

# 56 Series™

Industrial Switchgear



**Schneider**  
Electric

Providing the strength,  
reliability and  
durability demanded  
of today's industry



**The Power behind today's industry** . . . . . 2

- Introduction
- Plastic Comparison
- Chemical Comparison
- 56 Series Modules
- 56 Series Plugs



**Combination Switched Socket Outlets** . . . . . 8

- Versions From 250V 10A to 500V 50A
- Factory Wired Internal Phase Connections
- Includes Dustproof & Hoseproof Flap



**Surface Socket Outlets** . . . . . 9

- 1 Phase & 3 Phase Sockets



**Surface Switches** . . . . . 10

- 1 Pole - 4 Pole
- 10A - 63A
- 250V Single & 2 Way Switches



**Push-Button Control Stations** . . . . . 12

- Start, Stop, Start/Stop Control Station
- Emergency Control Stations
- Mushroom Button Control Station



**Sunset Switches** . . . . . 13

- Sunset Switches Premium
- Sunset Switches Economy



**Angle & Straight Plugs** . . . . . 15

- 56P - 56PA



**Special Combinations & Modules** . . . . . 17

- Switched Sockets & Modules



**Mounting Enclosures (Back Boxes)** . . . . . 18

- Back Boxes
- Bridges



**Mounting Enclosure Lids (Covers)** . . . . . 20

- Lids
- Pre-Drilled Mounting Enclosure Lids



**Switchgear Cover Assemblies** . . . . . 21

- DIN Rail Accessory Mounting Cover Kits



**Adaptable Enclosures** . . . . . 22

- Adaptable Enclosures & Enclosure Covers
- Junction Boxes
- Two Aperture Enclosure
- Flush Surrounds

**Technical Section** . . . . . 24

- Lloyd's Register of Shipping Approvals
- Plug Configurations
- Socket Configurations
- International Protection Ratings
- Technical Terms
- Technical Tables
- Common Conversion Factors
- Wiring Diagram Types
- Numerical Index





## The Power behind today's industry

Designed to satisfy customer needs, precisely engineered and carefully manufactured, Schneider Electric Industrial Switchgear is as versatile as your requirements. The 56 Series is suitable for heavy industrial environments with five different protection capabilities – Hose Proof, Dust Proof, Crash Proof, UV Resistance and Chemical Resistance.

### Hose Proof and Dust Proof

The 56 Series has been tested for protection against ingress of water and dust to at least International Protection Rating IP56, and in many instances exceeds this level of protection.

When plugs are removed, the socket flap automatically locks into place, preventing dust or water from entering

### Crash Proof

The 56 Series, being one of the most important components of industry, has to be tough, safe, and able to take hard knocks and give reliable performance under many adverse conditions.



### UV Resistance and Chemical Resistance

Most products in the 56 Series are available in light grey UV stabilised rigid polycarbonate. The light grey series has excellent strength compared to other compatible plastic products, which are ideal for most applications.

For those environments where harsh chemicals are used Schneider Electric offers an option of chemical resistant orange (RO), which offers resistance to a wide range of chemical types. It is ideal for corrosive and industrial chemicals, animal fats, oils, solvents and lubricants. It is suitable for indoor and outdoor applications, such as chemical plants, timber and paper processing plants and laboratories.

All Schneider Electric 56 Series Enclosures are manufactured from robust UV stabilised PVC and can be solvent bonded to standard electrical PVC conduit accessories.

To make selection of the correct product, we provide the Plastic Comparison Chart (page 4) and Chemical Comparison Chart (page 5) as a guide.

### Designed to Mix and Match

What suits one industry might not be the perfect match for another. That's why the 56 Series was specially designed to mix and match. There is an extensive choice of modules available, including switches, sockets, photo electrical cells and residual current devices.

Schneider Electric mounting enclosures range in size from 1 to 4 gangs. This allows assemblies to be customized – from a simple switch station to a large electrical control panel.

The introduction of transparent materials to the 56 Series enables the inspection and checking of the components pin/socket configuration and wiring at a glance, while still providing protection against the elements. The aesthetic appearance of the 56 Series makes it the ideal choice for installation in commercial facilities such as television studios, shopping centers and warehouses. What's more, the 56 Series offers are also used alongside a public or domestic swimming pool.

### Standards

Pin configurations for plugs, sockets and switched socket outlets comply with AS/NZS3123 and switches with appropriate parts of AS/NZS3947.3 & AS/NZS3133.

# Plastic Comparisons

## Plastic Comparison Chart

Applications	Standard Grey & Electric Orange	Resistant Orange & White
Outdoor use - mechanical properties	A	A
Outdoor use - colour properties	B	B
Indoor use	A	A
Saltwater environments	A	A
Thermal properties	A	A
Lightweight	A	A
High rigidity	B	B
Impact resistant	A	B

This table should be used as a guide only. Any end user should test to evaluate the suitability of any chemical with any plastic.

A - EXCELLENT Recommended; no adverse effects after extended exposure.  
 B - GOOD Acceptable, minimal loss of mechanical properties after long periods of exposure.  
 C - FAIR Marginal acceptability; loss of mechanical properties after long periods of exposure.  
 D - POOR Not recommended for use.



## Chemical Comparison Chart

Product Type (colour)	All Mounting Enclosures (ie Back Box)	Grey Transparent Covers and Plugs	Resistant Orange (RO) Covers and Plugs
<b>Acids</b>			
<b>Weak Solutions</b>			
Hydrochloric 10%	A	A	A
Nitric 10% Concentrate	A	A	A
Sulphuric 100%	A	D	D
<b>Alkalis</b>			
<b>Weak Solutions</b>			
Sodium Hydroxide 10% (Caustic Soda)	A	D	B
<b>Concentrate</b>			
Potassium Hydroxide 100%	A-B	D	D
<b>Automotive</b>			
Petroleum	A	D	A
Lubricating Oils		D	A
Hydraulic Oil		D	A
<b>Solvents</b>			
<b>Aliphatic Hydrocarbons (Alkanes)</b>			
Methane	B	A	A
Propane	A	A	A
<b>Alcohols</b>			
Ethylene Glycol	A	A	A
Glycerol (Glycerin)	A	C	B
Methyl Alcohol (Methanol)	A	D	B
Ethyl Alcohol (Ethanol)	A	A	A
<b>Amines</b>			
Aniline	D	D	D
<b>Aromatic Hydrocarbons</b>			
Methyl Benzene	D	D	B
Xylene	D	D	B
<b>Ethers</b>			
Dimethyl Ethyl	A	A	A
<b>Ketones</b>			
Acetone	A	D	C
Acetophenone	D	D	C
Ethyl Methyl Ketone	D	D	C
<b>Miscellaneous</b>			
Detergent	A	A	A
<b>Inorganic Salts</b>			
Magnesium Sulphate	A	A	A
<b>Oxidising Agents</b>			
<b>Weak Solution</b>			
Sodium Hypochlorite 5%	A	A	A
<b>Strong Solution</b>			
Hydrogen Peroxide 30%	A	A	A
<b>Water</b>			
Ambient	A	A	A
Hot >60°C	C	A	B
Steam	D	D	D

This table should be used as a guide only. Any end user should test to evaluate the suitability of any chemical with any plastic.

A - EXCELLENT

Recommended; no adverse effects after extended exposure.

C - FAIR

Marginal acceptability; loss of mechanical properties after long periods of exposure.

B - GOOD

Acceptable; minimal loss of mechanical properties after long periods of exposure.

D - POOR

Not recommended for use.

# 56 Series Modules

Designed to mix and match and packed with features designed to outperform all other protected accessories

Modular system with 1 to 4 gang arrangements to satisfy your every need.

Captive stainless steel combination head fixings for corrosion resistance and effortless installation.

8mm Padlock ON/OFF facility.

Rotary ON/OFF switch.

Permanent laser engraved ratings and specifications are durable & clearly displayed.

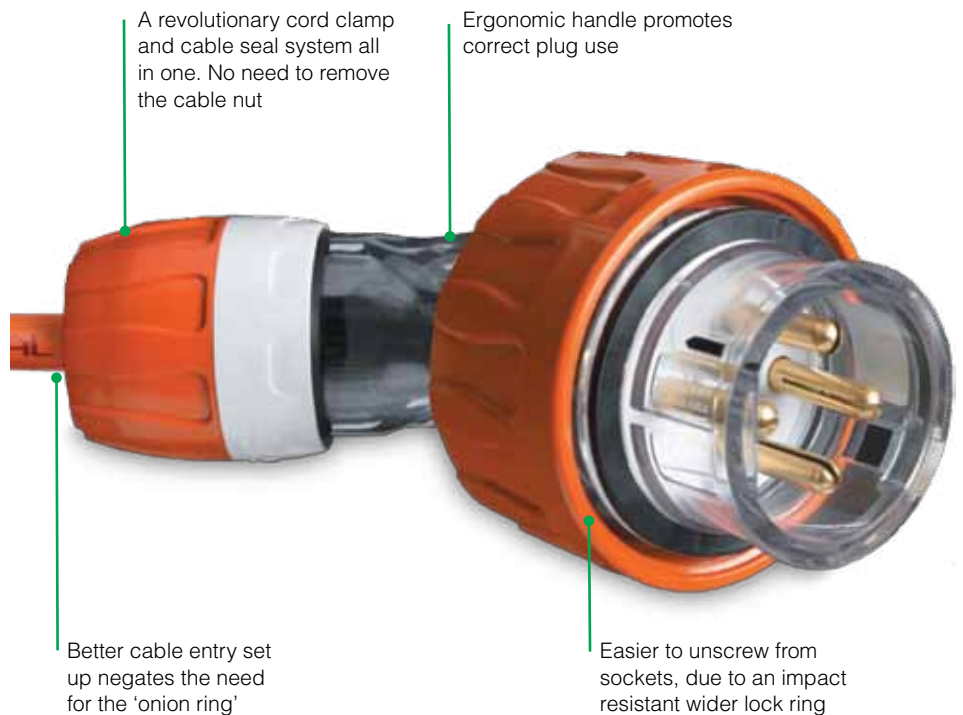
Redesigned transparent socket cover for improved visibility, strength & accessibility.

Larger and easy-to-use latch design. Socket cover automatically closes to ensure IP rating is maintained. Padlocking option available.





Schneider Electric 56 Series Industrial Switchgear has a long standing history as being the toughest, most trusted industrial switchgear on the Asian market. This legacy has been carried on with new range of industrial plugs and socket connectors.



A revolutionary cord clamp and cable seal system all in one. No need to remove the cable nut

Ergonomic handle promotes correct plug use

Better cable entry set up negates the need for the 'onion ring'

Easier to unscrew from sockets, due to an impact resistant wider lock ring

## Snap Shut Bodies

Screw-less assembly using a 'latching' spring allows for speed, simplicity, product strength and improved reliability.

The 'latching' spring clip stays down once it is pressed, so it is just a simple 'press and switch'. The spring clip, when shut, does not exert any stress on the housings, resulting in a stronger body and sleeve connection.

### To Open

1. Look for padlock and arrow icons
2. Align grey band to locked position
3. Insert driver and push down firmly
4. Align grey band to unlocked position
5. Twist body left only

### To Close

1. Look for padlock and arrow icons
2. Align grey band to unlocked position
3. Insert driver and push down firmly
4. Align grey band to locked position
5. Twist body right only



# Combination Switched Socket Outlets



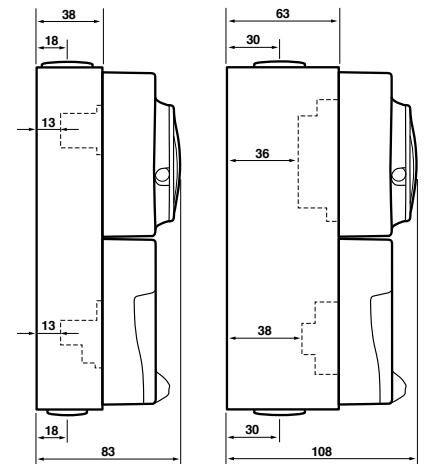
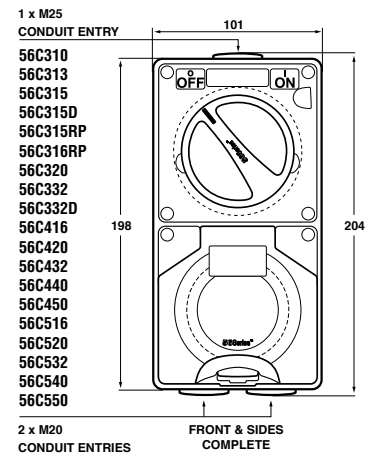
**56C313GY**

The Schneider Electric range of three phase combinations includes two module units. All internal phase connections between switches and sockets are factory wired.

