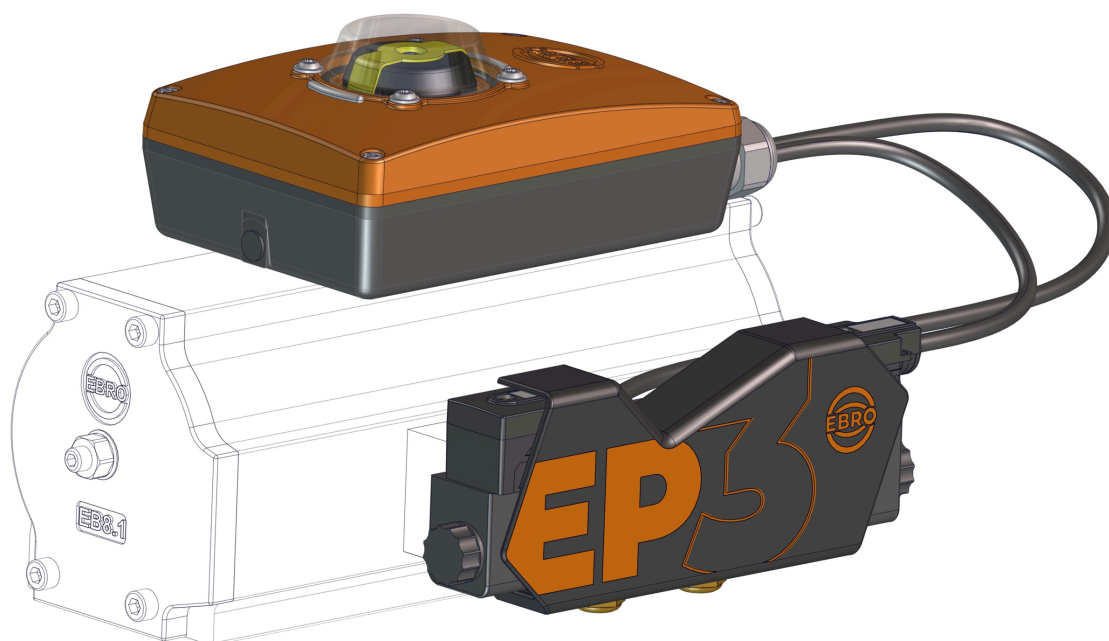
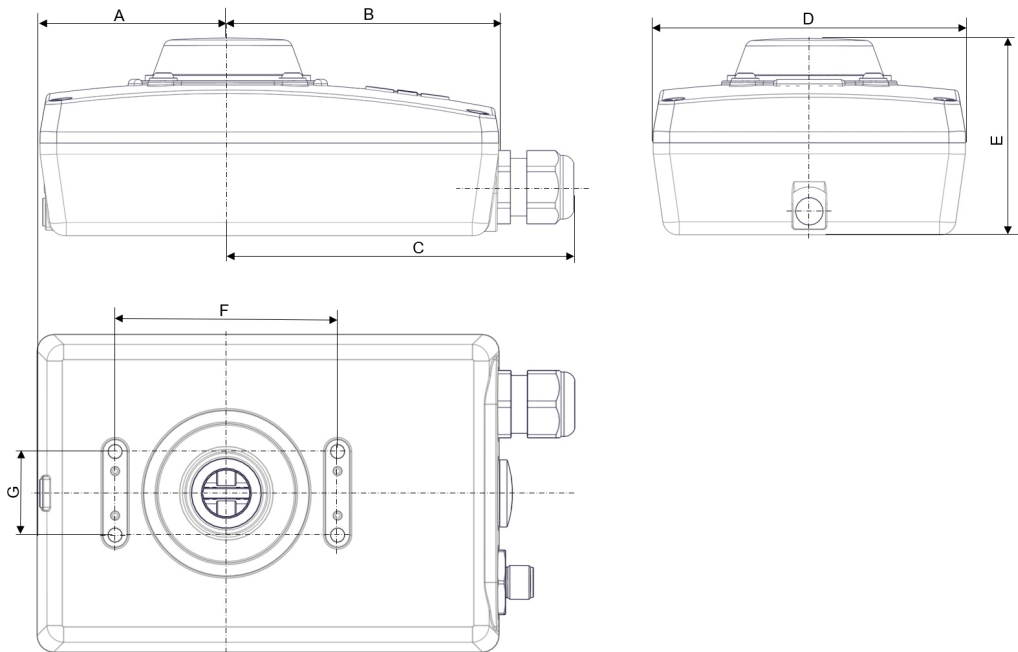


