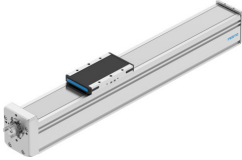


Ball screw axis

ELGD-BS-KF-80-500-0H-5P

Part number: 8192271

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 | 5 mm/U |
| Mounting position | Any |
| Guide | Recirculating ball bearing guide |
| Structural design | Electromechanical linear axis with ball screw |
| Motor type | Stepper motor Servo motor |
| Spindle type | Ball screw drive |
| Position sensing | For inductive proximity sensors |
| Max. acceleration | 15 m/s ² |
| Max. rotational speed | 5000 rpm |
| Max. speed | 0.42 m/s |
| Repetition accuracy | ±0.01 mm |
| Duty cycle | 100% |
| LABS (PWIS) conformity | VDMA24364 zone III |
| Suitability for the production of Li-ion batteries | Product corresponds to Festo's internal product definition for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils |
| Degree of protection | IP40 |
| 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 Iy | 1213000 mm ⁴ |
| 2nd moment of area Iz | 2052000 mm ⁴ |
| No-load torque at maximum travel speed | 0.172 Nm |
| No-load torque at minimum travel speed | 0.065 Nm |

| Feature | Value |
|--|--------------------------------------|
| Max. force Fy | 3906 N |
| Max. force Fz | 3913 N |
| Max. force Fy total axis | 2291 N |
| Max. force Fz total axis | 2500 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 | 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 ⁴ |
| Mass moment of inertia JH per meter of stroke | 0.39016 kgcm ² |
| Mass moment of inertia JL per kg of payload | 0.00633 kgcm ² |
| Mass moment of inertia JO | 0.10619 kgcm ² |
| Feed constant | 5 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 |