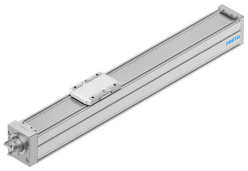
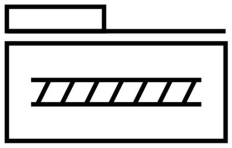
Ball screw linear actuator
ELGC-BS-KF-60-400-12P

Part number: 8061494





General operating condition

Data sheet

Feature	Value
Working stroke	400 mm
Size	60
Stroke reserve	0 mm
Reversing backlash	150 µm
Screw diameter	12 mm
Spindle pitch	12 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
Symbol	00991211
Position sensing	For proximity sensor For inductive proximity sensors
Max. acceleration	15 m/s²
Max. rotational speed	4000 rpm
Max. speed	0.8 m/s
Repetition accuracy	±0.01 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Suitability for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed 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	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	441000 mm⁴
2nd moment of area Iz	542000 mm⁴
No-load torque at maximum travel speed	0.246 Nm
No-load torque at minimum travel speed	0.042 Nm
Max. force Fy	3641 N

Feature	Value
Max. force Fz	3641 N
Max. force Fy total axis	600 N
Max. force Fz total axis	1800 N
Fy with theoretical service life of 100 km (from a guide perspective only)	13400 N
Fz with theoretical service life of 100 km (from a guide perspective only)	13400 N
Max. torque Mx	29.1 Nm
Max. torque My	31.8 Nm
Max. torque Mz	31.8 Nm
Max. moment Mx total axis	29.1 Nm
Max. moment My total axis	31.8 Nm
Max. moment Mz total axis	31.8 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	107 Nm
My with theoretical service life of 100 km (from a guide perspective only)	117 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	117 Nm
Distance between slide surface and guide center	54.6 mm
Max. radial force on actuator shaft	230 N
Max. feed force Fx	200 N
Torsion moment of inertia It	29800 mm^4
Mass moment of inertia JH per meter of stroke	0.10779 $kgcm^2$
Mass moment of inertia JL per kg of payload	0.036476 $kgcm^2$
Mass moment of inertia JO	0.02235 $kgcm^2$
Feed constant	12 mm/U
Reference service life	5000 km
Maintenance interval	Life-time lubrication
Moving mass	525 g
Additional weight per 10 mm stroke	51 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	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