

Electric cylinder unit

EPCE-TB-45-20-FL-MF-ST-M-H1-PLK-AA

FESTO

Part number: 8101544



[PDF General operating condition](#)

Data sheet

Feature	Value
Effective diameter of drive pinion	10.18 mm
Size	45
Stroke	20 mm
Stroke reserve	0 mm
Piston rod thread	M6
Toothed-belt stretch	0.31 %
Toothed-belt pitch	2 mm
Mounting position	Any
Piston-rod end	Male thread
Type of motor	Stepper motor
Position detection	Motor encoder
Design	With toothed belt With integrated drive
Symbol	00997342
Protection against torque/guide	With plain-bearing guide
Referencing	Positive fixed stop block Negative fixed stop block
Rotor position sensor	Absolute encoder, single turn
Rotor position sensor, encoder measuring principle	magnetic
Temperature monitoring	Switch-off for excessive temperature Integrated precise CMOS temperature sensor with analogue output
Additional functions	Built-in end-position sensing
Display	LED
Ready status indication	LED
Max. acceleration	9 m/s ²
Max. speed	0.44 m/s
Speed "Speed press"	0.02 m/s
Repetition accuracy	±0.05 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	3000 mA
Max. current consumption, logic	0.3 A
Nominal voltage DC	24 V
Nominal current	3 A

Feature	Value
Parameterisation interface	IO-Link® User interface
Rotor position transducer resolution	16 bit
Permissible voltage fluctuations	+/- 15 %
Power supply, connection type	Plug
power supply, connection system	M12x1, T-coded according to EN 61076-2-111
Power supply, number of pins/wires	4
Power supply, connection pattern	00995989
Approval	RCM
KC mark	KC-EMV
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK RoHS instructions
Vibration resistance	Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Corrosion resistance class CRC	0 - No corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C ... 60 °C
Relative air humidity	0 - 90%
Degree of protection	IP40
Protection class	III
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Power must be reduced by 2% per K at ambient temperatures above 30°C.
Impact energy in end positions	0.003 J
Max. moment Mx	0 Nm
Max. moment My	0.4 Nm
Max. moment Mz	0.4 Nm
Max. feed force Fx	85 N
Reference value effective load, horizontal	5 kg
Reference value effective load, vertical	2.5 kg
Feed constant	32 mm/U
Reference service life	200 km
Maintenance interval	Lifetime lubrication
Moving mass	96 g
Moving mass for 0 mm stroke	87 g
Additional moving mass per 10 mm stroke	4.55 g
Product weight	872 g
Basic weight for 0 mm stroke	813 g
Additional weight per 10 mm stroke	29 g
Number of digital logic outputs 24 V DC	2
Number of digital logic inputs	2
Specification logic input	Based on IEC 61131-2, type 1
Working range of logic input	24 V
Features of logic input	Configurable Not galvanically isolated
IO-Link, SIO-Mode support	Yes
IO-Link, Protocol version	Device V 1.1
IO-Link, communication mode	COM3 (230.4 kBaud)
IO-Link, Port class	A
IO-Link, Number of ports	1
IO-Link, Process data length OUT	2 bytes

Feature	Value
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 length IN	2 bytes
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	Speed 32 bit Position 32 bit Force 32 bit
IO-Link, Min. cycle time	1 ms
IO-Link, Data storage required	500 Byte
Max. cable length	15 m outputs 15 m inputs 20 m with IO-Link® operation
Switching logic for outputs	PNP (positive switching)
Switching logic for inputs	PNP (positive switching)
IO-Link, connection technology	Plug
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
Logic interface, plug pattern	00992264
Type of mounting	With through-hole With female thread With centring sleeve With accessories
Note on materials	RoHS compliant
Material cover	Anodised wrought aluminium alloy
Material housing	Anodised wrought aluminium alloy
Material piston rod	High-alloy stainless steel
Material toothed belt	Polychloroprene with glass fibre