LOW VOLTAGE AC DRIVES

ABB machinery drives

ACS355, 0.5 to 30 hp/0.37 to 22 kW

All your machine building needs in one drive. ACS355 drives.

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Introduction to ACS355

ABB machinery drives
The ABB machinery drives are designed to be fast drives to install, parameter-set and commission. Thus saving hours of engineering work. They are highly compact and cost-effective. Equipped with cutting-edge intelligence and 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.

In the ABB machinery drives portfolio, ACS355 represents the micro drive range; meeting requirements like compact size, being optimized for a lower power range, cost-effectiveness, and ease of use. By choosing an ABB machinery drive, machine builders not only get all the clever things inside the drive, but also everything outside it: the entire global ABB. This means a full range of products and services designed to support their business.

Applications
ABB 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, lifting, textile, printing, rubber and plastics, and woodworking applications.

Highlights
- Exceptionally compact drives and uniform design
- Quick commissioning with application macros and panel assistants
- Safe torque off function (SIL3) as standard
- Sensorless vector control for induction motors and permanent magnet motors up to 599 Hz
- Built-in braking chopper
- Coated boards - all variants
- IP66 product variant for harsh environments and solar pump drive variant available

Compact drives with big drive features

ACS355 drives are designed to maximize your machine's availability with drives that are easy to install and setup.

The drive is highly modular and supports a variety of fieldbus protocols thus providing flexible connectivity. In addition to a broad range of built-in options such as different I/O and communications, a wide selection of external accessories is also available. Wherever your machine is located, the local ABB will be there to support you and your clients.

Flexible performance
Reduce the need for external PLC components with built-in sequence programming providing simple drive control logic. Improve production flow and increase cost savings with built-in features, such as speed compensated stop enabling precision stopping, and patented smooth start for permanent magnet motors.

Quick and easy commissioning
Predefined I/O configurations for application macros and built-in assistants speed up commissioning of the drive, allowing you to concentrate on your business.

Compact and uniform design
Compact size, the broadest power range in its class from 0.37 to 22 kW and side-by-side mounting ensure optimized cabinet installation in a wide range of machinery applications, resulting in space and cost savings.

Supported motor types
Same drive can be used for sensorless induction and permanent magnet motor control without a feedback device.

Application-specific product variants
Ensure long life time of equipment and reliable energy supply with a drive for solar pumps including embedded pump-specific features protecting the pump. The high speed variant for spindle applications provides speed controller tuning without use of encoder.

Protection against harsh environments
Increase time and cost savings with NSF certified product variant for IP66/67/69K, UL Type 4X protection classes with no need to design special enclosures for applications that require a high ingress protection against dirt, dust and moisture.

Communication with major automation networks
Optional fieldbus adapters enable connectivity with major industrial automation networks.

Safety
Integrated safe torque off (STO) function up to SIL 3 is a cost-effective and certified solution for safe machine maintenance by fulfilling IEC 61508, EN 62061 and EN ISO 13849-1 standards. The safety function can also be used to implement Emergency Stop without contactors.

NEMA 1 (UL Type 1) enclosure kits
Enhance installation flexibility by allowing the drive to be wall-mounted outside of an enclosure or to provide finger-safe protection inside an enclosure.

Typical applications

Mixer
In mixing applications the drive provides a high starting torque. The silent operation mode adjusts the switching frequency of the drive to a higher level after the high-torque start, resulting in lower audible noise. The FlashDrop tool provides a quick and safe way to configure multiple drives for identical mixer applications.

Conveyor
Production lines often have multiple stages, including conveyors, which need to be efficiently linked with each other to provide high production output. A drive provides smooth start and stop of the conveyor, thereby reducing mechanical stress and lowering maintenance costs.

Packaging machine
Packaging machines often require a drive to provide a high degree of repeatability and accuracy during the packing operation. As such, the ACS355 is well suited for packaging duties and also provides good dynamic and static speed control accuracy. Sequence programming enables the drive to perform sequences of tasks, reducing the need for a PLC. Software features include timer, counter, brake control and jogging – all of which can be used in a packaging machine.

Bottling line
When filling the bottles with liquid, bottling lines require a drive which offers high accuracy. The ACS355 is perfect for this purpose, with its good dynamic and static speed control. When dealing with liquids, the ACS355 with a high protection class (IP66) would also be a good choice.

