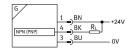
Proximity sensors SDBT-MSX-1L-NU-E-0.3-N-M8

FESTO

Part number: 8059123





General operating condition

Data sheet

UKCA marking (see declaration of conformity) UKCA marking (see declaration of conformity) To UK RoHS instructions Certificate issuing authority UL E232949 Note on materials RoHS-compliant Halogen-free Application note Inttps://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Ambient temperature -40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time -2 ms Switching frequency Max. switching frequency Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC Axa. witching capacity DC in mounting kits 1.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Available Reverse polarity protection for all electrical connections	Feature	Value
Symbol 00995963 Certification RCM compliance mark cUL us - Listed (OL) CE marking (see declaration of conformity) As per EU RNG directive As per EU RNG directiva As per EU	Design	for T-slot
Certification RCM compliance mark c UL us - Usted (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU RHS directive UKCA marking (see declaration of conformity) To UK RoHS instructions for EMC To UK RoHS instructions Certificate issuing authority UL E232949 Note on materials ROHS-compliant Halogen-free Application note Intrps://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Ambient temperature 40°C 85°C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time 22 ms Switch-off time 22 ms Switch off time 22 ms Max. switching frequency 200 Hz Max. output current Max. output current in mounting kits 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 10.15 mA Residual current 0.15 mA Residual current 0.15 mA Residual current 0.15 mA Residual current 0.20 mA Residual current 0.15 mA Residual current 0.20 mA Residual current 0.15 mA Residual current 0.20 mA Resi	Based on norm	EN 60947-5-2
CUL us - Listed (OL) 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 Certificate issuing authority UL E239249 Note on materials ROHS-compliant Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Ambient temperature 40°C85°C Associated as Sender Application accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis O.2 mm Switch-off time 22 ms Switch-off time 22 ms Switch fitting Max. output current in mounting kits 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC Max. switching capacity DC in mounting kits 2.8 W Voltage drop Max. switching capacity DC in mounting kits 0.2 mA Residual current 0.15 mA Residual current 0.20 mA Residual current 0.15 mA Residual current 0.20 mA Residu	Symbol	00995963
UKCA marking (see declaration of conformity) UKCA marking (see declaration of conformity) To UK RoHS instructions Certificate issuing authority UL E232949 Note on materials RoHS-compliant Halogen-free Application note Inttps://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Ambient temperature -40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time -2 ms Switching frequency Max. switching frequency Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC Axa. witching capacity DC in mounting kits 1.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Available Reverse polarity protection for all electrical connections	Certification	· ·
To UK RoHS instructions Certificate issuing authority Note on materials RoHS-compliant Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Measured variable Measuring principle Ambient temperature 40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output N/C contact/N/O contact switchable Wysteresis 0.2 mm On time 2 ms Switch-off time 2 ms Switching frequency 200 Hz Max. switching frequency Max. output current in mounting kits 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC in mounting kits 2.8 W Woltage drop 4.15 V Minimum load current 0.2 mA Short-circuit protection yes Overload protection Available Reverse polarity protection for all electrical connections	CE marking (see declaration of conformity)	'·
RoHS-compliant Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Ambient temperature -40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time -2 ms Switch-off time -2 ms Switching frequency 200 Hz Max. output current 100 mA Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC 1.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Short-circuit protection yes Reverse polarity protection for all electrical connections	UKCA marking (see declaration of conformity)	
Application note Application note Application note Application note Amasured variable Amasuring principle Ambient temperature Au°C 85 °C Amax. travel speed Application accuracy Application accur	Certificate issuing authority	UL E232949
Measured variable Position Measuring principle Magnetic Hall Ambient temperature -40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable On time -22 ms Switch-off time -22 ms Switch-off time -22 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC 1.5 v W Max. switching capacity DC 1.5 v W Minimum load current 0.15 mA Residual current 0.15 mA Short-circuit protection yes Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 v 30 V Reverse polarity protection for all electrical connections	Note on materials	· · · · · · · · · · · · · · · · · · ·
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Ambient temperature -40 °C 85 °C Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time \$2 ms Switch-off time \$2 ms Switch-off time \$2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Available Rated operating voltage DC Coperating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Measured variable	Position
Max. travel speed 3 m/s Repetition accuracy 0.1 mm Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time \$2 ms Switch-off time \$2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC 1.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Measuring principle	Magnetic Hall
