

# ABB general machinery drives

## ACS355, 0.37 to 22 kW / 0.5 to 30 hp

The ABB general machinery drives are designed to be the fastest drives to install, parameter-set and commission. They are highly compact and cost effective. Equipped with cutting-edge intelligence and an innovative safety capability the drives are designed specifically to meet the production and performance needs of system integrators, original equipment manufacturers (OEMs) and panel builders, as well as the requirements of end users in a broad range of applications.



### Highlights

- Worldwide availability and service
- Exceptionally compact drives and uniform design
- Quick commissioning with application macros and panel assistants
- Safe Torque-Off function (SIL3) as standard
- Sensorless vector control
- Built-in brake chopper
- High protection class variants for demanding environments

### Saving time in installation and commissioning

The drive's compact and uniform dimensions facilitate multiple drive solutions and cabinet installations. Different mounting options enable flexible installation in restricted spaces.

With the FlashDrop tool the drive can be pre-configured in seconds without powering the drive. The drive's application macros and assistants enable fast and easy commissioning.

### Saving cost with cutting-edge intelligence and flexibility

Up to eight pre-set sequences of operations can be created in minutes with the drive's PC tool to reduce the need for external PLC components. Versatile fieldbus connectivity to most PLCs on the market is also available. The drive includes Safe Torque-Off function as standard helping machine builders to fulfill the latest machinery directives.

Additional features include Speed Compensated Stop, making the drive ideal for material handling applications that require precision stopping that is independent of variations in process speed. For demanding environments high protection class variants are available in IP66/IP67/UL Type 4X classes that are NSF certified.

### Power and voltage 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 11 kW (0.5 to 15 hp)
- 3-phase, 380 to 480 V  $\pm$  10%  
0.37 to 22 kW (0.5 to 30 hp)

### Options

- Auxiliary I/O modules
  - MTAC pulse encoder interface
  - MREL module for additional relays
  - MPOW for external auxiliary power supply
- Fieldbus connection via optional modules
  - PROFIBUS DP
  - CANopen
  - DeviceNet
  - Modbus
  - Ethernet
  - Profinet
  - EtherCat
  - LonWorks
- FlashDrop tool for fast pre-configuration without powering the drive
- DriveWindow Light PC tool for easy parameter setting and graphical sequence programming
- External EMC filters for category C2 compatibility
- Input chokes for IEC 61000-3-12 compatibility

## Technical data and types

Ratings			Type code	Frame size	IP20 UL open			
$P_N$ kW	$P_N$ hp	$I_{2N}$ A			H2 mm	W mm	D mm	Weight kg
<b>1-phase supply voltage 200 to 240 V units</b>								
0.37	0.5	2.4	ACS355-01X-02A4-2	R0	202	70	161	1.1
0.75	1	4.7	ACS355-01X-04A7-2	R1	202	70	161	1.3
1.1	1.5	6.7	ACS355-01X-06A7-2	R1	202	70	161	1.3
1.5	2	7.5	ACS355-01X-07A5-2	R2	202	105	165	1.5
2.2	3	9.8	ACS355-01X-09A8-2	R2	202	105	165	1.5
<b>3-phase supply voltage 200 to 240 V units</b>								
0.37	0.5	2.4	ACS355-03X-02A4-2	R0	202	70	161	1.1
0.55	0.75	3.5	ACS355-03X-03A5-2	R0	202	70	161	1.1
0.75	1	4.7	ACS355-03X-04A7-2	R1	202	70	161	1.3
1.1	1.5	6.7	ACS355-03X-06A7-2	R1	202	70	161	1.3
1.5	2	7.5	ACS355-03X-07A5-2	R1	202	70	161	1.3
2.2	3	9.8	ACS355-03X-09A8-2	R2	202	105	165	1.5
3	4	13.3	ACS355-03X-13A3-2	R2	202	105	165	1.5
4	5	17.6	ACS355-03X-17A6-2	R2	202	105	165	1.5
5.5	7.5	24.4	ACS355-03X-24A4-2	R3	202	169	169	2.5
7.5	10	31	ACS355-03X-31A0-2	R4	202	260	169	4.4
11	15	46.2	ACS355-03X-46A2-2	R4	202	260	169	4.4
<b>3-phase supply voltage 380 to 480 V units</b>								
0.37	0.5	1.2	ACS355-03X-01A2-4	R0	202	70	161	1.1
0.55	0.75	1.9	ACS355-03X-01A9-4	R0	202	70	161	1.1
0.75	1	2.4	ACS355-03X-02A4-4	R1	202	70	161	1.3
1.1	1.5	3.3	ACS355-03X-03A3-4	R1	202	70	161	1.3
1.5	2	4.1	ACS355-03X-04A1-4	R1	202	70	161	1.3
2.2	3	5.6	ACS355-03X-05A6-4	R1	202	70	161	1.3
3	4	7.3	ACS355-03X-07A3-4	R1	202	70	161	1.3
4	5	8.8	ACS355-03X-08A8-4	R1	202	70	161	1.3
5.5	7.5	12.5	ACS355-03X-12A5-4	R3	202	169	169	2.5
7.5	10	15.6	ACS355-03X-15A6-4	R3	202	169	169	2.5
11	15	23.1	ACS355-03X-23A1-4	R3	202	169	169	2.5
15	20	31	ACS355-03X-31A0-4	R4	202	260	169	4.4
18.5	25	38	ACS355-03X-38A0-4	R4	202	260	169	4.4
22	30	44	ACS355-03X-44A0-4	R4	202	260	169	4.4

