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## ACS255 IP66 micro drive

### Ratings and types

#### Type designation

This is the unique reference number (shown above and in the first column, below) that clearly identifies your drive by power rating and frame size. Once the drive's type designation has been selected, the frame size (column 7) can be used to determine the drive dimensions, shown on the next page.

#### Voltages

ACS255 is available in two voltage ranges:

- 1 = 110 to 120 V
- 2 = 200 to 240 V
- 4 = 380 to 480 V
- 6 = 500 to 600 V

Insert either "1", "2", "4" or "6", depending on your chosen voltage, into the type designation shown above.

#### Construction

"01U" within the type designation (shown above) varies depending on the drive phase and EMC filtering. Choose below the one you need.

- 01 = 1-phase
- 03 = 3-phase
- U = No EMC filter
- F278 = Operator controls: Disconnect, FWD/  
REV/OFF selector, Speed Potentiometer

## ACS255 IP66 micro drive

### Ratings and types

| Type code                                                               | Braking<br>chopper<br>(included) | P <sub>N</sub><br><br>HP | P <sub>N</sub><br><br>kW | Output<br>current<br>I <sub>2N</sub><br>A | Weight<br><br>lb | Frame<br>size |
|-------------------------------------------------------------------------|----------------------------------|--------------------------|--------------------------|-------------------------------------------|------------------|---------------|
| 1-phase supply voltage 110 to 120V, +/-10%, 3-phase output 200 to 240 V |                                  |                          |                          |                                           |                  |               |
| ACS255-01U-02A3-1+B068(+F278)                                           | -                                | 0.5                      | 0.37                     | 2.3                                       | 6.5              | E1            |
| ACS255-01U-04A3-1+B068(+F278)                                           | -                                | 1.0                      | 0.75                     | 4.3                                       | 6.5              | E1            |
| ACS255-01U-05A8-1+B068(+F278)                                           | X                                | 1.5                      | 1.1                      | 5.8                                       | 9.3              | E2            |
| 1-phase supply voltage 200 to 240V, +/-10%, 3-phase output 200 to 240 V |                                  |                          |                          |                                           |                  |               |
| ACS255-01U-02A3-2+B068(+F278)                                           | -                                | 0.5                      | 0.37                     | 2.3                                       | 6.5              | E1            |
| ACS255-01U-04A3-2+B068(+F278)                                           | -                                | 1.0                      | 0.75                     | 4.3                                       | 6.5              | E1            |
| ACS255-01U-06A1-2+B068(+F278)                                           | -                                | 1.5                      | 1.1                      | 6.1                                       | 6.5              | E1            |
| ACS255-01U-07A0-2+B068(+F278)                                           | -                                | 2.0                      | 1.5                      | 7.0                                       | 6.5              | E1            |
| ACS255-01U-10A5-2+B068(+F278)                                           | X                                | 3.0                      | 2.2                      | 10.5                                      | 9.3              | E2            |
| ACS255-01U-15A3-2+B068(+F278)                                           | X                                | 5.0                      | 3.7                      | 15.3                                      | 17.0             | E3            |
| 3-phase supply voltage 200 to 240 V, +/-10%                             |                                  |                          |                          |                                           |                  |               |
| ACS255-03U-02A3-2+B068(+F278)                                           | -                                | 0.5                      | 0.37                     | 2.3                                       | 6.5              | E1            |
| ACS255-03U-04A3-2+B068(+F278)                                           | -                                | 1.0                      | 0.75                     | 4.3                                       | 6.5              | E1            |
| ACS255-03U-06A1-2+B068(+F278)                                           | -                                | 1.5                      | 1.10                     | 6.1                                       | 6.5              | E1            |
| ACS255-03U-07A0-2+B068(+F278)                                           | X                                | 2.0                      | 1.5                      | 7.0                                       | 9.3              | E2            |
| ACS255-03U-10A5-2+B068(+F278)                                           | X                                | 3.0                      | 2.2                      | 10.5                                      | 9.3              | E2            |
| ACS255-03U-18A0-2+B068(+F278)                                           | X                                | 5.0                      | 4.0                      | 18.0                                      | 17.0             | E3            |