Combination sockets feature a clear dustproof and hoseproof flap with a snap catch latch. Both the superseded non IP56 plain plugs and the current IP66 retention ring plugs can be accommodated.

Earth and neutral connectors accommodating 3 x 6mm<sup>2</sup> cables are supplied with 500V models.

Dimensional Drawings



## TWO PIECE

Catalogue Number	No. of switch poles	I <sub>th</sub> (Amp)	U <sub>i</sub> / U <sub>e</sub> (Volt)	I <sub>e</sub> (A) Utilisation Category			M Rating	Number of Sockets	Cond. Term Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)	Matching Plug Straight	Matching Plug Angle	Socket Config
				AC21A	AC22A	AC23A			Min.	Max/Cond.					
56C310	1 Pole	10A	250V	10	8	8	M80	3 Flat	1.5	6	66	204x101x83	56P310		A
56C313	1 Pole	13A	250V				M100	3 Flat	1.5	6	66	204x101x83	56P313	56PA313	
56C313/2	1 Pole	13A	250V				M100	3 Flat x 2	1.5	6	66	204x196x83	56P313	56PA313	
56C315	1 Pole	15A	250V	15	10	8	M80	3 Flat	1.5	6	66	204x101x83	56P315		B
56C315D	2 Pole	15A	250V	15	15	15	M120	3 Flat double pole	1.5	6	66	204x101x108	56P315		B
56C315RP	1 Pole	15A	250V					3 Round	1.5	6	66	204x101x83	56P315RP	56PA315RP	
56C316RP	1 Pole	16A	250V					3 Round	1.5	6	66	204x101x83	56P316RP	56PA316RP	
56C320	1 Pole	20A	250V	20	20	21	M150	3 Round	2.5	6	66	204x101x108	56P320	56PA320	H
56C332	1 Pole	32A	250V	32	32	28	M180	3 Round	6	16	66	204x101x108	56P332	56PA332	I
56C332D	2 Pole	32A	250V					3 Round	2.5	10	66		56P332	56PA332	
56C416	3 Pole	16A	500V					4 Round	1.5	6	66	204x101x83	56P416	56PA416	
56C420	3 Pole	20A	500V	20	20	21	M150	4 Round	2.5	6	66	204x101x108	56P420	56PA420	L
56C432	3 Pole	32A	500V	32	32	28	M180	4 Round	4	16	66	204x101x108	56P432	56PA432	N
56C440	3 Pole	40A	500V	40	40	35	M200	4 Round	10	16	66	204x101x108	56P440	56PA440	O
56C450	3 Pole	50A	500V	50	50	35	M250	4 Round	10	16	66	204x101x108	56P450	56PA450	P
56C516	3 Pole	16A	500V					4 Round	1.5	6	66	204x101x108	56P516	56PA516	
56C520	3 Pole	20A	500V	20	20	21	M150	5 Round	2.5	6	66	204x101x108	56P520	56PA520	R
56C532	3 Pole	32A	500V	32	32	28	M180	5 Round	4	16	66	204x101x108	56P532	56PA532	S
56C540	3 Pole	40A	500V	40	40	35	M200	5 Round	10	16	66	204x101x108	56P540	56PA540	T
56C550	3 Pole	50A	500V	50	50	35	M250	5 Round	10	16	66	204x101x108	56P550	56PA550	U

Refer to page 25 for explanation of socket configurations.

Note: AC utilisation categories to AS/NZS3947.3 I<sub>th</sub> - Conventional Enclosed Thermal Current U<sub>i</sub> - Insulation Voltage U<sub>e</sub> - Operational Voltage

# Surface Socket Outlets



56S0313GY



56S0315RPGY

## 1 Phase and 3 Phase sockets

Schneider Electric Surface Socket Outlets range in size from 250V 10A to 500V 50A.

All sockets feature hoseproof and dust resistant flaps with automatic snap catch latches. The transparent flap enables instant visual inspection of socket condition and pin configuration.

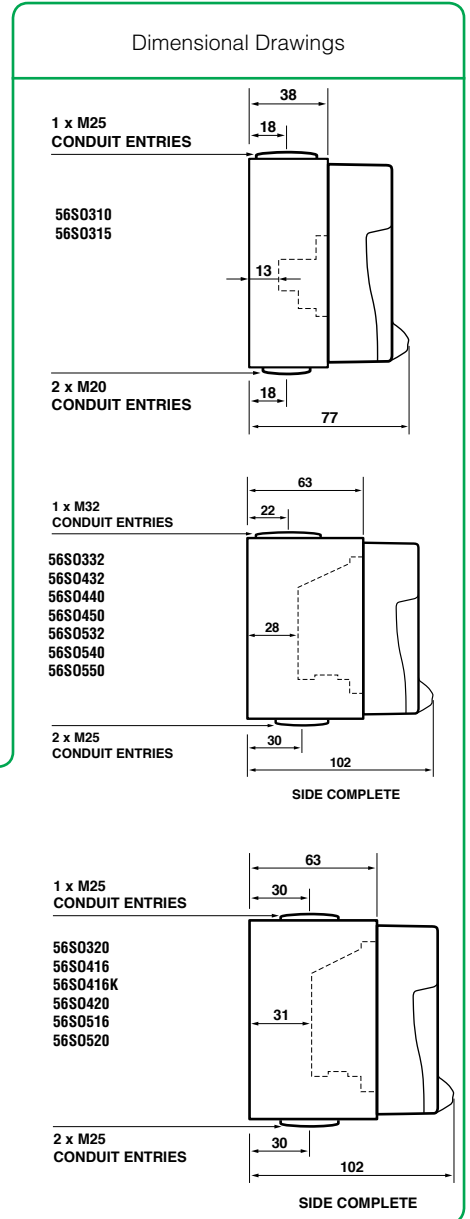
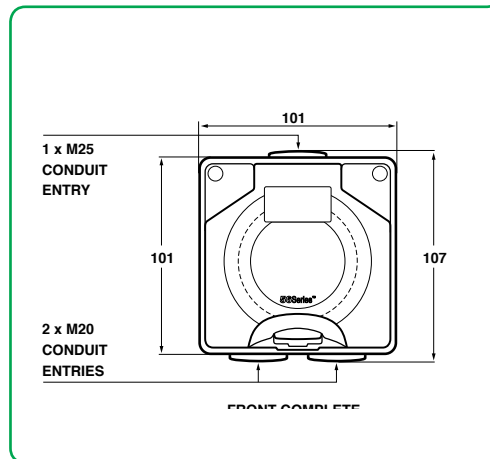
The full range of sockets accommodate both the superseded IP56 plain plugs and the current IP66 retention ring plugs in order to rationalise the number of variations required.

Earth and neutral connectors accommodating 3 x 6mm<sup>2</sup> cable are supplied with all 500V models.

Terminal housings are moulded in tough polyester to minimise damage.

### Options available

- Less Enclosure - add LE to catalogue number e.g. 56SO416 becomes 56SO416LE.



Catalogue Number	I <sub>the</sub> (Amp)	U <sub>i</sub> / U <sub>e</sub> (Volt)	Number of Sockets	Cond. Term Size in mm		IP Rating	O/A Dims. (H) x (W) x (D)	Matching Plug Straight	Matching Plug Angled	Socket Config.
				Min.	Max/Cond.					
56S0310	10A	250V	3 Flat	1.5	6	66	107x101x77	56P310		A
56S0313	13A	250V	3 Flat	1.5	6	66	107x101x77	56P313	56PA313	
56S0315	15A	250V	3 Flat	1.5	6	66	107x101x77	56P315		B
56S0315RP	15A	250V	3 Round	1.5	6	66	107x101x77	56P315RP	56PA315RP	
56S0316RP	16A	250V	3 Round	1.5	6	66	107x101x77	56P316RP	56PA316RP	
56S0320	20A	250V	3 Round	2.5	6	66	107x101x102	56P320	56PA320	H
56S0332	32A	250V	3 Round	6	16	66	107x101x102	56P332	56PA332	I
56S0416	16A	500V	4 Round	1.5	6	66	107x101x102	56P416	56PA416	K
56S0416K	16A	500V	Unique key configuration	1.5	6	66	107x101x102	56P416K	56PA416K	M
56S0420	20A	500V	4 Round	2.5	6	66	107x101x102	56P420	56PA420	L
56S0432	32A	500V	4 Round	4	16	66	107x101x102	56P432	56PA432	N
56S0440	40A	500V	4 Round	6	16	66	107x101x102	56P440	56PA440	O
56S0450	50A	500V	4 Round	10	16**	66	107x101x102	56P450	56PA450	P
56S0516	16A	500V	4 Round	1.5	6	66	107x101x102	56P516	56PA516	Q
56S0520	20A	500V	5 Round	2.5	6	66	107x101x102	56P520	56PA520	R
56S0532	32A	500V	5 Round	4	16	66	107x101x102	56P532	56PA532	S
56S0540	40A	500V	5 Round	6	16	66	107x101x102	56P540	56PA540	T
56S0550	50A	500V	5 Round	10	16**	66	107x101x102	56P550	56PA550	U

Note: 56S0320 come with the facility to fit auxiliary switch 56SOAUX15.

\*\* - L1, L2, L3 Cable size max. 25mm<sup>2</sup> I<sub>the</sub> - Conventional Enclosed Thermal Current U<sub>i</sub> - Insulation Voltage

# Surface Switches



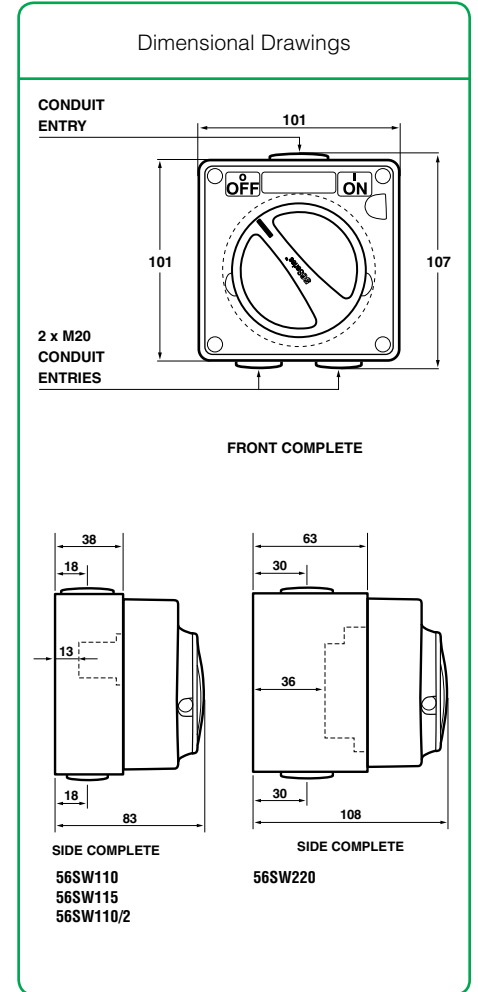
**56SW110GY**

## 56 Series Surface Switches

56 Series Surface Switches are available from 250V, 10A to 500V 63A. They incorporate a positive, rotary switch action. 'ON' and 'OFF' positions are clearly marked and there is provision for two padlocks. Hole diameter is 8mm.