# Technical data sheet

## Positioner EP3

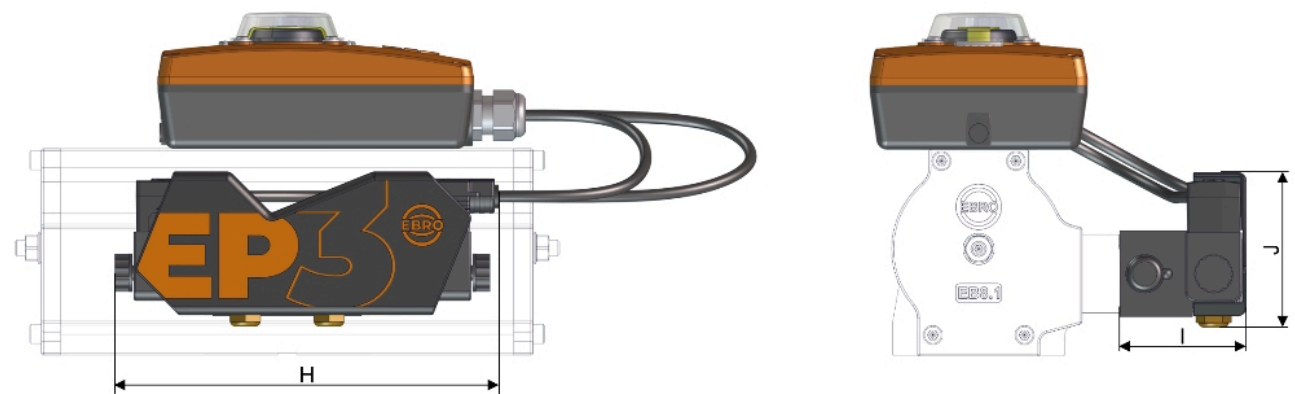


**Dimension sheet**



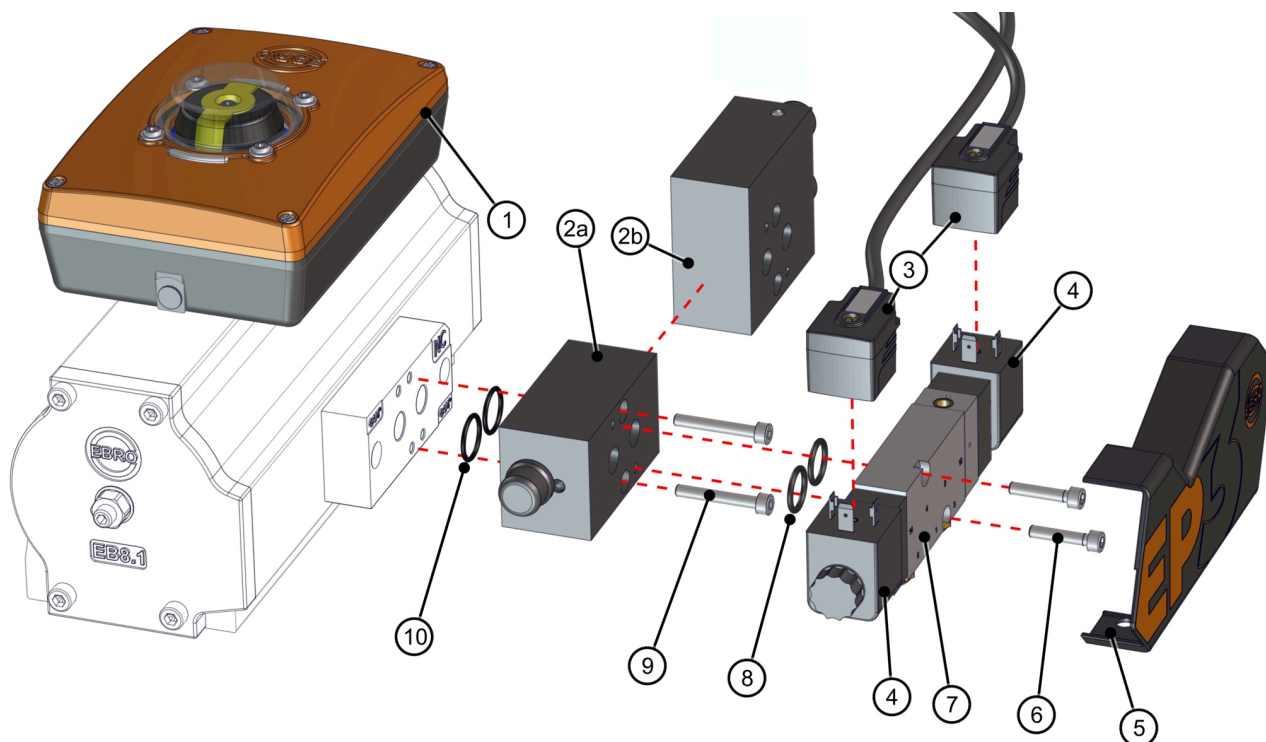
| Type | Main dimensions [mm] |    |     |     |    |    |    | Weight [kg] |
|------|----------------------|----|-----|-----|----|----|----|-------------|
|      | A                    | B  | C   | D   | E  | F  | G  |             |
| EP3  | 68                   | 98 | 125 | 114 | 70 | 80 | 30 | 2.0         |

