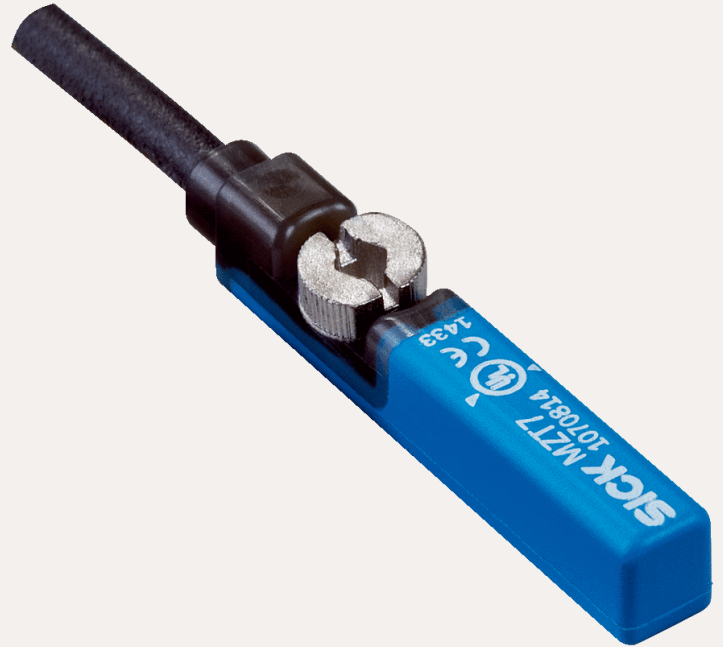




DATA SHEET

MZT7-03VNS-KRD

MZT7
Cylinder sensors

SICK

Sensor Intelligence



CYLINDER SENSORS

MZT7-03VNS-KRD

ORDERING INFORMATION

Type	part no.
MZT7-03VNS-KRD	1089066

Further device versions and accessories at www.sick.com/MZT7



DETAILED TECHNICAL DATA

FEATURES

Cylinder type	T-slot
Cylinder types with adapter	Profile cylinder Tie rod cylinder Round body cylinder Dovetail groove cylinder SMC rail CDQ2 SMC rail ECDQ2
Housing length	29.5 mm
Switching output	NPN
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP65 ¹⁾ IP67

¹⁾ According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Power consumption	8 mA, without load
Voltage drop	≤ 2 V
Continuous current I _a	≤ 100 mA
Protection class	III
Response sensitivity, typ.	3 mT
Overrun distance, typ.	10 mm ¹⁾
Hysteresis, typ.	< 0.8 mT

¹⁾ Distance covered by the encoder magnet while the sensor outputs a switching signal.

²⁾ Supply voltage U_s and constant ambient temperature T_a.

Reproducibility	$\leq 0.1 \text{ mT}^{2)}$								
Reverse polarity protection	Yes								
Short-circuit protection	Yes								
Status indicator LED	Yes								
Teach-in	No								
Ambient operating temperature	-30 °C ... +80 °C								
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm								
EMC	According to EN 60947-5-2								
Connection type	Cable with plug M8, 3-pin, with knurled nut, drag chain use, 0.3 m								
Connection type Detail	<table> <tr> <td>Conductor cross section</td><td>0.14 mm²</td></tr> <tr> <td>Cable diameter</td><td>Ø 2.9 mm</td></tr> <tr> <td>Bending radius</td><td>With fixed installation > 8 x cable diameter For flexible use > 12 x cable diameter</td></tr> <tr> <td>Cable outlet</td><td>Axial</td></tr> </table>	Conductor cross section	0.14 mm ²	Cable diameter	Ø 2.9 mm	Bending radius	With fixed installation > 8 x cable diameter For flexible use > 12 x cable diameter	Cable outlet	Axial
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Material	<table> <tr> <td>Housing</td><td>Plastic</td></tr> <tr> <td>Cable</td><td>PUR</td></tr> </table>	Housing	Plastic	Cable	PUR				
Housing	Plastic								
Cable	PUR								
UL File No.	NRKH.E181493 & NRKH7.E181493								

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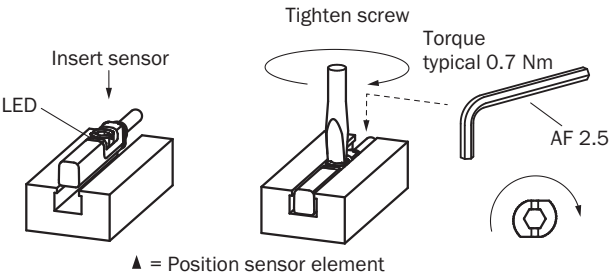
SAFETY-RELATED PARAMETERS

MTTF _D	1,300 years
DC _{avg}	0 %
T _M (mission time)	20 years

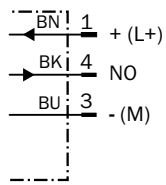
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) ex-empt	✓
cULus certificate	✓

