

Ball screw axis

ELGA-BS-KF-70-200-0H-10P-ML

Part number: 8041817

FESTO



Data sheet

| Feature | Value |
|--|---|
| Working stroke | 200 mm |
| Size | 70 |
| Stroke reserve | 0 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 Servo motor |
| Spindle type | Ball screw |
| Measuring principle of linear potentiometer | Incremental |
| Max. acceleration | 15 m/s ² |
| Max. rotational speed | 3000 rpm |
| Max. speed | 0.5 m/s |
| Repetition accuracy | ±0.02 mm |
| Duty cycle | 100% |
| LABS (PWIS) conformity | VDMA24364 zone III |
| Degree of protection | IP40 |
| Ambient temperature | -10 °C...60 °C |
| 2nd moment of area Iy | 165000 mm ⁴ |
| 2nd moment of area Iz | 472000 mm ⁴ |
| No-load torque at maximum travel speed | 0.24 Nm |
| No-load torque at minimum travel speed | 0.17 Nm |
| Max. force Fy | 1500 N |
| Max. force Fz | 1850 N |
| Max. force Fy total axis | 1500 N |
| Max. force Fz total axis | 1850 N |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 5520 N |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 6808 N |
| Max. torque Mx | 16 Nm |

| Feature | Value |
|--|--------------------------------------|
| Max. torque My | 132 Nm |
| Max. torque Mz | 132 Nm |
| Max. moment Mx total axis | 16 Nm |
| Max. moment My total axis | 132 Nm |
| Max. moment Mz total axis | 132 Nm |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 59 Nm |
| My with theoretical service life of 100 km (from a guide perspective only) | 486 Nm |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 486 Nm |
| Distance between slide surface and guide center | 51 mm |
| Max. radial force on actuator shaft | 220 N |
| Max. feed force Fx | 650 N |
| Torsion moment of inertia It | 28300 mm ⁴ |
| Mass moment of inertia JH per meter of stroke | 0.142 kgcm ² |
| Mass moment of inertia JL per kg of payload | 0.0253 kgcm ² |
| Mass moment of inertia JO | 0.038 kgcm ² |
| Feed constant | 10 mm/U |
| Reference service life | 5000 km |
| Moving mass | 804 g |
| Additional weight per 10 mm stroke | 33 g |
| Dynamic deflection (load moved) | 0.05% of axis length, maximum 0.5 mm |
| Static deflection (load at standstill) | 0.1 % of axis length |
| Material of end caps | Wrought aluminum alloy Anodized |
| Profile material | Wrought aluminum alloy Anodized |
| Note on materials | RoHS-compliant |
| Cover strip material | Stainless steel strip |
| Drive cover material | Wrought aluminum alloy Anodized |
| Slide carriage material | Steel |
| Guide rail material | Steel |
| Slide material | Wrought aluminum alloy Anodized |
| Spindle nut material | Steel |
| Spindle material | Steel |