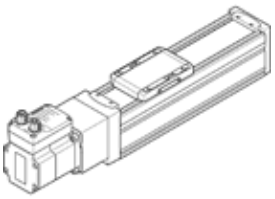
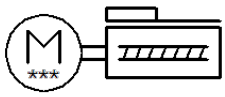
spindle axis unit
ELGS-BS-KF-60-100-12P-ST-M-H1-PLK-AA

Part number: 8083383

FESTO





Data sheet

Feature	Value
Working stroke	100 mm
Size	60
Stroke reserve	0 mm
Spindle diameter	12 mm
Spindle pitch	12 mm/U
Assembly position	Any
Guide	Recirculating ball bearing guide
Design structure	Electromechanical linear axis with recirculating ball bearing spindle With integrated drive
Motor type	Stepper motor
Spindle type	Ball screw
Position detection	Motor encoder For proximity sensor
Referencing	Fixed stop block positive Fixed stop block negative
Rotor position sensor	Absolute single turn encoder
Rotary position encoder measuring principle	Magnetic
Temperature monitoring	Shutdown at over-temperature Integrated precise CMOS temperature sensor with analogue output
Additional functions	User interface Integrated end-position sensing
Display	LED
Ready status display	LED
Max. acceleration	5 m/s2
Max. speed	0.25 m/s
Repetition accuracy	±0,01 mm
Digital logic output characteristics	configurable Not electrically isolated
Duty cycle	100 %
Insulation protection class	B
Max. current, digital logic outputs	100 mA
Max. current consumption	5.3 A
Nominal voltage DC	24 V
Nominal current	5.3 A
Parameters configuring interface	IO-Link User interface
Rotor position encoder resolution	16 Bit
Permissible voltage fluctuation	+/- 15 %
Power supply, type of connection	Plug
Power supply, connection technology	M12x1, T-coded to EN 61076-2-111
Power supply, number of pins/wires	4
Authorisation	RCM Mark
KC mark	KC-EMV
CE mark (see declaration of conformity)	to EU directive for EMC in accordance with EU RoHS directive

Feature	Value
Vibration resistance	Transport application test at severity level 1 in accordance with FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 in accordance with FN 942017-5 and EN 60068-2-27
Storage temperature	-20 ... 60 °C
Relative air humidity	0 - 90 %
Protection class	IP40
Safety class	III
Ambient temperature	0 ... 50 °C
Note on ambient temperature	Above an ambient temperature of 30 °C, the power must be reduced by 2% per K.
Area moment of inertia 2nd degree Iy	441E+03 mm4
Area moment of inertia 2nd degree Iz	542E+03 mm4
Max. force Fy	600 N
Max. force Fz	1,800 N
Fy with theoretical service life of 100 km (from a guide perspective only)	2,208 N
Fz with theoretical service life of 100 km (from a guide perspective only)	6,624 N
Max. torque Mx	29.1 Nm
Max. torque My	31.8 Nm
Max. torque Mz	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
Max. feed force Fx	200 N
Reference value for working load, horizontal	20 kg
Reference value for working load, vertical	13 kg
Torsional mass moment of inertia It	29.8E+03 mm4
Feed constant	12 mm/U
Moving mass	525 g
Product weight	3,372 g
Dynamic deflection (load moved)	0.05% of the axis length, max. 0.5 mm
Static deflection (load at standstill)	0.1% of the axis length
Number of 24 V DC digital logic outputs	2
Number of digital logic inputs	2
Specification, logic input	Based on IEC 61131-2, type 1
Logic input working range	24 V
IO-Link, SIO mode support	Yes
Logic input characteristics	configurable Not electrically isolated
IO-Link, protocol	Device V 1.1
IO-Link, communication mode	COM3 (230.4 kbd)
IO-Link, port type	A
IO-Link, number of ports	1
IO-Link, process data width OUT	2 Byte
IO-Link, process data content OUT	1 bit (Move in) 1 bit (Move out) 1 bit (Quit Error)
IO-Link, process data width IN	2 Byte
IO-Link, process data content IN	1 bit (State Device) 1 bit (State Move) 1 bit (State in) 1 bit (State out)
IO-Link, Service data contents IN	32 bit Force 32 bit Position 32 bit Speed
IO-Link, minimum cycle time	1 ms
IO-Link, data memory required	0.5 Kilobyte
Max. line length	15 m outputs 15 m inputs 20 m with IO-Link operation
Switching logic, outputs	PNP (positive-switching)

Feature	Value
Input circuit logic	PNP (positive-switching)
IO-Link, connection technology	Plug
Logic interface, connection type	Plug
Logic interface, connection technology	M12x1, A-coded in accordance with EN 61076-2-101
Logic interface, number of poles/wires	8
Logic interface, connection pattern	00992264
Material of end caps	Die-cast aluminium, painted
Material of profile	Anodised wrought aluminium alloy
Materials note	Contains PWIS substances Conforms to RoHS
Material cover tape	High alloy steel, non-corrosive
Material drive cover	Die-cast aluminium, painted
Material guide slide	Steel
Material guide rail	Steel
Material slide	Aluminium die cast
Material spindle nut	Steel
Material spindle	Steel