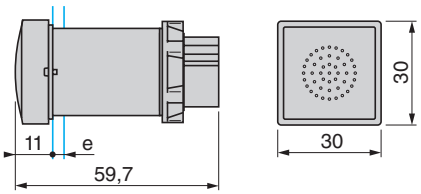
Hour counters

XB5 DS●



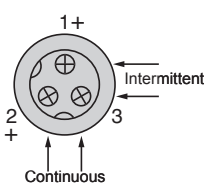
Annunciators

XB5 KS●



Cabling

XB5 KS●



e: panel thickness 1 to 6 mm

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Control and signalling units Ø 22

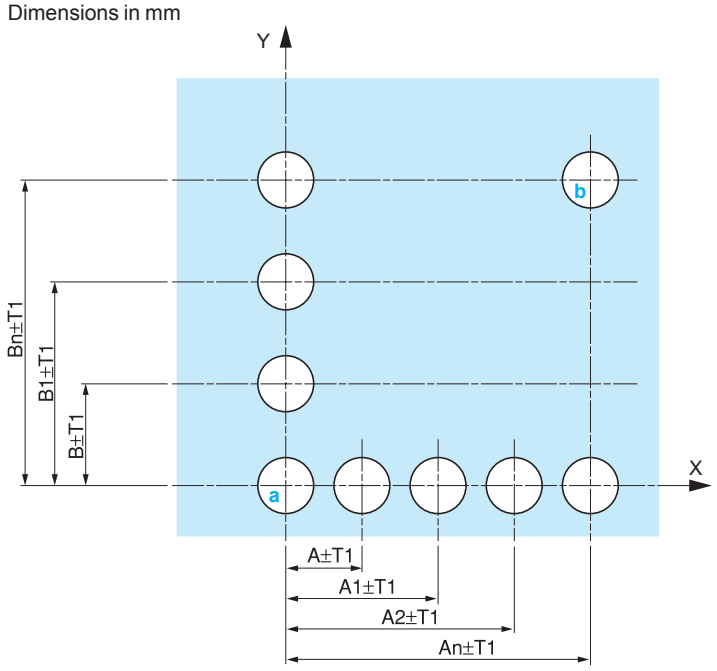
Harmony® XB4 metal

Pushbuttons, switches and pilot lights
for printed circuit board connection

Pushbuttons, switches and pilot lights for printed circuit board connection

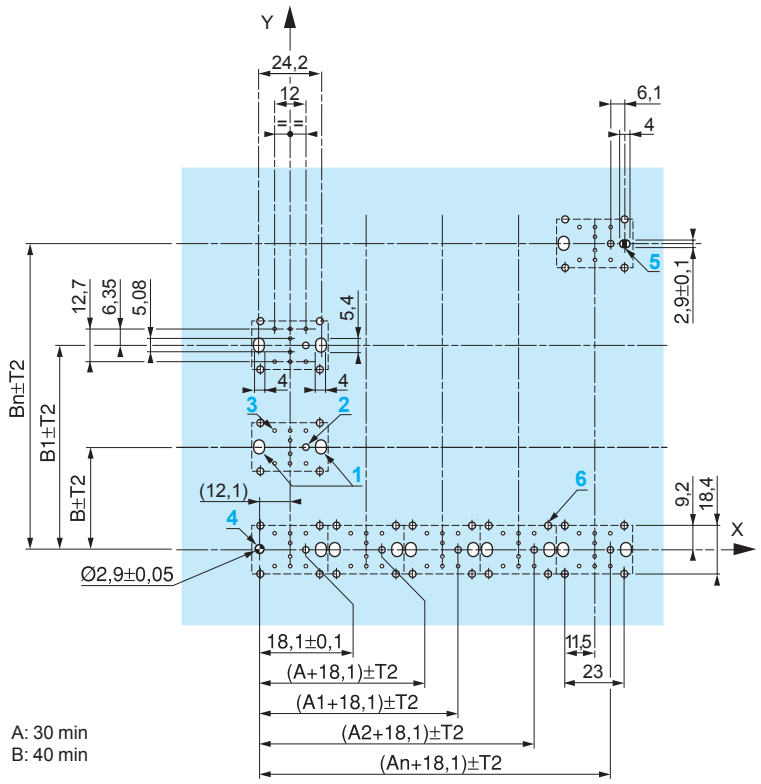
Panel cut-outs (viewed from installer's side)

Dimensions in mm



Printed circuit board cut-outs (viewed from electrical block side)

Dimensions in mm

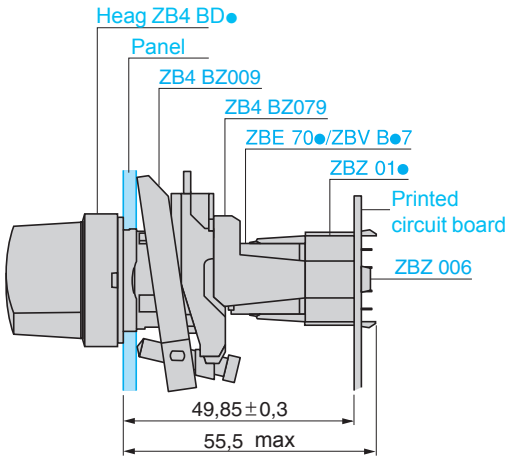


General tolerances of the panel and printed circuit board

The cumulative tolerance must not exceed 0.3 mm: T1 + T2 = 0.3 mm max.

■ Installation precautions:
□ Minimum thickness of circuit board: 1.6 mm.
□ Cut-out diameter: 22.4 mm ± 0.1 mm.
□ Orientation of body/fixing collar ZB4 BZ009: ± 2° 30' (excluding cut-outs marked **a** and **b**).
□ Tightening torque of screws ZBZ 006: 0.6 N.m. max.
□ Allow for one ZB4 BZ079 fixing collar/pillar and its fixing screws:
- every 90 mm horizontally (X), and 120 mm vertically (Y).
- with each selector switch head (ZB4 BD●, ZB4 BJ●, ZB4 BG●).

The fixing centres marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5**.



■ **Mounting of adapter (socket) ZBZ 01●:**

1 2 elongated holes for ZBZ 006 screw access.

2 1 hole Ø 2.4 mm ± 0.05 for centring adapter ZBZ 01●

3 8 x Ø 1.2 mm holes.

4 1 hole Ø 2.9 mm ± 0.05, for aligning the printed circuit board (with cut-out marked **a**).

5 1 elongated hole for aligning the printed circuit board (with cut-out marked **b**).

6 4 holes Ø 2.4 mm for clipping in adapter ZBZ 01●.

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 holes for centring adapter ZBZ 01●.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22
Joystick controllers

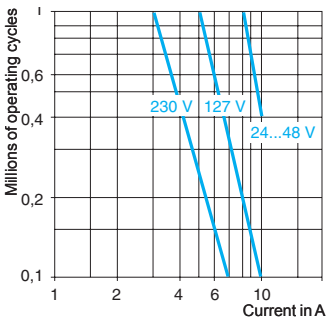
Environment

Conformity to standards	EN/IEC 60947-5-1
Product certifications	Standard version: CSA A600-Q600, LRO
Protective treatment	Standard version: "TC"
Ambient air temperature	Operation: - 25…+ 70 °C. Storage: - 40…+ 70 °C
Operating position	All positions
Vibration resistance	5 gn (40 Hz < frequency < 500 Hz) conforming to IEC 60068-2-6
Shock resistance	20 gn conforming to IEC 60068-2-27
Electric shock protection	Class I, conforming to 61140
Degree of protection	IP 66 conforming to IEC 60529
Mechanical life	1 million operating cycles

Contact block characteristics

Rated operational characteristics	∼ AC-15; A300 or Ue = 240 V and Ie = 3 A ⎓ DC13; Q300 or Ue = 250 V and Ie = 0.27 A conforming to EN/IEC 60947-5-1
Rated insulation voltage	Ui: 500 V conforming to EN/IEC 60947-1; degree of pollution 3; 600 V conforming to UL 508 and CSA C 22-2 n° 14
Rated impulse withstand voltage	U imp = 6 kV conforming to EN/IEC 60947-1
Contact operation	Slow break N/O
Short-circuit protection	10 A cartridge fuse type gG (gl) or N conforming to EN/IEC 60947-5-1
Terminal referencing	Conforming to CENELEC EN 50013
Rated operational power	Conforming to EN/IEC 60947-5-1 Appendix C. Utilisation categories AC-15 and DC-13. Operating rate: 3600 operating cycles/hour. Load factor: 0.5

a.c. supply ∼ 50-60 Hz
Inductive circuit



d.c. supply ⎓
Power broken in W
for 1 million operating cycles

Voltage V	**24**	**48**	**120**
W	65	48	40

Electrical reliability	Failure rate < 1 fault for 100 million operating cycles (programmable controller inputs, ⎓ 24 V)
Connection	- Screw and captive cable clamp terminals. Clamping capacity: min. 1 x 0.5 mm², max., with or without cable end: 2 x 1.5 mm² - 6.3 mm Faston connectors (on request)

References: page 1/119
Dimensions: page 1/121
Schemes: page 1/121

For reference only. www.fengshengelectric.com.sg

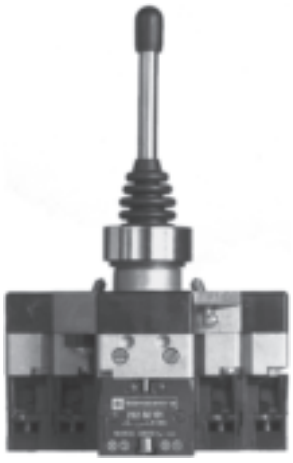
Control and signalling units Ø 22
Joystick controllers

94172



XD2 GA8211

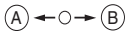
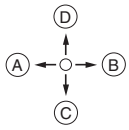
94173



XD2 GA8441

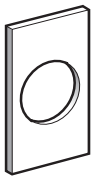
Complete units type XD2 G, with chromium plated metal bezel

Interchangeable contacts

Description	Operation	Spring return to zero position	Bezel finish	Reference	Weight kg
2 direction Fixing centres 90 x 90 mm 	1 notch 1 N/O contact per direction	Without	Shiny	**XD2 GA8211**	0.300
			Black	**XD2 GA82117**	0.300
		With	Shiny	**XD2 GA8221**	0.300
			Black	**XD2 GA82217**	0.300
	2 notches 2 N/O contacts per direction	Without	Shiny	**XD2 GA8231**	0.500
			Black	**XD2 GA82317**	0.500
		With	Shiny	**XD2 GA8241**	0.500
			Black	**XD2 GA82417**	0.500
		1st notch stay put 2nd notch with spring return to 1st notch	Shiny	**XD2 GA8251**	0.500
			Black	**XD2 GA82517**	0.500
4 direction Fixing centres 90 x 90 mm 	1 notch 1 N/O contact per direction	Without	Shiny	**XD2 GA8411**	0.330
			Black	**XD2 GA84117**	0.330
		With	Shiny	**XD2 GA8421**	0.330
			Black	**XD2 GA84217**	0.330
	2 notches 2 N/O contacts per direction	Without	Shiny	**XD2 GA8431**	0.550
			Black	**XD2 GA84317**	0.550
		With	Shiny	**XD2 GA8441**	0.550
			Black	**XD2 GA84417**	0.550
		1st notch stay put 2nd notch with spring return to 1st notch	Shiny	**XD2 GA8451**	0.550
			Black	**XD2 GA84517**	0.550

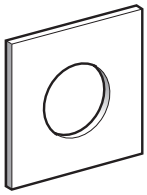
Control and signalling units Ø 22
Joystick controllers

500846_1



ZD2 GY5201

500847_1



ZD2 GY6201

94174



ZB2 BE101

Legend plates

Description	Text	Colour	Reference	Weight kg
2 direction 40 x 64 mm	Without	Black one side, red reverse	**ZD2 GY5201**	0.002
		White one side, yellow reverse	**ZD2 GY5401**	0.002
	With *(1)* (specify when ordering)	Black background, white letters	**ZD2 GY5002**	0.002
		Red background, white letters	**ZD2 GY5004**	0.002
		White background, black letters	**ZD2 GY5001**	0.002
		Yellow background, black letters	**ZD2 GY5005**	0.002
4 direction 64 x 64 mm	Without	Black one side, red reverse	**ZD2 GY6201**	0.003
		White one side, yellow reverse	**ZD2 GY6401**	0.003
	With *(1)* (specify when ordering)	Black background, white letters	**ZD2 GY6002**	0.003
		Red background, white letters	**ZD2 GY6004**	0.003
		White background, black letters	**ZD2 GY6001**	0.003
		Yellow background, black letters	**ZD2 GY6005**	0.003

Contact blocks

Description	Contact	Reference	Weight kg
Slow break Additional or replacement	N/O	**ZB2 BE101**	0.015

(1) 2 lines of 11 characters maximum per direction.

Other versions

XD2 G joystick controllers with:
- variable composition; 2, 3, 4 or 8 direction,
- contact blocks with Faston connectors conforming to NF C 20-120,
- gold flashed contacts for low power switching.

Please consult your customer care centre.

Characteristics: page 1/118
Dimensions: page 1/121
Schemes: page 1/121

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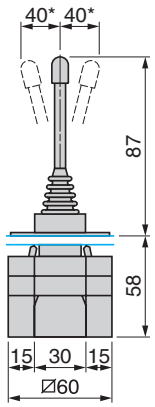
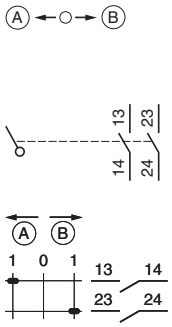
XD2 GA●●

1 notch
1 N/O contact per direction

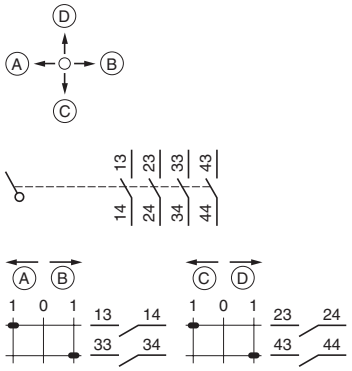


* in each of the 4 directions

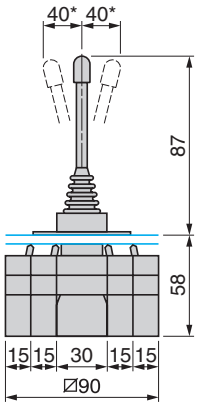
XD2 GA8211, GA82117
XD2 GA8221, GA82217



XD2 GA8411, GA84117
XD2 GA8421, GA84217

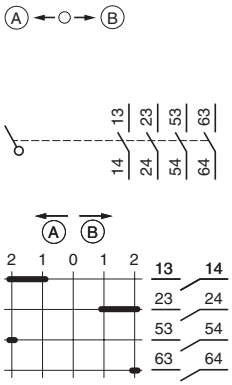


2 notches
2 N/O contacts per direction

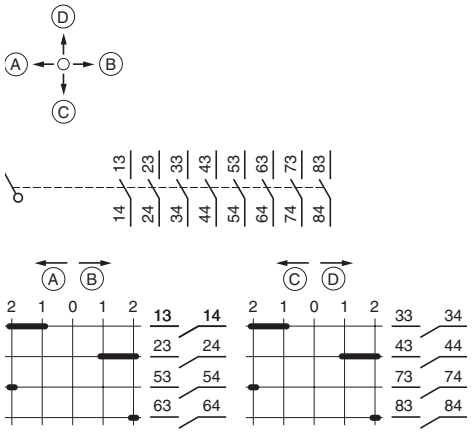


* in each of the 4 directions

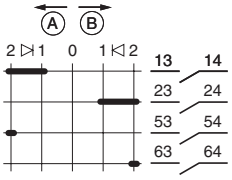
XD2 GA8231, GA82317
XD2 GA8241, GA82417



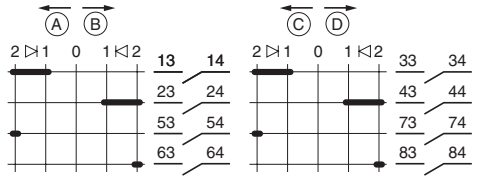
XD2 GA8431, GA84317
XD2 GA8441, GA84417



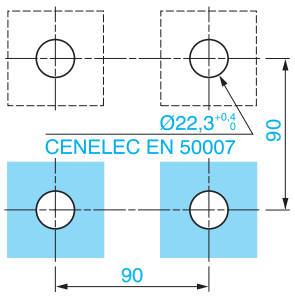
XD2 GA8251, GA82517



XD2 GA8451, GA84517



Panel cut-out
(thickness 1 to 6 mm)
XD2 GA (2 and 4 direction)



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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights

1

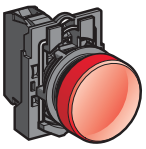
Description

The Ø 22 range of plastic (double insulated) control and signalling units comprises:

Complete units, XB5 A

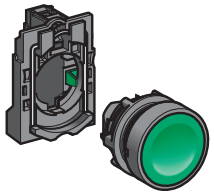


Pushbuttons and switches



Pilot lights

Sub-assemblies, ZB5 A

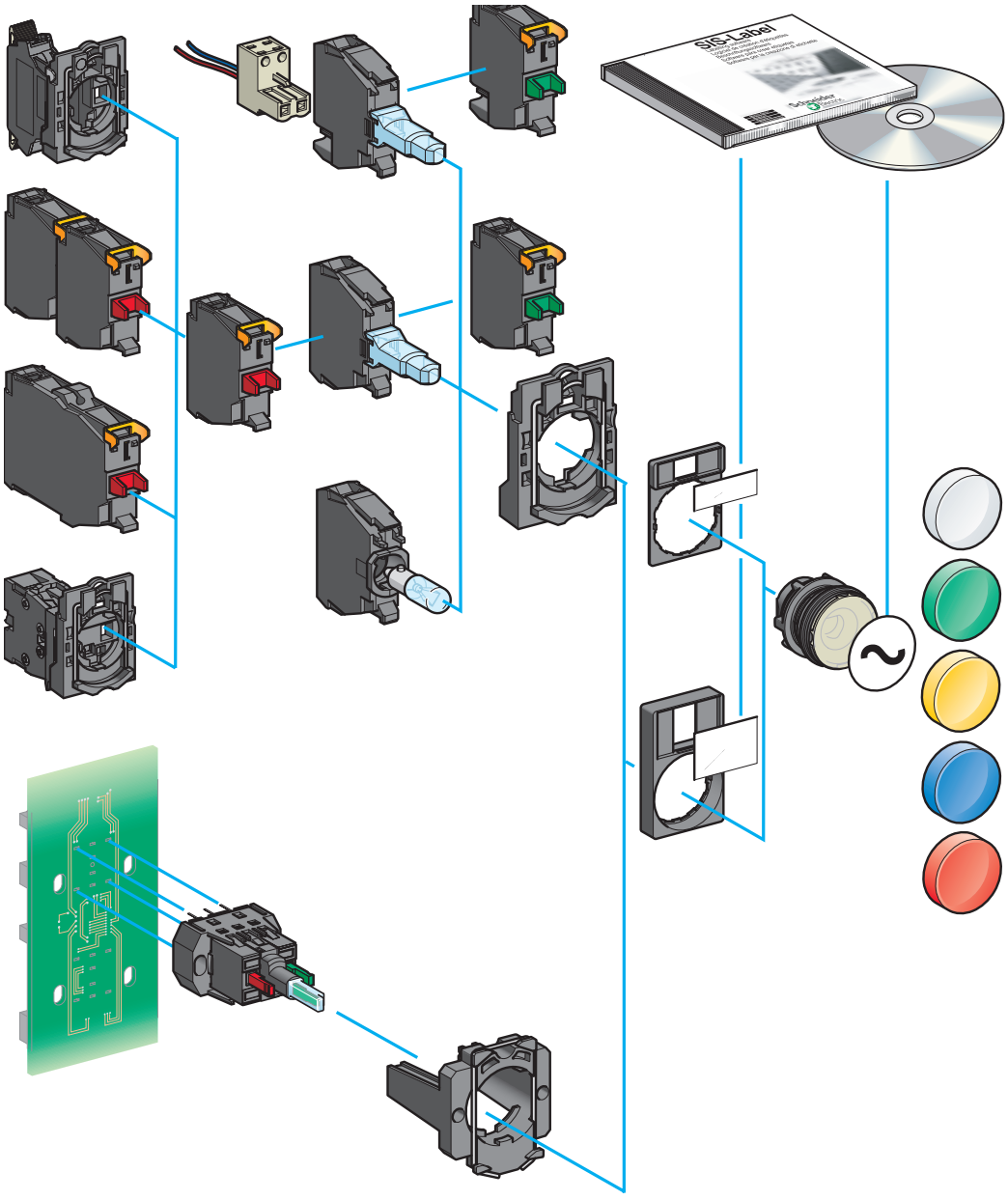


Pushbuttons and switches: body + head sub-assemblies



Pilot lights: body + head sub-assemblies

ZB component parts and accessories



Characteristics : page 1/130
References : page 1/136
Dimensions : page 1/188

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Control and signalling units Ø 22
Harmony® XB5, plastic
Pushbuttons, switches and pilot lights

Schematic library

Contact functions (pushbuttons, Emergency stop and Emergency switching off pushbuttons)



Pushbutton
N/O contact



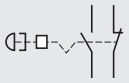
Pushbutton
N/C contact



Mushroom head spring return
N/O contact



Emergency switching off mushroom head pushbutton - Push-pull N/C contact



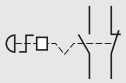
Emergency stop trigger action mushroom head - Push-pull N/O + N/C contacts



Emergency switching off mushroom head - Turn to release N/C contact



Emergency switching off mushroom head - Turn to release, with key N/C contact



Emergency stop trigger action mushroom head - Turn to release N/O + N/C contacts



Emergency stop trigger action mushroom head Turn to release, with key N/O + N/C contacts



Double-headed pushbutton N/O + N/C contacts

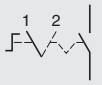


Early make contact block N/O contact

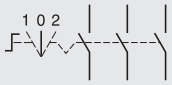


Late break contact block N/C contact

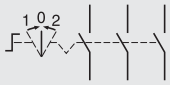
Contact functions (selector switches)



Selector switch 2-position stay put N/O contact



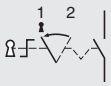
Selector switch 3-position stay put N/O+N/O+N/O contacts



Selector switch 3-position 2 spring return to centre N/O+N/O+N/O contacts



Selector switch 2-position stay put, key withdrawal from LH position - N/O contact



Selector switch 2-position spring return from right to left, key withdrawal from LH position N/O contact

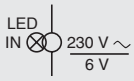
Signalling functions



Pilot light with BA 9s incandescent bulb

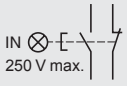


LED pilot light

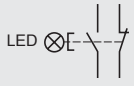


Pilot light with integral transformer 230 V primary, 6 V secondary BA 9s bulb, incandescent or LED

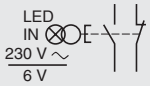
Combined functions, contact + signalling (pushbuttons and selector switches)



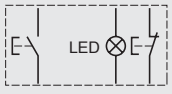
Illuminated pushbutton, BA 9s incandescent bulb N/O+N/C contacts



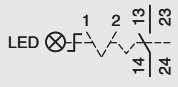
Illuminated pushbutton LED - N/O+ N/C contacts



Illuminated pushbutton with integral transformer 230 V ~ 50/60 Hz primary, 6 V secondary BA 9s bulb, incandescent or LED - N/O+ N/C contacts



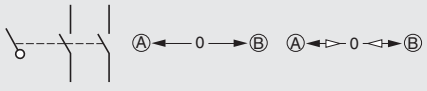
Double-headed pushbutton with LED pilot light



Illuminated selector switch with LED, 2-position stay put N/O + N/C contacts

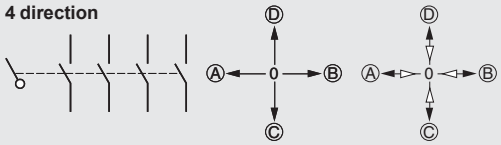
Joystick controller functions

2 direction



Without spring return **With spring return**

4 direction



Without spring return **With spring return**

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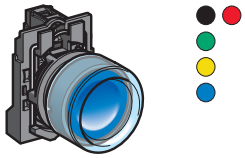
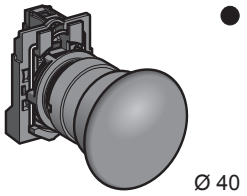
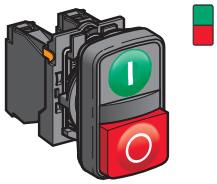
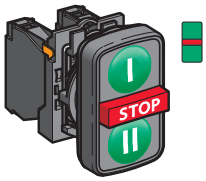
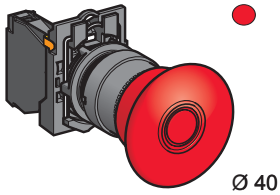
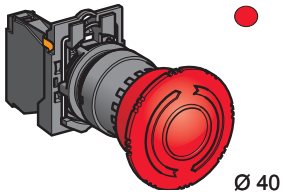
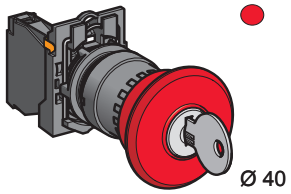
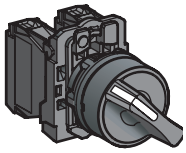
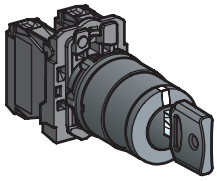
Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: complete units, XB5 A

Complete units	Contact functions		
Pushbuttons, spring return			
	Flush push, unmarked **XB5 AA●1/AA42** **see page 1/136**	Flush push, with marking **XB5 AA3311/AA33●1** **see page 1/140**	Projecting push, with marking **XB5 AL4322** **see page 1/140**
			
	Booted flush push **XB5 AP●1/AP42** **see page 1/139**	Projecting push, unmarked **XB5 AL42** **see page 1/138**	Mushroom head **XB5 AC21** **see page 1/146**
Multiple-headed pushbuttons, spring return			
	Double-headed **XB5 AL73415** **see page 1/144**	Triple-headed **XB5 AA731327/XB5 AA711237** **see page 1/145**	
Emergency Stop or Emergency switching off mushroom head pushbuttons, Ø 40			
Emergency stop trigger action and mechanical latching	Push-pull (EN/ISO 13850) **XB5 AT845** **see page 1/148**	Turn to release (EN/ISO 13850) **XB5 AS8●4** **see page 1/148**	Key release (EN/ISO 13850) **XB5 AS9445** **see page 1/148**
Emergency switching off mechanical latching	Push-pull (IEC 60364-5-53) **XB5 AT42** **see page 1/149**	Turn to release (IEC 60364-5-53) **XB5 AS542** **see page 1/149**	Key release (IEC 60364-5-53) **XB5 AS142** **see page 1/149**
Selector switches and key switches			
	Standard handle, black **XB5 AD●●** **see page 1/152**	Long handle, black **XB5 AJ●●** **see page 1/153**	Key switch **XB5 AG●●** **see page 1/154**

Characteristics : page 1/130
References : page 1/136
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: complete units, XB5 A

Complete units *(continued)*

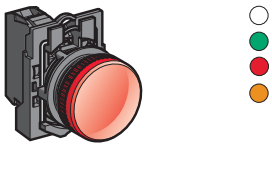
Signalling functions

Pilot lights



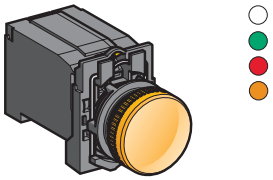
Integral LED

XB5 AVB●/AVG●/AVM●
see page 1/158



For bulb with BA 9s base fitting
Direct supply

XB5 AV6●
see page 1/159



Via integral transformer

XB5 AV3●/AV4●
see page 1/159

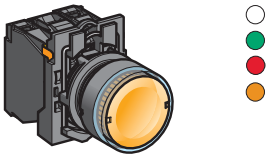
Combined functions (contact + signalling)

Illuminated pushbuttons, spring return, flush push



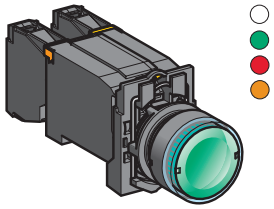
Integral LED

XB5 AW3●B5/AW3●G5/AW3●M5
see page 1/141



For bulb with BA 9s base fitting
Direct supply

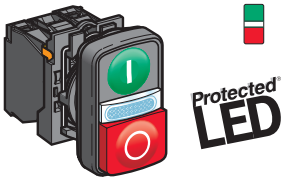
XB5 AW3●65
see page 1/143



Via integral transformer

XB5 AW3●35/AW3●45
see page 1/143

Double-headed pushbuttons, spring return, + pilot light block



Integral LED

XB5 AW73731●5
see page 1/144

Illuminated selector switches, standard handle

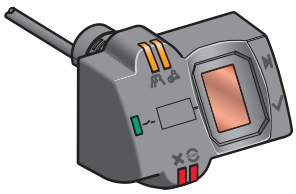


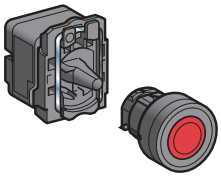
Integral LED

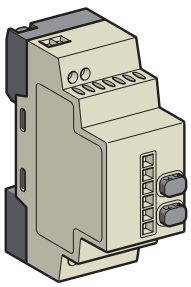
XB5 AK12●●5, XB5 AK13●●5
see page 1/156

Biometric switches

Wireless and batteryless pushbuttons







Fingerprint reader biometric switches
Bistable or monostable type, 24 V d.c.

XB5 S●B●●●●
see page 1/200

Wireless and batteryless pushbuttons
24 V d.c. or 24...240 V a.c./d.c.

XB5 R●●●●
see page 1/208

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

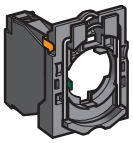
Non illuminated units for user assembly

Contact functions

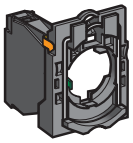
Body sub-assemblies

Head sub-assemblies

For pushbuttons, spring return, unmarked

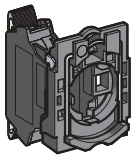


Screw clamp terminals
ZB5 AZ10●/AZ141
page 1/162

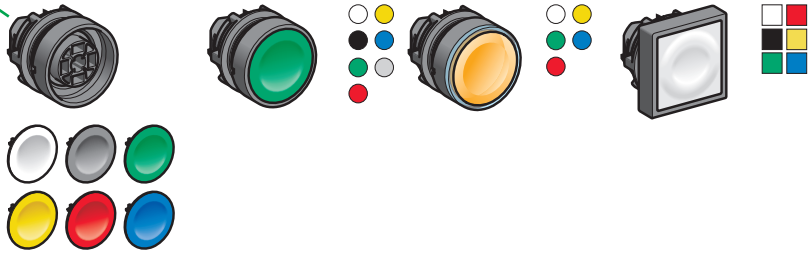


Faston
ZB5 AZ10●3
page 1/166

For pushbuttons, spring return, with marking



Spring clamp terminals
ZBE 10●5
ZB5 AZ10●5
page 1/164

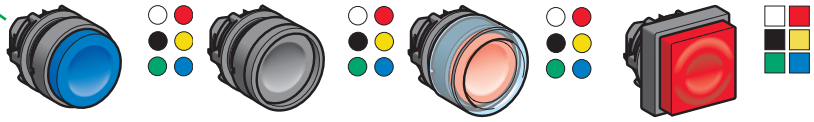


Flush push without cap/with set of 6 caps
ZB5 AA0/AA9
page 1/136

Flush push
ZB5 AA●
page 1/136

Flush push for insertion of legend
ZB5 AA●8
page 1/136

Flush push, cap mounted/not mounted
ZB5 CA0/CA●
page 1/136



Projecting
ZB5 AL●
page 1/138

Recessed push
ZB5 AA●
page 1/137

Booted flush push, for insertion of legend
ZB5 AP●●/AP●S
page 1/138

Projecting or recessed push
ZB5 CA●/CL●
page 1/137

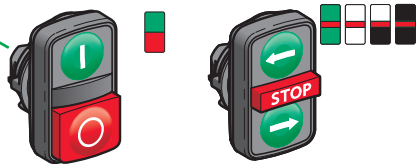


Flush push
ZB5 AA●3●/AA●4●
page 1/140

Projecting push
ZB5 AL●
page 1/140

Flush push
ZB5 CA●3●/ CA●9●
page 1/140

For multiple-headed pushbuttons, spring return



Double-headed
ZB5 AA7●●● /AA79
ZB5 AL734●
page 1/144

Triple-headed
ZB5 AA7313●, ZB5 AA711●●
ZB5 AA72124, ZB5 AA791
page 1/145

For "push-push to release" pushbuttons

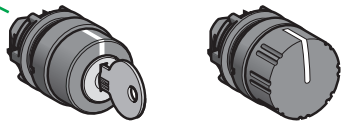


Flush push (caps mounted/not mounted)
ZB5 AH●●/CH●●
page 1/150

Projecting push
ZB5 AH●
page 1/150

Flush push (caps mounted/not mounted)
ZB5 CH0/CH0●
page 1/150

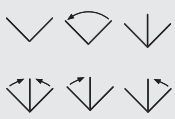
For "push-turn to release" pushbuttons



Key switches
ZB5 AFD●
page 1/151

Knurled knob *(1)*
ZB5 AF
page 1/151

(1) Knob positions



Characteristics : page 1/130
References : page 1/136
Dimensions : page 1/188

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

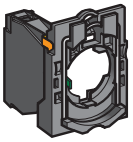
Non illuminated units for user assembly *(continued)*

Contact functions *(continued)*

Body sub-assemblies

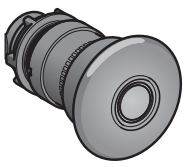
Head sub-assemblies

For mushroom head pushbuttons





Ø 30
Ø 40
Ø 60



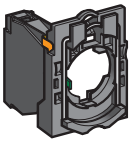
Ø 30
Ø 40
Ø 60

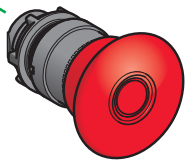
Screw clamp terminals
ZB5 AZ10●/AZ141
page 1/162

Spring
ZB5 AC●/AR●
see page 1/146

Latching
ZB5 A●2/AS●2/AS55
see page 1/147

For Emergency Stop or Emergency switching off mushroom head pushbuttons





Ø 30
Ø 40
Ø 60



Ø 30
Ø 40
Ø 60

Emergency stop trigger action and mechanical latching

Faston
ZB5 AZ10●3
page 1/166

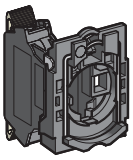
Push-pull (EN/ISO 13850)
ZB5 AT84
see page 1/148

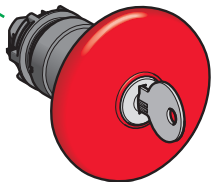
Turn to release (EN/ISO 13850)
ZB5 AS8●4
see page 1/148

Emergency switching off mechanical latching

Push-pull (IEC 60364-5-53)
ZB5 AT●/AX●
see page 1/149

Turn to release (IEC 60364-5-53)
ZB5 AS44/AS54/AS64
see page 1/149





Ø 30
Ø 40
Ø 60

Emergency stop trigger action and mechanical latching

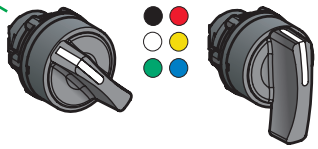
Spring clamp terminals
ZBE 10●5
ZB5 AZ10●5
page 1/164

Key release (EN/ISO 13850)
ZB5 AS9●4/AS944D, see page 1/148

Emergency switching off mechanical latching

Key release (IEC 60364-5-53)
ZB5 AS●4/AS14D, see page 1/149

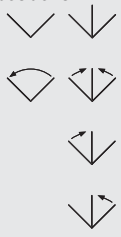
For selector switches and key switches



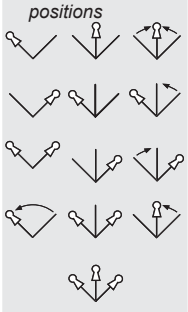
Standard handle *(1)*
ZB5 AD●
page 1/152

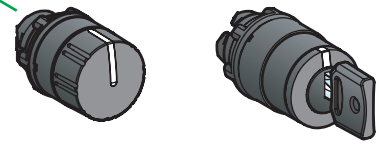
Long black handle *(1)*
ZB5 AJ●
page 1/153

(1) Switch handle and knob positions



(2) Key switch positions
Key withdrawal positions

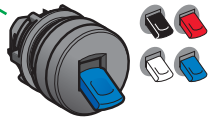




Knurled black knob *(1)*
ZB5 AD●9
page 1/155

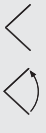
Key switch *(2)*
ZB5 AG●●
page 1/155

For toggle switches



2-position lever *(3)*
ZB5 AD●8
see page 1/155

(3) Lever positions



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Control and signalling units Ø 22

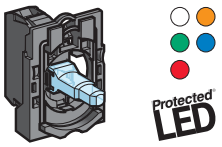
Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

Pilot lights for user assembly

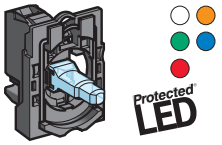
Signalling functions

Body sub-assemblies with integral LED



Connection: screw clamp terminals

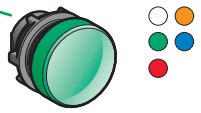
ZB5 AVB/AVG/AVM
see page 1/170



Connection: plug-in connector

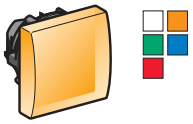
Please consult your customer care centre

Head sub-assemblies



With lens fitted (insertion of legend)

ZB5 AV0●3/AV0●3E, see page 1/158



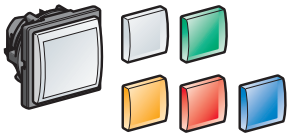
With lens fitted

ZB5 CV0●3, see page 1/158



With 5 lens caps (not fitted) for insertion of legend

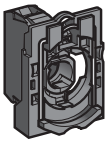
ZB5 AV003/AV0●3●, see page 1/158



With 5 separate lens caps, not fitted

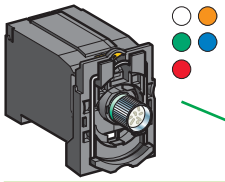
ZB5 CV003, see page 1/158

Body sub-assemblies for BA 9s bulb



Direct supply
Connection: screw clamp terminals

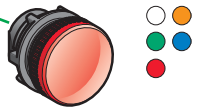
ZB5 AV6, page 1/173



Via integral transformer
Connection: screw clamp terminals

ZB5 AV●/AV3D●/AV5D●
page 1/173

Head sub-assemblies



With lens fitted

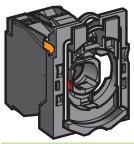
ZB5 AV0●, see page 1/159

Illuminated pushbuttons for user assembly

For illuminated pushbuttons, spring return

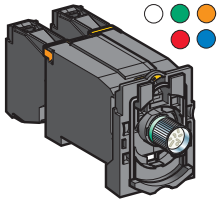
Combined functions (contact + signalling)

Body sub-assemblies for BA 9s bulb



Direct supply
Connection: screw clamp terminals

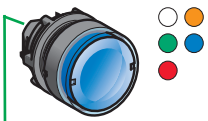
ZB5 AW06●, page 1/172



Via integral transformer
Connection: screw clamp terminals

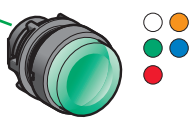
ZB5 AW03●/AW04●/AW05●
see page 1/172

Head sub-assemblies



Flush

ZB5 AW3●/AW3●S, see page 1/142



Projecting

ZB5 AW1●/AW1●S, see page 1/142

Characteristics : page 1/130
References : page 1/136
Dimensions : page 1/188

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

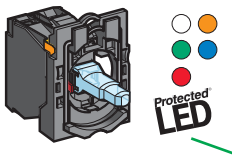
Illuminated pushbuttons for user assembly

Combined functions (contact + signalling) *(continued)*

Body sub-assemblies with integral LED

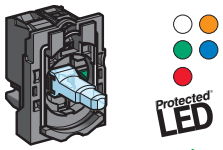
Head sub-assemblies

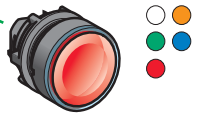
For illuminated pushbuttons, spring return



Connection: screw clamp terminals

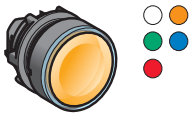
ZB5 AW0B/AW0G/ AW0M
see page 1/168





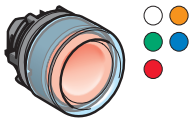
Flush push
Flush push with illuminated ring

ZB5 AW3●3/AW3●3S/AW9●3
see page 1/168



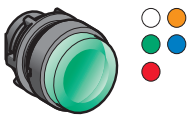
Flush push
for insertion of legend

ZB5 AA●8
see page 1/136



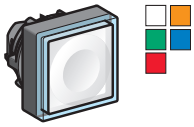
Booted flush push

ZB5 AW5●3
see page 1/142



Projecting push

ZB5 AW1●3/AW1●3S
see page 1/142



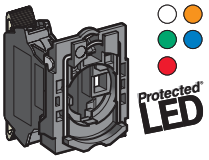
Flush or projecting push
Flush or projecting push for insertion of legend

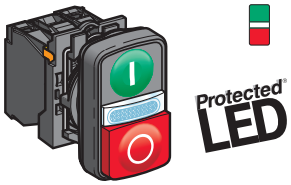
ZB5 CW3●3/CW1●3
see page 1/142

For double-headed pushbuttons, spring return, with pilot light

Connection: plug-in connector

Please consult your customer care centre





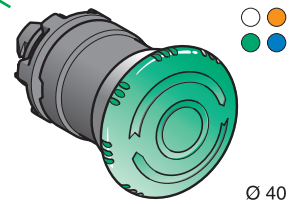
Double-headed (flush/flush push) + central pilot light
Double-headed (flush/projecting push) + central pilot light

ZB5 AW7A17●●, ZB5 AW7A374●, ZB5 AW7A9, see page 1/144
ZB5 AW7L374●, see page 1/144

For illuminated, mushroom head pushbuttons, latching

Connection: spring clamp terminals

ZBV ●●5
see page 1/164



Turn to release

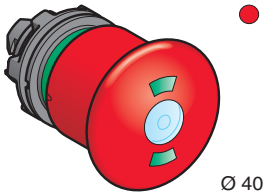
ZB5 AW7●3, see page 1/147

For illuminated mushroom head pushbuttons

- **Emergency Stop with trigger action and mechanical latching**

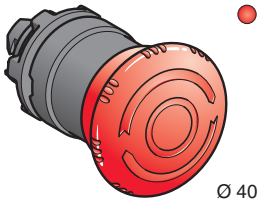
or

- **Emergency switching off with mechanical latching only**



Push-pull with mechanical state indicator (EN/ISO 13850)

ZB5 AT8643M
see page 1/148

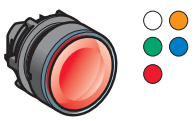


Turn to release
(IEC 60364-5-53)

ZB5 AW743
see page 1/149

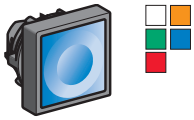
For illuminated "push-push to release" pushbuttons

For illuminated selector switches, standard handle



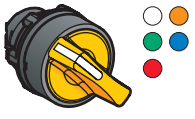
Flush or projecting "push-push to release"

ZB5 AH0●3/AH●3
see page 1/150



Flush "Push-push to release"

ZB5 CH3●3
see page 1/150



Standard handle *(1)*

ZB5 AK1●●3
see page 1/157

(1) Handle positions



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Control and signalling units Ø 22
Harmony® XB5 plastic
Pushbuttons, switches and pilot lights

Environment

Protective treatment	Standard version		"TH" treatment
Ambient air temperature around the device	Storage	°C	- 40…+ 70
	Operation	°C	- 25…+ 70: LED and neon bulb versions - 25…+ 55: incandescent bulb version
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to IEC 60529		IP 66 IP 69 K (Selector switches and multiple-headed pushbuttons) IP 54 (Emergency stop illuminated, trigger action and mechanical latching pushbuttons with mechanical state indicator)
	Conforming to NEMA		NEMA type 4X and 13, unless otherwise stated
Resistance to high pressure washer		Pa	70 x 10^5 (70 bar); distance: 0.1 m Temperature: 55 °C
Mechanical shock protection	Conforming to IEC 50102		Non illuminated heads: IK 03 Illuminated heads: IK 05 Selector switch heads: IK 06
Conforming to standards	UL, CSA, GOST, CCC and CE		EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5, EN/IEC 60204-1 and EN/ISO 13850 (Emergency stop trigger action and mechanical latching pushbuttons, see page 1/148) IEC 60364-5-53 (Emergency switching off mechanical latching pushbuttons, see page 1/148) EN 81-1 (Emergency stop illuminated, trigger action and mechanical latching pushbuttons with mechanical state indicator, see page 1/148) UL 508, CSA C22-2 n° 14, GB 14048.5
Product certifications	UL Listed, CSA		Standard single contacts with screw clamp and spring terminals: A600; Q600 Double contacts with screw clamp terminals: A600; Q600 Light blocks with screw clamp terminals Joystick controllers XD5 PA/ZD5 PA: A600; R300 Special contact blocks: □ ZBE 201: A300; Q300 □ ZBE 202: A600; Q600 Single contacts for high power switching: □ ZBE 501 and ZBE 502: A300; P300
	UL Recognized, CSA		Standard single contacts for plug-in connector: A300; R300 Standard contacts for printed circuit board: B300; R300
	BV, RINA, LROS, DNV, GL, GOST, CCC		Standard single contacts and double contacts with screw clamp or spring terminals:
Terminal referencing	Conforming to EN 50005 and EN 50013		

Characteristics of contact or combined contact and signalling functions (see page 1/134)

Mechanical characteristics

Contact operation	N/C or N/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 appendix K		All functions incorporating a N/C contact have positive opening operation
Operating travel (to change the electrical state)	Pushbutton	mm	Changing N/C state: 1.5 Changing N/O state: 2.6 Total travel: 4.3
Operating force	Pushbutton	N	Changing N/C state: 3.5 Changing N/O state: 3.8
	Additional contact only (extra to change state)	N	Single N/C contact: 2 Single N/O contact: 2.3
		N	Double N/C contact: 3.4 Double N/O contact: 5 Double contact N/C + N/O: 4.6
	Emergency stop or Emergency switching off with N/C + N/O	N	Standard push-pull: 45 Trigger action push-pull: 50
		N	Standard turn to release and key release: 40 Trigger action turn to release and key release: 44

General: page 1/122 References: page 1/136 Dimensions: page 1/188

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Characteristics of contact or combined contact and signalling functions (continued) (see page 1/134)

Mechanical characteristics (continued)

Operating torque (to change the electrical state)	Selector switches		**N.m**	N/O contact: 0.14
	Additional contact only		**N.m**	N/O contact: 0.05
Mechanical durability (in millions of operating cycles)	Pushbutton	Spring return		5
		Multiple-headed		1
		Push-push to release		0.5
	Selector switch	Non illuminated		1
		Illuminated		0.5
	Toggle switch			0.5
	Emergency stop or Emergency switching off pushbutton			0.3 with 4 contacts 0.3 with 2 contacts (Emergency stop with mechanical state indicator) 0.1 with 2 contacts (Emergency switching off illuminated pushbutton)
	Joystick controller			1
	Standard contact block only			5
	Low power switching contact block only (dust protected)			0.5
Vibration resistance	Conforming to IEC 60068-2-6			Frequency: 2 to 500 Hz: 5 gn
Mechanical shock resistance	Conforming to IEC 60068-2-27			All functions except mushroom head pushbuttons, spring return: □ half sine wave acceleration 11 ms: 50 gn □ half sine wave acceleration 18 ms: 30 gn
				Spring return mushroom head pushbutton: □ half sine wave acceleration 11 ms: 15 gn

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Standard block with screw clamp or spring terminals: Min: 1 x 0.22 without cable end Max: 2 x 1.5 with cable end Cross headed screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (maxi 1.2 N.m) Contact blocks for high power switching: Min: 1 x 0.5 without cable end Max: 2 x 2.5 with or without cable end
Contact material	Silver alloy (Ag / Ni)		Standard single and double blocks with screw clamp or spring terminals Blocks for plug-in connector Standard blocks for printed circuit board connection
	Gold flashed (Ag / Ni / Au)		Low power switching contact blocks with screw clamp terminals Low power switching contact blocks for printed circuit board connection
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	Standard single and double blocks with screw clamp or spring terminals: 10 (gG cartridge fuse conforming to IEC 60269-1) Blocks for plug-in connector Standard blocks for printed circuit board connection: 4 (gG cartridge fuse conforming to IEC 60269-1)
Rated thermal current	Conforming to EN/IEC 60947-5-1	**A**	Standard single and double blocks with screw clamp or spring terminals: 10 Blocks for plug-in connector: 10 Standard blocks for printed circuit board connection: 6
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Standard single and double blocks with screw clamp or spring terminals: Ui = 600, degree of pollution 3 Blocks for plug-in connector or Faston connectors Standard blocks for printed circuit board connection Contact blocks for high-power switching: Ui = 250, degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Standard single and double blocks with screw clamp or spring terminals: Uimp = 6 Blocks for plug-in connector Standard blocks for printed circuit board connection Contact blocks for high-power switching: Uimp = 4

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1

Characteristics of contact or combined contact and signalling functions (continued) (see page 1/134)

Electrical characteristics (continued)

Rated operational characteristics Conforming to EN/IEC 60947-5-1		a.c. supply: utilisation category AC-15		**Standard single and double blocks with screw clamp or spring terminals** A600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A **Blocks for plug-in connector:** A300: Ue = 120 V and Ie = 6 A or Ue = 240 V and Ie = 3 A **Standard blocks for printed circuit board connection:** B300: Ue = 120 V and Ie = 3 A or Ue = 240 V and Ie = 1.5 A **Special contact blocks:** □ ZBE 201: A300: Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A (with insulation voltage Ui = 500 V) □ ZBE 202: A600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A **Contact blocks for high power switching:** □ ZBE 50●: A300: Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A
		d.c.supply: utilisation category DC-13		**Standard single and double blocks with screw clamp or spring terminals** Q600: Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.27 A or Ue = 125 V and Ie = 0.55 A **Joystick controllers XD5 PA/ZD5 PA:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Blocks for plug-in connector:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Standard blocks for printed circuit board connection:** R300: Ue = 125 V and Ie = 0.22 A or Ue = 250 V and Ie = 0.1 A **Special contact blocks:** □ ZBE 201: Q300; Ue = 125 V and Ie = 0.55 A or Ue = 250 V and Ie = 0.27 A □ ZBE 202: Q600; Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.27 A or Ue = 125 V and Ie = 0.55 A **Contact blocks for high power switching:** □ ZBE 50●: P300: Ue = 125 V and Ie = 1.1 A or Ue = 250 V and Ie = 0.55 A
Characteristics of special contact blocks	**Low power switching**		**VA** **A** **V**	P max: 12 I max: 0.1 U max: 24
	High power switching conforming to EN/IEC 60947-5-1	100 000 operating cycles Load factor: 0.5 Operating rate: 900 cycles/hour	**VA** **A** **V**	P max: 240 I max: 10 U: 24 ⎓
Electrical durability Conforming to EN/IEC 60947-5-1 appendix C Operating rate 3600 operating cycles/hour Load factor: 0.5		a.c. supply for 1 million operating cycles utilisation category AC-15		Standard single blocks with screw clamp terminals or spring terminals:
			V **A**	24 | 120 | 230 4 | 3 | 2
				Standard double blocks with screw clamp terminals and blocks for plug-in connector:
			V **A**	24 | 120 | 230 3 | 1.5 | 1
		d.c. supply for 1 million operating cycles utilisation category DC-13		Standard single blocks with screw clamp terminals or spring terminals:
			V **A**	24 | 110 0.5 | 0.2
				Standard double blocks with screw clamp terminals and blocks for plug-in connector:
			V **A**	24 | 110 0.4 | 0.15
Electrical reliability Failure rate Conforming to EN/IEC 60947-5-4	In clean environment	Standard blocks		- at 17 V and 5 mA, with confidence level of 90 %: $\lambda_{90} = 10^{-8}$, defect contact voltage drop = 1.7 V - at 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 10^{-7}$, defect contact voltage drop = 1 V
				At 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 5.10^{-8}$, defect contact voltage drop = 1 V
		Special blocks with gold flashed contacts for low power switching		At 5 V and 1 mA, with confidence level of 90 %: $\lambda_{90} = 5.10^{-8}$, defect contact voltage drop = 1 V
	In dusty environment	Special blocks with gold flashed contacts and dust protection for low power switching only		At 5 V and 1 mA, $\lambda < 10^{-7}$

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Characteristics of illuminated units (pilot lights)

Mechanical characteristics			
Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 12 to 500 Hz: 5 gn
Mechanical shock resistance	Conforming to IEC 60068-2-27		Half sine wave acceleration 11 ms: 50 gn Half sine wave acceleration 18 ms: 30 gn
Electrical characteristics			
Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Screw clamp and spring terminals Min: 1 x 0.2 without cable end (1 x 0.34 for linking) Max: 2 x 1.5 with cable end
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Direct supply pilot light blocks (BA 9s bulb): Ui = 250 degree of pollution 3 Pilot light blocks with integral LED: Ui = 250 degree of pollution 3 Pilot light blocks with transformer: Ui = 600 degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Direct supply pilot light blocks (BA 9s bulb): Uimp = 4 Pilot light blocks with integral LED: Uimp = 4 Pilot light blocks with transformer: Uimp = 6

Specific characteristics of single light blocks with integral LED

Voltage limits	For rated voltage	**V**	12 V: 10 to 15 ⎓ and 10.2 to 13.8 ∿ 24 V: 19.2 to 30 ⎓ and 21.6 to 26.4 ∿ 24 to 120 V: 19.2 to 132 ⎓ and 21.6 to 132 ∿ 110 to 120 V: 94 to 132 ∿ 230/240 V: 195 to 264 ∿
Current consumption	Applicable to all colours	**mA**	Blocks with ⎓ 12 V supply: 18 Blocks with ⎓ 24 V supply: 18 Blocks with ∿ 120 V supply: 14 Blocks with ∿ 240 V supply: 14
Service life	At rated voltage and at an ambient temperature of 25 °C	**H**	100 000
Surge withstand	Conforming to IEC 61000-4-5	**kV**	1
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	**V/m**	10
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8: in free air, in insulating parts 6: on contact, on metal parts
Direct parallel connection across inductive load e.g.: contactor coil or solenoid	Maximum power of load	**VA**	For high power applications (≥ 30 VA), a **ZBZ V●** LED suppressor must be connected across the light block terminals (see page 1/163)
Electromagnetic emission	Conforming to IEC 55011		Class B

Specific characteristics

Fixing nut			
Head tightening torque		**N.m**	2.2 (± 0.2)
Hour counters and annunciators			
Voltage limits	Hour counter and annunciator	**V**	± 10% of the nominal voltage
Current consumption	Hour counter	**mA**	XB5 DSB: 7 to 15 XB5 DSG: 8 XB5 DSM: 8
	Annunciator	**mA**	5

General: page 1/122 References: page 1/136 Dimensions: page 1/188

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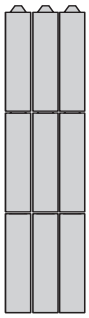
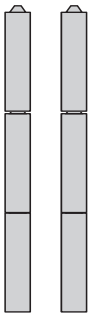
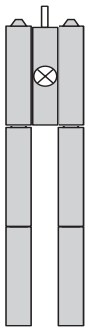
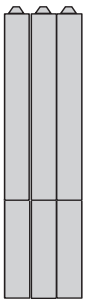
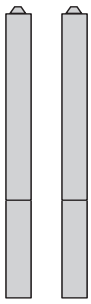
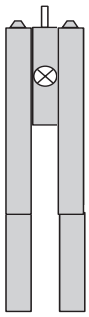
Control and signalling units Ø 22
Harmony® XB5 plastic
Contact mounting - Contact sequence

Maximum recommended configurations guaranteeing achievement of catalogue characteristics

Unit type (complete units XB5 B, heads ZB5 B)	Pushbuttons, spring return XB5 AA●, ZB5 AA●, (except ZB5 AA●8) XB5 AC●, ZB5 AC●, XB5 AL●, ZB5 AL●, XB5 AP●, ZB5 AP●, ZB5 AR● Triple-headed pushbuttons XB5 AA731327, XB5 AA711137, ZB5 AA7313●, ZB5 AA7111●, ZB5 AA72124, ZB5 AA791	Double-headed pushbuttons XB5 AL73415, ZB5 AA712●, ZB5 A●734●, ZB5 AA79	Illuminated pushbuttons, spring return XB5 AW●, ZB5 AW●, ZB5 AA●8 Double-headed pushbuttons + pilot light block XB5 AW73731●5, ZB5 AW7A17●●, ZB5 AW7●374●, ZB5 AW7A9	
Solution using single contacts				
Solution using single and double contacts				
Maximum recommended configurations – Single contacts	9	6	6	
Maximum recommended configurations – Double contacts + Single contacts	3 + 3	2 + 2	2 + 2	
Maximum recommended configurations – Light block	–	–	1	


Single contact

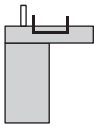
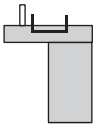
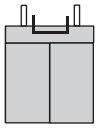

Double contact


Light block


Possible location

Possible configurations for high power switching contacts *(1) (2)*

High power switching contact blocks with screw clamp terminal connections :
ZBE 501, ZBE 502, ZBE 503, ZBE 504 and ZBE 505
High power switching contact blocks with connection by Faston connectors
ZBE 5013, ZBE 5023, ZBE 5033, ZBE 5043 and ZBE 5053

		
1 N/O	1 N/C	1 N/O + N/C 1 N/O + N/O 1 N/C + N/C

(1) The configurations are not upgradable and cannot be combined with other types of contact and signalling functions.
(2) High power switching contacts are not compatible with Harmony triple-headed pushbuttons.

General : page 1/122 | Characteristics : page 1/130 | References : page 1/136 | Dimensions : page 1/188

Schneider Electric

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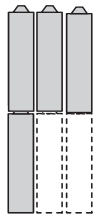
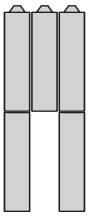
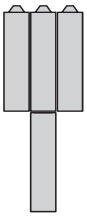
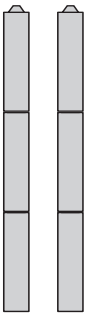
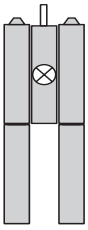
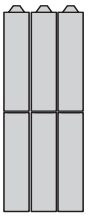
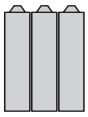
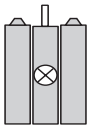
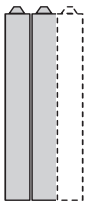
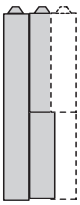
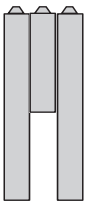
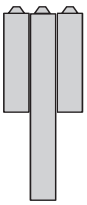
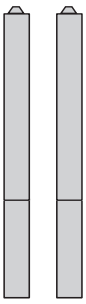
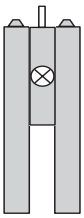
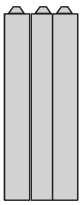
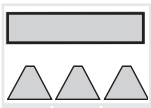
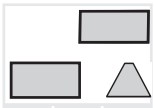
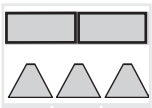
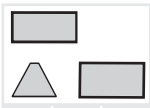
	Emergency stop or Emergency switching off XB5 AT●, ZB5 AT●, XB5 AS●, ZB5 AS●		Selector switches XB5 AD●, ZB5 AD●, ■ Standard handle XB5 AJ●, ZB5 AJ●, ■ Long handle ZB5 AD●9, ■ Key switch XB5 AG●, ZB5 AG●			Illuminated selector switches with standard handle XB5 AK●, ZB5 AK● Illuminated Emergency Stop ZB5 AT8643M	Toggle switches ZB5 AD●8 Pushbuttons, push-turn to release, knurled operator ZB5 AF●, or lockable ZB5 FAD●	Pushbuttons, push-push ZB5 AH●	Illuminated pusbuttons, push-push ZB5 AH●3 ZB5 AW743
									
								–	–
	4	4	5	4	6	4	6	3	2
	2 + 0	1 + 2	2 + 1	1 + 2	2 + 2	2 + 0	3 + 0	–	–
	–	–	–	–	–	1	–	–	1

Sequence of contacts fitted to selector switch bodies

Unit type			Selector switches															
			2-position						3-position									
			315°			45°			315°			0°			45°			
Push	Position	Top																
		Bottom																
	Location		L	C	R	L	C	R	L	C	R	L	C	R	L	C	R	
	State		0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	
Contacts	N/O		□	□	□	■	■	■	■	■	□	□	□	□	□	■	■	
	N/C		■	■	■	□	□	□	□	□	■	■	■	■	■	□	□	

L left, C centre, R right
□ open, ■ closed

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Control and signalling units Ø 22

Harmony® XB5, plastic

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see pages 1/174 and 1/178


563455

XB5 AA31


814416

ZB5 AA0


814417

ZB5 AA5


PF101351

ZB5 AA68


814421

ZB5 CA5

Pushbuttons with flush push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Flush	1	–	White	**XB5 AA11** (ZB5 AZ101 + ZB5 AA1)	0.037
				Black	**XB5 AA21** (ZB5 AZ101 + ZB5 AA2)	0.037
				Green	**XB5 AA31** (ZB5 AZ101 + ZB5 AA3)	0.037
				Yellow	**XB5 AA51** (ZB5 AZ101 + ZB5 AA5)	0.037
				Blue	**XB5 AA61** (ZB5 AZ101 + ZB5 AA6)	0.037
		–	1	Red	**XB5 AA42** (ZB5 AZ102 + ZB5 AA4)	0.037
Heads only, circular						
	Without cap *(2)*			–	**ZB5 AA0**	0.022
	Flush, with set of 6 coloured caps			6 colours *(3)*	**ZB5 AA9**	0.027
	Flush			White	**ZB5 AA1**	0.018
				Black	**ZB5 AA2**	0.018
				Green	**ZB5 AA3**	0.018
				Red	**ZB5 AA4**	0.018
				Yellow	**ZB5 AA5**	0.018
				Blue	**ZB5 AA6**	0.018
				Grey	**ZB5 AA8**	0.018
	Flush with transparent cap for insertion of legend *(4)*			White	**ZB5 AA18**	0.018
				Green	**ZB5 AA38**	0.018
				Red	**ZB5 AA48**	0.018
				Yellow	**ZB5 AA58**	0.018
				Blue	**ZB5 AA68**	0.018
	Flush (high bezel)			White	**ZB5 AA14**	0.020
				Black	**ZB5 AA24**	0.020
				Green	**ZB5 AA34**	0.020
				Red	**ZB5 AA44**	0.020
				Yellow	**ZB5 AA54**	0.020
				Blue	**ZB5 AA64**	0.020
Heads only, square						
	Without cap *(2)*			–	**ZB5 CA0**	0.022
	Flush			White	**ZB5 CA1**	0.019
				Black	**ZB5 CA2**	0.019
				Green	**ZB5 CA3**	0.019
				Red	**ZB5 CA4**	0.019
				Yellow	**ZB5 CA5**	0.019
				Blue	**ZB5 CA6**	0.019

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134
(2) Coloured cap to be ordered separately: see page 1/174.
(3) Head supplied with 6 different coloured caps (white, black, green, red, yellow, blue) not fitted.
(4) For legend ordering information, see page 1/183.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see pages 1/174 and 1/178



ZB5 AA16



ZB5 CA16

Pushbuttons with recessed push *(1)*
High guard

Shape of head	Type of push	Colour	Reference	Weight kg
Heads only, circular				
	**Recessed** (high guard)	White	**ZB5 AA16**	0.020
		Black	**ZB5 AA26**	0.020
		Green	**ZB5 AA36**	0.020
		Red	**ZB5 AA46**	0.020
		Yellow	**ZB5 AA56**	0.020
		Blue	**ZB5 AA66**	0.020
Heads only, square				
	**Recessed** (high guard)	White	**ZB5 CA16**	0.012
		Black	**ZB5 CA26**	0.012
		Green	**ZB5 CA36**	0.012
		Red	**ZB5 CA46**	0.012
		Yellow	**ZB5 CA56**	0.012
		Blue	**ZB5 CA66**	0.012

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see pages 1/174 and 1/178

563458



XB5 AL42

814418



ZB5 AL3

PF110280



ZB5 CL1

Pushbuttons with projecting push *(1)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Projecting	–	1	Red	**XB5 AL42** (ZB5 AZ102 + ZB5 AL4)	0.038
Heads only, circular						
	Projecting			White	**ZB5 AL1**	0.019
				Black	**ZB5 AL2**	0.019
				Green	**ZB5 AL3**	0.019
				Red	**ZB5 AL4**	0.019
				Yellow	**ZB5 AL5**	0.019
				Blue	**ZB5 AL6**	0.019
Heads only, square						
	Projecting			White	**ZB5 CL1**	0.021
				Black	**ZB5 CL2**	0.021
				Green	**ZB5 CL3**	0.021
				Red	**ZB5 CL4**	0.021
				Yellow	**ZB5 CL5**	0.021
				Blue	**ZB5 CL6**	0.021

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Spring return pushbuttons, unmarked

Assembly of other products using:
body/contact assemblies: see page 1/162
combined sub-assemblies: see page 1/168
accessories: see page 1/174

Pushbuttons with booted head *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Reference	Weight kg
Complete units						
	Booted, clear silicone (colour of push unobscured)	1	–	Black	**XB5 AP21** (ZB5 AZ101 + ZB5 AP2)	0.039
				Green	**XB5 AP31** (ZB5 AZ101 + ZB5 AP3)	0.039
				Yellow	**XB5 AP51** (ZB5 AZ101 + ZB5 AP5)	0.039
				Blue	**XB5 AP61** (ZB5 AZ101 + ZB5 AP6)	0.039
		–	1	Red	**XB5 AP42** (ZB5 AZ102 + ZB5 AP4)	0.039
Silicone booted heads only, with increased protection (IP 69K)						
Flush	**Clear boot** *(2)* For insertion of protected legend within head *(3)*			White	**ZB5 AP18**	0.023
				Green	**ZB5 AP38**	0.023
				Red	**ZB5 AP48**	0.023
				Yellow	**ZB5 AP58**	0.023
				Blue	**ZB5 AP68**	0.023
Projecting	**Clear boot** *(2)*			White	**ZB5 AP1**	0.014
				Black	**ZB5 AP2**	0.014
				Green	**ZB5 AP3**	0.014
				Red	**ZB5 AP4**	0.014
				Yellow	**ZB5 AP5**	0.014
				Blue	**ZB5 AP6**	0.014
Silicone booted heads only, standard for mouting with legend holder (IP 66)						
Flush	**Coloured boot** *(4)*			White	**ZB5 AP1S**	0.021
				Black	**ZB5 AP2S**	0.021
				Green	**ZB5 AP3S**	0.021
				Red	**ZB5 AP4S**	0.021
				Yellow	**ZB5 AP5S**	0.021
				Blue	**ZB5 AP6S**	0.021
	Clear membrane *(4)* For insertion of protected legend within head *(3)*			White	**ZB5 AP183**	0.010
				Green	**ZB5 AP383**	0.010
				Red	**ZB5 AP483**	0.010
				Yellow	**ZB5 AP583**	0.010
				Blue	**ZB5 AP683**	0.010

563467



XB5 AP51

PF110267



ZB5 AP4

PF525564



ZB5 AP2S

109499



ZB5 AP183

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Permissible panel thickness 1 to 5 mm, cannot be used with legend holders.
(3) To order a legend for insertion within the head, see page 1/183.
(4) Replacement of silicone protection element without dismantling head, see page 1/176.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Spring return pushbuttons, with marking

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see pages 1/174 and 1/178

563456



XB5 AA4322

814428



ZB5 AA331

814429



ZB5 AA432

PF110316



ZB5 CA432

814430



ZB5 AL232

Pushbuttons with flush or projecting push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Marking Text (colour)	Colour of push	Reference	Weight kg
Complete units							
	Flush	1	–	"I" (white)	Green	**XB5 AA3311** (ZB5 AZ101 + ZB5 AA331)	0.037
	Flush	–	1	"O" (white)	Red	**XB5 AA4322** (ZB5 AZ102 + ZB5 AA432)	0.037
	Projecting	–	1	"O" (white)	Red	**XB5 AL4322** (ZB5 AZ102 + ZB5 AL432)	0.037
	Flush *(2)*	1	–	⬆ (black)	White	**XB5 AA3341** (ZB5 AZ101 + ZB5 AA334)	0.037
	Flush *(2)*	1	–	⬇ (white)	Black	**XB5 AA3351** (ZB5 AZ101 + ZB5 AA335	0.037
Heads only, circular							
	Flush			"I" (white)	Green	**ZB5 AA331**	0.018
				"I" (black)	White	**ZB5 AA131**	0.018
				"II" (white)	Green	**ZB5 AA336**	0.018
				"II" (black)	White	**ZB5 AA136**	0.018
				"START" (white)	Green	**ZB5 AA333**	0.018
				"START" (black)	White	**ZB5 AA133**	0.018
				"ON" (white)	Green	**ZB5 AA341**	0.018
				"ON" (black)	White	**ZB5 AA141**	0.018
				"MARCHE" (white)	Green	**ZB5 AA342**	0.018
				"MARCHE" (black)	White	**ZB5 AA142**	0.018
				(white)	Black	**ZB5 AA245**	0.018
				(black)	White	**ZB5 AA145**	0.018
				"O" (white)	Red	**ZB5 AA432**	0.018
					Black	**ZB5 AA232**	0.018
				"ARRET" (white)	Red	**ZB5 AA433**	0.018
					Black	**ZB5 AA233**	0.018
				"STOP" (white)	Red	**ZB5 AA434**	0.018
					Black	**ZB5 AA234**	0.018
				"OFF" (white)	Red	**ZB5 AA435**	0.018
					Black	**ZB5 AA235**	0.018
				UP (black)	White	**ZB5 AA343**	0.018
				Down (white)	Black	**ZB5 AA344**	0.018
				⬆ (black) *(2)*	White	**ZB5 AA334**	0.018
				⬇ (white) *(2)*	Black	**ZB5 AA335**	0.018
Heads only, square							
	Flush *(2)*			"I" (white)	Green	**ZB5 CA331**	0.019
				"O" (white)	Red	**ZB5 CA432**	0.019
				"+" (white)	Black	**ZB5 CA2934**	0.019
				⬆ (white)	Black	**ZB5 CA2912**	0.019
				"R" (white)	Blue	**ZB5 CA6939**	0.019
Heads only, circular							
	Projecting *(2)*			"O" (white)	Red	**ZB5 AL432**	0.019
					Black	**ZB5 AL232**	0.019
				"ARRET" (white)	Red	**ZB5 AL433**	0.019
					Black	**ZB5 AL233**	0.019
				"STOP" (white)	Red	**ZB5 AL434**	0.019
					Black	**ZB5 AL234**	0.019
				"OFF" (white)	Red	**ZB5 AL435**	0.019
					Black	**ZB5 AL235**	0.019

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Product supplied with cap not clipped-in, allowing orientation through 360° in 90° steps.

General : page 1/122 | Characteristics : page 1/130 | Dimensions : page 1/188

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB5, plastic

Illuminated pushbuttons, spring return, with integral LED

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see pages 1/174 and 1/178

Illuminated pushbuttons with flush push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

814396



XB5 AW31B5

814396



XB5 AW34G5

Shape of head	Description	Type of contact N/O	Type of contact N/C	Supply voltage V	Colour of push	Reference	Weight kg
Complete units - With plain lens							
	Integral LED	1	1	⎓ 24 50/60 Hz	White	**XB5 AW31B5** (ZB5 AW0B15 + ZB5 AW313)	0.056
					Green	**XB5 AW33B5** (ZB5 AW0B35 + ZB5 AW333)	0.056
					Red	**XB5 AW34B5** (ZB5 AW0B45 + ZB5 AW343)	0.056
					Orange	**XB5 AW35B5** (ZB5 AW0B55 + ZB5 AW353)	0.056
					Blue	**XB5 AW36B5** (ZB5 AW0B65 + ZB5 AW363)	0.056
				∿ 110...120 50/60 Hz	White	**XB5 AW31G5** (ZB5 AW0G15 + ZB5 AW313)	0.056
					Green	**XB5 AW33G5** (ZB5 AW0G35 + ZB5 AW333)	0.056
					Red	**XB5 AW34G5** (ZB5 AW0G45 + ZB5 AW343)	0.056
					Orange	**XB5 AW35G5** (ZB5 AW0G55 + ZB5 AW353)	0.056
					Blue	**XB5 AW36G5** (ZB5 AW0G65 + ZB5 AW363)	0.056
				∿ 230...240 50/60 Hz	White	**XB5 AW31M5** (ZB5 AW0M15 + ZB5 AW313)	0.056
					Green	**XB5 AW33M5** (ZB5 AW0M35 + ZB5 AW333)	0.056
					Red	**XB5 AW34M5** (ZB5 AW0M45 + ZB5 AW343)	0.056
					Orange	**XB5 AW35M5** (ZB5 AW0M55 + ZB5 AW353)	0.056
					Blue	**XB5 AW36M5** (ZB5 AW0M65 + ZB5 AW363)	0.056

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Illuminated pushbuttons, spring return, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/168
accessories: see page 1/174

814556
ZB5 AW313

814557
ZB5 AW363

PF110406
ZB5 CW313

PF109498
ZB5 CW3136

814555
ZB5 AW143

PF110412
ZB5 CW143

Illuminated pushbuttons with flush push (1)

Shape of head	Type of push	Colour	Reference	Weight (kg)
Heads only, circular (2) - With plain lens				
Protected LED	**Flush**	White	**ZB5 AW313**	0.017
		Green	**ZB5 AW333**	0.017
		Red	**ZB5 AW343**	0.017
		Orange	**ZB5 AW353**	0.017
		Blue	**ZB5 AW363**	0.017
Protected LED	**Flush with illuminated ring**	White	**ZB5 AW913**	0.016
		Green	**ZB5 AW933**	0.016
		Red	**ZB5 AW943**	0.016
		Orange	**ZB5 AW953**	0.016
		Blue	**ZB5 AW963**	0.016
Protected LED	**Flush with clear boot (IP 69 K)**	White	**ZB5 AW513**	0.019
		Green	**ZB5 AW533**	0.019
		Red	**ZB5 AW543**	0.019
		Orange	**ZB5 AW553**	0.019
		Blue	**ZB5 AW563**	0.019
Protected LED	**Flush for insertion of legend (3) (IP 69 K)**	White	**ZB5 AA18**	0.018
		Green	**ZB5 AA38**	0.018
		Red	**ZB5 AA48**	0.018
		Orange	**ZB5 AA58**	0.018
		Blue	**ZB5 AA68**	0.018
Heads only, circular (2) - With grooved lens (4)				
Protected LED	**Flush**	White	**ZB5 AW313S**	0.017
		Green	**ZB5 AW333S**	0.017
		Red	**ZB5 AW343S**	0.017
		Orange	**ZB5 AW353S**	0.017
		Blue	**ZB5 AW363S**	0.017
Heads only, square (2)				
Protected LED	**Flush** (legend can be inserted)	White	**ZB5 CW313**	0.023
		Green	**ZB5 CW333**	0.023
		Red	**ZB5 CW343**	0.023
		Orange	**ZB5 CW353**	0.023
		Blue	**ZB5 CW363**	0.023
Protected LED	**Flush** (high guard)	White	**ZB5 CW3136**	0.014
		Green	**ZB5 CW3336**	0.014
		Red	**ZB5 CW3436**	0.014
		Orange	**ZB5 CW3536**	0.014
		Blue	**ZB5 CW3636**	0.014

Illuminated pushbuttons with projecting push (1)

Shape of head	Type of push	Colour	Reference	Weight (kg)
Heads only, circular (2) - With plain lens				
Protected LED	**Projecting**	White	**ZB5 AW113**	0.018
		Green	**ZB5 AW133**	0.018
		Red	**ZB5 AW143**	0.018
		Orange	**ZB5 AW153**	0.018
		Blue	**ZB5 AW163**	0.018
Heads only, circular (2) - With grooved lens (4)				
Protected LED	**Projecting**	White	**ZB5 AW113S**	0.017
		Green	**ZB5 AW133S**	0.017
		Red	**ZB5 AW143S**	0.017
		Orange	**ZB5 AW153S**	0.017
		Blue	**ZB5 AW163S**	0.017
Heads only, square (2)				
Protected LED	**Projecting** (legend can be inserted)	White	**ZB5 CW113**	0.024
		Green	**ZB5 CW133**	0.024
		Red	**ZB5 CW143**	0.024
		Orange	**ZB5 CW153**	0.024
		Blue	**ZB5 CW163**	0.024

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Only for use with bodies comprising a light source with integral LED.
(3) For legend ordering information, see page 1/178.
(4) For use in bright ambient light conditions (outdoors in sunlight, for example).

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Illuminated pushbuttons, spring return, with BA 9s base fitting

Assembly of other products using:
combined sub-assemblies: see page 1/168
accessories: see page 1/174


523844

XB5 AW3465


563461

XB5 AW3335


814559

ZB5 AW33

Illuminated pushbuttons with flush push *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Supply voltage V	Colour of push	Reference	Weight kg
Complete units - With plain lens							
	Direct supply for bulb with BA 9s base fitting, 2.4 W max, **(bulb not included)**	1	1	≤ 250	White	**XB5 AW3165** (ZB5 AW065 + ZB5 AW31)	0.057
					Green	**XB5 AW3365** (ZB5 AW065 + ZB5 AW33)	0.057
					Red	**XB5 AW3465** (ZB5 AW065 + ZB5 AW34)	0.057
					Orange	**XB5 AW3565** (ZB5 AW065 + ZB5 AW35)	0.057
	Via integral transformer 1.2 VA, 6 V secondary, incandescent bulb with BA 9s base fitting, **(bulb included)**	1	1	∼ 110…120 50/60 Hz	White	**XB5 AW3135** (ZB5 AW035 + ZB5 AW31)	0.128
					Green	**XB5 AW3335** (ZB5 AW035 + ZB5 AW33)	0.128
					Red	**XB5 AW3435** (ZB5 AW035 + ZB5 AW34)	0.128
					Orange	**XB5 AW3535** (ZB5 AW035 + ZB5 AW35)	0.128
				∼ 230 50 Hz ∼ 220…240 60 Hz	White	**XB5 AW3145** (ZB5 AW045 + ZB5 AW31)	0.129
					Green	**XB5 AW3345** (ZB5 AW045 + ZB5 AW33)	0.129
					Red	**XB5 AW3445** (ZB5 AW045 + ZB5 AW34)	0.129
					Orange	**XB5 AW3545** (ZB5 AW045 + ZB5 AW35)	0.129
Heads only *(2)* **- With plain lens**							
	Flush				White	**ZB5 AW31**	0,018
					Green	**ZB5 AW33**	0,018
					Red	**ZB5 AW34**	0,018
					Orange	**ZB5 AW35**	0,018
					Blue	**ZB5 AW36**	0,018
					Clear	**ZB5 AW37**	0,018
Heads only *(2)* **- With grooved lens** *(3)*							
	Flush				White	**ZB5 AW31S**	0.018
					Green	**ZB5 AW33S**	0.018
					Red	**ZB5 AW34S**	0.018
					Orange	**ZB5 AW35S**	0.018
					Blue	**ZB5 AW36S**	0.018
					Clear	**ZB5 AW37S**	0.018

Illuminated pushbuttons with projecting push *(1)*

Heads only *(2)* **- With plain lens**							
	Projecting				White	**ZB5 AW11**	0.017
					Green	**ZB5 AW13**	0.017
					Red	**ZB5 AW14**	0.017
					Orange	**ZB5 AW15**	0.017
					Blue	**ZB5 AW16**	0.017
					Clear	**ZB5 AW17**	0.017
Heads only *(2)* **- With grooved lens** *(3)*							
	Projecting				White	**ZB5 AW11S**	0.018
					Green	**ZB5 AW13S**	0.018
					Red	**ZB5 AW14S**	0.018
					Orange	**ZB5 AW15S**	0.018
					Blue	**ZB5 AW16S**	0.018
					Clear	**ZB5 AW17S**	0.018

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Only for use with bodies comprising a light source with BA9s base fitting bulb (incandescent, neon or LED).
(3) For use in bright ambient light conditions (outdoors in sunlight, for example).

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Control and signalling units Ø 22

Harmony® XB5 plastic

Multiple-headed pushbuttons, spring return

User assembly of other units, using:
body-contacts assemblies: see page 1/162
combined sub-assemblies: see page 1/168

569133

XB5 AL73415

569135

ZB5 AA7121

569137

ZB5 AL7341

569139

XB5 AW73731●5

569141

ZB5 AW7A1721

569149

ZB5 AW7A3741

Double-headed pushbuttons *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Colour and marking of caps *(2)*	Reference	Weight kg
Complete units						
	2 pushes (1 flush black + 1 projecting red)	1	1	White “I” on green background White “0” on red background	**XB5 AL73415**	0.053
Heads only						
	2 flush black pushes			White background + black background, unmarked	**ZB5 AA7120**	0.023
				Black “I” on white background White “0” on black background	**ZB5 AA7121**	0.023
				Green background + red background, unmarked	**ZB5 AA7340**	0.023
				White “I” on green background White “0” on red background	**ZB5 AA7341**	0.023
				Without cap *(3)*	**ZB5 AA79**	0.023
	1 flush black push 1 projecting red push			Green background + red background, unmarked	**ZB5 AL7340**	0.023
				White “I” on green background White “0” on red background	**ZB5 AL7341**	0.023

Double-headed pushbuttons + 1 white central pilot light block *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	Type of contact N/C	Colour and marking of caps *(2)*	Pilot light voltage V	Reference	Weight kg
Complete units							
Protected LED	**1 flush black push 1 projecting red push 1 white central pilot light block**	1	1	White “I” on green background White “0” on red background	24	**XB5 AW73731B5**	0.066
					120	**XB5 AW73731G5**	0.066
					240	**XB5 AW73731M5**	0.066
Heads only *(5)*							
Protected LED	**2 flush black pushes 1 clear central pilot light** *(4)*			White background + black background, unmarked		**ZB5 AW7A1720**	0.023
				Black “I” on white background White “0” on black background		**ZB5 AW7A1721**	0.023
				Green background + red background, unmarked		**ZB5 AW7A3740**	0.023
				White “I” on green background White “0” on red background		**ZB5 AW7A3741**	0.023
				Black “⬆” on white background White “⇩” on black background		**ZB5 AW7A1724**	0.023
				Black “+” on white background Black “–” on white background		**ZB5 AW7A1715**	0.023
				Without cap *(3)*		**ZB5 AW7A9**	0.023
Protected LED	**1 flush black push 1 projecting red push 1 clear central pilot light** *(4)*			Green background + red background, unmarked		**ZB5 AW7L3740**	0.023
				White “I” on green background White “0” on red background		**ZB5 AW7L3741**	0.023

(1) *Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.*
(2) These caps are fitted by Schneider Electric and cannot be removed (risk of damage).
(3) Caps to be ordered separately: see page opposite.
(4) Colour of centrally positioned pilot light determined by the colour of the LED incorporated in the body sub-assembly.
5) Only for use with bodies comprising a light source with integral LED.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5 plastic

Multiple-headed pushbuttons, spring return

User assembly of other units, using:
body-contacts assemblies: see page 1/162
combined sub-assemblies: see page 1/168

Triple-headed pushbuttons *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Description	Type of contact N/O	N/C	N/O	Colour and marking of caps *(3)*	Reference	Weight kg
Complete units							
	**2 flush black pushes + 1 central projecting red push marked "Stop" in white**	1	1	1	White "I" on green background White "II" on green background	**XB5 AA731327**	0.063
					Black "➡" on white background White "⇦" on black background	**XB5 AA711237**	0.063
Heads only							
	**2 flush black pushes + 1 central projecting red push marked "Stop" in white**				White "I" on green background White "II" on green background	**ZB5 AA73132**	0.023
					White "⇦" on green background White "⇨" on green background	**ZB5 AA73133**	0.023
					White "⇧" on green background White "⇩" on green background	**ZB5 AA73134**	0.023
					White "+" on green background White "–" on green background	**ZB5 AA73135**	0.023
					Black "+" on white background Black "–" on white background	**ZB5 AA71115**	0.023
					Black "➡" on white background White "⇦" on black background	**ZB5 AA71123**	0.023
					Black "⬆" on white background White "⇩" on black background	**ZB5 AA71124**	0.023
					White "⇧" on black background White "⇩" on black background	**ZB5 AA72124**	0.023
					Without cap *(4)*	**ZB5 AA791**	0.023

569143


XB5 AA731327

569145


ZB5 AA73133

569147


ZB5 AA71124

Specific accessories for multiple-headed pushbuttons

Description	Background colour	Marking	Sold in lots of	Reference	Weight kg
Caps only for clip-on mounting *(5)* on: - ZB5 AA79 double-headed pushbuttons - ZB5 AW7A9 double-headed pushbuttons + central pilot light block - ZB5 AA791 triple-headed pushbuttons	White	Unmarked	10	**ZBA 71**	0.010
		"I" black	10	**ZBA 7131**	0.010
		"⬆" black	10	**ZBA 7134**	0.010
		"+" black	10	**ZBA 7138**	0.010
	Black	Unmarked	10	**ZBA 72**	0.010
		"O" white	10	**ZBA 7232**	0.010
		"+" white	10	**ZBA 7233**	0.010
		"⇩" white	10	**ZBA 7235**	0.010
		"I" white	10	**ZBA 7237**	0.010
	Green	Unmarked	10	**ZBA 73**	0.010
		"I" white	10	**ZBA 7331**	0.010
		"+" white	10	**ZBA 7333**	0.010
		"⇧" white	10	**ZBA 7335**	0.010
		"II" white	10	**ZBA 7336**	0.010
	Red	Unmarked	10	**ZBA 74**	0.010
		"O" white	10	**ZBA 7432**	0.010
	Yellow	Unmarked	10	**ZBA 75**	0.010
	Blue	Unmarked	10	**ZBA 76**	0.010
Clear silicone boots *(6)*	For 2 flush pushes	–	10	**ZBA 708**	0.055
	For 3 pushes	–	10	**ZBA 709**	0.055
	For 1 flush push + 1 projecting push	–	10	**ZBA 710**	0.055

540585

ZBA 7235

569177

ZBA 7331

569178

ZBA 7432

540598

ZBA 709

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Not compatible with high power switching contacts and contacts for printed circuit board.
(3) These caps are fitted by Schneider Electric and cannot be removed (risk of damage).
(4) Caps to be ordered separately: see accessories on this page.
(5) Can be clipped-in at 90° steps, through 360°.
(6) Can be replaced without dismantling the head.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Mushroom head pushbuttons, spring return

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

563459

XB5 AC21

814444

ZB5 AC24

814445

ZB5 AC2

814446

ZB5 AR4

540160

ZB5 AR216

Mushroom head pushbuttons *(1) (2)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Push Ø (mm)	Push Colour	Reference	Weight kg
Complete units							
	**Mushroom head**	1	–	40	Black	**XB5 AC21** (ZB5 AZ101 + ZB5 AC2)	0.062
Heads only							
	**Mushroom head**			30	Black	**ZB5 AC24**	0.027
					Green	**ZB5 AC34**	0.027
					Red	**ZB5 AC44**	0.027
					Yellow	**ZB5 AC54**	0.027
					Blue	**ZB5 AC64**	0.027
				40	Black	**ZB5 AC2**	0.046
					Green	**ZB5 AC3**	0.046
					Red	**ZB5 AC4**	0.046
					Yellow	**ZB5 AC5**	0.046
					Blue	**ZB5 AC6**	0.046
				60	Black	**ZB5 AR2**	0.065
					Green	**ZB5 AR3**	0.065
					Red	**ZB5 AR4**	0.065
					Yellow	**ZB5 AR5**	0.065
					Blue	**ZB5 AR6**	0.065
				60 *(3)* Hemispherical	Black	**ZB5 AR216**	0.048
					Green	**ZB5 AR316**	0.048
					Red	**ZB5 AR416**	0.048
					Yellow	**ZB5 AR516**	0.048
					Blue	**ZB5 AR616**	0.048

(1) These pushbuttons and heads cannot be used for an Emergency Stop function.
Therefore, it is recommended that a legend with a black or white background is used.
(2) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134
(3) Ergonomic product used in two-handed control applications. Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head: 6.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Mushroom head pushbuttons, latching

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

Mushroom head pushbuttons *(1) (2)*

Shape of head	Type of reset	Push Ø (mm)	Push Colour	Reference	Weight kg
Heads only					
 *ZB5 AT2*	**Push-pull**	30	Black	**ZB5 AT24**	0.044
		40	Black	**ZB5 AT2**	0.049
		60	Black	**ZB5 AX2**	0.067
 *ZB5 AS62*	**Turn to release**	30	Black	**ZB5 AS42**	0.040
		40	Black	**ZB5 AS52**	0.044
		40	Yellow	**ZB5 AS55**	0.044
		60	Black	**ZB5 AS62**	0.064
 *ZB5 AS72*	**Key release (key n° 455)** (2 keys included with head) *(3)* *(5)*	30	Black	**ZB5 AS72**	0.040
		40	Black	**ZB5 AS12** *(4)*	0.044
		60	Black	**ZB5 AS22**	0.064

Illuminated mushroom head pushbuttons *(2)*

Shape of head	Type of reset	Push Ø (mm)	Push Colour	Reference	Weight kg
Heads only *(6)*					
 *ZB5 AW733*	**Turn to release**	40	White	**ZB5 AW713**	0.022
			Green	**ZB5 AW733**	0.022
			Orange	**ZB5 AW753**	0.022
			Blue	**ZB5 AW763**	0.022

(1) These pushbuttons and heads cannot be used for an Emergency Stop function.
Therefore, it is recommended that a legend with a black or white background is used.
(2) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(3) For specific keys with other numbers, please consult your customer care centre.
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: To order a Ø 40 black mushroom head for a latching pushbutton, with release by key n° 421E, the reference becomes: **ZB5 AS1212**.*
(5) The symbol ⚷ indicates key withdrawal position(s).
(6) Only for use with bodies comprising a light source with integral LED.

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Control and signalling units Ø 22

Harmony® XB5, plastic
Emergency stop devices
Conforming to EN/IEC 60204-1 and EN/ISO 13850 and Machinery Directive 2006/42/EC

Assembly of other products using:
body/contact assemblies: see page 1/162
combined sub-assemblies: see page 1/168
accessories: see pages 1/183 and 1/184

Mushroom head Emergency stop trigger action and mechanical latching pushbuttons conform to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 2006/42/EC and to standard EN/IEC 60947-5-5. Please consult your customer care centre for a full explanation of these standards and directives.

107183



XB5 AT845

523852



XB5 AS8445

563449



XB5 AS9445

Emergency stop trigger action and mechanical latching pushbuttons *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Type of contact N/O	Type of contact N/C	Push Ø (mm)	Colour	Reference	Weight kg
Complete units							
	Push-pull	1	1	40	Red	**XB5 AT845** (ZB5 AZ105 + ZB5 AT84)	0.076
	Turn to release	1	1	40	Red	**XB5 AS8445** (ZB5 AZ105 + ZB5 AS844)	0.072
		–	2	40	Red	**XB5 AS8444** (ZB5 AZ104 + ZB5 AS844)	0.072
	Key release (key n° 455) *(3)*	1	1	40	Red	**XB5 AS9445** (ZB5 AZ105 + ZB5 AS944)	0.112

Heads only

Shape of head	Type of reset	Push Ø (mm)	Colour	Reference	Weight kg
	Push-pull	30	Red	**ZB5 AT844**	0.050
		40	Red	**ZB5 AT84**	0.050
		60	Red	**ZB5 AX84**	0.050
	Turn to release	30	Red	**ZB5 AS834**	0.042
		40	Red	**ZB5 AS844**	0.046
	Key release (key n° 455) 2 keys included with head *(5)* *(3)*	30	Red	**ZB5 AS934**	0.068
		40	Red	**ZB5 AS944** *(4)*	0.071
		60	Red	**ZB5 AS964**	0.092
	Key release (key n° 4A185) *(5)*	40	Red	**ZB5 AS944D**	0.071

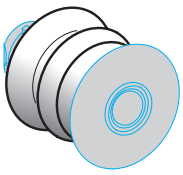
523853



ZB5 AS844

Bellows for harsh environments (IP 69K) *(6)*

For use in	Material	Colour	Sold in lots of	Unit reference	Weight kg
Environments subject to humidity, dust, high pressure cleaning, etc.	Silicone	Red	2	**ZBZ 48**	0.009
	EPDM	Black	2	**ZBZ 28**	0.009
		Yellow	2	**ZBZ 58**	0.009



ZBZ ●8

Illuminated Emergency stop trigger action and mechanical latching pushbuttons with mechanical state indicator *(1)*

For elevator inspection box applications

Heads only *(7)*

Shape of head	Type of reset	Push Ø (mm)	Colour	Reference	Weight kg
Protected LED	**Push-pull** *(8)*	40	Red	**ZB5 AT8643M**	0.034

523854



ZB5 AT8643M

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) It is recommended that a legend or yellow background is used.
(3) The symbol ⚷ indicates key withdrawal position(s).
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*- key n° 4A185: add suffix **D** to the reference.*
*Example: To order a Ø 40 red mushroom head for a trigger action and mechanical latching Emergency stop pushbutton, with release by key n° 421E, the reference becomes: **ZB5 AS94412**.*
(5) For specific keys with other numbers, please consult your customer care centre.
(6) Not compatible with Ø 30 pushbuttons.
(7) Only for use with bodies comprising a light source with integral LED.
(8) Cannot be used with metal guards ZBZ 160●.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Emergency switching off devices

Conforming to IEC 60364-5-53

Assembly of other products using:
body/contact assemblies: see page 1/162
combined sub-assemblies: see page 1/168
accessories: see pages 1/183 and 1/184

Mushroom head switching off mechanical latching pushbuttons conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5. Please consult your customer care centre for a full explanation of these standards and directives.


563451

XB5 AS542


107185

ZB5 AT4


107189

ZB5 AS64


107192

ZB5 AS24

Emergency switching off, mechanical latching pushbuttons *(1) (2)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Type of contact N/O	Type of contact N/C	Push Ø mm	Push Colour	Reference	Weight kg
Complete units							
	Push-pull	–	1	40	Red	**XB5 AT42** (ZB5 AZ102 + ZB5 AT4)	0.065
	Turn to release	–	1	40	Red	**XB5 AS542** (ZB5 AZ102 + ZB5 AS54)	0.060
	Key release (key n° 455) *(3)*	–	1	40	Red	**XB5 AS142** (ZB5 AZ102 + ZB5 AS14)	0.075
Heads only							
	Push-pull			30	Red	**ZB5 AT44**	0.049
				40	Red	**ZB5 AT4**	0.049
				60	Red	**ZB5 AX4**	0.067
	Turn to release			30	Red	**ZB5 AS44**	0.040
				40	Red	**ZB5 AS54**	0.044
				60	Red	**ZB5 AS64**	0.064
	Key release (key n° 455) 2 keys included with head) *(5)* *(3)*			30	Red	**ZB5 AS74**	0.040
				40	Red	**ZB5 AS14** *(4)*	0.044
				60	Red	**ZB5 AS24**	0.060
	Key release (key n° 4A185)			40	Red	**ZB5 AS14D**	0.044

Illuminated Emergency switching off, mechanical latching pushbuttons *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of reset	Push Ø (mm)	Colour	Reference	Weight kg
Heads only *(6)*					
Protected LED	**Turn to release**	40	Red	**ZB5 AW743**	0.022

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) It is recommended that a legend or yellow background is used.
(3) The symbol ⚷ indicates key withdrawal position(s).
(4) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: To order a Ø 40 red mushroom head for a mechanical latching Emergency switching off pushbutton, with release by key n° 421E, the reference becomes: **ZB5 AS1412**.*
(5) For specific keys with other numbers, please consult your customer care centre.
(6) Only for use with bodies comprising a light source with integral LED.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Pushbuttons, push-push

Assembly of other products using:
body/contact assemblies: see page 1/162
combined sub-assemblies: see page 1/168
accessories: see page 1/174

814439



ZB5 AH04

Pushbuttons with flush push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only, circular				
	Without cap *(2)*	–	**ZB5 AH0**	0.018
	Flush	White	**ZB5 AH01**	0.018
		Black	**ZB5 AH02**	0.018
		Green	**ZB5 AH03**	0.018
		Red	**ZB5 AH04**	0.018
		Yellow	**ZB5 AH05**	0.018
		Blue	**ZB5 AH06**	0.018
Heads only, square				
	Without cap *(2)*	–	**ZB5 CH0**	0.020
	Flush	White	**ZB5 CH01**	0.020
		Black	**ZB5 CH02**	0.020
		Green	**ZB5 CH03**	0.020
		Red	**ZB5 CH04**	0.020
		Yellow	**ZB5 CH05**	0.020
		Blue	**ZB5 CH06**	0.020

Pushbuttons with projecting push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only, circular				
	Projecting	White	**ZB5 AH1**	0.018
		Black	**ZB5 AH2**	0.018
		Green	**ZB5 AH3**	0.018
		Red	**ZB5 AH4**	0.018
		Yellow	**ZB5 AH5**	0.018
		Blue	**ZB5 AH6**	0.018

Illuminated pushbuttons with flush push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only, circular *(3)*				
Protected LED	**Flush**	White	**ZB5 AH013**	0.017
		Green	**ZB5 AH033**	0.017
		Red	**ZB5 AH043**	0.017
		Orange	**ZB5 AH053**	0.017
		Blue	**ZB5 AH063**	0.017
Heads only, square *(3)*				
Protected LED	**Flush**	White	**ZB5 CH313**	0.018
		Green	**ZB5 CH333**	0.018
		Red	**ZB5 CH343**	0.018
		Orange	**ZB5 CH353**	0.018
		Blue	**ZB5 CH363**	0.018

113972



ZB5 CH343

Illuminated pushbuttons with projecting push *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Heads only, circular *(3)*				
Protected LED	**Projecting**	White	**ZB5 AH13**	0.017
		Green	**ZB5 AH33**	0.017
		Red	**ZB5 AH43**	0.017
		Orange	**ZB5 AH53**	0.017
		Blue	**ZB5 AH63**	0.017

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Caps to be ordered separately, see page 1/174.
(3) Only for use with bodies comprising a light source with integral LED.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pushbuttons, “push-turn to release”

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

523836



ZB5 AFDA

Pushbuttons with key-operated push *(1)*

Shape of head	Type of push	Locking	Key withdrawal	Reference	Weight kg
Heads only					
	**Key n° 4A185**	Both positions	Both positions	**ZB5 AFDA**	0.050
		Actuated position	Actuated position	**ZB5 AFDB**	0.050
		Rest position	Rest position	**ZB5 AFDC**	0.050
		Actuated position	Both positions	**ZB5 AFDD**	0.050
	Key LU1	Both positions	Both positions	**ZB5 AFDE01**	0.050
	Key LU2	Both positions	Both positions	**ZB5 AFDE02**	0.050
	Key LU3	Both positions	Both positions	**ZB5 AFDE03**	0.050
	Key LU4	Both positions	Both positions	**ZB5 AFDE04**	0.050
	Key LU5	Both positions	Both positions	**ZB5 AFDE05**	0.050
	Key LU6	Both positions	Both positions	**ZB5 AFDE06**	0.050
	Key LU7	Both positions	Both positions	**ZB5 AFDE07**	0.050
	Key LU8	Both positions	Both positions	**ZB5 AFDE08**	0.050
	Key LU9	Both positions	Both positions	**ZB5 AFDE09**	0.050
	Key LU10	Both positions	Both positions	**ZB5 AFDE10**	0.050
	Key LU11	Both positions	Both positions	**ZB5 AFDE11**	0.050
	Key LU12	Both positions	Both positions	**ZB5 AFDE12**	0.050
	Key LU13	Both positions	Both positions	**ZB5 AFDE13**	0.050
	Key LU14	Both positions	Both positions	**ZB5 AFDE14**	0.050
	Key LU15	Both positions	Both positions	**ZB5 AFDE15**	0.050

110321



ZB5 AF

110322



ZB5 AF351

Pushbuttons with knurled push *(1)*

Shape of head	Type of push	Marking	Reference	Weight kg
Heads only				
	**Knurled without cap** *(2)*	–	**ZB5 AF**	0.027
	Knurled with marked cap	↑ (white on black background)	**ZB5 AF351**	0.030

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Coloured caps to be ordered separately: see page 1/174.

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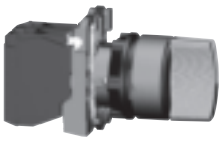
Control and signalling units Ø 22

Harmony® XB5, plastic

Selector switches with standard handle

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

106201



XB5 AD33

106215



ZB5 AD2

Selector switches with standard handle *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type		Reference	Weight kg
Complete units								
	**Standard handle, black**	1	–	2-position 90°	Stay put		**XB5 AD21** (ZB5 AZ101 + ZB5 AD2)	0.043
		1	–		Spring return from right to left		**XB5 AD41** (ZB5 AZ101 + ZB5 AD4)	0.046
		1	1		Stay put		**XB5 AD25** (ZB5 AZ105 + ZB5 AD2)	0.043
		2	–	3-position ± 45°	Stay put		**XB5 AD33** (ZB5 AZ103 + ZB5 AD3)	0.043
					Spring return to centre		**XB5 AD53** (ZB5 AZ103 + ZB5 AD5)	0.043
Heads only								
	**Standard handle, black**			2-position 90°	Stay put		**ZB5 AD2**	0.017
					Spring return from right to left		**ZB5 AD4**	0.020
				3-position ± 45°	Stay put		**ZB5 AD3**	0.017
					Spring return to centre		**ZB5 AD5**	0.017
					Spring return from left to centre		**ZB5 AD7**	0.017
					Spring return from right to centre		**ZB5 AD8**	0.017

Heads only with other coloured handles



Standard handle, white	add suffix **01** to the reference, example: **ZB5 AD201**
Standard handle, green	add suffix **03** to the reference, example: **ZB5 AD203**
Standard handle, red	add suffix **04** to the reference, example: **ZB5 AD204**
Standard handle, yellow	add suffix **05** to the reference, example: **ZB5 AD205**
Standard handle, blue	add suffix **06** to the reference, example: **ZB5 AD206**

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

General : page 1/122
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Schneider Electric

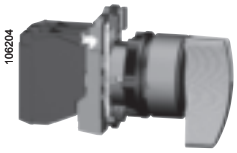
For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

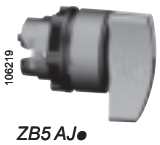
Harmony® XB5, plastic

Selector switches with long handle

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174



ZB5 AJ●3



ZB5 AJ●

Selector switches with long handle *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type	Reference	Weight kg
Complete units							
	**Long handle, black**	1	–	2-position 90°	Stay put 	**XB5 AJ21** (ZB5 AZ101 + ZB5 AJ2)	0.043
		2	–	3-position ± 45°	Stay put 	**XB5 AJ33** (ZB5 AZ103 + ZB5 AJ3)	0.043
					Spring return to centre 	**XB5 AJ53** (ZB5 AZ103 + ZB5 AJ5)	0.043
Heads only							
	**Long handle, black**			2-position 90°	Stay put 	**ZB5 AJ2**	0.017
					Spring return from right to left 	**ZB5 AJ4**	0.020
				3-position ± 45°	Stay put 	**ZB5 AJ3**	0.017
					Spring return to centre 	**ZB5 AJ5**	0.017
					Spring return from left to centre 	**ZB5 AJ7**	0.017
					Spring return from right to centre 	**ZB5 AJ8**	0.017

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB5, plastic

Key switches

Key n° 455, 8D1, 421E, 458A, 520E or 3131A

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174


106203

XB5 AG●3


106224

ZB5 AG2


106223

ZB5 AG3

Key switches *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number	Positions Type *(2)*		Reference	Weight kg
Complete units								
	Key switch with key n° 455	1	–	2-position 90°	Stay put		**XB5 AG21** (ZB5 AZ101 + ZB5 AG2)	0.831
							XB5 AG41 (ZB5 AZ101 + ZB5 AG4)	0.831
					Spring return to left		**XB5 AG61** (ZB5 AZ101 + ZB5 AG6)	0.870
		2	–	3-position ± 45°	Stay put		**XB5 AG03** (ZB5 AZ103 + ZB5 AG0)	0.831
							XB5 AG33 (ZB5 AZ103 + ZB5 AG3)	0.831
Heads only								
	Key switch with key n° 455 *(3) (4)*			2-position 90°	Stay put		**ZB5 AG2**	0.057
							ZB5 AG02	0.057
							ZB5 AG4	0.057
					Spring return from right to left		**ZB5 AG6**	0.061
				3-position ± 45°	Stay put		**ZB5 AG0**	0.057
							ZB5 AG3	0.057
							ZB5 AG5	0.057
							ZB5 AG9	0.057
							ZB5 AG09	0.057
					Spring return from left to centre		**ZB5 AG1**	0.057
					Spring return to centre		**ZB5 AG7**	0.057
					Spring return from right to centre		**ZB5 AG8**	0.057
							ZB5 AG05	0.057
							ZB5 AG08	0.057

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) The symbol ⟟ indicates key withdrawal position(s).
(3) Other key numbers:
*- key n° 421E: add suffix **12** to the reference.*
*- key n° 458A: add suffix **10** to the reference.*
*- key n° 520E: add suffix **14** to the reference.*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: For a switch head with key n° 421E, 2-position stay put with key withdrawal from the left-hand position, the reference becomes: **ZB5 AG212**.*
(4) For specific keys with other numbers, please consult your customer care centre.

General : page 1/122
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For reference only. www.fengshengelectric.com.sg

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

Control and signalling units Ø 22

Harmony® XB5, plastic

Key switches with key 8D1

Selector switches with knurled knob - Toggle switches

Key switches (continued) (1)

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Positions (2) Number	Type		Reference	Weight kg
	**Key switch with key n° 8D1**	2-position 90°	Stay put		**ZB5 AG2D**	0.057
					**ZB5 AG02D**	0.057
					**ZB5 AG4D**	0.057
			Spring return from right to left		**ZB5 AG6D**	0.061
		3-position ± 45°	Stay put		**ZB5 AG0D**	0.057
					**ZB5 AG3D**	0.057
					**ZB5 AG5D**	0.057
					**ZB5 AG9D**	0.057
					**ZB5 AG09D**	0.057
					**ZB5 AG03D**	0.057
					**ZB5 AG04D**	0.057
			Spring return from left to centre		**ZB5 AG06D**	0.057
					ZB5 AG1D	0.057
					**ZB5 AG07D**	0.057
			Spring return from right to centre		**ZB5 AG8D**	0.057
					**ZB5 AG08D**	0.057
					**ZB5 AG05D**	0.057
			Spring return to centre		**ZB5 AG7D**	0.057

Selector switches with knurled knob (1)

Shape of head	Type of operator	Positions Number	Type		Reference	Weight kg
Heads only						
	**Black knurled knob**	2-position 90°	Stay put		**ZB5 AD29**	0.020
			Spring return from right to left		**ZB5 AD49**	0.024
		3-position ± 45°	Stay put		**ZB5 AD39**	0.020
			Spring return to centre		**ZB5 AD59**	0.020
			Spring return from left to centre		**ZB5 AD79**	0.020
			Spring return from right to centre		**ZB5 AD89**	0.020


106221

ZB5 AD39

Toggle switches (1)

Shape of head	Type of operator	Positions Number	Type		Reference	Weight kg
Heads only						
	**Black lever**	2-position 90°	Stay put		**ZB5 AD28**	0.023
			Spring return		**ZB5 AD48**	0.023
	White lever	2-position 90°	Stay put		**ZB5 AD2801**	0.023
	Red lever	2-position 90°	Stay put		**ZB5 AD2804**	0.023
	Blue lever	2-position 90°	Stay put		**ZB5 AD2806**	0.023


535626

ZB5 AD28

(1) Recommended maximum number of contacts and sequence of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

(2) The symbol ⚷ indicates key withdrawal position(s)

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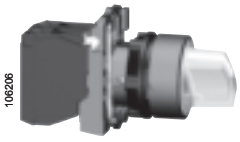
Control and signalling units Ø 22

Harmony® XB5, plastic

Illuminated selector switches with standard handle, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/168
accessories: see page 1/174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XB5 AK123●5


106209

XB5 AK124●5


106212

XB5 AK125●5

Illuminated selector switches with standard handle, with integral LED *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Positions Number Type	Supply voltage V	Colour of handle	Reference	Weight kg
Complete units								
	Standard handle	1	1	2-position Stay put 90°	⎓ 24 (50/60 Hz)	Green	**XB5 AK123B5** (ZB5 AW0B35 + ZB5 AK1233)	0.516
						Red	**XB5 AK124B5** (ZB5 AW0B45 + ZB5 AK1243)	0.516
						Orange	**XB5 AK125B5** (ZB5 AW0B55 + ZB5 AK1253)	0.516
					∿ 110...120 (50/60 Hz)	Green	**XB5 AK123G5** (ZB5 AW0G35 + ZB5 AK1233)	0.516
						Red	**XB5 AK124G5** (ZB5 AW0G45 + ZB5 AK1243)	0.516
						Orange	**XB5 AK125G5** (ZB5 AW0G55 + ZB5 AK1253)	0.516
					∿ 230...240 (50/60 Hz)	Green	**XB5 AK123M5** (ZB5 AW0M35 + ZB5 AK1233)	0.516
						Red	**XB5 AK124M5** (ZB5 AW0M45 + ZB5 AK1243)	0.516
						Orange	**XB5 AK125M5** (ZB5 AW0M55 + ZB5 AK1253)	0.516
		1	1	3-position Stay put ± 45°	⎓ 24 (50/60 Hz)	Green	**XB5 AK133B5** (ZB5 AW0B35 + ZB5 AK1333)	0.516
						Red	**XB5 AK134B5** (ZB5 AW0B45 + ZB5 AK1343)	0.516
						Orange	**XB5 AK135B5** (ZB5 AW0B55 + ZB5 AK1353)	0.516
					∿ 110...120 (50/60 Hz)	Green	**XB5 AK133G5** (ZB5 AW0G35 + ZB5 AK1333)	0.516
						Red	**XB5 AK134G5** (ZB5 AW0G45 + ZB5 AK1343)	0.516
						Orange	**XB5 AK135G5** (ZB5 AW0G55 + ZB5 AK1353)	0.516
					∿ 230...240 (50/60 Hz)	Green	**XB5 AK133M5** (ZB5 AW0M35 + ZB5 AK1333)	0.516
						Red	**XB5 AK134M5** (ZB5 AW0M45 + ZB5 AK1343)	0.516
						Orange	**XB5 AK135M5** (ZB5 AW0M55 + ZB5 AK1353)	0.516

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Illuminated selector switches with standard handle, with integral LED

Assembly of other products using:
combined sub-assemblies: see page 1/168
accessories: see page 1/174

106225



ZB5 AK1263

106227



ZB5 AK1463

Illuminated selector switches with standard handle, with integral LED (continued) *(1)*

Shape of head	Type of operator	Positions Number	Positions Type	Colour of handle	Reference	Weight kg
Heads only *(2)*						
Protected LED	**Standard handle**	2-position 90°	Stay put	White	**ZB5 AK1213**	0.016
				Green	**ZB5 AK1233**	0.016
				Red	**ZB5 AK1243**	0.016
				Orange	**ZB5 AK1253**	0.016
				Blue	**ZB5 AK1263**	0.016
			Spring return from right to left	White	**ZB5 AK1413**	0.017
				Green	**ZB5 AK1433**	0.017
				Red	**ZB5 AK1443**	0.017
				Orange	**ZB5 AK1453**	0.017
				Blue	**ZB5 AK1463**	0.017
		3-position ± 45°	Stay put	White	**ZB5 AK1313**	0.016
				Green	**ZB5 AK1333**	0.016
				Red	**ZB5 AK1343**	0.016
				Orange	**ZB5 AK1353**	0.016
				Blue	**ZB5 AK1363**	0.016
			Spring return to centre	White	**ZB5 AK1513**	0.016
				Green	**ZB5 AK1533**	0.016
				Red	**ZB5 AK1543**	0.016
				Orange	**ZB5 AK1553**	0.016
				Blue	**ZB5 AK1563**	0.016
			Spring return from right to centre	White	**ZB5 AK1813**	0.016
				Green	**ZB5 AK1833**	0.016
				Red	**ZB5 AK1843**	0.016
				Orange	**ZB5 AK1853**	0.016
				Blue	**ZB5 AK1863**	0.016
			Spring return from left to centre	White	**ZB5 AK1713**	0.016
				Green	**ZB5 AK1733**	0.016
				Red	**ZB5 AK1743**	0.016
				Orange	**ZB5 AK1753**	0.016
				Blue	**ZB5 AK1763**	0.016

(1) Recommended maximum number of contacts constituting the body (fixing collar + contact) associated with the head, see page 1/134.
(2) Only for use with bodies comprising a light source with integral LED.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Pilot lights with integral LED

Assembly of other products using:
light block sub-assemblies: see page 1/170
accessories: see page 1/174

Pilot lights with integral LED
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Supply voltage V	Colour	Reference for monolithic units ▲	Reference for complete units	Weight kg
Complete units (With plain lens)					
 814388	⎓ 24 (50/60 Hz)	White	**XB5 EVB1**	**XB5 AVB1** (ZB5 AVB1 + ZB5 AV013)	0.038
		Green	**XB5 EVB3**	**XB5 AVB3** (ZB5 AVB3 + ZB5 AV033)	0.038
		Red	**XB5 EVB4**	**XB5 AVB4** (ZB5 AVB4 + ZB5 AV043)	0.038
		Orange	**XB5 EVB5**	**XB5 AVB5** (ZB5 AVB5 + ZB5 AV053)	0.038
		Blue	**XB5 EVB6**	**XB5 AVB6** (ZB5 AVB6 + ZB5 AV063)	0.038
		Yellow	**XB5 EVB8**	**–**	0.038
	~ 110...120 (50/60 Hz)	White	**XB5 EVG1**	**XB5 AVG1** (ZB5 AVG1 + ZB5 AV013)	0.038
		Green	**XB5 EVG3**	**XB5 AVG3** (ZB5 AVG3 + ZB5 AV033)	0.038
		Red	**XB5 EVG4**	**XB5 AVG4** (ZB5 AVG4 + ZB5 AV043)	0.038
		Orange	**XB5 EVG5**	**XB5 AVG5** (ZB5 AVG5 + ZB5 AV053)	0.038
		Blue	**XB5 EVG6**	**XB5 AVG6** (ZB5 AVG6 + ZB5 AV063)	0.038
		Yellow	**XB5 EVG8**	**–**	0.038
 PF100406	~ 230...240 (50/60 Hz)	White	**XB5 EVM1**	**XB5 AVM1** (ZB5 AVM1 + ZB5 AV013)	0.038
		Green	**XB5 EVM3**	**XB5 AVM3** (ZB5 AVM3 + ZB5 AV033)	0.038
		Red	**XB5 EVM4**	**XB5 AVM4** (ZB5 AVM4 + ZB5 AV043)	0.038
		Orange	**XB5 EVM5**	**XB5 AVM5** (ZB5 AVM5 + ZB5 AV053)	0.038
		Blue	**XB5 EVM6**	**XB5 AVM6** (ZB5 AVM6 + ZB5 AV063)	0.038
		Yellow	**XB5 EVM8**	**–**	0.038

XB5 AVB1

XB5 EV●●

Heads only, circular *(1)*

Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
■ With plain lens				
 814529	**Integral LED only**	White	**ZB5 AV013**	0.017
		Green	**ZB5 AV033**	0.017
		Red	**ZB5 AV043**	0.017
		Orange	**ZB5 AV053**	0.017
		Blue	**ZB5 AV063**	0.017
		5 colours *(2) (3)*	**ZB5 AV003**	0.017
■ With plain lens, for insertion of legend *(3)*				
	**Integral LED only**	White	**ZB5 AV013E**	0.017
		Green	**ZB5 AV033E**	0.017
		Red	**ZB5 AV043E**	0.017
		Orange	**ZB5 AV053E**	0.017
		Blue	**ZB5 AV063E**	0.017
■ With grooved lens *(4)*				
	**Integral LED only**	White	**ZB5 AV013S**	0.017
		Green	**ZB5 AV033S**	0.017
		Red	**ZB5 AV043S**	0.017
		Orange	**ZB5 AV053S**	0.017
		Blue	**ZB5 AV063S**	0.017

ZB5 AV053

Heads only, square *(1)*

■ With plain lens				
 814530	**Integral LED only**	White	**ZB5 CV013**	0.020
		Green	**ZB5 CV033**	0.020
		Red	**ZB5 CV043**	0.020
		Orange	**ZB5 CV053**	0.020
		Blue	**ZB5 CV063**	0.020
		5 colours *(2)*	**ZB5 CV003**	0.028

ZB5 CV063

(1) Only for use with bodies comprising a light source with integral LED.
(2) Head supplied with 5 different coloured lenses (white, green, red, orange, blue) not fitted, for insertion of legend.
(3) For legend ordering information: see page 1/178.
(4) For use in bright ambient light conditions (outdoors in sunlight, for example).

▲ Available: 3rd quarter 2011.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Pilot lights with integral LED and with BA 9s base fitting

Assembly of other products using:
light block sub-assemblies: see page 1/170
accessories: see page 1/174

080703



XB5 AV5B●

Pilot lights with integral LED and transformer (1.2 VA, 24 V secondary)

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Supply voltage V	Colour	Reference *(1)*	Weight kg
Complete units - With plain lens				
Protected LED	∼ 400 - 50 Hz *(1)*	White	**XB5 AV5B1**	0.133
		Green	**XB5 AV5B3**	0.133
		Red	**XB5 AV5B4**	0.133
		Orange	**XB5 AV5B5**	0.133
		Blue	**XB5 AV5B6**	0.133

814392



XB5 AV63

Pilot lights with BA 9s base fitting, with plain or grooved lens

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Shape of head	Supply voltage V	Colour	Reference	Weight kg
Complete units - With plain lens				
■ Direct supply, for BA 9s bulb, U ⩽ 250 V, 2.4 W max (bulb not included)				
	⩽ 250	White	**XB5 AV61** (ZB5 AV6 + ZB5 AV01)	0.037
		Green	**XB5 AV63** (ZB5 AV6 + ZB5 AV03)	0.037
		Red	**XB5 AV64** (ZB5 AV6 + ZB5 AV04)	0.037
		Orange	**XB5 AV65** (ZB5 AV6 + ZB5 AV05)	0.037
■ Via integral transformer, 1.2 VA, 6 V secondary, with BA 9s incandescent bulb (included)				
	∼ 110...120 - 50/60 Hz	White	**XB5 AV31** (ZB5 AV3 + ZB5 AV01)	0.109
		Green	**XB5 AV33** (ZB5 AV3 + ZB5 AV03)	0.109
		Red	**XB5 AV34** (ZB5 AV3 + ZB5 AV04)	0.109
		Orange	**XB5 AV35** (ZB5 AV3 + ZB5 AV05)	0.109
	∼ 230 - 50 Hz ∼ 220...240 - 60 Hz	White	**XB5 AV41** (ZB5 AV4 + ZB5 AV01)	0.110
		Green	**XB5 AV43** (ZB5 AV4 + ZB5 AV03)	0.110
		Red	**XB5 AV44** (ZB5 AV4 + ZB5 AV04)	0.110
		Orange	**XB5 AV45** (ZB5 AV4 + ZB5 AV05)	0.110

814391



XB5 AV34

Heads only *(2)*

Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
■ With plain lens				
	With BA 9s base fitting	White	**ZB5 AV01**	0.018
		Green	**ZB5 AV03**	0.018
		Red	**ZB5 AV04**	0.018
		Orange	**ZB5 AV05**	0.018
		Blue	**ZB5 AV06**	0.018
		Clear	**ZB5 AV07**	0.018
■ With grooved lens *(3)*				
	With BA 9s base fitting	White	**ZB5 AV01S**	0.017
		Green	**ZB5 AV03S**	0.017
		Red	**ZB5 AV04S**	0.017
		Orange	**ZB5 AV05S**	0.017
		Blue	**ZB5 AV06S**	0.017
		Clear	**ZB5 AV07S**	0.017

814528



ZB5 AV01

(1) Tor order ∼ 440...460 V - 60 Hz tranformer blocks, please replace «5» in the reference by «8». Example: XB5 AV5B1 becomes XB5 AV8B1. To order ∼ 550...600 V - 60 Hz blocks, please replace «5» by «9». Example: XB5 AV5B1 becomes XB5 AV9B1.

(2) Only for use with bodies comprising a light source with BA 9s base fitting (incandescent, neon or LED).

(3) For use in bright ambient light conditions (outdoors in sunlight, for example).

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Specific functions

Pushbuttons for manual overload reset, hour counters, buzzers, fuse carrier

Assembly of other products using:
body/contact assemblies: see page 1/162
accessories: see page 1/174

Manual overload reset buttons (travel 10 mm)

Shape of head	Actuation distance mm	Marking	Colour	Reference	Weight kg
Without cap *(1)*					
	17…120	–	–	**XB5 AA801**	0.027
	120…257	–	–	**XB5 AA802**	0.040
With flush push					
	17…120	Without	Green	**XB5 AA831**	0.027
			Red	**XB5 AA841**	0.027
			Blue	**XB5 AA861**	0.027
		O	Red	**XB5 AA84101**	0.027
		R	Blue	**XB5 AA86102**	0.027
	120…257	Without	Green	**XB5 AA832**	0.040
			Red	**XB5 AA842**	0.040
			Blue	**XB5 AA862**	0.040
		O	Red	**XB5 AA84201**	0.040
		R	Blue	**XB5 AA86202**	0.040
With projecting push					
	17…120	O	Red	**XB5 AL84101**	0.027
	120…257	O	Red	**XB5 AL84201**	0.040

563091



XB5 AA

Heads + mounting base for potentiometer *(2)*

Shape of head	Description	For use with	Reference	Weight kg
	For potentiometer with shaft length 45 to 50 mm	Ø 6 mm shaft	**ZB5 AD912**	0.032
		Ø 6.35 mm shaft	**ZB5 AD922**	0.032

109501



ZB5 AD

Hour counters

Characteristics	Supply voltage V	Reference	Weight kg
Indication 0…9999.9	⎓ 12…24 - 50/60 Hz	**XB5 DSB**	0.045
	∿ 120 - 60 Hz	**XB5 DSG**	0.045
	∿ 230…240 -50 Hz	**XB5 DSM**	0.045

814343



XB5 DS●

Annunciators (IP 40 NEMA 1)

85 db buzzer: 4 kHz, with continuous or intermittent operation (connection diagram: see page 1/188)	⎓ 24 - 50/60 Hz	**XB5 KSB**	0.035
	∿ 120 - 50/60 Hz	**XB5 KSG**	0.035
	∿ 230…240 -50 Hz	**XB5 KSM**	0.035

814344



XB5 KS●

Fuse carrier

Description	For use with	Reference	Weight kg
Fuse carrier	5 x 20 mm fuse 6.3 A - 250 V	**XB5 DT1S**	0.022

814344



XB5 DT1S

(1) Coloured cap to be ordered separately: see page 1/174.
(2) Potentiometer not included.

General : page 1/122 | Characteristics : page 1/130 | Dimensions : page 1/188

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Control and signalling units Ø 22
Harmony® XB5, plastic
Specific functions
Joystick controllers

Assembly of other products using:
accessories: see page 1/174

563161



XD5 PA12

814667



ZD5 PA103

814666



ZD5 PA203

563162



ZD5 PA12

Joystick controllers (with 54 mm long operating shaft) *(1)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Operation	Spring return to zero position	Reference	Weight kg
Complete products				
2-direction	1 notch 1 N/O contact per direction	Without	**XD5 PA12**	0.060
		With	**XD5 PA22**	0.060
4-direction	1 notch 1 N/O contact per direction	Without	**XD5 PA14**	0.077
		With	**XD5 PA24**	0.077

Sub-assemblies for joystick controllers

Description	For use with	Reference	Weight kg
Complete body/contact assemblies	2-direction	**ZD5 PA103**	0.049
	4-direction	**ZD5 PA203**	0.058
Complete head assemblies with operating shaft	2-direction, stay put	**ZD5 PA12**	0.022
	2-direction, spring return to zero position	**ZD5 PA22**	0.022
	4-direction, stay put	**ZD5 PA14**	0.022
	4-direction, spring return to zero position	**ZD5 PA24**	0.022

Legends 30 x 48 mm for engraving	2-direction	Black one side Red reverse	**ZBG 2201**	0.001
		White one side Yellow reverse	**ZBG 2401**	0.001
Legends 48 x 48 mm for engraving	4-direction	Black one side Red reverse	**ZBG 4201**	0.002
		White one side Yellow reverse	**ZBG 4401**	0.002

(1) Must not be used with standard contact blocks ZBE 10● (single) or ZBE 20● (double).

Other versions Joystick controllers and complete body/contact assemblies for joystick controllers with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Body/contact assemblies - Screw clamp terminal connections

To combine with heads, see pages 1/136 to 1/160


814588

ZB5 AZ009


814265

ZBE 101


814267

ZBE 203


814411

ZB5 AZ101


814265

ZBE 201


814667

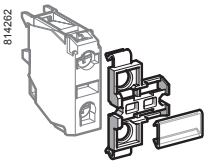
ZB5 AZ106


814667

ZB5 AZ107


PF080707

ZBE 505


814262

ZBZ 001

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB5 AZ009**	0.006

Contact functions *(1)*

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 101**	0.011
		–	1	5	**ZBE 102**	0.011
	Double	2	–	5	**ZBE 203**	0.020
		–	2	5	**ZBE 204**	0.020
		1	1	5	**ZBE 205**	0.020
	Single with body/fixing collar	1	–	1	**ZB5 AZ101**	0.021
		–	1	1	**ZB5 AZ102**	0.021
		2	–	1	**ZB5 AZ103**	0.030
		–	2	1	**ZB5 AZ104**	0.030
		1	1	1	**ZB5 AZ105**	0.030
		1	2	1	**ZB5 AZ141**	0.040

Contacts for specific applications

Application	Type of contact	Description	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	Standard	1	–	5	**ZBE 1016**	0.012
			–	1	5	**ZBE 1026**	0.012
		Dusty environment *(2)* (IP5X, 50 µm dust)	1	–	5	**ZBE 1016P**	0.012
			–	1	5	**ZBE 1026P**	0.012
Staggered contacts	Single	Early make N/O	1	–	5	**ZBE 201**	0.011
		Late break N/C	–	1	5	**ZBE 202**	0.011
	Single with body/fixing collar	Overlapping N/O+N/C	1	1	5	**ZB5 AZ106**	0.030
		Staggered N/O+N/C	2	–	5	**ZB5 AZ107**	0.030
High power switching	Single	Standard *(3)*	1	–	1	**ZBE 501**	0.020
			–	1	1	**ZBE 502**	0.020
			2	–	1	**ZBE 503**	0.032
			–	2	1	**ZBE 504**	0.032
			1	1	1	**ZBE 505**	0.032
Additional contact blocks for high power switching	Single	Standard *(4)*	1	–	1	**ZB2 BE101**	0.020
			–	1	1	**ZB2 BE102**	0.020

Clip-on legend holder, sheet of blank legends and labelling software *(5)*

Description	Sold in lots of	Unit reference	Weight kg
Clip-on legend-holder for electrical blocks with screw clamp terminal connections *(5)*. **For identification of an XB5 A control or signalling unit**	10	**ZBZ 001**	0.001
Sheet of 50 blank legends for legend holder ZBZ 001	10	**ZBY 001**	0.023
«SIS Label» labelling software for legend design (ZBY 001 legends) (for design of legends in English, French, German, Italian, Spanish)	1	**XBY 2U**	0.100

(1) The contact blocks enable variable composition of body/contact assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contacts occupy the first 2 rows). Maximum number of contacts is specified on page 1/134.

(2) It is not possible to fit an additional contact block on the back of these contact blocks.

(3) It is not possible to fit an additional contact block on the back of these contact blocks or to use these contacts with light blocks.

(4) To be fitted on the back of ZBE 50● contacts.

(5) This legend holder is not compatible with high power switching contacts.

General : page 1/122 Characteristics : page 1/130 Dimensions : page 1/188

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Control and signalling units Ø 22
Harmony® XB5, plastic
Light blocks - “Test light” - Protection

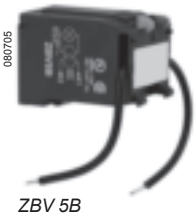
To combine with:
heads, see page 1/142


814273

ZBV B●

Light blocks with screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 12 (50/60 Hz)	White	5	**ZBV J1**	0.017
		Green	5	**ZBV J3**	0.017
		Red	5	**ZBV J4**	0.017
		Orange	5	**ZBV J5**	0.017
		Blue	5	**ZBV J6**	0.017
	⎓ 24 (50/60 Hz)	White	5	**ZBV B1**	0.017
		Green	5	**ZBV B3**	0.017
		Red	5	**ZBV B4**	0.017
		Orange	5	**ZBV B5**	0.017
		Blue	5	**ZBV B6**	0.017
	⎓ 24…120 (50/60 Hz)	White	5	**ZBV BG1**	0.017
		Green	5	**ZBV BG3**	0.017
		Red	5	**ZBV BG4**	0.017
		Orange	5	**ZBV BG5**	0.017
		Blue	5	**ZBV BG6**	0.017
	∼ 110...120 (50/60 Hz)	White	5	**ZBV G1**	0.017
		Green	5	**ZBV G3**	0.017
		Red	5	**ZBV G4**	0.017
		Orange	5	**ZBV G5**	0.017
		Blue	5	**ZBV G6**	0.017
	∼ 230...240 (50/60 Hz)	White	5	**ZBV M1**	0.017
		Green	5	**ZBV M3**	0.017
		Red	5	**ZBV M4**	0.017
		Orange	5	**ZBV M5**	0.017
		Blue	5	**ZBV M6**	0.017


080705

ZBV 5B

Flashing light blocks with screw clamp terminal connections (Schneider Electric anti-retightening system)

Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV 18B1**	0.017
		Green	5	**ZBV 18B3**	0.017
		Red	5	**ZBV 18B4**	0.017
		Orange	5	**ZBV 18B5**	0.017
		Blue	5	**ZBV 18B6**	0.017
	∼ 110...120 (50/60 Hz)	White	5	**ZBV 18G1**	0.017
		Green	5	**ZBV 18G3**	0.017
		Red	5	**ZBV 18G4**	0.017
		Orange	5	**ZBV 18G5**	0.017
		Blue	5	**ZBV 18G6**	0.017
	∼ 230...240 (50/60 Hz)	White	5	**ZBV 18M1**	0.017
		Green	5	**ZBV 18M3**	0.017
		Red	5	**ZBV 18M4**	0.017
		Orange	5	**ZBV 18M5**	0.017
		Blue	5	**ZBV 18M6**	0.017


522067

ZBZ G156

Transformer blocks for 24 V light blocks *(1)*

For use with	Supply voltage V	Description	Référence	Weight kg
Light blocks with integral LED	∼ 400 V - 50 Hz	Transformers 400 V - 24 V ∼	**ZBV 5B** *(2)*	0.090


522068

ZBZ M156

Blocks for “test light” function

Light blocks	⎓ 12 and 24 ⎓ 24…120	Single module, 1 connecting wire	**ZBZ G156** *(3)*	0.010
Light blocks with integral LED	∼ 48…230	Double module, with connecting wires	**ZBZ M156** *(4)*	0.010


814274

ZBZ V●

LED suppressors

For use with	Supply voltage V	Level of protection	Reference	Weight kg
Light blocks with integral LED fitted with screw clamp terminal connections	∼ 120	25…120 VA	**ZBZ VG**	0.010
	∼ 230	30…230 VA	**ZBZ VM**	0.010

(1) To be used with 2 dummy contact blocks ZBE 000.
(2) To order ∼ 440...460 V - 60 Hz transformer blocks, please replace «5» in the reference by «8» : ZBV 5B becomes ZBV 8B.
To order ∼ 550...600 V - 60 Hz transformer blocks, please replace «5» by «9» : ZBV 5B becomes ZBV 9B.
*(3) Block for use with ⎓ light blocks with integral LED types **ZBV J●**, **ZBV B●**, **ZVB BG●** or with direct supply light block for BA 9s bulb, **ZBV 6**.*
*(4) Block for use ∼ light blocks integral LED types **ZBV G●**, **ZBV M●**, see connection on page 1/196.*

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB5, plastic

Body/contact assemblies - Spring clamp terminal connections

To combine with heads, see pages 1/136 to 1/160

814588



ZB5 AZ009

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB5 AZ009**	0.006

Contact functions

Spring clamp terminal connections *(1)*

Contacts for standard applications

PF107777



ZBE 1015

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	4	**ZBE 1015**	0.011
		–	1	4	**ZBE 1025**	0.011
	Single with body/fixing collar	1	–	1	**ZB5 AZ1015**	0.021
		–	1	1	**ZB5 AZ1025**	0.021
		2	–	1	**ZB5 AZ1035**	0.030
		–	2	1	**ZB5 AZ1045**	0.030
		1	1	1	**ZB5 AZ1055**	0.030

PF107781



ZB5 AZ1015

Light blocks

Spring clamp terminal connections *(1)*

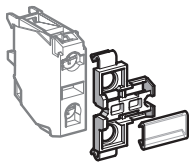
Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	≂ 12 (50/60 Hz)	White	4	**ZBV J15**	0.016
		Green	4	**ZBV J35**	0.016
		Red	4	**ZBV J45**	0.016
		Orange	4	**ZBV J55**	0.016
		Blue	4	**ZBV J65**	0.016
	≂ 24 (50/60 Hz)	White	4	**ZBV B15**	0.016
		Green	4	**ZBV B35**	0.016
		Red	4	**ZBV B45**	0.016
		Orange	4	**ZBV B55**	0.016
		Blue	4	**ZBV B65**	0.016
	∼ 110...120 (50/60 Hz)	White	4	**ZBV G15**	0.016
		Green	4	**ZBV G35**	0.016
		Red	4	**ZBV G45**	0.016
		Orange	4	**ZBV G55**	0.016
		Blue	4	**ZBV G65**	0.016
	∼ 230...240 (50/60 Hz)	White	4	**ZBV M15**	0.016
		Green	4	**ZBV M35**	0.016
		Red	4	**ZBV M45**	0.016
		Orange	4	**ZBV M55**	0.016
		Blue	4	**ZBV M65**	0.016

PF080711



ZBV B35

814262



ZBZ 001

Sheet of 50 blank legends

For use with	Sold in lots of	Unit reference	Weight kg
Legend holder ZBZ 001	10	**ZBY 001**	0.023

540548



XBY 2U

"SIS Label" labelling software (for legends ZBY 001)

For legend design for English, French, German, Italian, Spanish	1	**XBY 2U**	0.038

(1) It is not possible to fit an additional block on the back of these contact or light blocks.

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Control and signalling units Ø 22

Harmony® XB5, plastic

Body/contact assemblies for printed circuit board

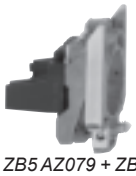
To combine with heads, see pages 1/136 to 1/160

814588



ZB5 AZ009

814286



ZB5 AZ079 + ZB5 AZ009

540159



ZBZ 01●

814287



ZBE 701

814288



ZBE 702

814289



ZBV B●7

Body/fixing collar and accessories specifically for printed circuit board mounting (1)

Accessories required when using adaptor (socket) ZBZ 010

Description	For use with	Sold in lots of	Unit reference	Weight kg
Body/fixing collar	Electrical block (contact or light)	10	**ZB5 AZ009**	0.006
Fixing collar/pillar	Printed circuit board support (fixing screw ZBZ 006 to be ordered separately)	10	**ZB5 AZ079**	0.003
Fixing screw for printed circuit board	Fixing collar/pillar ZB5 AZ079	10	**ZBZ 006**	0.011

Adapter (socket) (1)

For use with	Thickness of printed circuit board (mm)	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	1.6 ± 0.2	10	**ZBZ 010**	0.008
	2.2 ± 0.2	10	**ZBZ 011**	0.008
	3.2 ± 0.2	10	**ZBZ 012**	0.008

Contact functions (1)

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 701**	0.011
		–	1	5	**ZBE 702**	0.011

Contacts for specific applications

Application	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	1	–	5	**ZBE 7016**	0.012
		–	1	5	**ZBE 7026**	0.012

Light blocks (1)

Description	Supply voltage V	Colour of LED	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV B17**	0.004
		Green	5	**ZBV B37**	0.004
		Red	5	**ZBV B47**	0.004
		Orange	5	**ZBV B57**	0.004
		Blue	5	**ZBV B67**	0.004

(1) For details of support drilling and of printed circuit board: see page 1/199.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Body/contact assemblies - Faston connectors

To combine with heads, see pages 1/136 to 1/160

1


PF080708

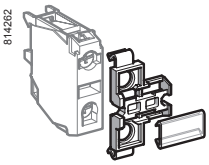
ZBE 1023


PF080709

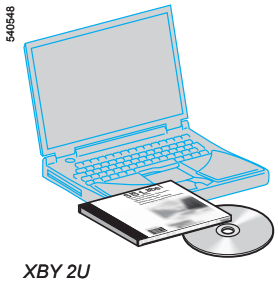
ZBE 2043


PF080710

ZBE 5043


814262

ZBZ 001


540548

XBY 2U

Contact functions *(1)*
Faston connectors (6.35 or 2 x 2.8 mm)

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 1013**	0.011
		–	1	5	**ZBE 1023**	0.011
	Double	2	–	5	**ZBE 2033**	0.020
		–	2	5	**ZBE 2043**	0.020
		1	1	5	**ZBE 2053**	0.020
	Single with body/fixing collar	1	–	1	**ZB5 AZ1013** *(2)*	0.021
		–	1	1	**ZB5 AZ1023** *(2)*	0.021
		2	–	1	**ZB5 AZ1033**	0.030
		–	2	1	**ZB5 AZ1043**	0.030
		1	1	1	**ZB5 AZ1053**	0.030

Contacts for specific applications

Application	Type of contact	Description	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Low power switching	Single	Standard	1	–	5	**ZBE 10163** *(2)*	0.012
			–	1	5	**ZBE 10263** *(2)*	0.012
		Dusty environments *(3)* (IP5X, 50 µm dust)	1	–	5	**ZBE 1016P3** *(2)*	0.012
			–	1	5	**ZBE 1026P3** *(2)*	0.012
Staggered contacts	Single	Early make N/O	1	–	5	**ZBE 2013** *(2)*	0.011
		Late break N/C	–	1	5	**ZBE 2023** *(2)*	0.011
High power switching	Single	Standard *(4)*	1	–	1	**ZBE 5013**	0,021
			–	1	1	**ZBE 5023**	0,021
			2	–	1	**ZBE 5033**	0,033
			–	2	1	**ZBE 5043**	0,033
			1	1	1	**ZBE 5053**	0,033

Clip-on legend holder for electrical blocks with screw clamp terminal connections *(5)*

For use with	Sold in lots of	Unit reference	Weight kg
Identification of an XB5 A control or signalling unit	10	**ZBZ 001**	0.001

Sheet of 50 blank legends

Legend holder ZBZ 001	10	**ZBY 001**	0.023

"SIS Label" labelling software (for legends **ZBY 001**)

For legend design for English, French, German, Italian, Spanish	1	**XBY 2U**	0.100

(1) The contact blocks enable variable composition of body/contact assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contacts occupy the first 2 rows).
*(2) To order products with screw clamp terminal connections for lugs, replace the **3** at the end of the reference with a **9**. Example: **ZBE 1013** becomes **ZBE 1019**.*
(3) It is not possible to fit an additional contact block on the back of these contact blocks.
(4) It is not possible to use these contacts with light blocks.
(5) This legend holder is not compatible with high power switching contacts.

General : page 1/122 | Characteristics : page 1/130 | Dimensions : page 1/188

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB5, plastic

Body/contact assemblies - Plug-in connector

To combine with heads, see pages 1/136 to 1/160

814588



ZB5 AZ009

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	**ZB5 AZ009**	0.006

814278



ZBE 1014

814279



ZBE 1024

814408



ZB5 AZ1014

814410



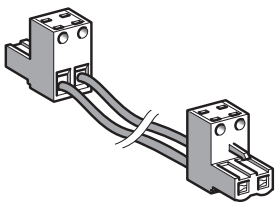
ZB5 AZ1024

814280



ZBV B●4

530719



APE 1C2250

Contact functions

Plug-in connector *(1)*

Contacts for standard applications

Description	Type of contact	N/O	N/C	Sold in lots of	Unit reference	Weight kg
Contact blocks	Single	1	–	5	**ZBE 1014**	0.011
		–	1	5	**ZBE 1024**	0.011
	Single with body/fixing collar	1	–	1	**ZB5 AZ1014**	0.018
		–	1	1	**ZB5 AZ1024**	0.018
		2	–	1	**ZB5 AZ1034**	0.026
		–	2	1	**ZB5 AZ1044**	0.026
		1	1	1	**ZB5 AZ1054**	0.026
		1	2	1	**ZB5 AZ1414**	0.036

Light blocks

Plug-in connector

Description	Supply voltage (V)	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	⎓ 24 (50/60 Hz)	White	5	**ZBV B14**	0.016
		Green	5	**ZBV B34**	0.016
		Red	5	**ZBV B44**	0.016
		Orange	5	**ZBV B54**	0.016
		Blue	5	**ZBV B64**	0.016
	~ 110…120 (50/60 Hz)	White	5	**ZBV G14**	0.016
		Green	5	**ZBV G34**	0.016
		Red	5	**ZBV G44**	0.016
		Orange	5	**ZBV G54**	0.016
		Blue	5	**ZBV G64**	0.016
	~ 230…240 (50/60 Hz)	White	5	**ZBV M14**	0.016
		Green	5	**ZBV M34**	0.016
		Red	5	**ZBV M44**	0.016
		Orange	5	**ZBV M54**	0.016
		Blue	5	**ZBV M64**	0.016

Connecting cables and connector

Description	Number of connectors	Wire c.s.a. mm²	Length mm	Sold in lots of	Unit reference	Weight kg
Cables with connectors 2-pin, 5.08 mm pitch	1	0.75	500	8	**APE 1C2150**	0.120
	2	0.75	500	8	**APE 1C2250**	0.180
Spring terminal connector 2-pin, 5.08 mm pitch	–	0.2 to 2.5	–	10	**APE 1PRE21**	0.003

(1) It is not possible to fit an additional contact block on the back of these contact blocks.

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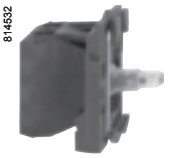
Control and signalling units Ø 22

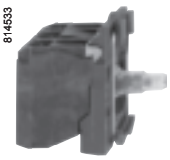
Harmony® XB5, plastic

Body/contact assemblies + light blocks with integral LED

To combine with:
heads, see pages 1/141 to 1/157
contacts, see page 1/162


814532

ZB5 AW0●●1


814533

ZB5 AW0●●3

Complete body/contact assemblies and light blocks *(1)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight kg
Direct supply						
Integral LED Protected LED	⎓ 24 (50/60 Hz)	1	–	White	**ZB5 AW0B11**	0.032
				Green	**ZB5 AW0B31**	0.032
				Red	**ZB5 AW0B41**	0.032
				Orange	**ZB5 AW0B51**	0.032
				Blue	**ZB5 AW0B61**	0.032
		–	1	White	**ZB5 AW0B12**	0.032
				Green	**ZB5 AW0B32**	0.032
				Red	**ZB5 AW0B42**	0.032
				Orange	**ZB5 AW0B52**	0.032
				Blue	**ZB5 AW0B62**	0.032
		2	–	White	**ZB5 AW0B13**	0.042
				Green	**ZB5 AW0B33**	0.042
				Red	**ZB5 AW0B43**	0.042
				Orange	**ZB5 AW0B53**	0.042
				Blue	**ZB5 AW0B63**	0.042
		1	1	White	**ZB5 AW0B15**	0.042
				Green	**ZB5 AW0B35**	0.042
				Red	**ZB5 AW0B45**	0.042
				Orange	**ZB5 AW0B55**	0.042
				Blue	**ZB5 AW0B65**	0.042
	∿ 110...120 (50/60 Hz)	1	–	White	**ZB5 AW0G11**	0.032
				Green	**ZB5 AW0G31**	0.032
				Red	**ZB5 AW0G41**	0.032
				Orange	**ZB5 AW0G51**	0.032
				Blue	**ZB5 AW0G61**	0.032
		–	1	White	**ZB5 AW0G12**	0.032
				Green	**ZB5 AW0G32**	0.032
				Red	**ZB5 AW0G42**	0.032
				Orange	**ZB5 AW0G52**	0.032
				Blue	**ZB5 AW0G62**	0.032
		2	–	White	**ZB5 AW0G13**	0.042
				Green	**ZB5 AW0G33**	0.042
				Red	**ZB5 AW0G43**	0.042
				Orange	**ZB5 AW0G53**	0.042
				Blue	**ZB5 AW0G63**	0.042
		1	1	White	**ZB5 AW0G15**	0.042
				Green	**ZB5 AW0G35**	0.042
				Red	**ZB5 AW0G45**	0.042
				Orange	**ZB5 AW0G55**	0.042
				Blue	**ZB5 AW0G65**	0.042

(1) Can be fitted with additional contact blocks: see page 1/162.

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

General : page 1/122 | Characteristics : page 1/130 | Dimensions : page 1/188

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Control and signalling units Ø 22
Harmony® XB5, plastic
Body/contact assemblies + light blocks with integral LED

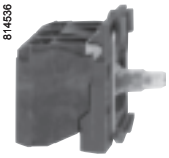
To combine with:
heads, see pages 1/141 to 1/157
contacts, see page 1/162

814537



ZB5 AW0●●1

814536



ZB5 AW0●●3

Complete body/contact assemblies and light blocks *(1) (continued)*
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight
	V					kg
Direct supply *(continued)*						
Integral LED Protected LED	∼ 230…240 (50/60 Hz)	1	–	White	**ZB5 AW0M11**	0.032
				Green	**ZB5 AW0M31**	0.032
				Red	**ZB5 AW0M41**	0.032
				Orange	**ZB5 AW0M51**	0.032
				Blue	**ZB5 AW0M61**	0.032
		–	1	White	**ZB5 AW0M12**	0.032
				Green	**ZB5 AW0M32**	0.032
				Red	**ZB5 AW0M42**	0.032
				Orange	**ZB5 AW0M52**	0.032
				Blue	**ZB5 AW0M62**	0.032
		2	–	White	**ZB5 AW0M13**	0.042
				Green	**ZB5 AW0M33**	0.042
				Red	**ZB5 AW0M43**	0.042
				Orange	**ZB5 AW0M53**	0.042
				Blue	**ZB5 AW0M63**	0.042
		1	1	White	**ZB5 AW0M15**	0.042
				Green	**ZB5 AW0M35**	0.042
				Red	**ZB5 AW0M45**	0.042
				Orange	**ZB5 AW0M55**	0.042
				Blue	**ZB5 AW0M65**	0.042

(1) Can be fitted with additional contact blocks: see page 1/162.

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your customer care centre.

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 22

Harmony® XB5, plastic

Body/light assemblies for pilot lights with integral LED

To combine with:
heads, see page 1/158
contacts, see page 1/162



ZB5 AV●●

Complete light bodies (fixing collar + light block with integral LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	≂ 12 (50/60 Hz)	White	**ZB5 AVJ1**	0.022
		Green	**ZB5 AVJ3**	0.022
		Red	**ZB5 AVJ4**	0.022
		Orange	**ZB5 AVJ5**	0.022
		Blue	**ZB5 AVJ6**	0.022
	≂ 24 *(1)* (50/60 Hz)	White	**ZB5 AVB1**	0.022
		Green	**ZB5 AVB3**	0.022
		Red	**ZB5 AVB4**	0.022
		Orange	**ZB5 AVB5**	0.022
		Blue	**ZB5 AVB6**	0.022
	≂24…120 (50/60 Hz)	White	**ZB5 AVBG1**	0.022
		Green	**ZB5 AVBG3**	0.022
		Red	**ZB5 AVBG4**	0.022
		Orange	**ZB5 AVBG5**	0.022
		Blue	**ZB5 AVBG6**	0.022
	~ 110...120 *(1)* (50/60 Hz)	White	**ZB5 AVG1**	0.022
		Green	**ZB5 AVG3**	0.022
		Red	**ZB5 AVG4**	0.022
		Orange	**ZB5 AVG5**	0.022
		Blue	**ZB5 AVG6**	0.022
	~ 230…240 *(1)* (50/60 Hz)	White	**ZB5 AVM1**	0.022
		Green	**ZB5 AVM3**	0.022
		Red	**ZB5 AVM4**	0.022
		Orange	**ZB5 AVM5**	0.022
		Blue	**ZB5 AVM6**	0.022

(1) Complete bodies with Faston connector terminals (6.35 or 2 x 2.8), see page 1/166.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5, plastic

Body/light assemblies for pilot lights with integral LED

To combine with:
heads, see page 1/158
contacts, see page 1/162



522071

ZB5 AVB●156

Complete light bodies with 3-terminal "test" function

(fixing collar + light block with integral LED + pre-wired block for "test light" function)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	⎓ 24 *(1)* (50/60 Hz)	White	**ZB5 AVB1156**	0.022
		Green	**ZB5 AVB3156**	0.022
		Red	**ZB5 AVB4156**	0.022
		Orange	**ZB5 AVB5156**	0.022
		Blue	**ZB5 AVB6156**	0.022

Complete bodies with flashing pilot light (fixing collar + light block with integral LED)

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Integral LED Protected LED	⎓ 24 (50/60 Hz)	White	**ZB5 AV18B1**	0.022
		Green	**ZB5 AV18B3**	0.022
		Red	**ZB5 AV18B4**	0.022
		Orange	**ZB5 AV18B5**	0.022
		Blue	**ZB5 AV18B6**	0.022
	~ 110…120 (50/60 Hz)	White	**ZB5 AV18G1**	0.022
		Green	**ZB5 AV18G3**	0.022
		Red	**ZB5 AV18G4**	0.022
		Orange	**ZB5 AV18G5**	0.022
		Blue	**ZB5 AV18G6**	0.022
	~ 230…240 (50/60 Hz)	White	**ZB5 AV18M1**	0.022
		Green	**ZB5 AV18M3**	0.022
		Red	**ZB5 AV18M4**	0.022
		Orange	**ZB5 AV18M5**	0.022
		Blue	**ZB5 AV18M6**	0.022

*(1) For a ~ 120 or 230 V supply, use complete body **ZB5 AVG●** or **ZB5 AVM●** with block for "test light" function type **ZBZ M156**, see page 1/163.*

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Control and signalling units Ø 22

Harmony® XB5, plastic

Body/contact assemblies + light blocks with BA 9s base fitting

To combine with heads, see page 1/143
contacts, see page 1/162

Complete body/contact assemblies and light blocks (1)

For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

814549



ZB5 AW065

Light source	Supply voltage V	Type of contact N/O	Type of contact N/C	Colour of light source	Reference	Weight kg
Direct supply						
BA 9s base fitting bulb, 2.4 W max., not included *(2)*	⩽ 250	1	–	–	**ZB5 AW061**	0.031
		–	1	–	**ZB5 AW062**	0.031
		2	–	–	**ZB5 AW063**	0.041
		1	1	–	**ZB5 AW065**	0.041
Supply via integral transformer (1.2 VA, 6 V secondary)						
Incandescent BA 9s base fitting bulb, included	∼ 110…120 50/60 Hz	1	–	–	**ZB5 AW031**	0.110
		1	1	–	**ZB5 AW035**	0.119
	∼ 230 50 Hz ∼ 220…240 60 Hz	1	–	–	**ZB5 AW041**	0.110
		1	1	–	**ZB5 AW045**	0.119
	∼ 400 50 Hz	1	–	–	**ZB5 AW051**	0.110
		1	1	–	**ZB5 AW055**	0.119
BA9s base fitting LED, included	∼ 110…120 50/60 Hz	1	1	White	**ZB5 AW03D15**	0.119
				Green	**ZB5 AW03D35**	0.119
				Red	**ZB5 AW03D45**	0.119
				Orange	**ZB5 AW03D55**	0.119
				Blue	**ZB5 AW03D65**	0.119
	∼ 230 50 Hz ∼ 220…240 60 Hz	1	1	White	**ZB5 AW04D15**	0.119
				Green	**ZB5 AW04D35**	0.119
				Red	**ZB5 AW04D45**	0.119
				Orange	**ZB5 AW04D55**	0.119
				Blue	**ZB5 AW04D65**	0.119
	∼ 400 50/60 Hz	1	1	White	**ZB5 AW05D15**	0.120
				Green	**ZB5 AW05D35**	0.120
				Red	**ZB5 AW05D45**	0.120
				Orange	**ZB5 AW05D55**	0.120
				Blue	**ZB5 AW05D65**	0.120

563158



ZB5 AW035

(1) Can be fitted with additional contact blocks: see page 1/162.
(2) Bulb to be ordered separately: see page 1/186.

Other versions Complete bodies with integral transformer incorporating Faston connector terminals (6.35 or 2 x 2.8). Please consult your customer care centre.

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Control and signalling units Ø 22
Harmony® XB5, plastic
Light bodies for pilot lights with BA 9s base fitting

To combine with:
heads, see page 1/159
contacts, see page 1/162

Light blocks
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Description	Supply voltage V	Sold in lots of	Unit reference	Weight kg
Direct supply for BA 9s base fitting bulb, 2.4 W max., not included *(1)*	⩽ 250	5	**ZBV 6**	0.016

Complete light bodies (fixing collar + light block)
For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Direct supply				
BA 9s base fitting bulb, 2.4 W max, not included *(1)*	⩽ 250	–	**ZB5 AV6**	0.022
Supply via integral transformer (1.2 VA, 6 V secondary)				
BA 9s base fitting incandescent bulb, included	∿ 110…120 -50/60 Hz	–	**ZB5 AV3**	0.099
	∿ 230 - 50 Hz ∿ 220…240 - 60 Hz	–	**ZB5 AV4**	0.099
	∿ 400 - 50 Hz	–	**ZB5 AV5**	0.099
	∿ 440…480 - 60 Hz	–	**ZB5 AV8**	0.099
	∿ 550…600 - 60 Hz	–	**ZB5 AV9**	0.099
BA 9s base fitting LED, included	∿ 110…120 - 50/60 Hz	White	**ZB5 AV3D1**	0.102
		Green	**ZB5 AV3D3**	0.102
		Red	**ZB5 AV3D4**	0.102
		Orange	**ZB5 AV3D5**	0.102
		Blue	**ZB5 AV3D6**	0.102
	∿ 230 - 50 Hz ∿ 220…240 - 60 Hz	White	**ZB5 AV4D1**	0.102
		Green	**ZB5 AV4D3**	0.102
		Red	**ZB5 AV4D4**	0.102
		Orange	**ZB5 AV4D5**	0.102
		Blue	**ZB5 AV4D6**	0.102
	∿ 400 - 50/60 Hz	White	**ZB5 AV5D1**	0.102
		Green	**ZB5 AV5D3**	0.102
		Red	**ZB5 AV5D4**	0.102
		Orange	**ZB5 AV5D5**	0.102
		Blue	**ZB5 AV5D6**	0.102

814524



ZB5 AV6

814523



ZB5 AV3

Complete light bodies with 3-terminal "test" function (fixing collar + light block)
For bulb with BA 9s base fitting (incandescent, neon or LED)
Screw clamp terminal connections (Schneider Electric anti-retightening system)

Light source	Supply voltage V	Reference	Weight kg
Direct supply			
BA 9s base fitting bulb, 2.4 W max, not included *(1)*	⩽ 250	**ZB5 AV156**	0.021

522068



ZB5 AV156

(1) Bulb to be ordered separately, see page 1/186.

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8), *see page 1/166.*

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Control and signalling units Ø 22

Harmony® XB5 plastic

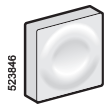
Accessories for heads: caps



ZBA ●



ZBL ●



ZBC 1

Pushbutton caps - unmarked

For use with	Type of push	Colour	Sold in lots of	Unit reference	Weight kg
ZB5 AA0 circular pushbutton heads supplied without cap	Flush	White	10	**ZBA 1**	0.001
		Black	10	**ZBA 2**	0.001
		Green	10	**ZBA 3**	0.001
		Red	10	**ZBA 4**	0.001
		Yellow	10	**ZBA 5**	0.001
		Blue	10	**ZBA 6**	0.001
		6 colours *(1)*	1	**ZBA 9**	0.006
	Projecting	White	10	**ZBL 1**	0.001
		Black	10	**ZBL 2**	0.001
		Green	10	**ZBL 3**	0.001
		Red	10	**ZBL 4**	0.001
		Yellow	10	**ZBL 5**	0.001
		Blue	10	**ZBL 6**	0.001
		6 colours *(1)*	1	**ZBL 9**	0.006
ZB5 CA0 square pushbutton heads supplied without cap	Flush	White	10	**ZBC 1**	0.001
		Black	10	**ZBC 2**	0.001
		Green	10	**ZBC 3**	0.001
		Red	10	**ZBC 4**	0.001
		Yellow	10	**ZBC 5**	0.001
		Blue	10	**ZBC 6**	0.001

(1) Set of 6 different coloured caps: white, black, green, red, yellow, blue.

General : page 1/122
Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5 plastic

Accessories for heads: marked pushbutton caps

814613



ZBA ●33

Pushbutton caps - marked

For use with	Type of push	Marking		Colour of cap	Unit reference	Weight kg
		Text	Colour			
ZB5 AA0 circular pushbutton heads supplied without cap (sold in lots of 10)	Flush	I *(1)*	White	Green	**ZBA 331**	0.001
			Black	White	**ZBA 131**	0.001
		II	White	Green	**ZBA 336**	0.001
			Black	White	**ZBA 136**	0.001
		III	White	Green	**ZBA 337**	0.001
			Black	White	**ZBA 137**	0.001
		IV	White	Green	**ZBA 338**	0.001
			Black	White	**ZBL 138**	0.001
		START *(1)*	White	Green	**ZBA 333**	0.001
			Black	White	**ZBA 133**	0.001
		ON	White	Green	**ZBA 341**	0.001
			Black	White	**ZBA 141**	0.001
		MARCHE	White	Green	**ZBA 342**	0.001
			Black	White	**ZBA 142**	0.001
		UP *(1)*	Black	White	**ZBA 343**	0.001
		DOWN *(1)*	White	Black	**ZBA 344**	0.001
		⏉ *(1)*	White	Black	**ZBA 245**	0.001
			Black	White	**ZBA 145**	0.001
		⬆ *(2)*	White	Black	**ZBA 335**	0.001
			Black	White	**ZBA 334**	0.001
		O *(1)*	White	Red	**ZBA 432**	0.001
				Black	**ZBA 232**	0.001
		ARRET	White	Red	**ZBA 433**	0.001
				Black	**ZBA 233**	0.001
		STOP *(1)*	White	Red	**ZBA 434**	0.001
				Black	**ZBA 234**	0.001
		OFF	White	Red	**ZBA 435**	0.001
				Black	**ZBA 235**	0.001
		⏀	White	Green	**ZBA 346**	0.001
		R *(1)*	White	Blue	**ZBA 639**	0.001
		+	White	Black	**ZBA 2934**	0.001
		–	White	Black	**ZBA 2935**	0.001

(1) Double injection moulded marking.
(2) Can be clipped-in at 90° steps, through 360°

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Control and signalling units Ø 22
Harmony® XB5 plastic
Accessories for heads: boots



ZBP 0

Transparent boots for pushbuttons *(1)*

Description	For use with pushbutton types	Sold in lots of	Unit reference	Weight kg
Single boots *(2)*	Flush with circular head	10	**ZBP A**	0.002
	Projecting with circular head and push-push version	10	**ZBP 0**	0.002
	Flush or projecting with circular head for food industry applications	10	**ZBP 0A**	0.002

Coloured boots

Description	Colour	For use with	Sold in lots of	Unit reference	Weight kg
Coloured boots (can be replaced without dismantling the head)	White	ZB5 AP1S	10	**ZBP 011**	0.003
	Black	ZB5 AP2S	10	**ZBP 012**	0.003
	Green	ZB5 AP3S	10	**ZBP 013**	0.003
	Red	ZB5 AP4S	10	**ZBP 014**	0.003
	Yellow	ZB5 AP5S	10	**ZBP 015**	0.003
	Blue	ZB5 AP6S	10	**ZBP 016**	0.003
Clear membrane	Transparent	ZB5 AP●83	10	**ZBP 017** ▲	0.003

(1) Boots for multiple-headed pushbuttons: see page 1/145.
(2) Permissible panel thickness 1 to 5 mm, cannot be used with legend holders.

▲ Available: 1st quarter 2011.

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Control and signalling units Ø 22

Harmony® XB5 plastic

Accessories for heads: lens caps

DF540779



ZBV 01●3

Lens caps

For use with	Colour	Sold in lots of	Unit reference	Weight kg
Circular lens caps for light sources with integral LED				
Pilot lights	White	10	**ZBV 0113**	0.002
	Green	10	**ZBV 0133**	0.002
	Red	10	**ZBV 0143**	0.002
	Orange	10	**ZBV 0153**	0.002
	Blue	10	**ZBV 0163**	0.002
	5 different coloured grooved lenses *(1)*	1	**ZBV 0103S**	0.010
Illuminated pushbuttons, with flush push	White	10	**ZBW 9113**	0.002
	Green	10	**ZBW 9133**	0.002
	Red	10	**ZBW 9143**	0.002
	Orange	10	**ZBW 9153**	0.002
	Blue	10	**ZBW 9163**	0.002
Illuminated pushbuttons, with projecting push	White	10	**ZBW 9313**	0.002
	Green	10	**ZBW 9333**	0.002
	Red	10	**ZBW 9343**	0.002
	Orange	10	**ZBW 9353**	0.002
	Blue	10	**ZBW 9363**	0.002
Square lens caps for light sources with integral LED				
Pilot lights	White	10	**ZBC V0113**	0.002
	Green	10	**ZBC V0133**	0.002
	Red	10	**ZBC V0143**	0.002
	Orange	10	**ZBC V0153**	0.002
	Blue	10	**ZBC V0163**	0.002
Illuminated pushbuttons, with flush push	White	10	**ZBC W9113**	0.002
	Green	10	**ZBC W9133**	0.002
	Red	10	**ZBC W9143**	0.002
	Orange	10	**ZBC W9153**	0.002
	Blue	10	**ZBC W9163**	0.002
Illuminated pushbuttons, with projecting push	White	10	**ZBC W9313**	0.002
	Green	10	**ZBC W9333**	0.002
	Red	10	**ZBC W9343**	0.002
	Orange	10	**ZBC W9353**	0.002
	Blue	10	**ZBC W9363**	0.002
Circular lens caps for light sources with BA 9s base fitting				
Pilot lights	White	10	**ZBV 011**	0.002
	Green	10	**ZBV 013**	0.002
	Red	10	**ZBV 014**	0.002
	Orange	10	**ZBV 015**	0.002
	Blue	10	**ZBV 016**	0.002
	Clear	10	**ZBV 017**	0.002
Illuminated pushbuttons. with flush push	White	10	**ZBW 911**	0.002
	Green	10	**ZBW 913**	0.002
	Red	10	**ZBW 914**	0.002
	Orange	10	**ZBW 915**	0.002
	Blue	10	**ZBW 916**	0.002
	Clear	10	**ZBW 917**	0.002
Illuminated pushbuttons. with projecting push	White	10	**ZBW 931**	0.002
	Green	10	**ZBW 933**	0.002
	Red	10	**ZBW 934**	0.002
	Orange	10	**ZBW 935**	0.002
	Blue	10	**ZBW 936**	0.002
	Clear	10	**ZBW 937**	0.002

(1) Clear, green, red, orange, blue.