Winders
The ACS355 offers high static speed accuracy. When dealing with thin strings like in string winders, it is essential to control the winder speed accurately in order to prevent the strings from snapping. Surface winders, on the other hand, require high static speed accuracy to keep control of the material thickness or tension.

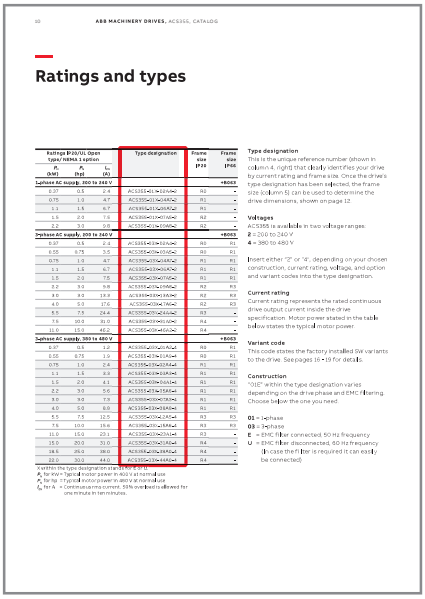
How to select a drive

The right drive is extremely easy to select. The following instructions show you how to order the right drive for your application.

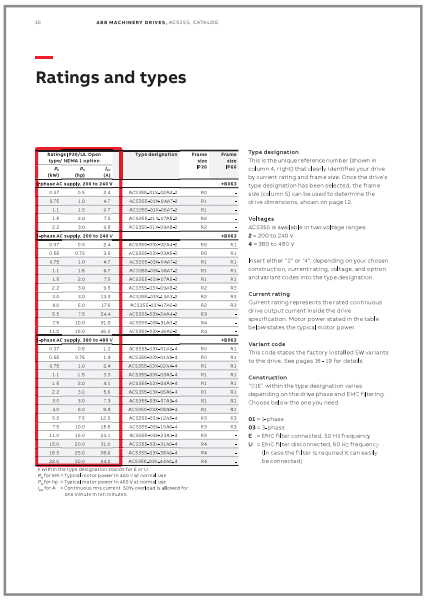
Start by identifying the required drive variant and your supply voltage and select the related rating table. Or use ABB's DriveSize dimensioning tool.

Select your drive's order code (drive type) from the rating table based on the load current, or, if it is unknown, select the drive based on your motor's power and current ratings.

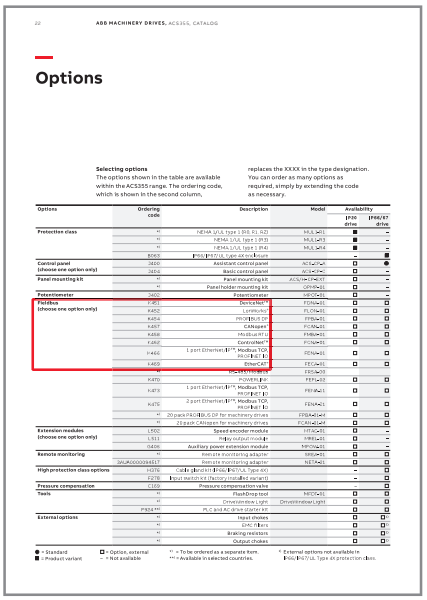
Choose your options and add the option **codes to the drive's order code.** Remember to use a "+" mark before each option code.



