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DATA SHEET

MZT8-03VPSAKR0S48

MZT8 VIA
Cylinder sensors

SICK Sensor Intelligence



CYLINDER SENSORS

MZT8-03VPSAKR0S48

ORDERING INFORMATION

Type	part no.
MZT8-03VPSAKR0S48	1150112

Further device versions and accessories at www.sick.com/MZT8_VIA

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	24 mm
Switching output	PNP
Switching frequency	1,000 Hz
Output function	NO, IO-Link
Electrical wiring	DC 3-wire
Enclosure rating	IP68 [1] IP69 [2]
Adjustment IO-Link	 NC or NO Switch-on or switch-off delay (up to 1.6 seconds)
Special features	Visual installation aid/LED indicator (yellow) Power LED (green) Interior housing temperature (via IO-Link) Counter function (via IO-Link)

[1] According to EN 60529.

[2] In accordance with EN 60529. Sensor head and cable only (plug excluded).

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Power consumption	10 mA, without load
Voltage drop	≤ 2.2 V
Continuous current I_a	≤ 200 mA
Protection class	III
Response sensitivity, typ.	2.8 mT
Overrun distance, typ.	9 mm [1]
Hysteresis, typ.	0.7 mT
Reproducibility	≤ 0.1 mT [2]
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No
Power-up pulse protection	Yes
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 screws and hex nut, drag chain use, 0.3 m
Connection type Detail	
Conductor cross section	0.14 mm²
Cable diameter	Ø 2.9 mm
Bending radius	With fixed installation > 3 x cable diameter For flexible use > 10 x cable diameter
Torsion force	± 270° / 10 cm
Torsion cycles	> 2,000,000
Drag chain cycles	> 2,000,000
Drag chain parameters	Traversing speed max. 3.3 m/s at 5 m horizontal traversing length Acceleration max. 5 m/s²
Cable outlet	Axial
Material	
Housing	Plastic, PA12
Cable	PUR [3]
Items supplied	2 x label holders attached (Phoenix Contact type PATG 2/23, P/N 1013850)
UL File No.	NRKH.E181493 & NRKH7.E181493

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

[2] Supply voltage U_B and constant ambient temperature Ta.

[3] PVC-cable without UL-Certificate.

SAFETY-RELATED PARAMETERS

$MTTF_D$	2,289 years
DC_{avg}	0 %
T_M (mission time)	20 years

COMMUNICATION INTERFACE

Communication interface	IO-Link V1.0
Communication Interface detail	COM2 (38,4 kBaud)
Cycle time	10.4 ms
Process data length	8 Bit
Process data structure	Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2}

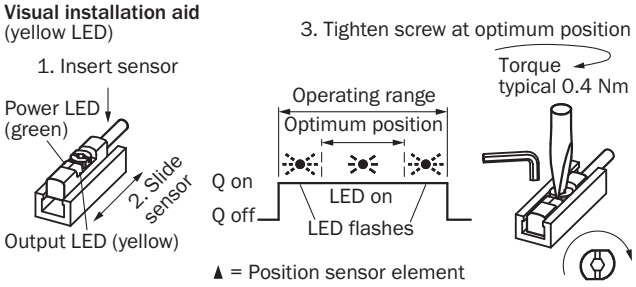
	Bit 2 ... 7 = empty
VendorID	26
DeviceID HEX	0x80015D
DeviceID DEC	8388957

CERTIFICATES

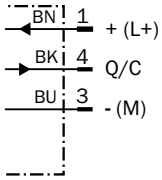
EU declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

INSTALLATION NOTE

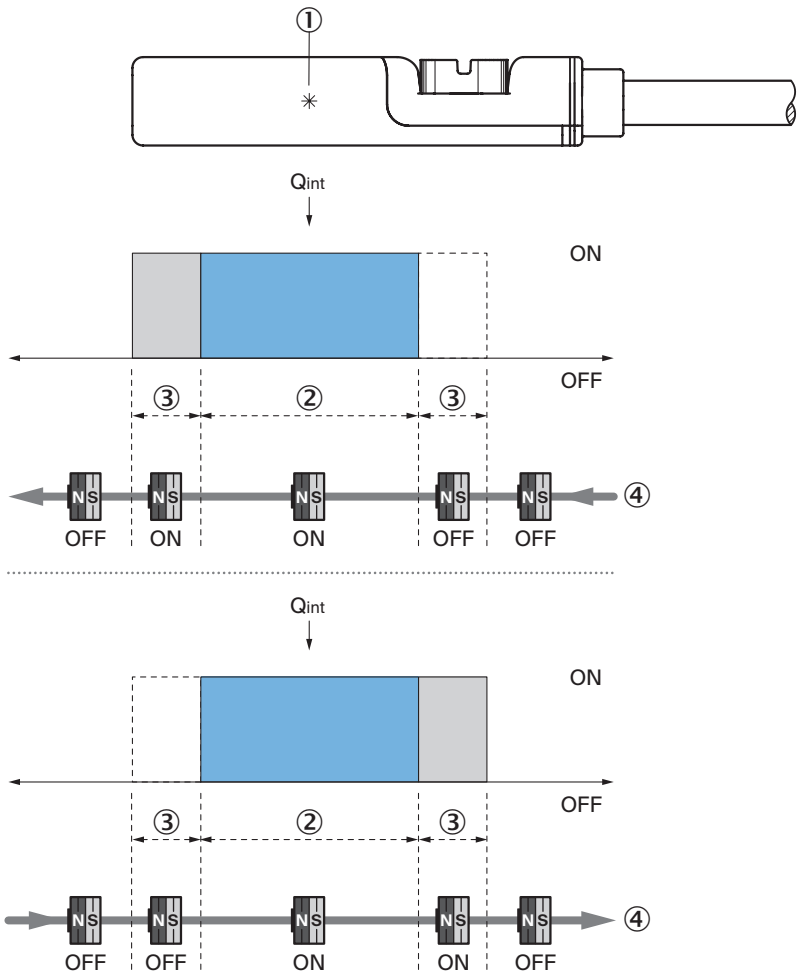
Visual installation aid
(yellow LED)



CONNECTION DIAGRAM CD-401



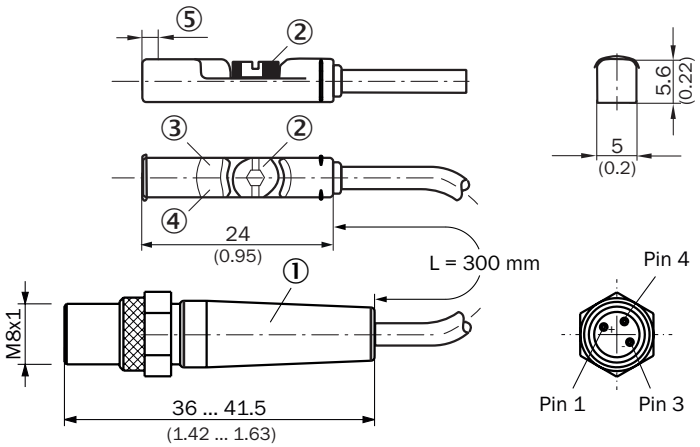
FUNCTIONAL PRINCIPLE OVERRUN DISTANCE



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 CONNECTOR M8



Dimensions in mm (inch)
① Connection
② Fixing screw SW 2.0
③ visual installation aid/LED indicator (yellow)
④ Power LED (green)
⑤ Sensor element position; short overrun distance (3 mm): 2.25 mm, long overrun distance (9 mm): 1.5 mm

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/1150112

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SICK AT A GLANCE

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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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