

ABB component drives

ACS55, 0.18 to 2.2 kW / 0.25 to 3 hp

Technical catalogue

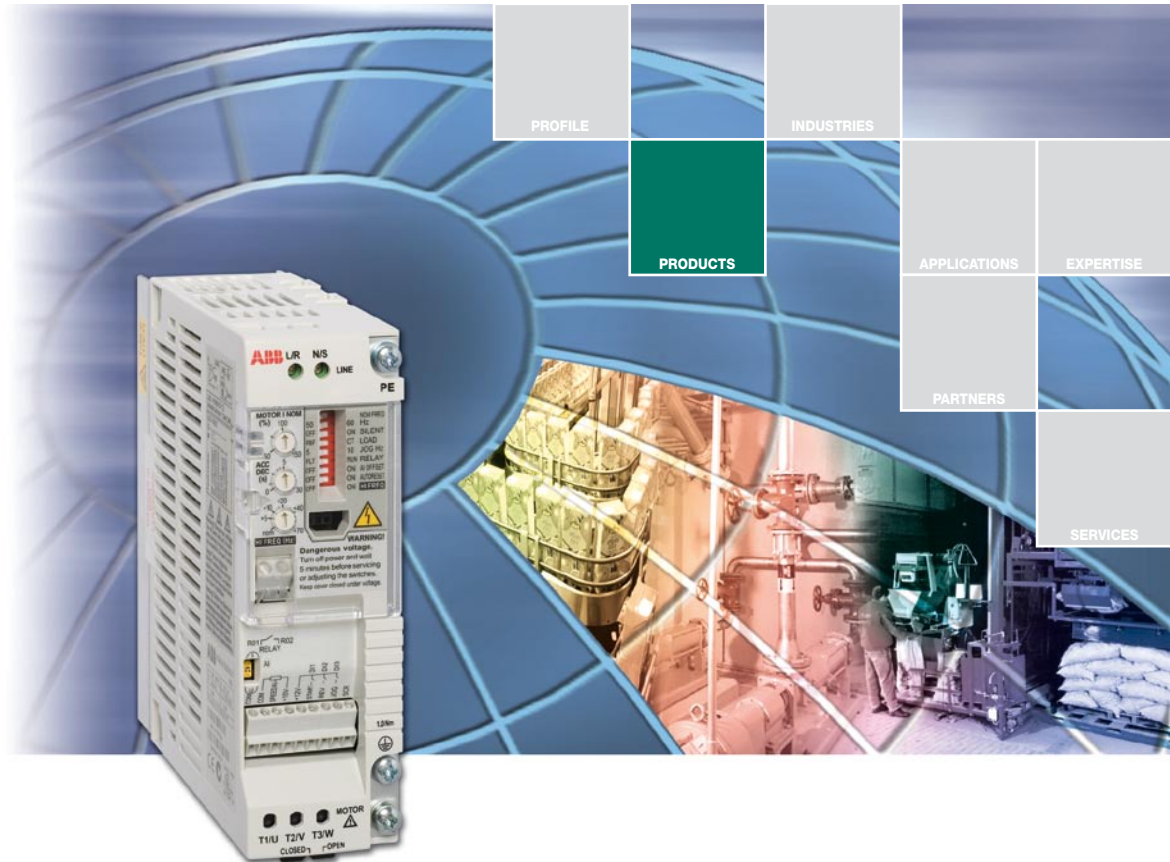




ABB component drives

ABB component drives meet the requirements of OEMs, installation companies and panel builders. These drives are components that are bought together with other components from a logistical distributor. The drives are stocked, and the number of options and variants is optimized for logistical distribution.