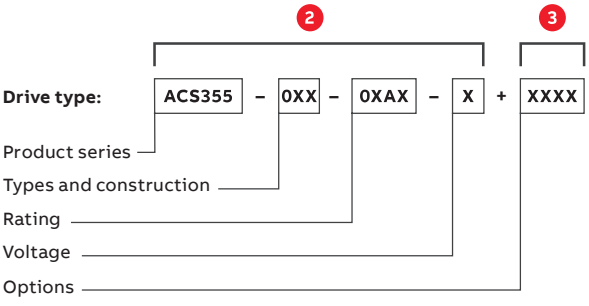
Ratings and types



Ratings and types



Options



Ratings and types

Ratings IP20/UL Open type/ NEMA 1 option			Type designation	Frame size IP20	Frame size IP66
P_N (hp)	P_N (kW)	I_{2N} (A)			
1-phase AC supply, 200 to 240 V					**+B063***
0.5	0.37	2.4	ACS355-01U-02A4-2	R0	-
1.0	0.75	4.7	ACS355-01U-04A7-2	R1	-
1.5	1.1	6.7	ACS355-01U-06A7-2	R1	-
2.0	1.5	7.5	ACS355-01U-07A5-2	R2	-
3.0	2.2	9.8	ACS355-01U-09A8-2	R2	-
3-phase AC supply, 200 to 240 V					**+B063***
0.5	0.37	2.4	ACS355-03U-02A4-2	R0	R1
0.75	0.55	3.5	ACS355-03U-03A5-2	R0	R1
1.0	0.75	4.7	ACS355-03U-04A7-2	R1	R1
1.5	1.1	6.7	ACS355-03U-06A7-2	R1	R1
2.0	1.5	7.5	ACS355-03U-07A5-2	R1	R1
3.0	2.2	9.8	ACS355-03U-09A8-2	R2	R3
5.0	4.0	17.6	ACS355-03U-17A6-2	R2	R3
7.5	5.5	24.4	ACS355-03U-24A4-2	R3	-
10.0	7.5	31.0	ACS355-03U-31A0-2	R4	-
15.0	11.0	46.2	ACS355-03U-46A2-2	R4	-
3-phase AC supply, 380 to 480 V					**+B063***
0.5	0.37	1.2	ACS355-03U-01A2-4	R0	R1
0.75	0.55	1.9	ACS355-03U-01A9-4	R0	R1
1.0	0.75	2.4	ACS355-03U-02A4-4	R1	R1
1.5	1.1	3.3	ACS355-03U-03A3-4	R1	R1
2.0	1.5	4.1	ACS355-03U-04A1-4	R1	R1
3.0	2.2	5.6	ACS355-03U-05A6-4	R1	R1
5.0	4.0	8.8	ACS355-03U-08A8-4	R1	R1
7.5	5.5	12.5	ACS355-03U-12A5-4	R3	R3
10.0	7.5	15.6	ACS355-03U-15A6-4	R3	R3
15.0	11.0	23.1	ACS355-03U-23A1-4	R3	-
20.0	15.0	31.0	ACS355-03U-31A0-4	R4	-
25.0	18.5	38.0	ACS355-03U-38A0-4	R4	-
30.0	22.0	44.0	ACS355-03U-44A0-4	R4	-

P_N for kW = Typical motor power in 400 V at normal use
P_N for hp = Typical motor power in 460 V at normal use
I_{2N} for A = Continuous rms current. 50% overload is allowed for one minute in ten minutes.

* See page 24 for details on +B063 variant

Type designation
This is the unique reference number (shown in column 4, right) that clearly identifies your drive by current rating and frame size. Once the drive's type designation has been selected, the frame size (column 5) can be used to determine the drive dimensions, shown on page 12.

Voltages
ACS355 is available in two voltage ranges:
2 = 200 to 240 V
4 = 380 to 480 V

Insert either "2" or "4", depending on your chosen construction, current rating, voltage, and option and variant codes into the type designation.

Current rating
Current rating represents the rated continuous drive output current inside the drive specification. Motor power stated in the table below states the typical motor power.

Variant code
This code states the factory installed SW variants to the drive. See pages 16 - 19 for details.

Construction
"01E" within the type designation varies depending on the drive phase and EMC filtering. Choose below the one you need.

01 = 1-phase
03 = 3-phase
U = EMC filter installed but disconnected. This is the standard configuration for drives stocked in the U.S. The "U" indicates that a plastic screw has been inserted in the "EMC" location on the side of the drive. To ground the EMC filter and make it active, remove the plastic screw and replace it with the metal screw provided in the parts bag.

Note: The European variant of the ACS355 drive may have an "E" in the type designation. This indicates the drive has been provided with the metal grounding screw inserted in the "EMC" location.