Weight including solenoid valve and throttle unit



| Type | Main dimensions [mm] |    |    |
|------|----------------------|----|----|
|      | H                    | I  | J  |
| EP3  | 202                  | 66 | 81 |

**Material specifications & bill of materials**



| Item | Naming                                              | Piece | Material group | Material no. |
|------|-----------------------------------------------------|-------|----------------|--------------|
| 1    | Switch box                                          | 1     |                |              |
| 2a   | Double-acting throttle unit                         | 1     |                |              |
| 2b   | Single-acting throttle unit                         |       |                |              |
| 3    | Plug with cable                                     | 2     |                |              |
| 4    | Solenoid coil                                       | 2     |                |              |
| 5    | Cover                                               | 1     |                |              |
| 6    | Hexagon socket screw<br>(solenoid valve)            | 2     |                |              |
| 7    | 5/3-way solenoid valve or<br>3/3-way solenoid valve | 1     |                |              |
| 8    | O-ring                                              | 2     | NBR            |              |
| 9    | Hexagon socket screw<br>(throttle unit)             | 2     |                |              |
| 10   | O-ring                                              | 2     | NBR            |              |

### Technical features

| Designation                         | Description                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------------------|
| Valve body                          | Powder-coated aluminum                                                                                  |
| Operating elements / HMI            | Pushbutton / IO-Link / Bluetooth / RGB light element                                                    |
| Temperature range                   | -20 °C to +60 °C (-4 °F to +140 °F)<br>ATEX: -10 °C to +40 °C (14 °F to +104 °F)                        |
| Connection type                     | Screw terminal connection 26-16 AWG / 0.129-1.31 mm <sup>2</sup> (16 AWG), optional M12 panel connector |
| Recording range                     | 100°                                                                                                    |
| Dead zone                           | 1-10% (factory setting 3%)                                                                              |
| Safety position                     | Holding, closing or opening                                                                             |
| <b>Electrical data</b>              |                                                                                                         |
| Power supply                        | 24 V DC ±10%                                                                                            |
| Current consumption                 | Max. 380 mA                                                                                             |
| Sensor type position detection      | Angle sensor, non-contact                                                                               |
| Additional sensors                  | Acceleration sensor, temperature sensor                                                                 |
| Analog input/setpoint specification | 4-20 mA / 0-10 V                                                                                        |
| Additional analog inputs            | 4-20 mA / 0-10 V                                                                                        |
| Analog output                       | 4-20 mA / 0-10 V                                                                                        |
| Digital input signals               | 3 (on/off, intermediate position, external process sensor)                                              |
| Digital output signals              | 3 (feedback: on, off, fault/intermediate position)                                                      |
| Reverse polarity protection         | Yes (power supply)                                                                                      |
| <b>Pneumatic data</b>               |                                                                                                         |
| Control medium                      | Neutral gases, air                                                                                      |
| Supply pressure                     | 3-8 bar (43.5 – 116.0 psi)                                                                              |
| Pilot air connection                | G1/4"                                                                                                   |
| Air output                          | 1250 NI/min (44.125 ft <sup>3</sup> /min), adjustable                                                   |

