

ABB micro drives

ACS255 600 V AC, 1 to 20 hp

ACS255 is an enhanced version of the popular ACS250 drive series. Updates to the 600V drives include: sensorless vector control for PM motors and sleep/standby mode. These changes better harmonize the features of the 115-480V and 600V drives. All of the existing features of the 600V ACS250 drives - parameters, external dimensions, mounting locations, etc. - are the same for the 600V ACS255.



ABB micro drive ACS255 with 600 V AC supply offers easy to use and compact solutions for general purpose low power applications, such as; screws, mixers, pumps, fans and conveyors. The key features include a built-in safe torque-off (STO), Modbus RTU and CANopen communication interfaces.

Part of ABB micro drives portfolio

The ACS255 drive is part of ABB's complete micro drive range, which offers a solution for every need:

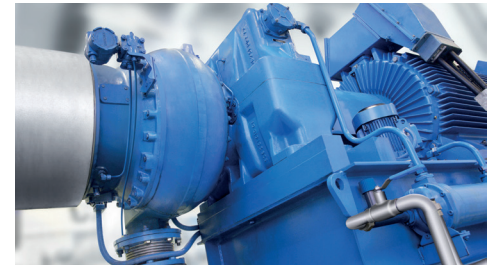
- Drives for simple to more complex machines
- Full voltage range from 110 to 600 V
- Enclosures IP20 and IP66
- Power range up to 20 hp

Supporting options

- Remote keypad (RCRP-02) provides easy cabinet installations
- Parameter upload/download tool (RCCS-01) for straightforward commissioning
- Relay output card (RCRO-01)
- UL Type 4X/IP66 frames for harsh environments up to 15 hp
- Disconnect switch for UL Type 4X/IP66 frames

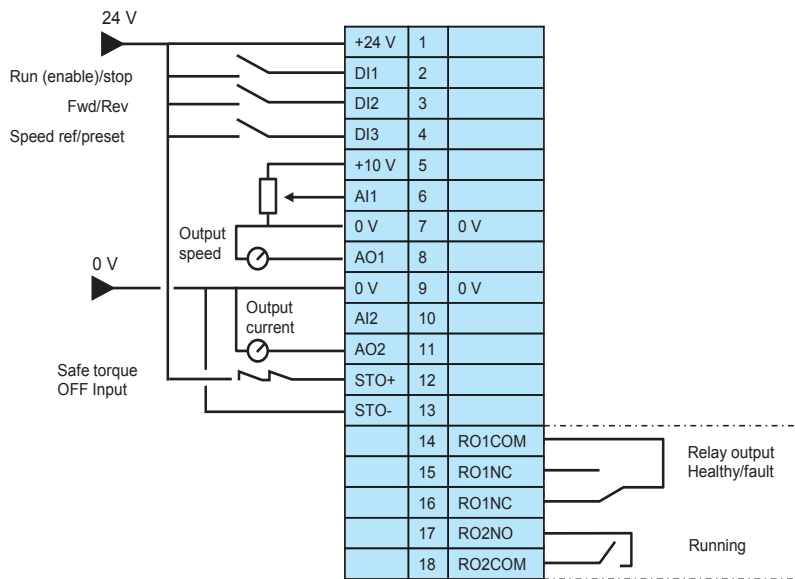
Product highlights

- Easy to use, compact design
- High performance vector control
- Input voltage 500 to 600 V +/- 10%
- Built-in safe torque-off (STO) complies with EN62061 SIL level 2
- Built-in braking chopper in all types
- Built-in communication with Modbus RTU and CANopen® interfaces
- Rated for 150% overload for 60 sec as standard
- DIN rail mounting
- Pluggable control terminals
- Remote keypad available as an option
- PID control with sleep mode
- IP20 panel mount and IP66/NEMA 4X enclosures
- Feed-thru wiring on IP 20 drives
- Front mounted operator control option for IP66/NEMA 4X drives