Technical data

Mains connection	
Voltage and power range	1-phase, 200 to 240 V ± 10% 0.5 to 3 hp (0.37 to 2.2 kW) 3-phase, 200 to 240 V ± 10% 0.5 to 15 hp (0.37 to 11 kW) 3-phase, 380 to 480 V ± 10% 0.5 to 30 hp (0.37 to 22 kW)
Frequency	48 to 63 Hz
Common DC connection	
Voltage and power range	230 V drives, 325 V ±15% 400/480 V drives, 540 ± 15% (common DC manual) $P_{max} = P_n$ of the drive
Motor connection	
Voltage	3-phase, from 0 to U_{SUPPLY}
Frequency	0 to 599 Hz
Continuous loading capability (constant torque at a max. ambient temperature of 40 °C)	Rated output current I_{2N}
Overload capacity (at a max. ambient temperature of 40 °C)	1.5 x I_{2N} for 1 minute every 10 minutes At start 1.8 x I_{2N} for 2 s
Switching frequency Selectable	Default 4 kHz 4 to 16 kHz with 4 kHz steps
Acceleration time	0.1 to 1800 s
Deceleration time	0.1 to 1800 s
Braking	Built-in brake chopper as standard
Speed control Static accuracy Dynamic accuracy	 20% of motor nominal slip < 1% s with 100% torque step
Torque control Torque step rise time Non-linearity	 < 10 ms with nominal torque ± 5% with nominal torque
Environmental limits	
Ambient temperature	-10 to 40 °C (14 to 104 °F), no frost allowed 50 °C (122 °F) with 10% derating
Altitude	Rated current available at 0 to 1000 m. In altitudes from 1000 to 2000 m (3300 to 13,200 ft) above sea level, the derating is 1% for every 100 m (330 ft). If the installation site is higher than 2000 m (6600 ft) above sea level, please contact your local ABB distributor or office for further information.
Relative humidity	Lower than 95% (without condensation)
Degree of protection	IP20/optional NEMA 1/UL type 1 enclosure IP66/IP67/UL Type 4X as an option up to 7.5 kW, IP69K available for IP66/IP67 variant with compatible cable glands
Enclosure color	NCS 1502-Y, RAL 9002, PMS 420 C
Contamination levels Transportation Storage Operation	IEC721-3-3 No conductive dust allowed Class 1C2 (chemical gases) Class 1S2 (solid particles) Class 2C2 (chemical gases) Class 2S2 (solid particles) Class 3C2 (chemical gases) Class 3S2 (solid particles)

Product compliance
Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 Environmental system ISO 14001 UL, cUL, CE, C-Tick/RCM and EAC RoHS compliant

Programmable control connections	
Two analog inputs	
Voltage signal	
Unipolar	0 (2) to 10 V, R_{in} > 312 kΩ
Bipolar	-10 to 10 V, R_{in} > 312 kΩ
Current signal	
Unipolar	0 (4) to 20 mA, R_{in} = 100 Ω
Bipolar	-20 to 20 mA, R_{in} = 100 Ω
Potentiometer reference value	10 V ± 1% max. 10 mA, R < 10 kΩ
Resolution	0.1%
Accuracy	± 2%
One analog output	0 (4) to 20 mA, load < 500 Ω
Auxiliary voltage	24 V DC ± 10%, max. 200 mA
Five digital inputs	12 to 24 V, PNP and NPN, programmable DI5 0 to 16 kHz pulse train
Input impedance	2.4 kΩ
One relay output	
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
One digital output	
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%

Serial and Ethernet communication	
Fieldbuses Refresh rate	Plug-in type < 10 ms (between drive and fieldbus module)
DeviceNet™	5-pin screw type connector, up to 500 kbit/s baud rate
PROFIBUS DP	9-pin D-connector, up to 12 Mbit/s baud rate
POWERLINK	2 pcs RJ-45 connector, 100 Mbit/s baud rate
ControlNet™	2 pcs 8P8C modular jacks
CANopen®	9-pin D-connector, up to 1 Mbit/s
Modbus RTU	4-pin screw type connector, up to 115 kbit/s baud rate
EtherNet/IP™, Modbus TCP, PROFINET IO	1 RJ45 connector (FENA-01 and -11) or 2 RJ45 connectors (FENA-21). 10/100Mbit/s baud rate
LonWorks®	3-pin screw type connector, up to 78 kbit/s baud rate
EtherCAT®	2 pcs RJ-45 connectors, 100 Mbit/s baud rate