### Standards

| Designation           | Description                               |
|-----------------------|-------------------------------------------|
| Air quality           | ISO 8573-1:2010-04, 7-4-4                 |
| Mechanical connection | VDI/VDE 3845 page 1:2010-09, direct setup |

### Certificates and approvals

| Designation                                                               | Description                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explosion protection optional                                             | Ex II 3G/D<br><b>Switch box:</b><br>Ex II 3 G Ex ec IIC T5 Gc X<br>Ex II 3 D Ex tc IIIC T85°C X Dc<br><b>Valve:</b><br>Ex II 3 G Ex h IIC T6 Gb<br>Ex II 3 D Ex h IIIC T80°C<br><b>Coil:</b><br>II 3G ec IIC Tx Gc<br>II 3D tc IIIC Tx°C Dc<br><b>Plug:</b><br>II 2G eb IIC T5 Gb<br>II 2D tb IIIC T100°C Db |
| Body protection                                                           | IP 65, optional IP67 (EN 60529:2014-09)                                                                                                                                                                                                                                                                      |
| Corrosion protection                                                      | CS3 or optional CS5M                                                                                                                                                                                                                                                                                         |
| IO-Link communication type                                                | COM3 (230.4 kBaud / 230.4 kbps)                                                                                                                                                                                                                                                                              |
| IO-Link revision                                                          | 1.1.3                                                                                                                                                                                                                                                                                                        |
| IO-Link process cycle time                                                | min. 10 ms                                                                                                                                                                                                                                                                                                   |
| IO-Link class                                                             | Class A                                                                                                                                                                                                                                                                                                      |
| Conformity                                                                | CE, IO-Link                                                                                                                                                                                                                                                                                                  |
| <b>Notice:</b> Further certificates and approvals available upon request. |                                                                                                                                                                                                                                                                                                              |

