

# Ball screw axis ELGC-BS-KF-45-100-10P

Part number: 8061484

FESTO



 General operating condition

## Data sheet

Feature	Value
Working stroke	100 mm
Size	45
Stroke reserve	0 mm
Reversing backlash theoretical	150 µm
Spindle diameter	10 mm
Spindle pitch	10 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Design	Electromechanical linear axis With ball screw
Type of motor	Stepper motor Servo motor
Spindle type	Ball screw
Symbol	00991211
Position detection	Via proximity switch For inductive sensors
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3600 rpm
Max. speed	0.6 m/s
Repetition accuracy	±0.015 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	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	5.0E-4 J
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s
2nd moment of area ly	140000 mm <sup>4</sup>
2nd moment of area lz	170000 mm <sup>4</sup>
Idle torque at v <sub>max</sub>	0.12 Nm
Idle torque at v <sub>min</sub>	0.032 Nm
Max. force F <sub>y</sub>	880 N
Max. force F <sub>z</sub>	880 N
Max. force F <sub>y</sub> total axis	300 N

Feature	Value
Max. force Fz total axis	600 N
Fy at theoretical life value of 100 km (only guide consideration)	3240 N
Fz at theoretical life value of 100 km (only guide consideration)	3240 N
Max. moment Mx	5.5 Nm
Max. moment My	4.7 Nm
Max. moment Mz	4.7 Nm
Max. moment Mx total axis	5.5 Nm
Max. moment My total axis	4.7 Nm
Max. moment Mz total axis	4.7 Nm
Mx at theoretical life value of 100 km (only guide consideration)	20 Nm
My at theoretical life value of 100 km (only guide consideration)	17 Nm
Mz at theoretical life value of 100 km (only guide consideration)	17 Nm
Distance between slide surface and guide centre	42.8 mm
Max. radial force at drive shaft	180 N
Max. feed force Fx	100 N
Torsional mass moment of inertia It	8500 mm <sup>4</sup>
Mass moment of inertia JH per metre of stroke	0.05056 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of working load	0.02533 kgcm <sup>2</sup>
Mass moment of inertia JO	0.0082 kgcm <sup>2</sup>
Feed constant	10 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	220 g
Additional weight per 10 mm stroke	36 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	V32
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 ball screw nut	Steel
Material spindle	Steel