Repetition accuracy Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis O.2 mm On time \$2 ms Switch-off time \$2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Ambient temperature	-40 °C 85 °C
Switching output PNP/NPN switchable Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time \$2 ms Switch-off time \$2 ms Max. switching frequency Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection Ves Overload protection Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Max. travel speed	3 m/s
Switching element function N/C contact/N/O contact switchable Hysteresis 0.2 mm On time \$2 ms Switch-off time \$2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop <1.5 V	Repetition accuracy	0.1 mm
Hysteresis 0.2 mm On time ≤2 ms Switch-off time ≤2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 41.5 V Minimum load current 0.15 mA Residual current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection 4vailable Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Switching output	PNP/NPN switchable
Switch-off time \$2 ms Max. switching frequency 200 Hz Max. output current 100 mA Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.5 V Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection yes Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protections	Switching element function	N/C contact/N/O contact switchable
Switch-off time ### According frequency ###	Hysteresis	0.2 mm
Max. switching frequency Max. output current Max. output current in mounting kits Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop C1.5 V Minimum load current C2.8 W Max. switching capacity DC in mounting kits C3.5 W Voltage drop C1.5 V Minimum load current C2.8 M No.2 mA Residual current C3.2 mA Short-circuit protection C3.2 mA Short-circuit protection C4.2 W C4.3 V C5.2 V C6.2 M C7.3 V C8.3 V C8.3 V C8.4 V C9.5	On time	≤2 ms
Max. output current Max. output current in mounting kits 100 mA Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.1.5 V Minimum load current 6.15 mA Residual current 6.2 mA Short-circuit protection Ves Overload protection Available Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protections	Switch-off time	≤2 ms
Max. output current in mounting kits Max. switching capacity DC 2.8 W Max. switching capacity DC in mounting kits 2.8 W Voltage drop C1.5 V Minimum load current C0.2 mA Residual current Short-circuit protection Ves Overload protection Rated operating voltage DC DC operating voltage range To where the sum of the su	Max. switching frequency	200 Hz
Max. switching capacity DC Max. switching capacity DC in mounting kits 2.8 W Voltage drop 4.5 V Minimum load current 6.2 mA Residual current 5hort-circuit protection Coverload protection Coverload protection Rated operating voltage DC Coperating voltage range 10 V 30 V Reverse polarity protection 2.8 W 2.8 W 2.8 W 2.8 W 4.5 V 4.5 V 4.5 V 4.5 V 4.5 V 4.7 V 4.7 Short-circuit protection Available 10 V 30 V 10 Reverse polarity protection For all electrical connections	Max. output current	100 mA
Max. switching capacity DC in mounting kits 2.8 W Voltage drop 41.5 V Minimum load current 60.15 mA Residual current 60.2 mA Short-circuit protection 9es Overload protection Available Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Max. output current in mounting kits	100 mA
Voltage drop 41.5 V Minimum load current Co.2 mA Short-circuit protection Ves Overload protection Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection 41.5 V Co.2 mA Available Available 10 V 30 V For all electrical connections	Max. switching capacity DC	2.8 W
Minimum load current 0.15 mA Residual current 0.2 mA Short-circuit protection yes Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Max. switching capacity DC in mounting kits	2.8 W
Residual current Co.2 mA Short-circuit protection Overload protection Available Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Voltage drop	<1.5 V
Short-circuit protection yes Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Minimum load current	0.15 mA
Overload protection Available Rated operating voltage DC 24 V DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Residual current	<0.2 mA
Rated operating voltage DC DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Short-circuit protection	yes
DC operating voltage range 10 V 30 V Reverse polarity protection for all electrical connections	Overload protection	Available
Reverse polarity protection for all electrical connections	Rated operating voltage DC	24 V
	DC operating voltage range	10 V 30 V
Electrical connection 1, connection type Cable with plug	Reverse polarity protection	for all electrical connections
	Electrical connection 1, connection type	Cable with plug

Feature	Value
Electrical connection 1, connection technology	M8x1 A-coded as per EN 61076-2-104
Electrical connection 1, number of pins/wires	3
Electrical connection 1, type of mounting	Screw-type lock
Electrical connection for input 1, connection pattern	00991155
Connection outlet orientation	Longitudinal
Connector cable test conditions	Flexural strength: as per Festo standard Test conditions on request Torsional 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)
Type of mounting	Screwed tightly Can be inserted in slot from above
Max. tightening torque	0.6 Nm
Mounting position	Any
Product weight	10 g
Housing colour	Black
Housing material	Brass, nickel-plated PA-reinforced High-alloy stainless steel
Switching status indication	LED yellow
Status indicator	LED green
Setting options	Auto teach-in Capacitive pushbutton
Ambient temperature with flexible cable installation	-20 °C 85 °C
Degree of protection	IP68
LABS (PWIS) conformity	VDMA24364-B2-L
Suitability for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils
Cleanroom class	Class 4 according to ISO 14644-1