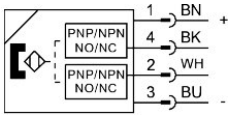
Position sensor
SRBS-Q1-10-E270-EP-1-S-M8

Part number: 2412001





Data sheet

Feature	Value
Design	Round
Based on norm	EN 60947-5-2
Certification	RCM compliance mark 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
Special features	Oil-resistant
Note on materials	RoHS compliant Halogen-free
Measured variable	Rotation angle
Measuring principle	Magnetic Hall
Sensing range	270 deg
Ambient temperature	-20 °C...70 °C
Typical sampling interval	3 ms
Switching output	2 x PNP or 2 x NPN switchable
Switching element function	N/C contact/N/O contact, switchable
Switching point reproducibility	<= 1°
On time	4 ms
Switch-off time	4 ms
Max. switching frequency	125 Hz
Max. output current	50 mA
Max. switching capacity DC	1.5 W
Voltage drop	1 V
Residual current	0.05 mA
Short-circuit protection	Yes
Overload protection	Yes
Rated operating voltage DC	24 V
DC operating voltage range	10 V...30 V
Residual ripple	10%
Idle current	20 mA

Feature	Value
Reverse polarity protection	for all electrical connections
Electrical connection 1, connection type	Cable with plug
Electrical connection 1, connection technology	M8x1 A-coded as per EN 61076-2-104
Electrical connection 1, number of pins/wires	4
Electrical connection 1, type of mounting	Screw-type lock Rotatable Compatible with rotatable/non-rotatable screw-type lock
Connection outlet orientation	Longitudinal
Material of pin contacts	Gold-plated copper alloy
Connector cable test conditions	Flexural strength: as per Festo standard Torsion resistance: > 300,000 cycles, ±270°/0.1 m Energy chain: > 5 million cycles, bending radius 28 mm
Cable length	0.3 m
Cable characteristic	suitable for energy chains/robot applications
Color cable sheath	Gray
Material of cable sheath	TPE-U(PUR)
Cable diameter	2.9 mm
Type of mounting	Screwed on
Mounting position	Any
Product weight	35 g
Housing colour	Black
Housing material	PA-reinforced Polyester
Film material	Polyester
Switching status indication	Yellow LED
Setting options	Key
Storage temperature	-30 °C...70 °C
Ambient temperature with flexible cable installation	-20 °C...70 °C
Degree of protection	IP65 IP68
Protection class	III
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Vibration resistance	Transport application test with severity level 3 according to FN 942017-4 and EN 60068-2-6
Corrosion resistance class (CRC)	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B2-L
Suitability for the production of Li-ion batteries	Metals with more than 5% by mass of copper, zinc or nickel are excluded from use. The exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1