DF540780



ZBV 01●

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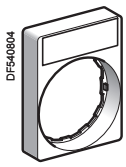
Control and signalling units Ø 22

Harmony® XB5 plastic

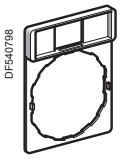
8 x 27 mm legends with 30 x 40 mm legend holders



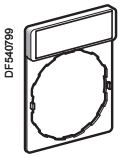
ZBZ 34



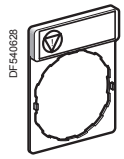
ZBY ●H101



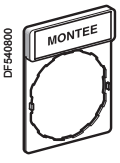
ZBZ 32



ZBY ●101



ZBY 4140



ZBY 2107

30 x 40 mm legend holders (flush mounting with bezel) for 8 x 27 mm legends *(1)*

Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	**ZBZ 34**	0.003
With blank legend	Black or red background	–	10	**ZBY 2H101**	0.004
	White or yellow background	–	10	**ZBY 4H101**	0.004

Standard (30 x 40 mm) legend holders for 8 x 27 mm legends *(1)*

Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	**ZBZ 32**	0.001
With blank legend (for engraving)	Black or red background	–	10	**ZBY 2101**	0.002
	White or yellow background	–	10	**ZBY 4101**	0.002
With 8 x 27 mm legend (with International marking)	Black or red background *(2)*	O (black background)	1	**ZBY 2146**	0.002
		O (red background)	1	**ZBY 2931**	0.002
		I	1	**ZBY 2147**	0.002
		II	1	**ZBY 2148**	0.002
		O-I	1	**ZBY 2178**	0.002
		I-II	1	**ZBY 2179**	0.002
		I-O-II	1	**ZBY 2186**	0.002
		AUTO	1	**ZBY 2115**	0.002
		STOP	1	**ZBY 2304**	0.002
	Yellow background	⊽	1	**ZBY 4140** *(3)*	0.002
With 8 x 27 mm legend (with French language marking)	Black or red background *(2)*	ARRET (red backgr.)	1	**ZBY 2104**	0.002
		ARRET (black backgr.)	1	**ZBY 0104**	0.002
		ARRET GENERAL	1	**ZBY 2129**	0.002
		ARRET REARMEMENT	1	**ZBY 2133**	0.002
		ARRET-MARCHE	1	**ZBY 2166**	0.002
		ARRIERE	1	**ZBY 2106**	0.002
		AUTO CYCLE-CYCLE	1	**ZBY 2198**	0.002
		AUTO CYCLE-MAIN	1	**ZBY 2199**	0.002
		AUTO-MAIN	1	**ZBY 2164**	0.002
		AUTO-O-MAIN	1	**ZBY 2185**	0.002
		AVANT	1	**ZBY 2105**	0.002
		AVANT-O-ARRIERE	1	**ZBY 2184**	0.002
		C-P-C-NORMAL	1	**ZBY 2165**	0.002
		CYCLE-MAIN	1	**ZBY 2197**	0.002
		DECLENCHEMENT	1	**ZBY 2132**	0.002
		DEFAUT (black backgr.)	1	**ZBY 2134**	0.002
		DEFAUT (red backgr.)	1	**ZBY 2135**	0.002
		DEPART CYCLE	1	**ZBY 2195**	0.002
		DESCENTE	1	**ZBY 2108**	0.002
		DROITE	1	**ZBY 2109**	0.002
		ENCLENCHEMENT	1	**ZBY 2131**	0.002
		EN SERVICE	1	**ZBY 2111**	0.002
		FERMETURE	1	**ZBY 2114**	0.002
		GAUCHE	1	**ZBY 2110**	0.002
		HORS SERVICE	1	**ZBY 2112**	0.002
		HORS-EN	1	**ZBY 2167**	0.002
		LENT	1	**ZBY 2127**	0.002
		MAIN	1	**ZBY 2116**	0.002
		MARCHE	1	**ZBY 2103**	0.002
		MONTEE	1	**ZBY 2107**	0.002
		OUVERTURE	1	**ZBY 2113**	0.002
		PHASE / PHASE	1	**ZBY 2196**	0.002
		REARMEMENT (red background)	1	**ZBY 2123**	0.002
		REARMEMENT (black background)	1	**ZBY 0123**	0.002
		SOUS TENSION	1	**ZBY 2126**	0.002
		VITE	1	**ZBY 2128**	0.002
	Red background	ARRET D'URGENCE	1	**ZBY 2130** *(3)*	0.002

(1) For legends, see pages 1/180 to 1/182.
(2) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).
*(3) **For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⊽ has been added.***

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Characteristics : page 1/130
Dimensions : page 1/188

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Control and signalling units Ø 22

Harmony® XB5 plastic

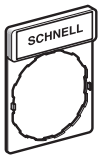
8 x 27 mm legends with 30 x 40 mm legend holders

814300



ZBY 2303

DF540801



ZBY 2228

Standard (30 x 40 mm) legend holders with 8 x 27 mm legends *(continued)*

Description	Legend		Reference	Weight kg
	Colour	Marking		
With legend (with English language marking)	Black or red background *(1)*	AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		CLOSE	**ZBY 2314**	0.002
		DOWN	**ZBY 2308**	0.002
		FAST	**ZBY 2328**	0.002
		FORWARD	**ZBY 2305**	0.002
		HAND	**ZBY 2316**	0.002
		HAND-OFF-AUTO	**ZBY 2387**	0.002
		INCH	**ZBY 2321**	0.002
		LEFT	**ZBY 2310**	0.002
		OFF	**ZBY 2312**	0.002
		OFF-ON	**ZBY 2367**	0.002
		ON	**ZBY 2311**	0.002
		OPEN	**ZBY 2313**	0.002
		POWER ON	**ZBY 2326**	0.002
		RESET (red background)	**ZBY 2323**	0.002
		RESET (black background)	**ZBY 2322**	0.002
		REVERSE	**ZBY 2306**	0.002
		RIGHT	**ZBY 2309**	0.002
		RUN	**ZBY 2334**	0.002
		SLOW	**ZBY 2327**	0.002
		START	**ZBY 2303**	0.002
		STOP-START	**ZBY 2366**	0.002
		UP	**ZBY 2307**	0.002
	Red background	EMERGENCY STOP	**ZBY 2330** *(2)*	0.002
With legend (with German language marking)	Black or red background *(1)*	AB	**ZBY 2208**	0.002
		AUF	**ZBY 2207**	0.002
		AUS	**ZBY 2204**	0.002
		AUS-EIN	**ZBY 2266**	0.002
		AUS-IN BETRIEB	**ZBY 2267**	0.002
		AUS-RÜCKSTELLUNG	**ZBY 2233**	0.002
		AUSSCHALTEN	**ZBY 2232**	0.002
		AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		AUTOZYKL-HAND	**ZBY 2299**	0.002
		AUTOZYKL- 1 ZYKL	**ZBY 2298**	0.002
		C-P-C-NORMAL	**ZBY 2265**	0.002
		EIN	**ZBY 2203**	0.002
		EINSCHALTEN	**ZBY 2231**	0.002
		HAND	**ZBY 2316**	0.002
		LANGSAM	**ZBY 2227**	0.002
		LINKS	**ZBY 2210**	0.002
		NOT-AUS (red background)	**ZBY 2230**	0.002
		ÖFFNEN	**ZBY 2213**	0.002
		RECHTS	**ZBY 2209**	0.002
		RÜCKSTELLUNG	**ZBY 2223**	0.002
		SCHLIESSEN	**ZBY 2214**	0.002
		SCHNELL	**ZBY 2228**	0.002
		SPANNUNG EIN	**ZBY 2226**	0.002
		STEUERUNG AUS	**ZBY 2212**	0.002
		STEUERUNG EIN	**ZBY 2211**	0.002
		STÖRUNG (black background)	**ZBY 2234**	0.002
		STÖRUNG (red background)	**ZBY 2235**	0.002
		VOR	**ZBY 2205**	0.002
		VOR-O-ZURÜCK	**ZBY 2284**	0.002
		ZURÜCK	**ZBY 2206**	0.002
		ZYKLUS-HAND	**ZBY 2297**	0.002
		ZYKLUSSTART	**ZBY 2295**	0.002
	Red background	NOT-HALT	**ZBY 2229** *(2)*	0.002
	Yellow background	NOT-HALT	**ZBY 22420001** *(2)*	0.002

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

(2) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

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Control and signalling units Ø 22
Harmony® XB5 plastic
Legends 8 x 27 mm

DF540805



ZBY 02178

DF540629



ZBY 0140

DF540806



ZBY 0●104

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34)

Colour	Marking		Reference	Weight kg
Without	White or yellow	O (black background)	**ZBY 0102**	0.001
International	Black or red *(1)*	O (black background)	**ZBY 02146**	0.001
		O (red background)	**ZBY 02931**	0.001
		I	**ZBY 02147**	0.001
		II	**ZBY 02148**	0.001
		O-I	**ZBY 02178**	0.001
		I-II	**ZBY 02179**	0.001
		I-O-II	**ZBY 02186**	0.001
		AUTO	**ZBY 02115**	0.001
		STOP	**ZBY 02304**	0.001
	Yellow	⏻	**ZBY 0140** *(2)*	0.001
French	Black or red *(1)*	ARRET (red background)	**ZBY 02104**	0.001
		ARRET (black background)	**ZBY 00104**	0.001
		ARRET GENERAL	**ZBY 02129**	0.001
		ARRET REARMEMENT	**ZBY 02133**	0.001
		ARRET-MARCHE	**ZBY 02166**	0.001
		ARRIERE	**ZBY 02106**	0.001
		AUTO CYCLE-CYCLE	**ZBY 02198**	0.001
		AUTO CYCLE-MAIN	**ZBY 02199**	0.001
		AUTO-MAIN	**ZBY 02164**	0.001
		AUTO-O-MAIN	**ZBY 02185**	0.001
		AVANT	**ZBY 02105**	0.001
		AVANT-O-ARRIERE	**ZBY 02184**	0.001
		C-P-C-NORMAL	**ZBY 02165**	0.001
		CYCLE-MAIN	**ZBY 02197**	0.001
		DECLENCHEMENT	**ZBY 02132**	0.001
		DEFAUT (black background)	**ZBY 02134**	0.001
		DEFAUT (red background)	**ZBY 02135**	0.001
		DEPART CYCLE	**ZBY 02195**	0.001
		DESCENTE	**ZBY 02108**	0.001
		DROITE	**ZBY 02109**	0.001
		ENCLENCHEMENT	**ZBY 02131**	0.001
		EN SERVICE	**ZBY 02111**	0.001
		FERMETURE	**ZBY 02114**	0.001
		GAUCHE	**ZBY 02110**	0.001
		HORS SERVICE	**ZBY 02112**	0.001
		HORS-EN	**ZBY 02167**	0.001
		LENT	**ZBY 02127**	0.001
		MAIN	**ZBY 02116**	0.001
		MARCHE	**ZBY 02103**	0.001
		MONTEE	**ZBY 02107**	0.001
		OUVERTURE	**ZBY 02113**	0.001
		PHASE / PHASE	**ZBY 02196**	0.001
		REARMEMENT (red background)	**ZBY 02123**	0.001
		REARMEMENT (black background)	**ZBY 00123**	0.001
		SOUS TENSION	**ZBY 02126**	0.001
		VITE	**ZBY 02128**	0.001
	Red	ARRET D'URGENCE	**ZBY 02130** *(2)*	0.001

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above)

(2) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⏻ has been added.***

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Control and signalling units Ø 22
Harmony® XB5 plastic
Legends 8 x 27 mm

DF540807



ZBY 02303

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34) *(continued)*

Colour	Marking		Reference	Weight kg
English	Black or red *(1)*	AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		CLOSE	**ZBY 02314**	0.001
		DOWN	**ZBY 02308**	0.001
		FAST	**ZBY 02328**	0.001
		FORWARD	**ZBY 02305**	0.001
		HAND	**ZBY 02316**	0.001
		HAND-OFF-AUTO	**ZBY 02387**	0.001
		INCH	**ZBY 02321**	0.001
		LEFT	**ZBY 02310**	0.001
		OFF	**ZBY 02312**	0.001
		OFF-ON	**ZBY 02367**	0.001
		ON	**ZBY 02311**	0.001
		OPEN	**ZBY 02313**	0.001
		POWER ON	**ZBY 02326**	0.001
		RESET (red background)	**ZBY 02323**	0.001
		RESET (black background)	**ZBY 02322**	0.001
		REVERSE	**ZBY 02306**	0.001
		RIGHT	**ZBY 02309**	0.001
		RUN	**ZBY 02334**	0.001
		SLOW	**ZBY 02327**	0.001
		START	**ZBY 02303**	0.001
		STOP-START	**ZBY 02366**	0.001
		UP	**ZBY 02307**	0.001
	Red	EMERGENCY STOP	**ZBY 02330** *(2)*	0.001

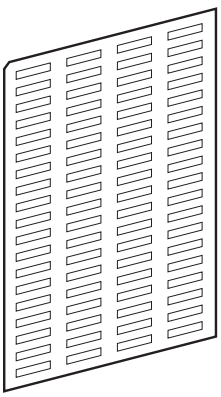
DF540808



ZBY 02228

German	Black or red *(1)*	AB	**ZBY 02208**	0.001
		AUF	**ZBY 02207**	0.001
		AUS	**ZBY 02204**	0.001
		AUS-EIN	**ZBY 02266**	0.001
		AUS-IN BETRIEB	**ZBY 02267**	0.001
		AUS-RÜCKSTELLUNG	**ZBY 02233**	0.001
		AUSSCHALTEN	**ZBY 02232**	0.001
		AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		AUTOZYKL-HAND	**ZBY 02299**	0.001
		AUTOZYKL- 1 ZYKL	**ZBY 02298**	0.001
		C-P-C-NORMAL	**ZBY 02265**	0.001
		EIN	**ZBY 02203**	0.001
		EINSCHALTEN	**ZBY 02231**	0.001
		HAND	**ZBY 02316**	0.001
		LANGSAM	**ZBY 02227**	0.001
		LINKS	**ZBY 02210**	0.001
		NOT-AUS (red background)	**ZBY 02230**	0.001
		ÖFFNEN	**ZBY 02213**	0.001
		RECHTS	**ZBY 02209**	0.001
		RÜCKSTELLUNG	**ZBY 02223**	0.001
		SCHLIESSEN	**ZBY 02214**	0.001
		SCHNELL	**ZBY 02228**	0.001
		SPANNUNG EIN	**ZBY 02226**	0.001
		STEUERUNG AUS	**ZBY 02212**	0.001
		STEUERUNG EIN	**ZBY 02211**	0.001
		STÖRUNG (black background)	**ZBY 02234**	0.001
		STÖRUNG (red background)	**ZBY 02235**	0.001
		VOR	**ZBY 02205**	0.001
		VOR-O-ZURÜCK	**ZBY 02284**	0.001
		ZURÜCK	**ZBY 02206**	0.001
		ZYKLUS-HAND	**ZBY 02297**	0.001
		ZYKLUSSTART	**ZBY 02295**	0.001
	Red	NOT-HALT	**ZBY 02229** *(2)*	0.001
	Yellow	NOT-HALT	**ZBY 022420001** *(2)*	0.001

814309



ZBY 4100

Sheets of peel-off legends (with backing board and protective transparent cover)

Description	For use with	Sold in lots of	Unit reference	Weight kg
Sheet of 76 legends 8 x 27 mm	30 x 40 mm legend holder ZBZ 32 and ZBZ 34	10	**ZBY 4100**	0.043

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

*(2) **For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⓨ has been added.***

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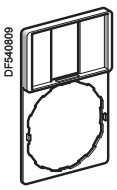
Control and signalling units Ø 22

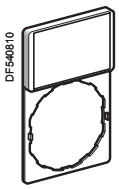
Harmony® XB5 plastic

Legend holders for 18 x 27 mm legends

18 x 27 mm legends for engraving or printing



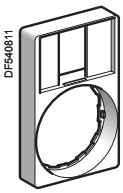
ZBZ 33



ZBY 610●

Standard (30 x 50 mm) legend holders for 18 x 27 mm legends

Description	Colour of background	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZBZ 33**	0.001
With blank legend	Black or red	10	**ZBY 6101**	0.002
	White or yellow	10	**ZBY 6102**	0.002
	Yellow	10	**ZBY 6140** *(1)*	0.002



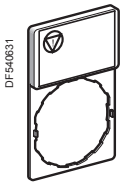
ZBZ 35



ZBY 6H10●

30 x 50 mm legend holder (flush mounting with bezel) for 18 x 27 mm legends

Description	Colour of background	Sold in lots of	Unit reference	Weight kg
Without legend	–	10	**ZBZ 35**	0.003
With blank legend	Black or red	10	**ZBY 6H101**	0.004
	White or yellow	10	**ZBY 6H102**	0.004



ZBY 6140

18 x 27 mm legends for engraving (for 30 x 50 mm legend-holders)

Description mm	Language	Marking	Sold in lots of	Unit reference	Weight kg
Black or red background	–	Without	10	**ZBY 0501**	0.001
White or yellow background	–	Without	10	**ZBY 0502**	0.001
Yellow background	International		10	**ZBY 5140** *(1)*	0.001
	French	ARRET D'URGENCE	10	**ZBY 55130** *(1)*	0.001
	English	EMERGENCY STOP	10	**ZBY 55330** *(1)*	0.001

Sheets of peel-off legends (with backing board and protective transparent cover)

Description	For use with	Sold in lots of	Unit reference	Weight kg
Sheet of 40 18 x 27 mm legends	30 x 50 mm legend holder ZBZ 33 and ZBZ 35	10	**ZBY 5100**	0.044

(1) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo*** ***has been added.***

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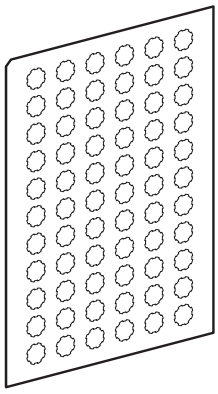
Control and signalling units Ø 22

Harmony® XB5 plastic

Legends, for insertion, for printing, pre-printed, labelling software, circular legends

DF540813



ZBY 1101

Legends for XB5 A pushbuttons, illuminated pushbuttons and pilot lights

Description	Language	Marking	Sold in lots of	Unit reference	Weight kg
Sheets of 66 circular peel-off, transparent, self-adhesive legends	–	Without	10	**ZBY 1101**	0.017
Strips of 66 circular peel-off, transparent, self-adhesive legends	International	O	10	**ZBY 1146**	0.017
		I	10	**ZBY 1147**	0.017
		II	10	**ZBY 1148**	0.017
		III	10	**ZBY 1149**	0.017
		STOP	10	**ZBY 1304**	0.017
		⬆	10	**ZBY 1912**	0.017
	French	ARRET	10	**ZBY 1104**	0.017
		ARRIERE	10	**ZBY 1106**	0.017
		AUTO	10	**ZBY 1115**	0.017
		AVANT	10	**ZBY 1105**	0.017
		DESCENTE	10	**ZBY 1108**	0.017
		MAIN	10	**ZBY 1116**	0.017
		MARCHE	10	**ZBY 1103**	0.017
		MONTEE	10	**ZBY 1107**	0.017
	English	HAND	10	**ZBY 1316**	0.017
		OFF	10	**ZBY 1312**	0.017
		ON	10	**ZBY 1311**	0.017
		START	10	**ZBY 1303**	0.017
	German	AB	10	**ZBY 1208**	0.017
		AUF	10	**ZBY 1207**	0.017
		AUS	10	**ZBY 1204**	0.017
		EIN	10	**ZBY 1203**	0.017
		ZU	10	**ZBY 1214**	0.017

DF540548



XBY 2U

"SIS Label" labelling software

Application	For use with	Reference	Weight kg
Legend design for English, French, German, Spanish, Italian	ZBY 1101, ZBY 001, ZBY 0101, ZBY 0102, ZBY 5101, ZBY 5102, ZBY 4100 and ZBY 5100	**XBY 2U**	0.100

Circular yellow legends for mushroom head pushbuttons

Used for "Emergency stop" function *(1)*

Diameter mm	Conforming to standards	Marking on yellow background	Reference	Weight kg
60	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 9140**	0.004
		ARRET D'URGENCE	**ZBY 9130**	0.004
		EMERGENCY STOP	**ZBY 9330**	0.004
		NOT-HALT	**ZBY 9230**	0.004
		PARADA DE EMERGENCIA	**ZBY 9430**	0.004
		ARRESTO DE EMERGENZA	**ZBY 9630**	0.004
90	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 8140**	0.008
		ARRET D'URGENCE	**ZBY 8130**	0.008
		EMERGENCY STOP	**ZBY 8330**	0.008
		NOT-HALT	**ZBY 8230**	0.008
		PARADA DE EMERGENCIA	**ZBY 8430**	0.008
		ARRESTO DE EMERGENZA	**ZBY 8630**	0.008

DF539640

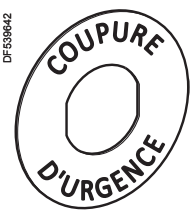


ZBY 9130

Used for "Emergency switching off" function

60	EN/IEC 60204-1	–	**ZBY 9101**	0.004
		COUPURE D'URGENCE	**ZBY 9160**	0.004
		EMERGENCY SWITCHING OFF	**ZBY 9360**	0.004
		NOT-AUS	**ZBY 9260**	0.004
		DESCONEXION DE EMERGENCIA	**ZBY 9460**	0.004
		INTERRUZIONE DI EMERGENZA	**ZBY 9660**	0.004
90	EN/IEC 60204-1	–	**ZBY 8101**	0.008
		COUPURE D'URGENCE	**ZBY 8160**	0.008
		EMERGENCY SWITCHING OFF	**ZBY 8360**	0.008
		NOT-AUS	**ZBY 8260**	0.008
		DESCONEXION DE EMERGENCIA	**ZBY 8460**	0.008
		INTERRUZIONE DI EMERGENZA	**ZBY 8660**	0.008

DF539642



ZBY 9160

(1) ***For complying with EN/ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⓥ has been added.***

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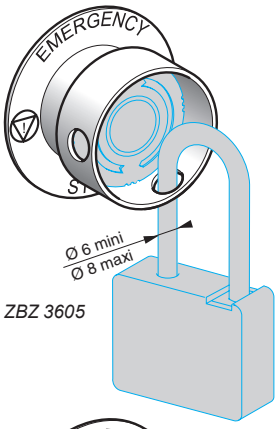
Control and signalling units Ø 22
Harmony® XB5 plastic
Accessories for pushbuttons

DF539643



ZBZ 3605

DF539640



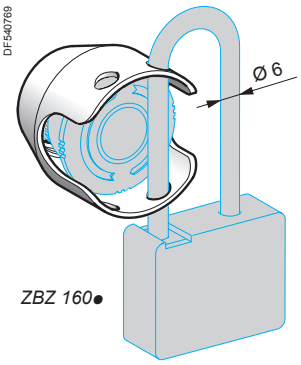
ZBY 9130T

DF539642



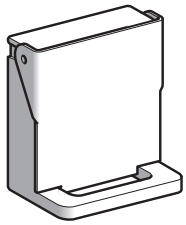
ZBY 9160T

DF540769



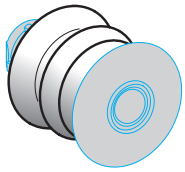
ZBZ 160●

501566



ZB4 BZ64

DF524008



ZBZ ●8

Accessories for mushroom head pushbuttons

Description	For use with	Colour	Reference	Weight kg
Padlocking kit *(1) (2)* (padlockable)	Emergency stop *(3)* and Emergency switching off function *(4)*, only with the following Ø 40 trigger action pushbuttons: XB5 AS844●, XB5 AS944●, ZB5 AS844, ZB5 AS944●.	Yellow	**ZBZ 3605**	0.045

Description	Marking	Colour	Reference	Weight kg
Ø 60 mm legend for padlocking device ZBZ 3605 For Emergency stop function *(3)*	Without	Yellow	**ZBY 9140T**	0.004
	ARRET D'URGENCE	Yellow	**ZBY 9130T**	0.004
	EMERGENCY STOP	Yellow	**ZBY 9330T**	0.004
	NOT-HALT	Yellow	**ZBY 9230T**	0.004
Ø 60 mm legend for padlocking device ZBZ 3605 For Emergency switching off function *(4)*	Without	Yellow	**ZBY 9101T**	0.004
	COUPURE D'URGENCE	Yellow	**ZBY 9160T**	0.004
	EMERGENCY SWITCHING OFF	Yellow	**ZBY 9360T**	0.004
	NOT-AUS	Yellow	**ZBY 9260T**	0.004
Metal guards Padlockable *(2)*	Emergency stop function only with the following Ø 40 trigger action pushbuttons: XB5 AT8●, XB5 AS8●, XB5 AS9●, ZB5 AT8●, ZB5 AS8●, ZB5 AS9●.	Chromium plated	**ZBZ 1600**	0.046
		Black	**ZBZ 1602**	0.046
		Red	**ZBZ 1604**	0.046
		Blue	**ZBZ 1606**	0.046

Other accessories

Description	For use with	Colour	Reference	Weight kg
Plastic guard	Selector switches and key switches	Black	**ZBZ 2102**	0.005
Padlockable flaps	Pushbuttons	Black	**ZB4 BZ62**	0.076
		Red	**ZB4 BZ64**	0.076
		Yellow	**ZB4 BZ65**	0.076
		Blue	**ZB4 BZ66**	0.076

Description	Application	Material	Colour	Sold in lots of	Unit reference	Weight kg
Bellows seals for harsh environments (IP 69K) *(5)*	Environments subject to humidity, dust, high-pressure cleaning etc…	Silicone	Red	2	**ZBZ 48**	0.009
		EPDM	Black	2	**ZBZ 28**	0.009
			Yellow	2	**ZBZ 58**	0.009

*(1) Standard circular legends are not compatible with this product. Use special legends **ZBY 9●●●T**.*
(2) No isolation function is possible when this guard is fitted.
(3) Ensures conformity with standards EN/IEC 60204-1 and EN/ISO 13850.
(4) Ensures conformity with standard EN/IEC 60204-1.
*(5) Only when mounted on control stations. Use legends **ZBY 9●●●T**.*

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Control and signalling units Ø 22

Harmony® XB5 plastic

Accessories for pushbuttons

DF540770



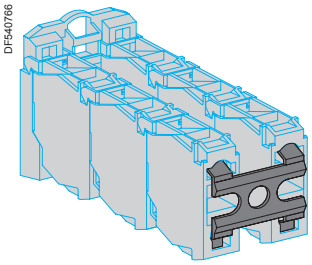
ZB5 SZ3

DF540733



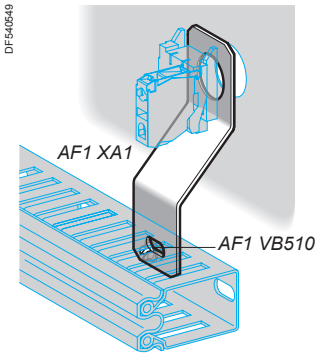
ZB4 BZ007

DF540766



ZBZ 007

DF540649



Other accessories *(continued)*

Description	For use with	Colour	Sold in lots of	Unit reference	Weight kg
Plastic square blanking plug (with fixing nut)	Ø 22 mm control and signalling units	Black	10	**ZB5 SZ5**	0.009
Plastic circular blanking plug (with fixing nut)	Ø 22 mm control and signalling units	Black	10	**ZB5 SZ3**	0.009
Liquid spray protective washer to be fitted in the head	Ø 22 mm control and signalling units	Chromium plated	50	**ZB4 BZ007**	0.010
		Black	50	**ZB4 BZ0077**	0.010
Plastic clips	2 or 3 levels of contact blocks ZBE 10● in high vibration environment	–	10	**ZBZ 007**	–
Dummy contact block	Contact blocks ZBE 10● and transformer blocks ZBV 5B	–	5	**ZBE 000**	–

Description	Application	Sold in lots of	Unit reference	Weight kg
Cable ducting support	Fixing beneath head	10	**AF1 XA1**	0.030
M5 x 10 screw, with hexagonal slotted head	For fixing cable ducting	100	**AF1 VB510**	0.003
Support	For XB5 A pushbuttons, switches and pilot lights	1	**DX1 AP52**	0.160

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Control and signalling units Ø 22

Harmony® XB5 plastic

Accessories for illuminated pushbuttons: bulbs

DF540771



DL1 CJ0●●●

DF540772



DL1 CE●●●

DF540773



DL1 CF●●●

DF540774



XBF X13

DF540768



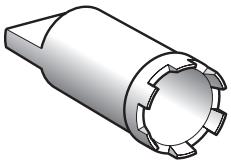
ZBZ 8

107367



ZBZ AZ31

DF540815



ZB5 AZ905

DF540814



ZB5 AZ902

Bulbs with BA 9s base fitting and associated accessories

Description	Characteristics	Colour	Sold in lots of	Unit reference	Weight kg
LEDs	≂ 24 V	White	1	**DL1 CJ0241**	0.002
		Green	1	**DL1 CJ0243**	0.002
		Red	1	**DL1 CJ0244**	0.002
		Orange	1	**DL1 CJ0245**	0.002
		Blue	1	**DL1 CJ0246**	0.002
	≂ 48 V	Green	1	**DL1 CJ0483**	0.002
		Red	1	**DL1 CJ0484**	0.002
		Orange	1	**DL1 CJ0485**	0.002
	6 V - 1.2 W	White	1	**DL1 CD0061**	0.002
		Green	1	**DL1 CD0063**	0.002
		Red	1	**DL1 CD0064**	0.002
		Orange	1	**DL1 CD0065**	0.002
		Blue	1	**DL1 CD0066**	0.002
Incandescent bulbs	6 V - 1.2 W	–	10	**DL1 CB006**	0.002
	24 V - 2 W	–	10	**DL1 CE024**	0.002
	120…130 V 2.4 W	–	10	**DL1 CE130**	0.002
Neon bulbs	120…130 V	–	10	**DL1 CF110**	0.002
	230…240 V	–	10	**DL1 CF220**	0.002
Bulb extractor	–	–	1	**XBF X13**	0.005
Lens cap tightening tool	Illuminated pushbuttons, with flush push	–	1	**ZBZ 8**	0.009

Description	Application	Colour	Sold in lots of	Unit reference	Weight kg
Add-on square trim	Gives a square appearance to ZB5 A circular heads	Black	10	**ZB5 AZ31**	0.002
		Green	10	**ZB5 AZ1715626002**	0.002
		Red	10	**ZB5 AZ1715626001**	0.002
		Blue	10	**ZB5 AZ1715626003**	0.002
Nut	Head fixing		10	**ZB5 AZ901**	0.002
Bezel tool	Tightening head fixing nut ZB5 AZ901		1	**ZB5 AZ905**	0.016
Anti-rotation plate	Prevents rotation of the head		10	**ZB5 AZ902**	0.008

General : page 1/122 Characteristics : page 1/130 Dimensions : page 1/188

Schneider Electric

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Control and signalling units Ø 22

Harmony® XB5 plastic

Accessories for pushbuttons: keys

PF100885



ZBG 455

PF100884



ZBD LU1

PF523989



ZBG 455P

PF100233



ZBG P

Replacement keys

Description	Key number	Reference	Weight kg
For latching mushroom head pushbuttons and selector switches			
Sets of 2 keys	455	**ZBG 455**	0.013
	421E	**ZBG 421E**	0.014
	458A	**ZBG 458A**	0.014
	520E	**ZBG 520E**	0.014
	3131A	**ZBG 3131A**	0.014
	4A185	**ZBD A185**	0.014
	LU1	**ZBD LU1**	0.014
	LU2	**ZBD LU2**	0.014
	LU3	**ZBD LU3**	0.014
	LU4	**ZBD LU4**	0.014
	LU5	**ZBD LU5**	0.014
	LU6	**ZBD LU6**	0.014
	LU7	**ZBD LU7**	0.014
	LU8	**ZBD LU8**	0.014
	LU9	**ZBD LU9**	0.014
	LU10	**ZBD LU10**	0.014
	LU11	**ZBD LU11**	0.014
	LU12	**ZBD LU12**	0.014
	LU13	**ZBD LU13**	0.014
	LU14	**ZBD LU14**	0.014
	8D1	**ZBD 8D1**	0.014
	Specific key	**ZBG K** *(1)*	0.014
For booted selector switches			
Sets of 2 keys, one of which supplied booted (rubber boot)	455	**ZBG 455P**	–
	421E	**ZBG 421EP**	–
	458A	**ZBG 458AP**	–
	520E	**ZBG 520EP**	–
	3131A	**ZBG 3131AP**	–

Accessory for key switches *(2)*

Description	Function	Reference	Weight kg
Keyhole cover (rubber boot)	Protection of lock barrel when no key inserted in lock	**ZBG P**	0.005

(1) Key number to be added when ordering.

(2) Not compatible with products with key TEC10.

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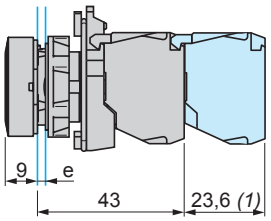
Control and signalling units Ø 22

Harmony® XB5 plastic

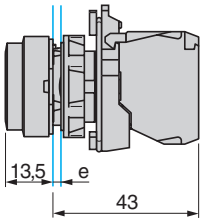
Pushbuttons, switches and pilot lights: complete units, XB5 A

Pushbuttons, spring return

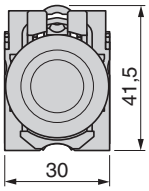
XB5 AA●●



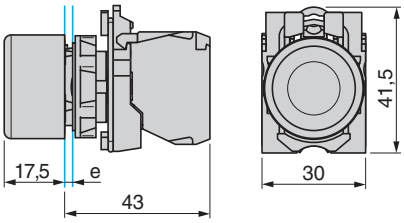
XB5 AL●●



Common face view



XB5 AP●●



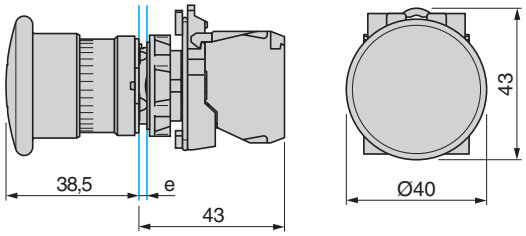
e: clamping thickness: 1 to 6 mm

(1) Additional row of contacts or double contact.

e: clamping thickness: 1 to 6 mm

Mushroom head pushbuttons, spring return

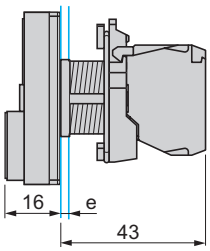
XB5 AC21



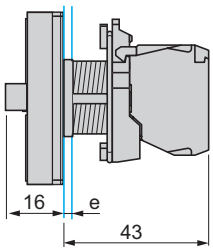
e: clamping thickness: 1 to 6 mm

Multiple-headed pushbuttons (double or triple), spring return

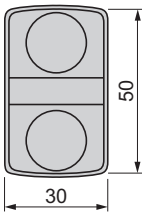
XB5 AL73415, XB5 AW73731●5



XB5 AA731327, XB5 AA711237



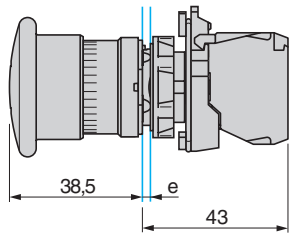
Common face view



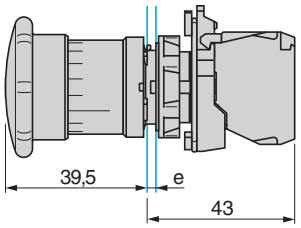
e: clamping thickness: 1 to 6 mm

Emergency stop mushroom head pushbuttons, trigger action and mechanical latching

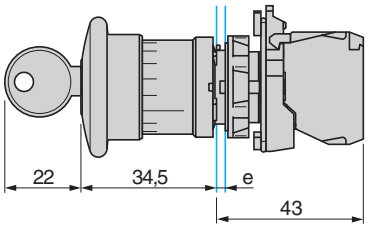
XB5 AT845



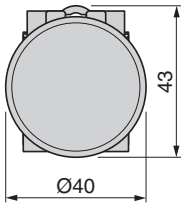
XB5 AS8445



XB5 AS9445



Common face view

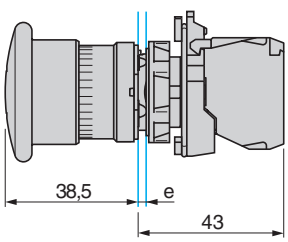


e: clamping thickness: 1 to 6 mm

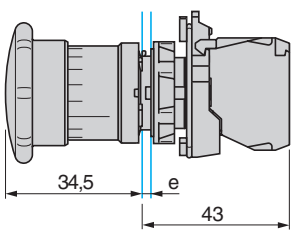
e: clamping thickness: 1 to 6 mm

Emergency switching off mushroom head pushbuttons, mechanical latching

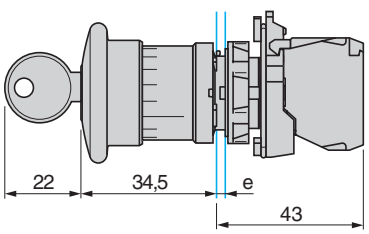
XB5 AT42



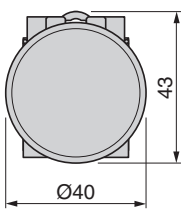
XB5 AS542



XB5 AS142



Common face view



e: clamping thickness: 1 to 6 mm

e: clamping thickness: 1 to 6 mm

General: page 1/122
Characteristics: page 1/130
References: page 1/136

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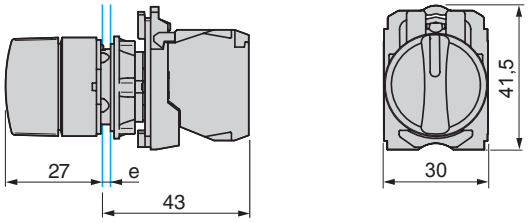
Selector switches

Standard handle operator

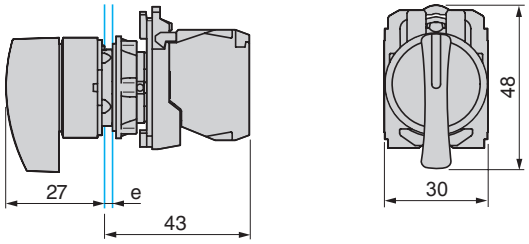
XB5 AD●●



e: clamping thickness: 1 to 6 mm

Long handle operator

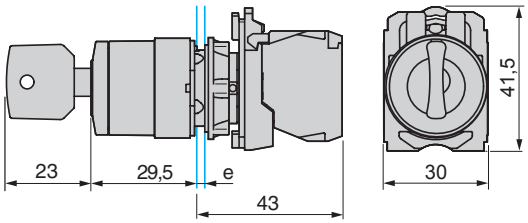
XB5 AJ●●



e: clamping thickness: 1 to 6 mm

Key switches

XB5 AG●●



e: clamping thickness: 1 to 6 mm

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Control and signalling units Ø 22

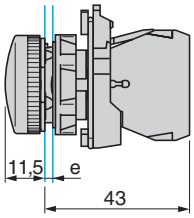
Harmony® XB5 plastic

Pushbuttons, switches and pilot lights: complete units, XB5 A

Pilot lights with BA9S base fitting

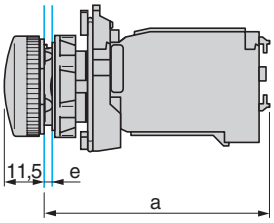
Direct supply

XB5 AV6●

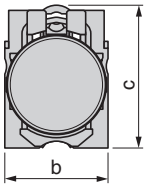


Via integral transformer

XB5 AV3●, AV4●, AV5B●



Common face view



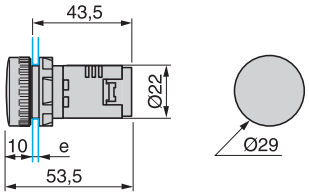
	a	b	c
XB5 AV●●	43	30	41.5
XB5 AV5B●	89,6	40	45

e: clamping thickness: 1 to 6 mm

Pilot lights with integral LED

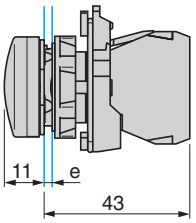
Monolithic units

XB5 EV●●



Complete units

XB5 AVB●, AVG●, AVM●

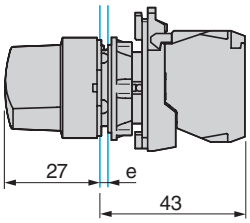


e: clamping thickness: 1 to 6 mm

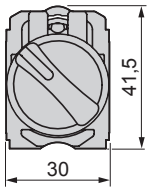
Illuminated selector switches

Integral LED

XB5 AK12●●5



Common face view

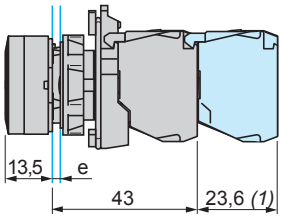


e: clamping thickness: 1 to 6 mm

Illuminated pushbuttons

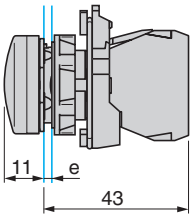
Integral LED

XB5 AW3●●5



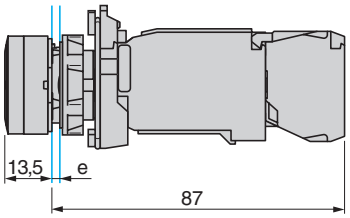
Direct supply

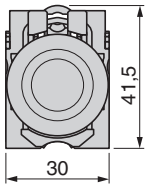
XB5 AW3●65



Via integral transformer

XB5 AW3●●5



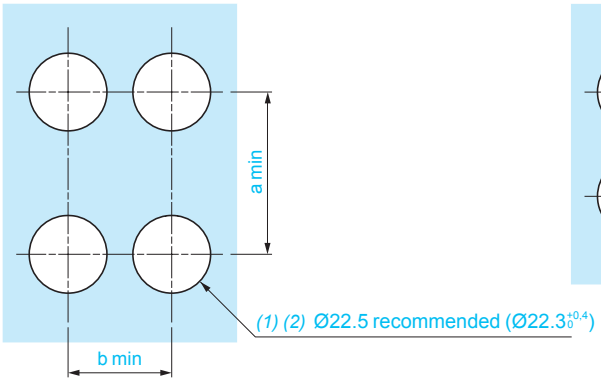


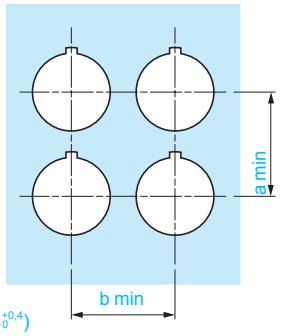
e: clamping thickness: 1 to 6 mm

(1) Additional row of contacts or double contact.

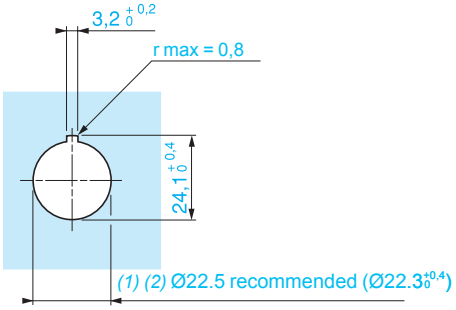
Panel cut-out for pushbuttons, switches and pilot lights (finished holes, ready for installation)

Connection by screw clamp terminals or plug-in connectors or on printed circuit board





Detail of lug recess



(1) Diameter on finished panel or support.
(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5 AZ902 is recommended, see page 1/186.

Connections	a	b
By screw clamp terminals or plug-in connector	40	30
By Faston connectors	45	32
On printed circuit board	30	30

General: page 1/122 Characteristics: page 1/130 References: page 1/136

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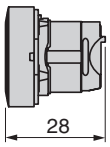
Control and signalling units Ø 22

Harmony® XB5 plastic

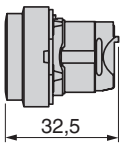
Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

Heads for spring return pushbuttons

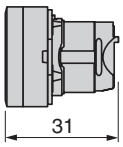
ZB5 AA●, AA●●●, ZB5 AA●8



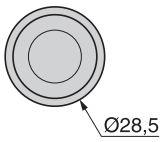
ZB5 AL●, ZB5 AL●●●



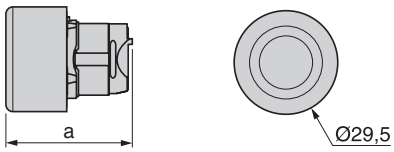
ZB5 AA●4, ZB5 AA●6



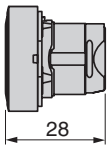
Common face view



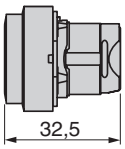
ZB5 AP●●, ZB5 AP●S, ZB5 AP●83, ZB5 AP●



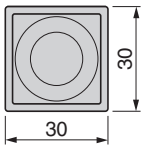
ZB5 CA●, ZB5 CA0



ZB5 CL●



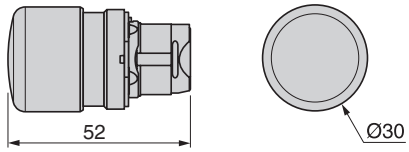
Vue de face commune



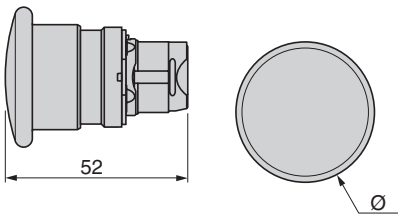
ZB5	a
AP●●	36.5
AP●S	33
AP●83	32
AP●	35

Mushroom heads for spring return pushbuttons

ZB5 AC●4

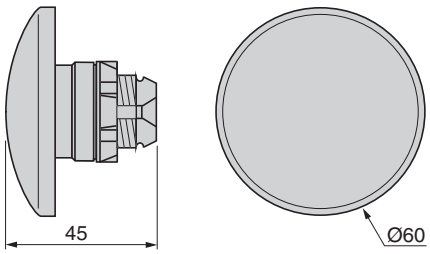


ZB5 AC●, AR●



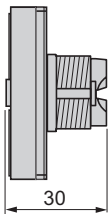
ZB5	Ø
AC●	40
AR●	60

ZB5 AR●16

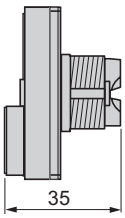


Heads for double-headed, spring return pushbuttons

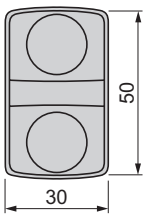
ZB5 AA712●, ZB5 AA734●, ZB5 AA79



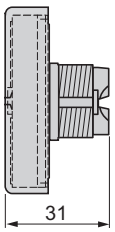
ZB5 AL734●



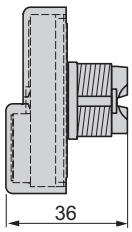
Common face view



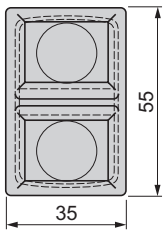
ZB5 AA712● , ZB5 AA734●, ZB5 AA79, + boot ZBA 708



ZB5 AL734● + boot ZBA 710

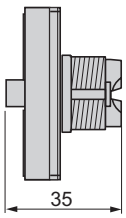


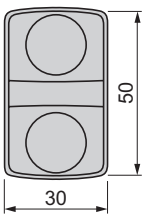
Common face view



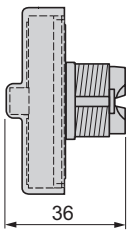
Heads for triple-headed, spring return pushbuttons

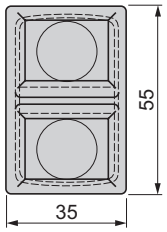
ZB5 AA7313●, ZB5 AA711●●, ZB5 AA72124, ZB5 AA791





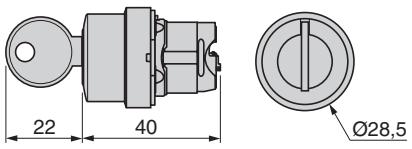
ZB5 AA7313●, ZB5 AA711●●, ZB5 AA72124, ZB5 AA791 + boot ZBA 709





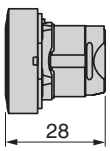
Heads for lockable, Push-turn pushbuttons

ZB5 AFD

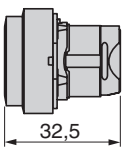


Heads for Push-push to release pushbuttons

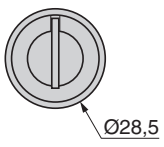
ZB5 AH0●



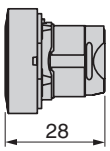
ZB5 AH●

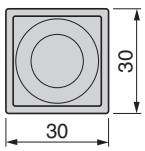


Common face view



ZB5 CH0●





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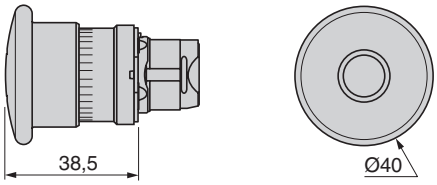
1

Mushroom heads for Emergency stop, trigger action and mechanical latching pushbuttons

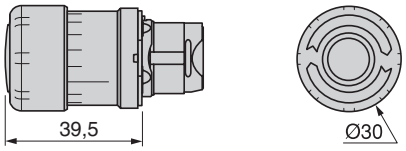
Push-pull

ZB5 AT84

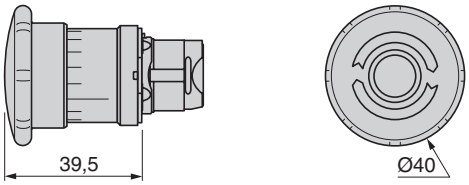


Turn to release

ZB5 AS834

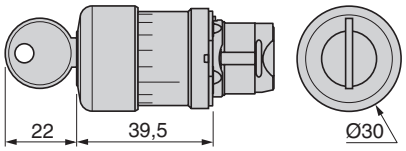


ZB5 AS844

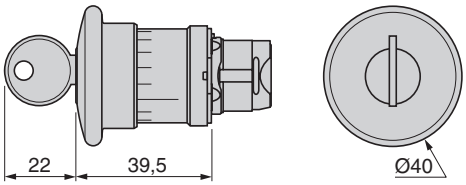


Key release

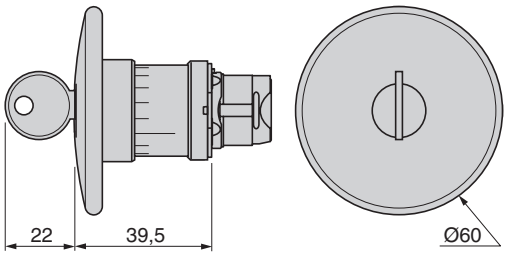
ZB5 AS934



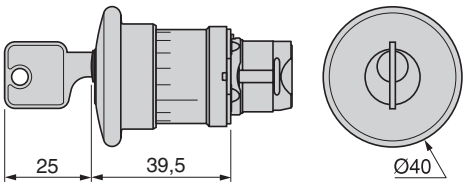
ZB5 AS944



ZB5 AS964



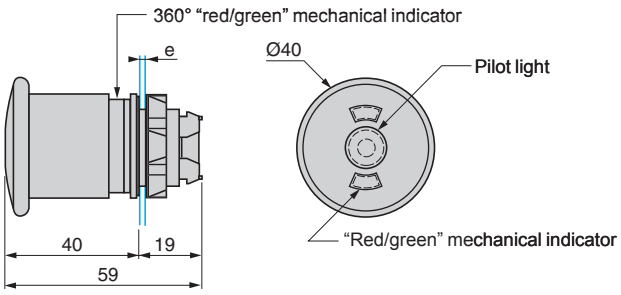
ZB5 AS944D



Illuminated mushroom heads for Emergency stop, trigger action and mechanical latching pushbuttons

Push-pull with pilot light and mechanical state indicator

ZB5 AT8643M



e: panel thickness 1 to 6 mm

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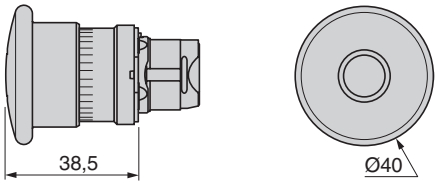
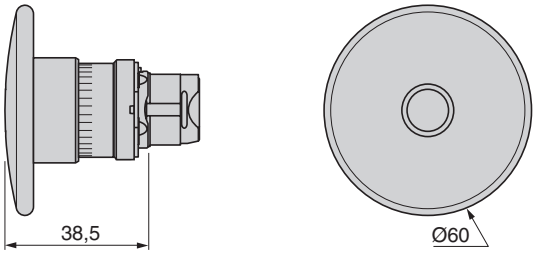
Mushroom heads for Emergency switching off, mechanical latching pushbuttons

Push-pull

ZB5 AT4

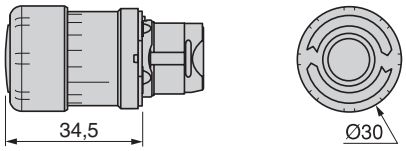


ZB5 AX4

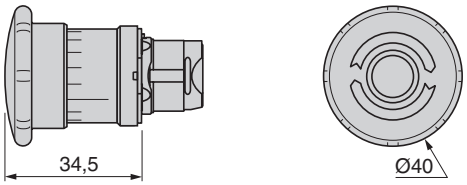


Turn to release

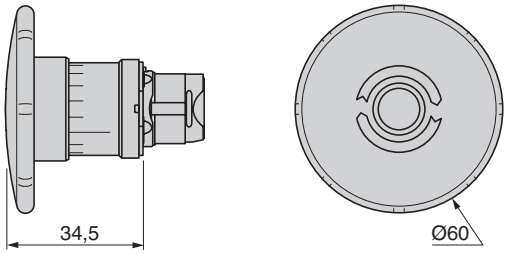
ZB5 AS44



ZB5 AS54

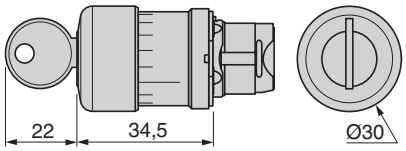


ZB5 AS64

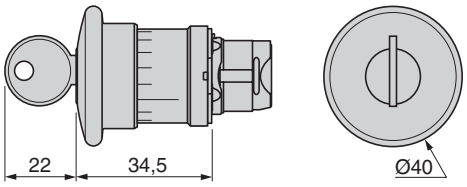


Key release

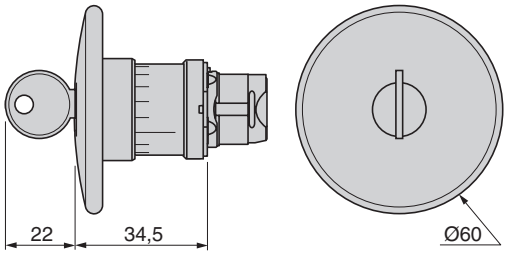
ZB5 AS74



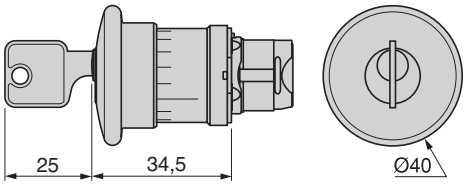
ZB5 AS14



ZB5 AS24



ZB5 AS14D



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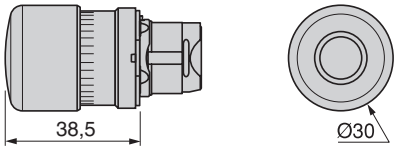
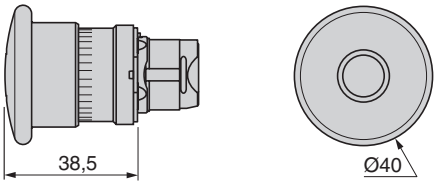
Mushroom heads for latching pushbuttons *(1)*

Push-pull

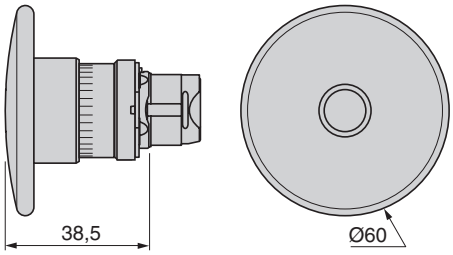
ZB5 AT24



ZB5 AT2

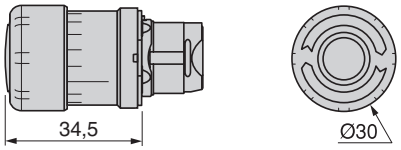


ZB5 AX2

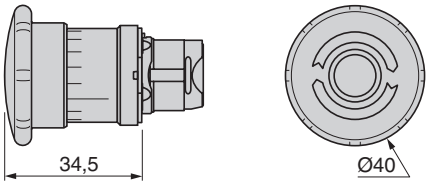


Turn to release

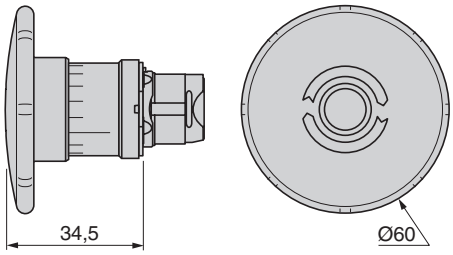
ZB5 AS42



ZB5 AS52, ZB5 AS55

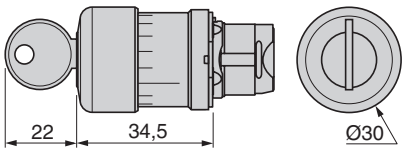


ZB5 AS62

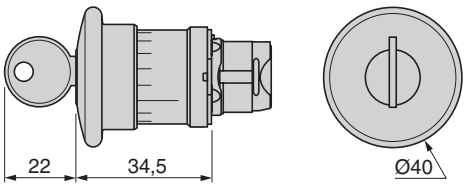


Key release

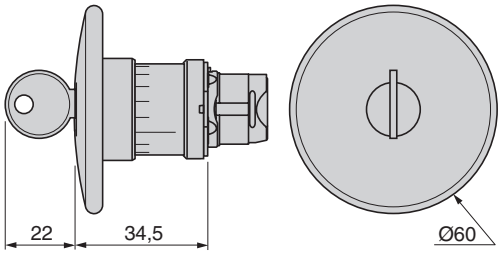
ZB5 AS72



ZB5 AS12



ZB5 AS22



(1) Red mushroom heads for Emergency stop and Emergency switching off, latching pushbuttons: see pages 1/192 and 1/193.

General: page 1/122 | Characteristics: page 1/130 | References: page 1/136

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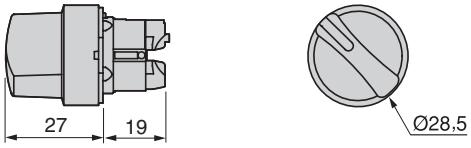
Heads for selector switches

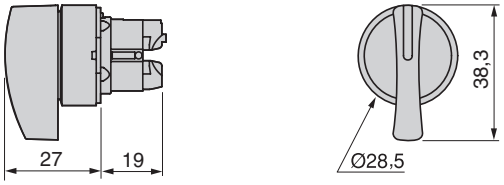
Standard handle operator

ZB5 AD●, ZB5 AD●M



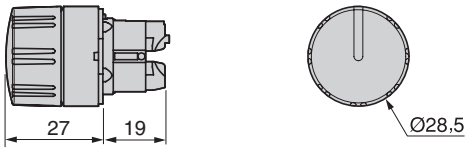
Long handle operator

ZB5 AJ●, ZB5 AJ●M



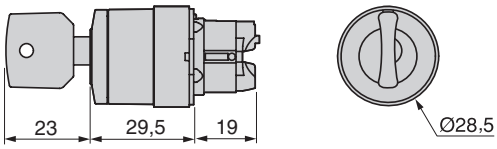
Black knurled knob

ZB5 AD●9



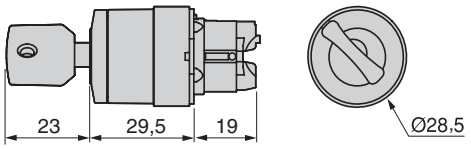
Key switch (Ronis n° 455)

ZB5 AG●, ZB5 AG0●, ZB5 AG●M



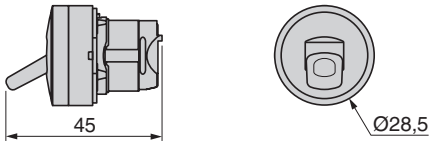
Key switch (DOM n° 8D1)

ZB5 AGD



Heads for toggle switches

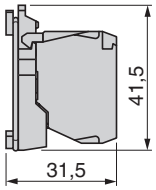
ZB5 AD●8



Bodies for pushbuttons and switches

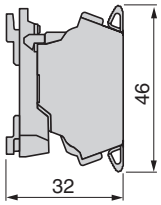
Screw clamp terminal connections

ZB5 AZ10●, ZB5 AZ141



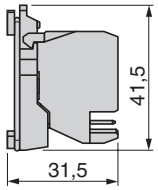
Spring terminal connections

ZB5 AZ10●5



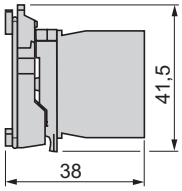
Plug-in connector

ZB5 AZ10●4, ZB5 AZ1414



High power switching with screw clamp terminal connections

ZBE 50● block + ZB5 AZ009 body



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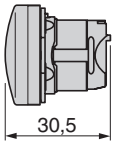
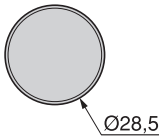
Heads for pilot lights, with light source

Integral LED

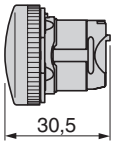
ZB5 AV0●3

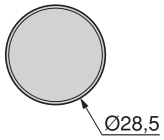




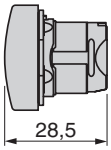
Incandescent, neon or LED

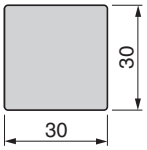
ZB5 AV0●, AV0●S





ZB5 CV0●3, CH3●3

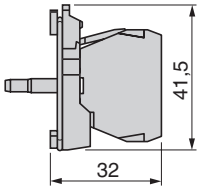




Bodies for pilot lights, screw clamp terminal connections

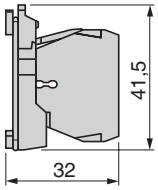
Integral LED

ZB5 AV●●



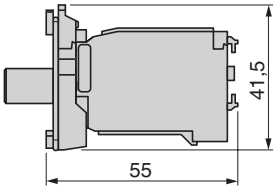
Direct supply, for BA 9s bulb

ZB5 AV6



With integral transformer, for BA9s bulb

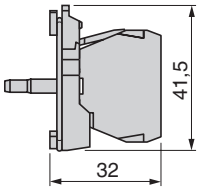
ZB5 AV●, AV●D●



Light block + body/fixing collar for pilot lights, plug-in connector

Integral LED

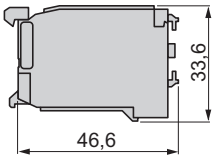
ZBV ●●4 light block + ZB5 AZ009 body/fixing collar



Transformer blocks

For 24 V light blocks with integral LED

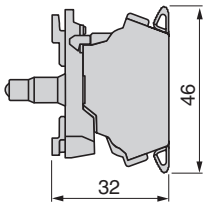
ZBV 5B, ZBV 8B, ZBV 9B



Light block + body/fixing collar for pilot lights, spring terminal connections

Integral LED

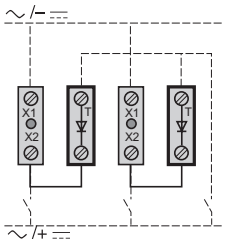
ZBV ●●5 light block + ZB5 AZ009 body/fixing collar



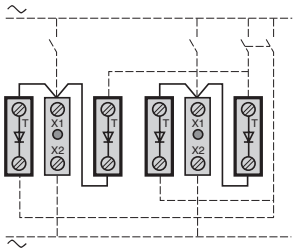
Blocks for “test light” function

Connections

ZBZ G156



ZBZ M156



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Control and signalling units Ø 22

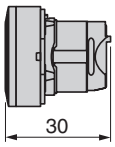
Harmony® XB5 plastic

Pushbuttons, switches and pilot lights: sub-assemblies, ZB5 A

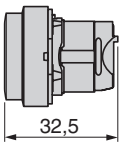
Heads for spring return illuminated pushbuttons, for light source types:

LED

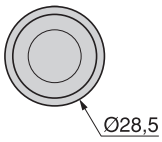
ZB5 AW3●3, AW3●3S, ZB5 AA●8



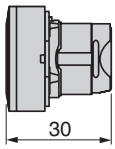
ZB5 AW1●3, ZB5 AW1●3S, ZB5 AL●8

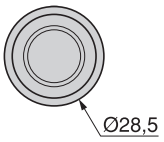


Common face view

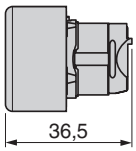


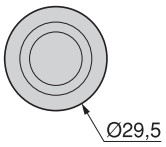
ZB5 AW9●3



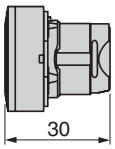


ZB5 AW5●3

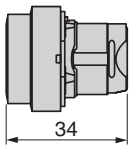




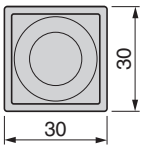
ZB5 CW3●3



ZB5 CW1●3

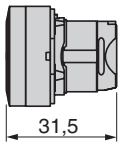


Common face view

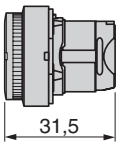


Bulb with BA9s base fitting

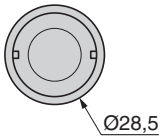
ZB5 AW3●, AW3●S



ZB5 AW1●, ZB5 AW1●S

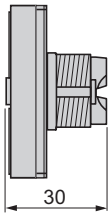


Common face view

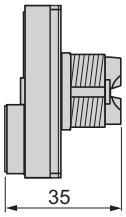


Heads for double-headed pushbuttons + pilot light

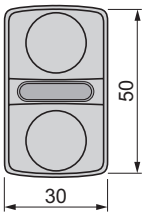
ZB5 AW7A374●, ZB5 AW7A17●●, ZB5 AW7A9



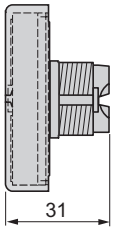
ZB5 AW7L374●



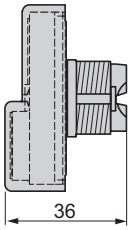
Common face view



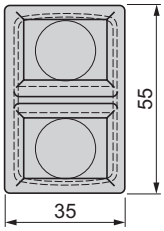
ZB5 AW7A374●, ZB5 AW7A17●●, ZB5 AW7A9 + boot ZBA 708



ZB5 AW7L374● + boot ZBA 710

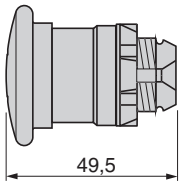


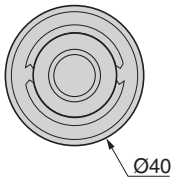
Common face view



Heads for illuminated, latching, mushroom head pushbuttons

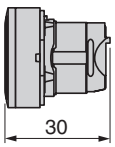
ZB5 AW7●3



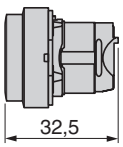


Heads for illuminated, "push-push to release" pushbuttons

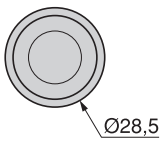
ZB5 AH0●3



ZB5 AH●3

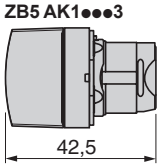


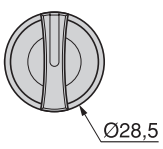
Common face view



Heads for illuminated selector switches with standard handle

ZB5 AK1●●●3





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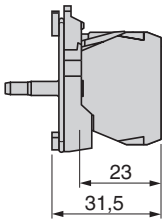
Bodies for illuminated pushbuttons and selector switches, screw clamp terminal connections

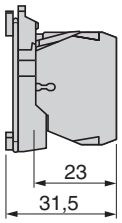
Integral LED

ZB5 AW0●●●



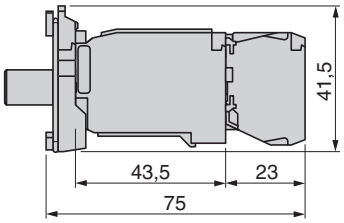
Direct supply for BA9s bulb

ZB5 AW06●



With integral transformer for BA9s bulb

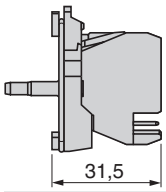
ZB5 AW0●●, ZB5 AW0●D●●



Bodies for illuminated pushbuttons and selector switches, plug-in connector

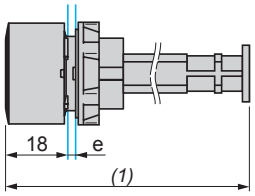
Integral LED

ZB5 AW0●●●4



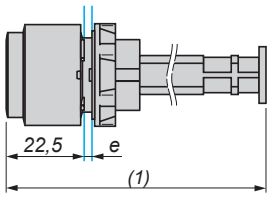
Manual overload reset buttons

XB5 A8●●●



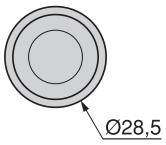
e: panel thickness 1 to 6 mm

XB5 AL8●●●



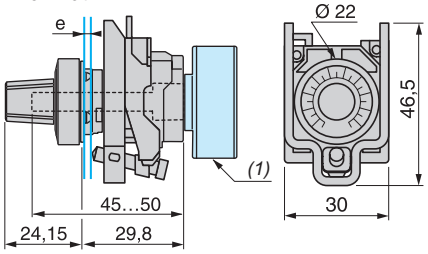
(1) Value not yet communicated

Common face view



Head + mounting base for potentiometer

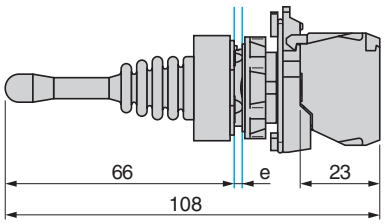
ZB5 AD9●2



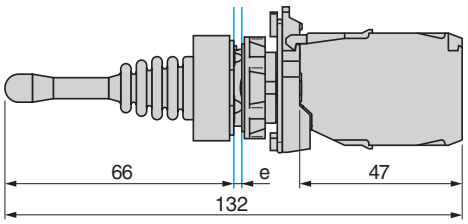
(1) Potentiometer not included.

Joystick controllers

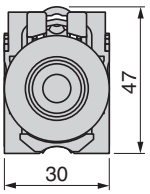
XD5 PA●2



XD5 PA●4



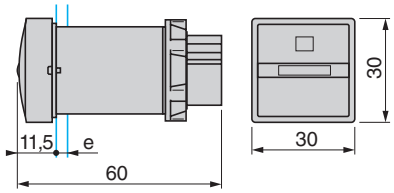
Common face view



e: panel thickness 1 to 6 mm

Hour counters

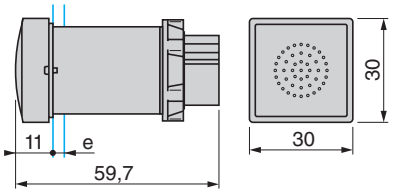
XB5 DS●



e: panel thickness 1 to 6 mm

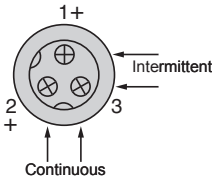
Annunciators

XB5 KS●



Cabling

XB5 KS●



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Control and signalling units Ø 22

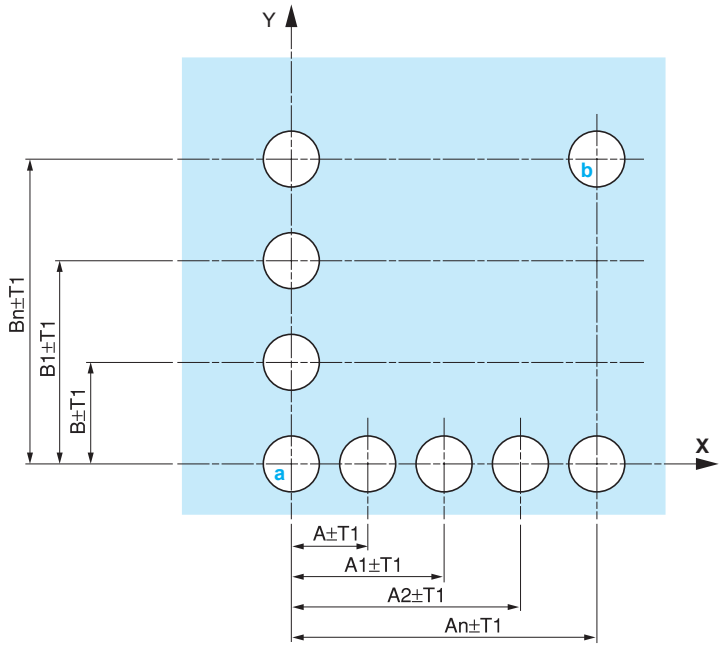
Harmony® XB5 plastic

Pushbuttons, switches and pilot lights for printed circuit board connection

Pushbuttons, switches and pilot lights for printed circuit board connection

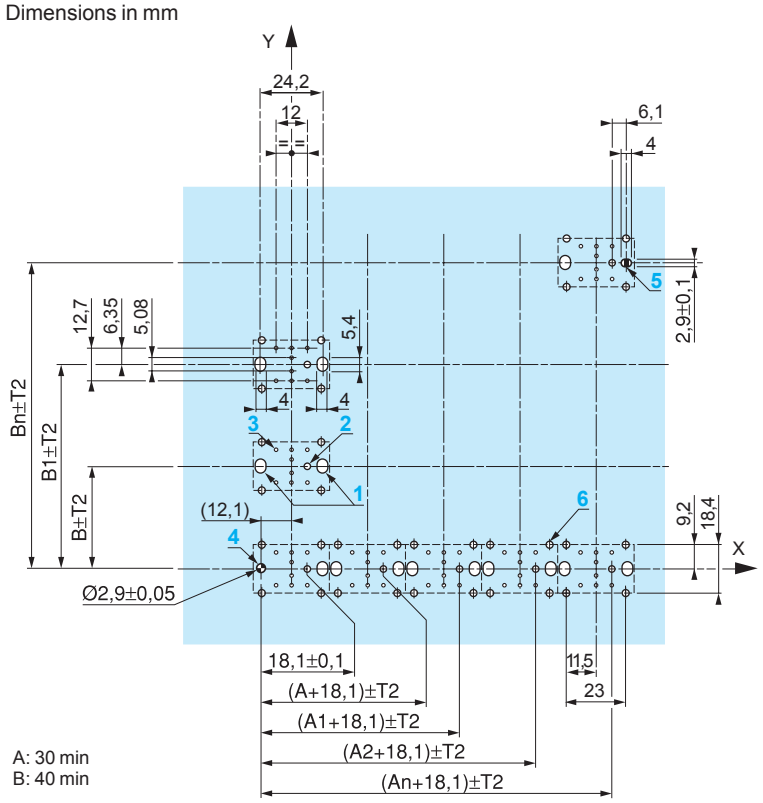
Panel cut-outs (viewed from installer's side)

Dimensions in mm



Printed circuit board cut-outs (viewed from electrical block side)

Dimensions in mm

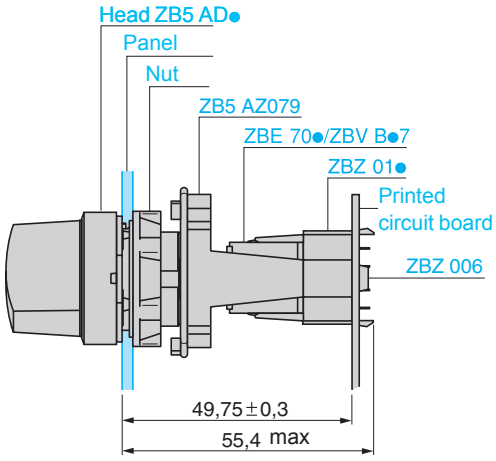


General tolerances of the panel and printed circuit board

The cumulative tolerance must not exceed 0.3 mm: T1 + T2 = 0.3 mm max.

■ Installation precautions:
□ Minimum thickness of circuit board: 1.6 mm.
□ Cut-out diameter: 22.4 mm ± 0.1 mm.
□ Orientation of body/fixing collar ZB5 BZ079: ± 2° 30' (excluding cut-outs marked **a** and **b**).
□ Tightening torque of screws ZBZ 006: 0.6 N.m. max.
□ Allow for one ZB5 BZ079 fixing collar/pillar and its fixing screws:
- every 90 mm horizontally (X), and 120 mm vertically (Y),
- with each selector switch head (ZB5 AD●, ZB5 AJ●, ZB5 AG●).

The fixing centres marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5**.



■ Mounting of adapter (socket) ZBZ 01●:

1 2 elongated holes for ZBZ 006 screw access.

2 1 hole Ø 2.4 mm ± 0.05 for centring adapter ZBZ 01●.

3 8 x Ø 1.2 mm holes.

4 1 hole Ø 2.9 mm ± 0.05, for aligning the printed circuit board (with cut-out marked **a**).

5 1 elongated hole for aligning the printed circuit board (with cut-out marked **b**).

6 4 holes Ø 2.4 mm for clipping in adapter ZBZ 01●.

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 holes for centring adapter ZBZ 01●.

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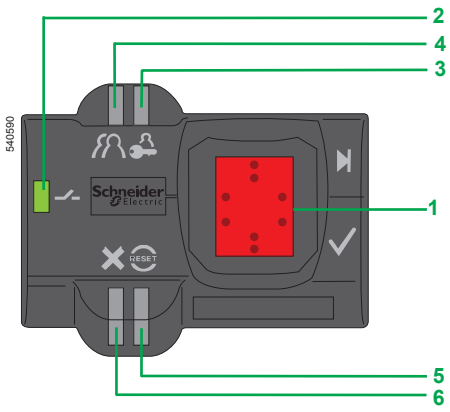
Control and signalling units Ø 22
Harmony® XB5, plastic
Biometric switches



Presentation

The fingerprint reader biometric switch is designed for use in industry to protect access to systems or machines. No type of interface is required for programming and operating the switch: it is an independent unit.

2 types of product are available:
- bistable biometric switches type XB5 S1B, with 2 fixed states,
- monostable biometric switches type XB5 S2B, with pulse control.

The biometric switch is aimed at 2 types of user:
- the administrator, who manages the registration and deletion of fingerprints,
- the operator who, once registered, uses the product as a control unit.

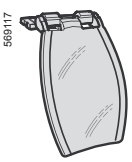
The product is of monolithic design (a single plastic housing) and is fixed by means of a nut (hand-tightened without need for tools) in a standard, 22 mm diameter hole.
It operates on a 24 V d.c. supply.
Connection to the power supply and to the control output (relay or plc) is by means of a 2 metre cable or by M12 connector.
It can be installed on a flat, horizontal or vertical surface.
A protective cover is available as an accessory to protect the active face of the sensing screen. This cover is fixed by means of a self-adhesive hinge.

Description

The product consists of a dark grey housing, with the following on its front face:
■ a sensing screen **1** that allows the registration of fingerprints and subsequent recognition of fingerprints registered,
■ a green LED output state indicator **2**, that illuminates when the output is activated (N/O solid state contact),
■ an orange LED **3**, indicating an administrator's “Registration” mode,
■ an orange LED **4**, indicating an operator's “Registration” mode,
■ a red «RESET» LED **5**, which indicates, in "Delete" mode, that the administrator is deleting all or part of the memory,
■ a red LED **6** which flashes in the presence of an "unrecognised" fingerprint or in the case of incorrect operation.



XB5 S●B●●●●



ZB5 SZ70

References

Complete units

Description	Connection	Reference	Weight kg
Bistable biometric switch, 24 V d.c. PNP output	By 2 m cable	**XB5 S1B2L2**	0.170
	By M12 connector	**XB5 S1B2M12**	0.183
Monostable biometric switch, 24 V d.c. PNP output	By 2 m cable	**XB5 S2B2L2**	0.170
	By M12 connector	**XB5 S2B2M12**	0.183

Accessories

Description	Function	Sold in lots of	Reference	Weight kg
Protective cover, translucent and self-adhesive	Protection of the sensing screen	5	**ZB5 SZ70**	0.020
Fixing nut Ø 22 mm	Replacement part	5	**ZB5 SZ71**	0.030
Legend plate, 27 x 8 mm, self-adhesive, blank, with black background, for engraving	–	10	**ZBY 0101T**	0.005

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Control and signalling units Ø 22
Harmony® XB5, plastic
Biometric switches

Characteristics

Biometric switch type			XB5 S1B●●●● and XB5 S2B●●●●
Conforming to standards			UL, CSA, GOST, CE
Product certifications			CSA C22-2 n° 14, UL 508, IEC 61000-6-2 and IEC 61000-6-4
Degree of protection	Conforming to EN/IEC 60529		IP 65 NEMA 12
Ambient air temperature around the device	Storage	°C	- 25…+ 70
	Operation	°C	- 5…+ 50
Mechanical shock protection			IK 03 conforming to IEC 50102
Vibration resistance	Conforming to IEC 60068-2-6		1 gn - 9 to 500 Hz Amplitude 3 mm - 5 to 9 Hz
Mechanical shock resistance	Conforming to IEC 60068-2-27		50 gn, duration 11 ms
Connection method	Cable		Length: 2 m, 3-wire, pre-wired
	Connector		M12
Materials	Housing		Polyamide PA66
	Cable		PvR 3 x 0.34 mm^2
Memory capacity			200 records (100 users, operators or administrators, each registering 2 fingerprints)
Output state indicator			Green LED
Short-circuit protection			By gG fuse - 250 mA
Rated supply voltage		V	⎓ 24 with protection against reverse polarity
Voltage limits (including ripple)		V	⎓ 20…30
Switching capacity		mA	≤ 200 with protection against overloads and short-circuits
Residual voltage, closed state		V	≤ 1
No-load current consumption		mA	≤ 50
Delays	First-up	s	< 2
	Response time	s	< 1
	Recovery time	s	< 1

Connections

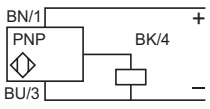
Connector

M12



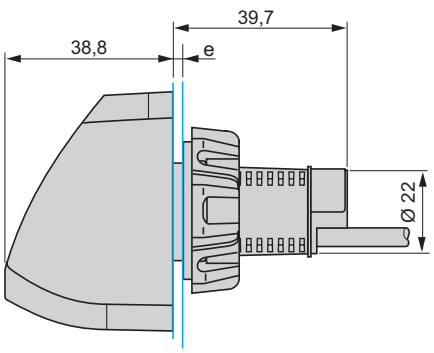
1 (+)
3 (-)
4 Output

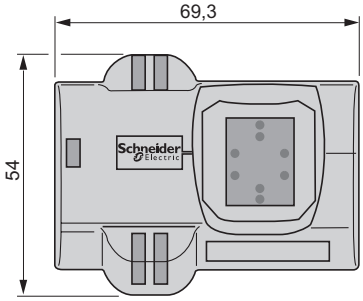
Cable with PNP output



BU: Blue
BN: Brown
BK: Black

Dimensions





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Control and signalling units Ø 22
Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton

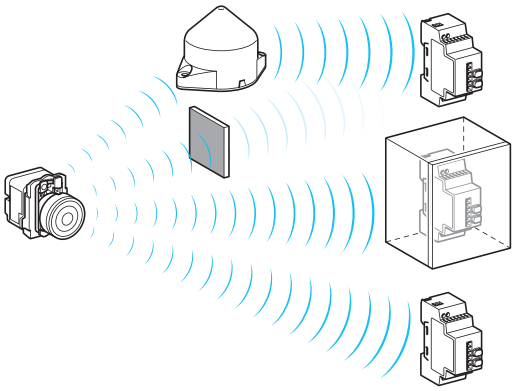

Figure A: radio transmission between 1 transmitter and 3 receivers

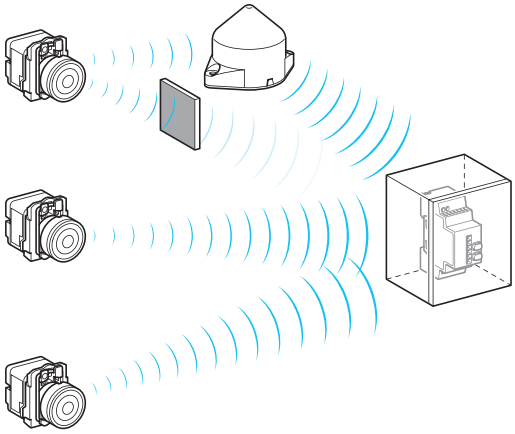

Figure B: radio transmission between 3 transmitters and 1 receiver

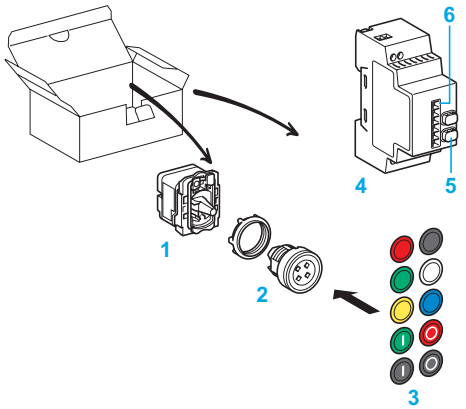

Figure C: pack with transmitter and programmable receiver

Presentation of the range

The Harmony wireless and batteryless pushbutton range enables remote control of a relay (receiver) by means of a pushbutton (transmitter). Control is by radio transmission: a transmitter is fitted with a "dynamo" type generator that converts the mechanical energy produced when the pushbutton is pressed, to electrical energy. A radio-encoded message with a unique ID code is sent, by a single pulse, to one or more receivers located several dozen metres away (see figure A). One receiver can also be actuated by several different transmitters (see figure B).

Depending on the application, a relay-antenna can be used to get round an obstacle that impedes transmission or to increase the range (see figures A and B).

The possible distance *(1)* between a transmitter and a receiver is approximately:
- 100 m where there are no obstacles,
- 25 m if the receiver is installed in a metal housing or in a closed metal enclosure,
- 40 m if a relay-antenna is located between the transmitter and the receiver (receiver installed in a metal housing or in a closed metal enclosure).

This new technology makes it possible to reduce installation times and costs by totally eliminating wiring and associated equipment between the pushbutton and the electrical enclosure.

This new technology also allows an operator to be mobile or to have a control mounted on-board a vehicle (trolley, truck, etc.). The pushbutton is always available and requires no maintenance (no battery needed).

There are numerous possible applications, both in industry (production line, conveyors, etc.) and in industrial buildings and infrastructures (lighting, door opening, start-up of fans, etc.).

This technology (radio-encoded message sent as a single pulse) cannot be used for hoisting applications ("up/down", "right-left" movements, etc.) or safety applications (Emergency Stop pushbuttons, etc.). For these applications, it is recommended that Harmony XB4 and XB5 wired pushbuttons or the XAC range of pendant control stations be used.

Description of the “Ready-to-use packs” ranges *(2)*

Pack with programmable receiver (see figure C)

The pack comprises:

1 A transmitter with a fixing collar for assembly with a pushbutton head and mounting in a Ø 22 mm hole.

2 A flush, spring return, plastic or metal pushbutton head.

3 A set of 10 different coloured caps, which can be clipped onto the pushbutton head.

4 A ∿/⎓ 24...240 V programmable controller, 2 relay outputs, with 2 buttons (learn and parameter setting) **5** and 6 indicating LEDs **6**.

(1) Typical values which can be affected by the application environment.
(2) Wireless and batteryless pushbutton and receiver ready-paired at the factory.

Characteristics: page 1/204
References: page 1/208
Dimensions, schemes: page 1/210

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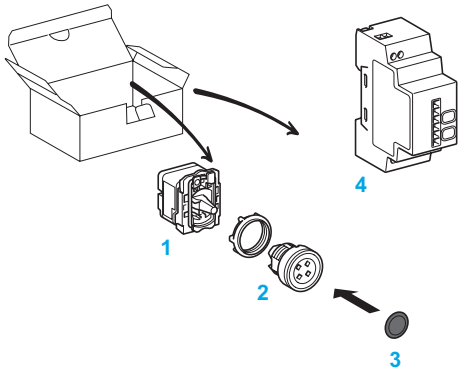

Figure D: pack with transmitter and non-programmable receiver

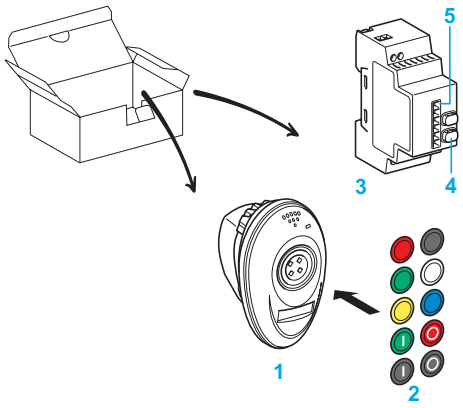

Figure E: pack with transmitter in handy box and programmable receiver

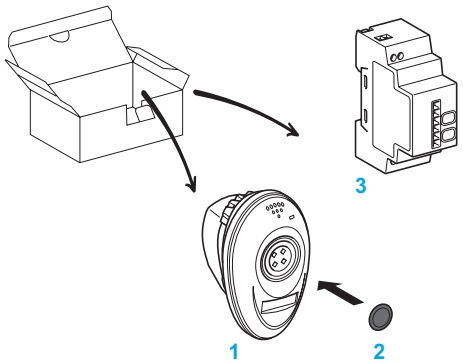

Figure F: pack with transmitter in handy box and non-programmable receiver

Description of the "Ready-to-use packs" *(1) (continued)*

Pack with non-programmable receiver (see figure D)

The pack comprises:

1 A transmitter with a fixing collar for assembly with a pushbutton head and mounting in a Ø 22 mm hole.

2 A flush, spring return, plastic or metal pushbutton head.

3 A black cap that can be clipped onto the pushbutton head.

4 A ⎓ 24 V non-programmable receiver, 1 relay output, without indicating LED or button.

Pack with handy box and programmable receiver (see figure E)

The pack comprises:

1 A handy box containing a wireless and batteryless pushbutton with plastic head.

2 A set of 10 different coloured caps, which can be clipped onto the pushbutton head.

3 A ∿/⎓ 24...240 V programmable receiver, 2 relay outputs, with 2 buttons (learn and parameter setting) 4 and 6 indicating LEDs 5

Pack with handy box and non-programmable receiver (see figure F)

The pack comprises:

1 A handy box containing a wireless and batteryless pushbutton with plastic head.

2 A black cap that can be clipped onto the pushbutton head.

3 A ⎓ 24 V non-programmable receiver, 1 relay output, without indicating LED or button.

Description of the "Components" range

Components are sold separately to allow completion of existing applications or creation of specific applications:

- transmitter for assembly with pushbutton head and mounting in a Ø 22 mm hole,
- flush, spring return, pushbutton head, metal or plastic version,
- plastic or metal fixing collar,
- empty handy box,
- empty plastic boxes (1 or 2 cut-outs) for wall mounting or on-board applications,
- set of 10 different coloured caps or set of 10 same colour caps, that can be clipped onto the pushbutton head,
- ∿/⎓ 24...240 V programmable receiver , 2 relay outputs, with 2 buttons (learn and parameter setting) and 6 indicating LEDs,
- ⎓ 24 V programmable receiver, 4 PNP outputs, with 2 buttons (learn and parameter setting) and 6 indicating LEDs,
- relay-antenna.

(1) Wireless and batteryless pushbutton and receiver ready-paired at the factory.

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Control and signalling units Ø 22
Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton

1

Characteristics of wireless and batteryless pushbutton

Environment characteristics

Conforming to standards	Wireless and batteryless pushbutton		EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14
	Transmitter/receiver system		CE : R&TTE 1999/5/EC, BT 2006/95/EC, EMC 2004/108/EC
	Radiofrequency		EN300-440-1, EN300-440-2, FCC part. 15, RSS210, ANATEL (resolution 506), SRRC, EMC: EN301-489-1, EN301-489-3 SAR (Specific Absorption Rate) compliant. Power transmitted by the button < 3 mw
Product certifications and radio agreements			UL, FCC (USA), CSA, RSS (Canada), C-Tick (Australia), GOST (Russia), ANATEL (Brazil), SRRC (China), CE (Europe)
Protective treatment standard version			"TH"
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 70
Relative humidity permissible	Transmitter block		+ 95% RH at 70° C (without condensation)
Degree of protection	Conforming to IEC 60529		IP 65 (front face)
			IP 30 (back face)
	Conforming to UL / CSA		Type 12
Mechanical shock protection	Conforming to IEC 50102		IK 03
Free fall resistance	Conforming to IEC 60068-2-32	**mm**	1 000

Mechanical characteristics

Operating travel (when sending information)	Pushbutton	**mm**	Total travel: 4.3 Instruction sent when wireless and batteryless pushbutton clicks
Operating force	Spring return pushbutton with its transmitter	**N**	< 25
Mechanical durability (in millions of operating cycles)	Spring return pushbutton with its transmitter		1
Vibration resistance conforming to IEC 60068-2-6	Frequency: 2 to 11Hz	**mm**	± 10
	Frequency: 11 to 500Hz	**gn**	5
Shock resistance conforming to IEC 60068-2-27	Half sine wave acceleration 11 ms	**gn**	50
	Half sine wave acceleration 18 ms	**gn**	30
Repetitive shocks resistance	Conforming to IEC 60068-2-27	**gn**	25 (duration: 6 ms - 6 000 shocks)
Head tightening torque	Plastic head (nut)		2.2 N.m (± 0.2) / 9.5 lb.in (± 1.8)
	Metal head (base screw)		0.8 N.m (max 1.2) / 7.5 lb.in (max 10.6)

Radio transmission characteristics

Frequency		**GHz**	2.4
Protocol			ZigBee Green Power compatible (transmitter and receiver can work with other ZigBee Green Power products)
Range		**m**	Approx. 100 (transmitter and receiver in free space)
			Approx. 25 (transmitter in a plastic box type XAL D and receiver in a metal enclosure)
			Approx. 40 (transmitter in plastic box type XAL D, receiver in a metal enclosure and use of a relay-antenna)
Transmission power		**mW**	3
Activation time		**ms**	2
Transmission time		**ms**	< 2
Type	Conforming to EN 301-489-3 § 4.1 - Equipment		Type III
Class	Conforming to EN 301-489-3 § 6.1 - Equipment		Class 2
Category	Conforming to EN 300-440-1 § 5.4.1.2 - Temperature	**°C**	Category 1: - 20 to + 55

Electromagnetic immunity and emissions

Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8: on insulating parts (in free air)
			6: on metal parts (contact)
Resistance to electromagnetic fields	Conforming to EN/IEC 60947-5-1 and IEC 61000-4-3	**V/m**	10: for 80 MHz to 2 000 MHz
	Conforming to IEC 61000-4-3, EN 301-489-3 and EN 301-489-1	**V/m**	3: for 80 MHz to 2 700 MHz and distance = 20 m
Radiated emissions	Conforming to EN 300-440-1 and EN 300-440-2		Compliant

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Characteristics of receiver for wireless and batteryless pushbutton

Environment characteristics

Conforming to standards	Receiver		EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11
	Transmitter/receiver system		CE: R&TTE 1999/5/EC, BT 2006/95/EC, EMC 2004/108/EC
	Radiofrequency		EN300-440-1, EN300-440-2, FCC part. 15, RSS210, ANATEL (resolution 506), SRRC, EMC: EN301-489-1, EN301-489-3
Product certifications and radio agreements			UL, FCC (USA), CSA, RSS (Canada), C-Tick (Australia), GOST (Russia), ANATEL (Brazil), SRRC (China), CE (Europe)
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 55
Permissible relative humidity			+ 90 % RH at + 55 °C (without condensation)
Vibration resistance conforming to IEC 60068-2-6	Frequency: 5...8.14 Hz	**mm**	± 7.5
	Frequency: 8.14…150 Hz	**gn**	2
Shock resistance conforming to IEC 60068-2-27	Half sine wave acceleration:11 ms	**gn**	30
Repetitive shocks resistance	Conforming to IEC 60068-2-27	**gn**	10 (duration: 16 ms - 6 000 shocks)
Degree of protection	Conforming to IEC 60529		IP 20
Degree of pollution	Conforming to IEC 60664-1		2
Housing material			Self-extinguishing plastic
Mounting position without derating (temperature)			Any position
Mounting			On ⊔ rail conforming to EN/IEC 60715
			On mounting plate

Electrical characteristics

Overvoltage category	Conforming to IEC 60664-1		II (AC/DC receiver), III (DC receiver)
Insulation resistance	Conforming to NFC 20030		> 500 MΩ, ⎓ 500 V
Rated insulation voltage	Conforming to IEC 60664-1	**V**	250 (receivers with relay outputs), < 60 (relay with PNP outputs)
Insulation test voltage conforming to EN/IEC 60947-5-1	Dielectric test	**Hz/KV**	AC/DC receiver: 50 / 1.5 (1 minute)
			DC receiver: 50 / 1 (1 minute)
	Surge	**kV**	DC receiver: Uimp = 0.8 (1.2 / 50 µs)
			AC/DC receiver: Uimp = 4 (1.2 / 50 µs)
Cabling Maximum c.s.a. conforming to EN/IEC 60947-1	Solid cable without cable end	**mm²**	1 conductor: 0.14…2.5 *(AWG 26…AWG 14)*
			2 conductors: 0.14…1.5 *(AWG 26…AWG 16)*
	Flexible cable with cable end	**mm²**	1 conductor: 0.14…4 *(AWG 26…AWG 12)*
			2 conductors: 0.14…1.5 *(AWG 26…AWG 16)*
Tightening torque	Conforming to EN/IEC 60947-1		0.5 N.m/*4.43 Lbf.In*
Power ON indicator			Green LED
Output indicators			Green LED (relay outputs and PNP outputs)
Received signal strength			Green LED: optimum reception
			Yellow LED: acceptable reception

Supply characteristics

Receiver type			**ZBR RC**	**Receiver included in packs XB4 RFB01, XB5 RFB01 and XB5 RMB03**	**ZBR RA**
Supply voltage Ue		**V**	⎓ 24 (+ 20/- 15 %)		∿/⎓ 24…240 (+/- 10 %)
Frequency	Of the power supply circuit	**Hz**	–		50/60 ± 10 %
Galvanic isolation	Power supply/output		–		Yes
Maximum power drawn		**W**	0.5	0.8	3
Short-circuit protection			Fast-blow fuse 400 mA	Fast-blow fuse 125 mA	Fast-blow fuse 400 mA
Immunity to microbreaks		**ms**	7 (total output current 800 mA)	Conforming to IEC 61000-4-11	
			10 (total output current 500 mA)		

Electromagnetic immunity and emissions

Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8: on insulating parts (in free air)	
			6: on metal parts (contact)	
Resistance to electromagnetic fields	Conforming to EN/IEC 60947-5-1 and IEC 61000-4-3	**V/m**	10: for 80 MHz to 2 000 MHz	
	Conforming to IEC 61000-4-3, EN 301-489-3 and EN 301-489-1	**V/m**	3: for 80 MHz to 2 700 MHz and distance = 20 m	
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	1 (PNP output wires)	2 (power supply wires and relay wires)
			2 (power supply wires)	
Hybrid surge withstand conforming to IEC 61000-4-5	Differential mode	**kV**	0.5	1
	Common mode	**kV**	1	2
Resistance to conducted disturbance	Conforming to IEC 61000-4-6	**V**	10	
Emissions	Conducted emissions conforming to EN 300-489-3, EN 300-489-1		As per class B method CISPR22	
	Radiated emissions conforming to EN 300-440-1, EN 300-440-2		Compliant	

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Characteristics of wireless and batteryless pushbutton *(continued)*

Radio transmission characteristics

Receiver type			ZBR RC	ZBR RA	Receiver included in packs XB4 RFB01, XB5 RFB01 and XB5 RMB03
Frequency		**GHz**	2.4		
Protocol			ZigBee Green Power compatible (transmitter and receiver can work with other ZigBee Green Power products)		
Range		**m**	Approx. 100 (transmitter and receiver in free space)		
			Approx. 25 (transmitter in a plastic box type XAL D and receiver in a metal enclosure)		
			Approx. 40 (transmitter in a plastic box type XAL D, receiver in a metal enclosure and use of a relay-antenna)		
Relay-antenna			To increase the range or to get round an obstacle		
Response time		**ms**	< 30 after the transmitter "clicks"		
Number of transmitter ID codes that can be stored			32 max. per receiver or 32 max. per output (example on 2-output receiver: 32/0, 16/16..)		
Type	Conforming to EN 301-489-3 § 4.1 - Equipment		Type III		
Class	Conforming to EN 301-489-3 § 6.1 - Equipment		Class 2		
Reliability	Conforming to EN 300 440-1 § 4.1.1 - Reliability		Category 2		
Temperature	Conforming to EN 300 440-1 § 5.4.1.2 - Temperature	**°C**	Category I : - 20...+ 55		

Output characteristics

Output type			4 PNP outputs 200 mA/24 V	2 relay outputs type RT 3A	1 relay output type RT 3A
Output function			Monostable (500 ms ± 15 %)	Monostable (500 ms ± 15%). Programmable to bistable or Start/Stop	Monostable (500 ms ± 15%)
Nominal current Ie conforming to EN/IEC 60947-5-1 and UL 508 / CSA C22-2 n°14	DC supply conforming to EN/IEC 60947-5-1	**A**	2	0.3 / 48 V DC	
	DC supply conforming to UL 508 / CSA C22-2 n°14	**A**	–	3 / 24 V DC	
	AC supply conforming to EN/IEC 60947-5-1	**A**	–	1.5 / 240 V AC	
				3 / 120 V AC	
	AC supply conforming to UL 508 / CSA C22-2 n°14	**A**	–	3 / 240 V AC	
Voltage drop		**V**	< 2	–	
Maximum switching voltage		**V**	–	∿/⎓ 250	
Nominal breaking capacity			4.8 W (0.2 A x 24 V DC) per output	750 VA (3 A x 250 V AC)	
				15 W (0.3 A x 48 V DC)	
Minimum current Ith	Conforming to EN/IEC 60947-5-1	**mA**	10 / ⎓ 5 V		
Maximum current		**A**	–	5	
Electrical durability			–	1 x 10^5 operating cycles	
Mechanical durability			–	10 x 10^5 operating cycles	
Maximum operating rate		**Hz**	2		
Utilisation categories	Conforming to EN/IEC 60947-5-1		DC13	AC15: B300	
				DC12	

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Characteristics of relay-antenna for wireless and batteryless pushbutton - Works with transmitter(s) and receiver(s)

Environment characteristics

Conforming to standards	Antenna		EN/IEC 60947-1, EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11
	Transmitter /antenna / receiver system		CE: R&TTE 1999/5/EC, BT 2006/95/EC, EMC 2004/108/EC
	Radiofrequency		EN300-440-1, EN300-440-2, FCC part. 15, RSS210, ANATEL (resolution 506), SRRC, EMC: EN301-489-1, EN301-489-3
Product certifications and radio agreements			UL, FCC (USA), CSA, RSS (Canada), C-Tick (Australia), GOST (Russia), ANATEL (Brazil), SRRC (China), CE (Europe)
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 55
Electric shock protection	Conforming to IEC 61140		Class II
Permissible relative humidity			+ 90 % RH at + 55 °C (without condensation)
Vibration resistance conforming to IEC 60068-2-6	Frequency: 10...55 Hz	**mm**	± 0.5
	Frequency: 55...150 Hz	**gn**	6
Shock resistance	Conforming to IEC 60068-2-27		Half sine wave acceleration: 11 ms / 15 gn
Repetitive shocks resistance	Conforming to IEC 60068-2-27	**gn**	25 (duration: 6 ms - 6 000 shocks)
Degree of protection	Conforming to IEC 60529, UL/CSA		IP 65 - type 12
Degree of pollution	Conforming to IEC 60664-1		3
Overvoltage category	Conforming to IEC 60664-1		III
Insulation resistance	Conforming to NFC 20030		> 500 MΩ, ⎓ 500 V
Rated insulation voltage	Conforming to IEC 60664-1	**V**	250
Insulation test voltage conforming to EN/IEC 60947-5-1	Dielectric test	**Hz/KV**	50 / 4 (1 minute)
	Surge	**kV**	Uimp = 4 (1.2 / 50 µs)
Cabling (flexible cable)	Conforming to EN/IEC 60947-1	**m**	5 (2 x 0.34 mm^2)
Screw tightening torque	Conforming to EN/IEC 60947-1		0.6 ± 0.1 Nm / 5.3 ± 0.9 Lb.-In
Housing material			Self-extinguishing plastic
Indication	Power ON		1 green LED
	Transmission/reception		2 green LEDs at 180°
Mounting position			See instructions for assembly

Supply characteristics

Supply voltage Ue		**V**	∿/⎓ 24…240 (± 10 %)
Frequency	Of the power supply circuit	**Hz**	50/60 ± 10 %
Maximum power drawn		**W**	2.6
Short-circuit protection		**mA**	400 with fast-blow fuse 400 mA
Resistance to microbreaks			Conforming to IEC 61000-4-11

Electromagnetic immunity and emissions

Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8: on insulating parts (in free air)
			6: on metal parts (contact)
Resistance to electromagnetic fields	Conforming to EN/IEC 60947-5-1 and IEC 61000-4-3	**V/m**	10: for 80 MHz to 2 000 MHz
	Conforming to IEC 61000-4-3, EN 301-489-3 and EN 301-489-1	**V/m**	3: for 80 MHz to 2 700 MHz and distance = 20 m
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Hybrid surge withstand conforming to IEC 61000-4-5	Differential mode	**kV**	1
	Common mode	**kV**	2
Resistance to conducted disturbance	Conforming to IEC 61000-4-6	**V**	10
Emissions	Conducted emissions conforming to EN 300-489-3, EN 300-489-1		As per class B method CISPR22
	Radiated emissions conforming to EN 300-440-1, EN 300-440-2		Compliant

Radio transmission characteristics

Frequency		**GHz**	2.4
Protocol			ZigBee Green Power compatible (transmitter and receiver can work with other ZigBee Green Power products)
Range		**m**	Approx. 40 m (transmitter in a plastic box type XAL D, receiver in a metal enclosure and use of a relay-antenna)
Transmission power		**mW**	< 3
Type	Conforming to EN 301-489-3 § 4.1 - Equipment		Type III
Class	Conforming to EN 301-489-3 § 6.1 - Equipment		Class 2
Reliability	Conforming to EN 300-440-1 § 4.1.1 - Reliability		Category 2
Temperature	Conforming to EN 300-440-1 § 5.4.1.2 - Temperature	**°C**	Category I: - 20...+ 55

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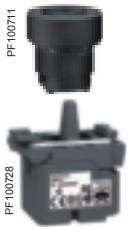
Control and signalling units Ø 22

Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton

(Available: 2nd quarter 2011)







XB5 RFA02

Ready-to-use packs *(1)*

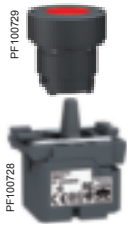
Description	Transmitter type	Voltage receiver V	Receiver type	Reference	Weight kg
Packs comprising: - 1 wireless and batteryless pushbutton assembled on fixing collar, - 1 receiver The pushbutton and receiver are factory-paired	Wireless and batteryless pushbutton + Ø 22 mm **plastic** head + 1 set of 10 different coloured caps (1 cap to be selected and fitted)	∿/⎓ 24...240	Programmable receiver equipped with: - 2 relay outputs type RT 3A *(2)*, - 2 buttons (learn, parameter setting) - 6 indicating LEDs (power ON, outputs, signal strength)	**XB5 RFA02**	0.230
	Wireless and batteryless pushbutton + Ø 22 mm **metallic** head + 1 set of 10 different coloured caps (1 cap to be selected and fitted)			**XB4 RFA02**	0.245
	Wireless and batteryless pushbutton + Ø 22 mm **plastic** head + 1 black cap not fitted	⎓ 24	Non-programmable receiver: - with 1 relay output type RT 3A *(3)* - without pushbutton - without indicating LED	**XB5 RFB01**	0.230
	Wireless and batteryless pushbutton + Ø 22 mm **metallic** head + 1 black cap not fitted			**XB4 RFB01**	0.245
Packs comprising: - 1 wireless and batteryless pushbutton assembled on fixing collar, in handy box *(4)*, - 1 receiver The pushbutton and receiver are factory-paired	Wireless and batteryless pushbutton + Ø 22 mm plastic head mounted in a handy box + 1 set of 10 different coloured caps (1 cap to be selected and fitted)	∿/⎓ 24...240	Programmable receiver equipped with: - 2 relay outputs type RT 3A *(2)*, - 2 buttons (learn, parameter setting) - 6 indicating LEDs (power ON, outputs, signal strength)	**XB5 RMA04**	0.250
	Wireless and batteryless pushbutton + Ø 22 mm metallic head mounted in a handy box + 1 black cap not fitted	⎓ 24	Non-programmable receiver: - with 1 relay output type RT 3A *(3)* - without pushbutton - without indicating LED	**XB5 RMB03**	0.250



ZBR T1



ZB4 RZA0



ZB5 RTA4

Transmitter components for wireless and batteryless pushbutton

Description	Type of push	Cap colour	Reference	Weight kg
Transmitter for wireless and batteryless pushbutton *(5) (6)*	–	–	**ZBR T1**	0.025
Spring return pushbutton heads for transmitter ZBR T1	Plastic	Without cap *(7)*	**ZB5 RZA0**	0.015
	Metal	Without cap *(7)*	**ZB4 RZA0**	0.030
Wireless and batteryless pushbuttons including: - a transmitter fitted with fixing collar - a spring return pushbutton head with clipped-in cap *(8)*	Plastic	White	**ZB5 RTA1**	0.045
		Black	**ZB5 RTA2**	0.045
		Green	**ZB5 RTA3**	0.045
		White I on green background	**ZB5 RTA331**	0.045
		Red	**ZB5 RTA4**	0.045
		White O on red background	**ZB5 RTA432**	0.045
		Yellow	**ZB5 RTA5**	0.045
		Blue	**ZB5 RTA6**	0.045
	Metal	White	**ZB4 RTA1**	0.085
		Black	**ZB4 RTA2**	0.085
		Green	**ZB4 RTA3**	0.085
		White I on green background	**ZB4 RTA331**	0.085
		Red	**ZB4 RTA4**	0.085
		White O on red background	**ZB4 RTA432**	0.085
		Yellow	**ZB4 RTA5**	0.085
		Blue	**ZB4 RTA6**	0.085

(1) Wireless and batteryless pushbutton and receiver, factory-paired.
(2) Supplied with output function set to monostable. Outputs programmable to bistable and Start-Stop.
(3) Non-programmable monostable output function.
(4) Supplied with a magnet to be stuck on by the customer.
(5) Fixing collar ZB5AZ009 (plastic) or ZB4BZ009 (metal) to be ordered separately.
(6) Only heads ZB4 RZA0 and ZB5 RZA0 are mechanically compatible.
(7) Cap to be ordered separately: see following page.
(8) This cap is fitted by Schneider Electric and cannot be removed (risk of damage).

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Control and signalling units Ø 22
Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton
(Available: 2nd quarter 2011)

PF100705



ZBR RA

Programmable receivers

Description	Output type	Receiver voltage V	Reference	Weight kg
Programmable receivers equipped with: **- 2 buttons** (learn, parameter setting) **- 6 indicating LEDs** (power ON, outputs, signal strength)	4 PNP outputs, 200 mA / 24 V	⎓ 24	**ZBR RC**	0.130
	2 relay outputs type RT 3A *(1)*	∿/⎓ 24...240	**ZBR RA**	0.130

Accessories

Caps for Harmony pushbutton heads ZB5 RZA0 and ZB4 RZA0

DF540585



ZBA 7235

DF569177



ZBA 7331

DF569178



ZBA 7432

PF100731



ZBA 79

Description	Background colour	Marking	Sold in lots of	Reference	Weight kg
Sets of 10 different coloured caps with identical marking *(2)*	White	Without	10	**ZBA 71**	0.010
		"I" (black)	10	**ZBA 7131**	0.010
		"⬆" (black)	10	**ZBA 7134**	0.010
		"+" (black)	10	**ZBA 7138**	0.010
	Black	Without	10	**ZBA 72**	0.010
		"O" (white)	10	**ZBA 7232**	0.010
		"+" (white)	10	**ZBA 7233**	0.010
		"⇩" (white)	10	**ZBA 7235**	0.010
		"I" (white)	10	**ZBA 7237**	0.010
	Green	Without	10	**ZBA 73**	0.010
		"I" (white)	10	**ZBA 7331**	0.010
		"+" (white)	10	**ZBA 7333**	0.010
		"⇧" white	10	**ZBA 7335**	0.010
		"II" (white)	10	**ZBA 7336**	0.010
	Red	Without	10	**ZBA 74**	0.010
		"O" (white)	10	**ZBA 7432**	0.010
	Yellow	Without	10	**ZBA 75**	0.010
	Blue	Without	10	**ZBA 76**	0.010
Set of 10 different coloured caps with different markings *(2)*	White, black, green, red, yellow, blue, white I on green background, black I on white background, white O on red background, white O on black background		10	**ZBA 79**	0.010

Boxes for wireless and batteryless pushbutton

PF100709



ZBR M01

Product	Application	Description	Sold in lots of	Reference	Weight kg
Handy box, plastic, empty *(3) (4)*	For mobile wireless and batteryless pushbutton	1 cut-out	1	**ZBR M01**	0.040
Empty plastic boxes for wireless and batteryless pushbuttons *(5)*	For fixed or on-board wireless and batteryless pushbutton	1 cut-out	1	**XAL D01**	0.136
		2 cut-outs	1	**XAL D02**	0.193

101374



XAL D02

Accessories

Relay-antenna *(6)*	Between transmitter and receiver Used to increase the range and/or get round obstacles	∿/⎓ 24...240 V - 5m cable - 1 power-ON LED - 2 LEDs reception/transmission	1	**ZBR A1**	0.200
Fixing collar	–	Plastic	10	**ZB5 AZ009**	0.038
		Metal	10	**ZB4 BZ009**	0.038
Legend plate, 27 x 8 mm, for engraving	For sticking onto handy box ZBR M01	Self-adhesive, blank, black background	10	**ZBY 0101T**	0.005

PF100707



ZBR A1

(1) Supplied with output function set to monostable Outputs programmable to bistable and Start-Stop.
(2) Cap can be clipped-in at 90° steps, through 360°.
(3) Cannot be used for wired contacts (no cable gland outlet).
(4) Supplied with a magnet to be stuck on by the customer.
(5) Box equipped with cable gland outlets, compatible with Harmony ZB5 pushbutton heads.
(6) Not wired to the receiver.

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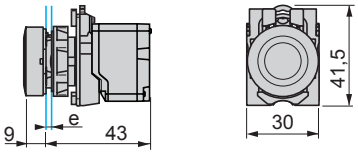
Control and signalling units Ø 22
Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton

Dimensions

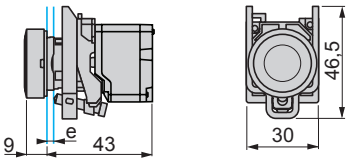
Wireless and batteryless pushbutton - Transmitter

ZB5 RTA●●●, with plastic pushbutton and cap



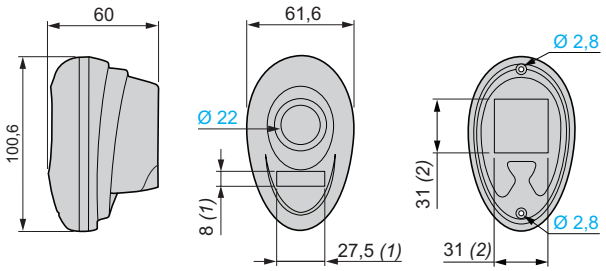
e: panel thickness 1 to 6 mm

ZB4 RTA●●●, with metal pushbutton and cap

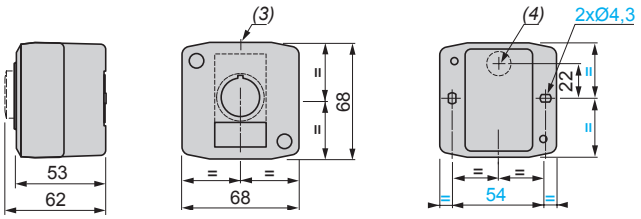


e: panel thickness 1 to 6 mm

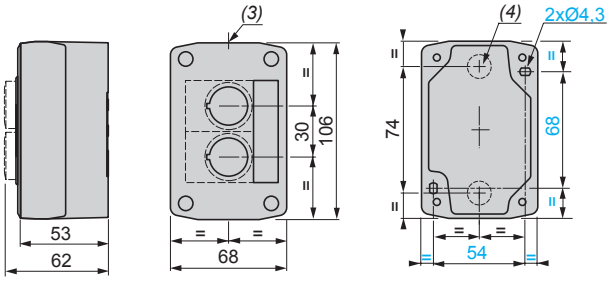
ZBR M01, Plastic handy box for mobile use



XAL D01, Plastic box, single-hole for fixed or on-board installation



XAL D02, Plastic box, 2-hole for fixed or on-board installation

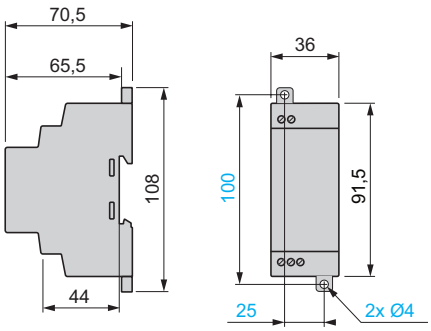


(1) Location for ZBY 0101T legend.
(2) Location for magnet to be stuck on by the customer.

(3) 2 knock-outs for Pg 13.5 cable gland, maximum capacity 12 mm.
(4) Knock-out for wire routing, maximum capacity 14 mm.

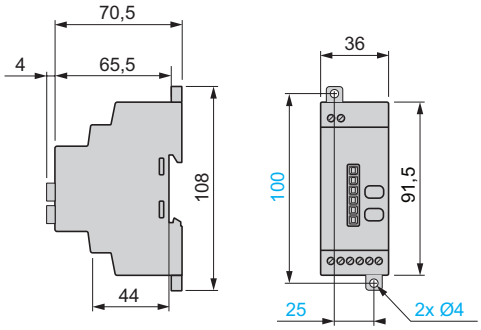
Non-programmable receiver

Receiver contained in packs XB4 RFB01, XB5 RFB01 and XB5 RMB03



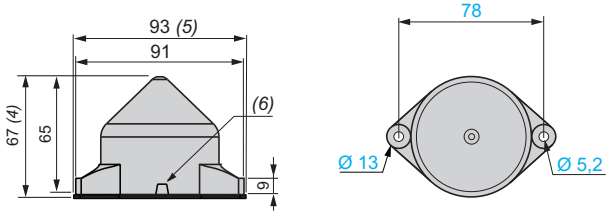
Programmable receivers

Receivers ZBR R● (contained in packs XB4 RFA02, XB5 RFA02 and XB5 RMA04)



Relay-antenna

ZBR A1



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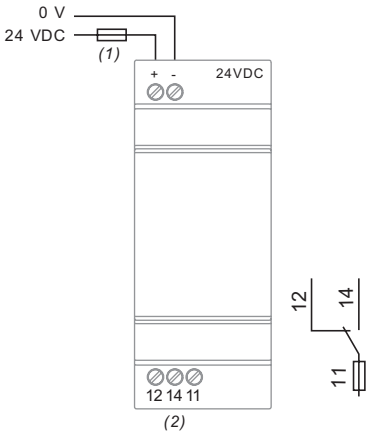
Control and signalling units Ø 22
Harmony® XB5 plastic and XB4 metal
Wireless and batteryless pushbutton

Schemes

Non-programmable receiver

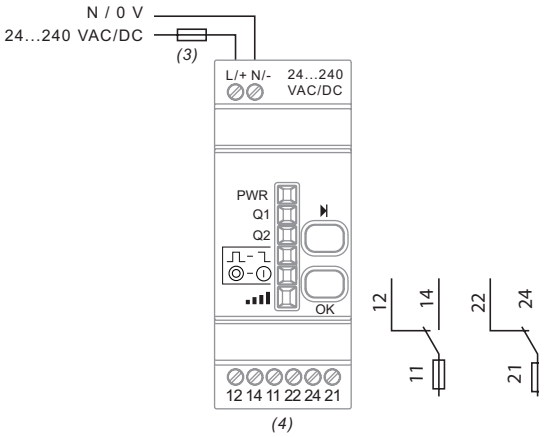
Receiver contained in packs XB5 RFB01 and XB5 RMB03



(1) 125 mA fast-blow fuse.
(2) Imax = 3 A.

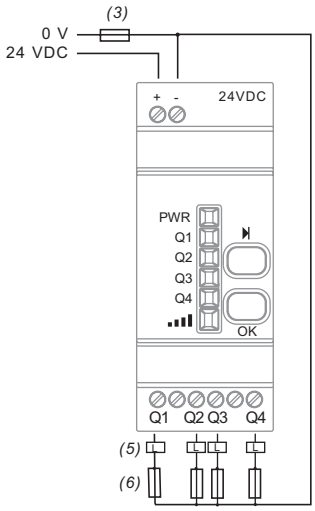
Programmable receivers

Receiver ZBR RA (contained in packs XB4 RFA02, XB5 RFA02 and XB5 RMA04)



(3) 400 mA fast-blow fuse.
(4) Imax = 3 A.

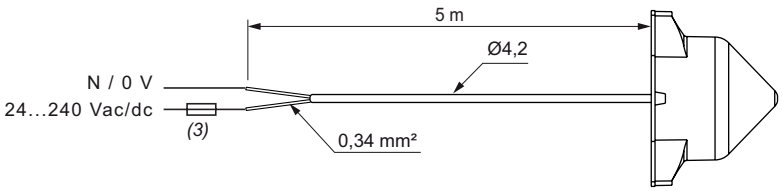
Receiver ZBR RC



(3) 400 mA fast-blow fuse.
(5) Imax = 200 mA
(6) Imax = 300 mA.

Relay-antenna

ZBR A1



(3) 400 mA fast-blow fuse.

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Control and signalling units Ø 22
Harmony® XB7
Monolithic pushbuttons, switches and pilot lights

Environment

Protective treatment	Standard version		"TH"
Ambient air temperature around the device	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70 for integral LED version - 25…+ 55 for incandescent bulb version
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to IEC 60529		Front face: □ IP 65 for pushbuttons, illuminated pushbuttons, pilot lights, selector switches □ IP 54 for Emergency switching off pushbuttons Rear face: □ IP 20 (protection against direct contact)
	Conforming to UL 50E		□ Suitable for enclosure type 3: pushbuttons, illuminated pushbuttons, selector switches □ Suitable for enclosure type 4: pilot lights with integral LED □ Suitable for enclosure type 12: Emergency switching off pushbuttons, pilot lights with integral LED and pilot lights with BA 9s base fitting
Conformity to standards	Generic standards		EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-5, IEC 60364-5-53 (Emergency switching off mechanical latching pushbuttons) UL 508, CSA C22 n° 14, CCC
Terminal referencing	Conforming to EN 50005 and EN 50013		Conforms
Mounting	Conforming to EN/IEC 60947-5-1		Finished fixing hole: 22.5 mm, recommended (22.3 +0.4/ 0) Fixing centres: 30 x 40 mm min.
			Support panel thickness: □ metal: 1 to 6 mm □ plastic: 2 to 6 mm
			Fixing nut beneath head: □ min. torque: 0.8 N.m □ recommended torque: 1.2 N.m □ max. torque: 2 N.m
Cabling capacity	Conforming to EN/IEC 60947-1		Screw clamp terminal connection (for all types of pushbuttons and pilot lights): □ min: 1 x 0.34 mm^2 without cable end □ max: 2 x 1.5 mm^2 with cable end or 2 x 2.5 mm^2 without cable end
			Forked "U" type tag connection: 2 max., fitted head to tail (for all types of pushbuttons and pilot lights) Recommended fork width: 6.5 mm (7 mm max.) for M3 screw
			Faston clip connection: type 6.35 x 0.8 mm (for pilot lights only)
Tightening torque of fixing screws		**N.m**	0.8 (nominal recommended) 1.2 (max.)
			Screw heads compatible with Pozidriv, Phillips or JIS screwdrivers (size 1) and flat tipped screwdrivers (4 and 5.5 mm)
Mechanical durability (in operating cycles)			□ Pushbuttons: 1000 000 □ Illuminated pushbuttons, spring return: 300 000 □ Illuminated pushbuttons, latch type: 300 000 □ Selector switches: 300 000 □ Key switches: 300 000 □ Emergency switching off pushbuttons: 10 000
Vibration resistance	Conforming to IEC 60068-2-6		5 gn (frequency 2 to 500 Hz)
Mechanical shock resistance	Conforming to IEC 60068-2-27		50 gn (half sine wave acceleration 11 ms) 30 gn (half sine wave acceleration 18 ms) 10 gn (half sine wave acceleration 11 ms) for Emergency switching off pushbuttons

References: page 1/214
Dimensions, mounting: page 1/219

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Contact function characteristics

Type of contact	N/C, N/O or N/C+N/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 Appendix K		All functions incorporating a N/C contact are positive opening operation
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	4 (using gG cartridge fuse conforming to IEC 269-1)
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Ui = 250 (degree of pollution 3)
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 6
Rated operational characteristics conforming to EN/IEC 60947-5-1	a.c. supply: utilisation category AC14, D300		Ue = 240 V and Ie = 0.3 A or Ue = 120 V and Ie = 0.6 A
	DC13, R300		Ue = 250 V and Ie = 0.1 A or Ue = 125 V and Ie = 0.22 A
Electrical reliability	Failure rate in accordance with EN/IEC 60947-5-4		At 17 V and 5 mA: $\lambda \leq 10^{-6}$

Light function characteristics

Type of signalling units				**Illuminated pushbuttons**	**Pilot lights**
Integral LED					
Current consumption	For all colours	⎓/∿ 24 V	**mA**	18 (27 max)	20 (27 max.)
		∿ 120 V	**mA**	12 (17 max)	18 (21 max.)
		∿ 230 V	**mA**	22 (27 max)	16 (20 max.)
Voltage limits	At nominal voltage	⎓ 24 V	**V**	19.2…30	
		∿ 24 V	**V**	21.6…26.4	
		∿ 120 V	**V**	100…132	
		∿ 230-240 V	**V**	195…264	
Service life	At nominal voltage and at an ambient temperature of 25 °C		**Hr**	70,000	
Overvoltage withstand	Level of protection	∿ 120 V	**VA**	100	
		∿ 230 V	**VA**	200	
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2		**kV**	6: on contact, on metal parts 8: in free air, in insulating parts	
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3		**V/m**	10	
Resistance to fast transients	Conforming to IEC 61000-4-4		**KV**	2	
Surge withstand	Conforming to IEC 61000-4-5		**KV**	1	
Immunity to conducted disturbances	Conforming to IEC 61000-4-6		**V**	10	
Brightness	At nominal voltage and for all colours		**Lux**	> 200	
BA 9s base fitting incandescent bulbs					
Voltage limits	At nominal voltage	∿ 120 V	**V**	100...132	
		∿ 230 V	**V**	195...264	
Current consumption	For all colours		**mA**	Depending on bulb	
Service life	At nominal voltage and at an ambient temperature of 25 °C		**H**	2 000	

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Control and signalling units Ø 22
Harmony® XB7
Monolithic pushbuttons, switches and pilot lights

1

Pushbuttons ▲

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Marking Text	Marking Colour	Colour of push	Sold in lots of	Unit reference	Weight kg
Spring return pushbutton without marking									
	Flush	1	–	–	–	White	10	**XB7 NA11**	0.021
		1	–	–	–	Black	10	**XB7 NA21**	0.021
		1	–	–	–	Green	10	**XB7 NA31**	0.021
		1	–	–	–	Yellow	10	**XB7 NA81**	0.021
		1	1	–	–	White	10	**XB7 NA15**	0.021
		1	1	–	–	Black	10	**XB7 NA25**	0.021
		1	1	–	–	Green	10	**XB7 NA35**	0.021
		1	1	–	–	Red	10	**XB7 NA45**	0.021
		1	1	–	–	Blue	10	**XB7 NA65**	0.021
		1	1	–	–	Yellow	10	**XB7 NA85**	0.021
		–	1	–	–	Red	10	**XB7 NA42**	0.021
		2	–	–	–	Black	10	**XB7 NA23**	0.021
		2	–	–	–	Green	10	**XB7 NA33**	0.021
		–	2	–	–	Red	10	**XB7 NA44**	0.021
	Projecting	–	1	–	–	Red	10	**XB7 NL42**	0.021
		1	1	–	–	Red	10	**XB7 NL45**	0.021
		–	2	–	–	Red	10	**XB7 NL44**	0.021
Latch type pushbutton without marking									
	Flush	1	–	–	–	Black	10	**XB7 NH21**	0.021
		1	–	–	–	Green	10	**XB7 NH31**	0.021
		1	1	–	–	Black	10	**XB7 NH25**	0.021
		1	1	–	–	Green	10	**XB7 NH35**	0.021
		1	–	–	–	Yellow	10	**XB7 NH81**	0.021

PF100412



XB7 NA31

PF100413



XB7 NL4●

PF100414



XB7 NH2●

▲ Available: 3rd quarter 2011

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Control and signalling units Ø 22
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PF100415

XB7 NA3133


PF100416

XB7 NA4234


PF100417

XB7 NL4232

Pushbuttons *(continued)* ▲

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Marking Text	Marking Colour	Colour of push	Sold in lots of	Unit reference	Weight kg
Spring return pushbutton with marking									
	Flush	1	–	I	White	Green	10	**XB7 NA3131**	0.021
		1	–	II	White	Green	10	**XB7 NA3136**	0.021
		1	–	MARCHE	White	Green	10	**XB7 NA3142**	0.021
		1	–	START	White	Green	10	**XB7 NA3133**	0.021
		1	–	⬇	Black	White	10	**XB7 NA11343**	0.021
		1	–	⬆	Black	White	10	**XB7 NA11341**	0.021
		1	–	⇩	White	Black	10	**XB7 NA21343**	0.021
		1	–	⇧	White	Black	10	**XB7 NA21341**	0.021
		–	1	O	White	Red	10	**XB7 NA4232**	0.021
		–	1	STOP	White	Red	10	**XB7 NA4234**	0.021
		–	1	ARRET	White	Red	10	**XB7 NA4233**	0.021
		–	1	ARRET	White	Black	10	**XB7 NA2233**	0.021
		2	–	I	White	Green	10	**XB7 NA3331**	0.021
		2	–	II	White	Green	10	**XB7 NA3336**	0.021
		2	–	MARCHE	White	Green	10	**XB7 NA3342**	0.021
		2	–	START	White	Green	10	**XB7 NA3333**	0.021
		1	1	O	White	Red	10	**XB7 NA4532**	0.021
		1	1	STOP	White	Red	10	**XB7 NA4534**	0.021
		1	1	⬇	Black	White	10	**XB7 NA15343**	0.021
		1	1	⬆	Black	White	10	**XB7 NA15341**	0.021
		1	1	ARRET	White	Black	10	**XB7 NA2533**	0.021
		1	1	⇩	White	Black	10	**XB7 NA25343**	0.021
		1	1	⇧	White	Black	10	**XB7 NA25341**	0.021
		1	1	ARRET	White	Red	10	**XB7 NA4533**	0.021
	Projecting	–	1	ARRET	White	Red	10	**XB7 NL4233**	0.021
		–	1	O	White	Red	10	**XB7 NL4232**	0.021
		–	1	STOP	White	Red	10	**XB7 NL4234**	0.021
		–	1	ARRET	White	Black	10	**XB7 NL2233**	0.021
		1	1	ARRET	White	Red	10	**XB7 NL4533**	0.021
		1	1	O	White	Red	10	**XB7 NL4532**	0.021
		1	1	STOP	White	Red	10	**XB7 NL4534**	0.021
		1	1	ARRET	White	Black	10	**XB7 NL2533**	0.021

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Control and signalling units Ø 22
Harmony® XB7
Monolithic pushbuttons, switches and pilot lights

PF100406



XB7 EV08●P

Pilot lights

With integral LED

Shape of head	Type of light source (included)	Colour of lens	Sold in lots of	Unit reference by supply voltage *(1)* ∼ / ⎓ 24 V	∼ 120 V	∼ 230 V	Weight kg
	Integral LED	Green	10	XB7 EV03BP	XB7 EV03GP	XB7 EV03MP	0.020
		Red	10	XB7 EV04BP	XB7 EV04GP	XB7 EV04MP	0.020
		Yellow	10	XB7 EV05BP	XB7 EV05GP	XB7 EV05MP	0.020
		Blue	10	XB7 EV06BP	XB7 EV06GP	XB7 EV06MP	0.020
		Clear	10	XB7 EV07BP	XB7 EV07GP	XB7 EV07MP	0.020
		Orange	10	XB7 EV08BP	XB7 EV08GP	XB7 EV08MP	0.020

With BA 9s base fitting

PF100407



XB7 EV75P

Shape of head	Supply	Colour of lens	Sold in lots of	Unit reference *(1)* With bulb	Without bulb	Weight kg
	Direct, through resistor, for 130 V, 2.6 W bulb Supply voltage: ∼ 230 V, 50-60 Hz	Green	10	XB7 EV73P	XB7 EV730P	0.020
		Red	10	XB7 EV74P	XB7 EV740P	0.020
		Yellow	10	XB7 EV75P	XB7 EV750P	0.020
		Blue	10	XB7 EV76P	XB7 EV760P	0.020
		Clear	10	XB7 EV77P	XB7 EV770P	0.020
		Orange	10	XB7 EV78P	XB7 EV780P	0.020
	Direct for BA 9s base fitting incandescent bulb Supply voltage: ⩽ 250 V *(2)*	Green	10	–	XB7 EV63P	0.020
		Red	10	–	XB7 EV64P	0.020
		Yellow	10	–	XB7 EV65P	0.020
		Blue	10	–	XB7 EV66P	0.020
		Clear	10	–	XB7 EV67P	0.020
		Orange	10	–	XB7 EV68P	0.020

Illuminated pushbuttons, projecting push ▲

With integral LED

PF100408



XB7 NW33●1

Shape of head	Type of push and contacts	Colour of lens	Sold in lots of	Unit reference by supply voltage *(3)* ∼ / ⎓ 24 V	∼ 120 V	∼ 230 V	Weight kg
	Spring return push with N/O or N/C contacts *(3)*	Green	10	XB7 NW33B1	XB7 NW33G1	XB7 NW33M1	0.023
		Red	10	XB7 NW34B1	XB7 NW34G1	XB7 NW34M1	0.023
			10	XB7 NW34B2	XB7 NW34G2	XB7 NW34M2	0.023
		Orange	10	XB7 NW35B1	XB7 NW35G1	XB7 NW35M1	0.023
		Blue	10	XB7 NW36B1	XB7 NW36G1	XB7 NW36M1	0.023
		Clear	10	XB7 NW37B1	XB7 NW37G1	XB7 NW37M1	0.023
		Yellow	10	XB7 NW38B1	XB7 NW38G1	XB7 NW38M1	0.023
	Latch push	Green	10	XB7 NJ03B1	XB7 NJ03G1	XB7 NJ03M1	0.023
		Red	10	XB7 NJ04B1	XB7 NJ04G1	XB7 NJ04M1	0.023
			10	XB7 NJ04B2	XB7 NJ04G2	XB7 NJ04M2	0.023
		Orange	10	XB7 NJ05B1	XB7 NJ05G1	XB7 NJ05M1	0.023
		Blue	10	XB7 NJ06B1	XB7 NJ06G1	XB7 NJ06M1	0.023
		Clear	10	XB7 NJ07B1	XB7 NJ07G1	XB7 NJ07M1	0.023
		Yellow	10	XB7 NJ08B1	XB7 NJ08G1	XB7 NJ08M1	0.023

(1) For Faston connection version (1 x 6.35 mm and 2 x 2.8 mm), add the number "3" to the end of the reference. Example: XB7 EV07BP becomes XB7 EV07BP3.
(2) Bulb characteristics for direct supply pilot lights: 250 V, 2.6 W.
*(3) All product references ending with "1" correspond to products with N/O contacts (Example: **XB7 NW34B1**). All product references ending with "2" correspond to products with N/C contacts (Example: **XB7 NW34B2**).*

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Illuminated pushbuttons, projecting push *(continued)* ▲

With BA 9s base fitting *(1)*


PF100408

XB7 NW3361

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of lights	Sold in lots of	Unit reference ~ 250 V *(2)*	Weight kg
	Spring return	1	–	Green	10	**XB7 NW3361**	0.022
		1	–	Red	10	**XB7 NW3461**	0.022
		1	–	Orange	10	**XB7 NW3561**	0.022
		1	–	Blue	10	**XB7 NW3661**	0.022
		1	–	Clear	10	**XB7 NW3761**	0.022
		1	–	Yellow	10	**XB7 NW3861**	0.022
	Latch	1	–	Green	10	**XB7 NJ0361**	0.022
		1	–	Red	10	**XB7 NJ0461**	0.022
		1	–	Orange	10	**XB7 NJ0561**	0.022
		1	–	Blue	10	**XB7 NJ0661**	0.022
		1	–	Clear	10	**XB7 NJ0761**	0.022
		1	–	Yellow	10	**XB7 NJ0861**	0.022

Selector switches and key switches ▲


PF100409

XB7 ND2●


PF100410

XB7 NG33

Shape of head	Type of operator	Type of contact N/O	Type of contact N/C	Number & type of positions *(3)*	Sold in lots of	Unit reference	Weight kg
	Standard handle, black	1	–	2, stay put	10	**XB7 ND21**	0.026
		1	1	2, stay put	10	**XB7 ND25**	0.026
		2	–	3, stay put	10	**XB7 ND33**	0.026
	Key (key n° 455)	1	–	2, key withdrawal in LH position	10	**XB7 NG21**	0.05
		2	–	3, key withdrawal in centre position	10	**XB7 NG33**	0.05

Ø 40 mm Emergency switching off mushroom head pushbuttons


103054

XB7 ES54●P

Shape of head	Type of push	Type of contact N/O	Type of contact N/C	Colour of push	Sold in lots of	Unit reference	Weight kg
	Turn to release	–	1	Red	10	**XB7 ES542P**	0.032
		1	1	Red	10	**XB7 ES545P**	0.035
	Key release (n° 455)	–	1	Red	10	**XB7 ES142P**	0.055
		1	1	Red	10	**XB7 ES145P**	0.058

(1) Bulb to be ordered separately. Bulb characteristics for direct supply illuminated pushbuttons: 250 V, 1.2 W.
(2) Mechanical latching conforms to standards IEC 60364-5-53 and EN/IEC 60947-5-5.
(3) The symbol "⚷" indicates key withdrawal position.

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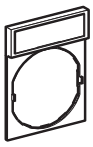
DF522441



ZBY 2101

Legend holder, 30x40 mm with legend (black or red background)

With blank legend

Text	Sold in lots of	Unit reference	Weight kg
Without	10	**ZBY 2101**	0.001

With marked legend (sold singly)

- Start functions: white characters on black backgroud.
- Stop functions: white characters on red background.

Text	Unit reference	Weight kg	Text	Unit reference	Weight kg
Auto	**ZBY 2115**	0.001	Reset	**ZBY 2323**	0.001
Down	**ZBY 2308**	0.001	Reverse	**ZBY 2306**	0.001
Forward	**ZBY 2305**	0.001	Right	**ZBY 2309**	0.001
Hand	**ZBY 2316**	0.001	Start	**ZBY 2303**	0.001
Inch	**ZBY 2321**	0.001	Stop	**ZBY 2304**	0.001
Left	**ZBY 2310**	0.001	Up	**ZBY 2307**	0.001
Off	**ZBY 2312**	0.001	O	**ZBY 2146**	0.001
On	**ZBY 2311**	0.001	I	**ZBY 2147**	0.001
Power on	**ZBY 2326**	0.001	O-I	**ZBY 2178**	0.001

DF5239642



ZBY 9160

Circular legends, yellow colour, for mushroom head pushbuttons

For use for «Emergency switching off» function

Diameter mm	Conforming to standard	Marking on yellow background	Unit reference	Weight kg
60	EN/IEC 60204-1	–	**ZBY 9101**	0.004
		COUPURE D'URGENCE	**ZBY 9160**	0.004
		EMERGENCY SWITCHING OFF	**ZBY 9360**	0.004
		NOT-AUS	**ZBY 9260**	0.004
		DESCONEXION DE EMERGENCIA	**ZBY 9460**	0.004
		INTERRUZIONE DI EMERGENZA	**ZBY 9660**	0.004
90	EN/IEC 60204-1	–	**ZBY 8101**	0.008
		COUPURE D'URGENCE	**ZBY 8160**	0.008
		EMERGENCY SWITCHING OFF	**ZBY 8360**	0.008
		NOT-AUS	**ZBY 8260**	0.008
		DESCONEXION DE EMERGENCIA	**ZBY 8460**	0.008
		INTERRUZIONE DI EMERGENZA	**ZBY 8660**	0.008

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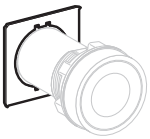


ZB5 AZ902

Accessories

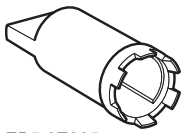
Description	Colour	Sold in lots of	Unit reference	Weight kg
Anti-rotation plate	–	10	**ZB5 AZ902**	0.008
Fixing nut	–	10	**ZB5 AZ901**	0.002
Fixing nut tightening tool	–	1	**ZB5 AZ905**	0.016
Grooved lenses for BA 9s pilot lights	White	10	**ZB7 EV01**	0.002
	Green	10	**ZB7 EV03**	0.002
	Red	10	**ZB7 EV04**	0.002
	Yellow	10	**ZB7 EV05**	0.002
	Blue	10	**ZB7 EV06**	0.002
	Clear	10	**ZB7 EV07**	0.002
	Orange	10	**ZB7 EV08**	0.002

DF522442



ZB5 AZ901

DF522444



ZB5 AZ905

Bulbs

Description	Voltage	Power	Colour	Sold in lots of	Unit reference	Weight
	V	W				kg
Incandescent bulbs, long life BA 9s base fitting Ø 11 mm max length 28 mm max.	6	1.2	–	10	**DL1 CB006**	0.002
	24	2.0	–	10	**DL1 CE024**	0.002
	130	2.6	–	10	**DL1 CE130**	0.002

813684



DL1 CE●●●

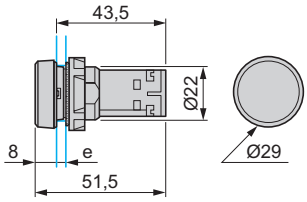
Characteristics:
page 1/212

Dimensions, mounting:
page 1/219

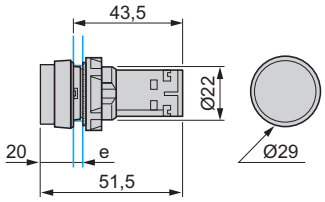
For reference only. www.fengshengelectric.com.sg

Dimensions

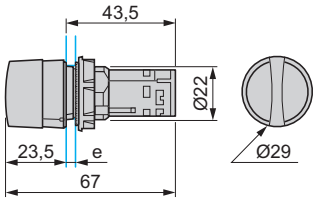
Pushbuttons, flush type
XB7 NA●●●●, XB7 NH●●



Pushbuttons, projecting type
XB7 NL●●●●

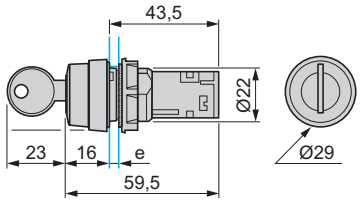


Selector switches, standard handle
XB7 ND●●

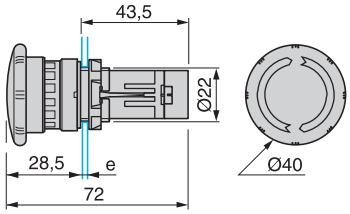


e : support panel thickness: 1 to 6 mm (metal), 2 to 6 mm (plastic).

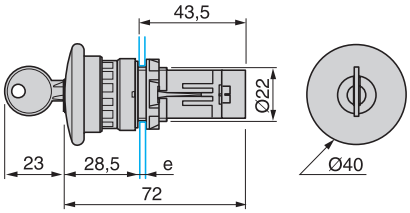
Key switches
XB7 NG●●



Emergency switching off pushbuttons
XB7ES54●P

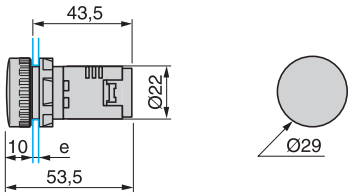


Emergency switching off pushbuttons with key
XB7ES14●P

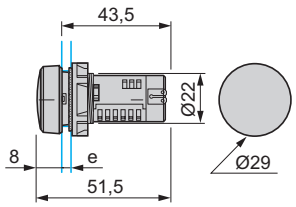


e : support panel thickness: 1 to 6 mm (metal), 2 to 6 mm (plastic).

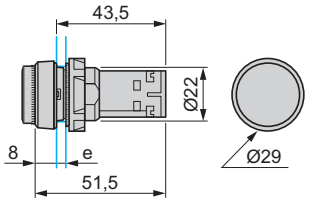
Pilot lights with screw terminal
XB7EV●●●P



Pilot lights with Faston terminal
XB7EV●●●P3

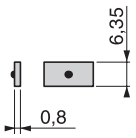


Illuminated pushbuttons
XB7 NW●●●●, XB7 NJ●●●●

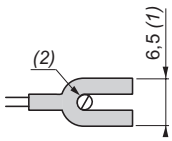


e : support panel thickness: 1 to 6 mm (metal), 2 to 6 mm (plastic).

Faston clip connection (for pilot lights only)



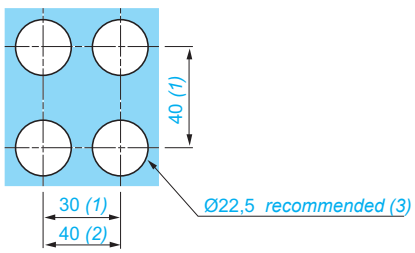
"U" type tag connection



(1) 6.5 recommended, 7 mm max.
(2) M3 screw clamp terminal.

Mounting

Diameter of finished fixing holes



(1) Minimum value.
(2) 40 mm for Emergency switching off pushbutton only.
(3) Standard value: Ø 22,3 (0; + 0.4).

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 30

Harmony® 9001 K & SK range

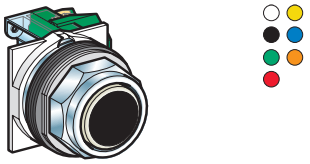
Pushbuttons, switches and pilot lights,
with chromium plated metal bezel

Complete units 9001 K

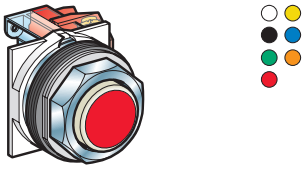
Complete units

Contact functions

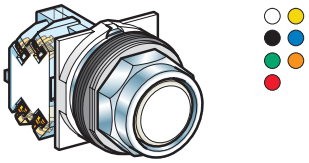
Pushbuttons, spring return



Flush push
9001 KR1●●● See page 1/226

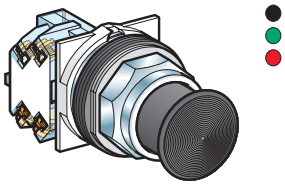


Projecting push
9001 KR3●●● See page 1/226

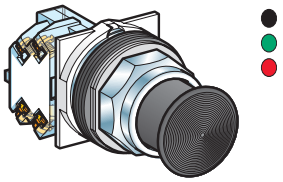


Recessed push (high guard)
9001 KR2●●● See page 1/226

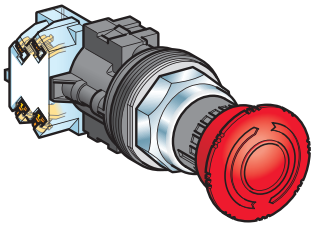
Mushroom head pushbuttons



Spring return Ø 35, 40, 57 or 60
9001 KR2●●H13 See page 1/226

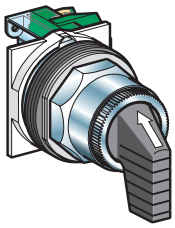


Latching Ø 35, 40, 41, 57 or 60
9001 KR●●● See page 1/226

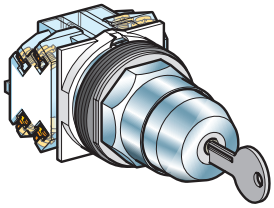


Turn to release, trigger action
9001 KR16 See page 1/226

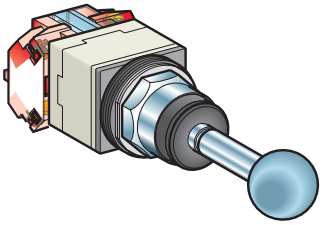
Selector switches, key switches and joystick controllers



Selector switches, long black handle
9001 KS●●FBH●● See page 1/227

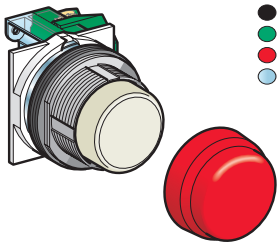


Key switches
9001 KS●●K●H●● See page 1/227

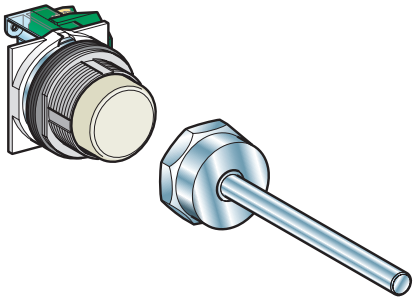


Joystick controllers
9001 K●●H● See page 1/233

Booted pushbuttons and wobblestick (with accessories)



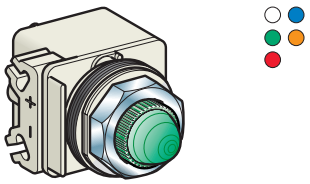
Booted pushbuttons
9001 KR●●● + 9001 KU● See page 1/226 and 1/240



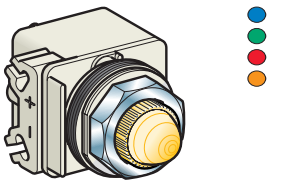
Wobblestick
9001 KR●●● + 9001 K8 See page 1/226 and 1/240

Light functions

Pilot lights



BA 9s base mounted super bright LED
9001 KP●●● See page 1/228



BA 9s incandescent bulb
9001 KP●●● See page 1/228

Characteristics: page 1/224 References: page 1/226 Dimensions: page 1/244

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 30

Harmony® 9001 K & SK range

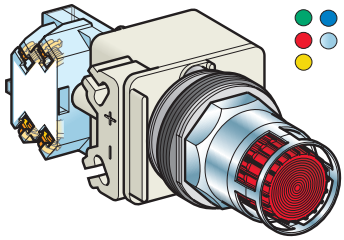
Pushbuttons, switches and pilot lights, with chromium plated metal bezel

Complete units 9001 K

Complete units

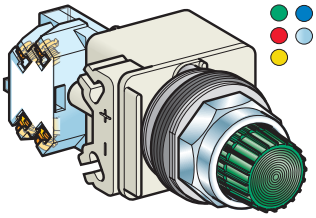
Combined contact and light functions

Illuminated pushbuttons, spring return



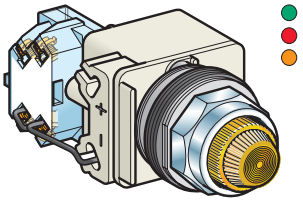
Flush push, super bright LED

9001 K●L●●● See page 1/229



Projecting push

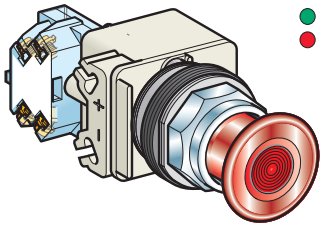
9001 K2L●●● See page 1/230



"Push to test", projecting push, super bright LED

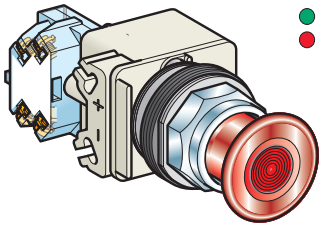
9001 KT●●●31 See page 1/231

Ø 41 mushroom head illuminated pushbuttons, super bright LED



2-position, push-pull

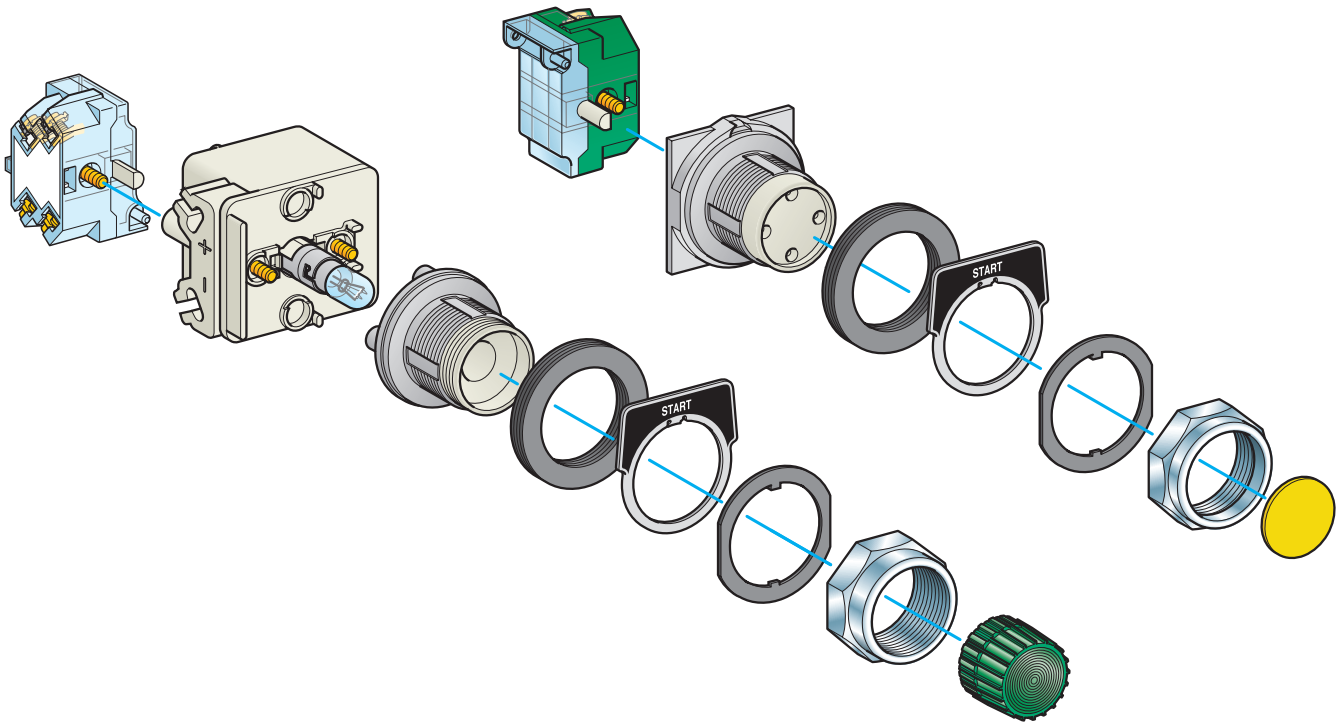
9001 KR9P●●● See page 1/231



3-position, push-pull

9001 KR8P●●● See page 1/231

Separate components and accessories



For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 30

Harmony® 9001 K & SK range

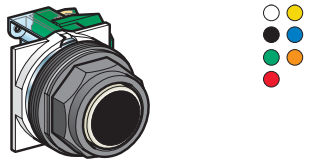
Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK

Complete units

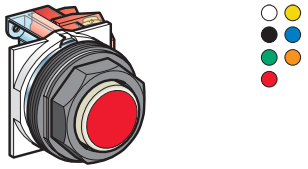
Contact functions

Pushbuttons, spring return



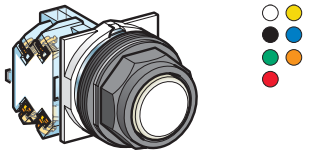
Flush push

9001 SKR1●●● See page 1/234



Projecting push

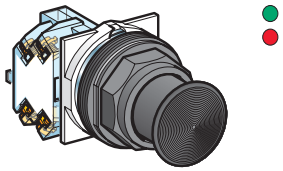
9001 SKR3●●● See page 1/234



Recessed push (high guard)

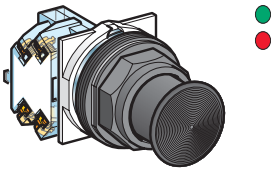
9001 SKR2●●● See page 1/234

Mushroom head pushbuttons



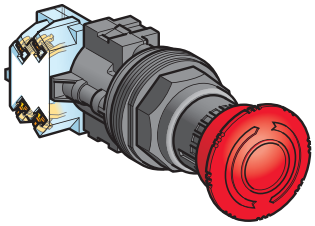
Spring return Ø 35 or Ø 57

9001 SKR2●●H13 See page 1/234



Latching Ø 35, 41 or 57

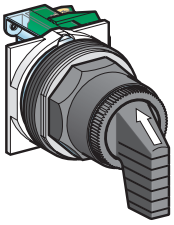
9001 SKR●●● See page 1/234



Turn to release, trigger action

9001 SKR16 See page 1/234

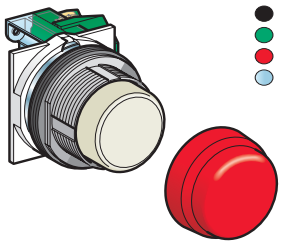
Selector switches



Selector switches, long black handle

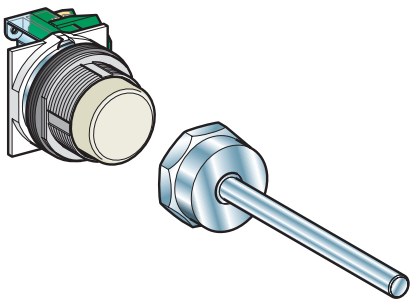
9001 SKS●●FBH●● See page 1/236

Booted pushbuttons and wobblestick (with accessories)



Booted pushbuttons

9001 SKR●●● + 9001 KU● See page 1/234 + 1/240

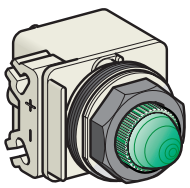


Wobblestick

9001 SKR●●● + 9001 K8 See page 1/234 and 1/240

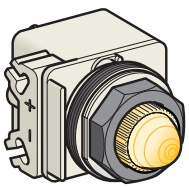
Light functions

Pilot lights



BA 9s base mounted super bright LED

9001 SKP●●● See page 1/235



BA 9s incandescent bulb

9001 SKP●●● See page 1/235

Characteristics: page 1/224 References: page 1/234 Dimensions: page 1/244

For reference only. www.fengshengelectric.com.sg

Control and signalling units Ø 30

Harmony® 9001 K & SK range

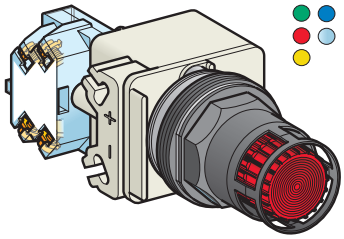
Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK

Complete units

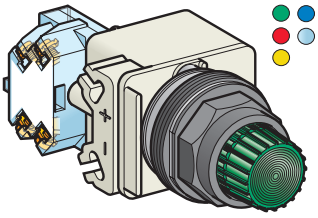
Combined contact and light functions

Illuminated pushbuttons, spring return



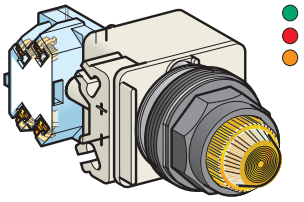
Flush push

9001 SK1L●●● See page 1/236



Projecting push

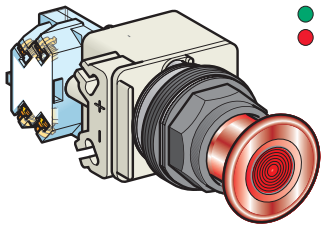
9001 SK2L●●● See page 1/237



"Push to test", projecting push

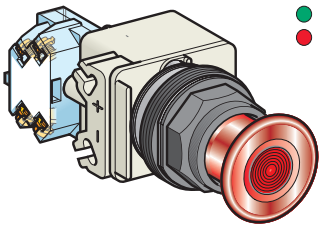
9001 SKT●●●31 See page 1/238

Ø 41 mushroom head illuminated pushbuttons



2-position, push-pull

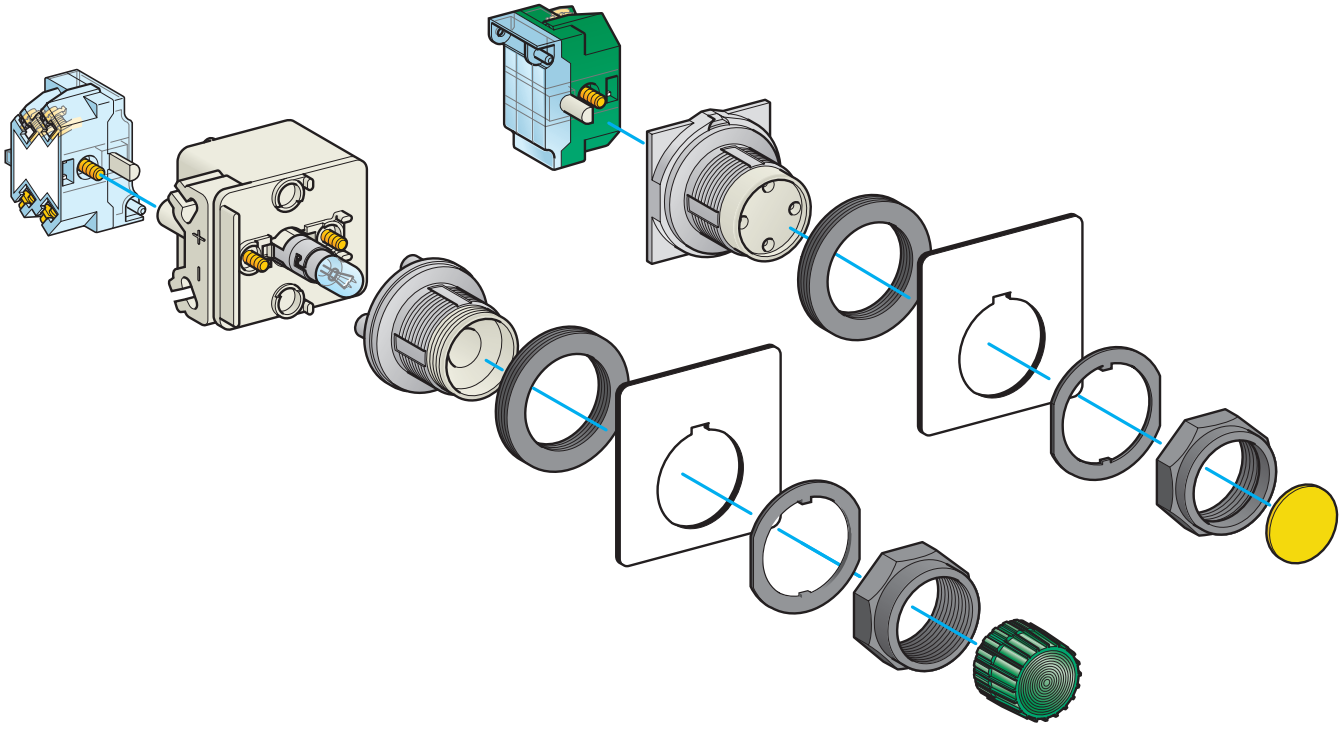
9001 SKR9P●●● See page 1/239



3-position, push-pull

9001 SKR8P●●● See page 1/239

Separate components and accessories



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Control and signalling units Ø 30
Harmony® 9001 K & SK range
Pushbuttons, switches and pilot lights

Environment

Conforming to standards			EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, JIS C 4520 and 852, UL 508, CSA C22-2 n° 14
			EN/IEC 60204-1, EN/ISO 13850 for Emergency Stop devices (when used with Emergency stop legend plates)
Product certifications			UL508, NEMA A600-Q600
Protective treatment standard version			"TC"
Ambient air temperature around the device	Storage	**°C**	- 40…+ 70
	Operation	**°C**	- 25…+ 70
Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 2 to 500 Hz: 7gn Ford Standard EA-1
Shock resistance	Conforming to IEC 60068-2-27		Half sine wave: 50 gn
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection for the chromium metal bezel range	Conforming to IEC 60529		IP 66
	Conforming to NEMA		Types 1, 2, 3, 3R, 4, 12 and 13
Degree of protection for the double insulated bezel range	Conforming to IEC 60529		IP 66
	Conforming to NEMA		Types 1, 2, 3, 3R, 4, 4X, 12 and 13
Mechanical life (in millions of operating cycles)	Pushbuttons, spring return		5
	Illuminated pushbuttons		5
	Selector switches and key switches		0.5
Mounting position			All positions

General (9001 K): page 1/220 | General (9001 SK): page 1/222 | References (9001 K): page 1/226 | References (9001 SK): page 1/234 | Dimensions: page 1/244

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Electrical characteristics of contact blocks

Rated operational characteristics	∼ AC-15		3 A, 240 V
	⎓ DC-13		0.55 A, 125 V
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Ui = 250 degree of pollution 3 (except pilot lights with incandescent bulb: degree of pollution 2)
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 2.5
Contact material	Normal environment and usage		Silver alloy
Contact operation	"N/C" ou "N/O"		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1	**N**	N/C contact(s) with positive opening operation
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	Cartridge fuse mounted upstream: 10
Cabling capacity	Conforming to EN/IEC 60947-1	**mm²** **mm²**	Screw clamp terminals (cross headedslotted screw) Mini: 1 x 0.22 Maxi: 2 x 1.5 Recommended tightening torque: 0.8 N.m
Thermal current	Ith	**A**	10
Maximum operation current	a.c. supply: utilisation category AC-15	**V** **A** **VA**	Contact making capacity 120 / 240 / 480 / 600 60 / 30 / 15 / 12 7200 / 7200 / 7200 / 7200
		V **A** **VA**	Breaking capacity 120 / 240 / 480 / 600 6 / 3 / 1.5 / 1.2 720 / 720 / 720 / 720
	d.c.supply: utilisation category DC-13	**V** **A**	Contact making capacity and breaking capacity 125 / 250 / 600 0.55 / 0.27 / 0.1

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals

821091

9001 KR1BH5

821092

9001 KR3RH6

821084

9001 KR2UH13

821085

9001 KR24BH13

PF100879

9001 KR9BM94

105025

9001 KR25BH13

PF100880

9001 KR9RM95

PF100878

9001 KR16H13

Pushbuttons, spring return

Shape of head	Type of push	Type of contact "N/O"	"N/C"	"C/O"	Colour	Reference	Weight kg
	**Flush**	1	–	–	Black	**9001 KR1BH5**	0.121
					Green	**9001 KR1GH5**	0.121
		–	–	1	Black	**9001 KR1BH13**	0.121
					Green	**9001 KR1GH13**	0.121
					Red	**9001 KR1RH13**	0.121
					Multi-colour	**9001 KR1UH13** *(1)*	0.121
		1	–	–	Multi-colour	**9001 KR1UH5** *(1)*	0.121
	**Projecting**	–	1	–	Red	**9001 KR3RH6**	0.128
		–	–	1	Multi-colour	**9001 KR3UH13** *(1)*	0.128
		1	–	–	Multi-colour	**9001 KR3UH5** *(1)*	0.128
	**Recessed (high guard)**	1	–	–	Green	**9001 KR2GH5**	0.136
		–	–	1	Multi-colour	**9001 KR2UH13** *(1)*	0.136
		1	–	–	Multi-colour	**9001 KR2UH5** *(1)*	0.136

Mushroom head pushbuttons

Shape of head	Type of push	Diameter mm	Type of contact "N/O"	"N/C"	"C/O"	Colour	Head material	Reference	Weight kg
	**Spring return**	**Ø 35** Screw-in with set screw security	–	–	1	Black	Plastic	**9001 KR24BH13**	0.126
						Red	Plastic	**9001 KR24RH13**	0.126
		Ø 35 Snap in Knob	–	1	–	Red	Plastic	**9001 KR4RH6**	0.154
		Ø 40 Screw-in with set screw security *(2)*	–	–	–	Black	Metal	**9001 KR24BM**	0.141
			–	–	–	Red	Metal	**9001 KR24RM**	0.141
			–	–	–	Green	Metal	**9001 KR24GM**	0.141
		Ø 57 Screw-in with set screw security	–	–	1	Black	Plastic	**9001 KR25BH13**	0.132
						Red	Plastic	**9001 KR25RH13**	0.132
		Ø 57 Snap in Knob	–	1	–	Red	Plastic	**9001 KR5RH6**	0.154
		Ø 60 Screw-in with set screw security *(2)*	–	–	–	Black	Metal	**9001 KR25BM**	0.150
			–	–	–	Red	Metal	**9001 KR25RM**	0.150
			–	–	–	Green	Metal	**9001 KR25GM**	0.150
	**3 positions: Push-pull (maintained centr. position)**	**Ø 41**	–	2	–	Black	Plastic	**9001 KR8BH25**	0.195
						Red	Plastic	**9001 KR8RH25**	0.195
	2 maintained positions: Push-pull	**Ø 40** Screw-in with set screw security *(2)*	–	–	–	Black	Metal	**9001 KR9BM94**	0.141
			–	–	–	Red	Metal	**9001 KR9RM94**	0.141
			–	–	–	Green	Metal	**9001 KR9GM94**	0.141
		Ø 41 Screw-in with set screw security	–	–	1	Black	Plastic	**9001 KR9BH13**	0.141
						Red	Plastic	**9001 KR9RH13**	0.141
			–	–	1	Red	Plastic	**9001 KR9R94H13**	0.141
			–	1	–	Red	Plastic	**9001 KR9RH6**	0.141
		Ø 60 Screw-in with set screw security *(2)*	–	–	–	Black	Metal	**9001 KR9BM95**	0.150
			–	–	–	Red	Metal	**9001 KR9RM95**	0.150
			–	–	–	Green	Metal	**9001 KR9GM95**	0.150
	Push-pull	**Ø 35**	–	1	–	Red	Plastic	**9001 KR9R20H6**	0.141
		Ø 57	–	1	–	Red	Plastic	**9001 KR9R21H6**	0.141
	**2 positions** *(3)* **Turn to Release Trigger action**	**Ø 40**	1	1	–	Red	Plastic	**9001 KR16H13**	0.141
			2	2	–	Red	Plastic	**9001 KR16H2**	0.141
			–	–	–	Red	Plastic	**9001 KR16** *(2)*	0.141

(1) Supplied with 7 different coloured caps: black, green, red, yellow, blue, white and orange, ready for clipping-in.

(2) Supplied without contact block. To order contact blocks, see page 1/240.

(3) Emergency stop device, conforms to EN/IEC 60204-1 and EN/ISO 13850 when used with Emergency Stop legend plate 9001 KN8330 or 9001 KN9330, see page 1/242.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals



9001 KS43FB



9001 KS11K1R

Selector switches and key switches (contact actuation sequence, see page 1/245)

Shape of head	Mount on side	Contact block (order seperately)	Contact status 1 - closed 0 - open	Number and type of positions	Reference	Weight kg
Long handle, black	1 or 2	9001KA2	0 1	2 stay put	**9001 KS11FB**	0.172
	1 or 2	9001KA2	0 1	2 spring return from right to left	**9001 KS34FB**	0.172
	1	9001KA1	1 0 / 0 0 / 0 1	3 stay put	**9001 KS43FB**	0.172
	1 or 2	9001KA1	0 0 / 0 1 / 1 0	3 stay put	**9001 KS46FB**	0.172
	1 or 2	9001KA1	1 0 / 0 0 / 0 1	3 spring return from left to center	**9001 KS63FB**	0.172
	1 or 2	9001KA1	1 0 / 0 0 / 0 1	3 spring return to center	**9001 KS53FB**	0.172
	Side 2	9001KA1	1 0 0 0 / 0 0 0 1 / 0 1 0 0 / 0 0 1 0	4 stay put	**9001 KS88FB**	0.172
	Side 1	9001KA1				
Key (Ronis n° 455)	1 or 2	9001KA2	0 1	2 stay put	**9001 KS11K1R**	0.207
	1 or 2	9001KA1	0 1 / 1 0	2 stay put	**9001 KS11K1R**	0.207
	1 or 2	9001KA1	0 1 / 1 0	2 stay put	**9001 KS11K3R**	0.207
	1 or 2	9001KA1	1 0 / 0 0 / 0 1	3 stay put	**9001 KS43K5R**	0.234
	1 or 2	9001KA1	1 0 / 0 0 / 0 1	3 spring return to center	**9001 KS53K5R**	0.234
Key (E10)		*For E 10 key, remove R from reference.*		*Ex: 9001 KS11K1R: Ronis key 9001 KS11K1: E10 key*		

Nota : *Other contact configurations are available. Please consult your customer care centre.*

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals

109200



9001 KP35LGG9

Pilot lights with BA 9s base mounted (super bright LED, included)

Shape of head	Supply voltage V	Colour	Reference	Weight kg
	≂ 24	Green	**9001 KP35LGG9**	0.134
		Red	**9001 KP35LRR9**	0.134
		Amber	**9001 KP35LYA9**	0.134
		Blue	**9001 KP35LLL9**	0.134
		White	**9001 KP35LWW9**	0.134
	≂ 48	Green	**9001 KP36LGG9**	0.134
		Red	**9001 KP36LRR9**	0.134
		Amber	**9001 KP36LYA9**	0.134
		Blue	**9001 KP36LLL9**	0.134
		White	**9001 KP36LWW9**	0.134
	≂ 120	Green	**9001 KP38LGG9**	0.134
		Red	**9001 KP38LRR9**	0.134
		Amber	**9001 KP38LYA9**	0.134
		Blue	**9001 KP38LLL9**	0.134
		White	**9001 KP38LWW9**	0.134

Pilot lights with BA 9s, incandescent bulb (bulb included)

Shape of head	Supply	Supply voltage V	Colour	Reference	Weight kg
	**Direct supply** for BA 9s bulb (included)	≂ 12	Green	**9001 KP32G9**	0.134
			Red	**9001 KP32R9**	0.134
			Amber	**9001 KP32A9**	0.134
			Blue	**9001 KP32L9**	0.134
		≂ 24	Green	**9001 KP35G9**	0.134
			Red	**9001 KP35R9**	0.134
			Amber	**9001 KP35A9**	0.134
			Blue	**9001 KP35L9**	0.134
		≂ 48	Green	**9001 KP36G9**	0.134
			Red	**9001 KP36R9**	0.134
			Amber	**9001 KP36A9**	0.134
			Blue	**9001 KP36L9**	0.134
		≂ 120	Green	**9001 KP38G9**	0.134
			Red	**9001 KP38R9**	0.134
			Amber	**9001 KP38A9**	0.134
			Blue	**9001 KP38L9**	0.134
	**Via integral transformer** for BA 9s 6 V bulb (included)	~ 120	Green	**9001 KP1G9**	0.210
			Red	**9001 KP1R9**	0.210
			Amber	**9001 KP1A9**	0.210
			Blue	**9001 KP1L9**	0.210
		~ 230	Green	**9001 KP7G9**	0.210
			Red	**9001 KP7R9**	0.210
			Amber	**9001 KP7A9**	0.210
			Blue	**9001 KP7L9**	0.210
		~ 380	Green	**9001 KP5G9**	0.210
			Red	**9001 KP5R9**	0.210
			Amber	**9001 KP5A9**	0.210
			Blue	**9001 KP5L9**	0.210
		~ 600	Green	**9001 KP6G9**	0.210
			Red	**9001 KP6R9**	0.210
			Amber	**9001 KP6A9**	0.210
			Blue	**9001 KP6L9**	0.210

109201



9001 KP38R9

109202



9001 KP7L9

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals

Illuminated pushbuttons, spring return, push-push (super bright LED, included)

Shape of head	Description supply	Type of contact "C/O"	Supply voltage V	Colour	Reference	Weight kg
Extended metallic guard						
	**BA 9s base mounted LED** (included)	1	≂ 24	Red	**9001 K3L35LRRH13**	0.175
				Green	**9001 K3L35LGGH13**	0.175
				Amber	**9001 K3L35LYAH13**	0.175
			≂ 48	Red	**9001 K3L36LRRH13**	0.175
				Green	**9001 K3L36LGGH13**	0.175
				Amber	**9001 K3L36LYAH13**	0.175
			≂ 120	Red	**9001 K3L38LRRH13**	0.175
				Green	**9001 K3L38LGGH13**	0.175
				Amber	**9001 K3L38LYAH13**	0.175
	Direct supply for BA 9s incandescent bulb (included)	1	≂ 24	Red	**9001 K3L35RH13**	0.175
				Green	**9001 K3L35GH13**	0.175
				Amber	**9001 K3L35AH13**	0.175
		1	≂ 48	Red	**9001 K3L36RH13**	0.175
				Green	**9001 K3L36GH13**	0.175
				Amber	**9001 K3L36AH13**	0.175
		1	≂ 120	Red	**9001 K3L38RH13**	0.175
				Green	**9001 K3L38GH13**	0.175
				Blue	**9001 K3L38LH13**	0.175
				Amber	**9001 K3L38AH13**	0.175
				White	**9001 K3L38WH13**	0.175
				Clear	**9001 K3L38CH13**	0.175
	Via integral transformer for BA 9s 6 V incandescent bulb (included)	1	∼ 120	Red	**9001 K3L1RH13**	0.250
				Green	**9001 K3L1GH13**	0.250
				Amber	**9001 K3L1AH13**	0.250
			≂ 230	Red	**9001 K3L7RH13**	0.250
				Green	**9001 K3L7GH13**	0.250
				Amber	**9001 K3L7AH13**	0.250
Full guard in plastic						
	**BA 9s base mounted** (included)	1	≂ 24	Red	**9001 K1L35LRRH13**	0.166
				Green	**9001 K1L35LGGH13**	0.166
				Amber	**9001 K1L35LYAH13**	0.166
		1	≂ 48	Red	**9001 K1L36LRRH13**	0.166
				Green	**9001 K1L36LGGH13**	0.166
				Amber	**9001 K1L36LYAH13**	0.166
		1	≂ 120	Red	**9001 K1L38LRRH13**	0.166
				Green	**9001 K1L38LGGH13**	0.166
				Amber	**9001 K1L38LYAH13**	0.166

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9001 K1L35LGGH13

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals



9001 K2L●●●H13

Illuminated pushbuttons, spring return, projecting push

Shape of head	Type of contact "N/O" late break	Type of contact "N/C"	Type of contact "C/O"	Supply voltage V	Colour	Reference	Weight kg
BA 9s base mounted LED (included)							
	–	–	1	≂ 24	Red	**9001 K2L35LRRH13**	0.166
					Green	**9001 K2L35LGGH13**	0.166
					Amber	**9001 K2L35LYAH13**	0.166
	–	–	1	≂ 48	Red	**9001 K2L36LRRH13**	0.166
					Green	**9001 K2L36LGGH13**	0.166
					Amber	**9001 K2L36LYAH13**	0.166
	–	–	1	≂ 120	Red	**9001 K2L38LRRH13**	0.166
					Green	**9001 K2L38LGGH13**	0.166
					Amber	**9001 K2L38LYAH13**	0.166
Direct supply for BA 9s incandescent bulb (included)							
	–	–	1	≂ 24	Red	**9001 K2L35RH13**	0.166
					Green	**9001 K2L35GH13**	0.166
					Amber	**9001 K2L35AH13**	0.166
					Blue	**9001 K2L35LH13**	0.166
					White	**9001 K2L35WH13**	0.166
	–	–	1	≂ 48	Red	**9001 K2L36RH13**	0.166
					Green	**9001 K2L36GH13**	0.166
					Amber	**9001 K2L36AH13**	0.166
					Blue	**9001 K2L36LH13**	0.166
					White	**9001 K2L36WH13**	0.166
	–	–	1	≂ 120	Red	**9001 K2L38RH13**	0.166
					Green	**9001 K2L38GH13**	0.166
					Amber	**9001 K2L38AH13**	0.166
					Blue	**9001 K2L38LH13**	0.166
					White	**9001 K2L38WH13**	0.166
Via integral transformer for BA 9s incandescent bulb (included)							
	–	–	1	∼ 230	Red	**9001 K2L7RH13**	0.140
					Green	**9001 K2L7GH13**	0.140
					Amber	**9001 K2L7AH13**	0.140
					Blue	**9001 K2L7LH13**	0.140
					White	**9001 K2L7WH13**	0.140

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals



9001 KR9P35LGGH13



9001 KR8P35LRRH25



9001 KR11UH1H1

Illuminated mushroom head pushbuttons (super bright LED, included)

Shape of head	Diameter mm	Type of contact: "N/O" l. break	"N/O"	"C/O"	Supply voltage V	Colour	Reference	Weight kg
2 position stay put pushbuttons. Direct supply for BA 9s incandescent bulb (included)								
	Ø 41	Order contacts separately			≂ 24	Green	**9001 KR9P35LGG**	0.186
						Red	**9001 KR9P35LRR**	0.186
					≂ 48	Green	**9001 KR9P36LGG**	0.186
						Red	**9001 KR9P36LRR**	0.186
					≂ 120	Green	**9001 KR9P38LGG**	0.186
						Red	**9001 KR9P38LRR**	
3 position pushbuttons (pull: spring return, center: stay put, push: spring return)								
	Ø 41	Order contacts separately			≂ 24	Green	**9001 KR8P35LGG**	0.254
						Red	**9001 KR8P35LRR**	0.254
					≂ 48	Green	**9001 KR8P36LGG**	0.254
						Red	**9001 KR8P36LRR**	0.254
					≂ 120	Green	**9001 KR8P38LGG**	0.254
						Red	**9001 KR8P38LRR**	0.254

Mechanically interlocked pushbuttons

Shape of head	Type of push	Type of contact: "N/O" l. break	"N/O"	"C/O"	Colour	Reference	Weight kg
	**Both maintained**	–	–	1	Multi-colour	**9001 KR11UH1H1** *(1)*	0.540
	One spring return and one latching	–	–	1	Multi-colour	**9001 KR12UH1H1** *(1)*	0.540

Illuminated "Push to test" pushbuttons, spring return (super bright LED, included)

Shape of head	Type of push	Type of contact: "N/O" l. break	"N/O"	"C/O"	Supply voltage V	Colour	Reference	Weight kg
Direct supply								
	**Projecting push**	1	–	–	≂ 24	Green	**9001 KT35LGG31**	0.235
						Red	**9001 KT35LRR31**	0.235
						Amber	**9001 KT35LYA31**	0.235
		1	–	–	≂ 48	Green	**9001 KT36LGG31**	0.235
						Red	**9001 KT36LRR31**	0.235
						Amber	**9001 KT36LYA31**	0.235
		1	–	–	≂ 120	Green	**9001 KT38LGG31**	0.235
						Red	**9001 KT38LRR31**	0.235
						Amber	**9001 KT38LYA31**	0.235

(1) Supplied with 7 different coloured caps: black, green, red, yellow, blue, white and orange, ready for clipping-in.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals



9001 K46J35LYFA

Illuminated selector switches with long handle (super bright LED, included)

Shape of head	Supply	Mount on side	Contact block (1)	Contact status 1 - closed 0 - open	Supply voltage V	Number and type of positions	Colour	Reference	Weight kg
	**Supplied with 24 V light module (super bright LED)**	1 or 2	9001KA2	0 1	≂ 24	2 stay put	Green	**9001 K11J35LGFG**	0.245
							Red	**9001 K11J35LRFR**	0.245
							Amber	**9001 K11J35LYFA**	0.245
		1 or 2	9001KA2	0 1	≂ 24	2 spring return from right to left	Green	**9001 K34J35LGFG**	0.245
							Red	**9001 K34J35LRFR**	0.245
							Amber	**9001 K34J35LYFA**	0.245
		1 or 2	9001KA1	1 0 / 0 0 / 0 1	≂ 24	3 stay put	Green	**9001 K43J35LGFG**	0.245
							Red	**9001 K43J35LRFR**	0.245
							Amber	**9001 K43J35LYFA**	0.245
		Side 2	9001KA1	1 0 / 0 0 / 0 1	≂ 24	3 stay put	Green	**9001 K46J35LGFG**	0.245
							Red	**9001 K46J35LRFR**	0.245
		Side 1	9001KA1	0 0 / 1 0 / 0 1			Amber	**9001 K46J35LYFA**	0.245
		1 or 2	9001KA1	1 0 / 0 0 / 0 1	≂ 24	3 spring return to center	Green	**9001 K53J35LGFG**	0.245
							Red	**9001 K53J35LRFR**	0.245
							Amber	**9001 K53J35LYFA**	0.245
		1 or 2	9001KA1	1 0 / 0 0 / 0 1	≂ 24	3 spring return from left to center	Green	**9001 K63J35LGFG**	0.245
							Red	**9001 K63J35LRFR**	0.245
							Amber	**9001 K63J35LYFA**	0.245
		Side 2	9001KA1	1 0 / 0 0 / 0 1 / 0 0	≂ 24	4 stay put	Green	**9001 K88J35LGFG**	0.245
							Red	**9001 K88J35LRFR**	0.245
		Side 1	9001KA1	0 0 / 0 1 / 0 0 / 1 0			Amber	**9001 K88J35LYFA**	0.245

(1) Order and install listed contact block for noted contact sequence. Other contact sequences are available. Please consult your customer care centre.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Complete units 9001 K, with screw clamp terminals

Illuminated mushroom head pushbuttons, push-pull, Ø 41 red

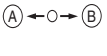
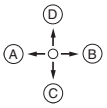
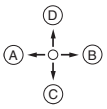
Shape of head	Supply	Type of contact			Supply voltage V	Reference	Weight kg
		"N/C" l.break	"N/C"	"C/O"			
2 position stay put pushbuttons							
	**Direct supply** for BA 9s incandescent bulb (included)	1	1	–	≂ 24	**9001 KR9P35RH25**	0.168
					≂ 120	**9001 KR9P38RH25**	0.168
	Via integral transformer for BA 9s 6 V incandescent bulb (included)	1	1	–	≂ 230	**9001 KR9P7RH25**	0.245
3 position pushbuttons (pull: spring return, center: stay put, push: spring return)							
	**Direct supply** for BA 9s incandescent bulb (included)	1	1	–	≂ 24	**9001 KR8P35RH25**	0.168
					≂ 120	**9001 KR8P38RH25**	0.168
	Via integral transformer for BA 9s 6 V incandescent bulb (included)	1	1	–	≂ 230	**9001 KR8P7RH25**	0.245

821125



9001 KR8P●●RH25

Joystick controllers (80 mm long operating shaft)

Shape of head	Description	Type of contact			Direction	Reference	Weight kg
		"N/O"	"N/C"	"C/O"			
	**3 positions** spring return	–	2	–		**9001 K31H8**	0.372
		Order contacts separately				**9001 K31**	0.372
510317 		2	–	–		**9001 K71H7**	0.372
		Order contacts separately				**9001 K71**	0.372
	5 positions spring return	–	–	2		**9001 K35H2**	0.372
		Order contacts separately				**9001 K35**	0.372
	3 positions stay put	Order contacts separately				**9001 K73**	0.372
	5 positions spring return with latch *(1)*	Order contacts separately				**9001 K34**	0.372

9001 K31H8

(1) Latch button must be depressed before joystick will operate.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK, with screw clamp terminals



9001 SKR1GH13



9001 SKR3RH6



9001 SKR2GH5



9001 SKR24BH13



9001 SKR16H13

Pushbuttons, spring return

Shape of head	Type of push	Type of contact "N/O"	"N/C"	"C/O"	Colour	Reference	Weight kg
	**Flush**	1	–	–	Black	**9001 SKR1BH5**	0.086
					Green	**9001 SKR1GH5**	0.086
		–	–	1	Black	**9001 SKR1BH13**	0.086
					Green	**9001 SKR1GH13**	0.086
					Red	**9001 SKR1RH13**	0.086
					Multi-colour	**9001 SKR1UH13** *(1)*	0.086
		1	–	–	Multi-colour	**9001 SKR1UH5** *(1)*	0.086
	**Projecting**	–	1	–	Red	**9001 SKR3RH6**	0.070
		–	–	1	Multi-colour	**9001 SKR3UH13** *(1)*	0.070
		1	–	–	Multi-colour	**9001 SKR3UH5** *(1)*	0.070
	**Recessed (high guard)**	1	–	–	Green	**9001 SKR2GH5**	0.090
		–	–	1	Multi-colour	**9001 SKR2UH13** *(1)*	0.090
		1	–	–	Multi-colour	**9001 SKR2UH5** *(1)*	0.090

Mushroom head pushbuttons

Shape of head	Type of push	Diameter mm	Type of contact "N/C" I. break	"N/C"	"C/O"	Colour	Reference	Weight kg
	**Spring return**	Ø 35	–	–	1	Black	**9001 SKR24BH13**	0.095
						Red	**9001 SKR24RH13**	0.095
		Ø 35 Snap in Knob	–	1	–	Red	**9001 SKR4RH6**	0.095
		Ø 57	–	–	1	Black	**9001 SKR25BH13**	0.102
						Red	**9001 SKR25RH13**	0.102
		Ø 57 Snap in Knob	–	1	–	Red	**9001 SKR5RH6**	0.102
	**3 positions: Push-pull (maintained centr. position)**	Ø 41	1	1	–	Black	**9001 SKR8BH25**	0.159
						Red	**9001 SKR8RH25**	0.159
	2 maintained positions: Push-pull	Ø 41	–	–	1	Black	**9001 SKR9BH13**	0.159
						Red	**9001 SKR9RH13**	0.159
			–	1	–	Red	**9001 SKR9RH6**	0.159
	Push-pull	Ø 35	–	1	–	Red	**9001 SKR9R20H6**	0.159
		Ø 57	–	1	–	Red	**9001 SKR9R21H6**	0.164
	**2 positions Turn to release Trigger action** *(3)*	Ø 40	1	1	–	Red	**9001 SKR16H13**	0.141
			2	2	–	Red	**9001 SKR16H2**	0.141
			–	–	–	Red	**9001 SKR16** *(2)*	0.141

(1) Supplied with 7 different coloured caps: black, green, red, yellow, blue, white and orange, ready for clipping-in.

