

# Ball screw axis ELGA-BS-KF-80-200-0H-10P-ML

Part number: 8041823

FESTO



 [General operating condition](#)

## Data sheet

| Feature  | Value                            |
|--|----------------------------------|
| Working stroke   | 200 mm                           |
| Size   | 80                               |
| Stroke reserve   | 0 mm                             |
| Screw diameter   | 15 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                       |
| Symbol   | 00991211                         |
| Measuring principle of linear potentiometer                                | Incremental                      |
| Max. acceleration  | 15 m/s <sup>2</sup>              |
| 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  | 310000 mm <sup>4</sup>           |
| 2nd moment of area Iz  | 977000 mm <sup>4</sup>           |
| No-load torque at maximum travel speed                                     | 0.55 Nm                          |
| No-load torque at minimum travel speed                                     | 0.3 Nm                           |
| Max. force Fy  | 2500 N                           |
| Max. force Fz  | 3050 N                           |
| Max. force Fy total axis   | 2500 N                           |
| Max. force Fz total axis   | 3050 N                           |
| Fy with theoretical service life of 100 km (from a guide perspective only) | 9200 N                           |
| Fz with theoretical service life of 100 km (from a guide perspective only) | 11224 N                          |
| Max. torque Mx   | 36 Nm                            |
| Max. torque My   | 228 Nm                           |
| Max. torque Mz   | 228 Nm                           |
| Max. moment Mx total axis  | 36 Nm                            |

| Feature  | Value                                |
|--|--------------------------------------|
| Max. moment My total axis  | 228 Nm                               |
| Max. moment Mz total axis  | 228 Nm                               |
| Mx with theoretical service life of 100 km (from a guide perspective only) | 132 Nm                               |
| My with theoretical service life of 100 km (from a guide perspective only) | 839 Nm                               |
| Mz with theoretical service life of 100 km (from a guide perspective only) | 839 Nm                               |
| Distance between slide surface and guide center                            | 60 mm                                |
| Max. radial force on actuator shaft  | 250 N                                |
| Max. feed force Fx   | 1600 N                               |
| Torsion moment of inertia It   | 67300 mm <sup>4</sup>                |
| Mass moment of inertia JH per meter of stroke                              | 0.346 kgcm <sup>2</sup>              |
| Mass moment of inertia JL per kg of payload                                | 0.0253 kgcm <sup>2</sup>             |
| Mass moment of inertia JO  | 0.097 kgcm <sup>2</sup>              |
| Feed constant  | 10 mm/U                              |
| Reference service life   | 5000 km                              |
| Moving mass  | 1370 g                               |
| Additional weight per 10 mm stroke   | 46.5 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<br>Anodized   |
| Profile material   | Wrought aluminum alloy<br>Anodized   |
| Note on materials  | RoHS-compliant                       |
| Cover strip material   | Stainless steel strip                |
| Drive cover material   | Wrought aluminum alloy<br>Anodized   |
| Slide carriage material  | Steel                                |
| Guide rail material  | Steel                                |
| Slide material   | Wrought aluminum alloy<br>Anodized   |
| Ball screw nut material  | Steel                                |
| Spindle material   | Steel                                |