

Ball screw axis ELGD-BS-KF-120

Part number: 8176876

FESTO



Data sheet

Feature	Value
Working stroke	50 mm...2500 mm
Size	120
Stroke reserve	0 mm
Reversing backlash	0.15 mm
Screw diameter	25 mm
Spindle pitch	5 mm/U...30 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 drive
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive proximity sensors
Max. acceleration	15 m/s ²
Max. rotational speed	3200 rpm
Max. speed	0.27 m/s...1.6 m/s
Repetition accuracy	±0.01 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364-C1-L
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Storage temperature	-20 °C...60 °C
For use in the food industry	See supplementary material information
Degree of protection	IP40
Ambient temperature	0 °C...60 °C
Impact energy in the end positions	1 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 Iy	3550000 mm ⁴
2nd moment of area Iz	8985000 mm ⁴
No-load torque at maximum travel speed	0.344 Nm...0.957 Nm
No-load torque at minimum travel speed	0.167 Nm...0.254 Nm

Feature	Value
Max. force Fy	4300 N...8400 N
Max. force Fz	4300 N...8400 N
Max. force Fy total axis	2957 N...5914 N
Max. force Fz total axis	5608 N...9000 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17576 N...35153 N
Fz with theoretical service life of 100 km (from a guide perspective only)	17576 N...35153 N
Max. torque Mx	170 Nm...350 Nm
Max. torque My	50 Nm...620 Nm
Max. torque Mz	60 Nm...580 Nm
Max. moment Mx total axis	207 Nm...378 Nm
Max. moment My total axis	63 Nm...641 Nm
Max. moment Mz total axis	76 Nm...527 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	730 Nm...1459 Nm
My with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1920 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	162 Nm...1920 Nm
Distance between slide surface and guide center	80 mm
Max. radial force on actuator shaft	750 N
Max. feed force Fx	3520 N
Torsion moment of inertia It	1433600 mm ⁴
Mass moment of inertia JH per meter of stroke	2.633 kgcm ² ...2.719 kgcm ²
Mass moment of inertia JL per kg of payload	0.00633 kgcm ² ...0.2282 kgcm ²
Mass moment of inertia JO	0.76031 kgcm ² ...1.0338 kgcm ²
Feed constant	5 mm/U...30 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	1814 g...3327 g
Product weight	6822 g...45829 g
Basic weight with 0 mm stroke	6087 g...9079 g
Additional weight per 10 mm stroke	147 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	S60
Material of end caps	Aluminum gravity die-cast, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Cover strip material	High-alloy stainless steel
Drive cover material	Aluminum gravity die-cast, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy
Spindle nut material	Steel
Spindle material	Steel