



MZC1-2V2PS-KP0

MZC1

CYLINDER SENSORS

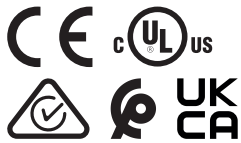
SICK
Sensor Intelligence.



Ordering information

Type	part no.
MZC1-2V2PS-KP0	1059735

Other models and accessories → 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 ¹⁾
Hysteresis, typ.	≤ 0.8 mT
Reproducibility	≤ 0.1 mT ²⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Teach-in	No

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

²⁾ Supply voltage U_B and constant ambient temperature T_a.

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	0.09 mm ²
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 ² Bending cycles in the drag chain min. 5 million
Cable outlet	Axial
Material	
Housing	Plastic
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 T_a .

Safety-related parameters

MTTF_D	2,461 years
DC_{avg}	0 %
T_M (mission time)	20 years

Certificates

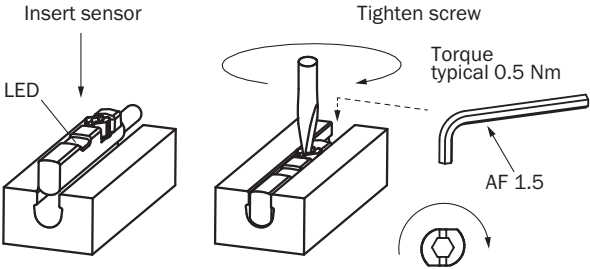
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

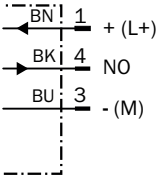
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ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
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UNSPSC 16.0901	39122230

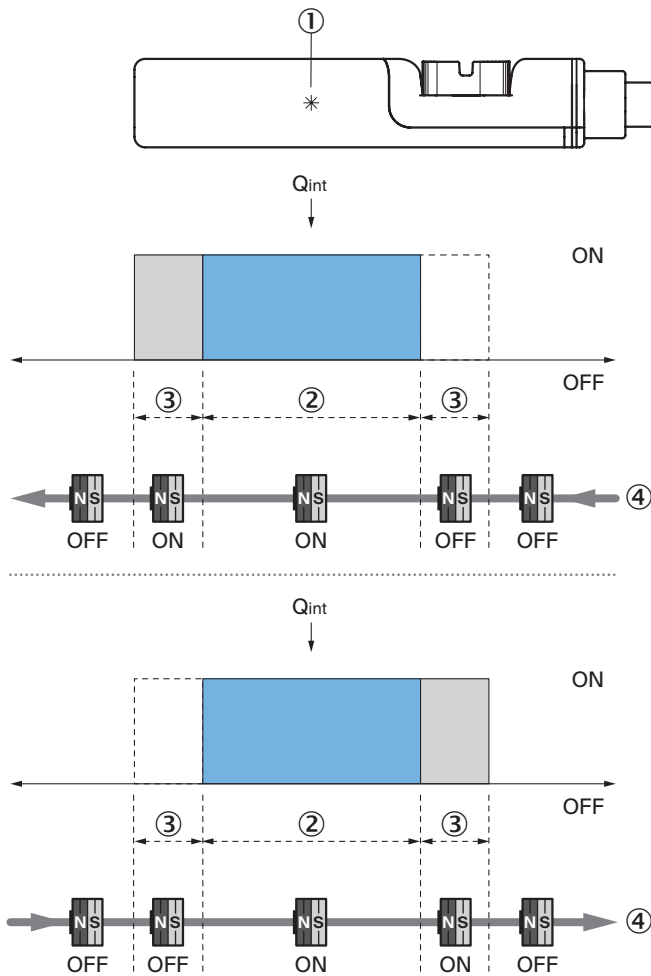
Installation note



Connection diagram Cd-002



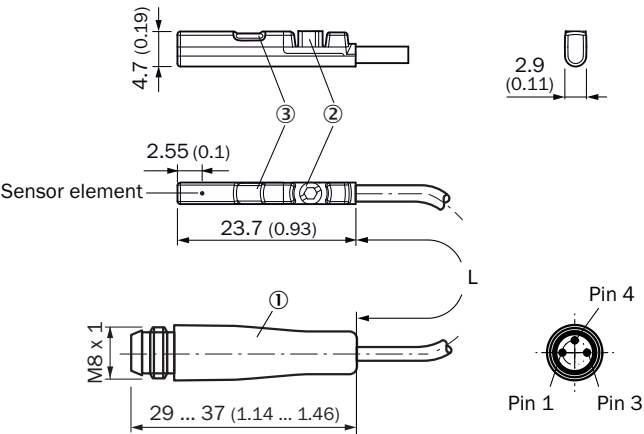
Functional principle Overrun distance



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 1.5
- ③ Display LED

Part no.	Type	L	Number of cores
1059735	MZC1-2V2PS-KP0	0.3 m	3
1059744	MZC1-2V2NS-KP0	0.3 m	3
1059752	MZC1-4V3PS-KP0	0.3 m	3
1059757	MZC1-4V3NS-KP0	0.3 m	3
1087247	MZC1-2V2DS-KP0	0.3 m	2

Recommended accessories

Other models and accessories → www.sick.com/MZC1

	Brief description	Type	part no.
Mounting systems			
	Description: Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-12	2077673
	Description: Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-16	2077672
	Description: Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-20	2077671
	Description: Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-25	2077670
	Description: Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-32	2077669
	Description: Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-40	2077668
	Description: Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-50	2077667
	Description: Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C Material: Plastic, Aluminum Details: Plastic, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC-63	2077666
	Description: Mounting bracket on round body cylinder with piston diameter of 1 mm ... 25 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Aluminum Details: Stainless steel, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC1-25	2077685
	Description: Mounting bracket on round body cylinder with piston diameter of 1 mm ... 130 mm, ambient temperature min -30 °C max 80 °C Material: Stainless steel, Aluminum Details: Stainless steel, Aluminum Packing unit: 1 piece Suitable for: C-slot	BEF-KHZ-RC1-130	2077686
	Description: Mounting bracket for integrated profile cylinder/tie-rod cylinder Material: Zinc diecast Details: Zinc diecast Items supplied: Mounting hardware included	BEF-KHZ-PC1	2076170

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	DOS-0803-G	7902077
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Description: Unshielded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm²	DOS-0803-W	7902078
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-020VA1XLEAX	2095860
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG8U13-020VA1XLEAX	2096165
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG8U13-050VA1XLEAX	2096166
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1XLEAX	2094794
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-050UA1XLEAX	2095586
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-C60UA1XLEAX	2145889
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-030UA1XLEAX	2145891
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-C60VA1XLEAX	2146368

SICK AT A GLANCE

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For us, that is “Sensor Intelligence.”

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