(2) Supplied without contact block. To order contact blocks, see page 1/240.

(3) Emergency stop device, conforms to EN/IEC 60204-1 and EN/ISO 13850 when used with Emergency Stop legend plate 9001 KN8330 or 9001 KN9330, see page 1/242.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK, with screw clamp terminal

109218



9001 SKP35LGG9

Pilot lights with BA 9s base mounted (super bright LED included)

Shape of head	Supply voltage V	Colour	Reference	Weight kg
	≂ 24	Green	**9001 SKP35LGG9**	0.082
		Red	**9001 SKP35LRR9**	0.082
		Amber	**9001 SKP35LYA9**	0.082
		Blue	**9001 SKP35LLL9**	0.082
		White	**9001 SKP35LWW9**	0.082
	≂ 48	Green	**9001 SKP36LGG9**	0.082
		Red	**9001 SKP36LRR9**	0.082
		Amber	**9001 SKP36LYA9**	0.082
		Blue	**9001 SKP36LLL9**	0.082
		White	**9001 SKP36LWW9**	0.082
	≂ 120	Green	**9001 SKP38LGG9**	0.082
		Red	**9001 SKP38LRR9**	0.082
		Amber	**9001 SKP38LYA9**	0.082
		Blue	**9001 SKP38LLL9**	0.082
		White	**9001 SKP38LWW9**	0.082

Pilot lights with BA 9s, incandescent bulb (bulb included)

Shape of head	Supply	Supply voltage V	Colour	Reference	Weight kg
	**Direct supply** for BA 9s bulb (included)	≂ 12	Green	**9001 SKP32G9**	0.082
			Red	**9001 SKP32R9**	0.082
			Amber	**9001 SKP32A9**	0.082
			Blue	**9001 SKP32L9**	0.082
		≂ 24	Green	**9001 SKP35G9**	0.082
			Red	**9001 SKP35R9**	0.082
			Amber	**9001 SKP35A9**	0.082
			Blue	**9001 SKP35L9**	0.082
		≂ 48	Green	**9001 SKP36G9**	0.082
			Red	**9001 SKP36R9**	0.082
			Amber	**9001 SKP36A9**	0.082
			Blue	**9001 SKP36L9**	0.082
		≂ 120	Green	**9001 SKP38G9**	0.082
			Red	**9001 SKP38R9**	0.082
			Amber	**9001 SKP38A9**	0.082
			Blue	**9001 SKP38L9**	0.082
	**Via integral transformer** for BA 9s 6 V bulb (included)	~ 120	Green	**9001 SKP1G9**	0.181
			Red	**9001 SKP1R9**	0.181
			Amber	**9001 SKP1A9**	0.181
			Blue	**9001 SKP1L9**	0.181
		~ 230	Green	**9001 SKP7G9**	0.181
			Red	**9001 SKP7R9**	0.181
			Amber	**9001 SKP7A9**	0.181
			Blue	**9001 SKP7L9**	0.181
		~ 380	Green	**9001 SKP5G9**	0.181
			Red	**9001 SKP5R9**	0.181
			Amber	**9001 SKP5A9**	0.181
			Blue	**9001 SKP5L9**	0.181
		~ 600	Green	**9001 SKP6G9**	0.181
			Red	**9001 SKP6R9**	0.181
			Amber	**9001 SKP6A9**	0.181
			Blue	**9001 SKP6L9**	0.181

109219



9001 SKP38R9

109220



9001 SKP7L9

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

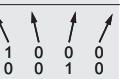
Complete units 9001 SK, with screw clamp terminal

109217



9001 SKS43FB

Selector switches (contact actuation sequence, see page 36053/3)

Shape of head	Mount on side	Contact block (order separately)	Contact status 1 - closed 0 - open	Number and type of positions	Reference	Weight kg
 **Long handle, black**	1 or 2	9001KA2 		2 stay put 	**9001 SKS11FB**	0.059
	1 or 2	9001KA2 		2 spring return from right to left 	**9001 SKS34FB**	0.059
	1 or 2	9001KA1 		3 stay put 	**9001 SKS43FB**	0.059
	1 or 2	9001KA1 		3 spring return from left to center 	**9001 SKS63FB**	0.059
	1 or 2	9001KA1 		3 spring return to center 	**9001 SKS53FB**	0.059
	Side 1	9001KA1 		4 stay put	**9001 SKS88FB**	0.059
	Side 2	9001KA1 				

Illuminated pushbuttons, spring return, flush push (super bright LED included)

Shape of head	Supply	Type of contact  "C/O"	Supply voltage V	Colour	Reference	Weight kg
Full guard in plastic						
	**BA 9s base mounted**	1	≂ 24	Red	**9001 SK1L35LRR**	0.181
				Green	**9001 SK1L35LGG**	0.181
				Amber	**9001 SK1L35LYA**	0.181
		1	≂ 48	Red	**9001 SK1L36LRR**	0.181
				Green	**9001 SK1L36LGG**	0.181
				Amber	**9001 SK1L36LYA**	0.181
		1	≂ 120	Red	**9001 SK1L38LRR**	0.181
				Green	**9001 SK1L38LGG**	0.181
				Amber	**9001 SK1L38LYA**	0.181

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9001 SK1L35LGG

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK, with screw clamp terminal

Illuminated pushbuttons, spring return, projecting push

Shape of head	Type of contact "N/O" late break	Type of contact "N/C"	Type of contact "C/O"	Supply voltage V	Colour	Reference	Weight kg
BA 9s base mounted LED (included)							
	–	–	–	≂ 24	Red	**9001 SK2L35LRR**	0.181
	Order contact block separately				Green	**9001 SK2L35LGG**	0.181
					Amber	**9001 SK2L35LYA**	0.181
	–	–	–	≂ 48	Red	**9001 SK2L36LRR**	0.181
	Order contact block separately				Green	**9001 SK2L36LGG**	0.181
					Amber	**9001 SK2L36LYA**	0.181
	–	–	–	≂ 120	Red	**9001 SK2L38LRR**	0.181
	Order contact block separately				Green	**9001 SK2L38LGG**	0.181
					Amber	**9001 SK2L38LYA**	0.181
Direct supply for BA 9s incandescent bulb (included)							
	–	–	1	≂ 24	Red	**9001 SK2L35RH13**	0.181
					Green	**9001 SK2L35GH13**	0.181
					Amber	**9001 SK2L35AH13**	0.181
					Blue	**9001 SK2L35LH13**	0.181
					White	**9001 SK2L35WH13**	0.181
	–	–	1	≂ 48	Red	**9001 SK2L36RH13**	0.181
					Green	**9001 SK2L36GH13**	0.181
					Amber	**9001 SK2L36AH13**	0.181
					Blue	**9001 SK2L36LH13**	0.181
					White	**9001 SK2L36WH13**	0.181
	–	–	1	≂ 120	Red	**9001 SK2L38RH13**	0.181
					Green	**9001 SK2L38GH13**	0.181
					Amber	**9001 SK2L38AH13**	0.181
					Blue	**9001 SK2L38LH13**	0.181
					White	**9001 SK2L38WH13**	0.181
Via integral transformer for BA 9s incandescent bulb (included)							
	–	–	1	∼ 230	Red	**9001 SK2L7RH13**	0.226
					Green	**9001 SK2L7GH13**	0.226
					Amber	**9001 SK2L7AH13**	0.226
					Blue	**9001 SK2L7LH13**	0.226
					White	**9001 SK2L7WH13**	0.226

109222



9001 SK2L36GH13

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK, with screw clamp terminal

109223



9001 SKR9P35LGG

109224



9001 SKR8P35LRR

538596



9001 SKR11UH1H1

Illuminated mushroom head pushbuttons (super bright LED, included)

Shape of head	Diameter mm	Supply voltage V	Type of contact: "N/O" l.break	"N/O"	"C/O"	Colour	Reference	Weight kg
2 position stay put pushbuttons. Direct supply for BA 9s incandescent bulb (included)								
	Ø 41	≂ 24	Order contact block separately			Green	**9001 SKR9P35LGG**	0.226
						Red	**9001 SKR9P35LRR**	0.226
		≂ 48	Order contact block separately			Green	**9001 SKR9P36LGG**	0.226
						Red	**9001 SKR9P36LRR**	0.226
		≂ 120	Order contact block separately			Green	**9001 SKR9P38LGG**	0.226
						Red	**9001 SKR9P38LRR**	0.226
3 position pushbuttons (pull: spring return, center: stay put, push: spring return)								
	Ø 41	≂ 24	Order contact block separately			Green	**9001 SKR8P35LGG**	0.226
						Red	**9001 SKR8P35LRR**	0.226
		≂ 48	Order contact block separately			Green	**9001 SKR8P36LGG**	0.226
						Red	**9001 SKR8P36LRR**	0.226
		≂ 120	Order contact block separately			Green	**9001 SKR8P38LGG**	0.226
						Red	**9001 SKR8P38LRR**	0.226

Mechanically interlocked pushbuttons

Shape of head	Type of push	Type of contact: "N/O" l. break	"N/O"	"C/O"	Colour	Reference	Weight kg
	**Both maintained**	–	–	1	Multi-colour	**9001 SKR11UH1H1** *(1)*	0.290
	One spring return and one latching	–	–	1	Multi-colour	**9001 SKR12UH1H1** *(1)*	0.290

Illuminated "Push to test" pushbuttons, spring return, projecting push (super bright LED included)

Shape of head	Supply voltage V	Type of contact: "N/O" l. break	"N/O"	"C/O"	Colour	Reference	Weight kg
Direct supply							
	≂ 24	–	–	1	Green	**9001 SKT35LGG31**	0.195
					Red	**9001 SKT35LRR31**	0.195
					Amber	**9001 SKT35LYA31**	0.195
	≂ 48	–	–	1	Green	**9001 SKT36LGG31**	0.195
					Red	**9001 SKT36LRR31**	0.195
					Amber	**9001 SKT36LYA31**	0.195
	≂ 120	–	–	1	Green	**9001 SKT38LGG31**	0.195
					Red	**9001 SKT38LRR31**	0.195
					Amber	**9001 SKT38LYA31**	0.195

(1) Supplied with 7 different coloured caps: black, green, red, yellow, blue, white and orange, ready for clipping-in.

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights with double insulated bezel

Complete units 9001 SK, with screw clamp terminal



109226

9001 SK46J35LYFA

Illuminated selector switches with long handle (super bright LED included)

Shape of head	Supply	Mount on side	Contact block (1)	Contact status 1 - closed 0 - open	Supply voltage V	Number and type of positions	Colour	Reference	Weight kg
	**Supplied with 24 V light module**	1 or 2	9001KA2	0 1	≂ 24	2 stay put	Green	**9001 SK11J35LGFG**	0.190
							Red	**9001 SK11J35LRFR**	0.190
							Amber	**9001 SK11J35LYFA**	0.190
		1 or 2	9001KA2	0 1	≂ 24	2 spring return from right to left	Green	**9001 SK34J35LGFG**	0.190
							Red	**9001 SK34J35LRFR**	0.190
							Amber	**9001 SK34J35LYFA**	0.190
		1 or 2	9001KA1	1 0 0 0 1	≂ 24	3 stay put	Green	**9001 SK43J35LGFG**	0.190
							Red	**9001 SK43J35LRFR**	0.190
							Amber	**9001 SK43J35LYFA**	0.190
		Side 2	9001KA1	1 0 0 0 0 0 1 0 1	≂ 24	3 stay put	Green	**9001 SK46J35LGFG**	0.190
							Red	**9001 SK46J35LRFR**	0.190
		Side 1	9001KA1				Amber	**9001 SK46J35LYFA**	0.190
		1 or 2	9001KA1	1 0 0 0 1	≂ 24	3 spring return to center	Green	**9001 SK53J35LGFG**	0.190
							Red	**9001 SK53J35LRFR**	0.190
							Amber	**9001 SK53J35LYFA**	0.190
		1 or 2	9001KA1	1 0 0 0 1	≂ 24	3 spring return from left to center	Green	**9001 SK63J35LGFG**	0.190
							Red	**9001 SK63J35LRFR**	0.190
							Amber	**9001 SK63J35LYFA**	0.190
		Side 2	9001KA1	1 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0	≂ 24	4 stay put	Green	**9001 SK88J35LGFG**	0.190
							Red	**9001 SK88J35LRFR**	0.190
		Side 1	9001KA1				Amber	**9001 SK88J35LYFA**	0.190

Illuminated mushroom head pushbuttons, push-pull, Ø 41 red

Shape of head	Supply	Type of contact "N/C" l. break	Type of contact "N/C"	Type of contact "C/O"	Supply voltage V	Reference	Weight kg
2 position stay put pushbuttons							
	**Direct supply** for BA 9s bulb (2)	1	1	–	≂ 24	**9001 SKR9P35RH25**	0.226
					≂ 120	**9001 SKR9P38RH25**	0.226
	Via integral transformer for BA 9s bulb (2)	1	1	–	≂ 230	**9001 SKR9P7RH25**	0.226
3 position pushbuttons (pull: spring return, center: stay put, push: spring return)							
	**Direct supply** for BA 9s bulb (2)	1	1	–	≂ 24	**9001 SKR8P35RH25**	0.226
					≂ 120	**9001 SKR8P38RH25**	0.226
	Via integral transformer for BA 9s bulb (2)	1	1	–	≂ 230	**9001 SKR8P7RH25**	0.226

(1) Order and install listed contact block for noted contact sequence. Other contact sequences are available. Please consult your customer care centre.

(2) Incandescent bulb, included.

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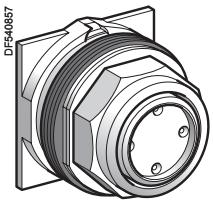
Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights

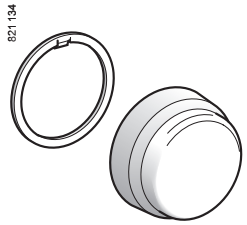
Separate components, accessories and spare parts



9001 KR1U

Heads for spring return pushbuttons - unmarked

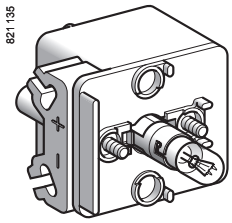
Shape of head	Type of push	Colour	Reference	Weight kg
For the metal range				
	Flush	Multi-colour *(1)*	**9001 KR1U**	0.087
	Projecting	Multi-colour *(1)*	**9001 KR3U**	0.090
	Recessed (high guard)	Multi-colour *(1)*	**9001 KR2U**	0.087
For the plastic range				
	Flush	Multi-colour *(1)*	**9001 SKR1U**	0.050
	Projecting	Multi-colour *(1)*	**9001 SKR3U**	0.050
	Recessed (high guard)	Multi-colour *(1)*	**9001 SKR2U**	0.050



9001 KU●

Accessories for heads 9001 KR●U

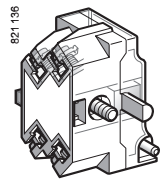
Description	Application	Colour	Reference	Weight kg
Rubber boots	Pushbuttons	Black	**9001 KU1**	0.027
		Green	**9001 KU5**	0.027
		Red	**9001 KU2**	0.027
		Clear	**9001 KU7**	0.027
Rod for spring return wobblestick	Pushbuttons	Chromium plated	**9001 K8**	0.120



9001 KM●

Light blocks for pilot lights and illuminated pushbuttons

Supply	Light source	Type	Supply voltage V	Colour	Reference	Weight kg
Direct supply via integral resistance	BA 9s bulb (included)	Incandescent	⎓ 12	–	**9001 KM32**	0.050
			⎓ 24	–	**9001 KM35**	0.050
			⎓ 120	–	**9001 KM38**	0.050
			⎓ 230	–	**9001 KM25**	0.050
Direct supply via integral transformer	BA 9s 6 V bulb (included)	Incandescent	~ 120	–	**9001 KM1**	0.144
			~ 230	–	**9001 KM7**	0.144
			⎓ 380 - 480	–	**9001 KM5**	0.144
Shallow depth	24 V bulb	Incandescent	⎓ 24 - 28	–	**9001 KM55**	0.115
		LED	⎓ 24 - 28	Red	**9001 KM55LR**	0.115
				Green	**9001 KM55LG**	0.115
				Yellow	**9001 KM55LY**	0.115
	120 V bulb	Incandescent	⎓ 110 - 120	–	**9001 KM58**	0.115
		LED	⎓ 110 - 120	Red	**9001 KM58LR**	0.115
				Green	**9001 KM58LG**	0.115
				Yellow	**9001 KM58LY**	0.115



9001 KA1

Contact blocks with protected terminals

Description		Type of contact "N/O"	Type of contact "N/C"	Type of contact "C/O"	Reference	Weight kg
Standard contact blocks	–	–	–	1	**9001 KA1** *(2)*	0.027
		1	–	–	**9001 KA2** *(2)*	0.023
		–	1	–	**9001 KA3** *(2)*	0.023
Late break contact blocks	–	–	–	1	**9001 KA4**	0.027
		–	1	–	**9001 KA5**	0.023
Early break contact blocks	–	1	–	–	**9001 KA6**	0.023
Logic reed contact blocks	Hermetically sealed	1	–	–	**9001 KA41** *(2)*	0.045
		–	1	–	**9001 KA42** *(2)*	0.045
		–	–	1	**9001 KA43** *(2)*	0.045
Power reed contact blocks	Hermetically sealed	1	–	1	**9001 KA51** *(2)*	0.045
		–	1	–	**9001 KA52** *(2)*	0.045
		–	–	1	**9001 KA53** *(2)*	0.045

(1) Includes set of 7 different coloured caps for customer installation: black, green, red, yellow, blue, white and orange.

(2) It is possible to mount up to 3 levels of contact blocks (maximum of 6 contacts blocks) on 9001 K and 9001 SK references (see page 1/245).

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Control and signalling units Ø 30

Harmony® 9001 K & SK range

Pushbuttons, switches and pilot lights

Separate components, accessories and spare parts



9001 KN300



9001 KN201



9001 KN379

Aluminium legend plates for metal range

Unmarked

Description		Background colour	Reference	Weight kg
Size 1 (40 x 43 mm)		Black	**9001 KN200**	0.005
		Red	**9001 KN200R**	0.005
Size 2 (44 x 50 mm)		Black	**9001 KN300**	0.005
		Red	**9001 KN300R**	0.005

Marked

Description	Legend plate colour	Marking	Reference	Weight kg
English text (40 x 43 mm)	Black or red background	START	**9001 KN201**	0.005
		STOP (red background)	**9001 KN202**	0.005
		ON	**9001 KN203**	0.005
		OFF (red background)	**9001 KN204**	0.005
		EMERGENCY STOP (red background)	**9001 KN205**	0.005
		FORWARD	**9001 KN206**	0.005
		REVERSE	**9001 KN207**	0.005
		CLOSE	**9001 KN208**	0.005
		OPEN	**9001 KN209**	0.005
		DOWN	**9001 KN210**	0.005
		UP	**9001 KN211**	0.005
		SLOW	**9001 KN213**	0.005
		HIGH	**9001 KN214**	0.005
		LOW	**9001 KN215**	0.005
		RESET	**9001 KN233**	0.005
		OFF-ON	**9001 KN245**	0.005
		OPEN-CLOSE	**9001 KN246**	0.005
		HAND-OFF-AUTO	**9001 KN260**	0.005
		PULL TO START/PUSH TO STOP	**9001 KN279**	0.005
English text (44 x 50 mm)	Black	PULL TO START/PUSH TO STOP	**9001 KN379**	0.005
French text (40 x 43 mm)	Black or red background	MARCHE	**9001 KN201F**	0.005
		ARRET (red background)	**9001 KN202F**	0.005
		AVANT	**9001 KN206F**	0.005
		ARRIERE	**9001 KN207F**	0.005
		FERME	**9001 KN208F**	0.005
		OUVERT	**9001 KN209F**	0.005
		BAS	**9001 KN210F**	0.005
		HAUT	**9001 KN211F**	0.005
		VITE	**9001 KN214F**	0.005
		LENT	**9001 KN215F**	0.005
		REARMEMENT	**9001 KN223F**	0.005

Plastic legend plates for plastic range

Unmarked

Description		Background colour	Reference	Weight kg
Size 1 (57 x 57 mm)		White	**9001 KN100WP**	0.005
		Black	**9001 KN100BP**	0.005

Marked

Description	Legend plate colour	Marking	Reference	Weight kg
English text (57 x 57 mm)	White	START	**9001 KN101WP**	0.005
		STOP	**9001 KN102WP**	0.005
		ON	**9001 KN103WP**	0.005
		OFF	**9001 KN104WP**	0.005
		EMERGENCY STOP	**9001 KN105WP**	0.005
		FORWARD	**9001 KN106WP**	0.005
		REVERSE	**9001 KN107WP**	0.005
		CLOSE	**9001 KN108WP**	0.005

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Separate components, accessories and spare parts

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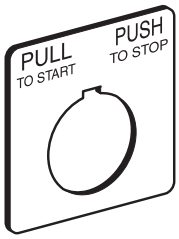

9001 KN179WP

Plastic legend plates for plastic range (continued)

Marked

Description	Legend plate colour	Marking	Reference	Weight kg
English text (57 x 57 mm)	White background	OPEN	**9001 KN109WP**	0.005
		DOWN	**9001 KN110WP**	0.005
		UP	**9001 KN111WP**	0.005
		SLOW	**9001 KN113WP**	0.005
		HIGH	**9001 KN114WP**	0.005
		LOW	**9001 KN115WP**	0.005
		RESET	**9001 KN133WP**	0.005
		OPEN-CLOSE	**9001 KN146WP**	0.005
		OFF-ON	**9001 KN145WP**	0.005
		HAND-OFF-AUTO	**9001 KN160WP**	0.005
		PULL TO START/PUSH TO STOP	**9001 KN179WP**	0.005
French text (57 x 57 mm)	White background	MARCHE	**9001 KN101WPF**	0.005
		ARRET (red background)	**9001 KN102WPF**	0.005
		AVANT	**9001 KN106WPF**	0.005
		ARRIERE	**9001 KN107WPF**	0.005
		FERME	**9001 KN108WPF**	0.005
		OUVERT	**9001 KN109WPF**	0.005
		BAS	**9001 KN110WPF**	0.005
		HAUT	**9001 KN111WPF**	0.005
		VITE	**9001 KN114WPF**	0.005
		LENT	**9001 KN115WPF**	0.005
		TIRER POUR MARCHE / POUSSER POUR ARRET	**9001 KN179WPF**	0.005

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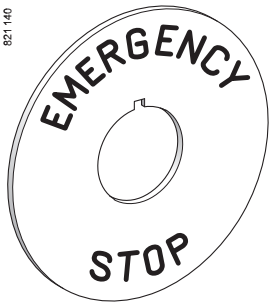

9001 KN8330

Emergency stop legend plate (plastic)

Description	Legend plate colour	Marking	Reference	Weight kg
Ø 60	Yellow	EMERGENCY STOP	**9001 KN9330**	0.005
Ø 90	Yellow	EMERGENCY STOP	**9001 KN8330**	0.005

Caps and knobs

Description	Application	Color	Reference	Weight kg
Ø 41 mushroom knob with set screw	For non-illuminated pushbutton	Red	**9001 K94R**	0.005
Ø 57 mushroom knob with set screw	For non-illuminated pushbutton	Red	**9001 K93R**	0.005
Ø 41 mushroom knob	For illuminated pushbutton	Red	**9001 R22**	0.005
Ø 57 mushroom knob	For illuminated pushbutton	Red	**9001 R21**	0.005
Ø 41 lens caps	Mushroom head illuminated pushbutton	Yellow	**9001 Y22**	0.005
		Green	**9001 G22**	0.005
Standard lens	For pilot light	Red	**9001 R9**	0.005
		Green	**9001 G9**	0.005
		Blue	**9001 L9**	0.005
		Yellow	**9001 Y9**	0.005
		White	**9001 W9**	0.005
		Clear	**9001 C9**	0.005
Lens caps “Fresnel lens”	For pilot light	Red	**9001 R31**	0.005
		Green	**9001 G31**	0.005
		Blue	**9001 L31**	0.005
		Yellow	**9001 Y31**	0.005
		White	**9001 W31**	0.005
		Clear	**9001 C31**	0.005
Standard knob	For selector switch	Black	**9001 B11**	0.005
		Red	**9001 R8**	0.005
		Green	**9001 G8**	0.005
		Blue	**9001 L8**	0.005
		Yellow	**9001 Y8**	0.005
		White	**9001 W8**	0.005
Long knob	For selector switch	Black	**9001 B25**	0.005
		Red	**9001 R24**	0.005
		Green	**9001 G24**	0.005
		Blue	**9001 L24**	0.005
		Yellow	**9001 Y24**	0.005
		White	**9001 W24**	0.005

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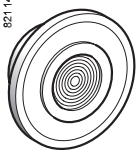

9001 G22

821151



9001 ●31

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Control and signalling units Ø 30

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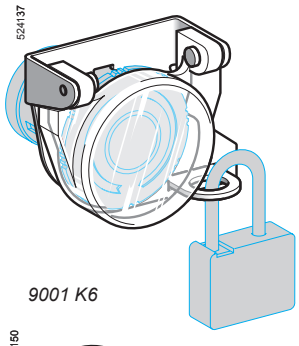
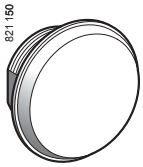
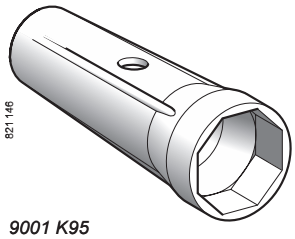


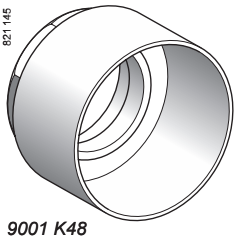
9001 K6



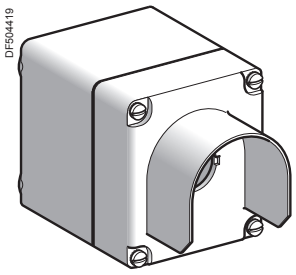
9001 K52



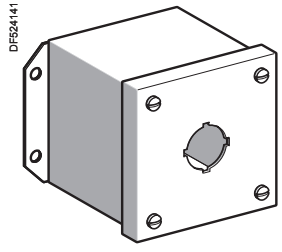
9001 K95



9001 K48



9001 KYG1
9001 TYG1



9001 KYSS1

Other accessories

Description	Application			Colour	Reference	Weight kg
Super bright LED bulbs	24 V / 9001 ●●●35L *(1)* or 48 V / 9001 ●●●36L *(1)* or 120 V / 9001 ●●●38L *(1)*			Red *(1)*	**6508805210**	0.010
				Green *(1)*	**6508805212**	0.010
				Amber *(1)*	**6508805211**	0.010
				Blue *(1)*	**6508805213**	0.010
				White *(1)*	**6508805214**	0.010
LED bulbs	120 V / 9001 ●●●1L *(1)* or 230 V / 9001 ●●●7L *(1)* or 380 V / 9001 ●●●5L *(1)*			Red *(1)*	**6508805201**	0,010
				Yellow *(1)*	**6508805202**	0,010
				Green *(1)*	**6508805203**	0,010
Incandescent bulbs	Resistor light blocks	≂ 12 V - code “32” *(2)*		–	**2550101037**	0.002
		≂ 24 V - code “35” *(2)*		–	**2550101002**	0.002
		≂ 48 V - code “36” *(2)*		–	**2550101025**	0.002
		≂ 120 V - code “38” *(2)*		–	**2550101027**	0.002
		≂ 240 V - code “25” *(2)*		–	**2550101027**	0.002
	Transformer light blocks	~ 120 V 50/60 Hz - code “1” *(2)*		–	**2550101020**	0.002
		~ 230 V 50/60 Hz - code “7” *(2)*		–	**2550101020**	0.002
		~ 380 V 50/60 Hz - code “5” *(2)*		–	**2550101020**	0.002
		~ 600 V 50/60 Hz - code “6” *(2)*		–	**2550101020**	0.002
Closing plates	–			Grey	**9001 K51**	0.020
	–			Metal	**9001 K52**	0.028
Screwdriver *(3)*	–			–	**9001 K69**	0.150
Tightening wrench	Fixing nut			–	**9001 K95**	0.064
	Boot			–	**9001 K1**	0.150
Guards:	Mushroom head pushbutton		Ø 35 mm	–	**9001 K48**	0.028
			Ø 41 mm	–	**9001 K56YM**	0.036
			Ø 60 mm	–	**9001 K685**	0.030
Set of 7 different coloured caps	Pushbutton			Black, green, red, yellow, blue, white, orange	**9001 T8U**	0.005
Bulb extractor	–			–	**XBF X13**	0.005
Padlock attachment	For selector switch			–	**9001 K7**	0.150
	For pushbutton			–	**9001 K6**	0.150
	For Emergency stop			–	**9001 K62**	0.150
Alternate action module	Push on - Push off module *(4)*			–	**9001 K85**	0.025

Enclosures

Type	Conduit threads	NEMA ratings	Colour of enclosure	Colour of cover	N° of 30 mm holes	Reference	Weight kg
Aluminium	3/4”	1, 3, 4, 6, 12, 13	–	–	1	**9001 KY1**	1.170
					2	**9001 KY2**	1.279
					3	**9001 KY3**	1.597
					4	**9001 KY4**	1.846
	14 mm	1, 3, 4, 6, 12, 13	–	–	1	**9001 TY1**	1.170
					2	**9001 TY2**	1.279
					3	**9001 TY3**	1.597
					4	**9001 TY4**	1.846
Aluminium with integral guard	3/4”	1, 3, 4, 6, 12, 13	Grey	Grey	1	**9001 KYG1**	1.200
			Grey	Yellow	1	**9001 KYG1Y**	1.200
	25 mm	1, 3, 4, 6, 12, 13	Grey	Grey	1	**9001 TYG1**	1.200
			Grey	Yellow	1	**9001 TYG1Y**	1.200
Stainless steel	3/4” Knockout	1, 3, 4, 4X, 13	–	–	1	**9001 KYSS1**	1.061
					2	**9001 KYSS2**	1.370
					3	**9001 KYSS3**	1.715
					4	**9001 KYSS4**	1.855
Plastic	3/4” Knockout	1, 3, 4, 4X, 13	–	–	1	**9001 SKY1**	0.690
					2	**9001 SKY2**	0.690
					3	**9001 SKY3**	0.790

(1) LED light modules require the color cap color and the LED be the same or use a clear color cap.
(2) Voltage Assembly Codes.
(3) Screwdriver with special tip for mounting contact blocks.
(4) N/O circuits require KA4 or KA6 contact blocks.

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Control and signalling units Ø 30
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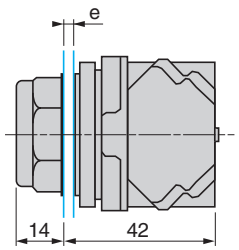
1

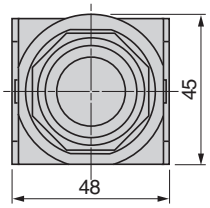
Dimensions

Pushbuttons

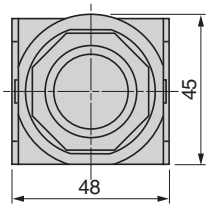


e: panel thickness 1 to 6 mm

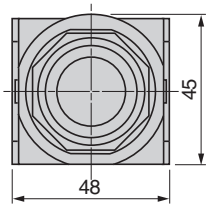
Flush push
9001 KR1●●●,
9001 SKR1●●●



Projecting push
9001 KR3●●●,
9001 SKR3●●●



Projecting push with high guard 9001 KR2●●●,
9001 SKR2●●●



Mushroom head pushbuttons

Spring return Ø 35 mm:
9001 KR24/SKR24●H13,
9001 KR4/SKR4RH6,
9001 KR9/SKR9R20H6

Spring return Ø 57 mm:
9001 KR25/SKR25●H13,
9001 KR5/SKR5RH6

Spring return Ø 60 mm:
9001 KR25●M

Push-pull Ø 35 mm:
9001 KR9/SKR9R20H6

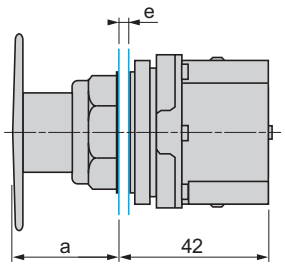
Push-pull Ø 40 mm:
9001 KR24●M
9001 KR9●M94

Push-pull Ø 41 mm:
9001 KR9/SKR9●H13,
9001 KR9R94H13
9001 KR9/SKR9RH6
9001 KR8/SKR8●H25

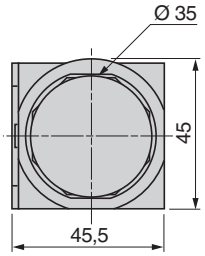
Push-pull Ø 57 mm:
9001 KR9/SKR9R21H6

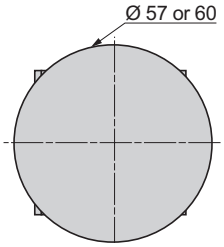
Push-pull Ø 60 mm:
9001 KR9●M95

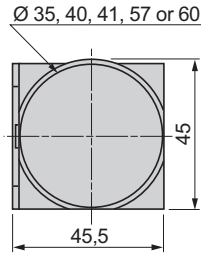
Spring return Ø 35, 57 and 60 mm	a = 28 mm
Push-pull Ø 35 to 60 mm	a = 32 mm



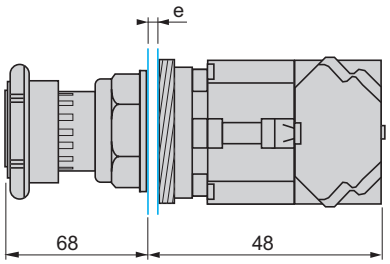
e: panel thickness 1 to 6 mm



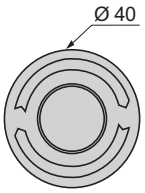




Turn to release 9001 KR16/SKR16H13, 9001 KR16/SKR16H2 and 9001 KR16/SKR16

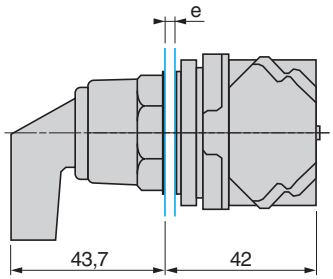


e: panel thickness 1 to 6 mm

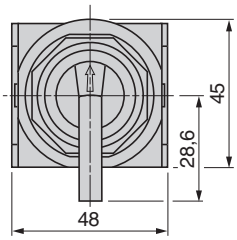


Selector switches

Long handle 9001 KS●●FB and 9001 SKS●●FB



e: panel thickness 1 to 6 mm



General (9001 K): page 1/220
General (9001 SK): page 1/222
Characteristics: page 1/224
References (9001 K): page 1/226
References (9001 SK): page 1/234

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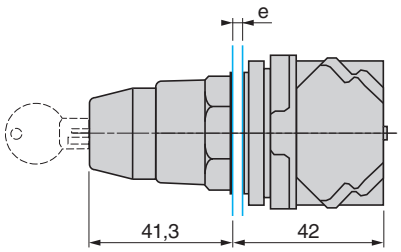
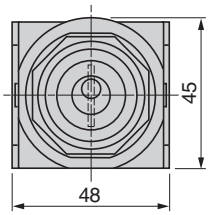
Control and signalling units Ø 30
Harmony® 9001 K & SK range
Pushbuttons, switches and pilot lights

Dimensions *(continued)*

Selector switches *(continued)*

Key switches 9001 KS●●K●●● (for the chromium metal bezel range only)

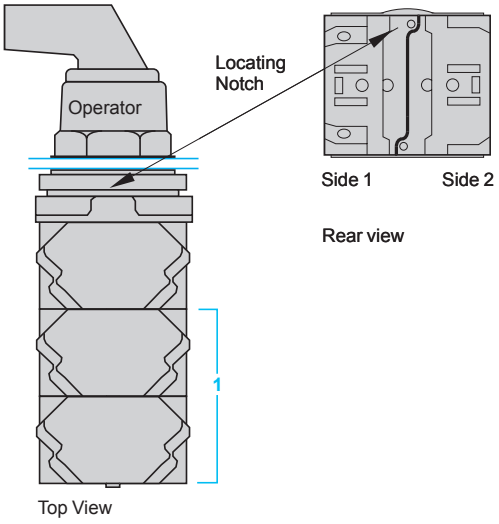




e: panel thickness 1 to 6 mm

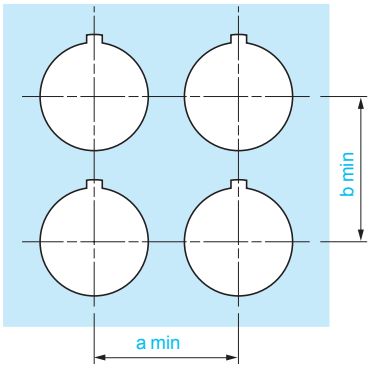
Mounting

Contact block mounting position



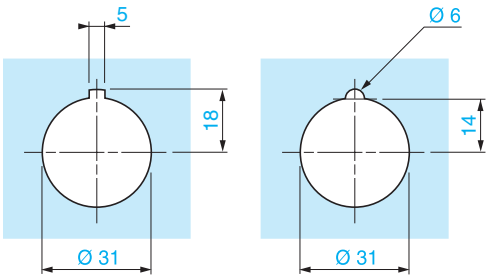
1 It is possible to mount up to 3 levels of contacts blocks (maximum of 6 contacts blocks) on 9001 K and 9001 SK references.For additional contact blocks to be installed by the customer, see page 1/240.

Panel cut-out



Individual cut-outs details

2 alternatives



Type of 9001 K unit	Legend plate	a	b
All units except Ø 57 mushroom head pushbuttons	9001 KN2●●	57,2	44,5
	9001 KN3●●	57,2	50,8
Ø 57 mushroom head pushbuttons	9001 KN2●●	57,2	57,2
	9001 KN3●●	57,2	57,2

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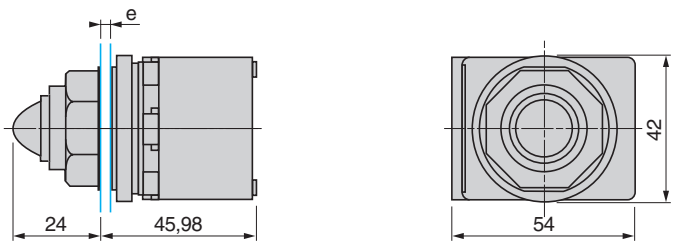
1

Dimensions

Pilot lights

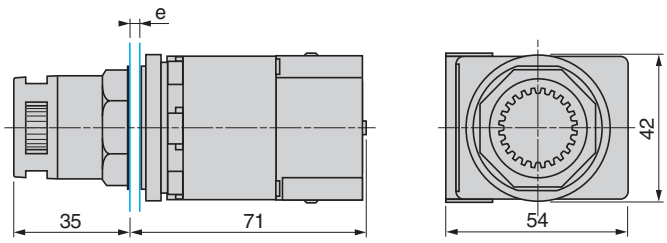
With BA 9s bulb 9001 KP●●● and 9001 SKP●●●



e: panel thickness 1 to 6 mm

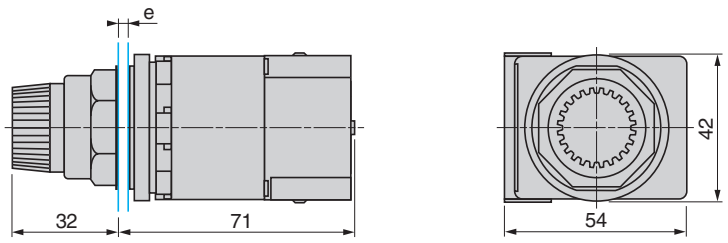
Illuminated pushbuttons, spring return

Flush push 9001 K3L●●●●●H13



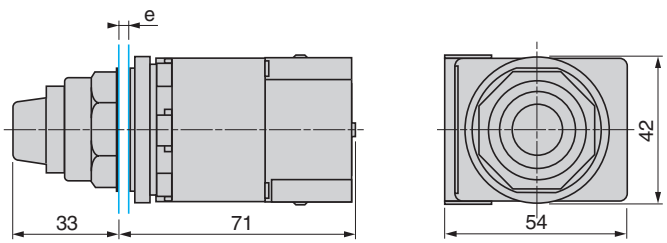
e: panel thickness 1 to 6 mm

Projecting push 9001 K2L●●●●●H13 and 9001 SK2L●●●●●H13



e: panel thickness 1 to 6 mm

"Push to test", projecting push 9001 KT●●●●●31 and 9001 SKT●●●●●31



e: panel thickness 1 to 6 mm

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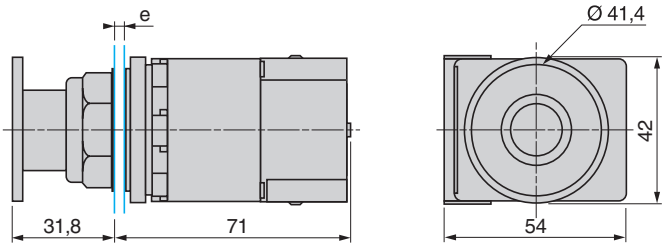
Control and signalling units Ø 30
Harmony® 9001 K & SK range
Pushbuttons, switches and pilot lights

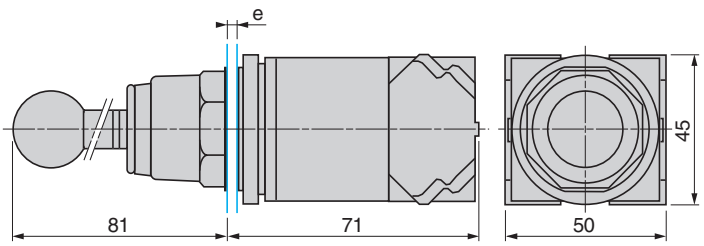
Dimensions

Illuminated mushroom head pushbuttons
9001 KR●P●●● and 9001 SKR●P●●●



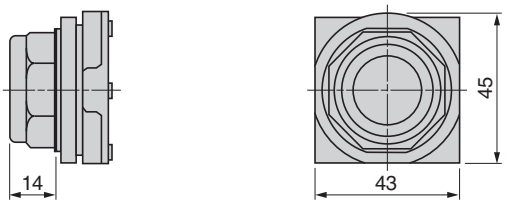
e: panel thickness 1 to 6 mm

Joystick controllers (for the chromium metal bezel range only)
9001 K●●H●

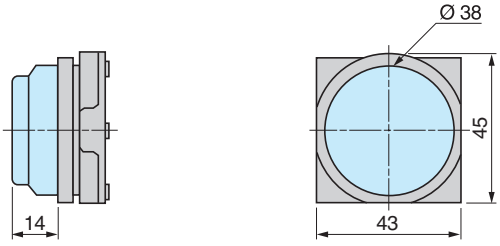


e: panel thickness 1 to 6 mm

Heads for spring return pushbuttons
9001 KR●U and 9001 SKR●U



Boots for pushbuttons
9001 KU●



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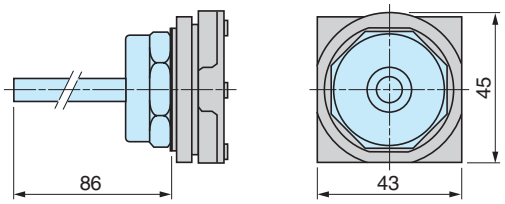
Control and signalling units Ø 30
Harmony® 9001 K & SK range
Pushbuttons, switches and pilot lights

Dimensions

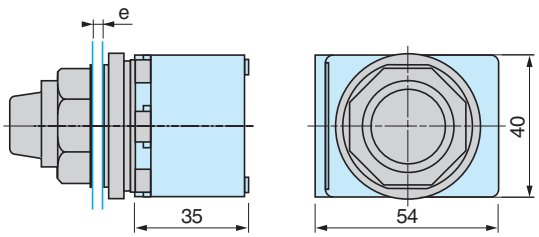
Rod for wobblestick

9001 K8



Light blocks for pilot lights and illuminated pushbuttons

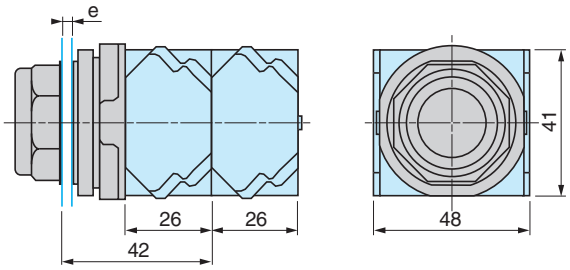
9001 KM●



e: panel thickness 1 to 6 mm

Contact blocks for pushbuttons (including illuminated)

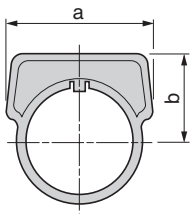
9001 KA●



e: panel thickness 1 to 6 mm
It is not possible to mount complementary contact blocks type 9001 KA4 to KA6.

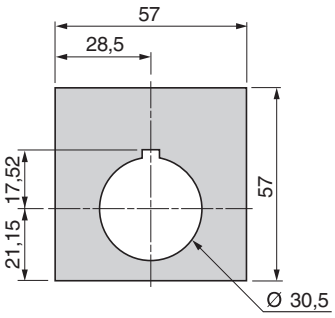
Legend plates

Aluminium plates 9001 KN●●●



	a	b
9001 KN2●●	41,3	24,6
9001 KN3●●	44,5	31,4

Plastic plates 9001 KN1●●●



General (9001 K): page 1/220 | General (9001 SK): page 1/222 | Characteristics: page 1/224 | References (9001 K): page 1/226 | References (9001 SK): page 1/234

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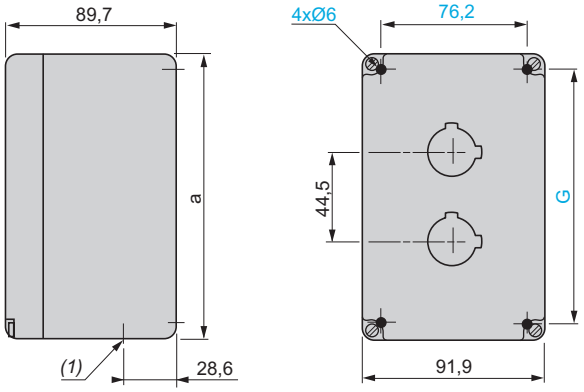
Control and signalling units Ø 30

Harmony® 9001 K & SK range

Accessories: enclosures for pushbuttons, switches and pilot lights

Dimensions

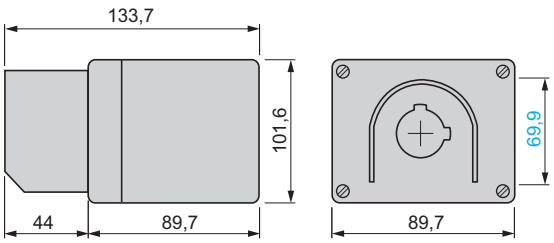
9001 KY● and 9001 TY● enclosures



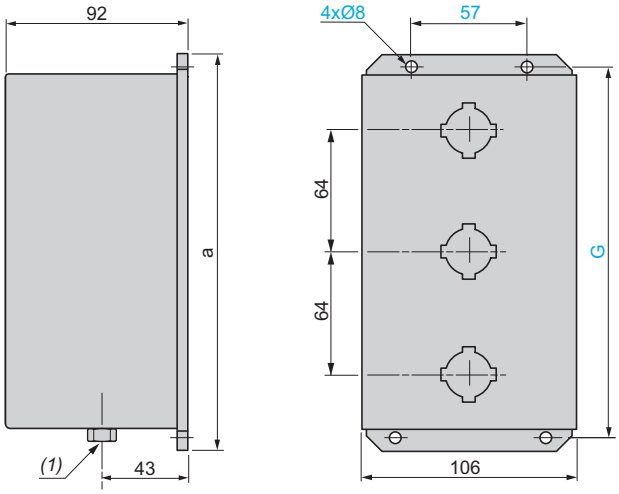
(1) Conduit thread: 9001 KY●: 3/4". 9001 TY●: 14 mm.

	a	G
9001 KY1, TY1	101.6	69.9
9001 KY2, TY2 (as shown)	146.1	114.3
9001 KY3, TY3	177.8	158.8
9001 KY4, TY4	235.0	203.2

9001 KYG1 and 9001 TYG1 enclosures



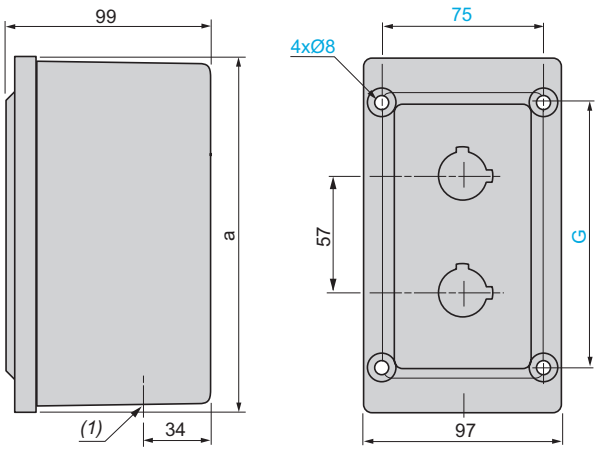
9001 KYSS● enclosures



(1) Knockout conduit thread: 3/4".

	a	G
9001 KYSS1	133	117
9001 KYSS2	197	181
9001 KYSS3 (as shown)	260	244
9001 KYSS4	324	308

9001 SKY● enclosures



(1) Knockout conduit thread: 3/4".

	a	G
9001 SKY1	169	124
9001 SKY2 (as shown)	169	124
9001 SKY3	226	181

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2 - Control stations and enclosures

Selection guide . . . . . page 2/2

Plastic control stations

■ XAL D and K control stations
for Harmony® Ø 22 control and signalling units XB5

□ Complete stations (screw clamp terminal connections) . . . . . *page 2/8*
□ Stations for customer assembly: empty enclosures . . . . . *page 2/12*
□ Stations for customer assembly: electrical blocks . . . . . *page 2/13*
□ Stations for customer assembly: heads . . . . . *page 2/14*
□ Stations for customer assembly: accessories . . . . . *page 2/23*

■ XAL G plastic control stations for severe environments . . . . . *page 2/33*

■ XAL E plastic control stations
for Harmony® Ø 22 control and signalling units XB7

□ Complete stations . . . . . *page 2/39*
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Polyester enclosures

■ XAP A polyester enclosures, undrilled or with cut-outs
for Harmony® Ø 22 control and signalling units . . . . . *page 2/52*

Metal control enclosures

■ Die-cast metal enclosures XAP M and XAP J (aluminium) . . . . . *page 2/53*

■ Sheet-steel enclosures XB2 SL . . . . . *page 2/54*

■ Die-cast metal enclosures XB2 SL (zinc alloy) . . . . . *page 2/54*

■ Flush-mounting enclosures XAP E. . . . . *page 2/54*

Control stations for specific applications

■ XAP S key operated control stations . . . . . *page 2/58*

■ XAL F lift inspection stations . . . . . *page 2/64*

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Control stations and enclosures

Type of applications	**All applications**			
Enclosures	**Plastic**			**Glass-reinforced polyester**
	Complete stations and separate components for customer assembly			**Empty insulated enclosures**
				
Main feature	Pre-drilled-control stations			Pre-drilled or undrilled enclosures
Associated control and signalling units	Harmony XB5 with plastic bezel		Harmony XB7, monolithic, plastic	Harmony XB4 with metal bezel Harmony XB5 with plastic bezel
Number of cut-outs for Ø 22 control and signalling units	1, 2, 3, 4 or 5	1, 2 or 3 (complete stations) 1, 2, 3, 4 or 5 (empty enclosures)	1, 2 or 3	1, 2, 4, 8 or 16
Material	Polycarbonate		ABS	Glass-reinforced polyester
Colour	Yellow lid Light grey base	Dark grey lid Light grey base	Light grey or yellow lid Light grey base	Coloured grey throughout
Degree of protection	IP 66		IP 54	IP 65
Function	Emergency Stop	Start or Stop Start-Stop with pilot light Movement control	According to equipment fitted: □ Start or Stop □ Start-Stop with pilot light □ Movement control □ Emergency stop	
Cable entries	Knock-outs			Tapped for cable gland
Type references	**XAL K**	**XAL D**	**XAL E**	**XAP A**
Page(s)	2/9 and 2/12	2/8 and 2/10	2/39	2/52

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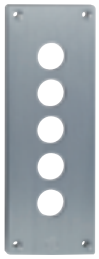
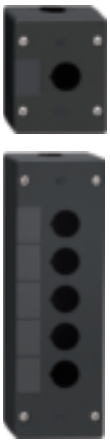
			Specific applications		
Metal		**Metal front plate, insulated protective rear cover**	**Plastic**		**Metal**
Empty enclosures		**Empty, flush mounting enclosures: front plate + rear cover**	**Control stations for severe environments**	**Lift inspection stations**	**Key operated control stations**
					
Pre-drilled enclosures	Pre-drilled or undrilled enclosures	Pre-drilled front plates & rear covers	Pre-drilled empty control stations	Pre-drilled empty enclosures or fitted stations	Fitted stations
Harmony XB4 with metal bezel Harmony XB5 with plastic bezel			Harmony XB5 with plastic bezel	Harmony XB5 or XB7 with plastic bezel	With key lock
8, 16, 24, 30 or 40	1, 2, 3, 4, 6, 8 or 12	1, 2, 3, 4 or 5	1, 2, 3, 4 or 5	1, 2, 3, 4, 5 or 6 with or without power socket	–
Aluminium alloy or sheet steel	Zinc or aluminium alloy	Front plate: brushed aluminium Rear cover:polystyrene	Mineral reinforced polyamide	Polycarbonate	Zinc alloy
Blue lid and base	**XAP M**: Blue lid Blue base **XAP J:** Yellow lid Blue base	Unpainted aluminium	Black lid Black base	Yellow lid Light grey base	Grey
IP 54	IP 65		IP 66 IP 69K	IP 44, IP 55 or IP 66 depending on model	IP 54
According to equipment fitted: □ Start or Stop □ Start-Stop with pilot light □ Movement control □ Emergency stop					Start-Stop
Drilled		Knock-outs	ISO 20	Knock-outs	Tapped for cable gland
XB2 SL	**XAP M, XAP J**	**XAP E**	**XAL G**	**XAL F**	**XAP S**
2/53	2/53	2/54	2/33	2/65	2/59

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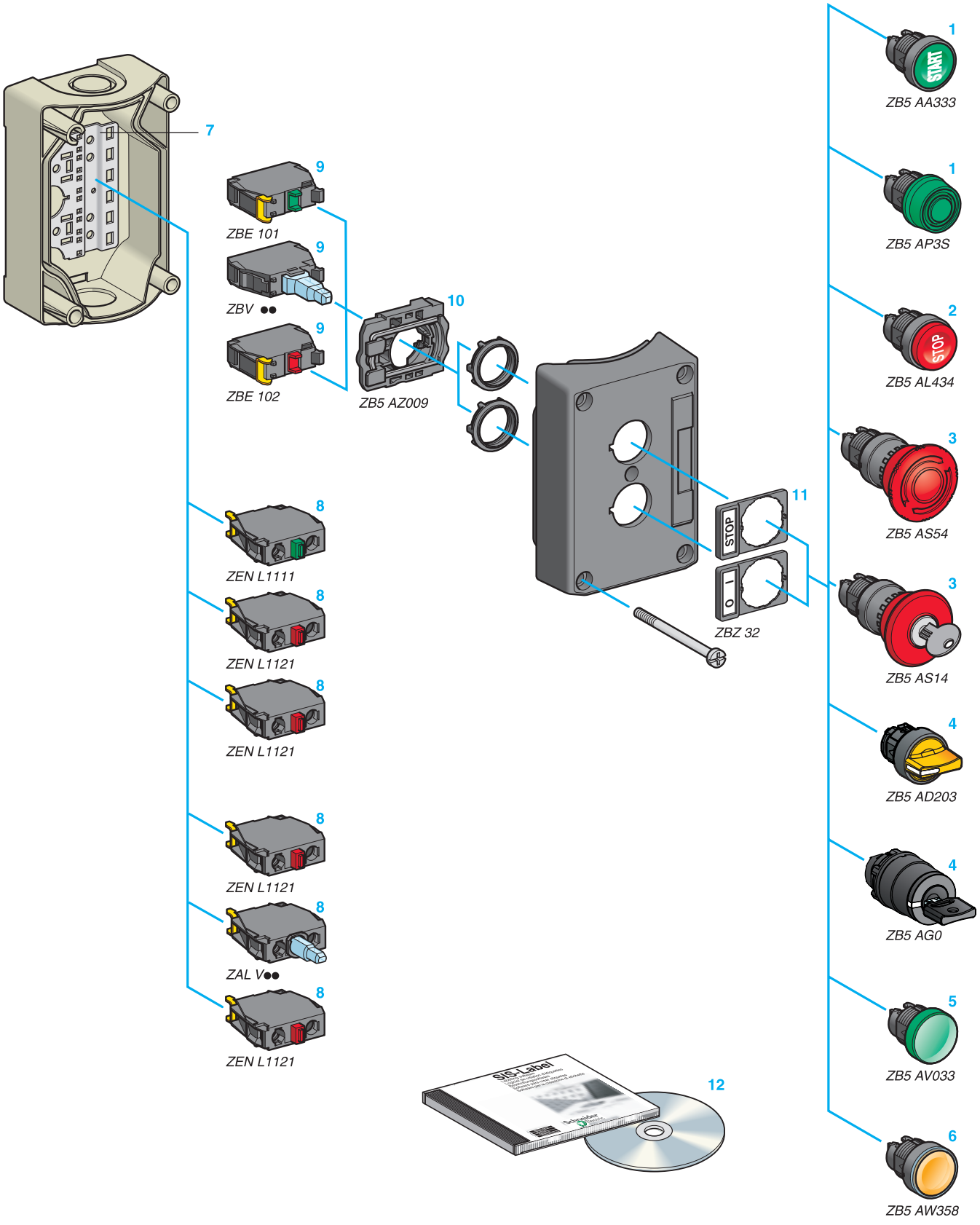
Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5



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Control stations and enclosures
Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5

XAL D and XAL K control stations are available in two forms:
- Complete.
- For customer assembly

These control stations use the plastic bezel pushbuttons, switches and pilot lights of the Harmony XB5 range, which offers a wide choice of circular and square types of head.

Complete stations

Pre-assembled

These are complete, ready to install, stations fitted with 1 to 3 buttons to cater for the most commonly encountered functions:
- **Start or Stop,** with:
  - 1 flush spring return pushbutton,
  - 1 red, spring return, mushroom head pushbutton.
- **Emergency stop or Emergency switching off,** with:
  - 1 red, latching, mushroom head pushbutton 3 (standard or trigger action), either push-pull or turn to release, with or without key.
- **Start-Stop,** with:
  - 2 flush spring return pushbuttons,
  - 1 flush spring return pushbutton 1 + 1 projecting spring return pushbutton 2,
  - 1 2-position selector switch 4 + 1 pilot light with integral red LED, if required.
- **Two functions,** with:
  - 2 flush spring return pushbuttons 1.
- **Three functions,** with:
  - 3 flush spring return pushbuttons 1,
  - 2 flush spring return pushbuttons 1 + 1 projecting spring return pushbutton 2,
  - 2 flush spring return pushbuttons 1 + 1 red, latching, mushroom head pushbutton 3.

These pushbuttons, switches and pilot lights comprise plastic heads from the Harmony XB5 range and electrical blocks (contact or light) 8 that are mounted in the back of the enclosure.

Stations for customer assembly

For customer assembly

These stations are for assembly by the user and offer a choice of 2 assembly methods:
- **Box method**

Identical to the pre-assembled versions. The electrical blocks 8 are mounted on a metal mounting plate in the back of the enclosure 7.
- **Station method**

The electrical blocks 9 are mounted directly beneath the heads using a body/fixing collar 10.

It is possible to assemble stations with 1 to 5 heads, each of which can be combined with 3 electrical blocks 8 or 9 (contact or light).

The XAL range offers a wide choice of head types for:
- Spring return pushbuttons 1 or 2, either marked or unmarked.
- Spring return mushroom head pushbuttons.
- Latching mushroom head pushbuttons 3.
- Selector switches with standard or long handle and key switches 4.
- Toggle switches.
- Pilot lights 5.
- Illuminated spring return pushbuttons 6.
- Illuminated selector switches with standard handle 4.

Accessories

For heads

Markings can be customised by using legend holders 11 which can either be fitted with pre-marked legends or legends engraved by the user. Alternatively, paper legends (protected), prepared using "SIS Label" software 12, or peel-off legends (supplied on sheet for marking by laser printer) can be used.

Characteristics: page 2/6
References: page 2/8
Dimensions: page 2/30

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Control stations and enclosures

Control stations XAL D and XAL K

For Harmony® Ø 22 control and signalling units XB5

Environment characteristics

Protective treatment	Standard version		"TH"
Ambient air temperature around the device	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70 unless otherwise stated
Electric shock protection			Conforming to IEC 61140: class II
Degree of protection			Conforming to IEC 60529: IP 66
			Conforming to NEMA: NEMA type 4X and 13
High pressure cleaning resistance		**Pa**	70 x 10^5 (70 bar); distance: 0.1 m Temperature: 55 °C
Mechanical shock protection	Conforming to EN 50102		With non illuminated heads: IK 03
			With illuminated heads: IK 05
Conformity to standards			EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5, EN/IEC 60204-1 and EN/ISO 13850 (trigger action Emergency stops and mechanical latching pushbuttons, see pages 2/9 and 2/16), IEC 60364-5-53 (Emergency switching off mechanical latching pushbuttons, see page 2/39) UL 508, CSA C22-2 n° 14, GB 14048.5
Product certifications	UL Listed, CSA, GOST		Standard single contacts with screw clamp terminals: A600; R300 Light blocks with screw clamp terminals
Terminal referencing			Conforming to EN 50005 and EN 50013
Material and colours			XAL D: polycarbonate, light grey RAL 7035 and dark grey RAL 7016
			XAL K: polycarbonate, light grey RAL 7035 and yellow RAL 1021
Cable entries			Knock-out entries for n° 13 (CM12, Pg 13.5) cable gland and tapped ISO 20

Contact function characteristics

Mechanical characteristics

Contact operation	N/C or N/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 Appendix K		All functions incorporating a N/C contact are positive opening operation
Operating travel (to change electrical state)	Pushbutton	**mm**	Changing N/C state: 1.5 Changing N/O state: 2.6 Total travel: 4.3
Operating force	Pushbutton	**N**	Changing N/C state: 3.5 Changing N/O state: 3.8
	Additional contact only (extra to change state)	**N**	Single N/C contact: 2 Single N/O contact: 2.3
	Emergency stop or Emergency switching off with N/C + N/O	**N**	Standard push-pull: 45 Trigger action push-pull: 50 Standard turn to release (with or without key): 40 Trigger action turn to release (with or without key): 44
Operating torque (to change electrical state)	Selector switches	**N.m**	N/O contact: 0.14
	Additional contact only	**N.m**	N/O contact: 0.05
Mechanical durability (in millions of operating cycles)	Spring return pushbutton		5
	Non illuminated selector switch		1
	Illuminated selector switch		0.5
	Toggle switch		0.5
	Emergency stop or Emergency switching off pushbutton		0.3
Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 12…500 Hz: 5 gn
Shock resistance	Conforming to IEC 60068-2-27		All functions except mushroom head pushbutton, spring return: □ half sine wave acceleration 11 ms: 50 gn □ half sine wave acceleration 18 ms: 30 gn Mushroom head pushbutton, spring return: □ half sine wave acceleration 11 ms: 10 gn

General: page 2/4 References: page 2/8 Dimensions: page 2/30

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Contact function characteristics (continued)

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²** **mm²**	Screw clamp terminals Min.: 1 x 0.22 without cable end Max.: 2 x 1.5 with cable end Cross head screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (1.2 N.m max.)		
Contact material			Silver alloy (Ag/Ni)		
Nominal thermal current	Conforming to EN/IEC 60947-5-1	**A**	Standard blocks with screw clamp terminals: 10		
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	Standard blocks with screw clamp terminals: 10 (gG cartridge fuse conforming to IEC 269-1)		
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Standard blocks with screw clamp terminals: Ui = 600 degree of pollution 3		
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Standard blocks with screw clamp terminals: Uimp = 6		
Rated operational characteristics Conforming to EN/IEC 60947-5-1	a.c. supply: utilisation category AC-15		A 600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A		
	d.c. supply: utilisation category DC-13		Q 600: Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.27 A or Ue = 125 V and Ie = 0.55 A		
Electrical durability Conforming to EN/IEC 60947-5-1 Appendix C Operating rate: 3600 operating cycles/hour Load factor: 0.5	a.c. supply for 1 million operating cycles: utilisation category AC-15	**V** **A**	24 4	120 3	230 2
	d.c. supply for 1 million operating cycles: utilisation category DC-13	**V** **A**	24 0.5	110 0.2	
Electrical reliability	Failure rate. Conforming to EN/IEC 60947-5-4		At 17 V and 5 mA, $\lambda < 10^{-8}$ At 5 V and 1 mA, $\lambda < 10^{-6}$		

Specific characteristics of light functions with integral LED

Mechanical characteristics

Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 12…500 Hz: 5 gn
Shock resistance	Conforming to IEC 60068-2-27		Half sine wave acceleration 11 ms: 50 gn Half sine wave acceleration 18 ms: 30 gn

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²** **mm²**	Screw clamp terminals Min.: 1 x 0.22 without cable end Max.: 2 x 1.5 with cable end Cross head screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (1.2 N.m max.)
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Pilot light blocks with integral LED: Ui = 250, degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Pilot light blocks with integral LED: Uimp = 4
Voltage limits	At nominal voltage	**V**	24 V: 19.2…30 ⎓ and 21.6…26.4 ∿ 110…120 V: 40…132 ∿ 240 V: 195…264 ∿
Current consumption	For all colours	**mA**	≂ 12 V supply blocks: 18 ≂ 24 V supply blocks: 18 ∿ 120 V supply blocks: 14 ∿ 240 V supply blocks: 14
Service life	At nominal voltage and at an ambient temperature of 25 °C	**H**	100,000
Surge withstand	Conforming to IEC 61000-4-5	**kV**	1
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	**V/m**	10
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8/6
Direct parallel connection across inductive load e.g. contactor coil or solenoid	Maximum power of load	**VA**	For applications involving high powers (≥ 30 VA), a **ZBZ V●** suppressor must be connected across the light block terminals (see page 2/13)
Electromagnetic emission	Conforming to EN 55011		Class B

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Complete stations (screw clamp terminal connections)

Start or Stop function

Light grey “RAL 7035” base, dark grey “RAL 7016” lid, lid fixing screws and nut material: stainless steel type A4, AISI 316.

Description	Type of push	Type of contact N/O	Type of contact N/C	Marking	Reference	Weight kg
Marking on pushbutton						
1 spring return pushbutton	Flush, green	1	–	I	**XAL D102**	0.135
				Marche	**XAL D104**	0.156
				Start	**XAL D103**	0.156
		1	1	I	**XAL D102E**	0.165
	Flush, red	–	1	O	**XAL D112**	0.156
				Arrêt	**XAL D117**	0.156
				Stop	**XAL D114**	0.165
		1	1	O	**XAL D112E**	0.165
				Stop	**XAL D114E**	0.165
	Projecting, red	–	1	O	**XAL D115**	0.157
				Arrêt	**XAL D118**	0.157
				Stop	**XAL D116**	0.157
Marking on legend holder and legend below head						
1 spring return pushbutton	Flush, green	1	–	Marche	**XAL D101**	0.157
				Start	**XAL D101H29**	0.157
	Flush, red	–	1	Arrêt	**XAL D111**	0.157
				Stop	**XAL D111H29**	0.157
1 mushroom head pushbutton, Ø 40 mm, spring return	Red	–	1	Arrêt	**XAL D164**	0.182

815189

XAL D102

815190

XAL D115

815191

XAL D101

815192

XAL D111

815193

XAL D164

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Complete stations (screw clamp terminal connections)

Emergency stop or Emergency switching off functions

Light grey “RAL 7035” base, yellow “RAL 1021” lid, lid fixing screws and nut material: stainless steel type A4, AISI 316.

Description	Type	Type of contact N/O	Type of contact N/C	Reference	Weight kg
Unmarked					
1 mushroom head pushbutton, Ø 40 mm, red Turn to release	Trigger action *(1) (2)*	–	1	**XAL K178**	0.194
		–	2	**XAL K178F**	0.194
		1	1	**XAL K178E**	0.194
		1	2	**XAL K178G**	0.194
	Standard *(3)*	–	1	**XAL K174**	0.178
		–	2	**XAL K174F**	0.188
		1	1	**XAL K174E**	0.188
		1	2	**XAL K174G**	0.197
1 mushroom head pushbutton, Ø 40 mm, red Key release (key n° 455)	Trigger action *(1) (2)*	–	1	**XAL K188**	0.188
		–	2	**XAL K188F**	0.188
		1	1	**XAL K188E**	0.188
		1	2	**XAL K188G**	0.188
	Standard *(3)*	–	1	**XAL K184**	0.178
		–	2	**XAL K184F**	0.188
		1	1	**XAL K184E**	0.188
		1	2	**XAL K184G**	0.197
1 mushroom head pushbutton, Ø 40 mm, red Push-pull	Trigger action *(1) (2)*	–	1	**XAL K198**	0.193
	Standard *(3)*	–	1	**XAL K194**	0.183

815196



XAL K178●

815197



XAL K188●

815195



XAL K198

(1) Mushroom head Emergency stop trigger action and mechanical latching pushbuttons conform to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 2006/42/EC and to standard EN/IEC 60947-5-5.

*(2) **Your Customer Care Centre may provide a control station type XAL K1●8 with marking of the Emergency stop function and of the logo in conformity with the requests of EN/ISO 13850 standard, paragraph 4.4.6.***

(3) Mushroom head switching off mechanical latching pushbuttons conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5.

Please consult your Customer Care Centre for full details of these standards and directives.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Complete stations (screw clamp terminal connections)

815203



XAL D224

815202



XAL D211H29

106613



XAL D134

106614



XAL D144

815199



XAL D363B

Start-Stop function

Light grey “RAL 7035” base, dark grey “RAL 7016” lid, lid fixing screws and nut material: stainless steel type A4, AISI 316.

Description	Type of push	Type of contact N/O	Type of contact N/C	Marking	Reference	Weight kg
Marking on pushbutton *(1)*						
2 spring return pushbuttons	1 flush, green 1 flush, red	1 –	– 1	I O	**XAL D213**	0.233
				Marche Arrêt	**XAL D224**	0.233
				Start Stop	**XAL D215**	0.233
		1 1	1 1	I O	**XAL D213E**	0.252
	1 flush, green 1 projecting, red	1 –	– 1	I O	**XAL D214**	0.234
				Start Stop	**XAL D225**	0.234
Marking on legend holder and legend below head						
2 spring return pushbuttons	1 flush, green 1 flush, red	1 –	– 1	Marche Arrêt	**XAL D211**	0.233
				Start Stop	**XAL D211H29**	0.233
	1 flush, green 1 flush, green	1 1	– –	Ouverture Fermeture	**XAL D241**	0.233
1 selector switch 2-position stay put	Standard handle	1	–	O-I	**XAL D134**	0.163
		1	–	Arrêt-Marche	**XAL D132**	0.163
	Key switch (key n° 455) key withdrawal from left-hand position	1	–	O-I	**XAL D144**	0.187
				Arrêt-Marche	**XAL D142**	0.196
		1	1	O-I	**XAL D144E**	0.196

Description	Type of push	Type of contact N/O	Type of contact N/C	Marking	Pilot light supply V	Reference	Weight kg
With pilot light and marking on pushbutton *(1)*							
2 spring return pushbuttons and 1 pilot light with integral red LED Protected LED	1 flush, green 1 flush, red	1 –	– 1	I O	≂ 24	**XAL D363B**	0.261
					~ 120	**XAL D363G**	0.261
					~ 230	**XAL D363M**	0.261
With pilot light and marking on legend holder and legend below head							
2 spring return pushbuttons and 1 pilot light with integral red LED	1 flush, green 1 flush, red	1 –	– 1	Marche Arrêt	≂ 24	**XAL D361B**	0.261
					~ 230	**XAL D361M**	0.261

(1) Push supplied with cap not clipped-in, allowing orientation through 90° in 360° steps.

General: page 2/4 Characteristics: page 2/6 Dimensions: page 2/30

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Complete stations (screw clamp terminal connections)


815206

XAL D222


815209

XAL D339


815208

XAL D334


815207

XAL D321

Two function

Light grey “RAL 7035” base, dark grey “RAL 7016” lid, lid fixing screws and nut material: stainless steel type A4, AISI 316.

Description	Type of push	Type of contact N/O	Type of contact N/C	Marking	Reference	Weight kg
Marking on pushbutton *(1)*						
2 spring return pushbuttons	1 flush, white 1 flush, black	1 1	– –	⇧ ⇩	**XAL D222**	0.233
				➡ ⇦	**XAL D223**	0.233
		1 1	1 1	⇧ ⇩	**XAL D222E**	0.233

Three function (light grey “RAL 7035” base, dark grey “RAL 7016” lid)

Description	Type of push	Type of contact N/O	Type of contact N/C	Marking	Reference	Weight kg
Marking on pushbutton *(1)*						
3 spring return pushbuttons	1 flush, green 1 flush, red 1 flush, green	1 – 1	– 1 –	I O II	**XAL D339**	0.298
	1 flush, white 1 flush, red 1 flush, black	1 – 1	– 1 –	⇧ O ⇩	**XAL D324**	0.298
				⇧ Stop ⇩	**XAL D326**	0.298
				➡ O ⇦	**XAL D334**	0.298
		1 1 1	1 1 1	⇧ O ⇩	**XAL D324E**	0.317
	1 flush, white 1 flush, red 1 flush, black	1 – 1	– 1 –	⇧ O ⇩	**XAL D325**	0.299
2 spring return pushbuttons + 1 latching mushroom head pushbutton, Ø 30 mm	1 flush, white 1 mushroom head, red *(2)* 1 flush, black	1 – 1	– 1 –	⇧ O ⇩	**XAL D328**	0.317
Marking on legend holder and legend below head						
3 spring return pushbuttons	1 flush, green 1 flush, red 1 flush, green	1 – –	– 1 –	Avant Arrêt Arrière	**XAL D311**	0.299
				Montée Arrêt Descente	**XAL D321**	0.299

(1) Push supplied with cap not clipped-in, allowing orientation through 90° in 360° steps.
(2) Standard turn to release.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: empty enclosures

815211



XAL D02

PF540623



XAL K01H29

Empty control stations (lid fixing screws and nut material: stainless steel type A4, AISI 316)

Description	Text and logo	Marking of the control station	Number of cut-outs	Reference	Weight kg
Light grey "RAL 7035" base Dark grey "RAL 7016" lid	Without	–	1	**XAL D01**	0.136
			2	**XAL D02**	0.193
			3	**XAL D03**	0.238
			4	**XAL D04**	0.278
			5	**XAL D05**	0.322
Light grey "RAL 7035" base Yellow "RAL 1021" lid For Emergency stop function	Without	–	1	**XAL K01**	0.136
			2	**XAL K02**	0.193
			3	**XAL K03**	0.238
			4	**XAL K04**	0.278
			5	**XAL K05**	0.322
	With text (1) and logo (2)	ARRET D'URGENCE	1	**XAL K01HFR**	0.136
		EMERGENCY STOP	1	**XAL K01H29**	0.136
		NOT-HALT	1	**XAL K01H44**	0.136
CSA + UL certified *(3)*					
Light grey "RAL 7035"base Dark grey "RAL 7016" lid	Without	–	1	**XAL D01H7**	0.136
			2	**XAL D02H7**	0.205
			3	**XAL D03H7**	0.238

(1) For supply of the text in an other language, please consult your Customer care centre.
*(2) **For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***
(3) Volt-free commoning/earth terminal included.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: electrical blocks



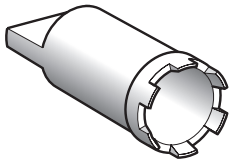
ZEN L1111



ZAL VB●



ZB5 SZ3



ZB5 AZ905



ZBE 101



ZBV V●



ZB5 AZ009

Electrical blocks and accessories for mounting in back of enclosure

Description	Description	Colour	Sold in lots of	Unit reference	Weight kg
Electrical blocks with screw clamp terminal connections					
Standard contact blocks *(1)*	N/O contact	–	5	**ZEN L1111**	0.015
	N/C contact	–	5	**ZEN L1121**	0.015
Light blocks with integral LED *(1)*	⎓ 24 V	White	5	**ZAL VB1**	0.015
		Green	5	**ZAL VB3**	0.015
		Red	5	**ZAL VB4**	0.015
		Yellow	5	**ZAL VB5**	0.015
		Blue	5	**ZAL VB6**	0.015
	∿ 110…120 V	White	5	**ZAL VG1**	0.015
		Green	5	**ZAL VG3**	0.015
		Red	5	**ZAL VG4**	0.015
		Yellow	5	**ZAL VG5**	0.015
		Blue	5	**ZAL VG6**	0.015
	∿ 230…240 V	White	5	**ZAL VM1**	0.015
		Green	5	**ZAL VM3**	0.015
		Red	5	**ZAL VM4**	0.015
		Yellow	5	**ZAL VM5**	0.015
		Blue	5	**ZAL VM6**	0.015

Description	For use with	Sold in lots of	Unit reference	Weight kg
Accessories for electrical blocks				
Blanking plug	Ø 22 mm units	10	**ZB5 SZ3**	0.008
Nut	Head fixing	10	**ZB5 AZ901**	0.002
Volt-free terminal	Commoning/earth	10	**XAL Z09**	0.003
Bezel tool	For tightening nut ZB5 AZ901	1	**ZB5 AZ905**	0.016

Electrical blocks and accessories for mounting beneath heads

Description	Description	Colour	Sold in lots of	Unit reference	Weight kg
Electrical blocks with screw clamp terminal connections *(2)* (for use with body/fixing collar ZB5 AZ009)					
Standard contact blocks	N/O contact	–	5	**ZBE 101**	0.016
	N/C contact	–	5	**ZBE 102**	0.016
Light blocks with integral LED	⎓ 24 V	White	5	**ZBV B1**	0.016
		Green	5	**ZBV B3**	0.016
		Red	5	**ZBV B4**	0.016
		Yellow	5	**ZBV B5**	0.016
		Blue	5	**ZBV B6**	0.016
	∿ 110…120 V	White	5	**ZBV G1**	0.016
		Green	5	**ZBV G3**	0.016
		Red	5	**ZBV G4**	0.016
		Yellow	5	**ZBV G5**	0.016
		Blue	5	**ZBV G6**	0.016
	∿ 230…240 V	White	5	**ZBV M1**	0.016
		Green	5	**ZBV M3**	0.016
		Red	5	**ZBV M4**	0.016
		Yellow	5	**ZBV M5**	0.016
		Blue	5	**ZBV M6**	0.016

Description	For use with		Level of protection	Unit reference	Weight kg
Accessories for electrical blocks					
LED suppressors	Electrical light blocks with integral LED	∿ 120 V	25…120 VA	**ZBZ VG**	0.010
		∿ 230 V	30…230 VA	**ZBZ VM**	0.010
Body/fixing collar Sold in lots of 10	Electrical blocks (contact or light)		–	**ZB5 AZ009**	0.006

(1) A maximum of 3 electrical blocks can be fitted per associated head.
(2) For electrical blocks for printed circuit board connection: please consult your customer care centre.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads



ZB5 AA0



ZB5 AA5



ZB5 AP2S



ZB5 AL3



ZB5 CA2



ZB5 CA5

Heads for spring return pushbuttons - unmarked

Shape of head	Type of push	Colour of cap	Reference	Weight kg
	Without cap *(1)*	–	**ZB5 AA0**	0.022
	Flush, with set of 6 coloured caps	6 colours *(2)*	**ZB5 AA9**	0.027
	Flush	White	**ZB5 AA1**	0.018
		Black	**ZB5 AA2**	0.018
		Green	**ZB5 AA3**	0.018
		Red	**ZB5 AA4**	0.018
		Yellow	**ZB5 AA5**	0.018
		Blue	**ZB5 AA6**	0.018
		Grey	**ZB5 AA8**	0.018
	Flush with transparent cap, for insertion of legend *(3)*	White	**ZB5 AA18**	0.018
		Green	**ZB5 AA38**	0.018
		Red	**ZB5 AA48**	0.018
		Yellow	**ZB5 AA58**	0.018
		Blue	**ZB5 AA68**	0.018
	Booted (coloured silicone) Can be replaced without dismantling the head	White	**ZB5 AP1S**	0.014
		Black	**ZB5 AP2S**	0.014
		Green	**ZB5 AP3S**	0.014
		Red	**ZB5 AP4S**	0.014
		Yellow	**ZB5 AP5S**	0.014
		Blue	**ZB5 AP6S**	0.014
	Projecting	White	**ZB5 AL1**	0.019
		Black	**ZB5 AL2**	0.019
		Green	**ZB5 AL3**	0.019
		Red	**ZB5 AL4**	0.019
		Yellow	**ZB5 AL5**	0.019
		Blue	**ZB5 AL6**	0.019
	Flush (high guard)	White	**ZB5 AA14**	0.020
		Black	**ZB5 AA24**	0.020
		Green	**ZB5 AA34**	0.020
		Red	**ZB5 AA44**	0.020
		Yellow	**ZB5 AA54**	0.020
		Blue	**ZB5 AA64**	0.020
	Recessed (high guard)	White	**ZB5 AA16**	0.019
		Black	**ZB5 AA26**	0.019
		Green	**ZB5 AA36**	0.019
		Red	**ZB5 AA46**	0.019
		Yellow	**ZB5 AA56**	0.019
		Blue	**ZB5 AA66**	0.019
	Flush	White	**ZB5 CA1**	0.019
		Black	**ZB5 CA2**	0.019
		Green	**ZB5 CA3**	0.019
		Red	**ZB5 CA4**	0.019
		Yellow	**ZB5 CA5**	0.019
		Blue	**ZB5 CA6**	0.019
	Projecting	White	**ZB5 CL1**	0.021
		Black	**ZB5 CL2**	0.021
		Green	**ZB5 CL3**	0.021
		Red	**ZB5 CL4**	0.021
		Yellow	**ZB5 CL5**	0.021
		Blue	**ZB5 CL6**	0.021

(1) Cap to be ordered separately, see page 2/27.
(2) Head supplied with 6 different coloured caps (white, black, green, red, yellow, blue).
(3) For legend ordering information, see page 2/26.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads


ZB5 AA331


ZB5 AA432


ZB5 AL232


ZB5 AC24


ZB5 AC2

Heads for spring return pushbuttons - marked

Shape of head	Type of push	Marking		Colour of cap	Reference	Weight
		Text	Colour			kg
	Flush *(1)*	I	White	Green	**ZB5 AA331**	0.018
			Black	White	**ZB5 AA131**	0.018
		II	White	Green	**ZB5 AA336**	0.018
			Black	White	**ZB5 AA136**	0.018
		START	White	Green	**ZB5 AA333**	0.018
			Black	White	**ZB5 AA133**	0.018
		ON	White	Green	**ZB5 AA341**	0.018
			Black	White	**ZB5 AA141**	0.018
		MARCHE	White	Green	**ZB5 AA342**	0.018
			Black	White	**ZB5 AA142**	0.018
			White	Black	**ZB5 AA245**	0.018
			Black	White	**ZB5 AA145**	0.018
		O	White	Red	**ZB5 AA432**	0.018
				Black	**ZB5 AA232**	0.018
		ARRET	White	Red	**ZB5 AA433**	0.018
				Black	**ZB5 AA233**	0.018
		STOP	White	Red	**ZB5 AA434**	0.018
				Black	**ZB5 AA234**	0.018
		OFF	White	Red	**ZB5 AA435**	0.018
				Black	**ZB5 AA235**	0.018
		UP	Black	White	**ZB5 AA343**	0.018
		DOWN	White	Black	**ZB5 AA344**	0.018
		↑	White	Black	**ZB5 AA335**	0.018
			Black	White	**ZB5 AA334**	0.018
	Projecting *(1)*	O	White	Red	**ZB5 AL432**	0.019
				Black	**ZB5 AL232**	0.019
		ARRET	White	Red	**ZB5 AL433**	0.019
				Black	**ZB5 AL233**	0.019
		STOP	White	Red	**ZB5 AL434**	0.019
				Black	**ZB5 AL234**	0.019
		OFF	White	Red	**ZB5 AL435**	0.019
				Black	**ZB5 AL235**	0.019
	Flush *(1)*	I	White	Green	**ZB5 CA331**	0.019
		O	White	Red	**ZB5 CA432**	0.019
		+	White	Black	**ZB5 CA2934**	0.019
		↑	White	Black	**ZB5 CA2912**	0.019
		R	White	Blue	**ZB5 CA6939**	0.019

Mushroom heads for spring return pushbuttons

Shape of head	Diameter of push	Colour of push	Reference	Weight
	mm			kg
	30	Black	**ZB5 AC24**	0.027
		Green	**ZB5 AC34**	0.027
		Red	**ZB5 AC44**	0.027
		Yellow	**ZB5 AC54**	0.027
		Blue	**ZB5 AC64**	0.027
	40	Black	**ZB5 AC2**	0.046
		Green	**ZB5 AC3**	0.046
		Red	**ZB5 AC4**	0.046
		Yellow	**ZB5 AC5**	0.046
		Blue	**ZB5 AC6**	0.046

(1) Push supplied with cap not clipped-in, allowing orientation through 90° in 360° steps.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads

815243



ZB5 AS844

815246



ZB5 AS934

815244



ZB5 AT44

815245



ZB5 AS54

Mushroom heads for latching pushbuttons
(Emergency stop: colour red)

Shape of head	Type of push	Diameter of push mm	Colour of push	Reference	Weight kg
	**Trigger action Push-pull**	40	Red	**ZB5 AT84** *(1)*	0.050
	**Trigger action Turn to release**	30	Red	**ZB5 AS834** *(1)*	0.042
		40	Red	**ZB5 AS844** *(1)*	0.046
	**Trigger action Key release (key n° 455)** *(3)*	30	Red	**ZB5 AS934** *(1) (4)*	0.068
		40	Red	**ZB5 AS944** *(1)*	0.071
		60	Red	**ZB5 AS964** *(1)*	0.092
	**Trigger action Key release (key n° 4A185)**	40	Red	**ZB5 AS944D** *(1)*	0.071
	**Push-pull**	30	Black	**ZB5 AT24** *(2)*	0.044
			Red	**ZB5 AT44** *(2)*	0.044
		40	Black	**ZB5 AT2** *(2)*	0.049
			Red	**ZB5 AT4** *(2)*	0.049
	**Turn to release**	30	Black	**ZB5 AS42** *(2)*	0.040
			Red	**ZB5 AS44** *(2)*	0.040
		40	Black	**ZB5 AS52** *(2)*	0.044
			Red	**ZB5 AS54** *(2)*	0.044
			Yellow	**ZB5 AS55** *(2)*	0.044
	**Key release (key n° 455)** *(3)*	30	Black	**ZB5 AS72** *(2)*	0.040
			Red	**ZB5 AS74** *(2)*	0.040
		40	Black	**ZB5 AS12** *(2)*	0.044
			Red	**ZB5 AS14** *(2) (3)*	0.044
	**Key release (key n° 4A185)**	40	Red	**ZB5 AS14D** *(2)*	0.044

(1) Mushroom head Emergency stop trigger action and mechanical latching pushbuttons conform to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 2006/42/EC and to standard EN/IEC 60947-5-5.

(2) Mushroom head switching off mechanical latching pushbuttons conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5. Please consult your customer care centre for full details of these standards and directives.

(3) For specific keys with other numbers, please consult your customer care centre.

(4) Other key numbers:
- *key n° 421E: add suffix **12** to the reference.*
- *key n° 458A: add suffix **10** to the reference.*
- *key n° 520E: add suffix **14** to the reference.*
- *key n° 3131A: add suffix **20** to the reference.*

*Example: The reference for a Ø 40 mushroom head for a trigger action latching pushbutton with release by key n° 421E becomes: **ZB5 AS94412**.*

General: page 2/4 Characteristics: page 2/6 Dimensions: page 2/30

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads



ZB5 AD2

Heads for selector switches *(1)*

Shape of head	Type of operator	Number and type of positions	Reference	Weight kg
	Standard handle, black	2 - stay put	**ZB5 AD2**	0.017
		2 - spring return from right to left	**ZB5 AD4**	0.020
		3 - stay put	**ZB5 AD3**	0.017
		3 - spring return to centre	**ZB5 AD5**	0.017
		3 - spring return from left to centre	**ZB5 AD7**	0.017
		3 - spring return from right to centre	**ZB5 AD8**	0.017
	Standard handle, white	2 - stay put	**ZB5 AD201**	0.017
		2 - spring return from right to left	**ZB5 AD401**	0.020
		3 - stay put	**ZB5 AD301**	0.017
		3 - spring return to centre	**ZB5 AD501**	0.017
		3 - spring return from left to centre	**ZB5 AD701**	0.017
		3 - spring return from right to centre	**ZB5 AD801**	0.017
	Standard handle, green	2 - stay put	**ZB5 AD203**	0.017
		2 - spring return from right to left	**ZB5 AD403**	0.020
		3 - stay put	**ZB5 AD303**	0.017
		3 - spring return to centre	**ZB5 AD503**	0.017
		3 - spring return from left to centre	**ZB5 AD703**	0.017
		3 - spring return from right to centre	**ZB5 AD803**	0.017

(1) Can only be used for actuation of end of row (side) mounted contacts.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads



ZB5 AD●●●

Heads for selector switches *(1) (continued)*

Shape of head	Type of operator	Number and type of positions	Reference	Weight kg
	**Standard handle, red**	2 - stay put 	**ZB5 AD204**	0.017
		2 - spring return from right to left 	**ZB5 AD404**	0.020
		3 - stay put 	**ZB5 AD304**	0.017
		3 - spring return to centre 	**ZB5 AD504**	0.017
		3 - spring return from left to centre 	**ZB5 AD704**	0.017
		3 - spring return from right to centre 	**ZB5 AD804**	0.017
	Standard handle, yellow	2 - stay put 	**ZB5 AD205**	0.017
		2 - spring return from right to left 	**ZB5 AD405**	0.020
		3 - stay put 	**ZB5 AD305**	0.017
		3 - spring return to centre 	**ZB5 AD505**	0.017
		3 - spring return from left to centre 	**ZB5 AD705**	0.017
		3 - spring return from right to centre 	**ZB5 AD805**	0.017
	Standard handle, blue	2 - stay put 	**ZB5 AD206**	0.017
		2 - spring return from right to left 	**ZB5 AD406**	0.020
		3 - stay put 	**ZB5 AD306**	0.017
		3 - spring return to centre 	**ZB5 AD506**	0.017
		3 - spring return from left to centre 	**ZB5 AD706**	0.017
		3 - spring return from right to centre 	**ZB5 AD806**	0.017



ZB5 AJ●

Shape of head	Type of operator	Number and type of positions	Reference	Weight kg
	**Long handle, black**	2 - stay put 	**ZB5 AJ2**	0.017
		2 - spring return from right to left 	**ZB5 AJ4**	0.020
		3 - stay put 	**ZB5 AJ3**	0.017
		3 - spring return to centre 	**ZB5 AJ5**	0.017
		3 - spring return from left to centre 	**ZB5 AJ7**	0.017
		3 - spring return from right to centre 	**ZB5 AJ8**	0.017

(1) Can only be used for actuation of end of row (side) mounted contacts.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads

106221

ZB5 AD39

106224

ZB5 AG2

106223

ZB5 AG3

Heads for selector switches *(1) (continued)*

Shape of head	Type of operator	Number and type of positions *(2)*		Reference	Weight kg
	Knurled knob, black	2 - stay put		**ZB5 AD29**	0.020
		2 - spring return from right to left		**ZB5 AD49**	0.024
		3 - stay put		**ZB5 AD39**	0.020
		3 - spring return to centre		**ZB5 AD59**	0.020
		3 - spring return from left to centre		**ZB5 AD79**	0.020
		3 - spring return from right to centre		**ZB5 AD89**	0.020
	Key switch with key n° 455 *(4)*	2 - stay put		**ZB5 AG2** *(3)*	0.057
				ZB5 AG02 *(3)*	0.057
				ZB5 AG4 *(3)*	0.057
		2 - spring return from right to left		**ZB5 AG6** *(3)*	0.061
		3 - stay put		**ZB5 AG0** *(3)*	0.057
				ZB5 AG3 (3)	0.057
				ZB5 AG5 *(3)*	0.057
				ZB5 AG9 *(3)*	0.057
				ZB5 AG09 *(3)*	0.057
		3 - spring return from left to centre		**ZB5 AG1** *(3)*	0.057
		3 - spring return to centre		**ZB5 AG7** *(3)*	0.057
		3 - spring return from right to centre		**ZB5 AG8** *(3)*	0.057
				ZB5 AG08 *(3)*	0.057

(1) Can only be used for actuation of end of row (side) mounted contacts.
(2) The symbol "⚷" indicates key withdrawal position(s).
(3) Other key numbers:
*- key n° 421E: add suffix **12** to the reference,*
*- key n° 458A: add suffix **10** to the reference,*
*- key n° 520E: add suffix **14** to the reference,*
*- key n° 3131A: add suffix **20** to the reference.*
Example:
*For a key switch head with key n° 421E, 2-position stay put with key withdrawal from the left-hand position, the reference becomes: **ZB5 AG212**.*
(4) For specific keys with other numbers, please consult your customer care centre.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads

106224



ZB5 AG●●

Heads for selector switches *(1) (continued)*

Shape of head	Type of operator	Number and type of positions *(2)*		Reference	Weight kg
	Key switch with key n° 8D1	2 - stay put		**ZB5 AG2D**	0.057
				ZB5 AG02D	0.057
				ZB5 AG4D	0.057
		2 - spring return from right to left		**ZB5 AG6D**	0.061
		3 - stay put		**ZB5 AG0D**	0.057
				ZB5 AG3D	0.057
				ZB5 AG5D	0.057
				ZB5 AG9D	0.057
				ZB5 AG09D	0.057
				ZB5 AG03D	0.057
				ZB5 AG04D	0.057
		3 - spring return from left to centre		**ZB5 AG06D**	0.057
				ZB5 AG1D	0.057
				ZB5 AG07D	0.057
		3 - spring return from right to centre		**ZB5 AG8D**	0.057
				ZB5 AG08D	0.057
				ZB5 AG05D	0.057
		3 - spring return to centre		**ZB5 AG7D**	0.057

Heads for toggle switches

Shape of head	Description	Lever	Type of position	Reference	Weight kg
	2-position	Black	Stay put	**ZB5 AD28**	0.023
			Spring return	**ZB5 AD48**	0.023
		White	Stay put	**ZB5 AD2801**	0.023
		Red	Stay put	**ZB5 AD2804**	0.023
		Blue	Stay put	**ZB5 AD2806**	0.023

815307



ZB5 AD28

(1) Can only be used for actuation of end of row (side) mounted contacts.
(2) The symbol "⚷" indicates key withdrawal position(s).

General: page 2/4 Characteristics: page 2/6 Dimensions: page 2/30

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Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads

815314



ZB5 AV053

Heads for pilot lights

Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
With plain lens				
	With integral LED Protected LED	White	**ZB5 AV013**	0.017
		Green	**ZB5 AV033**	0.017
		Red	**ZB5 AV043**	0.017
		Yellow	**ZB5 AV053**	0.017
		Blue	**ZB5 AV063**	0.017
	With integral LED Protected LED	White	**ZB5 CV013**	0.020
		Green	**ZB5 CV033**	0.020
		Red	**ZB5 CV043**	0.020
		Yellow	**ZB5 CV053**	0.020
		Blue	**ZB5 CV063**	0.020
		5 colours *(1)*	**ZB5 CV003**	0.028
With plain lens, for insertion of legend *(2)*				
	With integral LED Protected LED	White	**ZB5 AV013E**	0.017
		Green	**ZB5 AV033E**	0.017
		Red	**ZB5 AV043E**	0.017
		Yellow	**ZB5 AV053E**	0.017
		Blue	**ZB5 AV063E**	0.017
With grooved lens *(3)*				
	With integral LED Protected LED	White	**ZB5 AV013S**	0.017
		Green	**ZB5 AV033S**	0.017
		Red	**ZB5 AV043S**	0.017
		Yellow	**ZB5 AV053S**	0.017
		Blue	**ZB5 AV063S**	0.017

815315



ZB5 AW313

815316



ZB5 AW363

815317



ZB5 AW143

815318



ZB5 CW313

Heads for spring return illuminated pushbuttons

Shape of head	Type of push	Colour	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED Protected LED				
	Flush, plain lens	White	**ZB5 AW313**	0.017
		Green	**ZB5 AW333**	0.017
		Red	**ZB5 AW343**	0.017
		Yellow	**ZB5 AW353**	0.017
		Blue	**ZB5 AW363**	0.017
	Flush, grooved lens *(3)*	White	**ZB5 AW313S**	0.016
		Green	**ZB5 AW333S**	0.016
		Red	**ZB5 AW343S**	0.016
		Yellow	**ZB5 AW353S**	0.016
		Blue	**ZB5 AW363S**	0.016
	Flush for insertion of legend *(1)*	White	**ZB5 AA18**	0.018
		Green	**ZB5 AA38**	0.018
		Red	**ZB5 AA48**	0.018
		Yellow	**ZB5 AA58**	0.018
		Blue	**ZB5 AA68**	0.018
	Projecting	White	**ZB5 AW113**	0.018
		Green	**ZB5 AW133**	0.018
		Red	**ZB5 AW143**	0.018
		Yellow	**ZB5 AW153**	0.018
		Blue	**ZB5 AW163**	0.018
	Flush for insertion of legend *(1)*	White	**ZB5 CW313**	0.023
		Green	**ZB5 CW333**	0.023
		Red	**ZB5 CW343**	0.023
		Yellow	**ZB5 CW353**	0.023
		Blue	**ZB5 CW363**	0.023

(1) Head supplied with 5 different coloured lenses (white, green, red, yellow, blue) for insertion of legend. For legend ordering information: see page 2/26.
(2) For legend ordering information: see page 2/26.
(3) For use in bright ambient light conditions (outdoors in sunlight, for example).

Other versions Heads for flush pushbuttons with illuminated ring.
Please consult your customer care centre.

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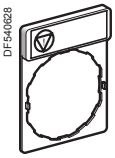
Control stations and enclosures

Plastic control stations XAL D and XAL K
For Harmony® Ø 22 control and signalling units XB5
Stations for customer assembly: heads

Heads for illuminated selector switches with standard handle

Shape of head	Number and type of positions	Colour of handle	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED Protected LED				
 *ZB5 AK1263*	**2 - stay put**	White	**ZB5 AK1213**	0.021
		Green	**ZB5 AK1233**	0.021
		Red	**ZB5 AK1243**	0.021
		Yellow	**ZB5 AK1253**	0.021
		Blue	**ZB5 AK1263**	0.021
	2 - spring return from right to left	White	**ZB5 AK1413**	0.021
		Green	**ZB5 AK1433**	0.021
		Red	**ZB5 AK1443**	0.021
		Yellow	**ZB5 AK1453**	0.021
		Blue	**ZB5 AK1463**	0.021
 *ZB5 AK1463*	**3 - stay put**	White	**ZB5 AK1313**	0.021
		Green	**ZB5 AK1333**	0.021
		Red	**ZB5 AK1343**	0.021
		Yellow	**ZB5 AK1353**	0.021
		Blue	**ZB5 AK1363**	0.021
	3 - spring return to centre	White	**ZB5 AK1513**	0.021
		Green	**ZB5 AK1533**	0.021
		Red	**ZB5 AK1543**	0.021
		Yellow	**ZB5 AK1553**	0.021
		Blue	**ZB5 AK1563**	0.021
 *ZBY 4140*	**3 - spring return from right to centre**	White	**ZB5 AK1813**	0.021
		Green	**ZB5 AK1833**	0.021
		Red	**ZB5 AK1843**	0.021
		Yellow	**ZB5 AK1853**	0.021
		Blue	**ZB5 AK1863**	0.021
	3 - spring return from left to centre	White	**ZB5 AK1713**	0.021
		Green	**ZB5 AK1733**	0.021
		Red	**ZB5 AK1743**	0.021
		Yellow	**ZB5 AK1753**	0.021
		Blue	**ZB5 AK1763**	0.021

Heads for Ø 40 illuminated, latching, mushroom head pushbuttons *(1)*

Shape of head	Type of push	Colour of push	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED Protected LED				
 *ZB5 AW743*	**Turn to release**	White	**ZB5 AW713**	0.022
		Green	**ZB5 AW733**	0.022
		Red	**ZB5 AW743**	0.022
		Yellow	**ZB5 AW753**	0.022
		Blue	**ZB5 AW763**	0.022

(1) Use electrical blocks type ZBE 10●, specifically designed for "mounting beneath heads", see page 2/13.

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Control stations and enclosures

Plastic control stations XAL D and XAL K
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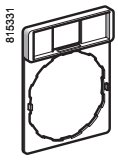
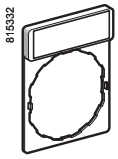
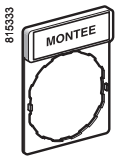
Stations for customer assembly: accessories



ZBZ 32



ZBY ●101



ZBY 2107



ZBZ 34



ZBY ●H101

Standard (30 x 40 mm) legend holders for 8 x 27 mm legends (1)

Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	**ZBZ 32**	0.001
With blank legend (for engraving)	Black or red background	–	10	**ZBY 2101**	0.002
	White or yellow background	–	10	**ZBY 4101**	0.002
With 8 x 27 mm legend (with international marking)	Black or red background	O (black background)	1	**ZBY 2146**	0.002
		O (red background)	1	**ZBY 2931**	0.002
		I	1	**ZBY 2147**	0.002
		II	1	**ZBY 2148**	0.002
		O-I	1	**ZBY 2178**	0.002
		I-II	1	**ZBY 2179**	0.002
		I-O-II	1	**ZBY 2186**	0.002
		AUTO	1	**ZBY 2115**	0.002
		STOP	1	**ZBY 2304**	0.002
	Yellow background	⊘	1	**ZBY 4140** (2)	0.002
With 8 x 27 mm legend (with French language marking)	Black or red background (3)	ARRET (red background)	1	**ZBY 2104**	0.002
		ARRET (black background)	1	**ZBY 0104**	0.002
		ARRET GENERAL	1	**ZBY 2129**	0.002
		ARRET REARMEMENT	1	**ZBY 2133**	0.002
		ARRET MARCHE	1	**ZBY 2166**	0.002
		ARRIERE	1	**ZBY 2106**	0.002
		AUTO CYCLE-CYCLE	1	**ZBY 2198**	0.002
		AUTO CYCLE-MAIN	1	**ZBY 2199**	0.002
		AUTO-MAIN	1	**ZBY 2164**	0.002
		AUTO-O-MAIN	1	**ZBY 2185**	0.002
		AVANT	1	**ZBY 2105**	0.002
		AVANT-O-ARRIERE	1	**ZBY 2184**	0.002
		C-P-C NORMAL	1	**ZBY 2165**	0.002
		CYCLE-MAIN	1	**ZBY 2197**	0.002
		DECLENCHEMENT	1	**ZBY 2132**	0.002
		DEFAUT (black background)	1	**ZBY 2134**	0.002
		DEFAUT (red background)	1	**ZBY 2135**	0.002
		DEPART CYCLE	1	**ZBY 2195**	0.002
		DESCENTE	1	**ZBY 2108**	0.002
		DROITE	1	**ZBY 2109**	0.002
		ENCLENCHEMENT	1	**ZBY 2131**	0.002
		EN SERVICE	1	**ZBY 2111**	0.002
		FERMETURE	1	**ZBY 2114**	0.002
		GAUCHE	1	**ZBY 2110**	0.002
		HORS SERVICE	1	**ZBY 2112**	0.002
		HORS-EN	1	**ZBY 2167**	0.002
		LENT	1	**ZBY 2127**	0.002
		MAIN	1	**ZBY 2116**	0.002
		MARCHE	1	**ZBY 2103**	0.002
		MONTEE	1	**ZBY 2107**	0.002
		OUVERTURE	1	**ZBY 2113**	0.002
		PHASE / PHASE	1	**ZBY 2196**	0.002
		REARMEMENT (red bckgrnd.)	1	**ZBY 2123**	0.002
		REARMEMENT (black bckgrnd.)	1	**ZBY 0123**	0.002
		SOUS TENSION	1	**ZBY 2126**	0.002
		VITE	1	**ZBY 2128**	0.002
	Red background	ARRET D'URGENCE	1	**ZBY 2130** (2)	0.002

30 x 40 mm legend holders (flush mounting with bezel) for 8 x 27 mm legends

Description	For use with	Colour	Sold in lots of	Unit reference	Weight kg
Without legend	Circular heads	–	10	**ZBZ 34**	0.003
	Square heads	–	10	**ZBC Z34**	0.002
With blank legend	Circular heads	Black or red background	10	**ZBY 2H101**	0.004
		White or yellow background	10	**ZBY 4H101**	0.004
	Square heads	Black or red background	10	**ZBC Y2H101**	0.002
		White or yellow background	10	**ZBC Y4H101**	0.002

(1) Legends: see page 2/24.

*(2) **For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⊘ has been added.***

(3) "Start" functions: white characters on black background. "Stop" functions: white characters on red background (unless otherwise stated above).

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Control stations and enclosures

Plastic control stations XAL D and XAL K
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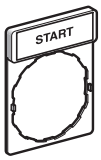
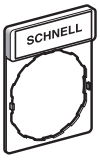
815334


ZBY 2303

DF540629

ZBY 0140

815335


ZBY 2228

Standard (30 x 40 mm) legend holders with 8 x 27 mm legend *(continued)*

Description	Legend		Reference	Weight
	Colour	Marking		kg
With 8 x 27 mm legend (with English marking)	Black or red background *(1)*	AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		CLOSE	**ZBY 2314**	0.002
		DOWN	**ZBY 2308**	0.002
		FAST	**ZBY 2328**	0.002
		FORWARD	**ZBY 2305**	0.002
		HAND	**ZBY 2316**	0.002
		HAND-OFF-AUTO	**ZBY 2387**	0.002
		INCH	**ZBY 2321**	0.002
		LEFT	**ZBY 2310**	0.002
		OFF	**ZBY 2312**	0.002
		OFF-ON	**ZBY 2367**	0.002
		ON	**ZBY 2311**	0.002
		OPEN	**ZBY 2313**	0.002
		POWER ON	**ZBY 2326**	0.002
		RESET (red background)	**ZBY 2323**	0.002
		RESET (black background)	**ZBY 2322**	0.002
		REVERSE	**ZBY 2306**	0.002
		RIGHT	**ZBY 2309**	0.002
		RUN	**ZBY 2334**	0.002
		SLOW	**ZBY 2327**	0.002
		START	**ZBY 2303**	0.002
		STOP-START	**ZBY 2366**	0.002
		UP	**ZBY 2307**	0.002
	Red background	EMERGENCY STOP	**ZBY 2330** *(2)*	0.002
With 8 x 27 mm legend (with German marking)	Black or red background *(1)*	AB	**ZBY 2208**	0.002
		AUF	**ZBY 2207**	0.002
		AUS	**ZBY 2204**	0.002
		AUS-EIN	**ZBY 2266**	0.002
		AUS-IN BETRIEB	**ZBY 2267**	0.002
		AUS-RUCKSTELLUND	**ZBY 2233**	0.002
		AUSSCHALTEN	**ZBY 2232**	0.002
		AUTO-HAND	**ZBY 2364**	0.002
		AUTO-O-HAND	**ZBY 2385**	0.002
		AUTOZYKL-HAND	**ZBY 2299**	0.002
		AUTOZYKL-1 ZYKL	**ZBY 2298**	0.002
		C-P-C-NORMAL	**ZBY 2265**	0.002
		EIN	**ZBY 2203**	0.002
		EINSCHALTEN	**ZBY 2231**	0.002
		HAND	**ZBY 2316**	0.002
		LANGSAM	**ZBY 2227**	0.002
		LINKS	**ZBY 2210**	0.002
		NOT-AUS (red background)	**ZBY 2230**	0.002
		ÖFFNEN	**ZBY 2213**	0.002
		RECHTS	**ZBY 2209**	0.002
		RUCKSTELLUNG	**ZBY 2223**	0.002
		SCHLIESSEN	**ZBY 2214**	0.002
		SCHNELL	**ZBY 2228**	0.002
		SPANNUNG EIN	**ZBY 2226**	0.002
		STEUERUNG AUS	**ZBY 2212**	0.002
		STEUERUNG EIN	**ZBY 2211**	0.002
		STORUNG (black background)	**ZBY 2234**	0.002
		STORUNG (red background)	**ZBY 2235**	0.002
		VOR	**ZBY 2205**	0.002
		VOR-O-ZURUCK	**ZBY 2284**	0.002
		ZURUCK	**ZBY 2206**	0.002
		ZYKLUS-HAND	**ZBY 2297**	0.002
		ZYKLUS-START	**ZBY 2295**	0.002
	Red background	NOT-HALT	**ZBY 2229** *(2)*	0.002
	Yellow background	NOT-HALT	**ZBY 22420001** *(2)*	0.002

(1) "Start" functions: white characters on black background. "Stop" functions: white characters on red background (unless otherwise stated above).
(2) ***For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

General: page 2/4 Characteristics: page 2/6 Dimensions: page 2/30

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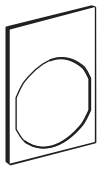


ZAL Y4

Legends (30 x 42 mm) for engraving

Description	Colour of background	Sold in lots of	Unit reference	Weight kg
Legends for engraving 2 lines of text	Black or red	10	**ZAL Y2**	0.001
	White or yellow	10	**ZAL Y4**	0.001

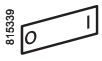
Legends (8 x 27 mm) for engraving

For use with	Colour of background	Sold in lots of	Unit reference	Weight kg
30 x 40 mm legend holder	Black or red	10	**ZBY 0101**	0.001
	White or yellow	10	**ZBY 0102**	0.001
	Yellow	10	**ZBY 0140** *(1)*	0.001

Sheets of 76 (8 x 27 mm) peel-off legends

For use with	Supplied with	Sold in lots of	Unit reference	Weight kg
30 x 40 mm legend holders **ZBZ 32** and **ZBZ 34**	Backing board and protective transparent cover	10	**ZBY 4100**	0.043

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34)



ZBY 02178



ZBY 0●104

Language	Colour of background	Marking	Reference	Weight kg
International	Black or red *(2)*	O (black background)	**ZBY 02146**	0.001
		O (red background)	**ZBY 02931**	0.001
		I	**ZBY 02147**	0.001
		II	**ZBY 02148**	0.001
		O-I	**ZBY 02178**	0.001
		I-II	**ZBY 02179**	0.001
		I-O-II	**ZBY 02186**	0.001
		AUTO	**ZBY 02115**	0.001
		STOP	**ZBY 02304**	0.001
French	Black or red *(2)*	ARRET (red background)	**ZBY 02104**	0.001
		ARRET (black background)	**ZBY 00104**	0.001
		ARRET GENERAL	**ZBY 02129**	0.001
		ARRET REARMEMENT	**ZBY 02133**	0.001
		ARRET-MARCHE	**ZBY 02166**	0.001
		ARRIERE	**ZBY 02106**	0.001
		AUTO CYCLE-CYCLE	**ZBY 02198**	0.001
		AUTO CYCLE-MAIN	**ZBY 02199**	0.001
		AUTO-MAIN	**ZBY 02164**	0.001
		AUTO-O-MAIN	**ZBY 02185**	0.001
		AVANT	**ZBY 02105**	0.001
		AVANT-O-ARRIERE	**ZBY 02184**	0.001
		C-P-C-NORMAL	**ZBY 02165**	0.001
		CYCLE-MAIN	**ZBY 02197**	0.001
		DECLENCHEMENT	**ZBY 02132**	0.001
		DEFAUT (black background)	**ZBY 02134**	0.001
		DEFAUT (red background)	**ZBY 02135**	0.001
		DEPART CYCLE	**ZBY 02195**	0.001
		DESCENTE	**ZBY 02108**	0.001
		DROITE	**ZBY 02109**	0.001
		ENCLENCHEMENT	**ZBY 02131**	0.001
		EN SERVICE	**ZBY 02111**	0.001
		FERMETURE	**ZBY 02114**	0.001
		GAUCHE	**ZBY 02110**	0.001
		HORS SERVICE	**ZBY 02112**	0.001
		HORS-EN	**ZBY 02167**	0.001
		LENT	**ZBY 02127**	0.001
		MAIN	**ZBY 02116**	0.001
		MARCHE	**ZBY 02103**	0.001
		MONTEE	**ZBY 02107**	0.001
		OUVERTURE	**ZBY 02113**	0.001
		PHASE / PHASE	**ZBY 02196**	0.001
		REARMEMENT (red background)	**ZBY 02123**	0.001
		REARMEMENT (black background)	**ZBY 00123**	0.001
		SOUS TENSION	**ZBY 02126**	0.001
		VITE	**ZBY 02128**	0.001
	Red	ARRET D'URGENCE	**ZBY 02130** *(1)*	0.001

(1) ***For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

(2) "Start" functions: white characters on black background. "Stop" functions: white characters on red background (unless otherwise stated above).

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815341



ZBY 02303

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBY 32 and ZBY 34) *(continued)*

Language	Colour of background	Marking	Reference	Weight kg
English	Black or red *(1)*	AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		CLOSE	**ZBY 02314**	0.001
		DOWN	**ZBY 02308**	0.001
		FAST	**ZBY 02328**	0.001
		FORWARD	**ZBY 02305**	0.001
		HAND	**ZBY 02316**	0.001
		HAND-OFF-AUTO	**ZBY 02387**	0.001
		INCH	**ZBY 02321**	0.001
		LEFT	**ZBY 02310**	0.001
		OFF	**ZBY 02312**	0.001
		OFF-ON	**ZBY 02367**	0.001
		ON	**ZBY 02311**	0.001
		OPEN	**ZBY 02313**	0.001
		POWER ON	**ZBY 02326**	0.001
		RESET (red background)	**ZBY 02323**	0.001
		RESET (black background)	**ZBY 02322**	0.001
		REVERSE	**ZBY 02306**	0.001
		RIGHT	**ZBY 02309**	0.001
		RUN	**ZBY 02334**	0.001
		SLOW	**ZBY 02327**	0.001
		START	**ZBY 02303**	0.001
		STOP-START	**ZBY 02366**	0.001
		UP	**ZBY 02307**	0.001
	Red	EMERGENCY STOP	**ZBY 02330** *(2)*	0.001
German	Black or red *(1)*	AB	**ZBY 02208**	0.001
		AUF	**ZBY 02207**	0.001
		AUS	**ZBY 02204**	0.001
		AUS-EIN	**ZBY 02266**	0.001
		AUS-IN BETRIEB	**ZBY 02267**	0.001
		AUS-RUCKSTELLUNG	**ZBY 02233**	0.001
		AUSSCHALLEN	**ZBY 02232**	0.001
		AUTO-HAND	**ZBY 02364**	0.001
		AUTO-O-HAND	**ZBY 02385**	0.001
		AUTOZYKL-HAND	**ZBY 02299**	0.001
		AUTOZYKL- 1 ZYKL	**ZBY 02298**	0.001
		C-P-C-NORMAL	**ZBY 02265**	0.001
		EIN	**ZBY 02203**	0.001
		EINSCHALTEN	**ZBY 02231**	0.001
		HAND	**ZBY 02316**	0.001
		LANGSAM	**ZBY 02227**	0.001
		LINKS	**ZBY 02210**	0.001
		NOT-AUS (red background)	**ZBY 02230**	0.001
		ÖFFNEN	**ZBY 02213**	0.001
		RECHTS	**ZBY 02209**	0.001
		RUCKSTELLUNG	**ZBY 02223**	0.001
		SCHLIESSEN	**ZBY 02214**	0.001
		SCHNELL	**ZBY 02228**	0.001
		SPANNUNG EIN	**ZBY 02226**	0.001
		STEUERUNG AUS	**ZBY 02212**	0.001
		STEUERUNG EIN	**ZBY 02211**	0.001
		STORUNG (black background)	**ZBY 02234**	0.001
		STORUNG (red background)	**ZBY 02235**	0.001
		VOR	**ZBY 02205**	0.001
		VOR-O-ZURUCK	**ZBY 02284**	0.001
		ZURUCK	**ZBY 02206**	0.001
		ZYKLUS-HAND	**ZBY 02297**	0.001
		ZYKLUS-START	**ZBY 02295**	0.001
	Red	NOT-HALT	**ZBY 02229** *(2)*	0.001
	Yellow	NOT-HALT	**ZBY 022420001** *(2)*	0.001

815342



ZBY 02228

DF540548



XBY 2U

(1) "Start" functions: white characters on black background. "Stop" functions: white characters on red background (unless otherwise stated above).

(2) ***For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo has been added.***

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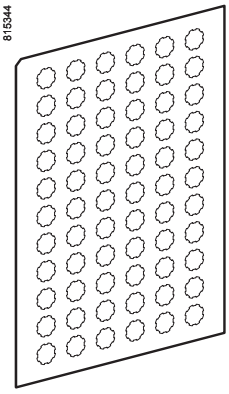

ZBY 1●●●

Legends for pushbuttons, switches and pilot lights XB5 A

Description	Marking		Sold in lots of	Unit reference	Weight kg
Sheets of 66 circular peel-off transparent self-adhesive legends	Without		10	**ZBY 1101**	0.017
	International	O	10	**ZBY 1146**	0.017
		I	10	**ZBY 1147**	0.017
		II	10	**ZBY 1148**	0.017
		III	10	**ZBY 1149**	0.017
		AUTO	10	**ZBY 1115**	0.017
		STOP	10	**ZBY 1304**	0.017
		⬆	10	**ZBY 1912**	0.017
	French	ARRET	10	**ZBY 1104**	0.017
		ARRIERE	10	**ZBY 1106**	0.017
		AVANT	10	**ZBY 1105**	0.017
		AUTO	10	**ZBY 1115**	0.017
		DESCENTE	10	**ZBY 1108**	0.017
		MAIN	10	**ZBY 1116**	0.017
		MARCHE	10	**ZBY 1103**	0.017
		MONTEE	10	**ZBY 1107**	0.017
	English	HAND	10	**ZBY 1316**	0.017
		OFF	10	**ZBY 1312**	0.017
		ON	10	**ZBY 1311**	0.017
		START	10	**ZBY 1303**	0.017
	German	AB	10	**ZBY 1208**	0.017
		AUF	10	**ZBY 1207**	0.017
		AUS	10	**ZBY 1204**	0.017
		EIN	10	**ZBY 1203**	0.017
		ZU	10	**ZBY 1214**	0.017
Strip of 66 square peel-off transparent self-adhesive legends	Without		10	**ZBC Y1101**	0.017

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XBY 2U

"SIS Label" labelling software (for legend sheets ZBY 1101, ZBY 4100 and ZBC Y1101)

Application	Reference	Weight kg
Legend design for English, French, German, Italian and Spanish	**XBY 2U**	0.100

Circular yellow legends for mushroom head pushbuttons

Used for "Emergency stop" function *(1)*

Diameter mm	Conforming to standards	Marking on yellow background	Reference	Weight kg
60	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 9140**	0.004
		ARRET D'URGENCE	**ZBY 9130**	0.004
		EMERGENCY STOP	**ZBY 9330**	0.004
		NOT-HALT	**ZBY 9230**	0.004
		PARADA DE EMERGENCIA	**ZBY 9430**	0.004
		ARRESTO DE EMERGENZA	**ZBY 9630**	0.004
90	EN/IEC 60204-1 and EN/ISO 13850	–	**ZBY 8140**	0.008
		ARRET D'URGENCE	**ZBY 8130**	0.008
		EMERGENCY STOP	**ZBY 8330**	0.008
		NOT-HALT	**ZBY 8230**	0.008
		PARADA DE EMERGENCIA	**ZBY 8430**	0.008
		ARRESTO DE EMERGENZA	**ZBY 8630**	0.008

Used for "Emergency switching off" function

60	EN/IEC 60204-1	–	**ZBY 9101**	0.004
		COUPURE D'URGENCE	**ZBY 9160**	0.004
		EMERGENCY SWITCHING OFF	**ZBY 9360**	0.004
		NOT-AUS	**ZBY 9260**	0.004
		DESCONEXION DE EMERGENCIA	**ZBY 9460**	0.004
		INTERRUZIONE DI EMERGENZA	**ZBY 9660**	0.004
90	EN/IEC 60204-1	–	**ZBY 8101**	0.008
		COUPURE D'URGENCE	**ZBY 8160**	0.008
		EMERGENCY SWITCHING OFF	**ZBY 8360**	0.008
		NOT-AUS	**ZBY 8260**	0.008
		DESCONEXION DE EMERGENCIA	**ZBY 8460**	0.008
		INTERRUZIONE DI EMERGENZA	**ZBY 8660**	0.008

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ZBY 9130

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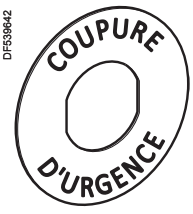

ZBY 9160

(1) ***For complying with ISO 13850 standard, paragraph 4.4.6., Emergency Stop function logo ⓥ has been added.***

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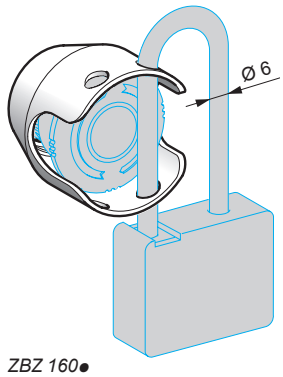

ZBZ 160●

Metal guards *(1)*

Description	For use with	Colour	Reference	Weight kg
Metal guards Padlockable	Emergency stop function only with the following Ø 40 trigger action pushbuttons: XB5 AT8●, XB5 AS8●, XB5 AS9●, ZB5 AT8●, ZB5 AS8●, ZB5 AS9●.	Chromium plated	**ZBZ 1600**	0.046
		Black	**ZBZ 1602**	0.046
		Red	**ZBZ 1604**	0.046
		Blue	**ZBZ 1605**	0.046

Pushbutton caps - unmarked

For use with	Cap		Sold in lots of	Unit reference	Weight kg
	Type	Colour			
Circular pushbutton heads ZB5 AA supplied without cap	Flush	White	10	**ZBA 1**	0.001
		Black	10	**ZBA 2**	0.001
		Green	10	**ZBA 3**	0.001
		Red	10	**ZBA 4**	0.001
		Yellow	10	**ZBA 5**	0.001
		Blue	10	**ZBA 6**	0.001
		6 colours *(2)*	1	**ZBA 9**	0.006
	Projecting	White	10	**ZBL 1**	0.001
		Black	10	**ZBL 2**	0.001
		Green	10	**ZBL 3**	0.001
		Red	10	**ZBL 4**	0.001
		Yellow	10	**ZBL 5**	0.001
		Blue	10	**ZBL 6**	0.001
		6 colours *(2)*	1	**ZBL 9**	0.006

815347



ZBA ●

815348



ZBL ●

Pushbutton caps - marked *(3)* (sold in lots of 10)

For use with	Type of push	Marking		Colour of cap	Unit reference	Weight kg
		Text	Colour			
Circular pushbutton heads ZB5 AA supplied without cap	Flush	I	White	Green	**ZBA 331**	0.001
			Black	White	**ZBA 131**	0.001
		II	White	Green	**ZBA 336**	0.001
			Black	White	**ZBA 136**	0.001
		III	White	Green	**ZBA 337**	0.001
			Black	White	**ZBA 137**	0.001
		IV	White	Green	**ZBA 338**	0.001
			Black	White	**ZBA 138**	0.001
		START	White	Green	**ZBA 333**	0.001
			Black	White	**ZBA 133**	0.001
		ON	White	Green	**ZBA 341**	0.001
			Black	White	**ZBA 141**	0.001
		MARCHE	White	Green	**ZBA 342**	0.001
			Black	White	**ZBA 142**	0.001
		⏻	White	Black	**ZBA 245**	0.001
			Black	White	**ZBA 145**	0.001
		UP	Black	White	**ZBA 343**	0.001
		DOWN	White	Black	**ZBA 344**	0.001
		⬆	White	Black	**ZBA 335**	0.001
			Black	White	**ZBA 334**	0.001
		O	White	Red	**ZBA 432**	0.001
				Black	**ZBA 232**	0.001
		ARRET	White	Red	**ZBA 433**	0.001
				Black	**ZBA 233**	0.001
		STOP	White	Red	**ZBA 434**	0.001
				Black	**ZBA 234**	0.001
		OFF	White	Red	**ZBA 435**	0.001
				Black	**ZBA 235**	0.001
		⚠	White	Green	**ZBA 346**	0.001
		R	White	Blue	**ZBA 639**	0.001
		+	White	Black	**ZBA 2934**	0.001
		-	White	Black	**ZBA 2935**	0.001

815349



ZBA 333

(1) These guards can be used in conjunction with a legend holder, but only those for mounting directly beneath the head. See page 2/13.
(2) Set of 6 different coloured caps: white, black, green, red, yellow, blue.
(3) Can be clipped-in at 90° steps through 360°.

General: page 2/4 | Characteristics: page 2/6 | Dimensions: page 2/30

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ZB2 BP01●



ZBV 01●3

Coloured boots

For use with	Colour	Sold in lots of	Unit reference	Weight kg
Coloured boots (can be replaced without dismantling the head)	Black	10	**ZB2 BP012**	0.003
	Green	10	**ZB2 BP013**	0.003
	Red	10	**ZB2 BP014**	0.003
	Yellow	10	**ZB2 BP015**	0.003
	Blue	10	**ZB2 BP016**	0.003

Lens caps

Circular lens caps for light sources with integral LED

Pilot lights	White	10	**ZBV 0113**	0.002
	Green	10	**ZBV 0133**	0.002
	Red	10	**ZBV 0143**	0.002
	Yellow	10	**ZBV 0153**	0.002
	Blue	10	**ZBV 0163**	0.002
	5 different coloured grooved lenses *(1)*	1	**ZBV 0103S**	0.010
Illuminated pushbuttons, with flush push	White	10	**ZBW 9113**	0.002
	Green	10	**ZBW 9133**	0.002
	Red	10	**ZBW 9143**	0.002
	Yellow	10	**ZBW 9153**	0.002
	Blue	10	**ZBW 9163**	0.002
Illuminated pushbuttons, with projecting push	White	10	**ZBW 9313**	0.002
	Green	10	**ZBW 9333**	0.002
	Red	10	**ZBW 9343**	0.002
	Yellow	10	**ZBW 9353**	0.002
	Blue	10	**ZBW 9363**	0.002

Square lens caps for light sources with integral LED

Pilot lights	White	10	**ZBC V0113**	0.002
	Green	10	**ZBC V0133**	0.002
	Red	10	**ZBC V0143**	0.002
	Yellow	10	**ZBC V0153**	0.002
	Blue	10	**ZBC V0163**	0.002
Illuminated pushbuttons, with flush push	White	10	**ZBC W9113**	0.002
	Green	10	**ZBC W9133**	0.002
	Red	10	**ZBC W9143**	0.002
	Yellow	10	**ZBC W9153**	0.002
	Blue	10	**ZBC W9163**	0.002
Illuminated pushbuttons, with projecting push	White	10	**ZBC W9313**	0.002
	Green	10	**ZBC W9333**	0.002
	Red	10	**ZBC W9343**	0.002
	Yellow	10	**ZBC W9353**	0.002
	Blue	10	**ZBC W9363**	0.002

Replacement keys for Emergency stop key release heads and key switches

Description	Key number	Reference	Weight kg
Set of 2 keys	455	**ZBG 455**	0.013
	421E	**ZBG 421E**	0.014
	458A	**ZBG 458A**	0.014
	520E	**ZBG 520E**	0.014
	3131A	**ZBG 3131A**	0.014
	4A185	**ZBD A185**	0.014
	LU1	**ZBD LU1**	0.014
	LU2	**ZBD LU2**	0.014
	LU3	**ZBD LU3**	0.014
	LU4	**ZBD LU4**	0.014
	LU5	**ZBD LU5**	0.014
	LU6	**ZBD LU6**	0.014
	LU7	**ZBD LU7**	0.014
	LU8	**ZBD LU8**	0.014
	LU9	**ZBD LU9**	0.014
	LU10	**ZBD LU10**	0.014
	LU11	**ZBD LU11**	0.014
	LU12	**ZBD LU12**	0.014
	LU13	**ZBD LU13**	0.014
	LU14	**ZBD LU14**	0.014
	8D1	**ZBD 8D1**	0.014



ZBG 455



ZBD LU1

(1) Set of 5 different coloured lenses: white, green, red, yellow and blue.

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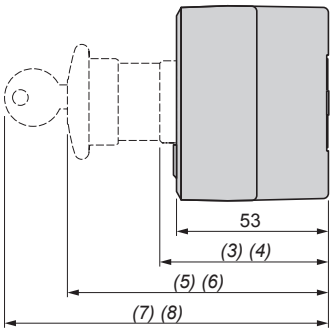
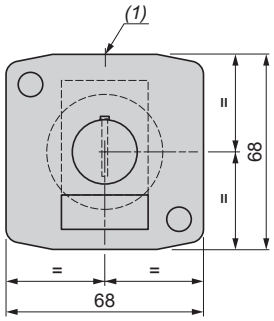
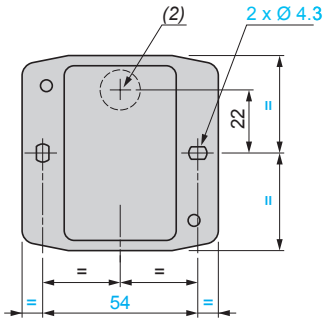
2

Dimensions

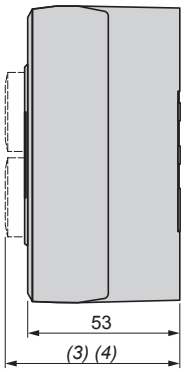
Single-way control stations XAL

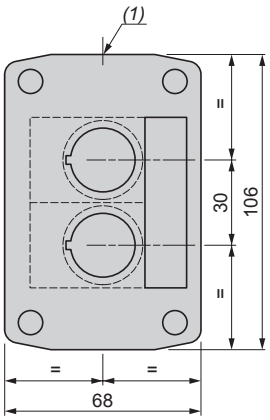


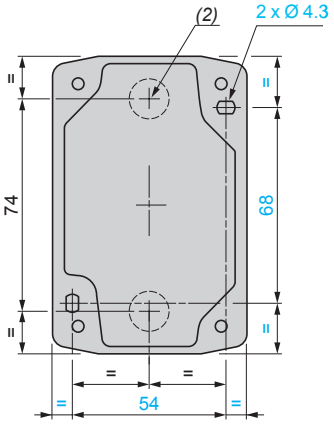




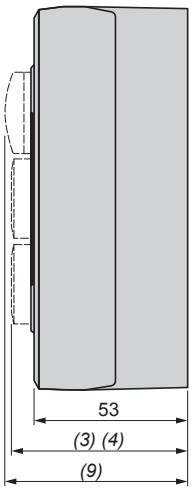
2-way control stations XAL

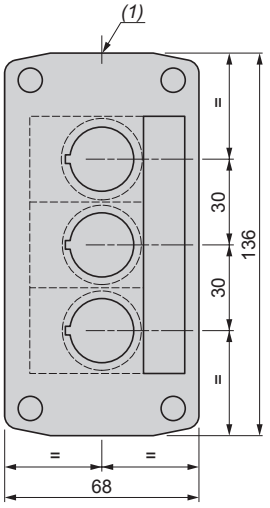


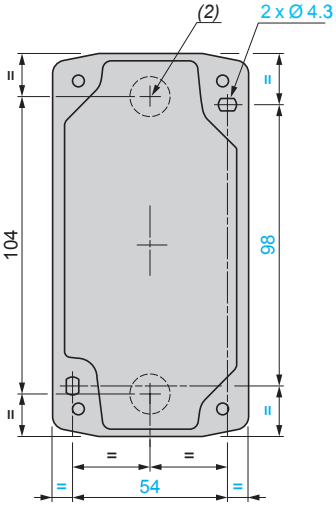




3-way control stations XAL







(1) 2 knock-outs for Pg 13.5 cable gland, maximum capacity 12 mm.
(2) Knock-out for cable entry, maximum capacity 14 mm.

Examples
(3) 62 mm for flush pushbuttons.
(4) 66 mm for projecting pushbuttons.
(5) 91 mm for latching mushroom head Emergency stop pushbuttons.
(6) 82.5 mm for key switches.
(7) 115 mm for latching mushroom head Emergency stop pushbuttons with key release.
(8) 105.5 mm for key switches with key inserted.
(9) 64 mm for pilot lights.

General: page 2/4
Characteristics: page 2/6
References: page 2/8

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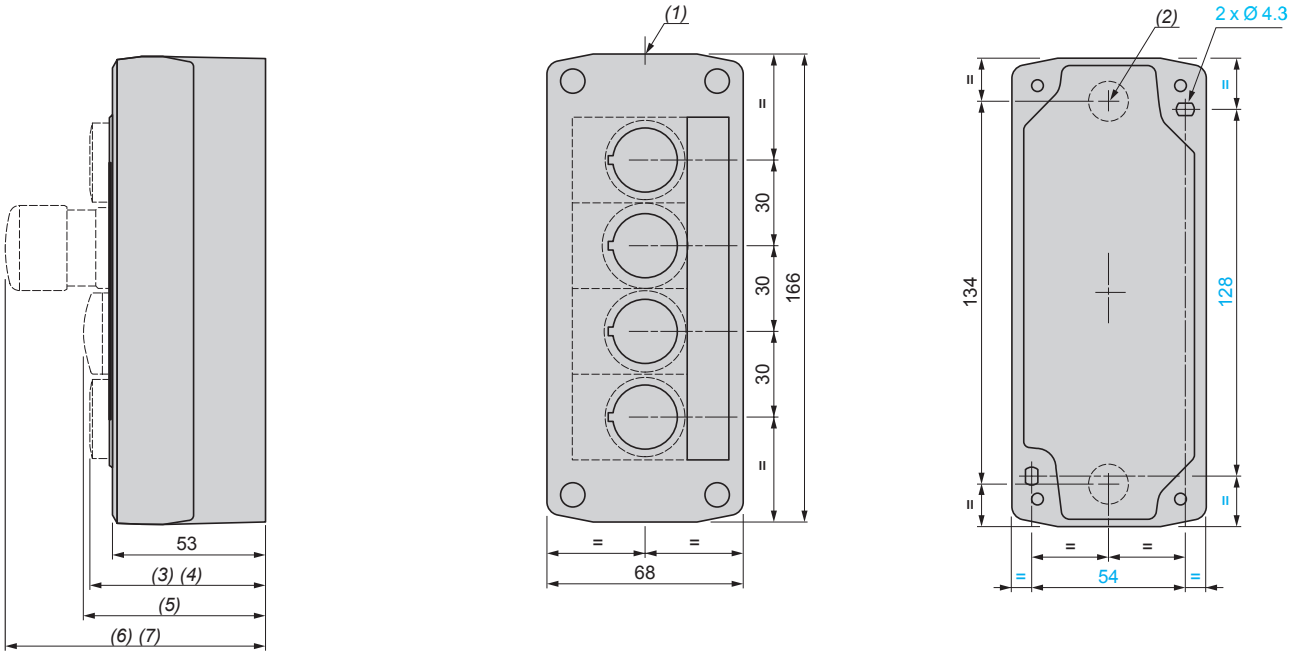
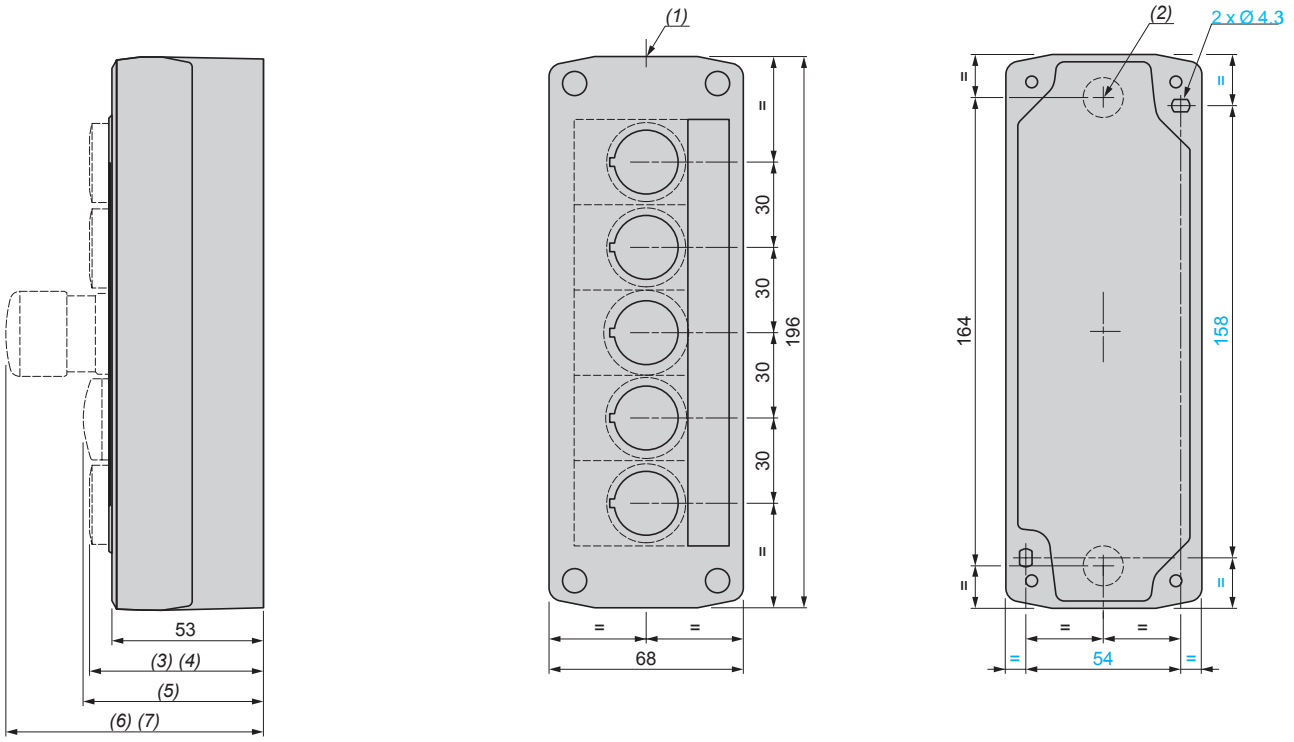
Dimensions (continued)

4-way control stations XAL



5-way control stations XAL



(1) 2 knock-outs for Pg 13.5 cable gland, maximum capacity 12 mm.
(2) Knock-out for cable entry, maximum capacity 14 mm.

Examples
(3) 62 mm for flush pushbuttons.
(4) 66 mm for projecting pushbuttons.
(5) 64 mm for pilot lights.
(6) 91.5 mm for mushroom head pushbuttons.
(7) 80 mm for selector switches.

For reference only. www.fengshengelectric.com.sg

Control stations and enclosures

Plastic control stations XAL G for severe environments

With cut-outs for Ø 22 control and signalling units XB5

Presentation

■ Plastic control stations XAL G are designed for use in severe environments (dirty, dusty or humid atmospheres). They ensure an increased degree of protection (IP 66, IP 69K) against the penetration of solid bodies and liquids and a high level of protection against heat and chemical products (acids, solvents, oils, alkaline substances).

■ The empty control stations XAL G are available with one, two, three, four or five Ø 22 mm cut-outs for the fitting of any of the catalogue listed Harmony control and signalling units type XB5.

■ Control stations XAL G comprise a lid and a base, with four captive stainless steel screws securing the lid.
□ The XB5 control and signalling units are mounted on the lid and secured by the head of the unit.
□ The electrical blocks of the XB5 units are mounted directly beneath the heads using a body/fixing collar (station method).
□ An anti-rotation plate is not required when mounting selector/key switches or Emergency stop mushroom heads: a notch incorporated in each cut-out fulfils this function.
□ The use of booted heads is recommended when using the station in severe environments.

■ The smooth and uniform surface of the lids simplifies cleaning of the installed control station.

■ Self-adhesive legends, with or without marking, specifically for use with these control stations are available as an accessory. They are resistant to high pressure cleaning and to heat.

Environment

Protective treatment	Standard version		"TC" and "TH"		
Ambient air temperature (around the device)	For storage	**°C**	- 40…+ 70		
	For operation	**°C**	- 25…+ 70		
Electric shock protection	Conforming to IEC 61140		Class II		
Degree of protection	Conforming to IEC 60529		IP 66, IP 69K		
High pressure cleaning resistance		**Bar**	100 at 0.2 m and 80 °C		
Mechanical shock protection (empty control stations)	Conforming to EN 50102		IK 05		
Conformity to standards			EN/IEC 60947-1, EN/IEC 60947-5-1		
Material			Lid and base: mineral reinforced polyamide		
Colour			Lid and base: black "RAL 9005"		
Cable entries			Two ISO 20 open entries (1)		
Resistance to chemical products			Results	Test conditions	
				Concentration (%)	Temperature (°C)
+ : good resistance **O**: limited resistance **-** : no resistance	Acetic acid		**O**	10	–
	Acetone		**+**	–	–
	Ammonia		**+**	–	–
	Benzene		**+**	–	–
	Boric acid		**O**	–	–
	Butter		**+**	–	–
	Citric acid		**+**	10	–
	Cutting compounds		**+**	–	–
	Ethane		**+**	–	–
	Ethanol		**+**	–	–
	Ethylene		**+**	–	–
	Fatty acids		**+**	–	–
	Fatty alcohols		**+**	–	–
	Formic acid		**-**	10	50
	Hydrogen peroxide		**-**	30	–
	Lactic acid		**+**	–	10
	Lactic acid		**-**	–	90
	Milk		**+**	–	–
	Motor oils and greases		**+**	–	–
	Nitric acid		**-**	2	–
	Oils (vegetable, mineral)		**+**	–	–
	Petroleum		**+**	–	–
	Uric acid		**+**	20	–
	Detergent		**+**	max.	60

(1) One ISO 20 cable entry blanking plug included with control station enclosures XAL G.

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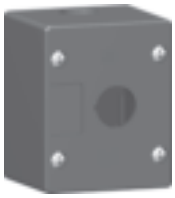
Control stations and enclosures

Plastic control stations XAL G for severe environments

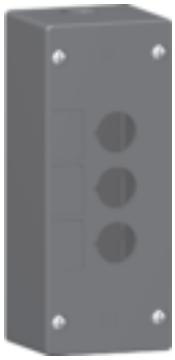
With cut-outs for Ø 22 control and signalling units XB5



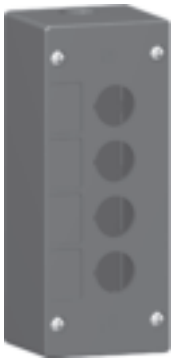
XAL G01



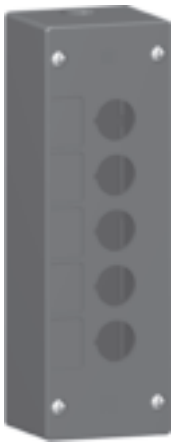
XAL G02



XAL G03



XAL G04



XAL G05

References

Control stations XAL G for severe environments

Description	Number of Ø 22 cut-outs	Reference	Weight kg
Black "RAL 9005" lid and base	1	**XAL G01**	0.226
	2	**XAL G02**	0.280
	3	**XAL G03**	0.333
	4	**XAL G04**	0.331
	5	**XAL G05**	0.382

Self-adhesive legends (19 x 27 mm) for control stations XAL G

Description	Marking	Sold in lots of	Unit reference	Weight kg
Blank legend (colour: grey)	–	10	**ZBY D06102**	0.001
Legends with marking (black marking on grey background)	O	1	**ZBY D06146**	0.001
	I	1	**ZBY D06147**	0.001
	O I	1	**ZBY D06178**	0.001
	EIN	1	**ZBY D06203**	0.001
	AUS	1	**ZBY D06204**	0.001
	AUF	1	**ZBY D06207**	0.001
	AB	1	**ZBY D06208**	0.001
	AUS EIN	1	**ZBY D06266**	0.001
	START	1	**ZBY D06303**	0.001
	STOP	1	**ZBY D06304**	0.001
	ON	1	**ZBY D06311**	0.001
	POWER ON	1	**ZBY D06326**	0.001
	HAND AUTO	1	**ZBY D06364**	0.001
	OFF ON	1	**ZBY D06367**	0.001

Other versions New control stations with 40 mm between 2 holes. Available 3rd quarter of 2011

Dimensions: page 2/34

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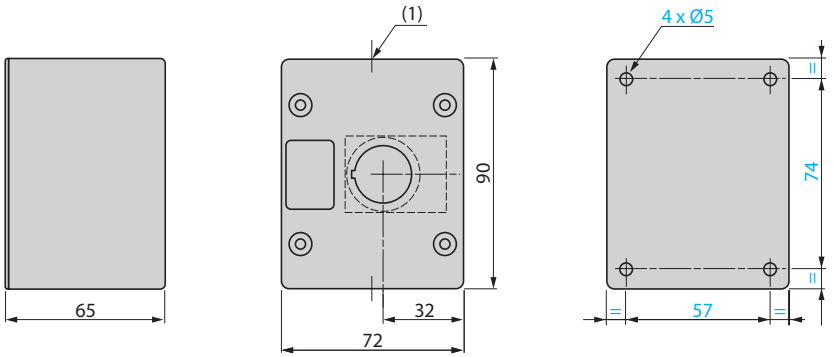
Control stations and enclosures

Plastic control stations XAL G for severe environments

With cut-outs for Ø 22 control and signalling units XB5

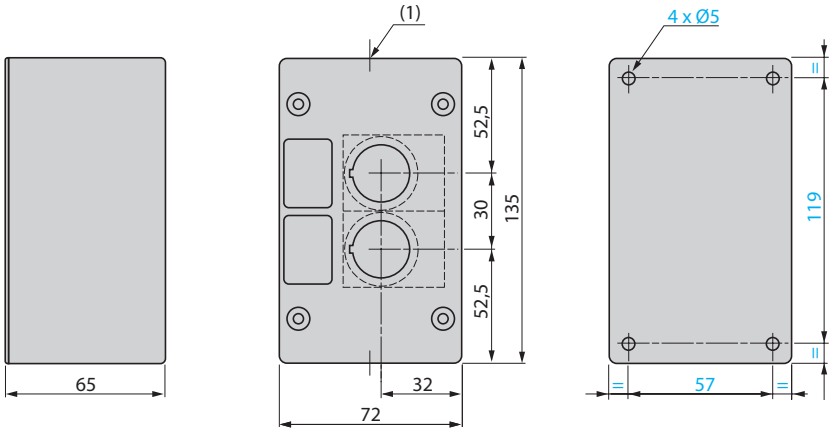
Dimensions

XAL G01



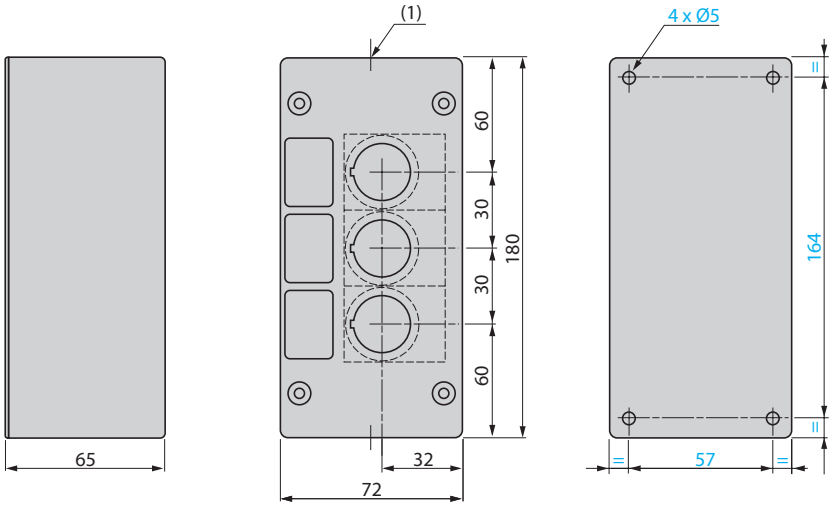
(1) 2 ISO 20 cable entries.

XAL G02



(1) 2 ISO 20 cable entries.

XAL G03



(1) 2 ISO 20 cable entries.

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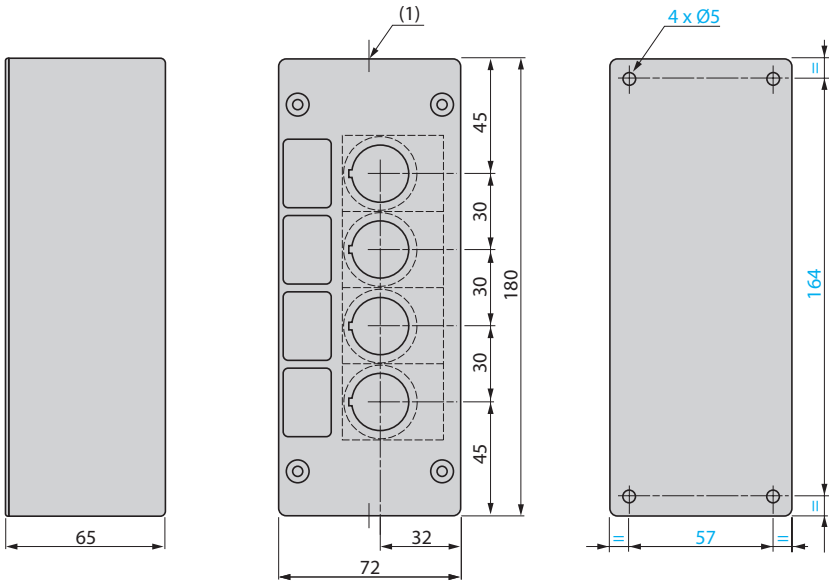
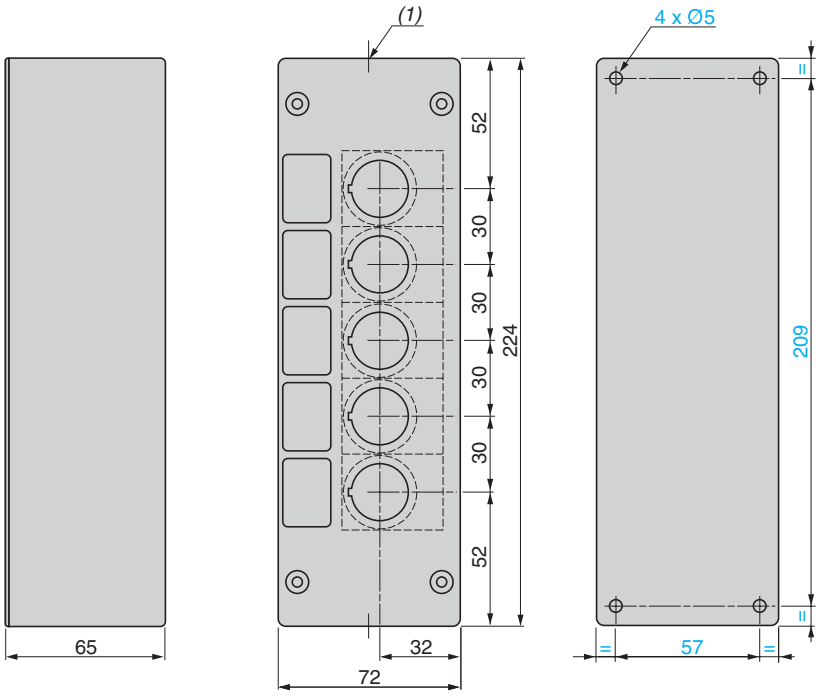
Dimensions

XAL G04



(1) 2 ISO 20 cable entries.

XAL G05



(1) 2 ISO 20 cable entries.

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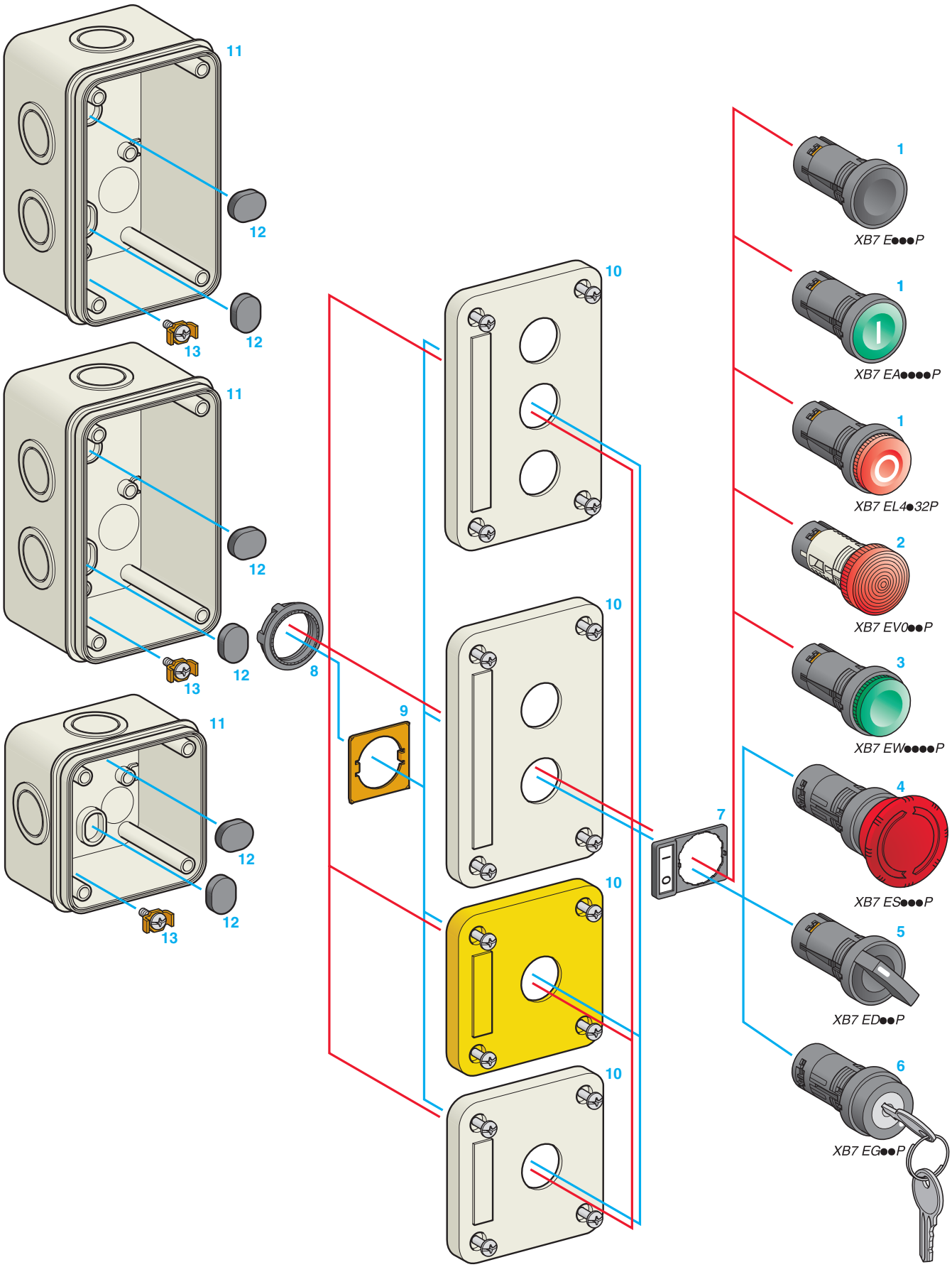
Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7



Schneider Electric

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Control stations and enclosures
Plastic control stations XAL E
For Harmony® Ø 22 control and signalling units XB7

Presentation

Control stations XAL E are designed for various applications and predetermined requirements.
□ In buildings, they control garage doors, rolling shutters or smoke extraction vents.
□ In the tertiary sector, they are fitted to simple machines and small lifting systems.
□ In the industrial sector, they are fitted to small machines with 2 or 3 actuators or mass production machines (packaging, materials handling, machine tools, etc.).

Control stations XAL E are available as complete products or as empty enclosures.

Complete stations

■ The complete XAL E control stations are supplied fitted with one, two or three Ø 22 mm control and signalling units from the Harmony® XB7 range *(1)*.
■ The fitted control stations are ready to use. Electrical connections to the mounted units are made by the user.

Complete XAL E control stations meet simple control and/or signalling requirements by factory pre-fitting of:
1 pushbuttons, with or without marking,
2 pilot lights with integral LED,
3 illuminated pushbuttons with integral LED,
4 Emergency stop mushroom head pushbuttons,
5 selector switches with standard handle,
6 key switches,
7 legend holder with legend,
8 fixing nut,
9 anti-rotation plates for selector switches, key switches, Emergency stops and buttons with rotatable marking.

The mounted units are interchangeable: the equipment fitted as standard can be modified in order to meet customised applications.

Empty enclosures

■ The XAL E enclosures supplied empty comprise:
□ a lid 10 with 4 captive fixing screws and a base 11,
□ two fixing screw caps (must be fitted to ensure double isolation and sealing)12.
■ The empty enclosures are available with one, two or three cut-outs of equal diameter.
■ Depending on the needs of the customer, all the catalogue listed Harmony® Ø 22 control and signalling units XB7 (1…6) can be fitted on these empty enclosures for customisation of the product *(1)*.
■ The units are fitted on the lid of the stations. Selector switches, key switches, Emergency stops and buttons with rotatable markings are held in position by an anti-rotation plate 9 *(2)*.
■ Legends and legend holder type ZBY 7 listed in the catalogue complete this customised equipment.

Mounting and fixing

■ Control stations XAL E easily mount on a support using two fixing screws. Two fixing screw caps 12 and a rubber seal *(3)* ensure the sealing and electrical insulation of the installation (IP 54 degree of protection).
■ Control stations XAL E incorporate 4 or 6 ISO 20 knock-outs (depending on the model) to enable cable entry irrespective of the fixing position of the station: horizontal or vertical.
■ A commoning/earth terminal 13 can be mounted in the base of the station if required. To be used in relation to the type of installation *(4)*.

(1) Except pilot lights type XB7 EV8●P supplied via integral transformer.
(2) Included with Harmony® Ø 22 control and signalling units XB7.
(3) Included with complete stations and empty enclosures.
(4) To be ordered separately.

Characteristics: page 2/38
References: page 2/39
Dimensions: page 2/48

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Control stations and enclosures
Plastic control stations XAL E
For Harmony® Ø 22 control and signalling units XB7

Environment

Protective treatment	Standard version		"TC"
Ambient air temperature (around the device)	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 55
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to IEC 60529		IP 54
Mechanical shock protection	Conforming to EN 50102		IK 05
Conformity to standards			EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 62208, EN/IEC 60947-5-5
Product certifications			CE
Material			ABS
Colours			Light grey "RAL 7035" or yellow "RAL 1021" lid, light grey "RAL 7035" base
Cable entries			ISO 20 knock-out entries

Contact function characteristics

Type of contact	N/C or N/O or C/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 Appendix K		All functions incorporating a N/C contact are positive opening operation
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	4 (using gG cartridge fuse conforming to IEC 269-1)
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Ui = 250 (degree of pollution 3)
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 4
Rated operational characteristics (conforming to EN/IEC 60947-5-1)	a.c. supply: utilisation category AC14, D300		Ue = 240 V and Ie = 0.3 A or Ue = 120 V and Ie = 0.6 A
	utilisation category DC13, R300		Ue = 250 V and Ie = 0.1 A or Ue = 125 V and Ie = 0.22 A
Electrical reliability	Failure rate in accordance with EN/IEC 60947-5-4		At 17 V and 5 mA: $\lambda \leq 10^{-6}$

Ordinary light function characteristics

Light source			**LED**	**Incandescent bulb** (all models)
Voltage limits	At nominal voltage	**V**	24 V ≂: 19.2…30 ⎓; 21.6…26.4 ∿ 120 V ∿: 100…132 ∿ 230-240 V ∿: 195…264 ∿	120 V ∿: 100…132 ∿ 230 V ∿: 195…264 ∿
Consumption	For all colours	**mA**	24 V ≂: 27 mA max. 120 V ∿: 21 mA max. 230 V ∿: 20 mA max.	Depending on bulb
Service life	At nominal voltage and at an ambient temperature of 25 °C	**H**	80 000	2 000
Electromagnetic emission	Conforming to EN 55011		Class B	

Presentation: page 2/36 References: page 2/39 Dimensions: page 2/48

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Complete stations



XAL E1011



XAL E1031



XAL E1W1●



XAL E1333



XAL E1441



XAL EK170●

Complete stations

With 1 x Ø 22 control and signalling unit (grey control station lid)

Equipment	Type of push	Type of contact N/O	N/C	C/O	Marking Text (colour)	Reference	Weight kg
1 spring return pushbutton	Flush, green	1	–	–	–	**XAL E1011**	0.100
		2	–	–	–	**XAL E1013**	0.100
		1	–	–	**I** (white)	**XAL E1021**	0.100
		1	–	–	**START** (white)	**XAL E1031**	0.100
	Flush, red	–	1	–	–	**XAL E1112**	0.100
		–	–	1	–	**XAL E1115**	0.100
		–	1	–	**STOP** (white)	**XAL E1142**	0.100
	Projecting, red	–	1	–	**O** (white)	**XAL E1152**	0.100
		–	–	1	**O** (white)	**XAL E1155**	0.100

Equipment	Colour of lens	Type of contact N/O	N/C	C/O	Supply voltage	Reference	Weight kg
1 projecting illuminated spring return pushbutton with integral LED Integral LED	Green	1	–	–	⎓ 24 V	**XAL E1W1B**	0.100
		1	–	–	∿ 230/240 V	**XAL E1W1M**	0.100
	Red	–	1	–	⎓ 24 V	**XAL E1W2B**	0.100
		–	1	–	∿ 230/240 V	**XAL E1W2M**	0.100

Equipment	Number and type of positions	Type of contact N/O	N/C	C/O	Marking Text (colour)	Reference	Weight kg
1 selector switch with standard handle	2 position, stay put	1	–	–	**O I** (white)	**XAL E1341**	0.105
	2 position, stay put	1	1	–	**O I** (white)	**XAL E1345**	0.105
	3 position, stay put	2	–	–	**I O II** (white)	**XAL E1333**	0.105
1 key switch (key n° 455)	2 position, stay put *(1)*	1	–	–	**O I** (white)	**XAL E1441**	0.115

Emergency switching off (yellow control station lid) *(2)*

Equipment	Type of push	Type of contact N/O	N/C	C/O	Reference	Weight kg
1 Emergency switching off pushbutton	Latching, red	–	1	–	**XAL EK1701**	0.110
		1	1	–	**XAL EK1702**	0.110

(1) The symbol "⚷" indicates key withdrawal position.

*(2) Mushroom head switching off mechanical latching pushbuttons conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5. Please consult your customer care centre for full details of these standards and directives. For conformity to standard EN/ISO 13850, use control stations **XAL K178●** or **XAL K188●**, see "Control stations **XAL**" offer.*

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Complete stations



XAL E201●



XAL E222●



XAL E21V1●

Complete stations (continued)

With 2 x Ø 22 control and signalling units (grey control station lid)

Equipment	Type of push	Type of contact			Marking	Reference	Weight
		N/O	N/C	C/O	**Text** (colour)		kg
2 spring return pushbuttons	1 flush, green	1	–	–	–	**XAL E2011**	0.145
	1 flush, red	–	1	–	–		
	1 flush, green	2	–	–	–	**XAL E2015**	0.145
	1 flush, red	–	–	1	–		
	1 flush, green	1	–	–	**START** (white)	**XAL E2151**	0.145
	1 flush, red	–	1	–	**STOP** (white)		
	1 flush, green	1	–	–	**I** (white)	**XAL E2141**	0.145
	1 projecting, red	–	1	–	**O** (white)		
	1 flush, white	1	–	–	➡ (black)	**XAL E2231**	0.145
	1 flush, black	1	–	–	⇦ (white)		
	1 flush, white	–	–	1	➡ (black)	**XAL E2235**	0.145
	1 flush, black	–	–	1	⇦ (white)		
	1 flush, white	1	–	–	⬆ (black)	**XAL E2221**	0.145
	1 flush, black	1	–	–	⇩ (white)		
	1 flush, white	–	–	1	⬆ (black)	**XAL E2225**	0.145
	1 flush, black	–	–	1	⇩ (white)		
1 spring return pushbutton + 1 pilot light with integral LED (⎓ 24 V), green Integral LED	1 flush, green	1	–	–	**I** (white)	**XAL E21V1B**	0.145
	–	–	–	–	–		
1 spring return pushbutton + 1 pilot light with integral LED (∿ 230/240 V), green Integral LED	1 flush, green	1	–	–	**I** (white)	**XAL E21V1M**	0.145
	–	–	–	–	–		

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Complete stations



XAL E33V●●



XAL E325●



XAL E3441

Complete stations (continued)

With 3 x Ø 22 control and signalling units (grey control station lid)

Equipment	Type of push or colour of lens	Type of contact N/O	N/C	C/O	Marking Text (colour)	Reference	Weight kg
2 spring return pushbuttons	1 flush, green	1	–	–	**I** (white)	**XAL E33V2B**	0.170
	1 flush, red	–	1	–	**O** (white)		
+ 1 pilot light with integral LED (≂ 24 V), red Integral LED	–	–	–	–	–		
2 spring return pushbuttons	1 flush, green	1	–	–	**I** (white)	**XAL E33V2M**	0.170
	1 flush, red	–	1	–	**O** (white)		
+ 1 pilot light with integral LED (~ 230/240 V), red Integral LED	–	–	–	–	–		
2 spring return pushbuttons	1 flush, green	1	–	–	**I** (white)	**XAL E33V1B**	0.170
	1 flush, red	–	1	–	**O** (white)		
+ 1 pilot light with integral LED (≂ 24 V), green Integral LED	–	–	–	–	–		
2 spring return pushbuttons	1 flush, green	1	–	–	**I** (white)	**XAL E33V1M**	0.170
	1 flush, red	–	1	–	**O** (white)		
+ 1 pilot light with integral LED (~ 230/240 V), green Integral LED	–	–	–	–	–		
3 spring return pushbuttons	1 flush, white	1	–	–	⬆ (black)	**XAL E3251**	0.170
	1 projecting, red	–	1	–	**O** (white)		
	1 flush, black	1	–	–	⇩ (white)		
	1 flush, white	–	–	1	⬆ (black)	**XAL E3255**	0.170
	1 projecting, red	–	–	1	**O** (white)		
	1 flush, black	–	–	1	⇩ (white)		
	1 flush, green	2	–	–	**I** (white)	**XAL E3405**	0.170
	1 projecting, red	–	–	1	**O** (white)		
	1 flush, green	2	–	–	**II** (white)		
	1 flush, green	1	–	–	**I** (white)	**XAL E3401**	0.170
	1 projecting, red	–	1	–	**O** (white)		
	1 flush, green	1	–	–	**II** (white)		
	1 flush, white	1	–	–	➡ (black)	**XAL E3351**	0.170
	1 projecting, red	–	1	–	**O** (white)		
	1 flush, black	1	–	–	⇦ (white)		
	1 flush, white	–	–	1	➡ (black)	**XAL E3355**	0.170
	1 projecting, red	–	–	1	**O** (white)		
	1 flush, black	–	–	1	⇦ (white)		
1 key switch (key n° 455) *(1)*	1 black operator (2 position, stay put)	1	–	–	**O I** (white)	**XAL E3441**	0.180
+ 2 spring return pushbuttons	1 flush, white	1	–	–	⬆ (black)		
	1 flush, black	1	–	–	⇩ (white)		

(1) The symbol "⚷" indicates key withdrawal position.

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Empty control stations



XAL E1



XAL E2



XAL E3



XAL EK1

Empty control stations

For Ø 22 control and signalling units

Description	Number of cut-outs	Sold in lots of	Unit reference	Weight kg
Light grey "RAL 7035" lid and base	1	5	**XAL E1**	0.080
	2	5	**XAL E2**	0.100
	3	5	**XAL E3**	0.100
For Emergency stop mushroom head pushbutton only *(1)*				
Yellow "RAL 1021" lid, light grey "RAL 7035" base	1	5	**XAL EK1**	0.080

*(1) For conformity to standard EN/ISO 13850, use control stations **XAL K178●** or **XAL K188●**, see "Control stations **XAL**" offer.*

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Separate components



XB7 EA●1P



XB7 EL4●P



XB7 EA3133P



XB7 EA1●341P



XB7 EA2●343P

Pushbuttons

Shape of head	Type of push	Type of contact N/O	N/C	C/O	Marking Text	Colour	Colour of push	Sold in lots of	Unit reference	Weight kg
Spring return pushbuttons without marking										
	Flush	1	–	–	–	–	White	10	**XB7 EA11P** *(1)*	0.020
		–	–	1				10	**XB7 EA15P** *(1)*	0.020
		1	–	–	–	–	Black	10	**XB7 EA21P** *(1)*	0.020
		2	–	–				10	**XB7 EA23P** *(1)*	0.020
		–	–	1				10	**XB7 EA25P** *(1)*	0.020
		1	–	–	–	–	Green	10	**XB7 EA31P** *(1)*	0.020
		2	–	–				10	**XB7 EA33P** *(1)*	0.020
		–	–	1				10	**XB7 EA35P** *(1)*	0.020
		–	1	–	–	–	Red	10	**XB7 EA42P** *(1)*	0.020
		–	–	1				10	**XB7 EA45P** *(1)*	0.020
		1	–	–	–	–	Yellow	10	**XB7 EA51P** *(1)*	0.020
	Projecting	–	1	–	–	–	Red	10	**XB7 EL42P** *(1)*	0.020
Spring return pushbuttons with marking										
I	**Flush**	1	–	–	I	White	Green	10	**XB7 EA3131P** *(1)*	0.020
		2	–	–				10	**XB7 EA3331P** *(1)*	0.020
START		1	–	–	START	White	Green	10	**XB7 EA3133P** *(1)*	0.020
		2	–	–				10	**XB7 EA3333P** *(1)*	0.020
MARCHE		1	–	–	MARCHE	White	Green	10	**XB7 EA3142P** *(1)*	0.020
		2	–	–				10	**XB7 EA3342P** *(1)*	0.020
O		–	1	–	O	White	Red	10	**XB7 EA4232P** *(1)*	0.020
		–	–	1				10	**XB7 EA4532P** *(1)*	0.020
STOP		–	1	–	STOP	White	Red	10	**XB7 EA4234P** *(1)*	0.020
		–	–	1				10	**XB7 EA4534P** *(1)*	0.020
⬆		1	–	–	⬆	Black	White	10	**XB7 EA11341P** *(1)*	0.020
		–	–	1				10	**XB7 EA15341P** *(1)*	0.020
⇩		1	–	–	⇩	White	Black	10	**XB7 EA21343P** *(1)*	0.020
		–	–	1				10	**XB7 EA25343P** *(1)*	0.020
O	**Projecting**	–	1	–	O	White	Red	10	**XB7 EL4232P** *(1)*	0.020
		–	–	1				10	**XB7 EL4532P** *(1)*	0.020
STOP		–	1	–	STOP	White	Red	10	**XB7 EL4234P** *(1)*	0.020
		–	–	1				10	**XB7 EL4534P** *(1)*	0.020
ARRET		–	1	–	ARRET	White	Red	10	**XB7 EL4233P** *(1)*	0.020
		–	–	1				10	**XB7 EL4533P** *(1)*	0.020

*(1) For Faston connection version (1 x 6.35 mm and 2 x 2.8 mm), add the number "**3**" to the end of the reference.*
*Example: **XB7 EA21P** becomes **XB7 EA21P3**.*

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Separate components (continued)



XB7 EA●1P

Pushbuttons (continued)

Shape of head	Type of push	Type of contact N/O	N/C	C/O	Marking Text	Colour	Colour of push	Sold in lots of	Unit reference	Weight kg
Push and push-to release pushbuttons without marking										
	Flush	1	–	–	–	–	Black	10	**XB7 EH21P**	0.020
					–	–	Green	10	**XB7 EH31P**	0.020
		–	–	1	–	–	Black	10	**XB7 EH25P**	0.020
					–	–	Green	10	**XB7 EH35P**	0.020

Selector/key switches

Shape of head	Type of operator	Type of contact N/O	N/C	C/O	Number and type of positions *(2)*		Sold in lots of	Unit reference	Weight kg
	Standard handle, black	1	–	–	2, stay put		10	**XB7 ED21P** *(1)*	0.025
		1	1	–	2, stay put		10	**XB7 ED25P**	0.025
		2	–	–	3, stay put		10	**XB7 ED33P**	0.025
	Key (key n° 455)	1	–	–	2, key withdrawal in LH position		10	**XB7 EG21P**	0.049
		2	–	–	3, key withdrawal in centre position		10	**XB7 EG33P**	0.049



XB7 ED21P



XB7 EG33P

Ø 40 mm Emergency switching off mushroom head pushbuttons *(3)*

Shape of head	Type of push	Type of contact N/O	N/C	C/O	Colour of push	Sold in lots of	Unit reference	Weight kg
	Turn to release	–	1	–	Red	10	**XB7 ES542P**	0.032
		1	1	–	Red	10	**XB7 ES545P**	0.035
	Key release (n° 455)	–	1	–	Red	10	**XB7 ES142P**	0.055
		1	1	–	Red	10	**XB7 ES145P**	0.058



XB7 ES542P

*(1) For Faston connection version (1 x 6.35 mm and 2 x 2.8 mm), add the number "**3**" to the end of the reference.*
*Example : **XB7 ED21P** becomes **XB7 ED21P3**.*
(2) The symbol "⚷" indicates key withdrawal position.
(3) Mushroom head switching off mechanical latching pushbuttons are conform to standards IEC 60364-5-53 and EN/IEC 60947-5-5.
For mushroom head Emergency stop trigger action and mechanical latching pushbuttons conforming to standards EN/IEC 60204-1 and EN/ISO 13850, to Machinery Directive 98/37/EC and to standard EN/IEC 60947-5-5, use an XB5 A●8●●● or XB5 AS9●●● from the Harmony range.

