SICK.COM




DATA SHEET

# MZ2Q-CFLPSKQ0

MZ2Q-C
Cylinder sensors

SICK Sensor Intelligence




## CYLINDER SENSORS

# MZ2Q-CFLPSKQ0

### ORDERING INFORMATION

| Type | part no. |
|---|---|
| MZ2Q-CFLPSKQ0 | 1043697 |

Further device versions and accessories at www.sick.com/MZ2Q-C

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Cylinder type | C-slot |
| Preferred manufacturer slot | Festo |
| Detection zone | 0 mm ... 50 mm |
| Housing length | 19.5 mm |
| Switching output | 2 x PNP |
| Output function | 2 x N/O contact, IO-Link |
| Electrical wiring | DC 4-wire |
| Enclosure rating | IP67 [1] |
| Adjustment | |
| Teach-in control panel | Teaching in switching points 1 and 2 |
| IO-Link | Disabling teach-in pushbutton<br>Teaching in switching points 1 and 2<br>Tolerance band for switching points in 5 stages |
| IO-Link functions | Standard functions |

[1] According to EN 60529.

### MECHANICS/ELECTRONICS

| | |
|---|---|
| Detection zone | 0 mm ... 50 mm |
| Supply voltage | 12 V DC ... 30 V DC |
| Power consumption | Typ. 25 mA, without load |
| Voltage drop | ≤ 2.2 V |
| Continuous current $I_a$ | ≤ 100 mA |
| Protection class | III |
| Hysteresis, typ. | 1 mT |
| Reproducibility | ≤ 0.1 mT [1] |
| Reverse polarity protection | Yes |

[1] Supply voltage $U_B$ and constant ambient temperature Ta.

| | |
|---|---|
| Short-circuit protection | Yes |
| Status indicator LED | Yes |
| Teach-in | Yes |
| Power-up pulse protection | Yes |
| Ambient operating temperature | –20 °C ... +75 °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 plug, M12, 4-pin, 0.3 m |
| Connection type Detail | |
| Conductor cross section | 0.08 mm² |
| Cable diameter | Ø 2.6 mm |
| Bending radius | With fixed installation > 5 x cable diameter<br>For flexible use > 10 x cable diameter |
| Cable outlet | Axial |
| Control elements connection cable | |
| Connection type | Cable, 4-wire, 0.1 m |
| Control elements connection cable detail | |
| Conductor size | 0.08 mm² |
| Cable diameter | Ø 2.3 mm |
| Bending radius | With fixed installation > 5 x cable diameter<br>For flexible use > 10 x cable diameter |
| Cable outlet | Axial |
| Material | |
| Housing | Plastic |
| Cable | PUR |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

[1] Supply voltage $U_B$ and constant ambient temperature Ta.

## SAFETY-RELATED PARAMETERS

| | |
|---|---|
| $MTTF_D$ | 799 years |
| $DC_{avg}$ | 0% |
| $T_M$ (mission time) | 20 years |

## COMMUNICATION INTERFACE

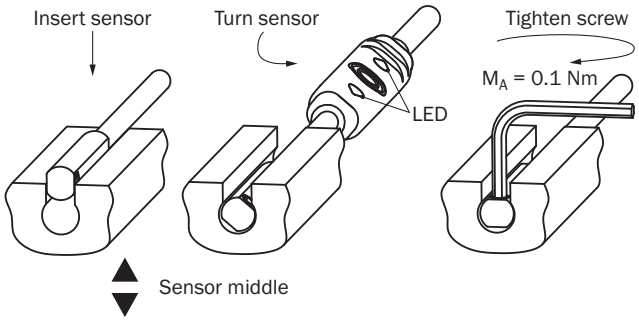
| | |
|---|---|
| Communication interface | IO-Link V1.0 |
| Communication Interface detail | COM2 (38,4 kBaud) |
| Cycle time | 2.3 ms |
| Process data length | 2 Bit |
| Process data structure | Bit 0 = switching signal $Q_{L1}$<br>Bit 1 = switching signal $Q_{L2}$<br>Bit 2 ... 7 = empty |

## CERTIFICATES

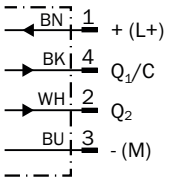
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |

| | |
|---|---|
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

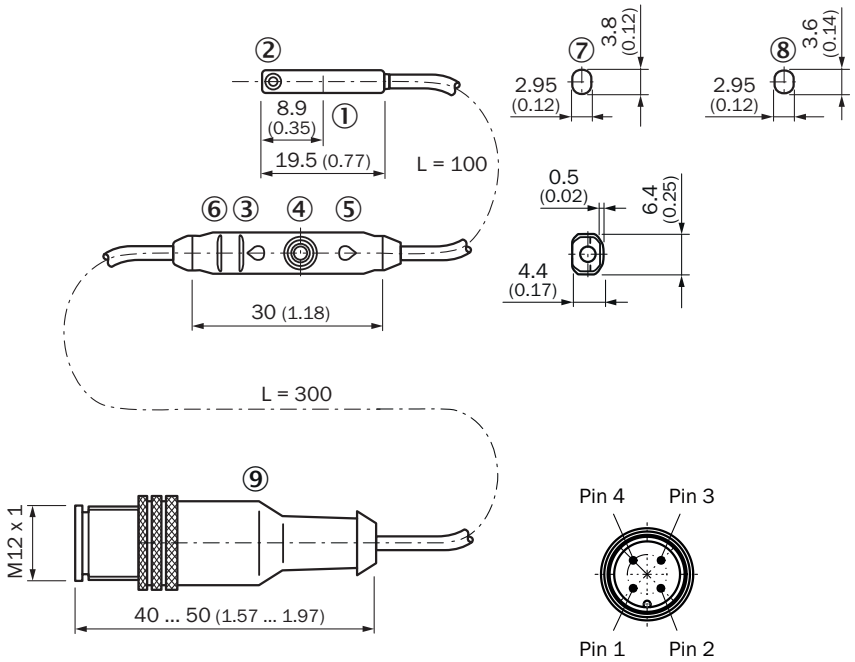
## INSTALLATION NOTE




## CONNECTION DIAGRAM CD-244



**DIMENSIONAL DRAWING CABLE WITH M12 MALE CONNECTOR**




Dimensions in mm (inch)
① Center of sensor element
② Fixing screw SW 1.3
③ Display LED
④ Teach-in button
⑤ Display LED
⑥ ribbing for cable ties
⑦ For SMC/ Bimba cylinder (MZ2Q-CSxxxx)
⑧ For festo cylinder (MZ2Q-CFxxxx)
⑨ Connection

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/1043697

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# SICK AT A GLANCE

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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

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