If locking is required in the 'ON' position, simply drill a hole where necessary.

Earth and neutral connectors accommodating 3 x 6mm<sup>2</sup> cables are supplied with all products above 20A.



Catalogue Number	No. of Switched Poles	I <sub>the</sub> (Amp)	U <sub>i</sub> /U <sub>e</sub> (Volt)	I <sub>e</sub> (A) Utilisation Category			M Rating	Conductor Terminal size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)
				AC21A	AC22A	AC23A		Min.	Max/Cond.		
56SW110	1 Pole	10A	250V	10	8	8	M80	1.5	6	66	107x101x83
56SW110/2*	1 Pole	10A	250V	10	8	8	M80	1.5	6	66	107x101x83
56SW115*	1 Pole	15A	250V	15	8	8	M80	1.5	6	66	107x101x83
56SW116	1 Pole	16A	250V	-	-	-	-	-	-	66	-
56SW120	1 Pole	20A	250V	20	20	20	M150	2.5	16	66	107x101x108
56SW132	1 Pole	32A	250V	32	32	28	M180	4	16	66	107x101x108
56SW150	1 Pole	50A	250V	50	50	25	M250	10	25	66	107x101x108
56SW163	1 Pole	63A	250V	63	63	25	M300	16	25	66	107x101x108
56SW210	2 Pole	10A	500V	-	-	-	-	-	-	66	-
56SW216	2 Pole	16A	500V	-	-	-	-	-	-	66	-
56SW220	2 Pole	20A	500V	20	20	20	M150	2.5	16	66	107x101x108
56SW232	2 Pole	32A	500V	32	32	28	M180	4	16	66	107x101x108
56SW250	2 Pole	50A	500V	50	50	25	M250	10	25	66	107x101x108
56SW263	2 Pole	63A	500V	63	63	25	M300	16	25	66	107x101x108
56SW310	3 Pole	10A	500V	10	10	10	M100	1.5	16	66	107x101x108
56SW316	3 Pole	16A	500V	-	-	-	-	-	-	66	-
56SW320	3 Pole	20A	500V	20	20	20	M150	2.5	16	66	107x101x108
56SW332	3 Pole	32A	500V	32	32	28	M180	4	16	66	107x101x108
56SW350	3 Pole	50A	500V	50	50	25	M250	10	25	66	107x101x108
56SW363	3 Pole	63A	500V	63	63	25	M300	16	25	66	107x101x108
56SW420*	4 Pole	20A	440V	20	20	20	-	2.5	6	66	107x101x108

**\*Further Information**

56SW110/2 - 2 way 4 terminal

56SW115 - 1 way 2 terminal

56SW420 - with 7 Series switch mechanism

Note: AC utilisation categories to AS/NZS3947.3 I<sub>th</sub> - Conventional Enclosed Thermal Current I<sub>e</sub> - Operational Current U<sub>i</sub> - Insulation Voltage U<sub>e</sub> - Operational Voltage.



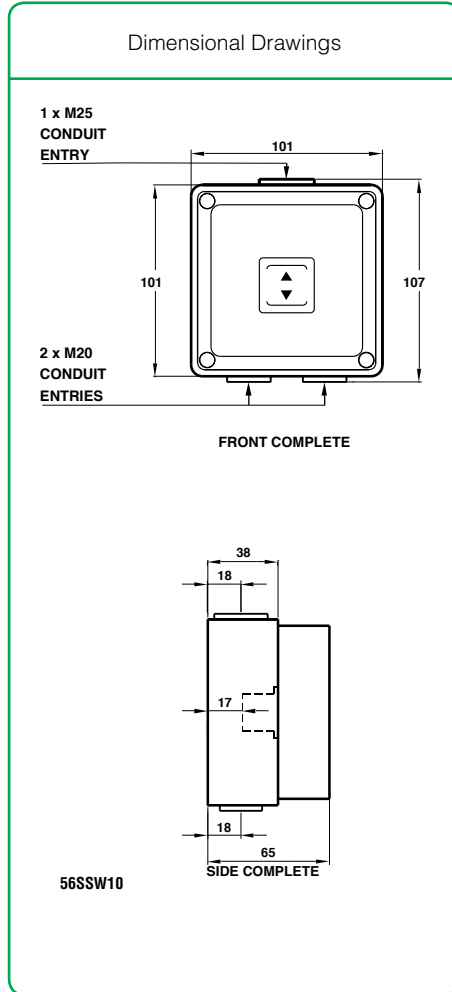
# Surface Switches



**56SSW10GY**

## 250V Single and Twin 2 Way Switches with sliding switch dollies

Schneider Electric 56 Series Single and Twin Sliding Switches are available in 10A and 15A ratings.



Catalogue Number	Description	No. of switches p/Module	I <sub>the</sub> (Amp)	U <sub>i</sub> /U <sub>e</sub> (Volts)	M Rating	Cond. Term Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)
						Min.	Max		
<b>56SSW10</b>	Single sliding switch	1	10A	250V	M80	1.5	6	56	107x101x65
<b>56SSW15</b>	Single sliding switch	1	15A	250V	M80	1.5	6	56	107x101x65
<b>56SSW2/10</b>	Twin sliding switch	2	10A	250V	M80	1.5	6	56	107x101x65
<b>56SSW2/15</b>	Twin sliding switch	2	15A	250V	M80	1.5	6	56	107x101x65

Note: AC utilisation categories to AS/NZS3947.3 I<sub>the</sub> - Conventional Enclosed Thermal Current U<sub>i</sub> - Insulation Voltage U<sub>e</sub> - Operational Voltage

# Push Button Control Stations



Push Button (PB) range L-R: 56/2PB GY, 56PBS1 GY, 56PBS GY, 56/2PBS1 GY.

This rugged range consists of five different combinations of stop start control stations.

The stations are ideal in wet, dusty or dirty conditions for controlling motor starters on pumps, saws, compressors, lathes, processors and processing lines.

**56PB** - Start control station.

**56PBS** - Stop control station.

**56PBS1** - Emergency stop station. This station has a mushroom head with twist reset and red push button.

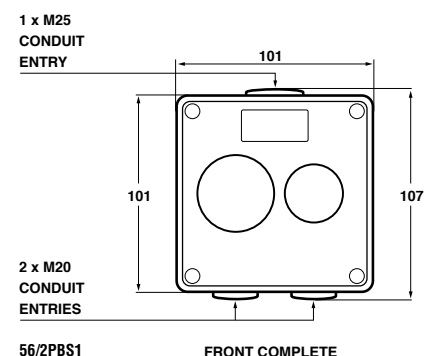
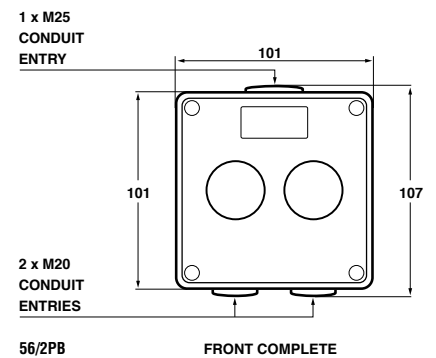
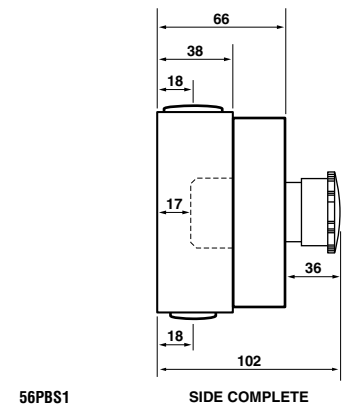
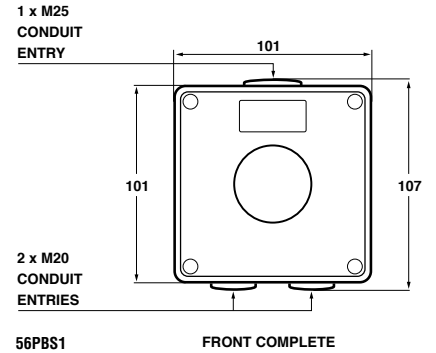
**56/2PB** - Combination stop/start control station with momentary operation push buttons. The red stop button has an extended head and the green start button a flush head.

**56/2PBS1** - Combination stop/start control station with same stop button as the 56PBS1.

Catalogue Number	I <sub>thb</sub> (Amp)	U <sub>i</sub> /U <sub>e</sub> (Volt)	I <sub>e</sub> (A) Utilisation Category		Button Colour	Cond. Term Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)
			AC15 240V	DC13 24V		Min.	Max.		
<b>56PB</b> Start control station	10A	250V	6	8	Green	1	4	66	107x101x76
<b>56PBS</b> Stop control station	10A	250V	6	8	Red	1	4	66	107x101x80
<b>56PBS1</b> Emergency stop control station	10A	250V	6	8	Red	1	4	66	107x101x102
<b>56/2PB</b> Start/Stop control station	10A	250V	6	8	Red/Green	1	4	66	107x101x80
<b>56/2PBS1</b> Emergency stop control & start station	10A	250V	6	8	Red/Green	1	4	66	107x101x80

Note: AC utilisation categories to AS/NZS3947.5 I<sub>thb</sub> - Conventional Enclosed Thermal Current U<sub>i</sub> - Insulation Voltage U<sub>e</sub> - Operational Voltage I<sub>e</sub> - Operational Current

## Dimensional Drawings



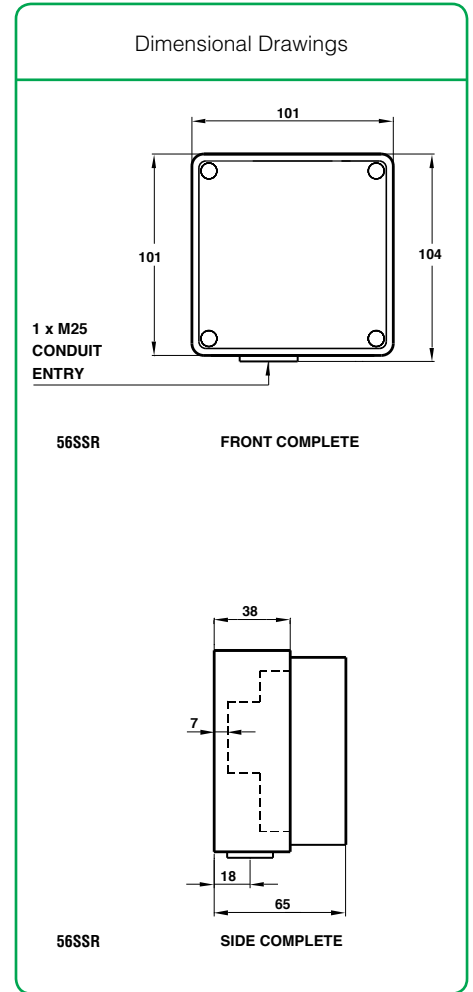
# Sunset Switches Premium



56SSR



56SSR



## Sunset Switches Premium

Sunset switches automatically switch lights on when the ambient light level falls below a predetermined level.

The 56SSR is surface mounting but can be adapted to flush mounting by using 56FA surrounds and brackets.

The 56SSR allows control of a 10A load current in a two wire configuration, therefore, eliminating the need for separate neutral at the switch. The 56SSR also incorporates a fully configurable timer with a remote-disable option.

When correctly connected to a suitable supply and load, the 56SSR will turn the load on when the ambient light level is below approximately 10 lux. Similarly, the load will be turned off when the light level exceeds approximately 30 lux. Delays of approximately eight seconds on turn-off and 30 seconds on turn-on are incorporated into the circuit to reject the effects of short term changes in the light levels, which may otherwise turn the load on or off.

The 56SSR is also equipped with a timer circuit which, if enabled, will turn the light off after a preset time delay. The time delay can be from 15 minutes to 15 hours and 45 minutes; set in 15 minute increments.

