

ABB AC drive selection table

Applications where to use		ACS150	ACS310	ACS355	ACH550	ACS550	ACS580
Pumps		●	●	●	●	●	●
Fans		●	●	●	●	●	●
Conveyors		●	-	●	-	●	●
Material handling machines		●	-	●	-	●	●
Exercise equipment		●	-	-	-	-	-
White goods		●	-	-	-	-	-
Gates, doors, barriers		●	-	●	-	-	-
Compressors		-	●	●	●	●	●
Cutting machines, shears, saws		-	-	●	-	●	●
Extruders		-	-	●	-	●	●
Machine tools, mixers, stirrers		-	-	●	-	●	●
Spinning machines		●	-	●	-	●	●
Centrifuges		-	-	●	-	●	●
Processing lines		-	-	-	-	●	●
Specification		ACS150	ACS310	ACS355	ACH550	ACS550	ACS580
Voltage and power ranges		1-phase, 200 to 240 V: 0.37 to 2.2 kW	1-phase, 200 to 240 V: 0.37 to 2.2 kW	1-phase, 200 to 240 V: 0.37 to 2.2 kW			
		3-phase, 200 to 240 V: 0.37 to 2.2 kW	3-phase, 200 to 240 V: 0.37 to 11 kW	3-phase, 200 to 240 V: 0.37 to 11 kW		3-phase, 208 to 240 V: 0.75 to 75 kW	
		3-phase, 380 to 480 V: 0.37 to 4 kW	3-phase, 380 to 480 V: 0.37 to 22 kW	3-phase, 380 to 480 V: 0.37 to 22 kW	3-phase, 380 to 480 V: 0.75 to 355 kW	3-phase, 380 to 480 V: 0.75 to 355 kW	3-phase, 380 to 480 V: 0.75 to 500 kW
Protection classes	IP20	●	●	●			
	IP21	-	○	○	●	●	●
	IP54/IP55	-	-	-	● ¹⁾	● ¹⁾	● ¹⁾
	IP66/IP67	-	-	● ¹⁾	-	-	-
Mounting arrangements	Optimal for cabinet mounting	●	●	●	-	-	-
	Optimal for wall mounting	-	○	● (IP66/67 variant)	●	●	●
Programming	Parameter programming	●	●	●	●	●	●
	Sequence programming	-	-	●	-	-	-
Human-machine interface	Basic control panel	●	○	○	-	○	○
	Assistant control panel	-	○	○/● (with IP66/67 variant)	●	●	●
Ambient temperature		-10 to +40 °C, no frost allowed, +50 °C with 10% derating.	-10 to +50 °C (14 to 122 °F), no frost allowed.	-10 to +40 °C, no frost allowed, +50 °C with 10% derating.	-15 to +50 °C. No frost allowed. From +40 to +50 °C with derating.	-15 to +50 °C. No frost allowed. From +40 to +50 °C with derating.	-15 to +50 °C. No frost allowed. From +40 to +50 °C with derating*.
Inputs and outputs	Digital inputs/outputs	5/0	5/1	5/1	6/0	6/0	6/0
	Relay outputs	1	1	1	3 + (3 as option)	3 + (3 as option)	3 + (2 as option)
	Analog inputs/outputs	2/1	2/1	2/1	2/2	2/2	2/2
Supported fieldbus protocols	Speed feedback	-	-	○	○	○	-
	Modbus RTU	-	●	○	●	●	●
	Profibus DP	-	-	○	○	○	○
	DeviceNet™	-	-	○	○	○	○
	LonWorks®	-	-	○	○	○	-
	ControlNet	-	-	-	○	○	-
	CANopen®	-	-	○	○	○	-
	Ethernet (Modbus/TCP)	-	-	○	○	○	○
	Ethernet (EtherNet/IP™)	-	-	○	○	○	○
	Ethernet (EtherCAT®)	-	-	○	○	○	-
Ethernet (PROFINET IO)	-	-	○	○	○	○	
Ethernet (PowerLink)	-	-	-	○	○	-	
EMC compliance (EN 61800-3)	C3, industrial use	●	●	●	●	●	●
	C2, commercial use (installation by EMC experts)	○	○	○	●	●	●
	C1, commercial use	○ (conductive emissions)	○ (conductive emissions)	○ (conductive emissions)	○ (conductive emissions)	○ (conductive emissions)	○ (conductive emissions)
Chokes	Input chokes	○	○	○	● (built-in)	● (built-in)	● (built-in)
	Output chokes	○	○	○	○	○	○
Brake chopper		●	-	●	-	● ²⁾	● ³⁾
Suggested maximum motor cable length		30 to 60 m	30 to 60 m	30 to 60 m	100 to 200 m	100 to 200 m	100 to 300 m
Switching frequency		up to 16 kHz	up to 16 kHz	up to 16 kHz	up to 12 kHz	up to 12 kHz	up to 12 kHz
Output frequency		0 to 500 Hz	0 to 599 Hz	0 to 599 Hz	0 to 500 Hz	0 to 500 Hz	0 to 500 Hz
Overload capacity		150% for 60 s, 180% for 2 s	110% for 60 s, 180% for 2 s	150% for 60 s, 180% for 2 s	110% for 60 s, 180% for 2 s	150% for 60 s, 180% for 2 s	150% for 60 s, 170-180% for 2 s **
Number of preset speeds		3	7	7	7	7	7
PC tools	Drive commissioning tool	-	○	○	○	○	○
	Drive offline programming tool	○	○	○	○	○	○
	Drive dimensioning tool	-	-	-	○	○	○
Approvals	CE, UL, cUL, C-Tick, EAC	●	●	●	●	●	●
	RoHS compliance	●	●	●	●	●	●

● = standard

○ = option

- = not available

¹⁾ IP66/67 and IP54/55 product variants

²⁾ up to R2 as standard

³⁾ up to R3 as standard

* IP21 frame sizes R0-R3 without derating up to 50 °C.

** Frames R0-R3 with 180% for 2s and R4-R9 with 170% for 2s, except ACS580-01-430A-4 with 150% for 2s