

# ABB general machinery drives

## ACS350, 0.37 to 7.5 kW / 0.5 to 10 hp



### ABB general machinery drives

ABB general machinery drives are designed for machine building. In serial type manufacturing the consumed time per unit is critical. The drives are designed to be the fastest drives in terms of installation, setting parameters and commissioning. The basic products have been made as user-friendly as possible, yet providing high intelligence. The drives offer diverse functionality to cater for the most demanding needs.

ABB general machinery drives are designed to meet the requirements of an extensive range of machinery applications. The drives are ideal for food and beverage, material handling, textile, printing, rubber and plastics, and woodworking applications.

### Highlights

- FlashDrop
- Sequence programming
- Inbuilt C3 EMC filter
- Inbuilt brake chopper
- Unified height and depth
- Side-by-side mounting

### Voltage and power range

- 1-phase, 200 to 240 V  $\pm$  10%  
0.37 to 2.2 kW (0.5 to 3 hp)
- 3-phase, 200 to 240 V  $\pm$  10%  
0.37 to 4 kW (0.5 to 5 hp)
- 3-phase, 380 to 480 V  $\pm$  10%  
0.37 to 7.5 kW (0.5 to 10 hp)

### Options

- User interface
  - Basic control panel
  - Assistant control panel
  - Potentiometer
- FlashDrop
- Fieldbuses
  - PROFIBUS DP
  - DeviceNet
  - CANopen
  - Modbus
- Encoder interface
- NEMA 1 kit
- Input/Output chokes
- C2 EMC filters
- DriveWindow Light 2 software

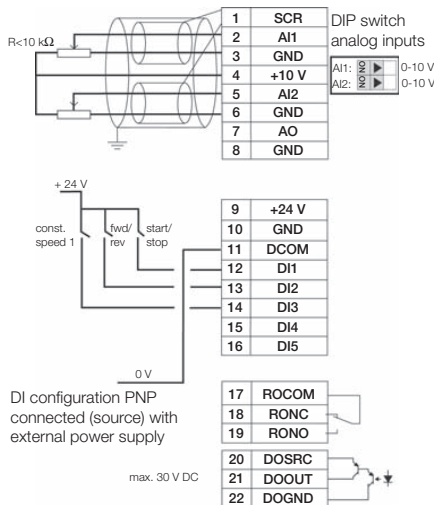
The ABB logo is displayed in a bold, red, sans-serif font.

# Ratings, types, voltages and dimensions



Ratings			Type code	Frame size	IP20 UL open				NEMA 1			
P <sub>N</sub> kW	P <sub>N</sub> hp	I <sub>2N</sub> A			H2 mm	W mm	D mm	Weight kg	H5 mm	W mm	D mm	Weight kg
<b>1-phase supply voltage 200 - 240 V units</b>												
0.37	0.5	2.4	ACS350-01X-02A4-2	R0	202	70	161	1.1	280	70	169	1.5
0.75	1	4.7	ACS350-01X-04A7-2	R1	202	70	161	1.3	280	70	169	1.7
1.1	1.5	6.7	ACS350-01X-06A7-2	R1	202	70	161	1.3	280	70	169	1.7
1.5	2	7.5	ACS350-01X-07A5-2	R2	202	105	165	1.5	282	105	169	1.9
2.2	3	9.8	ACS350-01X-09A8-2	R2	202	105	165	1.5	282	105	169	1.9
<b>3-phase supply voltage 200 - 240 V units</b>												
0.37	0.5	2.4	ACS350-03X-02A4-2	R0	202	70	161	1.1	280	70	169	1.5
0.55	0.75	3.5	ACS350-03X-03A5-2	R0	202	70	161	1.1	280	70	169	1.5
0.75	1	4.7	ACS350-03X-04A7-2	R1	202	70	161	1.3	280	70	169	1.7
1.1	1.5	6.7	ACS350-03X-06A7-2	R1	202	70	161	1.3	280	70	169	1.7
1.5	2	7.5	ACS350-03X-07A5-2	R1	202	70	161	1.3	280	70	169	1.7
2.2	3	9.8	ACS350-03X-09A8-2	R2	202	105	165	1.5	282	105	169	1.9
3	4	13.3	ACS350-03X-13A3-2	R2	202	105	165	1.5	282	105	169	1.9
4	5	17.6	ACS350-03X-17A6-2	R2	202	105	165	1.5	282	105	169	1.9
<b>3-phase supply voltage 380 - 480 V units</b>												
0.37	0.5	1.2	ACS350-03X-01A2-4	R0	202	70	161	1.1	280	70	169	1.5
0.55	0.75	1.9	ACS350-03X-01A9-4	R0	202	70	161	1.1	280	70	169	1.5
0.75	1	2.4	ACS350-03X-02A4-4	R1	202	70	161	1.3	280	70	169	1.7
1.1	1.5	3.3	ACS350-03X-03A3-4	R1	202	70	161	1.3	280	70	169	1.7
1.5	2	4.1	ACS350-03X-04A1-4	R1	202	70	161	1.3	280	70	169	1.7
2.2	3	5.6	ACS350-03X-05A6-4	R1	202	70	161	1.3	280	70	169	1.7
3	4	7.3	ACS350-03X-07A3-4	R1	202	70	161	1.3	280	70	169	1.7
4	5	8.8	ACS350-03X-08A8-4	R1	202	70	161	1.3	280	70	169	1.7
5.5	7.5	12.5	ACS350-03X-12A5-4	R3	202	169	169	2.5	299	169	177	3.1
7.5	10	15.6	ACS350-03X-15A6-4	R3	202	169	169	2.5	299	169	177	3.1

