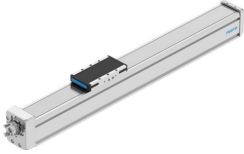


# Ball screw axis ELGD-BS-KF-60- -

Part number: 8176874

**FESTO**



## Data sheet

| Feature  | Value  |
|--|--|
| Working stroke                                     | 50 mm...1000 mm  |
| Size   | 60   |
| Stroke reserve                                     | 0 mm   |
| Reversing backlash theoretical                     | 0.15 mm  |
| Spindle diameter                                   | 12 mm  |
| Spindle pitch                                      | 5 mm/U...10 mm/U   |
| Mounting position                                  | optional   |
| Guide  | Recirculating ball bearing guide   |
| Design   | Electromechanical linear axis<br>With ball screw   |
| Type of motor                                      | Stepper motor<br>Servo motor   |
| Spindle type                                       | Ball screw drive   |
| Position detection                                 | Via inductive sensors  |
| Max. acceleration                                  | 15 m/s <sup>2</sup>  |
| Max. rotational speed                              | 6667 rpm   |
| Max. speed   | 0.56 m/s...1.11 m/s  |
| Repetition accuracy                                | ±0.01 mm   |
| Duty cycle   | 100%   |
| LABS (PWIS) conformity                             | VDMA24364 zone III   |
| Suitability for the production of Li-ion batteries | Product corresponds to the internal product definition from Festo for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |
| Degree of protection                               | IP40   |
| Ambient temperature                                | 0 °C...60 °C   |
| Impact energy in end positions                     | 1 mJ   |
| Note on the impact energy in the end positions     | At maximum homing speed of 0.01 m/s  |
| 2nd moment of area I <sub>y</sub>                  | 508600 mm <sup>4</sup>   |
| 2nd moment of area I <sub>z</sub>                  | 685700 mm <sup>4</sup>   |
| Idle torque at v <sub>max</sub>                    | 0.107 Nm...0.14 Nm   |
| Idle torque at v <sub>min</sub>                    | 0.045 Nm...0.047 Nm  |

| Feature   | Value  |
|---|--|
| Max. force Fy   | 2200 N...4075 N  |
| Max. force Fz   | 2200 N...4079 N  |
| Max. force Fy total axis  | 930 N...1650 N   |
| Max. force Fz total axis  | 1300 N...2750 N  |
| Fy at theoretical life value of 100 km (only guide consideration) | 9208 N...18415 N                                       |
| Fz at theoretical life value of 100 km (only guide consideration) | 9208 N...18415 N                                       |
| Max. moment Mx  | 37 Nm...65 Nm  |
| Max. moment My  | 15 Nm...141 Nm   |
| Max. moment Mz  | 15 Nm...139 Nm   |
| Max. moment Mx total axis   | 36 Nm...66 Nm  |
| Max. moment My total axis   | 27 Nm...85 Nm  |
| Max. moment Mz total axis   | 26 Nm...45 Nm  |
| Mx at theoretical life value of 100 km (only guide consideration) | 157 Nm...314 Nm  |
| My at theoretical life value of 100 km (only guide consideration) | 60 Nm...500 Nm   |
| Mz at theoretical life value of 100 km (only guide consideration) | 60 Nm...500 Nm   |
| Distance between slide surface and guide centre                   | 60 mm  |
| Max. radial force at drive shaft                                  | 230 N  |
| Max. feed force Fx  | 1550 N   |
| Torsional mass moment of inertia It                               | 52300 mm <sup>4</sup>                                  |
| Mass moment of inertia JH per metre of stroke                     | 0.15716 kgcm <sup>2</sup>                              |
| Mass moment of inertia JL per kg of working load                  | 0.00633 kgcm <sup>2</sup> ...0.02533 kgcm <sup>2</sup> |
| Mass moment of inertia JO   | 0.0635 kgcm <sup>2</sup> ...0.06995 kgcm <sup>2</sup>  |
| Feed constant   | 5 mm/U...10 mm/U                                       |
| Reference service life  | 5000 km  |
| Maintenance interval  | Life-time lubrication                                  |
| Moving mass   | 555 g...810 g  |
| Basic weight for 0 mm stroke                                      | 1774 g...2286 g  |
| Additional weight per 10 mm stroke                                | 54 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                                |
| Interface code, actuator  | T42  |
| Material end cap  | Aluminium gravity die-cast, painted                    |
| Material profile  | Anodised wrought aluminium alloy                       |
| Note on materials   | RoHS-compliant   |
| Material cover tape   | High-alloy stainless steel                             |
| Material drive cover  | Aluminium gravity die-cast, painted                    |
| Material guide slide  | Steel  |
| Material guide rail   | Steel  |
| Material slide  | Wrought aluminium alloy                                |
| Material spindle nut  | Steel  |
| Material spindle  | Steel  |