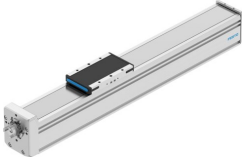


# Ball screw axis ELGD-BS-KF-80-500-0H-10P

Part number: 8192279

FESTO



 General operating condition

## Data sheet

| Feature                                            | Value                                                              |
|----------------------------------------------------|--------------------------------------------------------------------|
| Working stroke                                     | 500 mm                                                             |
| Size                                               | 80                                                                 |
| Stroke reserve                                     | 0 mm                                                               |
| Reversing backlash                                 | 150 µm                                                             |
| Screw diameter                                     | 16 mm                                                              |
| Spindle pitch                                      | 10 mm/U                                                            |
| Mounting position                                  | Any                                                                |
| Guide                                              | Recirculating ball bearing guide                                   |
| Structural design                                  | with ball screw                                                    |
| Motor type                                         | Stepper motor<br>Servo motor                                       |
| Spindle type                                       | Ball screw drive                                                   |
| Symbol                                             | 00991211                                                           |
| Measuring principle of linear potentiometer        | Incremental                                                        |
| Position sensing                                   | For inductive proximity sensors                                    |
| Max. acceleration                                  | 15 m/s <sup>2</sup>                                                |
| Max. rotational speed                              | 5000 rpm                                                           |
| Max. speed                                         | 0.83 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                 | 0.002 J                                                            |
| 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 Iy                              | 1213000 mm <sup>4</sup>                                            |
| 2nd moment of area Iz                              | 2052000 mm <sup>4</sup>                                            |
| No-load torque at maximum travel speed             | 0.179 Nm                                                           |
| No-load torque at minimum travel speed             | 0.065 Nm                                                           |
| Max. force Fy                                      | 3906 N                                                             |
| Max. force Fz                                      | 3913 N                                                             |
| Max. force Fy total axis                           | 2291 N                                                             |
| Max. force Fz total axis                           | 2500 N                                                             |

| Feature                                                                    | Value                                |
|----------------------------------------------------------------------------|--------------------------------------|
| 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                                                             | 95 Nm                                |
| Max. torque My                                                             | 42 Nm                                |
| Max. torque Mz                                                             | 42 Nm                                |
| Max. moment Mx total axis                                                  | 100 Nm                               |
| Max. moment My total axis                                                  | 42 Nm                                |
| Max. moment Mz total axis                                                  | 42 Nm                                |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 422 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                            | 62 mm                                |
| Max. radial force on actuator shaft                                        | 500 N                                |
| Max. feed force Fx                                                         | 2650 N                               |
| Torsion moment of inertia It                                               | 405000 mm <sup>4</sup>               |
| Mass moment of inertia JH per meter of stroke                              | 0.39016 kgcm <sup>2</sup>            |
| Mass moment of inertia JL per kg of payload                                | 0.02533 kgcm <sup>2</sup>            |
| Mass moment of inertia JO                                                  | 0.10619 kgcm <sup>2</sup>            |
| Feed constant                                                              | 10 mm/U                              |
| Reference service life                                                     | 5000 km                              |
| Maintenance interval                                                       | Life-time lubrication                |
| Moving mass                                                                | 990 g                                |
| Product weight                                                             | 7647 g                               |
| Basic weight with 0 mm stroke                                              | 3147 g                               |
| Additional weight per 10 mm stroke                                         | 90 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                                                   | T46                                  |
| 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                                |