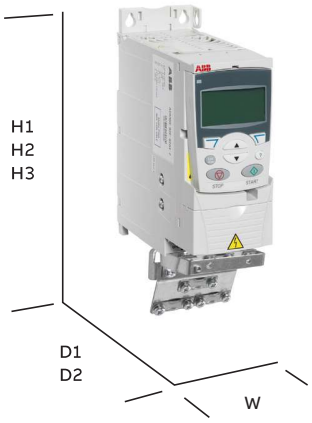
Chokes	
AC input chokes	External option. For reducing THD in partial loads and to comply with EN/IEC 61000-3-12.
AC output chokes	External option. To achieve 2x longer motor cables

Dimensions and weights

Cabinet-mounted drives (IP20/UL Open)

Frame size	IP20/UL Open						
	H1 (in)	H2 (in)	H3 (in)	W (in)	D1 (in)	D2 (in)	Weight (lb)
R0	6.7	8.0	9.4	2.8	6.3	7.4	2.6
R1	6.7	8.0	9.4	2.8	6.3	7.4	2.6
R2	6.7	8.0	9.4	4.1	6.5	7.5	3.3
R3	6.7	8.0	9.3	6.7	6.7	7.7	5.5
R4	7.1	8.0	9.6	10.2	6.7	7.7	9.7

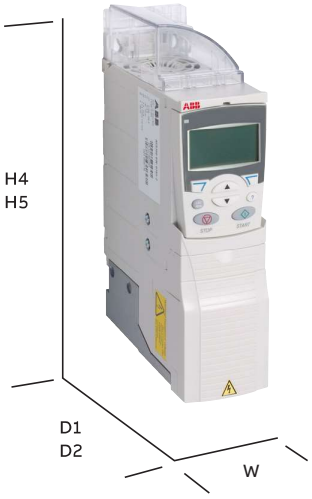
H1 = Height without fastenings and clamping plate
H2 = Height with fastenings but without clamping plate
H3 = Height with fastenings and clamping plate
W = Width
D1 = Standard depth
D2 = Depth with MREL, MPOW or MTAC option



Wall-mounted drives (NEMA 1/UL Type 1)

Frame size	NEMA 1/UL Type 1					
	H4 (in)	H5 (in)	W (in)	D1 (in)	D2 (in)	Weight (lb)
R0	10.1	11.0	2.8	6.7	7.4	3.5
R1	10.1	11.0	2.8	6.7	7.4	3.5
R2	10.1	11.1	4.1	6.7	7.5	4.2
R3	10.2	11.8	6.7	7.0	7.7	6.8
R4	10.6	12.6	10.2	7.0	7.7	11.0

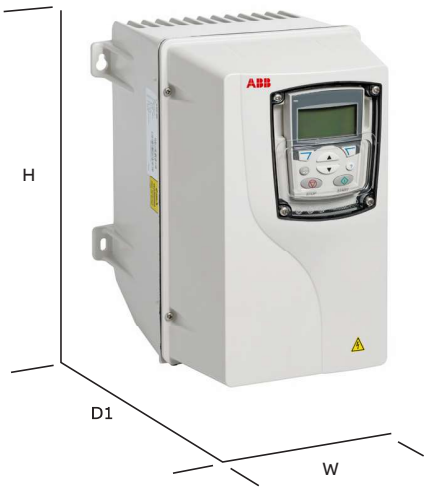
H4 = Height with fastenings and NEMA 1 connection box
H5 = Height with fastenings, NEMA 1 connection box and hood
W = Width
D1 = Standard depth
D2 = Depth with MREL, MPOW or MTAC option



Wall-mounted drives (IP66/IP67/UL Type 4X)

Frame size	IP66/IP67/UL Type 4X			
	H4 (in)	W (in)	D1 (in)	Weight (lb)
R1	12.0	7.7	11.1	16.9
R3	17.2	9.7	10.9	28.6

H = Height
W = Width
D1 = Standard depth



Cooling

Cooling

ACS355 is fitted with cooling fans as standard. The cooling air must be free from corrosive substances and must not be above the maximum ambient temperature of 40 °C (50 °C with derating). Heat dissipation from IP66/IP67/UL Type 4X drive equals to the IP20 UL Open values. For more specific limits see the Technical specification – Environmental limits in this catalog.

