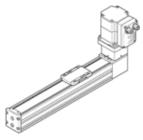
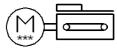
# toothed belt axis unit ELGS-TB-KF-45-1500-ST-M-H1-PLK-AA Part number: 8083672

#### **FESTO**



## **Data sheet**

| Feature                                     | Value   |
|---|---|
| Effective diameter of drive pinion          | 19.1 mm   |
| Working stroke                              | 1,500 mm  |
| Size  | 45  |
| Stroke reserve                              | 0 mm  |
| Toothed-belt stretch                        | 0.187 %   |
| Toothed-belt pitch                          | 2 mm  |
| Assembly position                           | Horizontal  |
| Guide                                       | Recirculating ball bearing guide                                |
| Design structure                            | Electromechanical linear axis                                   |
|   | With toothed belt   |
|   | with integrated drive   |
| Motor type                                  | Stepper motor   |
| Position detection                          | Motor encoder   |
|   | For proximity sensor  |
| Referencing                                 | Fixed stop block positive                                       |
|   | Fixed stop block negative                                       |
| Rotor position sensor                       | Absolute single turn encoder                                    |
| Rotary position encoder measuring principle | Magnetic  |
| Temperature monitoring                      | Shutdown at over-temperature                                    |
|   | Integrated precise CMOS temperature sensor with analogue output |
| Additional functions                        | User interface  |
|   | Integrated end-position sensing                                 |
| Display                                     | LED   |
| Ready status display                        | LED   |
| Max. acceleration                           |   |
|   | 6 m/s2  |
| Max. speed<br>Repetition accuracy           | 1.2 m/s   |
|   | ±0,1 mm   |
| Digital logic output characteristics        | configurable  |
|   | Not electrically isolated                                       |
| Duty cycle                                  | 100 %   |
| Insulation protection class                 | B   |
| Max. current, digital logic outputs         | 100 mA  |
| Max. current consumption                    | 5.3 A   |
| Nominal voltage DC                          | 24 V  |
| Nominal current                             | 5.3 A   |
| Parameters configuring interface            | IO-Link   |
|   | User interface  |
| Rotor position encoder resolution           | 16 Bit  |
| Permissible voltage fluctuation             | +/- 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   |
| Authorization                               | RCM Mark  |
| KC mark                                     | KC-EMV  |
| CE symbol (see declaration of conformity)   | according to EU-EMV guideline                                   |
|   | in accordance with EU RoHS directive                            |



## FESTO

| Feature  | Value  |
|--|--|
| 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 in accordance with FN 942017-5 and EN 60068-2-27    |
| PWIS conformity                                  | VDMA24364 zone III   |
| Storage temperature                              | -20 60 °C  |
| Relative air humidity                            | 0 - 90 %   |
| Protection class                                 | IP40   |
| Safety class                                     |  |
| Ambient temperature                              | 0 50 °C  |
| Note on ambient temperature                      | Above an ambient temperature of 30 °C, the power must be reduced by 2% per K.        |
| Area moment of inertia 2nd degree ly             | 140E+03 mm4  |
| Area moment of inertia 2nd degree Iz             | 170E+03 mm4  |
| Max. force Fy                                    | 300 N  |
| Max. force Fz                                    | 600 N  |
| Max. torque Mx<br>Max. torque My                 | 5.5 Nm<br>4.7 Nm   |
| Max. torque Mz                                   | 4.7 Nm<br>4.7 Nm   |
| Max. feed force Fx                               | 75 N   |
| Reference value for working load, horizontal     | 2.5 kg   |
| Torsional mass moment of inertia It              | 8.5E+03 mm4  |
| Feed constant                                    | 60 mm/U  |
| Moving mass                                      | 169 g  |
| Moving mass with 0 mm stroke                     | 169 g  |
| Slide weight                                     | 55 g   |
| Product weight                                   | 5,240 g  |
| Number of 24 V DC digital logic outputs          | 2  |
| Number of digital logic inputs                   | 2  |
| Specification, logic input                       | Based on IEC 61131-2, type 1   |
| Logic input working range                        | 24 V   |
| IO-Link, SIO mode support                        | Yes  |
| Logic input characteristics                      | configurable   |
|  | Not electrically isolated Device V 1.1   |
| IO-Link, protocol<br>IO-Link, communication mode | COM3 (230.4 kbd)   |
| IO-Link, port type                               | A  |
| IO-Link, number of ports                         | 1  |
| IO-Link, process data width OUT                  | 2 Byte   |
| IO-Link, process data content OUT                | 1 bit (Move in)  |
|  | 1 bit (Move out)   |
|  | 1 bit (Quit Error)   |
| IO-Link, process data width IN                   | 2 Byte   |
| IO-Link, process data content IN                 | 1 bit (State Device)   |
|  | 1 bit (State Move)   |
|  | 1 bit (State in)   |
|  | 1 bit (State out)  |
| 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                    | 0.5 Kilobyte   |
| Max. line length                                 | 15 m outputs   |
|  | 15 m inputs  |
| Switching logic outputs                          | 20 m with IO-Link operation  |
| Switching logic, outputs<br>Input circuit logic  | PNP (positive-switching)<br>PNP (positive-switching)                                 |
| IO-Link, connection technology                   | Plug   |
| Logic interface, connection type                 | Plug   |
|  | 1, 105   |

### FESTO

| Feature                                | Value  |
|--|--|
| Logic interface, connection technology | M12x1, A-coded in accordance with EN 61076-2-101 |
| Logic interface, number of poles/wires | 8  |
| Logic interface, connection pattern    | 00992264   |
| Material of end caps                   | Die-cast aluminium, painted                      |
| Material of profile                    | Anodised wrought aluminium alloy                 |
| Materials note                         | Conforms to RoHS                                 |
| Material cover tape                    | Stainless steel strip                            |
| Material drive cover                   | Die-cast aluminium, painted                      |
| Material guide slide                   | Heat-treatment steel                             |
| Material guide rail                    | Heat-treatment steel                             |
| Material pulleys                       | High alloy steel, non-corrosive                  |
| Material slide                         | Aluminum die cast                                |
| Material toothed belt                  | Polychloroprene with glass fibers                |