MZC1-4V3PS-KP0

MZC1

SENSORS FOR C-SLOT CYLINDERS

SICK
Sensor Intelligence.

MZC1-4V3PS-KP0 | MZC1
SENSORS FOR C-SLOT CYLINDERS

Ordering information

Type	Part no.
MZC1-4V3PS-KP0	1059752

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 [1]

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

Mechanics/electronics

Supply voltage	10 V DC … 30 V DC
Power consumption	8 mA [1]
Voltage drop	≤ 2.5 V
Continuous current I_a	≤ 100 mA
Protection class	III
Response sensitivity, typ.	4.25 mT
Overrun distance, typ.	7 mm
Hysteresis, typ.	≤ 0.8 mT
Reproducibility	≤ 0.1 mT [2]
Reverse polarity protection	✓
Short-circuit protection	✓
Power-up pulse protection	✓

[1] Without load.
[2] Ub and Ta constant.

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 mm²
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
Cable outlet	Axial
Material	
Housing	Plastic
Cable	PUR
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Without load.

[2] Ub and Ta constant.

Safety-related parameters

MTTF$_D$	1,428 years
DC$_{avg}$	0 %
T$_M$ (mission time)	20 years

Classifications

ECl@ss 5.0	27270104
ECl@ss 5.1.4	27270104
ECl@ss 6.0	27270104
ECl@ss 6.2	27270104
ECl@ss 7.0	27270104
ECl@ss 8.0	27270104
ECl@ss 8.1	27270104
ECl@ss 9.0	27270104
ECl@ss 10.0	27270104
ECl@ss 11.0	27270104
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note

Insert sensor
LED

Tighten screw
Torque typical 0.5 Nm
AF 1.5
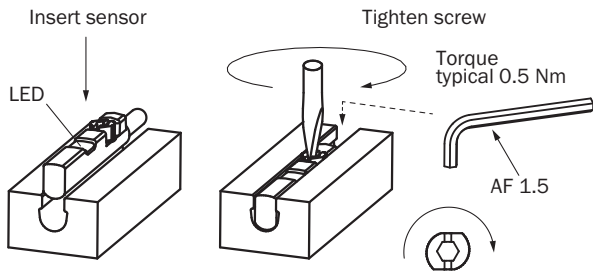
Connection diagram

Cd-002

BN	1	+ (L+)
BK	4	NO
BU	3	- (M)
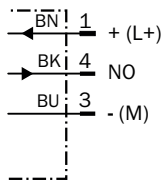
Dimensional drawing (Dimensions in mm (inch))

Cable with connector M8

4.7 (0.19)
2.9 (0.11)
③ ②
2.55 (0.1)
Sensor element
23.7 (0.93)
L
M8 x 1
①
29 ... 37 (1.14 ... 1.46)
Pin 4
Pin 1   Pin 3
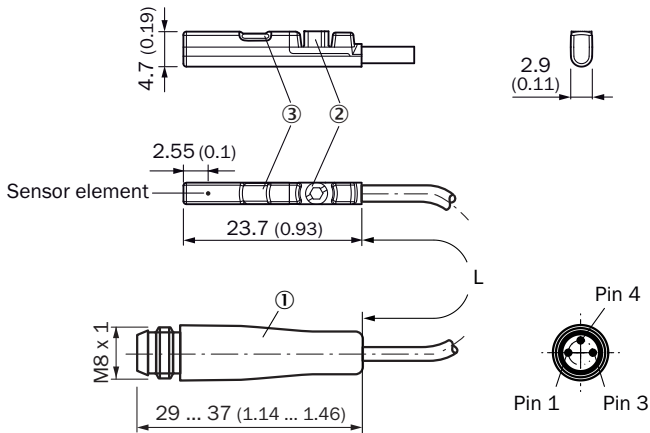
① Connection
② Fixing screw SW 1.5
③ Display LED

Part no.	Type	L	Number of cores
1059735	MZC1-2V2PS-KP0	300 mm	3
1059744	MZC1-2V2NS-KP0	300 mm	3
1059752	MZC1-4V3PS-KP0	300 mm	3
1059757	MZC1-4V3NS-KP0	300 mm	3
1087247	MZC1-2V2DS-KP0	300 mm	2

Recommended accessories

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

	Brief description	Type	Part no.
Brackets for cylinder sensors			
	• **Description:** Mounting bracket for integrated profile cylinder/tie-rod cylinder • **Material:** Zinc diecast • **Items supplied:** Mounting hardware included	BEF-KHZ-PC1	2076170
	• **Description:** Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C • **Material:** 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 • **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 • **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 • **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 • **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 • **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 • **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 • **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 ... 130 mm, ambient temperature min –30 °C max 80 °C • **Material:** Stainless steel, Aluminum • **Packing unit:** 1 piece • **Suitable for:** C-slot	BEF-KHZ-RC1-130	2077686
	• **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 • **Packing unit:** 1 piece • **Suitable for:** C-slot	BEF-KHZ-RC1-25	2077685

Brief description	Type	Part no.
Plug connectors and cables		
• **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF8U13-020VA1XLEAX	2095860
• **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF8U13-050VA1XLEAX	2095884
• **Connection type head A:** Female connector, M8, 3-pin, angled, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 3-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation	YG8U13-020UA1XLEAX	2094794
• **Connection type head A:** Female connector, M8, 3-pin, angled, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YG8U13-020VA1XLEAX	2096165
• **Connection type head A:** Female connector, M8, 3-pin, angled, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with oils and lubricants, Drag chain operation	YG8U13-050UA1XLEAX	2095586
• **Connection type head A:** Female connector, M8, 3-pin, angled, A-coded • **Connection type head B:** Flying leads • **Authorizations:** UL • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 3-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YG8U13-050VA1XLEAX	2096166
• **Connection type head A:** Female connector, M8, 3-pin, straight • **Connection type head B:** - • **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 • **Connection type head B:** - • **Description:** Unshielded • **Connection systems:** Solder connection • **Permitted cross-section:** ≤ 0.25 mm²	DOS-0803-W	7902078

SICK AT A GLANCE

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