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Schneider Electric

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Control stations and enclosures

Plastic control stations XAL E

For Harmony® Ø 22 control and signalling units XB7

Separate components (continued)



XB7 EV0●●P

Pilot lights with integral LED ("true" colours)

Shape of head	Supply voltage V	Colour of lens	Sold in lots of	Unit reference	Weight kg
Integral LED	⎓ 24 50-60 Hz	White	10	**XB7 EV01BP** *(1)*	0.020
		Green	10	**XB7 EV03BP** *(1)*	0.020
		Red	10	**XB7 EV04BP** *(1)*	0.020
		Yellow	10	**XB7 EV05BP** *(1)*	0.020
		Blue	10	**XB7 EV06BP** *(1)*	0.020
		Orange	10	**XB7 EV08BP** *(1)*	0.020
	~ 120 50-60 Hz	White	10	**XB7 EV01GP** *(1)*	0.020
		Green	10	**XB7 EV03GP** *(1)*	0.020
		Red	10	**XB7 EV04GP** *(1)*	0.020
		Yellow	10	**XB7 EV05GP** *(1)*	0.020
		Blue	10	**XB7 EV06GP** *(1)*	0.020
		Orange	10	**XB7 EV08GP** *(1)*	0.020
	~ 230-240 50-60 Hz	White	10	**XB7 EV01MP** *(1)*	0.020
		Green	10	**XB7 EV03MP** *(1)*	0.020
		Red	10	**XB7 EV04MP** *(1)*	0.020
		Yellow	10	**XB7 EV05MP** *(1)*	0.020
		Blue	10	**XB7 EV06MP** *(1)*	0.020
		Orange	10	**XB7 EV08MP** *(1)*	0.020



XB7 EW3●●●P

Illuminated pushbuttons with integral LED ("true" colours)

Shape of head	Type of push	Supply voltage V	Type of contact N/O	Type of contact N/C	Colour of lens	Sold in lots of	Unit reference	Weight kg
Spring return illuminated pushbuttons								
Integral LED	**Projecting**	⎓ 24	1	–	Green	10	**XB7 EW33B1P**	0.022
					Red	10	**XB7 EW34B1P**	0.022
					Yellow	10	**XB7 EW35B1P**	0.022
			–	1	Red	10	**XB7 EW34B2P**	0.022
		~ 230 50-60 Hz	1	–	Green	10	**XB7 EW33M1P**	0.022
					Red	10	**XB7 EW34M1P**	0.022
					Yellow	10	**XB7 EW35M1P**	0.022
			–	1	Red	10	**XB7 EW34M2P**	0.022
Push and push-to-release illuminated buttons								
Integral LED	**Projecting**	⎓ 24	1	–	Green	10	**XB7 EH03B1P**	0.022
					Red	10	**XB7 EH04B1P**	0.022
					Yellow	10	**XB7 EH05B1P**	0.022
			–	1	Red	10	**XB7 EH04B2P**	0.022
		~ 230 50-60 Hz	1	–	Green	10	**XB7 EH03M1P**	0.022
					Red	10	**XB7 EH04M1P**	0.022
					Yellow	10	**XB7 EH05M1P**	0.022
			–	1	Red	10	**XB7 EH04M2P**	0.022



XB7 EH0●●●P

*(1) For Faston connection version (1 x 6.35 mm and 2 x 2.8 mm), add the number "**3**" to the end of the reference.*
*Example: **XB7 EV01BP** becomes **XB7 EV01BP3**.*

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Control stations and enclosures
Plastic control stations XAL E
For Harmony® Ø 22 control and signalling units XB7
Separate components (continued)



XB7 EV●●P

Pilot lights with BA 9s base fitting

Shape of head	Supply	Description	Supply voltage V	Colour of lens	Sold in lots of	Unit reference	Weight kg
	Direct *(2)*	For incandescent bulb (not included) *(2)* BA 9s base fitting	≤ 250	White	10	**XB7 EV61P** *(1)*	0.018
				Green	10	**XB7 EV63P** *(1)*	0.018
				Red	10	**XB7 EV64P** *(1)*	0.018
				Yellow	10	**XB7 EV65P** *(1)*	0.018
				Blue	10	**XB7 EV66P** *(1)*	0.018
				Orange	10	**XB7 EV68P** *(1)*	0.018
	Direct, through resistor	With incandescent bulb 130 V - 2.6 W included BA 9s base fitting	∼ 230 50/60 Hz	White	10	**XB7 EV71P** *(1)*	0.020
				Green	10	**XB7 EV73P** *(1)*	0.020
				Red	10	**XB7 EV74P** *(1)*	0.020
				Yellow	10	**XB7 EV75P** *(1)*	0.020
				Blue	10	**XB7 EV76P** *(1)*	0.020
				Orange	10	**XB7 EV78P** *(1)*	0.020
		For 130 V - 2.6 W bulb (not included) *(2)* BA 9s base fitting	∼ 230 50/60 Hz	White	10	**XB7 EV710P** *(1)*	0.020
				Green	10	**XB7 EV730P** *(1)*	0.020
				Red	10	**XB7 EV740P** *(1)*	0.020
				Yellow	10	**XB7 EV750P** *(1)*	0.020
				Blue	10	**XB7 EV760P** *(1)*	0.020



XB7 EW3●●1P



XB7 EH0●●1P

Illuminated pushbuttons with BA 9s base fitting, projecting push

Shape of head	Supply	Type of contact N/O	Type of contact N/C	Supply voltage V	Colour of lens	Sold in lots of	Unit reference	Weight kg
Spring return illuminated pushbuttons								
	Direct with BA 9s base fitting neon bulb included	1	–	∼ 230	Green	10	**XB7 EW3341P**	0.022
					Red	10	**XB7 EW3441P**	0.022
					Yellow	10	**XB7 EW3541P**	0.022
	Direct for incandescent BA 9s bulb (not included) *(3)*	1	–	⩽ 250	Green	10	**XB7 EW3361P**	0.020
					Red	10	**XB7 EW3461P**	0.020
					Yellow	10	**XB7 EW3561P**	0.020
Push and push-to-release illuminated buttons								
	Direct with BA 9s base fitting neon bulb included	1	–	∼ 230	Green	10	**XB7 EH0341P**	0.022
					Red	10	**XB7 EH0441P**	0.022
					Yellow	10	**XB7 EH0541P**	0.022
	Direct for incandescent BA 9s bulb (not included) *(3)*	1	–	⩽ 250	Green	10	**XB7 EH0361P**	0.020
					Red	10	**XB7 EH0461P**	0.020
					Yellow	10	**XB7 EH0561P**	0.020

*(1) For Faston connection version (1 x 6.35 mm and 2 x 2.8 mm), add the number "**3**" to the end of the reference.*
*Example: **XB7 EV61P** becomes **XB7 EV61P3**.*
(2) Bulb characteristics for direct supply pilot lights: 250 V max., 2.6 W max.
(3) Bulb characteristics for direct supply illuminated pushbuttons: 250 V max., 1.2 W max.

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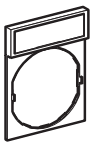


ZBY 2101

Legend holder, 30 x 40 mm with legend (black or red background)

With blank legend

Text	Sold in lots of	Unit reference	Weight kg
Without	**10**	**ZBY 2101**	0.001

With marked legend (sold singly)

- Start functions: white characters on black background.
- Stop functions: white characters on red background.

Text	Unit reference	Weight kg	Text	Unit reference	Weight kg
Auto	**ZBY 2115**	0.001	Reset	**ZBY 2323**	0.001
Down	**ZBY 2308**	0.001	Reverse	**ZBY 2306**	0.001
Forward	**ZBY 2305**	0.001	Right	**ZBY 2309**	0.001
Hand	**ZBY 2316**	0.001	Start	**ZBY 2303**	0.001
Inch	**ZBY 2321**	0.001	Stop	**ZBY 2304**	0.001
Left	**ZBY 2310**	0.001	Up	**ZBY 2307**	0.001
Off	**ZBY 2312**	0.001	O	**ZBY 2146**	0.001
On	**ZBY 2311**	0.001	I	**ZBY 2147**	0.001
Power on	**ZBY 2326**	0.001	O-I	**ZBY 2178**	0.001



ZBY 9330

Circular legends for Emergency stop mushroom head pushbuttons

Diameter mm	Colour	Marking on yellow background	Unit reference	Weight kg
60	Yellow	–	**ZBY 9101**	0.004
		EMERGENCY STOP	**ZBY 9330**	0.004
		ARRET D'URGENCE	**ZBY 9130**	0.004
		NOT-AUS	**ZBY 9230**	0.004
		PARADA DE EMERGENCIA	**ZBY 9430**	0.004
		ARRESTO EMERGENZA	**ZBY 9630**	0.004



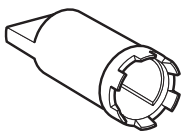
ZB5 AZ901



ZB5 AZ902

Accessories

Description	Colour	Sold in lots of	Unit reference	Weight kg
Anti-rotation plate	–	**10**	**ZB5 AZ902**	0.008
Fixing nut	–	**10**	**ZB5 AZ901**	0.002
Fixing nut tightening tool	–	**1**	**ZB5 AZ905**	0.016
Grooved lenses for BA 9s pilot lights	White	**10**	**ZB7 EV01**	0.002
	Green	**10**	**ZB7 EV03**	0.002
	Red	**10**	**ZB7 EV04**	0.002
	Yellow	**10**	**ZB7 EV05**	0.002
	Blue	**10**	**ZB7 EV06**	0.002
	Clear	**10**	**ZB7 EV07**	0.002
	Orange	**10**	**ZB7 EV08**	0.002



ZB5 AZ905

Bulbs

Description	Voltage	Power	Colour	Sold in lots of	Unit reference	Weight
	V	W				kg
Incandescent bulbs, long life BA 9s base fitting Ø 11 mm max. length 28 mm max.	6	1.2	–	**10**	**DL1 CB006**	0.002
	24	2.0	–	**10**	**DL1 CE024**	0.002
	130	2.6	–	**10**	**DL1 CE130**	0.002
Neon bulbs BA 9s base fitting Ø 11 mm max. length 28 mm max.	220…240	–	Green	**10**	**DL1 CS3220**	0.002
			Blue	**10**	**DL1 CS6220**	0.002
			Orange *(1)*	**10**	**DL1 CS7220**	0.002



DL1 CE●●●



DL1 CS●●●●

(1) For use with red, yellow or clear pilot light.

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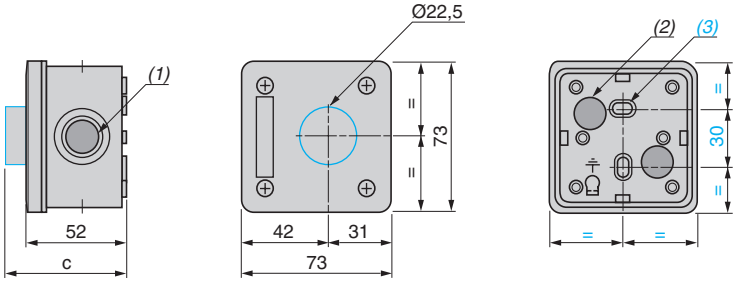
Control stations and enclosures
Plastic control stations XAL E
For Harmony® Ø 22 control and signalling units XB7

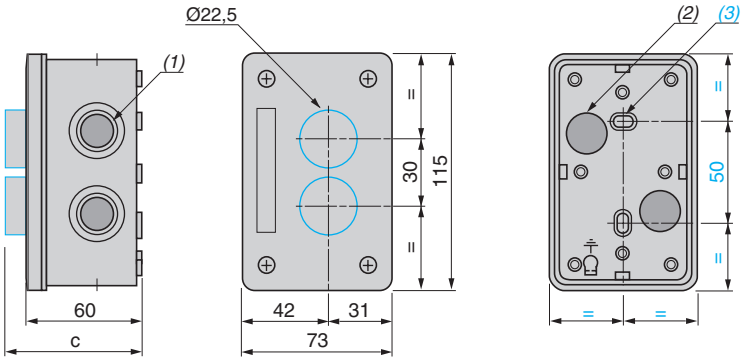
Control stations with 1 x Ø 22 control and signalling unit



Control station XAL E fitted with:	c
Flush pushbutton	61
Projecting pushbutton	63
Illuminated pushbutton	66.5
Pilot light	63
Emergency stop without key	81.5
Selector switch with standard handle	76.5
Key switch	92

(1) 4 ISO 20 knock-outs.
(2) 2 knock-outs for cable entry, maximum capacity 16 mm.
(3) 2 knock-out elongated fixing holes Ø 3 x 5.

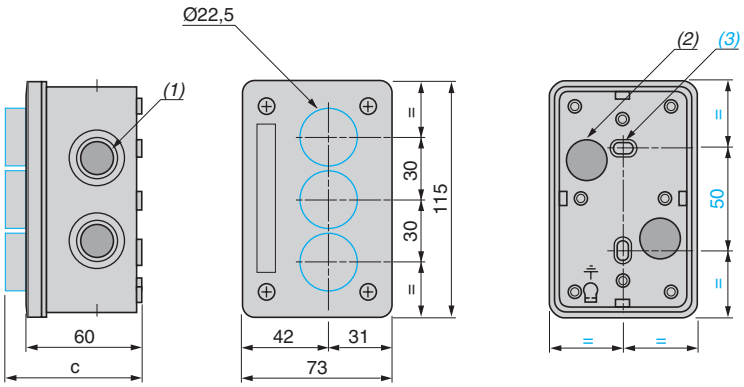
Control stations with 2 x Ø 22 control and signalling units



Control station XAL E fitted with:	c
Flush pushbutton	69
Projecting pushbutton	71
Illuminated pushbutton	74.5
Pilot light	71
Emergency stop without key	89.5
Selector switch with standard handle	84.5
Key switch	100

(1) 6 ISO 20 knock-outs.
(2) 2 knock-outs for cable entry, maximum capacity 20 mm.
(3) 2 knock-out elongated fixing holes Ø 3 x 5.

Control stations with 3 x Ø 22 control and signalling units



Control station XAL E fitted with:	c
Flush pushbutton	69
Projecting pushbutton	71
Illuminated pushbutton	74.5
Pilot light	71
Emergency stop without key	89.5
Selector switch with standard handle	84.5
Key switch	100

(1) 6 ISO 20 knock-outs.
(2) 2 knock-outs for cable entry, maximum capacity 20 mm.
(3) 2 knock-out elongated fixing holes Ø 3 x 5.

Presentation: page 2/36
Characteristics: page 2/38
References: page 2/39

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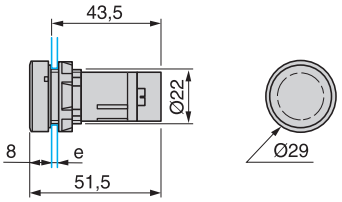
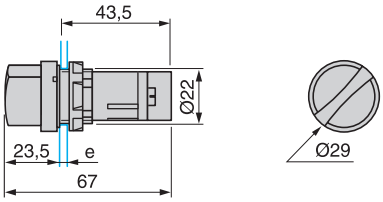
Harmony® Ø 22 control and signalling units XB7

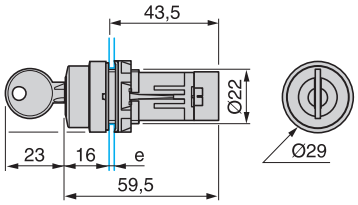
XB7 EA●●P, XB7 EH●●P



XB7 ED●●P

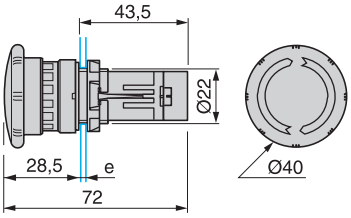


XB7 EG●●P

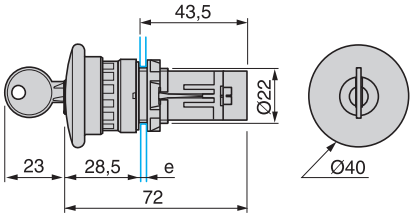


e: support panel thickness = 1 to 6 mm.

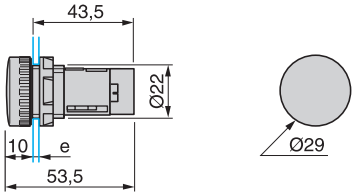
XB7 ES5●●P



XB7 ES1●●P

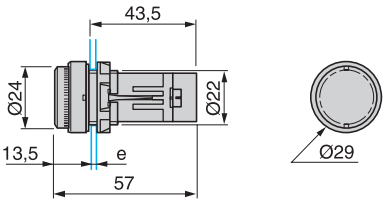


XB7 EV●●●P

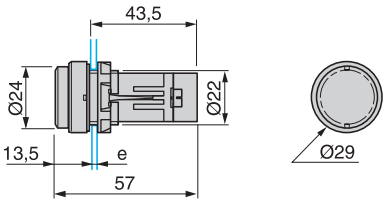


e: support panel thickness = 1 to 6 mm.

XB7 EW3●●●P, XB7 EH0●●●P

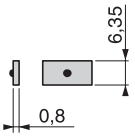


XB7 EL4●32P

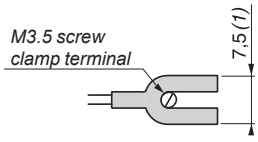


e: support panel thickness = 1 to 6 mm.

Faston clip connection



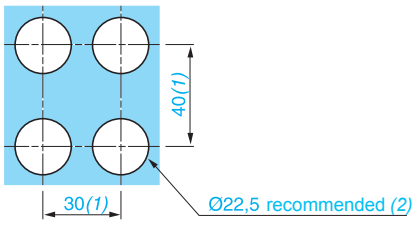
"U" type tag connection



(1) Minimum value.

Mounting

Diameter of finished fixing holes



(1) Minimum value.
(2) Standard value: Ø 22.3 (0; + 0.4).

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Control stations and enclosures

Polyester, metal and flush mounting enclosures
Undrilled or with cut-outs for Ø 22 control and signalling units

Insulated enclosures XAP A, glass-reinforced polyester

Material and colour			Glass-reinforced polyester, coloured grey throughout
Product certifications	Special version		CSA ENCLOSURE 4 and 5
Protective treatment	Standard version		"TC" and "TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Degree of protection	Conforming to IEC 60529		IP 65
Electric shock protection	Conforming to IEC 61140		Class II
Flame resistance			CSTB: M3, NF C 20-455: 850 °C, IEC 92: 960 °C, UL 94: VO
Resistance to chemical agents			Highly resistant to acids, bases, sea water, mineral salts, all solvents, petrol, diesel, oils and greases
Cable entries			Undrilled

Die-cast metal enclosures XAP M and XAP J

Material and colour			**XAP M1, M2, M3 and M4**: zinc alloy. Blue paint finish **XAP M5**: aluminium alloy. Blue paint finish **XAP J**: zinc alloy. Yellow lid and blue base
Product certifications	Special version		CSA ENCLOSURE 4 and 5, UL ENCLOSURE 1, 3, 4 and 12K
Protective treatment	Standard version		"TC"
	Special version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Degree of protection	Conforming to IEC 60529		IP 65
Electric shock protection	Conforming to IEC 61140		Class I
Resistance to chemical agents			Special treatments on request
Cable entries			Tapped entries for cable gland (see dimensions, page 2/55)

References: page 2/52
Dimensions: page 2/55

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Metal enclosures XB2 SL

Material and colour			Aluminium alloy or sheet steel. Blue paint finish
Protective treatment	Standard version		"TC"
	Special version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Degree of protection	Conforming to IEC 60529		IP 54
Electric shock protection	Conforming to IEC 61140		Class I
Resistance to chemical agents			Special treatments on request
Cable entries	**XB2 S** in aluminium alloy		Tapped entries for cable gland (see dimensions, page 2/55)
	XB2 S in sheet steel		Undrilled

Flush mounting enclosures XAP E

Material and colour			Anodised aluminium front plate. Insulated protective rear cover
Protective treatment	Standard version		"TC" and "TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Degree of protection	Conforming to IEC 60529		IP 65
Electric shock protection	Conforming to IEC 61140		Class I
Resistance to chemical agents			Good resistance to organic acids, diluted mineral acids, salts, alcohol, acetone, chloride and fluoride solvents, oils and petrol
Cable entries			Through rear cover: knock-out cable entries

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Control stations and enclosures

Polyester enclosures XAP A

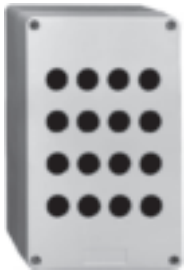
Undrilled or with cut-outs for Ø 22 control and signalling units



XAP A1104



XAP A2108



XAP A3116

Insulated enclosures XAP A, glass-reinforced polyester

Description	Front face dimensions mm	Number of cut-outs	Number of rows		Reference	Weight kg
			Vertical	Horizontal		
Without hinges Usable depth 83 mm	85 x 146	1	1	1	**XAP A1110**	0.470
		2	1	2	**XAP A1120**	0.450
		4	2	2	**XAP A1104**	0.460
	85 x 226	8	2	4	**XAP A2108**	0.580
	151 x 241	16	4	4	**XAP A3116**	0.820
With hinges Usable depth 83 mm	151 x 241	16	4	4	**XAP A4116**	0.850
Earthing plates sheet steel with earth screw	For XAP A1110				**XAP Z110**	0.080
	For XAP A1120				**XAP Z120**	0.070
	For XAP A1104				**XAP Z104**	0.070
	For XAP A2108				**XAP Z208**	0.110
	For XAP A3116 and A4116				**XAP Z316**	0.160



XAP A1100



XAP A2100



XAP A3100

Insulated enclosures XAP A, glass-reinforced polyester, undrilled

Description	Front face dimensions mm		Reference	Weight kg
Without hinges Usable depth 83 mm	85 x 146		**XAP A1100**	0.470
	85 x 226		**XAP A2100**	0.600
	151 x 241		**XAP A3100**	0.860
With hinges Usable depth 83 mm	151 x 241		**XAP A4100**	0.890
Earthing plates with earth screw	For XAP A1100	–	**XAP Z100**	0.080
	For XAP A2100	–	**XAP Z200**	0.130
	For XAP A3100 and A4100	–	**XAP Z300**	0.200
Other versions	Enclosures with cut-outs for Ø 30 control and signalling units. Enclosures pre-fitted with Ø 22 units. Please consult your customer care centre.			

Characteristics: page 2/50

Dimensions: page 2/55

Schneider Electric

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Control stations and enclosures

Metal control stations XAP M and XAP J

Undrilled or with cut-outs for Ø 22 control and signalling units



XAP M1202



XAP M2203



XAP M2504



XAP M4508

Die-cast metal enclosures XAP M (blue lid and base)

Description	Front face dimensions mm	Number of cut-outs	Number of rows		Reference	Weight
			Vertical	Horizontal		kg
Zinc alloy Usable depth 49 mm	80 x 80	1	1	1	**XAP M1201**	0.455
		2	2	1	**XAP M1202**	0.450
	80 x 130	2	1	2	**XAP M2202**	0.610
		3	1	3	**XAP M2203**	0.605
		4	2	2	**XAP M2204**	0.600
	80 x 175	3	1	3	**XAP M3203**	0.870
		4	1	4	**XAP M3204**	0.880
		6	2	3	**XAP M3206**	0.870
Zinc alloy Usable depth 74.5 mm	80 x 80	1	1	1	**XAP M1501**	0.605
		2	2	1	**XAP M1502**	0.600
	80 x 130	2	1	2	**XAP M2502**	0.810
		3	1	3	**XAP M2503**	0.815
		4	2	2	**XAP M2504**	0.810
	80 x 175	3	1	3	**XAP M3503**	1.145
		4	1	4	**XAP M3504**	1.140
		6	2	3	**XAP M3506**	1.130
	80 x 220	6	1	6	**XAP M4506**	1.380
		8	2	4	**XAP M4508**	1.370
Aluminium Usable depth 74.5 mm	85 x 310	8	1	8	**XAP M5508**	0.810
		12	2	6	**XAP M5512**	0.790

Die-cast metal enclosures XAP J (yellow lid, blue base)

Zinc alloy Usable depth 49 mm	80 x 80	1	1	1	**XAP J1201**	0.455
Zinc alloy Usable depth 74.5 mm	80 x 80	1	1	1	**XAP J1501**	0.605

Die-cast metal enclosures XAP M and XAP J, undrilled



XAP M11



XAP M31

Description	Material	Front face dimensions mm	Reference	Weight
Blue lid and base	Zinc alloy Usable depth 49 mm	80 x 80	**XAP M11**	0.460
		80 x 130	**XAP M21**	0.620
		80 x 175	**XAP M31**	0.900
	Zinc alloy Usable depth 74.5 mm	80 x 80	**XAP M14**	0.610
		80 x 130	**XAP M24**	0.830
		80 x 175	**XAP M34**	1.160
		80 x 220	**XAP M44**	1.410
	Aluminium Usable depth 74.5 mm	85 x 310	**XAP M54**	0.850
Yellow lid, blue base	Zinc alloy Usable depth 49 mm	80 x 80	**XAP J11**	0.460
	Zinc alloy Usable depth 74.5 mm	80 x 80	**XAP J14**	0.610
		80 x 80	**XAP J34**	1.160

Other versions

Enclosures with cut-outs for Ø 30 control and signalling units.
Enclosures pre-fitted with Ø 22 units.
Die-cast metal enclosures XAPM with ISO cable entries (H29 version).
Die-cast metal enclosures XAPM with UL/CSA certification (H7 version).
Please consult your customer care centre.

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Control stations and enclosures

Metal control stations XB2 SL
Flush mounting control stations XAP E
With cut-outs for Ø 22 control and signalling units



XB2 SL64007



XB2 SL42009



XAP E301



XAP E302



XAP E303



XAP E305



ZB5 SZ3

Sheet steel enclosures XB2 SL

Description	Front face dimensions mm	Number of cut-outs	Number of rows		Reference	Weight kg
			Vertical	Horizontal		
Sheet steel Usable depth 115 mm	200 x 200	8	4	2	**XB2 SL42007**	3.100
	200 x 260	16	4	4	**XB2 SL44007**	3.900
	260 x 260	24	6	4	**XB2 SL64007**	4.700
	260 x 320	30	6	5	**XB2 SL65007**	5.500
	320 x 320	40	8	5	**XB2 SL85007**	6.200

Die-cast metal enclosures XB2 SL (blue lid and base)

Description	Front face dimensions mm	Number of cut-outs	Number of rows		Reference	Weight kg
			Vertical	Horizontal		
Aluminium Usable depth 78 mm	150 x 150	6	3	2	**XB2 SL32009**	0.970
		8	4	2	**XB2 SL42009**	0.960

Flush mounting enclosures XAP E

Description	Material	Number of cut-outs	Front face dimensions mm	Reference	Weight kg
Front plates with fixing screws	Aluminium, anodised	1	72 x 72	**XAP E301**	0.050
		2	72 x 105	**XAP E302**	0.075
		3	72 x 138	**XAP E303**	0.095
		4	72 x 171	**XAP E304**	0.115
		5	72 x 204	**XAP E305**	0.135
Protective rear covers	Insulated	For front plate XAP E301		**XAP E901**	0.040
		For front plate XAP E302		**XAP E902**	0.050
		For front plate XAP E303		**XAP E903**	0.060
		For front plate XAP E304		**XAP E904**	0.070
		For front plate XAP E305		**XAP E905**	0.080

Accessories

Description	For use with	Colour	Sold in lots of	Unit reference	Weight kg
Metal circular blanking plug	Ø 22 control and signalling units XB4, metal	Chromium plated	10	**ZB4 SZ3**	0.023
		Black	10	**ZB4 SZ37**	0.023
Plastic square blanking plug (with fixing nut)	Ø 22 control and signalling units XB5, plastic	Black	10	**ZB5 SZ5**	0.009
Plastic circular blanking plug (with fixing nut)	Ø 22 control and signalling units XB5, plastic	Black	10	**ZB5 SZ3**	0.009
Other versions	Enclosures with cut-outs for Ø 30 control and signalling units. Enclosures pre-fitted with Ø 22 units. Please consult your customer care centre.				

Characteristics: page 2/50
Dimensions: page 2/55

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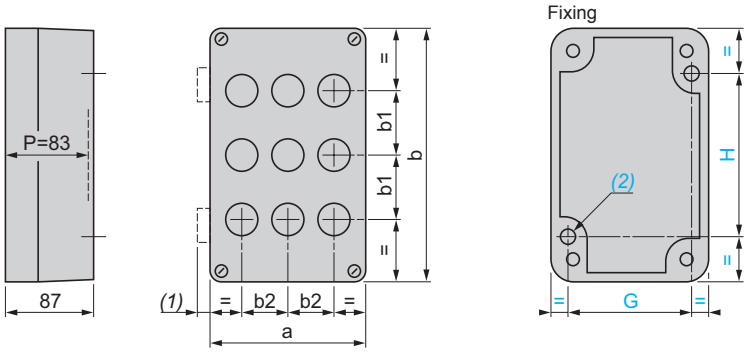
Control stations and enclosures

Polyester control stations XAP A

Undrilled or with cut-outs for Ø 22 control and signalling units

Insulated enclosures XAP A with cut-outs

XAP A



XAP	a	b	b1	b2	G	H
A1110	85	146	–	–	70	105
A1120	85	146	40	–	70	105
A1104	85	146	40	30	70	105
A2108	85	226	40	30	70	180
A3116, A4116	151	241	40	30	135	200

Drill cable entries to suit.

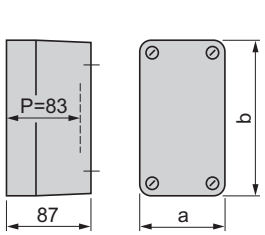
(1) 11 mm for XAP A4●●● enclosures with hinges.

(2) 2 x Ø 5.6 holes, depth 12.

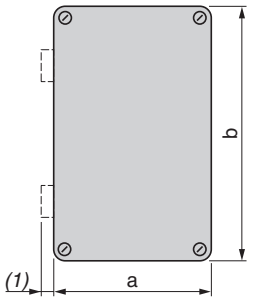
P = Usable depth

Insulated enclosures XAP A, undrilled

XAP A1100, XAP A2100



XAP A3100, XAP A4100



XAP	a	b	G	H
A1110	85	146	70	105
A2100	85	226	70	180
A3100	151	241	135	200
A4100	151	241	135	200

Drill cable entries to suit.

(1) 11 mm for XAP A4●●● enclosures with hinges.

(2) 2 x Ø 5.6 holes, depth 12.

P = Usable depth

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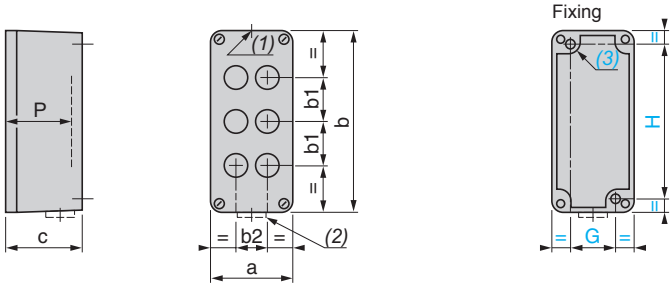
Control stations and enclosures

Metal control stations XAP M and XAP J
Metal control stations XB2 SL

Undrilled or with cut-outs for Ø 22 control and signalling units

Die-cast metal enclosures XAP M and XAP J, with cut-outs

XAP J, XAP M



(1) 1 hole, without blanking plug, for cable gland with 14 mm maximum clamping capacity, except:
- *XAP M3●●● and XAP M4●●●: maximum capacity 18 mm,*
- *XAP M5●●●: maximum capacity 24 mm.*

(2) 1 hole, with blanking plug (protrusion 6 mm), for cable gland with 14 mm maximum clamping capacity, except:
- *XAP M3●●●: maximum capacity 18 mm,*
- *XAP M4●●● and XAP M5●●●: undrilled.*

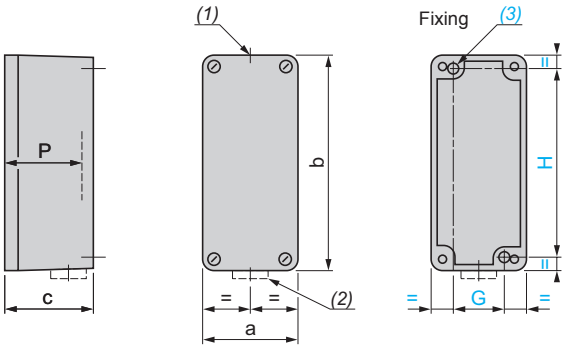
(3) 2 x Ø 5.6 holes, depth 20.

P = Usable depth

XAP	a	b	b1	b2	c	G	H	P
J1201	80	80	–	–	51.5	50	65	49
J1501	80	80	–	–	77	50	65	74.5
M1201, M1202	80	80	–	–	51.5	50	65	49
M1501	80	80	–	–	77	50	65	74.5
M1502	80	80	–	30	77	50	65	74.5
M2202	80	130	40	–	51.5	50	115	49
M2203	80	130	30	–	51.5	50	115	49
M2204	80	130	40	30	51.5	50	115	49
M2502	80	130	40	–	77	50	115	74.5
M2503	80	130	30	–	77	50	115	74.5
M2504	80	130	40	30	77	50	115	74.5
M3203	80	175	40	–	51.5	50	160	49
M3204	80	175	30	–	51.5	50	160	49
M3206	80	175	40	30	51.5	50	160	49
M3503	80	175	40	–	77	50	160	74.5
M3504	80	175	30	–	77	50	160	74.5
M3506	80	175	40	30	77	50	160	74.5
M4506	80	220	30	–	77	50	205	74.5
M4508	80	220	40	30	77	50	205	74.5
M5508	85	310	30	–	77	55	295	74.5
M5512	85	310	40	30	77	55	295	74.5

Die-cast metal enclosures XA PM and XAP J, undrilled

XAP J●●, XAP M●●



(1) 1 hole, without blanking plug, for cable gland with 14 mm maximum clamping capacity, except:
- *XAP J34, M31, M34 and M44: maximum capacity 18 mm,*
- *XAP M54: maximum capacity 24 mm.*

(2) 1 hole, with blanking plug (protrusion 6 mm), for cable gland with 14 mm maximum clamping capacity, except:
- *XAP J34, M31 and M34: maximum capacity 18 mm,*
- *XAP M44, M54: undrilled.*

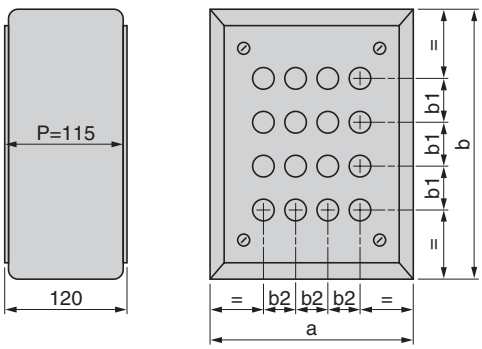
(3) 2 x Ø 5.6 holes, depth 20.

P = Usable depth

XAP	a	b	c	G	H	P
J11	80	80	51.5	50	65	49
J14	80	80	77	50	65	74.5
J34	80	175	77	50	160	74.5
M11	80	80	51.5	50	65	49
M14	80	80	77	50	65	74.5
M21	80	130	51.5	50	115	49
M24	80	130	77	50	115	74.5
M31	80	175	51.5	50	160	49
M34	80	175	77	50	160	74.5
M44	80	220	77	50	205	74.5
M54	85	310	77	55	295	74.5

Sheet steel enclosures XB2 SL

XB2 SL



XB2	a	b	b1	b2
SL42007	200	200	40	30
SL44007	200	260	40	30
SL64007	260	260	40	30
SL65007	260	320	40	30
SL85007	320	320	40	30

Enclosures supplied without fixing points or cable entries. In both cases drill to suit.
The depth of the enclosures enables all types of Ø 22 units to be mounted.
P = Usable depth

Characteristics: page 2/50
References: page 2/52

Schneider Electric
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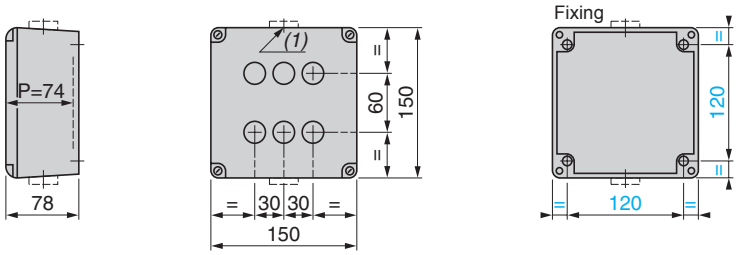
Control stations and enclosures

Metal control stations XAP M and XAP J
Metal control stations XB2 SL
Undrilled or with cut-outs for Ø 22 control and signalling units

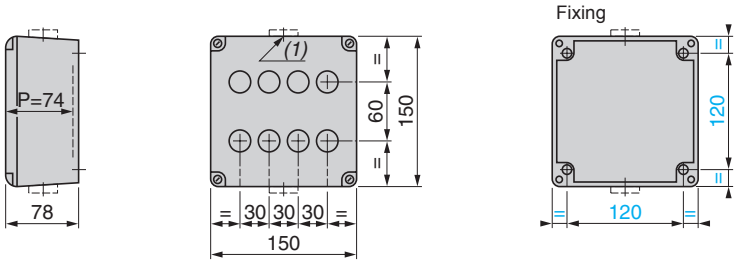
Die-cast metal enclosures XB2 SL, with cut-outs

XB2 SL32009



(1) 2 holes, with blanking plugs (protrusion 7.5 mm), for cable glands with 12 mm maximum clamping capacity.
P = Usable depth

XB2 SL42009

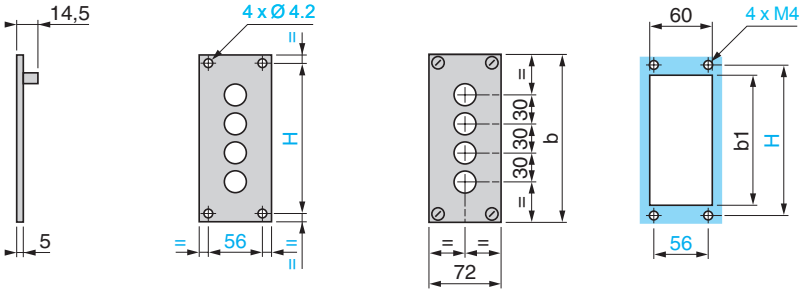


(1) 2 holes, with blanking plugs (protrusion 7.5 mm), for cable glands with 12 mm maximum clamping capacity.
P = Usable depth

Flush mounting enclosures XAP E

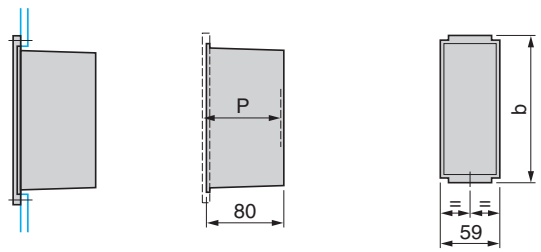
XAP E30●

Front plates with cut-outs for Ø 22 control and signalling units



For Ø 22 control and signalling units			
Front plate			
XAP	b	b1	H
E301	72	44	56
E302	105	77	89
E303	138	110	122
E304	171	143	155
E305	204	176	188

Mounting of front plate and protective rear cover on support panel



Protective rear cover for front plate XAP E30●		
XAP	b	P
E901	52	82.5
E902	85	82.5
E903	118	82.5
E904	151	82.5
E905	184	82.5

P = Usable depth

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Control stations and enclosures
Key operated control stations XAP S

Operating principle

These control stations are fitted with a key operated lock and are designed to provide a starting or authorisation sequence by using the key.
To prevent unauthorised operation (shorting of the contact block) or tampering, the stations are fitted with a special lock featuring a pre-determined key position (other than its withdrawal position) that only allows removal of the front cover by the key holder.
The control stations are supplied with 2 keys.

Environment

Conformity to standards			EN/IEC 60947-5-1
Protective treatment	Standard version		"TC"
	Special version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Electric shock protection	Conforming to IEC 61140		Class I
Degree of protection	Conforming to IEC 60529		IP 54
	Conforming to EN 50102		IK 08
Cable entries			1 tapped entry for cable gland and 1 entry through the rear (Ø 17 mm knock-out), with rubber cable grommet (see dimensions on next page)

Contact block characteristics

Nominal thermal current	Conforming to EN/IEC 60947-5-1	**A**	10
Rated insulation voltage			Ui = 600 V, degree of pollution 3 conforming to EN/IEC 60947-1
Rated impulse withstand voltage			Uimp = 6 kV conforming to EN/IEC 60947-1
Contact	Type		1 N/O slow break contact
	Material		Silver alloy (Ag/Ni)
Resistance across terminals		**mΩ**	≤ 25
Terminal referencing			Conforming to EN 50013 and EN 50050
Short-circuit protection	Conforming to EN/IEC 60947-5-1		10 A cartridge fuse type gG

Rated operational power

Conforming to EN/IEC 60947-5-1.
Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour.
Load factor: 0.5

AC-15: A600			
Ue (V)	600	240	120
Ie (A)	1.2	3	6
DC-13: Q600			
Ue (V)	600	250	125
Ie (A)	0.1	0.27	0.55

d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage (V)	24	48	120
⎓ (W)	65	48	40

Connection		Screw clamp terminals, cross head screws slotted for 4 and 5.5 mm screwdrivers Maximum clamping capacity: 1 x 2.5 mm^2 or 2 x 1.5 mm^2 with or without cable end Tightening torque: 0.8 Nm

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Control stations and enclosures
Key operated control stations XAP S

References


XAP S11111N


XAP S21111


XAP S21331


XAP S24431


XAP SZ12

Control stations with 1 N/O contact per function

Description	Key withdrawal	Marking			Mounting	Reference	Weight kg
2 position, stay put	Left-hand position	O		I	Surface	**XAP S11111N** *(1)*	0.830
					Flush	**XAP S14111N** *(1)*	0.890
2 position, spring return from right to left	Left-hand position			➡	Surface	**XAP S11221N** *(1)*	0.830
					Flush	**XAP S14221N** *(1)*	0.890
2 position, stay put + 2 spring return buttons	Left-hand position	⬆ O		⬇ I	Surface	**XAP S21111**	1.080
					Flush	**XAP S24111**	1.190
3 position, stay put	Centre position	⬆	O	⬇	Surface	**XAP S11331N** *(1)*	0.850
					Flush	**XAP S14331N** *(1)*	0.910
3 position, spring return from left and right to centre	Centre position	⬆	O	⬇	Surface	**XAP S11431N** *(1)*	0.850
					Flush	**XAP S14431N** *(1)*	0.910
3 position, stay put + 1 spring return button	Centre position	⬅	Stop O	➡	Surface	**XAP S21331**	1.070
					Flush	**XAP S24331**	1.180
3 position, spring return from left and right to centre + 1 spring return button	Centre position	⬅	Stop O	➡	Surface	**XAP S21431**	1.070
					Flush	**XAP S24431**	1.180

100 x 100 front plates (for XAP S11●●●N control stations)

Description	Marking			Reference	Weight kg
2 position, stay put	O		I	**XAP SZ11**	0.045
2 position			➡	**XAP SZ12**	0.045
3 position	⬆	O	⬇	**XAP SZ13**	0.045

Separate components and spare parts

Description	Type of contact	For use with control stations	Sold in lots of	Unit reference	Weight kg
Standard contact blocks	N/O	XAP S1●●●●N	5	**ZEN L1111**	0.015
		XAP S2●●●●	5	**ZB2 BE101**	0.015

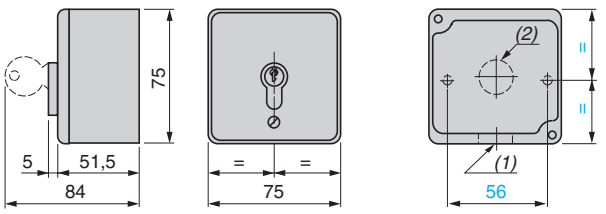
Accessories (for control stations XAP S11●●●N and XAP S14●●●N)

Description	Key number	Reference		Weight (kg)	
		Key only	2 keys + barrel *(2)*	Key only	2 keys + barrel
Keys	Number to be stated	**XAP SZ50**	**XAP SZ15**	0.011	0.140
	BC1011	**XAP SZ01**	**XAP SZ16**	0.011	0.140
	BC1025	**XAP SZ02**	**XAP SZ17**	0.011	0.140
	BC1029	**XAP SZ03**	**XAP SZ18**	0.011	0.140
	BC1031	**XAP SZ04**	**XAP SZ19**	0.011	0.140
	BC1069	**XAP SZ05**	**XAP SZ20**	0.011	0.140

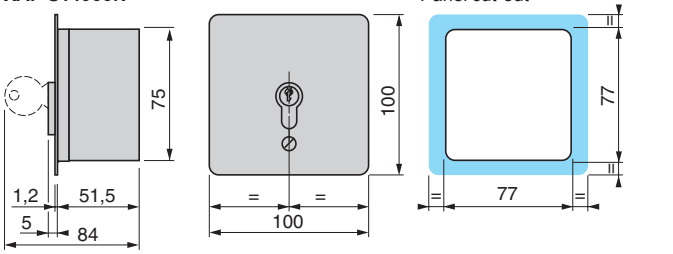
*(1) For a control station with a specific key number, add the letter Z to the end of the reference and state the key number when ordering. Example: **XAP S11111N** becomes **XAP S11111NZ**.*
(2) For keys and barrels with other numbers, please consult your customer care centre.

Dimensions, mounting

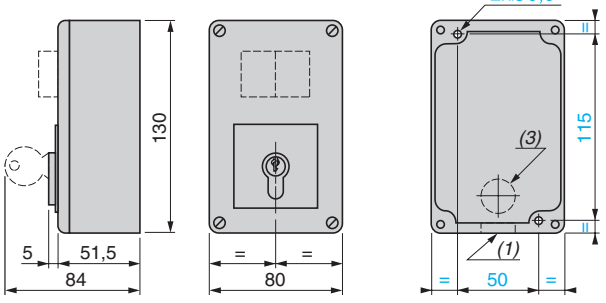
XAP S11●●●N



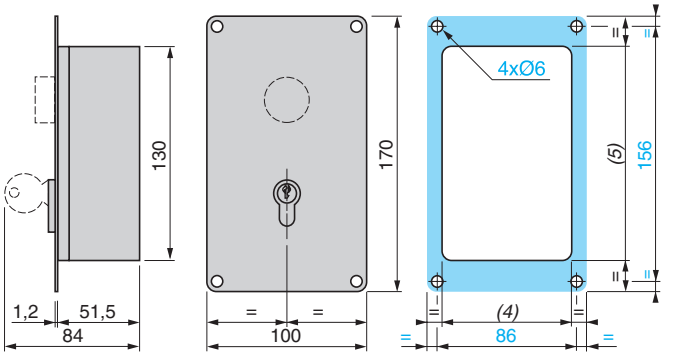
XAP S14●●●N



XAP S21●●●



XAP S24●●●



(1) 1 tapped entry for 12 mm maximum capacity cable gland.
(2) Knock-out: cable entry through rear, Ø 17 mm.
(3) Optional: cable entry through rear.
(4) 81 mm min.
(5) 131 mm min.

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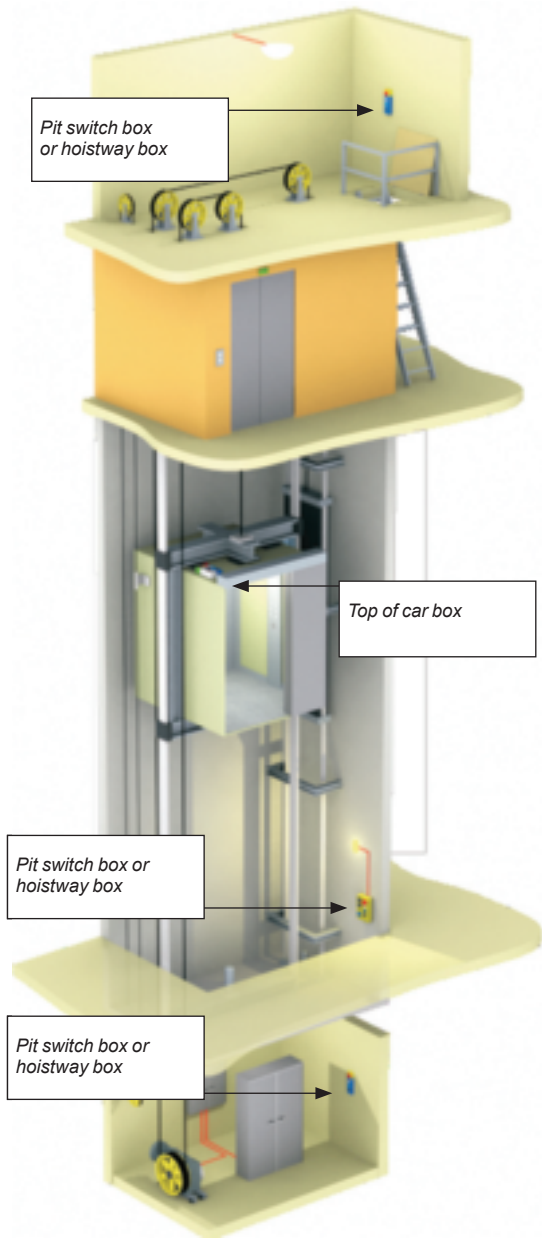
Control stations and enclosures
Lift inspection stations
Harmony® XAL F



Presentation

XAL F lift inspection stations are designed for lift maintenance applications.

Three types of stations are available:
- Top of car boxes
- Pit switch boxes
- Hoistway boxes.

- These boxes make it possible to control movement of the lift.
- Used in conjunction with the other operating components, they facilitate inspection and repair work.
- They are installed outside the lift car.
- Safety: inspection stations prevent any risk of uncontrolled movement of the lift while such work is being carried out.

- Supplied complete, these lift inspection stations are equipped with Ø 22 control and signalling units from the Harmony® XB5 and XB7 ranges; they are catalogue listed and are certified CE.
- Stations can also be configured by the user: empty enclosures which can be equipped to meet custom requirements are available from the catalogue.

Functions

Function	Equipment
Control and signalling	■ Flush pushbuttons, unmarked or with marking *(1)*. ■ Selector switches with standard handle or key switches. ■ Pilot lights with integral LED and “true colours”. ■ Illuminated pushbuttons.
Emergency Stop (EN/ISO 13850)	■ Mushroom head, latching, Emergency Stop pushbutton with pilot light and mechanical state indicator; □ White LED, on front panel. □ 360° mechanical indication by green ring and by two windows with green/red indication, on front panel.
Power socket	■ Extensive range of power sockets to meet the specific needs of each country. Degree of protection IP 44.

(1) Double injection-moulded marking.

Characteristics: page 2/62 | References: page 2/65 | Mounting: page 2/73 | Dimensions: page 2/74

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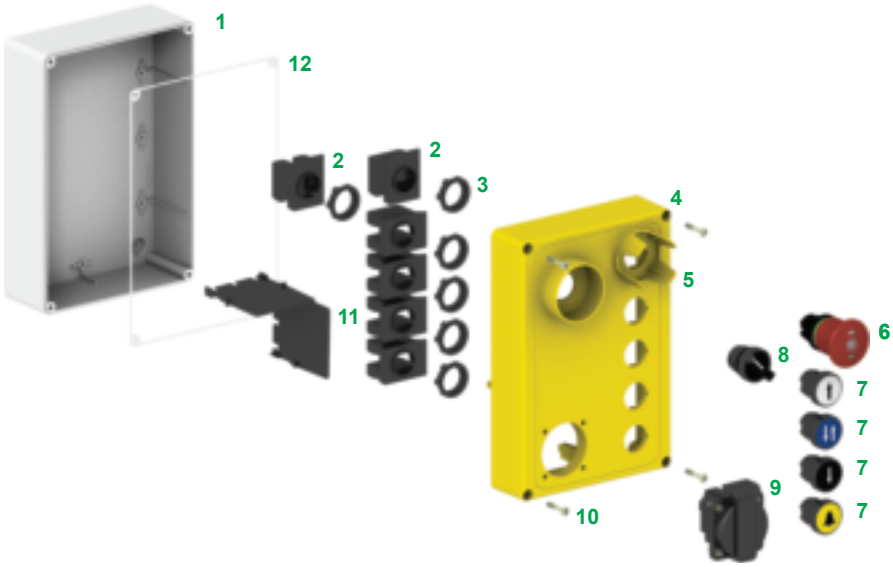
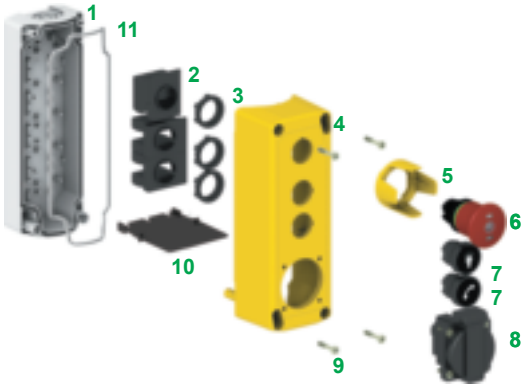
Control stations and enclosures
Lift inspection stations
Harmony® XAL F



Description

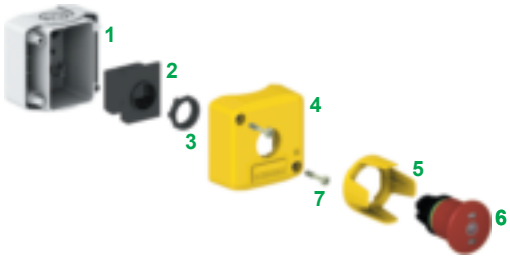
Top of car boxes

1 Enclosure base, grey.
2 Contact block.
3 Nuts.
4 Enclosure lid, yellow.
5 Guard.
6 Red, mushroom head, latching Emergency Stop pushbutton with pilot light (white) and mechanical state indicator (green/red).
7 Flush pushbuttons, with marking: ↑, ⏻, ↓, ▲.
8 Selector switch with standard handle.
9 230 V power socket.
10 Stainless steel screws.
11 Partition plates.
12 Gasket



Pit switch boxes

1 Enclosure base, grey.
2 Contact block.
3 Nuts.
4 Enclosure lid, yellow.
5 Guard.
6 Red, mushroom head, latching Emergency Stop pushbutton with pilot light (white) and mechanical state indicator (green/red).
7 Flush pushbuttons, with marking 🔔, 📞.
8 230 V power socket.
9 Stainless steel screws.
10 Partition plate
11 Gasket



Hoistway boxes

1 Enclosure base, grey.
2 Contact block.
3 Nut.
4 Enclosure lid, yellow.
5 Guard.
6 Mushroom head for latching Emergency Stop pushbutton with pilot light (white) and mechanical state indicator (green/red).
7 Stainless steel screws.

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Control stations and enclosures
Lift inspection stations
Harmony® XAL F

Empty enclosures or complete units

Environment characteristics

Protective treatment	Standard version		"TH" treatment
Ambient air temperature around the device	Storage	**°C**	- 40… + 70
	Operation	**°C**	0… + 50 (empty enclosures or complete units) - 25… + 70 (control and signalling units type XB5 or XB7)
Electric shock protection			Conforming to IEC 61140 class II
Degree of protection	Conforming to IEC 60529		IP 54 IP 44 with power socket
Mechanical shock protection	Conforming to IEC 50102		Non illuminated heads: IK 03 Illuminated heads: IK 05
Conforming to standards			EN 81-1, EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5
			EN/ISO 13850 (if equipped with "Trigger action" Emergency Stop buttons with pilot light and mechanical state indicator)
Product certifications			CE
Terminal referencing			Conforming to EN 50005 and EN 50013
Material and colours			Polycarbonate, light grey RAL 7035 (base) and yellow (lid)
Cable entries			Hoistway box and pit switch box: Knock-outs for n° 13 (CM12, Pg13.5) cable glands and tapped ISO 20 Top of car box: cut-outs required

Electrical characteristics

Rated insulation voltage	Conforming to EN 81-1	**V**	250 for power sockets
			500 for ZBE10● contact

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Contact function characteristics of XB5 pushbuttons, switches and pilot lights

Mechanical characteristics

Contact operation	N/C or N/O		Slow break
Positive operation	Conforming to EN/IEC 60947-5-1 appendix K		All functions incorporating an N/C contact have positive opening operation
Operating travel (to change the electrical state)	Pushbutton	**mm**	Changing N/C state: 1.5 Changing N/O state: 2.6 Total travel: 4.3
Operating force	Pushbutton	**N**	Changing N/C state: 3.5 Changing N/O state: 3.8
	Additional contact only (to change the state)	**N**	Single N/C contact: 2 Single N/O contact: 2.3
	Emergency stop with N/C + N/O	**N**	Trigger action push-pull: 50
Operating torque (to change the electrical state)	Selector switches	**N.m**	N/O contact: 0.14
	Additional contact only	**N.m**	N/O contact: 0.05
Mechanical durability (in millions of operating cycles)	Spring return pushbutton		5
	Non illuminated selector switch		1
	Illuminated selector switch		0.5
	Latching mushroom head pushbutton for Emergency Stop with mechanical state indicator		0.3 with 2 contacts
Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 2…500 Hz: 5 gn
Shock resistance	Conforming to IEC 60068-2-27		All functions except spring return mushroom head pushbuttons: □ half sine wave acceleration 11 ms: 50 gn □ half sine wave acceleration 18 ms: 30 gn Spring return mushroom head pushbutton: □ half sine wave acceleration 11 ms: 15 gn

Electrical characteristics

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Screw clamp terminals Min: 1 x 0.22 without cable end Max: 2 x 1.5 with cable end Cross head screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (max 1.2 N.m)
Contact material			Silver alloy (Ag / Ni)
Rated thermal current	Conforming to EN/IEC 60947-5-1	**A**	Standard block with screw clamp terminals: 10
Short-circuit protection	Conforming to EN/IEC 60947-5-1	**A**	Standard block with screw clamp terminals: 10 (gG cartridge fuse conforming to IEC 60269-1)
Rated insulation voltage	Conforming to EN/IEC 60947-1	**V**	Standard block with screw clamp terminals: Ui = 600 degree of pollution 3
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Standard block with screw clamp terminals: Uimp = 6
Rated operational characteristics Conforming to EN/IEC 60947-5-1	a.c. supply: utilisation category AC-15		A 600: Ue = 600 V and Ie = 1.2 A or Ue = 240 V and Ie = 3 A or Ue = 120 V and Ie = 6 A B300 with ZBE 7●●● contact blocks for printed circuit board connection
	d.c.supply: utilisation category DC-13		Q 600: Ue = 600 V and Ie = 0.1 A or Ue = 250 V and Ie = 0.1 A or Ue = 125 V and Ie = 0.22 A R300 with ZBE 7●●● contact blocks for printed circuit board connection
Electrical durability Conforming to EN/IEC 60947-5-1 appendix C Frequency: 3600 operating cycles/hour Load factor: 0.5	a.c. supply for 1 million operating cycles: utilisation category AC-15	**V** **A**	24 / 4 | 120 / 3 | 230 / 2
	d.c. supply for 1 million operating cycles: utilisation category DC-13	**V** **A**	24 / 0.5 | 110 / 0.2
Electrical reliability	Failure rate Conforming to EN/IEC 60947-5-4		At 17 V and 5 mA, $\lambda < 10^{-8}$ At 5 V and 1 mA, $\lambda < 10^{-6}$

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2

Ordinary light function characteristics, with integral LED

Ø 22 mm control and signalling units with plastic bezel, type XB5

Voltage limits	For rated voltage	**V**	12 V: 10 to 15 ⎓; 10.2 to 13.8 ∿ 24 V: 19.2 to 15 ⎓; 21.6 to 13.8 ∿ 24 to 120 V: 20 to 132 ⎓ 48 to 120 V: 40 to 132 ∿ 240 V: 195 to 264 ∿
Current consumption	Applicable to all colours	**mA**	Blocks with ⎓ 12 V supply: 18 Blocks with ⎓ 24 V supply: 18 Blocks with ∿ 120 V supply: 14 Blocks with ∿ 240 V supply: 14
Service life	At rated voltage and at an ambient temperature of 25 °C	**H**	100 000
Surge withstand	Conforming to IEC 61000-4-5	**kV**	1
Resistance to fast transients	Conforming to IEC 61000-4-4	**kV**	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	**V/m**	10
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	**kV**	8: in free air, on insulating parts 6: on contact, on metal parts
Direct parallel connection across inductive load E.g.: contactor coil or solenoid	Maximum power of load	**VA**	For high power applications (≥ 30 VA), a **ZBZ V●** LED suppressor must be connected across the light block terminals (see page 36168/4)
Electromagnetic emission	Conforming to IEC 55011		Class B

Monolithic plastic pilot lights type XB7 with integral LED

Voltage limits	For rated voltage	**V**	24 V ⎓: 19.2…30 ⎓; 21.6…26.4 ∿ 120 V ∿: 100…132 ∿ 230-240 V ∿: 195…264 ∿
Current consumption	Applicable to all colours	**mA**	18 (all types, all voltages)
Service life	At rated voltage and at an ambient temperature of 25 °C	**H**	80 000
Electromagnetic emissions	Conforming to IEC 55011		Class B

Connections

Ø 22 mm control and signalling units with plastic bezel, type XB5

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Screw clamp terminals □ min: 1 x 0.22 without cable end □ max.: 2 x 1.5 with cable end or 2 x 2.5 without cable end Cross head screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (max 1.2 N.m)

Monolithic plastic pilot lights type XB7 with integral LED

Cabling capacity	Conforming to EN/IEC 60947-1	**mm²**	Screw clamp terminals □ min: 1 x 0.34 without cable end □ max.: 2 x 1.5 with cable end Cross head screws (Pozidriv or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (max 1.2 N.m)

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Control stations and enclosures

Lift inspection stations
Harmony® XAL F
Complete stations, empty enclosures

Hoistway boxes (grey base and yellow lid)

Complete boxes

Description	Type of push	Type of contact N/O	Type of contact N/C	Shape of head	Reference	Weight kg
105765  *XAL FKT644●1*						
1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with mechanical state indicator (green/red)	1	1		**XAL FKT64451**	0.175
		–	1		**XAL FKT64421**	0.165
		–	2		**XAL FKT64441**	0.175
	Latching, with pilot light (white) and mechanical state indicator (green/red)	1	1		**XAL FKT6445●11** *(1)*	0.185
105766  *XAL FKT644●*						
1 red, mushroom head Emergency Stop pushbutton	Latching, with mechanical state indicator (green/red)	1	1		**XAL FKT6445**	0.165
		–	1		**XAL FKT6442**	0.155
		–	2		**XAL FKT6444**	0.165
	Latching, with pilot light (white) and mechanical state indicator (green/red)	1	1		**XAL FKT6445●1** *(1)*	0.175
105769  *XAL FKA252●*						
1 spring return pushbutton	Flush black	1	–		**XAL FKA2521**	0.130
		1	1		**XAL FKA2525**	0.140
		2	–		**XAL FKA2523**	0.140
105770  *XAL FKA551●*						
	Flush yellow	1	–		**XAL FKA5511**	0.130
		1	1		**XAL FKA5515**	0.140
		2	–		**XAL FKA5513**	0.140
105771  *XAL FKA253●*						
	Flush black	1	–		**XAL FKA2531**	0.130
		1	1		**XAL FKA2535**	0.140
		2	–		**XAL FKA2533**	0.140

Empty enclosure for configuration by the user

Number of Ø 22 mm cut-outs	Reference	Weight kg
105772  *XAL FK01*		
1	**XAL FK01**	0.110

*(1) Replace the ● in the reference with **B** for ∿/⎓ 24 V, with **G** for ∿ 110 …120 V or with **M** for ∿ 230…240 V.*

Other versions Please consult your customer care centre

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Control stations and enclosures

Lift inspection stations
Harmony® XAL F
Complete stations, empty enclosures

Pit switch boxes (grey base and yellow lid)

Complete boxes

Description	Type of push	Type of contact N/O	Type of contact N/C	Shape of head	Reference	Weight kg
1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with mechanical state indicator (green/red)	1	1		**XAL FK2001E**	0.500
1 spring return pushbutton	1 flush black	1	–			
1 power socket (IEC blue) *(1)*						

105762



XAL FK2001E

1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with mechanical state indicator (green/red)	1	1		**XAL FK3001E**	0.550
2 spring return pushbuttons	1 flush black	1	–			
	1 flush black	1	–			
1 power socket (IEC blue) *(1)*						

105763



XAL FK3001E

1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with pilot light (white ~/⎓ 24 V) and with mechanical state indicator (green/red)	1	1		**XAL FK3011E**	0.550
2 spring return pushbuttons	1 flush black	1	–			
	1 flush yellow	1	–			
1 power socket (IEC blue) *(1)*						

105764



XAL FK3011E

Empty enclosures for configuration by the user

Number of Ø 22 mm cut-outs	Number of Ø 45 mm cut-outs for power socket	Reference	Weight kg
3	–	**XAL FK03**	0.290
4	–	**XAL FK04**	0.290
2	1	**XAL FK021**	0.290
3	1	**XAL FK031**	0.290

105773



XAL FK04

105774



XAL FK031

(1) IEC Blue power socket type XAL FZE3; for other types of power socket, see page 2/70.

Other versions Please consult your customer care centre

Presentation: page 2/60 Characteristics: page 2/62 Mounting: page 2/73 Dimensions: page 2/74

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Control stations and enclosures

Lift inspection stations
Harmony® XAL F
Complete stations, empty enclosures

Top of car boxes (grey base and yellow lid)

Complete boxes

Description	Type of operator	Type of contact N/O	Type of contact N/C	Shape of head	Reference	Weight kg
105758  *XAL FP6003E*						
1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with mechanical state indicator (green/red)	1	1		**XAL FP6003E**	0.810
4 spring return pushbuttons	1 flush white	2	–			
	1 flush blue	1	–			
	1 flush black	2	–			
	1 flush yellow	1	–			
1 selector switch, with guard	Standard black handle, 2-position stay put	3	3			
1 power socket (IEC blue) *(1)*						
105759  *XAL FP7005E*						
1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with pilot light (white ∿/⎓ 24 V) and mechanical state indicator (green/red)	1	1		**XAL FP7005E**	0.850
4 spring return pushbuttons	1 flush white	2	–			
	1 flush blue	1	–			
	1 flush black	2	–			
	1 flush yellow	1	–			
2 selector switches, with guard	Standard black handle, 2-position stay put	2	2			
	Standard black handle, 3-position spring return to centre	1	1			
1 power socket (IEC blue) *(1)*						
105784  *XAL FK4001*						
1 red, mushroom head Emergency Stop pushbutton, with guard	Latching, with mechanical state indicator (green/red)	1	1		**XAL FK4001**	0.550
2 spring return pushbuttons	1 flush white	2	–			
	1 flush black	2	–			
1 selector switch, with guard	Standard black handle, 2-position stay put	2	2			
105775  *XAL FP0714*						

Empty enclosures for configuration by the user

Number of Ø 22 mm cut-outs	Number of Ø 45 mm cut-outs for power socket	Reference	Weight kg
6	1	**XAL FP0612**	0.500
	0	**XAL FP0602**	0.500
7	1	**XAL FP0714**	0.500
	0	**XAL FP0704**	0.500

(1) IEC Blue power socket type XAL FZE3; for other types of power socket, see page 2/70.

Other versions Please consult your customer care centre

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Control stations and enclosures
Lift inspection stations
Harmony® XAL F
Separate components

Heads to combine with bodies: see page 2/71

523149



ZB5 AA58

522694



ZB5 AT8643M

106215



ZB5 AD●

106224



ZB5 AG2

106227



ZB5 AK1233

Ø 22 mm control and signalling units with plastic bezel

Pushbuttons, switches and pilot lights for user assembly: heads

Description	Type of push	Marking		Colour of push	Reference	Weight kg
		Symbol	Colour			
Heads for spring return pushbuttons	Flush		White	Yellow	**ZB5 AA551**	0.018
			Black	White	**ZB5 AA334**	0.018
			White	Blue	**ZB5 AA650**	0.018
			White	Black	**ZB5 AA335**	0.018
			White	Black	**ZB5 AA252**	0.018
			White	Black	**ZB5 AA253**	0.018
	Flush, illuminated *(1)*		–	Orange	**ZB5 AA58**	0.018
Illuminated mushroom head for Emergency stop trigger action and mechanical latching pushbuttons *(2) (4)*	Push-pull Ø 40 mm With pilot light *(3)* and mechanical state indicator		–	Red	**ZB5 AT8643M**	0.034

Description	Type of operator	Shape of head	Number and type of positions	Reference	Weight kg
Heads for selector switches	Standard handle, black		2 - stay put	**ZB5 AD2**	0.025
			3 - spring return to centre	**ZB5 AD5**	0.025
	Key switch with key n° 455 *(5)*		2 - stay put *(6)*	**ZB5 AG2**	0.050
Heads for illuminated selector switches with standard handle *(3)*	Standard handle, green		2 - stay put	**ZB5 AK1233**	0.021

Protected LED

(1) For insertion of legend.
(2) Conforming to standards EN/IEC 60204-1 and ISO 13850, to Machinery Directive 98/37/EC and to standard EN/IEC 60947-5-5.
(3) For use with bodies comprising a light source with integral LED. Light blocks and body fixing collar, see page 2/71. Maximum number of contacts fitted to the associated body: 2.
(5) Other key numbers available:
*- key n° 421E: add suffix **12** to the reference,*
*- key n° 458A: add suffix **10** to the reference,*
*- key n° 520E: add suffix **14** to the reference,*
*- key n° 3131A: add suffix **20** to the reference.*
*Example: for a switch head with key n° 421E, 2-position stay put with key withdrawal from the left-hand position, the reference becomes: **ZB5 AG212**. For specific keys with other numbers, please consult your* customer care centre.
(6) The symbol indicates key withdrawal position(s).

Other versions

Specific markings on boxes
Other power sockets
Special cut-outs in enclosures
Customised products

Please consult your customer care centre

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Control stations and enclosures
Lift inspection stations
Harmony® XAL F
Separate components

522410



XB7 EV0●●P

Ø 22 mm control and signalling units with plastic bezel (continued)

Monolithic pilot lights

Description	Shape of head	Supply voltage V	Colour of lens	Sold in lots of	Unit reference	Weight kg
Pilot lights with integral LED ("true" colours) Integral LED		⎓ 24 V	White	10	**XB7 EV01BP**	0.020
			Green	10	**XB7 EV03BP**	0.020
			Red	10	**XB7 EV04BP**	0.020
			Yellow	10	**XB7 EV05BP**	0.020
			Blue	10	**XB7 EV06BP**	0.020
			Clear	10	**XB7 EV07BP**	0.020
			Orange	10	**XB7 EV08BP**	0.020
		~ 120 V 50-60 Hz	White	10	**XB7 EV01GP**	0.020
			Green	10	**XB7 EV03GP**	0.020
			Red	10	**XB7 EV04GP**	0.020
			Yellow	10	**XB7 EV05GP**	0.020
			Blue	10	**XB7 EV06GP**	0.020
			Clear	10	**XB7 EV07GP**	0.020
			Orange	10	**XB7 EV08GP**	0.020
		~ 230 V 50-60 Hz	White	10	**XB7 EV01MP**	0.020
			Green	10	**XB7 EV03MP**	0.020
			Red	10	**XB7 EV04MP**	0.020
			Yellow	10	**XB7 EV05MP**	0.020
			Blue	10	**XB7 EV06MP**	0.020
			Clear	10	**XB7 EV07MP**	0.020
			Orange	10	**XB7 EV08MP**	0.020

814388



XB5 AVB1

Pilot lights with integral LED

Screw clamp terminal connections (Schneider Electric anti-retightening system)

Complete units

Description	Shape of head	Supply voltage V	Colour	Reference	Weight kg
Pilot lights with plain lens Protected LED		⎓ 24 (50/60 Hz)	White	**XB5 AVB1** (ZB5 AVB1 + ZB5 AV013)	0.038
			Green	**XB5 AVB3** (ZB5 AVB3 + ZB5 AV033)	0.038
			Red	**XB5 AVB4** (ZB5 AVB4 + ZB5 AV043)	0.038
			Orange	**XB5 AVB5** (ZB5 AVB5 + ZB5 AV053)	0.038
			Blue	**XB5 AVB6** (ZB5 AVB6 + ZB5 AV063)	0.038
		~ 110...120 (50/60 Hz)	White	**XB5 AVG1** (ZB5 AVG1 + ZB5 AV013)	0.038
			Green	**XB5 AVG3** (ZB5 AVG3 + ZB5 AV033)	0.038
			Red	**XB5 AVG4** (ZB5 AVG4 + ZB5 AV043)	0.038
			Orange	**XB5 AVG5** (ZB5 AVG5 + ZB5 AV053)	0.038
			Blue	**XB5 AVG6** (ZB5 AVG6 + ZB5 AV063)	0.038
		~ 230...240 (50/60 Hz)	White	**XB5 AVM1** (ZB5 AVM1 + ZB5 AV013)	0.038
			Green	**XB5 AVM3** (ZB5 AVM3 + ZB5 AV033)	0.038
			Red	**XB5 AVM4** (ZB5 AVM4 + ZB5 AV043)	0.038
			Orange	**XB5 AVM5** (ZB5 AVM5 + ZB5 AV053)	0.038
			Blue	**XB5 AVM6** (ZB5 AVM6 + ZB5 AV063)	0.038

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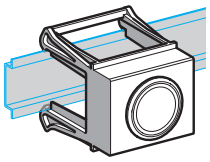
Control stations and enclosures
Lift inspection stations
Harmony® XAL F
Complete stations, empty enclosures



15151



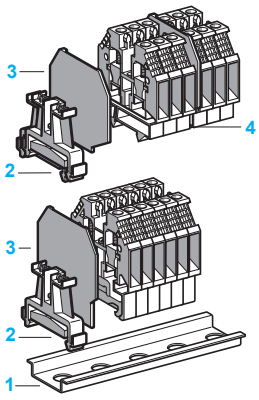
ZB5 SZ3



AB1 VV215



AB1 TP215



Power sockets

Description	For use in	Colour	Sold in lots of	Unit reference	Weight kg
230 Volt power socket, with protective shutter (protection: IP 44)	Germany	Black	1	**XAL FZE2**	0.050
		Blue	1	**XAL FZE3**	0.050
	France	Grey	1	**XAL FZF8**	0.050
	Italy	Blue	1	**XAL FZT3**	0.050
	United Kingdom	Black	1	**XAL FZB2**	0.050
	Switzerland	Blue	1	**XAL FZS3**	0.050

Accessories

Description	Application	Sold in lots of	Unit reference	Weight kg
Partition plates	For 230 Volt power socket	1	**XAL FZ1**	0.010
Nut	Fixing the head of Ø 22 mm control and signalling units	10	**ZB5 AZ901**	0.002
Plastic blanking plug, round, black (supplied with nut ZB5 AZ901)	Ø 22 mm cut-outs for circular heads	10	**ZB5 SZ3**	0.009
Bracket for XB5 A pushbuttons or XB7 E pilot lights	35 mm ⎓ mounting rail (for use in modular enclosure).	1	**15151**	0.040

Terminal blocks

Description	Type	Sold in lots of	Unit reference	Weight g
Terminal block for clip-on mounting on 15 mm ⎓ rail	Screw clamp terminals for cables Colour: grey - Width: 5 mm Cabling c.s.a. (mm^2): - flexible cable without cable end: 0.5…2.5 - flexible cable with cable end: 0.5…1.5 - solid cable: 0.5…4	10	**AB1 VV215**	4.2
Protective earth	Colour: green/yellow - Width: 6 mm Cabling c.s.a. (mm^2): - flexible cable without cable end: 0.5…4 - flexible cable with cable end: 0.5…2.5 - solid cable: 0.5…6	100	**AB1 TP215**	11.7
1 **15 x 5 rail for terminal blocks**	Length: 1m	10	**AB1 PC15**	140
2 **Plastic end stop**	Width: 7.5	100	**AB1 AB715**	2.2
3 **End plate**	Colour: grey Thickness: 1.5 mm	50	**AB1 AC2**	1.3
4 **Partition plate**	Colour: grey Thickness: 1.5 mm	50	**AB1 AS2**	1.7

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Control stations and enclosures
Lift inspection stations
Harmony® XAL F
Separate components


ZB5 AZ101


ZB5 AZ102


ZB5 AW0B51


ZBE 101


ZBE 102


ZBV B●


ZB5 AZ009

Bodies for Ø 22 mm control and signalling units with screw clamp terminal connections (1)

Description	For use with	Type of contact N/O	Type of contact N/C	Reference	Weight kg
Fixing collar + single contact block with screw clamp terminal connections	Heads for ZB5 pushbuttons	1	–	**ZB5 AZ101**	0.021
		–	1	**ZB5 AZ102**	0.021
		2	–	**ZB5 AZ103**	0.030
		–	2	**ZB5 AZ104**	0.030
		1	1	**ZB5 AZ105**	0.030

Description	For use with	Supply voltage	Colour of light source	Type of contact N/O	Type of contact N/C	Reference	Weight kg
Fixing collar + single contact block with screw clamp terminal connections + light block with integral LED Protected LED	ZB5 AA58	⎓ 24 V	Orange	1	–	**ZB5 AW0B51**	0.032

Contact blocks with screw clamp terminal connections

Description	For use with	Sold in lots of	Type of contact N/O	Type of contact N/C	Unit reference	Weight kg
Standard single contact blocks (2) (3)	Heads for ZB5 pushbuttons	5	1	–	**ZBE 101**	0.011
		5	–	1	**ZBE 102**	0.011

Light blocks with screw clamp terminal connections

Description	For use with	Supply voltage	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	ZB5 AA58	⎓ 24 V	Orange	5	**ZBV B5**	0.017
		∿ 48…120 V	Orange	5	**ZBV G5**	0.017
		∿ 230…240 V	Orange	5	**ZBV M5**	0.017
	ZB5 AK1233	⎓ 24 V	Green	5	**ZBV B3**	0.017
		∿ 48…120 V	Green	5	**ZBV G3**	0.017
		∿ 230…240 V	Green	5	**ZBV M3**	0.017
	ZB5 AT8643M	⎓ 24 V	White	5	**ZBV B1**	0.017
		∿ 48…120 V	White	5	**ZBV G1**	0.017
		∿ 230…240 V	White	5	**ZBV M1**	0.017

Accessories

Description	For use with	Sold in lots of	Unit reference	Weight kg
Body/fixing collar	Standard single contact blocks or light blocks with integral LED	10	**ZB5 AZ009**	0.006

(1) Can be fitted with additional contact blocks.
(2) The contact blocks enable variable composition of body/contact assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contacts occupy 2 rows).
*(3) For use with body/fixing collar **ZB5 AZ009**.*

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Control stations and enclosures
Lift inspection stations
Harmony® XAL F
Separate components



ZBE 701



ZBE 702

Contact blocks for printed circuit board connection *(1)*

Description	Type of contact N/O	Type of contact N/C	For use with	Sold in lots of	Unit reference	Weight kg
Standard contact blocks	1	–	Heads for ZB5 pushbuttons	10	**ZBE 701**	0.002
	–	1	Heads for ZB5 pushbuttons	10	**ZBE 702**	0.002
Specific contact blocks for low power switching with gold flashed contacts	1	–	Heads for ZB5 pushbuttons	10	**ZBE 7016**	0.003
	–	1	Heads for ZB5 pushbuttons	10	**ZBE 7026**	0.003

Light blocks for printed circuit board connection *(1)*

Description	Supply voltage V	For use with	Colour of LED	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	≂ 24	ZB5 AA58	Orange	5	**ZBV B57**	0.004
		ZB5 AK1233	Green	5	**ZBV B37**	0.004
		ZB5 AT8643M	White	5	**ZBV B17**	0.004



ZBV B●7

Adapter (socket) for printed circuit board

For use with	Thickness of printed circuit board mm	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	1.6 ± 0.2	10	**ZBZ 010**	0.008
	2.2 ± 0.2	10	**ZBZ 011**	0.008
	3.2 ± 0.2	10	**ZBZ 012**	0.008



ZBZ 01●

Accessories specifically for printed circuit board mounting *(1)*

Description	For use with	Sold in lots of	Unit reference	Weight kg
Fixing collar/pillar	Printed circuit board support	10	**ZB5 AZ079**	0.003
Fixing screw for printed circuit board	Fixing collar/pillar ZB5 AZ079	10	**ZBZ 006**	0.011



ZB5 AZ079

(1) For details of panel and printed circuit board cut-outs: see page 2/73.
Must be used in conjunction with adapter (socket) ***ZBZ 010****.*

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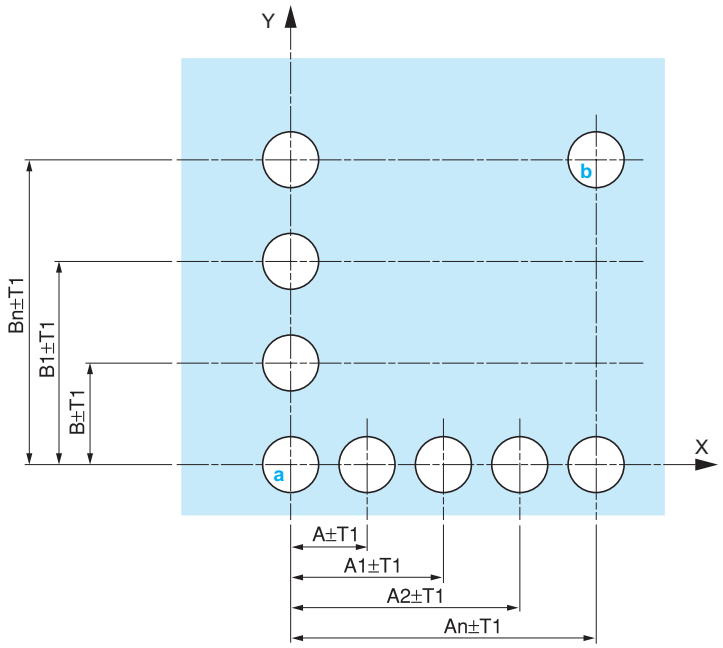
Pushbuttons, switches and pilot lights for printed circuit board connection

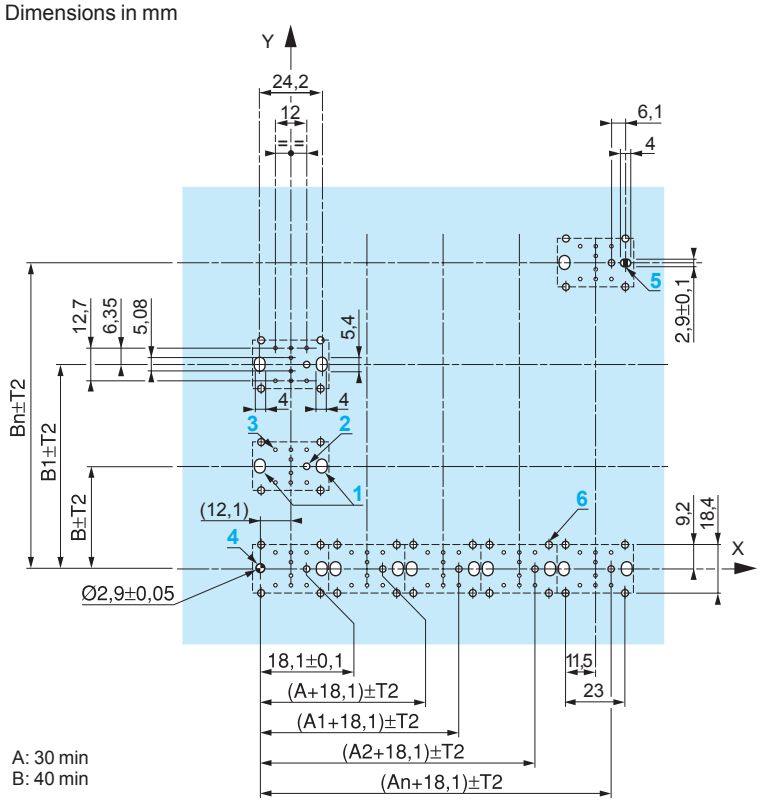
Panel cut-outs (viewed from installer's side)

Dimensions in mm



Printed circuit board cut-outs (viewed from electrical block side)

Dimensions in mm

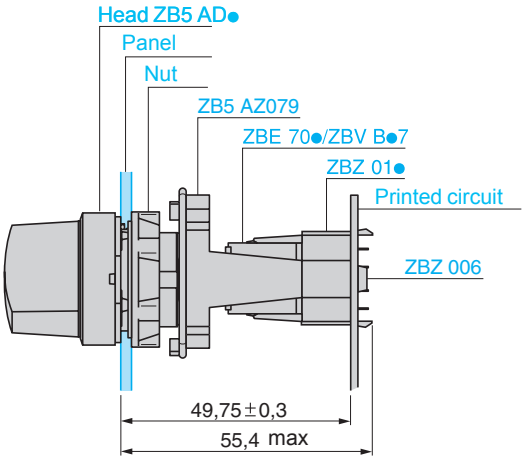


General tolerances of the panel and printed circuit board

The cumulative tolerance must not exceed 0.3 mm: T1 + T2 = 0.3 mm max.

■ Installation precautions:
□ Minimum thickness of circuit board: 1.6 mm.
□ Cut-out diameter: 22.4 mm ± 0.1 mm.
□ Orientation of body/fixing collar ZB5 BZ079: ± 2° 30' (excluding cut-outs marked **a** and **b**).
□ Tightening torque of screws ZBZ 006: 0.6 N.m max.
□ Allow for one ZB5 BZ079 fixing collar/pillar and its fixing screws:
- every 90 mm horizontally (X), and 120 mm vertically (Y),
- with each selector switch head (ZB5 AD●, ZB5 AJ●, ZB5 AG●).

The fixing centres marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5** on the printed circuit board.



■ Mounting of adapter (socket) ZBZ 01● :

1 2 elongated holes for ZBZ 006 screw access.

2 1 hole Ø 2.4 mm ± 0.05 for centring adapter ZBZ 01●.

3 8 x Ø 1.2 mm holes.

4 1 hole Ø 2.9 mm ± 0.05, for aligning the printed circuit board (with cut-out marked **a**).

5 1 elongated hole for aligning the printed circuit board (with cut-out marked **b**).

6 4 holes Ø 2.4 mm ± 0.05 for clipping in adapter ZBZ 01●.

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 holes for centring adapter ZBZ 01●.

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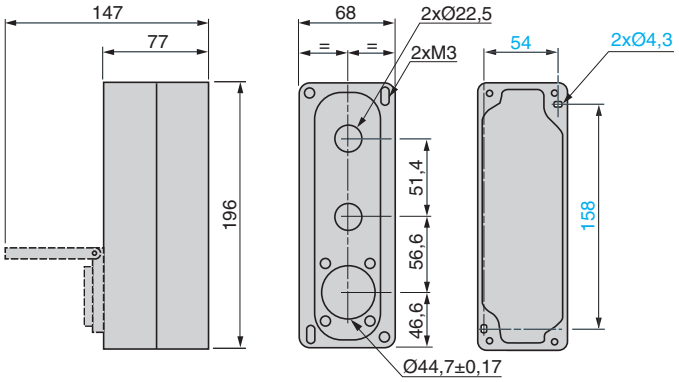
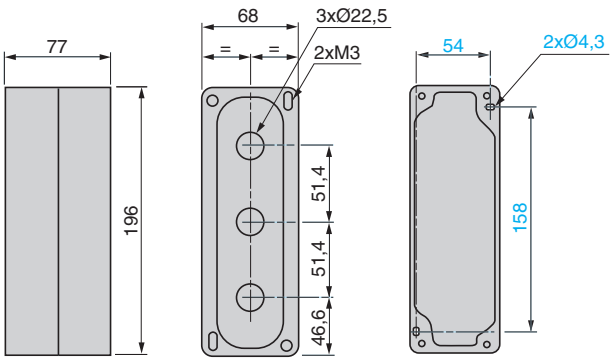
2

Pit switch boxes

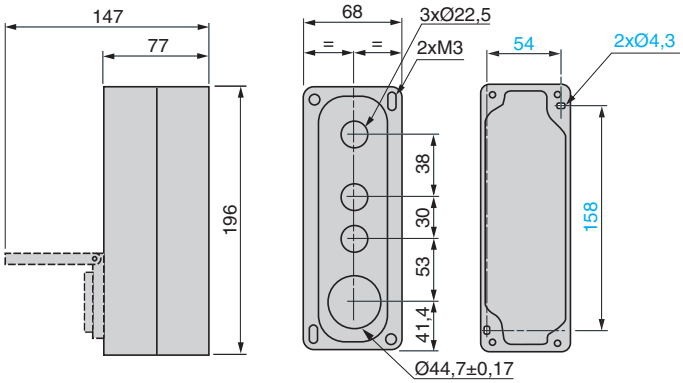
2 x Ø 22 mm cut-outs + 1 x Ø 45 mm cut-out for power socket



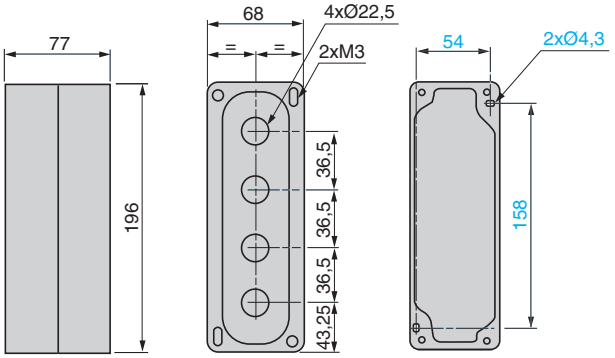
3 x Ø 22 mm cut-outs



3 x Ø 22 mm cut-outs + 1 x Ø 45 mm cut-out for power socket

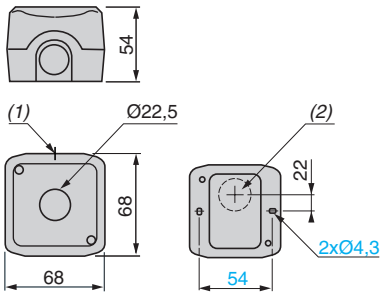


4 x Ø 22 mm cut-outs



Hoistway boxes

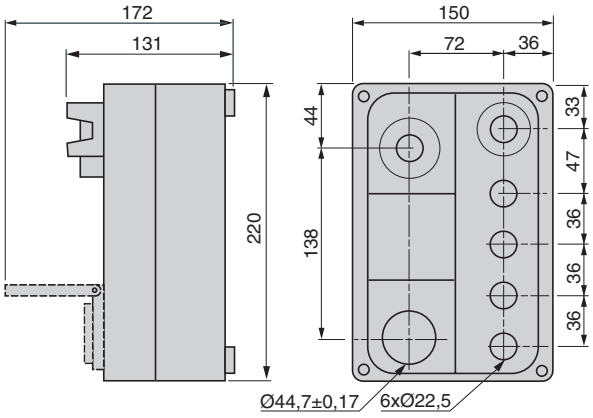
1 x Ø 22 mm cut-out



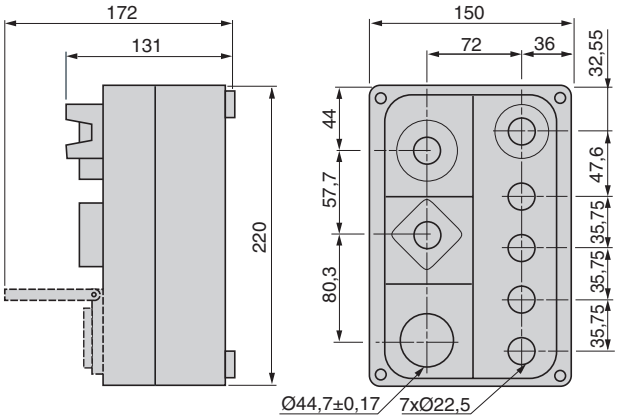
(1) 2 knock-outs for Pg 13.5 cable gland, maximum capacity 12 mm.
(2) Knock-out for cable entry, maximum capacity 14 mm.

Top of car boxes

6 x Ø 22 mm cut-outs + 1 x Ø 45 mm cut-out for power socket



7 x Ø 22 mm cut-outs + 1 x Ø 45 mm cut-out for power socket



Presentation: page 2/60
Characteristics: page 2/62
References: page 2/65
Mounting: page 2/73

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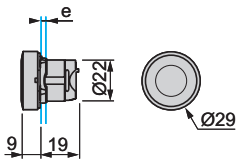
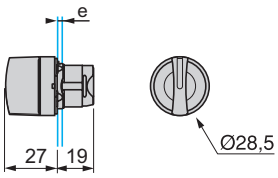
Control and signalling units

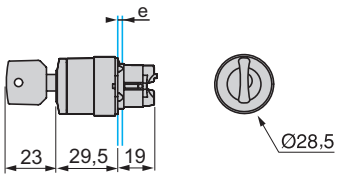
ZB5 AA●●●



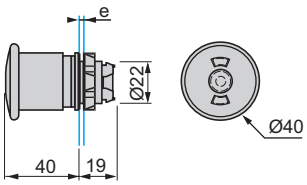
ZB5 AK1●●3



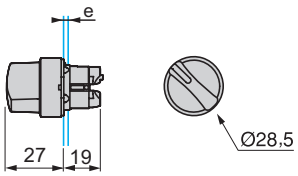
ZB5 AG●



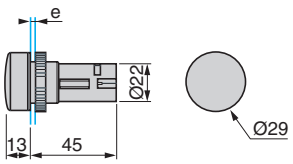
ZB5 AT8643M



ZB5 AD●



XB7 EV0●●P



e: panel thickness = 1…6 mm

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3 - Cam switches

Selection guide . . . . . page 3/2

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□ Switches and stepping switches. . . . . *page 3/8*
□ Changeover switches. . . . . *page 3/10*
□ Voltmeter and ammeter switches . . . . . *page 3/12*

Complete switches, 12 and 20 A

■ Front mounting, “multi-fixing” or by Ø 22 mm hole, with 45 x 45 mm front plate

□ Switches . . . . . *page 3/20*
□ Stepping switches . . . . . *page 3/23*
□ Reversing and changeover switches . . . . . *page 3/29*
□ Ammeter switches . . . . . *page 3/30*
□ Voltmeter switches. . . . . *page 3/32*

Adaptable sub-assemblies, 12 and 20 A

■ Bodies (contact blocks + fixing plate)

□ Switches . . . . . *page 3/34*
□ Changeover switches. . . . . *page 3/38*
□ Reversing switches . . . . . *page 3/40*
□ Encoded output switches . . . . . *page 3/41*
□ Paralleling switches . . . . . *page 3/44*
□ Stepping switches . . . . . *pages 3/46 and 3/59*
□ Ammeter switches . . . . . *page 3/56*
□ Voltmeter switches. . . . . *page 3/57*
□ Multi-circuit switches . . . . . *page 3/60*
□ Reversing switches . . . . . *page 3/61*
□ Star-delta switches and reversing star-delta switches . . . . . *page 3/62*
□ Pole change switches and reversing pole change switches . . . . . *page 3/63*

■ Operating heads

□ For “multi-fixing” or Ø 22 mm hole, front mounting bodies . . . . . *page 3/66*
□ For 4 hole, rear mounting bodies . . . . . *page 3/67*

■ Legends

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□ For Ø 22 mm hole mounting heads with plastic bezel. . . . . *page 3/69*
□ For Ø 22 mm hole mounting heads with chromium plated metal bezel . . . . . *page 3/70*
□ Legend holders for heads. . . . . *page 3/71*
□ Separate components and accessories . . . . . *page 3/72*

Switches, 10 and 16 A, mounted in plastic enclosure

■ Emergency stop switches . . . . . *page 3/78*

■ OFF-ON switches . . . . . *page 3/79*

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Complete switches, 12 A with key operated lock

■ Front mounting by 6 screws Ø 5.2 mm, with 55 x 100 mm front plate

□ Stepping switches, 2 to 5 step . . . . . *page 3/80*
□ Start selector switches changeover switches . . . . . *page 3/84*
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Complete switches, 32 to 150 A

■ With 64 x 64 mm front plate (32 to 63 A ratings) and 88 x 88 mm front plate (115 and 150 A ratings)

□ Switches . . . . . *page 3/88*
□ Changeover switches . . . . . *page 3/89*
□ Star-delta and reversing star-delta switches . . . . . *page 3/91*
□ Pole change and reversing switches . . . . . *page 3/92*

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Cam switches
Type K

Applications		**Used in building control panels and consoles, type K cam switches allow control of processes and utilities in industry and buildings and direct control for simple machines.**	
Functions			
	Off-On/On-Off switches	**1 to 4-pole**	**1 to 6-pole**
	Stepping switches	**2 to 4-position, 1 and 2-pole**	**2 to 12-position, 1 to 4-pole**
	Changeover switches	**1 to 4-pole**	**1 to 5-pole**
	Measurement switches	**Voltmeter and ammeter**	**Voltmeter and ammeter**
	Reversing switches	**–**	**2 and 3-pole**
	Reversing star-delta switches	**–**	**–**
	Pole change switches	**–**	**2 and 3-speed**





Conventional rated thermal current (Ith) **Rated insulation voltage (Ui)**		**10 A** 440 V	**12 A** 690 V
Electrical operating characteristics		AC-15 - A300 240 V - 3 A	AC-3 - 3-phase 230 V - 1.1 kW - 4.6 A AC-15 230 V - 3 A
Front plate degree of protection		IP 65	IP 40 IP 65 (with seal)
Product composition		Complete switches	Complete switches Adaptable sub-assemblies Special products (please consult your Regional Sales Office)
Compatibility		Ø 16 and Ø 22 control and signalling units	Ø 22 control and signalling units
Fixing	**Front mounting**	Single Ø 16 or Ø 22 hole	Multi-fixing Single Ø 22 hole
	Rear mounting	–	Screw fixing, 4 holes on 36 mm centres
Front plate dimensions (mm)		30 x 30	45 x 45 60 x 60 (adaptable sub-assemblies)
Operating heads		Black standard handle Metallic legend, black marking	Black and red standard and long handles Key operator Metallic head Metallic legend with black marking or black legend with white marking
Approvals		cULus EN/IEC 60947-3 EN/IEC 60947-5-1	UL-CSA EN/IEC 60947-3 EN/IEC 60947-5-1
Type		**Type K10**	**Type K1/K2**
Cam switch model		**K10 ●**	**K1 ●**
Pages		3/8 to 3/12	3/20 to 3/73 and 3/80 to 3/85

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1 to 6-pole	**1 to 6-pole**
2 to 12-position, 1 to 4-pole	**–**
1 to 5-pole	**1 to 4-pole**
–	**–**
2 and 3-pole	**2 and 3-pole**
Star-delta	**Star-delta**
2 and 3-speed	**2-speed**



20 A 690 V	**32 A** 690 V	**50 A** 690 V	**63 A** 690 V	**115 A** 690 V	**150 A** 690 V
AC-3 - 3-phase 230 V - 2.2 kW - 8.3 A AC-15 230 V - 4 A	AC-3 - 3-phase 230 V - 5.5 kW AC-15 230 V - 14 A	AC-3 - 3-phase 230 V - 7.5 kW AC-15 230 V - 16 A	AC-3 - 3-phase 230 V - 11 kW –	AC-3 - 3-phase 230 V - 15 kW –	AC-3 - 3-phase 230 V - 22 kW –
	IP 40				
	Complete switches				
	–				
	By 4 holes on 48 mm centres			By 4 holes on 68 mm centres	
	Screw fixing, 4 holes on 48 mm centres			Screw fixing, 4 holes on 68 mm centres	
	64 x 64			88 x 88	
	Black standard handle Metallic legend, black marking				
	cULus EN/IEC 60947-3				
	Type K30...K150				
K2 ●	**K30 ●**	**K50 ●**	**K63 ●**	**K115 ●**	**K150 ●**
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Cam switches
Series K
Functions panorama

Functions		Complete switches 10 A
		See pages
Switches	with 60° switching angle	**3/8**
	with 45° switching angle	–
	with 90° switching angle	–
	ON-OFF with spring return from 30° to “0” position	–
	OFF-ON with spring return from 30° to “0” position	–
	OFF-ON with spring return from 120° to 90°	–
	OFF-ON with spring return from 30° and from 330° to “0” position	–
	OFF-ON with 45° switching angle	–
	OFF-ON with momentary-contact function	–
	paralleling with “0” position	–
	OFF-ON changeover with spring return from 240° to 270° and from 120° to 90°	–
Stepping switches	single-pole with or without “0” position	**3/8, 3/9**
	2-pole with or without “0” position	**3/9, 3/10**
	2 to 5 step, single-pole, with or without “0” position	–
	2 to 5 step, 2-pole, with or without “0” position	–
	2 and 3 step, 3-pole, with or without “0” position	–
	2 to 11 step, single-pole, with “0” position	–
	2 to 12 step, single-pole, without “0” position	–
	2 to 6 step, 2-pole, with or without “0” position	–
	2 to 6 step, 3-pole, with or without “0” position	–
	2 to 5 step, 4-pole, with or without “0” position	–
	2 and 3 step, with “0” position + left-hand position	–
	3 step, without “0” position	–
	4 step, 4-pole, without “0” position	–
	2 step, with “0” position	–
	3 step, 2-pole, with “0” position	–
	5 step, 2-pole, with “0” position	–
Changeover switches	spring return to “0” position	**3/10**
	with or without “0” position	**3/11**
	1 to 4-pole with “0” position	–
	1 to 4-pole without “0” position	–
	1-pole, 2-pole, 3-pole with “0” position	–
	star-delta and reversing star-delta	–
	pole change	–
Voltmeter switches	with “0” position	**3/12**
	without “0” position	–
Ammeter switches	with “0” position	**3/12**
	without “0” position	–
Selector switches	BCD encoded output, with “0” position	–
	BCD encoded output, without “0” position	–
	multi-circuit	–
	star-delta and reversing star-delta	–
Reversing switches	with “0” position	–
	with spring return from 330° and from 30° to “0” position	–
	with spring return from 315° and from 45° to “0” position	–
	with spring return from 240° to 270° and from 120° to 90°	–
	with momentary-contact function	–
Pole change switches	for 2-speed motors	–
	for 3-speed motors	–
Start selector switches	3-position with “0” position	–
	4-position with “0” position	–
Starting switches	star-delta and reversing star-delta	–
	pole change	–

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	Complete switches 12 and 20 A	Complete switches 12 A, with key operated lock	Adaptable sub-assemblies 12 and 20 A	Complete switches 32 to 150 A
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	–	–	3/36	
	–	–	3/37	–
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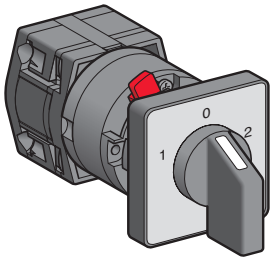
Cam switches
Complete switches, 10 A

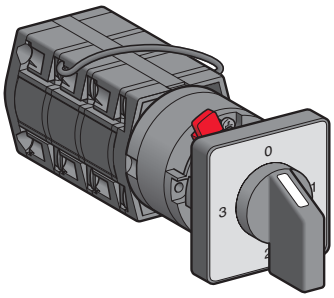
The range of K10 cam switches (10 A rating) comprises only complete switches. These products are more specifically designed for process control applications:
- compact size,
- easy to integrate with other Ø 16 and Ø 22 mm units,
- selection functions.

Complete switches

- switches
- stepping switches
- reversing switch
- changeover switches
- voltmeter switches
- ammeter switches

Front mounting

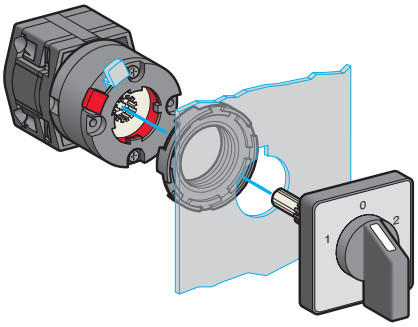




By Ø 16.3 or Ø 22.3 mm hole

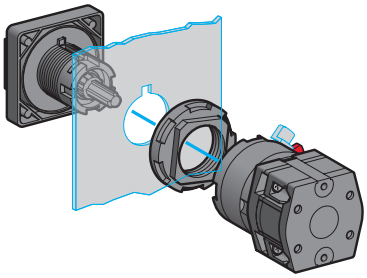
Mounting

Ø 16 or Ø 22 hole fixing

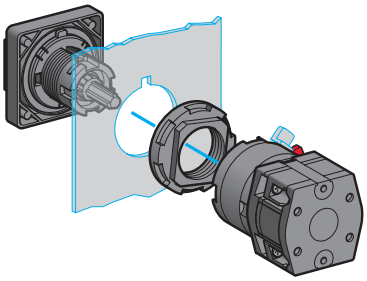


Locking/unlocking of the body-head assembly by spigot

Ø 16 hole fixing



Ø 22 hole fixing



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Cam switches
Complete switches, 10 A
Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

Environment

Conformity to standards	EN/IEC 60947-3 EN/IEC 60947-5-1 UL 508
Product certifications	cULus
Protective treatment	Standard version: "TC"
Ambient air temperature	For operation: - 20…+ 55 °C
	For storage: - 40…+ 70 °C
Electric shock protection	Class II, conforming to IEC 61140
Degree of protection	IP 65 conforming to IEC 60529 (operating head) IP 20 (contact block)
Mechanical life	1 million operating cycles

Contact block characteristics

Rated operational characteristics	AC-15, A300	–	240 V	3 A
			120 V	6 A
	AC-21A, AC-1	–	400 V	10 A
	UL/Canada Heavy Duty A300	3-phase	110/120 V	0.75 hp
			220/240 V	1 hp
		single-phase	110/120 V	0.33 hp
			220/240 V	0.75 hp
	AC-23A	3-phase	220/240 V	1.8 kW
		single-phase	110/120 V	0.37 kW
			220/240 V	0.75 kW
	d.c. current Ie resistive load	1 contact	24 V	10 A
			110 V	0.7 A
			220 V	0.3 A
Short-circuit protection	10 A cartridge fuse type gG			
Conventional thermal current (Ith)	10 A			
Rated insulation voltage (Ui)	440 V, degree of pollution 3, conforming to IEC 60947-1			
Contact operation	Slow break			
Terminal referencing	Conforming to EN 50013			
Rated impulse withstand voltage (U imp)	4 kV conforming to IEC 60947-1			
Electrical reliability	Failure rate < 1 fault for 100 million operating cycles (⎓ 24 V PLC inputs)			
Connection	Captive screw clamp terminals Clamping capacity: 2 x 1.5 mm^2			

General: page 3/6 References: page 3/8 Dimensions: page 3/13

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Cam switches

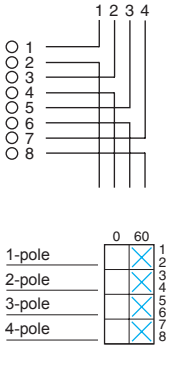
Complete switches, 10 A

Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

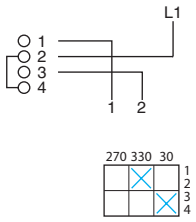
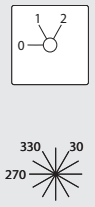
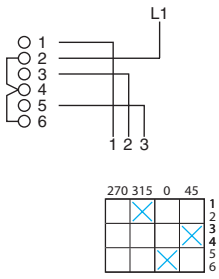
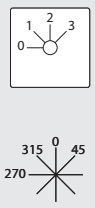
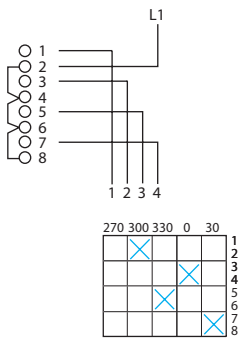
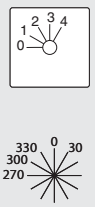


K10 B002ACH

Switches with 60° switching angle

Wiring diagram and switching programme	Marking and switch position	Number of poles	Reference	Weight kg
		1	**K10 A001ACH**	0.030
		2	**K10 B002ACH**	0.035
		3	**K10 C003ACH**	0.045
		4	**K10 D004ACH**	0.045

Stepping switches, single-pole, with “0” position

Wiring diagram and switching programme	Marking and switch position	Number of steps	Reference	Weight kg
		2 + “0” position	**K10 B002QCH**	0.035
		3 + “0” position	**K10 C003QCH**	0.045
		4 + “0” position	**K10 D004QCH**	0.045



K10 D004QCH

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Schneider Electric

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Cam switches

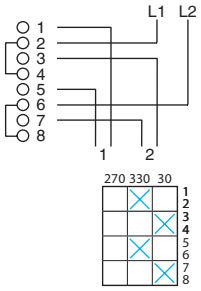
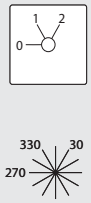
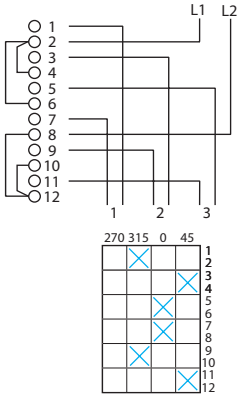
Complete switches, 10 A

Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

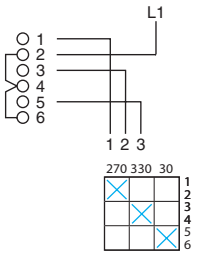
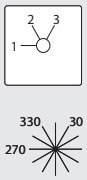
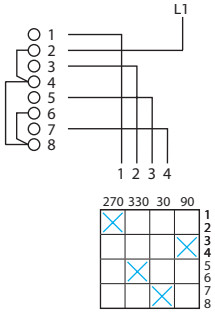
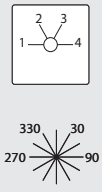


K10 D012QCH

Stepping switches, 2-pole, with “0” position

Wiring diagram and switching programme	Marking and switch position	Number of steps	Reference	Weight kg
		2 + “0” position	**K10 D012QCH**	0.045
		3 + “0” position	**K10 F013QCH**	0.055

Stepping switches, single-pole, without “0” position

Wiring diagram and switching programme	Marking and switch position	Number of steps	Reference	Weight kg
		3	**K10 C003NCH**	0.045
		4	**K10 D004NCH**	0.045

3

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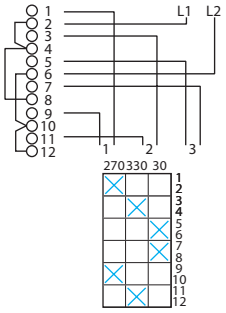
Cam switches

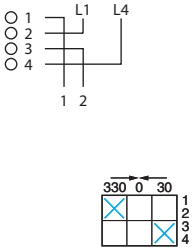
Complete switches, 10 A

Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

Stepping switches, 2-pole, without “0” position

Wiring diagram and switching programme	Marking and switch position	Number of steps	Reference	Weight kg
		3	**K10 F013NCH**	0.055

Changeover switch with spring return to “0” position

Wiring diagram and switching programme	Marking and switch position	Number of poles	Reference	Weight kg
		1	**K10 B006TCH**	0.035



K10 B006TCH

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Schneider Electric

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Cam switches

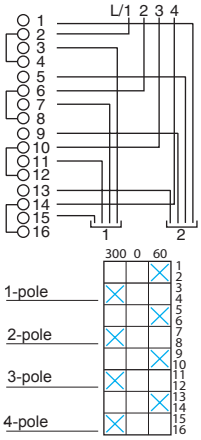
Complete switches, 10 A

Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

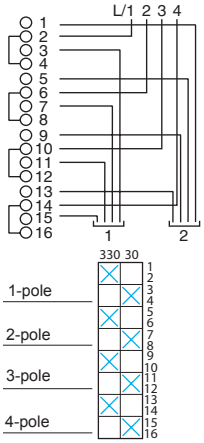


K10 F003UCH

Changeover switches with “0” position

Wiring diagram and switching programme	Marking and switch position	Number of poles	Reference	Weight kg
		1	**K10 B001UCH**	0.035
		2	**K10 D002UCH**	0.045
		3	**K10 F003UCH**	0.055
		4	**K10 H004UCH**	0.065

Changeover switches without “0” position

Wiring diagram and switching programme	Marking and switch position	Number of poles	Reference	Weight kg
		1	**K10 B011UCH**	0.035
		2	**K10 D012UCH**	0.045
		3	**K10 F013UCH**	0.055
		4	**K10 H014UCH**	0.065

3

General: page 3/6
Characteristics: page 3/7
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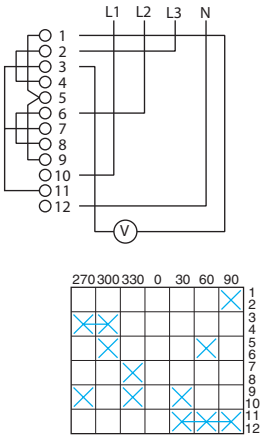
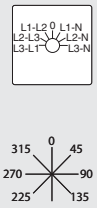
Cam switches

Complete switches, 10 A

Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

Voltmeter switches

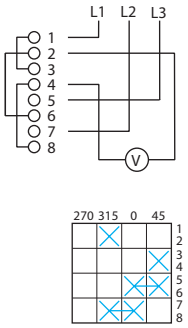
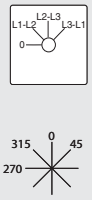
For measurements between 3 phases and between 1 phase and neutral

Wiring diagram and switching programme	Marking and switch position	Reference	Weight kg
		**K10 F027MCH**	0.055



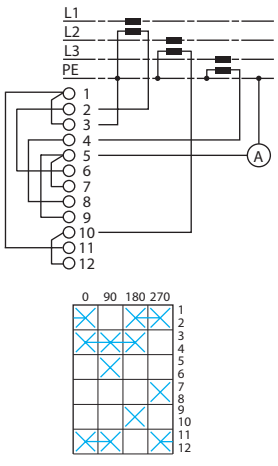
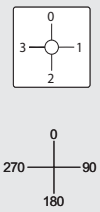
K10 F027MCH

For measurements between 3 phases, with “0” position

Wiring diagram and switching programme	Marking and switch position	Reference	Weight kg
		**K10 D024MCH**	0.045

Ammeter switches

For 3 circuits, with “0” position

Wiring diagram and switching programme	Marking and switch position	Reference	Weight kg
		**K10 F003MCH**	0.055



K10 F003MCH

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Schneider Electric

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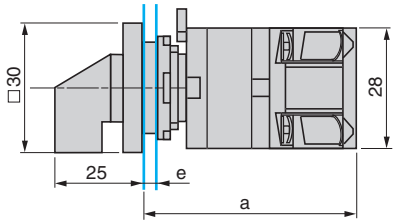
Cam switches
Complete switches, 10 A
Front mounting by Ø 16 or Ø 22 mm hole
With 30 x 30 mm front plate

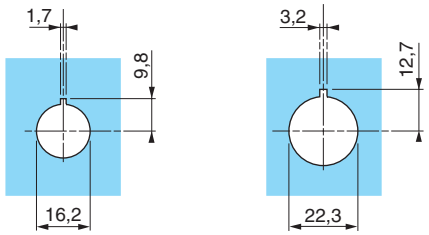
Cam switches, 10 A



	a
K10 A, B	51
K10 C, D	63
K10 F	75
K10 H	87

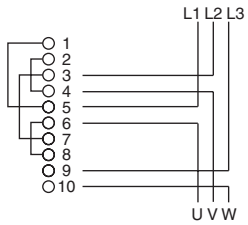
e: support panel thickness 0.5 to 5 mm.

Ø 16 and Ø 22 mm panel cut-outs

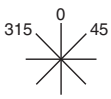


Convention used for switching programme representation

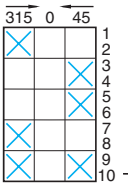
Link positions (factory mounted)



Angular position of switch



Graphic representation of switching positions and spring return to “0” position



Contact terminal reference number



Contact closed



Contact closed in 2 positions and maintained between the 2 positions



Sealed assembly for auto-maintain control



Overlapping contacts

General: page 3/6
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References: pages 3/8 to 3/12

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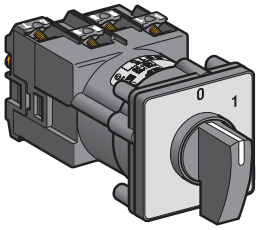
Cam switches
Complete switches and adaptable sub-assemblies, 12 and 20 A

The cam switch range comprises the equally dimensioned and similar looking products of the K1 (12 A rating) series and K2 (20 A rating) series.
Both series feature complete switches and adaptable sub-assemblies for user assembly.

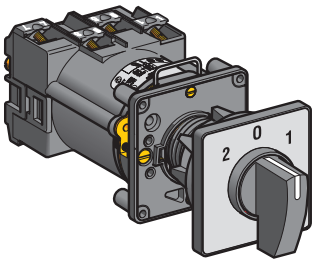
Complete switches

Front mounting

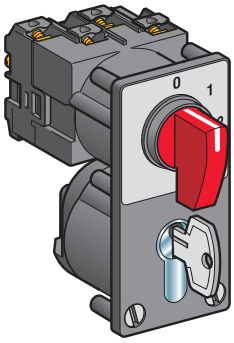
- switches
- stepping switches (2 to 5 step)
- reversing and 1 to 4-pole changeover switches
- ammeter and voltmeter switches



"Multi-fixing"
K1● ●●●●●H, K2● ●●●●●H
See pages 3/20 to 3/27



By Ø 22 mm hole
K1● ●●●●●H, K2● ●●●●●H
See pages 3/20 to 3/27

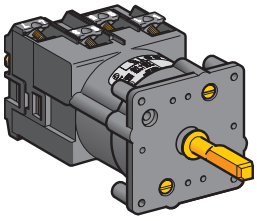


Front mounting by 6 screws Ø 5.2 mm and 55 x 100 mm front plate
K1● ●●●●Z●
See pages 3/80 to 3/85

Switches for user assembly

Front mounting

Body sub-assembly

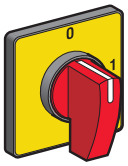


"Multi-fixing"
K1● ●●●●●L, K2● ●●●●●LL
See pages 3/34 to 3/65

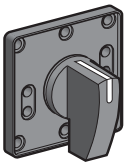
Head sub-assembly
■ **With 45 x 45 mm front plate and 35 mm handle**



With blank legend
K●G 3H
See page 3/66



With marked legend
KCG 3H
See page 3/66

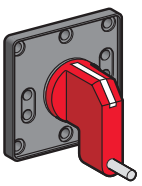


Without legend
KDG 3H
See page 3/66

Head sub-assembly
■ **With 45 x 45 mm front plate, 35 mm handle and padlocking device**



With marked legend
KCG 3Y
See page 3/66



Without legend
KDG 3Y
See page 3/66

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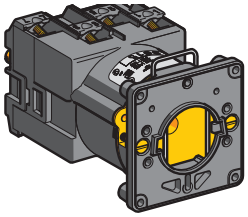
Cam switches
Complete switches and adaptable sub-assemblies, 12 and 20 A

Switches for user assembly (continued)

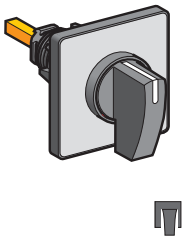
Front mounting (continued)

Body sub-assembly

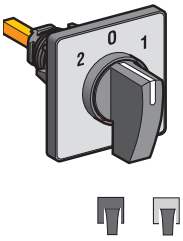


With Ø 22 mm hole
K1● ●●●●●, K2● ●●●●●L
See pages 3/34 to 3/65

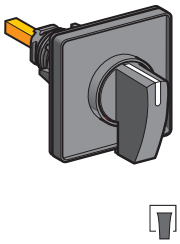
Head sub-assembly
■ **With 45 x 45 mm front plate and 35 mm handle**



With blank legend
K●C 1H
See page 3/66

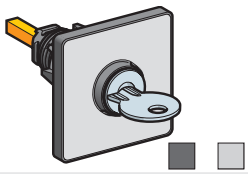


With marked legend *(1)*
K●C 1●●
See page 3/66

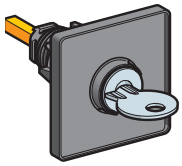


Without legend
KDC 1●●
See page 3/66

Head sub-assembly
■ **With 45 x 45 mm front plate and key operator**

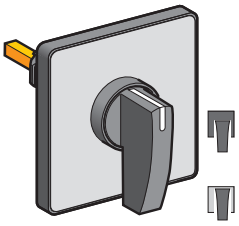


With blank legend
K●C 1●
See page 3/66

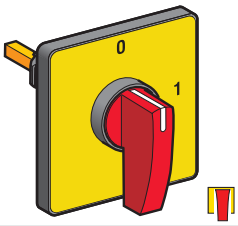


Without legend
KDC 1●
See page 3/66

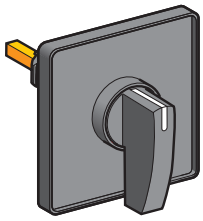
Head sub-assembly
■ **With 60 x 60 mm front plate and 42 mm handle**



With blank legend
K●D 1H
See page 3/66

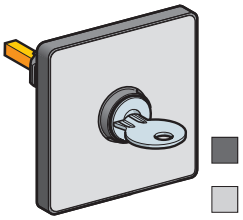


With marked legend
KCD 1●●
See page 3/66

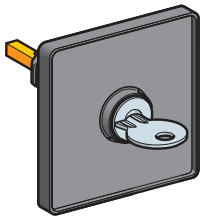


Without legend
KDD 1H
See page 3/66

Head sub-assembly
■ **With 60 x 60 mm front plate and key operator**



With blank legend
K●D 1●
See page 3/67

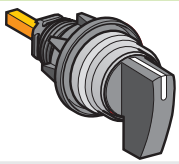


Without legend
KDD 1●
See page 3/67

Head sub-assembly
■ **Circular with plastic bezel**



Key operator
K●A 1●
See page 3/67



35 mm handle
K●A 1H
See page 3/67

(1) With or without padlocking device.

Characteristics: pages 3/18 and 3/19
References: pages 3/20 to 3/67
Dimensions: pages 3/74 to 3/77

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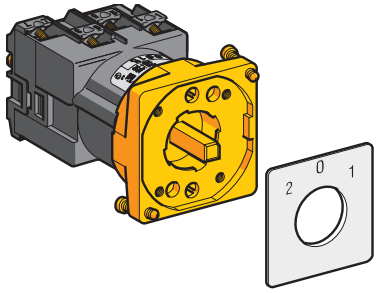
Cam switches
Complete switches and adaptable sub-assemblies, 12 and 20 A

Switches for user assembly (continued)

Front mounting (continued)

Body sub-assembly



With Ø 22 mm hole and metal mounting plate
K1● ●●●●K, K2● ●●●●X
See pages 3/34 to 3/65

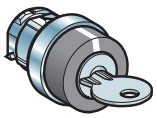
Head sub-assembly
■ **Circular with metal bezel**



Standard handle
KAX Z1M1●
See page 3/67



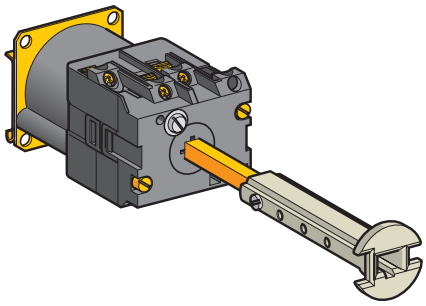
Long handle
KAX Z1C1●
See page 3/67



Key operator
KAX Z1S1●●
See page 3/67

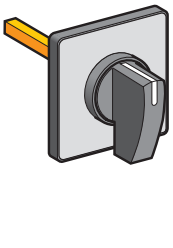
Rear mounting

Body sub-assembly

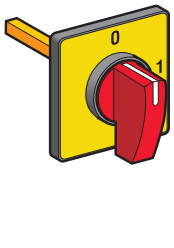


With 4 holes
K1● ●●●●, K2● ●●●●
See pages 3/34 to 3/65

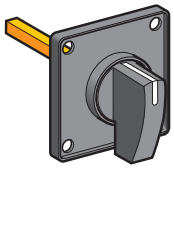
Head sub-assembly
■ **With 45 x 45 mm front plate and 35 mm handle**



With blank legend
K●E 1H
See page 3/67

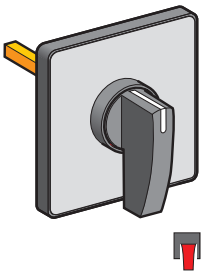


With marked legend *(1)*
KCE 1●
See page 3/67

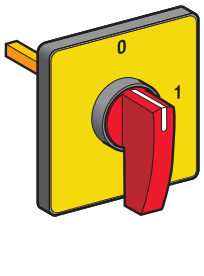


Without legend
KDE 1●
See page 3/67

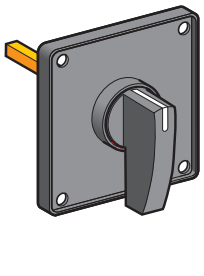
Head sub-assembly
■ **With 60 x 60 mm front plate and 42 mm handle**



With blank legend
K●F 1H
See page 3/67



With marked legend
KCF 1MH
See page 3/67



Without legend
KDF 1H
See page 3/67

(1) With or without padlocking device.

Accessories

Various accessories complement the K1 - K2 cam switch range: legends, legend holders, terminal covers, seals, etc. See pages 3/68 to 3/73.

Switches with specific schemes

If you cannot find a standard switching programme listed in this catalogue to suit your application, please consult your Regional Sales Office.

Characteristics: pages 3/18 and 3/19
References: pages 3/20 to 3/67
Dimensions: pages 3/74 to 3/77

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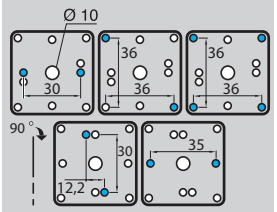
Cam switches
Complete switches and adaptable sub-assemblies, 12 and 20 A

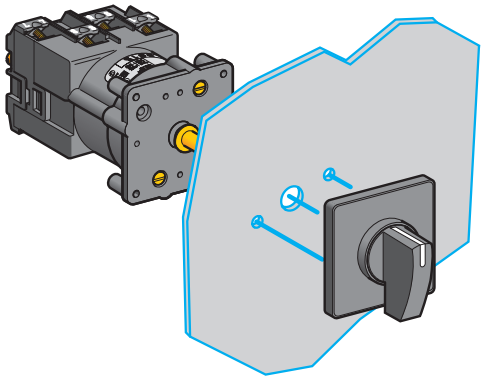
The cam switches are available to suit various mounting and fixing methods.

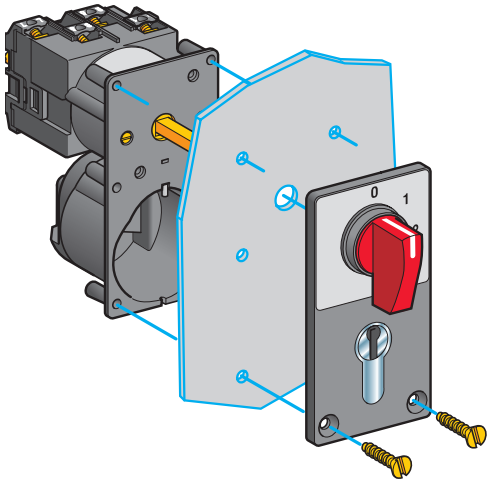
Fixing

Front mounting

By means of "multi-fixing" front plate, using 2 or 4 screws



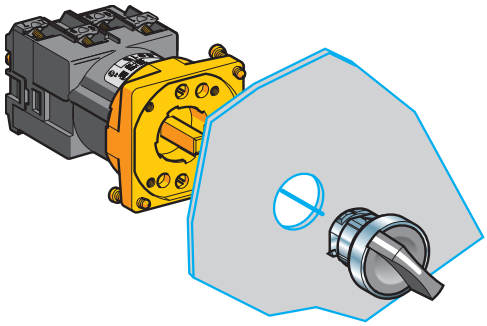


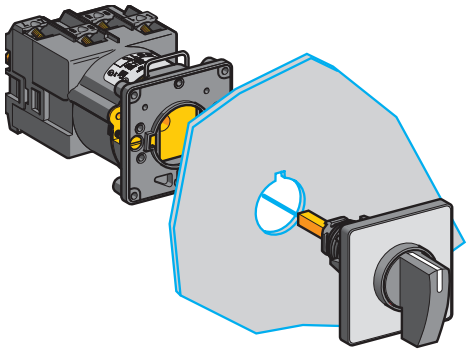


The "multi-fixing" concept enables the switch to be panel mounted using the most commonly used fixing centre dimensions. See drawing to left.

Fixing by 6 screws Ø 5.2 mm and 55 x 100 mm front plate.

By means of single Ø 22 mm hole



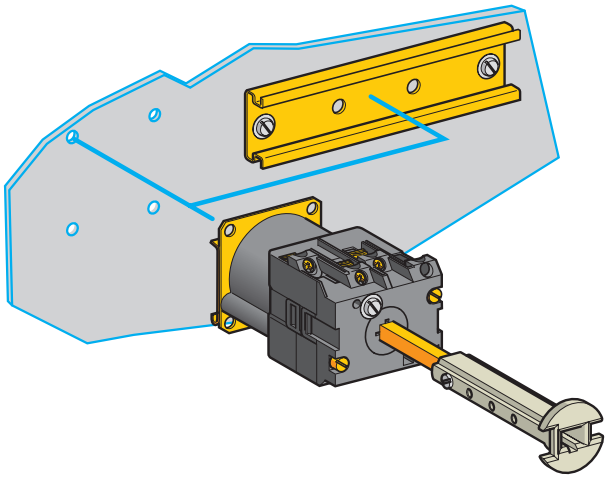


Ø 22.5 mm cut-out.
Head attaches to plate using 1/4 turn bayonet locking and secured on panel by 2 needle screws.

Ø 22.5 mm cut-out with anti-rotation notch.
Head clips into body and secured on panel by fixing nut.

Rear mounting

By means of 4 holes



Switch can be directly mounted on backplate using 4 screws.
For DIN rail mounting, an adaptor is available as an accessory. See page 3/75.

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Cam switches
Complete switches and adaptable sub-assemblies, 12 to 20 A

Characteristics

Environment

Cam switch type			K 1		K 2	
Conformity to standards	For control circuits		EN/IEC 60947-5-1 UL 508 CSA C22-2 n° 14			
	For power circuits		IEC/EN 60947-3 UL 508 CSA C22-2 n° 14			
Product certifications	UL, CSA A300/Q300 with “isolation” function CCC, GOST		240 V 0.33 hp single-phase	240 V 1 hp 3-phase	240 V 1 hp single-phase	240 V 3 hp 3-phase
	Marine classification: GL, LROS, RMRS		2-pole			2-pole
Protective treatment	Standard version		“TC”			
Ambient air temperature around the device	For operation	°C	- 25…+ 55			
	For storage	°C	- 40…+ 70			
Shock resistance	Conforming to IEC 60068-2-27		30 gn			
Vibration resistance	Conforming to IEC 60068-2-6		5 gn, 10…150 Hz			
Electric shock protection	Conforming to IEC 61140		Class II			
Degree of protection	Conforming to IEC 60529		IP 40, for fixing by front plate and 4 screws IP 65, with additional seal			
			IP 65, for Ø 22 mm hole fixing IP 20 (contact block)			
Mechanical life	Operating cycles		1 million			

General:
pages 3/14 to 3/17

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For reference only. www.fengshengelectric.com.sg

Characteristics (continued)

Contact blocks

Cam switch type				K 1	K 2
Rated insulation voltage (Ui)	Conforming to IEC 60947-1 degree of pollution 3		**V**	690	690
Conventional thermal current	Screw clamp terminal connections	In open air (Ith)	**A**	12	20
		In enclosure (Ithe)	**A**	10	16
Rated operational characteristics				**Conforming to IEC 60947-5-1**	
	∼ AC-15			230 V/3 A	230 V/4 A
				400 V/2 A	400 V/3 A
				500 V/1 A	500 V/2 A
				Conforming to IEC 60947-3	
	∼ AC-3	3-phase		230 V/1.1 kW/4.6 A	230 V/2.2 kW/8.3 A
				400 V/1.5 kW/3.3 A	400 V/4 kW/8 A
				500 V/1.5 kW/2.8 A	500 V/4 kW/6.5 A
				690 V/1.5 KW/1.8 A	690 V/4 kW/4.7 A
		single-phase 2-pole		230 V/0.6 kW	230 V/1.3 kW
				400 V/1.5 kW	400 V/2.2 kW
	∼ AC-23 A	3-phase		230 V/1.5 kW/5.6 A	230 V/4 kW/14.6 A
				400 V/2.2 kW/4.8 A	400 V/5.5 kW/10.8 A
				500 V/2.2 kW/3.8 A	500 V/5.5 kW/8.9 A
				690 V/2.2 kW/2.8 A	690 V/5.5 kW/6.4 A
	∼ AC-21	3-phase		230 V/4.8 kW	230 V/8 kW
				400 V/8.3 kW	400 V/14 kW
				500 - 660 V/10.5 kW	500 - 660 V/17 kW
Electrical durability (millions of operating cycles)	AC-3 and AC 23			0.5	0.2
	AC-15 and AC -21			1	0.6
Operating rate (operating cycles/h)	AC-3, AC-23 and AC-21			150	150
	AC-15			500	500
Rated conditional short-circuit current			**kA**	10	10
Short-circuit protection	Cartridge fuse			16 A gG	20 A gG
Rated impulse withstand voltage	Conforming to IEC 60947-1 (Uimp)		**kV**	6	
	In “isolating” function (Uimp)		**kV**	4	
Contact operation				Slow break with positive opening operation	
Terminal referencing				Conforming to EN 50013	
Connection	Captive screw clamp terminals		**mm²**	Solid cable, 1 x 2.5	
				Flexible cable, 1 x 2.5 or 2 x 1.5: with or without cable end	

3

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For reference only. www.fengshengelectric.com.sg

Cam switches

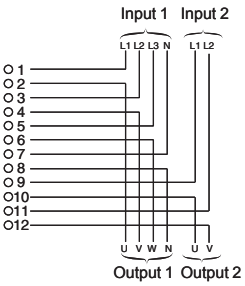
Complete switches, 12 and 20 A

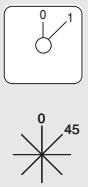
Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Switches with 45° switching angle



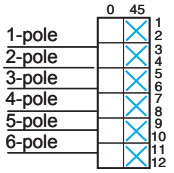
K●● ●●●●LH





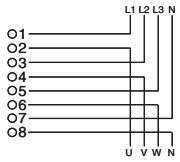


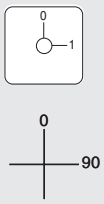
K●● ●●●●CH

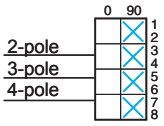


Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
				A		kg
		“Multi-fixing”	1	12	K1A 001ALH	0.103
				20	K2A 001ALH	0.103
			2	12	K1B 002ALH	0.113
				20	K2B 002ALH	0.113
			3	12	K1C 003ALH	0.133
				20	K2C 003ALH	0.133
			4	12	K1D 004ALH	0.138
				20	K2D 004ALH	0.138
			5	12	K1E 005ALH	0.158
				20	K2E 005ALH	0.158
			6	12	K1F 006ALH	0.168
				20	K2F 006ALH	0.168
		By Ø 22 mm hole	1	12	K1A 001ACH	0.123
				20	K2A 001ACH	0.123
			2	12	K1B 002ACH	0.133
				20	K2B 002ACH	0.133
			3	12	K1C 003ACH	0.153
				20	K2C 003ACH	0.153
			4	12	K1D 004ACH	0.158
				20	K2D 004ACH	0.158
			5	12	K1E 005ACH	0.178
				20	K2E 005ACH	0.178
			6	12	K1F 006ACH	0.188
				20	K2F 006ACH	0.188

Switches with 90° switching angle







Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
		“Multi-fixing”	2	12	K1B 1002HLH	0.130
				20	K2B 1002HLH	0.130
			3	12	K1C 003HLH	0.135
				20	K2C 003HLH	0.135
			4	12	K1D 004HLH	0.140
				20	K2D 004HLH	0.140
		By Ø 22 mm hole	2	12	K1B 1002HCH	0.150
				20	K2B 1002HCH	0.150
			3	12	K1C 003HCH	0.155
				20	K2C 003HCH	0.155
			4	12	K1D 004HCH	0.160
				20	K2D 004HCH	0.160

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Cam switches

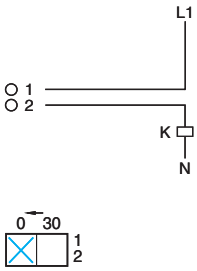
Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

ON-OFF switches with spring return from 30° to “0” position



K●● ●●●●LH





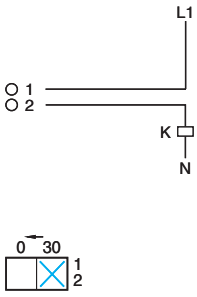


Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
				A		kg
		“Multi-fixing”	1	12	**K1A 002TLH**	0.105
				20	**K2A 002TLH**	0.105
		By Ø 22 mm hole	1	12	**K1A 002TCH**	0.125
				20	**K2A 002TCH**	0.125

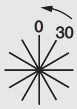
OFF-ON switches with spring return from 30° to “0” position



K●● ●●●●CH







Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
		“Multi-fixing”	1	12	**K1A 001TLH**	0.105
				20	**K2A 001TLH**	0.105
		By Ø 22 mm hole	1	12	**K1A 001TCH**	0.125
				20	**K2A 001TCH**	0.125

General: page 3/14
Characteristics: page 3/18
Dimensions: page 3/74

For reference only. www.fengshengelectric.com.sg

Cam switches

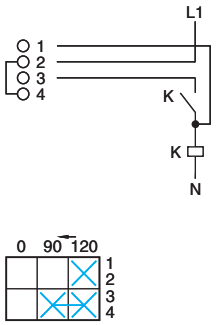
Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

OFF-ON switches with spring return from 120° to 90°



K●● ●●●●LH

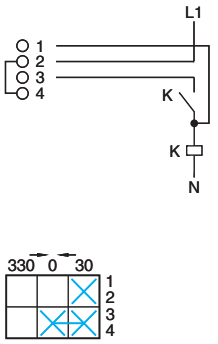


Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
				A		kg
		“Multi-fixing”	1	12	**K1B 003TLH**	0.115
				20	**K2B 003TLH**	0.115
		By Ø 22 mm hole	1	12	**K1B 003TCH**	0.135
				20	**K2B 003TCH**	0.135

OFF-ON switches with spring return from 30° and from 330° to “0” position



K●● ●●●●CH



		“Multi-fixing”	1	12	**K1B 004TLH**	0.115
				20	**K2B 004TLH**	0.115
		By Ø 22 mm hole	1	12	**K1B 004TCH**	0.135
				20	**K2B 004TCH**	0.135

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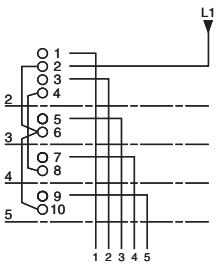
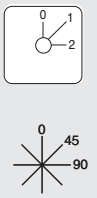
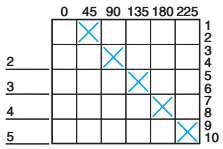
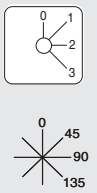
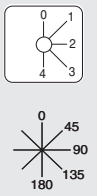
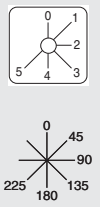
Cam switches

Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Stepping switches (2 to 5 step), single-pole, with “0” position

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			2 step +“0”		
 *K●● ●●●●LH* 		**“Multi-fixing”**	12	**K1B 002QLH**	0.115
			20	**K2B 002QLH**	0.115
		By Ø 22 mm hole	12	**K1B 002QCH**	0.135
			20	**K2B 002QCH**	0.135
			3 step +“0”		
 *K●● ●●●●CH* 		**“Multi-fixing”**	12	**K1C 003QLH**	0.135
			20	**K2C 003QLH**	0.135
		By Ø 22 mm hole	12	**K1C 003QCH**	0.155
			20	**K2C 003QCH**	0.155
			4 step +“0”		
		**“Multi-fixing”**	12	**K1D 004QLH**	0.140
			20	**K2D 004QLH**	0.140
		By Ø 22 mm hole	12	**K1D 004QCH**	0.160
			20	**K2D 004QCH**	0.160
			5 step +“0”		
		**“Multi-fixing”**	12	**K1E 005QLH**	0.160
			20	**K2E 005QLH**	0.160
		By Ø 22 mm hole	12	**K1E 005QCH**	0.180
			20	**K2E 005QCH**	0.180

General: page 3/14 | Characteristics: page 3/18 | Dimensions: page 3/74

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Cam switches

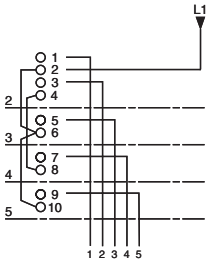
Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Stepping switches (2 to 5 step), single-pole, without “0” position

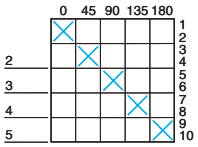


K●● ●●●●LH





K●● ●●●●CH



Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			2 step		
	 	**“Multi-fixing”**	12	**K1B 002NLH**	0.115
			20	**K2B 002NLH**	0.115
		By Ø 22 mm hole	12	**K1B 002NCH**	0.135
			20	**K2B 002NCH**	0.135
			3 step		
	 	**“Multi-fixing”**	12	**K1C 003NLH**	0.135
			20	**K2C 003NLH**	0.135
		By Ø 22 mm hole	12	**K1C 003NCH**	0.155
			20	**K2C 003NCH**	0.155
			4 step		
	 	**“Multi-fixing”**	12	**K1D 004NLH**	0.140
			20	**K2D 004NLH**	0.140
		By Ø 22 mm hole	12	**K1D 004NCH**	0.160
			20	**K2D 004NCH**	0.160
			5 step		
	 	**“Multi-fixing”**	12	**K1E 005NLH**	0.160
			20	**K2E 005NLH**	0.160
		By Ø 22 mm hole	12	**K1E 005NCH**	0.180
			20	**K2E 005NCH**	0.180

General: page 3/14 Characteristics: page 3/18 Dimensions: page 3/74

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Cam switches

Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

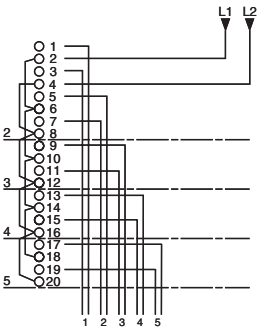
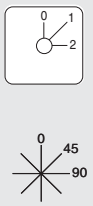
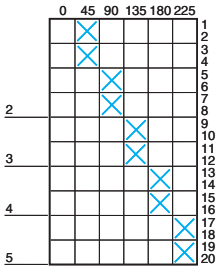
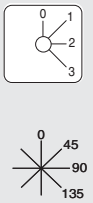
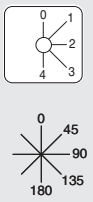
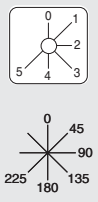
Stepping switches (2 to 5 step), 2-pole, with “0” position



K●● ●●●●LH



K●● ●●●●CH

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			**2 step +“0”**		
		“Multi-fixing”	12	**K1D 012QLH**	0.140
			20	**K2D 012QLH**	0.140
		By Ø 22 mm hole	12	**K1D 012QCH**	0.160
			20	**K2D 012QCH**	0.160
			**3 step +“0”**		
		“Multi-fixing”	12	**K1F 013QLH**	0.170
			20	**K2F 013QLH**	0.170
		By Ø 22 mm hole	12	**K1F 013QCH**	0.190
			20	**K2F 013QCH**	0.190
			**4 step +“0”**		
		“Multi-fixing”	12	**K1H 014QLH**	0.195
			20	**K2H 014QLH**	0.195
		By Ø 22 mm hole	12	**K1H 014QCH**	0.215
			20	**K2H 014QCH**	0.215
			**5 step +“0”**		
		“Multi-fixing”	12	**K1K 015QLH**	0.225
			20	**K2K 015QLH**	0.225
		By Ø 22 mm hole	12	**K1K 015QCH**	0.245
			20	**K2K 015QCH**	0.245

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Cam switches

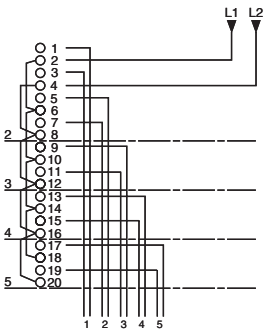
Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Stepping switches (2 to 5 step), 2-pole, without “0” position

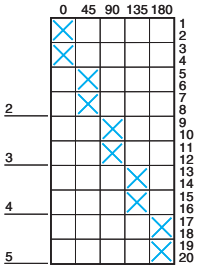


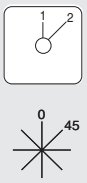
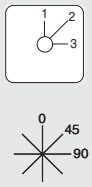
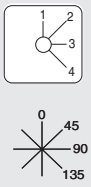
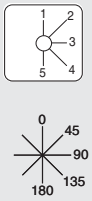
K●● ●●●●LH





K●● ●●●●CH



Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			2 step		
		**“Multi-fixing”**	12	**K1D 012NLH**	0.140
			20	**K2D 012NLH**	0.140
		By Ø 22 mm hole	12	**K1D 012NCH**	0.160
			20	**K2D 012NCH**	0.160
			3 step		
		**“Multi-fixing”**	12	**K1F 013NLH**	0.170
			20	**K2F 013NLH**	0.170
		By Ø 22 mm hole	12	**K1F 013NCH**	0.190
			20	**K2F 013NCH**	0.190
			4 step		
		**“Multi-fixing”**	12	**K1H 014NLH**	0.195
			20	**K2H 014NLH**	0.195
		By Ø 22 mm hole	12	**K1H 014NCH**	0.215
			20	**K2H 014NCH**	0.215
			5 step		
		**“Multi-fixing”**	12	**K1K 015NLH**	0.225
			20	**K2K 015NLH**	0.225
		By Ø 22 mm hole	12	**K1K 015NCH**	0.245
			20	**K2K 015NCH**	0.245

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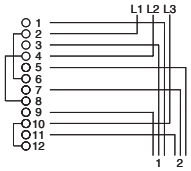
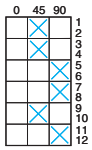
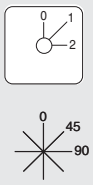
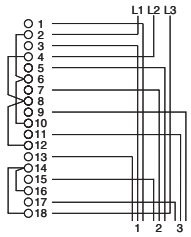
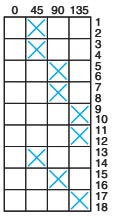
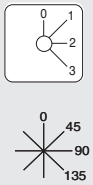
Cam switches

Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Stepping switches (2 and 3 step), 3-pole, with “0” position

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			2 step +“0”		
 *K●● ●●●●LH*  		**“Multi-fixing”**	12	**K1F 022QLH**	0.170
			20	**K2F 022QLH**	0.170
		By Ø 22 mm hole	12	**K1F 022QCH**	0.190
			20	**K2F 022QCH**	0.190
			3 step +“0”		
 *K●● ●●●●CH*  		**“Multi-fixing”**	12	**K1I 023QLH**	0.215
			20	**K2I 023QLH**	0.215
		By Ø 22 mm hole	12	**K1I 023QCH**	0.235
			20	**K2I 023QCH**	0.235

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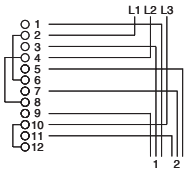
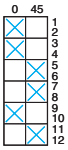
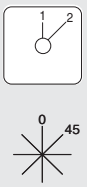
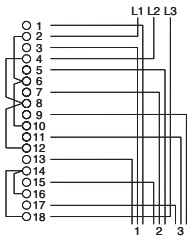
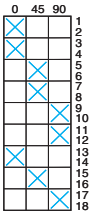
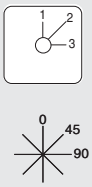
Cam switches

Complete switches, 12 and 20 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Stepping switches (2 and 3 step), 3-pole, without “0” position

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
			2 step		
 *K●● ●●●●LH*  		“Multi-fixing”	12	**K1F 022NLH**	0.170
			20	**K2F 022NLH**	0.170
		By Ø 22 mm hole	12	**K1F 022NCH**	0.190
			20	**K2F 022NCH**	0.190
			3 step		
 *K●● ●●●●CH*  		“Multi-fixing”	12	**K1I 023NLH**	0.215
			20	**K2I 023NLH**	0.215
		By Ø 22 mm hole	12	**K1I 023NCH**	0.235
			20	**K2I 023NCH**	0.235

General: page 3/14 Characteristics: page 3/18 Dimensions: page 3/74

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Cam switches

Complete switches, 12 and 20 A

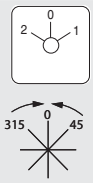
Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Reversing switches with spring return from 315° and from 45° to “0” position



K●● ●●●●LH



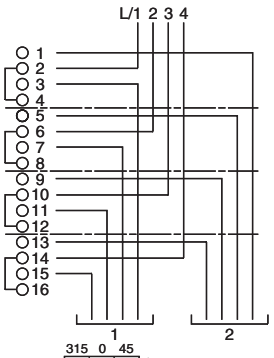


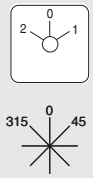
Wiring diagram and switching programme	Marking and switch position	Front mounting method	Number of poles	Thermal current (Ith)	Reference	Weight
				A		kg
		“Multi-fixing”	1	12	K1B 006TLH	0.115
				20	K2B 006TLH	0.115
		By Ø 22 mm hole	1	12	K1B 006TCH	0.135
				20	K2B 006TCH	0.135

Changeover switches, 1 to 4-pole

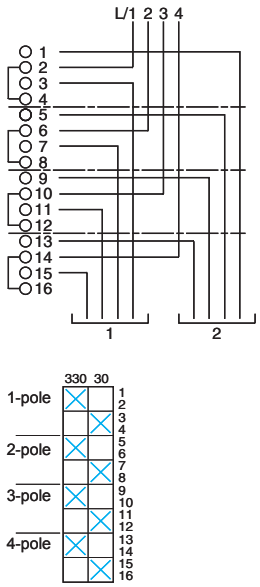


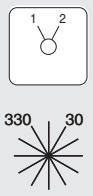
K●● ●●●●CH





				With “0” position	
“Multi-fixing”	1	12	K1B 001ULH	0.115
		20	K2B 001ULH	0.115
	2	12	K1D 002ULH	0.140
		20	K2D 002ULH	0.140
	3	12	K1F 003ULH	0.170
		20	K2F 003ULH	0.170
	4	12	K1H 004ULH	0.195
		20	K2H 004ULH	0.195
By Ø 22 mm hole	1	12	K1B 001UCH	0.135
		20	K2B 001UCH	0.135
	2	12	K1D 002UCH	0.160
		20	K2D 002UCH	0.160
	3	12	K1F 003UCH	0.190
		20	K2F 003UCH	0.190
	4	12	K1H 004UCH	0.215
		20	K2H 004UCH	0.215





				Without “0” position	
“Multi-fixing”	1	12	K1B 011ULH	0.115
		20	K2B 011ULH	0.115
	2	12	K1D 012ULH	0.140
		20	K2D 012ULH	0.140
	3	12	K1F 013ULH	0.170
		20	K2F 013ULH	0.170
	4	12	K1H 014ULH	0.195
		20	K2H 014ULH	0.195
By Ø 22 mm hole	1	12	K1B 011UCH	0.135
		20	K2B 011UCH	0.135
	2	12	K1D 012UCH	0.160
		20	K2D 012UCH	0.160
	3	12	K1F 013UCH	0.190
		20	K2F 013UCH	0.190
	4	12	K1H 014UCH	0.215
		20	K2H 014UCH	0.215

General: page 3/14
Characteristics: page 3/18
Dimensions: page 3/74

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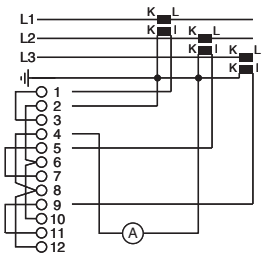
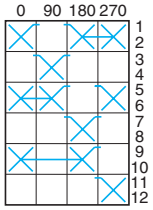
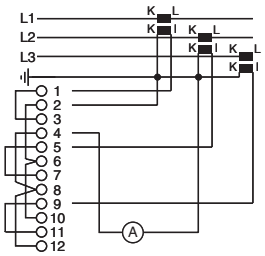
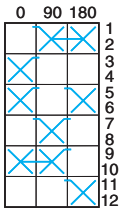
Cam switches

Complete switches, 12 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Ammeter switches

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
For 3 circuits					
			With “0” position		
 *K●● ●●●●LH*  	 	**“Multi-fixing”**	12	**K1F 003MLH**	0.170
		By Ø 22 mm hole	12	**K1F 003MCH**	0.190
			Without “0” position		
 	 	**“Multi-fixing”**	12	**K1F 013MLH**	0.170
		By Ø 22 mm hole	12	**K1F 013MCH**	0.190

K●● ●●●●LH



K●● ●●●●CH

General: page 3/14 Characteristics: page 3/18 Dimensions: page 3/74

Schneider Electric

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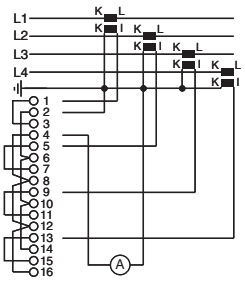
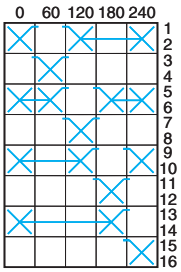
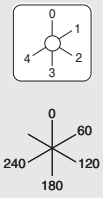
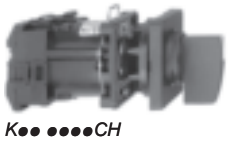
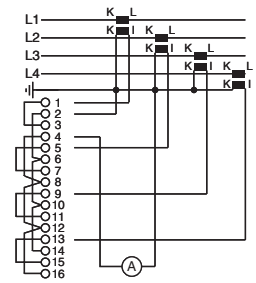
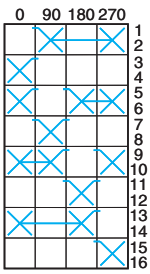
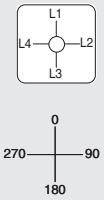
Cam switches

Complete switches, 12 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Ammeter switches (continued)

Wiring diagram and switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
			A		kg
For 4 circuits					
			With “0” position		
 *K●● ●●●●LH*  		**“Multi-fixing”**	12	**K1H 004MLH**	0.195
		By Ø 22 mm hole	12	**K1H 004MCH**	0.215
			Without “0” position		
 *K●● ●●●●CH*  		**“Multi-fixing”**	12	**K1H 014MLH**	0.195
		By Ø 22 mm hole	12	**K1H 014MCH**	0.215

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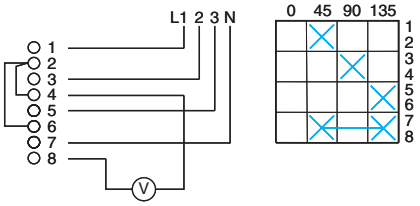
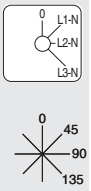
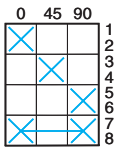
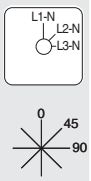
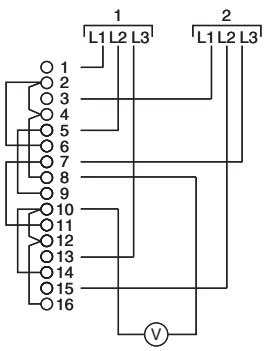
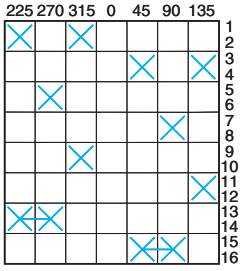
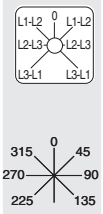
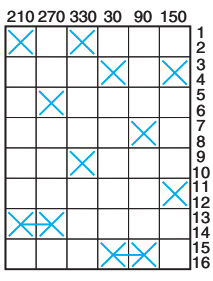
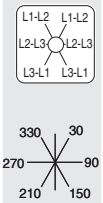
Cam switches

Complete switches, 12 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

Voltmeter switches

Wiring diagram	Switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
				A		kg
For measurements between 3 phases and neutral						
 *K●● ●●●●LH*						
			With “0” position			
			“Multi-fixing”	12	**K1D 023MLH**	0.140
			By Ø 22 mm hole	12	**K1D 023MCH**	0.160
			Without “0” position			
 *K●● ●●●●CH*						
			“Multi-fixing”	12	**K1D 033MLH**	0.140
			By Ø 22 mm hole	12	**K1D 033MCH**	0.160
For measurements between 3 phases of 2 supplies						
						
			With “0” position			
			“Multi-fixing”	12	**K1H 026MLH**	0.205
			By Ø 22 mm hole	12	**K1H 026MCH**	0.215
						
			Without “0” position			
			“Multi-fixing”	12	**K1H 036MLH**	0.205
			By Ø 22 mm hole	12	**K1H 036MCH**	0.215

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Cam switches

Complete switches, 12 A

Front mounting, “multi-fixing” or by Ø 22 mm hole
With 45 x 45 mm front plate, 35 mm handle and metallic legend with black marking

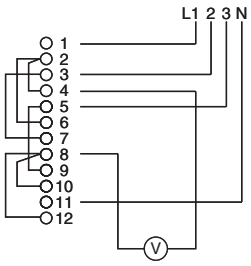
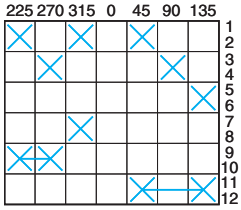
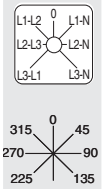
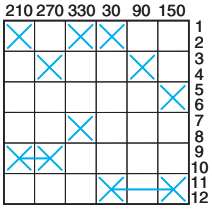
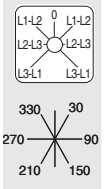
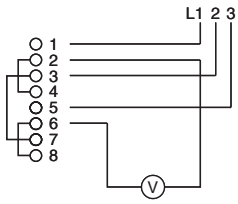
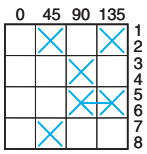
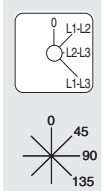
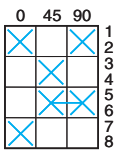
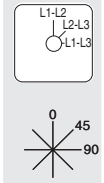
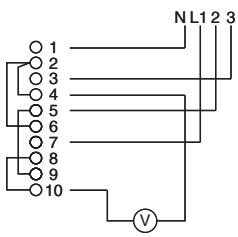
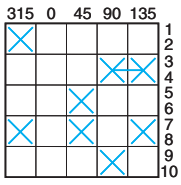
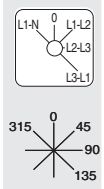
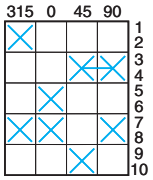
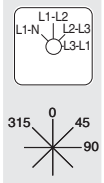


K●● ●●●●LH



K●● ●●●●CH

Voltmeter switches (continued)

Wiring diagram	Switching programme	Marking and switch position	Front mounting method	Thermal current (Ith)	Reference	Weight
				A		kg
For measurements between 3 phases and between each of the 3 phases and neutral						
				**With “0” position**		
			“Multi-fixing”	12	**K1F 027MLH**	0.170
			By Ø 22 mm hole	12	**K1F 027MCH**	0.190
				**Without “0” position**		
			“Multi-fixing”	12	**K1F 037MLH**	0.170
			By Ø 22 mm hole	12	**K1F 037MCH**	0.190
For measurements between 3 phases						
				**With “0” position**		
			“Multi-fixing”	12	**K1D 024MLH**	0.140
			By Ø 22 mm hole	12	**K1D 024MCH**	0.160
				**Without “0” position**		
			“Multi-fixing”	12	**K1D 034MLH**	0.140
			By Ø 22 mm hole	12	**K1D 034MCH**	0.160
For measurements between 3 phases and between 1 phase and neutral						
				**With “0” position**		
			“Multi-fixing”	12	**K1E 025MLH**	0.160
			By Ø 22 mm hole	12	**K1E 025MCH**	0.180
				**Without “0” position**		
			“Multi-fixing”	12	**K1E 035MLH**	0.160
			By Ø 22 mm hole	12	**K1E 035MCH**	0.180

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

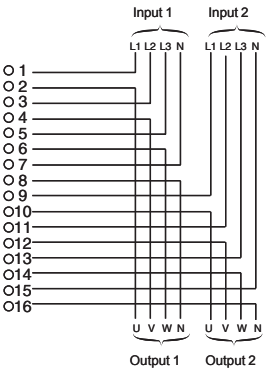
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Switches with 45° switching angle

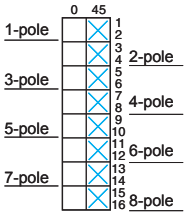


K●● 0●●●L





K●● 0●●●





K●● 5●●●



K●● 0●●●X

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
1-pole						
	0 45	Front	Multi-fixing	**K●A 001AL**		0.091
			By Ø 22 mm hole	**K●A 001A**		0.075
				K●A 001AX	(2)	0.153
		Rear		**K●A 501A**		0.115
2-pole						
	0 45	Front	Multi-fixing	**K●B 002AL**		0.101
			By Ø 22 mm hole	**K●B 002A**		0.085
				K●B 002AX	(2)	0.163
		Rear		**K●B 502A**		0.125
3-pole						
	0 45	Front	Multi-fixing	**K●C 003AL**		0.121
			By Ø 22 mm hole	**K●C 003A**		0.105
				K●C 003AX	(2)	0.183
		Rear		**K●C 503A**		0.140
4-pole						
	0 45	Front	Multi-fixing	**K●D 004AL**		0.126
			By Ø 22 mm hole	**K●D 004A**		0.110
				K●D 004AX	(2)	0.188
		Rear		**K●D 504A**		0.150
5-pole						
	0 45	Front	Multi-fixing	**K●E 005AL**		0.146
			By Ø 22 mm hole	**K●E 005A**		0.130
				K●E 005AX	(2)	0.208
		Rear		**K●E 505A**		0.165
6-pole						
	0 45	Front	Multi-fixing	**K●F 006AL**		0.156
			By Ø 22 mm hole	**K●F 006A**		0.140
				K●F 006AX	(2)	0.218
		Rear		**K●F 506A**		0.175
7-pole						
	0 45	Front	Multi-fixing	**K●G 007AL**		0.176
			By Ø 22 mm hole	**K●G 007A**		0.160
		Rear		**K●G 507A**		0.190
8-pole						
	0 45	Front	Multi-fixing	**K●H 008AL**		0.181
			By Ø 22 mm hole	**K●H 008A**		0.165
		Rear		**K●H 508A**		0.195

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1A 001A**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2A 001A**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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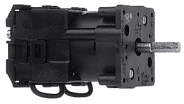
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67



K●● 0●●●L



K●● 0●●●

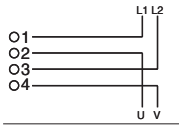
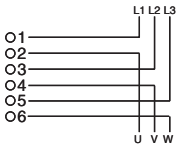
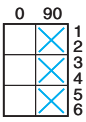
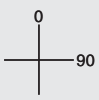
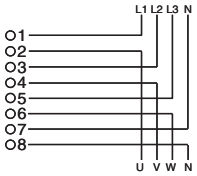
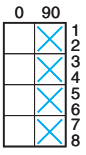
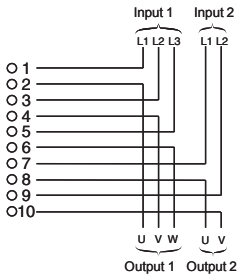
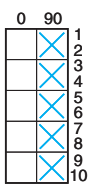
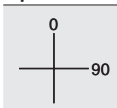
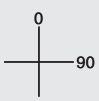
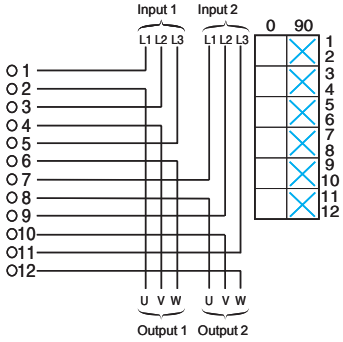
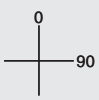


K●● 5●●●



K●● 0●●●X

Switches with 90° switching angle

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*	Weight kg
2-pole						
			Front	Multi-fixing	**K●B 1002HL**	0.121
				By Ø 22 mm hole	**K●B 1002H**	0.105
					K●B 1002HX *(2)*	0.183
3-pole						
			Front	Multi-fixing	**K●C 003HL**	0.121
				By Ø 22 mm hole	**K●C 003H**	0.105
					K●C 003HX *(2)*	0.183
			Rear		**K●C 503H**	0.140
3-pole with neutral wire terminal and Earth terminal						
			Front	Multi-fixing	**K●C 023HL**	0.121
				By Ø 22 mm hole	**K●C 023H**	0.105
					K●C 023HX *(2)*	0.183
			Rear		**K●C 523H**	0.140
4-pole						
			Front	Multi-fixing	**K●D 004HL**	0.126
				By Ø 22 mm hole	**K●D 004H**	0.110
					K●D 004HX *(2)*	0.188
			Rear		**K●D 504H**	0.150
4-pole with neutral wire terminal and Earth terminal						
			Front	Multi-fixing	**K●D 024HL**	0.126
				By Ø 22 mm hole	**K●D 024H**	0.110
					K●D 024HX *(2)*	0.188
			Rear		**K●D 524H**	0.150
5-pole						
			Front	Multi-fixing	**K●E 005HL**	0.146
				By Ø 22 mm hole	**K●E 005H**	0.130
					K●E 005HX *(2)*	0.208
			Rear		**K●E 505H**	0.165
5-pole with neutral wire terminal and Earth terminal						
			Front	Multi-fixing	**K●E 025HL**	0.146
				By Ø 22 mm hole	**K●E 025H**	0.130
			Rear		**K●E 525H**	0.165
6-pole						
			Front	Multi-fixing	**K●F 006HL**	0.156
				By Ø 22 mm hole	**K●F 006H**	0.140
					K●F 006HX *(2)*	0.218
			Rear		**K●F 506H**	0.175
6-pole with neutral wire terminal and Earth terminal						
			Front	Multi-fixing	**K●F 026HL**	0.156
				By Ø 22 mm hole	**K●F 026H**	0.140
			Rear		**K●F 526H**	0.175

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1C 003H**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2C 003H**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

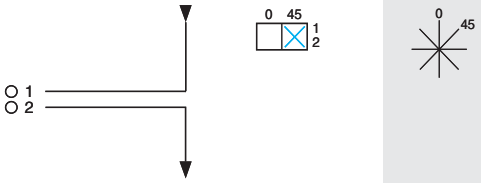
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

OFF-ON switches with 45° switching angle



K●● 0●●●L

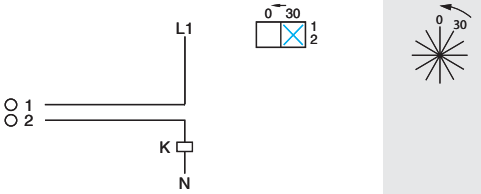


Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
			Front	Multi-fixing	**K●A 001AL**		0.091
				By Ø 22 mm hole	**K●A 001A**		0.075
					K●A 001AX	(2)	0.153
			Rear		**K●A 501A**		0.115

OFF-ON switches with spring return from 30° to "0" position



K●● 0●●●

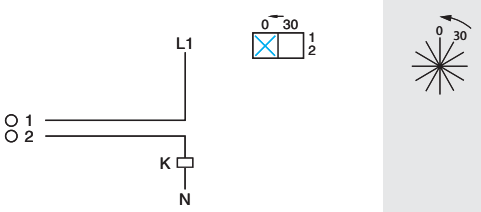


Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
			Front	Multi-fixing	**K●A 001TL**		0.091
				By Ø 22 mm hole	**K●A 001T**		0.075
					K●A 001TX	(2)	0.153
			Rear		**K●A 501T**		0.115

ON-OFF switches with spring return from 30° to "0" position



K●● 5●●●

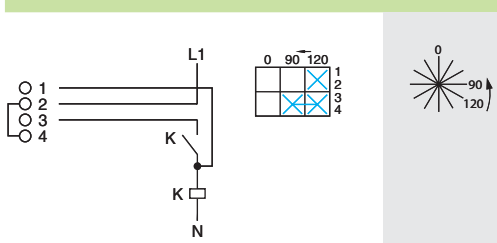


Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
			Front	Multi-fixing	**K●A 002TL**		0.091
				By Ø 22 mm hole	**K●A 002T**		0.075
					K●A 002TX	(2)	0.153
			Rear		**K●A 502T**		0.115

OFF-ON switches with spring return from 120° to 90°



K●● 0●●●X



Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
			Front	Multi-fixing	**K●B 003TL**		0.101
				By Ø 22 mm hole	**K●B 003T**		0.085
			Rear		**K●B 503T**		0.125

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1A 001A**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2A 001A**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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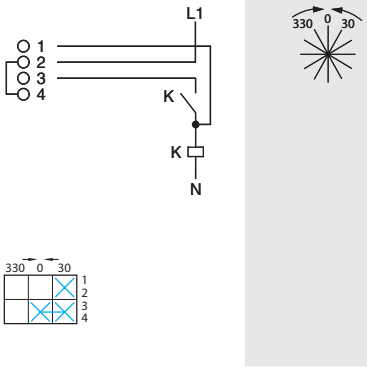
Cam switches

Adaptable sub-assemblies, 12 and 20 A

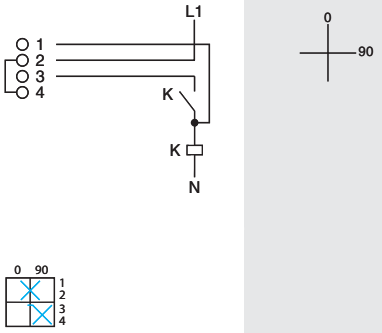
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

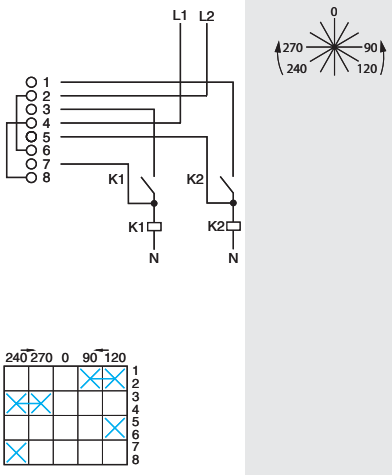
OFF-ON switches with spring return from 30° and from 330° to "0" position

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)	Weight kg
 *K●● 0●●●L*		Front	Multi-fixing	**K●B 004TL**	0.101
			By Ø 22 mm hole	**K●B 004T**	0.085
		Rear		**K●B 504T**	0.115

OFF-ON switches with momentary-contact function

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)	Weight kg
 *K●● 0●●●*		Front	Multi-fixing	**K●B 001DL**	0.101
			By Ø 22 mm hole	**K●B 001D**	0.085
				K●B 001DX (2)	0.163
		Rear		**K●B 501D**	0.125

OFF-ON changeover switches with spring return from 240° to 270° and from 120° to 90°

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)	Weight kg
 *K●● 5●●●*		Front	Multi-fixing	**K●D 005TL**	0.126
			By Ø 22 mm hole	**K●D 005T**	0.110
 *K●● 0●●●X*		Rear		**K●D 505T**	0.150

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 004T**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 004T**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17 | Characteristics: pages 3/18 and 3/19 | Dimensions: page 3/74

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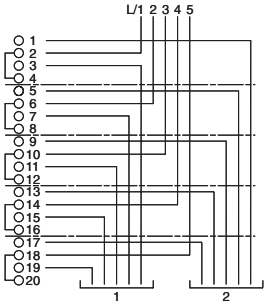
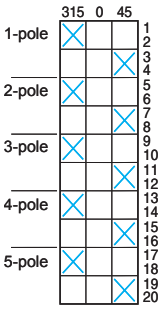
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Changeover switches with "0" position

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
	1-pole					
 *K●● 0●●●L* 		Front	Multi-fixing	**K●B 001UL**		0.101
			By Ø 22 mm hole	**K●B 001U**		0.085
				K●B 001UX	*(2)*	0.163
		Rear		**K●B 501U**		0.125
	2-pole					
		Front	Multi-fixing	**K●D 002UL**		0.126
			By Ø 22 mm hole	**K●D 002U**		0.110
				K●D 002UX	*(2)*	0.188
		Rear		**K●D 502U**		0.150
 *K●● 0●●●* 	**3-pole**					
		Front	Multi-fixing	**K●F 003UL**		0.156
			By Ø 22 mm hole	**K●F 003U**		0.140
				K●F 003UX	*(2)*	0.218
		Rear		**K●F 503U**		0.175
	4-pole					
		Front	Multi-fixing	**K●H 004UL**		0.181
			By Ø 22 mm hole	**K●H 004U**		0.165
				K●H 004UX	*(2)*	0.243
		Rear		**K●H 504U**		0.195
 *K●● 5●●●*	**5-pole**					
		Front	Multi-fixing	**K●K 005UL**		0.211
			By Ø 22 mm hole	**K●K 005U**		0.195
				K●K 005UX	*(2)*	0.273
		Rear		**K●K 505U**		0.210

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 001U**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 001U**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*


K●● 0●●●X

General: pages 3/14 to 3/17
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Dimensions: page 3/74

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

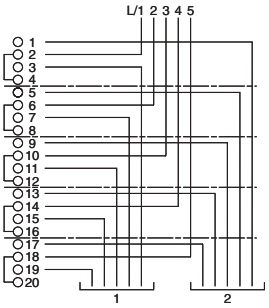
Bodies (contact blocks + fixing plate)

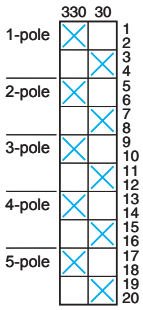
To combine with operating heads: see pages 3/66 and 3/67

Changeover switches without "0" position



K●● 0●●●L







K●● 0●●●



K●● 5●●●



K●● 0●●●X

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
1-pole						
		Front	Multi-fixing	**K●B 011UL**		0.101
			By Ø 22 mm hole	**K●B 011U**		0.085
				K●B 011UX	*(2)*	0.163
		Rear		**K●B 511U**		0.125
2-pole						
		Front	Multi-fixing	**K●D 012UL**		0.126
			By Ø 22 mm hole	**K●D 012U**		0.110
				K●D 012UX	*(2)*	0.188
		Rear		**K●D 512U**		0.150
3-pole						
		Front	Multi-fixing	**K●F 013UL**		0.156
			By Ø 22 mm hole	**K●F 013U**		0.140
				K●F 013UX	*(2)*	0.218
		Rear		**K●F 513U**		0.175
4-pole						
		Front	Multi-fixing	**K●H 014UL**		0.181
			By Ø 22 mm hole	**K●H 014U**		0.165
				K●H 014UX	*(2)*	0.243
		Rear		**K●H 514U**		0.195
5-pole						
		Front	Multi-fixing	**K●K 015UL**		0.211
			By Ø 22 mm hole	**K●K 015U**		0.195
				K●K 015UX	*(2)*	0.273
		Rear		**K●K 515U**		0.220

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 011U**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 011U**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

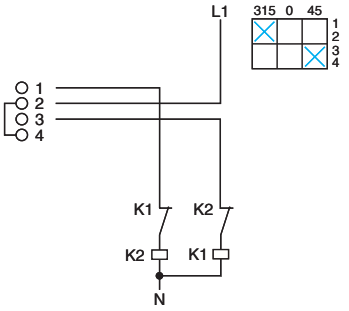
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Reversing switches with "0" position