Cooling air flow

Type designation	Frame size	Heat dissipation		Air flow	
		(W)	BTU/hr[1]	m^3/h	ft^3/min
1-phase AC supply, 200 to 240 V					
ACS355-01U-02A4-2	R0	48	163	–[2]	–[2]
ACS355-01U-04A7-2	R1	72	247	24	14
ACS355-01U-06A7-2	R1	97	333	24	14
ACS355-01U-07A5-2	R2	101	343	21	12
ACS355-01U-09A8-2	R2	124	422	21	12
3-phase AC supply, 200 to 240 V					
ACS355-03U-02A4-2	R0	42	142	–[2]	–[2]
ACS355-03U-03A5-2	R0	54	183	–[2]	–[2]
ACS355-03U-04A7-2	R1	64	220	24	14
ACS355-03U-06A7-2	R1	86	295	24	14
ACS355-03U-07A5-2	R1	88	302	21	12
ACS355-03U-09A8-2	R2	111	377	21	12
ACS355-03U-17A6-2	R2	180	613	52	31
ACS355-03U-24A4-2	R3	285	975	71	42
ACS355-03U-31A0-2	R4	328	1119	96	57
ACS355-03U-46A2-2	R4	488	1666	96	57
3-phase AC supply, 380 to 480 V					
ACS355-03U-01A2-4	R0	35	121	–[2]	–[2]
ACS355-03U-01A9-4	R0	40	138	–[2]	–[2]
ACS355-03U-02A4-4	R1	50	170	13	8
ACS355-03U-03A3-4	R1	60	204	13	8
ACS355-03U-04A1-4	R1	69	235	13	8
ACS355-03U-05A6-4	R1	90	306	19	11
ACS355-03U-08A8-4	R1	127	433	24	14
ACS355-03U-12A5-4	R3	161	551	52	31
ACS355-03U-15A6-4	R3	204	697	52	31
ACS355-03U-23A1-4	R3	301	1029	71	42
ACS355-03U-31A0-4	R4	408	1393	96	57
ACS355-03U-38A0-4	R4	498	1700	96	57
ACS355-03U-44A0-4	R4	588	2007	96	57

[1] BTU/hr = British Thermal Unit per hour. BTU/hr is approximately 0.293 Watts.
[2] Frame size R0 with free convection cooling.

Free space requirements

Enclosure type	Space above (in)	Space below (in)	Space on left/right (in)
All frame sizes	3.0	3.0	0.0
IP66/67 enclosure	3.0	3.0	0.8

Fuses and circuit protection

Fuses or manual motor protectors for circuit protection
Standard fuses or manual motor protectors can be used with ACS355 drives for branch circuit protection. Use the following table for selecting the correct fuse or protector for each drive.

Manual motor protectors
ABB UL file E211945 Volume 1, Section 4 lists the ABB Type E manual motor protectors MS132 & S1-M3-25, MS165, MS495-xxE as an alternate to UL classified fuses as a means of branch circuit protection. This is in accordance with the National Electrical Code (NEC).

When the correct ABB Type E manual motor protector is selected from the table and used for branch circuit protection the drive is suitable for use in a circuit capable of delivering not more than 65 kA RMS symmetrical amperes at the drive maximum rated voltage.

Drives with and without NEMA 1 enclosure kits are included in the UL file. The MMP selections in the table are also valid for drives having a NEMA 1 enclosure kit installed.