| ACS255-03U-24A0-2+B068(+F278)                                           | X                                | 7.5                      | 5.5                      | 24.0                                      | 17.0             | E3            |
| ACS255-03U-30A0-2+B068(+F278)                                           | X                                | 10                       | 7.5                      | 30.0                                      | 19.8             | E4            |
| ACS255-03U-046A-2+B068(+F278)                                           | X                                | 15                       | 11                       | 46.0                                      | 19.8             | E4            |
| 3-phase supply voltage 380 to 480 V, +/-10%                             |                                  |                          |                          |                                           |                  |               |
| ACS255-03U-01A2-4+B068(+F278)                                           | -                                | 0.5                      | 0.37                     | 1.2                                       | 6.5              | E1            |
| ACS255-03U-02A2-4+B068(+F278)                                           | -                                | 1.0                      | 0.75                     | 2.2                                       | 6.5              | E1            |
| ACS255-03U-03A3-4+B068(+F278)                                           | -                                | 1.5                      | 1.1                      | 3.3                                       | 6.5              | E1            |
| ACS255-03U-04A1-4+B068(+F278)                                           | -                                | 2.0                      | 1.5                      | 4.1                                       | 6.5              | E1            |
| ACS255-03U-05A8-4+B068(+F278)                                           | X                                | 3.0                      | 2.2                      | 5.8                                       | 9.3              | E2            |
| ACS255-03U-09A5-4+B068(+F278)                                           | X                                | 5.0                      | 4.0                      | 9.5                                       | 9.3              | E2            |
| ACS255-03U-14A0-4+B068(+F278)                                           | X                                | 7.5                      | 5.5                      | 14.0                                      | 17.0             | E3            |
| ACS255-03U-18A0-4+B068(+F278)                                           | X                                | 10.0                     | 7.5                      | 18.0                                      | 17.0             | E3            |
| ACS255-03U-24A0-4+B068(+F278)                                           | X                                | 15                       | 11                       | 24.0                                      | 17.0             | E3            |
| ACS255-03U-30A0-4+B068(+F278)                                           | X                                | 20                       | 15                       | 30.0                                      | 19.8             | E4            |
| ACS255-03U-39A0-4+B068(+F278)                                           | X                                | 25                       | 18.5                     | 39.0                                      | 19.8             | E4            |
| ACS255-03U-46A0-4+B068(+F278)                                           | X                                | 30                       | 22                       | 46.0                                      | 19.8             | E4            |
| 3-phase supply voltage 500 to 600 V, +/-10%                             |                                  |                          |                          |                                           |                  |               |
| ACS255-03U-02A1-6+B068(+F278)                                           | X                                | 1.0                      | 0.75                     | 2.1                                       | 10.6             | P2            |
| ACS255-03U-03A1-6+B068(+F278)                                           | X                                | 2.0                      | 1.5                      | 3.1                                       | 10.6             | P2            |
| ACS255-03U-04A1-6+B068(+F278)                                           | X                                | 3.0                      | 2.2                      | 4.1                                       | 10.6             | P2            |
| ACS255-03U-06A5-6+B068(+F278)                                           | X                                | 5.0                      | 4.0                      | 6.5                                       | 10.6             | P2            |
| ACS255-03U-09A0-6+B068(+F278)                                           | X                                | 7.5                      | 5.5                      | 9.0                                       | 10.6             | P2            |
| ACS255-03U-12A0-6+B068(+F278)                                           | X                                | 10.0                     | 7.5                      | 12.0                                      | 16.1             | P3            |
| ACS255-03U-17A0-6+B068(+F278)                                           | X                                | 15.0                     | 11.0                     | 17.0                                      | 16.1             | P3            |