The timer can be disabled by applying neutral potential to the terminal T1, in which case

the status of the load is controlled only by the ambient light level. This feature provides a remote timer override function if required.

Since the 56SSR Sunset Switch is a two wire product which does not require any power while the load is turned on, there is one specific aspect of its operation well worth noting. When power is applied to the sunset switch for the first time, it will require up to 3.5 minutes to warm up. This behaviour is caused by the time delay required to charge an energy storage element within the unit.

56SSR Specifications	
Operating Voltage Range	192-265V 50 Hz AC
Maximum Load Current	10A
Minimum Load Current	40mA
Incompatible Load Types	Electric Transformers Fluorescent Loads Discharge Lamps Motor Loads
Off-state Leakage Current at 240V AC	8.2mA (capacitive) max
DC Component of Off-state Leakage Current	0mA
Timing Range	15min - 15hrs and 45min
Setting Step	15min
Timer Accuracy	± 15%
Operating Temperature Range	-10 to 45°C
Maximum warm-up time at 240V AC	4 min

Catalogue Number	I <sub>the</sub> (Amp)	U <sub>i</sub> /U <sub>o</sub> (Volt)	I <sub>o</sub> (A) Utilisation Category			M Rating	Temp. Range	Time Adjust	Conductor Terminal Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)	Operating Voltage
			AC21A	AC22A	AC23A				Min.	Max.			
56SSR	10A	250	10	10	8	M80	0° to +40°C	15 Min. to 945 Min.	1.0	2x4.0	66	101x107x65	190-265V 50Hz a.c.

Note: AC utilisation categories to AS/NZS3947.3 I<sub>the</sub> - Conventional Enclosed Thermal Current U<sub>i</sub> - Insulation Voltage U<sub>o</sub> - Operational Voltage I<sub>o</sub> - Operational Current  
Note: Maximum off state leakage current - 8.2 mA 240V a.c. Time accuracy - +/-15%.

# Sunset Switches Economy



56PEDD3



56PEDD3

## Sunset Switches Economy

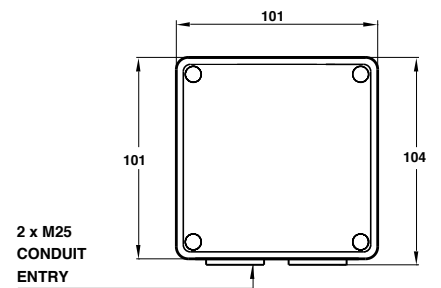
A switch that turns lights on at dusk and off at dawn by itself, how simple is that? For consistent lighting without lifting a finger, choose the photo Schneider Electric electric switch. A 'smart' switch that operates according to the level of sunlight, making it a simple to use, reliable and economical way to save time and energy.

- No capacitor or time programming necessary.
- IP66 rated for extreme environments.
- Factory set dusk to dawn saves set up time.
- 10A fluorescent and resistive loads.
- Three wire device eliminates the need for capacitor on small inductive loads.

### 56PEDD3 Specifications

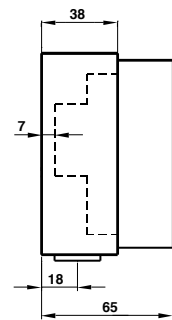
Operating Voltage Range	220-240 V AC 50 Hz
Maximum Load Current	10A
Minimum Load Current	0mA
Compatible Load Types	Incandescent, Fluorescent and 240V Halogen Iron Core and Electric Transformers Shaded Pole Induction Motors (exhaust fans, 5A max) Split Phase Induction Motors (ceiling fans, 5A max) Other Motor Loads (5A max)
Supply Current	15mA
Power Consumption	1W
Operating Temperature Range	0 to 45°C
Turn ON Light Level	Approx. 10 lux
Turn OFF Light Level	Approx. 50 lux

### Dimensional Drawings



56PEDD3

FRONT COMPLETE



56PEDD3

SIDE COMPLETE

Catalogue Number	I <sub>the</sub> (Amp)	U <sub>i</sub> /U <sub>o</sub> (Volt)	I <sub>o</sub> (A) Utilisation Category			M Rating	Temp. Range	Time Adjust	Conductor Terminal Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)	Operating Voltage
			AC21A	AC22A	AC23A				Min.	Max.			
56PEDD3	10A	250	10	10	8	M80	0° to +40°C		1.0	2x4.0	66	101x107x65	220-240V 50Hz a.c.

Note: AC utilisation categories to AS/NZS3947.3. I<sub>the</sub> - Conventional Enclosed Thermal Current. U<sub>i</sub> - Insulation Voltage. U<sub>o</sub> - Operational Voltage. I<sub>o</sub> - Operational Current.  
Note: Maximum off state leakage current - 8.2 mA 240V a.c. Time accuracy - +/-15%.



# Angle and Straight Plugs



**56P313GY**



**56PA313GY**



**56P315RPEO**

Schneider Electric has a comprehensive range of straight and angle plugs. All are fitted with a screwed ring for securing to socket outlets and to ensure IP66 rating.

Design innovations include a transparent centre body section for instant visual checking of connections and an internal cable clamp which grips two ways to prevent cable twisting.



**56P Series Plugs**

Catalogue # Straight	Catalogue # Angle	I <sub>th</sub> (Amp)	U <sub>i</sub> (Volt)	No. of Pins	Conductor Terminal Size in mm <sup>2</sup>		Cable Nominal Diameter		IP Rating	Pin Config.	Gland Nut Thread	
					Min.	Max/Cond.	Min.	Max.			Straight	Angled
56P215/32	-	15A	32V	2 Polarised, Extra Low Voltage	1.5	2.5	7	12.5	66	E	20mm	
56P310	-	10A	250V	3 Flat Pins	1.0	2.5	7	12.5	66	A	20mm	
56P313	56PA313	13A	250V	3 Pins	1.5	2.5	8.3	11.9	66		20mm	
56P315	-	15A	250V	3 Flat Pins	1.0	2.5	7	12.5	66	A	20mm	
56P315RP	56PA315RP	15A	250V	3 Round Pins	1.5	2.5	8.3	11.9	66		20mm	
56P316RP	56PA316RP	16A	250V	3 Round Pins	1.5	2.5	8.3	11.9	66		20mm	
56P320	56PA320	20A	250V	3 Round Pins	1.0	6	7	16	66	H	25mm	23mm
56P320F	-	20A	250V	3 Flat Pins	2.5	2.5	7	16	66	F	20mm	
56P332	56PA332	32A	250V	3 Round Pins	1.5	2.5	7	16	66	B	20mm	37mm
56P416	56PA416	16A	500V	4 Round Pins					66			
56P416K	56PA416K	16A	500V	Unique Key Configuration	2.5	4	7	16	66	M	23mm	23mm
56P420	56PA420	20A	500V	4 Round Pins	2.5	4	7	16	66	L	25mm	23mm
56P432	56PA432	32A	500V	4 Round Pins	2.5	16	9	28	66	N	37mm	37mm
56P440	56PA440	40A	500V	4 Round Pins	2.5	16	9	28	66	O	37mm	37mm
56P450	56PA450	50A	500V	4 Round Pins	2.5	25	9	28	66	P	37mm	37mm
56P516	56PA516	16A	500V	5 Round Pins					66			
56P520	56PA520	20A	500V	5 Round Pins	2.5	4	7	16	66	R	25mm	23mm
56P532	56PA532	32A	500V	5 Round Pins	2.5	16	9	28	66	S	37mm	37mm
56P540	56PA540	40A	500V	5 Round Pins	2.5	16	9	28	66	T	37mm	37mm
56P550	56PA550	50A	500V	5 Round Pins	2.5	25	9	28	66	U	37mm	37mm

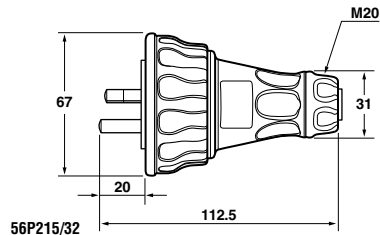
# Angle and Straight Plugs



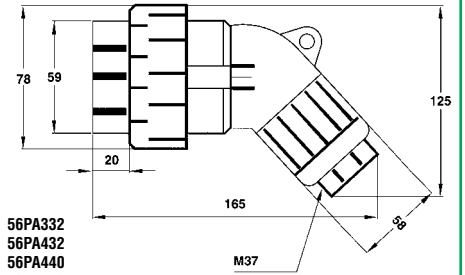
## 56P310GY

Angled versions ensure a neat cable run when connected to socket outlet.

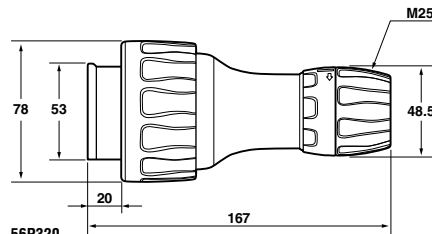
### Dimensional Drawings



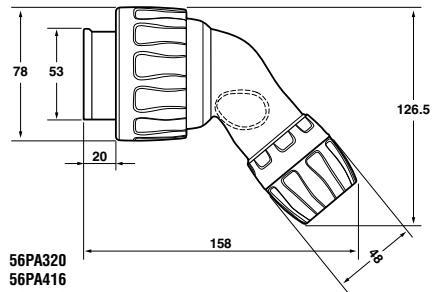
56P215/32  
56P310  
56P315  
56P320F



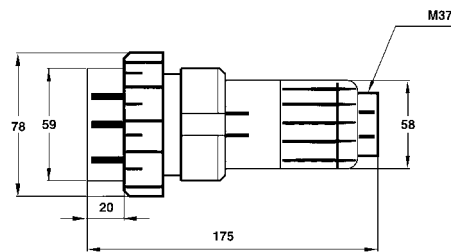
56PA332  
56PA432  
56PA440  
56PA450  
56PA532  
56PA540  
56PA550



56P320  
56P420  
56P520  
56P416K



56PA320  
56PA416  
56PA416K  
56PA420  
56PA516  
56PA520



56P332  
56P532  
56P540  
56P550  
56P432  
56P440  
56P450

# Special Combinations and Modules



56RCGY

## Combined Switched Sockets and Modules

Despite Asia having one of the safest electrical systems in the world, accidents can still occur.

A faulty or poorly maintained appliance, a frayed cord, wet hands or carelessness with power tools are all situations that can lead to tragedy.

To help avoid electrocution in industrial environments, Schneider Electric has a range of combination switched sockets with inbuilt RCD protection. The RCD works by constantly monitoring and comparing the current flow in both the Active and Neutral circuits of an electrical installation.

During normal operation, these Active and Neutral currents are in balance. However, should any current flow to Earth, an imbalance is created in these circuits.

If this imbalance is sufficient (30mA), the RCD will cut the electrical supply in less than 40 milliseconds, perhaps the most important fraction of a second in someone's life.

Apart from the protection from electrocution that an RCD offers, it will also cut off power to expensive electrical equipment in the event of an

electrical fault to Earth. This protects appliances against costly damage and the installation against fire resulting from faults of this nature.

Schneider Electric Combination Switched Sockets with RCD protection enable quick disconnection of power in the case of an emergency and provide motor rated isolation. A neon is standard on all models to indicate that the RCD is protecting the outlet. If the neon is not illuminated, the RCD has tripped and no power is available from the socket.

The internal phase connections between switches and sockets are factory wired.

The 56RC provides stand alone protection or multiple protection of socket outlets in a modular IP66 Series Enclosure.

Warning: The RCD used in the 56 Series Modules only protects against shocks from current passing through the body to Earth; the cause of the majority of electrocutions. Complete protection under all circumstances is not possible from this or any other device.