Output ratings			Type designation	Frame size	Height in	Width in	Depth in	Weight lb
P _{N,HD} hp	P _{N,HD} kW	I _{2N} A						
3-phase AC supply, 500 to 600 V								
1	0.75	2.1	ACS255-03U-02A1-6	P2	8.70	4.41	7.28	4
2	1.5	3.1	ACS255-03U-03A1-6	P2	8.70	4.41	7.28	4
3	2.2	4.1	ACS255-03U-04A1-6	P2	8.70	4.41	7.28	4
5	4	6.5	ACS255-03U-06A5-6	P2	8.70	4.41	7.28	4
7.5	5.5	9	ACS255-03U-09A0-6	P2	8.70	4.41	7.28	4
10	7.5	12	ACS255-03U-12A0-6	P3	10.28	5.16	8.07	7.7
15	11	17	ACS255-03U-17A0-6	P3	10.28	5.16	8.07	7.7
20	15	22	ACS255-03U-22A0-6	P3	10.28	5.16	8.07	7.7
1	0.75	2.1	ACS255-03U-02A1-6+B063(+F278)	P2	10.12	7.40	9.41	10.6
2	1.5	3.1	ACS255-03U-03A1-6+B063(+F278)	P2	10.12	7.40	9.41	10.6
3	2.2	4.1	ACS255-03U-04A1-6+B063(+F278)	P2	10.12	7.40	9.41	10.6
5	4	6.5	ACS255-03U-06A5-6+B063(+F278)	P2	10.12	7.40	9.41	10.6
7.5	5.5	9	ACS255-03U-09A0-6+B063(+F278)	P2	10.12	7.40	9.41	10.6
10	7.5	12	ACS255-03U-12A0-6+B063(+F278)	P3	12.20	8.29	9.88	16.1
15	11	17	ACS255-03U-17A0-6+B063(+F278)	P3	12.20	8.29	9.88	16.1

P_N for kW = Typical motor power at 400V in normal use
P_N for Hp = Typical motor power at 480V in normal use
I_{2N} for A = Continuous rms current. 50% overload is allowed for one minute in ten minutes
U within the type code = no EMC filter
+B063 = IP66/UL TYPE 4X enclosure without input disconnect.
+B063+F278 = IP66/UL TYPE 4X enclosure with input disconnect and operator controls.



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Specifications subject to change without notice.

Mains connection	
Supply voltage	3-ph, 500 to 600 V ±10%: 1 to 20 hp
Frequency	48 to 62 Hz
Phase imbalance	3% maximum allowed
Motor connection	
Motor types	Asynchronous induction motors Permanent magnet synchronous motors
Frequency	0 to 500 Hz, 0.1 Hz resolution
Overload capacity	150% of rated amps for 1 minute
Switching frequency	4-32kHz Effective
Control types	Scalar U/f Sensorless vector speed control PM motor vector speed control BLDC motor speed control (contact factory)
Programmable control connections	
Power supply	24 Volt DC, 100mA, Short Circuit Protected 10 Volt DC, 5mA for Potentiometer
Programmable Inputs	5 Total 3 Digital 2 Analog / Digital selectable
Digital inputs	8 – 30 Volt DC, internal or external supply Response time < 4ms
Analog inputs	0 - 10 VDC, 0 or 4 - 20mA, bi-polar Resolution: 12 bits Response time: < 4ms Accuracy: < 1% full scale Parameter adjustable scaling and offset
Programmable outputs	4 Total 2 Analog / Digital 2 Relay
Relay output	Maximum Voltage: 250 VAC, 30 VDC Switching Current Capacity: 6A AC, 5A DC
Analog outputs	0 to 10 Volt 0 to 20mA 4 to 20mA
PID control	Internal PID Controller Multi Setpoint Select Standby / Sleep Mode Boost Function
Serial communication	Modbus RTU 9.6 - 115.2 kbps selectable 8N1, 8N2, 8E1, 8O1 CANopen 125 - 1000kbps
Environmental limits	
Temperature	Storage: -40 to 60°C Operating: -10 to 50°C
Relative humidity	95% (without condensation)
Vibration	Conforms to IEC 60068-2-6 Sinusoidal Vibration 10 - 57Hz @ 0.075mm Pk 57 - 150Hz @ 1g Pk
Product compliance	
UL, cUL, C-Tick, CE listing/conformance; RoHS Compliant	

ACS255-PPHB02U-EN REV A Effective 01/01/2017