P<sub>N</sub> for kW = Typical motor power in 400 V at normal use

P<sub>N</sub> for hp = Typical motor power in 460 V at normal use

I<sub>2N</sub> for A = Continuous rms current. 50% overload is allowed for one minute in ten minutes.

## Fuses and cable sizes

The following table provides the output current rating information for the various ACS255 models. ABB Drives always recommend that selection of the correct ACS255 is based upon the motor full load current at the incoming supply voltage.

Cable dimensioning for nominal rated currents is shown in the table below together with the corresponding fuse types for short-circuit protection of the input power cable.

The rated fuse currents given in the table are the maximums for the mentioned fuse types. If smaller

fuse ratings are used, check that the fuse rms current rating is larger than the nominal input current. If 150% output power is needed, multiply nominal input current by 1.5.

Check that the operating time of the fuse is below 0.5 seconds. The operating time depends on the fuse type, the supply network impedance as well as the cross-sectional area, material and length of the supply cable. In case the 0.5 seconds operating time is exceeded with the gG or T fuses, ultra rapid (aR) fuses in most cases reduce the operating time to an acceptable level.

| Type Code                                                    | Power | Fuse | Maximum Supply and PE Cable Size |                 | Nominal Output Current A | Motor Cable Size |     | Max Motor Cable Length | Frame Size |
|--------------------------------------------------------------|-------|------|----------------------------------|-----------------|--------------------------|------------------|-----|------------------------|------------|
|                                                              | HP    | A    | UL Class CC or J                 | mm <sup>2</sup> | AWG                      | mm <sup>2</sup>  | AWG | m                      |            |
| <b>1-phase 110V...115V AC (+/-10%) - 3 Phase 230V Output</b> |       |      |                                  |                 |                          |                  |     |                        |            |
| ACS255-01U-02A3-1                                            | 0.5   | 10   | 10                               | 8               | 8                        | 2.3              | 1.5 | 14                     | E1         |
| ACS255-01U-04A3-1                                            | 1     | 25   | 20                               | 8               | 8                        | 4.3              | 1.5 | 14                     | E1         |
| ACS255-01U-05A8-1                                            | 1.5   | 32   | 30                               | 8               | 8                        | 5.8              | 1.5 | 14                     | E2         |
| <b>1-phase 200...240V AC (+/-10%) - 3 Phase Output</b>       |       |      |                                  |                 |                          |                  |     |                        |            |
| ACS255-01U-02A3-2                                            | 0.5   | 10   | 6                                | 8               | 8                        | 2.3              | 1.5 | 14                     | E1         |
| ACS255-01U-04A3-2                                            | 1     | 10   | 10                               | 8               | 8                        | 4.3              | 1.5 | 14                     | E1         |
| ACS255-01U-06A1-2                                            | 1.5   | 16   | 15                               | 8               | 8                        | 6.1              | 1.5 | 14                     | E1         |
| ACS255-01U-07A0-2                                            | 2     | 16   | 17.5                             | 8               | 8                        | 7                | 1.5 | 14                     | E2         |
| ACS255-01U-10A5-2                                            | 3     | 25   | 25                               | 8               | 8                        | 10.5             | 1.5 | 14                     | E2         |
| ACS255-01U-15A3-2                                            | 5     | 40   | 40                               | 8               | 8                        | 15.3             | 4   | 10                     | E3         |
| <b>3-phase 200...240V AC (+/-10%) - 3 Phase Output</b>       |       |      |                                  |                 |                          |                  |     |                        |            |
| ACS255-03U-02A3-2                                            | 0.5   | 6    | 6                                | 8               | 8                        | 2.3              | 1.5 | 14                     | E1         |
| ACS255-03U-04A3-2                                            | 1     | 10   | 10                               | 8               | 8                        | 4.3              | 1.5 | 14                     | E1         |
| ACS255-03U-06A1-2                                            | 1.5   | 10   | 15                               | 8               | 8                        | 6.1              | 1.5 | 14                     | E1         |
| ACS255-03U-07A0-2                                            | 2     | 16   | 15                               | 8               | 8                        | 7                | 1.5 | 14                     | E2         |
| ACS255-03U-10A5-2                                            | 3     | 16   | 17.5                             | 8               | 8                        | 10.5             | 1.5 | 14                     | E2         |
| ACS255-03U-18A0-2                                            | 5     | 32   | 30                               | 8               | 8                        | 18               | 2.5 | 10                     | E3         |
| ACS255-03U-24A0-2                                            | 7.5   | 40   | 35                               | 8               | 8                        | 24               | 4   | 10                     | E4         |
| ACS255-03U-30A0-2                                            | 10    | 40   | 45                               | 16              | 5                        | 30               | 6   | 8                      | E4         |
| ACS255-03U-46A0-2                                            | 15    | 63   | 70                               | 16              | 5                        | 46               | 10  | 6                      | E4         |

### Notes:

- 1) Larger fuses must not be used when the input power cable is selected according to this table.
- 2) For UL compliant installation, use Copper wire with a minimum insulation temperature rating of 70°C, UL Class CC or Class J Fuses
- 3) Other fuse types can be used if they meet the ratings and the melting curve of the fuse does not exceed the melting curve of the fuse mentioned in this table.
- 4) The maximum motor cable length stated applies to using a shielded motor cable. When using an unshielded cable, the maximum cable length limit may be increased by 50%. When using the ABB Drives recommended output choke, the maximum cable length may be increased by 100%
- 5) The PWM output switching from any inverter when used with a long motor cable length can cause an increase in the voltage at the motor terminals, depending on the motor cable length and inductance. The rise time and peak voltage can affect the service life of the motor. ABB Drives recommend using an output choke for motor cable lengths of 50m or more to ensure good motor service life

