

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

Part number: 8192279

FESTO



## Data sheet

| Feature  | Value   |
|--|---|
| Working stroke                                 | 500 mm  |
| Size   | 80  |
| Stroke reserve                                 | 0 mm  |
| Reversing backlash                             | 0,15 mm   |
| Screw diameter                                 | 16 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                                  |
| Position sensing                               | For inductive proximity sensors                   |
| Max. acceleration                              | 15 m/s <sup>2</sup>                               |
| Max. rotational speed                          | 5000 1/min  |
| Max. speed                                     | 0.83 m/s  |
| Repetition accuracy                            | ±0.01 mm  |
| Duty cycle                                     | 100%  |
| LABS (PWIS) conformity                         | VDMA24364 zone III                                |
| Degree of protection                           | IP30  |
| Ambient temperature                            | 0 °C...60 °C                                      |
| Impact energy in the end positions             | 2 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 ly                          | 1213000 mm <sup>4</sup>                           |
| 2nd moment of area lz                          | 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  | 95 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                                |
| 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                                |