K●● 0●●●L



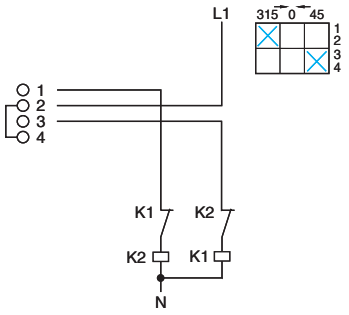


Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
			Front	Multi-fixing	**K●B 001UL**		0.101
				By Ø 22 mm hole	**K●B 001U**		0.085
					K●B 001UX	*(2)*	0.163
			Rear		**K●B 501U**		0.125

Reversing switches with spring return from 315° and from 45° to "0" position



K●● 0●●●



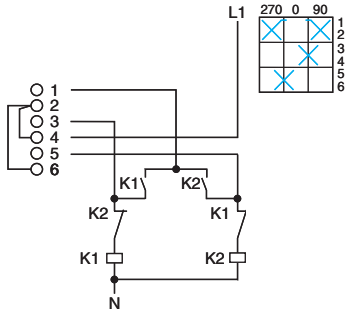


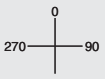
Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
			Front	Multi-fixing	**K●B 006TL**		0.101
				By Ø 22 mm hole	**K●B 006T**		0.085
					K●B 006TX	*(2)*	0.163
			Rear		**K●B 506T**		0.125

Reversing switches with momentary-contact function



K●● 5●●●



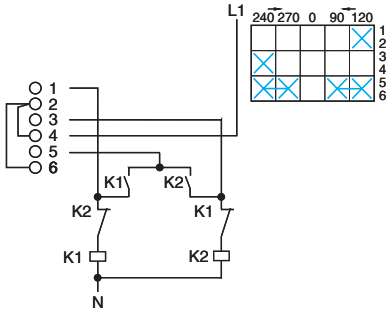


Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
			Front	Multi-fixing	**K●C 002DL**		0.121
				By Ø 22 mm hole	**K●C 002D**		0.105
					K●C 002DX	*(2)*	0.183
			Rear		**K●C 502D**		0.140

Reversing switches with spring return from 240° to 270° and from 120° to 90° position



K●● 0●●●X





Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
			Front	Multi-fixing	**K●C 007TL**		0.121
				By Ø 22 mm hole	**K●C 007T**		0.105
			Rear		**K●C 507T**		0.140

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 001U**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 001U**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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Cam switches
Adaptable sub-assemblies, 12 A
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67



K●● 0●●●L



K●● 0●●●

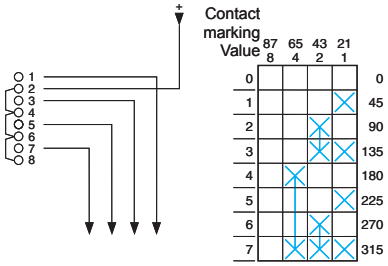
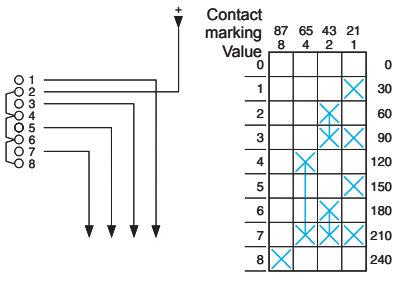
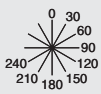


K●● 5●●●



K●● 0●●●X

BCD encoded output switches with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
		**1 decimal** 	Front	Multi-fixing	**K1A 001BL**		0.101
				By Ø 22 mm hole	**K1A 001B**		0.085
					K1A 001BX	*(2)*	0.163
			Rear		**K1A 501B**		0.125
		2 decimal 	Front	Multi-fixing	**K1B 002BL**		0.101
				By Ø 22 mm hole	**K1B 002B**		0.085
					K1B 002BX	*(2)*	0.163
			Rear		**K1B 502B**		0.125
		3 decimal 	Front	Multi-fixing	**K1B 003BL**		0.101
				By Ø 22 mm hole	**K1B 003B**		0.085
					K1B 003BX	*(2)*	0.163
			Rear		**K1B 503B**		0.125
		4 decimal 	Front	Multi-fixing	**K1C 004BL**		0.121
				By Ø 22 mm hole	**K1C 004B**		0.105
					K1C 004BX	*(2)*	0.183
			Rear		**K1C 504B**		0.140
		5 decimal 	Front	Multi-fixing	**K1C 005BL**		0.121
				By Ø 22 mm hole	**K1C 005B**		0.105
					K1C 005BX	*(2)*	0.183
			Rear		**K1C 505B**		0.140
		6 decimal 	Front	Multi-fixing	**K1C 006BL**		0.121
				By Ø 22 mm hole	**K1C 006B**		0.105
					K1C 006BX	*(2)*	0.183
			Rear		**K1C 506B**		0.140
		7 decimal 	Front	Multi-fixing	**K1C 007BL**		0.121
				By Ø 22 mm hole	**K1C 007B**		0.105
					K1C 007BX	*(2)*	0.183
			Rear		**K1C 507B**		0.140
		**8 decimal** 	Front	Multi-fixing	**K1D 008BL**		0.126
				By Ø 22 mm hole	**K1D 008B**		0.110
					K1D 008BX	*(2)*	0.188
			Rear		**K1D 508B**		0.150

(1) Ith = 12 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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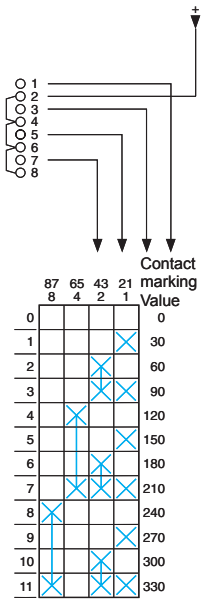
Cam switches
Adaptable sub-assemblies, 12 A
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

BCD encoded output switches with "0" position (continued)

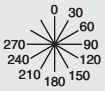
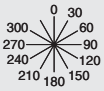
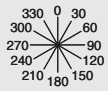


K●● 0●●●L





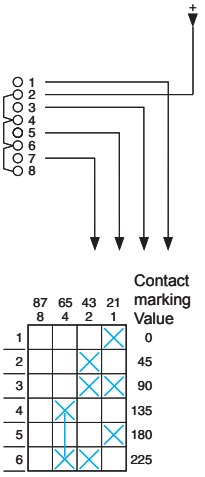
K●● 0●●●

Wiring diagram and switching programme	Switch position	Mounting method		Reference (1)		Weight kg
	9 decimal					
		Front	Multi-fixing	**K1D 009BL**		0.126
			By Ø 22 mm hole	**K1D 009B**		0.110
				K1D 009BX	(2)	0.188
		Rear		**K1D 509B**		0.150
	10 decimal					
		Front	Multi-fixing	**K1D 010BL**		0.126
			By Ø 22 mm hole	**K1D 010B**		0.110
		Rear		**K1D 510B**		0.150
	11 decimal					
		Front	Multi-fixing	**K1D 011BL**		0.126
			By Ø 22 mm hole	**K1D 011B**		0.110
		Rear		**K1D 511B**		0.150

BCD encoded output switches without "0" position



K●● 5●●●





K●● 0●●●X

Wiring diagram and switching programme	Switch position	Mounting method		Reference (1)		Weight kg
	1 and 2 decimal					
		Front	Multi-fixing	**K1B 022BL**		0.101
			By Ø 22 mm hole	**K1B 022B**		0.085
				K1B 022BX	(2)	0.163
		Rear		**K1B 522B**		0.125
	3 decimal					
		Front	Multi-fixing	**K1B 023BL**		0.101
			By Ø 22 mm hole	**K1B 023B**		0.085
				K1B 023BX	(2)	0.163
		Rear		**K1B 523B**		0.125
	4 decimal					
		Front	Multi-fixing	**K1C 024BL**		0.121
			By Ø 22 mm hole	**K1C 024B**		0.105
				K1C 024BX	(2)	0.183
		Rear		**K1C 524B**		0.140
	5 decimal					
		Front	Multi-fixing	**K1C 025BL**		0.121
			By Ø 22 mm hole	**K1C 025B**		0.105
				K1C 025BX	(2)	0.183
		Rear		**K1C 525B**		0.140
	6 decimal					
		Front	Multi-fixing	**K1C 026BL**		0.121
			By Ø 22 mm hole	**K1C 026B**		0.105
				K1C 026BX	(2)	0.183
		Rear		**K1C 526B**		0.140

(1) Ith = 12 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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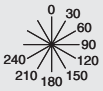
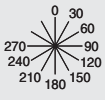
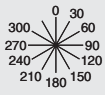
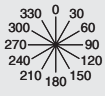
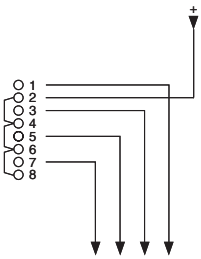
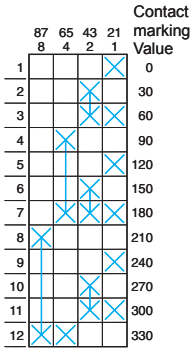
Cam switches
Adaptable sub-assemblies, 12 A
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

BCD encoded output switches without "0" position (continued)

Wiring diagram and switching programme	Switch position	Mounting method		Reference (1)		Weight kg
	7 decimal					
 *K●● 0●●●L*		Front	Multi-fixing	**K1C 027BL**		0.121
			By Ø 22 mm hole	**K1C 027B**		0.105
				K1C 027BX	*(2)*	0.183
		Rear		**K1C 527B**		0.140
	8 decimal					
		Front	Multi-fixing	**K1D 028BL**		0.126
			By Ø 22 mm hole	**K1D 028B**		0.110
				K1D 028BX	*(2)*	0.188
		Rear		**K1D 528B**		0.150
	9 decimal					
 *K●● 0●●●*		Front	Multi-fixing	**K1D 029BL**		0.126
			By Ø 22 mm hole	**K1D 029B**		0.110
				K1D 029BX	*(2)*	0.188
		Rear		**K1D 529B**		0.150
	10 decimal					
		Front	Multi-fixing	**K1D 030BL**		0.126
			By Ø 22 mm hole	**K1D 030B**		0.110
				K1D 030BX	*(2)*	0.188
		Rear		**K1D 530B**		0.150
	11 decimal					
 *K●● 5●●●*		Front	Multi-fixing	**K1D 031BL**		0.126
			By Ø 22 mm hole	**K1D 031B**		0.110
		Rear		**K1D 531B**		0.150
	12 decimal					
 *K●● 0●●●X*		Front	Multi-fixing	**K1D 032BL**		0.126
			By Ø 22 mm hole	**K1D 032B**		0.110
		Rear		**K1D 532B**		0.150





(1) Ith = 12 A.
(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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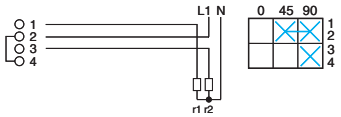
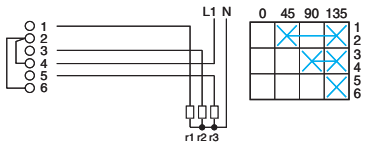
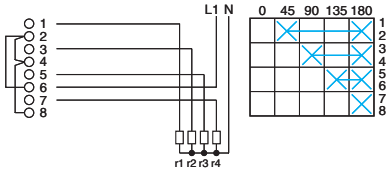
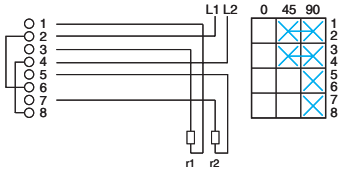
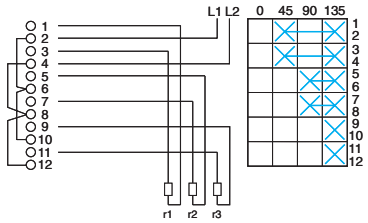
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Paralleling switches with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
1-pole for 2 loads							
 *K●● 0●●●L*			Front	Multi-fixing	**K●B 002GL**		0.101
				By Ø 22 mm hole	**K●B 002G**		0.085
					K●B 002GX	*(2)*	0.163
			Rear		**K●B 502G**		0.125
1-pole for 3 loads							
 *K●● 0●●●*			Front	Multi-fixing	**K●C 003GL**		0.121
				By Ø 22 mm hole	**K●C 003G**		0.105
					K●C 003GX	*(2)*	0.183
			Rear		**K●C 503G**		0.140
1-pole for 4 loads							
			Front	Multi-fixing	**K●D 004GL**		0.126
				By Ø 22 mm hole	**K●D 004G**		0.110
					K●D 004GX	*(2)*	0.188
			Rear		**K●D 504G**		0.150
2-pole for 2 loads							
 *K●● 5●●●*			Front	Multi-fixing	**K●D 012GL**		0.126
				By Ø 22 mm hole	**K●D 012G**		0.110
					K●D 012GX	*(2)*	0.188
			Rear		**K●D 512G**		0.150
2-pole for 3 loads							
 *K●● 0●●●X*			Front	Multi-fixing	**K●F 013GL**		0.156
				By Ø 22 mm hole	**K●F 013G**		0.140
					K●F 013GX	*(2)*	0.218
			Rear		**K●F 513G**		0.175

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 002G**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 002G**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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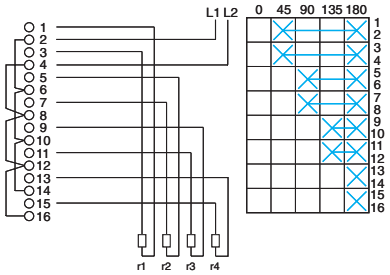
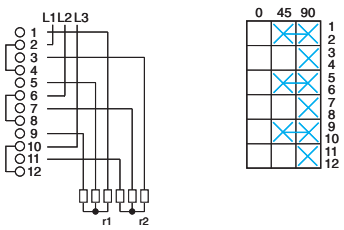
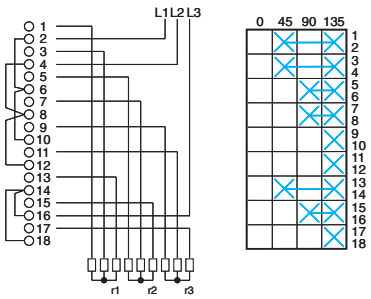
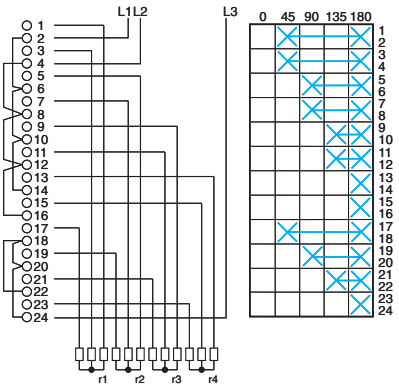
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Paralleling switches with "0" position (continued)

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
2-pole for 4 loads							
 *K●● 0●●●L*			Front	Multi-fixing	**K●H 014GL**		0.181
				By Ø 22 mm hole	**K●H 014G**		0.165
					K●H 014GX	*(2)*	0.243
			Rear		**K●H 514G**		0.195
3-pole for 2 loads							
 *K●● 0●●●*			Front	Multi-fixing	**K●F 022GL**		0.156
				By Ø 22 mm hole	**K●F 022G**		0.140
					K●F 022GX	*(2)*	0.218
			Rear		**K●F 522G**		0.175
3-pole for 3 loads							
 *K●● 5●●●*			Front	Multi-fixing	**K●I 023GL**		0.201
				By Ø 22 mm hole	**K●I 023G**		0.185
					K●I 023GX	*(2)*	0.263
			Rear		**K●I 523G**		0.215
3-pole for 4 loads							
 *K●● 0●●●X*			Front	Multi-fixing	**K●M 024GL**		0.241
				By Ø 22 mm hole	**K●M 024G**		0.225
					K●M 024GX	*(2)*	0.303
			Rear		**K●M 524G**		0.245

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1H 014G**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2H 014G**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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Cam switches

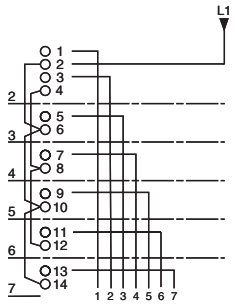
Adaptable sub-assemblies, 12 and 20 A

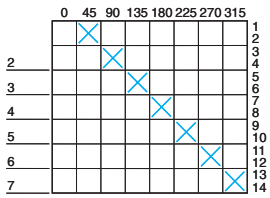
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 11 step), single-pole, with "0" position

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
	2 step + "0"					
 *K●● 0●●●L*		Front	Multi-fixing	**K●B 002QL**		0.101
			By Ø 22 mm hole	**K●B 002Q**		0.085
				K●B 002QX	*(2)*	0.163
		Rear		**K●B 502Q**		0.125
	3 step + "0"					
		Front	Multi-fixing	**K●C 003QL**		0.121
			By Ø 22 mm hole	**K●C 003Q**		0.105
				K●C 003QX	*(2)*	0.183
		Rear		**K●C 503Q**		0.140
 *K●● 0●●●*	**4 step + "0"**					
		Front	Multi-fixing	**K●D 004QL**		0.126
			By Ø 22 mm hole	**K●D 004Q**		0.110
				K●D 004QX	*(2)*	0.188
		Rear		**K●D 504Q**		0.150
	5 step + "0"					
		Front	Multi-fixing	**K●E 005QL**		0.146
			By Ø 22 mm hole	**K●E 005Q**		0.130
				K●E 005QX	*(2)*	0.208
		Rear		**K●E 505Q**		0.165
 *K●● 5●●●*	**6 step + "0"**					
		Front	Multi-fixing	**K●F 006QL**		0.156
			By Ø 22 mm hole	**K●F 006Q**		0.140
				K●F 006QX	*(2)*	0.218
		Rear		**K●F 506Q**		0.175
	7 step + "0"					
		Front	Multi-fixing	**K●G 007QL**		0.176
			By Ø 22 mm hole	**K●G 007Q**		0.160
				K●G 007QX	*(2)*	0.238
		Rear		**K●G 507Q**		0.190
 *K●● 0●●●X*						





*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 002Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 002Q**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67



K●● 0●●●L



K●● 0●●●

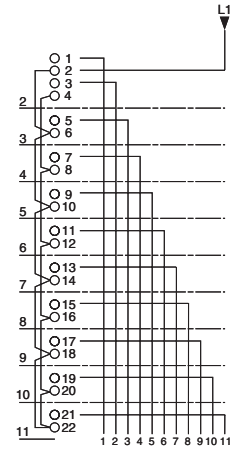
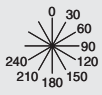
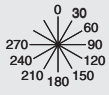
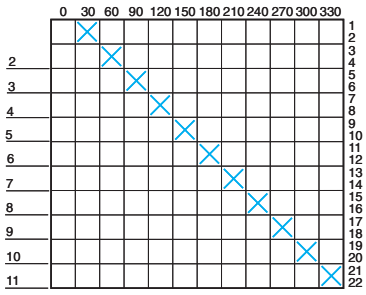
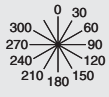
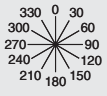


K●● 5●●●



K●● 0●●●X

Stepping switches (2 to 11 step), single-pole, with “0” position (continued)

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
8 step + “0”						
		Front	Multi-fixing	**K●H 008QL**		0.181
			By Ø 22 mm hole	**K●H 008Q**		0.165
				K●H 008QX	*(2)*	0.243
		Rear		**K●H 508Q**		0.195
9 step + “0”						
		Front	Multi-fixing	**K●I 009QL**		0.201
			By Ø 22 mm hole	**K●I 009Q**		0.185
				K●I 009QX	*(2)*	0.263
		Rear		**K●I 509Q**		0.215
10 step + “0”						
		Front	Multi-fixing	**K●K 010QL**		0.211
			By Ø 22 mm hole	**K●K 010Q**		0.195
				K●K 010QX	*(2)*	0.273
		Rear		**K●K 510Q**		0.220
11 step + “0”						
		Front	Multi-fixing	**K●L 011QL**		0.231
			By Ø 22 mm hole	**K●L 011Q**		0.215
				K●L 011QX	*(2)*	0.293
		Rear		**K●L 511Q**		0.240

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1H 008Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2H 008Q**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

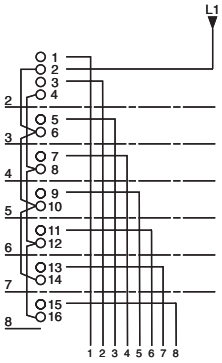
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 12 step), single-pole, without "0" position

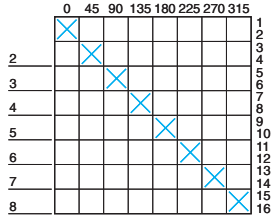


K●● 0●●●L





K●● 0●●●

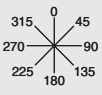




K●● 5●●●



K●● 0●●●X

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
2 step						
		Front	Multi-fixing	**K●B 002NL**		0.101
			By Ø 22 mm hole	**K●B 002N**		0.085
				K●B 002NX	*(2)*	0.163
		Rear		**K●B 502N**		0.125
3 step						
		Front	Multi-fixing	**K●C 003NL**		0.121
			By Ø 22 mm hole	**K●C 003N**		0.105
				K●C 003NX	*(2)*	0.183
		Rear		**K●C 503N**		0.140
4 step						
		Front	Multi-fixing	**K●D 004NL**		0.126
			By Ø 22 mm hole	**K●D 004N**		0.110
				K●D 004NX	*(2)*	0.188
		Rear		**K●D 504N**		0.150
5 step						
		Front	Multi-fixing	**K●E 005NL**		0.146
			By Ø 22 mm hole	**K●E 005N**		0.130
				K●E 005NX	*(2)*	0.208
		Rear		**K●E 505N**		0.165
6 step						
		Front	Multi-fixing	**K●F 006NL**		0.156
			By Ø 22 mm hole	**K●F 006N**		0.140
				K●F 006NX	*(2)*	0.218
		Rear		**K●F 506N**		0.175
7 step						
		Front	Multi-fixing	**K●G 007NL**		0.176
			By Ø 22 mm hole	**K●G 007N**		0.160
				K●G 007NX	*(2)*	0.238
		Rear		**K●G 507N**		0.190
8 step						
		Front	Multi-fixing	**K●H 008NL**		0.181
			By Ø 22 mm hole	**K●H 008N**		0.165
				K●H 008NX	*(2)*	0.243
		Rear		**K●H 508N**		0.195

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1B 002N**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2B 002N**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 12 step), single-pole, without "0" position (continued)



K●● 0●●●L



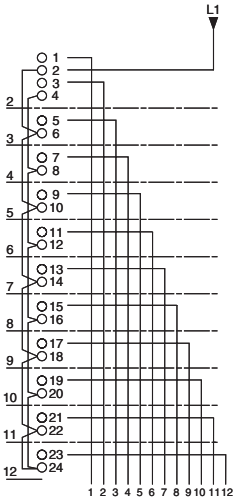
K●● 0●●●

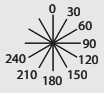
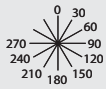
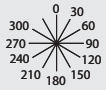
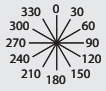


K●● 5●●●



K●● 0●●●X



Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
9 step						
		Front	Multi-fixing	**K●I 009NL**		0.201
			By Ø 22 mm hole	**K●I 009N**		0.185
				K●I 009NX	*(2)*	0.263
		Rear		**K●I 509N**		0.215
10 step						
		Front	Multi-fixing	**K●K 010NL**		0.211
			By Ø 22 mm hole	**K●K 010N**		0.195
				K●K 010NX	*(2)*	0.273
		Rear		**K●K 510N**		0.220
11 step						
		Front	Multi-fixing	**K●L 011NL**		0.231
			By Ø 22 mm hole	**K●L 011N**		0.215
				K●L 011NX	*(2)*	0.293
		Rear		**K●L 511N**		0.240
12 step						
		Front	Multi-fixing	**K●M 021NL**		0.241
			By Ø 22 mm hole	**K●M 021N**		0.225
				K●M 021NX	*(2)*	0.303
		Rear		**K●M 521N**		0.245

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1I 009N**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2I 009N**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●.***

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Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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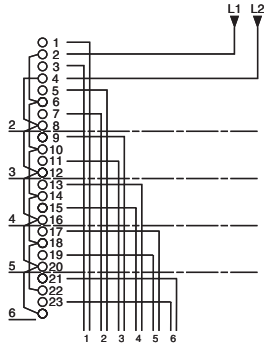
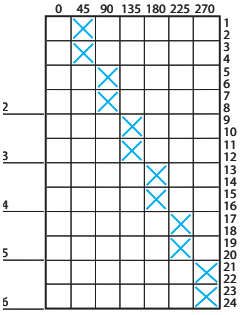
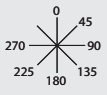
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 6 step), 2-pole, with "0" position

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
	2 step + "0"					
 *K●● 0●●●L*		Front	Multi-fixing	**K●D 012QL**		0.126
			By Ø 22 mm hole	**K●D 012Q**		0.110
				K●D 012QX	*(2)*	0.188
		Rear		**K●D 512Q**		0.150
						
	3 step + "0"					
		Front	Multi-fixing	**K●F 013QL**		0.156
			By Ø 22 mm hole	**K●F 013Q**		0.140
				K●F 013QX	*(2)*	0.218
		Rear		**K●F 513Q**		0.175
 *K●● 0●●●*						
						
	4 step + "0"					
		Front	Multi-fixing	**K●H 014QL**		0.181
			By Ø 22 mm hole	**K●H 014Q**		0.165
				K●H 014QX	*(2)*	0.243
		Rear		**K●H 514Q**		0.195
	5 step + "0"					
 *K●● 5●●●*		Front	Multi-fixing	**K●K 015QL**		0.211
			By Ø 22 mm hole	**K●K 015Q**		0.195
				K●K 015QX	*(2)*	0.273
		Rear		**K●K 515Q**		0.220
	6 step + "0"					
		Front	Multi-fixing	**K●M 016QL**		0.241
			By Ø 22 mm hole	**K●M 016Q**		0.225
				K●M 016QX	*(2)*	0.303
		Rear		**K●M 516Q**		0.245
 *K●● 0●●●X*						

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1D 012Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2D 012Q**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

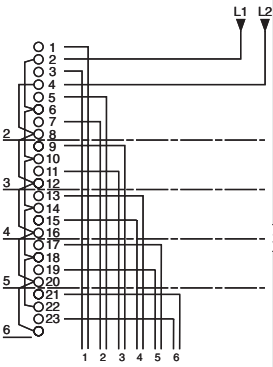
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 6 step), 2-pole, without "0" position

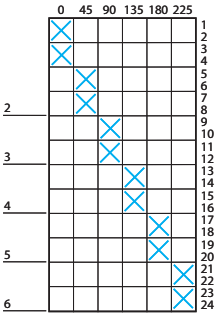


K●● 0●●●L





K●● 0●●●





K●● 5●●●



K●● 0●●●X

Wiring diagram and switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
2 step						
		Front	Multi-fixing	**K●D 012NL**		0.126
			By Ø 22 mm hole	**K●D 012N**		0.110
				K●D 012NX	(2)	0.188
		Rear		**K●D 512N**		0.150
3 step						
		Front	Multi-fixing	**K●F 013NL**		0.156
			By Ø 22 mm hole	**K●F 013N**		0.140
				K●F 013NX	(2)	0.218
		Rear		**K●F 513N**		0.175
4 step						
		Front	Multi-fixing	**K●H 014NL**		0.181
			By Ø 22 mm hole	**K●H 014N**		0.165
				K●H 014NX	(2)	0.243
		Rear		**K●H 514N**		0.195
5 step						
		Front	Multi-fixing	**K●K 015NL**		0.211
			By Ø 22 mm hole	**K●K 015N**		0.195
				K●K 015NX	(2)	0.273
		Rear		**K●K 515N**		0.220
6 step						
		Front	Multi-fixing	**K●M 016NL**		0.241
			By Ø 22 mm hole	**K●M 016N**		0.225
				K●M 016NX	(2)	0.303
		Rear		**K●M 516N**		0.245

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1D 012N**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2D 012N**.*
*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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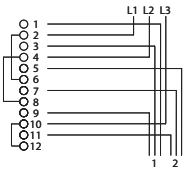
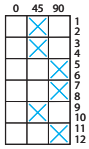
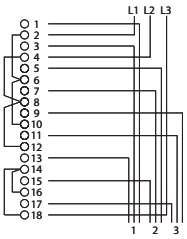
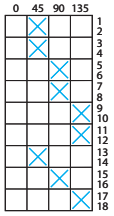
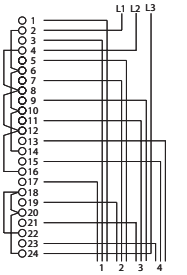
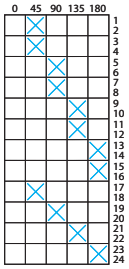
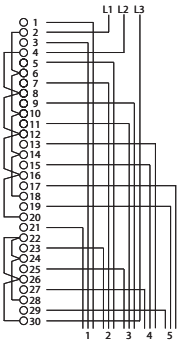
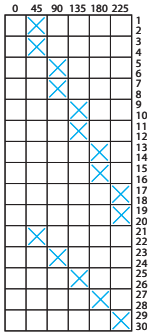
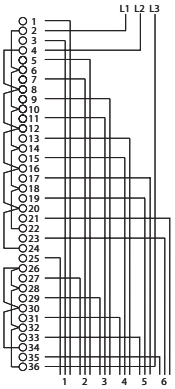
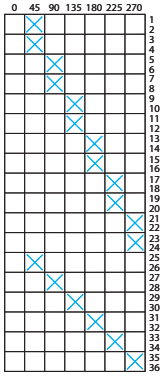
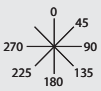
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 6 step), 3-pole, with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
		2 step + "0"					
			Front	Multi-fixing	**K●F 022QL**		0.156
				By Ø 22 mm hole	**K●F 022Q**		0.140
					K●F 022QX	*(2)*	0.218
			Rear		**K●F 522Q**		0.175
		3 step + "0"					
			Front	Multi-fixing	**K●I 023QL**		0.201
				By Ø 22 mm hole	**K●I 023Q**		0.185
					K●I 023QX	*(2)*	0.263
			Rear		**K●I 523Q**		0.215
		4 step + "0"					
			Front	Multi-fixing	**K●M 024QL**		0.241
				By Ø 22 mm hole	**K●M 024Q**		0.225
					K●M 024QX	*(2)*	0.303
			Rear		**K●M 524Q**		0.245
		5 step + "0"					
			Front	Multi-fixing	**K●P 025QL**		0.286
				By Ø 22 mm hole	**K●P 025Q**		0.270
					K●P 025QX	*(2)*	0.348
			Rear		**K●P 525Q**		0.285
		6 step + "0"					
			Front	Multi-fixing	**K●S 026QL**		0.321
				By Ø 22 mm hole	**K●S 026Q**		0.305
					K●S 026QX	*(2)*	0.383
			Rear		**K●S 526Q**		0.320



K●● 0●●●L



K●● 0●●●



K●● 5●●●



K●● 0●●●X

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1F 022Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2F 022Q**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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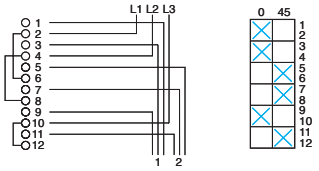
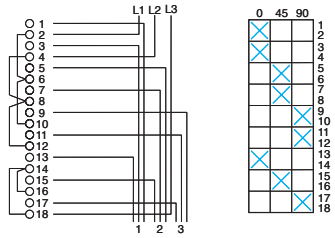
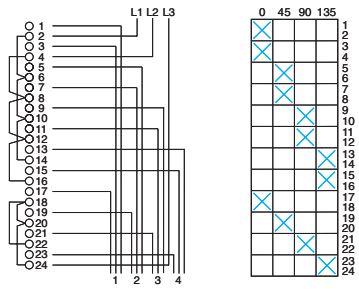
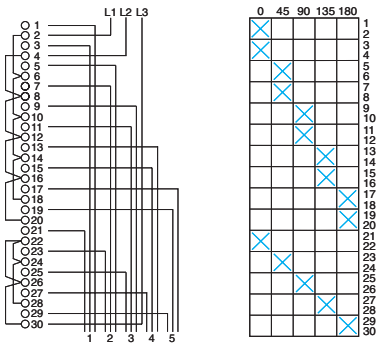
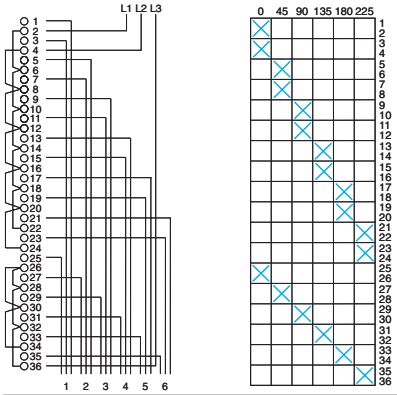
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 6 step), 3-pole, without "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
		2 step					
 *K●● 0●●●L*			Front	Multi-fixing	**K●F 022NL**		0.156
				By Ø 22 mm hole	**K●F 022N**		0.140
					K●F 022NX	*(2)*	0.218
			Rear		**K●F 522N**		0.175
		3 step					
 *K●● 0●●●*			Front	Multi-fixing	**K●I 023NL**		0.201
				By Ø 22 mm hole	**K●I 023N**		0.185
					K●I 023NX	*(2)*	0.263
			Rear		**K●I 523N**		0.215
		4 step					
			Front	Multi-fixing	**K●M 024NL**		0.241
				By Ø 22 mm hole	**K●M 024N**		0.225
					K●M 024NX	*(2)*	0.303
			Rear		**K●M 524N**		0.245
		5 step					
 *K●● 5●●●*			Front	Multi-fixing	**K●P 025NL**		0.286
				By Ø 22 mm hole	**K●P 025N**		0.270
					K●P 025NX	*(2)*	0.348
			Rear		**K●P 525N**		0.285
		6 step					
 *K●● 0●●●X*			Front	Multi-fixing	**K●S 026NL**		0.321
				By Ø 22 mm hole	**K●S 026N**		0.305
					K●S 026NX	*(2)*	0.383
			Rear		**K●S 526N**		0.320

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1F 022N**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2F 022N**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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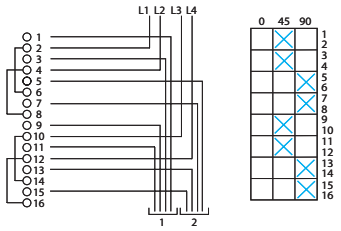
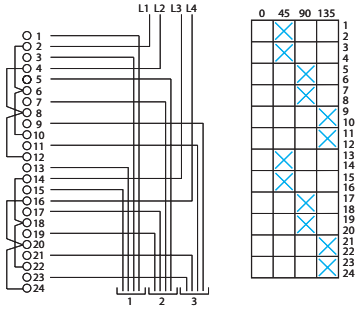
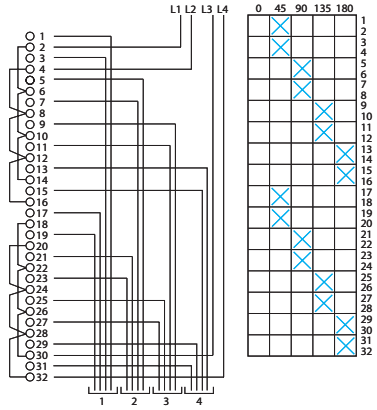
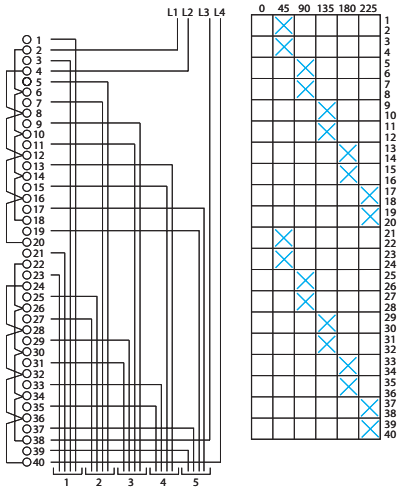
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 5 step), 4-pole, with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
 K●● 0●●●L		**2 step + "0"** 	Front	Multi-fixing	**K●H 032QL**		0.181
				By Ø 22 mm hole	**K●H 032Q**		0.165
					K●H 032QX	(2)	0.200
			Rear		**K●H 532Q**		0.195
 K●● 0●●●		**3 step + "0"** 	Front	Multi-fixing	**K●M 033QL**		0.241
				By Ø 22 mm hole	**K●M 033Q**		0.225
			Rear		**K●M 533Q**		0.245
 K●● 5●●●		**4 step + "0"** 	Front	Multi-fixing	**K●Q 034QL**		0.296
				By Ø 22 mm hole	**K●Q 034Q**		0.280
			Rear		**K●Q 534Q**		0.295
 K●● 0●●●X		**5 step + "0"** 	Front	Multi-fixing	**K●U 035QL**		0.351
				By Ø 22 mm hole	**K●U 035Q**		0.335
			Rear		**K●U 535Q**		0.345

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1H 032Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2H 032Q**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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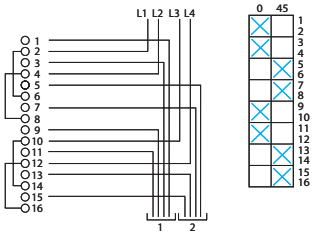
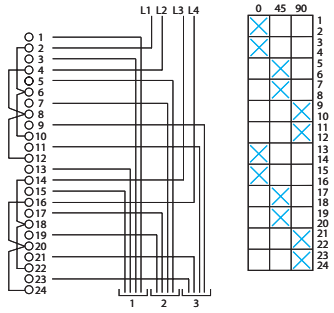
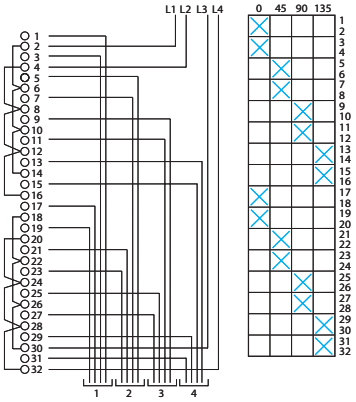
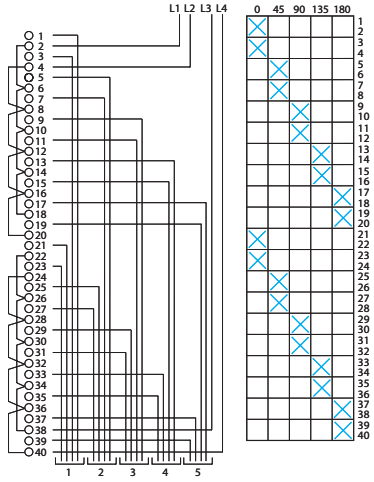
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 to 5 step), 4-pole, without "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
 *K●● 0●●●L*		**2 step** 	Front	Multi-fixing	**K●H 032NL**		0.181
				By Ø 22 mm hole	**K●H 032N**		0.165
					K●H 032NX	*(2)*	0.200
			Rear		**K●H 532N**		0.195
 *K●● 0●●●*		**3 step** 	Front	Multi-fixing	**K●M 033NL**		0.241
				By Ø 22 mm hole	**K●M 033N**		0.225
			Rear		**K●M 533N**		0.245
 *K●● 5●●●*		**4 step** 	Front	Multi-fixing	**K●Q 034NL**		0.296
				By Ø 22 mm hole	**K●Q 034N**		0.280
			Rear		**K●Q 534N**		0.295
 *K●● 0●●●X*		**5 step** 	Front	Multi-fixing	**K●U 035NL**		0.351
				By Ø 22 mm hole	**K●U 035N**		0.335
			Rear		**K●U 535N**		0.345

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1H 032N**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2H 032N**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●.***

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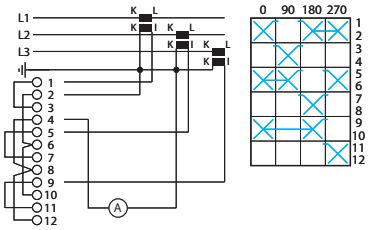
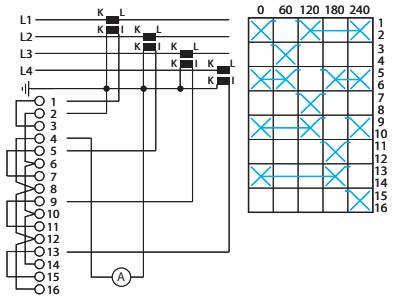
Cam switches

Adaptable sub-assemblies, 12 and 20 A

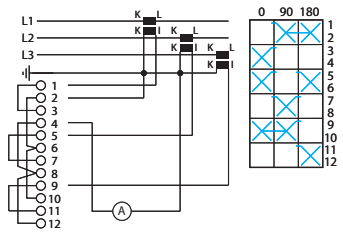
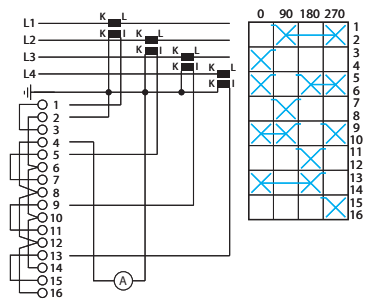
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Ammeter switches with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
For 3 circuits							
 *K●● 0●●●L*			Front	Multi-fixing	**K1F 003ML**		0.156
				By Ø 22 mm hole	**K1F 003M**		0.140
					K1F 003MX	(2)	0.218
			Rear		**K1F 503M**		0.175
For 4 circuits							
 *K1● 0●●●*			Front	Multi-fixing	**K1H 004ML**		0.181
				By Ø 22 mm hole	**K1H 004M**		0.165
					K1H 004MX	(2)	0.243
			Rear		**K1H 504M**		0.195

Ammeter switches without "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
For 3 circuits							
 *K1● 5●●●*			Front	Multi-fixing	**K1F 013ML**		0.156
				By Ø 22 mm hole	**K1F 013M**		0.140
					K1F 013MX	(2)	0.218
			Rear		**K1F 513M**		0.175
For 4 circuits							
 *K1● 0●●●X*			Front	Multi-fixing	**K1H 014ML**		0.181
				By Ø 22 mm hole	**K1H 014M**		0.165
					K1H 014MX	(2)	0.243
			Rear		**K1H 514M**		0.195

(1) Ith = 12 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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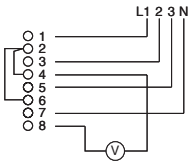
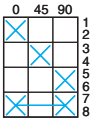
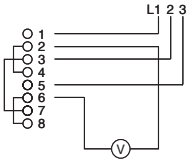
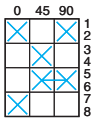
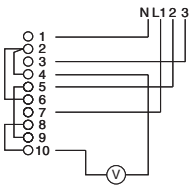
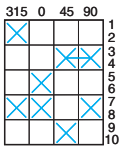
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Voltmeter switches

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
For measurements between 3 phases and neutral							
	With "0" position						
 *K1● 0●●●L*			Front	Multi-fixing	**K1D 023ML**		0.126
				By Ø 22 mm hole	**K1D 023M**		0.110
					K1D 023MX	*(2)*	0.188
			Rear		**K1D 523M**		0.150
	Without "0" position						
			Front	Multi-fixing	**K1D 033ML**		0.126
				By Ø 22 mm hole	**K1D 033M**		0.110
			Rear		**K1D 533M**		0.150
For measurements between 3 phases							
	With "0" position						
 *K1● 0●●●*			Front	Multi-fixing	**K1D 024ML**		0.126
				By Ø 22 mm hole	**K1D 024M**		0.110
					K1D 024MX	*(2)*	0.188
			Rear		**K1D 524M**		0.150
	Without "0" position						
			Front	Multi-fixing	**K1D 034ML**		0.126
				By Ø 22 mm hole	**K1D 034M**		0.110
			Rear		**K1D 534M**		0.150
For measurements between 3 phases and between 1 phase and neutral							
	With "0" position						
 *K1● 5●●●*			Front	Multi-fixing	**K1E 025ML**		0.146
				By Ø 22 mm hole	**K1E 025M**		0.130
					K1E 025MX	*(2)*	0.208
			Rear		**K1E 525M**		0.165
	Without "0" position						
 *K1● 0●●●X*			Front	Multi-fixing	**K1E 035ML**		0.146
				By Ø 22 mm hole	**K1E 035M**		0.130
					K1E 535M		0.165

(1) Ith = 12 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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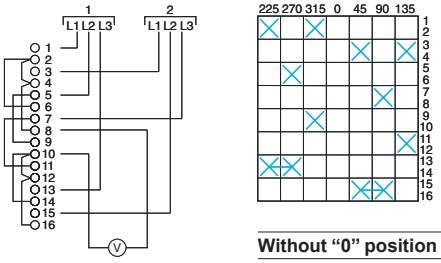
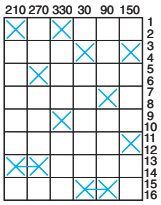
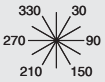
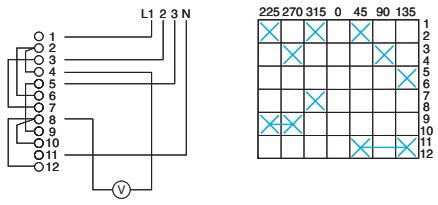
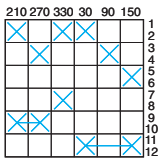
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Voltmeter switches (continued)

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)	Weight kg
For measurements between 3 phases of 2 supplies						
 *K1● 0●●●L*	**With "0" position** 		Front	Multi-fixing	**K1H 026ML**	0.181
				By Ø 22 mm hole	**K1H 026M**	0.165
			Rear		**K1H 526M**	0.195
 *K1● 0●●●*	**Without "0" position** 		Front	Multi-fixing	**K1H 036ML**	0.181
				By Ø 22 mm hole	**K1H 036M**	0.165
			Rear		**K1H 536M**	0.195
For measurements between 3 phases and between each of the 3 phases and neutral						
 *K1● 5●●●*	**With "0" position** 		Front	Multi-fixing	**K1F 027ML**	0.156
				By Ø 22 mm hole	**K1F 027M**	0.140
					K1F 027MX (2)	0.218
			Rear		**K1F 527M**	0.175
 *K1● 0●●●X*	**Without "0" position** 		Front	Multi-fixing	**K1F 037ML**	0.156
				By Ø 22 mm hole	**K1F 037M**	0.140
			Rear		**K1F 537M**	0.175

(1) Ith = 12 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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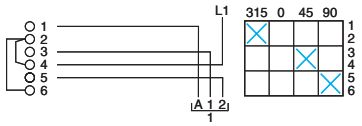
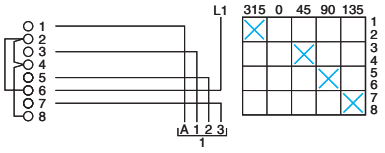
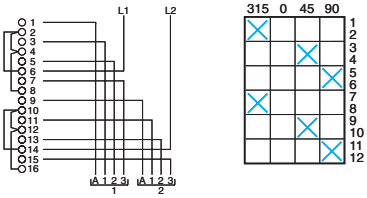
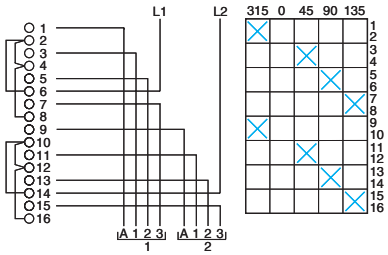
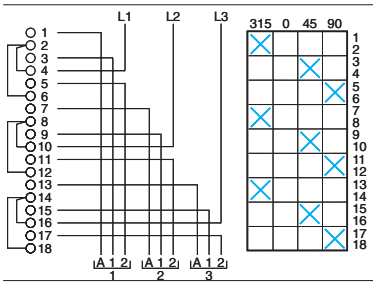
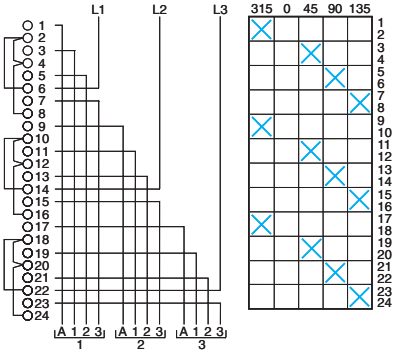
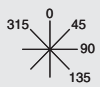
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Stepping switches (2 and 3 step), with "0" position + left-hand position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
 *K●● 0●●●L*		**1-pole: 2 step to right + 1 step to left**					
			Front	Multi-fixing	**K●C 002LL**		0.121
				By Ø 22 mm hole	**K●C 002L**		0.105
					K●C 002LX	*(2)*	0.183
			Rear		**K●C 502L**		0.140
		**1-pole: 3 step to right + 1 step to left**					
			Front	Multi-fixing	**K●D 003LL**		0.126
				By Ø 22 mm hole	**K●D 003L**		0.110
					K●D 003LX	*(2)*	0.188
			Rear		**K●D 503L**		0.150
 *K●● 0●●●*		**2-pole: 2 step to right + 1 step to left**					
			Front	Multi-fixing	**K●F 012LL**		0.156
				By Ø 22 mm hole	**K●F 012L**		0.140
					K●F 012LX	*(2)*	0.218
			Rear		**K●F 512L**		0.175
		**2-pole: 3 step to right + 1 step to left**					
			Front	Multi-fixing	**K●H 013LL**		0.181
				By Ø 22 mm hole	**K●H 013L**		0.165
					K●H 013LX	*(2)*	0.243
			Rear		**K●H 513L**		0.195
 *K●● 5●●●*		**3-pole: 2 step to right + 1 step to left**					
			Front	Multi-fixing	**K●I 022LL**		0.201
				By Ø 22 mm hole	**K●I 022L**		0.185
			Rear		**K●I 522L**		0.210
 *K●● 0●●●X*		**3-pole: 3 step to right + 1 step to left**					
			Front	Multi-fixing	**K●M 023LL**		0.241
				By Ø 22 mm hole	**K●M 023L**		0.225
			Rear		**K●M 523L**		0.245

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1C 022Q**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2C 022Q**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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Characteristics: pages 3/18 and 3/19
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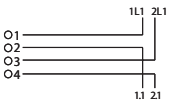
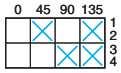
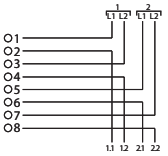
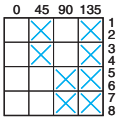
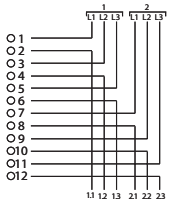
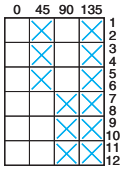
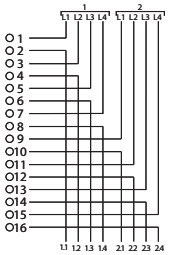
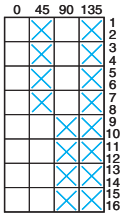
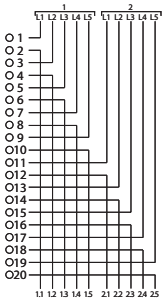
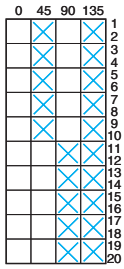
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Multi-circuit switches

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
1-pole							
			Front	Multi-fixing	**K●B 001SL**		0.101
				By Ø 22 mm hole	**K●B 001S**		0.085
					K●B 001SX	*(2)*	0.163
			Rear		**K●B 501S**		0.125
2-pole							
			Front	Multi-fixing	**K●D 002SL**		0.126
				By Ø 22 mm hole	**K●D 002S**		0.110
					K●D 002SX	*(2)*	0.188
			Rear		**K●D 502S**		0.150
3-pole							
			Front	Multi-fixing	**K●F 003SL**		0.156
				By Ø 22 mm hole	**K●F 003S**		0.140
					K●F 003SX	*(2)*	0.218
			Rear		**K●F 503S**		0.175
4-pole							
			Front	Multi-fixing	**K●H 004SL**		0.181
				By Ø 22 mm hole	**K●H 004S**		0.165
			Rear		**K●H 504S**		0.195
5-pole							
			Front	Multi-fixing	**K●K 005SL**		0.211
				By Ø 22 mm hole	**K●K 005S**		0.195
			Rear		**K●K 505S**		0.220



K●● 0●●●L



K●● 0●●●



K●● 5●●●



K●● 0●●●X

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1F 003S**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2F 003S**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●.***

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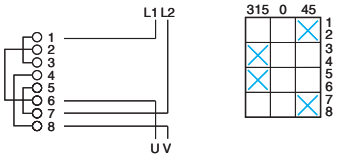
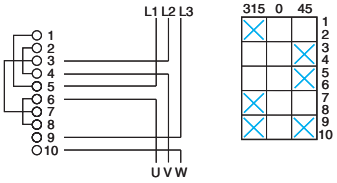
Cam switches

Adaptable sub-assemblies, 12 and 20 A

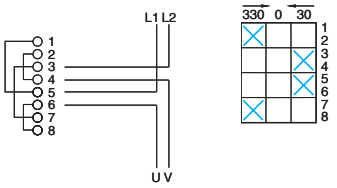
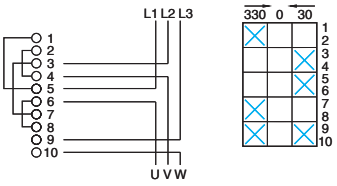
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Reversing switches with "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
2-pole							
 *K●● 0●●●L*			Front	Multi-fixing	**K●D 002WL**		0.126
				By Ø 22 mm hole	**K●D 002W**		0.110
					K●D 002WX	*(2)*	0.188
			Rear		**K●D 502W**		0.150
3-pole							
 *K●● 0●●●*			Front	Multi-fixing	**K●E 003WL**		0.146
				By Ø 22 mm hole	**K●E 003W**		0.130
					K●E 003WX	*(2)*	0.208
			Rear		**K●E 503W**		0.165

Reversing switches with spring return from 330° and from 30° to "0" position

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed *(1)*		Weight kg
2-pole							
 *K●● 5●●●*			Front	Multi-fixing	**K●D 022WL**		0.126
				By Ø 22 mm hole	**K●D 022W**		0.110
					K●D 022WX	*(2)*	0.188
			Rear		**K●D 522W**		0.150
3-pole							
 *K●● 0●●●X*			Front	Multi-fixing	**K●E 023WL**		0.146
				By Ø 22 mm hole	**K●E 023W**		0.130
					K●E 023WX	*(2)*	0.208
			Rear		**K●E 523W**		0.165

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1D 002W**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2D 002W**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

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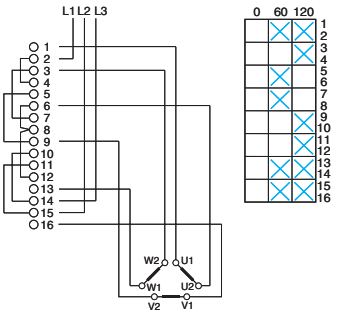
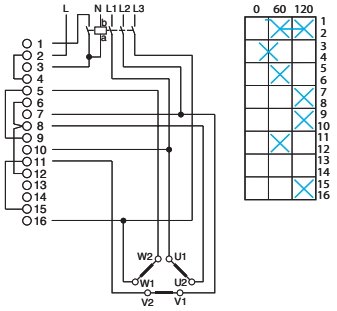
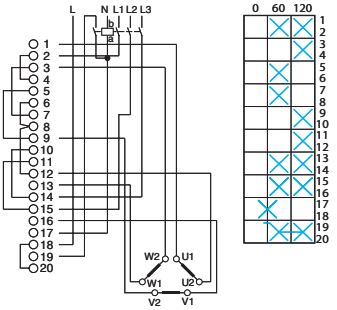
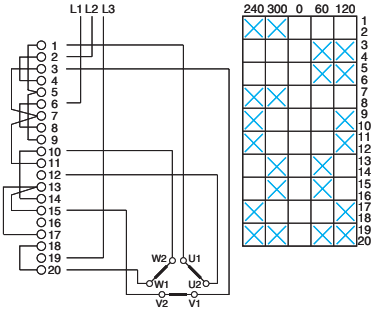
Cam switches
Adaptable sub-assemblies, 12 A
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Star-delta switches

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
 *K2● 0●●●L*			Front	Multi-fixing	**K2H 001YL**		0.181
				By Ø 22 mm hole	**K2H 001Y**		0.165
					K2H 001YX	*(2)*	0.243
			Rear		**K2H 501Y**		0.195
With slave contact, without supply disconnection							
 *K2● 0●●●*			Front	Multi-fixing	**K2G 003YL**		0.176
				By Ø 22 mm hole	**K2G 003Y**		0.160
					K2G 003YX	*(2)*	0.238
			Rear		**K2G 503Y**		0.190
With slave contact, with supply disconnection							
 *K2● 5●●●*			Front	Multi-fixing	**K2K 004YL**		0.211
				By Ø 22 mm hole	**K2K 004Y**		0.195
					K2K 004YX	*(2)*	0.273
			Rear		**K2K 504Y**		0.220

Reversing star-delta switches

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (1)		Weight kg
Without slave contact							
 *K2● 0●●●X*			Front	Multi-fixing	**K2K 006YL**		0.211
				By Ø 22 mm hole	**K2K 006Y**		0.195
			Rear		**K2K 506Y**		0.220

(1) Ith = 20 A.

(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type ***KAX Z1●●●.***

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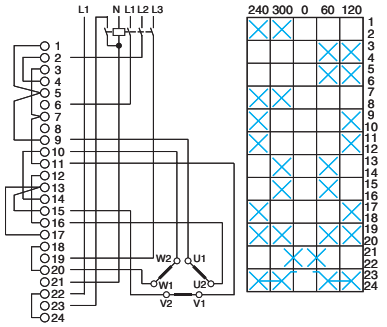
Cam switches

Adaptable sub-assemblies, 12 and 20 A

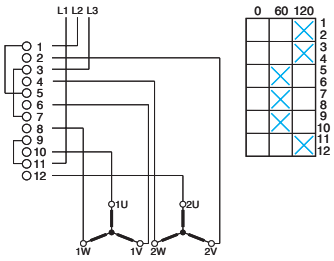
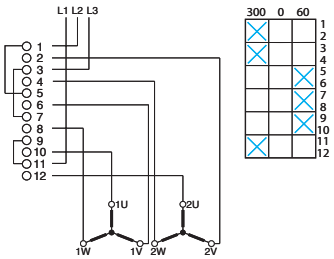
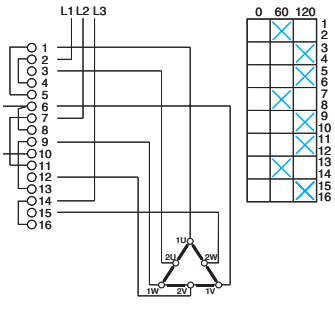
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Reversing star-delta switches (continued)

Wiring diagram	Switching programme	Switch position	Mounting method		Reference (2)	Weight kg
With slave contact						
 *K●● 0●●●L*			Front	Multi-fixing	**K2M 007YL**	0.241
				By Ø 22 mm hole	**K2M 007Y**	0.225
			Rear		**K2M 507Y**	0.245

Pole change switches for 2-speed motors

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)		Weight kg
For motors with 2 separate windings							
 *K●● 0●●●*			Front	Multi-fixing	**K●F 001PL**		0.156
				By Ø 22 mm hole	**K●F 001P**		0.140
					K●F 001PX	(3)	0.218
			Rear		**K●F 501P**		0.175
For motors with 2 separate windings, with centre "0" position							
 *K●● 5●●●*			Front	Multi-fixing	**K●F 002PL**		0.156
				By Ø 22 mm hole	**K●F 002P**		0.140
					K●F 002PX	(3)	0.218
			Rear		**K●F 502P**		0.175
For motors with tapped "Dahlander" windings							
 *K●● 0●●●X*			Front	Multi-fixing	**K●H 004PL**		0.181
				By Ø 22 mm hole	**K●H 004P**		0.165
					K●H 004PX	(3)	0.243
			Rear		**K●H 504P**		0.195

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1F 001P**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2F 001P**.*
(2) Ith = 20 A.
*(3) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

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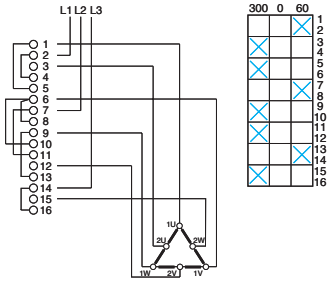
Cam switches

Adaptable sub-assemblies, 12 and 20 A

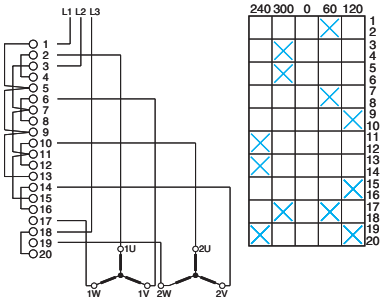
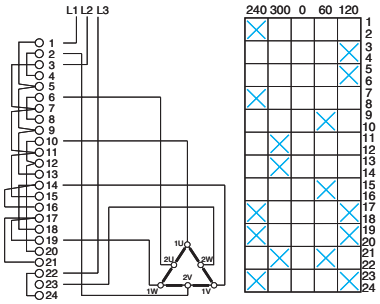
Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Pole change switches for 2-speed motors (continued)

Wiring diagram	Switching programme	Switch position	Mounting method	Reference, to be completed (1)		Weight kg
For motors with tapped "Dahlander" windings, with centre "0" position						
 *K●● 0●●●L*			Front — Multi-fixing	**K●H 005PL**		0.181
			By Ø 22 mm hole	**K●H 005P**		0.165
				K●H 005PX	*(2)*	0.243
			Rear	**K●H 505P**		0.195

Reversing pole change switches for 2-speed motors

Wiring diagram	Switching programme	Switch position	Mounting method	Reference, to be completed (1)		Weight kg
For motors with 2 separate windings, with centre "0" position						
 *K●● 0●●●*			Front — Multi-fixing	**K●K 008PL**		0.211
			By Ø 22 mm hole	**K●K 008P**		0.195
			Rear	**K●K 508P**		0.220
 *K●● 5●●●*						
For motors with tapped "Dahlander" windings, with centre "0" position						
 *K●● 0●●●X*			Front — Multi-fixing	**K●M 009PL**		0.241
			By Ø 22 mm hole	**K●M 009P**		0.225
			Rear	**K●M 509P**		0.245

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1H 005P**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2H 005P**.*

*(2) Bodies using the Ø 22 mm hole mounting method that can be fitted with chromium plated metal bezel operating heads, type **KAX Z1●●●**.*

General: pages 3/14 to 3/17 | Characteristics: pages 3/18 and 3/19 | Dimensions: page 3/74

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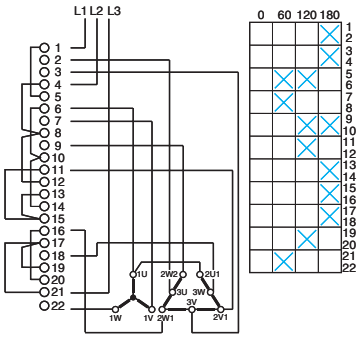
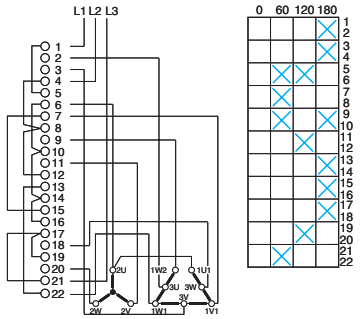
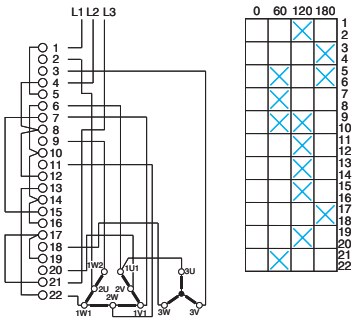
Cam switches

Adaptable sub-assemblies, 12 and 20 A

Bodies (contact blocks + fixing plate)

To combine with operating heads: see pages 3/66 and 3/67

Pole change switches for 3-speed motors

Wiring diagram	Switching programme	Switch position	Mounting method		Reference, to be completed (1)	Weight kg
For motors with open tapped "Dahlander" winding and separate winding for low speed						
 *K●● 0●●●L*			Front	Multi-fixing	**K●L 010PL**	0.231
				By Ø 22 mm hole	**K●L 010P**	0.215
			Rear		**K●L 510P**	0.240
For motors with open tapped "Dahlander" winding and separate winding for intermediate speed						
 *K●● 0●●●*			Front	Multi-fixing	**K●L 011PL**	0.231
				By Ø 22 mm hole	**K●L 011P**	0.215
			Rear		**K●L 511P**	0.240
For motors with open tapped "Dahlander" winding and separate winding for high speed						
 *K●● 5●●●*			Front	Multi-fixing	**K●L 012PL**	0.231
				By Ø 22 mm hole	**K●L 012P**	0.215
			Rear		**K●L 512P**	0.240
 *K●● 0●●●X*						

*(1) To order a cam switch with thermal current Ith = 12 A, replace the ● in the reference by **1**.*
*Example **K1L 010P**.*
*To order a cam switch with thermal current Ith = 20 A, replace the ● in the reference by **2**.*
*Example **K2L 010P**.*

General: pages 3/14 to 3/17
Characteristics: pages 3/18 and 3/19
Dimensions: page 3/74

For reference only. www.fengshengelectric.com.sg

Cam switches
Adaptable sub-assemblies, 12 and 20 A
Operating heads

To combine with bodies: see pages 3/34 to 3/65


KBG 3H


KCG 3Y


KAC 1H


KCC 1Y


KBC 1●


KBD 1H

Heads for "multi-fixing" front mounting bodies

Description	Switching angle and marking	Type of operator	Background colour of legend	Padlocking device	Reference	Weight kg
With 45 x 45 mm front plate and handle						
With blank legend (for engraving by user)	–	Black handle L = 35 mm	Matt black	Without	**KAG 3H**	0.012
			Metallic	Without	**KBG 3H**	0.012
With marked legend	90° 	Red handle L = 35 mm	Yellow	Without	**KCG 3H**	0.012
				With	**KCG 3Y**	0.024
Without legend *(1)*	–	Black handle L = 35 mm	–	Without	**KDG 3H**	0.010
		Red handle L = 35 mm	–	With	**KDG 3Y**	0.022

Heads for Ø 22 mm hole, front mounting bodies

Description	Switching angle and marking	Type of operator	Background colour of legend	Padlocking device	Reference	Weight kg
With 45 x 45 mm front plate and handle						
With blank legend (for engraving by user)	–	Black handle L = 35 mm	Matt black	Without	**KAC 1H**	0.048
			Metallic	Without	**KBC 1H**	0.048
With marked legend	45° 	Black handle L = 35 mm	Matt black	Without	**KAC 1H41**	0.012
			Metallic	Without	**KBC 1H41**	0.012
	45° 	Black handle L = 35 mm	Matt black	Without	**KAC 1H48**	0.012
			Metallic	Without	**KBC 1H48**	0.012
	60° 	Black handle L = 35 mm	Matt black	Without	**KAC 1H61**	0.048
			Metallic	Without	**KBC 1H61**	0.048
	90° 	Red handle L = 35 mm	Yellow	Without	**KCC 1LH**	0.048
				With	**KCC 1Y**	0.060
Without legend *(1)*	–	Black handle L = 35 mm	–	Without	**KDC 1H**	0.046
		Red handle L = 35 mm	–	Without	**KDC 1LH**	0.046
With 45 x 45 mm front plate and key operator *(2)*						
With blank legend (for engraving by user)	45° and 90°	Key *(2)*	Matt black	Without	**KAC 1S**	0.063
			Metallic	Without	**KBC 1S**	0.063
	60°	Key *(2)*	Matt black	Without	**KAC 1Z**	0.063
			Metallic	Without	**KBC 1Z**	0.063
Without legend *(1)*	45° and 90°	Key *(2)*	–	Without	**KDC 1S**	0.061
	60°	Key *(2)*	–	Without	**KDC 1Z**	0.061
With 60 x 60 mm front plate and handle						
With blank legend (for engraving by user)	–	Black handle L = 42 mm	Matt black	Without	**KAD 1H**	0.053
			Metallic	Without	**KBD 1H**	0.053
With marked legend	90° 	Red handle L = 42 mm	Yellow	Without	**KCD 1MH**	0.053
Without legend *(1)*	–	Black handle L = 42 mm	–	Without	**KDD 1H**	0.053

(1) For separate marked legend ordering information, see pages 3/68 to 3/71.
*(2) Head supplied with "Ronis" 8R1 key. To order a head with a "Ronis" 455 key, add the suffix **R** to the references listed above. Example: reference for Ø 22 mm hole, front mounting 45 x 45 mm operating head with 45° switching angle and matt black legend, becomes **KAC 1SR**. For a head with "Ronis" 8R15 key, use the suffix **R1**.*

General: page 3/14 Characteristics: page 3/18 Dimensions: page 3/74 to 3/77

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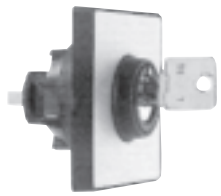
Cam switches
Adaptable sub-assemblies, 12 and 20 A
Operating heads

To combine with bodies: see pages 3/34 to 3/65



KBD 1●



KBA 1H



KBA 1●



KAX Z1C12



KBE 1H

Heads for Ø 22 mm hole, front mounting bodies (continued)

Description	Switching angle and marking	Type of operator	Background colour of legend	Padlocking device	Reference	Weight kg
With 60 x 60 mm front plate and key operator *(1)*						
With blank legend (to be engraved by user)	45° and 90°	Key *(1)*	Matt black	Without	**KAD 1S**	0.068
			Metallic	Without	**KBD 1S**	0.068
	60°	Key *(1)*	Matt black	Without	**KAD 1Z**	0.068
			Metallic	Without	**KBD 1Z**	0.068
Without legend *(2)*	45° and 90°	Key *(1)*	–	Without	**KDD 1S**	0.066
	60°	Key *(1)*	–	Without	**KDD 1Z**	0.066
With Ø 29 mm, metallic finish, plastic bezel and handle or key operator *(1)*						
Description	**Switching angle and marking**	**Type of operator**	**Colour of bezel**	**Padlocking device**	**Reference**	**Weight kg**
Circular heads	–	Black handle L = 35 mm	Matt black	Without	**KAA 1H**	0.042
			Metallic	Without	**KBA 1H**	0.042
	45°	Key *(1)*	Matt black	Without	**KAA 1S**	0.057
			Metallic	Without	**KBA 1S**	0.057
	60°	Key *(1)*	Matt black	Without	**KAA 1Z**	0.057
			Metallic	Without	**KBA 1Z**	0.057
With Ø 38 mm, black, plastic bezel and handle						
Circular head	–	Black handle L = 35 mm	Matt black	Without	**KAA 2H**	0.048
With Ø 28.5 mm chromium plated, metal bezel *(3) (2)* **and standard, handle, long handle or key operator** *(4)*						
Circular heads	–	Standard black handle	Metal	Without	**KAX Z1M12**	0.040
		Standard red handle	Metal	Without	**KAX Z1M14**	0.040
		Long black handle	Metal	Without	**KAX Z1C12**	0.040
		Long red handle	Metal	Without	**KAX Z1C14**	0.040
	30°	Key	Metal	Without	**KAX Z1S13●** *(4)*	0.065
	45°	Key	Metal	Without	**KAX Z1S14●** *(4)*	0.065
	60°	Key	Metal	Without	**KAX Z1S16●** *(4)*	0.065
	90°	Key	Metal	Without	**KAX Z1S19●** *(4)*	0.065

Operating heads for 4 hole, rear mounting bodies

Description	Switching angle and marking	Type of operator	Background colour of legend	Padlocking device	Reference	Weight kg
With 45 x 45 mm front plate and handle						
With blank legend (to be engraved by user)	–	Black handle L = 35 mm	Matt black	Without	**KAE 1H**	0.029
			Metallic	Without	**KBE 1H**	0.029
With marked legend	90° 	Red handle L = 35 mm	Yellow	Without	**KCE 1LH**	0.029
				With	**KCE 1Y**	0.060
Without legend *(2)*	–	Black handle L = 35 mm	–	Without	**KDE 1H**	0.027
		Red handle L = 35 mm	–	Without	**KDE 1LH**	0.027
With 60 x 60 mm front plate and handle						
With blank legend (to be engraved by user)	–	Black handle L = 42 mm	Matt black	Without	**KAF 1H**	0.068
			Metallic	Without	**KBF 1H**	0.068
With marked legend	90° 	Red handle L = 42 mm	Yellow	Without	**KCF 1MH**	0.068
Without legend *(2)*	–	Black handle L = 42 mm		Without	**KDF 1H**	0.066

*(1) Head supplied with "Ronis" 8R1 key. To order a head with a "Ronis" 455 key, add the suffix **R** to the references listed above. Example: reference for operating head with 60 x 60 mm front plate, key operator, blank legend, 45° switching angle and matt black background, becomes **KAD 1SR**. For a head with "Ronis" 8R15 key, use the suffix **R1**.*

(2) For separate marked legend ordering information, see pages 3/68 to 3/71.

*(3) Heads **only** for use with bodies K●● ●●●●X, incorporating adaptor plate **KZ 127**. See pages 3/34 to 3/64.*

(4) To order:
- *a head with key n° 455, replace the ● in the reference by **1**. Example: **KAX Z1S131**,*
- *a head with key n° 421, replace the ● in the reference by **2**. Example: **KAX Z1S132**,*
- *a head with key n° 520, replace the ● in the reference by **3**. Example: **KAX Z1S133**,*
- *a head with a special key, replace the ● in the reference by **9**. Example: **KAX Z1S139** (state the key number on the order). Key withdrawal from all positions.*

General: pages 3/14 to 3/17 | Characteristics: pages 3/18 and 3/19 | Dimensions: pages 3/74 to 3/77

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Cam switches
Adaptable sub-assemblies, 12 and 20 A
Legends for **MULTI-FIXING** heads

45 x 45 mm legends - marked *(1)*

White text on black background

30°

KZ 18032L



KZ 18033L



KZ 18312L



45°

KZ 18041L



KZ 18042L



KZ 18043L



KZ 18044L



KZ 18045L



KZ 18046L



KZ 18047L



KZ 18048L



KZ 18412L



KZ 18413L



KZ 18415L



KZ 18416L



KZ 18417L



KZ 18418L



KZ 18419L



KZ 18420L



KZ 18421L



KZ 18422FL



KZ 18423FL



KZ 18434L



KZ 18436FL



KZ 18451L



60°

KZ 18061L



KZ 18630L



KZ 18631L



KZ 18632L



KZ 18634L



KZ 18635L



KZ 18637L



KZ 18068L



90°

KZ 18091L



KZ 18093L



KZ 18913L



KZ 18931FL



Black text on yellow background

45°

KZ 19041L



90°

KZ 19093L



KZ 19098FL



KZ 19910L

45 x 45 mm legends - unmarked

Colour	Sold in lots of	Unit reference	Weight kg
Black	20	KZ 17L	0.003
Metallic	20	KZ 18L	0.003
Yellow	10	KZ 19L	0.003

(1) Weight = 0.003 kg.

For reference only. www.fengshengelectric.com.sg

Cam switches

Adaptable sub-assemblies, 12 and 20 A

Legends for **Ø 22 mm HOLE** mounting heads with plastic bezel

45 x 45 mm legends - marked *(1)*

Black text on metallic background

30°

KZ 18032



KZ 18312



45°

KZ 18041



KZ 18042



KZ 18043



KZ 18044



KZ 18045



KZ 18046



KZ 18047



KZ 18048



KZ 18412



KZ 18413



KZ 18415



KZ 18416



KZ 18417



KZ 18418



KZ 18419



KZ 18420



KZ 18421



KZ 18422F



KZ 18423F



KZ 18434



KZ 18436F



KZ 18451



60°

KZ 18061



KZ 18630



KZ 18631



KZ 18632



KZ 18634



KZ 18635



KZ 18637



KZ 18068



90°

KZ 18091



KZ 18093



KZ 18913



KZ 18931F



Black text on yellow background

45°

KZ 19041



90°

KZ 19093



KZ 19098F



KZ 19910



45 x 45 mm legends - unmarked

Colour	Sold in lots of	Unit reference	Weight kg
Black	20	KZ 17	0.003
Metallic	20	KZ 18	0.003
Yellow	10	KZ 19	0.003

60 x 60 mm legends - marked *(2)*

Black text on metallic background

45°

KZ 21041

KZ 21412

KZ 21048

KZ 21451

60°

KZ 21635

KZ 21637

90°

KZ 21910

KZ 21093

60 x 60 mm legends - unmarked

Colour	Sold in lots of	Unit reference	Weight kg
Black	20	KZ 20	0.005
Metallic	20	KZ 21	0.005
Yellow	10	KZ 22	0.005

(1) Weight = 0.003 kg.
(2) Weight = 0.005 kg.

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Cam switches

Adaptable sub-assemblies, 12 and 20 A

Legends for **Ø 22 mm HOLE** mounting heads
with chromium plated metal bezel, type KAX Z1●●●

46 x 46 mm - marked (PVC) *(1)*

White text on black background

30°

XBC Y7226


XBC Y7227


XBC Y7228


XBC Y7229


XBC Y7236


XBC Y2250


XBC Y7238


XBC Y7239


45°

XBC Y7220


XBC Y7221


XBC Y7222


XBC Y7223


XBC Y7224


XBC Y7225


XBC Y7230


XBC Y7231


XBC Y7232


XBC Y7233


XBC Y7234


XBC Y7235


XBC Y2213


XBC Y2214


XBC Y2215


XBC Y2216


XBC Y7217


XBC Y7251


60°

XBC Y7212


XBC Y7240


XBC Y7241


XBC Y7242


XBC Y7243


XBC Y7268


XBC Y7168


XBC Y7064


90°

XBC Y2211


XBC Y2218


XBC Y2219

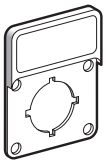

46 x 46 mm legends - unmarked (PVC)

Colour	Sold in lots of	Unit reference	Weight kg
Black/red	10	KZ 17X	0.004
White/yellow	10	KZ 19X	0.004

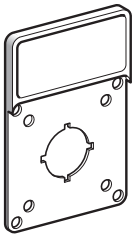
(1) Weight = 0.004 kg.

For reference only. www.fengshengelectric.com.sg

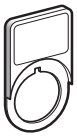
Cam switches
Adaptable sub-assemblies, 12 and 20 A
Legend holders for heads



KZ 13



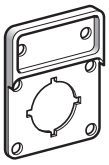
KZ 15



KZ 01R



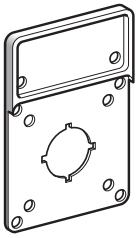
KZ 2



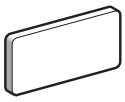
KZ 14



KZ 76



KZ 16



KZ 77

Legend holders with and without legend

Description	For use with heads	Legend marking	Sold in lots of	Unit reference	Weight kg
With blank legend	With 45 x 45 mm front plate *(1)*	–	5	**KZ 13**	0.004
	With 60 x 60 mm front plate *(1)*	–	5	**KZ 15**	0.010
	Circular, with Ø 29 mm collar	–	5	**KZ 01R**	0.010
With marked legend	Circular, with Ø 29 mm collar	1 2	1	**KZ 1**	0.003
		2 0 1	5	**KZ 2**	0.003
Without legend	With 45 x 45 mm front plate *(1)*	–	20	**KZ 14**	0.003
	With 60 x 60 mm front plate *(1)*	–	10	**KZ 16**	0.007

Blank legends (for engraving) for legend holders

Description	For use with heads	Sold in lots of	Unit reference	Weight kg
Legend for legend holder **KZ 14** Plastic with metallic finish. Self-adhesive. For engraved markings.	With 45 x 45 mm front plate *(1)*	20	**KZ 76**	0.002
Legend for legend holder **KZ 16** Plastic with metallic finish. Self-adhesive. For engraved markings.	With 60 x 60 mm front plate *(1)*	10	**KZ 77**	0.003

(1) Operating heads for single Ø 22 mm hole or 4 hole mounting.

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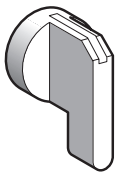
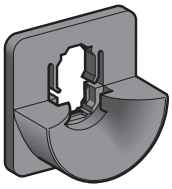
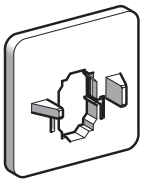
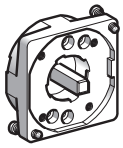
Cam switches
Complete switches, 12 and 20 A
Separate components and accessories

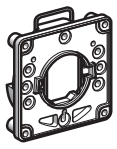

KZ 27H

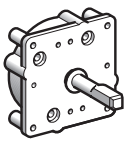

KZ 27


KZ 32


KZ 83


KZ 127


KZ 140


KZ 141

Handles

Description	Colour	Dimensions	Sold in lots of	Unit reference	Weight
		mm			kg
New shape	Black	35	5	**KZ 27H**	0.007
		42	5	**KZ 28H**	0.009
	Red	35	5	**KZ 41H**	0.007
		42	5	**KZ 42H**	0.009
Old shape	Black	34	5	**KZ 27**	0.007
		42	5	**KZ 28**	0.009

Accessories

Description	For use with	Dimensions	Sold in lots of	Unit reference	Weight
		mm			kg
Door interlocking plate	Rear mounting switches	45 x 45	5	**KZ 32**	0.010
Plate with rubber seal	Rear mounting switches. IP 65 between front plate and operating head	60 x 60	5	**KZ 83**	0.018
Adaptor plate, metal (replacement)	Mounting KAX Z1●●● chromium plated metal bezel heads on front mounting bodies for Ø 22 mm hole	–	1	**KZ 127**	0.088
Plastic plate (replacement)	Ø 22 mm hole, front mounting, clip-in bodies	–	1	**KZ 140**	0.010
Multi-fixing plate (replacement)	"Multi-fixing", front mounting, bodies	–	1	**KZ 141**	0.026

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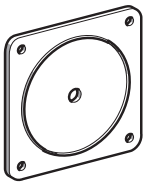
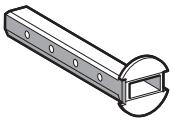
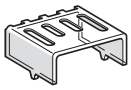
Cam switches
Complete switches, 12 and 20 A
Separate components and accessories



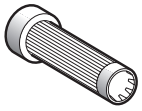
KZ 6●



KZ 5●



KZ 3●



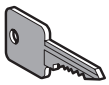
Z 01



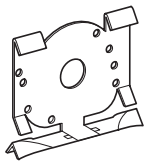
KZ 30



KZ 93



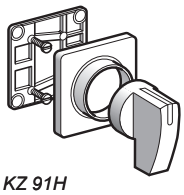
Z 18



KZ 31



KZ 95



KZ 91H

Accessories (continued)

Description	For use with		Sold in lots of	Unit reference	Weight kg
Rubber seals for IP 65 degree of protection	Ø 22 mm or 4 hole, front mounting, operating heads with 45 x 45 mm front plate		5	**KZ 65**	0.003
	Ø 22 mm or 4 hole, front mounting, operating heads with 60 x 60 mm front plate		5	**KZ 66**	0.004
	Multi-fixing operating heads with 45 x 45 mm front plate		5	**KZ 73**	0.004
Shaft couplers	⍁ 6 mm shaft	Length = 26 mm	3	**KZ 52**	0.007
		Length = 60 mm	3	**KZ 50**	0.013
Terminal covers	Contact blocks	4 contacts	1	**KZ 35**	0.010
		8 contacts	1	**KZ 36**	0.020
		12 contacts	1	**KZ 37**	0.004
		16 contacts	1	**KZ 38**	0.040
		20 contacts	1	**KZ 39**	0.050
Nut wrench	M22 fixing nuts		5	**Z 01**	0.010
Fixing nut, M22	Fixing operating heads on panel or in an enclosure		5	**KZ 30**	0.007
Mounting adaptor	Converting Ø 30.5 mm fixing hole to Ø 22.5 mm		50	**KZ 93**	0.003
Keys	8D1 key lock		2	**Z 18**	0.010
	“Ronis” 8R1 key lock		2	**Z 18R1**	0.010
	“Ronis” 455 key lock		2	**Z 18R**	0.010
	“Ronis” 8R15 key lock		2	**Z 18R15**	0.010
Quick assembly device	Mounting on 35 mm rails to DIN 46277. 2 fixing screws included for rear mounting		5	**KZ 31**	0.030
Fixing screws 3.5 x 16 mm	4 hole fixing operating heads		100	**KZ 95**	0.001
Cam switch installation kit Comprising: - mounting plate, - 45 x 45 mm front plate, without legend - black handle, length 35 mm (KZ 27H), - 2 fixing screws	Installation of a cam switch on a distribution panel		1	**KZ 91H**	0.010

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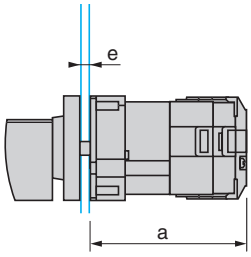
Cam switches
Complete switches, 12 and 20 A

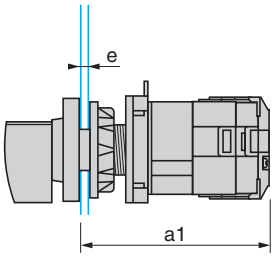
Operating heads and bodies, front mounting

"Multi-fixing"

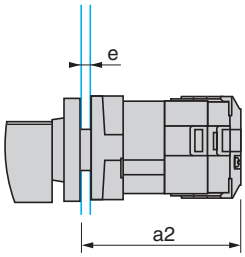


By Ø 22 mm hole

With plastic base



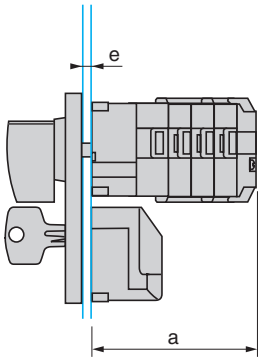
With metal base



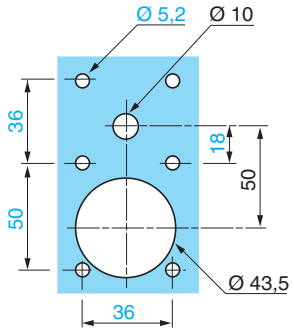
3

Front mounting by 6 screws Ø 5.2 mm and 55 x 100 mm front plate for cam switch with key operated lock

With plastic base and key locking



Panel cut-out



e: support panel thickness 1 to 6 mm.

Type of switch	Operating head + body, front mounting		
	Multi-fixing or by 6 screws Ø 5.2 mm with 55 x 100 mm front plate	By Ø 22 mm hole	
		Plastic base	Metal base
	a	a1	a2
K●A ●●●●, K●B ●●●●	53	70.5	64
K●C ●●●●, K●D ●●●●	63	80.5	74
K●E ●●●●, K●F ●●●●	73	90.5	84
K●G ●●●●, K●H ●●●●	83	100.5	94
K●I ●●●●, K●K ●●●●	93	110.5	104
K●L ●●●●, K●M ●●●●	103	120.5	114
K●N ●●●●, K●O ●●●●	113	130.5	124
K●P ●●●●, K●Q ●●●●	123	140.5	134
K●R ●●●●, K●S ●●●●	133	150.5	144
K●T ●●●●, K●U ●●●●	143	160.5	154

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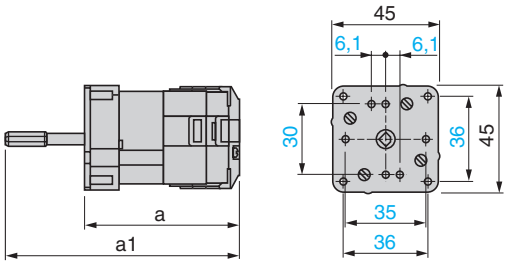
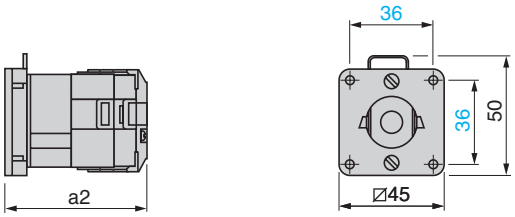
Bodies

Front mounting "multi-fixing", 2 or 4 screws



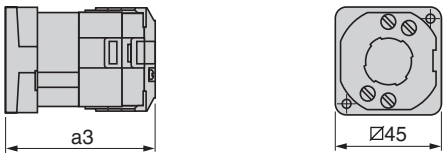
Front mounting by Ø 22 mm hole

With plastic base

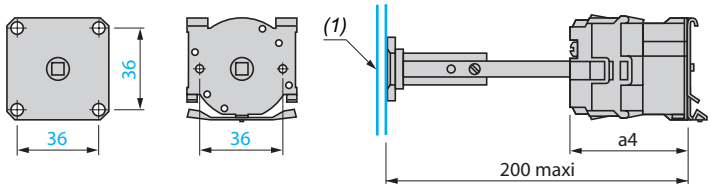


Front mounting by Ø 22 mm hole

With metal base, secured by needle screws



Rear mounting



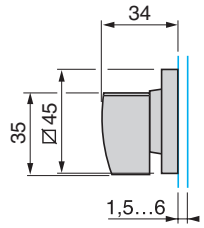
(1) Panel cut-out: Ø 10 mm central hole (see below)

Type of body	Front mounting				Rear mounting
	Multi-fixing		By Ø 22 mm hole		
			Plastic base	Metal base	
	a	a1	a2	a3	a4
K●A ●●●●, K●B ●●●●	53	77	49	55	42.5
K●C ●●●●, K●D ●●●●	63	87	59	65	52.5
K●E ●●●●, K●F ●●●●	73	97	69	75	62.5
K●G ●●●●, K●H ●●●●	83	107	79	85	72.5
K●I ●●●●, K●K ●●●●	93	117	89	95	82.5
K●L ●●●●, K●M ●●●●	103	127	99	105	92.5
K●N ●●●●, K●O ●●●●	113	137	109	115	102.5
K●P ●●●●, K●Q ●●●●	123	147	119	125	112.5
K●R ●●●●, K●S ●●●●	133	157	129	135	122.5
K●T ●●●●, K●U ●●●●	143	167	139	145	132.5

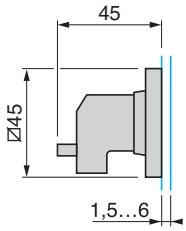
Operating heads and legend holders

For "multi-fixing", front mounting bodies

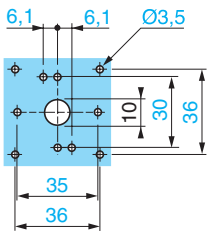
K●G 3H



KDG 3Y



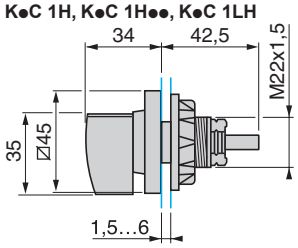
Panel cut-out *(1)*



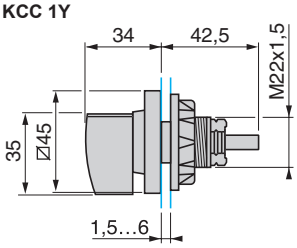
(1) Ø 10 mm central hole for operating shaft access. 2 or 4 holes for cam switch fixings (choice made by installer).

For Ø 22 mm hole, front mounting bodies - with 45 x 45 mm front plate

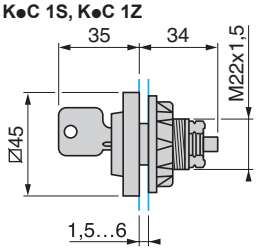
K●C 1H, K●C 1H●●, K●C 1LH



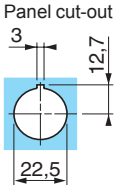
KCC 1Y



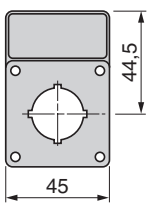
K●C 1S, K●C 1Z



Panel cut-out



KZ 13, KZ 14



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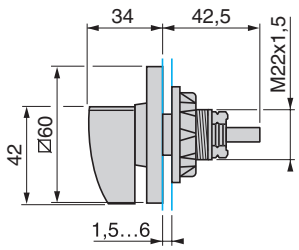
3

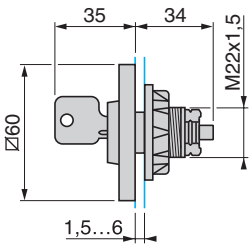
Operating heads and legend holders (continued)

For Ø 22 mm hole, front mounting bodies - with 60 x 60 mm front plate

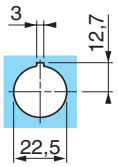
K●D 1H, KCD 1MH



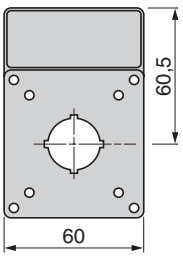
K●D 1S, K●D 1Z



Panel cut-out

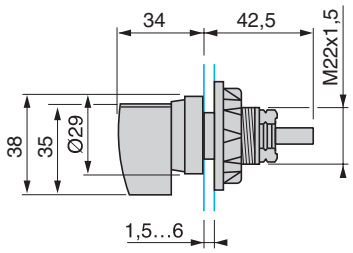


KZ 15, KZ 16

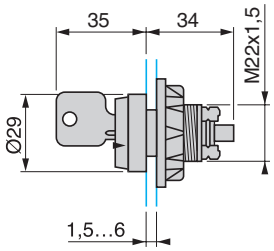


For Ø 22 mm hole, front mounting bodies - with Ø 29 mm metallic finish plastic bezel Head + adaptor plate

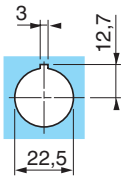
K●A 1H



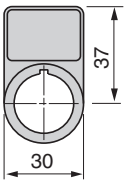
K●A 1S, K●A 1Z



Panel cut-out

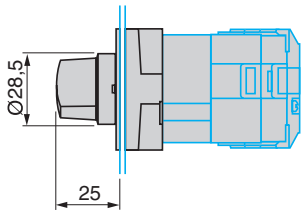


KZ 01R, KZ 1, KZ 2

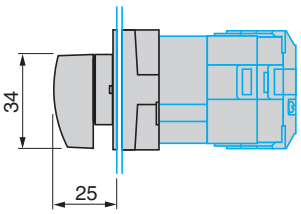


For Ø 22 mm hole, front mounting bodies - with Ø 28.5 mm chromium plated metal bezel

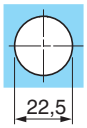
KAX Z1M1● + KZ 127



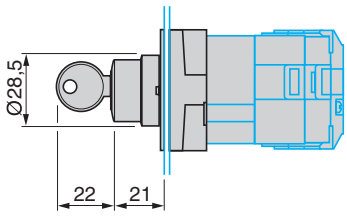
KAX Z1C1● + KZ 127



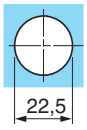
Panel cut-out



KAX Z1S1● + KZ 127

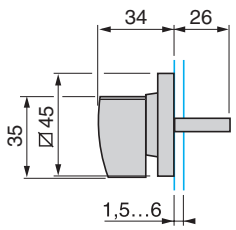


Panel cut-out

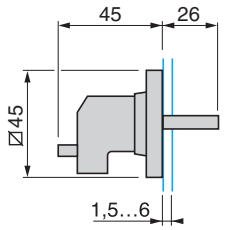


For 4 hole, rear mounting bodies - with 45 x 45 mm front plate

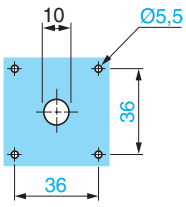
K●E 1H, K●E 1LH



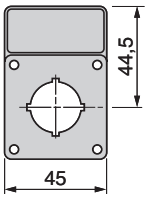
KCE 1Y



Panel cut-out



KZ 13, KZ 14



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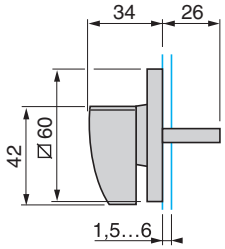
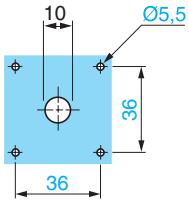
Operating heads and legend holders (continued)

For 4 hole, rear mounting bodies - with 60 x 60 mm front plate

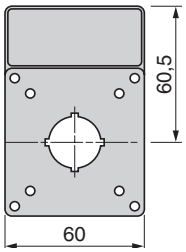
K●F 1H, KCF 1MH



Panel cut-out

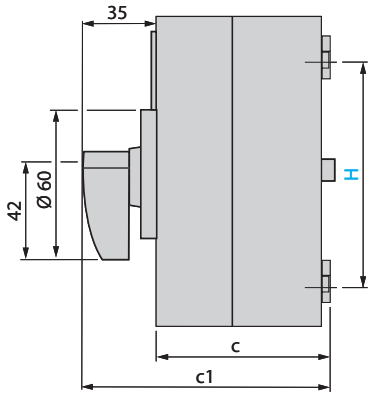


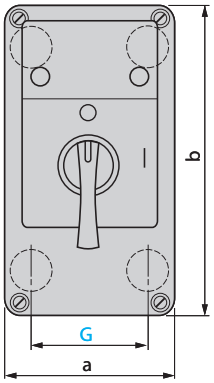
KZ 15, KZ 16



Cam switches in plastic enclosure

KA1●●●●G, KA2●●●●G, KD1●●●●G and KD2●●●●G

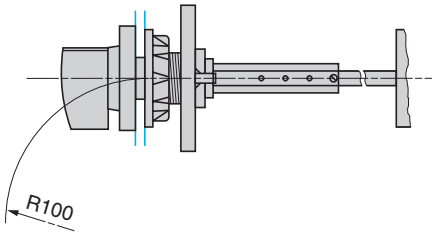




Enclosed cam switch type	a	b	c	c1	G	H	Entries for cable gland (untapped)
K●●-A050G, K●●-C051G, K●●-D052G, K●●-D053G	74	135	72	106	50	95	Top and bottom: 1 entry for nº 16 cable gland
K●●-E054G, K●●-G055G, K●●-F056G, K●●-F057G, K●●-G058G, K●●-G059G, K●●-H060G, K●●-I061G, K●●-K062G, K●●-K053G	105	170	112	146	53	122	Bottom: 2 entries for nº 16 cable gland and 1 entry for nº 11 cable gland

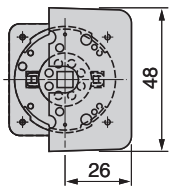
Shaft coupler and door interlock

(minimum door opening radius in mm)



Terminal cover

KZ 3●



Convention used for switching program representation



Contact closed



Contact closed in 2 positions and maintained between the 2 positions



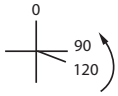
Sealed assembly for auto-maintain control



Overlapping contacts



Spring return position: for a switching angle of 90°, spring return is over 30° after the last position (for a maximum of 3 simultaneous contacts).
Example:



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Cam switches
Switches mounted in plastic enclosure, 10 and 16 A



KA● ●●●●G

"Emergency stop" switches

Specifications
- PVC enclosure.
- 60 x 60 mm operating head, red handle (without padlocking device) *(1)* on yellow background. Marking: O I.
- Legend holder with metallic finish blank legend.

Composition *(2)* Poles	N	N/O	N/C	Thermal current (Ithe) *(3)*	Reference	Weight
				A		kg
1	–	–	–	10	**KA1 A050G**	0.365
				16	**KA2 A050G**	0.365
3	–	–	–	10	**KA1 C051G**	0.390
				16	**KA2 C051G**	0.390
3	1	–	–	10	**KA1 D052G**	0.400
				16	**KA2 D052G**	0.400
3	–	1	–	10	**KA1 D053G**	0.400
				16	**KA2 D053G**	0.400
3	–	1	1	10	**KA1 E054G**	0.694
				16	**KA2 E054G**	0.694
3	–	2	2	10	**KA1 G055G**	0.719
				16	**KA2 G055G**	0.719
3	1	1	1	10	**KA1 F056G**	0.704
				16	**KA2 F056G**	0.704
6	–	–	–	10	**KA1 F057G**	0.704
				16	**KA2 F057G**	0.704
6	1	–	–	10	**KA1 G058G**	0.719
				16	**KA2 G058G**	0.719
6	–	1	–	10	**KA1 G059G**	0.719
				16	**KA2 G059G**	0.719
6	–	1	1	10	**KA1 H060G**	0.724
				16	**KA2 H060G**	0.724
9	–	–	–	10	**KA1 I061G**	0.744
				16	**KA2 I061G**	0.744
9	1	–	–	10	**KA1 K062G**	0.749
				16	**KA2 K062G**	0.719
9	–	1 (4)	–	10	**KA1 K063G**	0.719
				16	**KA2 K063G**	0.719

*(1) To order a switch with a red padlockable handle (up to 3 padlocks), replace the letter **A** (2nd letter) in the references shown above by the letter **C**.*
*Example : **KA1 A050G** becomes **KC1 A050G**.*
(2) Poles : main contacts
- *N/O contact : late make (unballasting contact)*
- *N/C contact : signalling contact*
- *Neutral conductor (N) : early make, late break.*

(3) Permissible power, AC-23 at 400 V :
- *K1 switches : 2.2 kW,*
- K2 switches : 5.5 kW.

(4) Contact not late make.

Dimensions:
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Cam switches

Switches mounted in plastic enclosure, 10 and 16 A



KD● ●●●●G

OFF-ON switches

Specifications

- PVC enclosure.
- 60 x 60 mm operating head, black handle (without padlocking device) on metallic background. Marking: O I.
- Legend holder with metallic finish blank legend.

Composition *(1)* Poles	N	N/O	N/C	Thermal current (Ithe) *(2)*	Reference	Weight
				A		kg
1	–	–	–	10	**KD1 A050G**	0.365
				16	**KD2 A050G**	0.365
3	–	–	–	10	**KD1 C051G**	0.390
				16	**KD2 C051G**	0.390
3	1	–	–	10	**KD1 D052G**	0.400
				16	**KD2 D052G**	0.400
3	–	1	–	10	**KD1 D053G**	0.400
				16	**KD2 D053G**	0.400
3	–	1	1	10	**KD1 E054G**	0.694
				16	**KD2 E054G**	0.694
3	–	2	2	10	**KD1 G055G**	0.719
				16	**KD2 G055G**	0.719
3	1	1	1	10	**KD1 F056G**	0.704
				16	**KD2 F056G**	0.704
6	–	–	–	10	**KD1 F057G**	0.704
				16	**KD2 F057G**	0.704
6	1	–	–	10	**KD1 G058G**	0.719
				16	**KD2 G058G**	0.719
6	–	1	–	10	**KD1 G059G**	0.719
				16	**KD2 G059G**	0.719
6	–	1	1	10	**KD1 H060G**	0.724
				16	**KD2 H060G**	0.724
9	–	–	–	10	**KD1 I061G**	0.744
				16	**KD2 I061G**	0.744
9	1	–	–	10	**KD1 K062G**	0.749
				16	**KD2 K062G**	0.749
9	–	1 *(3)*	–	10	**KD1 K063G**	0.749
				16	**KD2 K063G**	0.749

(1) Poles : main contacts
- *N/O contact : late make (unballasting contact)*
- *N/C contact : signalling contact*
- *Neutral conductor (N) : early make, late break.*

(2) Permissible power, AC-23 at 400 V :
- *K1 switches : 2.2 kW,*
- K2 switches : 5.5 kW.

(3) Contact not late make.

Dimensions:
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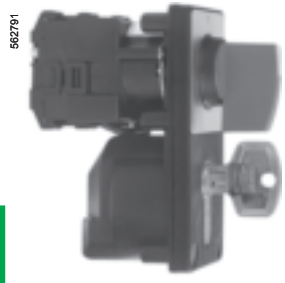
Cam switches

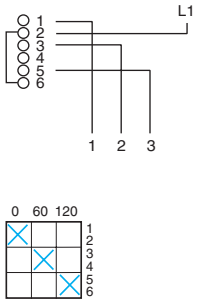
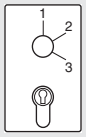
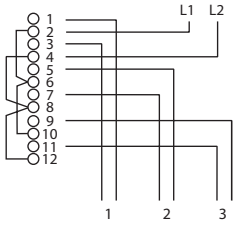
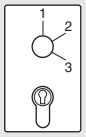
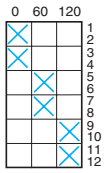
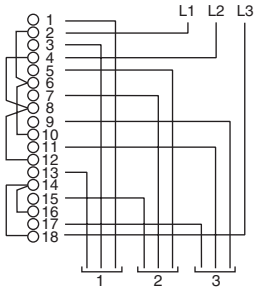
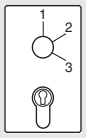
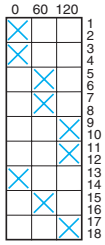
Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate



K1C 003NZ2

Stepping switches (3 step), without "0" position

Wiring diagram and switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
1-pole				
		Red	**K1C 003NZ2**	0.170
		Black	**K1C 003NZ4**	0.170
2-pole				
		Red	**K1F 013NZ2**	0.170
		Black	**K1F 013NZ4**	0.170
3-pole				
		Red	**K1I 023NZ2**	0.170
		Black	**K1I 023NZ4**	0.170

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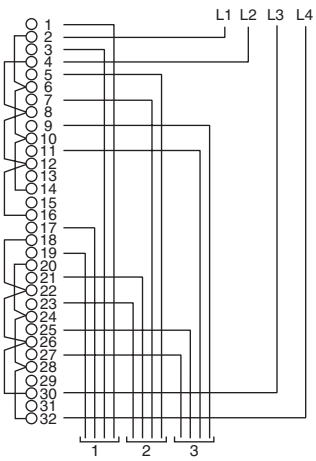
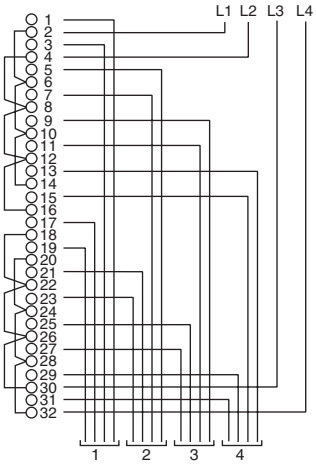
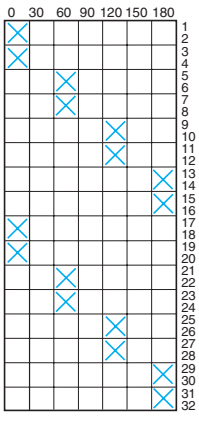
Cam switches

Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate

Stepping switches (4 step), 4-pole, without "0" position

Wiring diagram and switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
4 step *(1)*				
		Red	**K1Q 034NZ2**	0.170
		Black	**K1Q 034NZ4**	0.170
4 step with intermediate steps at 30°				
		Red	**K1Q 8621Z1**	0.170
				

(1) Switching programme identical for 4 step and 4 step with intermediate steps at 30°.

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Cam switches

Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate

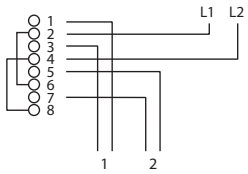
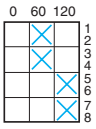
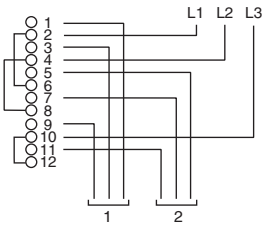
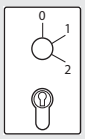
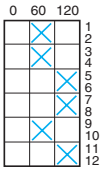
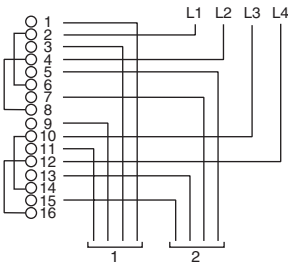
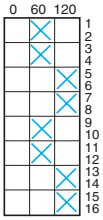


562791

K1D 012QZ2

3

Stepping switches (2 step), with "0" position

Wiring diagram and switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
2-pole				
		Red	**K1D 012QZ2**	0.170
		Black	**K1D 012QZ4**	0.170
3-pole				
		Red	**K1F 022QZ2**	0.170
		Black	**K1F 022QZ4**	0.170
4-pole				
		Red	**K1H 032QZ2**	0.170
		Black	**K1H 032QZ4**	0.170

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Schneider Electric
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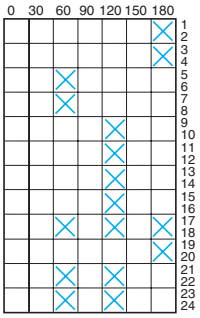
Cam switches

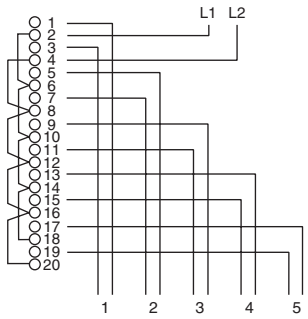
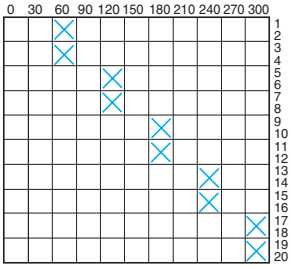
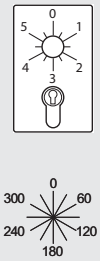
Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate

Stepping switches (3 step), 2-pole, with "0" position

Switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
3 step with intermediate steps at 30°				
		Red	**K1M 10317Z1**	0.170

Stepping switches (5 step), 2-pole, with "0" position

Wiring diagram and switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
5 step *(1)*				
		Red	**K1K 015NZ2**	0.170
		Black	**K1K 015NZ4**	0.170
5 step with intermediate steps at 30°				
		Red	**K1K 1060Z1**	0.170

(1) Switching programme identical for 5 step and 5 step with intermediate steps at 30°.

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Cam switches

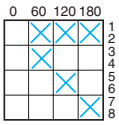
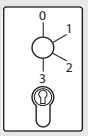
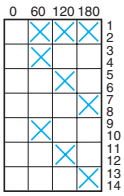
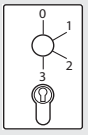
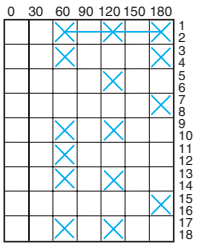
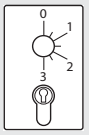
Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate



K1D 032RZ2

Start selector switches (3-position) with “0” position

Switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
1-pole				
		Red	**K1D 032RZ2**	0.170
		Black	**K1D 032RZ4**	0.170
2-pole				
		Red	**K1G 043RZ2**	0.170
		Black	**K1G 043RZ4**	0.170
2-pole with intermediate positions at 30°				
		Red	**K1I 9289Z1**	0.170
				

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Schneider Electric

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Cam switches

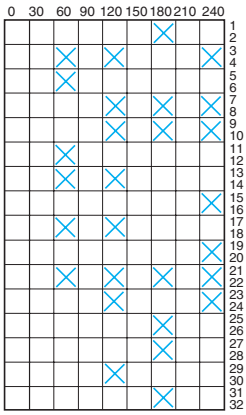
Complete switches, 12 A with key operated lock

Front mounting by 6 screws Ø 5.2 mm
with 55 x 100 mm front plate

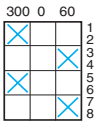
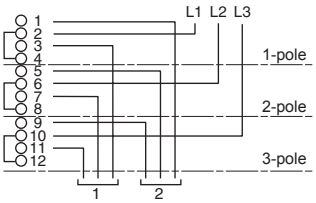
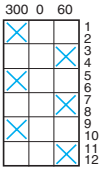


K1B 001UZ2

Start selector switches (4-position) with "0" position

Switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
		Red	**K1Q 10805Z1**	0.170

Changeover switches with "0" position

Wiring diagram and switching programme	Marking and switch position	Colour of handle	Reference	Weight kg
1-pole				
		Red	**K1B 001UZ2**	0.170
		Black	**K1B 001UZ4**	0.170
2-pole				
		Red	**K1D 002UZ2**	0.170
		Black	**K1D 002UZ4**	0.170
3-pole				
 		Red	**K1F 003UZ2**	0.170
		Black	**K1F 003UZ4**	0.170

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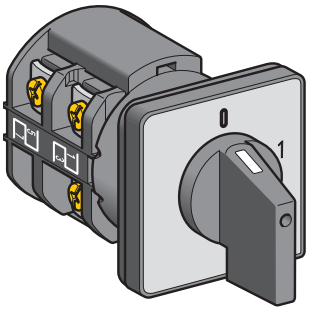
Cam switches
Complete switches, 32 to 150 A

The range of K30 to K150 cam switches (32 to 150 A ratings) comprises only complete switches.
These products are more specifically designed for direct control of simple machines.

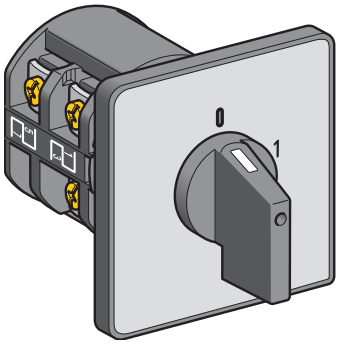
Complete switches

- switches
- ON-OFF switches
- changeover switches
- star-delta switches
- pole change switches
- reversing switches

Front mounting



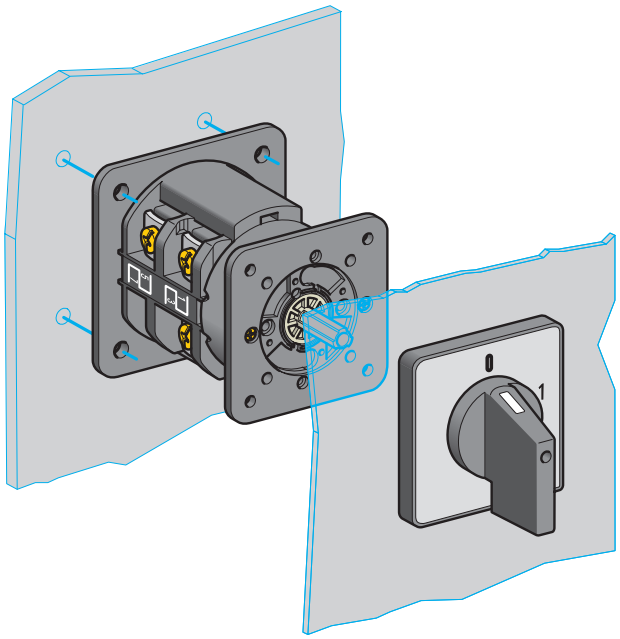
By 4 holes
with 64 x 64 mm front plate
32 to 63 A ratings
K30, K50 and K63



By 4 holes
with 88 x 88 mm front plate
115 to 150 A ratings
K115 and K150

"Multi-fixing" mounting

Rear mounting



By 4 holes on 48 mm centres
32 to 63 A ratings
K30, K50 and K63

By 4 holes on 68 mm centres
115 to 150 A ratings
K115 and K150

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Cam switches
Complete switches, 32 to 150 A

Switch type				K30	K50	K63	K115	K150
Environment characteristics								
Conformity to standards				UL 508 EN/IEC 60947-3				
Product certifications	cULus		120 V - 1-phase	2 hp	3 hp	3 hp	5 hp	7.5 hp
			240 V - 1-phase	5 hp	7.5 hp	7.5 hp	10 hp	15 hp
			240 V - 3-phase	5 hp	7.5 hp	10 hp	20 hp	25 hp
			480 V - 3-phase	20 hp	25 hp	25 hp	30 hp	40 hp
Protective treatment				Standard version: “TC”				
Ambient air temperature	For operation			- 25…+ 55 °C				
	For storage			- 40…+ 70 °C				
Electric shock protection				Class II, conforming to IEC 61140				
Degree of protection Conforming to IEC 60529				IP 40				
Mechanical life				300,000 operating cycles				
Contact block characteristics								
Rated insulation voltage				Ui = 690 V conforming to EN/IEC 60947-1 - Degree of pollution 3				
Conventional thermal current	Screw clamp terminals			In open air	Ith = 32 A	Ith = 50 A	Ith = 63 A	Ith = 115 A	Ith = 150 A
Rated operational characteristics									
Conforming to	∼ AC-15			220…240 V	14 A	16 A	–	–	–
EN/IEC 60947-5-1				380…440 V	6 A	7 A	–	–	–
Conforming to	∼ AC-3	3-phase		220…240 V	5.5 kW	7.5 kW	11 kW	15 kW	22 kW
EN/IEC 60947-3		3-pole		380…440 V	11 kW	15 kW	18.5 kW	30 kW	37 kW
				660…690 V	11 kW	15 kW	18.5 kW	30 kW	30 kW
		1-phase		110 V	2.2 kW	2.5 kW	3 kW	3.7 kW	5.5 kW
		2-pole		220…240 V	4 kW	5.5 kW	6 kW	7.5 kW	11 kW
				380…440 V	5.5 kW	7.5 kW	11 kW	13 kW	18.5 kW
	∼ AC-23A	3-phase		220…240 V	7.5 kW	11 kW	15 kW	30 kW	37 kW
		3-pole		380…440 V	15 kW	22 kW	30 kW	45 kW	75 kW
				660…690 V	15 kW	22 kW	40 kW	45 kW	55 kW
		1-phase		110 V	2.2 kW	2.5 kW	4 kW	5.5 kW	11 kW
		2-pole		220…240 V	4 kW	5.5 kW	10 kW	15 kW	22 kW
				380…440 V	7.5 kW	11 kW	18.5 kW	22 kW	37 kW
	∼ AC-21A				32 A	40 A	63 A	100 A	150 A
Rated conditional short-circuit current				Power: kA	5	5	10	15	25
Short-circuit protection				Cartridge fuse type gG, A	50	63	80	125	200
Rated impulse withstand voltage				U imp = 6 kV conforming to EN/IEC 60947-1					
Contact operation				Slow break with positive opening operation					
Connection				Captive screw clamp terminals (For 2 x 2.8 x 0.8 mm push-on connectors, please consult your Regional Sales office)					
	Solid cable				2 x 6 mm²	2 x 10 mm²	2 x 16 mm²	1 x 35 mm²	1 x 70 mm²
	Flexible cable with or without cable end				2 x 4 mm²	2 x 6 mm²	2 x 10 mm²	1 x 25 mm²	1 x 50 mm²
	Tightening torque				1.2 N.m	2 N.m	2.5 N.m	2.5 N.m	2.5 N.m
Switching capacity ⎓	Number of contacts in series			**1**	**2**	**3**			
	Resistive load V			24	48	70	32 A	50 A	63 A	115 A	–
	T ⩽ 1 ms			48	95	140	32 A	40 A	50 A	–	150 A
				60	120	180	12 A	12 A	16 A	–	–
				110	220	330	2 A	–	–	–	–
				220	440	660	0.6 A	–	–	–	–
				440	660	–	0.3 A	–	–	–	–
	Inductive load V			24	48	70	32 A	40 A	63 A	100 A	150 A
	T = 50 ms			30	60	90	13 A	16 A	22 A	–	50 A
				48	95	140	3.2 A	3.6 A	5 A	–	–
				60	120	180	1.6 A	2 A	–	–	–
				110	220	330	0.5 A	0.55 A	–	–	–

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Cam switches

Complete switches, 32 to 150 A

With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)



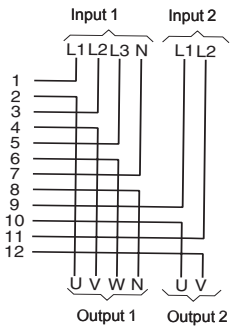
K30 C003AP

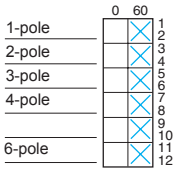


K50 C003AP

Switches with 60° switching angle

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		1	32	**K30 A001AP**	0.130
			50	**K50 A001AP**	0.175
		2	32	**K30 B002AP**	0.170
			50	**K50 B002AP**	0.215
		3	32	**K30 C003AP**	0.224
			50	**K50 C003AP**	0.275
			63	**K63 C003AP**	0.345
			115	**K115 C003AP**	0.680
			150	**K150 C003AP**	0.790
		4	32	**K30 D004AP**	0.250
			50	**K50 D004AP**	0.305
			63	**K63 D004AP**	0.390
			115	**K115 D004AP**	0.745
			150	**K150 D004AP**	0.880
		6	32	**K30 F006AP**	0.425
			50	**K50 F006AP**	0.530
			63	**K63 F006AP**	0.590



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Cam switches

Complete switches, 32 to 150 A

With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)

501179



K63 C003HP

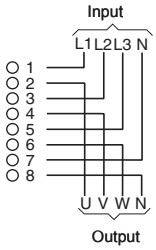
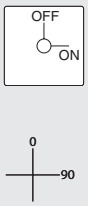
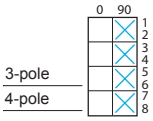
501178



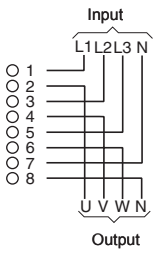
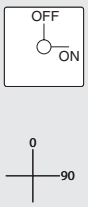
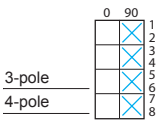
K150 D004HP

Switches with 90° switching angle

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		3	32	**K30 C003HP**	0.224
			50	**K50 C003HP**	0.275
			63	**K63 C003HP**	0.345
			115	**K115 C003HP**	0.680
			150	**K150 C003HP**	0.790
		4	32	**K30 D004HP**	0.250
			50	**K50 D004HP**	0.305
			63	**K63 D004HP**	0.390
			115	**K115 D004HP**	0.745
			150	**K150 D004HP**	0.880

Rear mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		3	32	**K30 C503HP**	0.250
			50	**K50 C503HP**	0.300
			63	**K63 C503HP**	0.370
			115	**K115 C503HP**	0.720
			150	**K150 C503HP**	0.830
		4	32	**K30 D504HP**	0.280
			50	**K50 D504HP**	0.350
			63	**K63 D504HP**	0.440
			115	**K115 D504HP**	0.790
			150	**K150 D504HP**	0.930

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Cam switches

Complete switches, 32 to 150 A

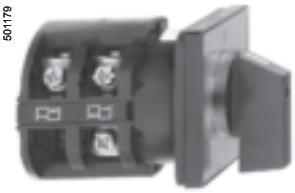
With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)

103522



K50 B001UP

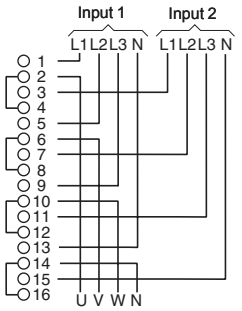
501179



K63 F013UP

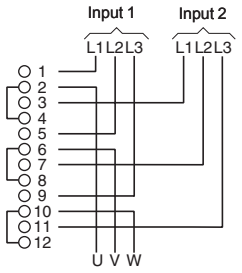
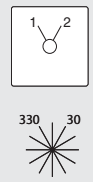
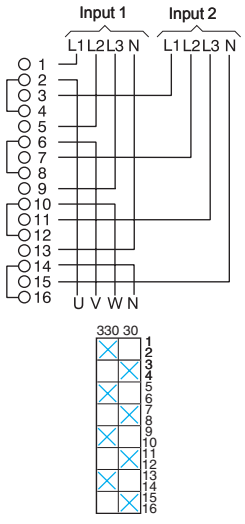
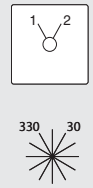
Changeover switches with “0” position

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		1	32	**K30 B001UP**	0.170
			50	**K50 B001UP**	0.215
			150	**K150 B001UP**	0.790
		2	32	**K30 D002UP**	0.250
			50	**K50 D002UP**	0.305
		3	32	**K30 F003UP**	0.425
			50	**K50 F003UP**	0.530
			63	**K63 F003UP**	0.590
			115	**K115 F003UP**	0.645
			150	**K150 F003UP**	0.760
		4	32	**K30 H004UP**	0.485
			50	**K50 H004UP**	0.610
			63	**K63 H004UP**	0.680
			115	**K115 H004UP**	0.750
			150	**K150 H004UP**	0.880

Changeover switches without “0” position

Front mounting

		3	32	**K30 F013UP**	0.425
			50	**K50 F013UP**	0.530
			63	**K63 F013UP**	0.590
			115	**K115 F013UP**	0.645
			150	**K150 F013UP**	0.760
		4	32	**K30 H014UP**	0.485
			50	**K50 H014UP**	0.610
			63	**K63 H014UP**	0.680
			115	**K115 H014UP**	0.750
			150	**K150 H014UP**	0.880

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Cam switches

Complete switches, 32 to 150 A

With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)

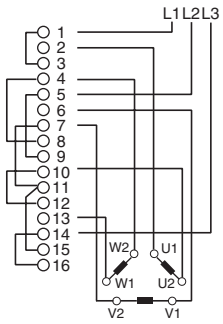
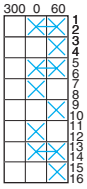
103822



K50 H001YP

Star-delta switches

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		3	32	**K30 H001YP**	0.485
			50	**K50 H001YP**	0.610
			63	**K63 H001YP**	0.680
			115	**K115 H001YP**	0.750
			150	**K150 H001YP**	0.880

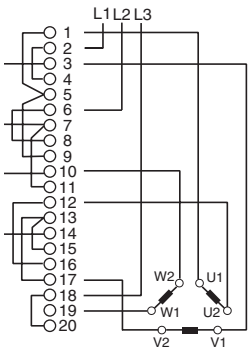
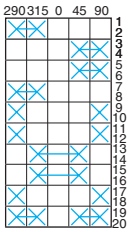
501177



K115 K006YP

Reversing star-delta switches

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current (Ith)	Reference	Weight
			A		kg
		3	32	**K30 K006YP**	0.560
			50	**K50 K006YP**	0.690
			63	**K63 K006YP**	0.770
			115	**K115 K006YP**	0.880
			150	**K150 K006YP**	0.990

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Cam switches

Complete switches, 32 to 150 A

With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)
Accessories

501179

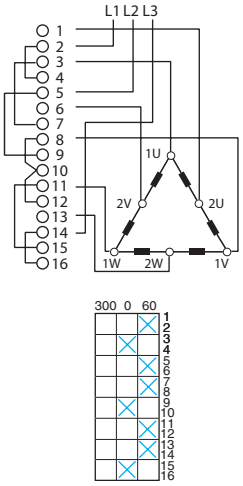
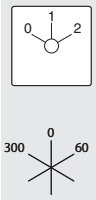


K63 H004PP

Pole change switches for 2-speed motors

(for motors with tapped "Dahlander" windings)

Front mounting

Wiring diagram and switching programme	Marking and switch position	Number of poles	Thermal current A	Reference	Weight kg
		3	32	**K30 H004PP**	0.485
			50	**K50 H004PP**	0.610
			63	**K63 H004PP**	0.680

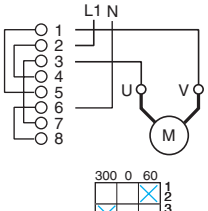
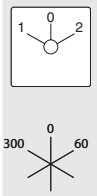
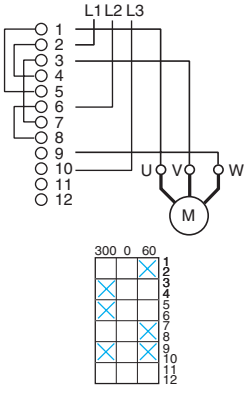
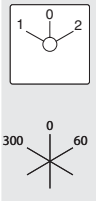
501178



K150 D002WP

Reversing switches with "0" position

Front mounting

		2	32	**K30 D002WP**	0.250
			50	**K50 D002WP**	0.305
			63	**K63 D002WP**	0.390
			115	**K115 D002WP**	0.745
			150	**K150 D002WP**	0.880
		3	32	**K30 E003WP**	0.385
			50	**K50 E003WP**	0.485
			63	**K63 E003WP**	0.540
			115	**K115 E003WP**	0.590
			150	**K150 E003WP**	0.710

Accessories

Description	For use with	Sold in lots of	Unit reference	Weight kg
Legend holders With blank legend	Square heads 64 x 64 mm	5	**KZN 15**	0.020
	Square heads 88 x 88 mm	5	**KZN 103**	0.040
Replacement blank legends for legend holder	KZN 15	5	**KZ 77N**	0.025
	KZN 103	5	**KZ 100N**	0.040
Blank legends for metallic finish front plate	64 x 64	5	**KZN 21**	0.035
	88 x 88	5	**KZN 24**	0.045

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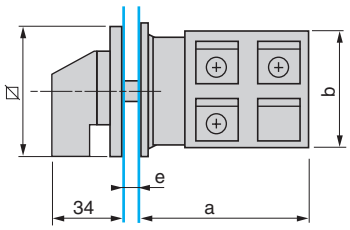
Cam switches

Complete switches, 32 to 150 A

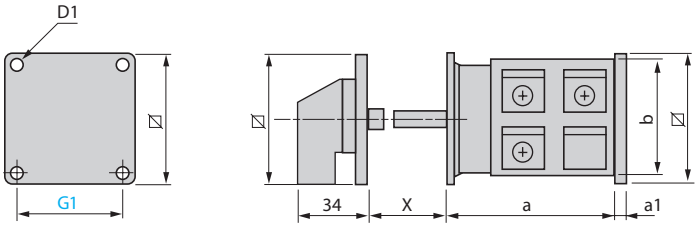
With 64 x 64 mm front plate (32 to 63 A ratings)
and 88 x 88 mm front plate (115 and 150 A ratings)

Cam switches from 32 to 150 A

Front mounting



Rear mounting

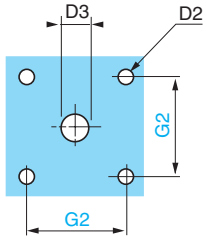


	K30 A K30 B	K30 C K30 D	K30 E K30 F	K30 H	K30 K	K50 A K50 B	K50 C K50 D	K50 E K50 F	K50 H	K50 K	K63 A K63 B	K63 C K63 D	K63 E K63 F	K63 H	K63 K
a	41	53.7	66.4	79.1	104.5	45.8	63.3	80.8	98.3	133.3	49.8	71.3	92.8	114.3	157.3
a1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
b	58	58	58	58	58	60	60	60	60	60	66	66	66	66	66
⍁	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
D1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	5.4	5.4	5.4	5.4	5.4
G1	–	48	–	–	–	–	48	–	–	–	–	48	–	–	–
X	–	78 to 97	–	–	–	–	78 to 97	–	–	–	–	78 to 97	–	–	–

	K115 A K115 B	K115 C K115 D	K115 E K115 F	K115 H	K115 K	K150 A K150 B	K150 C K150 D	K150 E K150 F	K150 H	K150 K
a	61.5	88	114.5	141	194	67.5	100	132.5	165	230
a1	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
b	84	84	84	84	84	88	88	88	88	88
⍁	88	88	88	88	88	88	88	88	88	88
D1	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
G1	–	68	–	–	–	–	68	–	–	–
X	–	120 to 150	–	–	–	–	120 to 150	–	–	–

e: support panel thickness 0.5 to 5.5 mm.

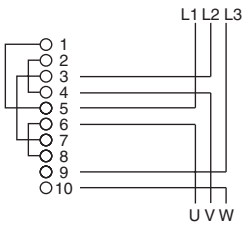
Panel cut-out



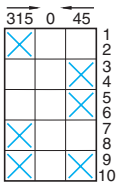
	K30/K50/K63	K115/K150
D2	4.5	6
D3	10	13
G2	48	68

Convention used for switching programme representation

Link positions (factory mounted)



Graphic representation of switching positions and spring return to “0” position



Contact terminal reference number

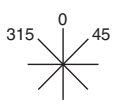
Contact closed

Contact closed in 2 positions and maintained between the 2 positions

Sealed assembly for auto-maintain control

Overlapping contacts

Angular position of switch



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Sound solutions

■ Sirens and electronic alarms, Harmony type XVS . . . . . *page 4/73*

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4

Harmony type XV		Monolithic tower lights	
			
Type of products		Complete pre-cabled pilot lights, height 55 mm	Complete miniature beacons
Diameter (mm)		Ø 25	Ø 45
Degree of protection conforming to IEC 60529		IP 40	IP 40
Type of signalling	Steady	–	■
	Flashing	–	–
	"Flash"	–	■
	Sound	–	–
Light sources	Incandescent bulb	■	■
	LED bulb	–	–
	Integral LED	–	–
	"Flash" discharge tube	–	■
	Halogen bulb	–	–
Colours of illuminated units		□ Green □ Red □ Clear □ Yellow	□ Green □ Red □ Orange □ Blue □ Clear □ Yellow
Connection		Flying leads, length 360 mm	Screw clamp terminals
Support panel drilling or cut-out		Ø 22 or Ø 30	3 x Ø 3.3 or M3
Type references		**XV1 CA**	**XVD LS**
Page(s)		Please consult your customer care centre	4/6

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Pre-assembled and pre-cabled tower lights		
Ø 40	Ø 60	Ø 100
IP 54 (flat surface installation) IP 23 (vertical surface installation)		IP 54 (flat surface installation)
■		
■		
–		
■		
–		
–		
■		
–		
–		
□ Red □ Orange □ Green □ Blue □ Clear		
Flying leads, length 450 to 900 mm according to model (see page 35097-EN/3)	Flying leads, length 450 to 850 mm according to model (see page 35097-EN/3)	Flying leads, length 500 mm
Mounting on support tube with bracket: 2 x Ø 9 Direct mounting on horizontal support: 3 x Ø 5 Other mounting possibilities with accessories	Mounting on support tube with bracket: 2 x Ø 11 Direct mounting on horizontal support: 3 x Ø 5 Other mounting possibilities with accessories	Direct mounting on horizontal support: - 3 x Ø 6 (without siren) - 3 x Ø 7 (with siren) Other mounting possibilities with accessories
XVC 4	**XVC 6**	**XVC 1**
4/11	4/12	4/13

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Signalling solutions
Harmony type XV

Harmony type XV		Modular tower lights		
				
Type of products		Pre-assembled/pre-cabled tower lights Variable composition tower lights for customer assembly of up to 5 units	Variable composition tower lights for customer assembly of up to 5 units	Illuminated beacons Variable composition tower lights for customer assembly of up to 5 units
Diameter (mm)		Ø 45	Ø 50	Ø 70
Degree of protection conforming to IEC 60529		IP 54 in vertical position (XVM with plastic fixing plate) IP 42 in horizontal position (XVM with metal bracket) IP 40 in other positions (all types of XVM tower lights)	IP 65 for illuminated units IP 43 for audible units	IP 42 mounted vertically IP 40 for other positions IP 54 with reinforced protection (using sealing kit)
Type of signalling	Steady	■	■	■
	Flashing	■	■	■
	"Flash"	■	–	■
	Sound	–	–	■
Light sources	Incandescent bulb	■	■	■
	LED bulb	■	■ "PROTECTED LED"	–
	Integral LED	–	–	■
	"Flash" discharge tube	■	■	■
	Halogen bulb	–	–	–
Colours of illuminated units		□ Red □ Green □ Orange □ Blue □ Clear	□ Green □ Red □ Orange □ Blue □ Clear □ Yellow	□ Green □ Red □ Orange □ Blue □ Clear
Connection		Flying leads, length 300 mm or screw terminals	Screw clamp terminals	Screw clamp terminals
Support panel drilling or cut-out		Mounting on bracket: 2 x Ø 9 Mounting on support tube: 4 x Ø 5.5 or M5	Mounting on bracket: 2 x Ø 9 Mounting on fixing base: 4 x Ø 5 or M5 Vertical mounting: 2 x Ø 4,5 Direct mounting: 4 x Ø 5 or M5	Mounting on support tube: 4 x Ø 5.5 or M5 Vertical mounting: 3 x Ø 5 or M5
Type references		**XVM**	**XVP C**	**XVE L, XVE C**
Page(s)		4/21	4/33	4/41

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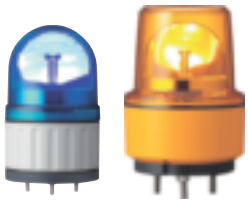





Illuminated beacons Variable composition tower lights for customer assembly of up to 5 units	Pre-cabled tower lights Tower lights for customer assembly of up to 5 units	Pre-cabled rotating beacons	Sirens and electronic alarms
Ø 70	Ø 70	Ø 84 to Ø 130	–
IP 65 (mounted on fixing base XVB Z0●) IP 66 (mounted on base unit)	IP 40	Ø 84 and 106: IP 23 (IP 65 with accessory) Ø 120: IP 23 Ø 130: IP 66 and IP 67 (depending on voltage)	IP 53 (sirens) IP 54 (electronic alarms)
■	■	■	–
■	■	–	–
■	■	–	–
■	■	■	■
■	■	–	–
■ “PROTECTED LED”	■ “PROTECTED LED”	■ “Super Bright”	–
■ “PROTECTED LED”	–	–	–
■	■	–	–
–	–	■	–
□ Green □ Red □ Orange □ Blue □ Clear □ Yellow	□ Green □ Red □ Orange □ Blue □ Clear □ Yellow	□ Red □ Orange □ Green □ Blue	–
Screw clamp terminals	Screw clamp terminals	Flying leads, length 400 mm (except XVR 08: 500 mm)	Screw clamp terminals (except XVS 14: flying leads, length 500 mm)
Mounting on support tube: 4 x Ø 5.5 or M5 Vertical mounting: 3 x Ø 5 or M5 Direct mounting: 2 x Ø 4.5 or M4		Depending on model: - XVR 08 (Ø 84 mm) : 3 x Ø 5 - XVR 10 (Ø 106 mm) : 3 x Ø 5 - XVR 12 (Ø 120 mm) : 3 x Ø 6 - XVR 13 (Ø 130 mm) : 3 x Ø 9 - XVR 13●●●L (Ø 130 mm) : 3 x Ø 7	3 x Ø 6.5
XVB L, XVB C	**XVD**	**XVR**	**XVS**
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Signalling solutions
Monolithic tower lights
Harmony type XVD LS Ø 45 mm
Complete miniature beacons

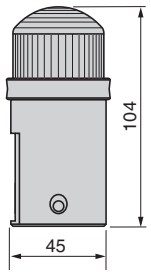
Presentation

Miniature illuminated beacons XVD LS are suitable for installation on small machines for short distance signalling of the process status.

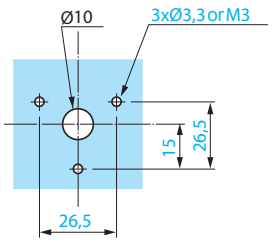
Characteristics

Product certifications	Standard version		CSA, UL
Conformity to standards			EN/IEC 60947-5-1
Protective treatment	Standard version		"TC"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70 with incandescent bulb - 10…+ 50 with "flash" discharge tube
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to IEC 60529		IP 40
Material	Illuminated units		Polycarbonate
	Base unit and cover		Glass-reinforced polyamide and polycarbonate
Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1	**V**	250
Consumption	With "flash" discharge tube circuit	**mA**	∼ 24 V: < 90 ⎓ 24 V: < 145
		mA	∼ 120 V: < 35
		mA	∼ 230 V: < 25
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	U imp = 4
Light source	Illuminated units with steady light		Incandescent bulbs with BA 15d base fitting, maximum power 5 W
Illuminating power	Illuminated units with discharge circuit (flash lamp with integral tube)	**cds**	1.4 (integral high intensity tube) with clear lens unit
Connection	Maximum clamping capacity on protected, ready-to-tighten, screw and captive cable clamp terminals	**mm²**	1 x 1.5 with cable end
Cable entry			For n° 7 (DIN Pg 7) cable gland, not included

Dimensions



Panel cut-out for direct fixing



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Signalling solutions
Monolithic tower lights
Harmony type XVD LS Ø 45 mm
Complete miniature beacons



XVD LS●●

Beacons with steady light signalling

Description	Light source, to be ordered separately	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct fixing)	Incandescent bulb 5 W max. 230 V max.	Green	**XVD LS33**	0.080
		Red	**XVD LS34**	0.080
		Orange	**XVD LS35**	0.080
		Blue	**XVD LS36**	0.080
		Clear	**XVD LS37**	0.080
		Yellow	**XVD LS38**	0.080

Bulbs for beacons with steady light signalling

Description	Characteristics		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs BA 15d base fitting	24 V	4 W	10	**DL1 BEBS**	0.090
	120 V	5 W	10	**DL1 BEGS**	0.090
	230 V	5 W	10	**DL1 BEMS**	0.090

Beacons with 1 Joule “flash” discharge tube

Description	Light source (included)	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct fixing)	“Flash” discharge tube ⎓ 24 V	Green	**XVD LS6B3**	0.085
		Red	**XVD LS6B4**	0.085
		Orange	**XVD LS6B5**	0.085
		Blue	**XVD LS6B6**	0.085
		Clear	**XVD LS6B7**	0.085
		Yellow	**XVD LS6B8**	0.085
	“Flash” discharge tube ∿ 120 V	Green	**XVD LS6G3**	0.085
		Red	**XVD LS6G4**	0.085
		Orange	**XVD LS6G5**	0.085
		Blue	**XVD LS6G6**	0.085
		Clear	**XVD LS6G7**	0.085
		Yellow	**XVD LS6G8**	0.085
	“Flash” discharge tube ∿ 230 V	Green	**XVD LS6M3**	0.085
		Red	**XVD LS6M4**	0.085
		Orange	**XVD LS6M5**	0.085
		Blue	**XVD LS6M6**	0.085
		Clear	**XVD LS6M7**	0.085
		Yellow	**XVD LS6M8**	0.085

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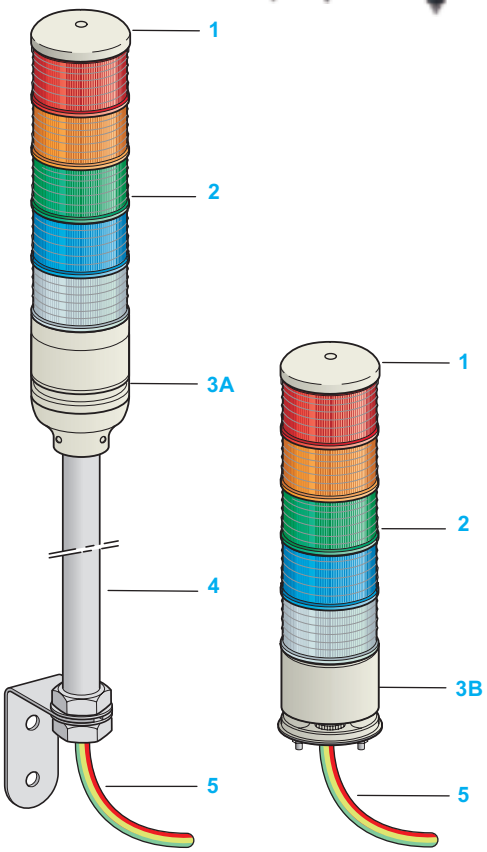
Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 40, Ø 60 and 100 mm
Pre-assembled and pre-cabled tower lights





Presentation

The monolithic tower lights in the Harmony XVC range are designed for long distance indication of the operating states or sequences of a machine or installation, either visually by means of illuminated signalling units visible through 360°, or audibly by means of an adjustable buzzer or siren.

■ The range includes small diameter products (40 and 60 mm) and larger diameter products (100 mm). It is therefore suitable for use in virtually all activity sectors :
□ XVC 4 (40 mm) tower lights are used mainly in the food-processing and medical sectors,
□ XVC 6 (60 mm) tower lights are used in semi-conductor factories, on conveyor belts and on small food or drink dispensing machines in the commercial sector,
□ XVC 1 (100 mm) tower lights are more particularly designed for industrial applications and machine-tools.

■ The entire range provides an IP 54 degree of protection to allow outdoor as well as indoor use.

■ XVC tower lights are supplied:
□ with 1, 2, 3, 4, or 5 illuminated signalling units (up to 3 for XVC 1●●HK),
□ with or without a buzzer or siren,
□ pre-assembled and pre-cabled,
□ fitted with a support tube and bracket for mounting on a vertical support or 3 screws for direct mounting on a horizontal surface (depending on the model).

Illuminated signalling

Several lens unit colours are available from the catalogue:
- 5 colours for XVC 1●●K and XVC 1●●SK (red, orange, green, blue or clear),
- 3 colours for XVC 1●●HK (red, orange, green).

The colours are always placed in that order, from top to bottom.
The light source consists of Super Bright LEDs which provide optimum luminosity.

Audible signalling

The tower light is supplied with or without an audible signalling unit (buzzer or siren) depending on the required configuration. This audible unit is located in the base of the tower light.

For products equipped with a buzzer, the type of signal (continuous or intermittent) can be reversed by modifying the cable connections (only for 60 and 100 mm units).
For products equipped with a siren, it is possible to choose between 16 melodies, either by a switch or by 4 external digital outputs.

A potentiometer is also present in the base for adjusting the audible signalling volume, up to a value of:
- 85 decibels for XVC 1●●K and XVC 1●●SK (equipped with a buzzer),
- 102 decibels for XVC 1●●HK (equipped with a siren).

Cabling

XVC tower lights supplied pre-assembled are equipped with wires marked with a label indicating the correct way to connect. Each level is marked by a different coloured wire.
XVC tower lights that have been pre-assembled and pre-cabled at the factory cannot be modified because the wires are permanently connected (soldered)

Description

XVC tower lights comprise an assembly of:

1 A cover.
2 One, two, three, four or five coloured illuminated signalling units (red, orange, green, blue or clear). Each illuminated unit is equipped with a LED (Super Bright LED).
3 A base mounted on the support tube **3A** or a base fitted with 3 screws **3B** for direct mounting on a horizontal surface.
4 A chromium plated-steel support tube mounted on a bracket, for mounting on a vertical support (depending on the model).
5 Marked wires, with projecting length of 500 to 900 mm (depending on the model).

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Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 40 and Ø 60 mm
Pre-assembled and pre-cabled tower lights

Environment characteristics

				XVC 4B● XVC 4B●5S XVC 4B●K	XVC 6B● XVC 6B●5S XVC 6B●K XVC 6B●5SK	XVC 4M● XVC 4M●5S	XVC 6M● XVC 6M●5S XVC 6M●K XVC 6M●5SK
Product certifications				CE (UL, CSA)		CE (UL, CSA and CCC)	
Conformity to standards				EN/IEC 61000-6-2, EN/IEC 61000-6-3	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN/IEC 61000-6-4	EN/IEC 60947-1, EN/IEC 60947-5-1	
Protective treatment				"TC"			
Ambient air temperature	Storage		**°C**	- 35…+ 70			
	Operation		**°C**	- 10…+ 50			
Electric shock protection conforming to IEC 61140	Mounted on support tube			Class I			
	Mounted on base			Class II		Class I	
Degree of protection conforming to IEC 60529	Mounted on support tube			IP 54 (Flat surface installation)			
				IP 23 (Vertical surface installation)			
	Mounted on base			IP 54 (Flat surface installation)			
Material	Top cover			PBT + ABS (UL94HB)		PBT + ABS (UL94V-0)	
	Illuminated lens unit			PC (polycarbonate)			
	Base			ABS or PBT + ABS			
	Support tube			SGP (chromium-plated)	STK (chromium-plated)	SGP (chromium-plated)	STK (chromium-plated)
	L mounting bracket			SPCC (Cr3 + chromium-plated)			
Light source				LED			

Electrical characteristics

Rated voltage			**V**	⎓ 24		~ 100 - 240	
Rated impulse withstand voltage			**kV**	0.8		4	
Consumption - at rated voltage (for XVC 4B● / XVC 6B●) **- at ~ 100 V** (for XVC 4M● / XVC 6M●)	Steady light	1 unit	**mA**	25		30	35
		2 units	**mA**	50		45	50
		3 units	**mA**	75		60	
		4 units	**mA**	100		75	
		5 units	**mA**	125		90	
	Steady/flashing light with buzzer	1 unit	**mA**	65		50	60
		2 units	**mA**	90		65	75
		3 units	**mA**	115		80	85
		4 units	**mA**	140		95	100
		5 units	**mA**	165		110	115
Audible units	Sound level (continuous or intermittant tone) at 1 m		**dB**	70...85			
	Fundamental frequency		**kHz**	2.23			
Flashing frequency of illuminated units			**Hz**	1			
Connection	Cable diameter		mm²	Wire c.s.a. 0.33 mm² / AWG 22 *(1)*		Wire c.s.a. 0.33 mm² / AWG 22 *(1)* Wire c.s.a. 0.83 mm² / SPT-1 AWG 18 *(1)*	
	Cable length		mm	600 for **XVC 4B●** 900 for **XVC 4B●5S** 500 for **XVC 4B●K**	600 for **XVC 6B●** 550 for **XVC 6B●5S** 850 for **XVC 6B●K** and **XVC 6B●5SK**	450	**XVC 6M●** : - 450 for signal - 550 for power - 550 for earth **XVC 6M●5S** : - 450 for signal - 450 for power - 450 for earth **XVC 6M●K** and **XVC 6M●5SK** : - 750 for signal - 850 for power - 850 for earth

(1) A.W.G. : American Wire Gauge.

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Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 100 mm
Pre-assembled and pre-cabled tower lights

Environment characteristics

Type of tower light				XVC 1B●K XVC 1B●SK	XVC 1M●K XVC 1M●SK	XVC 1B●HK	XVC 1M●HK
Product certifications				CE (UL, CSA)			
Conformity to standards				EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN/IEC 61000-6-4	EN/IEC 60947-1, EN/IEC 60947-5-1	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN/IEC 61000-6-4	EN/IEC 60947-1, EN/IEC 60947-5-1
Protective treatment				"TC"			
Ambient air temperature	Storage		**°C**	- 35…+ 70		- 35…+ 70	
	Operation		**°C**	- 30…+ 50		- 20…+ 50	
Electric shock protection conforming to IEC 61140	Mounted on support tube			–			
	Mounted on base			Class II	Class I	Class II	Class I
Degree of protection conforming to IEC 60529	Mounted on support tube			–			
	Mounted on base			IP 54 (Flat surface installation)			
Material	Top cover			PBT + ABS (UL94-V0)			
	Illuminated lens unit			PC (polycarbonate)			
	Base			PBT + ABS (UL94-V0)			
	Support tube			–			
	L mounting bracket			–			
Light source				LED			

Electrical characteristics

Rated voltage			**V**	⎓ 24	∿ 100 - 240	⎓ 24	∿ 100 - 240
Rated impulse withstand voltage			**kV**	0.8	4	0.8	4
Consumption - at rated voltage (for XVC 1B●) **- at ∿ 100 V** (for XVC 1M●)	Steady/flashing light	1 unit	**mA**	100	75	–	–
		2 units	**mA**	200	120	–	–
		3 units	**mA**	300	160	–	–
		4 units	**mA**	400	215	–	–
		5 units	**mA**	500	270	–	–
	Steady/flashing light with buzzer	1 unit	**mA**	150	85	460	235
		2 units	**mA**	250	130	550	280
		3 units	**mA**	350	170	660	320
		4 units	**mA**	450	230	–	–
		5 units	**mA**	550	280	–	–
Audible units	Sound level at 1 m		**dB**	60...85 (continuous or intermittant tone)		0...102	
Flashing frequency of illuminated units			**Hz**	0.7...3			
Connection	Cable diameter			Wire c.s.a.: 0.33 mm² / AWG 22 *(1)* Wire c.s.a.: 0.83 mm² / AWG 18 *(1)*			
	Cable length		**mm**	500			

(1) AWG: American Wire Gauge.

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Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 40 mm
Pre-assembled and pre-cabled tower lights



XVC 4B5 *XVC 4B55S*

Pre-assembled and pre-cabled tower lights Ø 40 mm

Description	Light source (included)	Voltage V	Signalling colours *(1)* Steady	Signalling colours *(1)* Flashing *(2)*	Reference	Weight kg
For support tube mounting, 17 mm						
Without buzzer	LED for steady light only	⎓ 24	R	–	**XVC 4B1**	0.500
			R, O	–	**XVC 4B2**	0.520
			R, O, G	–	**XVC 4B3**	0.540
			R, O, G, B	–	**XVC 4B4**	0.560
			R, O, G, B, C	–	**XVC 4B5**	0.580
		~ 100-240	R	–	**XVC 4M1**	0.720
			R, O	–	**XVC 4M2**	0.750
			R, O, G	–	**XVC 4M3**	0.780
			R, O, G, B	–	**XVC 4M4**	0.810
			R, O, G, B, C	–	**XVC 4M5**	0.840
With buzzer + flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 4B15S**	0.600
			R, O	R, O	**XVC 4B25S**	0.620
			R, O, G	R, O, G	**XVC 4B35S**	0.640
			R, O, G, B	R, O, G, B	**XVC 4B45S**	0.660
			R, O, G, B, C	R, O, G, B, C	**XVC 4B55S**	0.680
		~ 100-240	R	R	**XVC 4M15S**	0.740
			R, O	R, O	**XVC 4M25S**	0.770
			R, O, G	R, O, G	**XVC 4M35S**	0.800
			R, O, G, B	R, O, G, B	**XVC 4M45S**	0.830
			R, O, G, B, C	R, O, G, B, C	**XVC 4M55S**	0.860
For base mounting						
Without buzzer	LED for steady light only	⎓ 24	R	–	**XVC 4B1K**	0.100
			R, O	–	**XVC 4B2K**	0.120
			R, O, G	–	**XVC 4B3K**	0.140
			R, O, G, B	–	**XVC 4B4K**	0.160
			R, O, G, B, C	–	**XVC 4B5K**	0.180



XVC Z11



XVC Z31

Accessories for support tube mounting

Description	Diameter mm	Minimum height to be added mm	Reference	Weight kg
Metal fixing plate	90	32	**XVC Z11**	0.100
Plastic fixing plate	84	24.5	**XVC Z01**	0.060
Wall mounting bracket	–	82	**XVC Z31**	0.130

(1) Signalling colours: R: Red, O: Orange, G: Green, B: Blue, C: Clear. The colours are listed in the same order as the mounting order of the illuminated units (from top to bottom).
(2) Flashing function can be simply selected/programmed by wiring.

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Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 60 mm
Pre-assembled and pre-cabled tower lights



XVC 6B5 *XVC 6M5*



XVC 6B5K *XVC 6M5K*



XVC Z32

Pre-assembled and pre-cabled tower lights Ø 60 mm

Description	Light source (included)	Voltage V	Signalling colours (1) Steady	Signalling colours (1) Flashing (2)	Reference	Weight kg
For support tube mounting, 22 mm						
Without buzzer	LED for steady light only	⎓ 24	R	–	**XVC 6B1**	0.700
			R, O	–	**XVC 6B2**	0.740
			R, O, G	–	**XVC 6B3**	0.780
			R, O, G, B	–	**XVC 6B4**	0.820
			R, O, G, B, C	–	**XVC 6B5**	0.860
		∿ 100-240	R	–	**XVC 6M1**	0.960
			R, O	–	**XVC 6M2**	1.020
			R, O, G	–	**XVC 6M3**	1.070
			R, O, G, B	–	**XVC 6M4**	1.120
			R, O, G, B, C	–	**XVC 6M5**	1.180
With buzzer + flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 6B15S**	0.900
			R, O	R, O	**XVC 6B25S**	0.940
			R, O, G	R, O, G	**XVC 6B35S**	0.980
			R, O, G, B	R, O, G, B	**XVC 6B45S**	1.020
			R, O, G, B, C	R, O, G, B, C	**XVC 6B55S**	1.060
		∿ 100-240	R	R	**XVC 6M15S**	1.010
			R, O	R, O	**XVC 6M25S**	1.070
			R, O, G	R, O, G	**XVC 6M35S**	1.120
			R, O, G, B	R, O, G, B	**XVC 6M45S**	1.170
			R, O, G, B, C	R, O, G, B, C	**XVC 6M55S**	1.230
For base mounting						
Without buzzer	LED for steady light only	⎓ 24	R	–	**XVC 6B1K**	0.200
			R, O	–	**XVC 6B2K**	0.250
			R, O, G	–	**XVC 6B3K**	0.300
			R, O, G, B	–	**XVC 6B4K**	0.350
			R, O, G, B, C	–	**XVC 6B5K**	0.400
		∿ 100-240	R	–	**XVC 6M1K**	0.440
			R, O	–	**XVC 6M2K**	0.500
			R, O, G	–	**XVC 6M3K**	0.550
			R, O, G, B	–	**XVC 6M4K**	0.600
			R, O, G, B, C	–	**XVC 6M5K**	0.660
With buzzer + flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 6B15SK**	0.200
			R, O	R, O	**XVC 6B25SK**	0.250
			R, O, G	R, O, G	**XVC 6B35SK**	0.300
			R, O, G, B	R, O, G, B	**XVC 6B45SK**	0.350
			R, O, G, B, C	R, O, G, B, C	**XVC 6B55SK**	0.400
		∿ 100-240	R	R	**XVC 6M15SK**	0.490
			R, O	R, O	**XVC 6M25SK**	0.550
			R, O, G	R, O, G	**XVC 6M35SK**	0.600
			R, O, G, B	R, O, G, B	**XVC 6M45SK**	0.650
			R, O, G, B, C	R, O, G, B, C	**XVC 6M55SK**	0.710

Accessories for support tube mounting and base mounting

Description	For use with	Diameter mm	Minimum height to be added (mm)	Reference	Weight kg
Metal fixing plate for support-tube mounting	XVC 6●● and XVC 6●●5S	100	30	**XVC Z02**	0.080
Metal fixing plate for base mounting	XVC 6●● K and XVC 6●●5SK	84	21.6	**XVC Z12**	0.100
Wall mounting bracket for support-tube mounting	XVC 6●● and XVC 6●●5S	–	82	**XVC Z32**	0.130

(1) Signalling colours: R: Red, O: Orange, G: Green, B: Blue, C: Clear. The colours are listed in the same order as the mounting order of the illuminated units (from top to bottom).
(2) Flashing function can be simply selected/programmed by wiring.

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Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 100 mm
Pre-assembled and pre-cabled tower lights

PF569833



PF540614



XVC 1●5K
XVC 1●5SK

XVC 1●3HK

Pre-assembled and pre-cabled tower lights Ø 100 mm

Description	Light source (included)	Voltage V	Signalling colours *(1)* Steady	Signalling colours *(1)* Flashing *(2)*	Reference	Weight kg
For base mounting						
Without buzzer With flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 1B1K**	0.700
			R, O	R, O	**XVC 1B2K**	0.900
			R, O, G	R, O, G	**XVC 1B3K**	1.100
			R, O, G, B	R, O, G, B	**XVC 1B4K**	1.300
			R, O, G, B, C	R, O, G, B, C	**XVC 1B5K**	1.500
		∿ 100-240	R	R	**XVC 1M1K**	1.000
			R, O	R, O	**XVC 1M2K**	1.200
			R, O, G	R, O, G	**XVC 1M3K**	1.400
			R, O, G, B	R, O, G, B	**XVC 1M4K**	1.600
			R, O, G, B, C	R, O, G, B, C	**XVC 1M5K**	1.800
With buzzer + flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 1B1SK**	0.700
			R, O	R, O	**XVC 1B2SK**	0.900
			R, O, G	R, O, G	**XVC 1B3SK**	1.100
			R, O, G, B	R, O, G, B	**XVC 1B4SK**	1.300
			R, O, G, B, C	R, O, G, B, C	**XVC 1B5SK**	1.500
		∿ 100-240	R	R	**XVC 1M1SK**	1.050
			R, O	R, O	**XVC 1M2SK**	1.250
			R, O, G	R, O, G	**XVC 1M3SK**	1.450
			R, O, G, B	R, O, G, B	**XVC 1M4SK**	1.650
			R, O, G, B, C	R, O, G, B, C	**XVC 1M5SK**	1.850
With siren + flashing light	LED for steady or flashing light	⎓ 24	R	R	**XVC 1B1HK**	1.580
			R, O	R, O	**XVC 1B2HK**	1.780
			R, O, G	R, O, G	**XVC 1B3HK**	1.980
		∿ 100-240	R	R	**XVC 1M1HK**	1.680
			R, O	R, O	**XVC 1M2HK**	1.880
			R, O, G	R, O, G	**XVC 1M3HK**	2.080

PF538886



XVC Z13

Accessories for mounting on vertical support

Description	For use with	Diameter mm	Height mm	Reference	Weight kg
Chromium plated-steel extension tube with metal fixing plate	XVC 1●●K and XVC 1●●SK	140	300	**XVC Z13**	0.700
	XVC 1●●HK (with siren)	140	306	**XVC Z14**	0.700
Metal fixing bracket	XVC 1●●K and XVC 1●●SK	–	–	**XVC Z23**	0.380
	XVC 1●●HK (with siren)	–	–	**XVC Z24**	0.380

(1) Signalling colours: R: Red, O: Orange, G: Green, B: Blue, C: Clear. The colours are listed in the same order as the mounting order of the illuminated units (from top to bottom).
(2) Flashing function can be simply selected/programmed by wiring.

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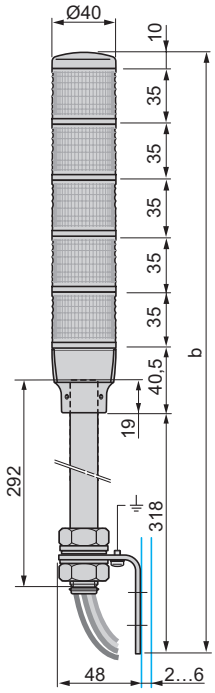
Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 40 mm
Pre-assembled and pre-cabled tower lights

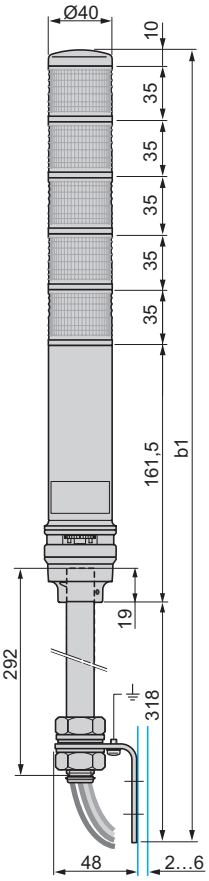
Pre-assembled and pre-cabled tower lights Ø 40 mm

With support tube mounting

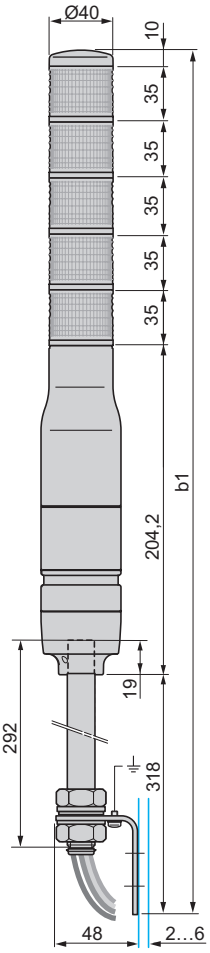
XVC 4B●

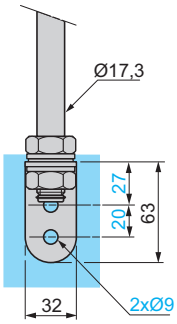


XVC 4B●5S



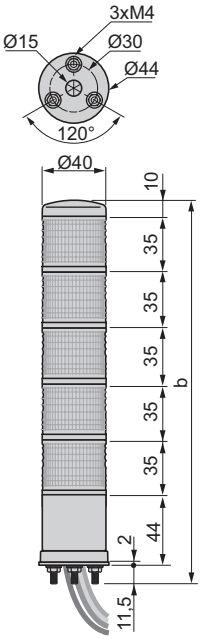
XVC 4M●, XVC 4M●5S



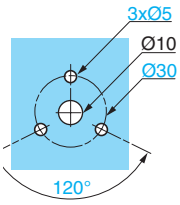


For direct mounting on horizontal support

XVC 4B●K



Panel cut-out



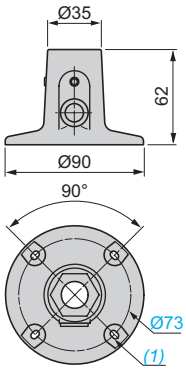
Height of pre-assembled and pre-cabled tower lights

No. of illuminated units	b Without buzzer (mm)	b1 With buzzer (mm)	
		XVC 4B●5S	XVC 4M●, XVC 4M●5S
1 stage	403.5	524.5	567.2
2 stages	438.5	559.5	602.2
3 stages	473.5	594.5	637.2
4 stages	508.5	629.5	672.2
5 stages	543.5	664.5	707.2

No. of illuminated units	b Without buzzer (mm)
1 stage	100.5
2 stages	135.5
3 stages	170.5
4 stages	205.5
5 stages	240.5

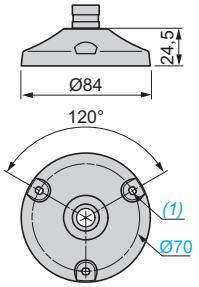
Accessories for tower lights type XVC 4●● and XVC 4●●5S

Metal fixing plate, XVC Z11



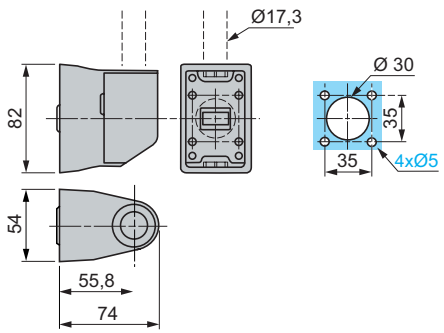
(1) 4 elongated holes Ø 4.2 x 5.

Plastic fixing plate, XVC Z01



(1) 3 elongated holes Ø 4.2 x 5

Wall mounting bracket, XVC Z31



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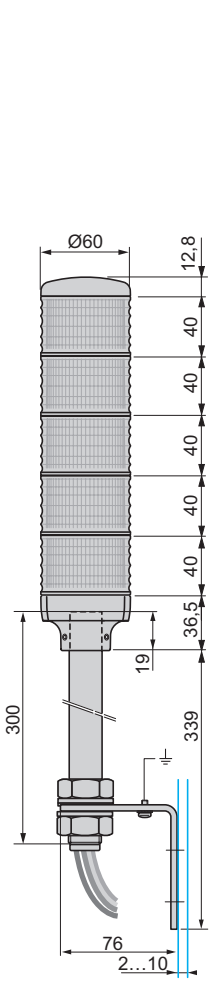
Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 60 mm
Pre-assembled and pre-cabled tower lights

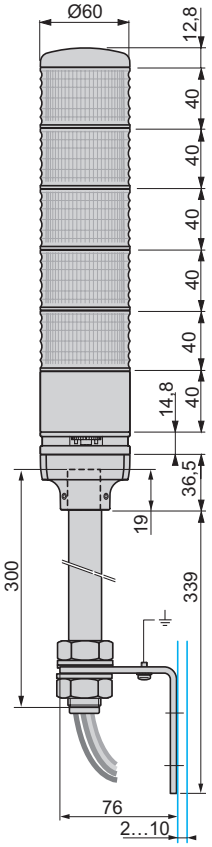
Pre-assembled and pre-cabled tower lights Ø 60 mm

With support tube mounting

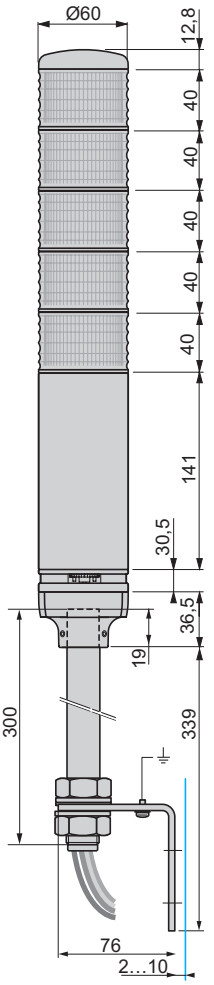
XVC 6B●

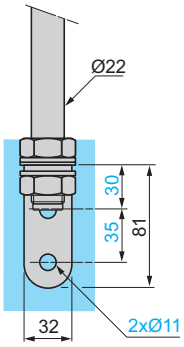


XVC 6B●5S



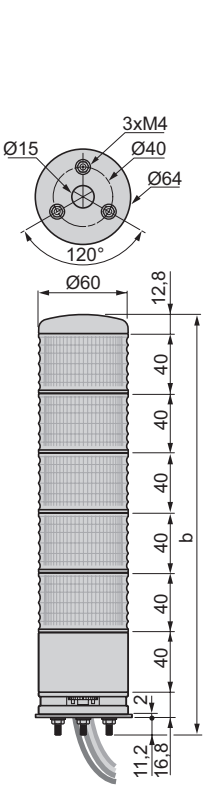
XVC 6M●, XVC 6M●5S



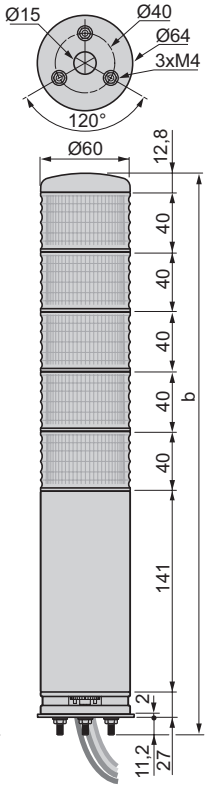


For mounting on horizontal support (direct or with fixing plate)

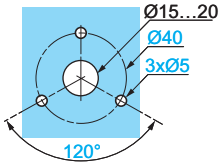
XVC 6B●K, 6B●5SK



XVC 6M●K, XVC 6M●5SK



Panel cut-out



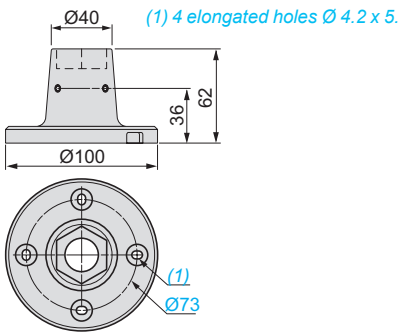
Height of pre-assembled and pre-cabled tower lights

No. of illuminated units	b Without buzzer (mm)	b1 With buzzer (mm)	
		XVC 6B●5S	XVC 6M●, XVC 6M●5S
1 stage	428.3	483.1	599.8
2 stages	468.3	523.1	639.8
3 stages	508.3	563.1	679.8
4 stages	548.3	603.1	719.8
5 stages	588.3	643.1	759.8

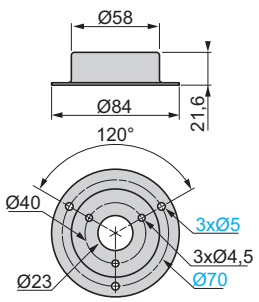
No. of illuminated units	b With or without buzzer (mm)	
	XVC 6B●K, XVC 6B●5SK	XVC 6M●K, XVC 6M●5SK
1 stage	120.8	232
2 stages	160.8	272
3 stages	200.8	312
4 stages	240.8	352
5 stages	280.8	392

Accessories for mounting on horizontal support

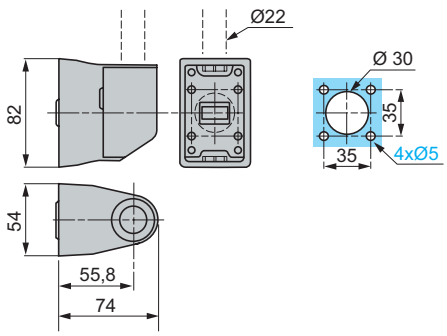
Fixing plate XVC Z02 for XVC 6●● / 6●●5S



Fixing plate XVC Z12 for XVC 6●●K / 6●●5SK



Wall mounting bracket XVC Z32 for XVC 6●● / 6●●5S



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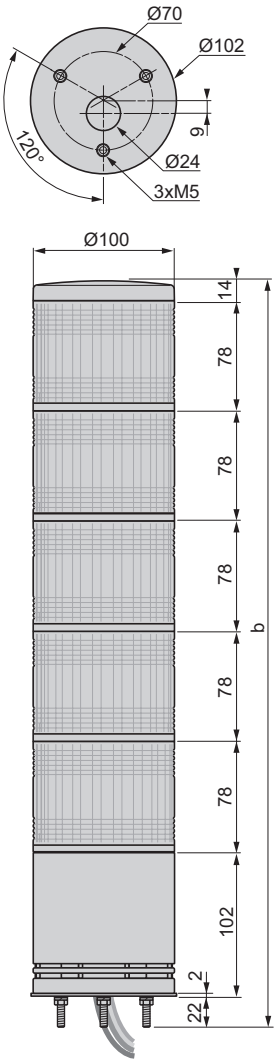
Signalling solutions
Monolithic tower lights
Harmony type XVC Ø 100 mm
Pre-assembled and pre-cabled tower lights

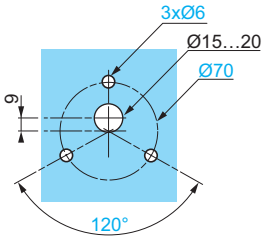
Pre-assembled and pre-cabled tower lights Ø 100 mm

For mounting on horizontal support (direct or with fixing plate)

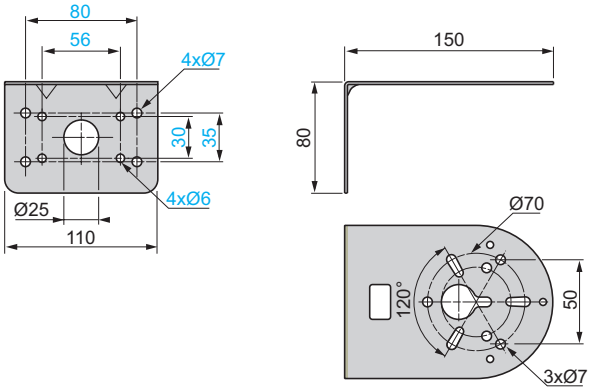
XVC 1●●K, XVC 1●●SK tower lights



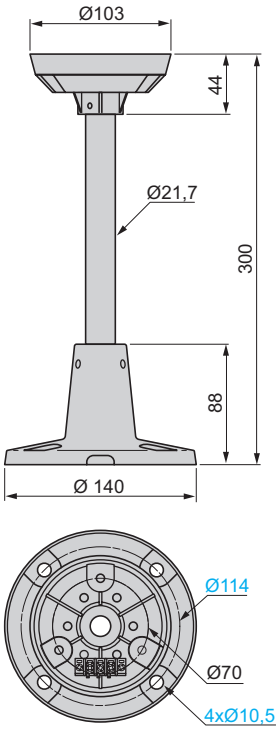
Panel cut-out



XVC Z23 fixing plate



XVC Z13 fixing plate



Height of pre-assembled and pre-cabled tower lights

No. of illuminated units	b (mm)
1	216
2	294
3	372
4	450
5	528

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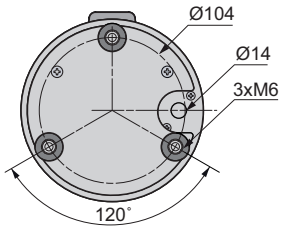
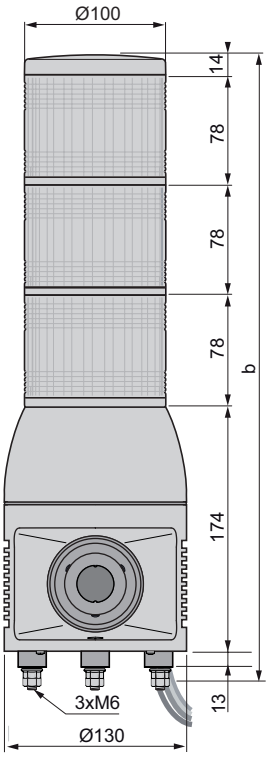
Pre-assembled and pre-cabled tower lights Ø 100 mm with siren

For mounting on horizontal support (direct or with fixing plate)

XVC 1●●HK tower lights





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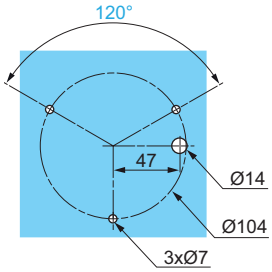
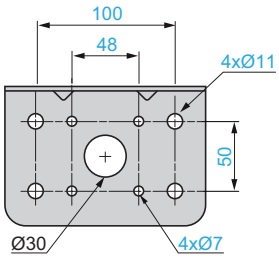
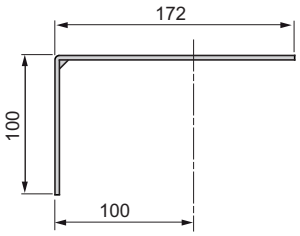


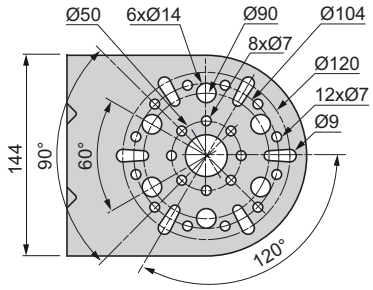
Height of pre-assembled and pre-cabled tower lights

No. of illuminated units	b (mm)
1	293
2	371
3	449

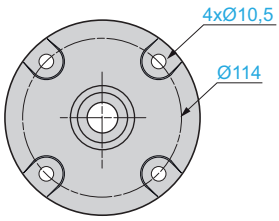
XVC Z24 fixing plate

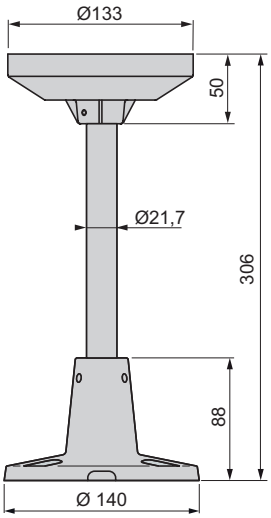


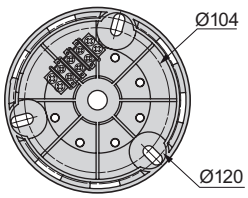




XVC Z14 fixing plate







4

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights and tower lights for customer assembly



Tower lights XVM supplied pre-assembled and pre-cabled, with 1, 2, 3 or 4 illuminated units, each one fitted with a buzzer and with a fixing base

Presentation

Ø 45 mm tower lights XVM are available in 2 forms:
■ **Pre-assembled and pre-cabled** by Schneider Electric.
The tower lights are supplied:
□ with 1, 2, 3 or 4 illuminated signalling units,
□ with or without buzzer,
□ fitted with a fixing base for mounting on a vertical support (only one support possible) or an horizontal support (2 types of support available).
Pre-assembled and pre-cabled Ø 45 mm tower lights XVM cannot be modified due to the wiring.

