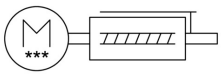
Electric cylinder unit
EPCS-BS-45-50-10P-A-ST-M-H1-PLK-AA

Part number: 8118281



General operating condition

Data sheet

Feature	Value
Size	45
Stroke	50 mm
Stroke reserve	0 mm
Piston rod thread	M10x1.25
Reversing backlash	100 µm
Screw diameter	10 mm
Spindle pitch	10 mm/U
Max. angle of rotation of the piston rod +/-	1 deg
Mounting position	Any
Piston rod end	External thread
Motor type	Stepper motor
Structural design	Electric actuator with ball screw drive With integrated drive
Spindle type	Ball screw drive
Symbol	00997294
Protection against torsion/guide	With plain-bearing guide
Homing	Fixed stop block positive Fixed stop block, negative Reference switch
Rotor position sensor	Absolute encoder, single-turn
Rotor position sensor measuring principle	Magnetic
Temperature monitoring	Shutdown in the event of over temperature Integrated precise CMOS temperature sensor with analogue output
Additional functions	User interface Integrated end-position sensing
Display	LED
Ready status indication	LED
Max. acceleration	5 m/s²
Max. speed	0.23 m/s
Speed "Speed Press"	0.01 m/s
Repetition accuracy	±0.02 mm
Characteristics of digital logic outputs	Configurable Not galvanically isolated
Duty cycle	100%
Insulation protection class	B
Max. current of digital logic outputs	100 mA
Max. current consumption	3000 mA

Feature	Value
Logic max. current consumption	0.3 A
DC nominal voltage	24 V
Nominal current	3 A
Parameterization interface	IO-Link® User interface
Rotor position sensor resolution	16 bit
Permissible voltage fluctuations	+/- 15 %
Power supply, type of connection	Plug
Power supply, connection technology	M12x1, T-coded as per EN 61076-2-111
Power supply, number of pins/wires	4
Power supply, connection pattern	00995989
Certification	RCM compliance mark
KC characters	KC EMC
CE marking (see declaration of conformity)	As per EU EMC directive As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions
Vibration resistance	Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27
Corrosion resistance class (CRC)	0 - No corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III
Cleanroom class	Class 9 according to ISO 14644-1
Storage temperature	-20 °C ... 60 °C
Relative air humidity	0 - 90 % Non-condensing
Degree of protection	IP40
Protection class	III
Ambient temperature	0 °C ... 50 °C
Note on ambient temperature	Above an ambient temperature of 30°C, the power must be reduced by 2% per K.
Max. torque Mx	0 Nm
Max. torque My	2.9 Nm
Max. torque Mz	2.9 Nm
Max. radial force on actuator shaft	180 N
Max. feed force Fx	250 N
Guide value for payload, horizontal	40 kg
Guide value for payload, vertical	13 kg
Maintenance interval	Life-time lubrication
Moving mass at 0 mm stroke	179 g
Additional moving mass per 10 mm stroke	4.9 g
Product weight	1390 g
Basic weight with 0 mm stroke	1185 g
Additional weight per 10 mm stroke	41 g
Number of digital logic outputs 24 V DC	2
Number of digital logic inputs	2
Logic input specification	Based on IEC 61131-2, type 1
Work range of logic input	24 V
Characteristics 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 kBd)
IO-Link®, port class	A
IO-Link®, number of ports	1

Feature	Value
IO-Link®, process data width OUT	2 Byte
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 width IN	2 Byte
IO-Link®, process data content IN	State In 1 bit State Out 1 bit State Move 1 bit State Device 1 bit State Intermediate 1 bit
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	500 byte
Max. cable length	15 m outputs 15 m inputs 20 m for IO-Link® operation
Switching logic at outputs	NPN (negative switching) PNP (positive switching)
Input switching logic	NPN (negative switching) PNP (positive switching)
Logic interface, connection type	Plug
Logic interface, connection technology	M12x1, A-coded as per EN 61076-2-101
Logic interface, number of poles/wires	8
Logic interface, connection pattern	00992264
Type of mounting	With internal thread With accessories
Note on materials	RoHS-compliant
Housing material	Wrought aluminum alloy, smooth-anodized
Piston rod material	High-alloy stainless steel
Spindle nut material	Steel
Spindle material	Roller bearing steel