## Fuses and cable sizes

| Type Code                                              | Power | Fuse |                  | Maximum Supply and PE Cable Size |     | Nominal Output Current A | Motor Cable Size |     | Max Motor Cable Length | Frame Size |
|--------------------------------------------------------|-------|------|------------------|----------------------------------|-----|--------------------------|------------------|-----|------------------------|------------|
|                                                        | HP    | A    |                  |                                  |     |                          |                  |     |                        |            |
|                                                        |       | gG   | UL Class CC or J | mm <sup>2</sup>                  | AWG |                          | mm <sup>2</sup>  | AWG | m                      |            |
| <b>3-phase 380...480V AC (+/-10%) - 3 Phase Output</b> |       |      |                  |                                  |     |                          |                  |     |                        |            |
| ACS255-03U-01A2-4                                      | 0.5   | 6    | 6                | 8                                | 8   | 1.2                      | 1.5              | 14  | 100                    | E1         |
| ACS255-03U-02A2-4                                      | 1     | 6    | 6                | 8                                | 8   | 2.2                      | 1.5              | 14  | 100                    | E1         |
| ACS255-03U-03A3-4                                      | 1.5   | 10   | 10               | 8                                | 8   | 3.3                      | 1.5              | 14  | 100                    | E1         |
| ACS255-03U-04A1-4                                      | 2     | 10   | 10               | 8                                | 8   | 4.1                      | 1.5              | 14  | 100                    | E2         |
| ACS255-03U-05A8-4                                      | 3     | 16   | 10               | 8                                | 8   | 5.8                      | 1.5              | 14  | 100                    | E2         |
| ACS255-03U-09A5-4                                      | 5     | 16   | 15               | 8                                | 8   | 9.5                      | 1.5              | 14  | 100                    | E2         |
| ACS255-03U-14A0-4                                      | 7.5   | 25   | 25               | 8                                | 8   | 14                       | 1.5              | 12  | 100                    | E3         |
| ACS255-03U-18A0-4                                      | 10    | 32   | 30               | 8                                | 8   | 18                       | 2.5              | 10  | 100                    | E3         |
| ACS255-03U-24A0-4                                      | 15    | 40   | 35               | 8                                | 8   | 24                       | 4                | 10  | 100                    | E4         |
| ACS255-03U-30A0-4                                      | 20    | 40   | 45               | 16                               | 5   | 30                       | 6                | 8   | 100                    | E4         |
| ACS255-03U-39A0-4                                      | 25    | 50   | 60               | 16                               | 5   | 39                       | 10               | 8   | 100                    | E4         |
| ACS255-03U-46A0-4                                      | 30    | 63   | 70               | 16                               | 5   | 46                       | 10               | 6   | 100                    | E4         |
| <b>3-phase 500...600V AC (+/-10%) - 3 Phase Output</b> |       |      |                  |                                  |     |                          |                  |     |                        |            |
| ACS255-03U-02A1-6                                      | 1     | 10   | 6                | 1.5                              | 14  | 2.1                      | 1.5              | 14  | 100                    | P2         |
| ACS255-03U-03A1-6                                      | 2     | 10   | 6                | 1.5                              | 14  | 3.1                      | 1.5              | 14  | 100                    | P2         |
| ACS255-03U-04A1-6                                      | 3     | 10   | 10               | 1.5                              | 14  | 4.1                      | 1.5              | 14  | 100                    | P2         |
| ACS255-03U-06A5-6                                      | 5     | 10   | 10               | 1.5                              | 14  | 6.5                      | 1.5              | 14  | 100                    | P2         |
| ACS255-03U-09A0-6                                      | 7.5   | 16   | 15               | 2.5                              | 12  | 9                        | 1.5              | 14  | 100                    | P2         |
| ACS255-03U-12A0-6                                      | 10    | 25   | 20               | 4                                | 10  | 12                       | 1.5              | 14  | 100                    | P3         |
| ACS255-03U-17A0-6                                      | 15    | 25   | 25               | 4                                | 8   | 17                       | 2.5              | 10  | 100                    | P3         |
| ACS255-03U-22A0-6                                      | 20    | 40   | 35               | 10                               | 8   | 22                       | 4                | 10  | 100                    | P3         |

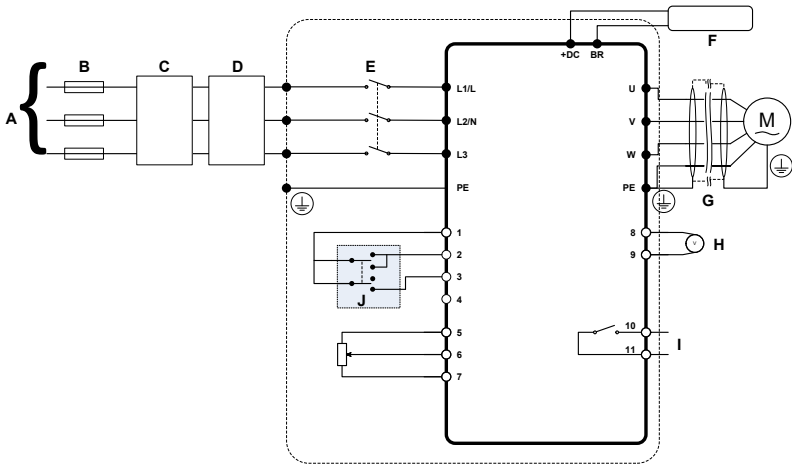
### Notes:

