



## Capacitive Proximity Sensors Rectangular housing, CQ28

CQ28-10NPP-KW1



**Model Name** > CQ28-10NPP-KW1  
**Part No.** > 6030132



#### At a glance

- PNP or NPN output versions are available
- Operating distance up to 10 mm
- High electromagnetic immunity
- Extra narrow rectangular housing (5.5 mm)
- Short-circuit reverse polarity and power-up pulse suppression protection
- IP 68 enclosure rating
- Programmable complementary output function as NO or NC
- Two LED status indicators for output and sensitivity

#### Your benefits

- Flat housing design saves installation space on the machine
- Time-saving installation on machine via zip tie or counter sunk screws
- Time-saving setup via control wire or a pushbutton
- High EMC immunity prevents false switching and increases throughput
- Non-contact level measurement, even through container or tank walls, which eliminates drilling holes and thus reduces installation time



#### Features

|                           |                                      |
|---------------------------|--------------------------------------|
| Housing:                  | Rectangular                          |
| Dimensions (W x H x D):   | 28 mm x 46 mm x 5.5 mm               |
| Sensing range Sn:         | 10 mm                                |
| Assured sensing range Sa: | 7.2 mm                               |
| Installation type:        | Non-flush                            |
| Sensitivity adjustment:   | Teach-in button<br>External Teach-in |
| Switching frequency:      | ± 10 Hz                              |
| Output type:              | PNP                                  |
| Output function:          | NC or NO                             |
| Electrical wiring:        | DC 4-wire                            |
| Enclosure rating:         | IP 68 <sup>1)</sup>                  |
| Connection type:          | Cable, 4-wire, 2 m <sup>2)</sup>     |

<sup>1)</sup> According to EN 60529 <sup>2)</sup> Do not bend below 0 °C

#### Mechanics/electronics

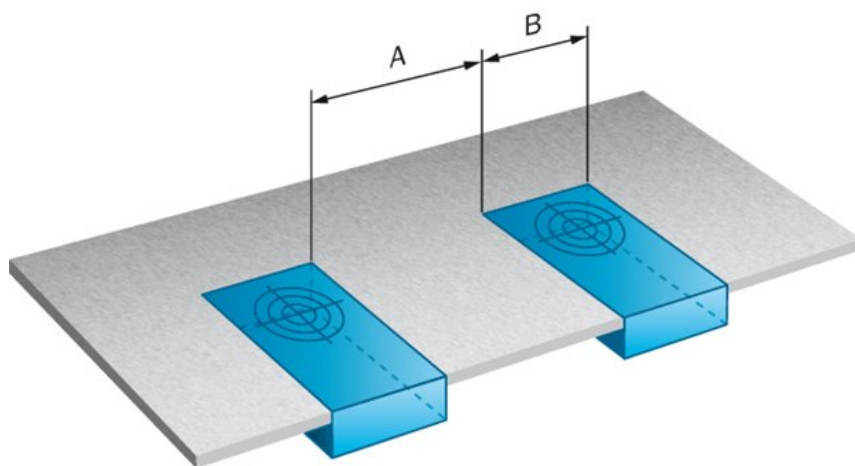
|                                 |                                         |
|---------------------------------|-----------------------------------------|
| Supply voltage:                 | 10 V DC ... 30 V DC                     |
| Ripple:                         | ≤ 10 %                                  |
| Voltage drop:                   | ≤ 2.5 V DC <sup>1)</sup>                |
| Power consumption:              | ≤ 12 mA <sup>2)</sup>                   |
| Time delay before availability: | ≤ 300 ms                                |
| Repeatability:                  | ≤ 5 % <sup>3) 4)</sup>                  |
| Temperature drift (% of Sr):    | ± 10 %                                  |
| EMC:                            | According to EN 60947-5-2 <sup>5)</sup> |
| Output current I <sub>a</sub> : | ≤ 200 mA                                |
| Cable material:                 | PVC                                     |
| Conductor cross-section:        | 0.14 mm <sup>2</sup>                    |
| Short-circuit protection:       | ✓                                       |
| Reverse polarity protection:    | ✓                                       |
| Shock/vibration:                | 30 g, 11 ms/10 ... 55 Hz, 1 mm          |
| Ambient operating temperature:  | -20 °C ... 85 °C                        |
| Ambient storage temperature:    | -40 °C ... 85 °C                        |
| Housing material:               | PBT                                     |

