

SICK.COM



DATA SHEET

# MZC1-2V2PS-KW0

MZC1  
Cylinder sensors

**SICK** Sensor Intelligence

## CYLINDER SENSORS

## MZC1-2V2PS-KW0

## ORDERING INFORMATION

Type	part no.
MZC1-2V2PS-KW0	1059740

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 <sup>1)</sup> IP69K

<sup>1)</sup> According to DIN 40050 (IP 69K).

## MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Power consumption	8 mA, without load
Voltage drop	≤ 2.5 V
Continuous current I <sub>a</sub>	≤ 100 mA
Protection class	III

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

<sup>2)</sup> Supply voltage U<sub>s</sub> and constant ambient temperature T<sub>a</sub>.

Response sensitivity, typ.	2.2 mT								
Overrun distance, typ.	4 mm <sup>1)</sup>								
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, 3-wire, stripped, 2 m								
Connection type Detail	<table border="0"> <tr> <td>Conductor cross section</td> <td>0.09 mm<sup>2</sup></td> </tr> <tr> <td>Cable diameter</td> <td>Ø 2.2 mm</td> </tr> <tr> <td>Bending radius</td> <td>With fixed installation &gt; 2 x cable diameter For flexible use &gt; 5 x cable diameter</td> </tr> <tr> <td>Cable outlet</td> <td>Axial</td> </tr> </table>	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	Cable outlet	Axial
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								
Cable outlet	Axial								
Material	<table border="0"> <tr> <td>Housing</td> <td>Plastic</td> </tr> <tr> <td>Cable</td> <td>PVC</td> </tr> </table>	Housing	Plastic	Cable	PVC				
Housing	Plastic								
Cable	PVC								
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<sub>g</sub> and constant ambient temperature Ta.

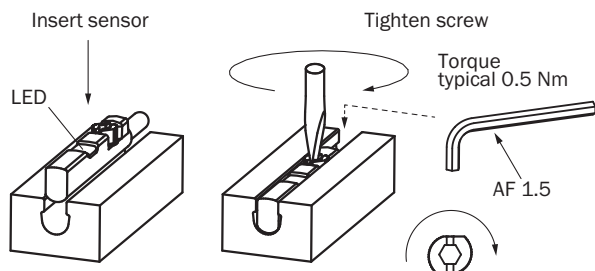
**SAFETY-RELATED PARAMETERS**

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

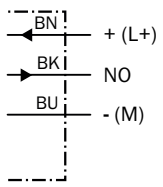
**CERTIFICATES**

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

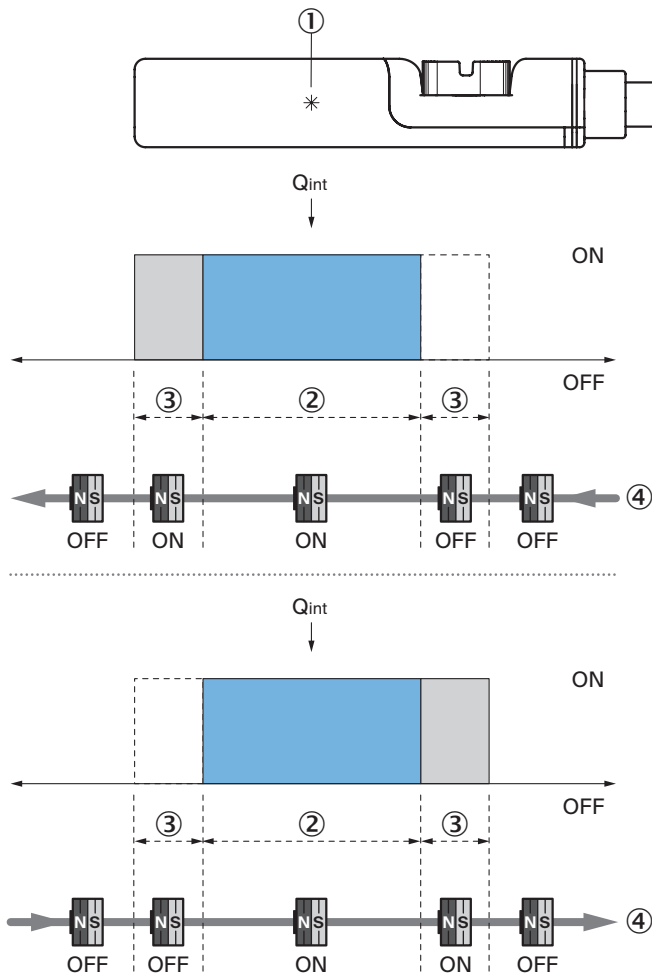
**INSTALLATION NOTE**



**CONNECTION DIAGRAM CD-001**



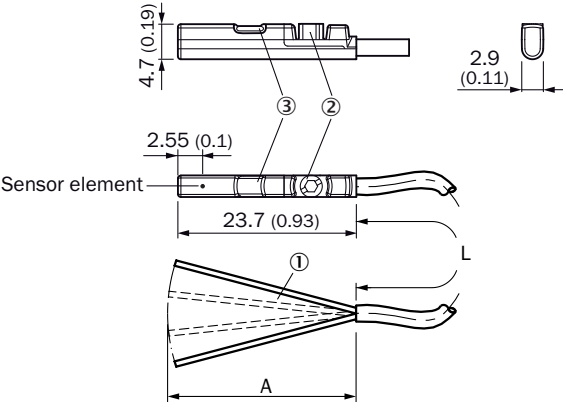
**FUNCTIONAL PRINCIPLE OVERRUN DISTANCE**



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 Fixing screw SW 1.5
- ③ Display LED

Part no.	Type	L	A	Number of cores
1059738	MZC1-2V2PS-KU0	2 m	31.5 mm	3
1059740	MZC1-2V2PS-KW0	2 m	31.5 mm	3
1059743	MZC1-2V2NS-KU0	2 m	31.5 mm	3
1059755	MZC1-4V3PS-KU0	2 m	31.5 mm	3
1059756	MZC1-4V3NS-KU0	2 m	31.5 mm	3
1063549	MZC1-4V3PO-KU0	2 m	31.5 mm	3
1086137	MZC1-2V2DS-KUA	3 m	31.5 mm	2
1059739	MZC1-2V2PS-KUB	5 m	31.5 mm	3
1059741	MZC1-2V2PS-KWB	5 m	31.5 mm	3
1068831	MZC1-2Z2PS-KUB	5 m	31.5 mm	3
1087248	MZC1-2V2DS-KUB	5 m	31.5 mm	2

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/1059740](http://www.sick.com/1059740)



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