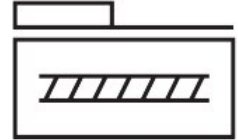
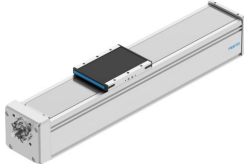


**Ball screw axis**  
**ELGD-BS-KF-120-200-0H-5P**  
Part number: 8192291

**FESTO**



**Data sheet**

| Feature                                            | Value                                                              |
|----------------------------------------------------|--------------------------------------------------------------------|
| Working stroke                                     | 200 mm                                                             |
| Size                                               | 120                                                                |
| Stroke reserve                                     | 0 mm                                                               |
| Reversing backlash                                 | 0.15 mm                                                            |
| Screw diameter                                     | 25 mm                                                              |
| Spindle pitch                                      | 5 mm/U                                                             |
| Mounting position                                  | Any                                                                |
| Guide                                              | Recirculating ball bearing guide                                   |
| Structural design                                  | Electromechanical linear axis with ball screw                      |
| Motor type                                         | Stepper motor<br>Servo motor                                       |
| Spindle type                                       | Ball screw drive                                                   |
| Measuring principle of linear potentiometer        | Incremental                                                        |
| Position sensing                                   | For inductive proximity sensors                                    |
| Max. acceleration                                  | 15 m/s <sup>2</sup>                                                |
| Max. rotational speed                              | 3200 rpm                                                           |
| Max. speed                                         | 0.27 m/s                                                           |
| Repetition accuracy                                | ±0.01 mm                                                           |
| Duty cycle                                         | 100%                                                               |
| LABS (PWIS) conformity                             | VDMA24364-C1-L                                                     |
| Suitability for the production of Li-ion batteries | Suitable for battery production with reduced Cu/Zn/Ni values (F1a) |
| Storage temperature                                | -20 °C...60 °C                                                     |
| Degree of protection                               | IP40                                                               |
| Ambient temperature                                | 0 °C...60 °C                                                       |
| Impact energy in the end positions                 | 1 mJ                                                               |
| Note on the impact energy in the end positions     | At maximum speed of the reference run of 0.01 m/s                  |
| 2nd moment of area I <sub>y</sub>                  | 3550000 mm <sup>4</sup>                                            |
| 2nd moment of area I <sub>z</sub>                  | 8985000 mm <sup>4</sup>                                            |
| No-load torque at maximum travel speed             | 0.344 Nm                                                           |
| No-load torque at minimum travel speed             | 0.167 Nm                                                           |
| Max. force F <sub>y</sub>                          | 4300 N                                                             |

| Feature                                                                    | Value                                |
|----------------------------------------------------------------------------|--------------------------------------|
| Max. force Fz                                                              | 4300 N                               |
| Max. force Fy total axis                                                   | 2957 N                               |
| Max. force Fz total axis                                                   | 5608 N                               |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 17576 N                              |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 17576 N                              |
| Max. torque Mx                                                             | 170 Nm                               |
| Max. torque My                                                             | 50 Nm                                |
| Max. torque Mz                                                             | 60 Nm                                |
| Max. moment Mx total axis                                                  | 207 Nm                               |
| Max. moment My total axis                                                  | 63 Nm                                |
| Max. moment Mz total axis                                                  | 76 Nm                                |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 730 Nm                               |
| My with theoretical service life of 100 km (from a guide perspective only) | 162 Nm                               |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 162 Nm                               |
| Distance between slide surface and guide center                            | 80 mm                                |
| Max. radial force on actuator shaft                                        | 750 N                                |
| Max. feed force Fx                                                         | 3520 N                               |
| Torsion moment of inertia It                                               | 1433600 mm <sup>4</sup>              |
| Mass moment of inertia JH per meter of stroke                              | 2.633 kgcm <sup>2</sup>              |
| Mass moment of inertia JL per kg of payload                                | 0.00633 kgcm <sup>2</sup>            |
| Mass moment of inertia JO                                                  | 0.76031 kgcm <sup>2</sup>            |
| Feed constant                                                              | 5 mm/U                               |
| Reference service life                                                     | 5000 km                              |
| Maintenance interval                                                       | Life-time lubrication                |
| Moving mass                                                                | 1814 g                               |
| Product weight                                                             | 9027 g                               |
| Basic weight with 0 mm stroke                                              | 6087 g                               |
| Additional weight per 10 mm stroke                                         | 147 g                                |
| Dynamic deflection (load moved)                                            | 0.05% of axis length, maximum 0.5 mm |
| Static deflection (load at standstill)                                     | 0.1 % of axis length                 |
| Interface code, actuator                                                   | S60                                  |
| Material of end caps                                                       | Aluminum gravity die-cast, painted   |
| Profile material                                                           | Wrought aluminum alloy, anodized     |
| Note on materials                                                          | RoHS-compliant                       |
| Cover strip material                                                       | High-alloy stainless steel           |
| Drive cover material                                                       | Aluminum gravity die-cast, painted   |
| Slide carriage material                                                    | Steel                                |
| Guide rail material                                                        | Steel                                |
| Slide material                                                             | Wrought aluminum alloy               |
| Spindle nut material                                                       | Steel                                |
| Spindle material                                                           | Steel                                |