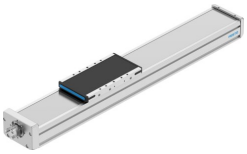
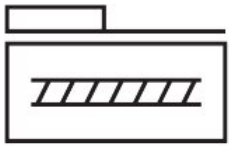
Ball screw axis
ELGD-BS-KF-WD-100-500-0H-20P-L

Part number: 8248009





Data sheet

Feature	Value
Working stroke	500 mm
Size	100
Stroke reserve	0 mm
Ball screw reversing backlash	±0.02 mm
Spindle diameter	10 mm
Spindle pitch	20 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
Functional principle of measuring system	Incremental
Position detection	For inductive sensors
Max. acceleration	15 m/s²
Max. rotational speed	2459 rpm
Max. speed	0.82 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 extraction) 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 end positions	0.001 J
Note on the impact energy in the end positions	At maximum homing speed of 0.01 m/s
2nd moment of area Iy	347100 mm⁴
2nd moment of area Iz	2268000 mm⁴
Idle torque at vmax	0.262 Nm

Feature	Value
Idle torque at vmin	0.089 Nm
Max. force Fy	4400 N
Max. force Fz	4400 N
Max. force Fy total axis	4092 N
Max. force Fz total axis	2250 N
Fy at theoretical life value of 100 km (only guide consideration)	18415 N
Fz at theoretical life value of 100 km (only guide consideration)	18415 N
Max. moment Mx	140 Nm
Max. moment My	230 Nm
Max. moment Mz	220 Nm
Max. moment Mx total axis	160 Nm
Max. moment My total axis	191 Nm
Max. moment Mz total axis	191 Nm
Mx at theoretical life value of 100 km (only guide consideration)	645 Nm
My at theoretical life value of 100 km (only guide consideration)	720 Nm
Mz at theoretical life value of 100 km (only guide consideration)	720 Nm
Distance between slide surface and guide centre	47 mm
Max. radial force at drive shaft	180 N
Max. feed force Fx	1100 N
Torsional mass moment of inertia It	108900 mm⁴
Mass moment of inertia JH per metre of stroke	0.07554 kgcm²
Mass moment of inertia JL per kg of working load	0.101 kgcm²
Mass moment of inertia JO	0.05632 kgcm²
Feed constant	20 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	1185 g
Product weight	5929 g
Basic weight for 0 mm stroke	2979 g
Additional weight per 10 mm stroke	59 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	T42
Material end cap	Aluminium gravity die-cast, painted
Material profile	Anodised wrought aluminium alloy
Note on materials	RoHS compliant
Material cover tape	High-alloy stainless steel
Material drive cover	Aluminium gravity die-cast, painted
Material guide slide	Steel
Material guide rail	Steel
Material slide	Wrought aluminium alloy
Material ball screw nut	Steel
Material spindle	Steel