Position transmitter SDAS-MHS-M40-1L-PNLK-PN-E-0.3-M8

Part number: 8063974



G PNP / NPN / IO-LINK PNP / NPN / IO-LINK PNP / NPN / 3 BU OV

Data sheet

General operating condition

Symbol 00995894 Certification RCM compliance mark c UL us - Listed (0L) Te marking (see declaration of conformity) As per EU EMC directive As per EU RMS directive JKCA marking (see declaration of conformity) To UK Instructions for EMC To UK RoHS instructions Zertificate issuing authority UL E32949 Note on materials RoHS compliant Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Weasuring principle Magnetic Hall Weasuring principle Magnetic Hall Wask travels peed 3 m/s Displacement resolution 40 °C 80 °C Vipical sampling interval 2 ms Wask travel speed 3 m/s Displacement resolution A0.ºC mm Wask travel speed 3 m/s Displacement resolution V/C contact/N/O contact switchable Mask. switching output 2 × PNP or 2x NPN adjustable Watch-off time 4 ms Mask. switching output voltage DC 30 V Mask. switching requercy 125 Hz Mask. switching capacity DC 1.5 W Mask. switching capacity	Feature	Value
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c UL us - Listed (OL) ET marking (see declaration of conformity) As per EU BerUG directive JXCA marking (see declaration of conformity) To UK Instructions for EMC To UK RolFS instructions To UK RolFS instructions Certificate issuing authority UL E232949 Vole on materials RolFS-compliant Halogen-free Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Weasured variable Position Weasuring principle Magnetic Hall Weasuring principle Magnetic Hall Weasuring principle Magnetic Hall Sing range <52000 µm	Symbol	00995894
As per EU RoHS directive JKCA marking (see declaration of conformity) To UK instructions for EMC Certificate issuing authority UL E232949 Note on materials RoHS-compliant Halogen-free https://www.festo.com/Drive-Sensor-Overview Application note https://www.festo.com/Drive-Sensor-Overview Measured variable Position Weasured variable Magnetic Hall Sensing range s52000 µm Aust travel speed 3m/5 Displacement resolution a.0 °C. Wax. travel speed 3m/5 Displacement resolution a.0.2 mm Switching output 2.2 NP or 2x NPN adjustable Switching output a.ms Switching requency 4.0 °C. Wax. switching frequency 125 Hz Max. switching frequency 30 V Max. switching requency DC 30 V Max. switching requency DC 50 mA Max. switching requency DC 50 mA Max. switching requency DC 50 V Max. switching requency DC 50 V Max. switching reque	Certification	
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Note on materials RoHS-compliant Halogen-free Application note https://www.festo.com/Drive-Sensor-Overview Measured variable Position Measuring principle Magnetic Hall Sensing range \$52000 µm Ambient temperature 40 °C 80 °C Vipical sampling interval 2 ms Max. travel speed 3 m/s Displacement resolution 6.02 mm Repetition accuracy 0.2 mm Witching output 2x PNP or 2x NPN adjustable Switching output voltage DC 30 V Max. switching output voltage DC 30 V Max. switching capacity DC 1.5 W foltage drop 6.5 V Vipical linearity error ±1 mm Short-circuit protection Yes Overload protection Available Or-Link@, protocol version Device V 1.1	UKCA marking (see declaration of conformity)	
Halogen-freeApplication notehttps://www.festo.com/Drive-Sensor-OverviewMeasured variablePositionMeasuring principleMagnetic HallSensing range<52000 µm	Certificate issuing authority	UL E232949
Weasured variablePositionMeasuring principleMagnetic HallSensing range\$52000 µmAmbient temperature40 °C 80 °C(ypical sampling interval2 msMax. travel speed3 m/sDisplacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x NPP or 2x NPN adjustableSwitching element functionN/C contact /N/O contact switchableOn time44 msMax. switching frequency125 HzMax. switching capacity DC30 VMax. switching capacity DC1.5 W/oltage drop40 sci/oltage drop40 ms/ort-cricuit protectionyes/operiod40 ms/operiod1.5 W/operiod1.5 W/operiod2.5 V/operiod40 ms/operiod40 ms/operiod1.5 W/operiod1.5 W/operiod2.5 V/operiod40 ms/operiod40 ms/operiod40 ms/operiod1.5 W/operiod2.5 V/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/operiod1.5 W/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/operiod40 ms/op	Note on materials	
Measuring principleMagnetic HallSensing range\$52000 µmAmbient temperature-40 °C 80 °CTypical sampling interval2 msMax. travel speed3 m/sDisplacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time44 msSwitchoff time44 msMax. switching frequency125 HzMax. switching capacity DC30 VMax. switching capacity DC1.5 WShort-circuit protectionyesShort-circuit protectionyesOzeroda protectionAvailableProtocol1-Port IO-Link@O-Link@, protocol versionDevice V 1.1	Application note	https://www.festo.com/Drive-Sensor-Overview
Sensing range<52000 µmAmbient temperature-40 °C 80 °CTypical sampling interval2 msWax. travel speed3 m/sDisplacement resolution<0.02 mm	Measured variable	Position
Ambient temperature-40 °C 80 °CTypical sampling interval2 msMax. travel speed3 m/sDisplacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time4 msSwitching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC1.5 WVoltage drop0.5 VTypical linearity error\$1 mmShort-circuit protectionyesOverload protectionI-Port IO-Link®O-Link®, protocol versionDevice V1.1	Measuring principle	Magnetic Hall
