

SICK.COM



DATA SHEET

# MZC1-2V2PS-KR0

MZC1  
Cylinder sensors

**SICK** Sensor Intelligence

## CYLINDER SENSORS

## MZC1-2V2PS-KR0

## ORDERING INFORMATION

Type	part no.
MZC1-2V2PS-KR0	1059737

Further device versions and accessories at [www.sick.com/MZC1](http://www.sick.com/MZC1)



## 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	23.7 mm
Switching output	PNP
Switching frequency	1,000 Hz
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68

## MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Power consumption	8 mA, without load
Voltage drop	≤ 2.5 V
Continuous current $I_a$	≤ 100 mA
Protection class	III
Response sensitivity, typ.	2.2 mT
Overrun distance, typ.	4 mm <sup>1)</sup>

<sup>1)</sup> Distance covered by the encoder magnet while the sensor outputs a switching signal.

<sup>2)</sup> Supply voltage  $U_a$  and constant ambient temperature  $T_a$ .

Hysteresis, typ.	≤ 0.8 mT
Reproducibility	≤ 0.1 mT <sup>2)</sup>
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 nut, drag chain use, 0.3 m
Connection type Detail	
Conductor cross section	0.09 mm <sup>2</sup>
Cable diameter	Ø 2.2 mm
Bending radius	With fixed installation > 2 x cable diameter For flexible use > 5 x cable diameter
Torsion force	± 270° / 0.1 m
Torsion cycles	300,000
Drag chain cycles	5,000,000
Drag chain parameters	Traversing speed max. 3 m/s Acceleration max. 10 m/s <sup>2</sup> Bending cycles in the drag chain min. 5 million
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Distance covered by the encoder magnet while the sensor outputs a switching signal.

<sup>2)</sup> Supply voltage  $U_s$  and constant ambient temperature  $T_a$ .

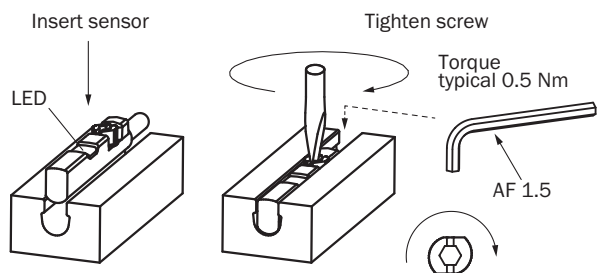
## SAFETY-RELATED PARAMETERS

MTTF <sub>D</sub>	2,461 years
DC <sub>avg</sub>	0 %
T <sub>M</sub> (mission time)	20 years

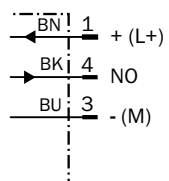
## CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

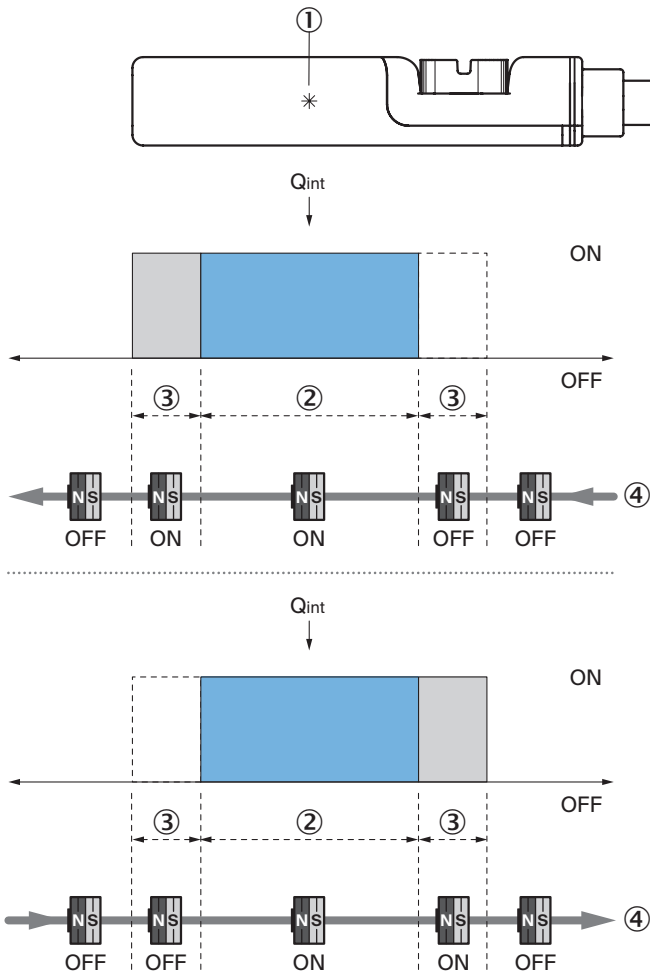
**INSTALLATION NOTE**



**CONNECTION DIAGRAM CD-002**



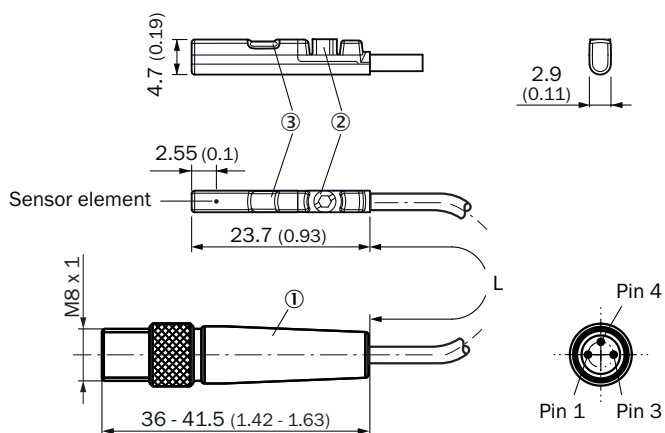
**FUNCTIONAL PRINCIPLE OVERRUN DISTANCE**



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 Fixing screw SW 1.5
- ③ Display LED

Part no.	Type	L	Number of cores
1092528	MZC1-2V2DS-KR0	0.3 m	2
1158201	MZC1-2V2PS-KRDS21	0.15 m	3
1059737	MZC1-2V2PS-KR0	0.3 m	3
1059742	MZC1-2V2NS-KR0	0.3 m	3
1059753	MZC1-4V3PS-KR0	0.3 m	3
1084696	MZC1-2V2PS-KR0S10	0.3 m	3
1119997	MZC1-2V2PS-KR0S19	0.3 m	3
1144625	MZC1-2V2PS-KR0S20	0.3 m	3
1145710	MZC1-4V3PO-KR0	0.3 m	3
1060129	MZC1-2V2PS-KRD	0.5 m	3
1068563	MZC1-2V2PS-KRDS02	1 m	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/1059737](http://www.sick.com/1059737)



SICK AG  
WALDKIRCH  
GERMANY  
SICK.COM

# 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

**SICK**  
Sensor Intelligence