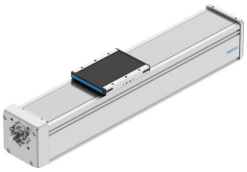
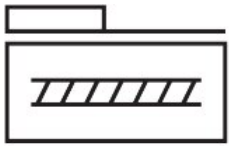
Ball screw axis
ELGD-BS-KF-120-500-0H-5P

Part number: 8192294





Data sheet

Feature	Value
Working stroke	500 mm
Size	120
Stroke reserve	0 mm
Ball screw reversing backlash	±0.02 mm
Spindle diameter	25 mm
Spindle pitch	5 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	3200 rpm
Max. speed	0.27 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	3550000 mm⁴
2nd moment of area Iz	8985000 mm⁴
Idle torque at vmax	0.344 Nm

Feature	Value
Idle torque at vmin	0.167 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 at theoretical life value of 100 km (only guide consideration)	17576 N
Fz at theoretical life value of 100 km (only guide consideration)	17576 N
Max. moment Mx	170 Nm
Max. moment My	50 Nm
Max. moment 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 at theoretical life value of 100 km (only guide consideration)	730 Nm
My at theoretical life value of 100 km (only guide consideration)	162 Nm
Mz at theoretical life value of 100 km (only guide consideration)	162 Nm
Distance between slide surface and guide centre	80 mm
Max. radial force at drive shaft	750 N
Max. feed force Fx	3520 N
Torsional mass moment of inertia It	1433600 mm^4
Mass moment of inertia JH per metre of stroke	2.633 $kgcm^2$
Mass moment of inertia JL per kg of working load	0.00633 $kgcm^2$
Mass moment of inertia JO	0.76031 $kgcm^2$
Feed constant	5 mm/U
Reference service life	5000 km
Maintenance interval	Lifetime lubrication
Moving mass	1725 g
Product weight	13437 g
Basic weight for 0 mm stroke	6087 g
Additional weight per 10 mm stroke	147 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	S60
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