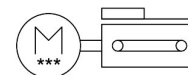


# Toothed belt axis unit ELGS-TB-KF-45-1000-ST-M-H1-PLK-AA

Part number: 8083670

**FESTO**



## Data sheet

| Feature                                   | Value  |
|---|--|
| Drive pinion effective diameter           | 19.1 mm  |
| Working stroke                            | 1000 mm  |
| Size                                      | 45   |
| Stroke reserve                            | 0 mm   |
| Toothed belt elongation                   | 0.187 %  |
| Toothed belt pitch                        | 2 mm   |
| Mounting position                         | Horizontal   |
| Guide                                     | Recirculating ball bearing guide   |
| Structural design                         | Electromechanical linear axis<br>with toothed belt<br>With integrated drive                                  |
| Position sensing                          | Motor encoder<br>For proximity sensor  |
| Rotor position sensor                     | Absolute encoder, single-turn  |
| 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                         | 6 m/s <sup>2</sup>   |
| Max. speed                                | 1.2 m/s  |
| Repetition accuracy                       | ±0.1 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                  | 5.3 A  |
| Logic max. current consumption            | 0.3 A  |
| DC nominal voltage                        | 24 V   |
| Nominal current                           | 5.3 A  |

| Feature  | Value   |
|--|---|
| Parameterization interface   | IO-Link®<br>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   |
| 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.                            |
| 2nd moment of area Iy  | 140000 mm <sup>4</sup>  |
| 2nd moment of area Iz  | 170000 mm <sup>4</sup>  |
| Max. force Fy  | 880 N   |
| Max. force Fz  | 880 N   |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 3240 N  |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 3240 N  |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 20 Nm   |
| My with theoretical service life of 100 km (from a guide perspective only) | 17 Nm   |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 17 Nm   |
| Max. feed force Fx   | 75 N  |
| Guide value for payload, horizontal  | 2.5 kg  |
| Feed constant  | 60 mm/U   |
| Moving mass  | 169 g   |
| Moving mass at 0 mm stroke   | 169 g   |
| Slide weight   | 55 g  |
| Product weight   | 4090 g  |
| Dynamic deflection (load moved)  | 0.05% of axis length, maximum 0.5 mm  |
| Static deflection (load at standstill)                                     | 0.1 % of axis length  |
| 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®, 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   | 32 bit force<br>32 bit position<br>32 bit speed   |
| IO-Link®, data memory required   | 0.5 KB  |
| Input switching logic  | PNP (positive switching)  |
| Logic interface, connection type   | Plug  |

| Feature                                | Value   |
|--|---|
| 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 centering sleeve and pin<br>With accessories |
| Material of end caps                   | Die cast aluminum, painted  |
| Profile material                       | Wrought aluminum alloy, anodized  |
| Note on materials                      | RoHS-compliant  |
| Cover strip material                   | Stainless steel strip   |
| Slide carriage material                | Tempered steel  |
| Guide rail material                    | Tempered steel  |
| Toothed belt material                  | Polychloroprene with glass fiber  |