### SINGLE PHASE RESIDUAL CURRENT DEVICE

Catalogue Number	No. of Switch Poles	I <sub>th</sub> (Amp)	U <sub>i</sub> /U <sub>e</sub> (Volt)	Voltage Parameters		Prospective Short Circuit Current 33kA for 40mS	Cond. Term Size in mm <sup>2</sup>		IP Rating	O/A Dims. (H) x (W) x (D)
				Min. (V)	Max. (V)		Min.	Max.		
56RC	2 Pole 30mA 1 Phase RCD	20A	250V	190	260	Unit must be protected by 20A max. MCB	1.5	6	66	107x101x101

### RCD PROTECTED OUTLETS

Catalogue Number	I <sub>th</sub> (Amp)	U <sub>i</sub> /U <sub>e</sub> (Volt)	Number of Sockets	Protection	Cond. Term Size in mm <sup>2</sup>		IP Rating	O/A Dims (H) x (W) x (D)	Matching Plug Straight	Matching Plug Angle	Socket Config.
					Min.	Max.					
56C313RCD30	13A	250V	3 Flat	30mA RCD			66		56P313	56PA313	
56C420RC	20A	500V	4 Round	30mA RCD	1.5	16	66	300x101x110	56P420	56PA420	L
56C432RC	32A	500V	4 Round	30mA RCD	4	16	66	300x101x110	56P432	56PA432	N
56C520RC	20A	500V	5 Round	30mA RCD	1.5	16	66	300x101x110	56P520	56PA520	R
56C532RC	32A	500V	5 Round	30mA RCD	4	16	66	300x101x110	56P532	56PA532	S

# Mounting Enclosures (Back Boxes)



## 56E

All Schneider Electric Mounting Back Boxes are moulded in UV stabilised rigid PVC to facilitate gluing of fittings for conduit entry.

Ample conduit and cable entries are provided and there is plenty of wiring room for easy installation.

All screwed conduit entries are provided with plugs. The multigang enclosures feature moulded bridges between modules to ensure switches and sockets sit flush on a continuous

surface.

Each enclosure has a number of mounting points and 220/10 Sealing Plugs are provided to double insulate mounting screw heads and ensure the IP rating.

Moulded gaskets are supplied with switch and socket modules.



## 56Bridge

### Bridges

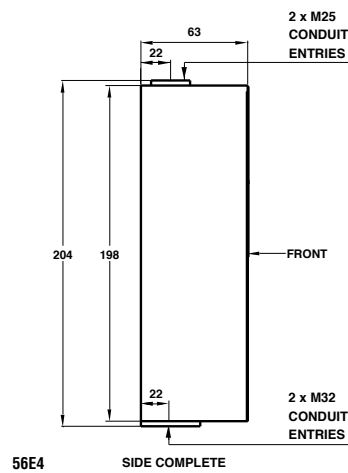
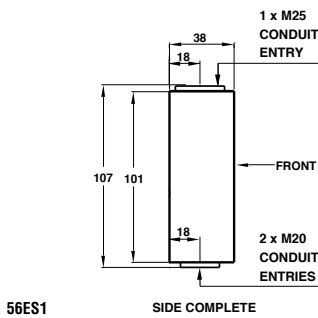
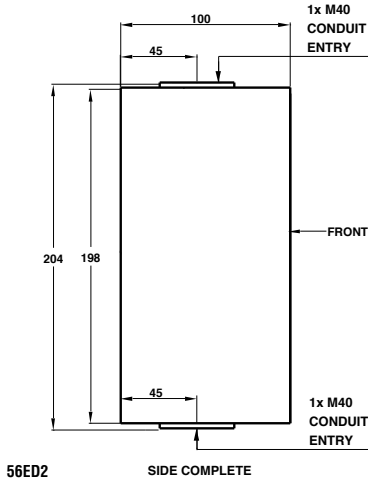
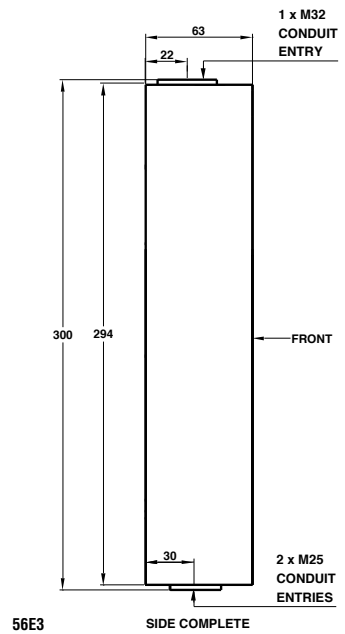
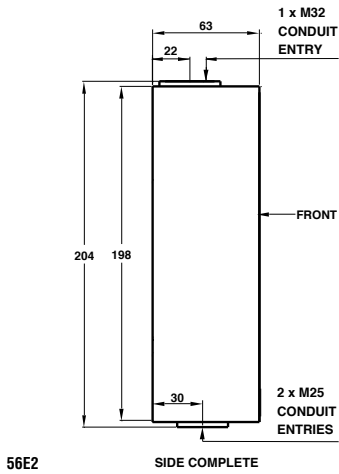
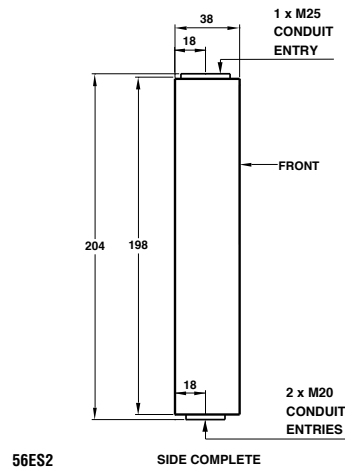
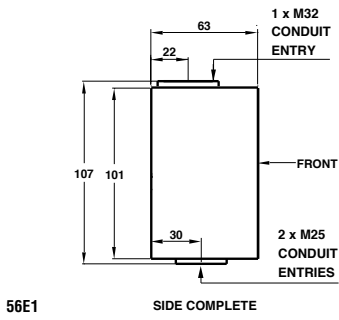
56 Series Bridges suits 56E Series Mounting Enclosures and provide a continuous flat surface for socket and switch modules in multigang enclosures, thereby ensuring sealing.

Catalogue Number	No. of Gangs	O/A Dims. (H) x (W) x (D)	Mounting Points	No. of Conduit Entries (mm)	Cut-Out Provision (mm)
<b>56E1</b>	1	63x101x101	8	2x25, 1x32	1x25/32
<b>56ES1</b>	1 Shallow	38x101x101	4	1x25, 1x20	1x20/25
<b>56E2</b>	2	63x101x198	8	2x25, 1x32	1x25, 1x32
<b>56ED2</b>	2 Deep	100x101x198	8	2x40	1x25, 1x32
<b>56ES2</b>	2 Shallow	38x101x198	4	1x25, 2x20	2x20/25
<b>56E3</b>	3	294x101x63	16	2x25, 1x32	2x25, 1x32
<b>56E4</b>	4	63x198x198	16	2x25, 2x32	2x25, 1x32, 1x40



# Mounting Enclosures (Back Boxes)

## Dimensional Drawings



# Mounting Enclosure Lids (Covers)



## 56L1LEGY, 56L2LEGY

Mounting enclosure lids are moulded in UV stabilised polycarbonate.

All are 28mm high and supplied complete with sealing gasket.

Catalogue Number	Number of Gangs	Dimensions (mm)				
		A	B	C	D	E
56L1LE	1	95	95	28	84	84
56L2LE	2	192	95	28	84	181

## Pre-Drilled Mounting Enclosure Lids



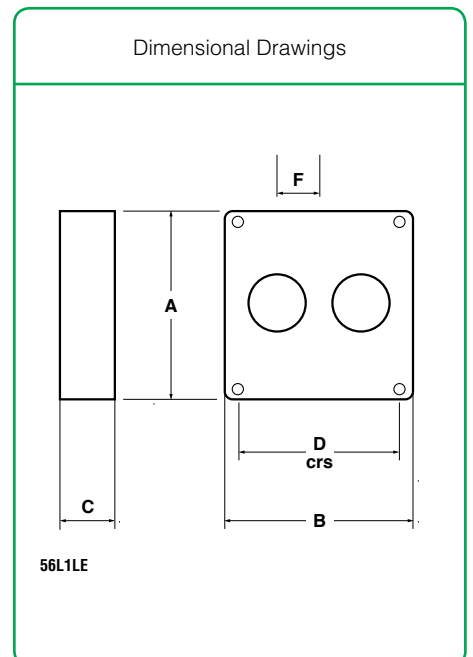
### 56L1/22LEGY

One gang, 28mm high lids are also available pre-drilled to accept 22mm diameter IP56 rated push- buttons or indicating lights. Dimensions are identical to the 56L1.



### 56L1/22/2LEGY

Catalogue Number	Hole Diameter	No. of Holes	F
56L1/22LE	22mm	1	-
56L1/22/2LE	22mm	2	20



# Switchgear Cover Assemblies



**56CB4NLEGY**

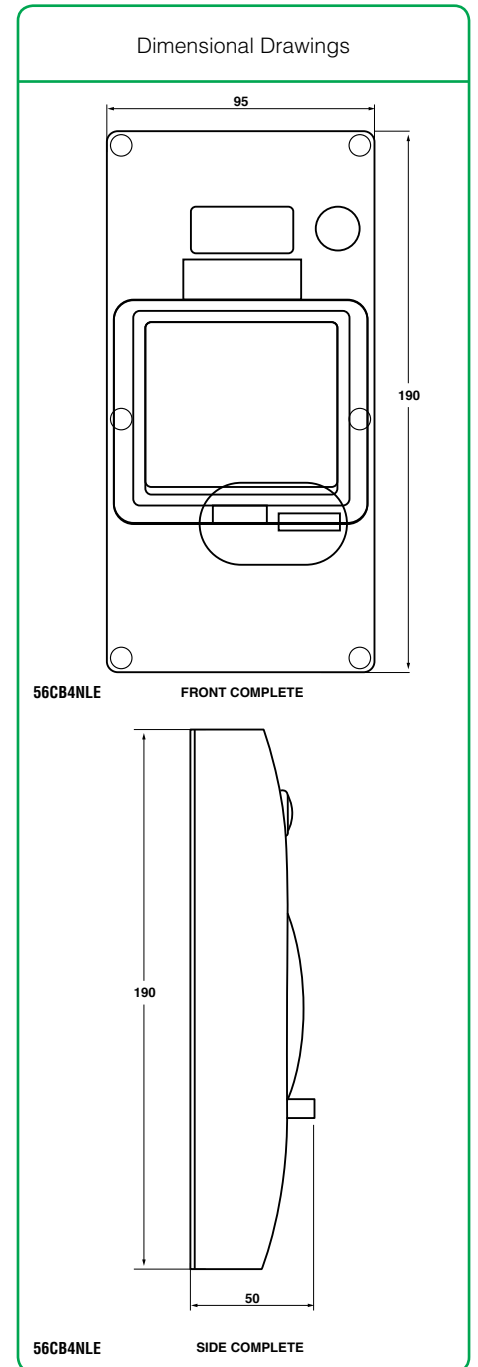
## DIN Rail Accessory Mounting Cover Kits

The 56 Series Two Gang Cover Assemblies are moulded in hi-impact polycarbonate and feature a specially designed mounting bracket which will accommodate the full range of circuit breakers, RCDs and combination MCB/RCDs.

Covers suit all 56 Series enclosures (minimum standard depth 63mm) and are supplied with neon indicators, which can be wired from either the line or load side of the switch.

It includes a padlocking facility on the cover flap.

COVER WITH MOUNTING BRACKET AND NEON (LESS ENCLOSURE)						
Catalogue Number	U <sub>n</sub> /U <sub>e</sub> (Volt)	Module Type	No. of Poles	Module Width	Neon Voltage	Protective Membrane
<b>56CB4NLE</b>	240V / 440V	1, 2, 3 pole MCB	4 RCD	4 max.	240V / 415V	No



# Adaptable Enclosures

## Junction Boxes

56 Series Junction Boxes are designed for industrial environments. They are supplied complete with Earth and Neutral connectors for up to 3 x 6mm<sup>2</sup> cables and sealing gasket.