- 1) Larger fuses must not be used when the input power cable is selected according to this table.
- 2) For UL compliant installation, use Copper wire with a minimum insulation temperature rating of 70°C, UL Class CC or Class J Fuses
- 3) Other fuse types can be used if they meet the ratings and the melting curve of the fuse does not exceed the melting curve of the fuse mentioned in this table.
- 4) The maximum motor cable length stated applies to using a shielded motor cable. When using an unshielded cable, the maximum cable length limit may be increased by 50%. When using the ABB Drives recommended output choke, the maximum cable length may be increased by 100%
- 5) The PWM output switching from any inverter when used with a long motor cable length can cause an increase in the voltage at the motor terminals, depending on the motor cable length and inductance. The rise time and peak voltage can affect the service life of the motor. ABB Drives recommend using an output choke for motor cable lengths of 50m or more to ensure good motor service life

Control connections

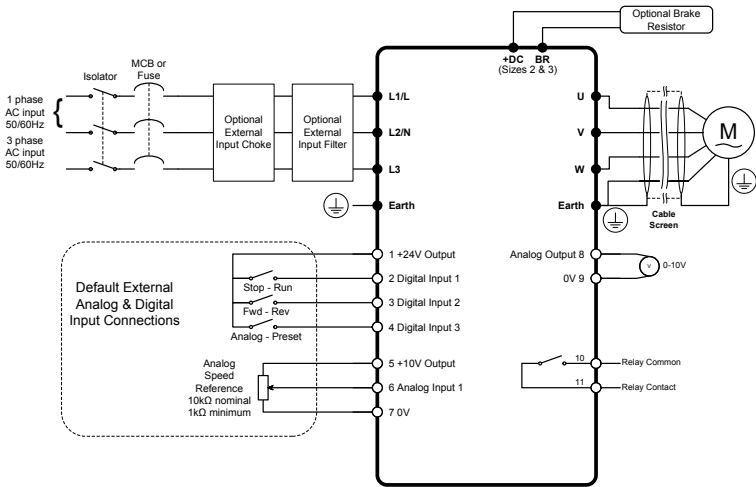
115, 240, 480 V drives

IP66 (NEMA 4X) Switched Units



| Power Connections   |                                         |
|---------------------|-----------------------------------------|
| A                   | Incoming Power Source                   |
| B                   | External Fuse                           |
| C                   | Optional Input Choke                    |
| D                   | Optional Input Filter                   |
| E                   | Internal Mains Disconnect               |
| F                   | Optional Brake Resistor                 |
| G                   | Shielded Motor Cable                    |
| I                   | Relay Output                            |
| Control Connections |                                         |
| J                   | Internal Forward / Off / Reverse Switch |
| K                   | Internal Speed Control Pot              |
|                     |                                         |
| 8                   | Analog Output: 0 – 10 Volts             |
| 9                   | 0 Volt                                  |
| 10                  | Relay Output                            |
| 11                  | 'Drive READY' = Closed                  |

IP20 & IP66 (NEMA 4X) Non-Switched Units



| Power Connections   |                                        |
|---------------------|----------------------------------------|
| A                   | Incoming Power Source                  |
| B                   | External Mains Disconnect              |
| C                   | External Fuse                          |
| D                   | Optional Input Choke                   |
| E                   | Optional Input Filter                  |
| F                   | Optional Brake Resistor                |
| G                   | Shielded Motor Cable                   |
| I                   | Relay Output                           |
| Control Connections |                                        |
| 1                   | + 24 Volt (100mA) User Output          |
| 2                   | Digital Input 1: Drive Run / Stop      |
| 3                   | Digital Input 2: Forward / Reverse     |
| 4                   | Digital Input 3: Analog / Preset Speed |
| 5                   | + 10 Volt Output                       |
| 6                   | Analog Input 1: 0 – 10 Volt            |
| 7                   | 0 Volt                                 |
| 8                   | Analog Output: 0 – 10 Volts            |
| 9                   | 0 Volt                                 |
| 10                  | Relay Output                           |
| 11                  | 'Drive READY' = Closed                 |