X within the type code stands for E or U.  
 E = EMC filter connected. U = EMC filter disconnected.  
 H2 = Height with fastenings but without clamping plate.  
 H5 = Height with fastenings, NEMA 1 connection box and hood.  
 W = Width, D = Depth



## Motor connection

<b>Voltage</b>	3-phase, from 0 to U <sub>SUPPLY</sub>
<b>Frequency</b>	0 to 500 Hz
<b>Overload capacity</b> (at a max. ambient temperature of 40°C)	At heavy duty use 1.5 x I <sub>2N</sub> for 1 minute every 10 minutes At start 1.8 x I <sub>2N</sub> for 2 s
<b>Switching frequency</b> Default Selectable	4 kHz 4 to 16 kHz with 4 kHz steps
<b>Speed control</b> Static accuracy Dynamic accuracy	20% of motor nominal slip < 1% s with 100% torque step
<b>Torque control</b> Torque step rise time Non-linearity	< 10ms with nominal torque ± 5% with nominal torque

## Programmable control connections

<b>Two analog inputs</b>	
Voltage signal Unipolar Bipolar	0 (2) to 10 V, R <sub>in</sub> > 312 kΩ -10 to 10 V, R <sub>in</sub> > 312 kΩ
Current signal Unipolar Bipolar	0 (4) to 20 mA, R <sub>in</sub> = 100 Ω -20 to 20 mA, R <sub>in</sub> = 100 Ω
Potentiometer reference value Resolution Accuracy	10 V ± 1% max. 10 mA, R < 10 kΩ 0.1% ± 1%
<b>One analog output</b>	0 (4) to 20 mA, load < 500 Ω
<b>Auxiliary voltage</b>	24 V DC ± 10%, max. 200 mA
<b>Five digital inputs</b>	12 to 24 V DC with internal or external supply, PNP and NPN, pulse train 0 to 10 kHz 2.4 kΩ
<b>One relay output</b>	Type: NO + NC Maximum switching voltage: 250 V AC/30 V DC Maximum switching current: 0.5 A/30 V DC; 5 A/230 V AC Maximum continuous current: 2 A rms
<b>One digital output</b>	Type: Transistor output Maximum switching voltage: 30 V DC Maximum switching current: 100 mA/30 V DC, short circuit protected Frequency: 10 Hz to 16 kHz Resolution: 1 Hz Accuracy: 0.2%

## Product compliance

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

## Environmental limits

<b>Degree of protection</b>	IP20 / optional NEMA 1 enclosure
<b>Ambient temperature</b>	-10 to 40°C (14 to 104°F), no frost allowed 50°C (122°F) with 10% derating
<b>Relative humidity</b>	Lower than 95% (without condensation)

For more information see technical catalogue  
 ABB general machinery drives (3AFE68596106).

Find your nearest contact at



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



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