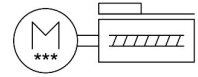


# Ball screw axis unit ELGS-BS-KF-45-400-10P-ST-M-H1-PLK-AA

Part number: 8083473

**FESTO**



## Data sheet

| Feature                                            | Value                                                                                                   |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Working stroke                                     | 400 mm                                                                                                  |
| Size                                               | 45                                                                                                      |
| Stroke reserve                                     | 0 mm                                                                                                    |
| Spindle diameter                                   | 10 mm                                                                                                   |
| Spindle pitch                                      | 10 mm/U                                                                                                 |
| Mounting position                                  | optional                                                                                                |
| Guide                                              | Recirculating ball bearing guide                                                                        |
| Design                                             | Electromechanical linear axis<br>With ball screw<br>With integrated drive                               |
| Position detection                                 | Motor encoder<br>Via proximity switch                                                                   |
| Rotor position sensor                              | Absolute single-turn encoder                                                                            |
| Rotor position sensor, encoder measuring principle | Magnetic                                                                                                |
| Temperature monitoring                             | Switch-off for excessive temperature<br>Integrated precise CMOS temperature sensor with analogue output |
| Additional functions                               | User interface<br>Integrated end-position sensing                                                       |
| Display                                            | LED                                                                                                     |
| Max. acceleration                                  | 5 m/s <sup>2</sup>                                                                                      |
| Max. speed                                         | 0.25 m/s                                                                                                |
| Repetition accuracy                                | ±0.015 mm                                                                                               |
| Features of digital logic outputs                  | Configurable<br>Not galvanically isolated                                                               |
| Duty cycle                                         | 100%                                                                                                    |
| Insulation protection class                        | B                                                                                                       |
| Max. current digital logic outputs                 | 100 mA                                                                                                  |
| Max. current consumption                           | 3 A                                                                                                     |
| Max. current consumption, logic                    | 0.3 A                                                                                                   |
| Nominal voltage DC                                 | 24 V                                                                                                    |
| Nominal current                                    | 3 A                                                                                                     |
| Parameterisation interface                         | IO-Link<br>User interface                                                                               |

| Feature                                                           | Value                                                                                                   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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                                                                                                       |
| Approval                                                          | RCM trademark                                                                                           |
| CE mark (see declaration of conformity)                           | To EU EMC Directive<br>In accordance with 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                                       | Power must be reduced by 2% per K at ambient temperatures above 30°C.                                   |
| 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 at theoretical life value of 100 km (only guide consideration) | 3240 N                                                                                                  |
| Fz at theoretical life value of 100 km (only guide consideration) | 3240 N                                                                                                  |
| Max. moment Mx                                                    | 5.5 Nm                                                                                                  |
| Max. moment My                                                    | 4.7 Nm                                                                                                  |
| Max. moment Mz                                                    | 4.7 Nm                                                                                                  |
| Mx at theoretical life value of 100 km (only guide consideration) | 20 Nm                                                                                                   |
| My at theoretical life value of 100 km (only guide consideration) | 17 Nm                                                                                                   |
| Mz at theoretical life value of 100 km (only guide consideration) | 17 Nm                                                                                                   |
| Max. feed force Fx                                                | 100 N                                                                                                   |
| Reference value effective load, horizontal                        | 10 kg                                                                                                   |
| Reference value effective load, vertical                          | 5 kg                                                                                                    |
| Feed constant                                                     | 10 mm/U                                                                                                 |
| Moving mass                                                       | 220 g                                                                                                   |
| Product weight                                                    | 2794 g                                                                                                  |
| Dynamic deflection (moving load)                                  | 0.05% of the axis length, max. 0.5 mm                                                                   |
| Static deflection (load in standstill)                            | 0.1% of the axis length                                                                                 |
| Number of digital logic outputs 24 V DC                           | 2                                                                                                       |
| Number of digital logic inputs                                    | 2                                                                                                       |
| Working range of logic input                                      | 24 V                                                                                                    |
| Features 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 IN                                          | 32-bit force<br>32-bit position<br>32-bit speed                                                         |
| IO-Link, Data storage required                                    | 0.5 KB                                                                                                  |
| Switching logic for inputs                                        | 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                                                                                                       |

| Feature              | Value                                                                |
|----------------------|----------------------------------------------------------------------|
| Type of mounting     | Via female thread<br>Via centring sleeve and pin<br>With accessories |
| Material end cap     | Painted die cast aluminium                                           |
| Material profile     | Anodised wrought aluminium alloy                                     |
| Note on materials    | RoHS-compliant                                                       |
| Material cover tape  | High-alloy stainless steel                                           |
| Material guide slide | Steel                                                                |
| Material guide rail  | Steel                                                                |