

# Ball screw axis

## ELGC-BS-KF-80-300-16P

Part number: 8061500

FESTO



## Data sheet

Feature	Value
Working stroke	300 mm
Size	80
Stroke reserve	0 mm
Reversing backlash	0.15 mm
Screw diameter	16 mm
Spindle pitch	16 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
Position sensing	For proximity sensor For inductive proximity sensors
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3750 rpm
Max. speed	1 m/s
Repetition accuracy	±0.01 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Suitability for the production of Li-ion batteries	Product corresponds to Festo's internal product definition for use in battery production: Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils
Cleanroom class	Class 7 according to ISO 14644-1
Storage temperature	-20 °C...60 °C
Degree of protection	IP40
Ambient temperature	0 °C...50 °C
Impact energy in the end positions	2 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 I <sub>y</sub>	1370000 mm <sup>4</sup>

Feature	Value
2nd moment of area Iz	1660000 mm <sup>4</sup>
No-load torque at maximum travel speed	0.396 Nm
No-load torque at minimum travel speed	0.095 Nm
Max. force Fy	5543 N
Max. force Fz	5543 N
Max. force Fy total axis	900 N
Max. force Fz total axis	2700 N
Fy with theoretical service life of 100 km (from a guide perspective only)	20400 N
Fz with theoretical service life of 100 km (from a guide perspective only)	20400 N
Max. torque Mx	59.8 Nm
Max. torque My	56.2 Nm
Max. torque Mz	56.2 Nm
Max. moment Mx total axis	59.8 Nm
Max. moment My total axis	56.2 Nm
Max. moment Mz total axis	56.2 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	220 Nm
My with theoretical service life of 100 km (from a guide perspective only)	207 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	207 Nm
Distance between slide surface and guide center	72.5 mm
Max. radial force on actuator shaft	500 N
Max. feed force Fx	350 N
Torsion moment of inertia It	90500 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.35257 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.064846 kgcm <sup>2</sup>
Mass moment of inertia JO	0.07856 kgcm <sup>2</sup>
Feed constant	16 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	978 g
Additional weight per 10 mm stroke	88 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	T46
Material of end caps	Die cast aluminum, painted
Profile material	Wrought aluminum alloy, anodized
Note on materials	RoHS-compliant
Cover strip material	High-alloy stainless steel
Drive cover material	Die cast aluminum, painted
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Die-cast aluminum
Spindle nut material	Steel
Spindle material	Steel