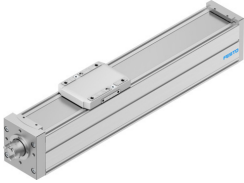


# Ball screw axis ELGC-BS-KF-80-200-16P

Part number: 8061499

FESTO



## Data sheet

 General operating condition

| Feature                                            | Value                                                                                                                                                    |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Working stroke                                     | 200 mm                                                                                                                                                   |
| Size                                               | 80                                                                                                                                                       |
| Stroke reserve                                     | 0 mm                                                                                                                                                     |
| Reversing backlash theoretical                     | 150 µm                                                                                                                                                   |
| Spindle diameter                                   | 16 mm                                                                                                                                                    |
| Spindle pitch                                      | 16 mm/U                                                                                                                                                  |
| Mounting position                                  | optional                                                                                                                                                 |
| Guide                                              | Recirculating ball bearing guide                                                                                                                         |
| Design                                             | Electromechanical linear axis<br>With ball screw                                                                                                         |
| Type of motor                                      | Stepper motor<br>Servo motor                                                                                                                             |
| Spindle type                                       | Ball screw drive                                                                                                                                         |
| Symbol                                             | 00991211                                                                                                                                                 |
| Position detection                                 | Via proximity switch<br>Via inductive sensors                                                                                                            |
| Max. acceleration                                  | 15 m/s <sup>2</sup>                                                                                                                                      |
| Max. rotational speed                              | 3750 rpm                                                                                                                                                 |
| Max. speed                                         | 1 m/s                                                                                                                                                    |
| Repetition accuracy                                | ±0.01 mm                                                                                                                                                 |
| Duty cycle                                         | 100%                                                                                                                                                     |
| LABS (PWIS) conformity                             | VDMA24364 zone III                                                                                                                                       |
| Suitability for the production of Li-ion batteries | Suitable for battery production according to the Festo internal definition of the degree of severity F1A with restrictions regarding the use of Cu/Zn/Ni |
| Cleanroom class                                    | Class 7 according to ISO 14644-1                                                                                                                         |
| Storage temperature                                | -20 °C ... 60 °C                                                                                                                                         |
| Degree of protection                               | IP40                                                                                                                                                     |
| Ambient temperature                                | 0 °C ... 50 °C                                                                                                                                           |
| Impact energy in end positions                     | 0.002 J                                                                                                                                                  |
| Note on the impact energy in the end positions     | At maximum homing speed of 0.01 m/s                                                                                                                      |
| 2nd moment of area Iy                              | 1370000 mm <sup>4</sup>                                                                                                                                  |
| 2nd moment of area Iz                              | 1660000 mm <sup>4</sup>                                                                                                                                  |
| Idle torque at v <sub>max</sub>                    | 0.396 Nm                                                                                                                                                 |
| Idle torque at v <sub>min</sub>                    | 0.095 Nm                                                                                                                                                 |
| Max. force F <sub>y</sub>                          | 5543 N                                                                                                                                                   |
| Max. force F <sub>z</sub>                          | 5543 N                                                                                                                                                   |

| Feature                                                           | Value                                 |
|-------------------------------------------------------------------|---------------------------------------|
| Max. force Fy total axis                                          | 900 N                                 |
| Max. force Fz total axis                                          | 2700 N                                |
| Fy at theoretical life value of 100 km (only guide consideration) | 20400 N                               |
| Fz at theoretical life value of 100 km (only guide consideration) | 20400 N                               |
| Max. moment Mx                                                    | 59.8 Nm                               |
| Max. moment My                                                    | 56.2 Nm                               |
| Max. moment Mz                                                    | 56.2 Nm                               |
| Max. moment Mx total axis                                         | 59.8 Nm                               |
| Max. moment My total axis                                         | 56.2 Nm                               |
| Max. moment Mz total axis                                         | 56.2 Nm                               |
| Mx at theoretical life value of 100 km (only guide consideration) | 220 Nm                                |
| My at theoretical life value of 100 km (only guide consideration) | 207 Nm                                |
| Mz at theoretical life value of 100 km (only guide consideration) | 207 Nm                                |
| Distance between slide surface and guide centre                   | 72.5 mm                               |
| Max. radial force at drive shaft                                  | 500 N                                 |
| Max. feed force Fx                                                | 350 N                                 |
| Torsional mass moment of inertia It                               | 90500 mm <sup>4</sup>                 |
| Mass moment of inertia JH per metre of stroke                     | 0.35257 kgcm <sup>2</sup>             |
| Mass moment of inertia JL per kg of working load                  | 0.064846 kgcm <sup>2</sup>            |
| Mass moment of inertia JO                                         | 0.07856 kgcm <sup>2</sup>             |
| Feed constant                                                     | 16 mm/U                               |
| Reference service life                                            | 5000 km                               |
| Maintenance interval                                              | Life-time lubrication                 |
| Moving mass                                                       | 978 g                                 |
| Additional weight per 10 mm stroke                                | 88 g                                  |
| Dynamic deflection (moving load)                                  | 0.05% of the axis length, max. 0.5 mm |
| Static deflection (load in standstill)                            | 0.1% of the axis length               |
| Interface code, actuator                                          | T46                                   |
| Material end cap                                                  | Painted die cast aluminium            |
| Material profile                                                  | Anodised wrought aluminium alloy      |
| Note on materials                                                 | RoHS-compliant                        |
| Material cover tape                                               | High-alloy stainless steel            |
| Material drive cover                                              | Painted die cast aluminium            |
| Material guide slide                                              | Steel                                 |
| Material guide rail                                               | Steel                                 |
| Material slide                                                    | Die-cast aluminium                    |
| Material spindle nut                                              | Steel                                 |
| Material spindle                                                  | Steel                                 |