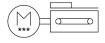
Toothed belt axis unit ELGS-TB-KF-45-600-ST-M-H1-PLK-AA

FESTO

Part number: 8083668





Data sheet

Working stroke Size 45 Stroke reserve 0 mm Toothed-belt stretch Toothed-belt pitch 2 mm Mounting position Horizontal Guide Recirculating ball bearing guide Electromechanical linear axis with toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Rotor position sensor, encoder measuring principle Temperature monitoring Magnetic Switch-off for excessive temperature sensor with analogue output Additional functions User interface integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy 20.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100 mA Max. current consumption Max. current consumption 100 mA Max. current consumption, logic 0.3 A Nominal voltage DC A mm	Feature	Value
Size 45 Stroke reserve 0 mm Toothed-belt stretch 0.187 % Toothed-belt stretch 2 mm Mounting position Horizontal Guide Recirculating ball bearing guide Design Electromechanical linear axis With toothed belt With integrated drive Position detection Motor encoder Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated procise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy 5.0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Max. current digital logic outputs 100 mA Max. current digital logic outputs 5.3 A Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Effective diameter of drive pinion	19.1 mm
Stroke reserve 0 mm Toothed-belt stretch 0.187 % Toothed-belt pitch 2 mm Mounting position Horizontal Guide Recirculating ball bearing guide Design Electromechanical linear axis With toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Max. current digital logic outputs 15.3 A Max. current consumption (ogic 0.3 A Nominal voltage DC 24 V	Working stroke	600 mm
Toothed-belt stretch Toothed-belt pitch 2 mm Mounting position Guide Recirculating ball bearing guide Electromechanical linear axis With toothed belt With integrated drive Position detection Wotor encoder Via proximity switch Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy 40.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Max. current digital logic outputs Display Max. current digital logic outputs Max. current digital logic outputs Max. current consumption S.3 A Max. current consumption, logic O.3 A Nominal voltage DC Meditional functions Meditional functions Accurrent consumption, logic Accurrent con	Size	45
Toothed-belt pitch 2 mm Mounting position Horizontal Guide Recirculating ball bearing guide Electromechanical linear axis With toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output User integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100 mA Max. current digital logic outputs 100 mA Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Stroke reserve	0 mm
Mounting position Horizontal Guide Recirculating ball bearing guide Design Electromechanical linear axis with toothed belt with integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Integrated precise CMOS temperature sensor with analogue output Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100 mA Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Toothed-belt stretch	0.187 %
Recirculating ball bearing guide Design Electromechanical linear axis With toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Rotor position sensor, encoder measuring principle Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Not galvanically isolated Duty cycle Insulation protection class B Max. current digital logic outputs Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC Rotor position sensing Electromechanical linear axis With toothed belt With integrated drive Washita Absolute single-ture encoder Washita Absolute single-ture encoder Washith Chemical services Absolute single-ture encoder Washita Absolute single-ture encoder With Charles Assolutes single-ture encoder With C	Toothed-belt pitch	2 mm
Design Electromechanical linear axis With toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Duty cycle Insulation protection class B Max. current digital logic outputs Max. current digital logic outputs Duty accurrent consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC Absolute single turn encoder Motor encoder Via proximity switch With toothed belt With toothed derive Lecture axis With toothed derive With toothed derive Lecture axis With toothed aviet and solutions Absolute single-turn encoder Via proximity switch Absolute axis With toothed evenued axis With toothed aviet axis With toothed evenued axis Repetition axis With toothed evenued axis With too	Mounting position	Horizontal
With toothed belt With integrated drive Position detection Motor encoder Via proximity switch Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Integrated precise CMOS temperature sensor with analogue output Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Guide	Recirculating ball bearing guide
Rotor position sensor Absolute single-turn encoder Rotor position sensor, encoder measuring principle Magnetic Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Design	With toothed belt
Rotor position sensor, encoder measuring principle Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output Additional functions User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy 20.1 mm Features of digital logic outputs Not galvanically isolated Duty cycle Insulation protection class B Max. current digital logic outputs Magnetic Magnetic Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output 6 m/s² 20.1 mm Features of Migham Deletation accuracy Features of digital logic outputs Not galvanically isolated Not galvanically isolated 100 mA Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC	Position detection	
Temperature monitoring Switch-off for excessive temperature Integrated precise CMOS temperature Sensor with analogue output User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy Features of digital logic outputs Configurable Not galvanically isolated Duty cycle Insulation protection class Max. current digital logic outputs Max. current consumption 5.3 A Max. current consumption, logic Nominal voltage DC Service Sive temperature Integrated precise CMOS temperature sensor with analogue output User integrated precise CMOS temperature sensor with analogue output Integrated precise CMOS temperature sensor with analogue output Boundaries CMOS temperature sensor with analogue output 1.2 m/s	Rotor position sensor	Absolute single-turn encoder
Integrated precise CMOS temperature sensor with analogue output User interface Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC Issentiated non-position sensing User interface Integrated end-position sensing Issentiated end-position sensing User interface Integrated end-position sensing Integrated end-position sensing Integrated end-position sensing User interface Integrated end-position sensing Issentiated end-position sensing Issentiat	Rotor position sensor, encoder measuring principle	Magnetic
Integrated end-position sensing Display LED Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC LED Amx. current consumption sensing 1.2 m/s 40.1 mm Configurable Not galvanically isolated 100 mA 24 V	Temperature monitoring	' '
Max. acceleration 6 m/s² Max. speed 1.2 m/s Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Additional functions	
Max. speed Repetition accuracy #0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic Nominal voltage DC 1.2 m/s #0.1 mm Configurable Not galvanically isolated 100 w 100 w 100 m 24 V	Display	LED
Repetition accuracy ±0.1 mm Features of digital logic outputs Configurable Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Max. acceleration	6 m/s ²
Features of digital logic outputs Configurable Not galvanically isolated 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Max. speed	1.2 m/s
Not galvanically isolated Duty cycle 100% Insulation protection class B Max. current digital logic outputs 100 mA Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Repetition accuracy	±0.1 mm
Insulation protection class Max. current digital logic outputs Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Features of digital logic outputs	
Max. current digital logic outputs Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Duty cycle	100%
Max. current consumption 5.3 A Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Insulation protection class	В
Max. current consumption, logic 0.3 A Nominal voltage DC 24 V	Max. current digital logic outputs	100 mA
Nominal voltage DC 24 V	Max. current consumption	5.3 A
<u> </u>	Max. current consumption, logic	0.3 A
Nominal current 5.3 A	Nominal voltage DC	24 V
	Nominal current	5.3 A