■ And as separate components (all catalogued) **for customer assembly** of variable composition units to meet particular requirements.

Light signalling

5 catalogued lens unit colours available: red, orange, green, clear and blue.
These illuminated units incorporate a BA 15d base that can be fitted (by simple 15° rotation) with the choice of light source:
□ 1 incandescent bulb,
□ 1 “Super Bright” LED, or
□ 1 “flash” discharge tube.
These 3 types of light source enable:
□ steady light signalling using an incandescent bulb or an LED *(1)*,
□ flashing light signalling using an LED,
□ “flash” light signalling using a “flash” discharge tube.

(1) A flashing function can also be obtained from a steady light LED by using a PLC output signal.

Audible signalling

The tower light is supplied with or without an audible (buzzer) unit depending on the configuration required. The buzzer is housed in the base unit of the tower light.
□ There is also a potentiometer in the base unit for adjusting the volume of the audible signal, up to a value of 85 decibels.
□ A selector enables the choice of signalling: continuous or intermittent tone.

Modularity

■ Tower lights XVM can also be assembled by the customer using separate components, all of which are catalogue listed:
□ either 5 illuminated units maximum, or
□ a base unit with buzzer and 4 illuminated units.

■ The light sources (incandescent bulb, Super Bright LED or “flash” discharge tube) are interchangeable. This enables, for example, the replacement of incandescent bulbs initially fitted in a tower light by LEDs (longer service life) in order to reduce maintenance operations. The current consumption of LEDs is very low and consequently, their usage has a definite effect on the reduction of power consumption.
■ The illuminated units easily fit together and electrical connections are made automatically.
■ Connections in the base unit for customer assembled indicator banks are made to a screw terminal block.

Cabling

Tower lights XVM supplied pre-assembled feature referenced wires with a wiring instructions label. Each signalling unit of the tower light is identified by a different wire colour.

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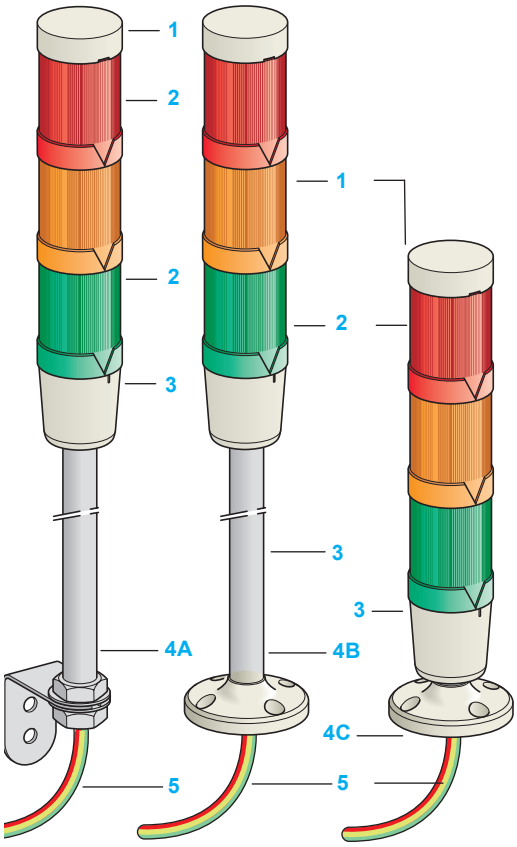
Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights and tower lights for customer assembly



Description

Pre-assembled and pre-cabled tower lights

The pre-assembled XVM indicator banks comprise:

1 A cover.

2 One, two, three or four coloured illuminated units (red, orange, green or blue). Each illuminated unit is fitted with an incandescent bulb, a base mounted Super Bright LED with integrated light diffuser or a "flash" discharge tube, depending on the catalogued model selected.

3 A base unit integrating the buzzer (depending on model).

4 A fixing base for mounting on a vertical or horizontal support (depending on model).

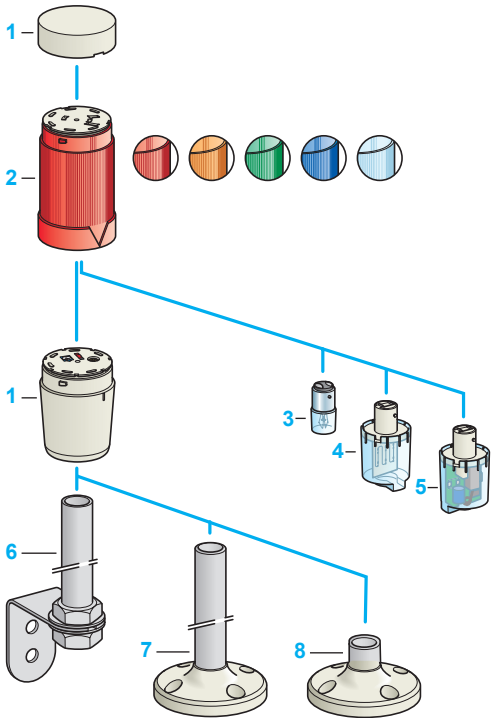
5 300 mm flying lead connections, each wire identified.

3 types of fixations are proposed:

4A A fixing base, comprising a 250 mm aluminium tube mounted on a bracket, for mounting on a vertical support.

4B A fixing base, comprising a 250 mm aluminium tube mounted on a plastic bracket, for mounting on an horizontal support.

4C A plastic fixing plate for direct mounting on the base unit.



Customer assembled tower lights

The customised composition of XVM tower lights is obtained by assembling:

1 A cover and a base unit, with or without integral buzzer.

2 5 illuminated units maximum *(1)*, red, orange, green, blue or clear lens (light source not included).

Each illuminated unit can be fitted with either:

3 an incandescent bulb,

4 a base mounted Super Bright LED with integrated light diffuser, or

5 a "flash" discharge tube.

Base mounted LEDs and "flash" discharge tubes can be fitted or removed without using a tool.

The assembly detailed above mounts on either:

6 an aluminium support tube (length 100, 250 or 400 mm) mounted on a fixing bracket,

7 an aluminium support tube (length 100, 250 or 400 mm) mounted on a plastic fixing plate,

8 a plastic fixing plate for direct mounting under the base unit.

(1) Maximum configuration possibilities:
- *5 illuminated units mounted on base unit without buzzer.*
- *4 illuminated units mounted on base unit fitted with buzzer.*

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights and tower lights for customer assembly

Environment

Degree of protection	Conforming to IEC 60529		IP 54 in horizontal position (XVM with plastic fixing base)
			IP 42 in vertical position (XVM with metal bracket)
			IP 40 in other positions (all types of XVM tower lights)
Product certifications			CCC
Approval			CE
Conformity to standards			EN/IEC 60947-1, EN/IEC 60947-5-1
Ambient air temperature	For storage	**°C**	- 25…+ 70
	For operation	**°C**	- 10…+ 50
Electric shock protection Conforming to IEC 61140	Mounted on aluminium support tube		Class I
	Mounted on base		Class II
Protective treatment			Standard version "TC"
Electronic components protection (LED and "flash")	Fuse to be connected in series on common	**A**	0.2 (~ 120…230 V)

Electrical characteristics

Light sources			**Incandescent bulbs**	**Super Bright LEDs**		**"Flash" discharge tube, 0.8 Joule**
				Steady light signalling	Flashing light signalling	
Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1	**V**	250			
Voltage limits	Conforming to IEC 60947-5-1		0.85…1.10 Un			
Light sources fixing type	For mounting in BA 15d base, push-and-turn (15°)		BA 15d base fitting			
Consumption	On ⎓ 24 V	**mA**	5 W max.	43	45	140 (on ~) 98 (on ⎓)
	On ~ 120 V	**mA**	5 W max.	16	16	33
	On ~ 230 V	**mA**	5 W max.	15	15	20
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 4			
Illuminating power	Average value for all colours	**cds/m²**	650	900	900	–
Flashing frequency	Nominal value	**Hz**	–	–	1	0.8
Audible unit (base unit fitted with buzzer)						
Consumption	On ⎓ 24 V	**mA**	65			
	On ~ 120 V	**mA**	45			
	On ~ 230 V	**mA**	30			
Power	Continuous or intermittent tone	**dB**	0…85 at 1 m			
	Fundamental frequency	**kHz**	4 for continuous tone			
Connection of illuminated and audible units						
Terminal referencing			□ 1 terminal referenced **N**: common to all 5 units, including base unit fitted with buzzer □ 1 terminal referenced **B**: for base unit fitted with buzzer □ 4 terminals referenced **1** - **2** - **3** - **4**: for 4 illuminated units mounted on base unit fitted with buzzer □ 5 terminals referenced **1** - **2** - **3** - **4** - **5**: for 5 illuminated units mounted on base unit without buzzer			
Connection	Flying leads on pre-cabled tower lights		Wire c.s.a.: 1 x 0.33 mm² / AWG 22 *(1)*			
	Screw terminals		Max.: 1 x 1.5 mm² / AWG 16 *(1)* Min.: 1 x 0.33 mm² / AWG 22 *(1)*			

(1) AWG : American Wire Gauge.

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights

PF100900



XVM ●● RWSB
XVM ●●RSWSB

Pre-assembled and pre-cabled tower lights with one illuminated unit

Description	Light source (included)	Voltage (V)	Signalling colour *(1)*			Reference	Weight kg
			Steady	Flashing	"Flash"		
With fixing base for mounting on horizontal support (plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RWSB**	0.210
		∿ 120	R	–	–	**XVM G2RWSB**	0.210
		∿ 230	R	–	–	**XVM M2RWSB**	0.210
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RSWSB**	0.210
		∿ 120	R	–	–	**XVM G2RSWSB**	0.210
		∿ 230	R	–	–	**XVM M2RSWSB**	0.210
With fixing base for mounting on horizontal support (250 mm aluminium support tube + plastic fixing plate)							
Without buzzer"	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RHSB**	0.260
		∿ 120	R	–	–	**XVM G2RHSB**	0.260
		∿ 230	R	–	–	**XVM M2RHSB**	0.260
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RSHSB**	0.260
		∿ 120	R	–	–	**XVM G2RSHSB**	0.260
		∿ 230	R	–	–	**XVM M2RSHSB**	0.260
With fixing base for mounting on vertical support (250 mm aluminium support tube + metal bracket)							
Without buzzer	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RSB**	0.360
		∿ 120	R	–	–	**XVM G2RSB**	0.360
		∿ 230	R	–	–	**XVM M2RSB**	0.360
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R	–	–	**XVM B2RSSB**	0.360
		∿ 120	R	–	–	**XVM G2RSSB**	0.360
		∿ 230	R	–	–	**XVM M2RSSB**	0.360

PF100901



XVM ●●RSB
XVM ●●RSSB

(1) Signalling colour: R: red.

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights


PF100902

XVM ●●RAWSB
XVM ●●RASWSB


PF100917

XVM ●●RA
XVM ●●RASB
XVM ●●RAS
XVM ●●RASSB

Pre-assembled and pre-cabled tower lights with two illuminated units

Description	Light source (included)	Voltage (V)	Signalling colour *(1)* Steady	Flashing	"Flash"	Reference *(2)*	Weight kg
With fixing base for mounting on horizontal support (plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	⎓ 24	R-O	–	–	**XVM B2RAWSB**	0.270
		∿ 120	R-O	–	–	**XVM G2RAWSB**	0.270
		∿ 230	R-O	–	–	**XVM M2RAWSB**	0.270
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R-O	–	–	**XVM B2RASWSB**	0.270
		∿ 120	R-O	–	–	**XVM G2RASWSB**	0.270
		∿ 230	R-O	–	–	**XVM M2RASWSB**	0.270
With fixing base for mounting on vertical support (250 mm aluminium support tube + metal bracket)							
Without buzzer	Incandescent bulb, 5 W	⎓ 24	R-O	–	–	**XVM B1RA**	0.420
			R-G	–	–	**XVM B1RG**	0.420
		⎓ 120	R-O	–	–	**XVM G1RA**	0.420
			R-G	–	–	**XVM G1RG**	0.420
		⎓ 230	R-O	–	–	**XVM M1RA**	0.420
			R-G	–	–	**XVM M1RG**	0.420
	Super Bright LED With integral light diffuser	⎓ 24	R-O	–	–	**XVM B2RASB**	0.420
			R-G	–	–	**XVM B2RGSB**	0.420
			G	R	–	**XVM B2R5GSB**	0.420
			R	O	–	**XVM B2RA5SB**	0.420
			–	R-O	–	**XVM B2R5A5SB**	0.420
		∿ 120	R-O	–	–	**XVM G2RASB**	0.420
			R-G	–	–	**XVM G2RGSB**	0.420
			G	R	–	**XVM G2R5GSB**	0.420
			R	O	–	**XVM G2RA5SB**	0.420
			–	R-O	–	**XVM G2R5A5SB**	0.420
		∿ 230	R-O	–	–	**XVM M2RASB**	0.420
			R-G	–	–	**XVM M2RGSB**	0.420
			G	R	–	**XVM M2R5GSB**	0.420
			R	O	–	**XVM M2RA5SB**	0.420
			–	R-O	–	**XVM M2R5A5SB**	0.420
With buzzer integrated in base unit	Incandescent bulb, 5 W	⎓ 24	R-O	–	–	**XVM B1RAS**	0.420
			R-G	–	–	**XVM B1RGS**	0.420
		⎓ 120	R-O	–	–	**XVM G1RAS**	0.420
			R-G	–	–	**XVM G1RGS**	0.420
		⎓ 230	R-O	–	–	**XVM M1RAS**	0.420
			R-G	–	–	**XVM M1RGS**	0.420
	Super Bright LED With integral light diffuser	⎓ 24	R-O	–	–	**XVM B2RASSB**	0.420
			R-G	–	–	**XVM B2RGSSB**	0.420
			G	R	–	**XVM B2R5GSSB**	0.420
			R	O	–	**XVM B2RA5SSB**	0.420
			–	R-O	–	**XVM B2R5A5SSB**	0.420
		∿ 120	R-O	–	–	**XVM G2RASSB**	0.420
			R-G	–	–	**XVM G2RGSSB**	0.420
			G	R	–	**XVM G2R5GSSB**	0.420
			R	O	–	**XVM G2RA5SSB**	0.420
			–	R-O	–	**XVM G2R5A5SSB**	0.420
		∿ 230	R-O	–	–	**XVM M2RASSB**	0.420
			R-G	–	–	**XVM M2RGSSB**	0.420
			G	R	–	**XVM M2R5GSSB**	0.420
			R	O	–	**XVM M2RA5SSB**	0.420
			–	R-O	–	**XVM M2R5A5SSB**	0.420

(1) Signalling colour: R: red; O: orange; G: green.
(2) In the references, the colours are listed in same order as the mounting of the illuminated units (from top to bottom).

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights

PF100903



XVM ●●RAHSB
XVM ●●RGHSB

Pre-assembled and pre-cabled tower lights with two illuminated units *(continued)*

Description	Light source (included)	Voltage (V)	Signalling colour *(1)* Steady	Flashing	"Flash"	Reference *(2)*	Weight kg
With fixing base for mounting on horizontal support (250 mm aluminium support tube + plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	≂ 24	R-O	–	–	**XVM B2RAHSB**	0.320
			R-G	–	–	**XVM B2RGHSB**	0.320
		∿ 120	R-O	–	–	**XVM G2RAHSB**	0.320
			R-G	–	–	**XVM G2RGHSB**	0.320
		∿ 230	R-O	–	–	**XVM M2RAHSB**	0.320
			R-G	–	–	**XVM M2RGHSB**	0.320
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	≂ 24	R-O	–	–	**XVM B2RASHSB**	0.320
			R-G	–	–	**XVM B2RGSHSB**	0.320
		∿ 120	R-O	–	–	**XVM G2RASHSB**	0.320
			R-G	–	–	**XVM G2RGSHSB**	0.320
		∿ 230	R-O	–	–	**XVM M2RASHSB**	0.320
			R-G	–	–	**XVM M2RGSHSB**	0.320

Pre-assembled and pre-cabled tower lights with three illuminated units

Description	Light source (included)	Voltage (V)	Signalling colour *(1)* Steady	Flashing	"Flash"	Reference *(2)*	Weight kg
With fixing base for mounting on horizontal support (plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGWSB**	0.320
		∿ 120	R-O-G	–	–	**XVM G2RAGWSB**	0.320
		∿ 230	R-O-G	–	–	**XVM M2RAGWSB**	0.320
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGSWSB**	0.320
		∿ 120	R-O-G	–	–	**XVM G2RAGSWSB**	0.320
		∿ 230	R-O-G	–	–	**XVM M2RAGSWSB**	0.320
With fixing base for mounting on horizontal support (250 mm aluminium support tube + plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGHSB**	0.380
			R-G	O	–	**XVM B2RA5GHSB**	0.380
		∿ 120	R-O-G	–	–	**XVM G2RAGHSB**	0.380
			R-G	O	–	**XVM G2RA5GHSB**	0.380
		∿ 230	R-O-G	–	–	**XVM M2RAGHSB**	0.380
			R-G	O	–	**XVM M2RA5GHSB**	0.380
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGSHSB**	0.380
			R-G	O	–	**XVM B2RA5GSHSB**	0.380
		∿ 120	R-O-G	–	–	**XVM G2RAGSHSB**	0.380
			R-G	O	–	**XVM G2RA5GSHSB**	0.380
		∿ 230	R-O-G	–	–	**XVM M2RAGSHSB**	0.380
			R-G	O	–	**XVM M2RA5GSHSB**	0.380

PF100907



PF100904



XVM ●●RAGHSB
XVM ●●RAGSHSB

XVM ●●RAGWSB
XVM ●●RAGSWSB

(1) Signalling colour: R: red; O: orange; G: green.
(2) In the references, the colours are listed in same order as the mounting of the illuminated units (from top to bottom).

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights



XVM ●●RAG
XVM ●●RAGSB



XVM ●●RAGS
XVM ●●RAGSSB

Pre-assembled and pre-cabled tower lights with three illuminated units *(continued)*

Description	Light source (included)	Voltage (V)	Signalling colour *(1)* Steady	Flashing	"Flash"	Reference *(2)*	Weight kg
With fixing base for mounting on vertical support (250 mm aluminium support tube + metal bracket)							
Without buzzer	Incandescent bulb, 5 W	≂ 24	R-O-G	–	–	**XVM B1RAG**	0.480
			O-G	–	R	**XVM B1R6AG**	0.480
		≂ 120	R-O-G	–	–	**XVM G1RAG**	0.480
			O-G	–	R	**XVM G1R6AG**	0.480
		≂ 230	R-O-G	–	–	**XVM M1RAG**	0.480
			O-G	–	R	**XVM M1R6AG**	0.480
	Super Bright LED with integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGSB**	0.480
			O-G	–	R	**XVM B2R6AGSB**	0.480
			R-G	O	–	**XVM B2RA5GSB**	0.480
			G	R-O	–	**XVM B2R5A5GSB**	0.480
			G	O	R	**XVM B2R6A5GSB**	0.480
		∼ 120	R-O-G	–	–	**XVM G2RAGSB**	0.480
			O-G	–	R	**XVM G2R6AGSB**	0.480
			R-G	O	–	**XVM G2RA5GSB**	0.480
			G	R-O	–	**XVM G2R5A5GSB**	0.480
			G	O	R	**XVM G2R6A5GSB**	0.480
		∼ 230	R-O-G	–	–	**XVM M2RAGSB**	0.480
			O-G	–	R	**XVM M2R6AGSB**	0.480
			R-G	O	–	**XVM M2RA5GSB**	0.480
			G	R-O	–	**XVM M2R5A5GSB**	0.480
			G	O	R	**XVM M2R6A5GSB**	0.480
With buzzer integrated in base unit	Incandescent bulb, 5 W	≂ 24	R-O-G	–	–	**XVM B1RAGS**	0.480
			O-G	–	R	**XVM B1R6AGS**	0.480
		≂ 120	R-O-G	–	–	**XVM G1RAGS**	0.480
			O-G	–	R	**XVM G1R6AGS**	0.480
		≂ 230	R-O-G	–	–	**XVM M1RAGS**	0.480
			O-G	–	R	**XVM M1R6AGS**	0.480
	Super Bright LED with integral light diffuser	≂ 24	R-O-G	–	–	**XVM B2RAGSSB**	0.480
			O-G	–	R	**XVM B2R6AGSSB**	0.480
			R-G	O	–	**XVM B2RA5GSSB**	0.480
			G	R-O	–	**XVM B2R5A5GSSB**	0.480
			G	O	R	**XVM B2R6A5GSSB**	0.480
		∼ 120	R-O-G	–	–	**XVM G2RAGSSB**	0.480
			O-G	–	R	**XVM G2R6AGSSB**	0.480
			R-G	O	–	**XVM G2RA5GSSB**	0.480
			G	R-O	–	**XVM G2R5A5GSSB**	0.480
			G	O	R	**XVM G2R6A5GSSB**	0.480
		∼ 230	R-O-G	–	–	**XVM M2RAGSSB**	0.480
			O-G	–	R	**XVM M2R6AGSSB**	0.480
			R-G	O	–	**XVM M2RA5GSSB**	0.480
			G	R-O	–	**XVM M2R5A5GSSB**	0.480
			G	O	R	**XVM M2R6A5GSSB**	0.480

(1) Signalling colour: R: red; O: orange; G: green.
(2) In the references, the colours are listed in same order as the mounting of the illuminated units (from top to bottom).

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights

PF100909



XVM ●●RAGBWSB
XVM ●●RAGBSWSB

PF100910



XVM ●●RAGBHSB
XVM ●●RAGBSHSB

Pre-assembled and pre-cabled tower lights with four illuminated units

Description	Light source (included)	Voltage (V)	Signalling colour (1) Steady	Flashing	"Flash"	Reference (2)	Weight kg
With fixing base for mounting on horizontal support (plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBWSB**	0.390
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBWSB**	0.390
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBWSB**	0.390
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBSWSB**	0.390
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBSWSB**	0.390
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBSWSB**	0.390
With fixing base for mounting on horizontal support (250 mm aluminium support tube + plastic fixing plate)							
Without buzzer	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBHSB**	0.440
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBHSB**	0.440
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBHSB**	0.440
With buzzer integrated in base unit	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBSHSB**	0.440
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBSHSB**	0.440
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBSHSB**	0.440
With fixing base for mounting on vertical support (250 mm aluminium support tube + metal bracket)							
Without buzzer	Incandescent bulb, 5 W	⎓ 24	R-O-G-B	–	–	**XVM B1RAGB**	0.540
		⎓ 120	R-O-G-B	–	–	**XVM G1RAGB**	0.540
		⎓ 230	R-O-G-B	–	–	**XVM M1RAGB**	0.540
	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBSB**	0.540
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBSB**	0.540
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBSB**	0.540
With buzzer integrated in base unit	Incandescent bulb, 5 W	⎓ 24	R-O-G-B	–	–	**XVM B1RAGBS**	0.540
		⎓ 120	R-O-G-B	–	–	**XVM G1RAGBS**	0.540
		⎓ 230	R-O-G-B	–	–	**XVM M1RAGBS**	0.540
	Super Bright LED With integral light diffuser	⎓ 24	R-O-G-B	–	–	**XVM B2RAGBSSB**	0.540
		∿ 120	R-O-G-B	–	–	**XVM G2RAGBSSB**	0.540
		∿ 230	R-O-G-B	–	–	**XVM M2RAGBSSB**	0.540

(1) Signalling colour: R: red; O: orange; G: green; B: blue.
(2) In the references, the colours are listed in same order as the mounting of the illuminated units (from top to bottom).

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Tower lights for customer assembly


PF100914

XVM C3●


PF100918

XVM C29●

Customer assembled tower lights

Description	Details	Voltage V	Colour	Reference	Weight kg
Illuminated units					
Lens units only for BA 15d base fitting bulb	Bulb not included, 5 W max.	Up to ≂ 230	Green	**XVM C33**	0.040
			Red	**XVM C34**	0.040
			Orange	**XVM C35**	0.040
			Blue	**XVM C36**	0.040
			Clear	**XVM C37**	0.040
Base mounting units					
Base unit and cover	Base unit without buzzer	–	White	**XVM C21**	0.100
	Base unit with integral 85 dB buzzer	≂ 24	White	**XVM C29B**	0.100
		∿ 120	White	**XVM C29G**	0.100
		∿ 230	White	**XVM C29M**	0.100
Base unit and cover + fixing base (250 mm support tube + bracket)	Base unit without buzzer	–	White	**XVM C213T**	0.300
	Base unit with integral 85 dB buzzer	≂ 24	White	**XVM C29B3T**	0.300
		∿ 120	White	**XVM C29G3T**	0.300
		∿ 230	White	**XVM C29M3T**	0.300


121255

XVM Z02


121257

XVM Z02T


PF100915

XVM Z06

Description	Length mm	Height under base unit mm	Colour	Reference	Weight kg
Fixing bases					
Ø 20 mm aluminium support tube + plastic fixing plate	100	106	White	**XVM Z02**	0.100
	250	256	White	**XVM Z03**	0.100
	400	406	White	**XVM Z04**	0.200
Ø 20 mm aluminium support tube + metal bracket	100	113	–	**XVM Z02T**	0.200
	250	263	–	**XVM Z03T**	0.200
	400	413	–	**XVM Z04T**	0.300
Plastic fixing plate	–	–	White	**XVM Z06**	0.300

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Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Tower lights for customer assembly


121259

DL1 ED●S


121260

DL2 E●●●SB


121261

DL6 B●

Customer assembled tower lights *(continued)*

Light sources for lens units *(1)*

Description	Signalling	Sold in lots of	Voltage V	Colour	Unit reference	Weight kg
Incandescent bulbs, 5 W	Steady light	10	≂ 24	–	**DL1 EDBS**	0.007
			≂ 120	–	**DL1 EDGS**	0.007
			≂ 230	–	**DL1 EDMS**	0.007
Super Bright LEDs with integral light diffuser	□ Steady light: replace the ● by **D** in the references shown on the right. □ Flashing light: replace the ● by **K** in the references shown on the right.	1	≂ 24	White	**DL2 E●B1SB**	0.020
				Green	**DL2 E●B3SB**	0.020
				Red	**DL2 E●B4SB**	0.020
				Blue	**DL2 E●B6SB**	0.020
				Orange	**DL2 E●B8SB**	0.020
		1	∼ 120	White	**DL2 E●G1SB**	0.020
				Green	**DL2 E●G3SB**	0.020
				Red	**DL2 E●G4SB**	0.020
				Blue	**DL2 E●G6SB**	0.020
				Orange	**DL2 E●G8SB**	0.020
		1	∼ 230	White	**DL2 E●M1SB**	0.020
				Green	**DL2 E●M3SB**	0.020
				Red	**DL2 E●M4SB**	0.020
				Blue	**DL2 E●M6SB**	0.020
				Orange	**DL2 E●M8SB**	0.020
"Flash" discharge tubes, 0.8 Joule	"Flash"	1	≂ 24	–	**DL6 BB**	0.022
			∼ 120	–	**DL6 BG**	0.022
			∼ 230	–	**DL6 BM**	0.022

(1) All light sources are push-and-turn (15°) mounting in a BA 15d base within the illuminated units.

Accessories for pre-assembled/pre-cabled and customer assembled tower lights

Description	Details	Reference	Weight kg
Cover only	White	**XVM Z081**	–
Mounting tool	For fitting and removal of incandescent bulbs type DL1	**ZBZ X13**	–

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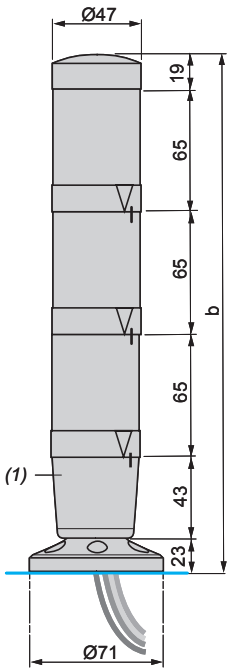
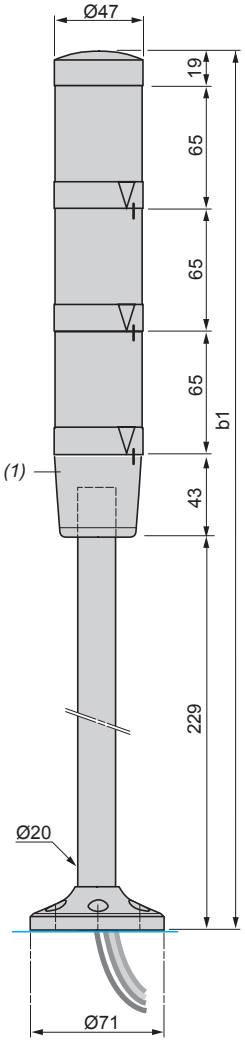
Signalling solutions
Modular tower lights
Harmony type XVM Ø 45 mm
Pre-assembled/pre-cabled tower lights

Pre-assembled and pre-cabled tower lights

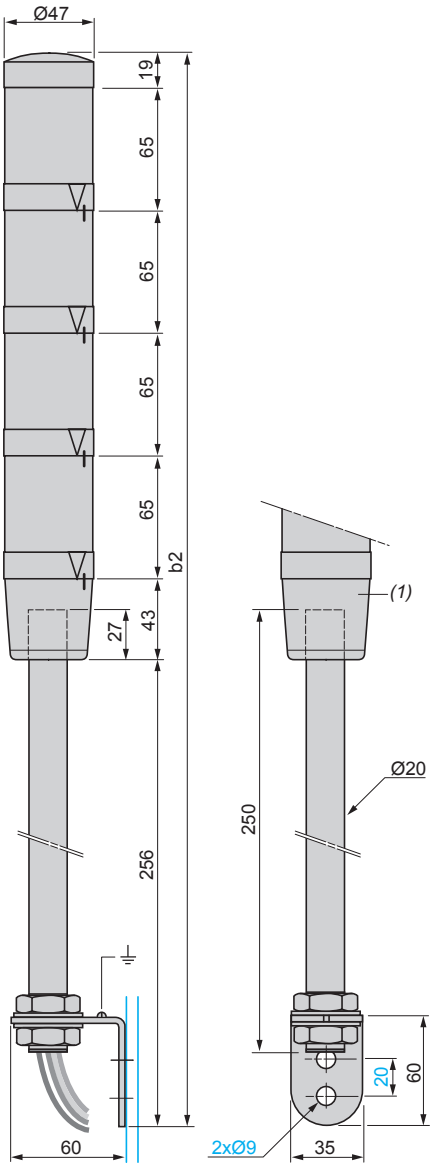
With fixing base for mounting on horizontal support (plastic fixing plate)



With fixing base for mounting on horizontal support (support tube + plastic fixing plate)



With fixing base for mounting on horizontal support (support tube + metal bracket)

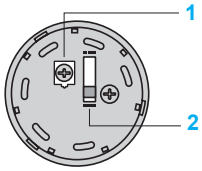


(1) Base unit with or without buzzer.

Height of pre-assembled and pre-cabled tower lights

Number of illuminated units	b (mm)	b1 (mm)	b2 (mm)
1 unit	150	356	383
2 units	215	421	448
3 units	280	486	513
4 units	345	551	578

Adjustment of audible signal on buzzer type unit



Base unit with integral buzzer (viewed from above)

1 Volume adjustment potentiometer: 0 to 85 dB. Use either a cross headed or flat tipped screwdriver.

2 2-position selector for type of audible signal:
- —— continuous tone
- - - - intermittent tone

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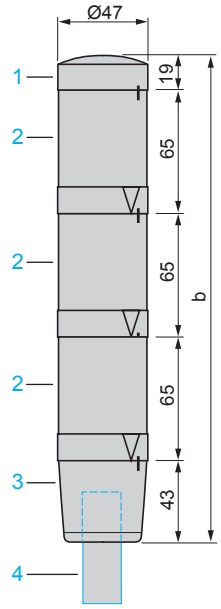
Harmony type XVM Ø 45 mm
Tower lights for customer assembly

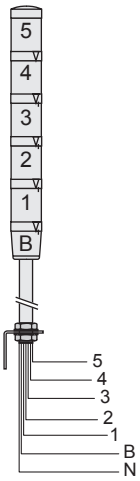
Customer assembled tower lights



1 Cover
2 Illuminated unit
3 Base unit (with or without buzzer)
4 Fixing base (see below)

Number of illuminated units (ref. 2)	b (mm)
1	127
2	192
3	257
4	322
5	387

Connecting scheme



Indicator bank with buzzer
(4 illuminated units max.)
4: 4th illuminated unit (yellow wire)
3: 3rd illuminated unit (green wire)
2: 2nd illuminated unit (white wire)
1: 1st illuminated unit (blue wire)
N: common (black wire)
B: Buzzer (grey wire)

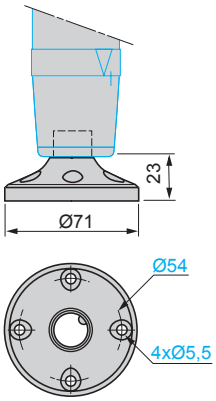
Indicator bank without buzzer
5: 5th illuminated unit (red wire)
4: 4th illuminated unit (yellow wire)
3: 3rd illuminated unit (green wire)
2: 2nd illuminated unit (white wire)
1: 1st illuminated unit (blue wire)
N: common (black wire)

Maximum capacity for wiring through support tube:
- 6 wires x 1 mm²,
- 5 wires x 1.5 mm²

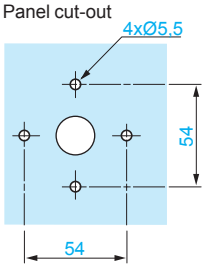
4

Fixing bases

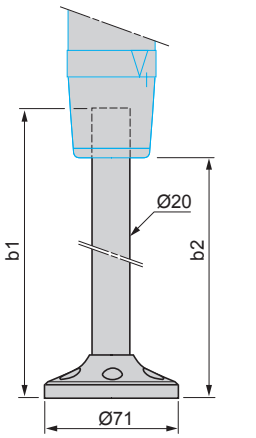
XVM Z06, for mounting on horizontal support



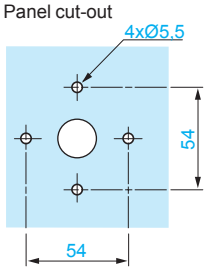
Panel cut-out



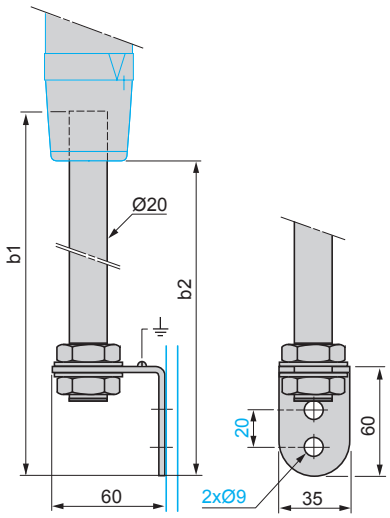
XVM Z0●, for mounting on horizontal support



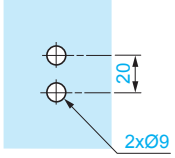
Panel cut-out



XVM Z0●T, for mounting on vertical support



Panel cut-out



Support tube length	b1 (tube + plate)	b2 (height under base unit)
100	106	79
250	256	229
400	406	379

Support tube length	b1 (tube + bracket)	b2 (height under base unit)
100	133	106
250	283	256
400	433	406

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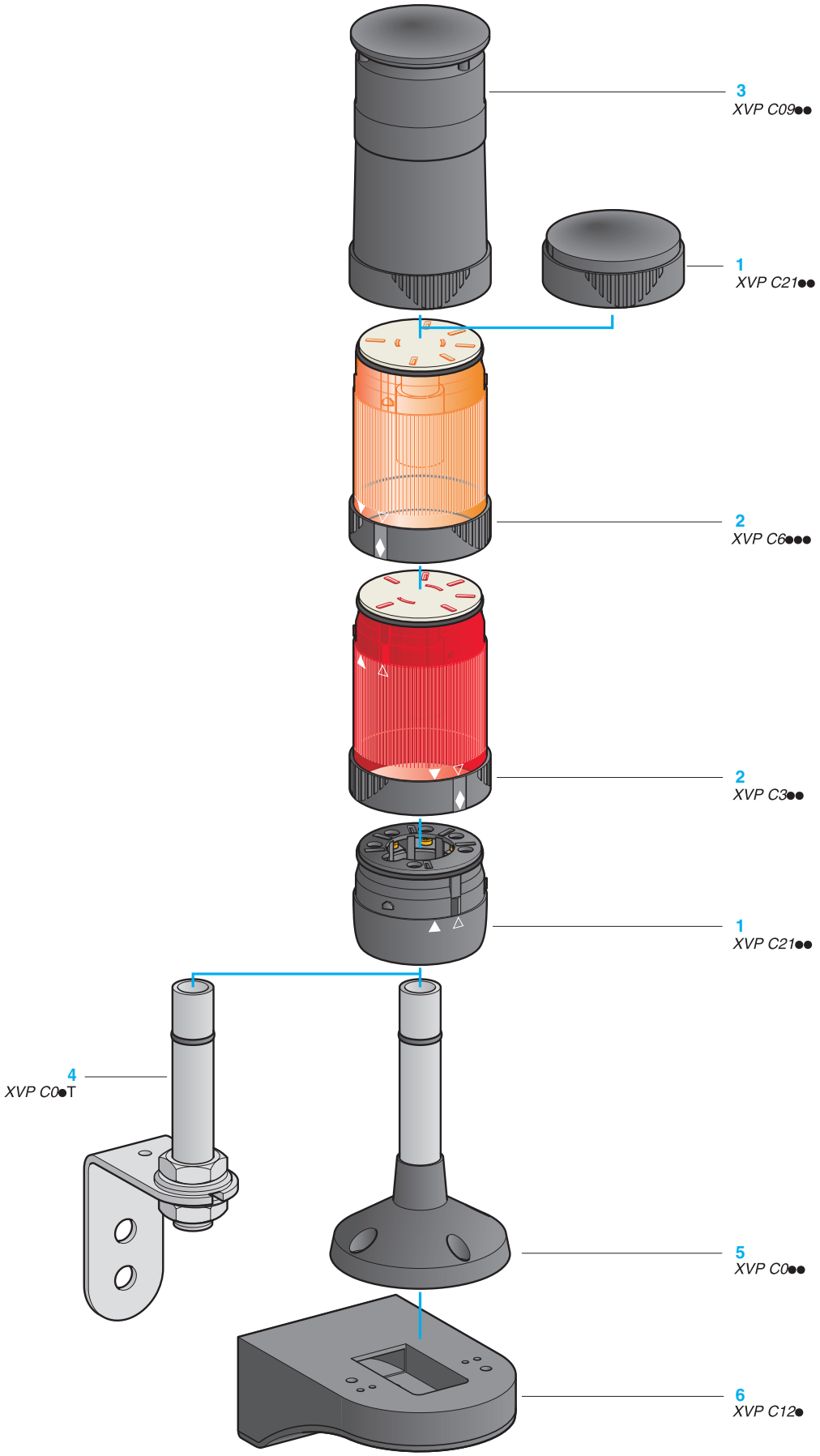
Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)



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Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)

Tower lights XVP C are visual or audible signalling units for indicating, throughout 360° and at a distance, the various states or operation sequences of a machine or installation.
Their reduced diameter (50 mm) makes them particularly suitable for use on small equipment.
In addition, the availability of two versions (aesthetic black or cream), makes them ideal for use in all sectors of activity: light industry, electronic, tertiary sector, food/drink processing.

The tower light

Customer assembled product

Variable composition assembly of illuminated and audible units which are supplied as separate items (assembly by user).
The tower light comprises:
1 a base unit with bottom cable entry, a cover for the top unit,
2 1 to 5 illuminated units with steady, flashing or “flash” light signalling (colours: green, red, orange, blue, clear or yellow).
3 or 1 audible unit (always mounted at the top of the bank) + 4 illuminated units.

■ The illuminated or audible units stack vertically and are easily locked and unlocked using an integral clamping ring. Electrical connections between each unit are made automatically.
■ For tower lights XVP C, several illuminated “flash” units can be mounted.
■ The flashing illuminated units are only available in the LED version and incorporate BA 15d base mounted flashing LEDs.

Accessories

4 Threaded aluminium support tube with fixing bracket, for heights beneath the base unit of 77, 227 or 377 mm.
5 Aluminium support tube with integral black or cream fixing base, for heights beneath the base unit of 89, 237 or 387 mm, for direct mounting on the machine or on a vertical support 6.

Installation

Mounting

■ Base unit fixed directly onto panel, or
■ using support tube with integral fixing base, or
■ using threaded support tube with metal fixing bracket, or
■ using support tube with integral fixing base, mounted on a fixing plate for use on a vertical support.

Cabling

By means of terminal block incorporated in base unit. The screw and captive cable clamp terminals are protected to prevent any accidental contact with live parts.
Cream coloured base units are available for use with eyelet tags.

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Dimensions: page 4/36

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Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)

Environment characteristics

Product certifications	Standard version			CSA, CE marking, cULus
Conformity to standards				EN/IEC 60947-5-1
Protective treatment	Standard version			"TC"
Ambient air temperature	For storage		**°C**	- 40…+ 70
	For operation	Illuminated units with steady light signalling	**°C**	- 25…+ 50 with 7 W incandescent bulb - 25…+ 50 with LED
		Illuminated "flash" units (discharge tube) Audible units	**°C**	- 25…+ 50
Electric shock protection conforming to IEC 61140	Mounted on support tube			Class I
	Mounted on base unit			Class II
Degree of protection	Conforming to IEC 60529			- IP 65 for illuminated units - IP 43 for audible units
Material	Illuminated units			Polycarbonate and Polyamide
	Base unit and cover			Acrylic Butadiene-Styrene + Polycarbonate and Polyamide
	Support tube + fixing plate			Aluminium and Acrylic Butadiene-Styrene + Polycarbonate

Electrical characteristics

Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1		**V**	250
Voltage limits	Conforming to IEC 60947-5-1		**V**	0.85 to 1.10 Un (Un: nominal voltage)
Consumption	LED unit	Steady light signalling	**mA**	⎓ 24 V: < 47 ~ 120 V: < 17 ~ 230 V: < 17
		Flashing light signalling	**mA**	⎓ 24 V: < 47 ~ 120 V: < 17 ~ 230 V: < 17
	Illuminated "flash" unit (discharge tube)	On power-up	**mA** **mA** **mA**	⎓ 24 V: ≤ 100 ~ 120 V: ≤ 20 ~ 230 V: ≤ 11
	Audible units		**mA** **mA** **mA**	⎓ 24 V: ≤ 15 ~ 120 V: ≤ 15 ~ 230 V: ≤ 12
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1		**kV**	U imp = 4
Light source	Illuminated units with steady or flashing light signalling			LEDs: degree of pollution 2 Incandescent bulbs with BA 15d base fitting, maximum power 7 W
Illuminating power	Illuminated units with steady light signalling		**cds**	2.4 with clear lens unit (7 W incandescent bulb)
	Illuminated "flash" units (discharge tube)		**cds**	1.2 (24 V) with clear lens unit (0.3 J tube), 5 (120…230 V) with clear lens unit (0.6 J tube)
Audible unit	Continuous or intermittent tone		**dB**	Adjustable: 85 ± 3 max., 55 ± 3 min. at 1 m
	Fundamental frequency		**kHz**	10 adjustable levels
Terminal referencing	Common to all 5 units			1 terminal referenced -/C
	Depending on number of units			1 or 5 terminals referenced +/1 to +/5
Connection	Maximum clamping capacity on protected, ready-to-tighten, screw and captive cable clamp terminals		**mm²**	1 x 1.5 with cable end
Frequency of illuminated units	Illuminated "flash" units (discharge tube)		**Hz**	0.6…2
	Flashing illuminated units		**Hz**	1
Service life in rapidly ageing environment	Illuminated "flash" units (discharge tube) Audible units		**H**	> 1000, continuous (climatic cycle - 25 °C…+ 50 °C)

Presentation: page 4/31 References: page 4/33 Dimensions: page 4/36

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Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)
Illuminated units

530419



XVP C3●

530420



XVP C3●W

Illuminated units with steady or flashing light signalling for BA 15d bulb or LED

Description	Light source, to be ordered separately	Colour	Reference	Weight kg
With black clamping ring	Incandescent bulb 7 W max. 250 V max. or LED	Green	**XVP C33**	0.100
		Red	**XVP C34**	0.100
		Orange	**XVP C35**	0.100
		Blue	**XVP C36**	0.100
		Clear	**XVP C37**	0.100
		Yellow	**XVP C38**	0.100
With cream clamping ring	Incandescent bulb 7 W max. 250 V max. or LED	Green	**XVP C33W**	0.100
		Red	**XVP C34W**	0.100
		Orange	**XVP C35W**	0.100
		Blue	**XVP C36W**	0.100
		Clear	**XVP C37W**	0.100
		Yellow	**XVP C38W**	0.100

BA 15d bulbs and LEDs

Description	Characteristics		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs BA 15d base fitting	24 V	4 W	10	**DL1 BEBS**	0.090
	120 V	5 W	10	**DL1 BEGS**	0.090
	230 V	5 W	10	**DL1 BEMS**	0.090
	12 V	7 W	10	**DL1 BEJ**	0.090
	24 V	6.5 W	10	**DL1 BEB**	0.090
	48 V	6 W	10	**DL1 BEE**	0.090
	120 V	7 W	10	**DL1 BEG**	0.090
	230 V	7 W	10	**DL1 BEM**	0.090
LEDs BA 15d base fitting Protected LED	≂ 24 V	White	1	**DL1 BDB1**	0.015
		Green	1	**DL1 BDB3**	0.015
		Red	1	**DL1 BDB4**	0.015
		Orange	1	**DL1 BDB5**	0.015
		Blue	1	**DL1 BDB6**	0.015
		Yellow	1	**DL1 BDB8**	0.015
	~ 120 V	White	1	**DL1 BDG1**	0.015
		Green	1	**DL1 BDG3**	0.015
		Red	1	**DL1 BDG4**	0.015
		Orange	1	**DL1 BDG5**	0.015
		Blue	1	**DL1 BDG6**	0.015
		Yellow	1	**DL1 BDG8**	0.015
	~ 230 V	White	1	**DL1 BDM1**	0.015
		Green	1	**DL1 BDM3**	0.015
		Red	1	**DL1 BDM4**	0.015
		Orange	1	**DL1 BDM5**	0.015
		Blue	1	**DL1 BDM6**	0.015
		Yellow	1	**DL1 BDM8**	0.015
Flashing LEDs BA 15d base fitting Protected LED	≂ 24 V	White	1	**DL1 BKB1**	0.015
		Green	1	**DL1 BKB3**	0.015
		Red	1	**DL1 BKB4**	0.015
		Orange	1	**DL1 BKB5**	0.015
		Blue	1	**DL1 BKB6**	0.015
		Yellow	1	**DL1 BKB8**	0.015
	~ 120 V	White	1	**DL1 BKG1**	0.015
		Green	1	**DL1 BKG3**	0.015
		Red	1	**DL1 BKG4**	0.015
		Orange	1	**DL1 BKG5**	0.015
		Blue	1	**DL1 BKG6**	0.015
		Yellow	1	**DL1 BKG8**	0.015
	~ 230 V	White	1	**DL1 BKM1**	0.015
		Green	1	**DL1 BKM3**	0.015
		Red	1	**DL1 BKM4**	0.015
		Orange	1	**DL1 BKM5**	0.015
		Blue	1	**DL1 BKM6**	0.015
		Yellow	1	**DL1 BKM8**	0.015

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Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)
Illuminated and audible units

530423



XVP C6●●

530424



XVP C6●●W

Illuminated "flash" units with discharge tube

Description	Voltage	Colour	Reference	Weight kg
With black clamping ring	"Flash" discharge tube (1 Joule) ⎓ 24 V	Green	**XVP C6B3**	0.120
		Red	**XVP C6B4**	0.120
		Orange	**XVP C6B5**	0.120
		Blue	**XVP C6B6**	0.120
		Clear	**XVP C6B7**	0.120
		Yellow	**XVP C6B8**	0.120
	"Flash" discharge tube (0.6 Joules) ∿ 120 V	Green	**XVP C6G3**	0.115
		Red	**XVP C6G4**	0.115
		Orange	**XVP C6G5**	0.115
		Blue	**XVP C6G6**	0.115
		Clear	**XVP C6G7**	0.115
		Yellow	**XVP C6G8**	0.115
	"Flash" discharge tube (0.6 Joules) ∿ 230 V	Green	**XVP C6M3**	0.115
		Red	**XVP C6M4**	0.115
		Orange	**XVP C6M5**	0.115
		Blue	**XVP C6M6**	0.115
		Clear	**XVP C6M7**	0.115
		Yellow	**XVP C6M8**	0.115
With cream clamping ring	"Flash" discharge tube (1 Joule) ⎓ 24 V	Green	**XVP C6B3W**	0.120
		Red	**XVP C6B4W**	0.120
		Orange	**XVP C6B5W**	0.120
		Blue	**XVP C6B6W**	0.120
		Clear	**XVP C6B7W**	0.120
		Yellow	**XVP C6B8W**	0.120
	"Flash" discharge tube (0.6 Joules) ∿ 120 V	Green	**XVP C6G3W**	0.115
		Red	**XVP C6G4W**	0.115
		Orange	**XVP C6G5W**	0.115
		Blue	**XVP C6G6W**	0.115
		Clear	**XVP C6G7W**	0.115
		Yellow	**XVP C6G8W**	0.115
	"Flash" discharge tube (0.6 Joules) ∿ 230 V	Green	**XVP C6M3W**	0.115
		Red	**XVP C6M4W**	0.115
		Orange	**XVP C6M5W**	0.115
		Blue	**XVP C6M6W**	0.115
		Clear	**XVP C6M7W**	0.115
		Yellow	**XVP C6M8W**	0.115

530425



XVP C09●

530426



XVP C09●W

Audible units

Description	Voltage	Colour	Reference	Weight kg
Buzzer, adjustable 55…85 dB at 1 m	⎓ 24 V	Black	**XVP C09B**	0.153
	∿ 120 V	Black	**XVP C09G**	0.153
	∿ 230 V	Black	**XVP C09M**	0.153
	⎓ 24 V	Cream	**XVP C09BW**	0.153
	∿ 120 V	Cream	**XVP C09GW**	0.153
	∿ 230 V	Cream	**XVP C09MW**	0.153

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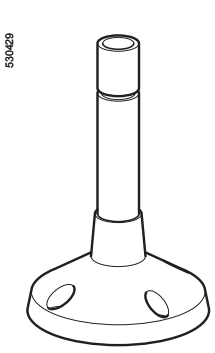
Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)
Base units, covers and accessories



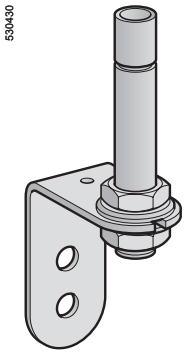
XVP C21



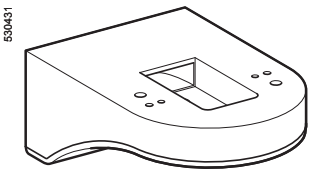
XVP C21W●



XVP C0●●



XVP C0●T



XVP C12●

Base units

Base units for direct or tube fixing

Description	Colour	Reference	Weight kg
Base unit + cover for bared wires or wires with cable end	Black	**XVP C21**	0.125
	Cream	**XVP C21W**	0.125
Base unit + cover for eyelet tags	Cream	**XVP C21WR**	0.125

Accessories

Description	Height under base unit mm	Reference	Weight kg
Aluminium support tube with integral black fixing base	89	**XVP C02**	0.112
	237	**XVP C03**	0.173
	387	**XVP C04**	0.253
Aluminium support tube with integral cream fixing base	89	**XVP C02W**	0.112
	237	**XVP C03W**	0.173
	387	**XVP C04W**	0.253
Threaded aluminium support tube + stainless steel fixing bracket	77	**XVP C02T**	0.245
	227	**XVP C03T**	0.306
	377	**XVP C04T**	0.386

Description	Application	Reference	Weight kg
Fixing plate for use on vertical support, black	For mounting XVP C0●● support tubes with integral fixing base	**XVP C12**	0.083
Fixing plate for use on vertical support, cream	For mounting XVP C0●● support tubes with integral fixing base	**XVP C12W**	0.083
Bulb mounting and removal tool	–	**XVP CX13**	0.015

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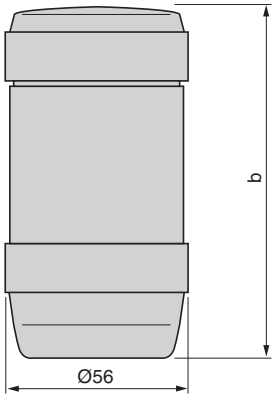
Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)

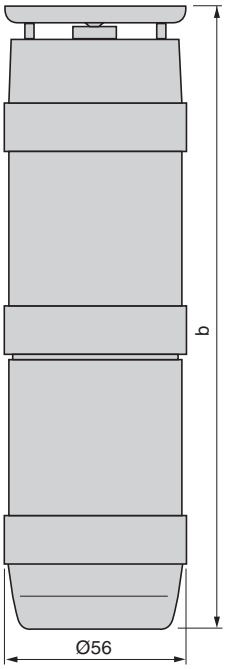
Tower lights XVP C●●●

Without audible unit



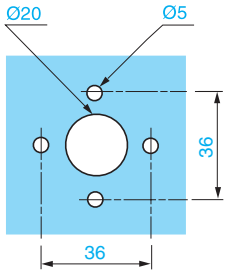
Number of illuminated units	b
1	108
2	170
3	232
4	294
5	356

With audible unit



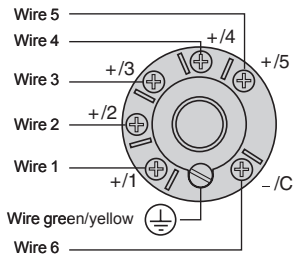
Number of units: Illuminated	+ Audible	b
0	+ 1	129
1	+ 1	194
2	+ 1	256
3	+ 1	318
4	+ 1	380

Panel cut-out for direct fixing (on base unit XVP C21●●)

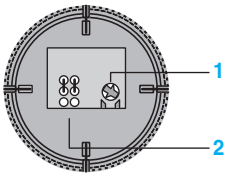


Installation

Connections



Adjustment of audible signal for buzzers type XVP C09●



1 Volume adjustment potentiometer: 55…85 dB. Use either a cross headed or flat tipped screwdriver.
2 Adjustment of type of audible signal according to position of 2 links. Use flat-nose pliers.
3 10 configurations are possible, see table below. Factory set on position **5**: continuous tone.

3	Position of links	Type of audible signal		Position of links	Type of audible signal
1	5 6 / 1 2	Hz 1000 / 800, 0,25, 0,25, s	6	5 6 / 1 2	
2	5 6 / 1 2	Hz 1200 / 500, 3, 0,5, s	7	5 6 / 1 2	Hz 1000 / 800, 0,14, s
3	5 6 / 1 2	Hz 1200 / 500, 1, s	8	5 6 / 1 2	Hz 2900 / 2400, 0,02, s
4	5 6 / 1 2	Hz 544 / 440, 0,4, 0,1, s	9	5 6 / 1 2	Hz 420, 0,625, 0,625, s
5	5 6 / 1 2	Hz 1000, s	10	5 6 / 1 2	Hz 1200 / 500, 0,25, 3,75, s

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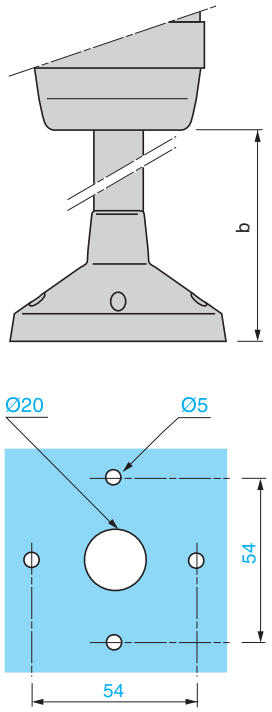
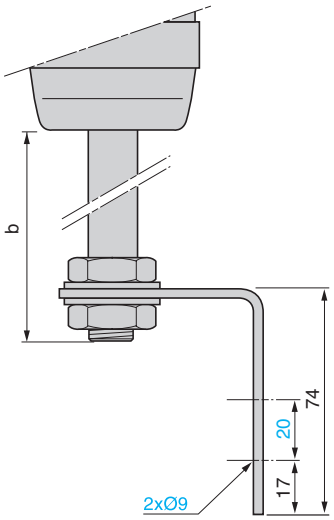
Signalling solutions
Modular tower lights
Harmony type XVP C Ø 50 mm
Tower lights for customer assembly (up to 5 units)

Support tube XVP C0●● with integral fixing base



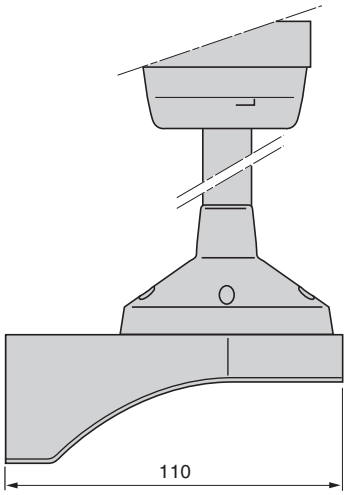
Height under base unit	b
XVP C02●	89
XVP C03●	237
XVP C04●	387

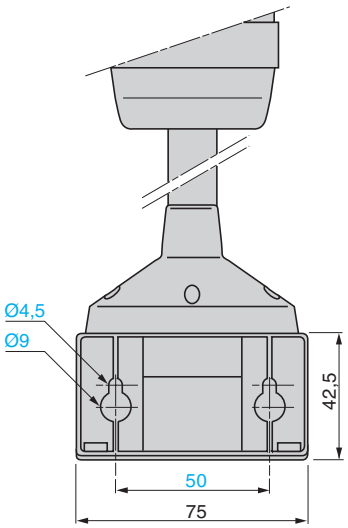
Threaded support tube XVP C0●T with metal fixing bracket



Height under base unit	b
XVP C02T	77
XVP C03T	227
XVP C04T	377

Mounting using fixing plate XVP C12● for use on a vertical support





Note: *support tube* ***XVP C0●●*** *with integral fixing base must be used.*

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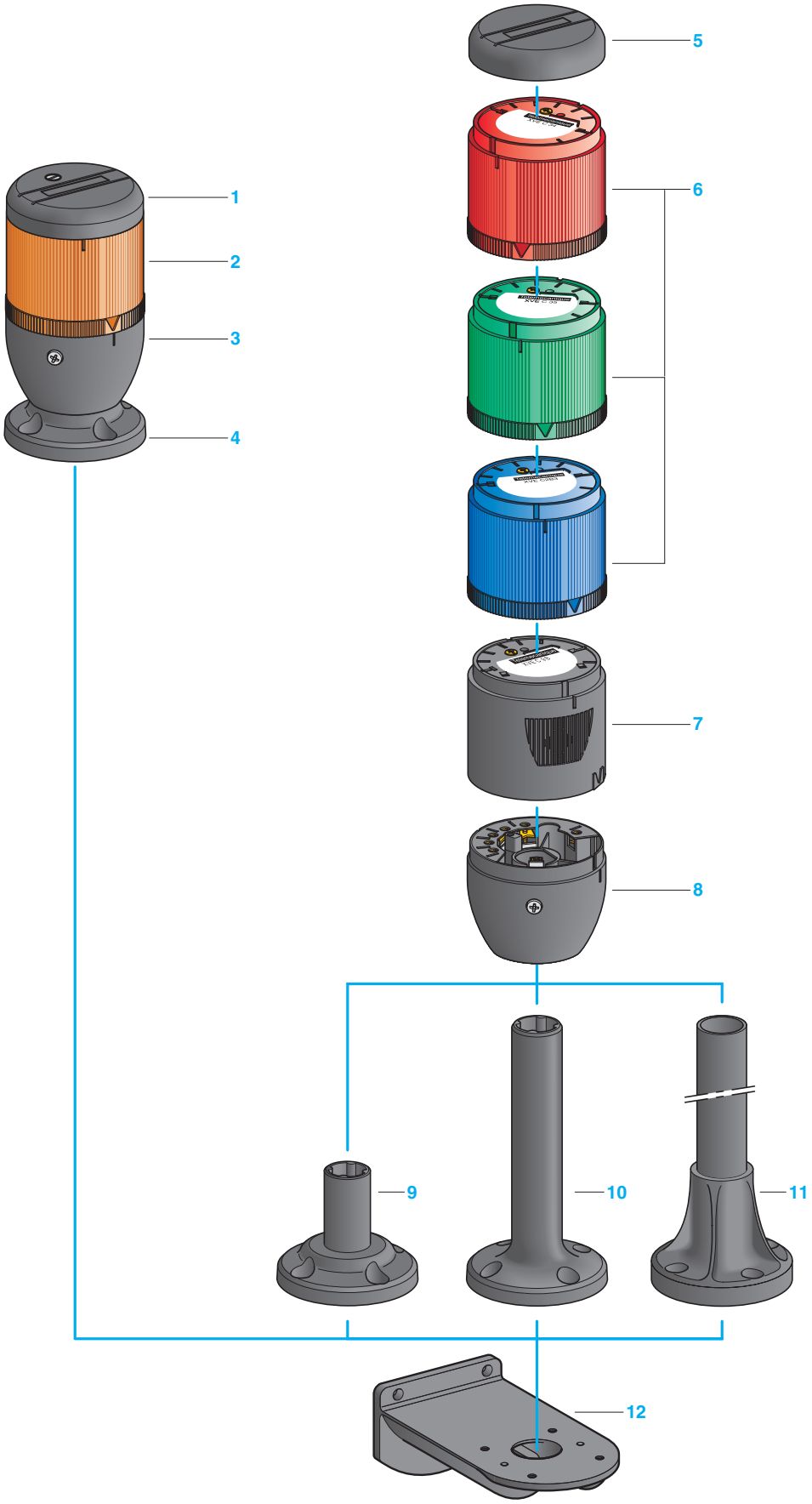
Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)



Description

Illuminated beacon

The illuminated beacon is a complete product comprising:
1 A screw fixing cover.
2 One coloured illuminated unit (green, red, orange, blue or clear).
3 A base unit with terminal block and bottom cable entry.
4 A monobloc fixing base for mounting on machine.

Tower light

The tower light is a customer assembled product using:
5 A cover.
6 1 to 5 coloured illuminated units (green, red, orange, blue or clear) with a choice of 3 types of signalling (steady, flashing or “flash”).
7 1 audible unit.
8 A base unit (IP 42 or IP 54) with terminal block and bottom cable entry.
9 A plastic fixing base, 20 mm high.
10 A plastic fixing base, 100 mm high.
11 An aluminium support tube glued into a plastic fixing plate, for heights beneath the base unit of 80, 380 or 780 mm.

To be ordered separately:
12 Fixing plate for mounting on vertical support.

Characteristics: page 4/40
References: page 4/41
Dimensions: page 4/44

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Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

Presentation

The illuminated beacons and tower lights of the XVE range are designed for remote signalling of the status of a machine, equipment or specific application, either visually using illuminated units which are visible throughout 360° or audibly using an 85 dB buzzer.
The XVE range provides efficient signalling (5 colours available), at medium range distances (30 m), in both indoor and outdoor environments.
The standard configuration of the beacons and tower lights is an IP 42 degree of protection, which is sufficient for the majority of indoor applications.
Both the IP 42 pre-configured beacons and tower lights can be upgraded to IP 54 by using a sealing kit *(1)*.
Depending on the tower light base unit selected, it is possible to achieve an IP 54 degree of protection for outdoor usage *(1)*.

Composition

■ The illuminated beacons are ready to use and incorporate a single steady or "flash" light illuminated unit and a short fixing base.
■ The tower lights must be assembled by the user and comprise signalling units, mounted on a base unit, and a fixing base. These various items are to be selected from the catalogue.
□ For a tower light, a maximum of 5 illuminated units or 4 illuminated units + 1 audible unit can be assembled.
□ The illuminated or audible units stack vertically and are easily fitted together. A screw secures their mounting. Electrical connections between each unit are made automatically as the units are mechanically assembled.
□ All the signalling units are identical in size and their positioning is unrestricted.

Signalling functions

Steady light signalling

Two types of light source are available for steady light signalling:
□ The incandescent BA 15d base fitting bulb, 5 W max. power, is recommended for infrequent usage and where no vibration or mechanical shock exists. The bulb is not included with the lens unit and must be fitted separately.
□ LEDs are recommended for continuous usage: 100,000 operating hours without maintenance and low consumption. They have a good resistance to vibration. Using an LED of a colour best suited to the colour of the lens unit provides optimal luminosity.

Flashing light signalling

Flashing light signalling is also obtained using the LED. It meets requirements regarding reliability, continuous usage and electronic simplicity.
A flashing function can also be obtained from a steady light LED illuminated unit by using a PLC output signal.

"Flash" light signalling

The light source is a 1 Joule discharge tube which delivers a powerful warning signal. It is available for the 5 colours.

Audible signalling

Audible signalling is provided by a continuous tone buzzer with a power rating of 85 dB at 1 m.

Installation

Mounting

Fixed onto support panel using plastic monobloc fixing base or fixing base comprising an aluminium support tube glued into a plastic fixing plate.

Cabling

By means of terminal block incorporated in base unit. The terminals are protected and of the screw and captive cable clamp type.

(1) See page 4/43.

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Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

Environment characteristics

Degree of protection	Conforming to IEC 60529		■ IP 42 in vertical position, IP 40 for other positions ■ IP 54 for reinforced protection version: □ for all mounting positions using fixing base XVE Z13, □ only in vertical position for other heights of fixing base
Product certifications			UL, CSA, CCC
Approval			CE
Conformity to standards			EN/IEC 60947-1, EN/IEC 60947-5-1
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 55
Electric shock protection Conforming to IEC 61140	Mounted on plastic support tube		Class I
	Mounted on aluminium support tube		Class I
Protective treatment			Standard version: "TC"
Electronic components protection (LED and flash)	By integral fuse in series on the common	**A**	0.63 (⎓ 24 V)
		A	0.16 (∿ 120…240 V)

Electrical characteristics

Illuminated units			**With bulb, not included (lens unit only)**	**With integral LED, steady light signalling**	**With integral LED, flashing light signalling**	**With "flash" discharge tube, 1 Joule**
Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1	**V**	250	250	250	250
Voltage limits	Conforming to EN/IEC 60947-5-1	**V**	0.85…1.10 Un (Un: nominal voltage)			
Light source			BA 15d base fitting bulb, maximum power 5 W (240 V max.)	LED	LED	"Flash" discharge tube, 1 Joule
Consumption	On ⎓ 24 V	**mA**	Depending on bulb used	< 25	< 30	< 145 on ∿ 24 V < 85 on ⎓ 24 V
	On ∿ 120 V	**mA**	Depending on bulb used	< 25	< 25	< 35
	On ∿ 230/240 V	**mA**	Depending on bulb used	< 25	< 25	< 25
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	U imp = 4			
Illuminating power	Average value for all colours	**cds/m²**	640	800	800	–
Flashing frequency	Nominal value	**Hz**	–	–	1	1
Audible units						
Consumption	On ⎓ 24 V	**mA**	< 15			
	On ∿ 120 V	**mA**	< 25			
	On ∿ 230/240 V	**mA**	< 25			
Power	Continuous tone	**dB**	85 at 1 m			
	Fundamental frequency	**kHz**	2.6 for continuous tone			
Connection of illuminated and audible units						
Terminal referencing			1 terminal referenced "C" common to all 5 units 5 terminals referenced 1 to 5			
Connection	Maximum clamping capacity on protected, ready-to-tighten, screw and captive cable clamp terminals	**mm²**	1 x 1.5 with cable end			

Presentation: page 4/38 References: page 4/41 Dimensions: page 4/44

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Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Illuminated beacons


XVE L3●●


XVE L2●●


XVE L6●●

Illuminated beacons with steady light signalling

Description	Light source	Supply voltage	Colour of lens unit	Reference	Weight kg
Complete unit comprising: - 1 screw fixing cover, - 1 illuminated unit, - 1 base unit, - 1 short fixing base	Bulb, not included, 5 W max.	⎓ 240 V max.	Green	**XVE L33**	0.245
			Red	**XVE L34**	0.245
			Orange	**XVE L35**	0.245
			Blue	**XVE L36**	0.245
			Clear	**XVE L37**	0.245
	Illuminated unit with integral LED	⎓ 24 V	Green	**XVE L2B3**	0.250
			Red	**XVE L2B4**	0.250
			Orange	**XVE L2B5**	0.250
			Blue	**XVE L2B6**	0.250
			Clear	**XVE L2B7**	0.250
		∿ 120 V	Green	**XVE L2G3**	0.250
			Red	**XVE L2G4**	0.250
			Orange	**XVE L2G5**	0.250
			Blue	**XVE L2G6**	0.250
			Clear	**XVE L2G7**	0.250
		∿ 230 V/240 V	Green	**XVE L2M3**	0.250
			Red	**XVE L2M4**	0.250
			Orange	**XVE L2M5**	0.250
			Blue	**XVE L2M6**	0.250
			Clear	**XVE L2M7**	0.250

Illuminated beacons with “flash” light signalling

Description	Light source	Supply voltage	Colour of lens unit	Reference	Weight kg
Complete unit comprising: - 1 screw fixing cover, - 1 illuminated unit, - 1 base unit, - 1 short fixing base	Illuminated unit with 1 Joule “flash” discharge tube	⎓ 24 V	Green	**XVE L6B3**	0.270
			Red	**XVE L6B4**	0.270
			Orange	**XVE L6B5**	0.270
			Blue	**XVE L6B6**	0.270
			Clear	**XVE L6B7**	0.270
		∿ 120 V	Green	**XVE L6G3**	0.270
			Red	**XVE L6G4**	0.270
			Orange	**XVE L6G5**	0.270
			Blue	**XVE L6G6**	0.270
			Clear	**XVE L6G7**	0.270
		∿ 230 V/240 V	Green	**XVE L6M3**	0.270
			Red	**XVE L6M4**	0.270
			Orange	**XVE L6M5**	0.270
			Blue	**XVE L6M6**	0.270
			Clear	**XVE L6M7**	0.270

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Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Tower lights for customer assembly (up to 5 units)


XVE C3●


XVE C2●●●


XVE C5●●●


XVE C6●●●


XVE C9●

Illuminated units with steady light signalling

Description	Light source	Supply voltage	Colour of lens unit	Reference	Weight kg
Lens units only for BA 15d base fitting bulb	Bulb, not included, 5 W max.	⎓ 240 V max.	Green	**XVE C33**	0.072
			Red	**XVE C34**	0.072
			Orange	**XVE C35**	0.072
			Blue	**XVE C36**	0.072
			Clear	**XVE C37**	0.072
Illuminated units	Integral LED	⎓ 24 V	Green	**XVE C2B3**	0.077
			Red	**XVE C2B4**	0.077
			Orange	**XVE C2B5**	0.077
			Blue	**XVE C2B6**	0.077
			Clear	**XVE C2B7**	0.077
		~ 120 V	Green	**XVE C2G3**	0.077
			Red	**XVE C2G4**	0.077
			Orange	**XVE C2G5**	0.077
			Blue	**XVE C2G6**	0.077
			Clear	**XVE C2G7**	0.077
		~ 230 V/240 V	Green	**XVE C2M3**	0.077
			Red	**XVE C2M4**	0.077
			Orange	**XVE C2M5**	0.077
			Blue	**XVE C2M6**	0.077
			Clear	**XVE C2M7**	0.077

Illuminated units with flashing light signalling

Illuminated units	Integral LED	⎓ 24 V	Green	**XVE C5B3**	0.077
			Red	**XVE C5B4**	0.077
			Orange	**XVE C5B5**	0.077
			Blue	**XVE C5B6**	0.077
			Clear	**XVE C5B7**	0.077
		~ 120 V	Green	**XVE C5G3**	0.077
			Red	**XVE C5G4**	0.077
			Orange	**XVE C5G5**	0.077
			Blue	**XVE C5G6**	0.077
			Clear	**XVE C5G7**	0.077
		~ 230 V/240 V	Green	**XVE C5M3**	0.077
			Red	**XVE C5M4**	0.077
			Orange	**XVE C5M5**	0.077
			Blue	**XVE C5M6**	0.077
			Clear	**XVE C5M7**	0.077

Illuminated units with “flash” light signalling

Illuminated units	“Flash” discharge tube, 1 Joule	⎓ 24 V	Green	**XVE C6B3**	0.094
			Red	**XVE C6B4**	0.094
			Orange	**XVE C6B5**	0.094
			Blue	**XVE C6B6**	0.094
			Clear	**XVE C6B7**	0.094
		~ 120 V	Green	**XVE C6G3**	0.094
			Red	**XVE C6G4**	0.094
			Orange	**XVE C6G5**	0.094
			Blue	**XVE C6G6**	0.094
			Clear	**XVE C6G7**	0.094
		~ 230 V/240 V	Green	**XVE C6M3**	0.094
			Red	**XVE C6M4**	0.094
			Orange	**XVE C6M5**	0.094
			Blue	**XVE C6M6**	0.094
			Clear	**XVE C6M7**	0.094

Audible units

Description	Power	Supply voltage	Reference	Weight kg
Buzzer, single tone	85 dB at 1 metre	⎓ 24 V	**XVE C9B**	0.090
		~ 120 V	**XVE C9G**	0.090
		~ 230 V/240 V	**XVE C9M**	0.090

Presentation: page 4/38 Characteristics: page 4/40 Dimensions: page 4/44

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Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Tower lights for customer assembly (up to 5 units), components for beacons and tower lights


XVE C21


XVE C21P

Base units and covers

Tower lights usage	Composition	Reference	Weight kg
Indoors (IP 42)	Base unit and cover	**XVE C21**	0.110
Outdoors (IP 54)	Base unit with seal + screw fixing cover + kit comprising 5 seals for lens units and buzzer + 1 seal for fixing base XVE Z13	**XVE C21P**	0.120


XVE Z13 XVD C02

Fixing components

Description	Height under base unit mm	Colour	Reference	Weight kg
Plastic fixing bases	20	Black	**XVE Z13**	0.040
	100	Black	**XVD C02**	0.056
Fixing bases comprising: Ø 25 mm aluminium support tube glued into black plastic fixing plate	80	Black aluminium	**XVB Z02**	0.110
		Aluminium	**XVB Z02A**	0.110
	380	Black aluminium	**XVB Z03**	0.200
		Aluminium	**XVB Z03A**	0.200
	780	Black aluminium	**XVB Z04**	0.325
		Aluminium	**XVB Z04A**	0.325


XVB Z02 XVB Z03/Z04

Description	For	Material	Reference	Weight kg
Fixing plate	Ø 25 mm aluminium support tube (to be glued into fixing plate)	Plastic	**XVB Z01**	0.050
Fixing plate for use on vertical support	Mounting complete and modular tower lights (requires a fixing base)	Zamak	**XVB C12**	0.380


XVB Z01 XVB C12

Separate components for beacons and tower lights

Description	For use with	Composition	Reference	Weight kg
Cover	Complete and modular tower lights	–	**XVE Z081**	0.010
IP 54 sealing kit	Modular tower lights	5 toric seals for lens units + base unit seal + 1 fixing plate seal + 1 seal for fixing base XVE Z13 + screw fixing cover	**XVE Z082**	0.015
	Complete tower lights	1 lens unit seal + 1 base unit seal + 2 fixing base seals	**XVE Z083**	0.005


XVE Z081


XVE Z082


XVE Z083


DL1 BE●S

Description	Electrical characteristics	Sold in lots of	Reference	Weight kg
Incandescent bulbs with BA 15d base fitting for lens units type XVE L3● and XVE C3●	5 W ≂ 24 V	10	**DL1 BEBS**	0.100
	5 W ≂ 120 V	10	**DL1 BEGS**	0.100
	5 W ≂ 230 V	10	**DL1 BEMS**	0.100

4

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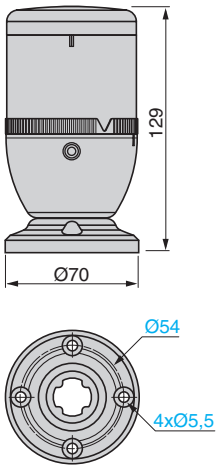
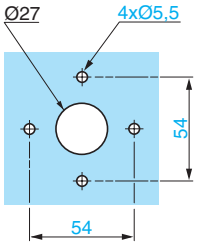
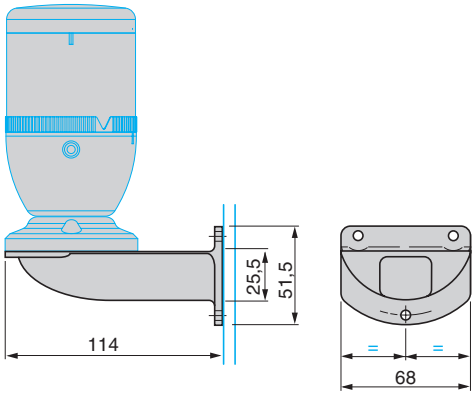
Illuminated beacons XVE L●●●



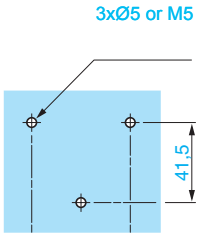
Panel cut-out for mounting directly on fixing base



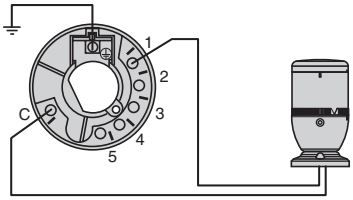
Mounting on fixing plate XVB C12



Vertical support panel drillings for mounting fixing plate XVB C12



Wiring scheme



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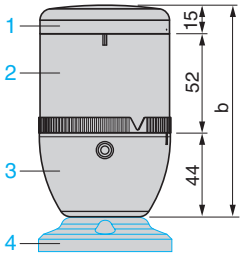
Signalling solutions
Modular tower lights
Harmony type XVE Ø 70 mm
Tower lights for customer assembly (up to 5 units)

Tower lights XVE C●●●

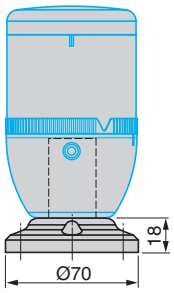


1 Cover XVE Z081 or cover XVE C21/C21P (with base unit),
2 Illuminated units XVE C●● and/or audible unit XVE C9●,
3 Base unit XVE C21/C21P,
4 Fixing bases (see below).

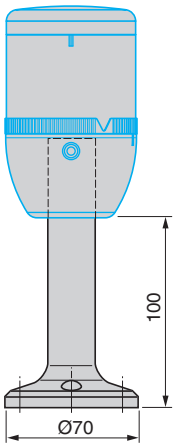
Height of tower lights	
Number of units (ref. 2)	b
1 unit	111
2 units	163
3 units	215
4 units	267
5 units	319

Fixing bases (height under base unit)

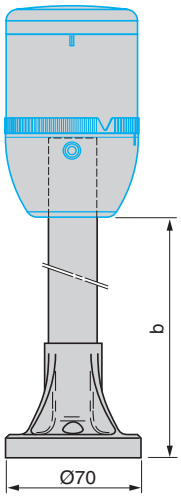
XVE Z13



XVD C02

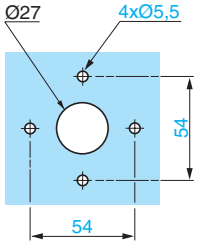


XVB Z0●●

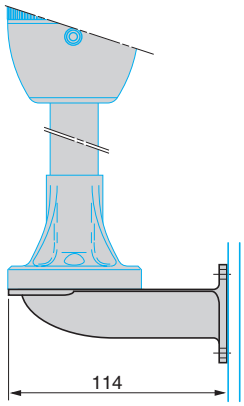


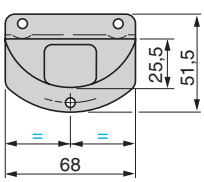
Height under base unit	
Fixing base	b
XVB Z02/Z02A	80
XVB Z03/Z03A	380
XVB Z04/Z04A	780

Panel cut-out for mounting directly on fixing base

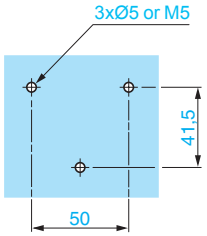


Mounting on fixing plate XVB C12

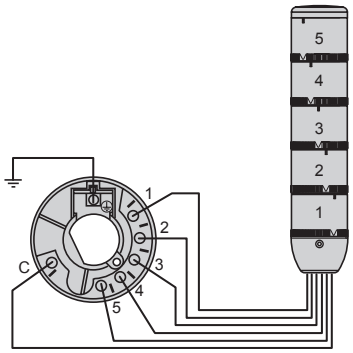




Vertical support panel drillings for mounting fixing plate XVB C12



Wiring scheme



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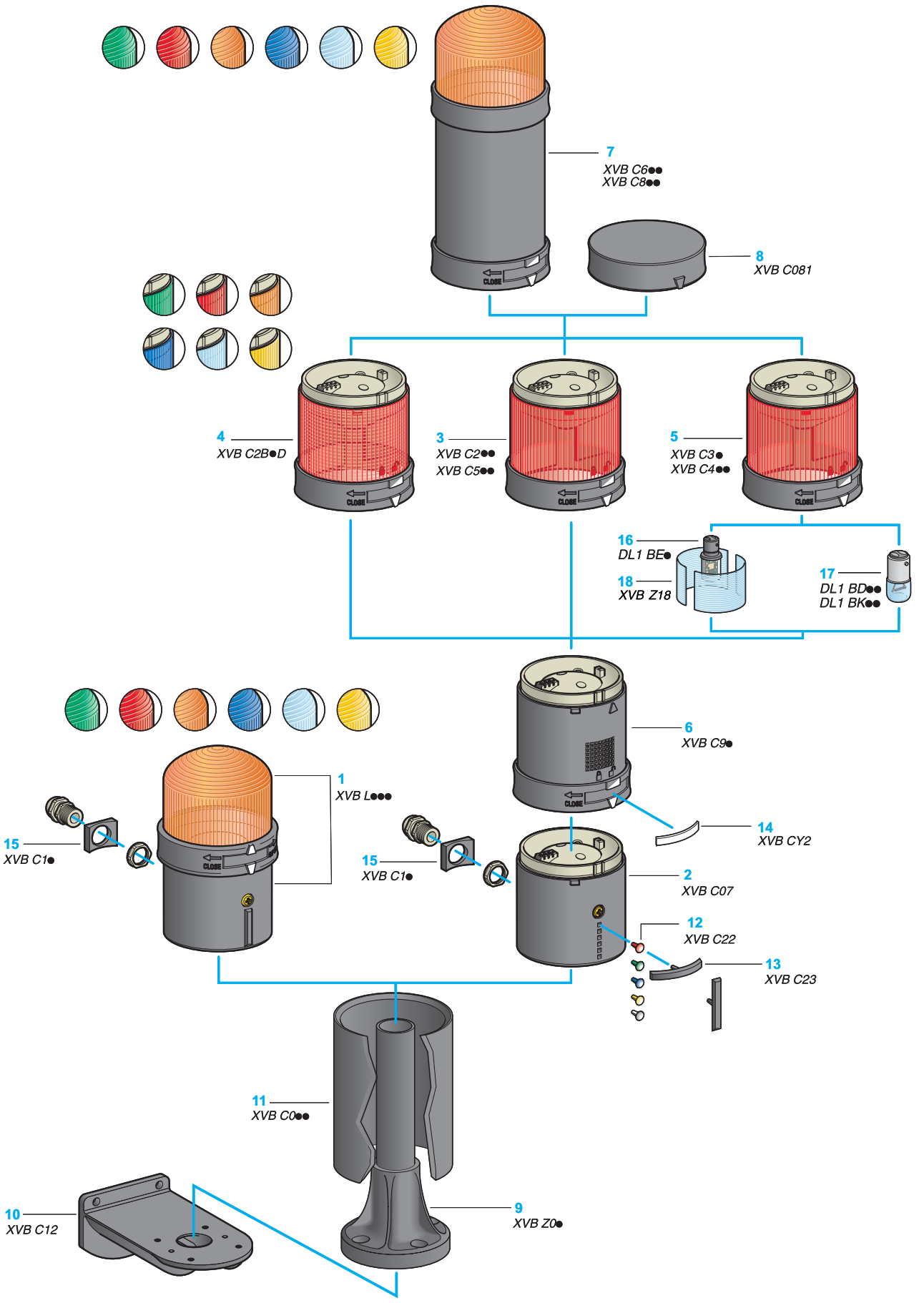
Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)



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Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

Illuminated beacons and tower lights type XVB are visual or audible signalling units used for indicating, throughout 360° and at a distance, the various states or operation sequences of a machine or installation. Examples: start, stop machine, no material, call technical staff, fault signalling, etc.

Illuminated beacon

Complete product XVB L

Ready assembled 1 with a single illuminated signalling unit:
- □ steady light (with incandescent bulb or LED),
- □ flashing light (with incandescent bulb or LED),
- □ or "flash" (with discharge tube).

The **XVB L** beacon comprises:
- ■ A base unit with a removable terminal block and bottom or side cable entry.
- ■ One coloured illuminated unit (green, red, orange, blue, clear or yellow).

Tower light

Customer assembled product XVB C

Variable composition assembly of 1 to 5 illuminated or audible units which are supplied as separate items (assembly by user). Maximum configuration: 5 units or 4 units + 1 "flash" unit.

The tower light **XVB C** comprises:
- ■ A base unit with a removable terminal block and bottom or side cable entry 2.
- ■ 1 to 5 coloured illuminated units (green, red, orange, blue, clear or yellow):
  - □ with integral LED 3,
  - □ with integral LED and diffuser 4 *(1)*,
  - □ for incandescent bulbs or base mounted LEDs 5.
- ■ 1 or 2 audible units 6.
- ■ A maximum of 1 "flash" discharge unit (5 Joule or 10 Joule) 7, for mounting on top of the bank.
- ■ A top cover 8 (except when using a "flash" discharge tube).

■ The illuminated or audible units stack vertically and are easily locked and unlocked using an integral clamping ring. Electrical connections between each unit are made automatically.

■ A light diffuser, pre-fitted in illuminated units XVB C2B●D with a base mounted LED, distributes the light evenly over the lens surface. When using the modular tower lights in bright ambient light conditions, remove the diffuser to improve contrast.

■ Connection on the AS-Interface cabling system is possible by ordering a dedicated base unit. Please refer to our "Industrial communication in machines and installations" catalogue.

Accessories

For illuminated beacons XVB L and tower lights XVB C

- ■ Fixing base comprising a support tube glued into a plastic fixing plate, for a height beneath the base unit of 80, 380 or 780 mm 9.
- ■ Fixing plate for mounting on vertical support 10.
- ■ Support tube concealment cover, height 100, 400 or 800 mm 11.
- ■ Coloured markers 12 *(1)*.
- ■ Legend holder with legend 13 *(1)*.
- ■ Legends that attach to locking ring of each signalling unit for identification 14.
- ■ Adaptor and 13P cable gland 15.
- ■ Base mounted LED 16 or incandescent bulb 17.
- ■ Diffuser 18 *(2)*.

Installation

Mounting

- ■ Base unit fixed directly onto panel using 2 screws.
- ■ Fixed using a fixing base comprising an aluminium support tube glued into a plastic fixing plate.

Cabling

By means of removable terminal block incorporated in base unit (simplified wiring). The screw and captive cable clamp terminals are protected to prevent any accidental contact with live parts.

(1) These enable the position of the various units (illuminated or audible) to be identified in the event of dismantling the bank.
(2) The diffuser can only be used with LED illuminated units. Not compatible with units fitted with an incandescent bulb or "flash" discharge tube.

Characteristics: page 4/48
References: page 4/50
Dimensions: page 4/58

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Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

Environment characteristics

Product certifications	Standard version		CSA C22-2 n°14, UL 508, CCC, GOST
Conformity to standards			EN/IEC 60947-5-1
Protective treatment	Standard version		"TC"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation *(1)*	**°C**	**Illuminated units with steady light signalling:** - 25…+ 70, with 7 W incandescent bulb - 25…+ 50, with LED
		°C	**Illuminated units with flashing light signalling:** - 25…+ 50, with 7 W incandescent bulb - 25…+ 50, with LED
		°C	**Illuminated units with "flash" discharge tube:** - 25…+ 50
		°C	**Audible units:** - 25…+ 50, with buzzer
Electric shock protection Conforming to IEC 61140	Mounted on support tube		Class I
	Mounted on base unit		Class II
Degree of protection	Conforming to IEC 60529		IP 65 (mounted on fixing base XVB Z0●) IP 66 (mounted directly on base unit)
	Conforming to UL 508		Type 4X NEMA "Indoor"
Material	Illuminated units		Polycarbonate
	Base unit and cover		Glass-reinforced polyamide and polycarbonate
	Support tube		Painted aluminium
	Fixing plate for use on vertical support		Zamak
	Fixing plate for use on horizontal support		Polyamide 66
	Support tube concealment cover		ABS

(1) Warning: illuminated units with incandescent bulbs must not be combined with LED illuminated units, due to the risk of overheating. Also, when different units (e.g. steady, flashing…) are combined, the maximum temperature is limited to that of the weaker unit.

4

General: page 4/46 References: page 4/50 Dimensions: page 4/58

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Electrical characteristics

Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1	**V**	250
Voltage limits	Conforming to EN/IEC 60947-5-1	**V**	0.85 to 1.10 Un (Un: nominal voltage)
Consumption	LED units	**mA**	**Steady light signalling:** ⎓ 24 V: < 47 ∼ 120 V: < 17 ∼ 230 V: < 17
		mA	**Flashing light signalling:** ⎓ 24 V: < 47 ∼ 120 V: < 17 ∼ 230 V: < 17
	Units with discharge tube *(1)*	**mA**	**Flashing light signalling:** ∼ 24 V: 5 J unit: < 550; 10 J unit: < 1 300 ⎓ 24 V: 5 J unit: < 350; 10 J unit: < 850 ∼ 48 V: 10 J unit: < 650 ⎓ 48 V: 10 J unit: < 400 ∼ 120 V: 5 J unit: < 140; 10 J unit: < 290 ∼ 230 V: 5 J unit: < 105; 10 J unit: < 280
	Audible units	**mA**	⎓ 12…48 V: < 15 ∼ 120…230 V: < 25
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 4
Light source	Illuminated units with steady or flashing light signalling		LEDs: degree of pollution 2 Bulbs with BA 15d base fitting, maximum power 7 W
Illuminating power	Units with discharge tube	**cds**	13 (integral high intensity tube) with clear lens unit: 5 J tube 26 (integral high intensity tube) with clear lens unit: 10 J tube
Audible unit	Continuous or intermittent tone	**dB**	90 at 1 m
	Fundamental frequency	**kHz**	2.8
Terminal referencing			1 terminal referenced “C” common to all 5 units
			1 or 5 terminals referenced 1 to 5, depending on number of units
Connection	Maximum clamping capacity on protected, ready-to-tighten, screw and captive cable clamp terminals	**mm²**	1 x 1.5 with cable end
Frequency of illuminated units	Illuminated units with flashing light signalling	**Hz**	1
	Illuminated units with discharge tube	**Hz**	1

(1) ***Warning****: illuminated units with a “flash” discharge tube are not suitable for steady light signalling due to the heat generated.*

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Signalling solutions
Modular tower lights
Harmony type XVB L Ø 70 mm
Illuminated beacons for incandescent bulbs or LEDs
(BA 15d base fitting)



XVB L3●



XVB L4B●

Illuminated beacons with steady light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	Incandescent bulb 7 W max. 250 V max.	Green	**XVB L33**	0.260
		Red	**XVB L34**	0.260
		Orange	**XVB L35**	0.260
		Blue	**XVB L36**	0.260
		Clear	**XVB L37**	0.260
		Yellow	**XVB L38**	0.260

Illuminated beacons with integral flashing light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	Incandescent bulb 7 W max. ~ 24 V ⎓ 24…48 V	Green	**XVB L4B3**	0.280
		Red	**XVB L4B4**	0.280
		Orange	**XVB L4B5**	0.280
		Blue	**XVB L4B6**	0.280
		Clear	**XVB L4B7**	0.280
		Yellow	**XVB L4B8**	0.280
	Incandescent bulb 7 W max. ~ 48…230 V	Green	**XVB L4M3**	0.280
		Red	**XVB L4M4**	0.280
		Orange	**XVB L4M5**	0.280
		Blue	**XVB L4M6**	0.280
		Clear	**XVB L4M7**	0.280
		Yellow	**XVB L4M8**	0.280

(1) Incandescent bulbs and LEDs, see page 4/57.

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Signalling solutions
Modular tower lights
Harmony type XVB L Ø 70 mm
Illuminated beacons with LED light source



XVB L0B●

Illuminated beacons with steady light signalling

Description	Light source	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	LED, included ⎓ 24 V	Green	**XVB L0B3**	0.270
		Red	**XVB L0B4**	0.270
		Orange	**XVB L0B5**	0.270
		Blue	**XVB L0B6**	0.270
		Clear	**XVB L0B7**	0.270
		Yellow	**XVB L0B8**	0.270
	LED, included ∿ 120 V	Green	**XVB L0G3**	0.270
		Red	**XVB L0G4**	0.270
		Orange	**XVB L0G5**	0.270
		Blue	**XVB L0G6**	0.270
		Clear	**XVB L0G7**	0.270
		Yellow	**XVB L0G8**	0.270
	LED, included ∿ 230 V	Green	**XVB L0M3**	0.270
		Red	**XVB L0M4**	0.270
		Orange	**XVB L0M5**	0.270
		Blue	**XVB L0M6**	0.270
		Clear	**XVB L0M7**	0.270
		Yellow	**XVB L0M8**	0.270



XVB L1B●

Illuminated beacons with integral flashing light signalling

Description	Light source	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	LED, included ⎓ 24 V	Green	**XVB L1B3**	0.280
		Red	**XVB L1B4**	0.280
		Orange	**XVB L1B5**	0.280
		Blue	**XVB L1B6**	0.280
		Clear	**XVB L1B7**	0.280
		Yellow	**XVB L1B8**	0.280
	LED, included ∿ 120 V	Green	**XVB L1G3**	0.280
		Red	**XVB L1G4**	0.280
		Orange	**XVB L1G5**	0.280
		Blue	**XVB L1G6**	0.280
		Clear	**XVB L1G7**	0.280
		Yellow	**XVB L1G8**	0.280
	LED, included ∿ 230 V	Green	**XVB L1M3**	0.280
		Red	**XVB L1M4**	0.280
		Orange	**XVB L1M5**	0.280
		Blue	**XVB L1M6**	0.280
		Clear	**XVB L1M7**	0.280
		Yellow	**XVB L1M8**	0.280

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Signalling solutions
Modular tower lights
Harmony type XVB L Ø 70 mm
Illuminated beacons with “flash” discharge tube



XVB L6B●



XVB L8B●

Illuminated beacons with 5 Joule “flash” discharge tube

Description	Light source	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	Integral “flash” discharge tube ⎓ 24 V	Green	**XVB L6B3**	0.440
		Red	**XVB L6B4**	0.440
		Orange	**XVB L6B5**	0.440
		Blue	**XVB L6B6**	0.440
		Clear	**XVB L6B7**	0.440
		Yellow	**XVB L6B8**	0.440
	Integral “flash” discharge tube ∿ 120 V	Green	**XVB L6G3**	0.425
		Red	**XVB L6G4**	0.425
		Orange	**XVB L6G5**	0.425
		Blue	**XVB L6G6**	0.425
		Clear	**XVB L6G7**	0.425
		Yellow	**XVB L6G8**	0.425
	Integral “flash” discharge tube ∿ 230 V	Green	**XVB L6M3**	0.435
		Red	**XVB L6M4**	0.435
		Orange	**XVB L6M5**	0.435
		Blue	**XVB L6M6**	0.435
		Clear	**XVB L6M7**	0.435
		Yellow	**XVB L6M8**	0.435

Illuminated beacons with 10 Joule “flash” discharge tube

Description	Light source	Colour	Reference	Weight kg
Complete unit comprising: - 1 illuminated unit - 1 base unit (direct or tube fixing)	Integral “flash” discharge tube ⎓ 24 V	Green	**XVB L8B3**	0.450
		Red	**XVB L8B4**	0.450
		Orange	**XVB L8B5**	0.450
		Blue	**XVB L8B6**	0.450
		Clear	**XVB L8B7**	0.450
		Yellow	**XVB L8B8**	0.450
	Integral “flash” discharge tube ∿ 120 V	Green	**XVB L8G3**	0.460
		Red	**XVB L8G4**	0.460
		Orange	**XVB L8G5**	0.460
		Blue	**XVB L8G6**	0.460
		Clear	**XVB L8G7**	0.460
		Yellow	**XVB L8G8**	0.460
	Integral “flash” discharge tube ∿ 230 V	Green	**XVB L8M3**	0.460
		Red	**XVB L8M4**	0.460
		Orange	**XVB L8M5**	0.460
		Blue	**XVB L8M6**	0.460
		Clear	**XVB L8M7**	0.460
		Yellow	**XVB L8M8**	0.460

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Signalling solutions
Modular tower lights
Harmony type XVB C Ø 70 mm
Tower lights for customer assembly (up to 5 units)
Illuminated units for incandescent bulbs or LEDs (BA 15d base fitting)

For use with base unit XVB C●●: see page 4/56



XVB C3●



XVB C4●●

Illuminated units with steady light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Illuminated units	Incandescent bulb 7 W max. 250 V max. or LED	Green	**XVB C33**	0.140
		Red	**XVB C34**	0.140
		Orange	**XVB C35**	0.140
		Blue	**XVB C36**	0.140
		Clear	**XVB C37**	0.140
		Yellow	**XVB C38**	0.140

Illuminated units with integral flashing light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Illuminated units	Incandescent bulb 7 W max. ∼ 24 V ⎓ 24…48 V or LED	Green	**XVB C4B3**	0.160
		Red	**XVB C4B4**	0.160
		Orange	**XVB C4B5**	0.160
		Blue	**XVB C4B6**	0.160
		Clear	**XVB C4B7**	0.160
		Yellow	**XVB C4B8**	0.160
	Incandescent bulb 7 W max. ∼ 48…230 V or LED	Green	**XVB C4M3**	0.160
		Red	**XVB C4M4**	0.160
		Orange	**XVB C4M5**	0.160
		Blue	**XVB C4M6**	0.160
		Clear	**XVB C4M7**	0.160
		Yellow	**XVB C4M8**	0.160

(1) Incandescent bulbs and LEDs, see page 4/57.

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Signalling solutions
Modular tower lights
Harmony type XVB C Ø 70 mm
Tower lights for customer assembly (up to 5 units)
Illuminated units with integral LED

For use with base unit XVB C●●: see page 4/56



XVB C2●●

Illuminated units with steady light signalling

Description	Voltage	Colour	Reference	Weight kg
Illuminated units with integral LED Protected LED	⎓ 24 V	Green	**XVB C2B3** *(1)*	0.150
		Red	**XVB C2B4** *(1)*	0.150
		Orange	**XVB C2B5** *(1)*	0.150
		Blue	**XVB C2B6** *(1)*	0.150
		Clear	**XVB C2B7** *(1)*	0.150
		Yellow	**XVB C2B8** *(1)*	0.150
	∿ 120 V	Green	**XVB C2G3**	0.150
		Red	**XVB C2G4**	0.150
		Orange	**XVB C2G5**	0.150
		Blue	**XVB C2G6**	0.150
		Clear	**XVB C2G7**	0.150
		Yellow	**XVB C2G8**	0.150
	∿ 230 V	Green	**XVB C2M3**	0.150
		Red	**XVB C2M4**	0.150
		Orange	**XVB C2M5**	0.150
		Blue	**XVB C2M6**	0.150
		Clear	**XVB C2M7**	0.150
		Yellow	**XVB C2M8**	0.150



XVB C5●●

Illuminated units with integral flashing light signalling

Description	Voltage	Colour	Reference	Weight kg
Illuminated units with integral LED Protected LED	⎓ 24 V	Green	**XVB C5B3**	0.170
		Red	**XVB C5B4**	0.170
		Orange	**XVB C5B5**	0.170
		Blue	**XVB C5B6**	0.170
		Clear	**XVB C5B7**	0.170
		Yellow	**XVB C5B8**	0.170
	∿ 120 V	Green	**XVB C5G3**	0.170
		Red	**XVB C5G4**	0.170
		Orange	**XVB C5G5**	0.170
		Blue	**XVB C5G6**	0.170
		Clear	**XVB C5G7**	0.170
		Yellow	**XVB C5G8**	0.170
	∿ 230 V	Green	**XVB C5M3**	0.170
		Red	**XVB C5M4**	0.170
		Orange	**XVB C5M5**	0.170
		Blue	**XVB C5M6**	0.170
		Clear	**XVB C5M7**	0.170
		Yellow	**XVB C5M8**	0.170

(1) To order an illuminated unit with integral LED pre-fitted with light diffuser XVB Z18, add the letter "D" to the end of the reference. Example: XVB C2B3D.

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Signalling solutions
Modular tower lights
Harmony type XVB C Ø 70 mm
Tower lights for customer assembly (up to 5 units)
Illuminated units with integral “flash” discharge tube

For use with base unit XVB C●●: see page 4/56



XVB C6●●



XVB C8●●

Illuminated units with 5 Joule “flash” discharge tube

Description	Light source	Colour	Reference	Weight kg
Illuminated units	Integral “flash” discharge tube ⎓ 24 V	Green	**XVB C6B3**	0.295
		Red	**XVB C6B4**	0.295
		Orange	**XVB C6B5**	0.295
		Blue	**XVB C6B6**	0.295
		Clear	**XVB C6B7**	0.295
		Yellow	**XVB C6B8**	0.295
	Integral “flash” discharge tube ~ 120 V	Green	**XVB C6G3**	0.280
		Red	**XVB C6G4**	0.280
		Orange	**XVB C6G5**	0.280
		Blue	**XVB C6G6**	0.280
		Clear	**XVB C6G7**	0.280
		Yellow	**XVB C6G8**	0.280
	Integral “flash” discharge tube ~ 230 V	Green	**XVB C6M3**	0.290
		Red	**XVB C6M4**	0.290
		Orange	**XVB C6M5**	0.290
		Blue	**XVB C6M6**	0.290
		Clear	**XVB C6M7**	0.290
		Yellow	**XVB C6M8**	0.290

Illuminated units with 10 Joule “flash” discharge tube

Description	Light source	Colour	Reference	Weight kg
Illuminated units	Integral “flash” discharge tube ⎓ 24 V	Green	**XVB C8B3**	0.305
		Red	**XVB C8B4**	0.305
		Orange	**XVB C8B5**	0.305
		Blue	**XVB C8B6**	0.305
		Clear	**XVB C8B7**	0.305
		Yellow	**XVB C8B8**	0.305
	Integral “flash” discharge tube ⎓ 48 V	Orange	**XVB C8E5**	0.315
	Integral “flash” discharge tube ~ 120 V	Green	**XVB C8G3**	0.315
		Red	**XVB C8G4**	0.315
		Orange	**XVB C8G5**	0.315
		Blue	**XVB C8G6**	0.315
		Clear	**XVB C8G7**	0.315
		Yellow	**XVB C8G8**	0.315
	Integral “flash” discharge tube ~ 230 V	Green	**XVB C8M3**	0.315
		Red	**XVB C8M4**	0.315
		Orange	**XVB C8M5**	0.315
		Blue	**XVB C8M6**	0.315
		Clear	**XVB C8M7**	0.315
		Yellow	**XVB C8M8**	0.315

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Signalling solutions
Modular tower lights
Harmony type XVB C Ø 70 mm
Tower lights for customer assembly (up to 5 units)
Audible units, base units, cover, accessories


XVB C9●

Audible units

Description	Characteristics	Reference	Weight kg
Buzzer, 90 dB at 1 m Adjustable: - 70 or 90 dB - continuous or intermittent tone using microswitch	⎓ 12…48 V	**XVB C9B**	0.170
	∿ 120…230 V	**XVB C9M**	0.180

Base units (for direct or tube fixing)

Description	For use with	Type	Reference	Weight kg
Base unit + cover with bottom or side cable entry	Modular tower lights without "flash" discharge tube unit	Standard	**XVB C21**	0.190
Base unit only with bottom or side cable entry	Modular tower lights with "flash" discharge tube unit	Standard	**XVB C07**	0.160
Base unit + cover with side cable entry	All types of modular tower lights	AS-Interface *(1)*	**XVB C21A**	–
Base unit + cover with bottom entry, pre-cabled (length 1 metre) and fitted with M12 end connector	All types of modular tower lights	AS-Interface *(1)*	**XVB C21B**	–

(1) For further information on AS-Interface connections, refer to our "Industrial communication in machines and installations" catalogue.


XVB C07

Accessories specific to tower lights XVB C

Description	Application	Unit reference	Weight kg
Cover only	For use with XVB C2, XVB C3, XVB C4, XVB C5 and XVB C9	**XVB C081**	0.030
Set of 6 coloured markers	For identification of the position of units in the event of dismantling the modular tower light	**XVB C22**	0.001
Set of 5 legend holders	For identification of stacked units on base unit	**XVB C23**	0.002
Sheet of 85 legends	For use with base unit legend holder XVB C23	**XVB CY1**	0.005
Sheet of 52 legends	For identification of stacked units, used on locking ring	**XVB CY2**	0.005
Adaptor for side entry through base unit	With 13P cable gland	**XVB C14**	0.015
SIS labelling software (in English, French, German, Italian and Spanish)	For creating legends	**XBY 2U**	0.100
Light diffuser, clear plastic (Sold in boxes)	Only for use with LED illuminated units (all colours) One box allows to equip 5 illuminated units.	**XVB Z18**	0.080


XVB Z18

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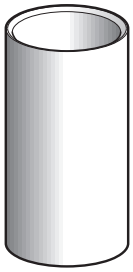
Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)



XVB Z02 XVB Z03/Z04



XVB C020



XVB Z01



XVB C12



DL1 B●●



DL1 BD●●/DL1 BK●●

Accessories common to beacons XVB L and tower lights XVB C

Description	Height under base unit (mm)	Colour	Reference	Weight kg
Fixing bases comprising Ø 25 mm aluminium support tube glued into a black plastic fixing plate	80	Black aluminium	**XVB Z02**	0.110
		Aluminium	**XVB Z02A**	0.110
	380	Black aluminium	**XVB Z03**	0.200
		Aluminium	**XVB Z03A**	0.200
	780	Black aluminium	**XVB Z04**	0.325
		Aluminium	**XVB Z04A**	0.325

Description	For use with	Material	Reference	Weight kg
Support tube concealment cover	Support tubes **XVB Z02, XVB Z02A**	ABS	**XVB C020**	0.080
	Support tubes **XVB Z03, XVB Z03A**	ABS	**XVB C030**	0.305
	Support tubes **XVB Z04, XVB Z04A**	ABS	**XVB C040**	0.610
Ø 25 mm aluminium support tube Height under base unit 780 mm	Fixing plate XVB Z01 (to be glued into the plastic fixing plate)	Plastic	**XVB Z14**	0.690
Fixing plate for use on horizontal support	Ø 25 mm aluminium support tube	Plastic	**XVB Z01**	0.050
Fixing plate for use on vertical support	Base unit (direct mounting), fixing plate XVB Z01 or fixing bases XVB Z0●	Zamak	**XVB C12**	0.380

Description	Characteristics		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs BA 15d base fitting	12 V	7 W	10	**DL1 BEJ**	0.090
	24 V	6.5 W	10	**DL1 BEB**	0.090
	48 V	6 W	10	**DL1 BEE**	0.090
	120 V	7 W	10	**DL1 BEG**	0.090
	230 V	7 W	10	**DL1 BEM**	0.090
LEDs BA 15d base fitting Protected LED	⎓ 24 V	White	1	**DL1 BDB1**	0.015
		Green	1	**DL1 BDB3**	0.015
		Red	1	**DL1 BDB4**	0.015
		Orange	1	**DL1 BDB5**	0.015
		Blue	1	**DL1 BDB6**	0.015
		Yellow	1	**DL1 BDB8**	0.015
	~ 120 V	White	1	**DL1 BDG1**	0.015
		Green	1	**DL1 BDG3**	0.015
		Red	1	**DL1 BDG4**	0.015
		Orange	1	**DL1 BDG5**	0.015
		Blue	1	**DL1 BDG6**	0.015
		Yellow	1	**DL1 BDG8**	0.015
	~ 230 V	White	1	**DL1 BDM1**	0.015
		Green	1	**DL1 BDM3**	0.015
		Red	1	**DL1 BDM4**	0.015
		Orange	1	**DL1 BDM5**	0.015
		Blue	1	**DL1 BDM6**	0.015
		Yellow	1	**DL1 BDM8**	0.015
Flashing LEDs BA 15d base fitting Protected LED	⎓ 24 V	White	1	**DL1 BKB1**	0.015
		Green	1	**DL1 BKB3**	0.015
		Red	1	**DL1 BKB4**	0.015
		Orange	1	**DL1 BKB5**	0.015
		Blue	1	**DL1 BKB6**	0.015
		Yellow	1	**DL1 BKB8**	0.015
	~ 120 V	White	1	**DL1 BKG1**	0.015
		Green	1	**DL1 BKG3**	0.015
		Red	1	**DL1 BKG4**	0.015
		Orange	1	**DL1 BKG5**	0.015
		Blue	1	**DL1 BKG6**	0.015
		Yellow	1	**DL1 BKG8**	0.015
	~ 230 V	White	1	**DL1 BKM1**	0.015
		Green	1	**DL1 BKM3**	0.015
		Red	1	**DL1 BKM4**	0.015
		Orange	1	**DL1 BKM5**	0.015
		Blue	1	**DL1 BKM6**	0.015
		Yellow	1	**DL1 BKM8**	0.015

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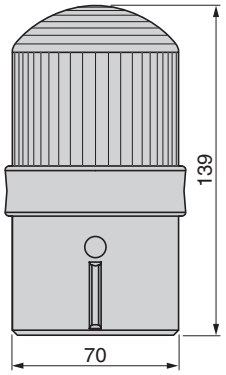
Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

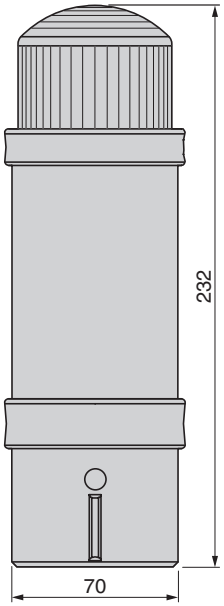
Dimensions

Illuminated beacons XVB L●●●

For BA 15d bulb or LED

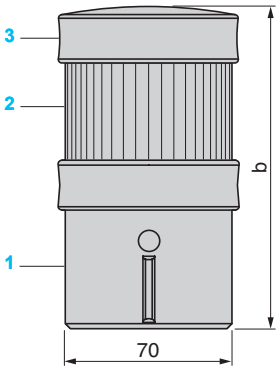


With "flash" discharge tube unit



Tower lights XVB C●●●

Without "flash" discharge tube unit

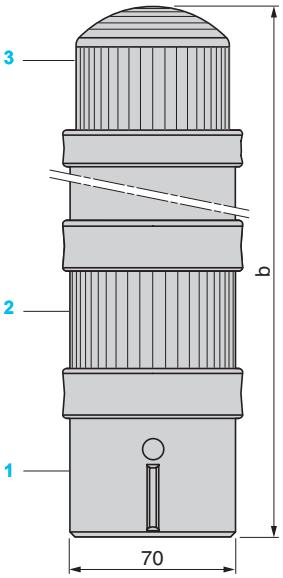


1 Base unit XVB C21 *(1)*
2 Illuminated or audible signalling unit XVB C●●●
3 Cover *(1)*

Number of illuminated or audible signalling units (no "flash")	b
1	138
2	201
3	264
4	327
5	390

(1) Base unit XVB C21 is supplied with a cover.

With "flash" discharge tube unit

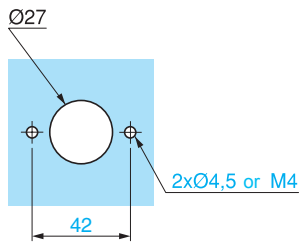


1 Base unit XVB C07
2 Illuminated or audible signalling unit XVB C●●●
3 "Flash" unit XVB C●●●

Number of illuminated or audible signalling units other than "flash" tube	b
1	295
2	358
3	421
4	484

Panel cut-out for direct fixing

On base unit XVB C21, XVB C07, XVB C21A or XVB C21B



General: page 4/46
Characteristics: page 4/48
References: page 4/50

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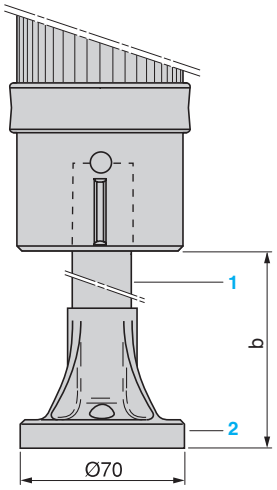
Signalling solutions
Modular tower lights
Harmony type XVB Ø 70 mm
Illuminated beacons, tower lights for customer assembly (up to 5 units)

Dimensions

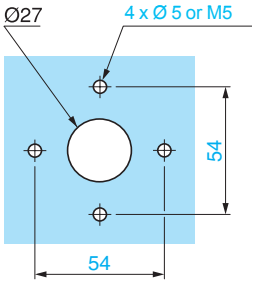
With fixing bases comprising XVB Z0● (aluminium support tube glued into black plastic fixing plate)



Fixing base comprising XVB Z0● (Ø 25 mm support tube **1** glued into plastic fixing plate **2**)

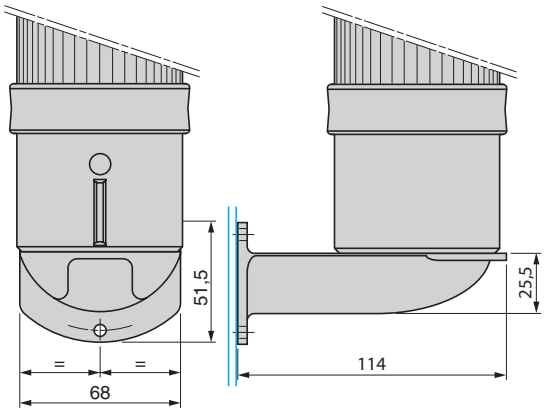
XVB	b
Z02/Z02A	80
Z03/Z03A	380
Z04/Z04A	780

Horizontal support panel cut-out for mounting on fixing plate

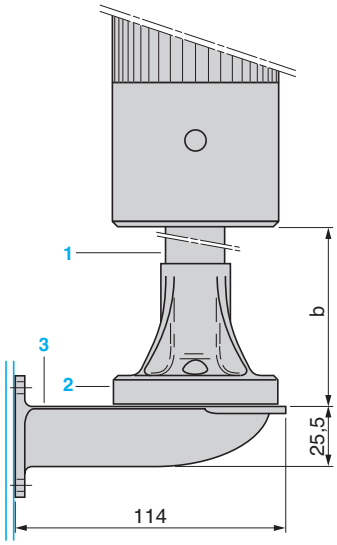


With fixing plate XVB C12 for use on vertical support

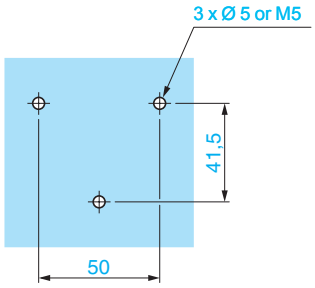
Direct mounting on base unit



Mounting using fixing base XVB Z0● (aluminium support tube glued into black plastic fixing plate)



Vertical support panel drillings for mounting fixing plate XVB C12



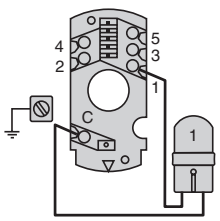
Fixing base comprising XVB Z0● (Ø 25 mm support tube **1** glued into plastic fixing plate **2**) mounted on fixing plate XVB C12 for vertical support **3**

XVB	b
Z02/Z02A	80
Z03/Z03A	380
Z04/Z04A	780

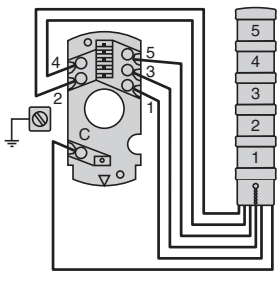
Installation

Connections

XVB L

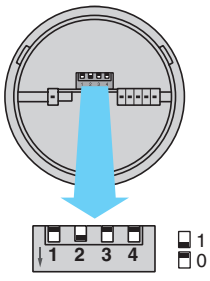


XVB C



Adjustment of audible signal for buzzers type XVB C9●

By means of 4 microswitches located in the base of the buzzer:
- 2 switches marked **1** and **2** for selecting continuous or intermittent **mode** (Hz).
- 2 switches marked **3** and **4** for selecting the **power** (dB) of the audible signal.



Position of microswitches		Setting
1	**2**	**Mode**
1	1	▬ 2.8 kHz
1	0	▬ 2.8 kHz
0	1	⎍ 5 Hz *(1)*
0	0	⎍ 1 Hz
3	**4**	**Power**
1	1	90 dB *(1)*
0	1	85 dB
1	0	80 dB
0	0	70 dB

(1) Factory setting.

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights and tower lights for customer assembly (up to 5 units)



Pre-cabled tower light XVD fitted with 1 illuminated unit and 1 "flash" discharge tube



Pre-cabled tower light XVD fitted with 2 illuminated units and 1 audible unit

Presentation

Ø 70 mm tower lights type XVD are available in 2 forms:

■ **Pre-cabled products**

Depending on the model, they are "ready to use":

□ with 1, 2, 3 or 4 illuminated signalling units (light source included),
□ with or without "flash" unit,
□ with or without audible signalling unit (buzzer),
□ with fixing base.

The pre-cabled tower lights cannot be modified due to the wiring.

■ **Customer assembled products**, using separate components for customised configuration.

Light signalling

■ 6 catalogued illuminated unit lens colours (green, red, orange, blue, clear and yellow) are available as separate components. These illuminated units can be fitted with steady or flashing light signalling LEDs which provide a long service life by considerably reducing heating and power consumption. However, incandescent bulbs can also be used.

■ A light diffuser, pre-fitted in illuminated units with a base mounted LED *(1)*, distributes the light evenly over the lens surface. When using the tower lights in bright ambient light conditions, remove the diffuser to improve contrast.

■ Some pre-cabled tower lights models are available with a 5 Joule orange or red "flash" unit, but other colours (green, blue, yellow and clear) can be ordered as separate components.

Audible signalling

Pre-cabled tower lights are supplied with or without an audible unit (buzzer), depending on the model selected.

□ The volume of the audible signal is adjustable up to a value of 90 decibels at a distance of 1 m.

□ Microswitches located in the audible unit enable selection of the signal frequency: continuous or intermittent tone.

Cabling and mounting

■ Pre-cabled Ø 70 mm tower lights XVD have 300 mm long connecting wires protruding from the fixing base.

□ The wires have bared ends to enable direct connection, without the need for wire stripping etc. A label attached to the common (black wire) details the wire colour and associated unit in the tower light, from bottom to top:

- brown: 1st unit,
- grey: 2nd unit,
- violet: 3rd unit,
- blue: 4th unit.

□ The connections to customer assembled products are made to a removable terminal block incorporated in the base unit.

■ The fixing of the combined units is assured by a single screw, the length of which depends on the number of units in the tower light.

(1) Diffuser not compatible with units fitted with an incandescent bulb or "flash" discharge tube.

Characteristics: page 4/62
References: page 4/63
Dimensions, mounting: page 4/68

Schneider Electric

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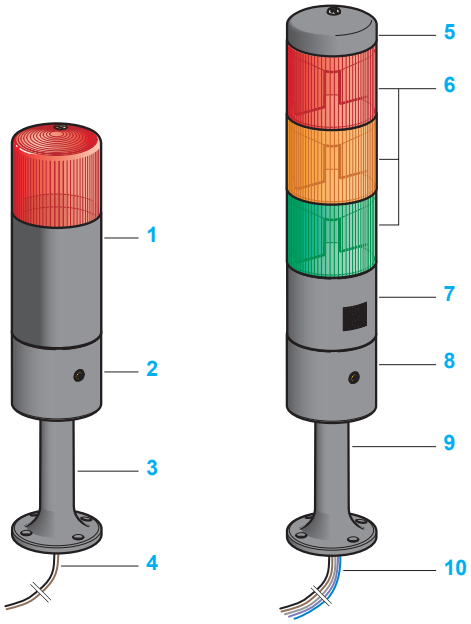
Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights and tower lights for customer assembly (up to 5 units)



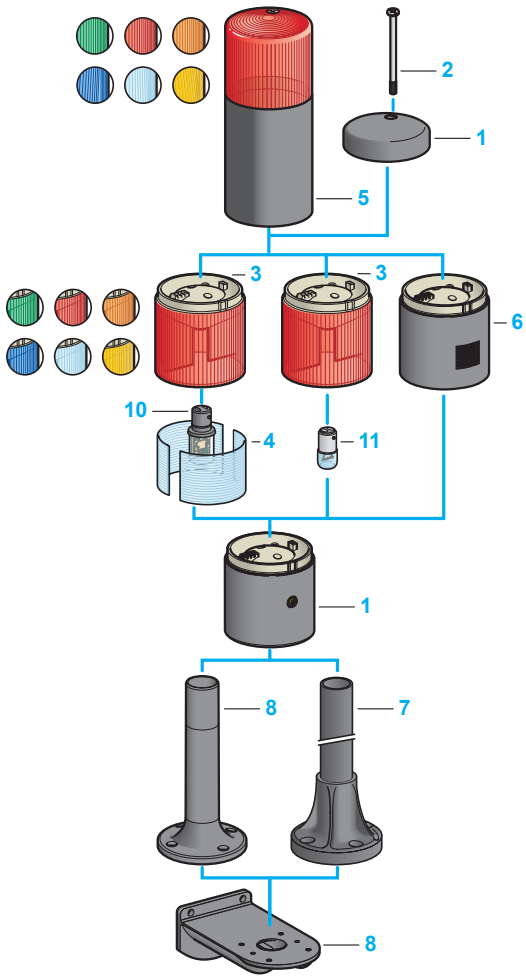
Description

Pre-cabled Ø 70 mm tower lights XVD with one illuminated unit

The assembled tower lights comprise:
1 an illuminated unit with “flash” discharge tube (included) and orange or red lens,
2 a base unit,
3 a 100 mm high plastic fixing base (support tube with integral fixing plate), for raising the tower light 80 mm,
4 different coloured connecting wires with bared ends, length protruding from support tube: 300 mm.

Pre-cabled Ø 70 mm tower lights XVD with two to four illuminated units

The assembled tower lights comprise:
5 a cover,
6 two, three or four illuminated units with red, green, orange or clear lens (depending on model) and light source (included),
7 an audible unit (buzzer), depending on model,
8 a base unit,
9 a 100 mm high plastic fixing base (support tube with integral fixing plate), for raising the tower light 80 mm,
10 different coloured connecting wires with bared ends, length protruding from support tube: 300 mm.



Customer assembled Ø 70 mm tower lights XVD

A **customised** tower light can be obtained by assembling:
1 a cover and a base unit incorporating a removable terminal block *(1)* with bottom cable entry,
2 a fixing screw for the combined units *(2)*,
3 5 illuminated units maximum *(3)* with red, orange, green, blue or clear lens, light source not included *(4)*,
4 a light diffuser (accessory that is only compatible with illuminated units fitted with an LED),
5 an illuminated unit with integral “flash” discharge tube (always mounted at the top of the tower light),
6 an audible unit (buzzer),
7 a fixing base comprising an aluminium support tube glued into a plastic fixing plate, for raising the tower light by 80, 380 or 780 mm,
8 a plastic fixing base (support tube with integral fixing plate), height 100 mm,
9 a zamak fixing plate for use on a vertical support,
10 a base mounted LED,
11 an incandescent bulb.

(1) Electrical connections to removable terminal block to made by user.
(2) Variable length screw depending on the number of units to be combined. To be ordered separately, see page 4/66
(3) Maximum configurations possibilities:
□ *5 illuminated units mounted on base unit.*
□ *4 illuminated units + 1 “buzzer” mounted on base unit.*
(4) Incandescent bulbs or LEDs to be ordered separately, see page 4/67.

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights and tower lights for customer assembly (up to 5 units)

Environment

Conformity to standards			EN/IEC 60947-5-1
Product certifications			UL, CSA, GOST
Protective treatment	Standard version		"TC"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation *(1)*	**°C**	**Illuminated units with steady light signalling:** - 25…+ 70, with 10 W max. incandescent bulb - 25…+ 50, with LED
		°C	**Illuminated units with flashing light signalling:** - 25…+ 50, with 7 W max. incandescent bulb - 25…+ 40, with 10 W max. incandescent bulb - 25…+ 50, with LED
		°C	**Illuminated units with "flash" discharge tube:** - 25…+ 50
		°C	**Audible units:** - 25…+ 50, with buzzer
Electric shock protection Conforming to IEC 61140	Mounted on support tube		Class I with metal fixing plate Class II with plastic fixing plate
	Mounted on base unit		Class II
Degree of protection	Conforming to IEC 60529		IP 40
Material	Illuminated units		Polycarbonate
	Base unit and cover		Glass-reinforced polyamide and polycarbonate
	Fixing bases		Support tube with integral fixing plate: plastic (XVD C02) Aluminium support tube glued into plastic fixing plate (XVB Z0●)
	Fixing plate XVB C12 for use on vertical support		Zamak

Electrical characteristics

Rated insulation voltage (Ui)	Conforming to EN/IEC 60947-1	**V**	250
Voltage limits	Conforming to EN/IEC 60947-5-1	**G**	0.85 to 1.10 Un (Un: nominal voltage)
Consumption	LED unit	**mA**	**Steady light signalling:** ⎓ 24 V: < 47 ~ 120 V: < 17 ~ 230 V: < 17
		mA	**Flashing light signalling:** ⎓ 24 V: < 47 ~ 120 V: < 17 ~ 230 V: < 17
	5 Joule "flash" discharge tube unit (on energisation)	**mA**	~ 24 V: < 550 ⎓ 24 V: < 350 ~ 120 V: < 140 ~ 230 V: < 105
	Audible units	**mA**	⎓ 12…48 V: < 20 ~ 120…230 V: < 50
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	**kV**	Uimp = 4
Light source	Illuminated units with steady or flashing light signalling		Incandescent bulbs with BA 15d base fitting, maximum power 10 W LED with BA 15d base fitting
Illuminating power	Illuminated units with discharge circuit (integral discharge tube)	**cds**	13 (integral high intensity tube) with clear lens unit: 5 J tube
Audible unit	Continuous or intermittent tone	**dB**	90 at 1 m (adjustable: 70…90 dB)
	Fundamental frequency	**kHz**	2.8
Terminal referencing	Common to all 5 units		1 terminal referenced "C"
	Depending on number of units		1 or 5 terminals referenced 1 to 5
Connection	Maximum clamping capacity on protected, ready-to-tighten, screw and captive cable clamp terminals	**mm²**	1 x 1.5 with cable end 1 x 0.82 with bared wire ends (complete products)
Frequency of illuminated units	Illuminated units with flashing light signalling	**Hz**	1
	Illuminated units with discharge tube	**Hz**	1

(1) ***Warning****: illuminated units with incandescent bulbs must not be combined with LED illuminated units, due to the risk of overheating. Also, when different units (e.g. steady, flashing…) are combined, the maximum temperature is limited to that of the weaker unit.*

Presentation, description: page 4/60 References: page 4/63 Dimensions, mounting: page 4/68

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights



XVD ●●6



XVD ●2S●R

Pre-cabled tower lights

With 1 signalling unit

Composition	Light source (included)	Voltage	Signalling colour *(1)*		Reference *(2)*	Weight kg
			Steady	"Flash"		
1 illuminated unit	"Flash" discharge tube 5 J	⎓ 24 V	–	R	**XVD BR6**	0.600
			–	O	**XVD BA6**	0.600
		∿ 230 V	–	R	**XVD MR6**	0.600
			–	O	**XVD MA6**	0.600

With 2 signalling units

Composition	Light source (included)	Voltage	Signalling colour *(1)*		Reference *(2)*	Weight kg
			Steady	"Flash"		
2 illuminated units	LED	⎓ 24 V	G-R	–	**XVD B2GR**	0.553
			O-R	–	**XVD B2AR**	0.553
	LED + "flash" discharge tube 5 J	⎓ 24 V	G	R	**XVD B2GR6**	0.755
1 illuminated unit + 1 audible "buzzer" unit	"Flash" discharge tube 5 J	⎓ 24 V	–	O	**XVD BSA6**	0.775

With 3 signalling units

Composition	Light source (included)	Voltage	Signalling colour *(1)*		Reference *(2)*	Weight kg
			Steady	"Flash"		
3 illuminated units	Incandescent bulb 10 W max.	⎓ 24 V	G-O-R	–	**XVD B1GAR**	0.923
		∿ 230 V	G-O-R	–	**XVD M1GAR**	0.923
	LED	⎓ 24 V	G-O-R	–	**XVD B2GAR**	0.698
		∿ 230 V	G-O-R	–	**XVD M2GAR**	0.698
	LED + "flash" discharge tube 5 J	⎓ 24 V	G-O	R	**XVD B2GAR6**	0.898
2 illuminated units + 1 audible "buzzer" unit	LED	⎓ 24 V	G-R	–	**XVD B2SGR**	0.718
			O-R	–	**XVD B2SAR**	0.718
		∿ 230 V	G-R	–	**XVD M2SGR**	0. 718

With 4 signalling units

Composition	Light source (included)	Voltage	Signalling colour *(1)*		Reference *(2)*	Weight kg
			Steady	"Flash"		
4 illuminated units	LED	⎓ 24 V	C-G-O-R	–	**XVD B2CGAR**	0.843
3 illuminated units + 1 audible "buzzer" unit	Incandescent bulb 10 W max.	⎓ 24 V	G-O-R	–	**XVD B1SGAR**	1.088
	LED	⎓ 24 V	G-O-R	–	**XVD B2SGAR**	0.863
		∿ 230 V	G-O-R	–	**XVD M2SGAR**	0.863

(1) Signalling colour: R: red; O: orange; G: green; C: clear.
(2) In the references, the colours are listed in the same order as the mounting of the illuminated units (from bottom to top).

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Tower lights for customer assembly (up to 5 units)



XVD L3●



XVD L4●●



XVD L6●●

Tower lights for customer assembly

With steady light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Tower light comprising: - 1 illuminated unit - 1 base unit	Incandescent bulb 10 W max., 250 V max. or LED	Green	**XVD L33**	0.255
		Red	**XVD L34**	0.255
		Orange	**XVD L35**	0.255
		Blue	**XVD L36**	0.255
		Clear	**XVD L37**	0.255
		Yellow	**XVD L38**	0.255

With integral flashing light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Tower light comprising: - 1 illuminated unit - 1 base unit	Incandescent bulb 10 W max., ∼ 24 V, ⎓ 24…48 V or LED	Green	**XVD L4B3**	0.275
		Red	**XVD L4B4**	0.275
		Orange	**XVD L4B5**	0.275
		Blue	**XVD L4B6**	0.275
		Clear	**XVD L4B7**	0.275
		Yellow	**XVD L4B8**	0.275
	Incandescent bulb 10 W max., ∼ 48…230 V or LED	Green	**XVD L4M3**	0.275
		Red	**XVD L4M4**	0.275
		Orange	**XVD L4M5**	0.275
		Blue	**XVD L4M6**	0.275
		Clear	**XVD L4M7**	0.275
		Yellow	**XVD L4M8**	0.275

With 5 Joule "flash" discharge tube

Description	Light source (included)	Colour	Reference	Weight kg
Tower light comprising: - 1 illuminated unit - 1 base unit	Integral "flash" discharge tube ≂ 24 V	Green	**XVD L6B3**	0.480
		Red	**XVD L6B4**	0.480
		Orange	**XVD L6B5**	0.480
		Blue	**XVD L6B6**	0.480
		Clear	**XVD L6B7**	0.480
		Yellow	**XVD L6B8**	0.480
	Integral "flash" discharge tube ∼ 230 V	Green	**XVD L6M3**	0.475
		Red	**XVD L6M4**	0.475
		Orange	**XVD L6M5**	0.475
		Blue	**XVD L6M6**	0.475
		Clear	**XVD L6M7**	0.475
		Yellow	**XVD L6M8**	0.475

(1) Incandescent bulbs and LEDS: see page 4/67.

Presentation, description: page 4/60
Characteristics: page 4/62
Dimensions, mounting: page 4/68

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Tower lights for customer assembly (up to 5 units)



XVD C3●



XVD C4●●



XVD Z18



XVD C6●●

Tower lights for customer assembly of 1 to 5 signalling units

Illuminated units with steady light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Illuminated units	Incandescent bulb 10 W max., 250 V max. or LED	Green	**XVD C33**	0.115
		Red	**XVD C34**	0.115
		Orange	**XVD C35**	0.115
		Blue	**XVD C36**	0.115
		Clear	**XVD C37**	0.115
		Yellow	**XVD C38**	0.115

Illuminated units with integral flashing light signalling

Description	Light source, to be ordered separately *(1)*	Colour	Reference	Weight kg
Illuminated units	Incandescent bulb 10 W max., ∿ 24 V, ⎓ 24…48 V or LED	Green	**XVD C4B3**	0.135
		Red	**XVD C4B4**	0.135
		Orange	**XVD C4B5**	0.135
		Blue	**XVD C4B6**	0.135
		Clear	**XVD C4B7**	0.135
		Yellow	**XVD C4B8**	0.135
	Incandescent bulb 10 W max., ∿ 48…230 V or LED	Green	**XVD C4M3**	0.135
		Red	**XVD C4M4**	0.135
		Orange	**XVD C4M5**	0.135
		Blue	**XVD C4M6**	0.135
		Clear	**XVD C4M7**	0.135
		Yellow	**XVD C4M8**	0.135

Light diffuser

Description	For use with	Reference	Weight kg
Light diffuser clear plastic (Sold in boxes)	LED illuminated units only (all colours) One box allows to equip 5 illuminated units.	**XVB Z18**	0.080

Illuminated units with 5 Joule “flash” discharge tube

Description	Light source (included)	Colour	Reference	Weight kg
Illuminated units	Integral “flash” discharge tube ⎓ 24 V	Green	**XVD C6B3**	0.310
		Red	**XVD C6B4**	0.310
		Orange	**XVD C6B5**	0.310
		Blue	**XVD C6B6**	0.310
		Clear	**XVD C6B7**	0.310
		Yellow	**XVD C6B8**	0.310
	Integral “flash” discharge tube ∿ 230 V	Green	**XVD C6M3**	0.310
		Red	**XVD C6M4**	0.310
		Orange	**XVD C6M5**	0.310
		Blue	**XVD C6M6**	0.310
		Clear	**XVD C6M7**	0.310
		Yellow	**XVD C6M8**	0.310

(1) Incandescent bulbs and LEDS: see page 4/67.

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Tower lights for customer assembly (up to 5 units)



XVD C9●



XVD C07

Tower lights for customer assembly of 1 to 5 signalling units (continued)

Audible units

Description	Characteristics	Reference	Weight kg
Buzzer, 90 dB at 1 m adjustable, 70 to 90 dB, continuous or intermittent mode (using microswitches)	⎓ 12…48 V	**XVD C9B**	0.150
	∿120…230 V	**XVD C9M**	0.150

Base units (for direct or support tube fixing)

Description	For use with	Type	Reference	Weight kg
Base unit + cover with bottom cable entry	Tower lights without "flash" discharge tube unit	Standard	**XVD C21**	0.180
Base unit only with bottom cable entry	Tower lights with "flash" discharge tube unit	Standard	**XVD C07**	0.160

Assembly screw

Description	For use with	Type	Reference	Weight kg
Screw for assembling signalling units on base unit	Tower lights without "flash" discharge tube unit	1 unit	**XVD C03**	0.015
		2 units	**XVD C04**	0.022
		3 units	**XVD C05**	0.030
		4 units	**XVD C06**	0.038
		5 units	**XVD C08**	0.045
	Tower lights with "flash" discharge tube unit	1 unit	**XVD C09**	0.036
		2 units	**XVD C10**	0.044
		3 units	**XVD C11**	0.050
		4 units	**XVD C12**	0.059

Presentation, description: page 4/60
Characteristics: page 4/62
Dimensions, mounting: page 4/68

Schneider Electric

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Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Accessories for customer assembled tower lights


XVB Z02


XVB Z03/Z04


XVD C02


XVB C12


DL1 B●●


DL1 BD●●/DL1 BK●●

Accessories for customer assembled tower lights

Description	Height under base unit (mm)	Support tube colour	Reference	Weight kg
Fixing bases comprising Ø 25 mm aluminium support tube glued into a black plastic fixing plate	80	Black aluminium	**XVB Z02**	0.110
		Aluminium	**XVB Z02A**	0.110
	380	Black aluminium	**XVB Z03**	0.200
		Aluminium	**XVB Z03A**	0.200
	780	Black aluminium	**XVB Z04**	0.325
		Aluminium	**XVB Z04A**	0.325

Description	Details	Colour	Reference	Weight kg
Fixing base (plastic support tube with integral fixing plate)	100 mm	Black	**XVD C02**	0.070
Fixing plate (Zamak) for use on vertical support	Direct mounting on base unit or using support tube with integral fixing plate XVD C02 or using fixing bases XVB Z0●		**XVB C12**	0.380
Cover only	–			0.020

Description	Characteristics		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs BA 15d base fitting	12 V		10	**DL1 B●J** *(1)*	0.090
	24 V		10	**DL1 B●B** *(1)*	0.090
	48 V		10	**DL1 B●E** *(1)*	0.090
	120 V		10	**DL1 B●G** *(1)*	0.090
	230 V		10	**DL1 B●M** *(1)*	0.090
LEDs BA 15d base fitting Protected LED	⎓ 24 V	White	1	**DL1 BDB1**	0.015
		Green	1	**DL1 BDB3**	0.015
		Red	1	**DL1 BDB4**	0.015
		Orange	1	**DL1 BDB5**	0.015
		Blue	1	**DL1 BDB6**	0.015
		Yellow	1	**DL1 BDB8**	0.015
	∿ 120 V	White	1	**DL1 BDG1**	0.015
		Green	1	**DL1 BDG3**	0.015
		Red	1	**DL1 BDG4**	0.015
		Orange	1	**DL1 BDG5**	0.015
		Blue	1	**DL1 BDG6**	0.015
		Yellow	1	**DL1 BDG8**	0.015
	∿ 230 V	White	1	**DL1 BDM1**	0.015
		Green	1	**DL1 BDM3**	0.015
		Red	1	**DL1 BDM4**	0.015
		Orange	1	**DL1 BDM5**	0.015
		Blue	1	**DL1 BDM6**	0.015
		Yellow	1	**DL1 BDM8**	0.015
Flashing LEDs BA 15d base fitting Protected LED	⎓ 24 V	White	1	**DL1 BKB1**	0.015
		Green	1	**DL1 BKB3**	0.015
		Red	1	**DL1 BKB4**	0.015
		Orange	1	**DL1 BKB5**	0.015
		Blue	1	**DL1 BKB6**	0.015
		Yellow	1	**DL1 BKB8**	0.015
	∿ 120 V	White	1	**DL1 BKG1**	0.015
		Green	1	**DL1 BKG3**	0.015
		Red	1	**DL1 BKG4**	0.015
		Orange	1	**DL1 BKG5**	0.015
		Blue	1	**DL1 BKG6**	0.015
		Yellow	1	**DL1 BKG8**	0.015
	∿ 230 V	White	1	**DL1 BKM1**	0.015
		Green	1	**DL1 BKM3**	0.015
		Red	1	**DL1 BKM4**	0.015
		Orange	1	**DL1 BKM5**	0.015
		Blue	1	**DL1 BKM6**	0.015
		Yellow	1	**DL1 BKM8**	0.015

*(1) Complete the reference using the letter "**E**" for a 7 W bulb or the letter "**L**" for a 10 W bulb. Example: DL1 BEJ.*

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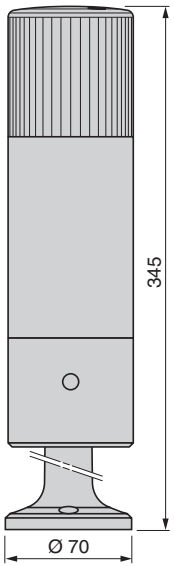
Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights and tower lights for customer assembly (up to 5 units)

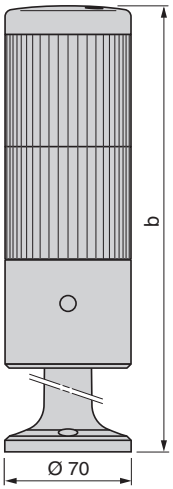
Dimensions

Pre-cabled tower lights XVD B●6, XVD M●6



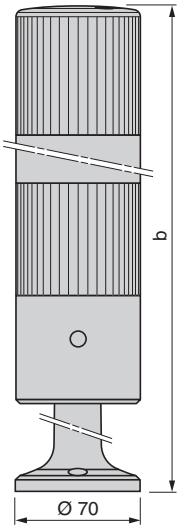
Pre-cabled tower lights XVD ●●●●

Without "flash" discharge tube



Number of illuminated or audible signalling units (no "flash")	b
2	302
3	365
4	428

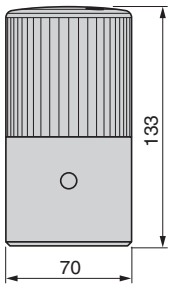
With "flash" discharge tube



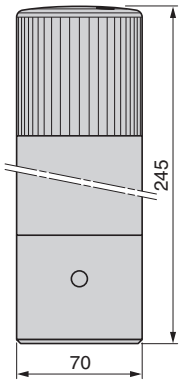
Number of illuminated or audible signalling units other than "flash"	b
2	405
3	468

Customer assembled tower lights XVD L●●●

With steady or flashing light signalling, XVD L3●/L4●●

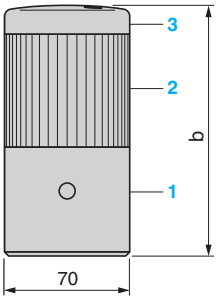


With "flash" discharge tube, XVD L6●●



Customer assembled tower lights XVD C●●●

Without "flash" discharge tube

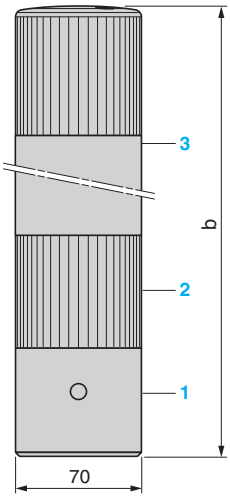


1 Base unit XVD C21 *(1)*
2 Illuminated unit XVD C3●/C4●● or audible unit XVD C9●
3 Cover *(1)*

Number of illuminated or audible signalling units (no "flash")	b
1	140
2	203
3	266
4	329
5	392

(1) Cover included with base unit XVD C21.

With "flash" discharge tube



1 Base unit XVD C07
2 Illuminated unit XVD C6●● or audible unit XVD C9●
3 "Flash" unit XVD C6●●

Number of illuminated or audible signalling units other than "flash"	b
1	308
2	371
3	434
4	497

Presentation, description: page 4/60
Characteristics: page 4/62
References: page 4/63

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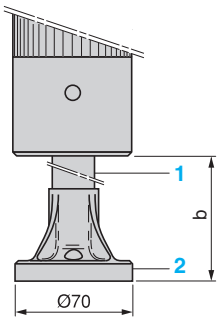
Signalling solutions
Modular tower lights
Harmony type XVD Ø 70 mm
Pre-cabled tower lights and tower lights for customer assembly (up to 5 units)

Mounting

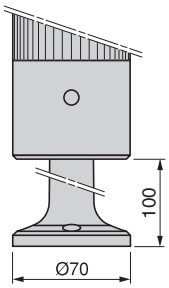
With fixing bases XVB Z0● (aluminium support tube glued into black plastic fixing plate)



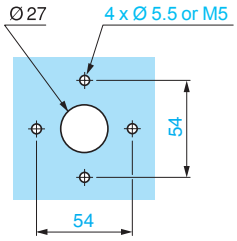
Fixing base comprising XVB Z0● (Ø 25 mm support tube **1** glued into plastic fixing plate **2**)

XVB	b
Z02/Z02A	80
Z03/Z03A	380
Z04/Z04A	780

With fixing base XVD C02 (support tube with integral fixing plate)

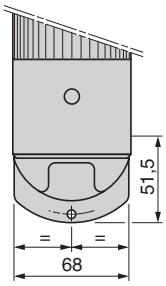


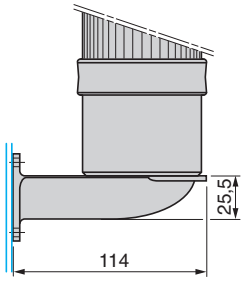
Horizontal support panel cut-out for mounting on fixing plate



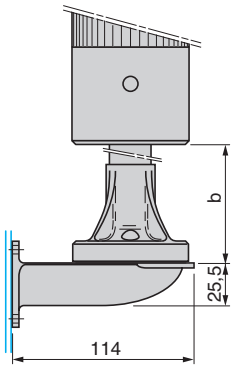
With fixing plate XVB C12 for use on vertical support

Direct mounting on base unit



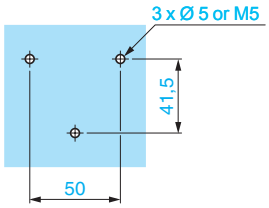


Mounting using fixing bases XVB Z0● or XVD C02



Fixing bases	b
XVB Z02/Z02A	80
XVB Z03/Z03A	380
XVB Z04/Z04A	780
XVD C02	100

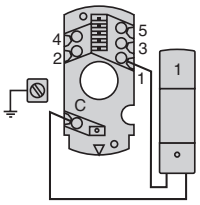
Vertical support panel drillings for fixing plate XVB C12

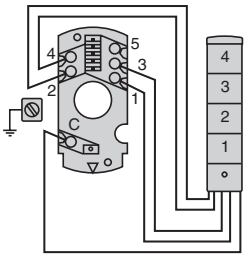


Installation

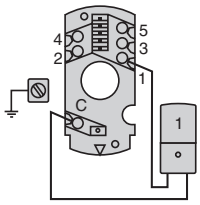
Connections

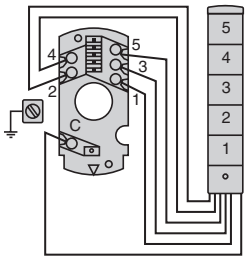
Pre-cabled tower lights





Customer assembled tower lights

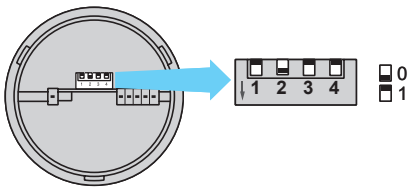




Wire colours of pre-assembled products:
C: black
1: brown
2: grey
3: violet
4: blue

Adjustment of audible signal for buzzers type XVD C9●

By 4 microswitches located in the base of the buzzer:
□ 2 switches marked **1** and **2** for selecting continuous or intermittent **mode** (Hz).
□ 2 switches marked **3** and **4** for selecting the audible signal **power** (dB).



Position of microswitches				Setting	
1	2	3	4	Mode	Power
1	1	1	1	— 2.8 kHz	90 dB (*Factory setting*)
1	0	0	1	— 2.8 kHz	85 dB
0	1	1	0	⎍ 5 Hz *(1)*	80 dB
0	0	0	0	⎍ 1 Hz	70 dB

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Signalling solutions
Rotating beacons Harmony type XVR (equipped with Super Bright LED)

Presentation

The rotating beacons in the Harmony XVR range are optical signalling units designed for long distance signalling applications.

They are used mainly in the iron and steel industry, on industrial handling vehicles or for safety applications.

Environment characteristics

Rotating beacons type			XVR 08	XVR 10	XVR 12	XVR 13B●● XVR 13J●●	XVR 13●●●L
Product certifications			CE, UL and CSA				
Conforming to standards			EN/IEC 61000-6-2 , EN/IEC 61000-6-4				EN/IEC 60947-1, EN/IEC 60947-5-1
Protective treatment			"TC"				
Ambient air temperature	For storage	**°C**	- 35…+ 70				
	For operation	**°C**	- 10…+ 50			- 30…+ 50	
Electric shock protection conforming to IEC 61140			Class II				
Degree of protection conforming to IEC 60529			IP 23 (IP 65 with accessory)	IP 23 (IP 55 with accessory)	IP 23	IP 66 (resistant to vibration)	IP 66 and IP 67
Material	Domed lens unit		PC				
	Base		ABS				
Light source			Super Bright LED				

Electrical characteristics

Rotating beacons type			XVR 08J XVR 10J XVR 12J XVR 12J●●S	XVR 08B XVR 10B XVR 12B XVR 12B●●S XVR 13B●●L	XVR 13J	XVR 13B	XVR 13G●●L	XVR 13M●●L
Voltage		**V**	≂ 12	≂ 24	⎓ 12	⎓ 24	~ 120	~ 230
Rated impulse withstand voltage		**kV**	0.8				4	
Consumption	Without buzzer	**W**	3.2				5	
	With buzzer (for XVR 12●●●S)	**W**	4	4.7	–			
Audible units with continuous or intermittant tone (short/long or high/low)	For XVR 12●●●S Sound level at 1 m	**dB**	50...90					
Flashing frequency of illuminated units		**Hz**	2.3 2.7 for **XVR 13**					
Connection	Wire c.s.a	**mm²**	0.83 mm² / SPT-1 AWG 18 *(1)* for **XVR 08●**, **XVR 10●** and **XVR 12●** 0.83 mm² / UL1007 AWG 18 *(1)* for **XVR 12●●●S** 1.25 mm² / VCT for **XVR 13**					
	Cable length	**mm**	400 500 for **XVR 08●**					

(1) AWG: American Wire Gauge.

References: page 4/71
Dimensions: page 4/72

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Signalling solutions
Rotating beacons Harmony type XVR
(equipped with Super Bright LED)


525874

XVR 08●●●


525875

XVR 10●●●


525877

XVR 13●●●


PF540658

XVR 13●●●L

Complete, pre-cabled rotating beacons

Diameter mm	Sound option	IP degree of protection	Voltage V	Colour	Reference	Weight kg
Ø 84	Without buzzer	IP 23 (IP 65 With accessories)	≂ 12	Red	**XVR 08J04**	0.300
				Orange	**XVR 08J05**	0.300
				Green	**XVR 08J03**	0.300
				Blue	**XVR 08J06**	0.300
			≂ 24	Red	**XVR 08B04**	0.300
				Orange	**XVR 08B05**	0.300
				Green	**XVR 08B03**	0.300
				Blue	**XVR 08B06**	0.300
Ø 106	Without buzzer	IP 23 (IP 55 With accessories)	≂ 12	Red	**XVR 10J04**	0.500
				Orange	**XVR 10J05**	0.500
				Green	**XVR 10J03**	0.500
				Blue	**XVR 10J06**	0.500
			≂ 24	Red	**XVR 10B04**	0.500
				Orange	**XVR 10B05**	0.500
				Green	**XVR 10B03**	0.500
				Blue	**XVR 10B06**	0.500
Ø 120	Without buzzer	IP 23	≂ 12	Red	**XVR 12J04**	0.500
				Orange	**XVR 12J05**	0.500
				Green	**XVR 12J03**	0.500
				Blue	**XVR 12J06**	0.500
			≂ 24	Red	**XVR 12B04**	0.500
				Orange	**XVR 12B05**	0.500
				Green	**XVR 12B03**	0.500
				Blue	**XVR 12B06**	0.500
Ø 120	With buzzer	IP 23	≂ 12	Red	**XVR 12J04S**	0.500
				Orange	**XVR 12J05S**	0.500
				Green	**XVR 12J03S**	0.500
				Blue	**XVR 12J06S**	0.500
			≂ 24	Red	**XVR 12B04S**	0.500
				Orange	**XVR 12B05S**	0.500
				Green	**XVR 12B03S**	0.500
				Blue	**XVR 12B06S**	0.500
Ø 130	Without buzzer	IP 66 Resistant to vibration	⎓ 12	Red	**XVR 13J04**	0.800
				Orange	**XVR 13J05**	0.800
			⎓ 24	Red	**XVR 13B04**	0.800
				Orange	**XVR 13B05**	0.800
		IP 66 and IP 67	≂ 24	Red	**XVR 13B04L**	0.820
				Orange	**XVR 13B05L**	0.820
			~ 120	Red	**XVR 13G04L**	0.990
				Orange	**XVR 13G05L**	0.990
			~ 230	Red	**XVR 13M04L**	0.990
				Orange	**XVR 13M05L**	0.990

Accessories for rotating beacons

Description	To be used for / with	Diameter mm	Height mm	Reference	Weight kg
Reflecting prism	–	84	–	**XVR ZR1**	0.010
		106	–	**XVR ZR2**	0.015
		120/130	–	**XVR ZR3**	0.020
Rubber base	Increasing the IP degree	84	–	**XVR Z081**	0.040
		106	–	**XVR Z082**	0.050
Metal angle bracket	Horizontal support	84, 106, 120	–	**XVC Z23**	0.380
		130	–	**XVR 012L**	1.300
Metal fixing plate	Horizontal support	106, 120	300	**XVC Z13**	0.700

4

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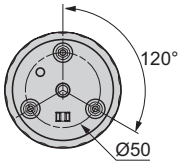
Signalling solutions
Rotating beacons Harmony type XVR
(equipped with Super Bright LED)

Complete, pre-cabled rotating beacons

XVR 08●0●



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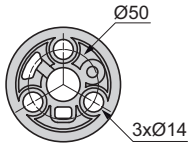
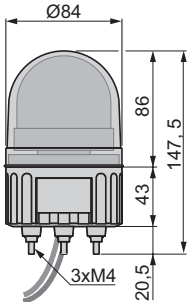
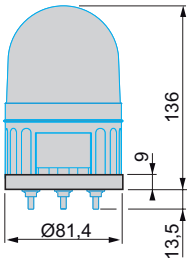
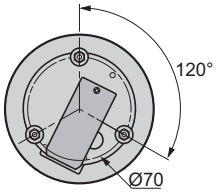






XVR 10●0●



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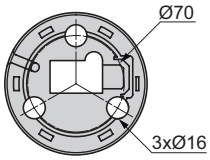

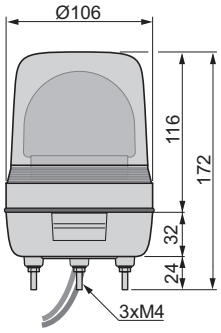

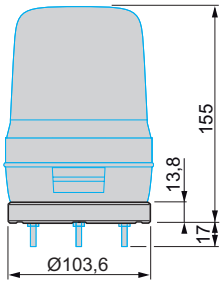

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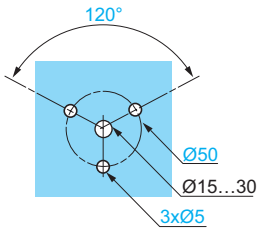

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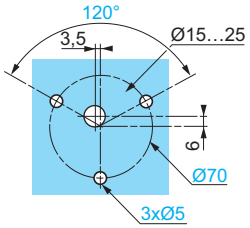

Presentation: page 4/70
Characteristics: page 4/70
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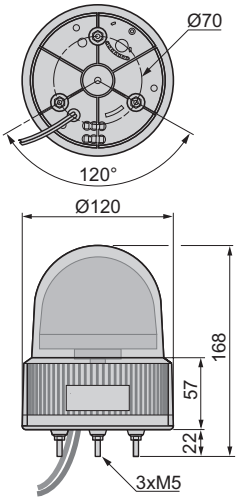
Complete, pre-cabled rotating beacons *(continued)*

XVR 12●0●



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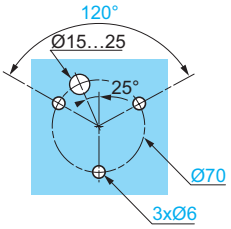

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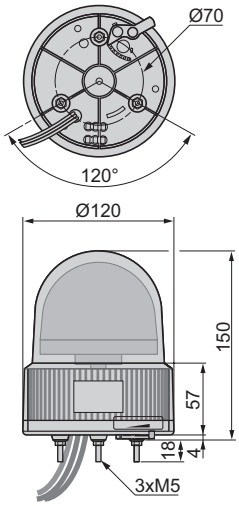

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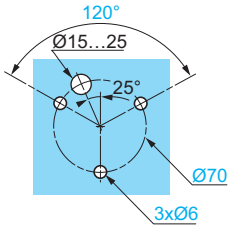

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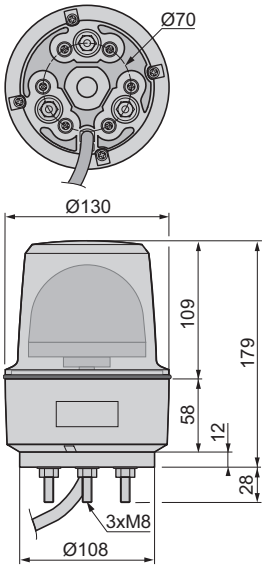

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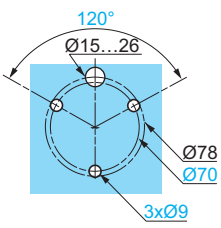
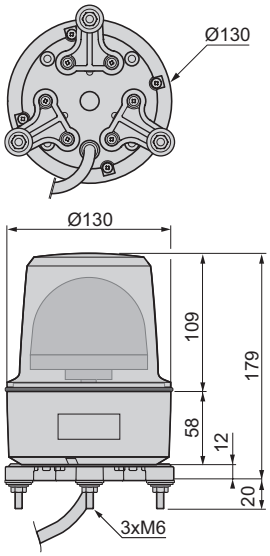


XVR 13●0●L



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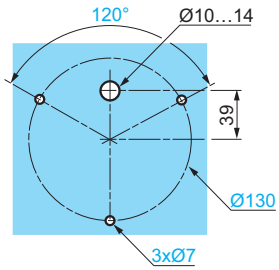

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Presentation

Harmony XVS sirens and electronic alarms are audible signalling units used for long distance indication of the operating status or sequences of a machine or installation.

They are mainly used on conveyor belts, on automated industrial trucks and on the doors of electrical control panels.

Characteristics

Type of siren or alarm			XVS 10BMW	XVS 10GMW 10MMW	XVS 14BMW	XVS 14GMW 14MMW	XVS 72BM••	XVS 96BM••
Environment characteristics								
Product certifications			CE, UL and CSA					
Conforming to standards			EN/IEC 60947-1, EN/IEC 60947-5-1		EN/IEC 61000-6-2, EN/IEC 61000-6-3	EN/IEC 60947-1, EN/IEC 60947-5-1	EN/IEC 61000-6-2, EN/IEC 61000-6-3	EN/IEC 60947-1, EN/IEC 60947-5-1
Protective treatment			"TC"					
Ambient air temperature	Storage	**°C**	- 35…+ 70					
	Operation	**°C**	- 30…+ 50		- 10…+ 50		- 20…+ 50	
Electric shock protection conforming to IEC 61140			Class II					
Degree of protection conforming to IEC 60529			IP 53				IP 54	
Material	Terminal cover		–				PC	
	Base		PC		PC/ABS		ABS	PC or ABS
Sound	Number of options (tones)		2		43		16	
Electrical characteristics								
Voltage		**V**	≂ 12-24	∿ 120 ∿ 230	⎓ 12/24	∿ 120 ∿ 240	≂ 12/24	
Rated impulse withstand voltage			0.8	4	0.8	4	0.8	
Consumption			≂ 12 V: 500 mA ≂ 24 V: 300 mA	∿ 120 V: 80 mA ∿ 230 V: 40 mA	⎓ 12 V: 250 mA ⎓ 24 V: 350 mA	∿ 120 V: 100 mA ∿ 240 V: 50 mA	≂ 12 V: 1.9 / 1.4 W ≂ 24 V: 4.8 / 3 W	≂ 12 V: 3.5 / 3 W ≂ 24 V: 8.5 / 7 W
Audible units	Sound level (continous or intermittant tone) at 1 m	**dB**	106		0…105		0…90	0…96
Cabling	Cable diameter		Cable-gland for using 6.5 to 8.5 mm cables		Power wire c.s.a.: 0.52 mm² / AWG 20 *(1)* Signal wire c.s.a.: 0.33 mm² / AWG 22 *(1)*		–	
	Maximum clamping capacity	**mm²**	1 x 1.5		–		1 x 1.5	
	Cable length	**mm**	–		500		–	

(1) AWG: American Wire Gauge.

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Signalling solutions
Sound solutions Harmony type XVS
Sirens and electronic alarms

References

PF540616



XVS 10●M

PF569825



XVS 14●MW

PF569826



XVS 72BM●●

PF569827

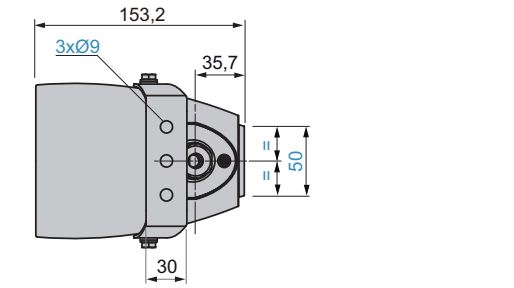


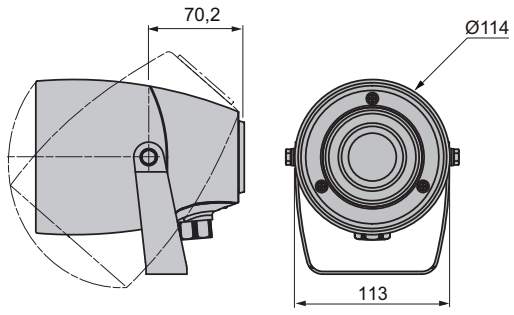
XVS 96BM●●

Description	Voltage	Colour	Reference	Weight
	V			kg
Sirens **106 dB, 2 tones**	⎓ 12-24	White	**XVS 10BMW**	0.800
	~ 120	White	**XVS 10GMW**	1.000
	~ 230	White	**XVS 10MMW**	1.000
Multisound siren **105 dB, 43 tones** **8 channels** **Pre-wired**	⎓ 12/24	White	**XVS 14BMW**	1.000
	~ 120	White	**XVS 14GMW**	1.200
	~ 240	White	**XVS 14MMW**	1.200
Electronic alarms **90 dB, 16 tones** **Panel Mount DIN72** **4 channels**	⎓ 12/24	PNP, Black	**XVS 72BMBP**	0.180
		PNP, White	**XVS 72BMWP**	0.180
		NPN, Black	**XVS 72BMBN**	0.180
		NPN, White	**XVS 72BMWN**	0.180
Electronic alarms **96 dB, 16 tones** **Panel Mount DIN96** **4 channels**	⎓ 12/24	PNP, Black	**XVS 96BMBP**	0.400
		PNP, White	**XVS 96BMWP**	0.400
		NPN, Black	**XVS 96BMBN**	0.400
		NPN, White	**XVS 96BMWN**	0.400

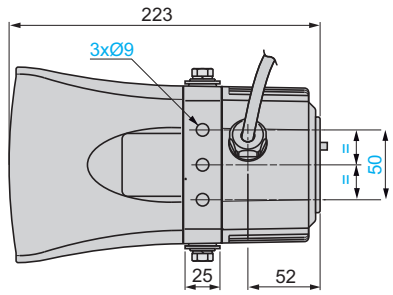
Dimensions

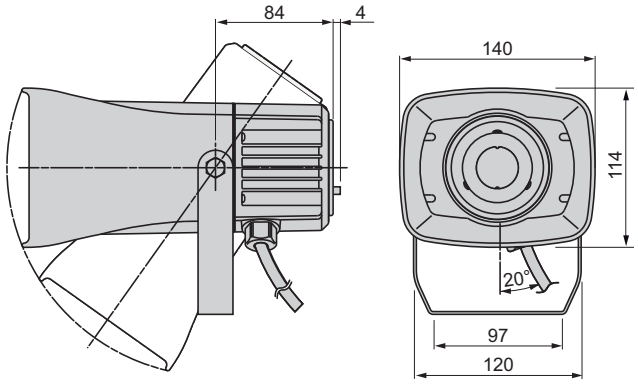
XVS 10●M



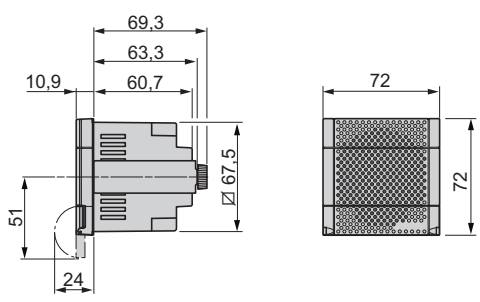


XVS 14●MW

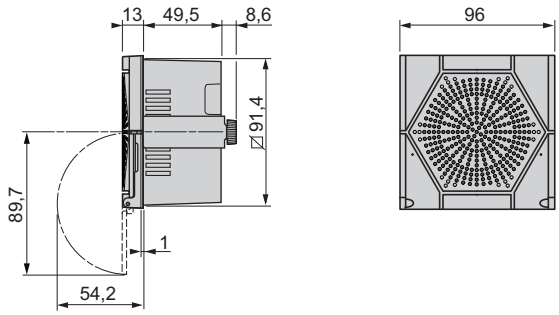




XVS 72BM●●



XVS 96BM●●



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Emergency stop trip wire switches, type XY2 C

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- Replacement parts . . . . . *page 5/12*

Metal foot switches, Harmony types XPE M/R

- Single and double pedal foot switches with protective cover . . . . . *page 5/19*
- Foot switches without protective cover. . . . . *page 5/20*
- Accessories . . . . . *page 5/20*

Plastic foot switches, Harmony types XPE A/B/G/Y

- Single pedal foot switches with protective cover . . . . . *page 5/23*
- Foot switches without protective cover. . . . . *page 5/23*
- Accessories . . . . . *page 5/23*

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Control and signalling units for safety applications
Dialogue components

Applications	**Trip wire switches for:** - conveyor systems, - materials handling, machine tools, - electrical testing stations	**Foot switches for:** - bending machines, dosing machines, assembly stations, packaging machines, cutting presses, stamping presses, - machine tools (numerical control, lathes, milling machines, grinders, machining centres), - guillotines, cutters, folders, saws, - forging machines, rolling machines, cold metal forming machines		**Enabling grip switch for:** - robots, - machine tools, - labellers	**Ergonomic two-hand control stations for machine tool control**
	 813638_1	 561251	 521352	 530146	 825932_1
Features	Length of protected zone: 15 to 100 metres. Can be tripped by the operator at any point in the work zone	Metal, with or without protective cover. Single or double pedal	Plastic, with or without protective cover. Single pedal	Plastic enclosure	2 control pushbuttons and 1 Emergency stop pushbutton
Conformity to standards	**XY2 CH**, **XY2 CE**: EN/IEC 60947-5-1, EN/ISO 13850, UL 508 and CSA C22-2 n° 14 (when specified H7) **XY2 CB**: EN/IEC 60947-5-1, EN/ISO 13850, CSA C22-2 n° 14 (when specified H2)	Without protective cover: EN/IEC 60947-5-1, CSA C22-2 n° 14 With protective cover: NF E 09-031	**XPE B, G**: EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14 **XPE A, Y**: EN/IEC 60947-5-1	EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60204-1, cUL us 508, CSA C22-2 n° 14	EN/IEC 60947-5-1, EN 574/ISO 13851
Protective treatment	Special version, “TH”			Standard version, “TC”	
Ambient temperature For operation	- 25…+ 70 °C		**XPE B, G**: - 25…+ 70 °C **XPE A, Y**: - 25…+ 55 °C	- 10…+ 60 °C	- 25…+ 70 °C
For storage	- 40…+ 70 °C				
Electric shock protection conforming to IEC 61140	Class I			Class II	Class I
Degree of protection conforming to IEC 60529	**XY2 CH**, **XY2 CE**: IP 65 **XY2 CB**: enclosure IP 22, contact housing IP 65	IP 66, IP 669 (with protective cover)	**XPE B**, **G** : IP 66 **XPE Y** : IP 55 **XPE A** : IP 43	IP 66 IP 65 with pushbutton	IP 65
Positive operation conf. to EN/IEC 60947-5-1 Appendix K	N/C contacts with positive opening operation ⊖			2-contact, 3-position with positive opening operation	N/C contacts with positive opening operation
Rated insulation voltage	**XY2 CH**, **XY2 CE**: Ui = 400 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 300 V conforming to UL 508, CSA C22-2 n° 14 **XY2 CB**: Ui = 500 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 600 V conforming to CSA C22-2 n° 14	Ui = 500 V, degree of pollution 3 conforming to EN/IEC 60947-1, group C conforming to NF C 20-040 and VDE 0110 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14		Ui = 250 V Ui = 125 V for pushbutton conforming to EN/IEC 60947-1	Ui = 600 V, degree of pollution 3 conforming to EN/IEC 60947-1
Rated impulse withstand voltage conforming to EN/IEC 60947-1	**XY2 CH**, **XY2 CE**: Uimp = 4 kV **XY2 CB:** Uimp = 6 kV	Uimp = 6 kV		Uimp = 2.5 kV	Uimp = 6 kV
Type references	**XY2 C**	**XPE M, XPE R**	**XPE A/B/G/Y**	**XY2 AU**	**XY2 SB**
Pages	5/7	5/19	5/23	Please consult our catalogue: “Safety solutions using Preventa”	

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Emergency stop pushbuttons for: - machine tools, - foundries, presses, - automobile industry	**Emergency stop pushbuttons for:** - assembly and packaging machines, - paper, cardboard and woodworking machines, - food/beverage processing and chemical industries	**Control stations for:** - assembly and packaging machines, - paper, cardboard and woodworking machines, - food/beverage processing, chemical and automobile industries, mechanical presses	**Illuminated beacons and tower lights**	**Rotating beacons** for long distance signalling applications	**Sirens and electronic alarms** for long distance signalling applications
 813635_1	 813636	 813636	 121571  107717	 PF525877	 PF569825
Metal bezel and fixing collar	Plastic bezel and fixing collar	Plastic enclosure	Direct fixing or on support tube	Super Bright LED	Power - 106 db, 2 tones - 105 db, 43 tones - 90 and 96 db, 16 tones
EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, EN/IEC 60947-5-5, EN/ISO 13850 and EN/IEC 60204-1 (Emergency Stop trigger action and mechanical latching mushroom head pushbuttons), IEC 60364-5-53 (Emergency switching off mechanical latching mushroom head pushbuttons) CSA C22-2 n° 14, UL 508 and GB 14048.5			EN/IEC 60947-5-1, UL 508, CSA C22-2 n°14	EN/IEC 61000-6-2 and EN/IEC 61000-6-4 (Ø 84 to 120 mm), EN/IEC 60947-1 and EN/IEC 60947-5-1 (Ø 130 mm), UL 508, CSA C22-2-14	EN/IEC 60947-1 and EN/IEC 60947-5-1 (XVS 10, 14 and 96) EN/IEC 61000-6-2 and EN/IEC 61000-6-3 (XVS 14BMW and XVS 72BM)
Standard version, “TH”			Standard version, “TC”		
- 25…+ 70 °C			See page 4/48	- 10..+ 50 °C (Ø 84 to 120 mm) - 30..+ 50 °C (Ø 130mm)	- 30..+ 50 °C (XVS 10) - 10..+ 50 °C (XVS 14) - 20..+ 50 °C (XVS 72/96)
- 40…+ 70 °C				- 35…+ 70 °C	
Classe I	Classe II		Class I: mounted on support tube Class II: mounted directly	Class II	
IP 66, IP 69K (head fitted with bellows ZBZ ●8) Nema type 4X and 13			IP 65 (mounted on fixing base XVB Z0●) IP 66 (mounted directly on base unit)	Ø 84 and 106: IP 23 (IP 55 or 65 with acces.) Ø 120: IP 23 Ø 130: IP 66 and/or IP 67	IP 53 or IP54
N/C contacts with positive opening operation ⊖			–		
Standard single and double blocks with screw clamp terminals: Ui = 600 V, degree of pollution 3 Blocks for plug-in connector or Faston connectors: Ui = 250 V, degree of pollution 3 Standard blocks for printed circuit board connection: Ui = 250 V, degree of pollution 3 Contact blocks for high power switching: Ui = 250 V, degree of pollution 3 conforming to EN/IEC 60947-1			Ui = 250 V conforming to EN/IEC 60947-1	–	–
Standard single and double blocks with screw clamp terminals: Uimp = 6 kV Blocks for plug-in connector: Uimp = 4 kV Standard blocks for printed circuit board connection: Uimp = 4 kV Contact blocks for high power switching: Uimp = 4 kV			Uimp = 4 kV	Uimp = 0.8 kV (Ø 84 to 120 mm), Uimp = 4 kV (Ø 130 mm)	Uimp = 0.8 kV (≂ 12-24 V and ⎓ 12/24 V), Uimp = 4 kV (≂ 120/230 and ≂ 120/240 V)
XB4 B	**XB5 A**	**XAL K**	**XVB L, XVB C**	**XVR**	**XVS**
1/68	1/148	2/9 and 2/12	4/50	4/71	4/75

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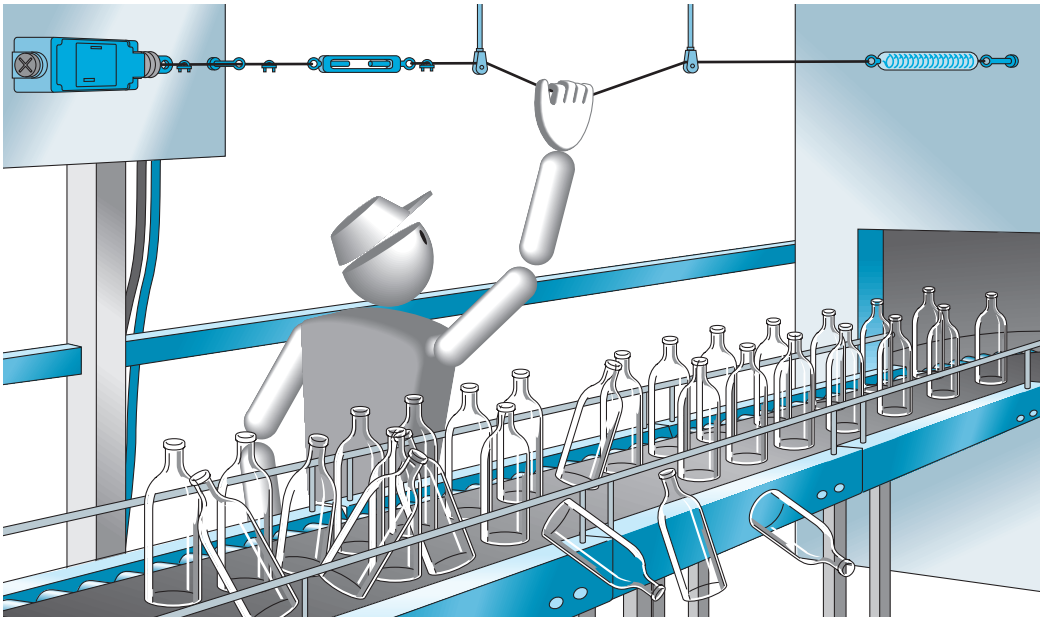
Control and signalling units for safety applications
Emergency stop trip wire switches, type XY2 C

Presentation

Emergency stop trip wire switches

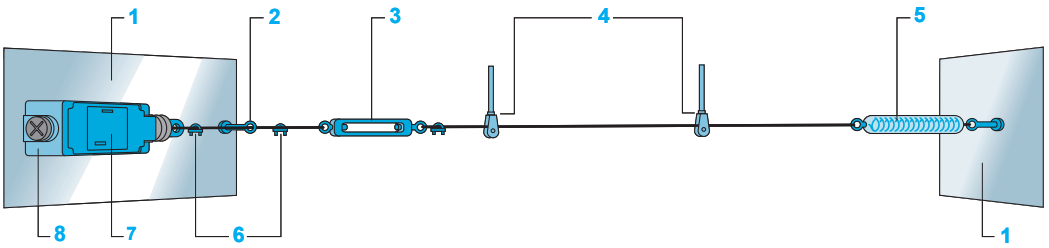
Emergency stop trip wire switches are designed to:
- avert hazards (dangerous phenomena) at the earliest possible moment, or to reduce risks which could cause injury to persons or damage either to machines or work in progress,
- be tripped by a single human action when a normal Emergency stop function is not available,
- trip in the event of the trip wire breaking.

