

Electric cylinder unit

EPCS-BS-45-300-10P-A-ST-M-H1-PLK-AA

FESTO

Part number: 8118286



[PDF](#) General operating condition

Data sheet

| Feature | Value |
|--|--|
| Size | 45 |
| Stroke | 300 mm |
| Stroke reserve | 0 mm |
| Piston rod thread | M10x1.25 |
| Reversing backlash | 100 µm |
| Screw diameter | 10 mm |
| Spindle pitch | 10 mm/U |
| Max. angle of rotation of the piston rod +/- | 1 deg |
| Mounting position | Any |
| Piston rod end | External thread |
| Motor type | Stepper motor |
| Structural design | Electric actuator with ball screw drive With integrated drive |
| Spindle type | Ball screw drive |
| Symbol | 00997294 |
| Protection against torsion/guide | With plain-bearing guide |
| Homing | Fixed stop block positive Fixed stop block, negative Reference switch |
| Rotor position sensor | Absolute encoder, single-turn |
| Rotor position sensor measuring principle | Magnetic |
| Temperature monitoring | Shutdown in the event of over temperature Integrated precise CMOS temperature sensor with analogue output |
| Additional functions | User interface Integrated end-position sensing |
| Display | LED |
| Ready status indication | LED |
| Max. acceleration | 5 m/s ² |
| Max. speed | 0.23 m/s |
| Speed "Speed Press" | 0.01 m/s |
| Repetition accuracy | ±0.02 mm |
| Characteristics of digital logic outputs | Configurable Not galvanically isolated |
| Duty cycle | 100% |
| Insulation protection class | B |
| Max. current of digital logic outputs | 100 mA |
| Max. current consumption | 3000 mA |

| Feature | Value |
|--|--|
| Logic max. current consumption | 0.3 A |
| DC nominal voltage | 24 V |
| Nominal current | 3 A |
| Parameterization interface | IO-Link® User interface |
| Rotor position sensor resolution | 16 bit |
| Permissible voltage fluctuations | +/- 15 % |
| Power supply, type of connection | Plug |
| Power supply, connection technology | M12x1, T-coded as per EN 61076-2-111 |
| Power supply, number of pins/wires | 4 |
| Power supply, connection pattern | 00995989 |
| Certification | RCM compliance mark |
| KC characters | KC EMC |
| CE marking (see declaration of conformity) | As per EU EMC directive As per EU RoHS directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC To UK RoHS instructions |
| Vibration resistance | Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27 |
| Corrosion resistance class (CRC) | 0 - No corrosion stress |
| LABS (PWIS) conformity | VDMA24364 zone III |
| Cleanroom class | Class 9 according to ISO 14644-1 |
| Storage temperature | -20 °C ... 60 °C |
| Relative air humidity | 0 - 90 % Non-condensing |
| Degree of protection | IP40 |
| Protection class | III |
| Ambient temperature | 0 °C ... 50 °C |
| Note on ambient temperature | Above an ambient temperature of 30°C, the power must be reduced by 2% per K. |
| Max. torque Mx | 0 Nm |
| Max. torque My | 2.9 Nm |
| Max. torque Mz | 2.9 Nm |
| Max. radial force on actuator shaft | 180 N |
| Max. feed force Fx | 250 N |
| Guide value for payload, horizontal | 40 kg |
| Guide value for payload, vertical | 13 kg |
| Maintenance interval | Life-time lubrication |
| Moving mass at 0 mm stroke | 179 g |
| Additional moving mass per 10 mm stroke | 4.9 g |
| Product weight | 2415 g |
| Basic weight with 0 mm stroke | 1185 g |
| Additional weight per 10 mm stroke | 41 g |
| Number of digital logic outputs 24 V DC | 2 |
| Number of digital logic inputs | 2 |
| Logic input specification | Based on IEC 61131-2, type 1 |
| Work range of logic input | 24 V |
| Characteristics of logic input | Configurable Not galvanically isolated |
| IO-Link®, SIO mode support | Yes |
| IO-Link®, protocol version | Device V 1.1 |
| IO-Link®, communication mode | COM3 (230.4 kBd) |
| IO-Link®, port class | A |
| IO-Link®, number of ports | 1 |

| Feature | Value |
|--|---|
| IO-Link®, process data width OUT | 2 Byte |
| IO-Link®, process data content OUT | Move in 1 bit Move out 1 bit Quit Error 1 bit Move Intermediate 1 bit |
| IO-Link®, process data width IN | 2 Byte |
| IO-Link®, process data content IN | State In 1 bit State Out 1 bit State Move 1 bit State Device 1 bit State Intermediate 1 bit |
| IO-Link®, service data contents IN | 32 bit force 32 bit position 32 bit speed |
| IO-Link®, minimum cycle time | 1 ms |
| IO-Link®, data memory required | 500 byte |
| Max. cable length | 15 m outputs 15 m inputs 20 m for IO-Link® operation |
| Switching logic at outputs | NPN (negative switching) PNP (positive switching) |
| Input switching logic | NPN (negative switching) PNP (positive switching) |
| Logic interface, connection type | Plug |
| Logic interface, connection technology | M12x1, A-coded as per EN 61076-2-101 |
| Logic interface, number of poles/wires | 8 |
| Logic interface, connection pattern | 00992264 |
| Type of mounting | With internal thread With accessories |
| Note on materials | RoHS-compliant |
| Housing material | Wrought aluminum alloy, smooth-anodized |
| Piston rod material | High-alloy stainless steel |
| Spindle nut material | Steel |
| Spindle material | Roller bearing steel |