



MZC1-4V3PS-KQ0

MZC1

SENSORS FOR C-SLOT CYLINDERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
MZC1-4V3PS-KQ0	1059754

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.	4.25 mT
Overrun distance, typ.	7 mm
Hysteresis, typ.	≤ 0.8 mT
Reproducibility	≤ 0.1 mT ¹⁾
Reverse polarity protection	Yes
Short-circuit protection	Yes
Status indicator LED	Yes
Power-up pulse protection	Yes
Ambient operating temperature	-30 °C ... +80 °C

¹⁾ Supply voltage U_B and constant ambient temperature T_a.

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 M12, 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⁾ Supply voltage U_B and constant ambient temperature T_a .

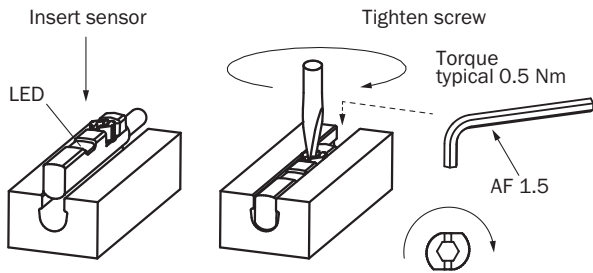
Safety-related parameters

MTTF_D	1,428 years
DC_{avg}	0 %
T_M (mission time)	20 years

Classifications

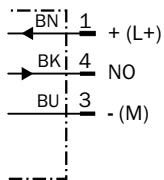
ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note



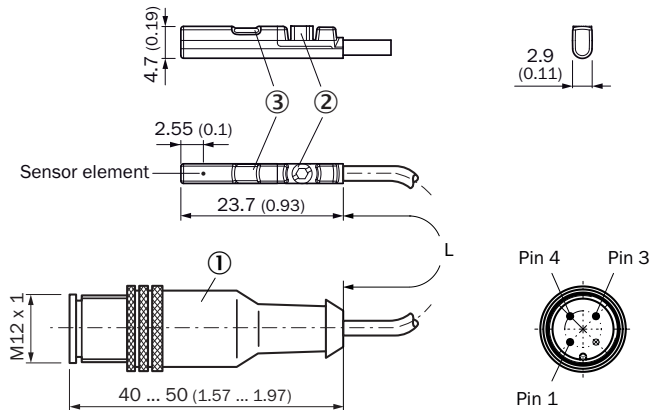
Connection diagram

Cd-002



Dimensional drawing (Dimensions in mm (inch))

Cable with M12 male connector



- ① Connection
- ② Fixing screw SW 1.5
- ③ Display LED

Part no.	Type	L	Number of cores
1059736	MZC1-2V2PS-KQ0	300 mm	3
1059754	MZC1-4V3PS-KQ0	300 mm	3
1077026	MZC1-2V2NS-KQ0	300 mm	3
1083652	MZC1-2V2PS-KQD	1 m	3

Recommended accessories

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

	Brief description	Type	Part no.
Brackets for cylinder sensors			
	Mounting bracket for integrated profile cylinder/tie-rod cylinder, zinc diecast, mounting hardware included	BEF-KHZ-PC1	2076170
	1 piece, Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-12	2077673
	1 piece, Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-16	2077672
	1 piece, Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-20	2077671
	1 piece, Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-25	2077670
	1 piece, Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-32	2077669
	1 piece, Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-40	2077668
	1 piece, Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-50	2077667
	1 piece, Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RC-63	2077666
	1 piece, Mounting bracket on round body cylinder with piston diameter of 1 mm ... 130 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Aluminum	BEF-KHZ-RC1-130	2077686
	1 piece, Mounting bracket on round body cylinder with piston diameter of 1 mm ... 25 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Aluminum	BEF-KHZ-RC1-25	2077685
Plug connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 3-pin, straight, 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: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A13-020UB1XLEAX	2095604
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 3-pin, straight, 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: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A13-050UB1XLEAX	2095605
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 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: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A13-020UB1XLEAX	2095752
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 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: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A13-050UB1XLEAX	2095753

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