Highlights

- Descriptive interface
- Compact and slim
- Fast and safe drive configuration with DriveConfig kit
- Ideal for DIN-rail mounting
- Suitable for domestic environment as standard
- Silent motor

Applications

- Fans
- Pumps
- Gate control
- Material handling
- Conveyors

Features	Benefits	Notes
Descriptive interface	Faster set-up Easier configuration Easier drive for new users	Basic parameter settings are done with DIP switches and potentiometers
Compact and slim	Less space required for installation	0.18 to 0.37 kW 45 mm width 0.75 kW 67.5 mm width 1.5 to 2.2 kW 70 mm width
DriveConfig kit	Fast and safe configuration of unpowered drives	New drive configuration tool for volume manufacturing
Removable mounting clip	Flexible and easy mounting	Removable clip allows DIN-rail and wall mounting from back and side of the unit
EMC	Low EMC emissions	1 st environment EMC filters as standard
Automatic switching frequency	Provides lowest possible noise without decreased derating of the drive	Increases switching frequency automatically, when drive temperature is decreased

Ratings, types and voltages

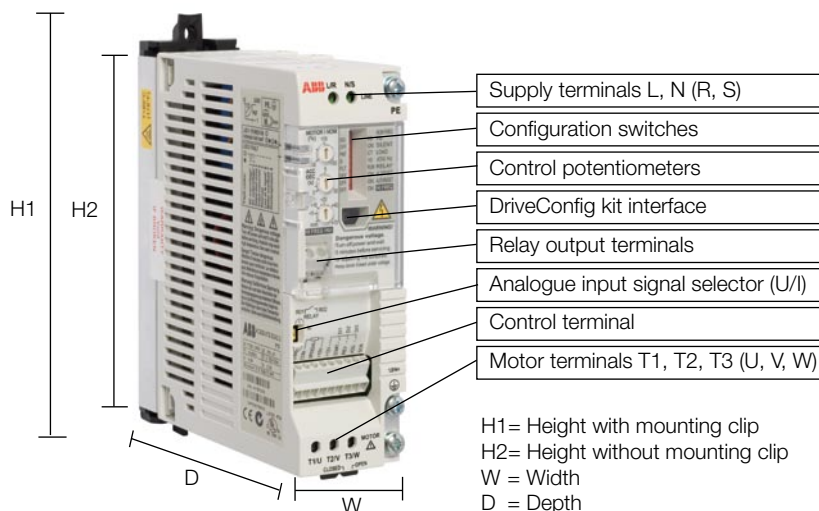


P_N kW	P_N hp	Output current		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		nominal A	max A								
Inbuilt EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V											
0.18	0.25	1.4	2.1	4.4	ACS55-01E-01A4-2	A	170	146.5	45	128	0.65
0.37	0.5	2.2	3.3	6.9	ACS55-01E-02A2-2	A	170	146.5	45	128	0.7
0.75	1.0	4.3	6.5	10.8	ACS55-01E-04A3-2	B	170	146.5	67.5	128	0.7
1.5	2	7.6	11.4	18.2	ACS55-01E-07A6-2	D	226	203	70	159	1.1
2.2	3	9.8	14.7	22	ACS55-01E-09A8-2	D	226	203	70	159	1.1

P_N kW	P_N hp	Output current		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		nominal A	max A								
No EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V											
0.18	0.25	1.4	2.1	4.4	ACS55-01N-01A4-2	A	170	146.5	45	128	0.65
0.37	0.5	2.2	3.3	6.9	ACS55-01N-02A2-2	A	170	146.5	45	128	0.7
0.75	1.0	4.3	6.5	10.8	ACS55-01N-04A3-2	B	170	146.5	67.5	128	0.7
1.5	2	7.6	11.4	18.2	ACS55-01N-07A6-2	C	194	171	70	159	1.1
2.2	3	9.8	14.7	22	ACS55-01N-09A8-2	C	194	171	70	159	1.1

P_N kW	P_N hp	Output current		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		nominal A	max A								
Inbuilt EMC filter, 1-phase supply voltage 110/120 V, +10/-15%, 3-phase output 200/240 V											
0.18	0.25	1.4	2.1	6.4	ACS55-01E-01A4-1	A	170	146.5	45	128	0.65
0.37	0.5	2.2	3.3	9.5	ACS55-01E-02A2-1	A	170	146.5	45	128	0.7

P_N kW	P_N hp	Output current		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		nominal A	max A								
No EMC filter, 1-phase supply voltage 110/120 V, +10/-15%, 3-phase output 200/240 V											
0.18	0.25	1.4	2.1	6.4	ACS55-01N-01A4-1	A	170	146.5	45	128	0.55
0.37	0.5	2.2	3.3	9.5	ACS55-01N-01A4-1	A	170	146.5	45	128	0.6





DriveConfig kit

The DriveConfig kit is a PC tool for volume configuration and control of ACS55 drives. The kit enables parameter setting and software updating without the need for a power connection. The drives can even remain in their delivery boxes during configuration. The DriveConfig kit features on-line drive control and monitoring of up to four signals simultaneously. Together with ACS55 drives, the DriveConfig kit brings additional value to processes by saving time and ensuring safety.

