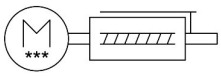
# Electric cylinder unit
# EPCS-BS-60-100-12P-A-ST-M-H1-PLK-AA

Part number: 8118297




General operating condition

## Data sheet

| Feature | Value |
|---|---|
| Size | 60 |
| Stroke | 100 mm |
| Stroke reserve | 0 mm |
| Piston rod thread | M12x1.25 |
| Reversing backlash | 100 µm |
| Screw diameter | 12 mm |
| Spindle pitch | 12 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 | With ball screw<br>With integrated actuator |
| Spindle type | Ball screw |
| Symbol | 00997294 |
| Protection against torsion/guide | With plain bearing-guide |
| Homing | Fixed stop block positive<br>Fixed stop block negative<br>Reference switch |
| Rotor position sensor | Absolute single-turn encoder |
| Rotor position sensor measuring principle | Magnetic |
| Temperature monitoring | Shutdown in the event of over temperature<br>Integrated precise CMOS temperature sensor with analogue output |
| Additional functions | Integrated end-position sensing |
| Display | LED |
| Ready status indication | LED |
| Max. acceleration | 5 m/s² |
| Max. speed | 0.22 m/s |
| Speed "Speed Press" | 0.01 m/s |
| Repetition accuracy | ±0.02 mm |
| Characteristics of digital logic outputs | Configurable<br>Not galvanically isolated |
| Duty cycle | 100% |
| Insulation protection class | B |
| Max. current of digital logic outputs | 100 mA |
| Max. current consumption | 5300 mA |
| Logic max. current consumption | 0.3 A |

| Feature | Value |
|---|---|
| DC nominal voltage | 24 V |
| Nominal current | 5.3 A |
| Parameterization interface | IO-Link®<br>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-EMV |
| CE marking (see declaration of conformity) | As per EU EMC directive<br>As per EU RoHS directive |
| UKCA marking (see declaration of conformity) | 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 suitability, measured according to ISO 14644-14 | Class 9 according to ISO 14644-1 |
| Storage temperature | -20 °C ... 60 °C |
| Relative air humidity | Non-condensating |
| 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 | 6.4 Nm |
| Max. torque Mz | 6.4 Nm |
| Max. radial force on actuator shaft | 230 N |
| Max. feed force Fx | 375 N |
| Guide value for payload, horizontal | 56 kg |
| Guide value for payload, vertical | 18 kg |
| Maintenance interval | Lifetime lubrication |
| Moving mass at 0 mm stroke | 305 g |
| Additional moving mass per 10 mm stroke | 6.5 g |
| Product weight | 2984 g |
| Basic weight with 0 mm stroke | 2294 g |
| Additional weight per 10 mm stroke | 69 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<br>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 |
| IO-Link®, process data width OUT | 2 bytes |

| Feature | Value |
|---|---|
| IO-Link®, process data content OUT | Move in 1 bit<br>Move out 1 bit<br>Quit Error 1 bit<br>Move Intermediate 1 bit |
| IO-Link®, process data width IN | 2 Byte |
| IO-Link®, process data content IN | State Device 1 bit<br>State In 1 bit<br>State Intermediate 1 bit<br>State Move 1 bit<br>State Out 1 bit |
| IO-Link®, service data contents IN | 32-bit force<br>32-bit position<br>32-bit speed |
| IO-Link®, minimum cycle time | 1 ms |
| IO-Link®, data memory required | 500 byte |
| Max. cable length | 15 m outputs<br>15 m inputs<br>20 m for IO-Link® operation |
| Switching logic at outputs | NPN (negative switching)<br>PNP (positive switching) |
| Input switching logic | NPN (negative switching)<br>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<br>With accessories |
| Note on materials | RoHS compliant |
| Housing material | Wrought aluminum alloy, smooth-anodized |
| Piston rod material | high-alloy stainless steel |
| Ball screw nut material | Steel |
| Spindle material | Bearing steel |