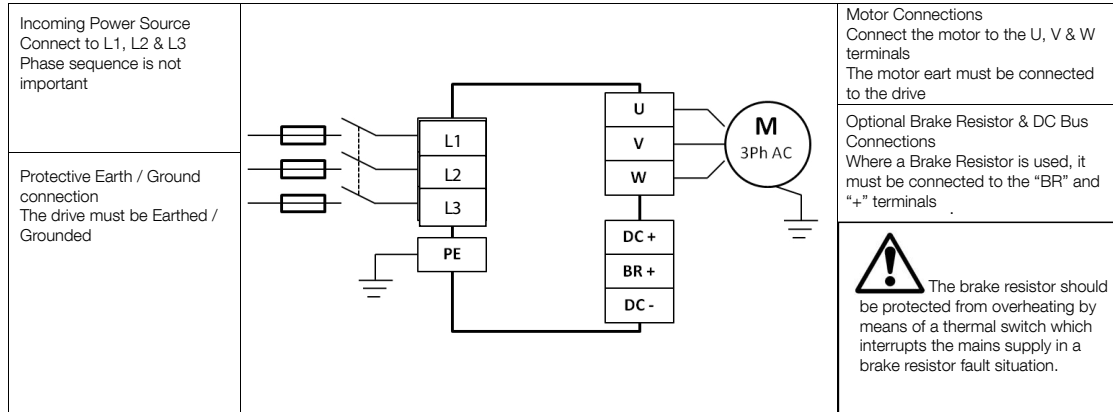
Typical I/O Connections

|                                                                                 |                                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------|---|--------------|---|--------------------------|---|---------------------|---|------------|---|-----------|---|---------|
|                                                                                 | <table><tr><td>1</td><td>+24 Volt</td></tr><tr><td>2</td><td>Run (Enable)</td></tr><tr><td>3</td><td>For / Rev</td></tr><tr><td>4</td><td>Analog / Preset</td></tr><tr><td>5</td><td>+ 10 Volts</td></tr><tr><td>6</td><td>Reference</td></tr><tr><td>7</td><td>0 Volts</td></tr></table>             | 1 | +24 Volt | 2 | Run (Enable) | 3 | For / Rev                | 4 | Analog / Preset     | 5 | + 10 Volts | 6 | Reference | 7 | 0 Volts |
| 1                                                                               | +24 Volt                                                                                                                                                                                                                                                                                              |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 2                                                                               | Run (Enable)                                                                                                                                                                                                                                                                                          |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 3                                                                               | For / Rev                                                                                                                                                                                                                                                                                             |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 4                                                                               | Analog / Preset                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 5                                                                               | + 10 Volts                                                                                                                                                                                                                                                                                            |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 6                                                                               | Reference                                                                                                                                                                                                                                                                                             |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 7                                                                               | 0 Volts                                                                                                                                                                                                                                                                                               |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
|                                                                                 | <table><tr><td>1</td><td>+24 Volt</td></tr><tr><td>2</td><td>Run (Enable)</td></tr><tr><td>3</td><td>Analog / Preset</td></tr><tr><td>4</td><td>Preset 1 / Preset 2</td></tr><tr><td>5</td><td>+ 10 Volts</td></tr><tr><td>6</td><td>Reference</td></tr><tr><td>7</td><td>0 Volts</td></tr></table>   | 1 | +24 Volt | 2 | Run (Enable) | 3 | Analog / Preset          | 4 | Preset 1 / Preset 2 | 5 | + 10 Volts | 6 | Reference | 7 | 0 Volts |
| 1                                                                               | +24 Volt                                                                                                                                                                                                                                                                                              |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 2                                                                               | Run (Enable)                                                                                                                                                                                                                                                                                          |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 3                                                                               | Analog / Preset                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 4                                                                               | Preset 1 / Preset 2                                                                                                                                                                                                                                                                                   |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 5                                                                               | + 10 Volts                                                                                                                                                                                                                                                                                            |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 6                                                                               | Reference                                                                                                                                                                                                                                                                                             |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 7                                                                               | 0 Volts                                                                                                                                                                                                                                                                                               |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
|                                                                                 | <table><tr><td>1</td><td>+24 Volt</td></tr><tr><td>2</td><td>Run (Enable)</td></tr><tr><td>3</td><td>Preset Speeds 1-4 Select</td></tr><tr><td>4</td><td>Preset / Max</td></tr><tr><td>5</td><td>+ 10 Volts</td></tr><tr><td>6</td><td>Reference</td></tr><tr><td>7</td><td>0 Volts</td></tr></table> | 1 | +24 Volt | 2 | Run (Enable) | 3 | Preset Speeds 1-4 Select | 4 | Preset / Max        | 5 | + 10 Volts | 6 | Reference | 7 | 0 Volts |
| 1                                                                               | +24 Volt                                                                                                                                                                                                                                                                                              |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 2                                                                               | Run (Enable)                                                                                                                                                                                                                                                                                          |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 3                                                                               | Preset Speeds 1-4 Select                                                                                                                                                                                                                                                                              |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 4                                                                               | Preset / Max                                                                                                                                                                                                                                                                                          |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 5                                                                               | + 10 Volts                                                                                                                                                                                                                                                                                            |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 6                                                                               | Reference                                                                                                                                                                                                                                                                                             |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 7                                                                               | 0 Volts                                                                                                                                                                                                                                                                                               |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| Analog speed input with 1 preset speed and fwd/rev switch                       |                                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| Analog speed input with 2 preset speeds                                         |                                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |
| 4 preset speeds and max speed select switch. Effectively giving 5 preset speeds |                                                                                                                                                                                                                                                                                                       |   |          |   |              |   |                          |   |                     |   |            |   |           |   |         |

