

Ball screw axis ELGD-BS-KF-120-400-0H-10P

Part number: 8192300

FESTO



Data sheet

Feature	Value
Working stroke	400 mm
Size	120
Stroke reserve	0 mm
Ball screw reversing backlash	±0.02 mm
Screw diameter	25 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
Measuring principle of linear potentiometer	Incremental
Position sensing	For inductive sensors
Max. acceleration	15 m/s ²
Max. rotational speed	3200 rpm
Max. speed	0.5 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)
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
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	3550000 mm ⁴
2nd moment of area Iz	8985000 mm ⁴
No-load torque at maximum travel speed	0.957 Nm

Feature	Value
No-load torque at minimum travel speed	0.254 Nm
Max. force Fy	4300 N
Max. force Fz	4300 N
Max. force Fy total axis	2957 N
Max. force Fz total axis	5608 N
Fy with theoretical service life of 100 km (from a guide perspective only)	17576 N
Fz with theoretical service life of 100 km (from a guide perspective only)	17576 N
Max. torque Mx	170 Nm
Max. torque My	50 Nm
Max. torque Mz	60 Nm
Max. moment Mx total axis	202 Nm
Max. moment My total axis	80 Nm
Max. moment Mz total axis	95 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	730 Nm
My with theoretical service life of 100 km (from a guide perspective only)	162 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	162 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
Mass moment of inertia JL per kg of payload	0.00633 kgcm ²
Mass moment of inertia JO	0.76031 kgcm ²
Feed constant	10 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	1725 g
Product weight	11967 g
Basic weight with 0 mm stroke	6087 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
Ball screw nut material	Steel
Spindle material	Steel