**Type code**

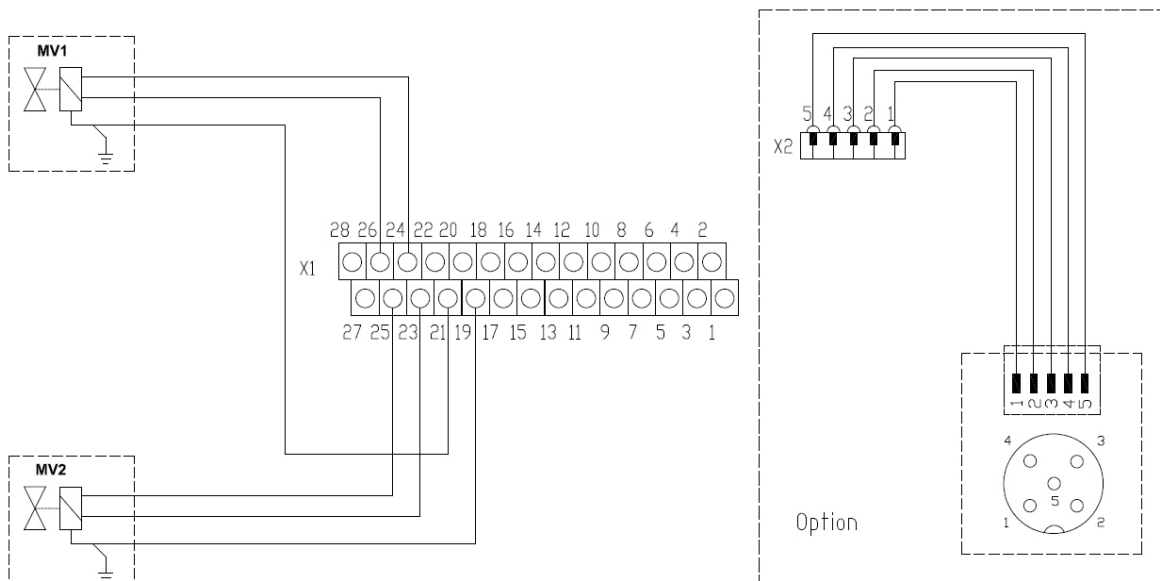
**EP3-P-DC-A-K202-0000-D-0**



| Example   | Position  | Feature                               | Characteristic                           | Abbreviation |
|-----------|-----------|---------------------------------------|------------------------------------------|--------------|
| <b>P</b>  | <b>1</b>  | Mode                                  | Positioner                               | P            |
|           |           |                                       | 3rd position actuating mode              | 3            |
|           |           |                                       | Open/close Eco mode                      | D            |
|           |           |                                       | Position controller linear               | PL           |
|           |           |                                       | Open/close Eco mode linear               | DL           |
| <b>D</b>  | <b>2</b>  | Actuator type                         | double-acting                            | D            |
|           |           |                                       | single-acting                            | S            |
| <b>C</b>  | <b>3</b>  | Safety position                       | Fixed last position (only double-acting) | H            |
|           |           |                                       | Closing                                  | C            |
|           |           |                                       | Opening                                  | O            |
| <b>A</b>  | <b>4</b>  | Control                               | 4-20 mA                                  | A            |
|           |           |                                       | 0-10 V                                   | A            |
|           |           |                                       | IO-link                                  | I            |
|           |           |                                       | 24 V                                     | D            |
| <b>K</b>  | <b>5</b>  | Connection 1-3 material               | Plastic                                  | K            |
|           |           |                                       | Metal                                    | M            |
| <b>2</b>  | <b>6</b>  | Connection 1                          | M12 plug                                 | S            |
|           |           |                                       | M20x1.5 6-12 mm                          | 2            |
| <b>0</b>  | <b>7</b>  | Connection 2                          | Blind screw connection                   | 0            |
|           |           |                                       | M20x1.5 6-12 mm                          | 2            |
|           |           |                                       | Diaphragm                                | B            |
| <b>00</b> | <b>8</b>  | Material exhaust air screw connection | open (G¼")                               | 00           |
|           |           |                                       | Sintered bronze                          | S1           |
|           |           |                                       | Plastic                                  | K1           |
| <b>00</b> | <b>9</b>  | Supply air configuration              | open (G¼")                               | 00           |
|           |           |                                       | L-push-in fitting, G¼" to 6 mm           | E1           |
|           |           |                                       | L-push-in fitting, G¼" to 8 mm           | E2           |
|           |           |                                       | L-push-in fitting, G¼" to 10 mm          | E3           |
| <b>D</b>  | <b>10</b> | Actuator size                         | EB5-12                                   | D            |
|           |           |                                       | EB14-18                                  | A            |
|           |           |                                       | EB20-26                                  | AA           |
|           |           |                                       | SC                                       |              |

| Example | Position | Feature              | Characteristic | Abbreviation |
|---------|----------|----------------------|----------------|--------------|
| O       | 11       | Explosion protection | without        | O            |
|         |          |                      | ATEX 3GD       | E            |

## Wiring diagram





| X1            |                                         | X1            |                                    | X2            |                                       |
|---------------|-----------------------------------------|---------------|------------------------------------|---------------|---------------------------------------|
| Termi-<br>nal | Assignment                              | Termi-<br>nal | Assignment                         | Termi-<br>nal | Assignment                            |
| 1             | PE                                      | 15            | GND                                | 1             | +24 V (conventional / IO-Link Master) |
| 2             | +24 V (for external sensors)            | 16            | Digital input 3                    | 2             |                                       |
| 3             | 0 V (conventional / IO-Link master)     | 17            | Analog input 2 GND (-)             | 3             | 0 V (conventional / IO-Link Master)   |
| 4             | +24 V (for external sensors)            | 18            | Digital input 2                    | 4             | Feedback position CLOSED / IO-Link    |
| 5             | +24 V (conventional / IO-Link master)   | 19            | PE                                 | 5             |                                       |
| 6             | Analog input 2 (+)                      | 20            | Digital input 1                    |               |                                       |
| 7             | Feedback 3. Position / collective fault | 21            | PE                                 |               |                                       |
| 8             | Analog input 1 (setpoint (+))           | 22            | Analog input 1 GND (-)             |               |                                       |
| 9             | Feedback Position OPEN                  | 23            | 2U+ control via IO-Link            |               |                                       |
| 10            | Analog feedback GND (-)                 | 24            | U-                                 |               |                                       |
| 11            | Feedback position CLOSED / IO-Link      | 25            | U-                                 |               |                                       |
| 12            | Analog feedback 0-10 V (+)              | 26            | 1U+ control via IO-Link            |               |                                       |
| 13            | 0 V (for external sensors)              | 27            | 2M IO-Link master <sup>1</sup>     |               |                                       |
| 14            | Analog feedback 4-20 mA                 | 28            | 2+24 V IO-Link master <sup>1</sup> |               |                                       |

<sup>1</sup> Optional auxiliary voltage for MV control