

Electric cylinder unit

EPCS-BS-45-100-3P-A-ST-M-H1-PLK-AA

FESTO

Part number: 8118276



[PDF](#) General operating condition

Data sheet

| Feature | Value |
|--|---|
| Size | 45 |
| Stroke | 100 mm |
| Stroke reserve | 0 mm |
| Piston rod thread | M10x1.25 |
| Reversing backlash theoretical | 100 µm |
| Spindle diameter | 10 mm |
| Spindle pitch | 3 mm/U |
| Torsional backlash at piston rod +/- | 1 deg |
| Mounting position | optional |
| Piston-rod end | Male thread |
| Type of motor | Stepper motor |
| Design | With ball screw drive With integrated drive |
| Spindle type | Ball screw drive |
| Symbol | 00997294 |
| Protection against torque/guide | With plain-bearing guide |
| Referencing | Positive fixed stop block Negative fixed stop block Reference switch |
| Rotor position sensor | Absolute single-turn encoder |
| Rotor position sensor, encoder measuring principle | Magnetic |
| Temperature monitoring | Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output |
| Additional functions | Integrated end-position sensing |
| Display | LED |
| Ready status indication | LED |
| Max. acceleration | 1.5 m/s ² |
| Max. speed | 0.074 m/s |
| Speed "Speed press" | 0.01 m/s |
| Repetition accuracy | ±0.02 mm |
| Features of digital logic outputs | Configurable Not galvanically isolated |
| Duty cycle | 100% |
| Insulation protection class | B |
| Max. current digital logic outputs | 100 mA |
| Max. current consumption | 3000 mA |
| Max. current consumption, logic | 0.3 A |

| Feature | Value |
|---|--|
| Nominal voltage DC | 24 V |
| Nominal current | 3 A |
| Parameterisation interface | IO-Link User interface |
| Rotor position transducer resolution | 16 bit |
| Permissible voltage fluctuations | +/- 15% |
| Power supply, connection type | Plugs |
| power supply, connection system | M12x1, T-coded according to EN 61076-2-111 |
| Power supply, number of pins/wires | 4 |
| Power supply, connection pattern | 00995989 |
| Approval | RCM trademark |
| KC mark | KC-EMV |
| CE mark (see declaration of conformity) | To EU EMC Directive In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK RoHS instructions |
| Vibration resistance | Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27 |
| Corrosion resistance class CRC | 0 - No corrosion stress |
| LABS (PWIS) conformity | VDMA24364 zone III |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 9 according to ISO 14644-1 |
| Storage temperature | -20 °C ... 60 °C |
| Relative air humidity | Non-condensing |
| Degree of protection | IP40 |
| Protection class | III |
| Ambient temperature | 0 °C ... 50 °C |
| Note on ambient temperature | Power must be reduced by 2% per K at ambient temperatures above 30°C. |
| Max. moment Mx | 0 Nm |
| Max. moment My | 2.9 Nm |
| Max. moment Mz | 2.9 Nm |
| Max. radial force at drive shaft | 180 N |
| Max. feed force Fx | 450 N |
| Reference value effective load, horizontal | 60 kg |
| Reference value effective load, vertical | 23 kg |
| Maintenance interval | Life-time lubrication |
| Moving mass for 0 mm stroke | 179 g |
| Additional moving mass per 10 mm stroke | 4.9 g |
| Product weight | 1595 g |
| Basic weight for 0 mm stroke | 1185 g |
| Additional weight per 10 mm stroke | 41 g |
| Number of digital logic outputs 24 V DC | 2 |
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| Specification logic input | Based on IEC 61131-2, type 1 |
| Working range of logic input | 24 V |
| Features 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 kBaud) |
| IO-Link, Port class | A |
| IO-Link, Number of ports | 1 |
| IO-Link, Process data length OUT | 2 bytes |

| Feature | Value |
|--|---|
| 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 length IN | 2 bytes |
| IO-Link, Process data content IN | State Device 1 bit State In 1 bit State Intermediate 1 bit State Move 1 bit State Out 1 bit |
| IO-Link, Service data IN | 32-bit force 32-bit position 32-bit speed |
| IO-Link, Min. cycle time | 1 ms |
| IO-Link, Data storage required | 500 Byte |
| Max. cable length | 15 m outputs 15 m inputs 20 m with IO-Link® operation |
| Switching logic for outputs | NPN (negative switching) PNP (positive switching) |
| Switching logic for inputs | NPN (negative switching) PNP (positive switching) |
| Logic interface, connection type | Plug |
| Logic interface, connection technology | M12x1, A-coded according to EN 61076-2-101 |
| Logic interface, number of pins/wires | 8 |
| Logic interface, plug pattern | 00992264 |
| Type of mounting | Via female thread With accessories |
| Note on materials | RoHS-compliant |
| Material housing | Smooth-anodised wrought aluminium alloy |
| Material piston rod | High-alloy stainless steel |
| Material ball screw nut | Steel |
| Material spindle | Rolled steel |