Emergency stop trip wire switches are essential in premises and on machines that are potentially dangerous when in operation. The operator must be able to trigger the stop instruction at any point within their working area.
Application examples: woodworking machines, shears, conveyor systems, transfer machines, printing machines, textile machines, rolling mills, test laboratories, paint shops, surface treatment works.



Installation

Typical installation



1 Fixing support
2 First cable support
3 Turnbuckle
4 Pulley supports and pulleys
5 End spring
6 Cable grips
7 Switch adjustment
8 Emergency stop

Notes regarding installation

- All XY2 CH/CE/CB trip wire switches can be fitted with a pilot light to indicate their tripped condition.
- Cable tension adjustment can be performed using:
  - a turnbuckle (to be ordered separately, see page 5/11),
  - a tensioner (integrated in certain XY2 CH models, see page 5/11),
  - a tensioner (to be ordered separately, see page 5/11) for mounting on XY2 CE models.
- This adjustment is simplified by:
  - a cable tension indicator that is available on all models XY2 CH,
  - the availability of versions with a “cable tension indicator” window by stating its reference on the order form (see page 5/10). Example: reference XY2 CE1A250 becomes XY2 CE1**D**250.
- The use of an end spring is strongly advised for conveyor system applications to ensure operation of the Emergency stop in the event of the cable being pulled towards the switch.
- It is essential that pulleys be used with trip wires that deviate from a straight run, i.e. angled to form a protected zone.
- Important: switches XY2 CB must not be used if the installation requires that the trip wire be angled. Switches XY2 CH and XY2 CE can be used if the installation requires that the trip wire be angled. In this case, the total sum of the angles through which the trip wire bends must not exceed 180° (For further information on instructions to be adhered to, please refer to the installation manual).

Characteristics: page 5/6
References: pages 5/7 to 5/12
Dimensions: page 5/13

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Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

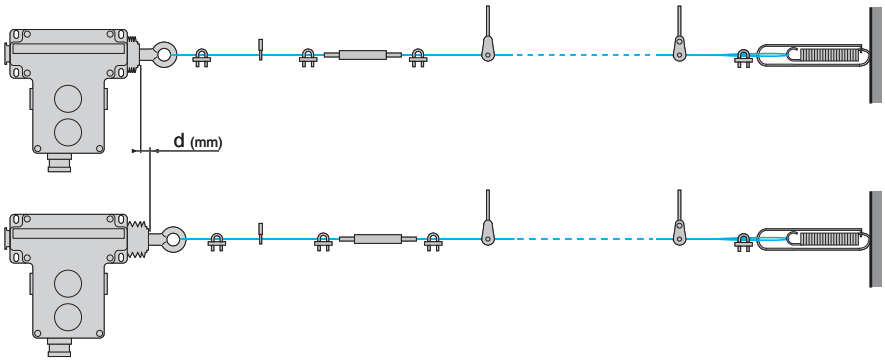
Main features



Positive operation: running condition	1	The switches incorporate positive opening operation contacts, the tripping of the switch being made with positive action.
Latching: stop instruction given (tripped)	2	The switch latches in the tripped position (N/C safety contact(s) open). The function of the N/O contact is purely for signalling.
Resetting: stop condition (awaiting reset/restart)	3	The switches incorporate a reset button, which re-closes the safety contact(s). Restarting of the machine must only be achieved by manual operation of a control device within the machine start circuit, remote to the trip wire switch.

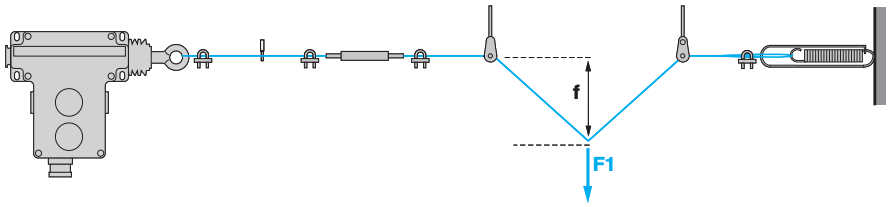
Trip wire expansion and contraction: d

Temperature variations likely to be encountered in the protected zone will obviously cause the trip wire to expand or contract.
To enable instant verification that the trip wire is at its correct tension (and for making any necessary adjustments), trip wire switches XY2 CH and XY2 CE incorporate a trip wire tension indicator.



Tripping force: F1
Tripping deflection: f

The tripping force **F1** is the force necessary on the trip wire to cause the switch to trip.
The tripping deflection **f** is the distance that the trip wire has to be deflected from its taut position to the point at which the switch trips.



Adjustment values (with end spring)

For Emergency stop trip wire switches type XY2 CE: the adjustment values depend on the positions of the cam located inside the switch. Adjustment is made by rotating the cam after the switch has been installed.
Each notched position of the cam is referenced by the letters A to F, and the selected letter is visible through a viewing port.
Temperature range: < 25 °C.

Type	Position of cam	Max. length of cable	End spring	Average tripping deflection values f and tripping forces F1 for a distance of 5 m between cable supports and cable used							
				Force F1 (daN)				Deflection f (mm) for:			
				Standard		Light		Standard force		Light force	
				Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm	Cable Ø 3.2 mm	Cable Ø 5 mm
XY2 CH	–	15 m	XY2 CZ703	2.4	3	–	–	190	230	–	–
XY2 CE	A	50 m	XY2 CZ702	7	7	4	4.4	270	260	240	250
	B			8.6	8.4	4.4	4.8	300	280	250	270
	C			10.1	9.6	4.8	5.1	320	300	270	270
	D			11	10.2	4.6	5.3	330	320	280	280
	E			12.5	12.3	5.8	6	360	340	310	290
	F			14.4	13.3	6.4	6.6	390	360	330	320
XY2 CB	–	100 m	XY2 CZ702	4.5	–	–	–	325	–	–	–

Standards

Trip wire switches XY2 CH, XY2 CE and XY2 CB meet all the requirements of the harmonised European standard **EN/ISO 13850:2006**, relating to Emergency stop devices.
All the trip wire switches are CE marked and supplied with an EC declaration of conformity.

Characteristics: page 5/6
References: pages 5/7 to 5/12
Dimensions: page 5/13

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Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Environment

Conformity to standards	Products	**XY2 CH**, **XY2 CE**: EN/IEC 60947-5-1, EN/ISO 13850:2006, UL 508 and CSA C 22-2 n° 14 (with suffix H7) **XY2 CB**: EN/IEC 60947-5-1, EN/ISO 13850:2006, CSA C 22-2 n° 14 (with suffix H2)
	Machine assemblies	**XY2 CH**, **XY2 CE**, **XY2 CB**: EN/IEC 60204-1, Machinery directive: 98/37/EC and 91/368/EEC, Work equipment directive: 89/655/EEC
Product certifications		**XY2 CH**: UL-CSA (with suffix H7), CCC *(1)* **XY2 CE**: UL-CSA A300-Q300 (with suffix H7), CCC *(1)* **XY2 CB**: CSA A600-Q600 (with suffix H2)
Protective treatment	Standard version	"TC"
	Special version	"TH"
Ambient air temperature	For operation	- 25…+ 70 °C
	For storage	- 40…+ 70 °C
Vibration resistance		**XY2 CH**: 10 gn (10…150 Hz) **XY2 CE**: 10 gn (10…300 Hz) conforming to EN/IEC 60068-2-6
Shock resistance		**XY2 CH, XY2 CE**: 50 gn (duration 11 ms) conforming to EN/IEC 60068-2-27
Electric shock protection		Class I conforming to EN/IEC 61140 and NF C 20-030
Degree of protection		**XY2 CH, XY2 CE**: IP 65 **XY2 CB**: enclosure IP 22, contact housing IP 65, conforming to EN/IEC 60529 and NF C 20-010
Mechanical life		**XY2 CH**, **XY2 CE** (Emergency stop), **XY2 CB**: 10 000 operating cycles
Length of protected zone (trip wire)		**XY2 CH**: ≤ 15 metres, **XY2 CE**: ≤ 50 metres, **XY2 CB**: ≤ 100 metres and ≤ 2 x 100 metres
Distance between cable supports		5 m
Cable entries		See dimensions, page 5/13.

Contact block characteristics

Rated operational characteristics	**XY2 CH**, **XY2 CE**: AC-15: A300 or Ue = 240 V, Ie = 3 A DC-13: Q600 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A **XY2 CB**: AC-15: A600 or Ue = 600 V, Ie = 1.2 A DC-13: Q600 or Ue = 600 V, Ie = 0.1 A conforming to EN/IEC 60947-5-1 Appendix A
Nominal thermal current	10 A
Rated insulation voltage	**XY2 CH**, **XY2 CE**: Ui = 400 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 300 V conforming to UL 508, CSA C22-2 n° 14 **XY2 CB**: Ui = 500 V degree of pollution 3 conforming to EN/IEC 60947-1, Ui = 600 V to CSA C22-2 n° 14
Rated impulse withstand voltage	**XY2 CH**, **XY2 CE**: Uimp = 4 kV, **XY2 CB**: Uimp = 6 kV conforming to EN/IEC 60947-1
Positive operation	N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Section 3
Contact operation	**XY2 CH**, **XY2 CE** (Emergency stop), **XY2 CB**: N/C + N/C or N/C + N/O slow break
Resistance across terminals	≤ 25 mΩ conforming to NF C 93-050 method A or EN/IEC 60255-7 category 3
Terminal referencing	Conforming to CENELEC EN 50013
Short-circuit protection	**XY2 CH, XY2 CE**, **XY2 CB**: 10 A cartridge fuse type gG (gl) conforming to EN/IEC 60269

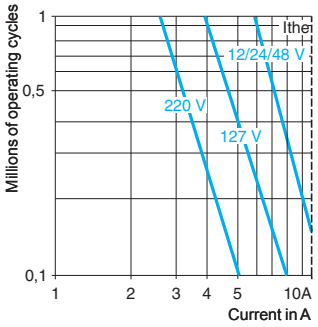
Rated operational power
(Electrical durability)

Operating rate: 3600 operating cycles/hour
Load factor: 0.5

XY2 CH, XY2 CE
Conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

a.c. supply ∿ 50…60 Hz

Inductive circuit



Voltage	V	24	48	120
	W	15	23	30

XY2 CB
Conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

a.c. supply ∿ 50…60 Hz
Power broken in VA *(1)*
Inductive circuit

Voltage	V	24	48	127	220
	VA	250	250	500	500

d.c. supply ⎓
Power broken in W *(1)*
Inductive circuit

Voltage	V	24	48	120
	W	50	100	100

(1) For 1 million operating cycles.

Contact connection	Screw clamp terminals Clamping capacity: min. 1 x 0.5 mm², max. 2 x 1.5 mm² Minimum tightening torque: 0.8 N.m Maximum tightening torque: 1.2 N.m

(1) Only products XY2 CH without pilot light and XY2 CE without pilot light or with 24, 48 or 130 V pilot light are CCC and UL-CSA approved.

General: pages 5/4 and 5/5
References: pages 5/7 to 5/12
Dimensions: page 5/13

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Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C



XY2 CH13250

Latching Emergency stops
(integrated turnbuckle, cable and end spring to be ordered separately) *(1)*

Without pilot light

Length of cable	Colour of enclosure	Reset		Type of contact			Cable anchor point	Reference	Weight kg
				13	14				
⩽ **15 m**	Grey RAL 7032	By booted pushbutton	–	1	1	N/C + N/O slow break	RH side or LH side	**XY2 CH13250** *(3)*	0.865
		By mushroom head pushbutton	–	1	1			**XY2 CH13350** *(3)*	0.900
		By key operated pushbutton (key n° 421) *(2)*	–	1	1			**XY2 CH13450** *(3)*	0.910
		By flush pushbutton	–	2	–	N/C + N/C slow break	RH side or LH side	**XY2 CH13170** *(3)*	0.865
		By booted pushbutton	–	2	–			**XY2 CH13270** *(3)*	0.865
		By mushroom head pushbutton	–	2	–			**XY2 CH13370** *(3)*	0.865
		By key operated pushbutton (key n° 421) *(2)*	–	2	–			**XY2 CH13470** *(3)*	0.910
	Grey RAL 3000 *(4)*	By booted pushbutton	–	1	1	N/C + N/O slow break	RH side or LH side	**XY2 CH13258** *(3)*	0.865
				2	–	N/C + N/C slow break	RH side or LH side	**XY2 CH13278** *(3)*	0.865
With pilot light (direct supply)									
⩽ **15 m**	Grey RAL 7032	By booted pushbutton	24 V	1	1	N/C + N/O slow break	RH side or LH side	**XY2 CH13253**	0.900
				2	–	N/C + N/C slow break	RH side or LH side	**XY2 CH13273**	0.900



XY2 CE1A250

Latching Emergency stops
(turnbuckle, cable and end spring to be ordered separately) *(1)*

Without pilot light

⩽ **50 m** *(5)*	Grey RAL 7032	By booted pushbutton	–	1	1	N/C + N/O slow break	RH side	**XY2 CE1A250** *(6)*	1.450
							LH side	**XY2 CE2A250** *(6)*	1.450
				2	–	N/C + N/C slow break	RH side	**XY2 CE1A270** *(6)*	1.450
							LH side	**XY2 CE2A270** *(6)*	1.450
		By key operated pushbutton (key n° 421) *(2)*	–	1	1	N/C + N/O slow break	RH side	**XY2 CE1A450** *(6)*	1.465
							LH side	**XY2 CE2A450** *(6)*	1.465
				2	–	N/C + N/C slow break	RH side	**XY2 CE1A470** *(6)*	1.470
							LH side	**XY2 CE2A470** *(6)*	1.470
With pilot light (direct supply)									
⩽ **50 m** *(5)*	Grey RAL 7032	By booted pushbutton	24 V, 48 V, 130 V (bulb not included)	2	2	N/C + N/O slow break	RH side	**XY2 CE1A296**	1.470
							LH side	**XY2 CE2A296**	1.470
			230 V (bulb not included)	2	2	N/C + N/O slow break	RH side	**XY2 CE1A297**	1.470
							LH side	**XY2 CE2A297**	1.470

Other versions

See order forms on pages 5/9 and 5/10.
XY2 CE with reset by Ø 40 mm mushroom head pushbutton or with integral cable tensioner and support.
Please consult your customer care center.

(1) See separate components, page 5/11.
(2) Ø 30 spring return, mushroom head, key operated pushbutton. Locking and key withdrawal in the rest (unactuated) position.
*(3) For ISO M20 threaded cable entry version, add H29 to the end of the reference selected. Example: **XY2 CH13250** becomes **XY2 CH13250H29**.*
(4) Only available on Emergency stop enclosures type XY2 CH1325● and XY2 CH1327● for standard, H29 and TK versions.
(5) Available with window for viewing cable tension indicator, for adjustment whilst the cover is closed (see versions XY2 CE●D●●● and XY2 CE●E●●● on the order form, page 5/10.
*(6) ATEX version available (products for explosive atmospheres). To order, add **EX** to the end of the reference. Example: **XY2 CE1A250** becomes **XY2 CE1A250EX**.*

General: pages 5/4 and 5/5
Characteristics: page 5/6
Dimensions: page 5/13

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Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C



XY2 CB30

Latching Emergency stops

(end spring included, turnbuckle and cable to be ordered separately) *(1)*

Without pilot light

Length of cable	Colour of enclosure	Reset	Type of contact			Cable anchor point	Reference	Weight kg
⩽ **100 m**	Blue	From inside enclosure	1	1	N/C + N/O slow break	LH side	**XY2 CB10** *(2)*	18.750
						RH side	**XY2 CB20** *(2)*	18.750
			2	–	N/C + N/C slow break	LH side	**XY2 CB104**	18.750
						RH side	**XY2 CB204**	18.750
⩽ **2 x 100 m**	Blue	From inside enclosure	1	1	N/C + N/O slow break	RH and LH sides	**XY2 CB30** *(2)*	29.250
			2	–	N/C + N/C slow break	RH and LH sides	**XY2 CB304**	29.250

With pilot light

Length of cable	Colour of enclosure	Reset	Supply voltage	Type of contact			Cable anchor point	Reference	Weight kg
■ **Direct supply**									
⩽ **100 m**	Blue	From inside enclosure	24 V	1	1	N/C + N/O slow break	LH side	**XY2 CB11**	19.550
							RH side	**XY2 CB21**	19.550
			48 V	1	1	N/C + N/O slow break	LH side	**XY2 CB12**	19.550
							RH side	**XY2 CB22**	19.550
⩽ **2 x 100 m**	Blue	From inside enclosure	24 V	1	1	N/C + N/O slow break	RH and LH sides	**XY2 CB31**	25.600
			48 V	1	1	N/C + N/O slow break	RH and LH sides	**XY2 CB32**	30.050
■ **Supply via integral transformer** *(3)*									
⩽ **100 m**	Blue	From inside enclosure	127 V/6 V	1	1	N/C + N/O slow break	LH side	**XY2 CB13**	15.600
							RH side	**XY2 CB23**	15.600
			220 V/6 V	1	1	N/C + N/O slow break	LH side	**XY2 CB14**	15.600
							RH side	**XY2 CB24**	15.600
⩽ **2 x 100 m**	Blue	From inside enclosure	127 V/6 V	1	1	N/C + N/O slow break	RH and LH sides	**XY2 CB33**	25.600
			220 V/6 V	1	1	N/C + N/O slow break	RH and LH sides	**XY2 CB34**	25.600

(1) See separate components, page 5/11. End spring XY2 CZ702 included.
(2) For 1/2" NPT threaded cable entry version, add the suffix H2 to the reference selected. Example : XY2CB10 becomes XY2CB10H2.
(3) Bulb DL1 CB006 included.

General: pages 5/4 and 5/5 | Characteristics: page 5/6 | Dimensions: page 5/13

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Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Complete units, pre-assembled

Customer			Schneider Electric Industries SA	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

How to use this form:
- indicate the number of Emergency stop switches required,
- complete the basic reference.

Reference

Number of identical Emergency stops ☐ **XY2 CH** ☐ ☐ ☐ ☐ ☐ ☐ ☐

Model							
Emergency stop (latching)		**1**					
Degree of protection							
IP 65 (standard bellows) without tensioner			**1**				
IP 65 (silicone bellows) without tensioner			**2**				
IP 65 (standard bellows) with integral tensioner			**3**				
IP 65 (silicone bellows) with integral tensioner			**4**				
Type of reset							
Emergency stop *(1)* Reset by spring return pushbutton	Flush			**1**			
	Booted			**2**			
	Mushroom head, Ø 30			**3**			
	Key operated mushroom head, Ø 30 (key n° 421)			**4**			
	Key operated mushroom head, Ø 30 (key n° 455)			**5**			
	Key operated mushroom head, Ø 30 *(2)*			**9**			
Contact block for Emergency stop function *(3)*							
Slow break	1 N/C + N/O (N/O staggered)				**5**		
	1 N/C + N/C				**7**		
Pilot light							
Without pilot light						**0**	
With 24 V direct supply pilot light						**3**	
With 48 V direct supply pilot light						**4**	
With 130 V direct supply pilot light						**5**	
With 230 V direct supply pilot light						**7**	
1/2" NPT tapped cable entries							**H7** *(4)*
ISO M20 tapped cable entries							**H29**
Increased protective treatment against corrosion							**TK** *(5)*

(1) Opening of a circuit + mechanical latching in the open position.
(2) Other key numbers:

458A	520E	1242A	1243E	1344A	1422A	1431E
2123E	2132E					

(3) Emergency stop trip wire switches can only be fitted with slow break contact blocks.
(4) Only for versions without pilot light. For versions with pilot light, order an H4 version.
*(5) Protective treatment TK is only possible for switches with silicone bellows (**XY2 CH12●●●TK**, **XY2 CH14●●●H29TK**...).*

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Order form (specimen suitable for photocopying)

Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Complete units, pre-assembled

Customer			Schneider Electric Industries SA	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

How to use this form:
- indicate the number of Emergency stop switches required,
- complete the basic reference.

Reference

Number of identical Emergency stops		XY2 CE						
Model								
Emergency stop (latching)	Anchor point on RH side, standard force	**1**						
	Anchor point on LH side, standard force	**2**						
	Anchor point on RH side, light force	**5**						
	Anchor point on LH side, light force	**6**						
Degree of protection and "cable tension indicator" window								
IP 65 (standard bellows) without "cable tension indicator" window			**A**					
IP 65 (silicone bellows) without "cable tension indicator" window			**C**					
IP 65 (standard bellows) with "cable tension indicator" window			**D**					
IP 65 (silicone bellows) with "cable tension indicator" window			**E**					
Type of reset								
Emergency stop *(1)* Reset by spring return pushbutton	Flush			**1**				
	Booted			**2**				
	Mushroom head, Ø 30			**3**				
	Key operated mushroom head, Ø 30 (n° 421)			**4**				
	Key operated mushroom head, Ø 30 (n° 455)			**5**				
	Key operated mushroom head, Ø 30 *(2)*			**9**				
Contact block for Emergency stop function *(3)*								
Slow break	1 N/C + N/O				**5**			
	1 N/C + N/C				**7**			
	2 N/C + N/O (compulsory with pilot light) *(4)*				**9**			
Pilot light								
Without pilot light						**0**		
With 24-48-130 V direct supply pilot light. Bulb not included (provide for 2 contact blocks)						**6**		
With 230 V direct supply, via integral resistor, pilot light. Bulb included (provide for 2 contact blocks) *(5)*						**7**		
1/2" NPT tapped cable entries							**H7** *(6)*	
Increased protective treatment against corrosion								**TK** *(7)*

(1) Opening of N/C contact + mechanical latching in the open position.
(2) Other key numbers:

458A	520E	1242A	1243E	1344A	1422A	1431E
2123E	2132E					

(3) Emergency stop trip wire switches can only be fitted with slow break contact blocks.
(4) The use of a pilot light means selecting a switch fitted with 2 N/C + N/O contacts: XY2 CE●●●9.
(5) Replacement bulb: DL1 CE130.
(6) For versions with pilot light, order an H4 version.
*(7) Protective treatment TK is only possible for switches with silicone bellows (**XY2 CE●C●●●TK, XY2 CE●E●●●H7TK**...).*

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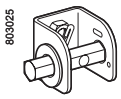
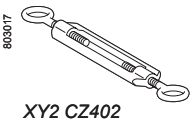
Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C



XY2 CZ203



XY2 CZ402



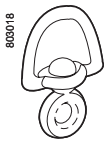
XY2 CZ503



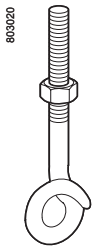
XY2 CZ524



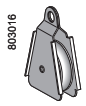
XY2 CZ601



XY2 CZ602



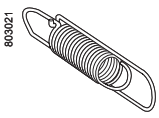
XY2 CZ705



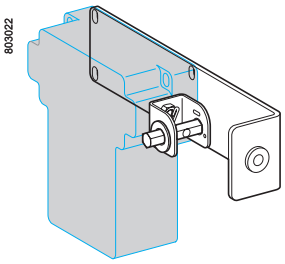
XY2 CZ708



XY2 CZ701



XY2 CZ702



XY2 CZ917

Separate components

Description	For use with	Diameter mm	Length m	Reference	Weight kg
Galvanised cables with red sheath	XY2 CH, XY2 CE and XY2 CB	3.2	10.5	**XY2 CZ301**	0.280
			15.5	**XY2 CZ3015**	0.410
			25.5	**XY2 CZ302**	0.690
			50.5	**XY2 CZ305**	1.360
			100.5	**XY2 CZ310**	2.700
	XY2 CH and XY2 CE	5	15.5	**XY2 CZ1015**	0.850
			25.5	**XY2 CZ102**	1.400
			50.5	**XY2 CZ105**	2.750
			100.5	**XY2 CZ110**	5.500

Description	Type	For use with	Sold in lots of	Unit reference	Weight kg
Tensioner	–	XY2 CE only	1	**XY2 CZ203**	0.09
Turnbuckles	M6 x 60 + locknut	All models *(1)*	1	**XY2 CZ402**	0.060
	M8 x 70 + locknut	All models *(1)*	1	**XY2 CZ404**	0.100
Cable grips	Single	Cable Ø 3 to 5 mm	10	**XY2 CZ503**	0.007
	Double	Cable Ø 3 to 5 mm	10	**XY2 CZ513**	0.016
	Clamp	Cable Ø 3.2 mm	10	**XY2 CZ523**	0.050
		Cable Ø 5 mm	10	**XY2 CZ524**	0.080
Cable supports	Fixed	All models	10	**XY2 CZ601**	0.030
	Swivelling	All models	1	**XY2 CZ602**	0.130
	Pulley support	XY2 CH and XY2 CE	1	**XY2 CZ705**	0.060
Pulley	Cable Ø 5 mm max.	XY2 CH and XY2 CE	1	**XY2 CZ708**	0.002
Cable end protectors		Cable Ø 3.2 mm	10	**XY2 CZ701**	0.002
		Cable Ø 5 mm	10	**XY2 CZ704**	0.010
End springs		XY2 CH	1	**XY2 CZ703**	0.035
		XY2 CE and XY2 CB	1	**XY2 CZ702**	0.080

Mounting kits

Contents	For use with	Cable diameter	Length of cable	Reference	Weight
		mm	m		kg
1 tensioner **XY2 CZ203** + 1 bracket	XY2 CE	–	–	**XY2 CZ917**	0.612
1 galvanised cable + 1 cable grip **XY2 CZ523** + 1 end spring **XY2 CZ703**	XY2 CH	3.2	10	**XY2 CZ9310**	0.415
			15	**XY2 CZ9315**	0.535
1 galvanised cable + 4 cable grips **XY2 CZ523** + 1 turnbuckle **XY2 CZ404** + 1 cable support **XY2 CZ601** + 3 cable end protectors **XY2 CZ701** + 1 end spring **XY2 CZ702**	XY2 CE	3.2	25	**XY2 CZ9325**	10
	XY2 CE and XY2 CB	3.2	50	**XY2 CZ9350**	1.980
1 galvanised cable + 4 cable grips **XY2 CZ524** + 1 turnbuckle **XY2 CZ404** + 1 cable support **XY2 CZ601** + 3 cable end protectors **XY2 CZ704** + 1 end spring **XY2 CZ702**	XY2 CE	5	25	**XY2 CZ9525**	1.905
			50	**XY2 CZ9550**	3.280

Documentation

Description	For use with	Reference	Weight kg
Installation manual	XY2 CH and XY2 CE	**XCOM2512**	0.200

(1) Emergency stop trip wire switches XY2 CH13●●● and XY2 CH14●●● incorporate a cable tensioner as standard. Therefore, there is no need to order a turnbuckle.

General: pages 5/4 and 5/5 | Characteristics: page 5/6 | Dimensions: page 5/13

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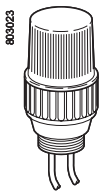
Control and signalling units for safety applications

Emergency stop trip wire switches, type XY2 C

Replacement parts

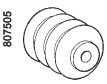
Description	Type		Reference	Weight kg
Reset pushbutton (blue), spring return for XY2 CH and XY2 CE	Flush with "R" marked on push		**ZA2 BA639**	0.030
	Booted		**ZA2 BP6**	0.025
	Mushroom head, Ø 30		**ZA2 BC64**	0.045
	Key operated mushroom head, Ø 30 (key n° 421)		**ZA2 BS06212**	0.090
	Key operated mushroom head, Ø 30 (key n° 455)		**ZA2 BS062**	0.090
Keys for reset button	N° 421		**Q99900911**	0.006
	N° 455		**Q99900901**	0.006
Pilot light head assembly	Orange, for XY2 CH and XY2 CE		**ZA2 BV05**	0.015
Pilot light lens	Orange, for XY2 CH and XY2 CE		**ZB2 BV015**	0.003
Fixing nut	Black plastic nut for head ZA2 B		**ZA2 BZ901**	0.002
Fixing nut tightening tool	Black plastic socket wrench for fixing nut ZA2 BZ901		**ZA2 BZ901**	0.060
Pilot lights With bulb DL1 AA●●● included	Orange, for XY2 CH	24 V	**XY2 CZ0024** *(1)*	0.035
		48 V	**XY2 CZ0048** *(1)*	0.035
		130 V	**XY2 CZ0130** *(1)*	0.035
		230 V	**XY2 CZ0230** *(1)*	0.035
	Red, for XY2 CB	24 V	**9001 KP35R9**	0.134
		48 V	**9001 KP36R9**	0.134
		120 V	**9001 KP1R9**	0.210
		230 V	**9001 KP7R9**	0.210



XY2 CZ●●●●



9001 KP3●R9



XY2 CZ901



XY2 CZ902

Description	Type		Sold in lots of	Unit reference	Weight kg
Incandescent bulbs	Screw base fitting for XY2 CH	24 V - 6 W	10	**DL1 AA024**	0.004
		48 V - 6 W	10	**DL1 AA048**	0.004
		130 V - 6 W	10	**DL1 AA127**	0.004
		230 V - 6 W	10	**DL1 AA220**	0.004
	BA 9s base fitting for XY2 CE and XY2 CB	24 V - 2.6 W	10	**DL1 CE024**	0.002
		48 V - 2.6 W	10	**DL1 CE048**	0.002
	BA 9s base fitting for XY2 CE	130 V - 2.6 W	10	**DL1 CE130**	0.002
	BA 9s base fitting for XY2 CB 120 V and 230 V	6 V - 1.2 W	10	**DL1 CB006**	0.002
Packet of 5 collars	For mounting DL1 AA127 and DL1 AA220 bulbs in pilot lights XY2 CZ●●●		5	**XY2 CZ908**	0.018
Dust and damp protecting bellows	For XY2 CE	Polychloroprene	1	**XY2 CZ901**	0.017
		Silicone	1	**XY2 CZ904**	0.005
	For XY2 CH	Polychloroprene	1	**XY2 CZ902**	0.017
		Silicone	1	**XY2 CZ903**	0.005
Adaptor	For XY2 CB	ISO M20	5	**DE9 RP13520**	0.050

(1) Only for use as replacement parts for switches pre-fitted with pilot lights. CCC and UL-CSA approvals no longer apply if a pilot light XY2 CZ●●● is mounted on Emergency stops XY2 CH.

General: pages 5/4 and 5/5 | Characteristics: page 5/6 | Dimensions: page 5/13

Schneider Electric

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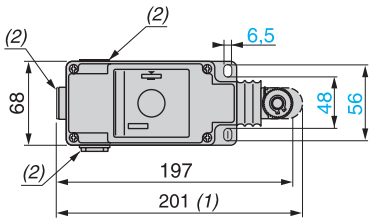
Control and signalling units for safety applications

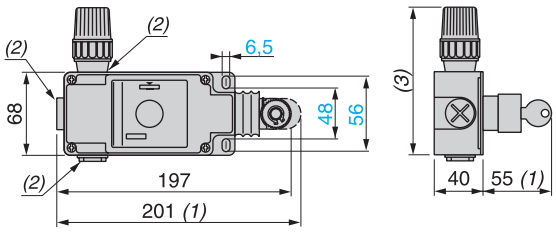
Emergency stop trip wire switches, type XY2 C

XY2 CH

Without pilot light



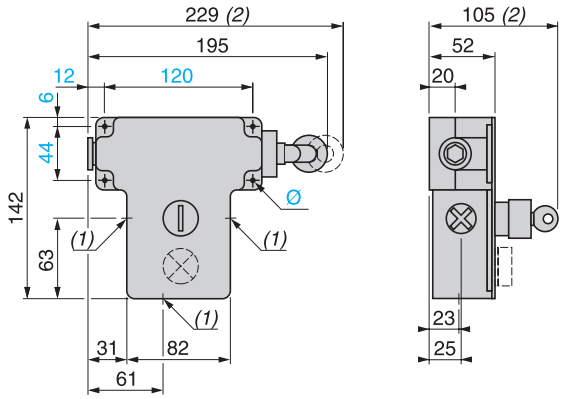
With pilot light



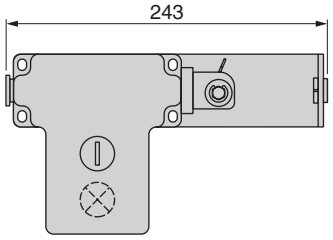
(1) Maximum extension.
*(2) Tapped entries for n° 13 (Pg 13.5) cable gland. For ISO M20 the reference becomes **XY2 CH●●●●●H29**.*
(3) 121 mm: 24 V and 48 V versions. 131 mm: 130 V and 230 V versions.

XY2 CE

XY2 CE●A●●●, XY2 CE●C●●●



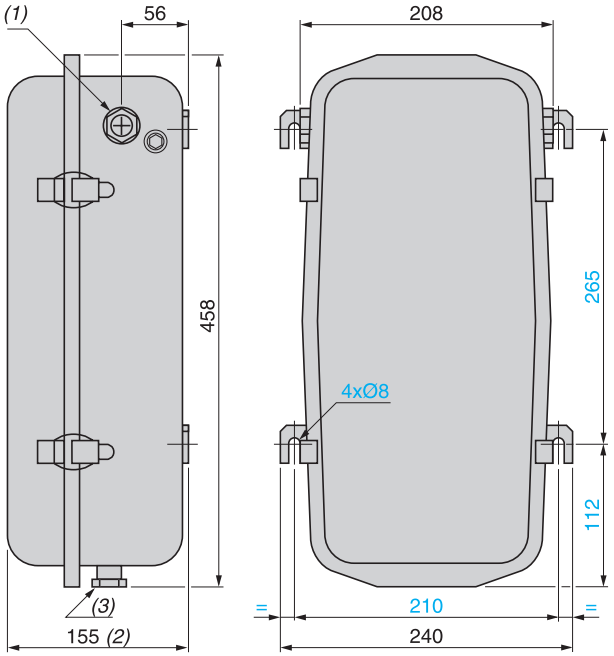
XY2 CE●A●●● + XY2 CZ917 (tensioner + bracket)



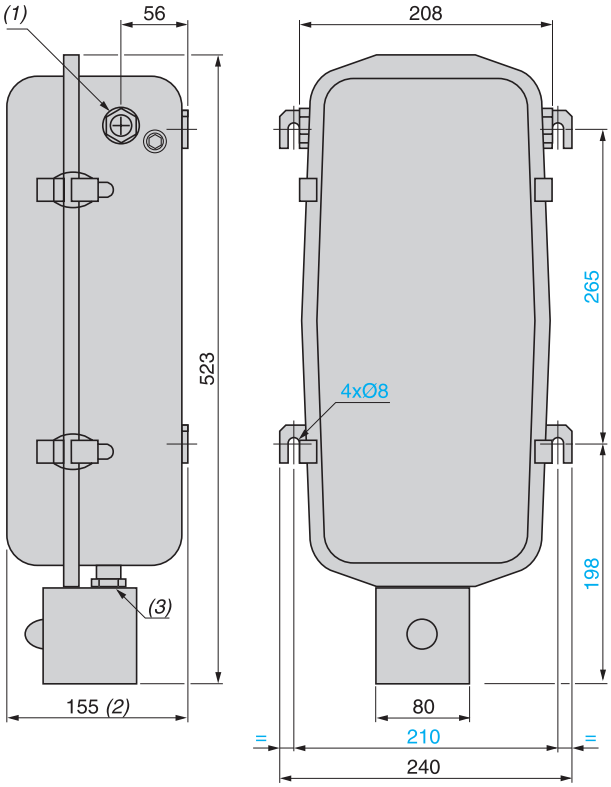
(1) 3 plain holes for n° 13 (Pg 13.5) or ISO M20 cable gland.
(2) Maximum extension.
Ø: 4 elongated holes Ø 6 mm.

XY2 CB

Without pilot light



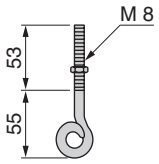
With pilot light



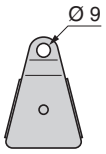
(1) 2 access points for operating cable.
(2) + 125 for opening cover.
(3) 1 tapped entry for n° 13 (Pg 13.5) cable gland. For ISO M20 use adaptor DE9 RP13520.

Accessories

XY2 CZ705



XY2 CZ708



5

General: pages 5/4 and 5/5
Characteristics: page 5/6
References: pages 5/7 to 5/12

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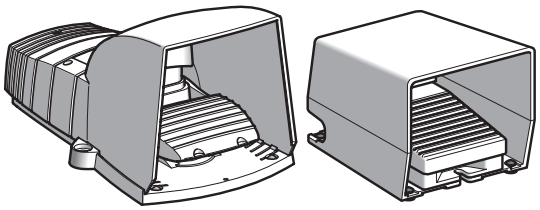
Control and signalling units for safety applications
Foot switches, Harmony type XPE

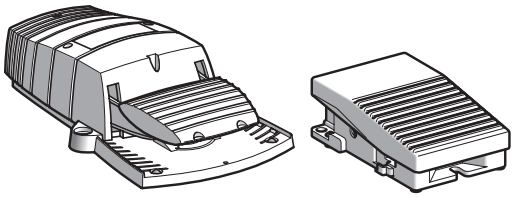
Presentation

Foot switches type XPE are an ideal solution for providing start and stop instructions for many types of industrial machines, running in various operating modes: normal (pulsed) start, inching, hold to run.

The range comprises metal case foot switches (heavy duty, high risk) complying to very strict regulations, and plastic case foot switches (light duty, low risk).



Fitted with a protective cover, the foot switches are for applications where, for each issuing of the start instruction, a high level of danger exists **(high risk)**.



Foot switches **without a protective cover** are suitable for applications where the issuing of the start instruction presents a **reduced level of danger**.

Contact

Switches incorporate snap action contacts with positive opening operation

The foot switches can incorporate **one or two N/C + N/O contact blocks**.

Positive opening operation on release of pedal: the hold down or return to the rest position of the pedal (machine stop) is positive acting.

Terminology

Positive opening operation

A switch meets this requirement when all its N/C contacts can be switched to the open position with certainty, i.e. there are no flexible links between the moving contacts and the actuator to which the operating force is applied.

All pedal operated foot switches incorporate a snap action N/C + N/O contact block with positive opening operation, and conform fully to standard IEC 60947-5-1 Section 3.

Snap action contact (quick break)

The displacement speed of the moving contacts is not related to the speed at which the contact actuator is operated. This feature gives consistent electrical performance, even when the contact actuator device is operated at low speeds.

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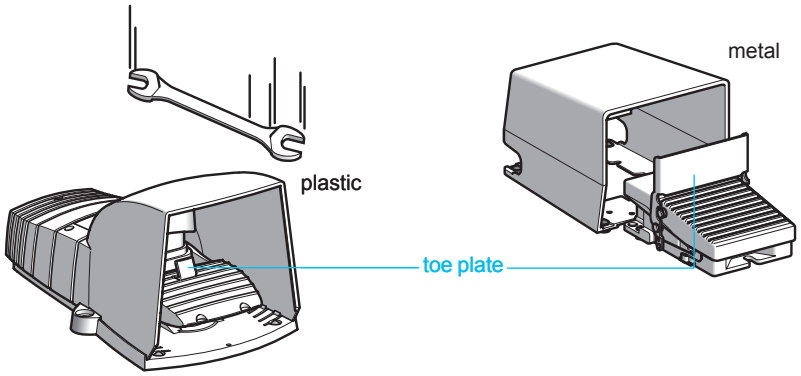
Control and signalling units for safety applications
Foot switches, Harmony type XPE

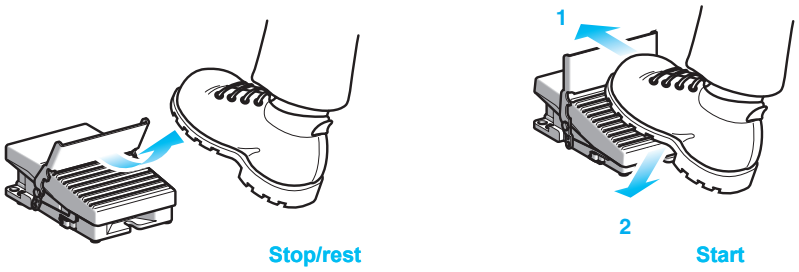
Start instructions

Foot switches XPE with protective cover are ideally suited for issuing a safety "Start" instruction for potentially dangerous machines.



The protective cover over the operating pedal avoids the risk of accidental operation, either by human action or by falling objects, which could result in unintentional starting of the machine.

A trigger mechanism **(toe plate)** enables locking of the pedal in the rest (released) position.

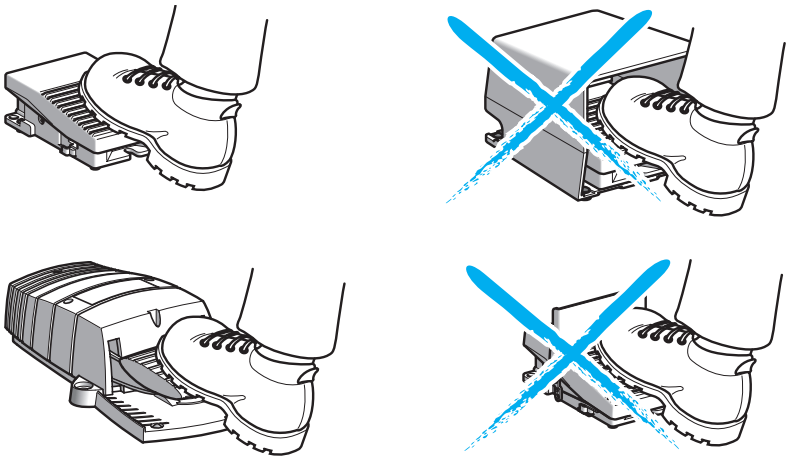


Positive action is required on the toe plate 1 before the pedal 2 can be depressed to start the machine.

On releasing the pedal to stop the machine, the trigger mechanism re-engages and locks the pedal in the rest position.

Normal stop instructions

All foot switches of the XPE range can be used for issuing a normal stop instruction to a machine.



Never use the protective cover nor the trigger mechanism for this type of application. Access to the stop control must be as unrestricted as possible and without any constraints.

For machine stop instructions, use the N/C contact(s).

5

Characteristics: pages 5/18 and 5/22
References: pages 5/19 and 5/23
Dimensions: pages 5/21 and 5/24

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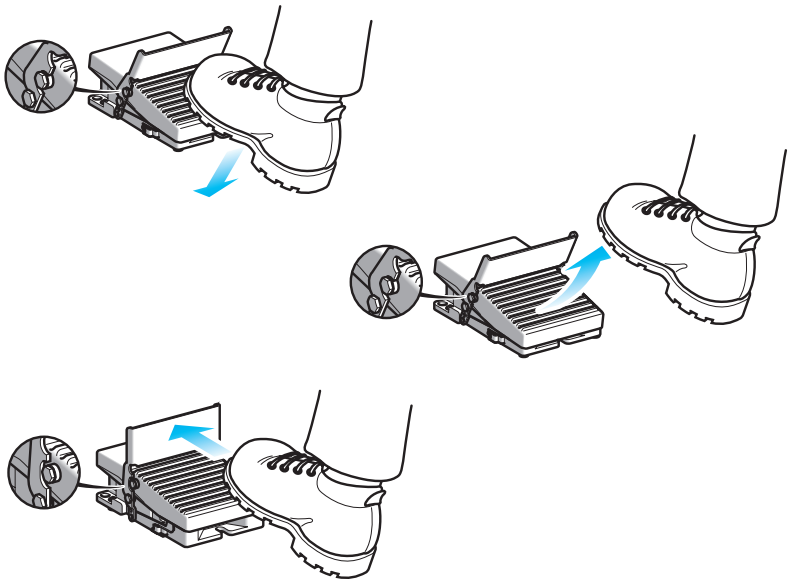
Control and signalling units for safety applications
Foot switches, Harmony type XPE

Pedal latching device when depressed

Foot switches with pedal latching device are particularly suited for the control of "hold to run" machines and also, for adjustment operations.



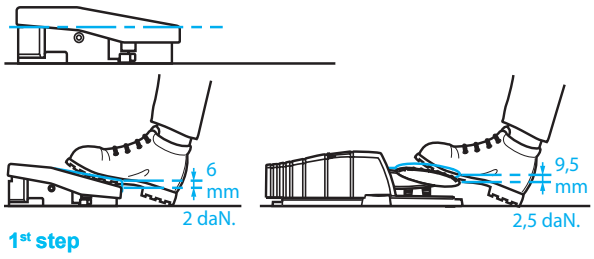
Pressing the pedal issues the machine start instruction and, when the pedal reaches its stop, it latches in the operated position.

Removing the foot from the pedal will not stop the "machine" cycle **(hold to run)**, the pedal remains latched.

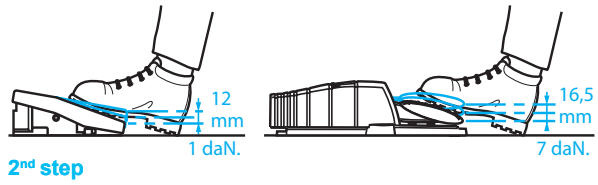
For issuing a normal stop instruction, the foot is replaced on the pedal and the toe plate operated: this returns the pedal to the rest position.

Switches with 2 step contact operation

Foot switches featuring 2 step contact operation are ideal for applications involving 2-speed machines.
Examples:
- **First speed: low (used for setting-up, adjustment or tool maintenance).**
- **Second speed: fast (normal machine operating speed).**



The first step, at 6 mm pedal travel and light foot pressure (2 daN), actuates a N/C + N/O contact block.



The second step, at maximum pedal travel (12 mm) and required foot pressure (9 daN), actuates a second N/C + N/O contact block.

Applications

Many types of machines are fitted with foot switches

- Bending machine
- Dosing machine
- Assembly station
- Packaging machines
- Cutting presses, stamping presses
- Machine tools (numerical control, lathes, milling machines, grinders, machining centres)
- Guillotines, cutters, folders, saws
- Forging machines, rolling machines, cold metal forming machines

Characteristics: pages 5/18 and 5/22
References: pages 5/19 and 5/23
Dimensions: pages 5/21 and 5/24

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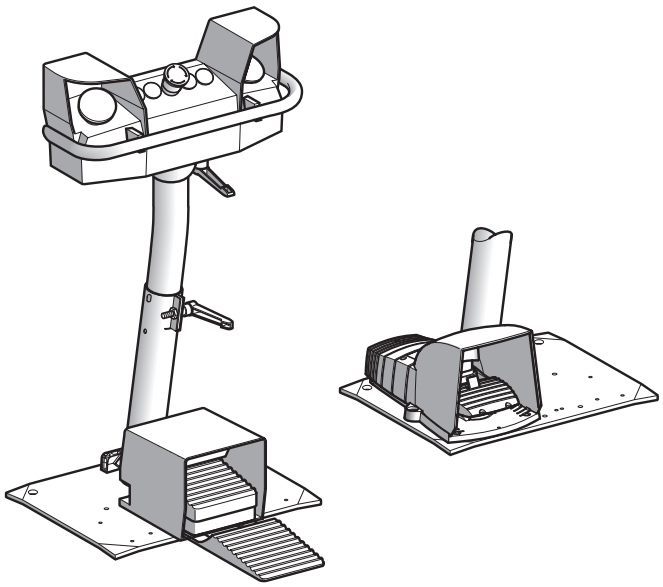
Control and signalling units for safety applications
Foot switches, Harmony type XPE

Foot switches used in conjunction with two-hand control stations

Foot switches XPE can be mounted directly on the baseplate (without drilling additional fixing holes) of the pedestal XY2 SB90 for two-hand control stations XY2 SB7●.

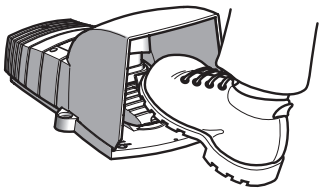


The baseplate of the two-hand control station pedestal XY2 SB90 is pre-drilled with fixing holes to suit the mounting of either:

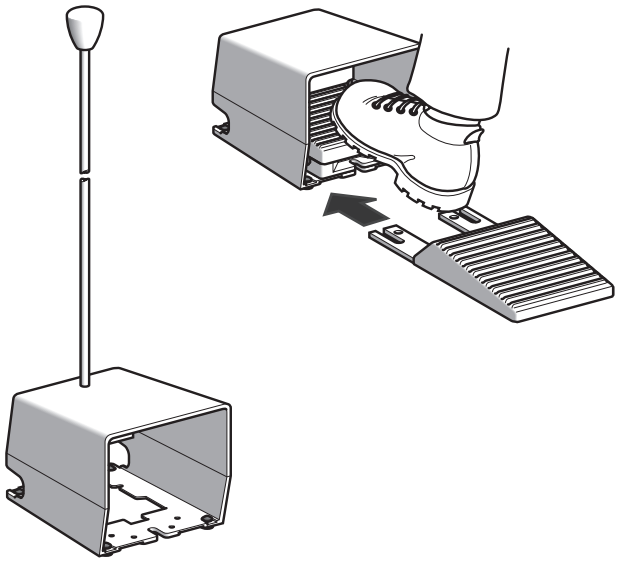
- One XPE foot switch, with or without protective cover.
- Two XPE R foot switches, each with its own protective cover or fitted with a common (double) cover.

Ergonomic

The protective cover is very strong and is sufficiently dimensioned to accommodate all types of footwear (large size, safety boots, etc.).



The foot switch is designed such that the operating pedal is close to the ground and at a comfortable angle.



Various accessories improve the working comfort for machine operators and help to avoid discomfort in the base of the spine due to unbalanced positioning of the pelvis:

- Heel rest (metal XPE).
- Hand grip for mounting on protective cover.

Characteristics: pages 5/18 and 5/22
References: pages 5/19 and 5/23
Dimensions: pages 5/21 and 5/24

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Control and signalling units for safety applications

Metal foot switches, Universal, Harmony types XPE M/R

Environment

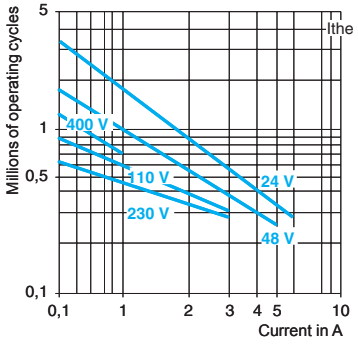
Conformity to standards	Without protective cover		EN/IEC 60947-5-1, CSA C22 2 n° 14 (if H2 specified)
	With protective cover		NF E 09-031
Product certifications	Standard version		FI, CSA A300 - Q300 with tapped entries for cable gland
	Special version		CSA A300 - Q300 with 1/2" NPT adaptor
Protective treatment	Standard version		"TC"
	Special version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			20 gn conforming to IEC 60068-2-27 (150 gn conforming to NF E 09-031)
Electric shock protection			Class I conforming to EN/IEC 61140 and NF C 20-030
Mechanical life			15 million operating cycles
Degree of protection			IP 66 conforming to IEC 60529 and IP 669 conforming to NF C 20-010 (with protective cover)
Cable entries			See dimensions, page 5/21

Contact block characteristics

Rated operational characteristics	∼ AC-15		A300 or Ue = 240 V, Ie = 3 A
	⎓ DC-13		Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Rated insulation voltage		**V**	Ui = 500, degree of pollution 3 conforming to EN/IEC 60947-1, group C conforming to NF C 20-040 and VDE 0110
			Ui = 300 conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage		**kV**	Uimp = 6 conforming to EN/IEC 60947-1
Positive operation			N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Resistance across terminals		**mΩ**	≤ 25 conforming to NF C 93-050 method A or IEC 60255-7 category 3
Short-circuit protection			10 A cartridge fuse type gG (gl) conforming to EN/IEC 60947-5-1, VDE 0660-200
Foot switches with snap action contacts	Operational power		Conforming to EN/IEC 60947-5-1 Appendix C
	Utilisation categories		AC-15 and DC-13
	Operating rate		3600 operating cycles/hour. Load factor: 0.5

a.c. supply ∼ 50-60 Hz

Inductive circuit



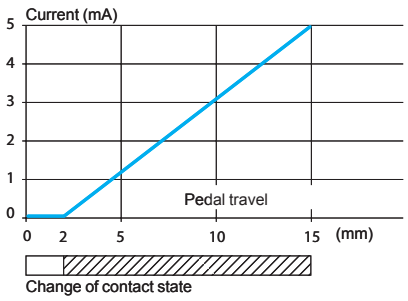
d.c. supply ⎓

Power broken in W for 5 million operating cycles

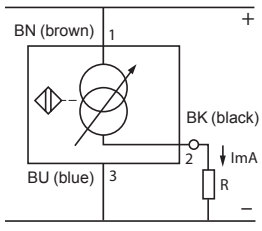
Voltage	V	24	48	120
	W	10	7	4

Foot switches with analogue output	Nominal supply voltage	**V**	⎓ 24…48
	Voltage limits	**V**	⎓ 19…58
	Current consumption, no-load	**mA**	4
	Output current drift (IS) in relation to temperature		0…+ 50 °C: + 2…- 6%
			- 25…+ 70 °C: + 2…- 12%

Output current curve



Wiring scheme



Connection	Screw clamp terminals		Maximum clamping capacity: 1 x 2.5 mm² or 2 x 1.5 mm² with or without cable end

General: page 5/14 References: page 5/19 Dimensions: page 5/21

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Control and signalling units for safety applications

Metal foot switches, Universal, Harmony types XPE M/R



XPE M510



XPE R5100D



XPE M310



XPE R3100D

Single and double pedal foot switches with protective cover

Description	Pedal	Contact operation		Colour	Reference	Weight kg
Metal With trigger mechanism requiring positive action to allow pedal operation	Single	1 step	1 N/C + N/O	Blue	**XPE M510**	2.570
	Double	1 step	2 x 1 N/C + N/O	Blue	**XPE M5100D**	6.070
	Single	1 step	1 N/C + N/O	Orange	**XPE R510**	2.570
	Double	1 step	2 x 1 N/C + N/O	Orange	**XPE R5100D**	6.070
	Single	1 step	2 N/C + N/O	Blue	**XPE M511**	2.590
	Double	1 step	2 x 2 N/C + N/O	Blue	**XPE M5110D**	6.090
	Single	1 step	2 N/C + N/O	Orange	**XPE R511**	2.590
	Double	1 step	2 x 2 N/C + N/O	Orange	**XPE R5110D**	6.090
	Single	2 step	2 N/C + N/O	Blue	**XPE M711**	2.590
				Orange	**XPE R711**	2.590
	Single	1 step with analogue output	2 N/C + N/O	Blue	**XPE M529**	2.600
				Orange	**XPE R529**	2.600
Metal Without trigger mechanism	Single	1 step	1 N/C + N/O	Blue	**XPE M310**	2.400
	Double	1 step	2 x 1 N/C + N/O	Blue	**XPE M3100D**	5.900
	Single	1 step	1 N/C + N/O	Orange	**XPE R310**	2.400
	Double	1 step	2 x 1 N/C + N/O	Orange	**XPE R3100D**	5.900
	Single	1 step	2 N/C + N/O	Blue	**XPE M311**	2.420
	Double	1 step	2 x 2 N/C + N/O	Blue	**XPE M3110D**	5.920
	Single	1 step	2 N/C + N/O	Orange	**XPE R311**	2.420
	Double	1 step	2 x 2 N/C + N/O	Orange	**XPE R3110D**	5.920
	Single	1 step latching	1 N/C + N/O	Blue	**XPE M410**	2.400
				Orange	**XPE R410**	2.420
	Single	2 step	2 N/C + N/O	Blue	**XPE M611**	2.420
				Orange	**XPE R611**	2.420
	Single	1 step with analogue output	2 N/C + N/O	Blue	**XPE M329**	2.420
	Double	2 step + 1 step	2 x 1 N/C + N/O + 1 N/C + N/O	Blue	**XPE M6210D**	5.900

General: page 5/16 Characteristics: page 5/18 Dimensions: page 5/21

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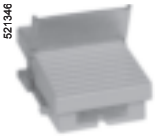
Control and signalling units for safety applications

Metal foot switches, Universal, Harmony types XPE M/R



XPE R810



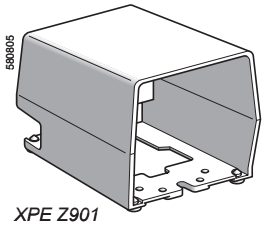
XPE M110

Foot switches without protective cover

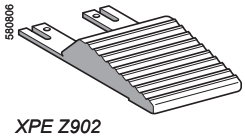
Description	Contact operation		Colour	Reference	Weight kg
Metal With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Blue	**XPE M810**	1.200
			Orange	**XPE R810**	1.200
		2 N/C + N/O	Blue	**XPE M811**	1.220
			Orange	**XPE R811**	1.220
	2 step	2 N/C + N/O	Blue	**XPE M911**	1.220
			Orange	**XPE R911**	1.220
	Analogue output	2 N/C + N/O	Blue	**XPE M929**	1.220
			Orange	**XPE R929**	1.220
Metal Without trigger mechanism	1 step	1 N/C + N/O	Blue	**XPE M110** *(1)*	1.200
			Orange	**XPE R110** *(1)*	1.200
		2 N/C + N/O	Blue	**XPE M111** *(1)*	1.220
			Orange	**XPE R111** *(1)*	1.220
	2 step	2 N/C + N/O	Blue	**XPE M211** *(1)*	1.220
			Orange	**XPE R211** *(1)*	1.220
	Analogue output	2 N/C + N/O	Orange	**XPE R229**	1.220

Accessories

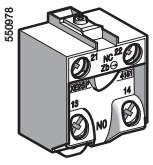
Description	For use with	Unit reference	Weight kg
Single protective cover	XPE M	**XPE Z901**	1.200
	XPE R	**XPE Z911**	1.200
Double protective cover	XPE M	**XPE Z921**	1.200
	XPE R	**XPE Z931**	1.200
Hand grip for protective cover	XPE Z901 or XPE Z911	**XPE Z913**	0.450
Heel rest	XPE M	**XPE Z902**	0.240
	XPE R	**XPE Z912**	0.240
Trigger mechanism	XPE M or XPE R	**XPE Z903**	0.170
Latching device (replacement for foot switches with this feature)	XPE M or XPE R	**XPE Z904**	0.170
Cable clamp	XPE M or XPE R	**XPE Z905**	0.010
Contact blocks Snap action	1 step switches: 1st or 2nd N/C + N/O 2 step switches: 1st N/C + N/O	**XE2S P4151**	0.020
	2 step switches: 2nd N/C + N/O	**XE2S P4151B**	0.020
ISO M20 adaptor (Sold in lots of 5)	XPE M or XPE R	**DE9 RA1620**	0.050



XPE Z901



XPE Z902



XE2S P4151●

*(1) To order an ATEX D version of the product (protection against dust), add **EX** to the end of the reference. Example: **XPE M110EX**.*

General: page 5/16 Characteristics: page 5/18 Dimensions: page 5/21

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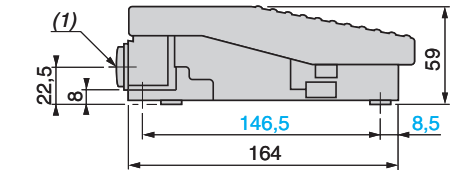
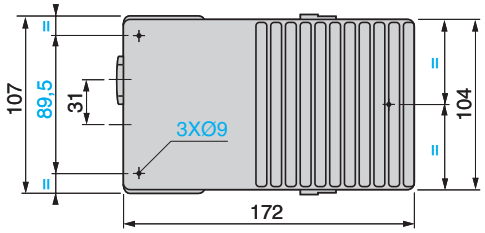
Control and signalling units for safety applications

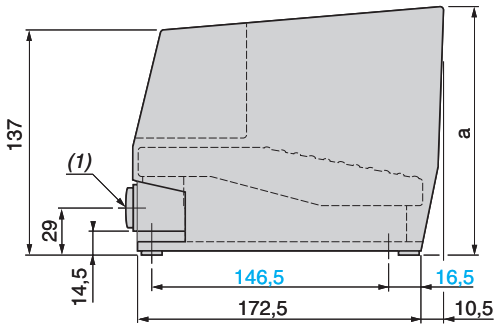
Metal foot switches, Universal, Harmony types XPE M/R

XPE M, XPE R without protective cover

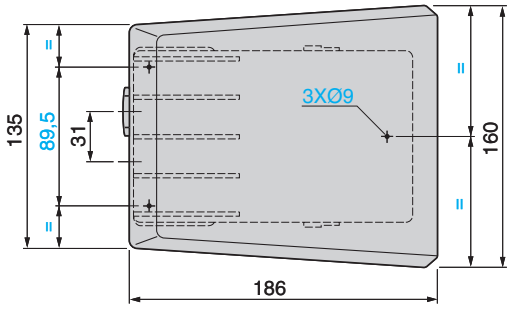




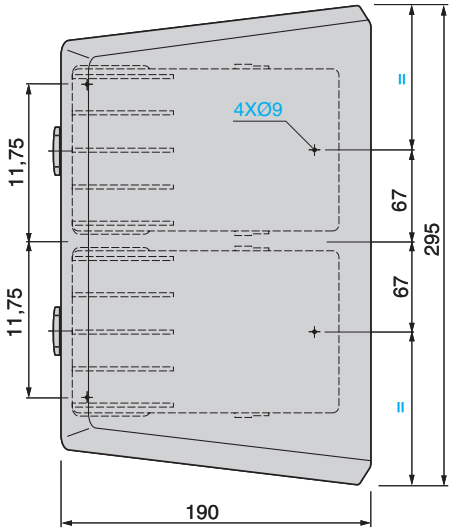
XPE M, XPE R with protective cover



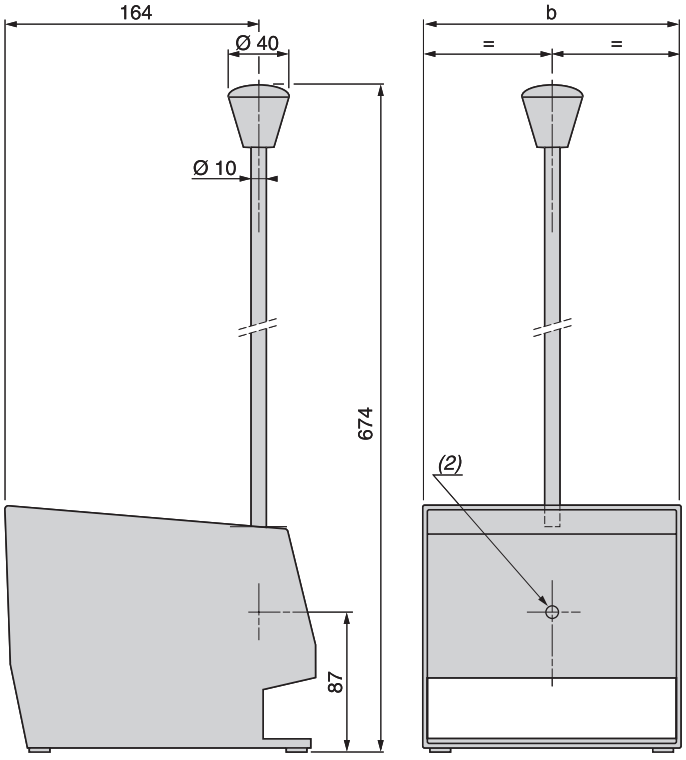
Single



Double



XPE Z913



	a	b
Single pedal	152	160
Double pedal	155	295

(1) 2 tapped entries for n° 16 (Pg 16) cable gland. For ISO M20, use adaptor DE9 RA1620.
(2) 1 Ø 6 plain hole.

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Control and signalling units for safety applications

Plastic foot switches, Harmony types XPE A/B/G/Y

Environment

Conformity to standards			**XPE A, XPE B, XPE G, XPE Y** without protective cover: IEC/EN 60947-5-1 **XPE B, XPE G**: UL 508, CSA C22-2 n° 14
			XPE B, XPE G with protective cover: NF E 09-031
Product certifications	Standard version		**XPE B, XPE G**: UL, CSA A300 - Q300 with knock-out entries for ISO M20 cable gland
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	°C	**XPE B, XPE G**: - 25…+ 70 **XPE A, XPE Y**: - 25…+ 55
	For storage	°C	- 40…+ 70
Vibration resistance	Conforming to IEC 60068-2-6		5 gn (10…500 Hz)
Shock resistance	Conforming to IEC 60068-2-27		**XPE A**: 25 gn, **XPE B, XPE G, XPE Y**: 30 gn
Electric shock protection	Conforming to IEC/EN 61140 and NF C 20-030		Class II
Mechanical life			**XPE A**: 2 million operating cycles **XPE Y**: 5 million operating cycles **XPE B, XPE G**: 10 million operating cycles
Degree of protection			**XPE A**: IP 43 conforming to IEC 60529 **XPE Y**: IP 55 conforming to IEC 60529
			XPE B, XPE G: IP 66 conforming to IEC 60529
Cable entries			See dimensions, pages 5/24 and 5/25

Contact block characteristics

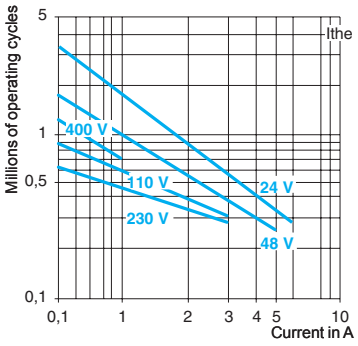
Rated operational characteristics			~ AC-15; A 300 or Ue = 240 V, Ie = 3 A
			⎓ DC-13; Q 300 or Ue = 250 V, Ie = 0.27 A conforming to IEC/EN 60947-5-1 Appendix A
Rated insulation voltage			Ui = 500 V degree of pollution 3 conforming to IEC/EN 60947-1, group C conforming to NF C 20-040 and VDE 0110
			Ui = 300 V conforming to UL 508, CSA C22-2 n° 14
Rated impulse withstand voltage			Uimp = 6 kV conforming to IEC/EN 60947-1
Positive operation			N/C contact with positive opening operation conforming to IEC/EN 60947-5-1 Appendix K
Resistance across terminals			≤ 25 mΩ conforming to NF C 93-050 method A or IEC 60255-7 category 3
Short-circuit protection			10 A cartridge fuse type gG (gI) conforming to IEC/EN 60947-5-1, VDE 0660-200

Operational power
conforming to IEC/EN 60947-5-1 Appendix C

Foot switches with snap action contacts

Utilisation categories AC-15 and DC-13
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ~ 50-60 Hz
Inductive circuit



d.c. supply ⎓

Power broken in W for 5 million operating cycles

Voltage	V	24	48	120
	W	10	7	4

Connection			Screw clamp terminals
			Maximum clamping capacity: 1 x 2.5 mm² or 2 x 1.5 mm² with or without cable end

General: page 5/14 References: page 5/23 Dimensions: page 5/24

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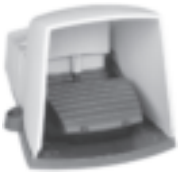
Control and signalling units for safety applications

Plastic foot switches, Harmony types XPE A/B/G/Y



XPE ●510



XPE ●310



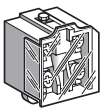
XPE G810



XPE ●110



XPE A110



XE2S P4151

Single pedal foot switches with protective cover

Description	Contact operation		Housing colour	Reference	Weight kg
With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Yellow	**XPE Y510** *(1)*	0.700
			Blue	**XPE B510**	0.700
			Grey	**XPE G510**	0.700
		2 N/C + N/O	Yellow	**XPE Y511** *(1)*	0.700
			Blue	**XPE B511**	0.700
			Grey	**XPE G511**	0.700
	2 step	2 N/C + N/O	Yellow	**XPE Y711** *(1)*	0.700
			Blue	**XPE B711**	0.700
			Grey	**XPE G711**	0.700
Without trigger mechanism	1 step	1 N/C + N/O	Yellow	**XPE Y310**	0.690
			Blue	**XPE B310**	0.690
			Grey	**XPE G310**	0.690
		2 N/C + N/O	Yellow	**XPE Y311** *(1)*	0.690
			Blue	**XPE B311**	0.690
			Grey	**XPE G311**	0.690
	2 step	2 N/C + N/O	Yellow	**XPE Y611** *(1)*	0.690
			Blue	**XPE B611**	0.690
			Grey	**XPE G611**	0.690

Foot switches without protective cover

Description	Contact operation		Housing colour	Reference	Weight kg
With trigger mechanism requiring positive action to allow pedal operation	1 step	1 N/C + N/O	Grey	**XPE G810**	0.580
	2 step	2 N/C + N/O	Grey	**XPE G911**	0.580
Without trigger mechanism	1 step	1 N/C + N/O	Yellow	**XPE Y110** *(1)*	0.570
			Blue	**XPE B110**	0.570
			Grey	**XPE G110**	0.570
			Black	**XPE A110**	0.275
		2 N/C + N/O	Blue	**XPE B111**	0.570
			Grey	**XPE G111**	0.570
			Black	**XPE A111**	0.295
	2 step	2 N/C + N/O	Yellow	**XPE Y211** *(1)*	0.570
			Blue	**XPE B211**	0.570
			Grey	**XPE G211**	0.570

Accessories for foot switches, with or without protective cover

Description	For use with	Sold in lots of	Unit reference	Weight kg
M20 x 1.5 cable gland	Cable Ø 5…10 mm	5	**DE9RA200612**	0.014
	Cable Ø 7…13 mm	5	**DE9RA201014**	0.014
Contact blocks, snap action	1 or 2 step switches	1	**XE2S P4151**	0.020

(1) IP 55, not UL, CSA approved.

General: page 5/14 Characteristics: page 5/22 Dimensions: page 5/24

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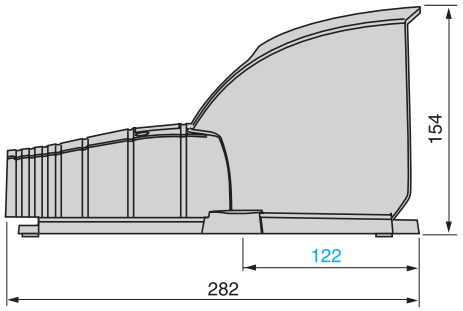
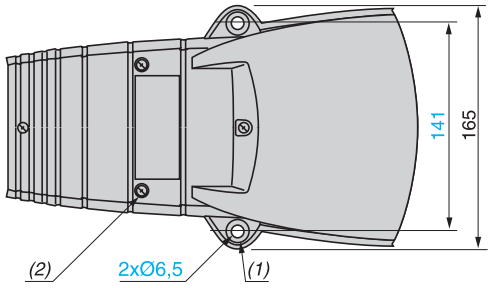
Control and signalling units for safety applications

Plastic foot switches, Harmony types XPE B/G/Y

XPE B, XPE G, XPE Y

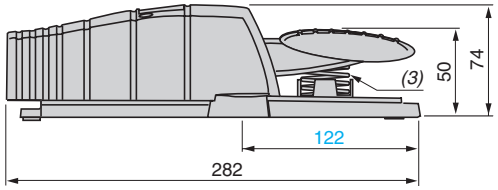
With protective cover

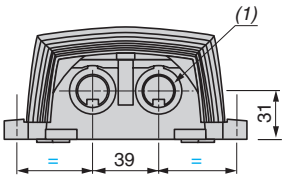


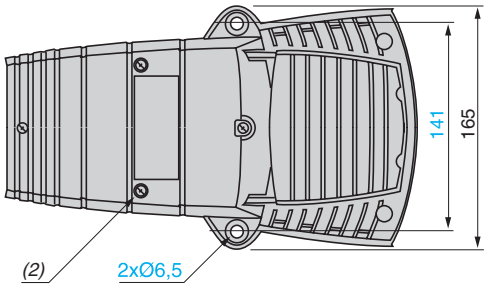


(1) Ø 16 x 4 counterbored hole.
(2) 4 cover fixing screws: stainless steel. Tightening torque: 1 N.m.

Without protective cover







(1) 2 plain holes for ISO M20 or n° 13 (Pg 13.5) cable gland.
(2) 4 cover fixing screws: stainless steel. Tightening torque: 1 N.m.
(3) Return spring: stainless steel.

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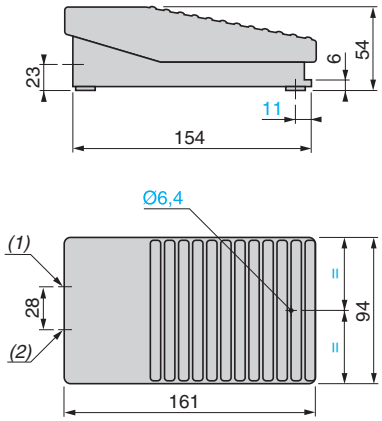
Control and signalling units for safety applications

Plastic foot switches, Harmony type XPE A

XPE A



(1) 1 plain hole for ISO M20 or n° 13 (Pg 13.5) cable gland.
(2) 1 plain hole for ISO M20 or n° 9 (Pg 11) cable gland.

5

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Contents

6 - Pendant control stations and controllers

Pendant control stations with intuitive operation

Selection guide . . . . . *page 6/2*

■ Double insulated, for control circuits

□ Complete stations “ready for use”, “Pistol grip”, type **XAC A** . . . . . *page 6/5*
□ Complete stations “ready for use”, type **XAC D** . . . . . *page 6/9*

■ Double insulated, for power circuits (direct switching)

□ Complete stations “ready for use”, type **XAC D** . . . . . *page 6/11*

■ Double insulated, for control or power circuits

□ Empty enclosures, type **XAC D** . . . . . *page 6/12*
□ Separate components and spare parts . . . . . *page 6/12*
□ Variable composition stations, factory assembled . . . . . *page 6/17*

Pendant control stations

Selection guide . . . . . *page 6/2*

■ Double insulated, type **XAC A,** for control circuits

□ Complete stations “ready for use” . . . . . *page 6/19*
□ Empty enclosures . . . . . *page 6/23*
□ Separate components and spare parts . . . . . *page 6/24*
□ Variable composition stations, factory assembled . . . . . *page 6/33*

■ Double insulated, type **XAC B** or metal, type **XAC M** *(1)*

□ Complete stations “ready for use”, type **XAC B**, for control circuits . . *page 6/35*
□ Complete stations “ready for use”, type **XAC B**, for power circuits . . . *page 6/37*
□ Empty enclosures, type XAC B, for control or power circuits . . . . . *page 6/39*
□ Empty enclosures, type XAC B or XAC M, for control circuits. . . . . *page 6/41*
□ Separate components and spare parts . . . . . *page 6/42*
□ Variable composition stations, factory assembled . . . . . *page 6/59*

■ Double insulated, type **XAC F**, for control circuits *(1)*

□ Empty enclosures . . . . . *page 6/61*
□ Variable composition stations, factory assembled . . . . . *page 6/65*

(1) XAC M and XAC F: products for maintenance purposes only.

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Controllers

Selection guide *6/66*

■ Controllers for “light hoisting” applications, type **XKB**

□ Controllers **XKB A** with predefined, non modifiable schemes, factory assembled . . . . . *page 6/72*

□ Controllers **XKB E** with variable composition schemes, factory assembled . . . . . *page 6/72*

□ Separate components . . . . . *page 6/75*

■ Controllers for “medium hoisting” applications, type **XKD F**

□ Controllers with variable composition schemes, factory assembled . . . . . *page 6/78*

□ Separate components . . . . . *page 6/83*

■ Controllers for “heavy hoisting” applications, type **XKM**

□ Controllers **XKM A** and **XKM B** with variable composition schemes, factory assembled . . . . . *page 6/86*

□ Controllers **XKM C** with variable composition schemes, factory assembled . . . . . *page 6/93*

□ Separate components . . . . . *page 6/95*

■ Potentiometers for controllers

□ For standard applications, type **XKZ A** . . . . . *page 6/100*

□ For applications requiring an extended “neutral zone”, types **XKB Z** and **XKD Z** . . . . . *page 6/101*

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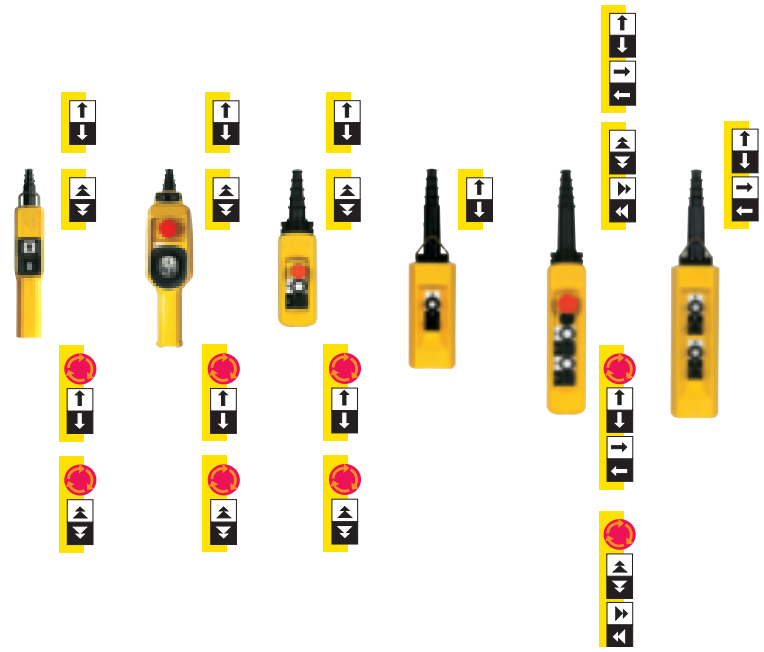
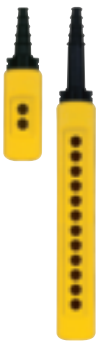
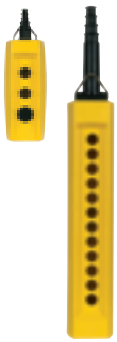
Pendant control stations
Complete stations “ready for use” and variable composition stations

Complete stations “ready for use”

Applications	Control circuits					
	Simple hoisting: 1 movement				Handling-hoisting: 2 movements	
Motor control *Single-speed* *2-speed* *Emergency stop*						
Number of operators	2	1 (2-directional)	2	2	4	4
Enclosure material	Polypropylene	Polypropylene	Polypropylene	Polyester	Polypropylene	Polyester
Pendant station type reference	XAC A	XAC D	XAC A	XAC B	XAC A	XAC B
Page(s)	6/5	6/9	6/19	6/35	6/20	6/35

Variable composition stations

Applications	Control circuits		
Number of cut-outs	1 or 2	2, 3, 4, 5, 6, 8 or 12	2, 3, 4, 6, 8 or 12 in 1 row or 2 rows of 6
			
Equipment	■ Emergency stop (front mounted) ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds
Enclosure material	Polypropylene	Polypropylene	Polyester
Pendant station type reference	XAC D	XAC A	XAC B
Page(s)	6/12 and 6/13	6/23 to 6/29	6/39 to 6/54

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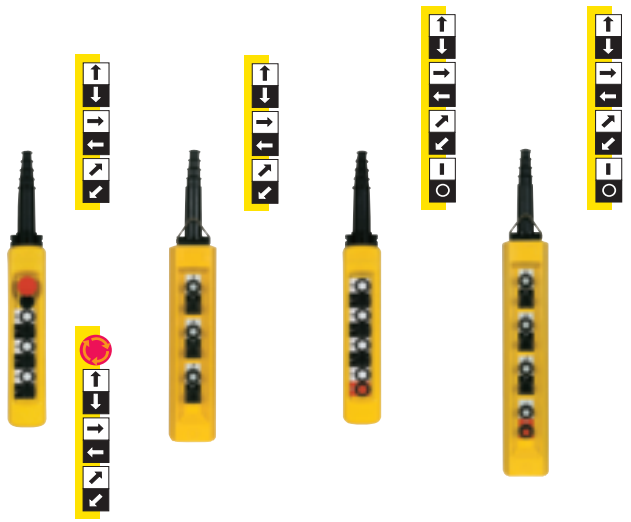
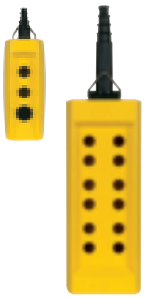
Handling-hoisting: 3 movements				Power circuits			
				Simple hoisting: 1 movement	Handling-hoisting: 2 movements	Handling-hoisting: 3 movements	
							
6	6	8	8	1 (2-directional)	2	4	6
Polypropylene	Polyester	Polypropylene	Polyester	Polypropylene	Polyester	Polyester	Polyester
XAC A	**XAC B**	**XAC A**	**XAC B**	**XAC D**	**XAC B**	**XAC B**	**XAC B**
6/20	6/35	6/21	6/35	6/11	6/37	6/37	6/38

4 or 8	Up to 30	Power circuits	
		1 or 2	2, 3, 4, 6, 8 or 12 in 2 rows of 6
Products for maintenance purposes only	Products for maintenance purposes only		
			
■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Emergency stop (front mounted) ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds
Aluminium	Polyester	Polypropylene	Polyester
XAC M	**XAC F**	**XAC D**	**XAC B**
6/41	6/61	6/12 and 6/13	6/37 to 6/54

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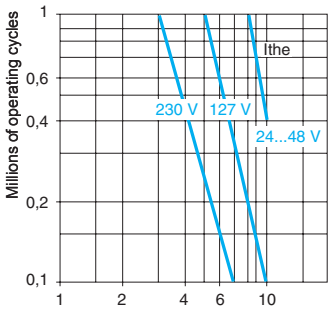
Pendant control stations
Double insulated with intuitive operation, type XAC A “Pistol grip”
For control circuits

Environment			
Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
Product certifications			UL type 4X A600-Q600, CSA type 4 A600-Q600
Protective treatment	Standard version		“TH”
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 15 mm
Contact block characteristics			
Rated operational characteristics			∼ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)		**V**	600, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			Slow break
Resistance across terminals		**MΩ**	⩽ 25
Operating force		**N**	13 to 15
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gI)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Rated operational power

Conforming to EN/IEC 60947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c. supply ∼ 50/60 Hz
Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	V	24	48	120
	W	65	48	40

References: pages 6/5 and 6/6
Dimensions: page 6/7
Application schemes: page 6/7

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Pendant control stations

Double insulated with intuitive operation, type XAC A "Pistol grip"

For control circuits

Complete stations "ready for use"



XAC A201



XAC A211

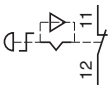
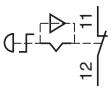
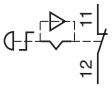
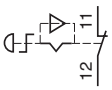


XAC A2014



XAC A2114

For control of single-speed hoist motors

Functions	Number of operators	Type of operators	Contact block(s) and scheme		Reference	Weight kg
			Per direction	For Emergency stop		
	**2** mechanically interlocked	Standard	1 N/O ZB2 BE101 	–	**XAC A201**	0.270
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A205**	0.300
		Booted	1 N/O ZB2 BE101 	–	**XAC A211**	0.290
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A215**	0.320
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(1)*	Standard	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2014**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2054**	0.340
		Booted	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2114**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2154**	0.340

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

6

Characteristics: page 6/4 Dimensions: page 6/7 Application schemes: page 6/7

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Pendant control stations

Double insulated with intuitive operation, type XAC A "Pistol grip"

For control circuits

Complete stations "ready for use"



XAC A207



XAC A217

For control of 2-speed hoist motors

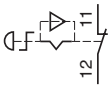
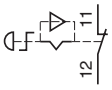
Functions	Number of operators	Type of operators	Contact block(s) and scheme: Per direction	For Emergency stop	Reference	Weight kg
	**2** mechanically interlocked	Standard	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201 	–	**XAC A207**	0.320
		Booted	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201 	–	**XAC A217**	0.320



XAC A2074



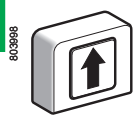
XAC A2174

	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(1)*	Standard	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201 	1 N/C ZB2 BE102 	**XAC A2074**	0.360
		Booted	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201 	1 N/C ZB2 BE102 	**XAC A2174**	0.360

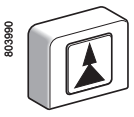
6

Separate components and spare parts

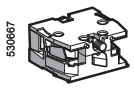
Description	For use with	Marking/ Function	Scheme	Reference	Weight kg
Booted pushbutton operators with fixing screws	XAC A211● XAC A215● (single-speed)	▲	–	**XAC A921**	0.010
		▼	–	**XAC A922**	0.010
	XAC A217● (2-speed)	▲	–	**XAC A923**	0.010
		▼	–	**XAC A924**	0.010
Contact blocks spring return, slow break	XAC A all models	N/O		**ZB2 BE101**	0.015
		N/C		**ZB2 BE102**	0.015
		N/O staggered		**ZB2 BE201**	0.015
Protective cable sleeve + suspension ring + cable clamp	Cable Ø 7 to Ø 13 mm	–	–	**XAC A913**	0.070



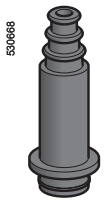
XAC A921



XAC A923



ZB2 BE●●●



XAC A913

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Characteristics: page 6/4 Dimensions: page 6/7 Application schemes: page 6/7

Schneider Electric

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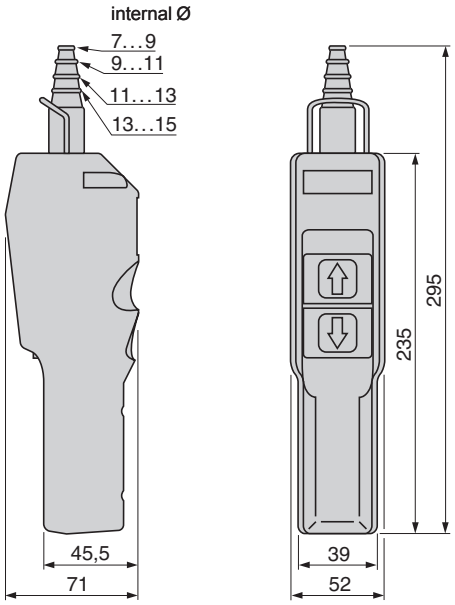
Pendant control stations

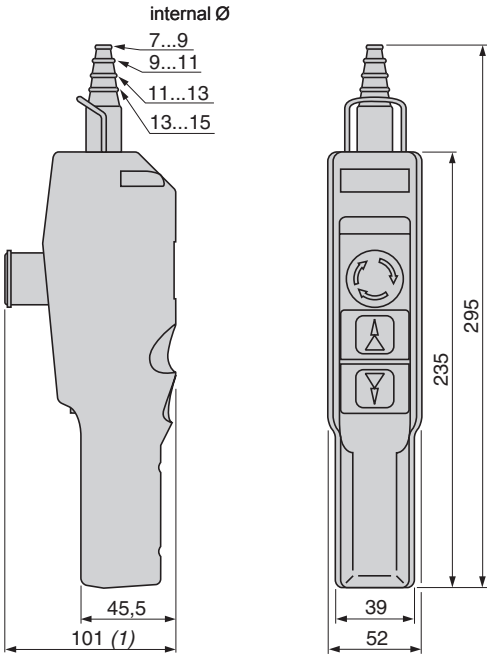
Double insulated with intuitive operation, type XAC A "Pistol grip"
For control circuits
Complete stations "ready for use"

Dimensions

XAC A2●●



XAC A2●●●

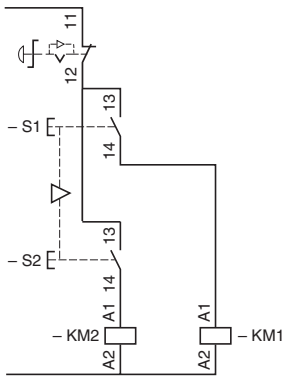


(1) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

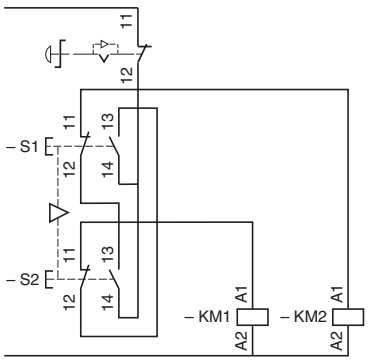
Application schemes (typical examples)

For control of single-speed reversing motor

XAC A2●1●

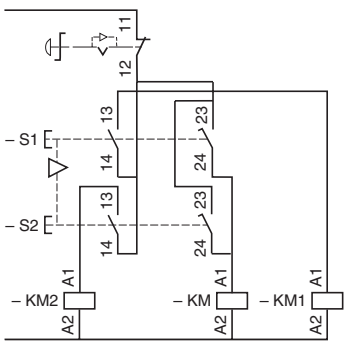


XAC A2●5●



For control of 2-speed reversing motor

XAC A2●7●



Characteristics: page 6/4
References: pages 6/5 and 6/6

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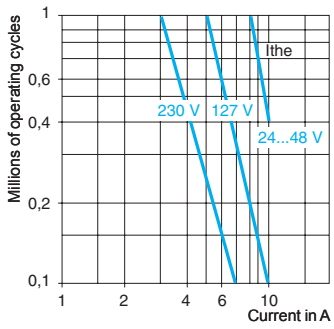
Pendant control stations
Double insulated with intuitive operation, type XAC D
For control circuits

Environment			
Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			70 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			3
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 18 mm
Contact block characteristics			
Rated operational characteristics			∼ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 947-5-1 Appendix A
Thermal current (Ithe)	**XAC D2●A010●**	**A**	10
	XAC D2●A12●1	**A**	16
Rated insulation voltage (Ui)		**V**	600, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1
Positive operation			Mushroom head pushbutton on **XAC D22A●●●●**: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			Single-speed contact blocks: slow break 2-speed contact blocks: snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	**XAC D2●A010●, XAC D2●A12●1**	**N**	16
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gl)
Connection		**mm²**	Captive screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power

Conforming to IEC 60947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c.supply ∼ 50/60 Hz
Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	V	24	48	120
	W	65	48	40

References: page 6/9 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

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Pendant control stations

Double insulated with intuitive operation, type XAC D

For control circuits

Complete stations “ready for use”

DF565503



XAC D21A0101

DF565501



XAC D24A0105

DF565504



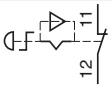
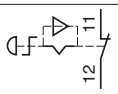
XAC D21A1231

DF565502

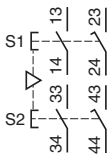
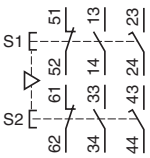
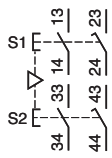
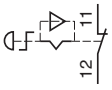
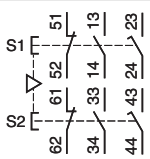
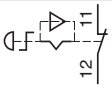


XAC D24A1241

For control of single-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight kg
		Per direction	For Emergency stop		
 Reversing, mechanically interlocked	**1** 2-directional operator	1 N/O ZB2 BE101 	–	**XAC D21A0101**	0.340
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC D21A0105**	0.365
	1 2-directional operator + 1 trigger action Emer. stop Ø 30 mm ZA2 BS834 operator *(2)*	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC D24A0101**	0.395
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC D24A0105**	0.425

For control of 2-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight kg
		Per direction	For Emergency stop		
 Reversing, mechanically interlocked	**1** 2-directional operator	1 N/O + N/O staggered XED S1231 *(1)* 	–	**XAC D21A1231**	0.365
		1 N/C + N/O + N/O staggered XED S1241 *(1)* 	–	**XAC D21A1241**	0.405
	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm ZA2 BS834 operator *(2)*	1 N/O + N/O staggered XED S1231 *(1)* 	1 N/C ZB2 BE102 	**XAC D24A1231**	0.420
		1 N/C + N/O + N/O staggered XED S1241 *(1)* 	1 N/C ZB2 BE102 	**XAC D24A1241**	0.420

(1) Reference of double contact block for reversing operation.

(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Characteristics: page 6/8 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

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Pendant control stations
Double insulated with intuitive operation, type XAC D
For power circuits (direct switching)

Environment

Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27 except **XAC D** 2-speed: 70 gn
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			3
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 18 mm

Contact block characteristics

Thermal current (Ithe)	**XEN T●●●●**	**A**	10
	XED S●●●●	**A**	16
Rated insulation voltage (Ui)		**V**	500, degree of pollution 3 conforming to IEC 60947-1 400, degree of pollution 3 for Emergency stop contact on stations **XAC D22P●●●●**
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1 4 for Emergency stop contact on stations **XAC D22P●●●●**
Contact operation			Snap action
Operating force		**N**	Single-speed: 28; 2-speed: 31
Terminal referencing			By numbers conforming to CENELEC EN 50005
Short-circuit protection			6 A maximum cartridge fuse type aM
Connection		**mm²**	Screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end
Operational power			Utilisation categories AC-3 and AC-4 conforming to IEC 60947-3 Appendix A 3 phases, 2 poles **XED S2●●●**: 1.1 kW-400 V **XED S3●●●**: 2.2 kW-400 V Brake contact: 100 V d.c. supply, 0.7 A, L/R = 100 ms
			Utilisation category AC-23B, mushroom head Emergency stop 3 phases, 3 poles, isolating block: **XEN T●●●●**: 3 kW-400 V
Electrical durability (in millions of operating cycles)			Utilisation categories AC-3 and AC-4 conforming to IEC 60947-3 Appendix A Duty cycle comprising 75% AC-3, 25% AC-4 Operating rate: 600 per hour, load factor: 0.4 3 phases, 2 poles **XED S2●●●**: 1.1 kW-400 V = 1 million **XED S3●●●**: 2.2 kW-400 V = 1 million

References: page 6/11 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

Schneider Electric

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Pendant control stations

Double insulated with intuitive operation, type XAC D

For power circuits (direct switching)
Complete stations “ready for use”


DF565500

XAC D21P2111


DF565501

XAC D24P2121


DF566504

XAC D21P2231


DF565502

XAC D24P3241

For control of single-speed hoist motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
 Reversing, mechanically interlocked	**1** 2-directional operator	2-pole XED S2111 *(1)*	–	1.1 kW	**XAC D21P2111**	0.355
		2-pole XED S3111 *(1)*	–	2.2 kW	**XAC D21P3111**	0.355
		2-pole + 1 N/O (brake) XED S2121 *(1)*	–	1.1 kW	**XAC D21P2121**	0.355
		2-pole + 1 N/O (brake) XED S3121 *(1)*	–	2.2 kW	**XAC D21P3121**	0.355
	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(2)*	2-pole XED S3111 *(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D24P3111** *(2)*	0.410
		2-pole + 1 N/O (brake) XED S2121 *(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D24P2121** *(2)*	0.410
		2-pole + 1 N/O (brake) XED S3121 *(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D24P3121** *(2)*	0.410

For control of 2-speed hoist motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
 Reversing, mechanically interlocked	**1** 2-directional operator	2-pole XED S2231 *(1)*	–	1.1 kW	**XAC D21P2231**	0.355
		2-pole XED S3231 *(1)*	–	2.2 kW	**XAC D21P3231**	0.355
		2-pole + 1 N/O (brake) XED S2241 *(1)*	–	1.1 kW	**XAC D21P2241**	0.355
		2-pole + 1 N/O (brake) XED S3241 *(1)*	–	2.2 kW	**XAC D21P3241**	0.355
	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(2)*	2-pole XED S2231 *(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D24P2231** *(2)*	0.420
		2-pole XED S3231 *(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D24P3231** *(2)*	0.420
		2-pole + 1 N/O (brake) XED S3241 *(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D24P3241** *(2)*	0.420

(1) Reference of double contact block for reversing operation.
(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

6

Characteristics: page 6/10 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

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Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

Empty enclosures, separate components and spare parts


DF565505

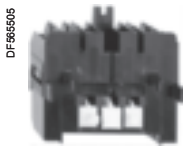
XAC D021


DF565506

XAC D022


DF565505

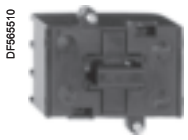
ZB2 BE10●


DF565505

XED S1231


DF565509

XED S2121


DF565510

XEN T1991

Empty enclosures

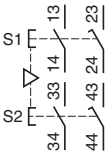
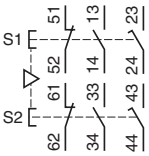
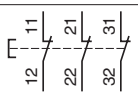
Description	Enclosure cut-outs	Reference	Weight kg
Empty enclosure comprising: - the enclosure, - protective cable sleeve for Ø 7 to 18 mm cable, - internal cable clamp, - cable tie (for tightening sleeve onto cable), - the directional operator, - legends.	For directional operator	**XAC D021**	0.345
	For directional operator + operating head (Ø 22.5 mm cut-out)	**XAC D022**	0.345

Variable composition stations, factory assembled

Use the order form on page 6/17 to define the required configuration.

Equipment: contact blocks and operating heads	See separate components, pages 6/13 and 6/14

Contact blocks

Description	Application	Function *(1)*	Scheme *(1)*	Max. power/ 400 V	Reference	Weight kg
For control circuits						
Single block spring return, slow break	Single-speed	N/O		–	**ZB2 BE101**	0.015
		N/C		–	**ZB2 BE102**	0.015
Double block spring return, snap action	2-speed	N/O + N/O staggered		–	**XED S1231**	0.015
		N/C + N/O + N/O staggered		–	**XED S1241**	0.015
For power circuits						
Double block spring return, snap action	Single-speed	2-pole	*(2)*	1.1 kW	**XED S2111**	0.080
				2.2 kW	**XED S3111**	0.090
		2-pole + 1 N/O (brake)	(2)	1.1 kW	**XED S2121**	0.090
				2.2 kW	**XED S3121**	0.090
	2-speed	2-pole	*(2)*	1.1 kW	**XED S2231**	0.110
				2.2 kW	**XED S3231**	0.110
		2-pole + 1 N/O (brake)	*(2)*	1.1 kW	**XED S2241**	0.120
				2.2 kW	**XED S3241**	0.120
For Emergency stop operating head (Ø 22.5 mm cut-out)						
Single block spring return, slow break		N/C		–	**ZB2 BE102**	0.015
		N/C + N/C + N/C		–	**XEN T1991**	0.040

(1) Function or scheme per direction for double contact blocks.
(2) See application schemes, page 6/15.

Characteristics: pages 6/8 and 6/10 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

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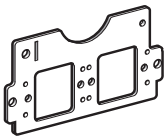
Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

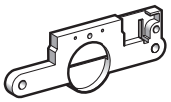
Separate components and spare parts

817505



XAC D913

817503



XAC D911

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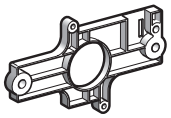

XAC D912

Contact block support plates

For use with	Reference	Weight kg
2 movement contact blocks ZB2 BE10● (control circuit stations)	**XAC D913**	0.010
1 contact block ZB2 BE102 for operating head	**XAC D911**	0.005
1 contact block XEN T1991 for operating head	**XAC D912**	0.010

Operating heads for Ø 22.5 mm cut-out

Description	Colour	Reference	Weight kg
1 trigger action latching Emergency stop Ø 30 mm operator *(1)* Turn to release	Red	**ZA2 BS834**	0.040
1 trigger action latching Emergency stop Ø 30 mm operator Key release, n° 455 *(2)* Key withdrawal in rest (unactuated) position	Red	**ZA2 BS934**	0.060
Selector switch, standard handle 2 position, stay put	Black	**ZA2 BD2**	0.018
Key switch (key n° 455) *(2)* 2 position, stay put Key withdrawal in left-hand position	–	**ZA2 BG2**	0.020
Key switch (key n° 455) *(2)* 2 position, spring return from right to left Key withdrawal in left-hand position	–	**ZA2 BG6**	0.020
Key switch (key n° 455) *(2)* 2 position, stay put Key withdrawal in left and right-hand position	–	**ZA2 BG4**	0.020
Key switch (key n° 455) *(2)* *(3)* 3 position, stay put Key withdrawal in left and right-hand position	–	**ZA2 BG5**	0.020
Key switch (key n° 455) *(2)* *(3)* 3 position, stay put Key withdrawal in centre position	–	**ZA2 BG3**	0.020

817495



ZA2 BS834

DF538494



ZA2 BS934

DF565513



ZA2 BD2

DF565514



ZA2 BG2

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

(2) Other key numbers available on request, please consult your Regional Sales Office.

(3) Only suitable for front mounting.

Characteristics: pages 6/8 and 6/10 | Dimensions: page 6/14 | Application schemes: page 6/15 | Presentation: page 6/16

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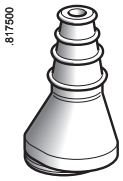
Pendant control stations

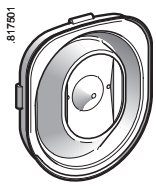
Double insulated with intuitive operation, type XAC D

For control or power circuits

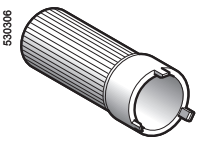
Complementary accessories



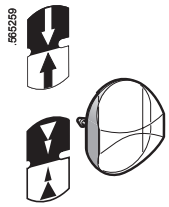
XAC D901



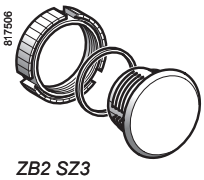
XAC D902



ZA2 BZ905



XAC D905



ZB2 SZ3

Complementary accessories

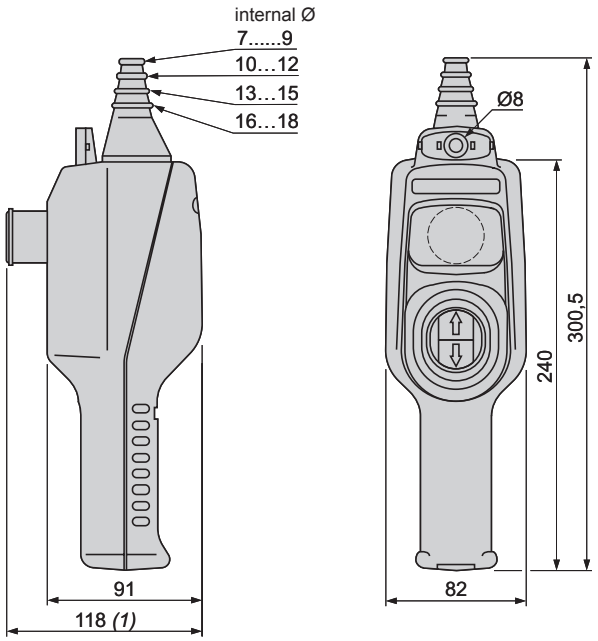
Protective cable sleeve for cable Ø 7 to 18 mm	–	**XAC D901**	0.030
Diaphragm for directional operator, polychloroprene	Black	**XAC D902**	0.015
Tightening tool for fixing nut	–	**ZA2 BZ905**	0.060
Directional operator with set of legends (single-speed and 2-speed)	–	**XAC D905**	0.005
Blanking plug for Ø 22.5 mm cut-out, with seal and fixing nut	Black	**ZB2 SZ3**	0.010

Printed labels, pendant station characteristics

Description	Pendant station circuit type	Sold in lots of	Unit reference	Weight kg
Self-adhesive labels product identification	Control	50	**XAC D950**	0.001
	Power, 1.1 kW	50	**XAC D951**	0.001
	Power, 2.2 kW	50	**XAC D952**	0.001

Dimensions

XAC D●●●



(1) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

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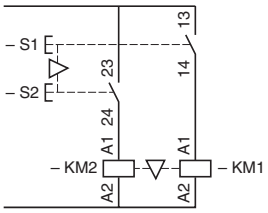
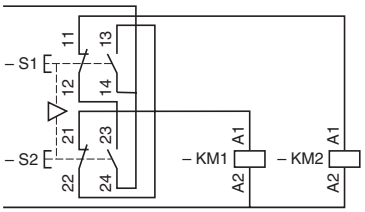
Pendant control stations
Double insulated with intuitive operation, type XAC D
For control or power circuits

Control circuits

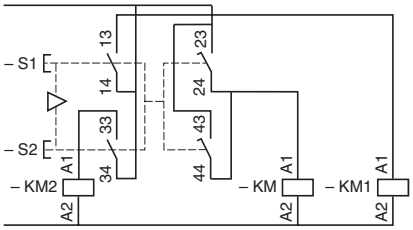
XAC D21A0101



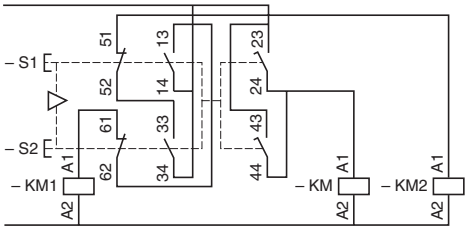
XAC D21A0105



XAC D21A1231



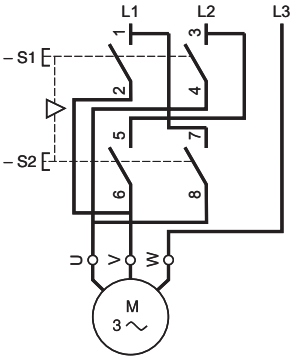
XAC D21A1241



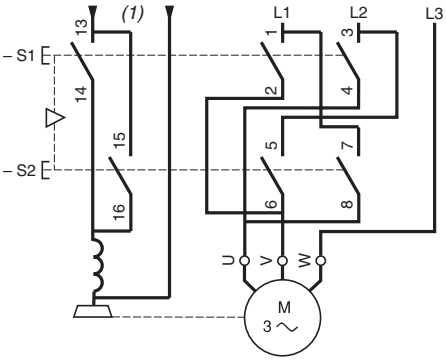
Power circuits

For control of single-speed reversing motor
2-phase switching

XAC D21P2111, XAC D21P3111



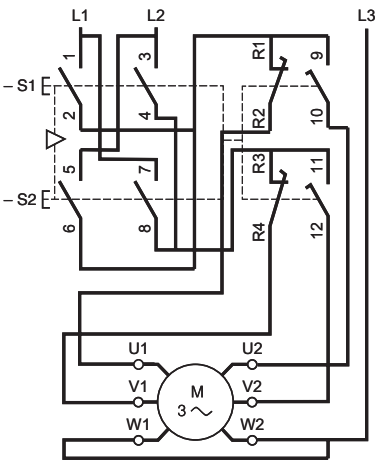
XAC D21P2121, XAC D21P3121



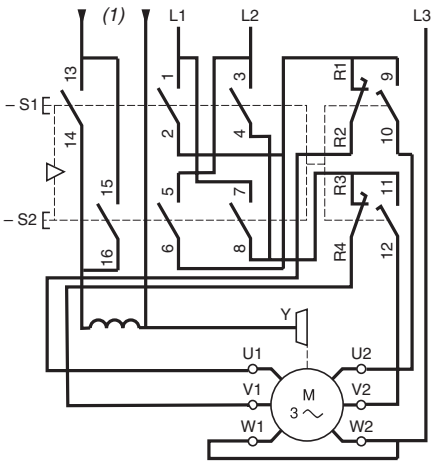
(1) Brake supply.

For control of 2-speed reversing motor (motors with separate windings only)
2-phase switching

XAC D21P2231, XAC D21P3231



XAC D21P2241, XAC D21P3241



(1) Brake supply.

Characteristics: pages 6/8 and 6/10
References: pages 6/9 to 6/13
Dimensions: page 6/14
Presentation: page 6/16

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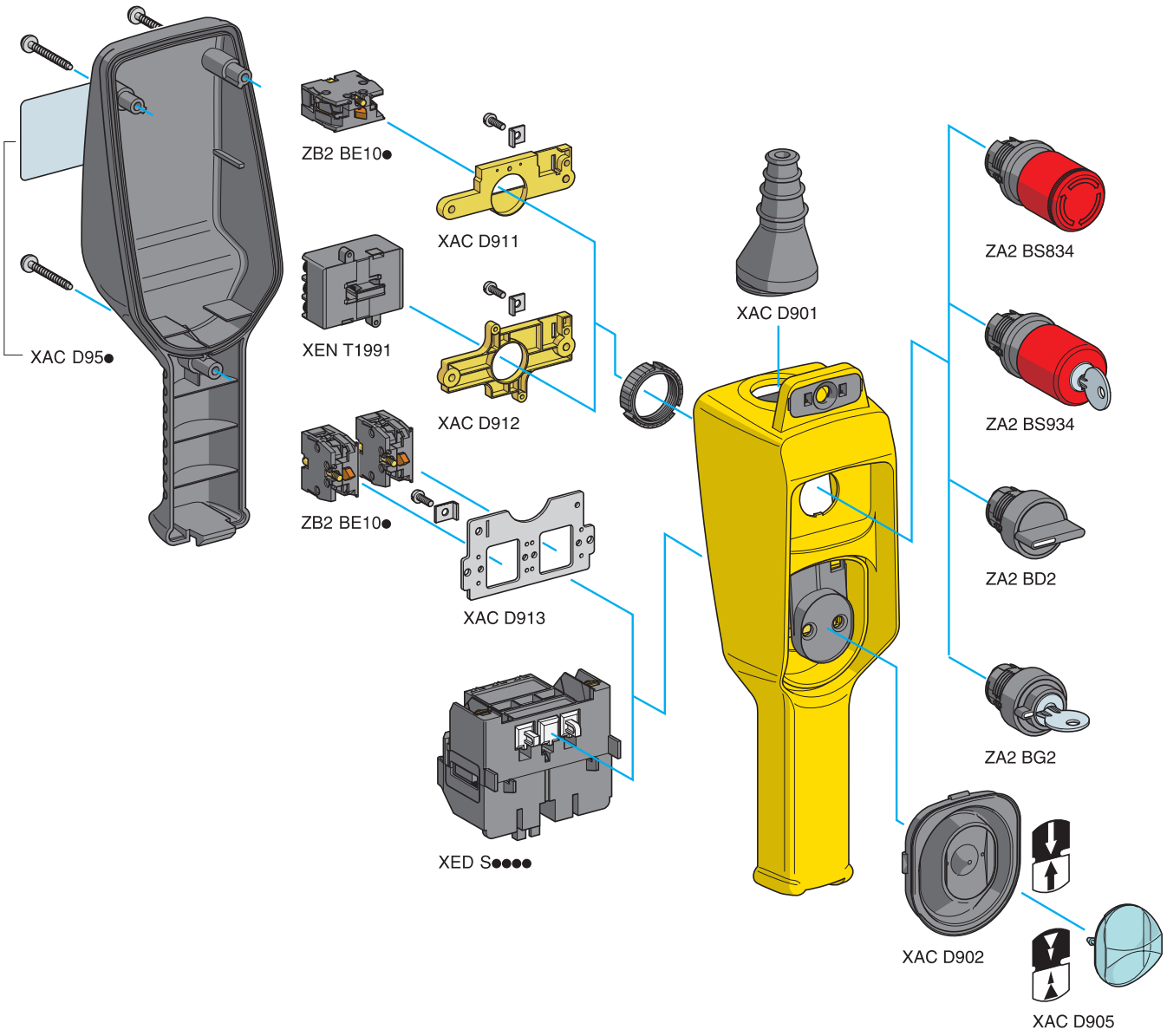
Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

Variable composition stations, factory assembled



For reference only. www.fengshengelectric.com.sg

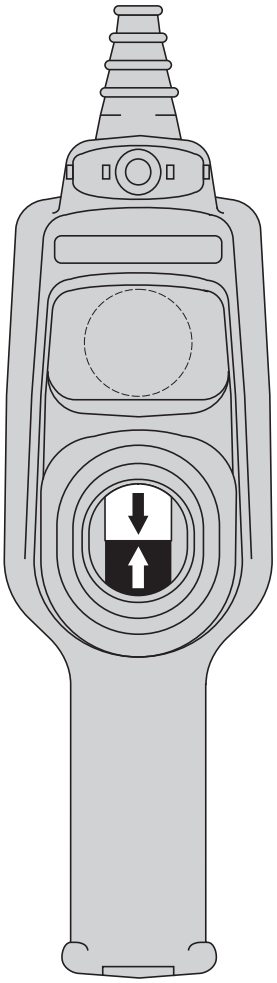
Order form (specimen suitable for photocopying)

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

Variable composition stations, factory assembled



Customer			Schneider Electric Industries	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC D09 reference

Unit reference of empty enclosure, see page 6/12	**Number of identical stations**	**Enclosure price** *(1)*
XAC **D** **0** **2**		

The reference of the empty enclosure above comprises:
- the enclosure,
- internal cable clamp,
- cable tie (for tightening sleeve onto cable),
- the directional operator with set of legends, **XAC D905**,
- protective cable sleeve for Ø 7 to 18 mm cable, **XAC D901**,
- diaphragm for directional operator, **XAC D902**.

Operating head see page 6/13		**Contact blocks** see page 6/12		**Support plate** see page 6/13		
Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**

Contact blocks see page 6/12			**Support plate** (for ZB2 BE●●● only) see page 6/13			
Reference	Qty.	Unit price	Reference	Qty.	Unit price	**Total price**

Factory assembly:
Add an additional cost for assembly **XAC 9VA**

Total price of assembled pendant station

(1) Obtain the empty enclosure price.

6

For reference only. www.fengshengelectric.com.sg

Pendant control stations
Double insulated, type XAC A
For control circuits

Environment

Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
Product certifications			Special version, with suffix "H7": UL Listed A600-Q600, CSA A600-Q600, CCC, GOST
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 8…Ø 26 mm

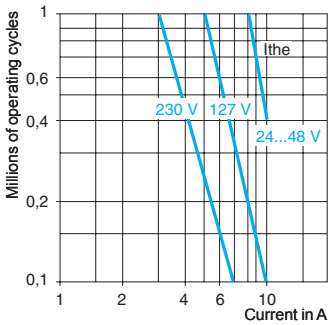
Contact block characteristics

Rated operational characteristics	**ZB2 BE●●●, XEN G●●●●, XAC S●●●●**		∼ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A
	XEN T●●●●		∼ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**ZB2 BE●●●, XEN G●●●●, XAC S●●●●**	**V**	600, degree of pollution 3
	XEN T●●●●	**V**	400, degree of pollution 3, conforming to EN/IEC 60947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to EN/IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			N/C or N/O slow break
Resistance across terminals		**MΩ**	≤ 25
Operating force		**N**	Operators - with 1 N/O contact: 10 - with 1 N/C contact: 8 - with additional N/O contact: + 5 - with additional N/C contact: + 3
Terminal referencing			Conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gI)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: min. 1 x 0.5 mm², max., with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm². 6.3 mm clips (on request), please consult your Regional Sales office.

Operational power

Conforming to EN/IEC 60947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c.supply ∼ 50/60 Hz
⎓ Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	V	24	48	120
⎓	W	65	48	40

References: pages 6/19 to 6/22
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Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations “ready for use”

DF565523



XAC A271
XAC A281

DF565524



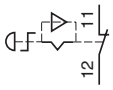
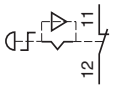
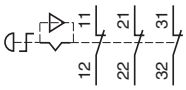
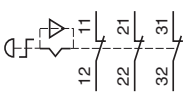
XAC A2714
XAC A2814

DF565524



XAC A27141
XAC A28141

For control of single-speed motors

Functions	Number of operators	Contact block(s) and scheme Per direction	 For Emergency stop	Reference	Weight kg
	**2** mechanically interlocked	1 N/O ZB2 BE101 	–	**XAC A271**	0.475
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A281**	0.500
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(1)*	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2714** *(1)*	0.575
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2814** *(1)*	0.600
		1 N/O ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A27141** *(1)*	0.615
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A28141** *(1)*	0.635

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

6

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Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

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Pendant control stations
Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF665525



XAC A471
XAC A481

530226



XAC A4714
XAC A4814
XAC A47141
XAC A48141

6

530223



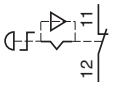
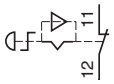
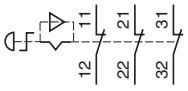
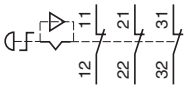
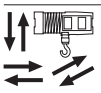
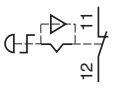
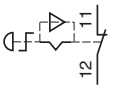
XAC A671
XAC A681

530224



XAC A6714
XAC A6814

For control of single-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme Per direction	For Emergency stop	Reference	Weight kg
	**4** mechanically interlocked between pairs	1 N/O ZB2 BE101 	–	**XAC A471**	0.625
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A481**	0.675
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 *(1)*	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A4714** *(1)*	0.800
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A4814** *(1)*	0.815
		1 N/O ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A47141** *(1)*	0.835
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A48141** *(1)*	0.850
	**6** mechanically interlocked between pairs	1 N/O ZB2 BE101 	–	**XAC A671**	0.860
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A681**	0.950
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 *(1)*	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A6714** *(1)*	0.845
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A6814** *(1)*	0.935

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

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Schneider Electric

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Pendant control stations
Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF565526



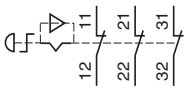
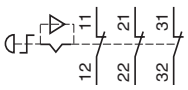
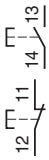
DF565527



XAC A67141
XAC A68141

XAC A871
XAC A881

For control of single-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight
		Per direction	For Emergency stop		kg
	**6** mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 *(1)*	1 N/O ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A67141** *(1)*	0.880
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A68141** *(1)*	0.970
 I O	**8** mechanically interlocked between pairs	1 N/O on 7 operators ZB2 BE101 and 1 N/C on the 8th operator ZB2 BE102 	–	**XAC A871**	0.940
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A881**	1.045

530229



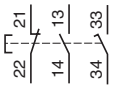
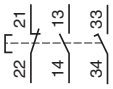
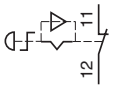
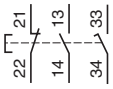
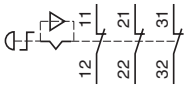
530230



XAC A291

XAC A2914
XAC A29141

For control of 2-speed motors

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight
		Per direction	For Emergency stop		kg
	**2** mechanically interlocked between pairs	1 N/C + N/O + N/O staggered XEN G1191 	–	**XAC A291**	0.525
	2 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 *(1)*	1 N/C + N/O + N/O staggered XEN G1191 	1 N/C ZB2 BE102 	**XAC A2914** *(1)*	0.570
		1 N/C + N/O + N/O staggered XEN G1191 	1 N/C + N/C + N/C XEN T1192 	**XAC A29141** *(1)*	0.605

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

6

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Pendant control stations
Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF566528



XAC A491

530231



XAC A4914
XAC A49141

DF566528



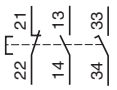
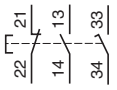
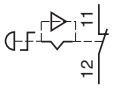
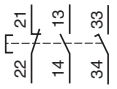
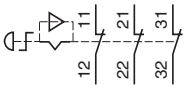
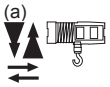
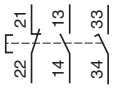
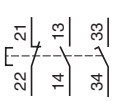
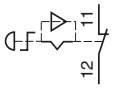
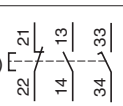
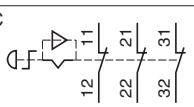
XAC A492

537743



XAC A4924
XAC A49241

For control of 2-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight
		Per direction	For Emergency stop		kg
	**4** mechanically interlocked between pairs	1 N/C + N/O + N/O staggered XEN G1191 	–	**XAC A491**	0.625
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 *(1)*	1 N/C + N/O + N/O staggered XEN G1191 	1 N/C ZB2 BE102 	**XAC A4914** *(1)*	0.675
		1 N/C + N/O + N/O staggered XEN G1191 	1 N/C + N/C + N/C XEN T1192 	**XAC A49141** *(1)*	0.700
(a)  (b)	**4** mechanically interlocked between pairs	1 N/C + N/O + N/O staggered (a) XEN G1191 	–	**XAC A492**	0.675
		1 N/O (b) ZB2 BE101 			
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 *(1)*	1 N/C + N/O + N/O staggered (a) XEN G1191 	1 N/C ZB2 BE102 	**XAC A4924** *(1)*	0.700
		1 N/O (b) ZB2 BE101 			
		1 N/C + N/O + N/O staggered (a) XEN G1191 	1 N/C + N/C + N/C XEN T1192 	**XAC A49241** *(1)*	0.735
		1 N/O (b) ZB2 BE101 			

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

6

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Pendant control stations
Double insulated, type XAC A
For control circuits
Empty enclosures

530233



XAC A02

530234



XAC A03

530234



XAC A12

Empty enclosures

Description	Number of cut-outs	Reference	Weight kg
Enclosure comprising: - the enclosure, - internal mounting plate, - protective cable sleeve, - internal cable clamp, - suspension ring, - cable tie (for tightening sleeve onto cable).	2	**XAC A02**	0.440
	3	**XAC A03** *(1)*	0.440
	4	**XAC A04**	0.540
	5	**XAC A05** *(1)*	0.625
	6	**XAC A06**	0.665
	8	**XAC A08**	0.770
	12	**XAC A12**	1.000

Variable composition stations, factory assembled

Use the order form on page 6/33 to define the required configuration.

Equipment: contact blocks, operating heads (control and signalling), complementary accessories	See separate components, pages 6/24 to 6/29

(1) Enclosures with 3 cut-outs XAC A03 and 5 cut-outs XAC A05 cannot be fitted with a mounting adaptor for base mounted units. The first cut-out can only be used for the Emergency stop function.

6

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Pendant control stations
Double insulated, type XAC A
For control circuits
Separate components and spare parts

530238



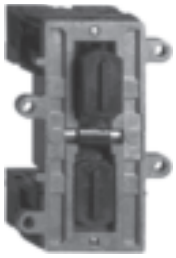
ZB2 BE101
ZB2 BE102

530237



XEN G1191
XEN G1491

530236



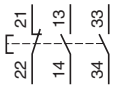
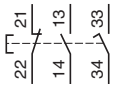
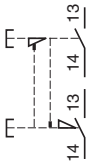
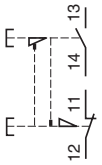
XEN G3781
XEN G3791

530239

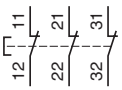


XEN T1192

Contact blocks for front mounting

Description	Application	Function	Scheme	Reference	Weight kg
Single block, spring return slow break	Single-speed	N/O		**ZB2 BE101**	0.015
		N/C		**ZB2 BE102**	0.015
		N/C + N/O + N/O simultaneous *(1)*		**XEN G1491**	0.040
	2-speed	N/C + N/O + N/O staggered (1)		**XEN G1191**	0.040
Double block, latching slow break *(2)*	Single-speed	N/O N/O		**XEN G3781**	0.060
		N/O N/C		**XEN G3791**	0.060

Isolating switch, slow break, for front mounting

For mounting in enclosures	Application	Function	Scheme	Reference	Weight kg
XAC A03 (frontal cut-out) XAC A05, A06, A08 (frontal or base cut-out)	Emergency stop	N/C + N/C + N/C with positive opening operation		**XEN T1192**	0.050

(1) Only for use with XAC A9●●● operators.
(2) Not suitable for use with the following operating heads: ZA2 BB, ZA2 BD, ZA2 BG and ZA2 BS.

6

Characteristics: page 6/18 | Dimensions: page 6/30 | Application schemes: page 6/31 | Presentation: page 6/32

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Pendant control stations
Double insulated, type XAC A
For control circuits
Separate components and spare parts

530240



XAC S10●

Contact blocks for base mounting

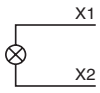
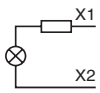
Description	Function	Scheme	Reference	Weight kg
Spring return slow break *(1)*	N/O		**XAC S101**	0.030
	N/C		**XAC S102**	0.030
	N/O + N/O		**XAC S103**	0.045
	N/C + N/C		**XAC S104**	0.045
	N/C + N/O		**XAC S105**	0.045

530241



ZB2 BV006

Pilot light bodies for front mounting

Description	Supply voltage	Scheme	Reference	Weight kg
Direct supply Bulb not included *(2)*	≤ 400 V		**ZB2 BV006**	0.015
Direct supply, through resistor Incandescent BA 9s base fitting 130 V bulb included	230 V		**ZB2 BV007**	0.020

530242



ZB2 BV007

(1) Not suitable for use with 3-position operating heads ZA2 BD and ZA2 BG or for mounting in enclosures XAC A039 and XAC A03.

(2) Bulb type for use with direct supply units: BA 9s base fitting incandescent bulb U ≤ 130 V or neon bulb 110 V ≤ U ≤ 400 V. Maximum power: 2.6 W, maximum Ø: 11 mm, maximum length: 28 mm. See page 6/26.

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Pendant control stations
Double insulated, type XAC A
For control circuits
Separate components and spare parts

530243



XAC A94●●

Operating heads for front mounting

Description	Colour	Sold in lots of	Unit reference	Weight kg
Booted operators	White	10	**XAC A9411**	0.010
	Black	10	**XAC A9412**	0.010
	Green	10	**XAC A9413**	0.010
	Red	10	**XAC A9414**	0.010
	Yellow	10	**XAC A9415**	0.010
	Blue	10	**XAC A9416**	0.010
	Brown	10	**XAC A9419**	0.010

Operating heads for front or base mounting

530249



ZA2 BS834

DF538493



ZA2 BS944

530245



ZA2 BD●

530246



ZA2 BG●

DF565529



ZA2 BB●

Description	Colour	Type	Reference	Weight kg
Trigger action latching Emergency stop *(1)* Turn to release	Red	Ø 30 mm	**ZA2 BS834**	0.040
		Ø 40 mm	**ZA2 BS844**	0.050
Trigger action latching Emergency stop *(2)* Key release (n° 455) Key withdrawal in rest (unactuated) position	Red	Ø 30 mm	**ZA2 BS934**	0.060
		Ø 40 mm	**ZA2 BS944**	0.065
Selector switches *(3)*, **standard handle** (Not to be used with XEN G●●●● contact blocks)	Black	2 position, stay put	**ZA2 BD2**	0.018
		3 position, stay put *(4)*	**ZA2 BD3**	0.018
Key switches *(2)* (key n° 455) Key withdrawal in left and right-hand position	–	2 position, stay put	**ZA2 BG4**	0.042
		3 position, stay put *(4)*	**ZA2 BG5**	0.042
Key switch *(2)* (key n° 455) Key withdrawal in left-hand position	–	2 position, stay put	**ZA2 BG2**	0.042
Key switch *(2)* (key n° 455) Spring return from right to left Key withdrawal in left-hand position	–	2-position	**ZA2 BG6**	0.042
Key switch *(4) (2)* (key n° 455) Key withdrawal in centre position	–	3 position, stay put	**ZA2 BG3**	0.042
Wobblesticks *(5)* Operates in all directions for fast stop	Black	–	**ZA2 BB2**	0.060
	Red	–	**ZA2 BB4**	0.060

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.
(2) Other key numbers available on request, please consult your Regional Sales Office.
(3) Selector switches available with other mechanical functions, please consult your Regional Sales Office.
(4) Only suitable for front mounting.
(5) Base mounting recommended.

Characteristics: page 6/18 | Dimensions: page 6/30 | Application schemes: page 6/31 | Presentation: page 6/32

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Pendant control stations
Double insulated, type XAC A
For control circuits
Separate components and spare parts


530250

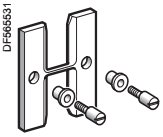
ZA2 BV0●


530201

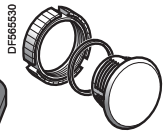

530202

DL1 C●●●● *DL1 CF●●●*


530203


DF565531

XAC A009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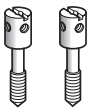
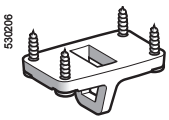
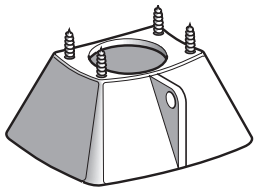
XAC A960 *ZB2 SZ3*

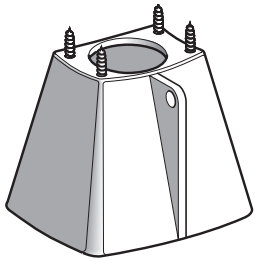

530205


530206

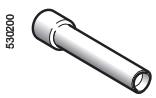
XAC B961 *XAC A971*


530207

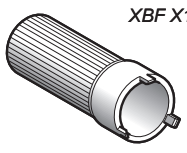
XAC A982


530208

XAC A983


530200

XBF X13


530306

ZA2 BZ905

Pilot light heads

Description	Colour	Reference	Weight kg
For use with incandescent bulbs			
Lens cap with bezel and fixing nut	White	**ZA2 BV01**	0.015
	Green	**ZA2 BV03**	0.015
	Red	**ZA2 BV04**	0.015
	Yellow	**ZA2 BV05**	0.015
	Blue	**ZA2 BV06**	0.015
	Clear	**ZA2 BV07**	0.015
For use with neon bulbs			
Lens cap with bezel and fixing nut	Green	**ZA2 BV033**	0.015
	Red	**ZA2 BV043**	0.015
	Yellow	**ZA2 BV053**	0.015
	Clear	**ZA2 BV073**	0.015

Bulbs

Description	Voltage	Sold in lots of	Unit reference	Weight kg
Incandescent BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	6 V	10	**DL1 CB006**	0.002
	12 V	10	**DL1 CE012**	0.002
	24 V	10	**DL1 CE024**	0.002
	48 V	10	**DL1 CE048**	0.002
	130 V	10	**DL1 CE130**	0.002
Neon BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	110 V	10	**DL1 CF110**	0.002
	230 V	10	**DL1 CF220**	0.002
	400 V	10	**DL1 CF380**	0.002

Complementary accessories, tools

Description		Reference	Weight kg
Protective cable sleeve	For cable Ø 8 to 22 mm	**XAC A950**	0.070
	For cable Ø 8 to 26 mm	**XAC A960**	0.090
Mechanical interlock for 2 operators	With fixing screws	**XAC A009**	0.003
Blanking plug	With seal and fixing nut	**ZB2 SZ3**	0.005
Tightening tool for fixing nut	–	**ZA2 BZ905**	0.060
Adaptor for self-supporting cable type BBAP	Mounted with protective sleeve for cable Ø 8 to 26 mm	**XAC B961**	0.025
Lower support ring	–	**XAC A971**	0.010
Protective guards for base mounted units	For selector switch (standard handle) or Emergency stop head pushbutton	**XAC A982**	0.025
	For key switch or key release latching Emergency stop head pushbutton	**XAC A983**	0.045
Bulb extractor	For BA 9s base fitting bulbs	**XBF X13**	0.025

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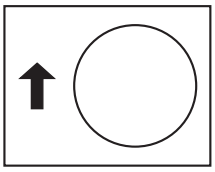
Pendant control stations

Double insulated, type XAC A

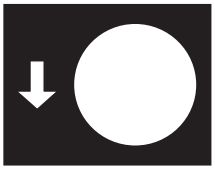
For control circuits

Legends 30 x 40 mm with symbols conforming to NF E 52-124

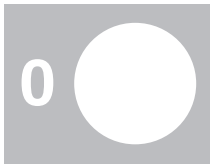
530209



White background, black symbol



Black background, white symbol



Red background, white symbol

Function Symbol	Reference	Weight kg
Raise, slow	**ZB2 BY4901**	0.001
Raise, fast	**ZB2 BY4902**	0.001
Raise, slow-fast	**ZB2 BY4903**	0.001
Right, slow	**ZB2 BY4907**	0.001
Right, fast	**ZB2 BY4908**	0.001
Right, slow-fast	**ZB2 BY4909**	0.001
Forward, slow	**ZB2 BY4913**	0.001
Forward, fast	**ZB2 BY4914**	0.001
Forward, slow-fast	**ZB2 BY4915**	0.001
Slew right, slow	**ZB2 BY4919**	0.001
Slew right, fast	**ZB2 BY4920**	0.001
Slew right, slow-fast	**ZB2 BY4921**	0.001
Slow	**ZB2 BY4933**	0.001
Klaxon	**ZB2 BY4932**	0.001
Start	**ZB2 BY4930**	0.001

Function Symbol	Reference	Weight kg
Lower, slow	**ZB2 BY2904**	0.001
Lower, fast	**ZB2 BY2905**	0.001
Lower, slow-fast	**ZB2 BY2906**	0.001
Left, slow	**ZB2 BY2910**	0.001
Left, fast	**ZB2 BY2911**	0.001
Left, slow-fast	**ZB2 BY2912**	0.001
Reverse, slow	**ZB2 BY2916**	0.001
Reverse, fast	**ZB2 BY2917**	0.001
Reverse, slow-fast	**ZB2 BY2918**	0.001
Slew left, slow	**ZB2 BY2922**	0.001
Slew left, fast	**ZB2 BY2923**	0.001
Slew left, slow-fast	**ZB2 BY2924**	0.001
Fast	**ZB2 BY4934**	0.001
Start-Klaxon	**ZB2 BY4935**	0.001
Stop	**ZB2 BY2931**	0.001

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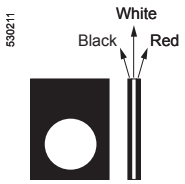
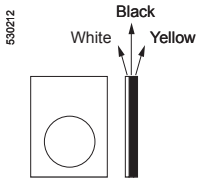
Pendant control stations
Double insulated, type XAC A
For control circuits
Legends 30 x 40 mm



ZB2 BY2101



ZB2 BY4101

Text	Reference	Weight kg	Text	Reference	Weight kg

■ Start functions: white characters on black background
■ Stop functions: white characters on red background

Blank

Black or red background	**ZB2 BY2101**	0.001	White or yellow background	**ZB2 BY4101**	0.001

With English text

For pushbuttons

Start	**ZB2 BY2303**	0.001	Stop	**ZB2 BY2304**	0.001
Forward	**ZB2 BY2305**	0.001	Reverse	**ZB2 BY2306**	0.001
Up	**ZB2 BY2307**	0.001	Down	**ZB2 BY2308**	0.001
Right	**ZB2 BY2309**	0.001	Left	**ZB2 BY2310**	0.001
On	**ZB2 BY2311**	0.001	Off	**ZB2 BY2312**	0.001
Power on	**ZB2 BY2326**	0.001	Slow	**ZB2 BY2327**	0.001
Fast	**ZB2 BY2328**	0.001	Klaxon	**ZB2 BY2125**	0.001

For selector switches

–	–	0.001	Off-On	**ZB2 BY2367**	0.001

With French text

For pushbuttons

Marche	**ZB2 BY2103**	0.001	Arrêt	**ZB2 BY2104**	0.001
Avant	**ZB2 BY2105**	0.001	Arrière	**ZB2 BY2106**	0.001
Montée	**ZB2 BY2107**	0.001	Descente	**ZB2 BY2108**	0.001
Droite	**ZB2 BY2109**	0.001	Gauche	**ZB2 BY2110**	0.001
En service	**ZB2 BY2111**	0.001	Hors service	**ZB2 BY2112**	0.001
Sous tension	**ZB2 BY2126**	0.001	Lent	**ZB2 BY2127**	0.001
Vite	**ZB2 BY2128**	0.001	Klaxon	**ZB2 BY2125**	0.001

For selector switches

Arrêt-Marche	**ZB2 BY2166**	–	Hors-en	**ZB2 BY2167**	0.001

With special texts

■ Specify text when ordering,
■ 2 lines maximum, 11 characters per line.

White characters on black background	**ZB2 BY2002**	0.001	Black characters on white background	**ZB2 BY4001**	0.001
White characters on red background	**ZB2 BY2004**	0.001	Black characters on yellow background	**ZB2 BY4005**	0.001

Other versions Legends with texts in other languages.
Please consult your Regional Sales Office.

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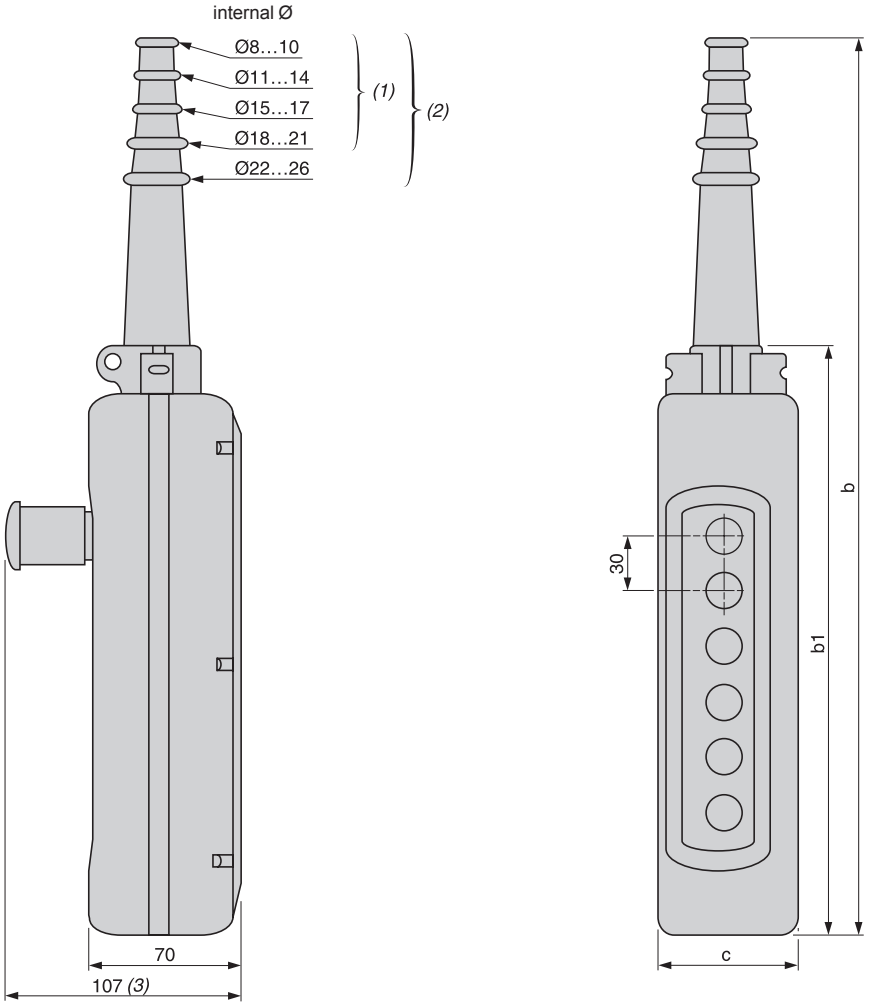
Pendant control stations
Double insulated, type XAC A
For control circuits

Dimensions
XAC A pendant stations for control circuits

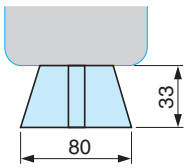


Number of operators	2	3	4	5	6	8	12
b	314	314	440	440	500	560	680
b1	190	190	250	250	310	370	490
c	80	80	80	80	80	80	92

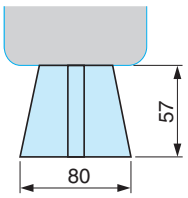
(1) For 2 and 3-way XAC A stations.
(2) For 4 to 8-way XAC A stations.
(3) With trigger action Emergency stop head operator.

Protective guards

XAC A982



XAC A983



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References: pages 6/19 to 6/29
Application schemes: page 6/31
Presentation: page 6/32

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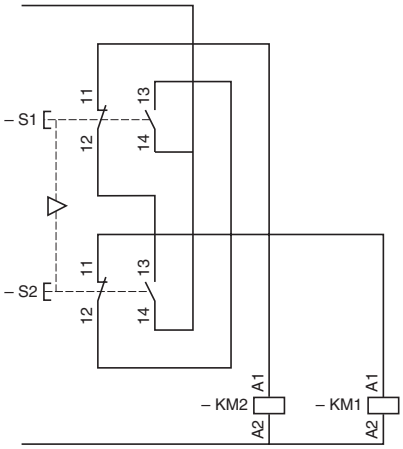
Pendant control stations
Double insulated, type XAC A
For control circuits

Application schemes (typical examples)

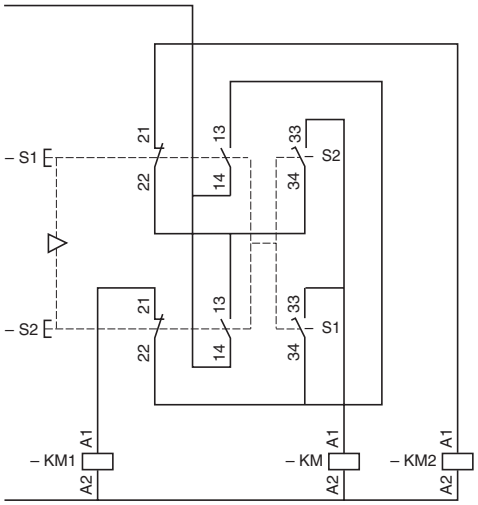
For control of single-speed reversing motor

Contact blocks **ZB2 BE101 + ZB2 BE102**



For control of 2-speed reversing motor

2 contact blocks **XEN G1191**



KM: high speed contactor

6

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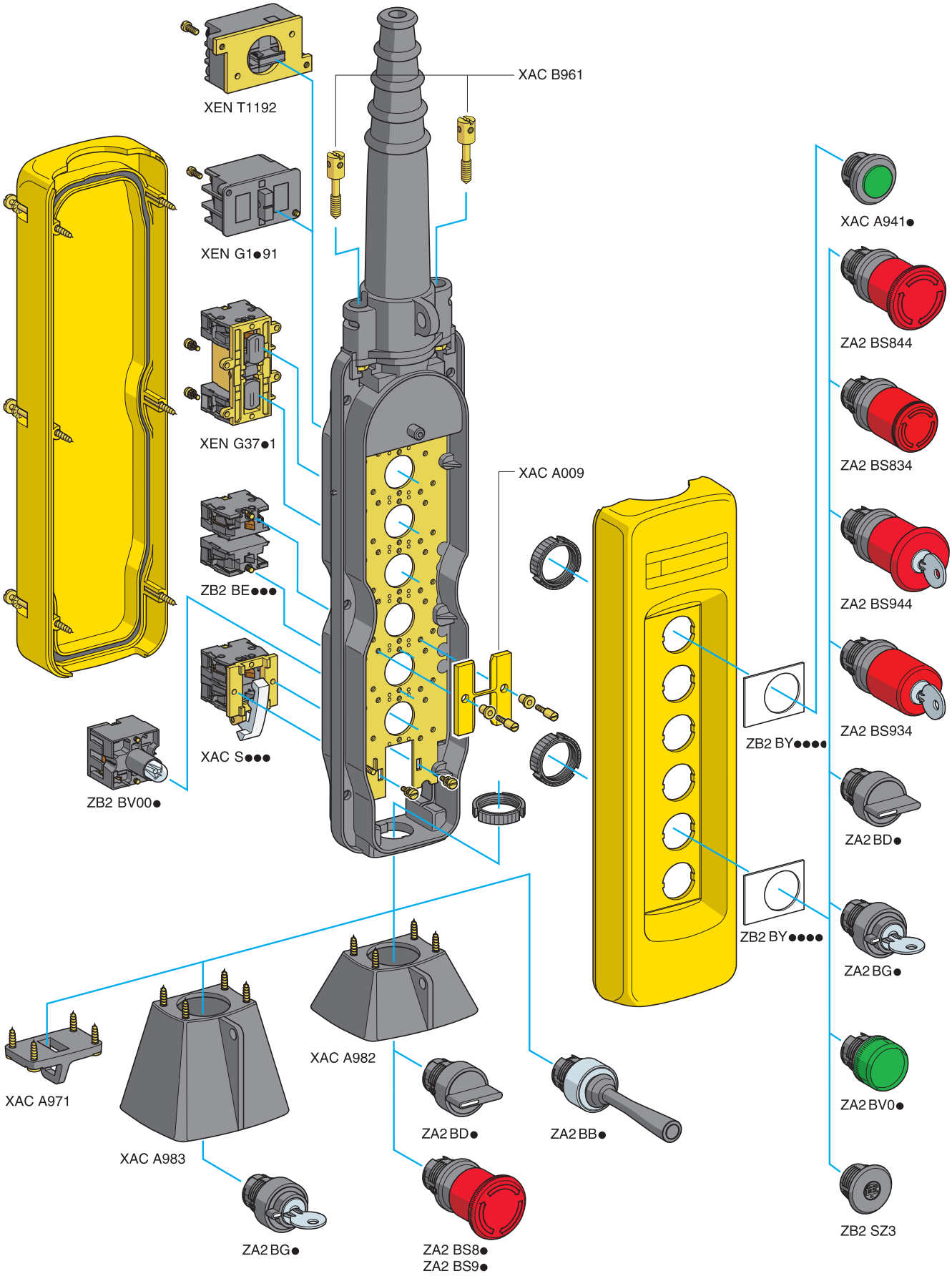
Pendant control stations

Double insulated, type XAC A

For control circuits

Variable composition stations, factory assembled



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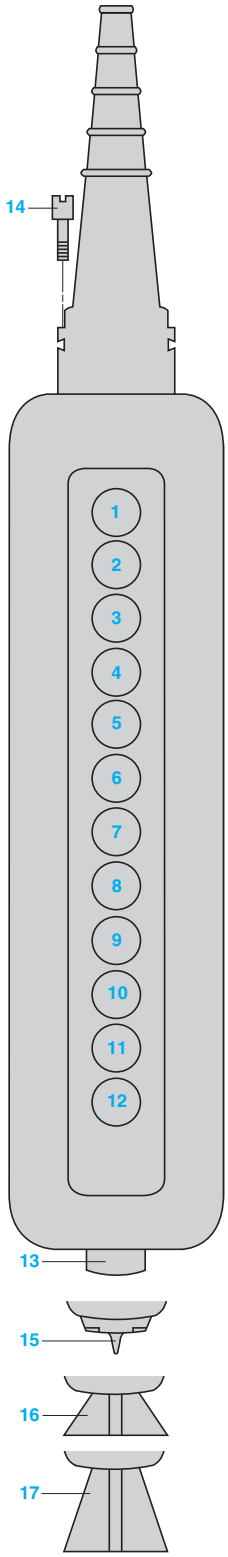
Pendant control stations

Double insulated, type XAC A

For control circuits

Variable composition stations, factory assembled



Customer			Schneider Electric Industries	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC A09 reference

Unit reference of empty enclosure, see page 6/23	**Number of identical stations**	**Enclosure price** *(1)*
XAC **A** ☐ ☐		

	Legends see pages 6/28 and 6/29		**Contact blocks or pilot light bodies** see pages 6/24 and 6/25		**Operating heads or pilot light heads or blanking plug** see pages 6/26 and 6/27		
	Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Unit mounted in base of enclosure (if required) (Except when using **XAC A03 and XAC A05)**

13							

Complementary accessories, see page 6/27 (cross the appropriate box or boxes)

	Description	☒	Reference	Unit price	
14	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 8 to 26 mm		**XAC B961**		
15	Lower support ring		**XAC A971**		
16	Protective guard for selector switch (std. handle) or Emergency stop head pushbutton, mounted in base		**XAC A982**		
17	Protective guard for key switch or key release Emergency stop head pushbutton, mounted in base		**XAC A983**		

Mechanical interlocking *(2)*

Reference	Quantity	Unit price	
XAC A009			

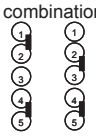
Factory assembly:	Number of heads or blanking plugs to be fitted		Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug	
		X		

Total price of assembled pendant station

(1) Obtain the empty enclosure price.

(2) Connect with a line the 2 ways which require mechanical interlocking.

Examples: combinations possible



Combinations not possible



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Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits

Environment

Conformity to standards			EN/IEC 60947-5-1, CSA C22-2 n° 14
Product certifications	**XAC B**		Standard version: CSA 300 V type 4
	XAC M		Standard version: CSA 300 V type 4
Protective treatment	**XAC B**		Standard version: "TH"
	XAC M		Standard version: "TC", ("TH" on request)
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection	**XAC B**		Class II
	XAC M		Class I conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure	**XAC B**		Double insulated glass-reinforced polyester (colour: yellow)
	XAC M		Aluminium enclosure. Painted yellow
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…13 mm, Ø 10…22 mm or Ø 22…35 mm

Contact block characteristics

Rated operational characteristics			∼ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**XEN C●●●●, XEN D3●●●, XEN D4●●●, XES B2011, XAC S4, XES D1181, XES D1281**	**V**	500, degree of pollution 3, conforming to IEC 60947-1
	XEN B●●●●, XEN D1●●●, XEN D2●●●		400, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			Slow break or snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	With booted operator	**N**	**XAC S4●●●**: 10 (N/O), 8 (N/C); **XEN C●●●●**: 6 (N/O), 4 (N/C); **XEN B●●●●, XEN D1●●●, XEN D2●●●**: Single-speed: 9; 2-speed: 20 (1st speed), 30 (2nd speed); **XEN D3●●●, XEN D4●●●**: 25; **XES B2011**: 7; **XES D1181, XES D128**: 15 (1st speed), 25 (2nd speed)
	With spring return mushroom head operator	**N**	10
	With latching mushroom head operator	**N**	40
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gI)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power
conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
For 1 million operating cycles
Operating rate: 3600 operating cycles/hour
Load factor: 0.5
⎓ Inductive circuit

Contact blocks XEN C●●●●, XEN D3●●●, XEN D4●●●, XAC S4●●●

a.c. supply ∼ 50/60 Hz						d.c. supply ⎓					
Voltage	**V**	**24**	**48**	**127**	**230**	**Voltage**	**V**	**24**	**48**	**120**	
⎓	VA	140	385	525	455	⎓	W	60	45	42	

Contact blocks XEN B●●●●, XEN D1●●●, XEN D2●●●

a.c. supply ∼ 50/60 Hz						d.c. supply ⎓					
Voltage	**V**	**24**	**48**	**127**	**230**	**Voltage**	**V**	**24**	**48**	**120**	
⎓	VA	140	210	640	680	⎓	W	48	31	35	

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply ∼ 50/60 Hz						d.c. supply ⎓					
Voltage	**V**	**24**	**48**	**127**	**230**	**Voltage**	**V**	**24**	**48**	**120**	
⎓	VA	50	100	450	750	⎓	W	140	140	95	

References: page 6/35
Dimensions: page 6/55
Application schemes: page 6/56

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Pendant control stations

Double insulated, type XAC B

For control circuits

Complete stations “ready for use” (with snap action contact blocks)



XAC B281



XAC B481

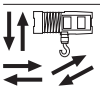


XAC B681



XAC B881

For control of single-speed motors

Functions	Number of operators	Contact blocks and scheme Per direction	Reference	Weight kg
	**2** without mechanical interlocking	1 C/O snap action XES B2011 	**XAC B281**	0.850
	**4** without mechanical interlocking	1 C/O snap action XES B2011 	**XAC B481**	1.100
	**6** without mechanical interlocking	1 C/O snap action XES B2011 	**XAC B681**	1.300
	**8** without mechanical interlocking	1 C/O snap action XES B2011 	**XAC B881**	1.550

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6

Characteristics: page 6/34 | Dimensions: page 6/55 | Application schemes: page 6/56

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Pendant control stations
Double insulated, type XAC B
For power circuits (direct switching)

Environment

Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
Product certifications	Standard version		CSA type 4
Protective treatment	Standard version		"TH"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529
Mechanical durability (in millions of operating cycles)			1 except for XAC B91● and XAC CB92●: 0.4
Enclosure			Double insulated glass-reinforced polyester (colour: yellow)
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 10…Ø 22 mm

Contact block characteristics

Thermal current (Ithe)	**XES D1191, XES D1291**	**A**	12
	XES D2201, XES D2241, XES D2251	**A**	20
Rated insulation voltage (Ui)	**XES D●●●●**	**V**	500, degree of pollution 3, conforming to IEC 60947-1
	XAC S●99	**V**	400, degree of pollution 3, conforming to IEC 60947-1
	XES D1●●●	**V**	600, conforming to CSA
	XES D2●●●	**V**	300, conforming to CSA
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1
Contact operation			Snap action
Operating force	**XES D1●●●**	**N**	17
	XES D2●●●	**N**	32
Terminal referencing			By numbers conforming to CENELEC EN 50005
Short-circuit protection	**XES D1●●●**		10 A maximum cartridge fuse type aM
	XES D2●●●		12 A maximum cartridge fuse type aM
Connection		**mm²**	Captive screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end
Operational power	3 phases, 2 poles **XES D1●●●**		Utilisation categories AC-3 and AC-4 conforming to EN/IEC 60947-3 Appendix A 2.2 kW-240 V 2.2 kW-400 V
	3 phases, 3 poles **XES D2●●●**		3 kW-240 V 3 kW-400 V
	3 phases, 3 poles, isolating block **XAC S●99**		Utilisation category AC-23B 3 kW-400 V
	3 phases, 2 poles **XES D1●●●**		CSA certification 2 hp-240 V 5 hp-400 V 3 hp-600 V
	3 phases, 3 poles **XES D2●●●**		3 hp-240 V
Mechanical durability (in millions of operating cycles) Utilisation categories AC-3 and AC-4 conforming to EN/IEC 60947-3 Appendix A Duty cycle comprising 75% AC-3, 25% AC-4 Operating rate: 600 operating cycles per hour Load factor: 0.4	3 phases, 2 poles **XES D1●●●**		1.5 kW-240 V = 0.5 2.2 kW-240 V = 0.3 1.5 kW-400 V = 0.8 2.2 kW-400 V = 0.3
	3 phases, 3 poles **XES D2●●●**		3 kW-240 V = 0.7 3 kW-400 V = 1

References: pages 6/37 and 6/38
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

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Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)

Complete stations “ready for use”

DF565568



DF565569



XAC B219
XAC B220

XAC B3195
XAC B3205

DF565570



DF565571



XAC B491
XAC B493

XAC B4916
XAC B4936

DF565572



XAC B4915
XAC B4935

For control of single-speed motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	**2** mechanically interlocked	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B219**	0.355
		3-pole XES D2201*(1)*	–	3 kW	**XAC B220**	0.355
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B3195 ▲**	0.940
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B3205 ▲**	1.000
	**4** mechanically interlocked between pairs	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B491**	1.200
		3-pole XES D2201*(1)*	–	3 kW	**XAC B493**	1.330
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B4916▲**	1.260
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B4936 ▲**	1.390
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 mounted in base	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S3991	2.2 kW	**XAC B4915 ▲**	1.350
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S3991	3 kW	**XAC B4935 ▲**	1.480

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

▲ Available 3rd quarter of 2011

Characteristics: page 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

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Pendant control stations
Double insulated, type XAC B
For power circuits (direct switching)
Complete stations “ready for use”

DF565573



XAC B691
XAC B693

DF565574



XAC B6916
XAC B6936

DF565575



XAC B6915
XAC B6935

DF565576



XAC B229

DF565577



XAC B3295

For control of single-speed motors *(continued)*

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	**6** mechanically interlocked between pairs	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B691**	1.350
		3-pole XES D2201*(1)*	–	3 kW	**XAC B693**	1.550
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B6916** ▲	1.410
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B6936** ▲	1.610
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 mounted in base	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S3991	2.2 kW	**XAC B6915** ▲	1.500
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S3991	3 kW	**XAC B6935** ▲	1.700

For control of 2-speed motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	**2** mechanically interlocked	2-pole XES D1291*(1)*	–	2.2 kW	**XAC B229**	0.405
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1291*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B3295** ▲	0.990

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

▲ Available 3rd quarter of 2011

Characteristics: page 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

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Pendant control stations
Double insulated, type XAC B
For control or power circuits
Empty enclosures

DF565578



XAC B020

DF565579



XAC B030

DF565580



XAC B02●

DF565581



XAC B04●

DF565582



XAC B06●

DF565583



XAC B08●

DF565584



XAC B12●

Empty enclosures for control circuits or power circuits *(1)*

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "Small hoist" applications** Operator cut-out centres: 40 mm	For cable Ø 7…13 mm	2	Without	**XAC B020**	0.760
		3	Without	**XAC B030**	0.760
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 10…22 mm	2	Without	**XAC B02**	0.760
			With	**XAC B021**	0.760
		4	Without	**XAC B04**	1.000
			With	**XAC B041**	1.000
		6	Without	**XAC B06**	1.160
			With	**XAC B061**	1.160
		8	Without	**XAC B08**	1.330
			With	**XAC B081**	1.330
		12 in 2 rows of 6	Without	**XAC B12**	1.460
			With	**XAC B121**	1.460

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

6

Characteristics: pages 6/34 and 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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Pendant control stations
Double insulated, type XAC B
For control or power circuits
Empty enclosures

DF566580



XAC B02●●

DF566581



XAC B04●●

DF566582



XAC B06●●

DF566583



XAC B08●●

DF566584



XAC B12●●

Empty enclosures for control circuits or power circuits *(1) (continued)*

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 22…35 mm	2	Without	**XAC B025**	0.960
			With	**XAC B0215**	0.960
		4	Without	**XAC B045**	1.200
			With	**XAC B0415**	1.200
		6	Without	**XAC B065**	1.360
			With	**XAC B0615**	1.360
		8	Without	**XAC B085**	1.530
			With	**XAC B0815**	1.530
		12 in 2 rows of 6	Without	**XAC B125**	1.660
			With	**XAC B1215**	1.660

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

Characteristics: pages 6/34 and 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

Schneider Electric

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Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Empty enclosures (XAC M: products for maintenance purposes only)

DF565585



XAC B120

DF565586



XAC M04●

DF565587



XAC M08●

Empty enclosures for control circuits (1)

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 30 mm	For cable Ø 10…22 mm	12 in 1 row	Without	**XAC B120**	1.330
			With	**XAC B1201**	1.330
	For cable Ø 22…35 mm	12 in 1 row	Without	**XAC B1205**	1.530
			With	**XAC B12015**	1.530
Empty enclosures *(1)* **Metal for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 10…22 mm	4	Without	**XAC M04**	1.540
			With	**XAC M041**	1.540
		8	Without	**XAC M08**	2.210
			With	**XAC M081**	2.210
	For cable Ø 22…35 mm	4	Without	**XAC M045**	1.740
			With	**XAC M0415**	1.740
		8	Without	**XAC M085**	2.410
			With	**XAC M0815**	2.410

Variable composition stations, factory assembled

Use the order form on page 6/59 to define the required configuration

Equipment: contact blocks, operating heads (control and signalling), complementary accessories	See separate components, pages 6/42 to 6/54

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve for cable Ø 10…22 mm or Ø 22…35 mm,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

Characteristics: pages 6/34 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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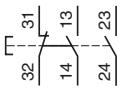
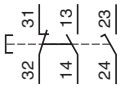
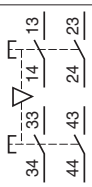
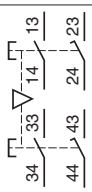
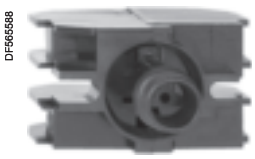
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts

Contact blocks for front mounting, slow break

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return						
Single block 1 spring return operator	Single-speed	N/O		30 or 40	**XEN C1111**	0.020
		N/C		30 or 40	**XEN C1121**	0.020
		N/O + N/O		30 or 40	**XEN C1131**	0.020
		N/C + N/C		30 or 40	**XEN C1141**	0.020
		N/C + N/O		30 or 40	**XEN C1151**	0.020
		C/O + N/O		30 or 40	**XEN B1491**	0.050
	2-speed	2 step N/O + N/O staggered		30 or 40	**XEN B1181**	0.050
		2 step C/O + N/O staggered		30 or 40	**XEN B1191**	0.050
Double block 2 spring return operators mechanically interlocked	Single-speed	N/O + N/O simultaneous		30	**XEN D1611**	0.110
				40 *(1)*	**XEN D2611**	0.110
	2-speed	2 step N/O + N/O staggered		30	**XEN D1621**	0.110
				40 *(1)*	**XEN D2621**	0.110


DF565588

XEN C1111


DF565589

XEN B1181


DF565590

XEN D2611

(1) These contact blocks cannot be mounted in enclosures XAC B120● (12 operators in 1 row).

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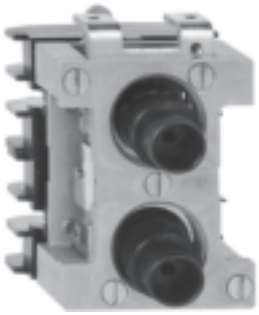
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts


DF565593

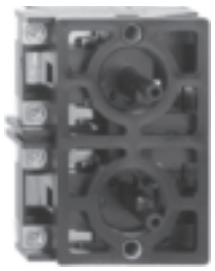
XEN D2641


DF565592

XEN D3801

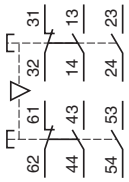
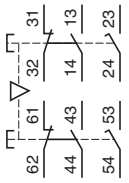
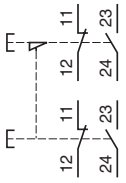
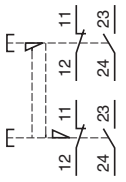

DF565591

XES B2011

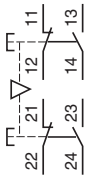
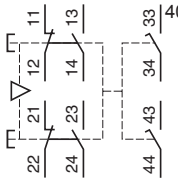

DF565594

XES D1181

Contact blocks for front mounting, slow break *(continued)*

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return *(continued)*						
Double block 2 spring return operators mechanically interlocked	Single-speed	C/O + N/O		30	**XEN D1631**	0.110
				40 *(1)*	**XEN D2631**	0.110
	2-speed	2 step C/O + N/O staggered		30	**XEN D1641**	0.110
				40 *(1)*	**XEN D2641**	0.110
Latching						
Double block 1 latching operator released by 1 spring return operator	Single-speed	N/C + N/O		30	**XEN D3801**	0.170
				40 *(1)*	**XEN D4801**	0.170
Double block 2 latching operators	Single-speed	N/C + N/O		30	**XEN D3811**	0.170
				40 *(1)*	**XEN D4811**	0.170

Contact blocks for front mounting, snap action

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return						
Single block 1 spring return operator *(2)*	Single-speed	C/O		40 *(1)*	**XES B2011**	0.030
Double block 2 spring return operators mechanically interlocked	Single-speed	C/O		40 *(1)*	**XES D1181**	0.140
	2-speed	C/O + N/O staggered		40 *(1)*	**XES D1281**	0.190

(1) These contact blocks cannot be mounted in enclosures XAC B120● (12 operators in 1 row).
(2) Only for mounting with operators XAC B91●●.

Characteristics: pages 6/34 | Dimensions: page 6/55 | Application schemes: pages 6/56 | Presentation: page 6/58

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Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts

Contact blocks for front mounting *(1)*

530240



XAC S41●

Description	Function	Scheme	Reference	Weight kg
Spring return **Slow break** Operator centres 30 or 40 mm	N/O		**XAC S411**	0.070
	N/C		**XAC S412**	0.070
	N/O + N/O		**XAC S413**	0.070
	N/C + N/C		**XAC S414**	0.070
	N/C + N/O		**XAC S415**	0.070

Contact blocks for base mounting *(1)*

530240



XAC S4111

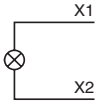
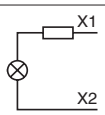
Description	Function	Scheme	Reference	Weight kg
Spring return **Slow break**	N/O		**XAC S4111**	0.100
	N/C		**XAC S4121**	0.100
	N/O + N/O		**XAC S4131**	0.100
	N/C + N/C		**XAC S4141**	0.100
	N/C + N/O		**XAC S4151**	0.100

Pilot light bodies for front mounting

DF565595



XAC V06

Description	Supply voltage	Scheme	Reference	Weight kg
Direct supply Bulb not included *(2)*	≤ 400 V		**XAC V06**	0.050
Direct supply, through resistor Incandescent BA 9s base fitting 130 V bulb included	230 V		**XAC V07**	0.055

(1) Mounting with operating heads ZA2 B●●● (see page 6/47).
(2) Bulb type for use with direct supply units: BA 9s base fitting incandescent bulb U ≤ 130 V or neon bulb 110 V ≤ U ≤ 400 V. Maximum power: 2.6 W, maximum Ø: 11 mm, maximum length: 26 mm. See page 6/50.

Characteristics: pages 6/34 | Dimensions: page 6/55 | Application schemes: pages 6/56 | Presentation: page 6/58

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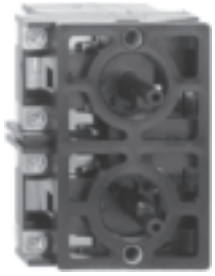
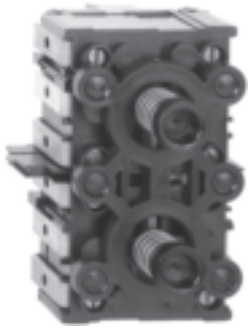
Pendant control stations
Double insulated, type XAC B
For power circuits (direct switching)
Separate components and spare parts

DF565594



XES D1191

530368



XES D2201

530369



XAC S399

530391



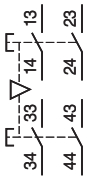
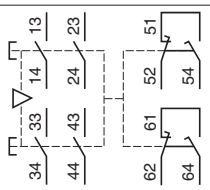
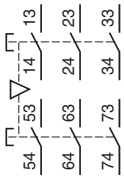
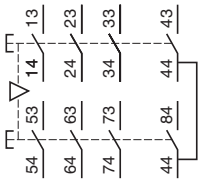
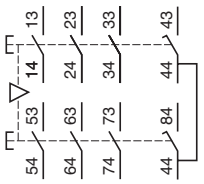
XAC S499

530366



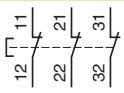
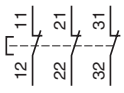
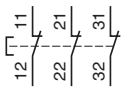
XAC S3991

Contact blocks, snap action

Description	Application	Function	Max. power/ 400 V	Scheme	Reference	Weight kg
Double block 2-pole 2 spring return operators mechanically interlocked (operator centres: 40 mm)	Single-speed	N/O + N/O	2.2 kW		**XES D1191**	0.140
	2-speed	N/O + N/O + 1 C/O staggered auxiliary contact *(1)*	2.2 kW		**XES D1291**	0.190
Double block 3-pole 2 spring return operators mechanically interlocked (operator centres: 40 mm)	Single-speed	N/O + N/O + N/O	3 kW		**XES D2201**	0.200
		N/O + N/O + N/O + 1 N/O simultaneous auxiliary contact *(1)*	3 kW		**XES D2241**	0.210
		N/O + N/O + N/O + 1 N/O staggered auxiliary contact *(1)*	3 kW		**XEN D2251**	0.210

Isolating block, slow break

In the interests of safety, it is imperative that these isolating blocks only be used with a stay put or latching type operating head to ensure complete isolation when the pendant station is not in use.

Mounting position	Application	Function	Max. power/ 400 V	Scheme	Reference	Weight kg
On front 40 mm centres *(2)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S399**	0.100
On front 30 mm centres *(2)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S499**	0.100
In base *(3)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S3991**	0.110

(1) Auxiliary contacts are slow break.
(2) Mounting with operating heads ZA2 B●●●, except ZA2 BD● and ZA2 BG● (see page 6/47).
(3) Mounting with operating head ZA2 BS944 (see page 6/47).

Characteristics: pages 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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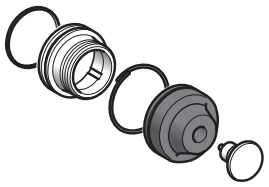
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

DF565596



XAC B911●

Booted operators

For use with contact block	Travel	Operating temperature	Colour of insert	Sold in lots of	Unit reference	Weight kg
XEN B●●●● XEN C●●●● XEN D●●●● XES B2011 XES D2201 XES D2241 XES D2251	4 mm	- 25…+ 70 °C *(1)*	White	10	**XAC B9111**	0.005
			Black	10	**XAC B9112**	0.005
			Green	10	**XAC B9113**	0.005
			Red	10	**XAC B9114**	0.005
			Yellow	10	**XAC B9115**	0.005
			Blue	10	**XAC B9116**	0.005
			Brown	10	**XAC B9119**	0.005
		- 40…+ 70 °C *(2)*	White	10	**XAC B9121**	0.005
			Black	10	**XAC B9122**	0.005
			Green	10	**XAC B9123**	0.005
			Red	10	**XAC B9124**	0.005
			Yellow	10	**XAC B9125**	0.005
			Blue	10	**XAC B9126**	0.005
			Brown	10	**XAC B9129**	0.005
XES D1181 XES D1191 XES D1281 XES D1291	16 mm	- 25…+ 70 °C *(1)*	White	10	**XAC B9211**	0.005
			Black	10	**XAC B9212**	0.005
			Green	10	**XAC B9213**	0.005
			Red	10	**XAC B9214**	0.005
			Yellow	10	**XAC B9215**	0.005
			Blue	10	**XAC B9216**	0.005
			Brown	10	**XAC B9219**	0.005
		- 40…+ 70 °C *(2)*	White	10	**XAC B9221**	0.005
			Black	10	**XAC B9222**	0.005
			Green	10	**XAC B9223**	0.005
			Red	10	**XAC B9224**	0.005
			Yellow	10	**XAC B9225**	0.005
			Blue	10	**XAC B9226**	0.005
			Brown	10	**XAC B9229**	0.005

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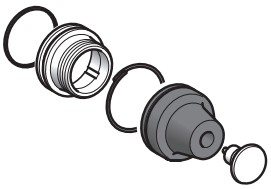

XAC B921●

DF565598



ZA2 BP●

Booted operators (silicone boot)

For use with contact block	Operating temperature	Colour of boot	Reference	Weight kg
XAC S41●	- 25…+ 70 °C	Black	**ZA2 BP2**	0.015
		Green	**ZA2 BP3**	0.015
		Red	**ZA2 BP4**	0.015
		Yellow	**ZA2 BP5**	0.015
		Blue	**ZA2 BP6**	0.015

(1) Polychloroprene boots.
(2) Silicone boots.

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

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Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

DF538492



ZA2 BS844

DF538493



ZA2 BS944

530382



ZA2 BD●

530383



ZA2 BG●

530381



ZA2 BB●

Operating heads for front or base mounting *(1)*

Description	Colour	Type	Reference	Weight kg
Trigger action latching Emergency stop *(2)* Turn to release (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS834**	0.028
		Ø 40 mm	**ZA2 BS844**	0.033
Trigger action latching Emergency stop *(2) (3)* Key release (n° 455) Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS934**	0.060
		Ø 40 mm	**ZA2 BS944**	0.065
Selector switches, standard handle *(4)*	Black	2 position, stay put	**ZA2 BD2**	0.018
		3 position, stay put *(5)*	**ZA2 BD3**	0.018
Key switches (key n° 455) *(3)* Key withdrawal in left and right-hand positions	–	2 position, stay put	**ZA2 BG4**	0.042
		3 position, stay put *(5)*	**ZA2 BG5**	0.042
Key switches (key n° 455) *(3)* Key withdrawal in left-hand position	–	2 position, stay put	**ZA2 BG2**	0.042
Key switches (key n° 455) *(3)* Spring return from right to left Key withdrawal in left-hand position	–	2 position	**ZA2 BG6**	0.042
Key switches (key n° 455) *(4) (3)* Key withdrawal in centre position	–	3 position, stay put *(5)*	**ZA2 BG3**	0.042
Wobblesticks *(6)* Operates in all directions for fast stop	Black	–	**ZA2 BB2**	0.060
	Red	–	**ZA2 BB4**	0.060

Operating head for isolating block

Description	Colour	Type	Reference	Weight kg
Mushroom head, latching Key release (n° 455) Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	Ø 40 mm	**ZA2 BS14**	0.065

Pilot light heads

Description	Colour	Reference	Weight kg
For use with incandescent bulbs			
Lens cap with fixing bezel	White	**ZA2 BV01**	0.015
	Green	**ZA2 BV03**	0.015
	Red	**ZA2 BV04**	0.015
	Yellow	**ZA2 BV05**	0.015
	Blue	**ZA2 BV06**	0.015
	Clear	**ZA2 BV07**	0.015
For use with neon bulbs			
Lens cap with fixing bezel	Green	**ZA2 BV033**	0.015
	Red	**ZA2 BV043**	0.015
	Yellow	**ZA2 BV053**	0.015
	Clear	**ZA2 BV073**	0.015

530390



ZA2 BV0●

(1) The technical characteristics of pendant control stations XAC B and XAC M can only be guaranteed by using the operating heads ZA2 B●● listed above.
(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.
(3) Other key numbers available on request, please consult your Regional Sales Office.
(4) Selector switches or key switches with other mechanical functions: please consult your Regional Sales Office.
(5) Only suitable for front mounting.
(6) Base mounting recommended.

Characteristics: pages 6/34 and 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components: pushbuttons with analogue output *(1)*

Environment

Conformity to standards			EN/IEC 60947-5-1
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Degree of protection			IP 65 conforming to IEC 60529
Pushbutton operator travel		**mm**	11
Operating force		**N**	4 (start of travel) 9 (end of travel)
Mechanical durability (in millions of operating cycles)			1
Connection		**mm²**	Terminal connectors, maximum clamping capacity: 2 x 1.5 mm² or 1 x 2.5 mm²

Contact block characteristics

Thermal current (Ithe)	**A**	6
Rated insulation voltage (Ui)	**V**	250, degree of pollution 3, conforming to IEC 60947-1

Rated operational characteristics
conforming to 947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

Inductive circuit

a.c. supply ∿ 50/60 Hz
Power broken in VA
for 1 million operating cycles

Voltage V	**48**	**110**	**230**
VA	30	30	30

d.c. supply ⎓
Power broken in W
for 1 million operating cycles

Voltage V	**48**	**110**
W	48	12

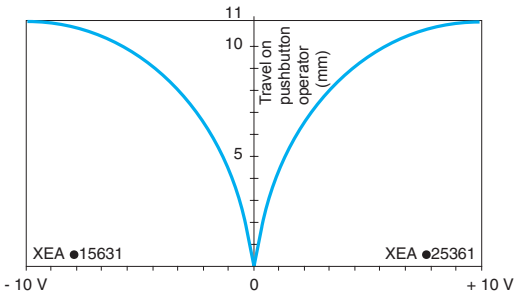
Analogue circuit characteristics

Type of current		d.c.
Rated supply voltage	**V**	15
Voltage limits	**V**	14…18
Current consumption	**mA**	< 15

Analogue signal output curves and schemes

Analogue signal output curves

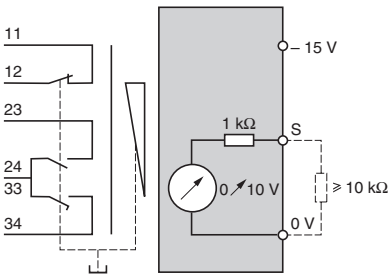
with 15 V supply voltage



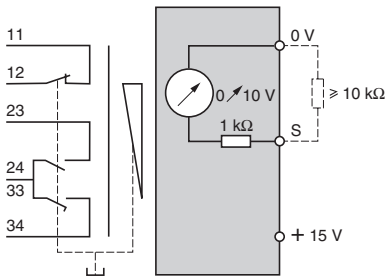
Note: *supply voltage = 15 V, output voltage = 10 V*
(if supply voltage < 15 V, output voltage < 10 V)

Equivalent output schemes

XEA ●15361



XEA ●25361



Contact state



(1) Pushbuttons providing an analogue output signal proportional to the distance travelled by the pushbutton operator.

