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DATA SHEET

MZCS-1Z8DS-KW0

MZCS
Cylinder sensors

SICK
Sensor Intelligence

CYLINDER SENSORS

MZCS-1Z8DS-KW0

ORDERING INFORMATION

Type	part no.
MZCS-1Z8DS-KW0	1142930

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

DETAILED TECHNICAL DATA

FEATURES

Cylinder type	C-slot
Cylinder types with adapter	SMC rail CDQ2 SMC rail ECDQ2 Round body cylinder Profile cylinders and tie-rod cylinders
Housing length	15 mm
Switching frequency	1,000 Hz
Electrical wiring	DC 2-wire
Enclosure rating	IP67

MECHANICS/ELECTRONICS

Supply voltage	5 V DC ... 30 V DC
Power consumption	≤ 2 mA, without load
Voltage drop	≤ 4 V
Continuous current I_a	≤ 50 mA
Off-state current	≤ 0.5 mA
Protection class	III
Response sensitivity, typ.	1.8 mT
Overrun distance, typ.	3 mm [1]
Hysteresis, typ.	0.2 mT
Reproducibility	≤ 0.1 mT [2]
Reverse polarity protection	Yes
Short-circuit protection	Yes [3]

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

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

[3] Time-limited. Excessive heating can cause the sensor to fail.

Status indicator LED	Yes
Teach-in	No
Ambient operating temperature	–30 °C ... +70 °C
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
EMC	According to EN 60947-5-2
Connection type	Cable, 2-wire, stripped, 0.5 m
Connection type Detail	
Conductor cross section	0.15 mm²
Cable diameter	Ø 2.7 mm
Bending radius	With fixed installation > 2 x cable diameter For flexible use > 5 x cable diameter
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PVC
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] Time-limited. Excessive heating can cause the sensor to fail.

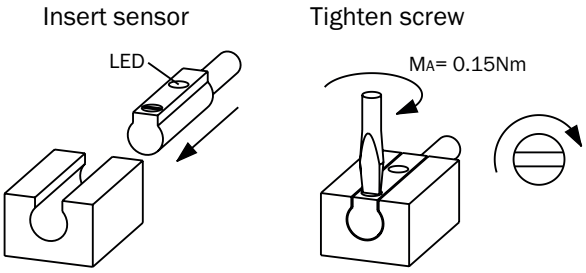
SAFETY-RELATED PARAMETERS

$MTTF_D$	3,465 years
DC_{avg}	0 %
T_M (mission time)	20 years

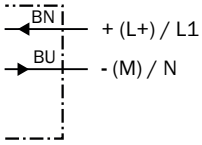
CERTIFICATES

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	✓

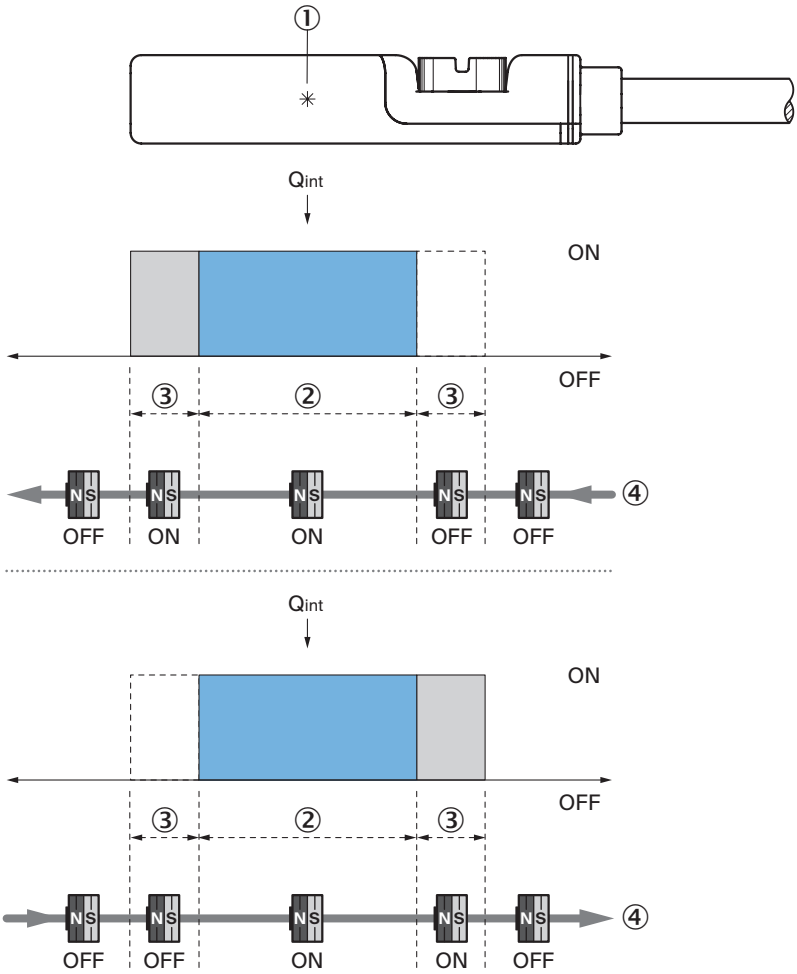
INSTALLATION NOTE



CONNECTION DIAGRAM CD-037

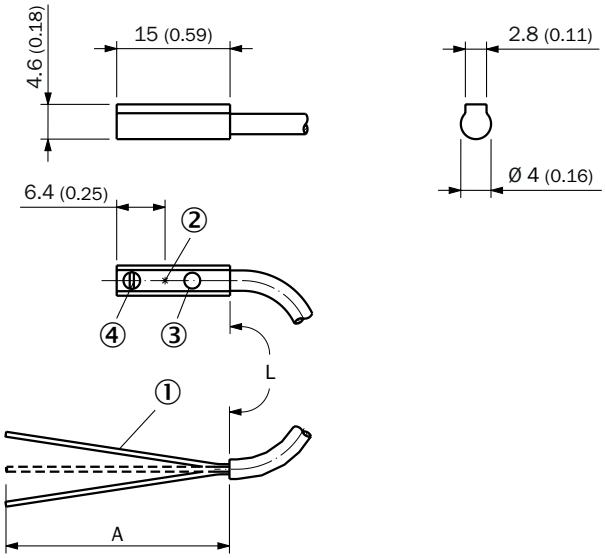


FUNCTIONAL PRINCIPLE OVERRUN DISTANCE



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



Dimensions in mm (inch)
① Connection
② Center of sensor element
③ Display LED
④ Fixing screw

Part no.	Type	L	A	Number of cores
1142930	MZCS-1Z8DS-KW0	0.5 m	31.5 mm	2
1142922	MZCS-1Z8PS-KW0	0.5 m	31.5 mm	3
1142926	MZCS-1Z8NS-KW0	0.5 m	31.5 mm	3
1158875	MZCS-1Z8DS-KUDS06	2 m	31.5 mm	2
1158873	MZCS-1Z8NS-KUDS04	2 m	31.5 mm	3
1158874	MZCS-1Z8PS-KUDS05	2 m	31.5 mm	3
1142931	MZCS-1Z8DS-KWA	3 m	31.5 mm	2
1142923	MZCS-1Z8PS-KWA	3 m	31.5 mm	3
1142927	MZCS-1Z8NS-KWA	3 m	31.5 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/1142930

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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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