

Ball screw axis unit ELGS-BS-KF-60-600-12P-ST-M-H1-PLK-AA

FESTO

Part number: 8083388



[PDF](#) General operating condition

Data sheet

| Feature | Value |
|--|---|
| Working stroke | 600 mm |
| Size | 60 |
| Stroke reserve | 0 mm |
| Spindle diameter | 12 mm |
| Spindle pitch | 12 mm/U |
| Mounting position | Any |
| Guide | Recirculating ball bearing guide |
| Design | Electromechanical linear axis With ball screw With integrated drive |
| Type of motor | Stepper motor |
| Spindle type | Ball screw |
| Symbol | 00997292 |
| Position detection | Motor encoder Via proximity switch |
| Referencing | Positive fixed stop block Negative fixed stop block |
| Rotor position sensor | Absolute encoder, single turn |
| Rotor position sensor, encoder measuring principle | magnetic |
| Temperature monitoring | Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output |
| Additional functions | User interface Built-in end-position sensing |
| Display | LED |
| Ready status indication | LED |
| Max. acceleration | 5 m/s ² |
| Max. speed | 0.25 m/s |
| Speed "Speed press" | 0.01 m/s |
| Repetition accuracy | ±0.01 mm |
| Features of digital logic outputs | Configurable Not galvanically isolated |
| Duty cycle | 100% |
| Insulation protection class | B |
| Max. current digital logic outputs | 100 mA |
| Max. current consumption | 5300 mA |
| Max. current consumption, logic | 0.3 A |
| Nominal voltage DC | 24 V |
| Nominal current | 5.3 A |

| Feature | Value |
|---|--|
| Parameterisation interface | IO-Link® User interface |
| Rotor position transducer resolution | 16 bit |
| Permissible voltage fluctuations | +/- 15 % |
| Power supply, connection type | Plug |
| power supply, connection system | M12x1, T-coded according to EN 61076-2-111 |
| Power supply, number of pins/wires | 4 |
| Power supply, connection pattern | 00995989 |
| Approval | RCM |
| KC mark | KC-EMV |
| CE mark (see declaration of conformity) | To EU EMC Directive In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC To UK RoHS instructions |
| Vibration resistance | Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27 |
| LABS (PWIS) conformity | VDMA24364 zone III |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 7 according to ISO 14644-1 |
| Storage temperature | -20 °C ... 60 °C |
| Relative air humidity | 0 - 90% |
| Degree of protection | IP40 |
| Protection class | III |
| 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 | 441000 mm ⁴ |
| 2nd moment of area Iz | 542000 mm ⁴ |
| Max. force Fy | 3641 N |
| Max. force Fz | 3641 N |
| Max. force Fy total axis | 600 N |
| Max. force Fz total axis | 1800 N |
| Fy at theoretical life value of 100 km (only guide consideration) | 13400 N |
| Fz at theoretical life value of 100 km (only guide consideration) | 13400 N |
| Max. moment Mx | 29.1 Nm |
| Max. moment My | 31.8 Nm |
| Max. moment Mz | 31.8 Nm |
| Max. moment Mx total axis | 29.1 Nm |
| Max. moment My total axis | 31.8 Nm |
| Max. moment Mz total axis | 31.8 Nm |
| Mx at theoretical life value of 100 km (only guide consideration) | 107 Nm |
| My at theoretical life value of 100 km (only guide consideration) | 117 Nm |
| Mz at theoretical life value of 100 km (only guide consideration) | 117 Nm |
| Max. feed force Fx | 200 N |
| Reference value effective load, horizontal | 20 kg |
| Reference value effective load, vertical | 13 kg |
| Torsional mass moment of inertia It | 29800 mm ⁴ |
| Feed constant | 12 mm/U |
| Reference service life | 5000 km |
| Maintenance interval | Lifetime lubrication |
| Moving mass | 525 g |
| Product weight | 5922 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 |

| Feature | Value |
|---|---|
| Number of digital logic outputs 24 V DC | 2 |
| Number of digital logic inputs | 2 |
| Specification logic input | Based on IEC 61131-2, type 1 |
| Working range of logic input | 24 V |
| IO-Link, SIO-Mode support | Yes |
| Features of logic input | Configurable Not galvanically isolated |
| IO-Link, Protocol version | Device V 1.1 |
| IO-Link, communication mode | COM3 (230.4 kBaud) |
| IO-Link, Port class | A |
| IO-Link, Number of ports | 1 |
| IO-Link, Process data length OUT | 2 bytes |
| IO-Link, Process data content OUT | Move in 1 bit Move out 1 bit Quit Error 1 bit Move intermediate 1 bit |
| IO-Link, Process data length IN | 2 bytes |
| IO-Link, Process data content IN | State Device 1 bit State In 1 bit State Intermediate 1 bit State Move 1 bit State Out 1 bit |
| IO-Link, Service data IN | 32 bit Force 32 bit position 32 bit speed |
| IO-Link, Min. cycle time | 1 ms |
| IO-Link, Data storage required | 500 Byte |
| Max. cable length | 15 m outputs 15 m inputs 20 m with IO-Link® operation |
| Switching logic for outputs | PNP (positive switching) |
| Switching logic for inputs | PNP (positive switching) |
| IO-Link, connection technology | Plug |
| 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 |
| Logic interface, plug pattern | 00992264 |
| Type of mounting | With female thread With centring sleeve and pin 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 drive cover | Painted die cast aluminium |
| Material guide slide | Steel |
| Material guide rail | Steel |
| Material slide | Die-cast aluminium |
| Material ball screw nut | Steel |
| Material spindle | Steel |