typical sampling interval2 msMax. travel speed3 m/sDisplacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time4 msSwitching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC1.5 WVoltage drop0.5 VTypical linearity error\$1 mmShort-circuit protectionyesOverload protectionAvailableOrticular for the specified of t	Sensing range	≤52000 μm
Max. travel speed3 m/sDisplacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time4 msSwitching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC1.5 WAva. switching capacity DC0.5 V/oltage drop0.5 V/voltage dropyesDort-circuit protectionyesDeveload protectionAvailableDeveload protectionI-Port IO-Link®O-Link®, protocol versionDevice V 1.1	Ambient temperature	-40 °C 80 °C
Displacement resolution\$0.02 mmRepetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time44 msSwitch-off time44 msMax. switching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC1.5 WVoltage drop0.5 VTypical linearity error\$1 mmShort-circuit protectionyesDoverload protectionAvailableProtocolI-Port IO-Link®, protocol versionO-Link®, protocol versionDevice V 1.1	Typical sampling interval	2 ms
Repetition accuracy0.2 mmSwitching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time4 msSwitch-off time44 msMax. switching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC50 mAMax. switching capacity DC1.5 W/oltage drop60.5 VFypical linearity error±1 mmShort-circuit protectionyesOverload protectionAvailableProtocolI-Port IO-Link@O-Link@, protocol versionDevice V 1.1	Max. travel speed	3 m/s
Switching output2x PNP or 2x NPN adjustableSwitching element functionN/C contact/N/O contact switchableOn time(4 msSwitch-off time(4 msMax. switching frequency125 HzMax. switching output voltage DC30 VMax. switching capacity DC50 mAMax. switching capacity DC1.5 W/oltage drop0.5 VFypical linearity error±1 mmShort-circuit protectionyesOverload protectionI-Port IO-Link@O-Link@, protocol versionDevice V 1.1	Displacement resolution	≤0.02 mm
Switching element functionN/C contact/N/O contact switchableOn time<4 ms	Repetition accuracy	0.2 mm
Dn time4 msSwitch-off time<4 ms	Switching output	2x PNP or 2x NPN adjustable
Switch-off time(4 msSwitch-off time125 HzMax. switching output voltage DC30 VMax. switching output voltage DC50 mAMax. switching capacity DC1.5 W/oltage drop(0.5 VTypical linearity error±1 mmShort-circuit protectionyesOverload protectionI-Port IO-Link®, protocol versionO-Link®, protocol versionDevice V 1.1	Switching element function	N/C contact/N/O contact switchable
Max. switching frequency125 HzMax. switching output voltage DC30 VMax. output current50 mAMax. switching capacity DC1.5 W/oltage drop<0.5 V	On time	۲4 ms
Max. switching output voltage DC 30 V Max. output current 50 mA Max. switching capacity DC 1.5 W /oltage drop 0.5 V /ypical linearity error ±1 mm Short-circuit protection yes Overload protection Available Protocol I-Port IO-Link® O-Link®, protocol version Device V 1.1	Switch-off time	<4 ms
Max. output current50 mAMax. switching capacity DC1.5 W/oltage drop<0.5 V	Max. switching frequency	125 Hz
Max. switching capacity DC1.5 W/oltage drop <pre></pre> /oltage drop <pre></pre> fypical linearity error±1 mmShort-circuit protectionyesOverload protectionAvailableProtocolI-Port IO-Link®O-Link®, protocol versionDevice V 1.1	Max. switching output voltage DC	30 V
/oltage drop <0.5 V	Max. output current	50 mA
Typical linearity error ±1 mm Short-circuit protection yes Overload protection Available Protocol I-Port IO-Link® O-Link®, protocol version Device V 1.1	Max. switching capacity DC	1.5 W
Short-circuit protection yes Dverload protection Available Protocol I-Port IO-Link® O-Link®, protocol version Device V 1.1	Voltage drop	<0.5 V
Overload protection Available Protocol I-Port IO-Link® O-Link®, protocol version Device V 1.1	Typical linearity error	±1 mm
Protocol I-Port IO-Link® O-Link®, protocol version Device V 1.1	Short-circuit protection	yes
IO-Link® O-Link®, protocol version Device V 1.1	Overload protection	Available
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O-Link®, profile Smart sensor profile	IO-Link®, protocol version	Device V 1.1
	IO-Link®, profile	Smart sensor profile

Feature	Value
IO-Link®, function classes	Process data variable (PDV) Identification Diagnostics Teach channel Switching signal channel (SSC)
IO-Link®, communication mode	COM2 (38,4 kBd)
IO-Link®, SIO mode support	Yes
IO-Link®, port class	A
IO-Link®, process data width IN	2 Byte
IO-Link®, process data content IN	12 bit PDV (position measurement) 4 bit SSC (switching signal)
IO-Link®, minimum cycle time	2.5 ms
DC operating voltage range	10 V 30 V
Residual ripple	10 %
Idle current	<12 mA
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
Electrical connection for input 1, connection pattern	00991171
Connection outlet orientation	Longitudinal
Material of pin contacts	Copper alloy, gold-plated
Connector cable test conditions	Flexural strength: as per Festo standard 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
Mounting position	Any
Product weight	9.5 g
Housing material	PA-reinforced High-alloy stainless steel
Material of union nut	Brass, nickel-plated
Switching status indication	LED yellow
Status indicator	LED red
Setting options	IO-Link® Capacitive pushbutton
Ambient temperature with flexible cable installation	-20 °C 70 °C
Degree of protection	IP65 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