

# ABB component drive

ACS50, 0.18 kW - 0.75 kW  
Technical catalogue

## Drive<sup>IT</sup> Low Voltage AC Drive



# ABB component drive



## What is an ABB component drive?

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

## ABB component drive promises

- No programming - easy and descriptive interface
- Compact size and thin shape
- Ideal drive for DIN-rail mounting
- Low EMC emissions
- Silent motor

## Where can it be used?

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

## Highlights

- Power range 0.18 - 0.75 kW (100 - 240 V)
- IP 20
- Integral EMC filter for 1<sup>st</sup> environment (EN61800-3)
- Optimized switching frequency for noise (up to 16 kHz)

## What are its main features?

Feature	Note	Benefit
No programming	All the inverter parameter settings are done with DIP switches and potentiometers	Faster set-up Easier configuration Easier drive for new users
Compact size and thin shape	up to 0.37 kW 45 mm width, 0.75 kW 67.5 mm width	Less space required for installation
Removable mounting clip	Removable clip allows DIN-rail and wall mounting from back and side of the unit	Flexible and easy mounting
EMC	1 <sup>st</sup> environment EMC filters as standard	Low EMC emissions
Automatic switching frequency	Increases switching frequency automatically, when drive temperature is decreased	Provides lowest possible noise without derating of the drive

# Ratings, types and voltages



Built-in EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V											
P <sub>N</sub> kW	P <sub>N</sub> hp	Output		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		Nominal current	Max current								
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	0.9

No EMC filter, 1-phase supply voltage 200/240 V, +10/-15%, 3-phase output 200/240 V											
P <sub>N</sub> kW	P <sub>N</sub> hp	Output		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		Nominal current	Max current								
0.18	0.25	1.4	2.1	4.4	ACS50-01N-01A4-2	A	170	146.5	45	128	0.55
0.37	0.5	2.2	3.3	6.9	ACS50-01N-02A2-2	A	170	146.5	45	128	0.6
0.75	1.0	4.3	6.5	10.8	ACS50-01N-04A3-2	B	170	146.5	67.5	128	0.8

Built-in EMC filter, 1-phase supply voltage 100/120 V, +10/-15%, 3-phase output 200/240 V											
P <sub>N</sub> kW	P <sub>N</sub> hp	Output		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
		Nominal current	Max current								
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

No EMC filter, 1-phase supply voltage 100/120 V, +10/-15%, 3-phase output 200/240 V											
P <sub>N</sub> kW	P <sub>N</sub> hp	Output		Input current A	Type code	Frame size	H1 mm	H2 mm	W mm	D mm	Weight kg
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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-02A2-1	A	170	146.5	45	128	0.6

## Options

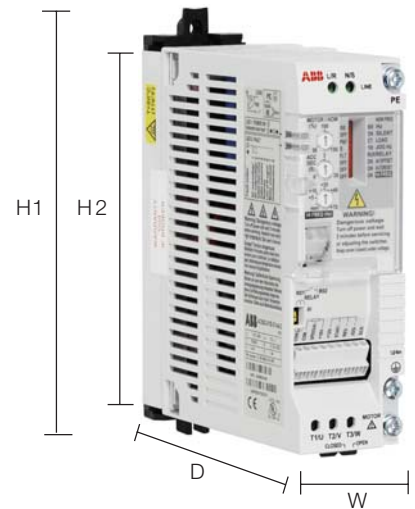
### Potentiometer

Type code
ACS50-POT



### EMC filter for 1<sup>st</sup> and 2<sup>nd</sup> environment

Type code	Height mm	Width mm	Depth mm	Weight kg
ACS50-IFAB-01	146.5	45	128	0.7



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

### Input and output chokes

Choke type	L/mH	Dimensions H x W x D mm	Weight kg	Max. cable mm <sup>2</sup>	I/A	ACS50 frame size
SACL21 (input)	3.2	76x63x62	1.0	4	8.5	A
SACL22 (input)	1.5	92x76x63	1.3	10	15	B
ACS-CHK-B3 (output)	1.5	300x102x112	4.0	4	8	A/B

# Technical specification

## Mains connection

<b>Power range</b>	0.18- 0.75 kW
<b>Voltage</b>	1-phase, 100 to 115 V and 200 to 240 V, +10/-15%
<b>Frequency</b>	48 to 63 Hz

## Motor connection

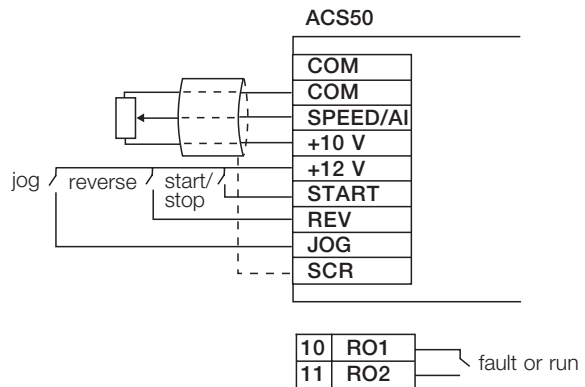
<b>Voltage</b>	3-phase, from 0 to $U_{\text{SUPPLY}}$ (for 100/115 V from 0 to 230 V)
<b>Frequency</b>	0 - 120/130 Hz
<b>Overload capacity</b>	150% (60 s)
<b>Switching frequency</b>	
Standard	5 kHz, adjustable up to 16 kHz with automatic switching frequency reduction
<b>Acceleration time</b>	0.1 to 30 s
<b>Deceleration time</b>	0.1 to 30 s

## Environmental limits

<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>Altitude</b>	
Output current	$I_2$ : 0 to 1000 m reduced by 1% per 100 m over 1000 m to 2000 m
<b>Relative humidity</b>	lower than 95% (without condensation)
<b>Protection class</b>	IP 20
<b>Contamination levels</b>	No conductive dust allowed, corrosive liquids or gases (IEC60721-3-3)

## 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, 1k $\Omega$ $\leq$ 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 V ... 24 V DC external supply, PNP
Input impedance	1.5 k $\Omega$
Response time	$\leq$ 9 ms
<b>One relay output</b>	
Switching voltage	12 to 250 V AC or max 30 V DC/0.5 A
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, ULc, CSA and C-Tick approvals



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