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DATA SHEET

MZT8-03VPS-KP0

MZT8
Cylinder sensors

SICK Sensor Intelligence



CYLINDER SENSORS

MZT8-03VPS-KP0

ORDERING INFORMATION

Type	part no.
MZT8-03VPS-KP0	1044458

Further device versions and accessories at www.sick.com/MZT8

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
Electrical wiring	DC 3-wire
Enclosure rating	IP68 [1]

[1] According to EN 60529 (IP 67 / IP 68).

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
Time delay before availability	25 ms
Response sensitivity, typ.	2.6 mT
Overrun distance, typ.	3 mm [1]
Hysteresis, typ.	0.7 mT

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

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

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 connector M8, 3-pin, 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
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.

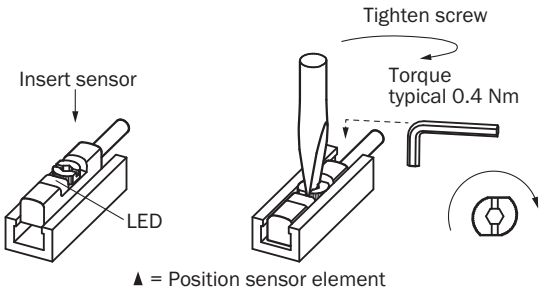
SAFETY-RELATED PARAMETERS

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

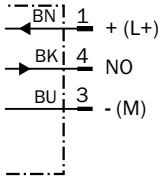
CERTIFICATES

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

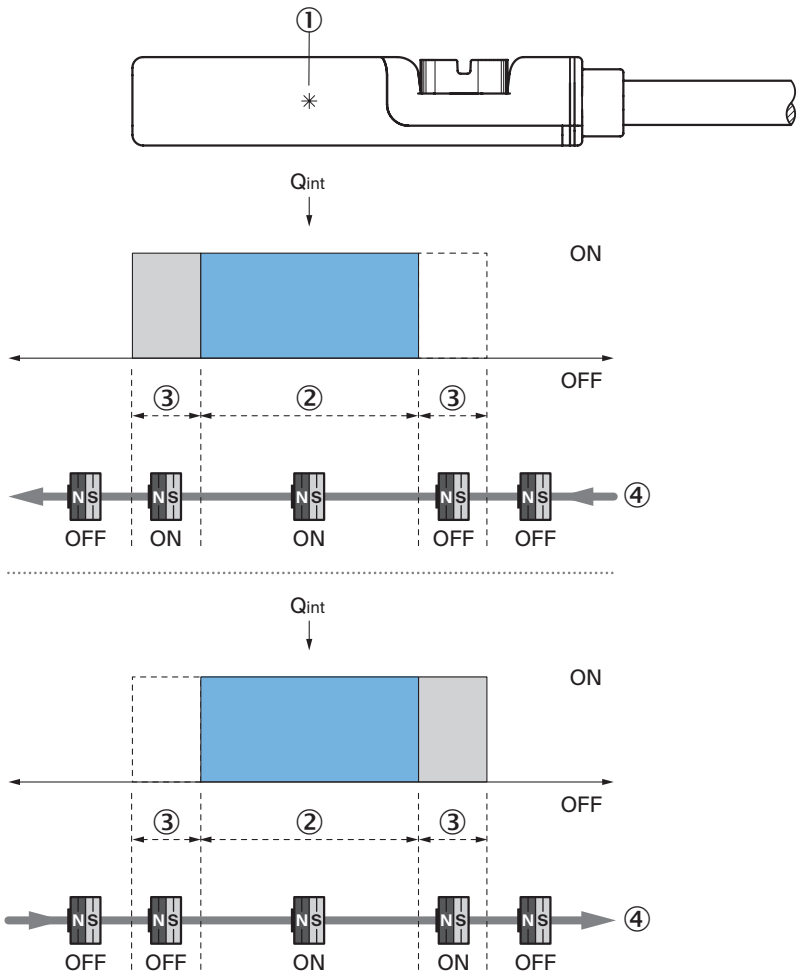
INSTALLATION NOTE



CONNECTION DIAGRAM CD-002



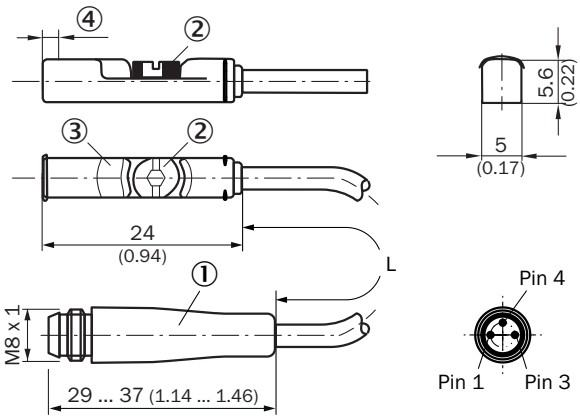
FUNCTIONAL PRINCIPLE OVERRUN DISTANCE



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 CONNECTOR M8



Dimensions in mm (inch)
① Connection
② Fixing screw SW 2.0
③ Display LED
④ Sensor element position; short overrun distance (3 mm): 2.25 mm, long overrun distance (9 mm): 1.5 mm

Part no.	Type	L	Number of cores
1089849	MZT8-2V8PS-KPDS26	100 mm	3
1121966	MZT8-03VPS-KPDS38	120 mm	3
1044458	MZT8-03VPS-KP0	300 mm	3
1044930	MZT8-03VPO-KP0	300 mm	3
1044932	MZT8-03VNS-KP0	300 mm	3
1048048	MZT8-28VPS-KP0	300 mm	3
1053014	MZT8-19VPS-KP0	300 mm	3
1053415	MZT8-03VPS-KP0S06	300 mm	3
1054250	MZT8-28VPS-KP0S10	300 mm	3
1073268	MZT8-2V6PSTKP0	300 mm	3
1044461	MZT8-03VPS-KPD	750 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/1044458

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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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