25mm and 32mm screwed conduit entries and sealing plugs are provided, as are cable entry cut outs in the back.

Catalogue Number	No. of Gangs	O/A Dims (H) x (W) x (D)	IP Rating	Cut Outs (mm)
56JB1	1	91x101x101	IP66	1x25/32
56JB2	2	91x198x101	IP66	1x25, 1x32



56/32GY

## Two Aperture Enclosure IP66

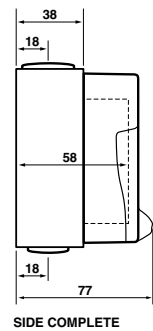
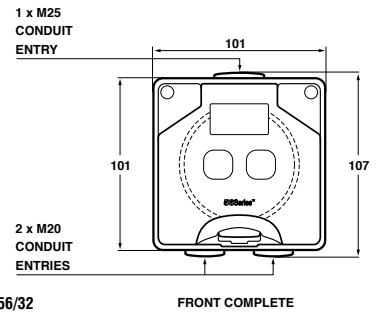
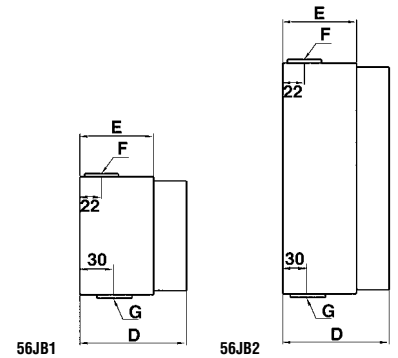
Apertures suit popular 30 Series Mechanisms.

**Option available**

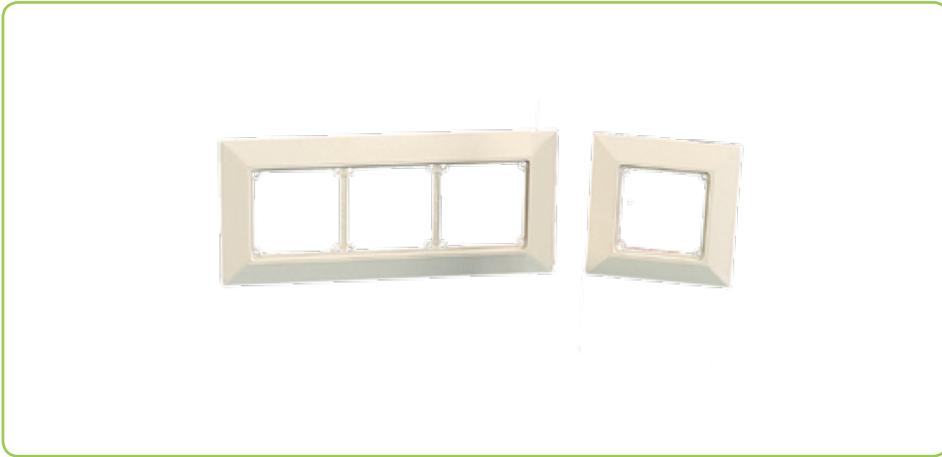
- Other resistant versions available to special order.

Catalogue Number	Description
56/32	107x101x75

### Dimensional Drawings



# Adaptable Enclosures



## Moulded Surrounds and Metal Brackets

### Flush Surrounds

Surface mounted 56 Series Sockets, Switches and Combinations can be transformed into flush mounting equivalents using the 56FA Surrounds and Brackets. The surrounds can be used on various types of walls to ensure a neat installation, such as:

- a mounting enclosure (back box) in poured concrete
- a bracket on brick, brick veneer or panel walls.

The brackets provide the installer with a practical method of flush mounting 56 Series accessories. Comprehensive installation instructions are supplied with all units.

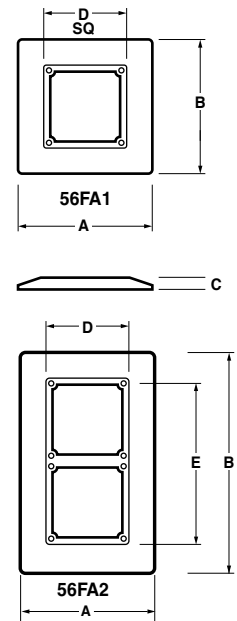
56FA1, 56FA2 and 56FA3 Flush Surrounds contain a moulded flange, foam gasket and stainless steel mounting screws.

Catalogue Number	Number of Gangs	Description	Dimensions (mm)				
			A	B	C	D	E
56FA1	1	Flush surround suits single gang 56 Series	157	157	13	97	
56FA2	2	Flush surround suits two gang 56 Series	157	254	13	97	194
56FA3	3	Flush surround suits three gang 56 Series	157	350	13	97	281

## Dimensional Drawings

### Dimensional Detail (mm)

**Moulded Surrounds**  
UV Stabilised PVC





# Lloyd Registered Products for Shipping Approvals

## Lloyd's Register of Shipping Approvals for 56 Series Switchgear

<b>500V Three Phase Sockets</b>	<b>250V Two-way Switches (Single and Twin with Sliding Switch Dollies)</b>	<b>500V Three Phase Combination Switched Sockets</b>	<b>250V and Low Voltage Switched Sockets (Single and Double Pole Combination)</b>	<b>250V a.c. and Low Voltage Plugs</b>
56SO420	56SSW10	56C420		56P215/32
56SO432	56SSW15	56C432		56P310
56SO440	56SSW2/10	56C440	<b>2 Module</b>	56P313
56SO450	56SSW2/15	56C450	56C310	56P320
56SO520		56C520	56C313	56P320F
56SO532		56C532	56C315	56P332
56SO540		56C540	56C315D	56PA320
56SO550		56C550	56C320	56PA332
			56C332	
<b>250V Sockets</b>			<b>500V Three Phase Plugs</b>	
56SO310			<b>Angle</b>	
56SO313			56PA420	
56SO315			56PA432	
56SO320			56PA440	
56SO332			56PA450	
<b>Rotary Switches (Single, Double and Triple Pole)</b>			56PA520	
56SW110			56PA532	
56SW110/2			56PA540	
56SW115			56PA550	
56SW120			<b>Straight</b>	
56SW132			56P420	
56SW150			56P432	
56SW163			56P440	
56SW220			56P450	
56SW232			56P520	
56SW250			56P532	
56SW263			56P540	
56SW310			56P550	
56SW320				
56SW332				
56SW350				
56SW363				

## Department of Industrial Relations Coal Mines Regulation Act 1982

<b>Rotary Switches (Single, Double and Triple Pole)</b>	<b>500V Three Phase Sockets</b>	<b>500V Three Phase Angle Plugs</b>
56SW120	56SO532	56PA520
56SW132	56SO540	56PA532
56SW150	56SO550	56PA540
56SW220		56PA550
56SW250		
56SW320		
56SW332		
56SW350		

56 Series accessories comply with the relevant parts of the following standards:

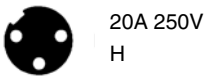
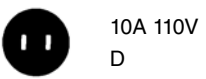
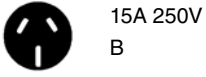
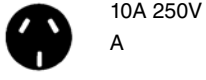
AS/NZS3123 - Approval and test specifications - plugs, socket outlets and couplers for general industrial application.

AS/NZS3133 - Approval and test specifications - air break switches.

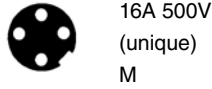
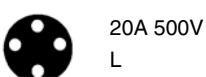
# Plug and Socket Configurations

## Plug Configurations

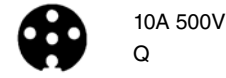
### 2 & 3 Pin



### 4 Pin



### 5 Pin



### 6 Pin

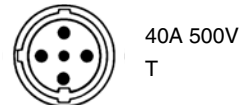
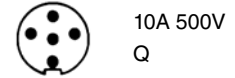
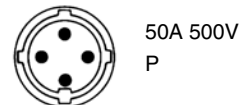
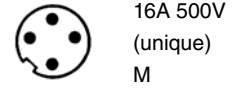
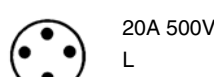
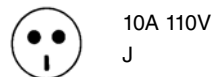
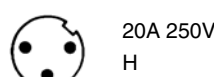
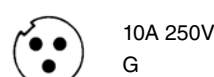
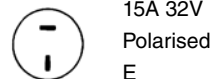
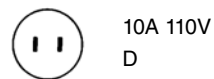
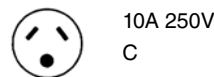
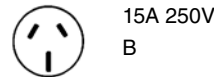


### 7 Pin

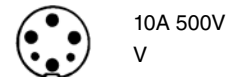


## Socket Configurations

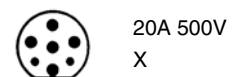
### 2 & 3 Pin



### 6 Pin



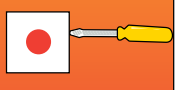





### 7 Pin



# International Protection Ratings & Technical Terms






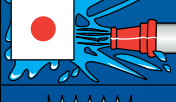


## PROTECTION AGAINST SOLIDS

	TEST	PROTECTION
x	No test applied	No specific protection
0	No test applied	Inherent degree of protection
1		Protected against solid objects equal to or greater than 50mm diameter. (eg. accidental contact with hand)
2		Protected against solid objects equal to or greater than 12.5mm diameter. (eg. contact with finger)
3		Protected against solid objects equal to or greater than 2.5mm diameter. (eg. tools and wires)
4		Protected against solid objects equal to or greater than 1mm diameter. (eg. fine tools and wires)
5		Protected against quantities of dust that could interfere with satisfactory operation.
6		Completely protected against dust.

Defined by IEC 60529  
DIN 40050 CEI 70-1

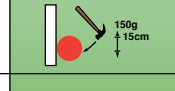
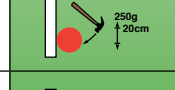
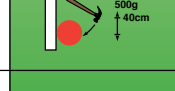
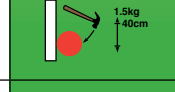
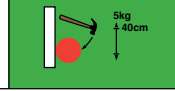
To Australian standards AS 60529-2004  
Degrees of protection provided by enclosures.  
(IP Code)

## PROTECTION AGAINST LIQUIDS

	TEST	PROTECTION
x	No test applied	No specific protection
0	No test applied	Inherent degree of protection
1		Protected against drops of water falling vertically.
2		Protected against drops of water falling at up to 15 degrees from the vertical.
3		Protected against spraying water at up to 60 degrees from the vertical.
4		Protected against splashing water from all directions.
5		Protected against jets of water from all directions.
6		Protected against jets of water of similar force to heavy seas.
7		Protected against the effects of temporary immersion.
8		Protected against the effects of continuous immersion.

Defined by IEC 60529

## PROTECTION AGAINST IMPACT

	TEST	PROTECTION
x	No test applied	No specific protection
1		Resistant to impacts of weight up to 150g falling from 15cm.
3		Resistant to impacts of weight up to 250g falling from 20cm.
5		Resistant to impacts of weight up to 500g falling from 40cm.
7		Resistant to impacts of weight up to 1.5kg falling from 40cm.
9		Resistant to impacts of weight up to 5kg falling from 40cm.

Defined by UTE 20010

The following technical terms are brief descriptions indicating the tests involved to attain ratings.  
For further information refer to the standards indicated.

### M-Rating (Refer AS/NZS3133)

Schneider Electric switches and switched socket outlets are marked with an M-Rating. This indicates that these products have been tested and found suitable for switching locked rotor current.

In part, this test involves 50 operations, make and break of the nominated locked rotor current at 0.5 power factor lagging. The switch will not fail to interrupt the current or fail in any way electrically or mechanically.

### AC-15 (refer AS/NZS3947)

Control of electromagnetic loads (>72VA).

### AC-23 (refer AS/NZS3947)

Switching of motor loads or highly inductive loads.

In part this involves five make and break operations at:

- 10 times rated current make
- 1.1 times rated voltage make
- 0.35 cos
- 8 times rated current break
- 1.1 times rated voltage break
- 0.35 cos.