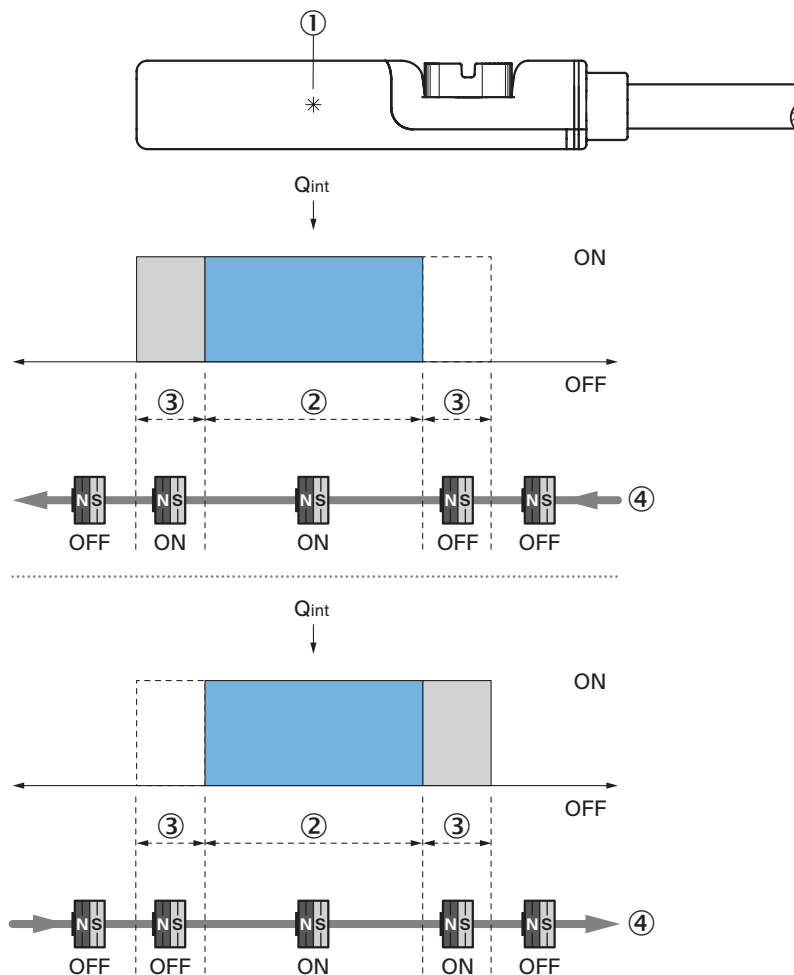
INSTALLATION NOTE



CONNECTION DIAGRAM CD-002



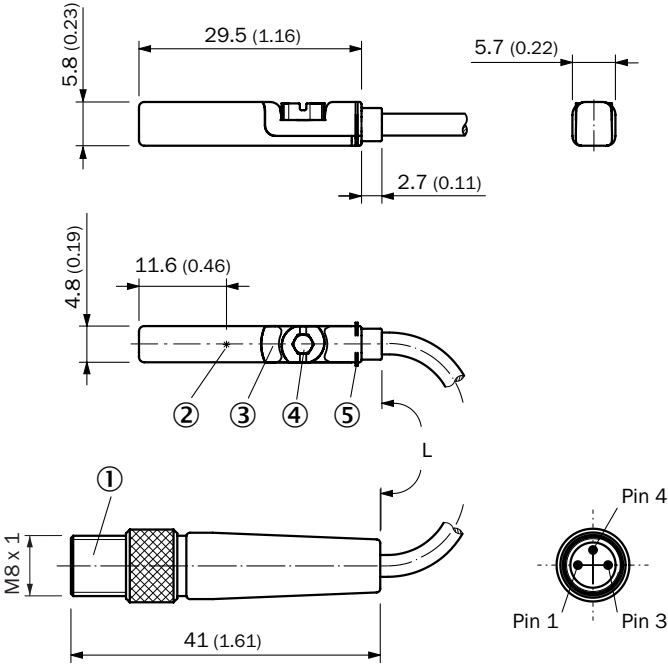
FUNCTIONAL PRINCIPLE OVERRUN DISTANCE



Note: Sensor housing may differ; representation corresponds to “NO contact” output function; overrun distance = switching point width + hysteresis

- ① Position sensor element
- ② Width of the switching point
- ③ Hysteresis
- ④ Direction of movement of the magnet

DIMENSIONAL DRAWING CABLE WITH PLUG M8, WITH KNURLED NUT



Dimensions in mm (inch)

- ① Connection
- ② Position sensor element
- ③ Display LED
- ④ Fixing screw SW 2.5
- ⑤ retaining ribs

Part no.	Type	L	Number of cores
1094040	MZT7-03VPS-KRDS10	150 mm	3
1082422	MZT7-03VPS-KRD	300 mm	3
1084695	MZT7-03VPS-KRDS04	300 mm	3
1089066	MZT7-03VNS-KRD	300 mm	3
1070821	MZT7-03VPS-KR0	500 mm	3
1070823	MZT7-03VPS-KR0	500 mm	3
1084694	MZT7-03VPS-KR0S03	500 mm	3
1088702	MZT7-03VPS-KRDS08	1000 mm	3

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1089066



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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