Feature	Value
Parameterisation interface	IO-Link
	User interface
Permissible voltage fluctuations	+/- 15%
Power supply, connection type	Plugs
power supply, connection system	M12x1, T-coded according to EN 61076-2-111
Power supply, number of pins/wires	4
Approval	RCM trademark
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C60 °C
Relative air humidity	0 - 90%
Degree of protection	IP40
Ambient temperature	0 °C50 °C
Note on ambient temperature	Power must be reduced by 2% per K at ambient temperatures above 30°C.
2nd moment of area ly	140000 mm⁴
2nd moment of area lz	170000 mm ⁴
Max. force Fy	880 N
Max. force Fz	880 N
Fy at theoretical life value of 100 km (only guide consideration)	3240 N
Fz at theoretical life value of 100 km (only guide consideration)	3240 N
Mx at theoretical life value of 100 km (only guide consideration)	20 Nm
My at theoretical life value of 100 km (only guide consideration)	17 Nm
Mz at theoretical life value of 100 km (only guide consideration)	17 Nm
Max. feed force Fx	75 N
Reference value effective load, horizontal	2.5 kg
Feed constant	60 mm/U
Moving mass	169 g
Moving mass for 0 mm stroke	169 g
Weight of slide	55 g
Product weight	3170 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
Number of digital logic outputs 24 V DC	2
Number of digital logic inputs	2
Working range of logic input	24 V
Features of logic input	Configurable
	Not galvanically isolated
IO-Link, Process data content OUT	Move in 1 bit Move out 1 bit Quit Error 1 bit Move intermediate 1 bit
IO-Link, Process data content IN	State Device 1 bit State In 1 bit State Intermediate 1 bit State Move 1 bit State Out 1 bit
IO-Link, Service data IN	32-bit force 32-bit position 32-bit speed
IO-Link, Data storage required	0.5 KB
Switching logic for inputs	PNP (positive switching)
Logic interface, connection type	Plug
Logic interface, connection technology	M12x1, A-coded according to EN 61076-2-101
Logic interface, number of pins/wires	8

Feature	Value
Type of mounting	Via female thread Via centring sleeve and pin With accessories
Material end cap	Painted die cast aluminium
Material profile	Anodised wrought aluminium alloy
Note on materials	RoHS-compliant
Material cover tape	Stainless steel strip
Material guide slide	Tempered steel
Material guide rail	Tempered steel
Material toothed belt	Polychloroprene with glass fibre