

# Ball screw axis ELGA-BS-KF-70-500-0H-10P-ML

Part number: 8041820

FESTO



General operating condition

## Data sheet

Feature	Value
Working stroke	500 mm
Size	70
Stroke reserve	0 mm
Screw diameter	12 mm
Spindle pitch	10 mm/U
Mounting position	Any
Guide	Recirculating ball bearing guide
Structural design	with ball screw
Motor type	Stepper motor Servo motor
Spindle type	Ball screw
Symbol	00991211
Measuring principle of linear potentiometer	Incremental
Max. acceleration	15 m/s <sup>2</sup>
Max. rotational speed	3000 rpm
Max. speed	0.5 m/s
Repetition accuracy	±0.02 mm
Duty cycle	100%
LABS (PWIS) conformity	VDMA24364 zone III
Degree of protection	IP40
Ambient temperature	-10 °C ... 60 °C
2nd moment of area Iy	165000 mm <sup>4</sup>
2nd moment of area Iz	472000 mm <sup>4</sup>
No-load torque at maximum travel speed	0.24 Nm
No-load torque at minimum travel speed	0.17 Nm
Max. force Fy	1500 N
Max. force Fz	1850 N
Max. force Fy total axis	1500 N
Max. force Fz total axis	1850 N
Fy with theoretical service life of 100 km (from a guide perspective only)	5520 N
Fz with theoretical service life of 100 km (from a guide perspective only)	6808 N
Max. torque Mx	16 Nm
Max. torque My	132 Nm
Max. torque Mz	132 Nm
Max. moment Mx total axis	16 Nm

Feature	Value
Max. moment My total axis	132 Nm
Max. moment Mz total axis	132 Nm
Mx with theoretical service life of 100 km (from a guide perspective only)	59 Nm
My with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Mz with theoretical service life of 100 km (from a guide perspective only)	486 Nm
Distance between slide surface and guide center	51 mm
Max. radial force on actuator shaft	220 N
Max. feed force Fx	650 N
Torsion moment of inertia It	28300 mm <sup>4</sup>
Mass moment of inertia JH per meter of stroke	0.142 kgcm <sup>2</sup>
Mass moment of inertia JL per kg of payload	0.0253 kgcm <sup>2</sup>
Mass moment of inertia JO	0.038 kgcm <sup>2</sup>
Feed constant	10 mm/U
Reference service life	5000 km
Moving mass	804 g
Additional weight per 10 mm stroke	33 g
Dynamic deflection (load moved)	0.05% of axis length, maximum 0.5 mm
Static deflection (load at standstill)	0.1 % of axis length
Material of end caps	Wrought aluminum alloy Anodized
Profile material	Wrought aluminum alloy Anodized
Note on materials	RoHS-compliant
Cover strip material	Stainless steel strip
Drive cover material	Wrought aluminum alloy Anodized
Slide carriage material	Steel
Guide rail material	Steel
Slide material	Wrought aluminum alloy Anodized
Ball screw nut material	Steel
Spindle material	Steel