<sup>1)</sup> At I<sub>a</sub> max <sup>2)</sup> Without load <sup>3)</sup> Of Sr <sup>4)</sup> U<sub>b</sub> and T<sub>a</sub> constant <sup>5)</sup> In EMC critical applications, conducted interference levels may lie in the frequency range of the oscillator. This can cause changes to the output signal.(see operating instructions)

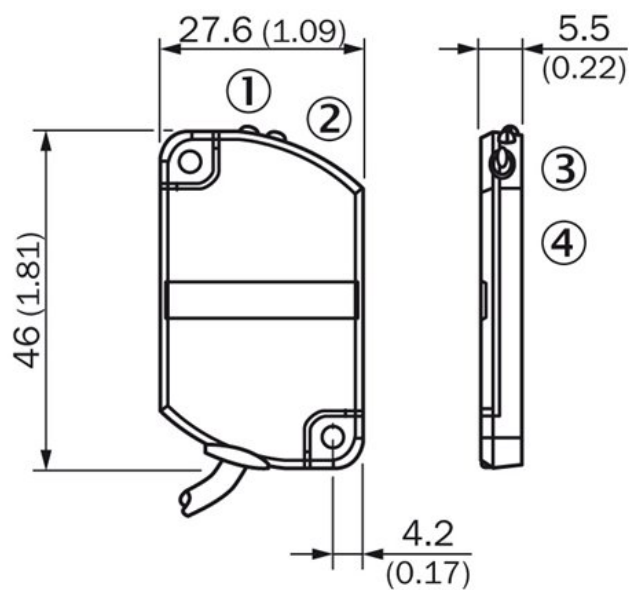
## Reduction factors

|        |                                                |
|--------|------------------------------------------------|
| Note:  | The values are reference values which may vary |
| Metal: | 1                                              |
| Water: | 1                                              |
| PVC:   | Ca. 0.4                                        |
| Oil:   | Ca. 0.25                                       |

## Installation note



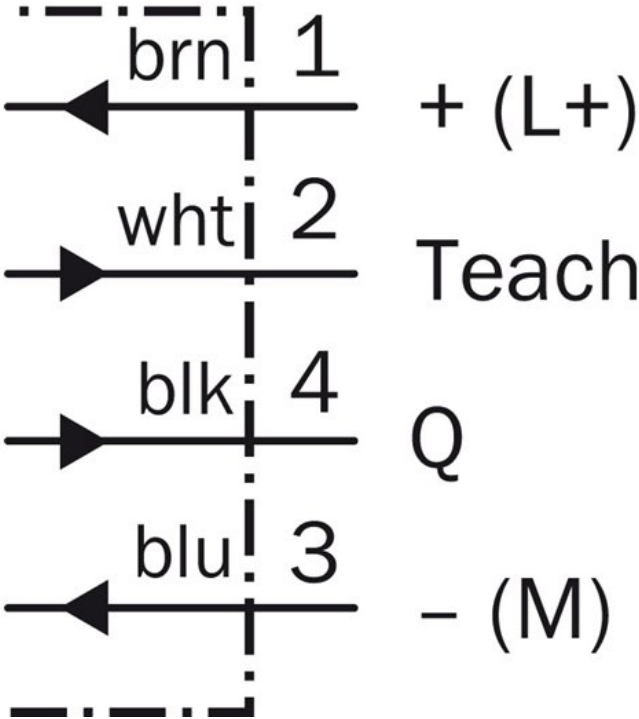
## Dimensional drawing



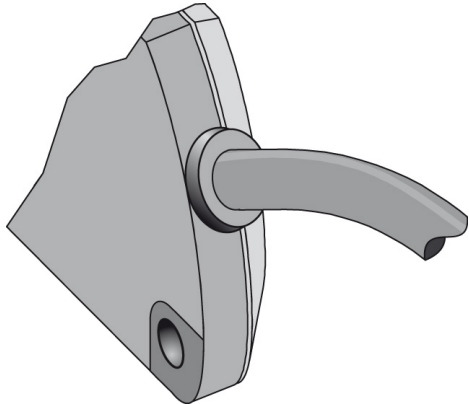
- |1| LED indicator green
- |2| LED indicator yellow
- |3| Teach-in button
- |4| Sensing face

All dimensions in mm (inch)

Connection diagram



Connection type



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