Additional mechanical at no load and electrical endurance tests at rated current and voltage at 0.35 cos are conducted.

### AC-21 (refer AS/NZS3947)

Switching of resistive loads, including moderate overloads

In part this involves five make and break operations, at 1½ times rated current and 1.1 times rated voltage at 0.95 cos.

Additional mechanical no load and electrical endurance tests at rated current and voltage at 0.95 cos are conducted.

### AC-22 (refer AS/NZS3947)

Switching of mixed resistive and inductive loads, including moderate overloads.

In part this involves five make and break operations at three times rated current and 1.1 times rated voltage at 0.65 cos. Additional mechanical no load and electrical endurance tests at rated current and voltage at 0.65 cos.

Cable Size - Nominal Area of Conductor mm <sup>2</sup>	No. and Diameter of Wires for Standard Conductor No./mm	Overall Diameter of AS/NZS300U Table E7 mm
0.5	1/0.80	2.5
1	1/1.13	2.9
1.5	1/1.38	3.2
	7/0.50	3.3
2.5	1/1.78	3.6
	7/0.67	3.8
4	7/0.85	4.8
6	7/1.04	5.3
10	7/1.35	6.3
16	7/1.70	7.3
25	19/1.35	9.4
35	19/1.53	10.4
50	19/1.78	12.0
70	19/2.14	13.8
95	37/1.78	16
120	37/2.03	17.7
150	37/2.25	19.7
185	37/2.52	22
240	61/2.25	25.1
300	61/2.52	27.9
400	61/2.85	31.4
500	61/3.20	34.9
630	127/2.52	38.9

Dimensions, standard copper and aluminium conductors 1 core 0.6/1kV PVC insulated cable to AS/NZS5000, 75°C

Note: For exact dimensions refer to manufacturers' details.

## Useful 3-Phase Formulae

$$kW = \frac{\text{Line Amps} \times \text{Line Volts} \times 1.732 \times \text{P.F.}}{1000}$$

$$kVA = \frac{\text{Line Amps} \times \text{Line Volts} \times 1.732}{1000}$$

$$kW = kVA \times \text{P.F.}$$

## Electric Motors

$$\text{Power Output} = \text{Power Input} \times \text{Efficiency}$$

$$kW \text{ Output} = kW \text{ Input} \times \text{Efficiency}$$

$$kW \text{ Output} = \frac{1.732 \times \text{Line Volts} \times \text{Line Amps} \times \text{P.F.} \times \text{Efficiency}}{1000}$$

$$kVA \text{ Input} = \frac{1.732 \times \text{Line Volts} \times \text{Line Amps}}{1000}$$

$$\text{Line Amperes} = \frac{1000 \times kW \text{ Output}}{\text{Line Volts} \times 1.732 \times \text{P.F.} \times \text{Efficiency}}$$

$$\text{Line Amperes} = \frac{1000 \times kVA \text{ Input}}{\text{Line Volts} \times 1.732}$$

The power factor is usually taken as 0.8 (as an all-round figure) but this varies with the speed and size of the motor. The efficiency varies from 85% in small motors to 90% and over for large motors.

Measure	Symbol	Unit
Length	S	m
Area	A	m <sup>2</sup>
Volume	V	m <sup>3</sup>
Weight	m	kg
Density	P	kg/m <sup>3</sup>
Time	t	s
Frequency	F	Hz
Rotary Speed	n	s <sup>-1</sup>
Linear Speed	v	ms <sup>-1</sup>
Acceleration	a	ms <sup>-2</sup>
Power	F	N (Newton)
Pressure	P	Pa (Pascal)
Torque	M	Nm
Work	W	J (Joule)
Power	P	W (Watt)
Reactive Voltampere		Var
Voltampere		V.A
Current	I	A (Ampere)
Operational Current	I <sub>th</sub>	A
Conventional Enclosed	I <sub>the</sub>	A
Thermal Current	61/2.85	31.4
Voltage	U	V (Volts)
Insulated Voltage	U <sub>i</sub>	V
Operational Voltage	U <sub>e</sub>	V
Resistance	R	(Ohm)
Impedance	Z	
Reactance	X	
Reluctance	S	A/Wb
Capacitance	C	F (Farad)
Quantity of Electricity	Q	C (Coulomb)
Magnetic Field Strength	H	A/m
Magnetic Flux	Ø	Wb (Weber)
Inductance	L	H (Henry)
Magnetic Flux Density	B	T (Tesca)
Temperature	t	°C (Centigrade)
Illuminance	E	l x (Lux)
Luminance	L	cd/m <sup>2</sup>
Luminous Flux	Ø	lm (Lumen)
Luminous Intensity	I	cd (Candela)

### Abbreviations for Multiples and Sub Multiples

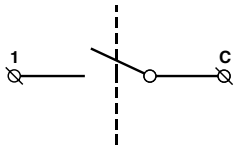
T	tera	10 <sup>12</sup>
G	giga	10 <sup>9</sup>
M	mega	10 <sup>6</sup>
k	kilo	10 <sup>3</sup>
d	deci	10 <sup>-1</sup>
c	centi	10 <sup>-2</sup>
m	milli	10 <sup>-3</sup>
u	micro	10 <sup>-6</sup>
n	nano	10 <sup>-9</sup>
p	pico	10 <sup>-12</sup>

# Common Conversion Factors

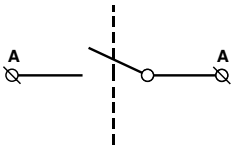
Quality	Non-SI Unit	Metric	Conversion Factors (approx.) Non-SI to Metric (SI) Units	Metric (SI) to Non-SI Units
Length	Inch (in)	Millimetre (mm) or Centimetre (cm)	1 in = 25.4mm	1 cm = 0.39 in
	Foot (ft)	Centimetre (cm) or Metre (m)	1 ft = 30.5 cm	1 m = 3.28 ft
	Yard (yd)	Metre (m)	1 yd = 0.914 m	1 m = 1.09 yd
	Mile	Kilometre (km)	1 mile = 1.61 km	1 km = 0.62 mile
Area	Square Inch (in <sup>2</sup> )	Square Millimetre (mm <sup>2</sup> )	1 in <sup>2</sup> = 645 mm <sup>2</sup>	1 mm <sup>2</sup> = 0.002 in <sup>2</sup>
	Square Inch (in <sup>2</sup> )	Square Centimetre (cm <sup>2</sup> )	1 in <sup>2</sup> = 6.45 cm <sup>2</sup>	1cm <sup>2</sup> = 0.155 in <sup>2</sup>
	Square Foot (ft <sup>2</sup> )	Square Centimetre (cm <sup>2</sup> ) or Square Metre (m <sup>2</sup> )	1 ft <sup>2</sup> = 929 cm <sup>2</sup>	1 m <sup>2</sup> = 10.76 ft <sup>2</sup>
	Square Yard (yd <sup>2</sup> )	Square Metre (m <sup>2</sup> )	1 yd <sup>2</sup> = 0.836m <sup>2</sup>	1 m <sup>2</sup> = 1.20 yd <sup>2</sup>
	Acre	Hectare (ha)	1 acre = 0.405 ha	1 ha = 2.47 acres
	Square Mile	Square Kilometre (km <sup>2</sup> )	1 Square Mile = 2.59 km <sup>2</sup>	1 km <sup>2</sup> = 0.387 sq. mile
Volume	Cubic Inch (in <sup>3</sup> )	Cubic Centimetre (cm <sup>3</sup> )	1 in <sup>3</sup> = 16.4 cm <sup>3</sup>	1 cm <sup>3</sup> = 0.06 in <sup>3</sup>
	Cubic Inch (ft <sup>3</sup> )	Cubic Decimetre (dm <sup>3</sup> ) or	1 ft <sup>3</sup> = 28.3 dm <sup>3</sup>	1 m <sup>3</sup> = 35.3 ft <sup>3</sup>
	Cubic Yard (yd <sup>3</sup> )	Cubic Metre (m <sup>3</sup> )	1 yd <sup>3</sup> = 0.765m <sup>3</sup>	1 m <sup>3</sup> = 1.31 yd <sup>3</sup>
Volume (Fluids)	Fluid Ounce UK (fl. oz UK)	Millilitre (ml)	1 fl. oz (UK) = 28.4 ml	1 ml = 0.035 fl. oz (UK)
	Pint UK (pt UK)	Millilitre (ml) or Litre (l)	1 pint UK = 568 ml	1 l = 1.76 pint (UK)
	Gallon UK (gal UK)	Litre (l) or Cubic Metre (m <sup>3</sup> )	1 gal UK = 4.55 l	1 m <sup>3</sup> = 220 gallons (UK)
	Fluid Ounce US (Fl. oz US)	Millilitre (ml)	1 fl. oz (US) = 29.6 ml	1 ml = 0.034 fl. oz (US)
	Pint US (gal US)	Litre (l) or Millilitre	1 pint (US) = 473 ml	1 l = 2.11 pint (US)
	Gallon US (gal US)	Litre	1 gallon (US) = 3.79 l	1 l = 0.264 gallon (US)
Mass	Ounce (oz)	Gram (g)	1 oz = 28.3 g	1 g = 0.035 oz
	Pound (lb)	Gram (g) or kilogram (kg)	1 lb = 454 g	1 kg = 2.20 lb
	Ton	Tonne (t)	1 ton = 1.02 tonne	1 tonne = 0.984 ton
	tael	Gram (g)	1 tael = 37.8 g	1 g = 0.026 tael
	Catty	Kilogram (kg)	1 catty = 0.605 kg	1 kg = 1.65 cattoes
	Picul	Kilogram (kg)	1 picul = 60.50 kg	1 kg = 0.017 picul
Force	Pound Force (lbf)	Newton (N)	1 lbf = 4.45 N	1 N = 0.225 lbf
	Kilogram Force (kgf)	Newton (N)	1 kgf = 9.81 N	1 N = 0.102 kgf
Pressure	Pound Force per square inch (psi)	kilopascal (kPa)	1 psi = 6.86 kPa	1 kPa = 0.145 psi
	Kilogram force per square centimetre (kgf/cm <sup>2</sup> )	kilopascal (kpa)	1 kgf/cm <sup>2</sup> = 98 kPa	1 kPa = 0.01 kgf/cm <sup>2</sup>
	Inch of water (in H <sub>2</sub> O)	Pascal (Pa)	1 in H <sub>2</sub> O = 249 Pa	1 Pa = 0.004 in H <sub>2</sub> O
	Bar	kilopascal (kPa)	1 Bar = 100 kPa	1 kPa = 0.01 bar
Velocity	Mile per hour (mph)	Kilometre per hour (km/h)	1 mile = 1.61 km/h	1 km/h = 0.62 mph
Temperature	Fahrenheit temp. (F)	Celsius temp. (C)	$^{\circ}\text{C} = 5 \frac{(^{\circ}\text{F} - 32)}{9}$	$^{\circ}\text{F} = \frac{(9 \times ^{\circ}\text{C}) + 32}{5}$
Density	Pound per cubic inch (lb/in <sup>3</sup> )	Gram per cubic centimetre (g/cm <sup>3</sup> ) = tonne per cubic metre (t/m <sup>3</sup> )	1 lb/in <sup>3</sup> = 27.7 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.036 lb/in <sup>3</sup>
	Pound per cubic foot (lb/ft <sup>3</sup> )	Kilogram per cubic metre (kg/m <sup>3</sup> )	1 lb/ft <sup>3</sup> = 16.02 kg/m <sup>3</sup>	1 kg/m <sup>3</sup> = 0.06 lb/ft <sup>3</sup>
	Ton per cubic yard (ton/yd <sup>3</sup> )	Tonne per cubic metre (t/m <sup>3</sup> )	1 ton/yd = 1.33 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.752 ton/yd <sup>3</sup>
Energy	British thermal unit (Btu)	Kilojoule (kJ)	1 Btu = 1.06 kJ	1 kJ = 0.948 Btu
	Therm	Megajoule (MJ)	1 Therm = 106 MJ	1 MJ = 9.48 x 10 <sup>-3</sup> therm
	Calorie (dietician)	Kilojoule (kJ)	1 Cal (dietician) = 4 kJ	1 kJ = 0.23 Cal (dietician)
Power	Horsepower (hp)	Kilowatt (kW)	1 hp = 0.746 kW	1 kW = 1.34 hp
Fuel Consumption	Mile per gallon (mpg)	Litres per 100 m	$\frac{(n) \times \text{mpg}}{n} = 2821/100 \text{ km}$	$\frac{(n) \times 1/100 \text{ km} = 282}{n}$



