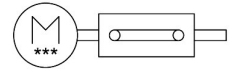


# Electric cylinder unit EPCE-TB-45-30-FL-ST-M-H1-PLK-AA

Part number: 8101541

**FESTO**



## Data sheet

| Feature                                   | Value                                                                                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Drive pinion effective diameter           | 10.18 mm                                                                                                     |
| Size                                      | 45                                                                                                           |
| Stroke                                    | 30 mm                                                                                                        |
| Stroke reserve                            | 0 mm                                                                                                         |
| Piston rod thread                         | M6                                                                                                           |
| Toothed belt elongation                   | 0.31 %                                                                                                       |
| Toothed belt pitch                        | 2 mm                                                                                                         |
| Mounting position                         | Any                                                                                                          |
| Position sensing                          | Motor encoder                                                                                                |
| Structural design                         | Electric cylinder<br>With toothed belt<br>With integrated actuator                                           |
| Protection against torsion/guide          | With plain bearing-guide                                                                                     |
| 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                      | User interface<br>Integrated end-position sensing                                                            |
| Display                                   | LED                                                                                                          |
| Max. acceleration                         | 9 m/s <sup>2</sup>                                                                                           |
| Max. speed                                | 0.44 m/s                                                                                                     |
| Repetition accuracy                       | ±0.05 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                  | 3 A                                                                                                          |
| Logic max. current consumption            | 300 mA                                                                                                       |
| DC nominal voltage                        | 24 V                                                                                                         |
| Nominal current                           | 3 A                                                                                                          |
| Parameterization interface                | IO-Link®                                                                                                     |

| Feature                                    | Value                                                                                                   |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                            | User interface                                                                                          |
| 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                                                                                                       |
| Certification                              | RCM compliance mark                                                                                     |
| CE marking (see declaration of conformity) | As per EU EMC directive<br>As per EU RoHS directive                                                     |
| 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                                                                                      |
| Storage temperature                        | -20 °C...60 °C                                                                                          |
| Relative air humidity                      | 0 - 90%                                                                                                 |
| Degree of protection                       | IP40                                                                                                    |
| 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.                            |
| Impact energy in the end positions         | 0.003 J                                                                                                 |
| Max. torque Mx                             | 0 Nm                                                                                                    |
| Max. torque My                             | 0.4 Nm                                                                                                  |
| Max. torque Mz                             | 0.4 Nm                                                                                                  |
| Max. feed force Fx                         | 85 N                                                                                                    |
| Guide value for payload, horizontal        | 5 kg                                                                                                    |
| Guide value for payload, vertical          | 2.5 kg                                                                                                  |
| Feed constant                              | 32 mm/U                                                                                                 |
| Reference service life                     | 300 km                                                                                                  |
| Moving mass                                | 97 g                                                                                                    |
| Moving mass at 0 mm stroke                 | 83 g                                                                                                    |
| Additional moving mass per 10 mm stroke    | 4.55 g                                                                                                  |
| Product weight                             | 863 g                                                                                                   |
| Basic weight with 0 mm stroke              | 775 g                                                                                                   |
| Additional weight per 10 mm stroke         | 29 g                                                                                                    |
| Number of digital logic outputs 24 V DC    | 2                                                                                                       |
| Number of digital logic inputs             | 2                                                                                                       |
| Work range of logic input                  | 24 V                                                                                                    |
| Characteristics of logic input             | Configurable<br>Not galvanically isolated                                                               |
| 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                                                                                                 |
| 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 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         | Speed 32 bit<br>Position 32 bit<br>Force 32 bit                                                         |

| Feature                                | Value                                    |
|----------------------------------------|------------------------------------------|
| IO-Link®, data memory required         | 0.5 KB                                   |
| Input switching logic                  | PNP (positive switching)                 |
| IO-Link®, Connection technology        | Plug                                     |
| 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                                        |
| Type of mounting                       | With internal thread<br>With accessories |
| Note on materials                      | RoHS compliant                           |
| Toothed belt material                  | Neoprene with glass fiber                |