ABB micro drives
ACS55, 0.18 to 2.2 kW/0.25 to 3 hp

Micro drives are used in a wide variety of simple machines such as automatic gates, solar trackers, treadmills, whirlpool baths and other applications. They are used in both commercial and domestic environments.

Drive parameters are easily set by configuring the drive's DIP switches and potentiometers on the front panel. For volume configuration, the optional DriveConfig kit, which includes PC software, can be used. DriveConfig provides advanced drive configuration options with different macros for default I/O connections. DriveConfig can even be used to configure unpowered drives.

Highlights

- Built-in 1st environment EMC filter as standard: suitable for single phase residential and commercial applications
- Compact and slim design
- Several installation alternatives
- Reduced motor noise with high switching frequency
- Easy configuration using potentiometers and switches
- Fast programming of drives without the need for a power connection

Voltage and power range

- 1-phase, 110 to 120 V +10/-15% 0.18 to 0.37 kW (0.25 to 0.5 hp)
- 1-phase, 200 to 240 V +10/-15% 0.18 to 2.2 kW (0.25 to 3 hp)

Options

- Input/output chokes
- Potentiometer
- DriveConfig kit

Applications

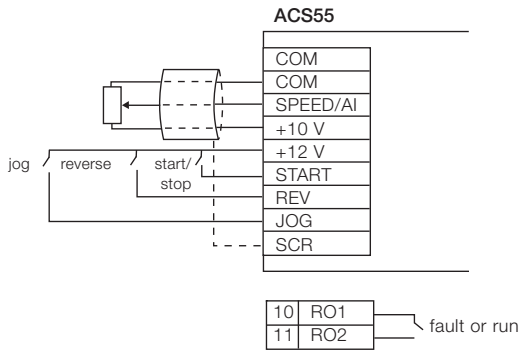
- Fans and pumps
- Exercise equipment
- Gate control
- Conveyors
- Whirlpool baths

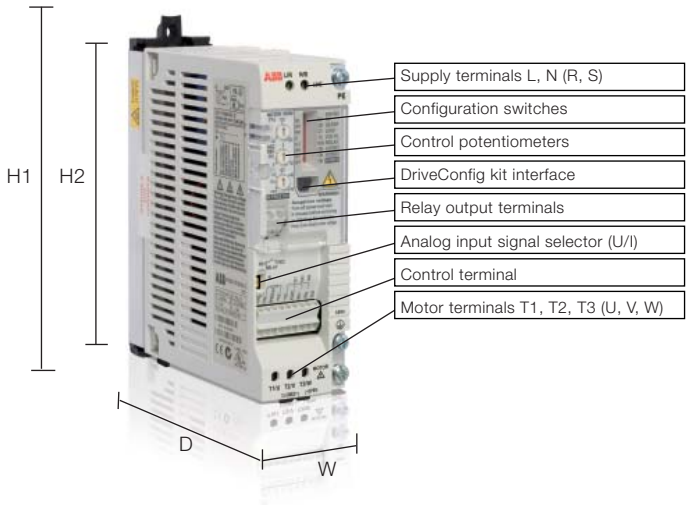
Technical data and types

Ratings P_N kW	P_N hp	Output current nominal A	max A	Input current A	Type designation	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
Built-in EMC filter, 1-phase AC supply, 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	0.9
1.5	2	7.6	11.4	18.2	ACS55-01E-07A6-2	D	226	203	70	159	1.6
2.2	3	9.8	14.7	22	ACS55-01E-09A8-2	D	226	203	70	159	1.7
No EMC filter, 1-phase AC supply, 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	0.9
1.5	2	7.6	11.4	18.2	ACS55-01N-07A6-2	C	194	171	70	159	1.2
2.2	3	9.8	14.7	22	ACS55-01N-09A8-2	C	194	171	70	159	1.3
Built-in EMC filter, 1-phase AC supply, 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
No EMC filter, 1-phase AC supply, 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	0.65
0.37	0.5	2.2	3.3	9.5	ACS55-01N-02A2-1	A	170	146.5	45	128	0.7

H1 = Height with mounting clip
H2 = Height without mounting clip
W = Width
D = Depth

ABB standard macro I/O configuration (default)





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)	
Motor control method	Scalar U/f	
Control connections		
One analog input		
Voltage signal	0 (2) to 10 V, 200 kΩ single-ended	
Current signal	0 (4) to 20 mA, 100 Ω single-ended	
Potentiometer reference value	10 V ±2% max. 10 mA, 1 kΩ ≤ R ≤ 10 kΩ	
Response time	≤ 60 ms	
Resolution	0.1%	
Accuracy	±1%	
Three digital inputs	12 V DC with internal supply or 12 to 24 V DC external supply, PNP	
Input impedance	1.5 Ω	
Response time	≤ 9 ms	
One relay output		
Switching voltage	12 to 250 V AC or max 30 V DC	
Maximum continuous current	2 A	
Application parameters		
	As standard	With DriveConfig kit
Motor nominal frequency	50/60 Hz	40 to 250 Hz
Acceleration time	0.1 to 30 s	0.1 to 100 s
Deceleration time	0.1 to 30 s	0.1 to 100 s
Maximum frequency	50 to 120 Hz	0 to 250 Hz
Relay output	Fault/Run	Fault/Fault (-1)/Run
Load type	Pump/fan or constant	
Switching frequency		
Standard	5 kHz, adjustable up to 16 kHz with automatic switching frequency reduction	
Features available with DriveConfig kit	Application macro selection, IR compensation, constant speed selection, stop mode selection, reset mode selection	
Product compliance		
CE, UL, cUL, C-Tick and GOST R approvals, RoHS compliant		
Environmental limits		
Degree of protection	IP20	
Ambient temperature		
-20 to +40 °C	With nominal current and 5 kHz switching frequency, no frost allowed	
up to +55 °C	With derating	
Relative humidity	Lower than 95% (without condensation)	

For more details see ACS55 catalog (3AFE68899842).

For more information please contact your local ABB representative or visit:

www.abb.com/drives
www.abb.com/drivespartners

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