

# ABB component drives

## ACS50, 0.18 to 2.2 kW / 0.25 to 3 hp



### 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

- No programming - easy and descriptive interface
- Compact and slim
- Ideal for DIN-rail mounting
- Suitable for domestic environment as standard
- Silent motor

### Voltage and power range

- 1-phase, 100 to 120 V  $\pm 10\%$   
0.18 to 0.37 kW (0.25 to 0.5 hp)
- 1-phase, 200 to 240 V  $\pm 10\%$   
0.18 to 2.2 kW (0.25 to 3 hp)

### Applications

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

### Options

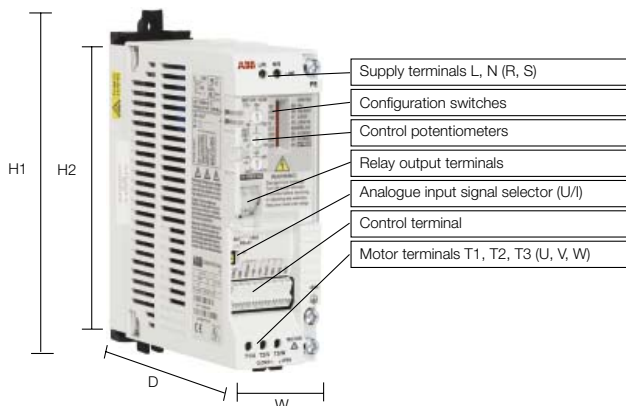
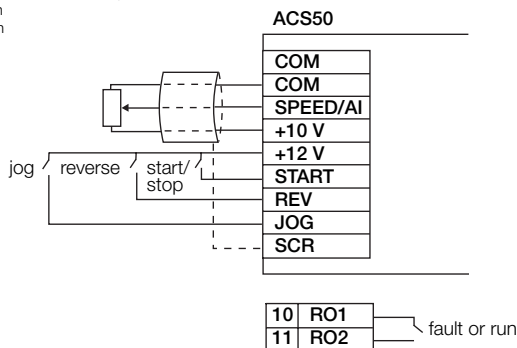
- Input/Output chokes
- Potentiometer

# Ratings, types, voltages and dimensions



Ratings		Output current			Input current	Type code	Frame size	H1	H2	W	D	Weight
$P_N$ kW	$P_N$ hp	nominal A	max A	A			mm	mm	mm	mm	kg	
<b>Inbuilt EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V</b>												
0.18	0.25	1.4	2.1	4.4	ACS50-01E-01A4-2	A	170	146.5	45	128	0.65	
0.37	0.5	2.2	3.3	6.9	ACS50-01E-02A2-2	A	170	146.5	45	128	0.7	
0.75	1.0	4.3	6.5	10.8	ACS50-01E-04A3-2	B	170	146.5	67.5	128	0.7	
1.5	2	7.6	11.4	18.2	ACS50-01E-07A6-2	D	226	203	70	159	1.1	
2.2	3	9.8	14.7	22	ACS50-01E-09A8-2	D	226	203	70	159	1.1	
<b>No EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V</b>												
0.18	0.25	1.4	2.1	4.4	ACS50-01N-01A4-2	A	170	146.5	45	128	0.65	
0.37	0.5	2.2	3.3	6.9	ACS50-01N-02A2-2	A	170	146.5	45	128	0.7	
0.75	1.0	4.3	6.5	10.8	ACS50-01N-04A3-2	B	170	146.5	67.5	128	0.7	
1.5	2	7.6	11.4	18.2	ACS50-01N-07A6-2	C	194	171	70	159	1.1	
2.2	3	9.8	14.7	22	ACS50-01N-09A8-2	C	194	171	70	159	1.1	
<b>Inbuilt EMC filter, 1-phase supply voltage 110/120 V, +10/-15%, 3-phase output 200/240 V</b>												
0.18	0.25	1.4	2.1	6.4	ACS50-01E-01A4-1	A	170	146.5	45	128	0.65	
0.37	0.5	2.2	3.3	9.5	ACS50-01E-02A2-1	A	170	146.5	45	128	0.7	
<b>No EMC filter, 1-phase supply voltage 110/120 V, +10/-15%, 3-phase output 200/240 V</b>												
0.18	0.25	1.4	2.1	6.4	ACS50-01N-01A4-1	A	170	146.5	45	128	0.55	
0.37	0.5	2.2	3.3	9.5	ACS50-01N-01A4-1	A	170	146.5	45	128	0.6	

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



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## Motor connection

<b>Voltage</b>	3-phase, from 0 to $U_{SUPPLY}$ (for 110/120 V from 0 to 230 V)
<b>Frequency</b>	0 to 120/130 Hz
<b>Overload capacity</b>	150% (60 s)
<b>Switching frequency</b>	Standard 5 kHz, adjustable up to 16 kHz with automatic switching frequency reduction
<b>Acceleration time</b>	0.1 to 30 s
<b>Deceleration time</b>	0.1 to 30 s

## Control connections

<b>One analog input</b>	
Voltage signal	0 (2) to 10 V, 200 k $\Omega$ single-ended
Current signal	0 (4) to 20 mA, 100 $\Omega$ single-ended
Potentiometer reference value	10 V $\pm$ 2% max. 10 mA, 1 k $\Omega$ $\leq$ R $\leq$ 10 k $\Omega$
Response time	$\leq$ 60 ms
Resolution	0.1%
Accuracy	$\pm$ 1%
<b>Three digital inputs</b>	
	12 V DC with internal or 12 to 24 V DC external supply, PNP
Input impedance	1.5 $\Omega$
Response time	$\leq$ 9 ms
<b>One relay output</b>	
Switching voltage	12 to 250 V AC or max 30 V DC
Maximum continuous current	2 A

## Product compliance

CE, UL, cUL, C-Tick and GOST R approvals

## Environmental limits

<b>Degree of protection</b>	IP20
<b>Ambient temperature</b>	
0 to 40°C	with nominal current and 5 kHz switching frequency
up to 50°C	with derating
-20°C	with restrictions
<b>Relative humidity</b>	lower than 95% (without condensation)

For more information see technical catalogue  
ABB component drives, ACS50 (3AFE68216061).

Find your nearest contact at



[www.abb.com/drivespartners](http://www.abb.com/drivespartners)