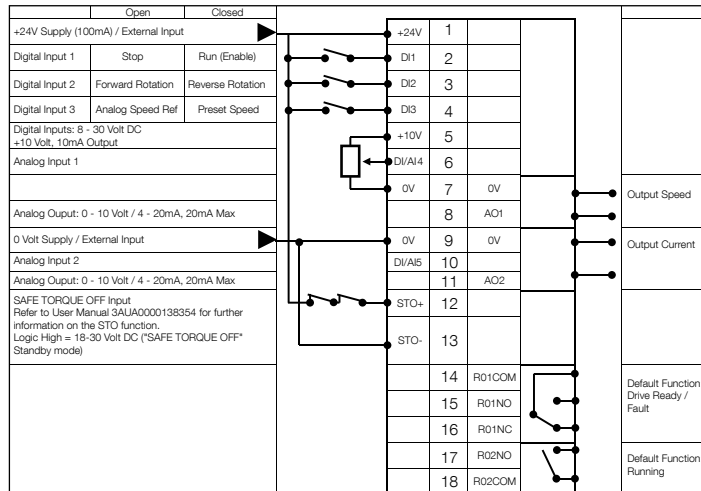
## Control connections

### 600V drives

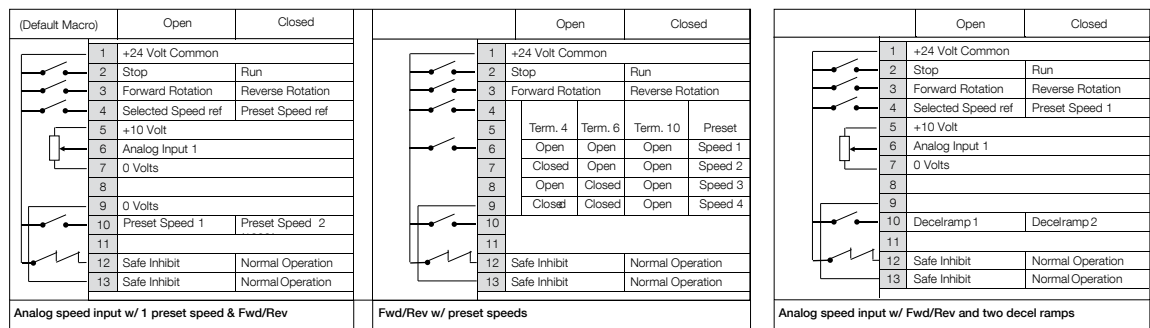
#### Power Terminal Designations



#### Control Terminal Connections & Factory Settings

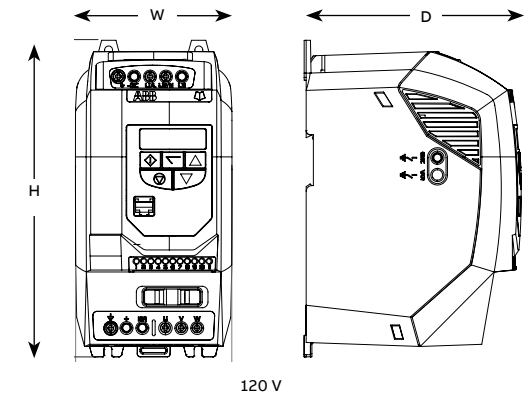


#### Typical I/O Connections



ACS255 IP20 micro drive

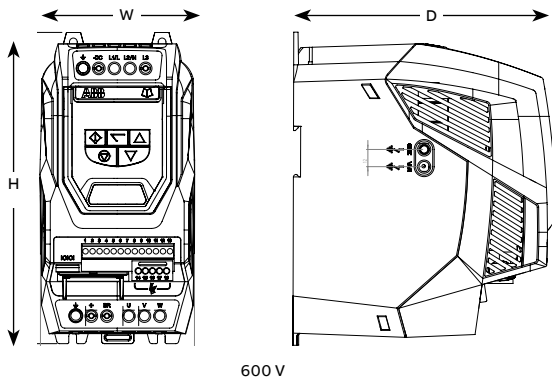
Dimensions and weights



IP20 120V

| Frame size | Height |     | Width |     | Depth |     | Weight |      | Dimension drawing |
|------------|--------|-----|-------|-----|-------|-----|--------|------|-------------------|
|            | in     | mm  | in    | mm  | in    | mm  | lb     | kg   |                   |
| E1         | 6.81   | 173 | 3.23  | 82  | 4.84  | 123 | 2.20   | 1    | 3AXD10000598750   |
| E2         | 8.70   | 221 | 4.29  | 109 | 5.91  | 150 | 3.75   | 1.70 | 3AXD10000598752   |

H = Height  
W = Width  
D = Depth



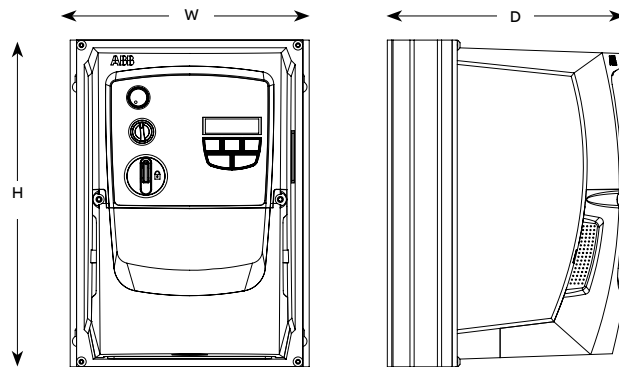
IP20 600V

| Frame size | Height |     | Width |     | Depth |     | Weight |      | Dimension drawing |
|------------|--------|-----|-------|-----|-------|-----|--------|------|-------------------|
|            | in     | mm  | in    | mm  | in    | mm  | lb     | kg   |                   |
| P2         | 8.70   | 221 | 4.41  | 112 | 7.28  | 185 | 4      | 1.80 | 3AXD10000598764   |
| P3         | 10.28  | 261 | 5.16  | 131 | 8.07  | 205 | 7.70   | 3.50 | 3AXD10000598766   |

