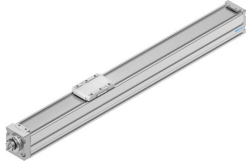


# Ball screw axis ELGC-BS-KF-45-500-10P

Part number: 8061488

FESTO



 General operating condition

## Data sheet

| Feature   | Value  |
|---|--|
| Working stroke  | 500 mm   |
| Size  | 45   |
| Stroke reserve  | 0 mm   |
| Reversing backlash theoretical                            | 150 µm   |
| 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                   |
| Type of motor   | Stepper motor<br>Servo motor                                       |
| Spindle type  | Ball screw drive   |
| Symbol  | 00991211   |
| Position detection  | Via proximity switch<br>Via inductive sensors                      |
| Max. acceleration   | 15 m/s <sup>2</sup>  |
| Max. rotational speed                                     | 3600 rpm   |
| Max. speed  | 0.6 m/s  |
| Repetition accuracy                                       | ±0.015 mm  |
| Duty cycle  | 100%   |
| LABS (PWIS) conformity                                    | VDMA24364 zone III   |
| Suitability for the production of Li-ion batteries        | Suitable for battery production with reduced Cu/Zn/Ni values (F1a) |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 7 according to ISO 14644-1                                   |
| Storage temperature                                       | -20 °C ... 60 °C   |
| Degree of protection                                      | IP40   |
| Ambient temperature                                       | 0 °C ... 50 °C   |
| Impact energy in end positions                            | 5.0E-4 J   |
| Note on the impact energy in the end positions            | At maximum homing speed of 0.01 m/s                                |
| 2nd moment of area ly                                     | 140000 mm <sup>4</sup>   |
| 2nd moment of area lz                                     | 170000 mm <sup>4</sup>   |
| Idle torque at v <sub>max</sub>                           | 0.12 Nm  |
| Idle torque at v <sub>min</sub>                           | 0.032 Nm   |
| Max. force F <sub>y</sub>                                 | 880 N  |
| Max. force F <sub>z</sub>                                 | 880 N  |
| Max. force F <sub>y</sub> total axis                      | 300 N  |

| Feature   | Value                                 |
|---|---------------------------------------|
| Max. force Fz total axis  | 600 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                                |
| Max. moment Mx total axis   | 5.5 Nm                                |
| Max. moment My total axis   | 4.7 Nm                                |
| Max. moment Mz total axis   | 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                                 |
| Distance between slide surface and guide centre                   | 42.8 mm                               |
| Max. radial force at drive shaft                                  | 180 N                                 |
| Max. feed force Fx  | 100 N                                 |
| Torsional mass moment of inertia It                               | 8500 mm <sup>4</sup>                  |
| Mass moment of inertia JH per metre of stroke                     | 0.05056 kgcm <sup>2</sup>             |
| Mass moment of inertia JL per kg of working load                  | 0.02533 kgcm <sup>2</sup>             |
| Mass moment of inertia JO   | 0.0082 kgcm <sup>2</sup>              |
| Feed constant   | 10 mm/U                               |
| Reference service life  | 5000 km                               |
| Maintenance interval  | Life-time lubrication                 |
| Moving mass   | 220 g                                 |
| Additional weight per 10 mm stroke                                | 36 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  | V32                                   |
| 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                                 |