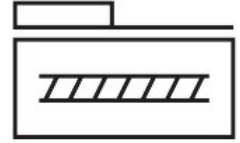
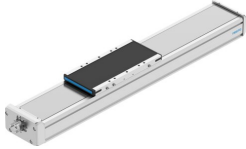


# Ball screw axis

## ELGD-BS-KF-WD-120-600-0H-10P-L

Part number: 8192341

FESTO



## Data sheet

| Feature                                            | Value                                                              |
|----------------------------------------------------|--------------------------------------------------------------------|
| Working stroke                                     | 600 mm                                                             |
| Size                                               | 120                                                                |
| Stroke reserve                                     | 0 mm                                                               |
| Reversing backlash                                 | 0.15 mm                                                            |
| Screw diameter                                     | 12 mm                                                              |
| Spindle pitch                                      | 10 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                              | 6667 rpm                                                           |
| Max. speed                                         | 1.11 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>                  | 770900 mm <sup>4</sup>                                             |
| 2nd moment of area I <sub>z</sub>                  | 5801000 mm <sup>4</sup>                                            |
| No-load torque at maximum travel speed             | 0.246 Nm                                                           |
| No-load torque at minimum travel speed             | 0.068 Nm                                                           |
| Max. force F <sub>y</sub>                          | 8000 N                                                             |

| Feature                                                                    | Value                                |
|----------------------------------------------------------------------------|--------------------------------------|
| Max. force Fz                                                              | 7200 N                               |
| Max. force Fy total axis                                                   | 5914 N                               |
| Max. force Fz total axis                                                   | 9071 N                               |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 35153 N                              |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 35153 N                              |
| Max. torque Mx                                                             | 330 Nm                               |
| Max. torque My                                                             | 600 Nm                               |
| Max. torque Mz                                                             | 540 Nm                               |
| Max. moment Mx total axis                                                  | 359 Nm                               |
| Max. moment My total axis                                                  | 628 Nm                               |
| Max. moment Mz total axis                                                  | 527 Nm                               |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 1459 Nm                              |
| My with theoretical service life of 100 km (from a guide perspective only) | 1920 Nm                              |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 1920 Nm                              |
| Distance between slide surface and guide center                            | 51 mm                                |
| Max. radial force on actuator shaft                                        | 230 N                                |
| Max. feed force Fx                                                         | 1880 N                               |
| Torsion moment of inertia It                                               | 383100 mm <sup>4</sup>               |
| Mass moment of inertia JH per meter of stroke                              | 0.13 kgcm <sup>2</sup>               |
| Mass moment of inertia JL per kg of payload                                | 0.02533 kgcm <sup>2</sup>            |
| Mass moment of inertia JO                                                  | 0.0947 kgcm <sup>2</sup>             |
| Feed constant                                                              | 10 mm/U                              |
| Reference service life                                                     | 5000 km                              |
| Maintenance interval                                                       | Life-time lubrication                |
| Moving mass                                                                | 2200 g                               |
| Product weight                                                             | 10450 g                              |
| Basic weight with 0 mm stroke                                              | 5290 g                               |
| Additional weight per 10 mm stroke                                         | 86 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                                                   | T42                                  |
| 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                                |