



## Capacitive Proximity Sensors Rectangular housing, CQ28

CQ28-10NNP-KW1S03



**Model Name** > CQ28-10NNP-KW1S03  
**Part No.** > 6049010



**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 External Teach-in
Switching frequency:	10 Hz
Output type:	NPN
Output function:	NC or NO
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 68 <sup>1)</sup>
Connection type:	Cable with connector M8, 4-pin, 0.2 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
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

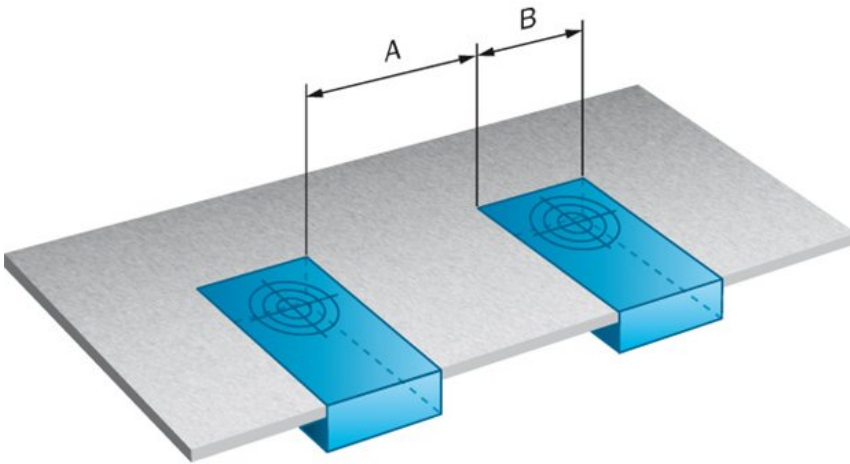
<sup>1)</sup> At I<sub>a</sub> max <sup>2)</sup> Without load <sup>3)</sup> Of Sr <sup>4)</sup> U<sub>b</sub> and T<sub>a</sub> constant <sup>5)</sup> In EMC critical applications, conducted interference levels may lie in the frequency range of the oscillator. This can cause changes to the output signal.(see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

### Reduction factors

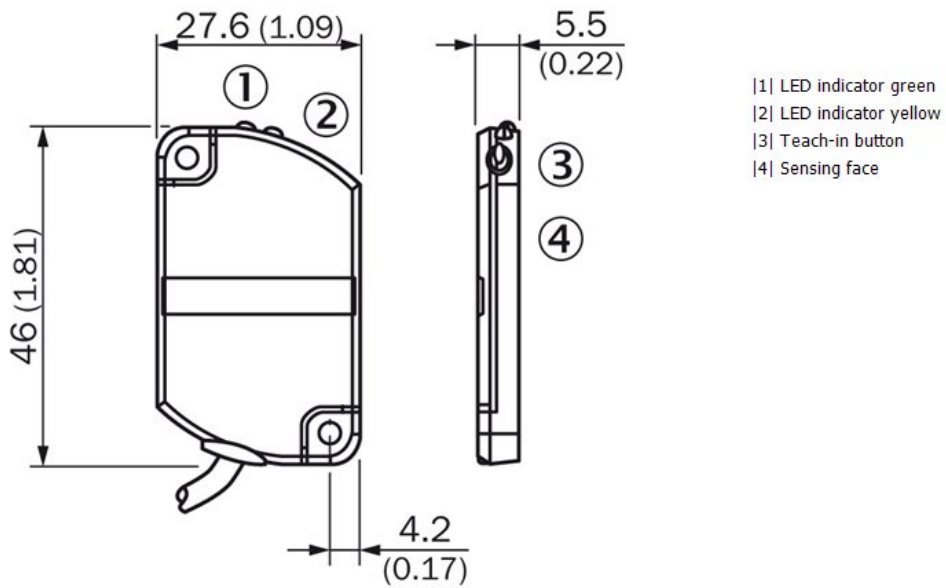
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Note:	The values are reference values which may vary
Metal:	1
Water:	1
PVC:	Ca. 0.4
Oil:	Ca. 0.25

## Installation note



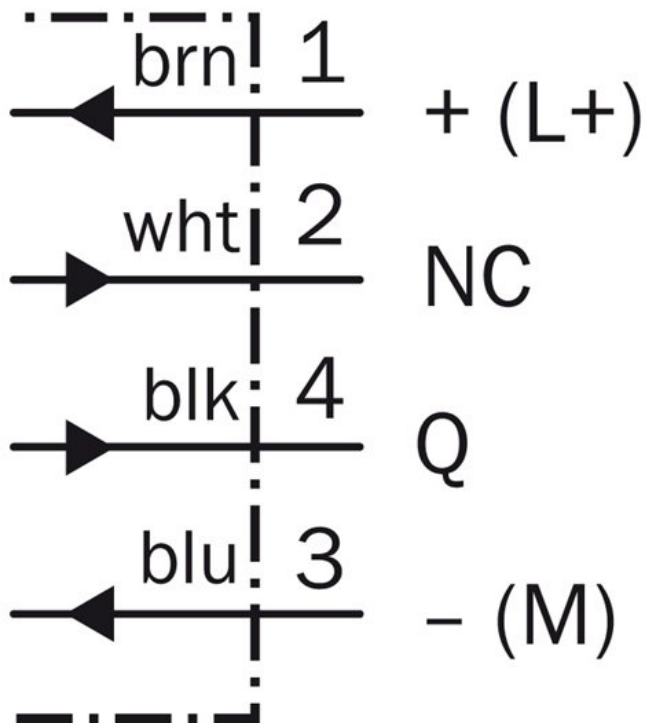
## Dimensional drawing



All dimensions in mm (inch)

Connection diagram

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