Selection table

Type designation	Frame size	IEC fuses	UL fuses	Manual motor protector		Min. Encl. Vol. (cu in) [7]
		Fuse type Gg [1] (A)	UL Class T or CC (600V) (A)	Input Amps	MMP Type E [3], [4]	
1-phase AC supply, 200 to 240 V						
ACS355-01U-02A4-2	R0	10	10	6.1	MS132-6.3 & S1-M3-25 [3]	1152
ACS355-01U-04A7-2	R1	16	20	11	MS165-16	1482
ACS355-01U-06A7-2	R1	16/20 [2]	25	16	MS165-20	1482
ACS355-01U-07A5-2	R2	20/25 [2]	30	17	MS165-20	1482
ACS355-01U-09A8-2	R2	25/35 [2]	35	21	MS165-25	1482
3-phase AC supply, 200 to 240V						
ACS355-03U-02A4-2	R0	10	10	4.3	MS132-6.3 & S1-M3-25 [3]	1152
ACS355-03U-03A5-2	R0	10	10	6.1	MS132-6.3 & S1-M3-25 [3]	1152
ACS355-03U-04A7-2	R1	10	15	7.6	MS132-10 & S1-M3-25 [3]	1152
ACS355-03U-06A7-2	R1	16	15	11.8	MS165-16	1482
ACS355-03U-07A5-2	R1	16	15	12	MS165-16	1482
ACS355-03U-09A8-2	R2	16	20	14.3	MS165-16	1482
ACS355-03U-13A3-2	R2	25	30	22	MS165-25	1482
ACS355-03U-17A6-2	R2	25	35	25	MS165-32	1482
ACS355-03U-24A4-2	R3	63	60	41	MS165-45	1482
ACS355-03U-31A0-2	R4	80	80	50	MS165-65	1482
ACS355-03U-46A2-2	R4	100	100	69	MS495-75E or MS5100-100	1152
3-phase AC supply, 440 to 480V [6]						
ACS355-03U-01A2-4	R0	10	10	1.8	MS132-2.5 & S1-M3-25 [3]	1152
ACS355-03U-01A9-4	R0	10	10	3	MS132-4.0 & S1-M3-25 [3]	1152
ACS355-03U-02A4-4	R1	10	10	3.4	MS132-4.0 & S1-M3-25 [3]	1152
ACS355-03U-03A3-4	R1	10	10	5	MS132-6.3 & S1-M3-25 [3]	1152
ACS355-03U-04A1-4	R1	16	15	5.8	MS132-6.3 & S1-M3-25 [3]	1152
ACS355-03U-05A6-4	R1	16	15	8	MS132-10 & S1-M3-25 [3]	1152
ACS355-03U-07A3-4	R1	16	20	9.7	MS132-10 & S1-M3-25 [3]	1152
ACS355-03U-08A8-4	R1	20	25	11	MS165-16	1482
ACS355-03U-12A5-4	R3	25	30	16	MS165-20	1482
ACS355-03U-15A6-4	R3	35	35	18	MS165-20	1482
ACS355-03U-23A1-4	R3	50	50	26	MS165-32	1482
ACS355-03U-31A0-4	R4	80	80	43	MS165-54	1482
ACS355-03U-38A0-4	R4	100	100	51	MS165-65	1482
ACS355-03U-44A0-4	R4	100	100	56	MS165-65	1482

1) According to IEC-60269 standard

2) If 50% overload capacity is needed, use the bigger fuse alternative.

3) All manual motor protectors listed are Type E self-protected up to 65 kA. See ABB publication 2CDC131085M0201 – Manual Motor Starters – North American Applications for complete technical data on the ABB Type E manual motor protectors. In order for these manual motor protectors to be used for branch circuit protection, they must be UL listed Type E manual motor protectors, otherwise they can be used only as an At Motor Disconnect. “At Motor Disconnect” is a disconnect just ahead of the motor on the load side of the panel.

4) Manual motor protectors may require adjusting the trip limit from the factory setting at or above the drive input Amps to avoid nuisance tripping. If the manual motor protector is set to the maximum current trip level and nuisance tripping is occurring, select the next size MMP. (MS132-10 is the highest size in the MS132 frame size to meet Type E at 65kA; next size up is MS165-16.)

5) Requires use of the S1-M3-25 line side feeder terminal with the manual motor protector to meet Type E self-protection class.