DriveConfig kit includes:

- Hardware and cables
- PC software
- User's manual in English (hardcopy and PDF)
- Battery charger
- Serial port / USB adapter

DriveConfig kit requirements:

- PC with Microsoft Windows 2000/XP operating system
- Free serial or USB port from the PC

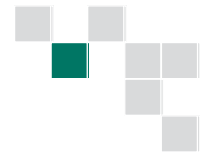


Potentiometer

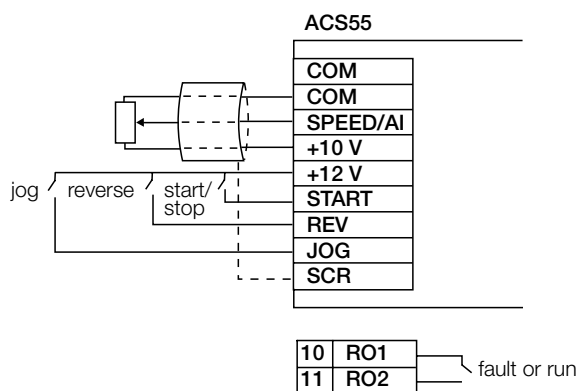
The ACS50-POT potentiometer is an option for ACS55 drives. Two switches are included in addition to the potentiometer for drive control; start / stop and forward / reverse. The ACS50-POT potentiometer does not require any external power source.



Technical specification



Mains connection	
Power range	0.18 to 2.2 kW
Voltage	1-phase, 110 to 120 V and 200 to 240 V, +10/-15%
Frequency	48 to 63 Hz
Motor connection	
Voltage	3-phase, from 0 to U_{SUPPLY} (for 110/120 V from 0 to 230 V)
Frequency	0 to 120/130 Hz
Overload capacity	150% (60 s)
Switching frequency	
Standard	5 kHz, adjustable up to 16 kHz with automatic switching frequency reduction
Acceleration time	0.1 to 30 s
Deceleration time	0.1 to 30 s
Environmental limits	
Ambient temperature	
0 to 40 °C	with nominal current and 5 kHz switching frequency
up to 50 °C	with derating
-20 °C	with restrictions
Altitude	
Output current	Nominal current : 0 to 1000 m reduced by 1% per 100 m over 1000 m to 2000 m
Relative humidity	lower than 95% (without condensation)
Degree of protection	IP20
Contamination levels	No conductive dust allowed, corrosive liquids or gases (IEC 60721-3-3)



Control connections		
One analog input		
Voltage signal	0 (2) to 10 V, 200 k Ω single-ended	
Current signal	0 (4) to 20 mA, 100 Ω single-ended	
Potentiometer reference value	10 V \pm 2% max. 10 mA, 1 k Ω \leq R \leq 10 k Ω	
Response time	\leq 60 ms	
Resolution	0.1%	
Accuracy	\pm 1%	
Three digital inputs		
	12 V DC with internal or 12 to 24 V DC external supply, PNP	
Input impedance	1.5 Ω	
Response time	\leq 9 ms	
One relay output		
Switching voltage	12 to 250 V AC or max 30 V DC	
Maximum continuous current	2 A	
Product compliance		
Low Voltage Directive 73/23/EEC with supplements		
EMC Directive 89/336/EEC with supplements		
Quality assurance system ISO 9001 and Environmental system ISO 14001		
CE, UL, cUL, C-Tick and GOST R approvals		
EMC standards in general		
EN 61800-3/A11 (2000), product standard	EN 61800-3 (2004), product standard	EN 55011, product family standard for industrial, scientific and medical (ISM) equipment
1 st environment, unrestricted distribution	Category C1	Group 1 Class B
1 st environment, restricted distribution	Category C2	Group 1 Class A
2 nd environment, unrestricted distribution	Category C3	Group 2 Class A
2 nd environment, restricted distribution	Category C4	Not applicable



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