Ratings			Type code	Frame size	IP66/IP67/UL Type 4X			
$P_N$ kW	$P_N$ hp	$I_{2N}$ A			H mm	W mm	D mm	Weight kg
<b>3-phase supply voltage 200 to 240 V units</b>								
0.37	0.5	2.4	ACS355-03X-02A4-2 + B063	R1	305	195	281	7.7
0.55	0.75	3.5	ACS355-03X-03A5-2 + B063	R1	305	195	281	7.7
0.75	1	4.7	ACS355-03X-04A7-2 + B063	R1	305	195	281	7.7
1.1	1.5	6.7	ACS355-03X-06A7-2 + B063	R1	305	195	281	7.7
1.5	2	7.5	ACS355-03X-07A5-2 + B063	R1	305	195	281	7.7
2.2	3	9.8	ACS355-03X-09A8-2 + B063	R3	436	246	277	13
3	4	13.3	ACS355-03X-13A3-2 + B063	R3	436	246	277	13
4	5	17.6	ACS355-03X-17A6-2 + B063	R3	436	246	277	13
<b>3-phase supply voltage 380 to 480 V units</b>								
0.37	0.5	1.2	ACS355-03X-01A2-4 + B063	R1	305	195	281	7.7
0.55	0.75	1.9	ACS355-03X-01A9-4 + B063	R1	305	195	281	7.7
0.75	1	2.4	ACS355-03X-02A4-4 + B063	R1	305	195	281	7.7
1.1	1.5	3.3	ACS355-03X-03A3-4 + B063	R1	305	195	281	7.7
1.5	2	4.1	ACS355-03X-04A1-4 + B063	R1	305	195	281	7.7
2.2	3	5.6	ACS355-03X-05A6-4 + B063	R1	305	195	281	7.7
3	4	7.3	ACS355-03X-07A3-4 + B063	R1	305	195	281	7.7
4	5	8.8	ACS355-03X-08A8-4 + B063	R1	305	195	281	7.7
5.5	7.5	12.5	ACS355-03X-12A5-4 + B063	R3	436	246	277	13
7.5	10	15.6	ACS355-03X-15A6-4 + B063	R3	436	246	277	13

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.

H = Height, W = Width, D = Depth

B063 = IP66/IP67/UL Type 4X enclosure

## Mains connection

<b>Voltage and power connection</b>	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 11 kW (0.5 to 15 hp) 3-phase, 380 to 480 V $\pm 10\%$ : 0.37 to 22 kW (0.5 to 10 hp)
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**Frequency** 48 to 63 Hz

## Motor connection

**Voltage** 3-phase, from 0 to  $U_{SUPPLY}$

**Frequency** 0 to 600 Hz

**Overload capacity**  $1.5 \times I_{2N}$  for 1 minute every 10 minutes  
At start  $1.8 \times I_{2N}$  for 2 seconds

**Switching frequency** 4 (default) to 16 kHz with 4 kHz steps

Parameter-enabled noise cancellation function

## Programmable control connections

**Two analog inputs, signal selectable**

Voltage signal +10 V, 0 (2) to 10 V

Current signal  $\pm 20$  mA, 0 (4) to 20 mA

**One analog output** 0 (4) to 20 mA

**Five digital inputs** 12 to 24 V, PNP and NPN, programmable DI5 0 to 16 kHz pulse train

**One relay output** NO + NC, 250 V AC/2 A, 30 V DC/0.5 A

**One digital output** Transistor output, 30 V DC/100 mA, programmable 10 Hz to 16 kHz pulse train

**Accuracy** 24 V DC  $\pm 10\%$ , max. 200 mA

## Environmental limits

**Ambient temperature** -10 to 40 °C (14 to 104 °F), no frost allowed  
50 °C (122 °F) with 10 % derating

**Relative humidity** Lower than 95% (without condensation)

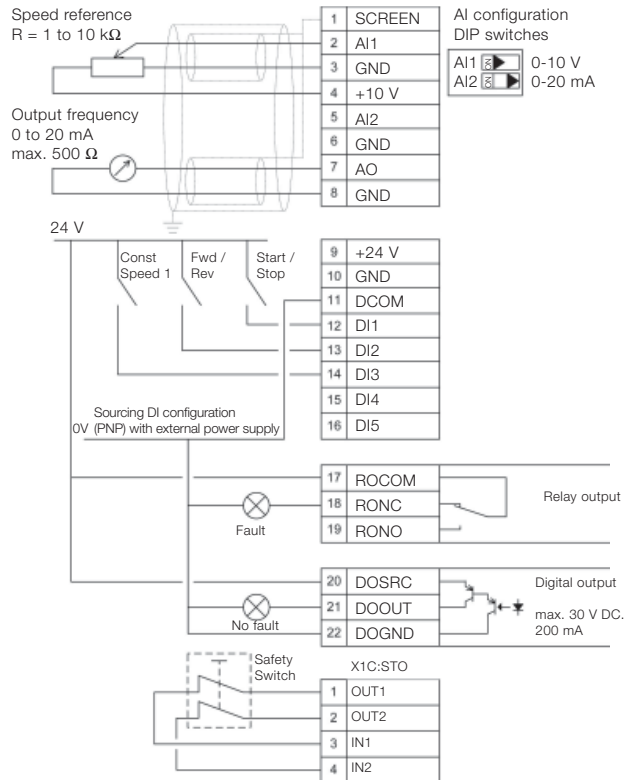


Figure 1. Inputs and outputs configuration based on ABB standard macro and external digital input supply voltage.

For more information please contact:

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