



MZC1-4V3PS-KR0

MZC1

SENSORS FOR C-SLOT CYLINDERS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|----------------|----------|
| MZC1-4V3PS-KR0 | 1059753 |

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 M8, 3-pin, with knurled nuts, 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 .

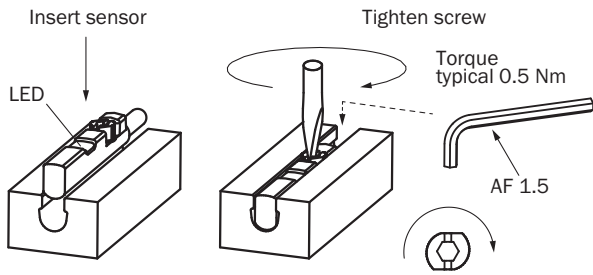
Safety-related parameters

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

Classifications

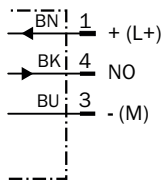
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270104 |
| ECLASS 5.1.4 | 27270104 |
| ECLASS 6.0 | 27270104 |
| ECLASS 6.2 | 27270104 |
| ECLASS 7.0 | 27270104 |
| ECLASS 8.0 | 27270104 |
| ECLASS 8.1 | 27270104 |
| ECLASS 9.0 | 27270104 |
| ECLASS 10.0 | 27270104 |
| ECLASS 11.0 | 27270104 |
| 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



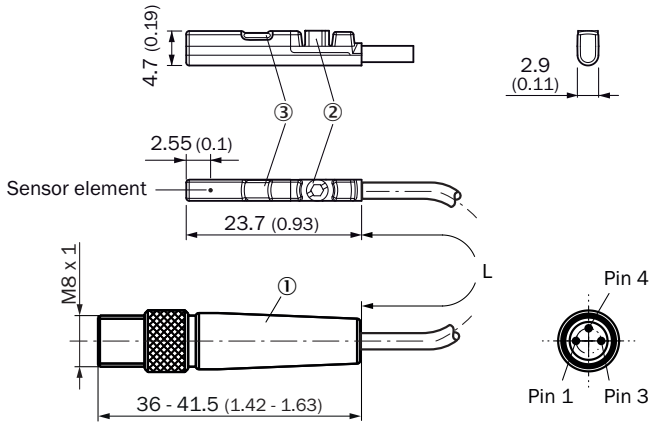
Connection diagram

Cd-002



Dimensional drawing (Dimensions in mm (inch))

Cable with connector M8, with knurled nuts



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






| Part no. | Type | L | Number of cores |
|----------|-------------------|--------|-----------------|
| 1092528 | MZC1-2V2DS-KR0 | 300 mm | 2 |
| 1059737 | MZC1-2V2PS-KR0 | 300 mm | 3 |
| 1059742 | MZC1-2V2NS-KR0 | 300 mm | 3 |
| 1059753 | MZC1-4V3PS-KR0 | 300 mm | 3 |
| 1084696 | MZC1-2V2PS-KROS10 | 300 mm | 3 |
| 1119997 | MZC1-2V2PS-KROS19 | 300 mm | 3 |
| 1144625 | MZC1-2V2PS-KROS20 | 300 mm | 3 |

| Part no. | Type | L | Number of cores |
|----------|----------------|--------|-----------------|
| 1145710 | MZC1-4V3PO-KRO | 300 mm | 3 |
| 1060129 | MZC1-2V2PS-KRD | 500 mm | 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 |
| Others | | | |
| | <ul style="list-style-type: none"> 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 |
| | <ul style="list-style-type: none"> 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 |
| | <ul style="list-style-type: none"> 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 | YF8U13-020VA1XLEAX | 2095860 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • 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 | YF8U13-050VA1XLEAX | 2095884 |
|  | <ul style="list-style-type: none"> • 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 | YG8U13-020VA1XLEAX | 2096165 |
|  | <ul style="list-style-type: none"> • 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 | YG8U13-050VA1XLEAX | 2096166 |
|  | <ul style="list-style-type: none"> • 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: Zones with oils and lubricants, Drag chain operation, Robot | YG8U13-020UA1XLEAX | 2094794 |
|  | <ul style="list-style-type: none"> • 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: Zones with oils and lubricants, Drag chain operation, Robot | YG8U13-050UA1XLEAX | 2095586 |

SICK AT A GLANCE

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