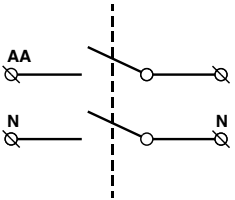
# Switch Wiring Diagram Types



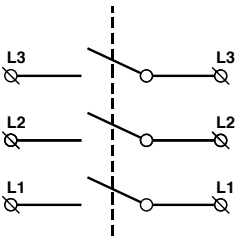
Switch is 30 Series mech.  
 56C310  
 56C315  
 56CV315  
 56SW110  
 56SW115



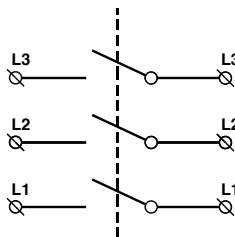
Switch terminals are not identified  
 Switch is backwired  
 Conductor termination is pressure plate type  
 56C320  
 56SW120  
 56SW132  
 56SW150  
 56SW163



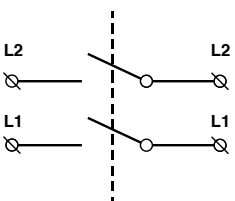
Switch terminals are not identified  
 Switch is backwired  
 Conductor termination is pressure plate type  
 56C315D



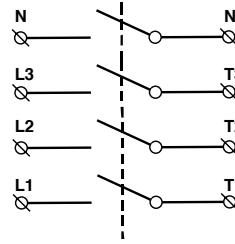
Switch terminals are not identified  
 Switch is backwired  
 Conductor termination is pressure plate type  
 56C420  
 56C520



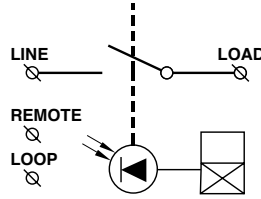
Switch terminals are not identified  
 Switch is backwired  
 Conductor termination is plain screw type  
 56SW310    56SW363    56C532  
 56SW320    56C432    56C540  
 56SW332    56C440    56C550  
 56SW350    56C450



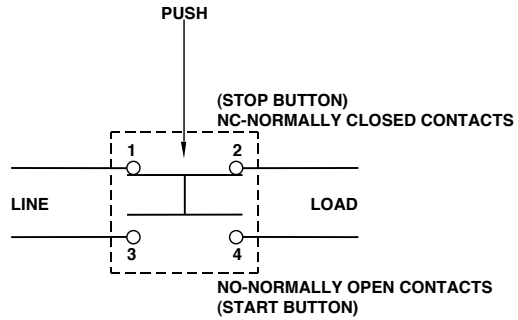
Switch is sidewired  
 Conductor termination is pressure plate type  
 56SW220  
 56SW232  
 56SW250  
 56SW263



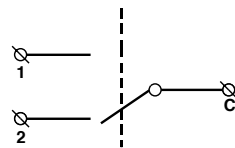
If neutral potential is applied to remote terminal timer function is overridden  
 56SW420



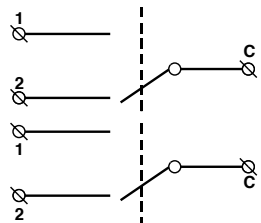
Switch is sidewired  
 Conductor termination is pressure plate type  
 56SSR



56PB (No Marking, Colour Green, Non Latching)  
 56PBS (Stop, Colour Red, Non Latching)  
 56PBS1 (Emergency Stop, Marked on Switch and Plate, Colour Red Mushroom, Latching)  
 56/2PB (Stop/Start, Colour Red/Green, Non Latching)  
 56/2PBS1 (Stop, Colour Red Mushroom, Latching)(Start, Colour Green, Non Latching)

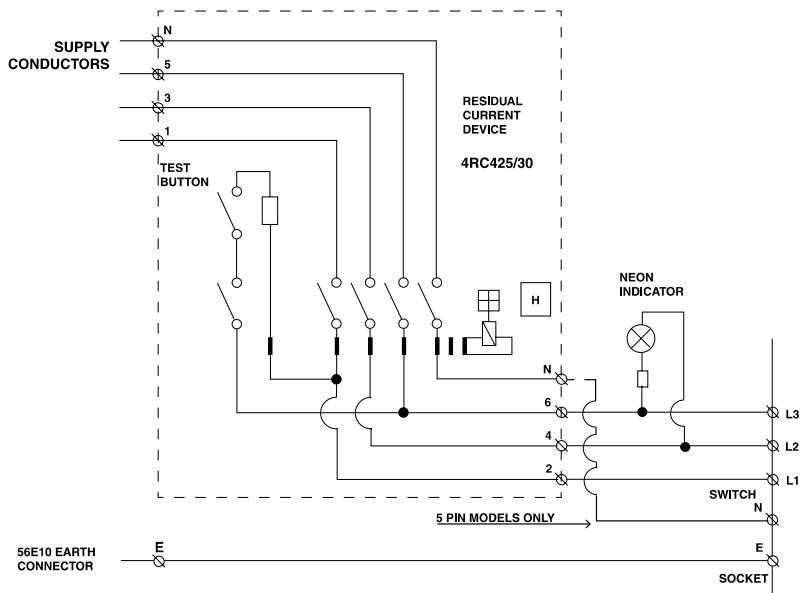
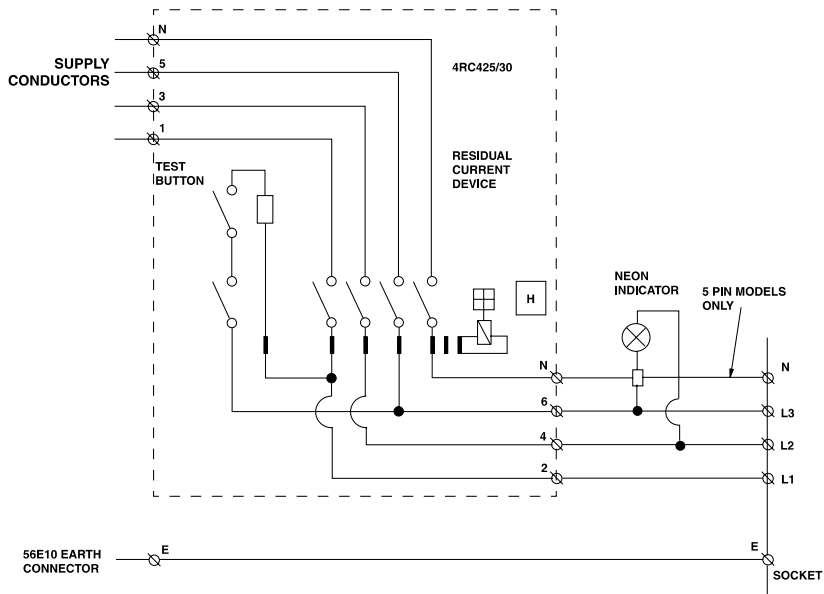
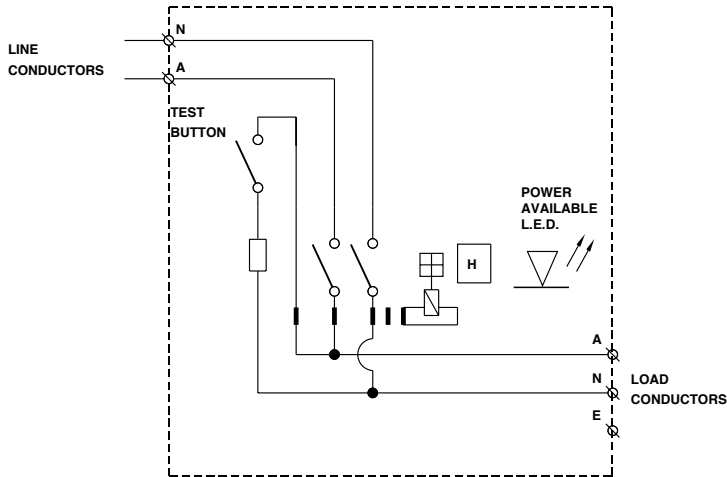


Switch is 30 Series mech.  
 56SW110/2  
 56SW115/2  
 56SSW10  
 56SSW15



Circuit is shown in the 'OFF' position  
 56SSW2/10  
 56SSW2/15

# Wiring Diagram Types



# Numerical Index

Catalogue Number	Reference Page	Catalogue Number	Reference Page	Catalogue Number	Reference Page
56/2PB	12	56P416	15	56SSR	13
56/2PBS1	12	56P416K	15	56SW110	10
56/32	22	56P420	15	56SW110/2	10
56Bridge	18	56P432	15	56SW115	10
56C310	8	56P440	15	56SW116	10
56C313	8	56P450	15	56SW120	10
56C313/2	8	56P516	15	56SW132	10
56C313RCD30	17	56P520	15	56SW150	10
56C315	8	56P532	15	56SW163	10
56C315D	8	56P540	15	56SW210	10
56C315RP	8	56P550	15	56SW216	10
56C316RP	8	56PA313	15	56SW220	10
56C320	8	56PA315RP	15	56SW232	10
56C332	8	56PA316RP	15	56SW250	10
56C416	8	56PA320	15	56SW263	10
56C420	8	56PA332	15	56SW310	10
56C420RC	17	56PA416	15	56SW316	10
56C432	8	56PA416K	15	56SW320	10
56C432RC	17	56PA420	15	56SW332	10
56C440	8	56PA432	15	56SW350	10
56C450	8	56PA440	15	56SW363	10
56C516	8	56PA450	15	56SW420	10
56C520	8	56PA516	15		
56C520RC	17	56PA520	15		
56C532	8	56PA532	15		
56C532RC	17	56PA540	15		
56C540	8	56PA550	15		
56C550	8	56PB	12		
56CB4NLE	21	56PBS	12		
56E1	18	56PBS1	12		
56E2	18	56PEDD3	14		
56E3	18	56RC	17		
56E4	18	56SO310	9		
56ED2	18	56SO313	9		
56ES1	18	56SO315	9		
56ES2	18	56SO315RP	9		
56FA1	23	56SO316RP	9		
56FA2	23	56SO320	9		
56FA3	23	56SO332	9		
56JB1	22	56SO416	9		
56JB2	22	56SO416K	9		
56L1LE	20	56SO420	9		
56L1/22LE	20	56SO432	9		
56L1/22/2LE	20	56SO440	9		
56L2LE	20	56SO450	9		
56P215/32	15	56SO516	9		
56P310	15	56SO520	9		
56P313	15	56SO532	9		
56P315	15	56SO540	9		
56P315RP	15	56SO550	9		
56P316RP	15	56SSW10	11		
56P320	15	56SSW15	11		
56P320F	15	56SSW2/10	11		
56P332	15	56SSW2/15	11		







## About Schneider Electric

As the global specialist in energy management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in energy and infrastructure, industrial processes, building automation, and data centres/networks, as well as a broad presence in residential applications. Focused on making energy safe, reliable, and efficient, the company's 110,000 plus employees achieved sales of 19.6 billion euros in 2010, through an active commitment to help individuals and organizations "Make the most of their energy".

The LifeSpace Business of Schneider Electric provides solutions that represent the best in lifestyle and innovation for offices, hotels and homes. These solutions include award-winning products in the areas of building and home automation, structured cabling, and designer switches and sockets. They help the finest architectures around the world to achieve more with less.

[www.schneider-electric.com](http://www.schneider-electric.com)

