



# MZC1-2V2PSAKRD

MZC1 VIA

CYLINDER SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type           | part no. |
|----------------|----------|
| MZC1-2V2PSAKRD | 1089290  |

Other models and accessories → [www.sick.com/MZC1\\_VIA](http://www.sick.com/MZC1_VIA)



### Detailed technical data

#### Features

|                                    |   |
|------------------------------------|---|
| <b>Cylinder type</b>               | C-slot  |
| <b>Cylinder types with adapter</b> | SMC rail CDQ2<br>SMC rail ECDQ2<br>Round body cylinder<br>Profile cylinders and tie-rod cylinders   |
| <b>Housing length</b>              | 23.7 mm   |
| <b>Switching output</b>            | PNP   |
| <b>Switching frequency</b>         | 1,000 Hz  |
| <b>Output function</b>             | NO, IO-Link   |
| <b>Electrical wiring</b>           | DC 3-wire   |
| <b>Enclosure rating</b>            | IP68  |
| <b>Adjustment</b>                  |   |
|                                    | IO-Link NC or NOSwitch-on or switch-off delay (up to 1.6 seconds)   |
| <b>Special features</b>            | Visual installation aid/LED indicator (yellow)<br>Power LED (green)<br>Interior housing temperature (via IO-Link)<br>Counter function (via IO-Link) |

#### Mechanics/electronics

|   |                        |
|---|------------------------|
| <b>Supply voltage</b>                   | 10 V DC ... 30 V DC    |
| <b>Power consumption</b>                | 8 mA, without load     |
| <b>Voltage drop</b>                     | ≤ 2.5 V                |
| <b>Continuous current I<sub>a</sub></b> | ≤ 100 mA               |
| <b>Protection class</b>                 | III                    |
| <b>Response sensitivity, typ.</b>       | 2.2 mT                 |
| <b>Overrun distance, typ.</b>           | 4 mm                   |
| <b>Hysteresis, typ.</b>                 | ≤ 0.8 mT               |
| <b>Reproducibility</b>                  | ≤ 0.1 mT <sup>1)</sup> |
| <b>Reverse polarity protection</b>      | Yes                    |

<sup>1)</sup> Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.

|                                       |  |
|---------------------------------------|--|
| <b>Short-circuit protection</b>       | Yes  |
| <b>Status indicator LED</b>           | Yes  |
| <b>Teach-in</b>                       | No   |
| <b>Power-up pulse protection</b>      | Yes  |
| <b>Ambient operating temperature</b>  | -30 °C ... +80 °C  |
| <b>Shock and vibration resistance</b> | 30 g, 11 ms / 10 ... 55 Hz, 1 mm                                   |
| <b>EMC</b>                            | According to EN 60947-5-2  |
| <b>Connection type</b>                | Cable with plug M8, 3-pin, with knurled nut, drag chain use, 0.5 m |
| <b>Connection type Detail</b>         |  |
| Conductor cross section               | 0.09 mm <sup>2</sup>   |
| 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 <sup>2</sup>                              |
|                                       | Bending cycles in the drag chain min. 5 million                    |
| Cable outlet                          | Axial  |
| <b>Material</b>                       |  |
| Housing                               | Plastic  |
| Cable                                 | PUR  |
| <b>UL File No.</b>                    | NRKH.E181493 & NRKH7.E181493                                       |

<sup>1)</sup> Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

## Safety-related parameters

|                                     |             |
|-------------------------------------|-------------|
| <b>MTTF<sub>D</sub></b>             | 1,428 years |
| <b>DC<sub>avg</sub></b>             | 0 %         |
| <b>T<sub>M</sub> (mission time)</b> | 20 years    |

## Communication interface

|                                       |   |
|---------------------------------------|---|
| <b>Communication interface</b>        | IO-Link V1.0  |
| <b>Communication Interface detail</b> | COM2 (38,4 kBaud)   |
| <b>Cycle time</b>                     | 10.4 ms   |
| <b>Process data length</b>            | 8 Bit   |
| <b>Process data structure</b>         | Bit 0 = switching signal $Q_{L1}$<br>Bit 1 = switching signal $Q_{L2}$<br>Bit 2 ... 7 = empty |
| <b>VendorID</b>                       | 26  |
| <b>DeviceID HEX</b>                   | 0x80015D  |
| <b>DeviceID DEC</b>                   | 8388957   |

