

Ball screw axis
ELGC-BS-KF-45-100-10P
 Part number: 8061484

FESTO



Data sheet

Feature	Value
Working stroke	100 mm
Size	45
Stroke reserve	0 mm
Reversing backlash	0.15 mm
Screw diameter	10 mm
Spindle pitch	10 mm/U
Mounting position	Any
Guide	Recirculating ball bearing
Structural design	Electromechanical linear axis With ball screw
Motor type	Stepper motor Servo motor
Spindle type	Ball screw
Position sensing	Via proximity switch For inductive sensors
Max. acceleration	15 m/s ²
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 the end positions	0.5 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 I _y	140000 mm ⁴
2nd moment of area I _z	170000 mm ⁴
No-load torque at maximum travel speed	0.12 Nm
No-load torque at minimum travel speed	0.032 Nm

Feature	Value
Max. force Fy	880 N
Max. force Fz	880 N
Max. force Fy total axis	300 N
Max. force Fz total axis	600 N
Fy with theoretical service life of 100 km (from a guide perspective only)	3240 N
Fz with theoretical service life of 100 km (from a guide perspective only)	3240 N
Max. torque Mx	5.5 Nm
Max. torque My	4.7 Nm
Max. torque 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 with theoretical service life of 100 km (from a guide perspective only)	20 Nm
My with theoretical service life of 100 km (from a guide perspective only)	17 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	17 Nm
Distance between slide surface and guide center	42.8 mm
Max. radial force on actuator shaft	180 N
Max. feed force Fx	100 N
Torsion moment of inertia It	8500 mm ⁴
Mass moment of inertia JH per meter of stroke	0.05056 kgcm ²
Mass moment of inertia JL per kg of payload	0.02533 kgcm ²
Mass moment of inertia JO	0.0082 kgcm ²
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 (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Interface code, actuator	V32
Material of end caps	Die cast aluminum, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS compliant
Cover strip material	high-alloy stainless steel
Drive cover material	Die cast aluminum, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Die-cast aluminum
Ball screw nut material	Steel
Spindle material	Steel