Micro drives
ACS255 600 V AC, 1 to 20 hp

Compact and available with flexible mounting options without the need for accessory mounting kits. These drives are ideal for panel builders and OEM’s needing a micro drive with low cost, flexible mounting options, and rapid parameter setup.

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
### 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)

### 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

### 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

### PI 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 - 1000kps

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**Output ratings**

<table>
<thead>
<tr>
<th>Output ratings</th>
<th>Type designation</th>
<th>Frame size</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
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</table>

- **Pₙₜ for kW** = Typical motor power at 400V in normal use
- **Pₙₜ for hp** = Typical motor power at 480V in normal use
- **I²ₜ 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.**

### Standard I/O configurations

- **Run (enable)/stop**
- **Fwd/Rev**
- **Speed ref/preset**
- **Output speed**
- **Output current**
- **Safe torque OFF Input**
- **+24 V**
  - DI1 2
  - DI2 3
  - DI3 4

- **+10 V**
  - AI1 6
  - AO1 8
  - AI2 10
  - AO2 11
  - STO+ 12
  - STO- 13
  - RO1COM 14
  - RO1NC 15
  - RO1NC 16
  - RO2NO 17
  - RO2COM 18

- **0 V**

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ABB Inc.
Robotics and Motion
Drives and Controls
16250 W. Glendale Drive
New Berlin, WI 53151

abb.com/drives