

Ball screw axis ELGD-BS-KF-WD-120- -

Part number: 8176879

FESTO



Data sheet

Feature	Value
Working stroke	50 mm...1500 mm
Size	120
Stroke reserve	0 mm
Ball screw reversing backlash	±0.02 mm
Screw diameter	12 mm
Spindle pitch	5 mm/U...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
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive sensors
Max. acceleration	15 m/s ²
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)
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1 (with vacuum insert) Class 7 according to ISO 14644-1
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	0.001 J
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	770900 mm ⁴
2nd moment of area Iz	5801000 mm ⁴
No-load torque at maximum travel speed	0.179 Nm...0.246 Nm
No-load torque at minimum travel speed	0.068 Nm

Feature	Value
Max. force Fy	8000 N
Max. force Fz	7200 N
Max. force Fy total axis	5914 N
Max. force Fz total axis	5280 N
Fy with theoretical service life of 100 km (from a guide perspective only)	35153 N
Fz with theoretical service life of 100 km (from a guide perspective only)	35153 N
Max. torque Mx	330 Nm
Max. torque My	600 Nm
Max. torque Mz	540 Nm
Max. moment Mx total axis	290 Nm
Max. moment My total axis	590 Nm
Max. moment Mz total axis	527 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	1459 Nm
My with theoretical service life of 100 km (from a guide perspective only)	1920 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	1920 Nm
Distance between slide surface and guide center	51 mm
Max. radial force on actuator shaft	230 N
Max. feed force Fx	1880 N
Torsion moment of inertia It	383100 mm ⁴
Mass moment of inertia JH per meter of stroke	0.13 kgcm ² ...0.135 kgcm ²
Mass moment of inertia JL per kg of payload	0.00633 kgcm ² ...0.02533 kgcm ²
Mass moment of inertia JO	0.0947 kgcm ² ...0.0961 kgcm ²
Feed constant	5 mm/U...10 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	2352 g
Product weight	5720 g...18190 g
Basic weight with 0 mm stroke	5290 g
Additional weight per 10 mm stroke	86 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	T42
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
Ball screw nut material	Steel
Spindle material	Steel