Proximity switch
SOIA-M12PB-PNLK-M12

Part number: 8161199
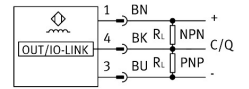
Data sheet

Feature	Value
Design	Round
Conforms to standard	EN 60947-5-2
Certification	c UL us - Listed (OL)
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
Note on materials	RoHS-compliant
Measured variable	Position Displacement
Measuring principle	Inductive
Method of measurement	Distance sensor
Rated operating distance	0 mm...4 mm
Note on rated operating distance	SSC1.SP1: 3.4 mm SSC2.SP1: 2.0 mm Factory setting
Position measuring range	0 mm...4 mm
Ambient temperature	-25 ºC...70 ºC
Displacement resolution	0.01 mm
Repetition accuracy	±0.04 mm
Temperature drift	±10%
Switching output	PNP/NNP switchable Push-pull
Switching element function	Switchable
Note on hysteresis	Factory setting: 5 %FS
Hysteresis	1 %FS...20 %FS
Linearity error FS	3 %
On time	100 ms
Measurement range speed	1 mm/s...1400 mm/s
Accuracy speed	+/- 20 %FS
Repetition accuracy speed	+/- -5 %FS
Acceleration value range	-3270 m/s²...3270 m/s²
Max. switching frequency	1200 Hz

Feature	Value
Max. output current	100 mA
Voltage drop	1 V
Inductive protective circuit	Installed
Minimum load current	0 mA
Residual current	0.03 mA
Short-circuit protection	Pulsed
Overload protection	Available
Protocol	IO-Link®
IO-Link, revision ID	V1.1
IO-Link, device profile	Function Object detection Function Product URI Function Teach two values Identification and diagnosis Smart Sensor - SSP 4.1.1
IO-Link, transmission rate	COM2
IO-Link®, SIO mode support	Yes
IO-Link, port type	Class A
IO-Link, process data length input	32 bit
IO-Link®, process data content IN	Distance measurement 16 bit MDC Distance monitoring 2 bit SSC Maintenance warning 1 bit DSC Motion diagnostic 2 bit DSC
IO-Link®, service data contents IN	Acceleration averages 32 bit Acceleration range 32 bit Acceleration value 16 bit Maintenance monitor operating time 32 bit Maintenance monitor measurement 96 bit Maintenance monitor temperature 64 bit Maintenance diagnostic 7 bit Maintenance monitor SSC 64 bit Velocity 1 averages 32 bit Velocity 1 value 16 bit Velocity 1 value range 32 bit Velocity 2 averages 32 bit Velocity 2 value 16 bit Velocity 2 value range 32 bit
IO-Link®, minimum cycle time	3.2 ms
IO-Link®, data memory required	308 byte
DC operating voltage range	10 V...30 V
Residual ripple	20 %
Idle current	17 mA
Reverse polarity protection	yes
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	M12x1 A-coded as per EN 61076-2-101
Electrical connection 1, number of pins/wires	3
Electrical connection 1, type of mounting	Screw-type lock not rotatable
Size	M12
Tightening torque	0 Nm...10 Nm
Mounting type	Flush
Product weight	21 g
Housing colour	Blue Gray
Housing material	Brass PBT
Lock nut material	Brass
Reference material	12 mm x 12 mm x 1 mm Structural steel, 1.0037, S235JR
Switching status indication	LED yellow
Storage temperature	-40 °C...85 °C

Feature	Value
Degree of protection	IP65 IP67
Resistance to sensor fitting pressure	1 bar
Resistance to interference from magnetic fields	< 50 µT
Corrosion resistance class (CRC)	3 - High corrosion stress
LABS (PWIS) conformity	VDMA24364-B2-L