### Certificates

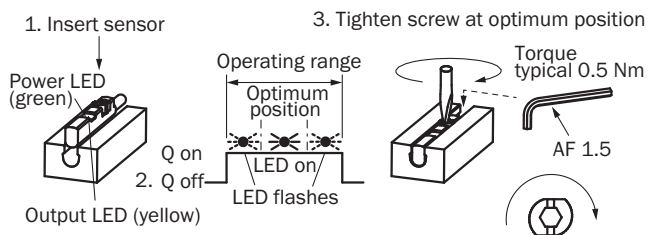
|   |   |
|---|---|
| <b>EU declaration of conformity</b>       | ✓ |
| <b>ACMA declaration of conformity</b>     | ✓ |
| <b>Moroccan declaration of conformity</b> | ✓ |
| <b>China-RoHS</b>                         | ✓ |

### Classifications

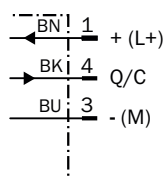
|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270104 |
| <b>ECLASS 5.1.4</b>   | 27270104 |
| <b>ECLASS 6.0</b>     | 27270104 |
| <b>ECLASS 6.2</b>     | 27270104 |
| <b>ECLASS 7.0</b>     | 27270104 |
| <b>ECLASS 8.0</b>     | 27270104 |
| <b>ECLASS 8.1</b>     | 27270104 |
| <b>ECLASS 9.0</b>     | 27270104 |
| <b>ECLASS 10.0</b>    | 27270104 |
| <b>ECLASS 11.0</b>    | 27270104 |
| <b>ECLASS 12.0</b>    | 27274301 |
| <b>ETIM 5.0</b>       | EC002544 |
| <b>ETIM 6.0</b>       | EC002544 |
| <b>ETIM 7.0</b>       | EC002544 |
| <b>ETIM 8.0</b>       | EC002544 |
| <b>UNSPSC 16.0901</b> | 39122230 |

### Installation note

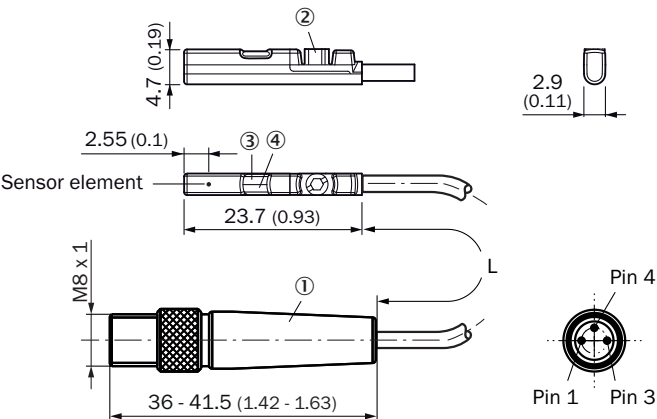
#### Visual installation aid (yellow LED)



### Connection diagram Cd-401



Dimensional drawing Cable with plug M8, with knurled nut



- Dimensions in mm (inch)
- ① Connection
  - ② Fixing screw SW 1.5
  - ③ visual installation aid/LED indicator (yellow)
  - ④ Power LED (green)

| Part no. | Type           | L     | Number of cores |
|----------|----------------|-------|-----------------|
| 1079047  | MZC1-2V2PSAKR0 | 0.3 m | 3               |
| 1089290  | MZC1-2V2PSAKRD | 0.5 m | 3               |

### Recommended accessories

Other models and accessories → [www.sick.com/MZC1\\_VIA](http://www.sick.com/MZC1_VIA)

|   | Brief description   | Type               | part no. |
|---|---|--------------------|----------|
| connectors and cables   |   |                    |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li> </ul>  | DOS-0803-G         | 7902077  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Solder connection</li> <li><b>Permitted cross-section:</b> ≤ 0.25 mm²</li> </ul>   | DOS-0803-W         | 7902078  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>  | YF8U13-020VA1XLEAX | 2095860  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>  | YF8U13-050VA1XLEAX | 2095884  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>  | YG8U13-020VA1XLEAX | 2096165  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>  | YG8U13-050VA1XLEAX | 2096166  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 3-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untamminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG8U13-020UA1XLEAX | 2094794  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 3-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untamminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG8U13-050UA1XLEAX | 2095586  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 3-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untamminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YG8U13-C60UA1XLEAX | 2145889  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 3 m, 3-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untamminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG8U13-030UA1XLEAX | 2145891  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 3-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untamminated zones</li> </ul>  | YF8U13-C60VA1XLEAX | 2146368  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)