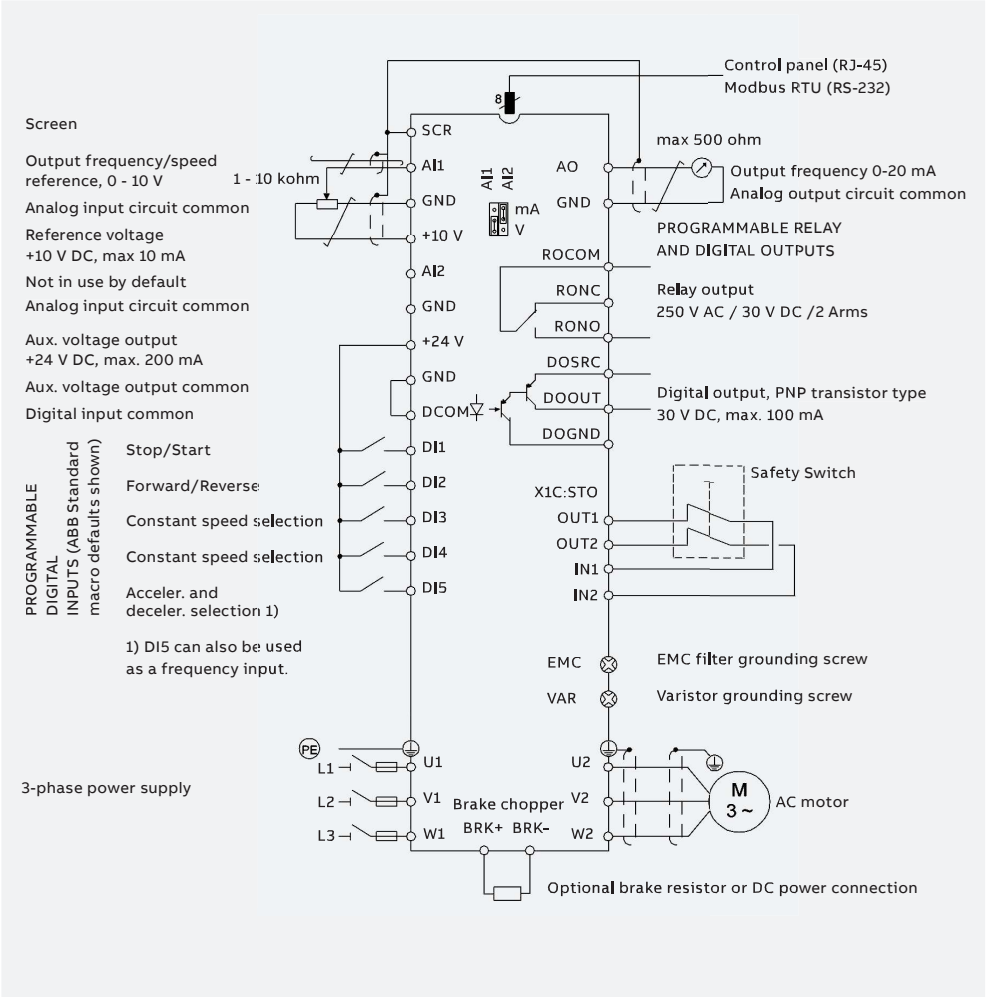
6) 480Y/277V delta systems only: Short-circuit protective devices with slash voltage ratings (e.g. 480Y/277 VAC) can be applied only in solidly grounded networks where the voltage from line-to-ground does not exceed the lower of the two ratings (e.g. 277 V AC), and the voltage from line-to-line does not exceed the higher of the two ratings (e.g. 480 V AC). The lower rating represents the device’s interrupting capability per pole.

7) Minimum enclosure volume is specified in the UL listing for R0 & R1 frame drives when applied with the ABB Type E MMP shown in the table. ABB IP20 micro drives are intended to be mounted in an enclosure unless a NEMA 1 kit is added.

For all drives, the enclosure must be sized to accommodate the specific thermal considerations of the application as well as provide free space for cooling.

See the applicable ABB User Manual for free space requirements.

Control connections

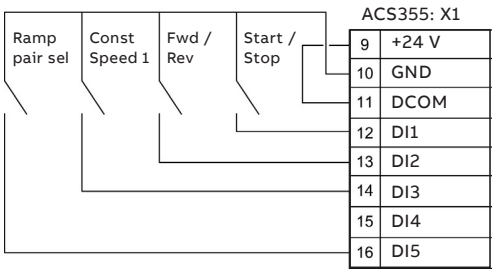


Application macros
Application macros are preprogrammed parameter sets. While starting up the drive, the user typically selects one of the macros that is best suited for the application. The diagram below gives an overview of ACS355 control connections and shows the default I/O connections for the ABB standard macro.

ABB machinery drives have eight application macros:
- ABB standard macro
- Torque control macro
- 3-wire macro
- Alternate macro
- AC500 Modbus macro
- Motor potentiometer macro
- Hand/auto macro
- PID control macro

In addition to the standard macros the user can create three user macros. The user macro allows the user to save the parameter settings for later use.

Sinking DI configuration (NPN connected)



Sourcing DI configuration (PNP connected) with external power supply