References:
page 6/49

Dimensions:
page 6/49

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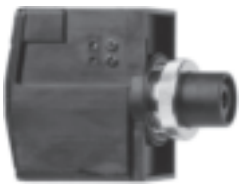
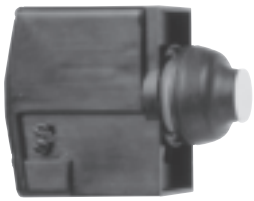
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components: pushbuttons with analogue output *(1)*

530386



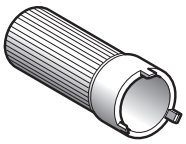
XEA C●5361

530392



XEA B●5361

530306



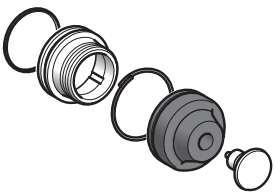
ZA2 BZ905

530305



XAC X1

DF565601



XAC B9112

References

Complete pushbuttons (body + operating head), non booted *(2)*

Supply voltage	Contact block	Reference	Weight kg
0…- 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA C15361**	0.065
0…+ 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA C25361**	0.065

Complete pushbuttons (body + operating head), booted (2)

Supply voltage	Contact block	Reference	Weight kg
0…- 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA B15361**	0.065
0…+ 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA B25361**	0.065

Mounting accessories

Description	For use with	Reference	Weight kg
Tightening key for fixing nut	XEA C●5361	**ZA2 BZ905**	0.060
	XEA B●5361	**XAC X1**	0.010

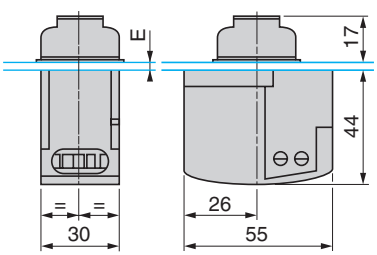
Separate components and spare parts

Description	Colour of insert	Unit reference	Weight kg
Booted operator (Sold in lots of 10)	White	**XAC B9111**	0.005
	Black	**XAC B9112**	0.005

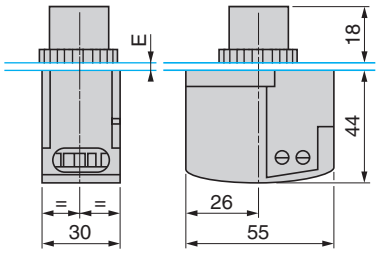
(1) Pushbuttons providing an analogue output signal proportional to the distance travelled by the pushbutton operator.
(2) Pushbutton supplied with 1 white insert and 1 black insert.

Dimensions

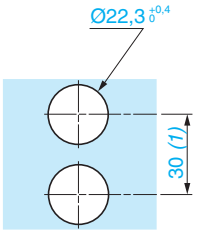
XEA B●5361



XEA C●5361



Panel cut-out



E = support panel thickness, 1 to 3.5 mm.

(1) Minimum fixing centres between 2 operators.

Characteristics:
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Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts



DL1 C●●●●



DL1 CF●●●



XAC B91●



XAC B92●



XAC B90●

Bulbs

Description	Voltage	Sold in lots of	Unit reference	Weight kg
Incandescent BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	6 V	10	**DL1 CB006**	0.002
	12 V	10	**DL1 CE012**	0.002
	24 V	10	**DL1 CE024**	0.002
	48 V	10	**DL1 CE048**	0.002
	130 V	10	**DL1 CE130**	0.002
Neon BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	120 V	10	**DL1 CF110**	0.002
	230 V	10	**DL1 CF220**	0.002
	400 V	10	**DL1 CF380**	0.002

Accessories for booted operators

Description	Travel	Material/ Colour	Operating temperature	Sold in lots of	Unit reference	Weight kg
Boots with circlip, without coloured insert	4 mm	Polychloroprene	- 25…+ 70° C	10	**XAC B911**	0.002
		Silicone	- 40…+ 70° C	10	**XAC B912**	0.002
	16 mm	Polychloroprene	- 25…+ 70° C	10	**XAC B921**	0.002
		Silicone	- 40…+ 70° C	10	**XAC B922**	0.002
Coloured inserts for booted operators (4 and 16 mm travel)		White	–	10	**XAC B901**	0.001
		Black	–	10	**XAC B902**	0.001
		Green	–	10	**XAC B903**	0.001
		Red	–	10	**XAC B904**	0.001
		Yellow	–	10	**XAC B905**	0.001
		Blue	–	10	**XAC B906**	0.001
		Brown	–	10	**XAC B909**	0.001

Characteristics: pages 6/34 and 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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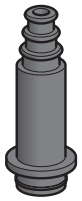
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

530312



XAC B913

530313



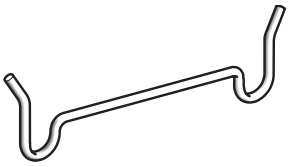
XAC B960

530314



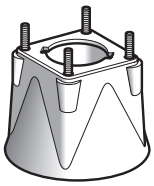
XAC B971

DF565602



XAC B972

DF565604



XAC B982

530318



XAC X1

530319



XAC X905

Complementary accessories

Description	For use with		Reference	Weight kg
Protective cable sleeve with cable tie (for tightening sleeve onto cable)	Enclosures XAC B219 and XAC B220 (2 operators)	For cable Ø 7…13 mm	**XAC B913**	0.065
	Enclosures XAC B●●● with 4 to 12 operators and XAC M●●● with 4 and 8 operators	For cable Ø 10…22 mm	**XAC B960**	0.110
		For cable Ø 22…35 mm	**XAC B965**	0.160
Blanking plug with seal and fixing nut	–		**ZB2 SZ3**	0.005
Adaptor for use with protective cable sleeve for cable Ø 10…22 mm	Self-supporting cable type BBAP		**XAC B961**	0.025
Lower support ring	Single row enclosures XAC B and XAC M		**XAC B971**	0.015
	2 row enclosures XAC B		**XAC B972**	0.020
Protective guards for base mounted units	Emergency stop pushbutton		**XAC B982**	0.050

Tools

Description	For use with	Reference	Weight kg
Tightening key	Bezels	**XAC X1**	0.010
	Units mounted in base of enclosure	**XAC X905**	0.015
Bulb extractor	BA 9s base fitting bulbs	**XBF X13**	0.003

6

Characteristics: pages 6/34 and 6/36 | Dimensions: page 6/55 | Application schemes: pages 6/56 and 6/57 | Presentation: page 6/58

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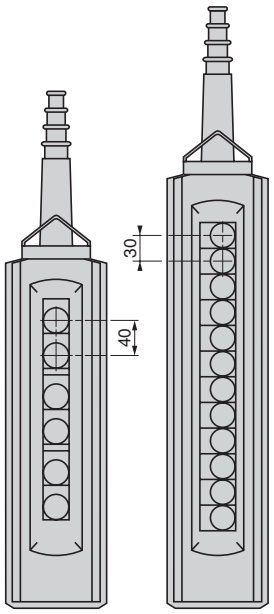
Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Legends 30 x 40 mm (with symbols conforming to NF E 52-124)

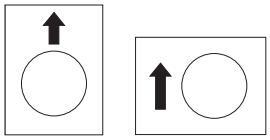
DF565666



Vertical mounting 40 mm centres

Horizontal mounting 30 mm centres

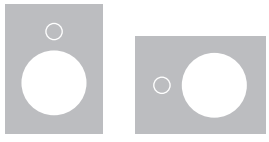
DF565665



White background, black symbol



Black background, white symbol



Red background, white symbol

Symbol	Reference Vertical mounting 40 mm centres	Symbol	Reference Horizontal mounting 30 mm centres	Weight kg
Raise, slow	ZB2 BY4951		ZB2 BY4901	0.001
Raise, fast	ZB2 BY4952		ZB2 BY4902	0.001
Raise, slow-fast	ZB2 BY4953		ZB2 BY4903	0.001
Right, slow	ZB2 BY4901		ZB2 BY4907	0.001
Right, fast	ZB2 BY4902		ZB2 BY4908	0.001
Right, slow-fast	ZB2 BY4903		ZB2 BY4909	0.001
Forward, slow	ZB2 BY4963		ZB2 BY4913	0.001
Forward, fast	ZB2 BY4964		ZB2 BY4914	0.001
Forward, slow-fast	ZB2 BY4965		ZB2 BY4915	0.001
Slew right, slow	ZB2 BY4919		ZB2 BY4919	0.001
Slew right, fast	ZB2 BY4920		ZB2 BY4920	0.001
Slew right, slow-fast	ZB2 BY4921		ZB2 BY4921	0.001
Slow	ZB2 BY4933		ZB2 BY4933	0.001
Klaxon	ZB2 BY4982		ZB2 BY4932	0.001
Start	ZB2 BY4980		ZB2 BY4930	0.001

Symbol	Reference Vertical mounting 40 mm centres	Symbol	Reference Horizontal mounting 30 mm centres	Weight kg
Lower, slow	ZB2 BY2954		ZB2 BY2904	0.001
Lower, fast	ZB2 BY2955		ZB2 BY2905	0.001
Lower, slow-fast	ZB2 BY2956		ZB2 BY2906	0.001
Left, slow	ZB2 BY2904		ZB2 BY2910	0.001
Left, fast	ZB2 BY2905		ZB2 BY2911	0.001
Left, slow-fast	ZB2 BY2906		ZB2 BY2912	0.001
Reverse, slow	ZB2 BY2966		ZB2 BY2916	0.001
Reverse, fast	ZB2 BY2967		ZB2 BY2917	0.001
Reverse, slow-fast	ZB2 BY2968		ZB2 BY2918	0.001
Slew left, slow	ZB2 BY2922		ZB2 BY2922	0.001
Slew left, fast	ZB2 BY2923		ZB2 BY2923	0.001
Slew left, slow-fast	ZB2 BY2924		ZB2 BY2924	0.001
Fast	ZB2 BY4934		ZB2 BY4934	0.001
Start-Klaxon	ZB2 BY4985		ZB2 BY4935	0.001
Stop	ZB2 BY2931		ZB2 BY2931	0.001

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Schneider Electric

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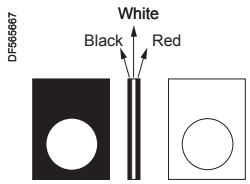
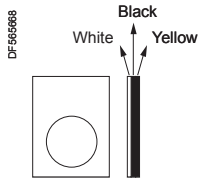
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Legends 30 x 40 mm



ZB2 BY2101



ZB2 BY4101

- Start functions: white characters on black background
- Stop functions: white characters on red background

Blank

Text	Reference	Weight kg	Text	Reference	Weight kg
Black or red background	**ZB2 BY2101**	0.001	White or yellow background	**ZB2 BY4101**	0.001

With French text

For pushbuttons

Marche	**ZB2 BY2103**	0.001	Start	**ZB2 BY2303**	0.001
Arrêt	**ZB2 BY2104**	0.001	Stop	**ZB2 BY2304**	0.001
Avant	**ZB2 BY2105**	0.001	Forward	**ZB2 BY2305**	0.001
Arrière	**ZB2 BY2106**	0.001	Reverse	**ZB2 BY2306**	0.001
Montée	**ZB2 BY2107**	0.001	Up	**ZB2 BY2307**	0.001
Descente	**ZB2 BY2108**	0.001	Down	**ZB2 BY2308**	0.001
Droite	**ZB2 BY2109**	0.001	Right	**ZB2 BY2309**	0.001
Gauche	**ZB2 BY2110**	0.001	Left	**ZB2 BY2310**	0.001
En service	**ZB2 BY2111**	0.001	On	**ZB2 BY2311**	0.001
Hors service	**ZB2 BY2112**	0.001	Off	**ZB2 BY2312**	0.001
Sous tension	**ZB2 BY2126**	0.001	Power on	**ZB2 BY2326**	0.001
Lent	**ZB2 BY2127**	0.001	Slow	**ZB2 BY2327**	0.001
Vite	**ZB2 BY2128**	0.001	Fast	**ZB2 BY2328**	0.001
Klaxon	**ZB2 BY2125**	0.001	–	–	–

For selector switches

Arrêt-Marche	**ZB2 BY2166**	0.001	–	–	–
Hors-En	**ZB2 BY2167**	0.001	Off-On	**ZB2 BY2367**	0.001

With special texts

- Specify text when ordering,
- 2 lines maximum, 11 characters per line.

White characters on black background	**ZB2 BY2002**	0.001	Black characters on white background	**ZB2 BY4001**	0.001
White characters on red background	**ZB2 BY2004**	0.001	Black characters on yellow background	**ZB2 BY4005**	0.001

Other versions Legends with texts in other languages.
Please consult your Regional Sales Office.

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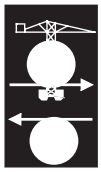
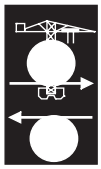
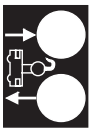
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Twin legends for tower cranes

Legends with white symbols on black background

Function	Symbol	Reference	Weight kg	Function	Symbol	Reference	Weight kg
40 mm operator centres (for enclosures with 2 to 8 operators and 12 operators in 2 rows)							
Hoist Raise Lower		**XAC Y4970**	0.002	**Long travel** Forward Reverse		**XAC Y4972**	0.002
Slew Right Left		**XAC Y4971**	0.002	**Trolley** Forward Reverse		**XAC Y4973**	0.002
30 mm operator centres (for enclosures with 12 operators in 1 row)							
Hoist Raise Lower		**XAC Y3970**	0.002	**Long travel** Forward Reverse		**XAC Y3972**	0.002
Slew Right Left		**XAC Y3971**	0.002	**Trolley** Forward Reverse		**XAC Y3973**	0.002

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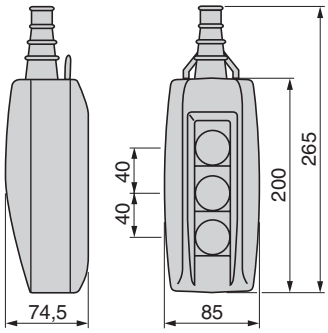
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

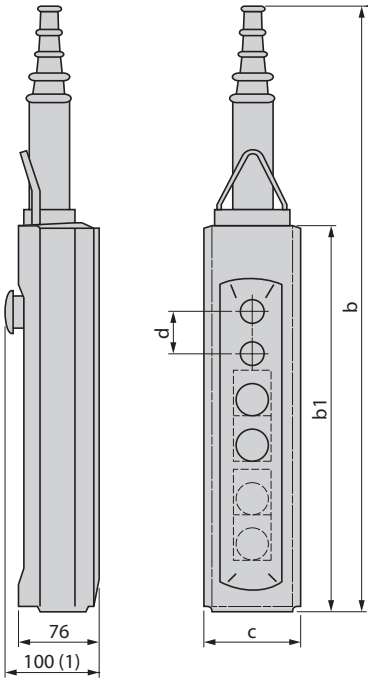
(XAC M: products for maintenance purposes only)

Pendant control stations

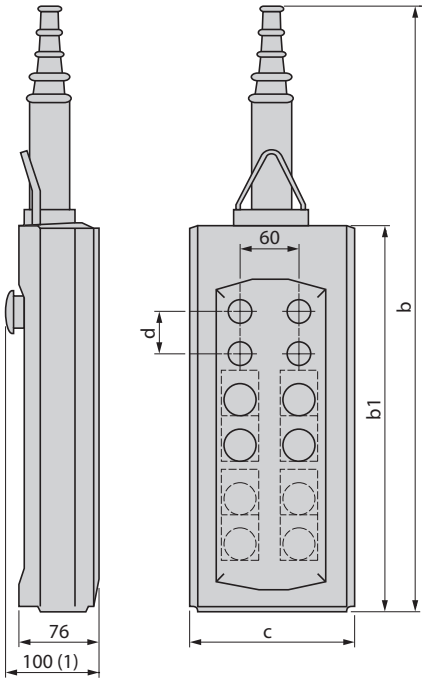
XAC B●●● (2 and 3-way)



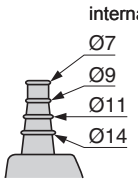
XAC B●●● (2 to 12-way, 1 row)
XAC M●●● (4 to 8-way, 1 row)

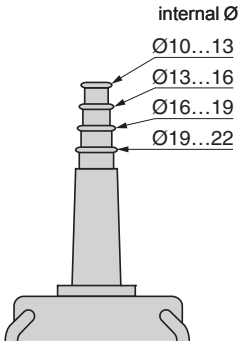


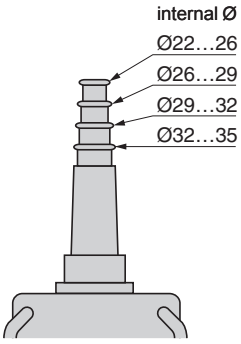
XAC B●●● (12-way, 2 rows)



Protective cable sleeves



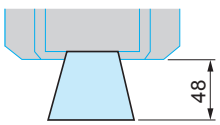




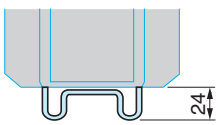
(1) With mushroom head operator.

Number of operators	2	4	6	8	12 (1 row)	12 (2 rows)
b	409	499	589	679	679	593
b1	220	310	400	490	490	404
c	98	98	98	98	98	158
d	40	40	40	40	30	40

Protective guards
XAC B982



Lower support rings
XAC B971, B972



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Presentation: page 6/58

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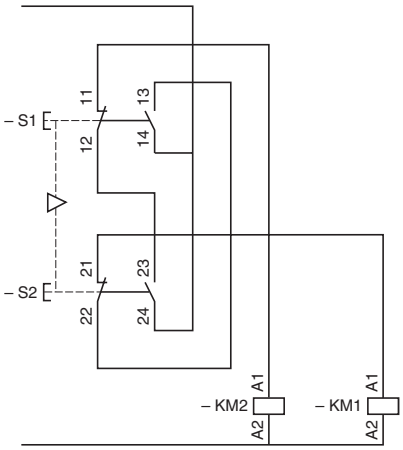
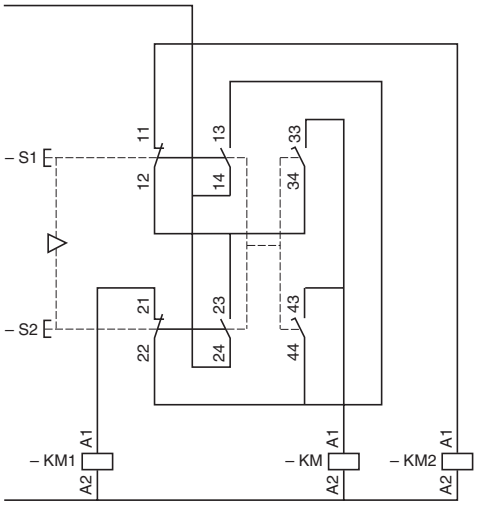
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

Control circuits

For control of single-speed reversing motor
Contact block **XES D1181**



For control of 2-speed reversing motor
Contact block **XES D1281**

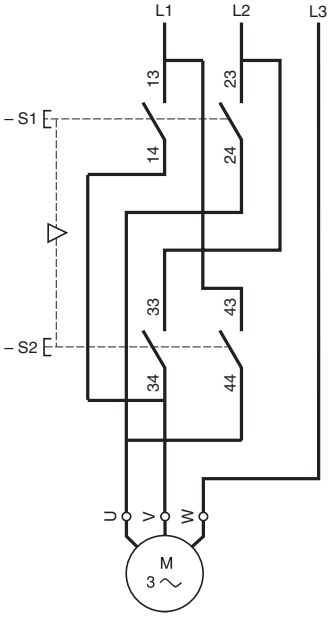


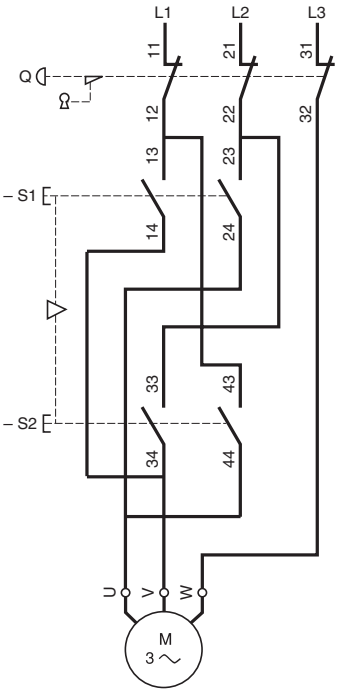
KM: high speed contactor

Power circuits

For control of single-speed reversing motor. 2-phase switching
Contact block **XES D1191**

Application example:
Combined with 3-pole isolating block XAC S399 or XAC S3991, shown in the unoperated position (pendant station "supplied"), fitted with key release trigger action latching Emergency stop operator (ZA2 BS944).





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For reference only. www.fengshengelectric.com.sg

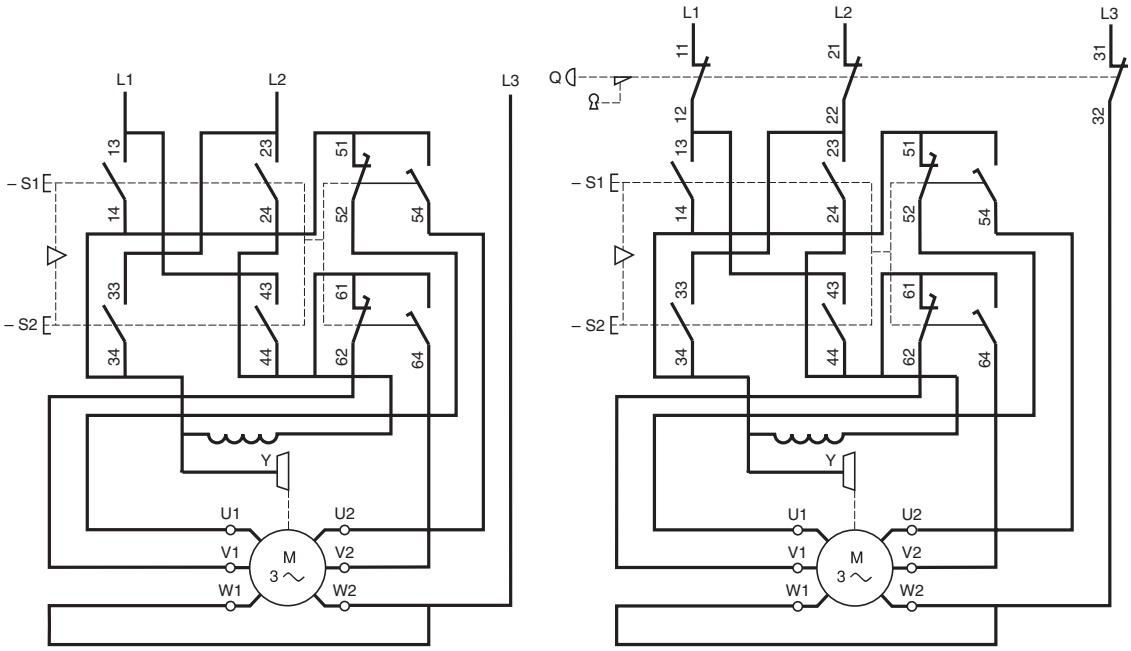
Pendant control stations
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

Power circuits *(continued)*

For control of 2-speed reversing motor (motors with separate windings only). 2-phase switching

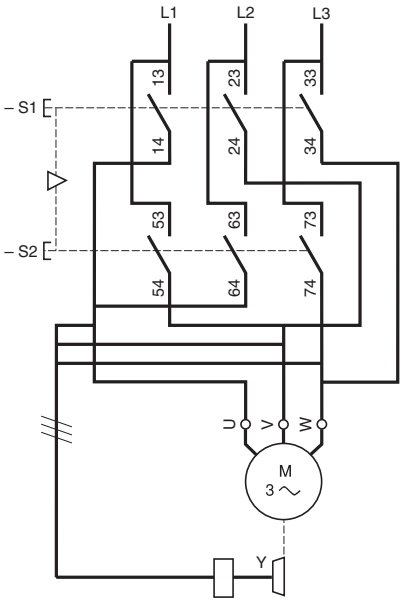
Contact block **XES D1291**

Application example:
Combined with 3-pole isolating block XAC S399 or XAC S3991, shown in the unoperated position (pendant station "supplied"), fitted with key release trigger action latching Emergency stop operator (ZA2 BS944).

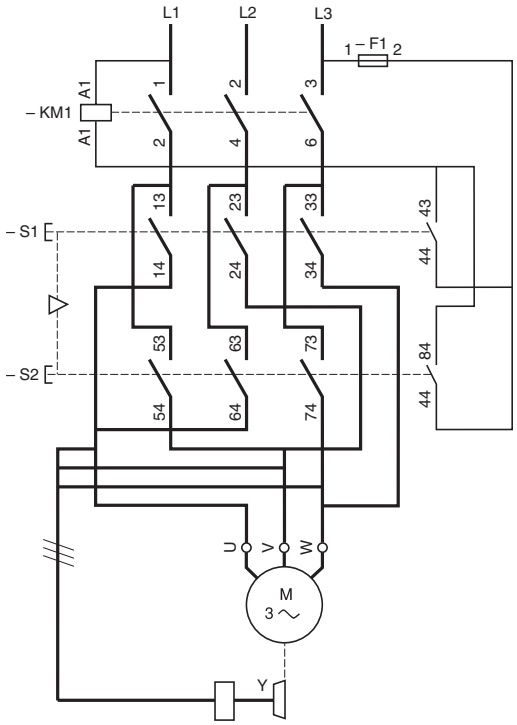


For control of single-speed reversing motor. 3-phase switching, reversing by 2-phase inversion

Contact block **XES D2201**



Contact block **XES D2241** with line contactor



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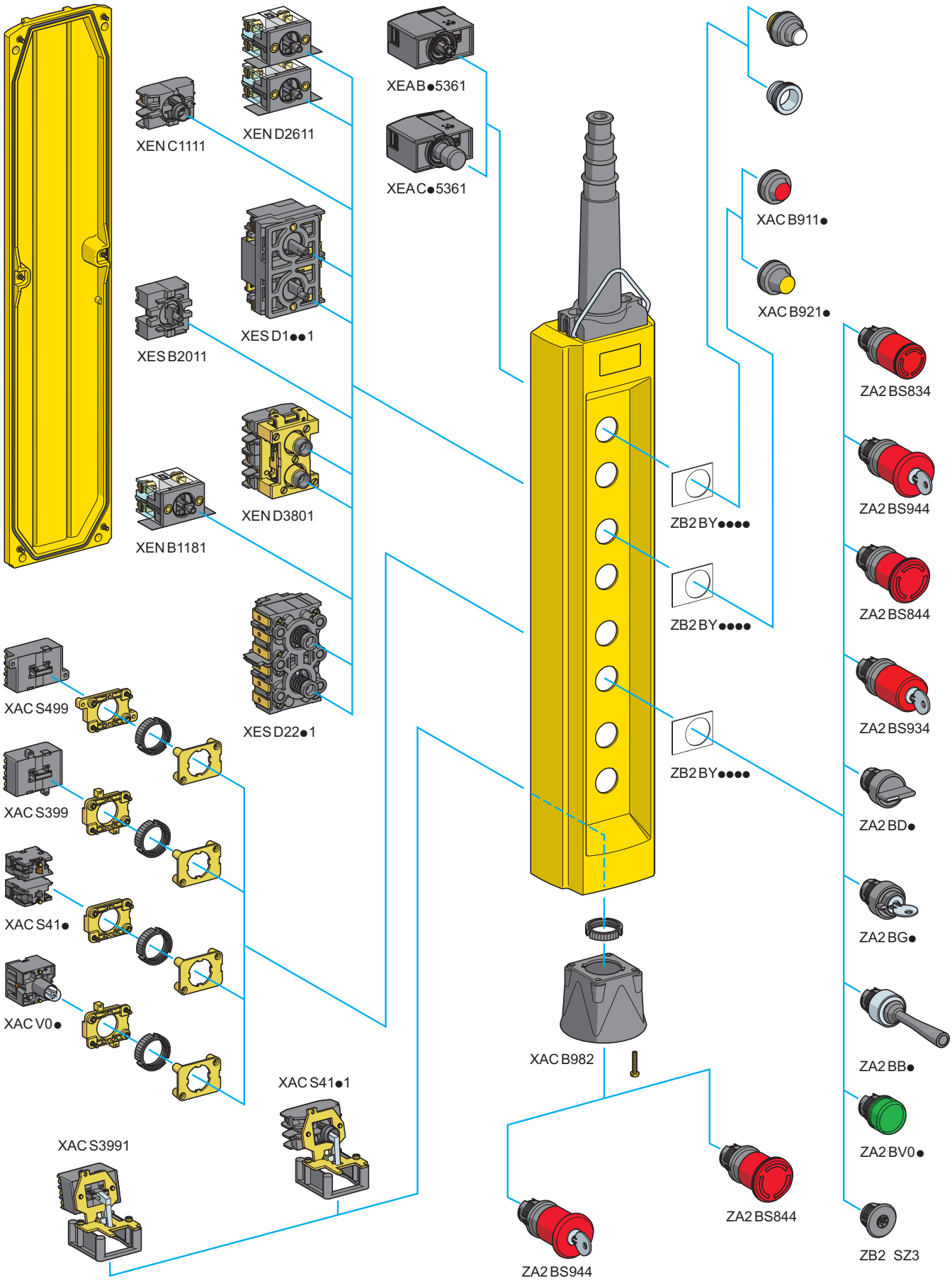
Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits



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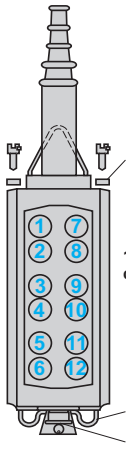
Order form (specimen suitable for photocopying)

Pendant control stations

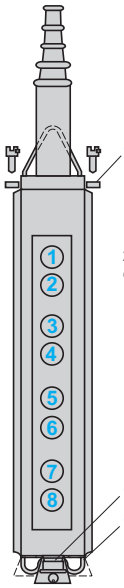
Double insulated, type XAC B
Metal, type XAC M **(XAC M: products for maintenance purposes only)**
For control or power circuits
Variable composition stations, factory assembled

530343



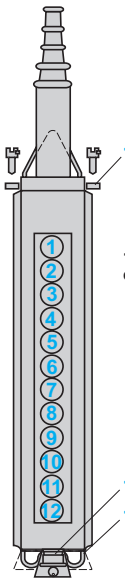
12 cut-outs, centres: 40 mm

525684



2 to 8 cut-outs, centres: 40 mm

525685



12 cut-outs, centres: 30 mm

Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC B09 reference (for enclosures XAC B) or XAC M09 reference (for enclosures XAC M)

Unit reference of empty enclosure, see pages 6/39 to 6/41	**Number of identical stations**	**Enclosure price** *(1)*
XAC ☐☐☐☐☐☐		

	Legends see pages 6/52 to 6/54		**Contact blocks or pilot light bodies** see pages 6/42 to 6/45		**Operating heads or pilot light heads or blanking plug** see pages 6/46 and 6/47		
	Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Unit mounted in base of enclosure (if required)

13							

Factory assembled: Number of heads or blanking plugs to be fitted ☐ X Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug ☐ ☐

Complementary accessories, see page 6/51 (cross the appropriate box or boxes)

	Description	☒	Reference	Unit price	
14	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 10 to 22 mm		**XAC B961**		
15	Lower support ring for single row enclosures		**XAC B971**		
15	Lower support ring for 2 row enclosures		**XAC B972**		
16	Protective guard for key release latching mushroom head pushbutton, mounted in base		**XAC B982**		

Total price of assembled pendant station ☐

(1) Obtain the empty enclosure price.

6

For reference only. www.fengshengelectric.com.sg

Pendant control stations
Double insulated, type XAC F
For control circuits
(XAC F: Products for maintenance purposes only)

Environment

Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
Protective treatment	Standard version		"TH"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated glass-reinforced polyester (yellow)
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 10…22 mm or Ø 22…35 mm

Contact block characteristics

Rated operational characteristics			∼ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**XEN C●●●●, XEN D3●●●, XEN D4●●●, XES B2011, XAC S4, XES D1181, XES D1281**	**V**	500, degree of pollution 3
	XEN B●●●●, XEN D1●●●, XEN D2●●●		400, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			Slow break or snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	With booted operator	**N**	**XAC S4●●●**: 10 (N/O), 8 (N/C); **XEN C●●●●**: 6 (N/O), 4 (N/C); **XEN B●●●●, XEN D1●●●, XEN D2●●●**: Single-speed: 9; 2-speed: 20 (1st speed), 30 (2nd speed); **XEN D3●●●, XEN D4●●●**: 25; **XES B2011**: 7; **XES D1181, XES D128:** 15 (1st speed), 25 (2nd speed)
	With spring return mushroom head operator	**N**	10
	With latching mushroom head operator	**N**	40
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gI)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power
Conforming to EN/IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
For 1 million operating cycles
Operating rate: 3600 operating cycles/hour
Load factor: 0.5
⎓ Inductive circuit

Contact blocks XEN C●●●●, XEN D3●●●, XEN D4●●●, XAC S4●●●

a.c. supply ∼ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
⎓	VA	140	385	525	455

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
⎓	W	60	45	42

Contact blocks XEN B●●●●, XEN D1●●●, XEN D2●●●

a.c. supply ∼ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
⎓	VA	140	210	640	680

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
⎓	W	48	31	35

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply ∼ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
⎓	VA	50	100	450	750

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
⎓	W	140	140	95

References: page 6/61 Dimensions: page 6/62 Application schemes: page 6/63 Presentation: page 6/64

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Pendant control stations
Double insulated, type XAC F
For control circuits
Empty enclosures

(XAC F: Products for maintenance purposes only)

DF566680



XAC F00●0

Empty enclosures *(1)*

Description		Protective cable sleeve	Reference	Weight kg
Enclosures without cut-outs	Without guard rails	Ø 10…22 mm	**XAC F0010**	2.100
		Ø 22…35 mm	**XAC F0050**	2.300
	With guard rails	Ø 10…22 mm	**XAC F0011**	2.300
		Ø 22…35 mm	**XAC F0051**	2.500
Enclosures with cut-outs in positions requested on the order form, see page 6/65	Without guard rails	Ø 10…22 mm	**XAC F3210**	2.100
		Ø 22…35 mm	**XAC F3250**	2.300
	With guard rails	Ø 10…22 mm	**XAC F3211**	2.300
		Ø 22…35 mm	**XAC F3251**	2.500

DF566681



XAC F00●1

Variable composition stations, factory assembled

Use the order form on page 6/65 to define the required configuration

Equipment: separate components as for control circuit pendant stations XAC B and XAC M. Units XB2 B can be mounted using a stiffening plate, please consult us.	See separate components, pages 6/42 to 6/54

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve for cable Ø 10…22 mm or Ø 22…35 mm,*
- *cable tie (for tightening sleeve onto cable,*
- *internal cable clamp.*

6

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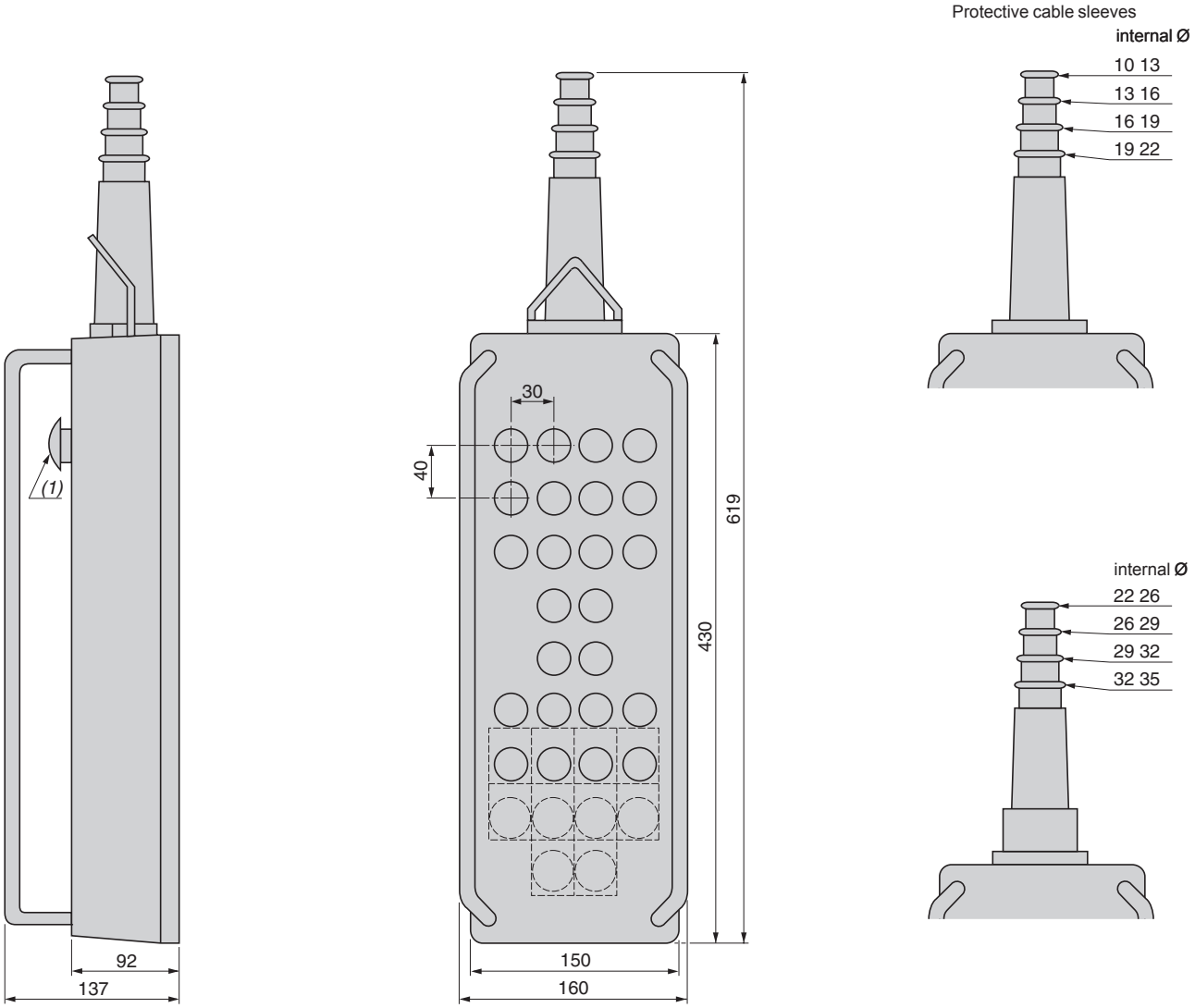
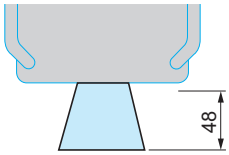
Pendant control stations
Double insulated, type XAC F
For control circuits
(XAC F: Products for maintenance purposes only)

Pendant control stations
XAC F●●●1 (30 operators maximum, front mounting)



(1) With mushroom head operator.

Protective guards
XAC B982



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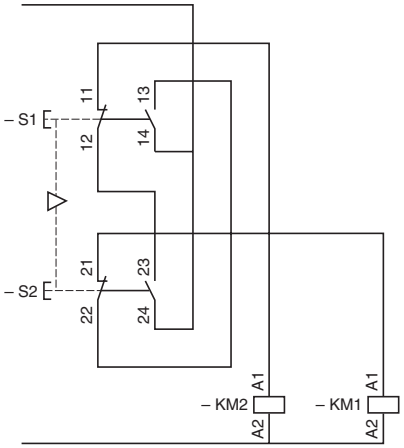
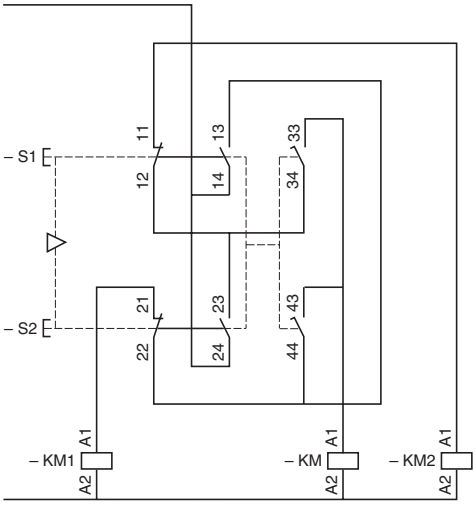
Pendant control stations
Double insulated, type XAC F
For control circuits
(XAC F: Products for maintenance purposes only)

For control of single-speed reversing motor
Contact block **XES D1181**



For control of 2-speed reversing motor
Contact block **XES D1281**



KM: high speed contactor

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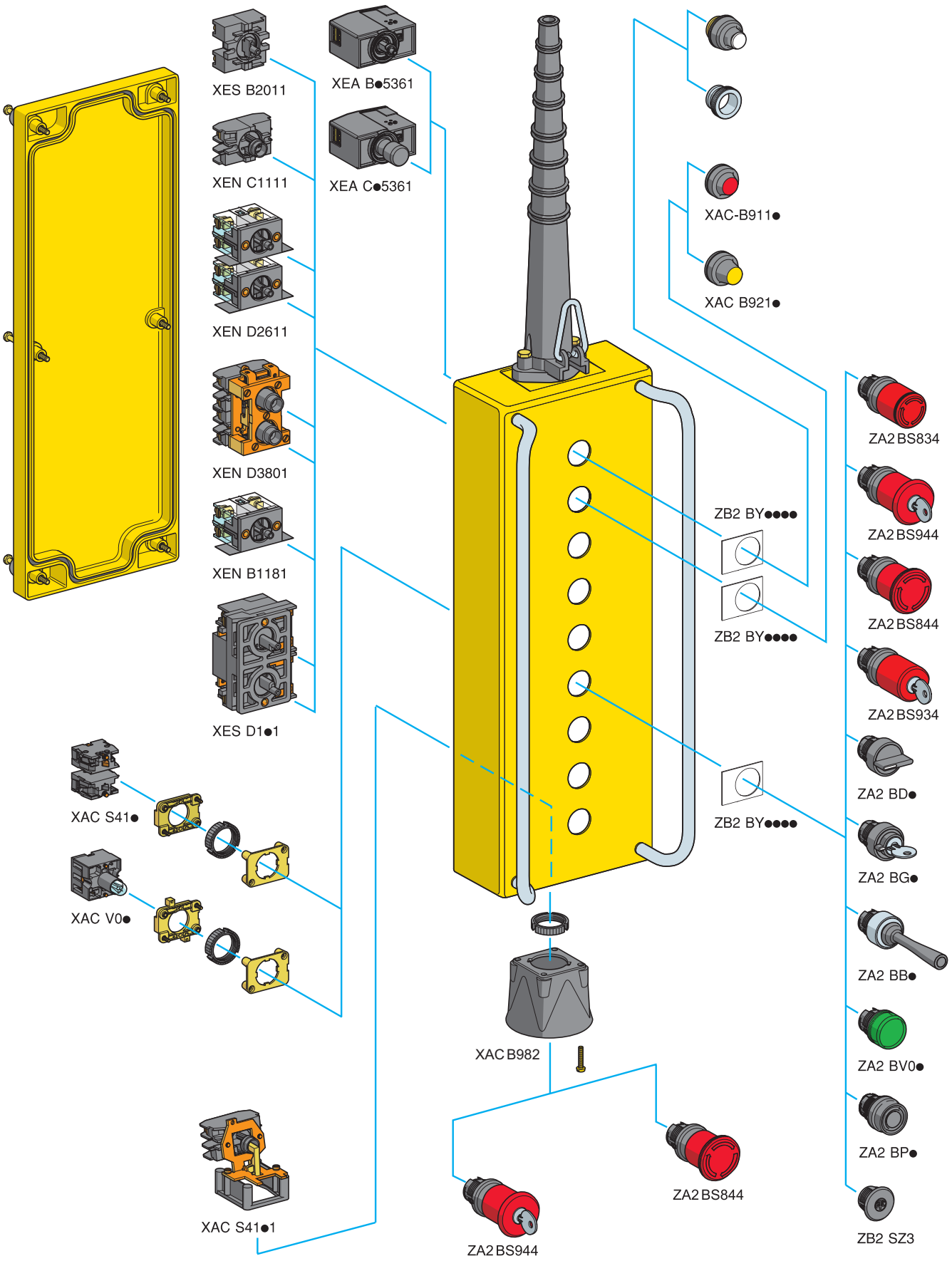
Pendant control stations

Double insulated, type XAC F

For control circuits

(XAC F: Products for maintenance purposes only)



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Order form (specimen suitable for photocopying)

Pendant control stations

Double insulated, type XAC F

For control circuits

Variable composition stations, factory assembled

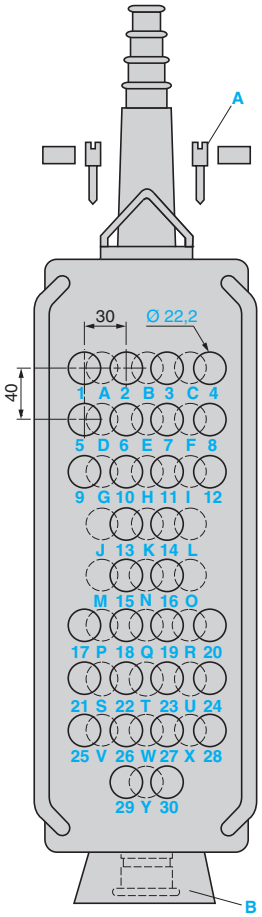
(XAC F: Products for maintenance purposes only)

Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC F09 reference

Unit reference of empty enclosure with cut-outs, see page 6/61	**Number of identical stations**	**Enclosure price** *(1)*
XAC **F** **3**		

The cut-outs indicated below only enable the mounting of contact and pilot light bodies XAC in association with operating heads/lenses ZA2 B. For other configurations, the arrangement of the cut-outs must be specifically designed. In this case, attach the configuration of the units to be mounted to this order form.



Position of cut-outs (number or letter)	**Legends**, see pages 6/52 to 6/54		**Contact blocks or pilot light bodies**, see pages 6/42 to 6/45		**Operating heads or pilot light heads or blanking plug**, see pages 6/46 and 6/51		**Total price**
	Reference	Unit price	Reference	Unit price	Reference	Unit price	
Unit mounted in base, if required *(2)*							

Factory assembled: Number of heads or blanking plugs to be fitted: ____ X Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug: ____ = ____

Complementary accessories, see page 6/52 (cross the appropriate box or boxes)

	Description	✕	Reference	Unit price	
A	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 10…22 mm		**XAC B961**		
B	Protective guard for mushroom head pushbutton, mounted in base		**XAC B983**		
	Protective guard for key release latching mushroom head pushbutton, mounted in base		**XAC B982**		

Total price of assembled pendant station

(1) Obtain the empty enclosure price with cut-outs.

(2) If positions Y, 29 or 30 are used, a unit cannot be mounted in the base of the enclosure.

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Controllers
For hoisting applications, types **XD** and **XK**

Applications			**"Light hoisting"**		
			Compact and light weight		
			For control of small materials handling equipment, elevating work platforms, fork-lift trucks, etc. Can be installed on control panels or enclosures types XAL, XAM and XAP	**For control of materials handling equipment, public work cranes, etc. Can be installed on portable controller stations type XJP**	
					
Mechanical durability (in millions of operating cycles)			1 in each direction	1 in each direction	1 in each direction
Number of directions	Basic		2 or 4 depending on model	4	4
	Variable composition		–	8	8
Number of movements			1 or 2	2	2
Maximum number of notches in each direction			**XD2**: 1 or 2 **XD4**, **XD5**: 1	3	3
Types of lever movement	Notched	with stayput operation	■	■	■
		with spring return to zero operation	■	■	■
	Unnotched	with spring return to zero operation	–	■	■
Operating schemes			Predefined cams	Predefined cams	Variable composition cams
Maximum number of contacts per movement			**XD2**: 4 (1 or 2 N/O contacts in each direction) **XD4**, **XD5**: 2 (1 N/O contact in each direction)	4 or 4 + 1 zero (centre) position contact	4 or 4 + 1 zero (centre) position contact
Contact *(1)*	Supply		∿ and ⎓	∿ and ⎓	∿ and ⎓
	Nominal thermal current		10 A	10 A	10 A
Mechanical durability of contact blocks (in millions of operating cycles)			5	1	1
Control device			Vertical lever	Vertical lever	Vertical lever
Handles *(2)*	**a** simple		■	■	■
	b1 with zero (centre) position mechanical interlocking		–	■	■
	b2 with zero (centre) position mechanical and electrical interlocking		–	■	■
	c1 "Dead man's" type		–	■	■
	c2 with built-in pushbutton		–	■	■
Lever gate			Fixed composition 30° in each direction	Variable composition	Variable composition
Maximum number of potentiometers per movement			–	1 or 2 depending on contact block arrangement	1 or 2 depending on contact blocks arrangement
Type references			**XD2, XD4, XD5**	**XKB A**	**XKB E**
Page(s)			1/119, 1/81 and 1/161	6/72	6/72

(1) N/C slow break contacts with positive opening operation. Contacts closed in absence of cam lobe.
*(2) Handles type **b1** and **b2** are designed in accordance with the French hoisting standard NF E 52070 (Dec. 1985): Electrical equipment of hoisting devices, paragraph 8231: all control devices must be designed, constructed and positioned in such a manner as to avoid any accidental operation…*

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“Medium hoisting”	“Heavy hoisting”		
Compact and fully configurable unit	**Extremely robust and fully configurable unit**		
For control of cranes, overhead travelling cranes, etc. Can be installed on fixed seated controller desks type XJC	**For control of overhead travelling cranes (iron and steelworks, rolling mills) etc. Can be installed on seated controller desks type XJC**		
			
3 in each direction	4 in each direction	4 in each direction	4 in each direction
4	4	2	2
8	8	2	2
2	2	1	1
5	6	6	9
■	■	■	■
■	■	■	■
■	■	■	■
Variable composition cams	Variable composition cams	Variable composition cams	Variable composition cams
16	24	24	12
∼ and ⎓	∼ and ⎓	∼ and ⎓	∼ and ⎓
10 A	20 A	20 A	20 A
3	4	4	4
Vertical lever	Vertical lever	Vertical lever	Side lever
■	■	■	■
■	■	■	–
■	■	■	–
■	■	■	–
■	■	■	–
Predefined or customised	Predefined or customised	–	–
2	2	2	1
XKD F	**XKM A**	**XKM B**	**XKM C**
6/78	6/86	6/86	6/91

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Controllers
For hoisting applications, type **XK**

Controller

The controllers are units designed to control hoisting and materials handling equipment by grouping their electrical circuits.
They comprise adaptable sub-assemblies that enable the construction of many different versions.
Used in association with automation system equipment, they ensure the starting, acceleration and braking of the drive motors.
They are designed for fitting into portable controller stations or controller desks. The mounting is dust and damp protected.

Mechanical block

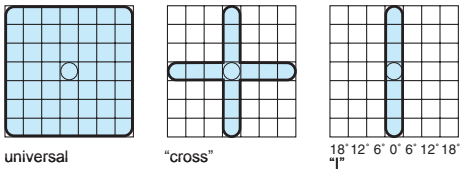
Articulated mechanical assembly that holds the control lever, lever gate, actuating mechanism, cam carriers, contacts and potentiometer adaptation device.

Control lever

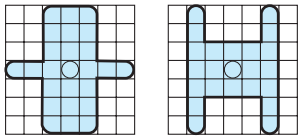
Operating device that enables separate or simultaneous control of the movements. Fitted to it are dust and damp protecting bellows, the handle and mechanical and electrical safety devices that are actuated when the controller lever is returned to its zero (centre) position.

Lever gate

Standard lever gates



Examples of special lever gates



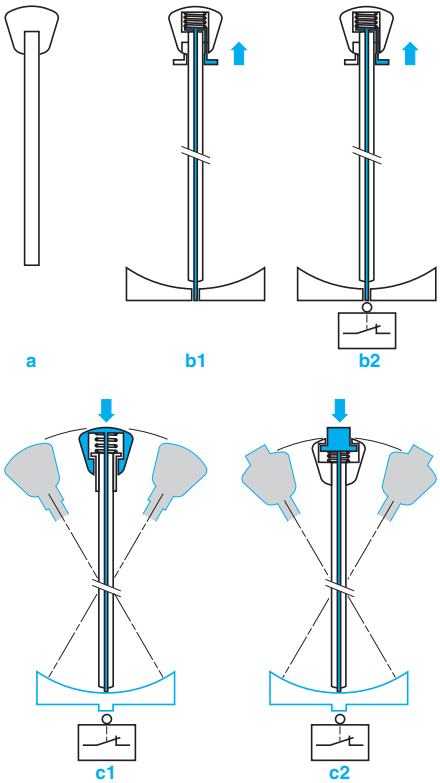
2 types of lever gate:
■ Standard types:
□ universal: allows the lever to move to its maximum travel in 1 or 2 directions simultaneously ("universal" or "8-direction" controller),
□ "cross" or "I" gates: only allow the lever to move to its maximum travel in 1 direction at a time.

■ Special types: related to the application, they are used to control the required combination of movements.

End stops

Additional devices for limiting the lever travel to a number of positions in a given direction.

Handles



a **Simple handle:** fixed knob screwed onto the control lever.

b1 **Handle with zero (centre) position mechanical interlock**.
Operation:
The knob of the handle comprises a fixed part (upper section) and a moving part (lower section).
When the lever is in the zero (centre) position, it is mechanically locked by a sliding rod within the lever.
To disengage the lock, the lower part of the handle is pulled upwards thus freeing the rod.

b2 **Handle with zero (centre) position mechanical interlock + electrical contact.**
Mechanical operation identical to that described above.
When the lever is in the zero (centre) position, the rod actuates a contact block.
The disengagement of the lock causes the contact(s) in the block to change state.

c1 **"Dead man's" handle.**
Operation:
The knob of the handle comprises a fixed part (lower section) and a moving part (upper section).
When the upper section of the knob is pushed downwards it pushes a sliding rod within the lever.
This rod actuates a moving bowl which, in turn, causes a contact block (located in the lower part of the mechanism) to change state and remain in this condition irrespective of the control lever position.

c2 **Handle with built-in flush or projecting pushbutton (audible alarm type).**
Mechanical operation identical to that described above.
The handle is fixed and it is only the pushbutton that operates the sliding rod.

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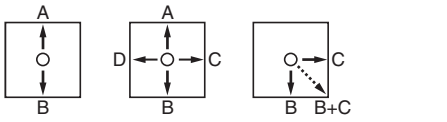
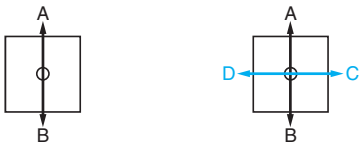
Direction



This is the direction of operation of the control lever away from its zero (centre) position towards one of 2 or 4 directions (either 2 directions directly in line or 4 directions at 90°).
Diagonal movement is the operation of 2 directions simultaneously.

Movement

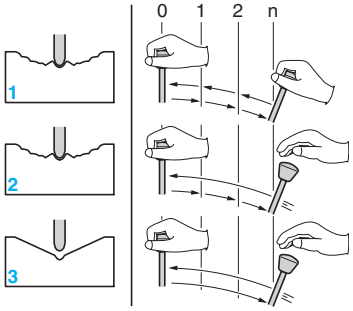


The movement is the combination of 2 directions either side of the zero position that are directly in line.

Electrical position

This is the change of state of a contact block obtained by angular displacement of the control lever.

Types of lever movement



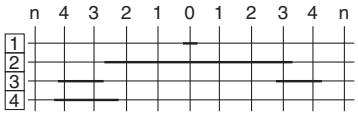
Three different types of lever operation for each direction:
1 **Notched positions, with stayput operation.**
The control lever is moved notch by notch from its zero (centre) position to its maximum travel position in the required direction.
The lever maintains its position when the operator releases the handle.
2 **Notched positions, with spring return to zero operation.**
Notched operation identical to that described above but with an automatic device that returns the lever to its zero (centre) position when the operator releases the handle.
3 **Unnotched positions, with spring return to zero operation.**
The control lever of the controller is moved from its zero (centre) position to its maximum travel position in the required direction without notching.
Irrespective of its position, the lever spring returns to the zero (centre) position when the operator releases the handle.

Electrical contacts

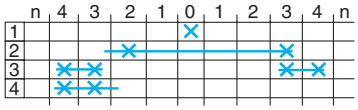
When designing the scheme take into account that all contacts are closed until actuated (opened) by an operating cam.

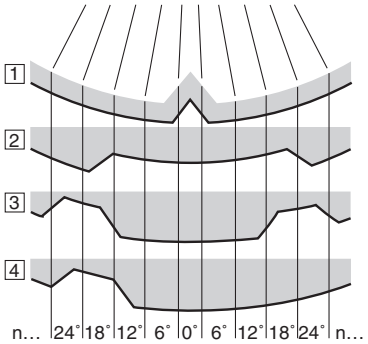
Cam schemes

Electrical scheme



Controller scheme





The contact blocks are actuated by a series of various length cams which are arranged to provide the required scheme.
These cams can either be:
□ variable composition, i.e. comprising different sub-assemblies mounted on a cam carrier,
□ predetermined, i.e. for a function that is widely used in conventional schemes.
Example: reversing cams for direction of operation.

Cam carriers

Mechanism designed for mounting cams on for controllers with variable composition cams.

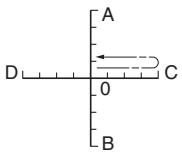
Cam actuation of contacts

When actuated by the cam lobe, the contact opens thus ensuring positive opening operation. Therefore, the presence of a cam corresponds to the absence of a cross or line on the scheme.

Example of graphic representation of a scheme

The various methods for indicating the operating sequence of the contacts and the ordering grids for XK controllers are shown opposite.
Take particular note of the way an assured electrical overlapping is represented as is shown for contacts 2 and 4 between positions 2 and 3 (see diagram to left).

Operating cycle



An operating cycle applied from an initial common O position is the passing from this initial position to the extreme position in each direction and subsequent return to the initial O position.

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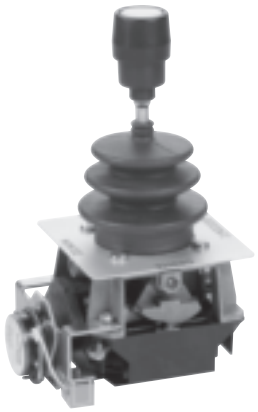
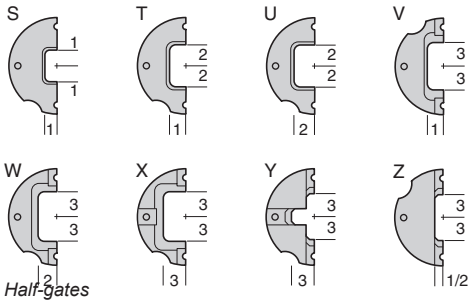
Controllers
For “light hoisting” applications, type **XKB**

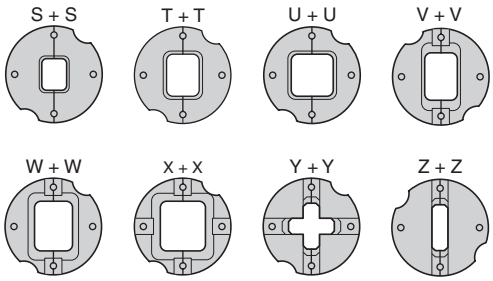
109229-34_M



XKB ●



Half-gates



9 main combinations

Compact and lightweight units, designed to control “light hoisting” and materials handling equipment. Mainly for use in portable stations.
2 models:
- **XKB A**: controllers with predefined, non modifiable, scheme.
- **XKB E**: controllers with variable composition schemes.

Control lever
Length: 130 mm. Travel in each direction: 28° maximum.

Lever gate
Universal and modifiable.
Specific, by adding half-gates to the universal lever gate (referenced by letter) 9 main combinations. .

End stops
The total lever travel can be limited to 20° or 12° by using removable end stops (**XKB Z972** for 20°, **XKB Z971** for 12°) when the lever gate comprises half-gates Y or Z.

Handles
- Simple handle with zero (centre) position contact (closed at zero).
- Handle with zero (centre) position mechanical interlock + contact (closed at zero).
- “Dead man’s” handle with contact (open when handle released).
- Handle with built-in flush or projecting pushbutton and contact (open when pushbutton or handle released).

***Note:** it is important to decide which type of handle is required when selecting the controller, since modification cannot be affected after installation.*

Electrical positions
3 positions maximum in each direction.

Types of lever movement
- **Notched positions, with stayput operation**: 3 notches maximum in each direction (12°, 20°, 28°).
- **Notched positions, with spring return to zero operation**: 3 notches maximum in each direction (12°, 20°, 28°). (XKB E: only 1 contact may be used at each notch.)
- **Unnotched positions, with spring return to zero operation**: 28° maximum travel in each direction. (XKB E: only 1 contact may be used for each spring return to zero position.)

Contacts
The contact blocks used for establishing the scheme are located in a monobloc assembly. There are 2 types:
- Block with 4 contacts per movement.
- Block with 4 contacts per movement + 1 zero (centre) position contact.

For both types, an additional contact is available. Its function depends on the type of handle.

Cam schemes
- **XKB A**: standard schemes can be established using predefined cams. These cams are moulded and cannot be modified.

2 versions:
- Using a block with 4 contacts per movement: 2 reversing cams and 2 function cams per movement.
- Using a block with 4 contacts per movement + 1 zero (centre) position contact: 2 reversing cams and 2 function cams per movement + 1 zero (centre) position cam.

- **XKB E**: special schemes can be established using snap-on cams (for each position) mounted on cam carriers. (overlapping contact operation is not possible).

2 versions:
- Using a block with 4 contacts per movement: 4 variable composition cams per movement.
- Using a block with 4 contacts per movement + 1 zero (centre) position contact: 4 variable composition cams per movement + 1 fixed composition zero (centre) position cam.

Legend
One 100 x 100 mm anodised aluminium legend plate with matt satin finish.
Standard “hoist-long travel” and “traverse-slew” symbols or text (to be stated on Order form, see page 6/73).

Potentiometer adaptation
- 2 potentiometers maximum per movement when using block with 4 contacts per movement.
- 1 potentiometer maximum per movement when using block with 4 contacts per movement + 1 zero (centre) position contact.

Characteristics: page 6/71
Referencing grid: page 6/72
Dimensions: page 6/96

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Controllers
For “light hoisting” applications, type **XKB**

Environment

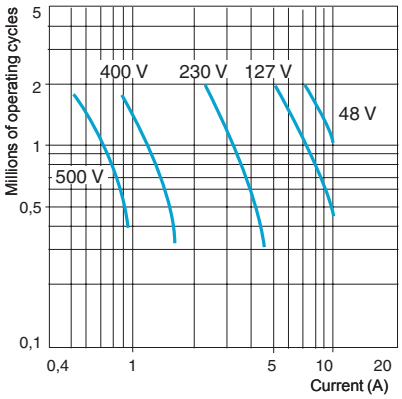
Conformity to standards			EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14
Product certifications			XKB: UL, A360, P300, “Pilot duty”, CSA ∼ 300 V “heavy duty”, ⎓ “standard duty”, CCC, RMRS
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 20…+ 70
Operating position			All positions
Vibration resistance	Conforming to EN/IEC 60068-2-6		6 gn (1 to 70 Hz)
Shock resistance	Conforming to EN/IEC 60068-2-27		20 gn, duration 11 ms
Electric shock protection	Conforming to EN/IEC 61140		Class I
Maximum operating lever force required in each direction		**daN**	< 1.7
Degree of protection	Conforming to EN/IEC 60529		IP 54 (unit with simple handle mounted in dust and damp proof enclosure) IP 20 (contact block)
Mechanical durability	In millions of operating cycles		1 in each direction
Weight		**kg**	**XKB A** and **XKB E**: 0.850

Contact block characteristics

Type		Monobloc assembly comprising 9 double-break contacts (8 function contacts and 1 zero position contact mounted at lever base) or monobloc assembly comprising 11 double-break contacts (8 function contacts + 2 zero position contacts and 1 zero position contact mounted at lever base)
Conventional thermal current	**A**	10 conforming to IEC 60947-5-1, UL 508, CSA C22-2 n° 14
Rated insulation voltage	**V**	⎓ 500 conforming to IEC 60947-1, degree of pollution 3
Insulation category		Group C conforming to NF C 20-040 and VDE 0110
Contact operation		Slow break, double-break contacts with positive opening operation; N/O (green operator). N/C contact (red operator): zero position contact mounted at lever base
Resistance across terminals	**mΩ**	≤ 25 (in accordance with NF C 93-050, at 1 A)
Terminal referencing		Conforming to CENELEC EN 50013
Short-circuit protection		10 A cartridge fuse type gG

Operational power
Conforming to IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ∼ 50-60 Hz
⎓ Inductive circuit



d.c. supply ⎓

Power broken in W for 1 million operating cycles

Voltage V	**24**	**48**	**120**
⎓	90	90	75

Connection	Captive screw clamp terminals	Clamping capacity: □ minimum 1 x 0.5 mm², □ maximum, with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm²

Characteristics: page 6/71
Referencing grid: page 6/72
Dimensions: page 6/96

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Controllers

For “light hoisting” applications, types **XKB A** and **XKB E**

Grid for composing the reference of a controller

Reference of controller type XKB

	Model	Contacts	Handle	Lever movement AB	Lever movement CD	Potentiometer adaptation
XKB						

Model

With predefined scheme	**A**
With variable composition scheme	**E**

Contact blocks

Block with 4 contacts per movement	Screw clamp terminal connections	**1**
	6.3 clip connections	**2**
Block with 4 contacts per movement + 1 zero (centre) position contact	Screw clamp terminal connections	**3**
	6.3 clip connections	**4**

Handle

Simple + zero (centre) position electrical interlocking (contact closed in rest position)	**1**
With zero (centre) position mechanical and electrical interlocking (contact closed in rest position)	**2**
“Dead man’s” type (contact open when released)	**4**
With built-in flush pushbutton (contact open in rest position)	**5**
With built-in projecting pushbutton (contact open in rest position)	**6**

Type of lever movement

On movement AB

Movement not required (blocked)	**0**
Notched positions, with stayput operation	**1**
Unnotched positions, with spring return to zero operation *(1)*	**2**
Notched positions, with spring return to zero operation	**3**

On movement CD

Movement not required (blocked)	**0**
Notched positions, with stayput operation	**1**
Unnotched positions, with spring return to zero operation *(1)*	**2**
Notched positions, with spring return to zero operation	**3**

Potentiometer adaptation

Without adaptation nor potentiometer		**0**
With adaptation only (without potentiometer)	On movement AB	**4**
	On movement CD	**5**
	On movements AB + CD	**6**
Adaptation + potentiometer *(2)*	On movement AB	**7**
	On movement CD	**8**
	On movements AB + CD	**9**

(1) Type of lever movement recommended when using a potentiometer.
(2) Potentiometer type and value to be stated when ordering. For standard application potentiometers see page 6/100.

Presentation: page 6/70 Characteristics: page 6/71 Dimensions: page 6/96

Schneider Electric

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Controllers

For “light hoisting” applications, type **XKB E**

Ordering form completion example

Requirement

A 2 movement controller:
“hoist-long travel”.
“Universal” lever gate, limited to 2 “lower” positions. **XKB**

Model
With variable composition scheme (customised elect. scheme as shown below) **E**

Contact blocks
Block with 4 contacts + 1 zero (centre) position contact per movement (screw clamp terminals) **3**

Handle
“Dead man’s” type **4**

Type of lever operation on movement AB
Unnotched positions, with spring return to zero operation **2**

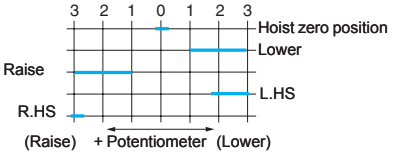
Type of lever operation on movement CD
Notched positions, with spring return to zero operation **3**

Potentiometer adaptation
With adaptation device + potentiometer on movement AB, standard 4700 Ω, size 15, model **7**

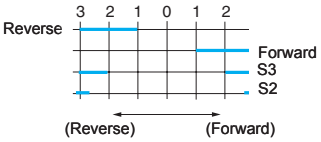
Composition of the reference (see page 6/72)

E	3	4	2	3	7

Electrical scheme for movement AB “hoist”



Electrical scheme for movement CD “long travel”



Lever gate

In accordance with the half-gates available, sketch and crosshatch the lever’s field of movement on the scheme grids below.
In the absence of this information, the controller will be supplied with a “universal” gate.

Potentiometer adaptation

Cross ☒ the required position on the schemes below.

On movement AB
Type/size: XKZ A15047
Value: 4700 Ω

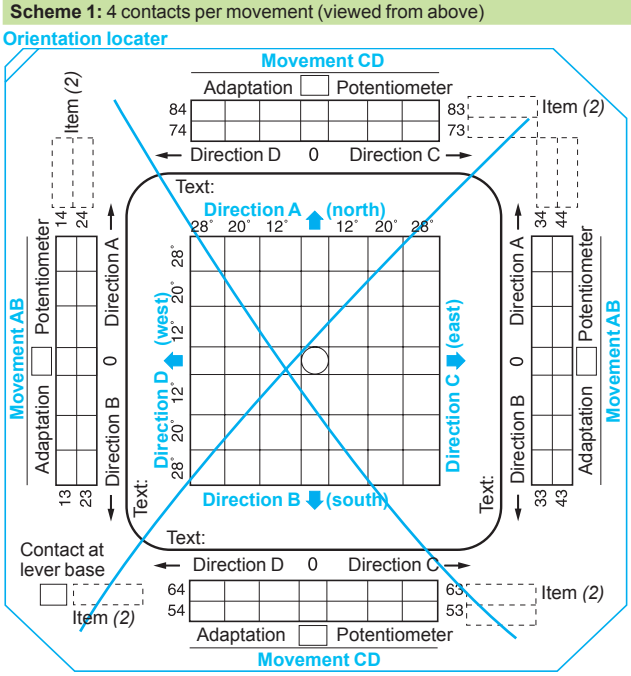
On movement CD
Type/size:
Value:

Legend

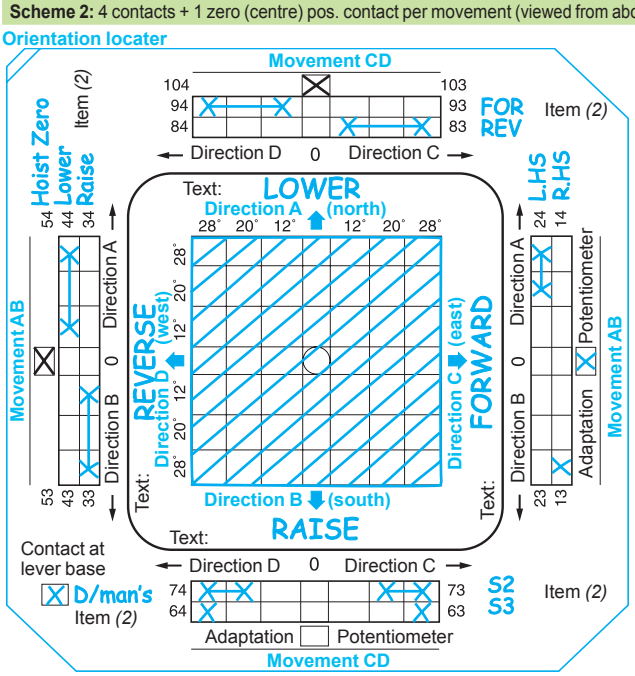
Without legend ☐
With blank legend, **XKB Y1** ☐
With “traverse-slew” symbols, **XKB Y2** ☐
With “hoist-long travel” symbols, **XKB Y3** ☐
With specific engraved text, **XKB Y1001** (clearly state the text on the scheme below)
Left-hand operated unit ☐
Right-hand operated unit ☒

⚠ If the scheme is not defined, all **XKB E** controllers will be supplied with the standard scheme as used for XKB A.

Scheme 1: 4 contacts per movement (viewed from above)



Scheme 2: 4 contacts + 1 zero (centre) pos. contact per movement (viewed from above)



(1) Additional help for completing the order form is available from your Regional Sales Office.
(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.
Spring return operation: only 1 contact can be used with spring return at each notch.

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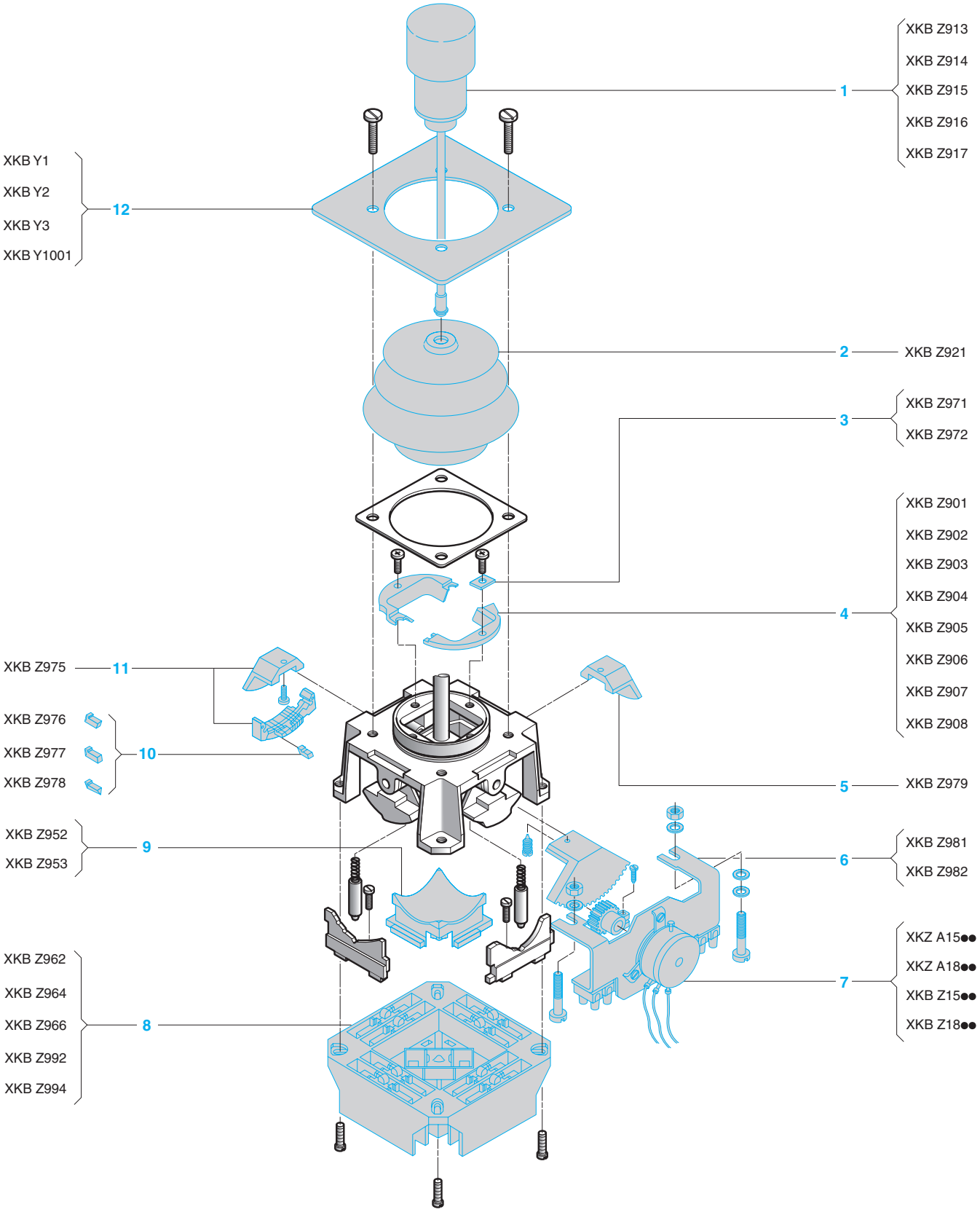
Controllers
For “light hoisting” applications, type **XKB**
Separate components



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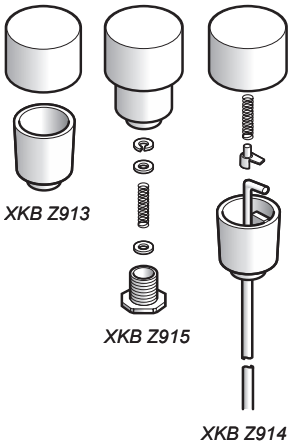
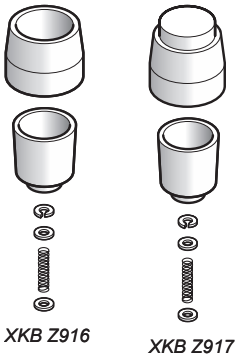
Controllers
For “light hoisting” applications, type **XKB**
Separate components

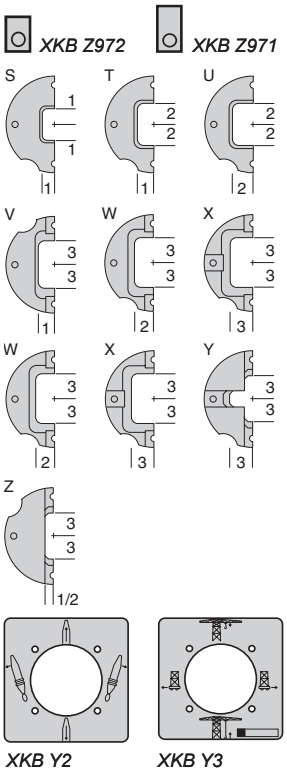

XKB Z913

XKB Z915

XKB Z914


XKB Z916

XKB Z917



XKB Y2

XKB Y3

Description	Item	Characteristics	Unit reference	Weight kg
Bellows	2	–	**XKB Z921**	0.060
Handles ⚠ Not interchangeable between different models	1	Simple	**XKB Z913**	0.030
		With zero (centre) position interlocking	**XKB Z914**	0.040
		“Dead man’s” type	**XKB Z915**	0.045
		With built-in flush pushbutton	**XKB Z916**	0.030
		With built-in projecting pushbutton	**XKB Z917**	0.030
Lever gate Universal and modifiable Specific, by adding half-gates to the universal lever gate (referenced by letter)	4	S	**XKB Z901**	0.005
		T	**XKB Z902**	0.005
		U	**XKB Z903**	0.005
		V	**XKB Z904**	0.005
		W	**XKB Z905**	0.005
		X	**XKB Z906**	0.005
		Y	**XKB Z907**	0.005
		Z	**XKB Z908**	0.005
Removable end stops Sold in lots of 10	3	Stop limiting to 1 notch of movement	**XKB Z971**	0.025
		Stop limiting to 2 notches of movement	**XKB Z972**	0.020
Contacts: block with 4 contacts per movement Screw clamp terminal connections	8	For use with simple handle or handle with zero (centre) position interlocking	**XKB Z962**	0.185
		For use with “Dead man’s” handle or handle with built-in pushbutton	**XKB Z966**	0.185
Contacts: block with 4 contacts per movement + 1 zero (centre) position contact Screw clamp terminal connections	8	For use with simple handle or handle with zero (centre) position interlocking	**XKB Z992**	0.215
		For use with “Dead man’s” handle or handle with built-in pushbutton	**XKB Z994**	0.215
Cam carriers for variable composition cams (XKB E only) Sold in lots of 20	11	–	**XKB Z975**	0.105
Cams (XKB E only) Sold in lots of 50	10	Right-hand position (colour: green)	**XKB Z976**	0.010
		Left-hand position (colour: red)	**XKB Z977**	0.010
		Pass cam (colour: black)	**XKB Z978**	0.010
Zero (centre) position cam with fixing screw	5	–	**XKB Z979**	0.010
Lever base adaptations	9	Interlocking bowl	**XKB Z952**	0.010
		Bowl for “Dead man’s” handle or handle with built-in pushbutton	**XKB Z953**	0.010
Legends	12	Blank	**XKB Y1**	0.025
		“Traverse - slew”	**XKB Y2**	0.025
		“Hoist - long travel”	**XKB Y3**	0.025
		With specific engraved text	**XKB Y1001**	0.025
Potentiometer adaptation kits (1)	6	Size 15	**XKB Z981**	0.090
		Size 18 (2)	**XKB Z982**	0.090
Potentiometers for controllers XKB	7	–	**XKZ A15●●, A18●●** **XKB Z15●●, Z18●●** See pages 6/100 and 6/101	–

(1) Including 13 tooth pinion.
- The maximum lever travel of 28° per direction corresponds to a potentiometer shaft rotation of 161°.
- Levers with friction drive facility are available under certain conditions: please consult your Regional Sales Office.

(2) The size 18 potentiometer adaptation on an XKB controller prevents it from being mounted in an XJP controller station.

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Controllers
For “medium hoisting” applications, type **XKD**

109230-34-



XKD F

Compact and fully configurable units designed to control “medium hoisting” equipment.
Mainly for use on fixed control stations or seated controller desks type **XJC**.
1 model:
■ **XKD F**: controller with variable composition schemes.

Control lever
Length: 200 mm. Travel in each direction: 36° maximum.

Lever gate
Integral, non removable, part of the mechanical block. Must be specified on the Order form.

Handles
■ Simple handle.
■ Handle with zero (centre) position mechanical interlock.
■ Handle with zero (centre) position mechanical interlock + 1 C/O snap action contact.
■ “Dead man’s” handle + slow break contact(s).
■ Handle with built-in flush or projecting pushbutton + slow break contact(s).

Angular electrical positions
■ 6 positions maximum in each direction.

Types of lever movement
■ **Notched positions, with stayput operation**
2 versions:
□ 5 notches maximum in each direction, at 12°, 18°, 24°, 30° and 36° (6° per notch), only when used with variable composition cam carriers comprising 4 or 8-contact blocks (1st notch at 6°).
□ 3 notches maximum in each direction, at 12°, 24° and 36° (12° per notch), only when used with variable composition cam carriers comprising 2-contact blocks.

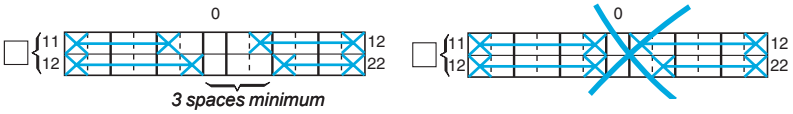
Note: *It is possible to use, on the same movement, a “5 notch max.” cam carrier combined with a “3 notch max.” cam carrier. The lever operation is “5 notch” type.*

■ **Notched positions, with spring return to zero operation**
3 or 5 notches maximum in each direction depending on the versions stated above.
⚠ 4 simultaneous contacts max. with spring return can be used at the 1st (12°) notch.
■ **Unnotched positions, with spring return to zero operation**
36° maximum travel in each direction.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent 6° position.

Contacts
16 contacts maximum per movement.
The contact blocks are mounted in pairs on a fixing plate.

Cam schemes
2 versions:
■ **Variable composition cams, 6° per position; 4 or 8-contact cam carriers.**
□ From 1 to 5 mechanical positions.
□ Overlapping contact operation possible (see graphic representation on page 6/69) except between the 4th and last position.
■ **Variable composition cams, 12° per position; 2-contact cam carriers.**
□ From 1 to 3 mechanical positions.
□ The contacts can be actuated 6° by 6° approx., except under the following conditions:
For technical reasons, it is essential to have at least 3 spaces on the electrical scheme for the same contact.

2 possible examples *2 impossible examples*



The 2-contact cam carriers are compact and do not increase the size of the mechanical block base.

Legend
One 120 x 120 mm anodised aluminium legend plate with matt satin finish.
Text to be stated on Order form.

Potentiometer adaptation
2 potentiometers maximum per movement:
□ mounted directly on the mechanical block when used with 2-contact variable composition cams,
□ mounted at the extremity of the contact supports when used with 4 and 8-contact variable composition cams.

6

Characteristics: pages 6/77
Referencing grid: page 6/78
Dimensions: page 6/97

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Controllers
For “medium hoisting” applications, type **XKD**

Environment

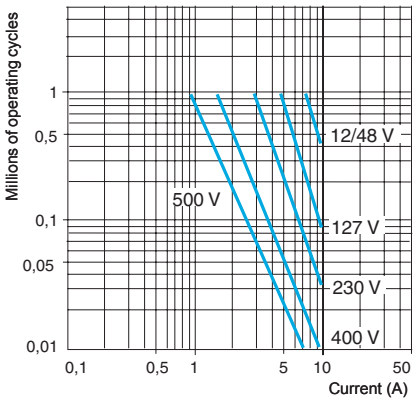
Conformity to standards			EN/IEC 60947-5-1, CSA C22-2 n° 14	
Product certifications			CSA A600, Q 600, CCC, RMRS	
Protective treatment			Standard version “TC”	
Ambient air temperature	For storage	**°C**	- 40…+ 70	
	For operation	**°C**	- 20…+ 70	
Operating position			All positions	
Vibration resistance			2 gn (10 to 500 Hz) conforming to IEC 60068-2-6	
Shock resistance			15 gn, duration 11 ms, conforming to IEC 60068-2-27	
Electric shock protection			Class I, conforming to IEC 61140	
Maximum operating lever force required in each direction		**daN**	Notched positions, with stayput operation: < 1.5	Notched or unnotched positions, with spring return to zero operation: < 3.5
Degree of protection			IP 54 conforming to IEC 60529 (unit with simple handle mounted in dust and damp proof enclosure)	
Mechanical durability	In millions of operating cycles		**XKD F:** 3 in each direction	
Weight	**XKD F**	**kg**	Mechanical block: 0.950 4-contact assembly: 0.350 8-contact assembly: 0.560	

Contact block characteristics

Type		N/C contact (**ZB2 BE102**)
Conventional thermal current	**A**	10 conforming to IEC 60947-5-1, CSA C 22-2 n° 14
Rated insulation voltage	**V**	⎓ 500 conforming to IEC 60947-1, degree of pollution 3
Contact operation		Slow break, double-break contacts with positive opening operation
Resistance across terminals	**mΩ**	≤ 25 (in accordance with NF C 93-050, at 1 A)
Short-circuit protection		10 A cartridge fuse type gG conforming to IEC 337-1B, VDE 0660 part 2

Operational power
Conforming to IEC 337-1
Utilisation categories AC-11 and DC-11
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ⎓ 50-60 Hz
Inductive circuit



d.c. supply ⎓

Power broken in W for 1 million operating cycles

Voltage V	**24**	**48**	**120**
⎓	65	48	40

Connection	Captive screw clamp terminals Clamping capacity: □ minimum 1 x 0.5 mm², □ maximum, with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm²

Presentation: page 6/76
Referencing grid: page 6/78
Dimensions: page 6/97

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Controllers

For "medium hoisting" applications, type **XKD F**

Grid for composing the reference of a controller

Reference of controller type XKD

	Lever	Handle	Movement AB: No. of blocks	Movement AB: Lever movement	Movement AB: Potentiometer adaptation	Movement CD: No. of blocks	Movement CD: Lever movement	Movement CD: Potentiometer adaptation
XKD F	**1**							

Control lever

Standard model, length 200 mm	**1**

Handle

Simple (standard model)		**1**
With zero (centre) position mechanical interlocking		**2**
With zero (centre) position mechanical & electrical interlocking (1 C/O contact)		**3**
"Dead man's" type	With N/C + N/O contact	**4**
	With N/O + N/O contact	**5**
With built-in flush pushbutton	With N/C + N/O contact	**6**
	With N/O + N/O contact	**7**
With built-in projecting pushbutton	With N/C + N/O contact	**8**
	With N/O + N/O contact	**9**

Movement AB

Number of 2-contact blocks

0 blocks	**0**
1 block	**1**
2 blocks	**2**
3 blocks	**3**
4 blocks	**4**
5 blocks	**5**
6 blocks	**6**
8 blocks	**8**

Type of lever movement

Notched positions, with stayput operation	3 notches *(1)*	**1**
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	**2**
Notched positions, with spring return to zero operation	3 notches *(1)*	**3**
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	**4**
Unnotched positions, with spring return to zero operation *(4)*		**5**

Potentiometer adaptation

Without adaptation nor potentiometer	**0**
With adaptation only (without potentiometer)	**1**
With adaptation + potentiometer *(5)*	**2**

Movement CD

Number of 2-contact blocks

0 blocks	**0**
1 block	**1**
2 blocks	**2**
3 blocks	**3**
4 blocks	**4**
5 blocks	**5**
6 blocks	**6**
8 blocks	**8**

Type of lever movement

Notched positions, with stayput operation	3 notches *(1)*	**1**
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	**2**
Notched positions, with spring return to zero operation	3 notches *(1)*	**3**
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	**4**
Unnotched positions, with spring return to zero operation *(4)*		**5**

Potentiometer adaptation

Without adaptation nor potentiometer	**0**
With adaptation only *(6)* (without potentiometer)	**1**
With adaptation *(6)* + potentiometer *(5)*	**2**

(1) 3 notches: restricted to 2-contact variable composition cams only.
(2) 5 notches: by using 1 or 2 variable composition 4 or 8-contact cams. 1st mechanical notch at 12° (6 electrical positions in each direction).
(3) It is possible to obtain 6 mechanical notches, 1st mechanical notch at 6° (6 electrical positions in each direction). Please consult your Regional Sales Office.
(4) Type of lever movement recommended when using a potentiometer.
(5) Potentiometer type and value to be stated on the order form, see pages 6/100 and 6/101
(6) It is possible to obtain 6 mechanical notches, 1st mechanical notch at 6° (6 electrical positions in each direction). Please consult your Regional Sales Office.

Presentation: page 6/76 Characteristics: page 6/77 Dimensions: page 6/97

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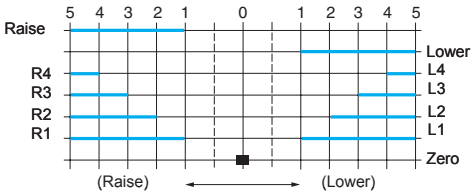
Controllers
For “medium hoisting” applications, type **XKD F**
Controller selection example

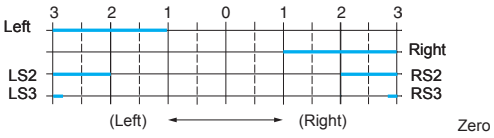
Requirement

A 2 movement controller: “hoist-traverse”.
“Cross” type lever gate.
No potentiometer adaptation on movements AB or CD.

Scheme for movement AB “hoist”



Scheme for movement CD “traverse”



Notes:

Movement AB

The scheme for movement AB requires 7 contacts, therefore, select 4 blocks of 2 contacts.
The only alternative is the selection of either drum n° 3 or n° 1, depending on the available space.

Movement CD

The space between each notch indicated on the 3 position scheme cannot be adhered to.
Effectively, to obtain 4 contacts, a 2-contact block can be selected (drum n° 2), which does not increase the size of the base, together with 1 x 2-contact block (drum n° 4).
The lever gate will limit the lever travel to 3 notches.

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Controllers
For “medium hoisting” applications, type **XKD F**
Controller selection example

Composition of the reference (see page 6/78)

	XKD F	1	2	4	4	0	2	3	3
Control lever									
Standard, length 200 mm		1							
Handle									
With zero (centre) position mechanical interlocking			2						
Movement AB “hoist”									
Number of 2-contact blocks									
4 blocks				4					
Type of lever movement									
5 notched positions, with spring return to zero operation					4				
Potentiometer adaptation									
Without adaptation nor potentiometer						0			
Movement CD “traverse”									
Number of 2-contact blocks									
2 blocks							2		
Type of lever movement									
3 notched positions, with spring return to zero operation								3	
Potentiometer adaptation									
Without adaptation nor potentiometer									3

6

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Controllers

For “medium hoisting” applications, type **XKD F**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference (use the grid for composing the reference of a controller on page 6/78)

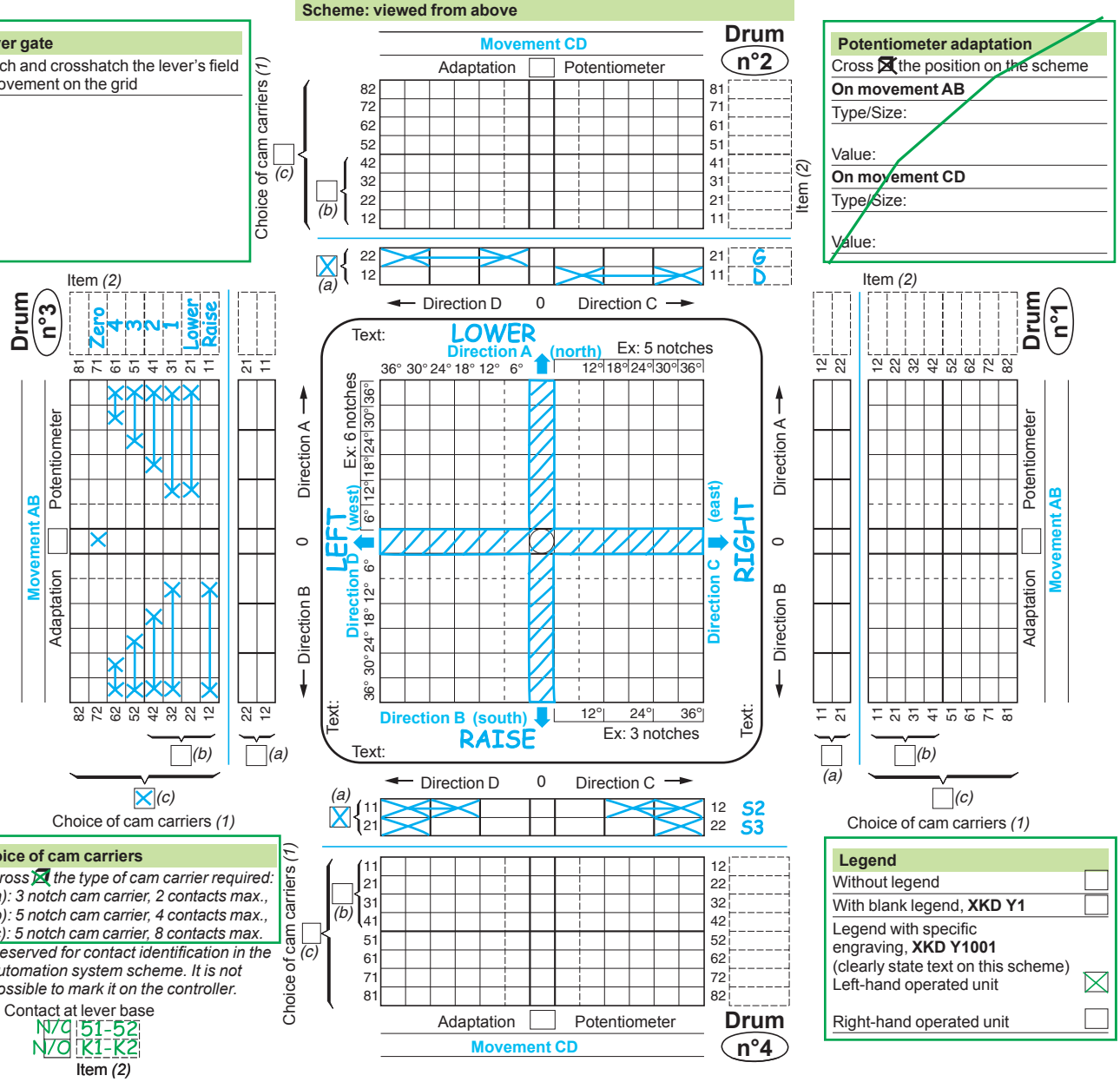
				Movement AB			Movement CD		
		Lever	Handle	No. of blocks	Lever movement	Potentiometer adaptation	No. of blocks	Lever movement	Potentiometer adaptation
Number of identical units	1	**XKD F**	1	2	4	4	0	3	4	0

For Schneider Electric Industries use only													
Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKD												

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid

Scheme: viewed from above



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/Size:

Value:

On movement CD

Type/Size:

Value:

Choice of cam carriers

(1) Cross ☒ the type of cam carrier required:
(a): 3 notch cam carrier, 2 contacts max.,
(b): 5 notch cam carrier, 4 contacts max.,
(c): 5 notch cam carrier, 8 contacts max.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

N/C	51-52
N/O	K1-K2

Item *(2)*

Legend

Without legend	☐
With blank legend, **XKD Y1**	☐
Legend with specific engraving, **XKD Y1001** (clearly state text on this scheme)	
Left-hand operated unit	☒
Right-hand operated unit	☐

- Electrical overlapping of contacts is not possible between the 5th and 6th notches.
- Spring return operation: 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) Additional help for completing the order form is available from your Regional Sales Office.

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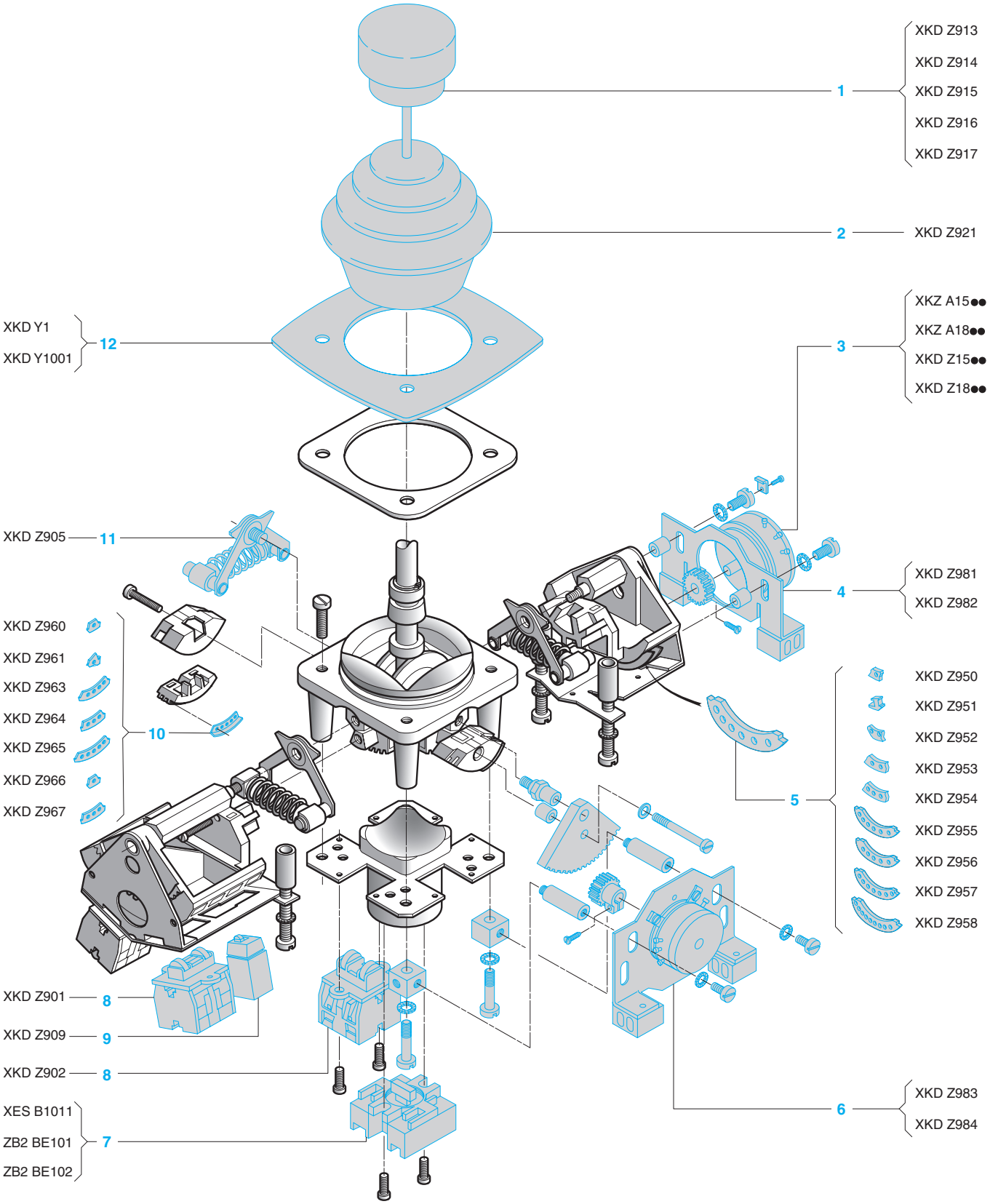
Controllers

For “medium hoisting” applications, type **XKD F**

Separate components



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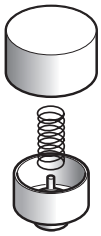
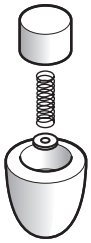
Controllers
For “medium hoisting” applications, type **XKD F**
Separate components



XKD Z915



XKD Z916



XKD Z917

Description	Item	Characteristics		Unit reference	Weight kg
Bellows	2	Bellows + 1 flat seal		**XKD Z921**	0.075
Handles ⚠ Not interchangeable between different models	1	Simple		**XKD Z913**	0.060
		With zero (centre) position interlocking		**XKD Z914**	0.035
		“Dead man’s” type		**XKD Z915**	0.040
		With built-in flush pushbutton		**XKD Z916**	0.050
		With built-in projecting pushbutton		**XKD Z917**	0.050
Spring return operation mechanism Sold in lots of 2	11	Spring return to zero mechanism		**XKD Z905**	0.100
Notched operation mechanism	9	Position notching mechanism for variable composition cams		**XKD Z909**	0.010
Variable composition cams for support with 4 or 8 contacts Sold in lots of 50	5	Pass cam		**XKD Z950**	0.005
		Complementary, 1 position		**XKD Z951**	0.005
		Complementary, 1.5 position		**XKD Z952**	0.010
		Complementary, 2 positions		**XKD Z953**	0.010
		Complementary, 3 positions		**XKD Z954**	0.020
		Complementary, 6 positions		**XKD Z955**	0.035
		5 positions		**XKD Z956**	0.030
		7 positions		**XKD Z957**	0.040
		9 positions		**XKD Z958**	0.050
Variable composition cams for support with 2 contacts Sold in lots of 20	10	Complementary, half-position		**XKD Z960**	0.005
		Complementary, 1 position		**XKD Z961**	0.005
		Reversing, for notches 1+ 2 + 3		**XKD Z963**	0.020
		Acceleration, for notches 2 + 3		**XKD Z964**	0.005
		Acceleration, for notch 3		**XKD Z965**	0.010
		Pass cam		**XKD Z966**	0.010
		Cam for zero position contact		**XKD Z967**	0.010
Scheme contacts	8	2 x ZB2 BE102 contacts mounted on baseplate	Without marker	**XKD Z901**	0.050
			With marker	**XKD Z902**	0.050
Zero (centre) position electrical interlocking C/O contact	7	Snap action		**XES B1011**	0.030
Contacts for “Dead man’s” handle or handle with built-in pushbutton	7	Slow break	N/C, positive opening	**ZB2 BE102**	0.015
			N/O	**ZB2 BE101**	0.015
Legends	12	Blank		**XKD Y1**	0.035
		With specific engraved text		**XKD Y1001**	0.035
Potentiometer adaptation kits *(1)*	4	On end of contact supports	Size 15	**XKD Z981**	0.120
			Size 18	**XKD Z982**	0.130
	6	Directly on mechanical block	Size 15	**XKD Z983**	0.120
			Size 18	**XKD Z984**	0.130
Potentiometers for controllers XKD	3	–		**XKZ A15●●, A18●●** **XKD Z15●●, Z18●●** See pages 6/100 and 6/101	–

(1) Including 15 tooth pinion.

- The maximum lever travel of 36° per direction corresponds to a potentiometer shaft rotation of 168°.
- Levers with friction drive facility are available under certain conditions. Please consult your Regional Sales Office.

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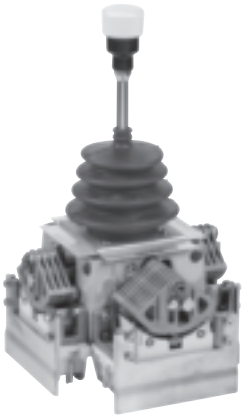
Controllers
For “heavy hoisting” applications, type **XKM**

109231_33_M



XKM A

109232_37_M



XKM B

109233_38_M



Extremely robust and fully configurable units designed to control “heavy hoisting” equipment.
Mainly for use on fixed control stations or seated controller desks type **XJC**.
3 different controller models:
■ **XKM A**: with variable composition schemes, multidirectional control of 2 movements by central lever.
■ **XKM B**: with variable composition schemes, control of 1 movement by central lever.
■ **XKM C**: with variable composition schemes, control of 1 movement by side lever.

Control lever
XKM A and **XKM B**: length: 200 or 250 mm. Travel in each direction: 36° max.
XKM C: side lever, length 240 mm. Travel in each direction: 54° maximum.

Lever gate
XKM A: universal or specific (must be specified on Order form).
XKM B and **XKM C:** no lever gate.

End stops
Removable, attached to mechanical block to limit lever travel in 6° steps.

Handle
XKM A and **XKM B**; 5 versions:
■ Simple handle.
■ Handle with zero (centre) position mechanical interlock.
■ Handle with zero (centre) position mechanical interlock + 1 C/O snap action contact.
■ “Dead man’s” handle with 1 C/O snap action contact.
■ Handle with built-in flush or projecting pushbutton + 1 C/O snap action contact.
XKM C: simple handle.

Electrical positions
XKM A and **XKM B:** 6 positions maximum in each direction.
XKM C: 9 positions maximum in each direction.

Type of lever movement
■ **Notched positions, with stayput operation.**
XKM A and **XKM B**; 2 versions:
□ 6 notch sector in each direction: 6°, 12°, 18°, 24°, 30°, 36°.
□ 5 notch sector in each direction: 12°, 18°, 24°, 30°, 36°.

Note: *two different notching forces: Normal: operating lever force: 2 daN. Increased: operating lever force: 4 daN (for 4 simultaneously operated contacts).*

XKM C, 2 versions:
□ 9 notch sector maximum in each direction: 6°, 12°, 18°, 24°, 30°, 36°, 42°, 48°, 54°.
□ 8 notch sector maximum in each direction: 12°, 18°, 24°, 30°, 36°, 42°, 48°, 54°.
■ **Notched positions, with spring return to zero operation**.
XKM A, B and C, 2 versions:
□ 6 notches maximum in each direction: 6°, 12°, 18°, 24°, 30°, 36°.
□ 5 notches maximum in each direction: 12°, 18°, 24°, 30°, 36°.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent notch.
■ **Unnotched positions, with spring return to zero operation**:
XKM A, B and C: 36° maximum travel in each direction.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent 6° position.

Contacts
24 contacts maximum per movement (2 x 3 blocks of 4 contacts).
2 versions:
□ Standard, double-break contacts.
□ Double-break contacts with magnetic blow-out.

Cam schemes
24 cams maximum per movement (12 contacts on each side), mounted in groups of 4.
Warning: for technical reasons relating to mounting, the first cam (for contact 13-14) must be a reversing or zero position cam.

Legends
1 for each direction, interchangeable without dismantling the unit.
Material: anodised aluminium, anodic oxidation marking.
Standard markings: FORWARD, REVERSE, RAISE, LOWER, LEFT, RIGHT.
Other markings: to be stated on Order form.

Potentiometer adaptation
2 potentiometers maximum per movement.
Potentiometers mounted at the extremity of the contact supports or directly onto the faces of the mechanical block.

Characteristics: page 6/85
Referencing grid: pages 6/86 and 6/91
Dimensions: pages 6/98 and 6/99

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Controllers
For “heavy hoisting” applications, type **XKM**

Environment

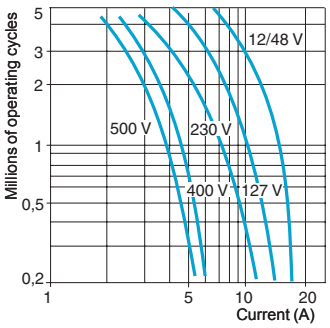
Conformity to standards			EN/IEC 60947-5-1, CSA C22-2 n° 14
Product certifications			CSA 600 V max. (≂) “heavy duty”, RMRS
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	**°C**	- 40…+ 70 °C
	For operation	**°C**	- 10…+ 55 °C
Operating position			All positions
Vibration resistance	Conforming to IEC 60068-2-6		2 gn (10 to 500 Hz)
Shock resistance	Conforming to IEC 60068-2-27		Direction of shocks on vertical axis: 15 gn Direction of shocks on horizontal and transversal axes: 100 gn
Electric shock protection	Conforming to IEC 61140		Class I
Maximum operating lever force required in each direction		**daN**	< 4 for 4 simultaneously actuated contacts (to 1st notch) < 4.5 for 4 simultaneously actuated contacts for spring return to zero version (maintained against end stop)
Degree of protection	Conforming to IEC 60529		IP 54 (unit with simple handle mounted in dust and damp proof enclosure)
Mechanical durability	In millions of operating cycles		4 in each direction (mechanical control device)
Weight		**kg**	**XKM A:** mechanical block: 4.6. 4-contact assembly: 0.7 **XKM B:** mechanical block: 3. 4-contact assembly: 0.7 **XKM C:** mechanical block: 3.7. 4-contact assembly: 0.7

Contact block characteristics

Type		Block of 4 double-break contacts
Conventional thermal current	**A**	16 conforming to IEC 60947-5-1
Rated insulation voltage	**V**	≂ 500 conforming to IEC 60947-1 degree of pollution 3 ≂ 600 conforming to CSA C22-2 n° 14
Insulation category		Group C conforming to NF C 20-040 and VDE 0110
Contact operation		Slow break, double-break contacts with positive opening operation 2 versions: standard or with magnetic blow-out
Resistance across terminals	**mΩ**	≤ 25 (in accordance with NF C 93-050, at 1 A)
Terminal referencing		Conforming to EN 50013
Short-circuit protection		20 A cartridge fuse type gG conforming to IEC 337-1B, VDE 0660 part 2

Operational power
Conforming to IEC 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

Standard double-break contact block
a.c. supply ∿ 50-60 Hz
Inductive circuit



d.c. supply ⎓
Power broken in W for 3 million operating cycles

Voltage V	24	48	120
⎓	70	75	75

Double-break contact block with magnetic blow-out.
d.c. supply ⎓
Power broken in W for 3 million operating cycles

Voltage V	24	48	120
⎓	90	100	100

Connection	Captive screw clamp terminals Clamping capacity: □ minimum: 1.5 mm², □ maximum: 2 x 2.5 mm² with cable end

Characteristics: page 6/85
Referencing grid: pages 6/86 and 6/91
Dimensions: pages 6/98 and 6/99

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Controllers

For “heavy hoisting” applications, type **XKM**

Grid for composing the reference of a controller XKM A or XKM B

Reference of a controller type XKM A or XKM B

					Movement AB			Movement CD (XKM A only)		
	Model	Lever	Handle	Contacts	No. of blocks	Lever move-ment	Potentio-meter adaptation	No. of blocks	Lever move-ment	Potentio-meter adaptation
XKM										

Model			
2 movement controller (AB + CD)			**A**
1 movement controller (AB)			**B**
Control lever			
Short: length 200 mm (standard)			**1**
Long: length 250 mm			**2**
Handle			
Simple (standard model)			**1**
With zero (centre) position mechanical interlocking			**2**
With zero (centre) position mechanical & electrical interlocking (1 C/O contact)			**3**
“Dead man’s” type (1 C/O contact)			**4**
With built-in flush pushbutton (1 C/O contact)			**5**
With built-in projecting pushbutton (1 C/O contact)			**6**
Type of contacts			
Block of 4 double-break contacts (standard model)			**1**
Block of 4 double-break contacts with magnetic blow-out			**2**
Movement AB			
Number of 4-contact blocks		0 blocks	**0**
		1 block	**1**
		2 blocks	**2**
		3 blocks	**3**
		4 blocks	**4**
		5 blocks	**5**
		6 blocks	**6**
Type of lever movement			
Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
Notched positions, with spring return to zero operation	5 notches *(1)*		**5**
	6 notches *(2)*		**6**
Unnotched positions, with spring return to zero operation *(3)*			**7**
Potentiometer adaptation			
Without potentiometer support plate, or potentiometer			**0**
With potentiometer support plate only *(4)* (potentiometer not included)			**1**
With potentiometer support plate + potentiometer *(5)*			**2**
Movement CD (for type XKM A only)			
Number of 4-contact blocks		0 blocks	**0**
		1 block	**1**
		2 blocks	**2**
		3 blocks	**3**
		4 blocks	**4**
		5 blocks	**5**
		6 blocks	**6**
Type of lever movement			
Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
Notched positions, with spring return to zero operation	5 notches *(1)*		**5**
	6 notches *(2)*		**6**
Unnotched positions, with spring return to zero operation *(3)*			**7**
Potentiometer adaptation			
Without adaptation nor potentiometer			**0**
With adaptation only (without potentiometer)			**1**
With adaptation + potentiometer *(5)*			**2**

(1) 5 mechanical notches (1st notch at 12°) (6 electrical positions in each direction). (2) 6 mechanical notches (1st notch at 6°) (6 electrical positions in each direction).
(3) Type of lever movement recommended when using a potentiometer. (4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the order form, see pages 6/100 and 6/101.

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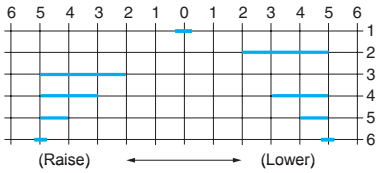
Controllers
For “heavy hoisting” applications, type **XKM A**
Controller selection example

Requirement

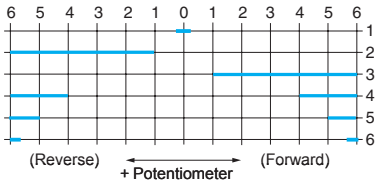
A 2 movement controller: “hoist-long travel”.
Universal 200 mm lever gate, limited to 4 notches on the “raise” and “lower” directions (1st notch at 12°).
Potentiometer adaptation on movement CD. Potentiometer selected: 4700 Ω, size 15, standard model.
“Dead man’s” handle with 1 C/O contact.

Movement AB: type of lever movement: notched positions, with spring return to zero operation and 5 notches (starting from 12°).
Movement CD: type of lever movement: unnotched positions, with spring return to zero operation.

Scheme for movement AB “hoist”



Scheme for movement CD “long travel”



Notes:
Movement AB
Two installation alternatives depending on the required size:
- 2 blocks of 4 contacts, both on the same side of the mechanical block (example on next page),
- 1 block of 4 contacts on either side of the mechanical block.

Movement CD
Same installation alternatives as for movement AB.
Two alternatives for potentiometer installation:
- On end of cam carriers and contact supports (example on next page).
- Directly on the mechanical block.

Composition of the reference (see page 6/86)

XKM	A	1	4	1	2	5	0	2	7	2
Model										
2 movements (AB + CD)	A									
Control lever										
Short: length 200 mm (standard)		1								
Handle										
“Dead man’s” type with 1 C/O contact			4							
Type of contacts										
Standard double-break				1						
Movement AB										
Number of 4-contact blocks										
2 blocks (i.e. 8 contacts when 6 contacts required)					2					
Type of lever movement										
Notched positions, with spring return to zero operation and 5 notch sectors (starting from 12°)						5				
Potentiometer										
Without adaptation device nor potentiometer							0			
Movement CD										
Number of 4-contact blocks										
2 blocks (i.e. 8 contacts when 6 contacts required)								2		
Type of lever movement										
Unnotched positions, with spring return to zero operation									7	
Potentiometer										
With potentiometer adaptation device + size 15, 4700 Ω potentiometer										2

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Controllers

For “heavy hoisting” applications, type **XKM A**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference (use the grid for composing the reference of a controller on page 6/86)

		Model	Lever	Handle	Type of contact	Movement AB: No. of blocks	Movement AB: Lever movement	Movement AB: Potentiometer adaptation	Movement CD: No. of blocks	Movement CD: Lever movement	Movement CD: Potentiometer adaptation
Number of identical units	1	XKM	A	1	4	1	2	5	0	2	7	2

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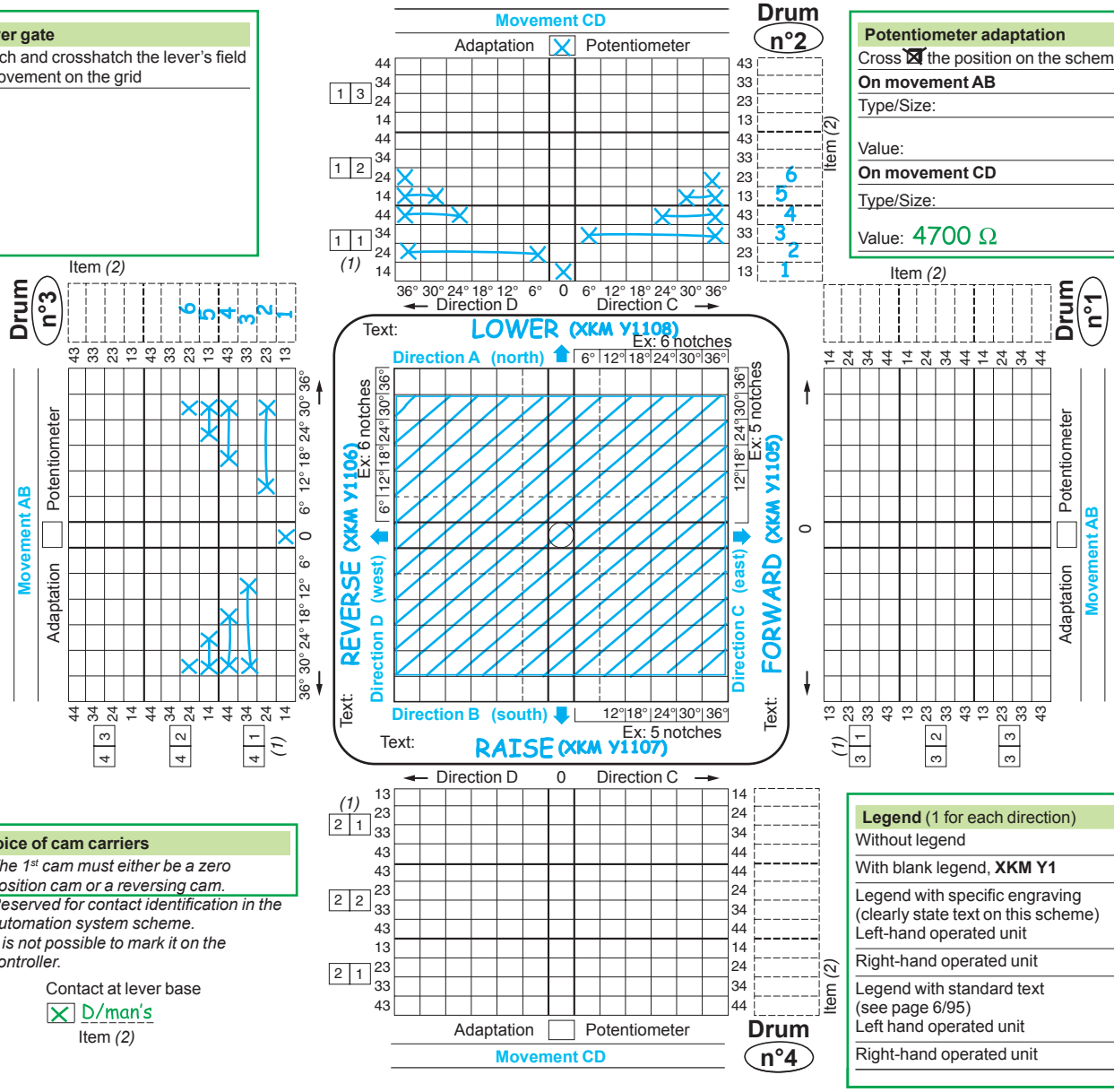
Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKM												

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid

Scheme: viewed from above



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/Size:

Value:

On movement CD

Type/Size:

Value: 4700 Ω

Choice of cam carriers

(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

☒ D/man’s

Item *(2)*

Legend (1 for each direction)

Without legend	☐
With blank legend, **XKM Y1**	☐
Legend with specific engraving (clearly state text on this scheme) Left-hand operated unit	☐
Right-hand operated unit	☐
Legend with standard text (see page 6/95) Left hand operated unit	☒
Right-hand operated unit	☐

⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) Additional help for completing the order form is available from your Regional Sales Office.

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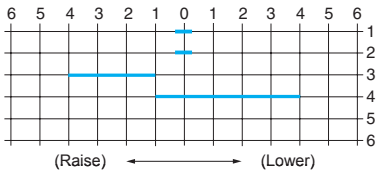
Controllers
For “heavy hoisting” applications, type **XKM B**
Controller selection example

Requirement
A single movement controller: “hoist”.

Scheme for movement AB “hoist”



Note:
Movement AB
Two installation alternatives depending on the required size (space in the enclosure or non symmetrical installation):
- 1 to 3 blocks of 4 contacts on each side of the mechanical block,
- 1 to 3 blocks on one side only.

Composition of the reference (see page 6/86)

XKM	B	1	1	1	1	6	0			

Model
1 movement controller (AB) — B

Control lever
Short: length 200 mm (standard) — 1

Handle
Simple (standard model) — 1

Type of contacts
Block of 4 double-break contacts (standard model) — 1

Movement AB

Number of 4-contact blocks
1 block (i.e. 4 contacts) — 1

Type of lever movement
6 notched positions, with spring return to zero operation — 6

Potentiometer
Without potentiometer support plate, or potentiometer — 0

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Controllers

For “heavy hoisting” applications, type **XKM B**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference (use the grid for composing the reference of a controller on page 6/86)

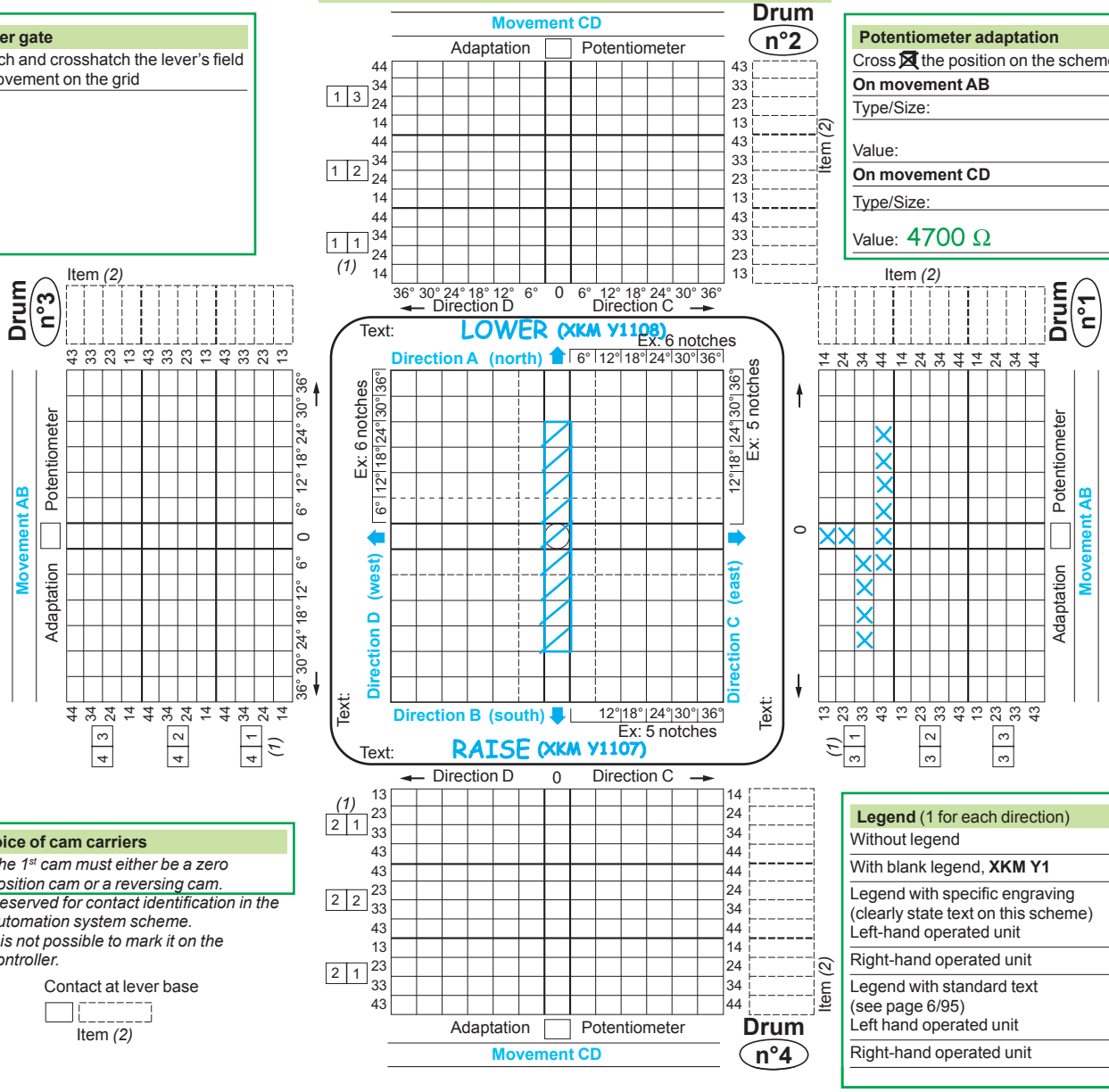
		Model	Lever	Handle	Type of contact	Movement AB: No. of blocks	Movement AB: Lever movement	Movement AB: Potentiometer adaptation	Movement CD: No. of blocks	Movement CD: Lever movement	Movement CD: Potentiometer adaptation
Number of identical units	1	XKM B	1	1	1	1	6	0			

For Schneider Electric Industries use only													
Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKM												

Scheme: viewed from above

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/Size:

Value:

On movement CD

Type/Size:

Value: 4700 Ω

Choice of cam carriers

(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base ☐ ☐

Item *(2)*

Legend (1 for each direction)

Without legend	☐
With blank legend, **XKM Y1**	☐
Legend with specific engraving (clearly state text on this scheme) Left-hand operated unit	☐
Right-hand operated unit	☐
Legend with standard text (see page 6/95) Left hand operated unit	☒
Right-hand operated unit	☐

⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) Additional help for completing the order form is available from your Regional Sales Office.

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Controllers

For “heavy hoisting” applications, type **XKM C**

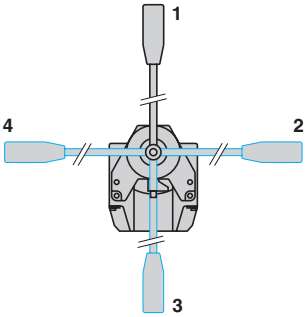
Grid for composing the reference of a controller

Reference of controller type XKM C

	Lever	Contacts	Movement AB: No. of blocks	Movement AB: Lever movement	Potentiometer adaptation
XKM C					

Control lever

Side lever, position according to diagram below



Position **1**	**1**
Position **2**	**2**
Position **3**	**3**
Position **4**	**4**

Type of contacts

Block of 4 double-break contacts (standard model)	**1**
Block of 4 double-break contacts with magnetic blow-out	**2**

Movement AB

Number of 4-contact blocks

1 block	**1**
2 blocks	**2**
3 blocks	**3**

Type of lever movement

Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
	8 notches *(1)*		**5**
	9 notches *(2)*		**6**
Notched positions, with spring return to zero operation	5 notches *(1)*		**7**
	6 notches *(2)*		**8**
Unnotched positions, with spring return to zero operation *(3)*			**9**

Potentiometer adaptation

Without adaptation nor potentiometer	**0**
With adaptation *(4)* only (without potentiometer)	**1**
With adaptation *(4)* + potentiometer *(5)*	**2**

(1) 1st mechanical notch at 12°.
(2) 1st mechanical notch at 6°.
(3) Type of lever movement recommended when using a potentiometer.
(4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the order form, see page 6/100.

6

Presentation: page 6/84
Characteristics: page 6/85
Dimensions: pages 6/98 and 6/99

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Controllers
For “heavy hoisting” applications, type **XKM C**
Controller selection example

Requirement

A 1 movement (AB), 2 direction controller, fitted with a vertical (upward pointing) lever.

Movement AB:
Installation of 2 blocks of 4 standard double-break contacts.

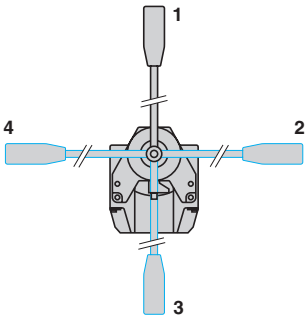
Lever movement with 6 notches at 6° intervals (1st mechanical notch at 6°), with notched cams and stayput angular positions.
No potentiometer.

Composition of the reference (see page 6/91)

	Lever	Contacts	Movement AB: No. of blocks	Movement AB: Lever movement	Potentiometer adaptation
XKM C	**1**	**1**	**2**	**3**	**0**

Control lever

Side lever, position according to diagram below



Position **1**	**1**
Position **2**	**2**
Position **3**	**3**
Position **4**	**4**

Type of contacts

Block of 4 double-break contacts (standard model)	**1**
Block of 4 double-break contacts with magnetic blow-out	**2**

Movement AB

Number of 4-contact blocks

1 block	**1**
2 blocks	**2**
3 blocks	**3**

Type of lever movement

Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
	8 notches *(1)*		**5**
	9 notches *(2)*		**6**
Notched positions, with spring return to zero operation	5 notches *(1)*		**7**
	6 notches *(2)*		**8**
Unnotched positions, with spring return to zero operation *(3)*			**9**

Potentiometer adaptation

Without adaptation nor potentiometer	**0**
With adaptation *(4)* only (without potentiometer)	**1**
With adaptation *(4)* + potentiometer *(5)*	**2**

(1) 1st mechanical notch at 12°.
(2) 1st mechanical notch at 6°.
(3) Type of lever movement recommended when using a potentiometer.
(4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the order form, see page 6/100.

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Controllers

For “heavy hoisting” applications, type **XKM C**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	Customer’s reference	Sales office - Subsid. - Plant	Editor	Geographical zone	Order N°

Reference (use the grid for composing the reference of a controller on page 6/91)

			Model	Lever	Contacts	Movement AB: No. of blocks	Movement AB: Lever movement	Movement AB: Potentiometer adaptation
Number of identical units		**XKM**	C	1	1	2	3	0

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Order N°	Item N°		MOD	LEV	POI	GLV	CTS	MAN	POT
		XKM							

Potentiometer adaptation

Cross ☒ the required position on the scheme below.

On movement AB

Type/size:

Value:

Legend

Without legend ☐

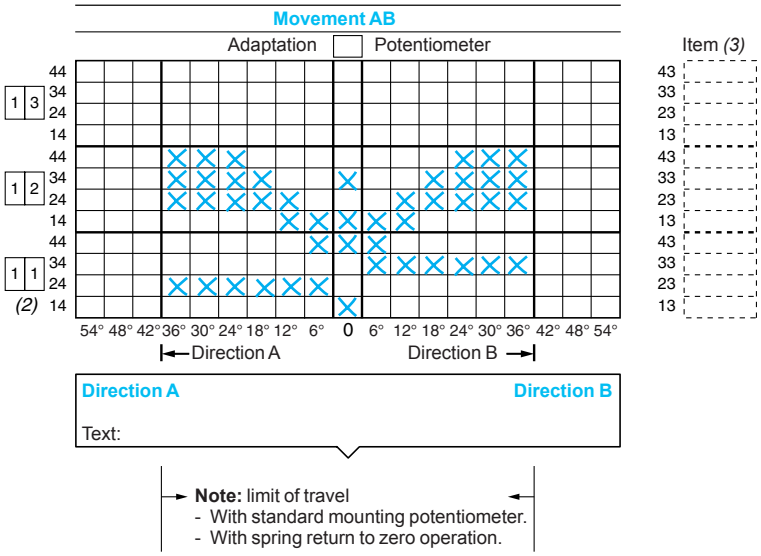
Blank legend, **XKM CY1** ☒

Legend with specific engraving, **XKM Y1001** (clearly state the text on the scheme below)

Left-hand operated unit ☐

Right-hand operated unit ☐

Scheme (viewed from above)



⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) Additional help for completing the order form is available from your Regional Sales Office.
(2) The 1st cam must either be a zero position cam or a reversing cam.
(3) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

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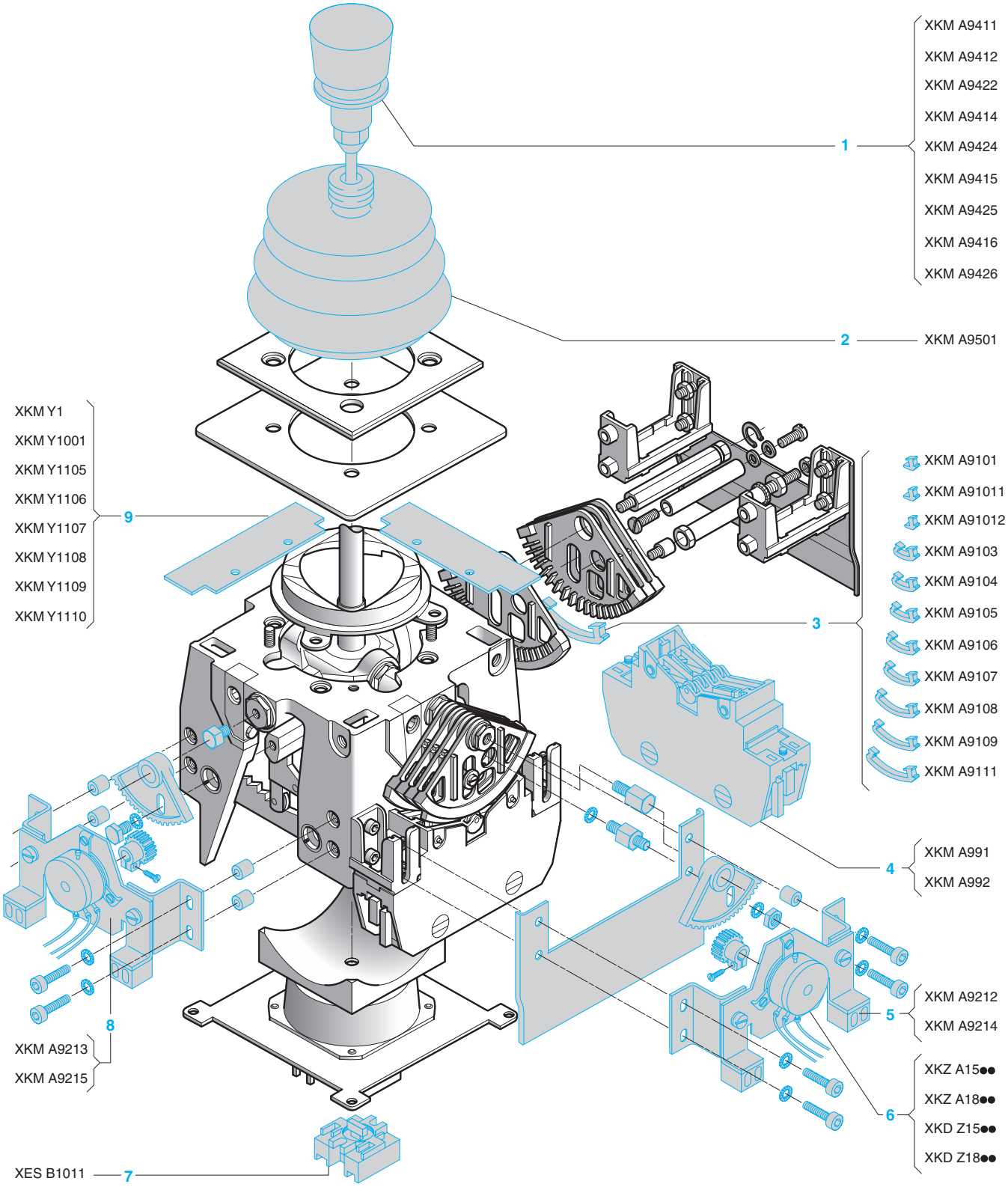
Controllers
For “heavy hoisting” applications, type **XKM**
Separate components



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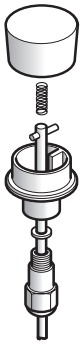
Controllers

For “heavy hoisting” applications, type **XKM**

Separate components



XKM A9411



XKM A94●4



XKM A94●2



XKM A94●5



XKM A94●6

Description	Item	Characteristics		Unit reference	Weight kg
Bellows	2	–		**XKM A9501**	0.120
Simple handle	1	–	For short or long lever	**XKM A9411**	0.085
Handles + rods	1	With zero (centre) position interlocking	For short lever	**XKM A9414**	0.145
			For long lever	**XKM A9424**	0.155
		“Dead man’s” type	For short lever	**XKM A9412**	0.150
			For long lever	**XKM A9422**	0.160
		With built-in flush pushbutton	For short lever	**XKM A9415**	0.140
			For long lever	**XKM A9425**	0.150
		With built-in projecting pushbutton	For short lever	**XKM A9416**	0.140
			For long lever	**XKM A9426**	0.150
Variable composition cams Sold in lots of 50	3	Pass cam		**XKM A9101**	0.115
		Complementary		**XKM A91011**	0.120
		Overlapping		**XKM A91012**	0.105
		3 positions		**XKM A9103**	0.205
		4 positions		**XKM A9104**	0.245
		5 positions		**XKM A9105**	0.370
		6 positions		**XKM A9106**	0.400
		7 positions		**XKM A9107**	0.430
		8 positions		**XKM A9108**	0.460
		9 positions		**XKM A9109**	0.505
		11 positions		**XKM A9111**	0.560
Blocks of 4 contacts	4	Double-break		**XKM A991**	0.310
		Double-break with magnetic blow-out		**XKM A992**	0.335
Contact at lever base	7	1 C/O snap action		**XES B1011**	0.030
Legends	9	Blank		**XKM Y1**	0.010
		With specific engraving (specify text when ordering)		**XKM Y1001**	0.010
		With standard text	Forward	**XKM Y1105**	0.010
			Reverse	**XKM Y1106**	0.010
			Raise	**XKM Y1107**	0.010
			Lower	**XKM Y1108**	0.010
			Left	**XKM Y1109**	0.010
			Right	**XKM Y1110**	0.010
Potentiometer adaptation kits *(1)*	5	On end of contact supports	Size 15	**XKM A9214**	0.120
			Size 18	**XKM A9212**	0.130
	8	Directly on mechanical block	Size 15	**XKM A9215**	0.120
			Size 18	**XKM A9213**	0.130
Potentiometers for controllers XKM A, XKM B, XKM C	6	–		**XKZ A15●●, A18●●** **XKD Z15●●, Z18●●** See pages 6/100 and 6/101	–

(1) Including 15 tooth pinion.

- *The maximum lever travel of 36° per direction corresponds to a potentiometer shaft rotation of 168°.*
- *Levers with friction drive facility are available under certain conditions. Please consult your Regional Sales Office.*

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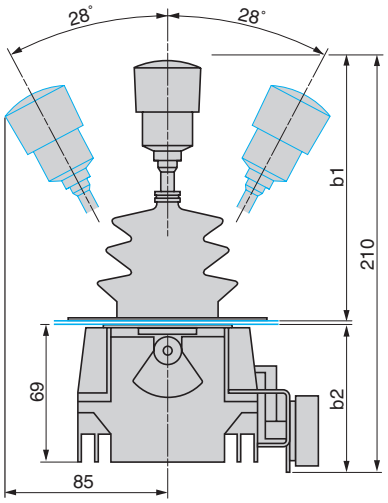
XKB A, XKB E

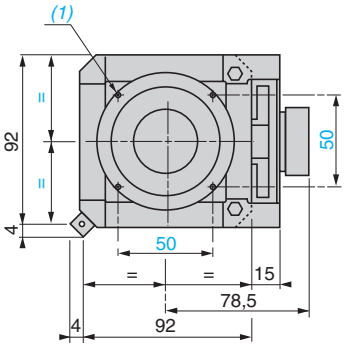


		b1	b2
XKB A, XKB E	**with size 15 (3 W) potentiometer**	129…134	75
	with size 18 (4 W) potentiometer	129…134	80

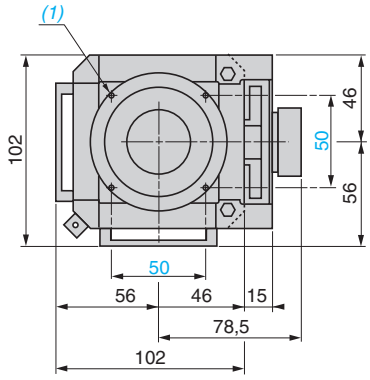
(1) Fixing by 4 M5 screws.

Note: *the size 18 potentiometer adaptation on an XKB controller prevents it from being mounted in an XJP controller station.*

4-contact block

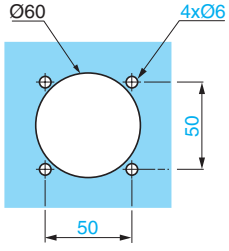


4-contact block + 1 zero position contact



Panel cut-out

thickness 1 to 6 mm



Presentation: page 6/70
Characteristics: page 6/71
Order form: pages 6/72 and 6/73

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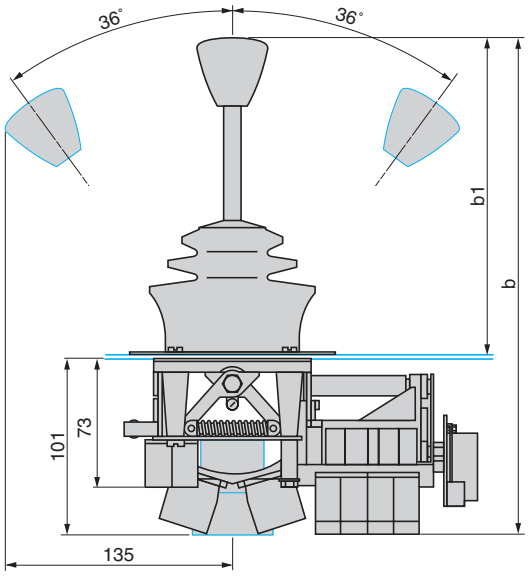
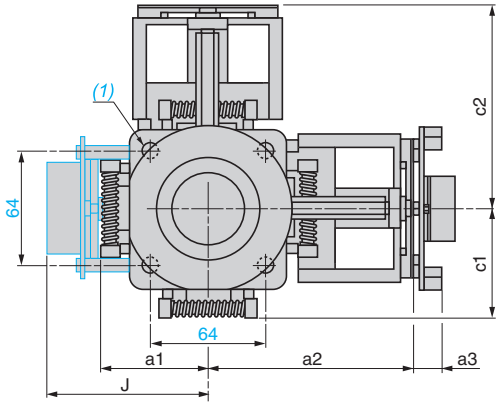
Controllers
For “medium hoisting” applications, type **XKD**

XKD F



		b	b1
XKD F	with short lever	288	181…186
	with long lever	338	236…241



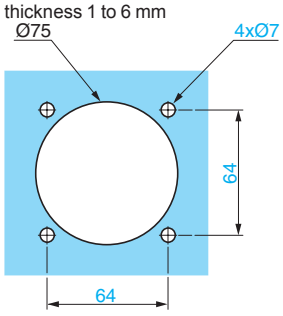
		a1	a2	c1	c2
XKD F	with 2 contacts	52	–	52	–
	with 2 contacts + spring return to zero	65	–	65	–
	with 4 contacts	–	90	–	90
	with 8 contacts	–	120	–	120

		J	a3
Adaptation for potentiometer	size 15 (3 W)	83.5	24.5
	size 18 (4 W)	85.5	26.5

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



6

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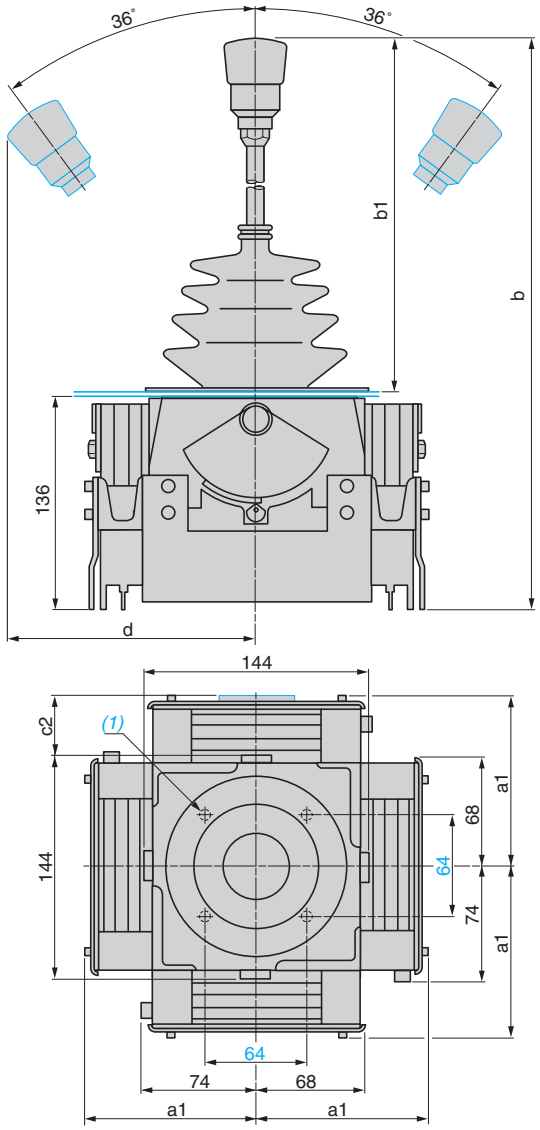
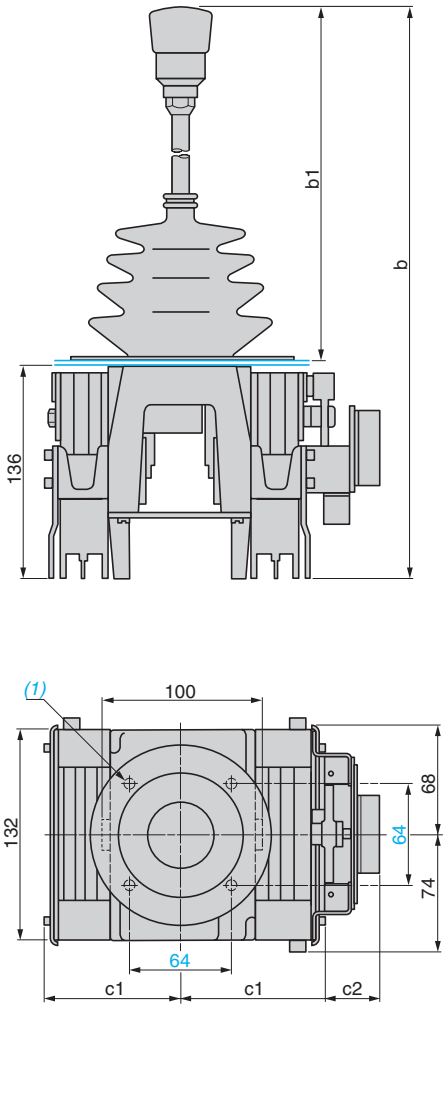
Controllers
For “heavy hoisting” applications, type **XKM**

XKM A



XKM B



		b	b1	d
XKM A, XKM B	**with short lever**	322	180 to 185	125
	with long lever	392	230 to 235	125

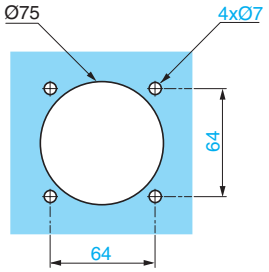
		a1	c1
XKM A, XKM B	**with 4 contacts**	110	88
	with 8 contacts	140	118
	with 12 contacts	170	148

		c2
Adaptation for potentiometer	**size 15 (3 W)**	37.5
	size 18 (4 W)	44.5

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



Presentation: page 6/84
Characteristics: page 6/85
Order form: pages 6/86 and 6/87

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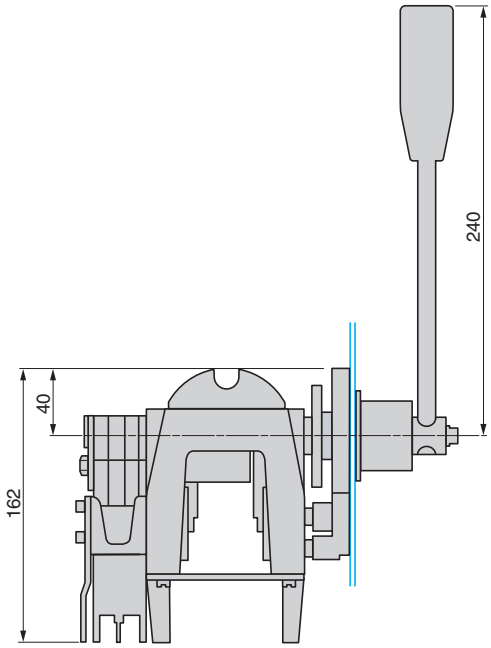
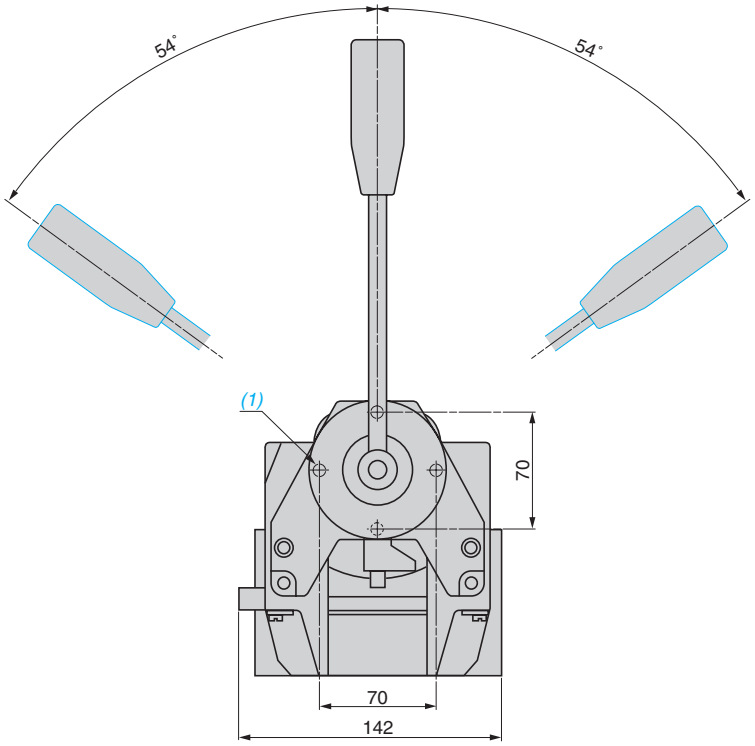
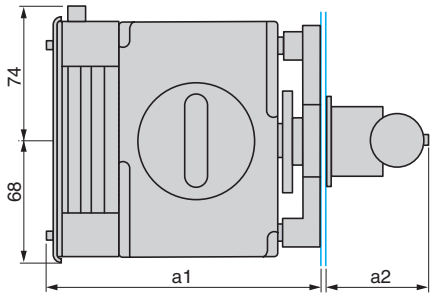
XKM C





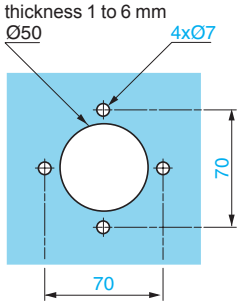


		a1	a2
XKM C	**with 4 contacts**	157	36 to 41
	with 8 contacts	187	36 to 41
	with 12 contacts	217	36 to 41

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



Presentation: page 6/84
Characteristics: page 6/85
Order form: pages 6/86 and 6/87

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Controllers

Potentiometers for controllers

For standard applications, type **XKZ A**

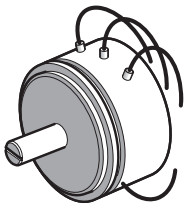
Mechanical characteristics

Potentiometer type	XKZ A15●●●	XKZ A18●●●
Size	15	18
Mounting method	By the body (“synchro” type)	
Rotational operation	Continuous	
Function	Linear (1% resolution)	
Operating angle	360°	
Mechanical durability (in millions of operating cycles)	3	1

Electrical characteristics

Centre tap	Wired out to terminal	
Dead zone around centre tap point (neutral zone)	2° ± 1°	
Nominal power (Pn)	3 W at 85 °C	4 W at 85 °C
Connections	Flying leads from soldered standard tags	

References



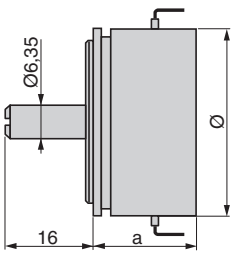
XKZ A1●●●●

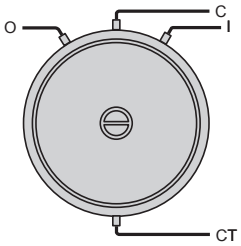
Resistance value Ω	Availability	Size	Reference	Weight kg
4700 (2 x 2350)	Stock item	15	**XKZ A15047**	0.060
	Short delivery	18	**XKZ A18047**	0.060
1000 (2 x 500)	Short delivery	15	**XKZ A15010**	0.060
	On demand	18	**XKZ A18010**	0.060
2200 (2 x 1100)	Short delivery	15	**XKZ A15022**	0.060
	On demand	18	**XKZ A18022**	0.060
10,000 (2 x 5000)	Stock item	15	**XKZ A15100**	0.060
	On demand	18	**XKZ A18100**	0.060
Other values	On demand	15	**XKZ A15000** *(1)*	0.060
	On demand	18	**XKZ A18000** *(1)*	0.060

(1) When ordering an XKZ A15000 or XKZ A18000, the total resistance value must be stated. The other characteristics are the same.

6

Dimensions

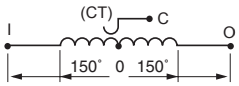




The pinion included with the adaptation simply clamps onto the potentiometer operating shaft (diameter 6.35 mm, length 16 mm).

	a	Ø
XKZ A15●●●	20	36.5
XKZ A18●●●	27	44.45

Connection



I = yellow
O = green
C = red
CT = black

For reference only. www.fengshengelectric.com.sg

Controllers

Potentiometers for controllers

For applications requiring an extended "neutral zone", types **XKB Z** and **XKD Z**

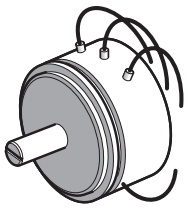
Mechanical characteristics

Potentiometer type	XKB Z15●●, XKD Z15●●	XKB Z18●●, XKD Z18●●
Size	15	18
Conformity to standards	UTE 93265	
Mounting method	By the body ("synchro" type)	
Rotational operation	Continuous	
Function	Linear (1% resolution)	
Operating angle	360°	
Mechanical durability (in millions of operating cycles)	3	1

Electrical characteristics

Centre tap	Wired out to terminal	
Dead zone around centre tap point (neutral zone)	40°, mainly for use with controllers XKB 30°, mainly for use with controllers XKD and XKM	
Nominal power (Pn)	3 W at 85 °C	4 W at 85 °C
Connections	Flying leads from soldered standard tags	

References



XKB Z1●●●, XKD Z1●●●

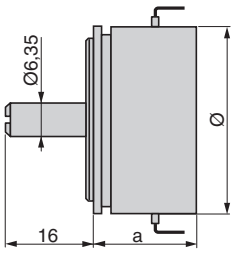
Potentiometers for controllers XKB

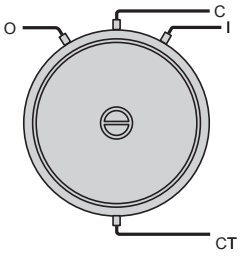
Resistance value Ω	Availability	Size	Reference	Weight kg
4700 (2 x 2350)	On demand	15	**XKB Z1547**	0.055
	On demand	18	**XKB Z1847**	0.065
800 (2 x 400)	On demand	15	**XKB Z1508**	0.055
	On demand	18	**XKB Z1808**	0.065

Potentiometers for controllers XKD and XKM

4700 (2 x 2350)	Stock item	15	**XKD Z1547**	0.055
	On demand	18	**XKD Z1847**	0.065
800 (2 x 400)	On demand	15	**XKD Z1508**	0.055
	On demand	18	**XKD Z1808**	0.065

Dimensions



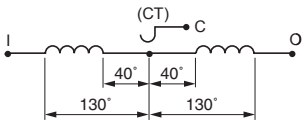


The pinion included with the adaptation simply clamps onto the potentiometer operating shaft (diameter 6.35 mm, length 16 mm).

	a	Ø
XKB Z15●●, XKD Z15●●	20	36.5
XKB Z18●●, XKD Z18●●	27	44.45

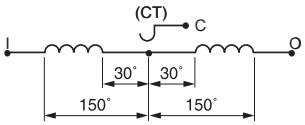
Connections

XKB Z15●●, XKB Z18●●



I = yellow
O = green
C = red
CT = black

XKD Z15●●, XKD Z18●●



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C = red
CT = black

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7 - Services

Technical information

- Protective treatment of equipment according to climatic environment . . . *page 7/2*
- Product standards and certification . . . . . *page 7/4*
- Degrees of protection provided by enclosures . . . . . *page 7/6*

Index

- Product reference index . . . . . *page 7/8*

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Technical information
Protective treatment of equipment according to climatic environment

Depending on the climatic and environmental conditions in which the equipment is placed, Schneider Electric can offer specially adapted products to meet your requirements.

In order to make the correct choice of protective finish, two points should be remembered:
- the prevailing climate of the country is never the only criterion,
- only the atmosphere in the immediate vicinity of the equipment need be considered.

All climates treatment "TC"

This is the standard treatment for Schneider-electric brand equipment and is suitable for the vast majority of applications. It is the equivalent of treatments described as "Klimafest", "Climateproof".
In particular, it meets the requirements specified in the following publications:
- Publication UTE C 63-100 (method I), successive cycles of humid heat at:
+ 40 °C and 95 % relative humidity.
- DIN 50016 - Variations of ambient conditions within a climatic chamber:
+ 23 °C and 83 % relative humidity,
+ 40 °C and 92 % relative humidity.

It also meets the requirements of the following marine classification societies:
BV-LR-GL-DNV-RINA.

Characteristics

- Steel components are usually treated with zinc. When they have a mechanical function, they may also be painted.
- Insulating materials are selected for their high electrical, dielectric and mechanical characteristics.
- Metal enclosures have a stoved paint finish, applied over a primary phosphate protective coat, or are galvanised (e.g. some prefabricated busbar trunking components).

Limits for use of "TC" (All climates) treatment

- "TC" treatment is suitable for the following temperatures and humidity:

Temperature (°C)	**Relative humidity** (%)
20	95
40	80
50	50

"TC" treatment is therefore suitable for all latitudes and in particular tropical and equatorial regions where the equipment is mounted in normally ventilated industrial premises. Being sheltered from external climatic conditions, temperature variations are small, the risk of condensation is minimised and the risk of dripping water is virtually non-existent.

Extension of use of "TC" (All climates) treatment

In cases where the humidity around the equipment exceeds the conditions described above, or in equatorial regions if the equipment is mounted outdoors, or if it is placed in a very humid location (laundries, sugar refineries, steam rooms, etc.), "TC" treatment can still be used if the following precautions are taken:
- The enclosure in which the equipment is mounted must be protected with a "TH" finish (see next page) and must be well ventilated to avoid condensation and dripping water (e.g. enclosure base plate mounted on spacers).
- Components mounted inside the enclosure must have a "TC" finish.
- If the equipment is to be switched off for long periods, a heater must be provided (0.2 to 0.5 kW per square decimetre of enclosure), that switches on automatically when the equipment is turned off. This heater keeps the inside of the enclosure at a temperature slightly higher than the outside surrounding temperature, thereby avoiding any risk of condensation and dripping water (the heat produced by the equipment itself during normal running is sufficient to provide this temperature difference).
- Special considerations for "Operator dialog" and "Detection" products:
for certain pilot devices, the use of "TC" treatment can be extended to outdoor use provided their enclosure is made of light alloys, zinc alloys or plastic material. In this case, it is also essential to ensure that the degree of protection against penetration of liquids and solid objects is suitable for the applications involved.

For reference only. www.fengshengelectric.com.sg

Technical information
Protective treatment of equipment according to climatic environment

"TH" treatment for hot and humid environments

This treatment is suitable for hot and humid atmospheres where installations are regularly subject to condensation, dripping water and the risk of fungi.

In addition, plastic insulating components are resistant to attacks from insects such as termites and cockroaches. These properties have often led to this treatment being described as "Tropical Finish", but this does not mean that all equipment installed in tropical and equatorial regions must systematically have undergone "TH" treatment. On the other hand, certain operating conditions in temperate climates may well require the use of "TH" treated equipment (see limitations for use of "TC" treatment).

Special characteristics of "TH" treatment

■ All insulating components are made of materials which are either resistant to fungi or treated with a fungicide, and which have increased resistance to creepage (Standards IEC 60112, NF C 26-220, DIN 5348).

■ Metal enclosures receive a top-coat of stoved, fungicidal paint, applied over a rust inhibiting undercoat. Components with "TH" treatment may be subject to a surcharge *(1)*. Please consult your Regional Sales Office.

Protective treatment selection guide

Surrounding environment	Duty cycle	Internal heating of enclosure when not in use	Type of climate	Protective treatment of equipment	Protective treatment of enclosure
Indoors					
No dripping water or condensation	Unimportant	Not necessary	Unimportant	"TC"	"TC"
Presence of dripping water or condensation	Frequent switching off for periods of more than 1 day	No	Temperate	"TC"	"TH"
			Equatorial	"TH"	"TH"
		Yes	Unimportant	"TC"	"TH"
	Continuous	Not necessary	Unimportant	"TC"	"TH"
Outdoors (sheltered)					
No dripping water or dew	Unimportant	Not necessary	Temperate	"TC"	"TC"
			Equatorial	"TH"	"TH"
Exposed outdoors or near the sea					
Frequent and regular presence of dripping water or dew	Frequent switching off for periods of more than 1 day	No	Temperate	"TC"	"TH"
			Equatorial	"TH"	"TH"
		Yes	Unimportant	"TC"	"TH"
	Continuous	Not necessary	Unimportant	"TC"	"TH"

These treatments cover, in particular, the applications defined by methods I and II of guide UTE C 63-100.

Special precautions for electronic equipment

Electronic products always meet the requirements of "TC" treatment. A number of them are "TH" treated as standard.

Some electronic products (for example: programmable controllers, flush mountable controllers CCX and flush mountable operator terminals XBT) require the use of an enclosure providing a degree of protection to at least IP 54, as defined by standards IEC 60664 and NF C 20 040, for use in industrial applications or in environmental conditions requiring "TH" treatment.

These electronic products, including flush mountable products, must have a degree of protection to at least IP 20 (provided either by their own enclosure or by their installation method) for restricted access locations where the degree of pollution does not exceed 2 (a test booth not containing machinery or other dust producing activities, for example).

Special treatments

For particularly harsh industrial environments, Schneider Electric is able to offer special protective treatments. Please consult your Regional Sales Office.

(1) A large number of the Schneider-electric brand products are "TH" treated as standard and are, therefore, not subject to a surcharge.

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Technical information
Product standards and certifications

Standardisation

Conformity to standards

Schneider Electric products satisfy, in the majority of cases, national (for example: BS in Great Britain, NF in France, DIN in Germany), European (for example: CENELEC) or international (IEC) standards. These product standards precisely define the performance of the designated products (such as IEC 60947 for low voltage equipment).
When used correctly, as designated by the manufacturer and in accordance with regulations and correct practices, these products will allow users to build equipment, machine systems or installations that conform to their appropriate standards (for example: IEC 60204-1, relating to electrical equipment used on industrial machines).
Schneider Electric is able to provide proof of conformity of its production to the standards it has chosen to comply with, through its quality assurance system.
On request, and depending on the situation, Schneider Electric can provide the following:
- a declaration of conformity,
- a certificate of conformity (ASEFA/LOVAG),
- a homologation certificate or approval, in the countries where this procedure is required or for particular specifications, such as those existing in the merchant navy.

Code	Certification authority		Country
	Name	Abbreviation	
ANSI	American National Standards Institute	ANSI	USA
BS	British Standards Institution	BSI	Great Britain
CEI	Comitato Elettrotecnico Italiano	CEI	Italy
DIN/VDE	Verband Deutscher Electrotechniker	VDE	Germany
EN	Comité Européen de Normalisation Electrotechnique	CENELEC	Europe
GOST	Gosudarstvenne Komitet Standartov	GOST	Russia
IEC	International Electrotechnical Commission	IEC	Worldwide
JIS	Japanese Industrial Standards Committee	JISC	Japan
NBN	Institut Belge de Normalisation	IBN	Belgium
NEN	Nederlands Normalisatie Institut	NNI	Netherlands
NF	Union Technique de l'Electricité	UTE	France
SAA	Standards Association of Australia	SAA	Australia
UNE	Asociacion Española de Normalizacion y Certificacion	AENOR	Spain

European EN standards

These are technical specifications established in conjunction with, and with approval of, the relative bodies within the various CENELEC member countries (European Union, European Free Trade Association and many central and eastern European countries having «member» or «affiliated» status). Prepared in accordance with the principle of consensus, the European standards are the result of a weighted majority vote. Such adopted standards are then integrated into the national collection of standards, and contradictory national standards are withdrawn.
European standards incorporated within the French collection of standards carry the prefix NF EN. At the 'Union Technique de l'Electricité' *(Technical Union of Electricity)* (UTE), the French version of a corresponding European standard carries a dual number: European reference (NF EN …) and classification index (C …).
Therefore, the standard NF EN 60947-4-1 relating to motor contactors and starters, effectively constitutes the French version of the European standard EN 60947-4-1 and carries the UTE classification C 63-110.
This standard is identical to the British standard BS EN 60947-4-1 or the German standard DIN EN 60947-4-1.
Whenever reasonably practical, European standards reflect the international standards (IEC).
With regard to automation system components and distribution equipment, in addition to complying with the requirements of French NF standards, Schneider Electric brand components conform to the standards of all other major industrial countries.

Regulations

European Directives

Opening up of European markets assumes harmonisation of the regulations pertaining to each of the member countries of the European Union.
The purpose of the European Directive is to eliminate obstacles hindering the free circulation of goods within the European Union, and it must be applied in all member countries. Member countries are obliged to transcribe each Directive into their national legislation and to simultaneously withdraw any contradictory regulations. The Directives, in particular those of a technical nature which concern us, only establish the objectives to be achieved, referred to as "essential requirements".
The manufacturer must take all the necessary measures to ensure that his products conform to the requirements of each Directive applicable to his production.
As a general rule, the manufacturer certifies conformity to the essential requirements of the Directive(s) for his product by affixing the CE mark.
The CE mark is affixed to Schneider Electric brand products concerned, in order to comply with French and European regulations.

Significance of the CE mark
- The CE mark affixed to a product signifies that the manufacturer certifies that the product conforms to the relevant European Directive(s) which concern it; this condition must be met to allow free distribution and circulation within the countries of the European Union of any product subject to one or more of the E.U. Directives.
- The CE mark is intended solely for national market control authorities.
- The CE mark must not be confused with a conformity marking.

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Technical information
Product standards and certifications

European Directives (continued)

For electrical equipment, only conformity to standards signifies that the product is suitable for its designated function, and only the guarantee of an established manufacturer can provide a high level of quality assurance.
For Schneider Electric brand products, one or several Directives are likely to be applicable, depending on the product, and in particular:

- the Low Voltage Directive 2006/95/EC: the CE mark relating to this Directive has been compulsory since 16th January 2007.
- the Electromagnetic Compatibility Directive 89/336/EEC, amended by Directives 92/31/EEC and 93/68/EEC: the CE mark on products covered by this Directive has been compulsory since 1st January 1996.

ASEFA-LOVAG certification

The function of ASEFA (Association des Stations d'Essais Française d'Appareils électriques - *Association of French Testing Stations for Low Voltage Industrial Electrical Equipment)* is to carry out tests of conformity to standards and to issue certificates of conformity and test reports.
ASEFA laboratories are authorised by the French authorisation committee (COFRAC).
ASEFA is now a member of the European agreement group LOVAG (Low Voltage Agreement Group). This means that any certificates issued by LOVAG/ASEFA are recognised by all the authorities which are members of the group and carry the same validity as those issued by any of the member authorities.

Quality labels

When components can be used in domestic and similar applications, it is sometimes recommended that a "Quality label" be obtained, which is a form of certification of conformity.

Code	Quality label	Country
CEBEC	Comité Electrotechnique Belge	Belgium
KEMA-KEUR	Keuring van Electrotechnische Materialen	Netherlands
NF	Union Technique de l'Electricité	France
ÖVE	Österreichischer Verband für Electrotechnik	Austria
SEMKO	Svenska Electriska Materiel Kontrollanatalten	Sweden

Product certifications

In some countries, the certification of certain electrical components is a legal requirement. In this case, a certificate of conformity to the standard is issued by the official test authority.
Each certified device must bear the relevant certification symbols when these are mandatory:

Code	Certification authority	Country
CSA	Canadian Standards Association	Canada
UL	Underwriters Laboratories	USA
CCC	China Compulsory Certification	China

Note on certifications issued by the Underwriters Laboratories (UL). There are two levels of approval:

"Recognized" ( ) The component is fully approved for inclusion in equipment built in a workshop, where the operating limits are known by the equipment manufacturer and where its use within such limits is acceptable by the Underwriters Laboratories.
The component is not approved as a "Product for general use" because its manufacturing characteristics are incomplete or its application possibilities are limited.
A "Recognized" component does not necessarily carry the certification symbol.

"Listed" (UL) The component conforms to all the requirements of the classification applicable to it and may therefore be used both as a "Product for general use" and as a component in assembled equipment. A "Listed" component must carry the certification symbol.

Marine classification societies

Prior approval (= certification) by certain marine classification societies is generally required for electrical equipment which is intended for use on board merchant vessels.

Code	Classification authority	Country
BV	Bureau Veritas	France
DNV	Det Norske Veritas	Norway
GL	Germanischer Lloyd	Germany
LR	Lloyd's Register	Great Britain
NKK	Nippon Kaiji Kyokaï	Japan
RINA	Registro Italiano Navale	Italy
RRS	Register of Shipping	Russia

Note

For further details on a specific product, please refer to the "Characteristics" pages in this catalogue or consult your Regional Sales Office.

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Technical information
Degrees of protection provided by enclosures
IP code

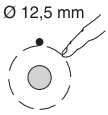
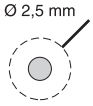
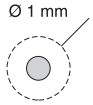
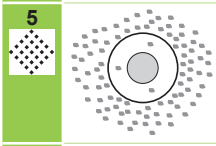
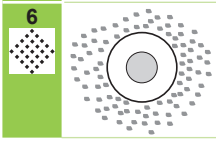
Degrees of protection against the penetration of solid bodies, water and personnel access to live parts

The European standard EN 60529 dated October 1991, IEC publication 529 (2nd edition - November 1989), defines a coding system (IP code) for indicating the degree of protection provided by electrical equipment enclosures against accidental direct contact with live parts and against the ingress of solid foreign objects or water.
This standard does not apply to protection against the risk of explosion or conditions such as humidity, corrosive gasses, fungi or vermin.
Certain equipment is designed to be mounted on an enclosure which will contribute towards achieving the required degree of protection (example : control devices mounted on an enclosure).
Different parts of an equipment can have different degrees of protection (example : enclosure with an opening in the base).
Standard NF C 15-100 (May 1991 edition), section 512, table 51 A, provides a cross-reference between the various degrees of protection and the environmental conditions classification, relating to the selection of equipment according to external factors.
Practical guide UTE C 15-103 shows, in the form of tables, the characteristics required for electrical equipment (including minimum degrees of protection), according to the locations in which they are installed.

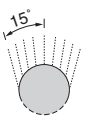
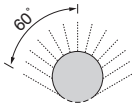
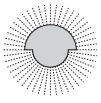
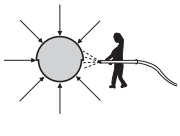
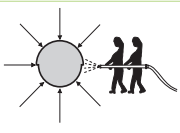
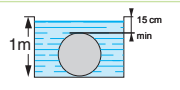
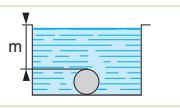
IP ●●● code

The IP code comprises **2 characteristic numerals** (e.g. **IP 55**) and may include **an additional letter** when the actual protection of personnel against direct contact with live parts is better than that indicated by the first numeral (e.g. IP 20C).
Any characteristic numeral which is unspecified is replaced by an X (e.g. IP XXB).

1st characteristic numeral:
corresponds to protection of the equipment against penetration of solid objects and protection of personnel against direct contact with live parts.

	Protection of the equipment		Protection of personnel
0	Non-protected		Non-protected
1		Protected against the penetration of solid objects having a diameter greater than or equal to 50 mm	Protected against direct contact with the back of the hand (accidental contacts).
2		Protected against the penetration of solid objects having a diameter greater than or equal to 12.5 mm.	Protected against direct finger contact.
3		Protected against the penetration of solid objects having a diameter greater than or equal to 2.5 mm.	Protected against direct contact with a Ø 2.5 mm tool.
4		Protected against the penetration of solid objects having a diameter greater than or equal to 1 mm.	Protected against direct contact with a Ø 1 mm wire.
5		Dust protected (no harmful deposits).	Protected against direct contact with a Ø 1 mm wire.
6		Dust tight.	Protected against direct contact with a Ø 1 mm wire.

2nd characteristic numeral:
corresponds to protection of the equipment against penetration of water with harmful effects.

0	Non-protected	
1		Protected against vertical dripping water, (condensation).
2		Protected against dripping water at an angle of up to 15°.
3		Protected against rain at an angle of up to 60°.
4		Protected against splashing water in all directions.
5		Protected against water jets in all directions.
6		Protected against powerful jets of water and waves.
7		Protected against the effects of temporary immersion.
8		Protected against the effects of prolonged immersion under specified conditions.

Additional letter:
corresponds to protection of personnel against direct contact with live parts.

A	With the back of the hand.
B	With the finger.
C	With a Ø 2.5 mm tool.
D	With a Ø 1 mm wire.

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Technical information
Degrees of protection provided by enclosures
IK code

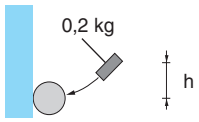
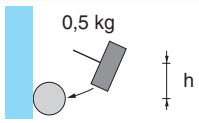
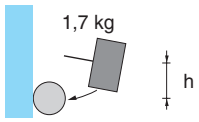
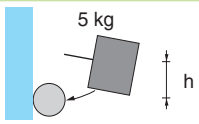
Degrees of protection against mechanical impact

The European standard EN 50102 dated March 1995 defines a coding system (IK code) for indicating the degree of protection provided by electrical equipment enclosures against external mechanical impact.
Standard NF C 15-100 (May 1991 edition), section 512, table 51 A, provides a cross-reference between the various degrees of protection and the environmental conditions classification, relating to the selection of equipment according to external factors.
Practical guide UTE C 15-103 shows, in the form of tables, the characteristics required for electrical equipment (including minimum degrees of protection), according to the locations in which they are installed.

IK ●● code

The IK code comprises **2 characteristic numerals** (e.g. **IK 05**).

2 characteristic numerals:
corresponding to a value of impact energy.

		h (cm)	Energy (J)
00	Non-protected		
01		7.5	0.15
02		10	0.2
03		17.5	0.35
04		25	0.5
05		35	0.7
06		20	1
07		40	2
08		30	5
09		20	10
10		40	20

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Control and signalling components

2011