H = Height  
W = Width  
D = Depth

## ACS255 IP66 micro drive

### Dimensions and weights



120, 240, 480 V

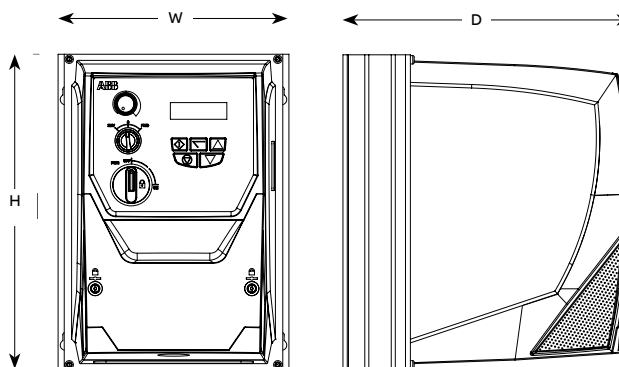
#### IP66 120, 240, 480V

| Frame size | Height |     | Width |     | Depth |     | Weight |      | Dimension drawing |
|------------|--------|-----|-------|-----|-------|-----|--------|------|-------------------|
|            | in     | mm  | in    | mm  | in    | mm  | lb     | kg   |                   |
| E1         | 9.13   | 232 | 6.34  | 161 | 7.05  | 179 | 6.50   | 2.95 | 3AXD10000598754   |
| E2         | 10.12  | 257 | 7.40  | 188 | 7.34  | 186 | 9.26   | 4.20 | 3AXD10000598755   |
| E3         | 12.20  | 310 | 8.29  | 210 | 9.00  | 229 | 16.97  | 7.70 | 3AXD10000598756   |
| E4         | 14.17  | 360 | 9.45  | 240 | 10.63 | 270 | 19.84  | 9.0  | 3AXD10000598757   |

H = Height

W = Width

D = Depth



600 V

#### IP66 600V

| Frame size | Height |     | Width |     | Depth |     | Weight |      | Dimension drawing |
|------------|--------|-----|-------|-----|-------|-----|--------|------|-------------------|
|            | in     | mm  | in    | mm  | in    | mm  | lb     | kg   |                   |
| P2         | 10.12  | 257 | 7.40  | 188 | 9.41  | 239 | 10.60  | 4.80 | 3AXD10000274017   |
| P3         | 12.20  | 310 | 8.29  | 211 | 9.88  | 251 | 16.10  | 7.30 | 3AXD10000274018   |

H = Height

W = Width

D = Depth