



# CQ28-10NPP-KW1S05

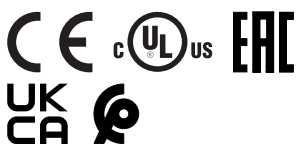
CQ

CAPACITIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
CQ28-10NPP-KW1S05	6049285

Other models and accessories → [www.sick.com/CQ](http://www.sick.com/CQ)

### Detailed technical data

#### Features

<b>Housing</b>	Rectangular
<b>Dimensions (W x H x D)</b>	28 mm x 46 mm x 5.5 mm
<b>Sensing range <math>S_n</math></b>	1 mm ... 10 mm
<b>Safe sensing range <math>S_a</math></b>	7.2 mm
<b>Installation type</b>	Non-flush
<b>Switching frequency</b>	10 Hz
<b>Connection type</b>	Cable with connector M8, 3-pin, 0.3 m <sup>1)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	NC or NO
<b>Output characteristic</b>	Programmable
<b>Electrical wiring</b>	DC 3-wire
<b>Adjustment</b>	Single teach-in button (Sensitivity)
<b>Enclosure rating</b>	IP68 <sup>2)</sup>

<sup>1)</sup> Do not bend below 0 °C.

<sup>2)</sup> According to EN 60529.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	≤ 10 %
<b>Voltage drop</b>	≤ 2.5 V DC <sup>1)</sup>
<b>Current consumption</b>	12 mA <sup>2)</sup>
<b>Time delay before availability</b>	≤ 300 ms

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup> Of  $S_r$ .

<sup>4)</sup> Supply voltage  $U_b$  and constant ambient temperature  $T_a$ .

<sup>5)</sup> In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

<b>Reproducibility</b>	≤ 5 % <sup>3) 4)</sup>
<b>Temperature drift (of S<sub>r</sub>)</b>	± 10 %
<b>EMC</b>	According to EN 60947-5-2 <sup>5)</sup>
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA
<b>Cable material</b>	PVC
<b>Conductor size</b>	0.14 mm <sup>2</sup>
<b>Short-circuit protection</b>	✓
<b>Reverse polarity protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	-20 °C ... +85 °C
<b>Ambient temperature, storage</b>	-40 °C ... +85 °C
<b>Housing material</b>	Plastic, PBT
<b>Sensing face material</b>	Plastic

1) At I<sub>a</sub> max.

2) Without load.

3) Of S<sub>r</sub>.

4) Supply voltage U<sub>b</sub> and constant ambient temperature T<sub>a</sub>.

5) In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	1,112 years
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	20 years

### Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>Metal</b>	1
<b>Water</b>	1
<b>PVC</b>	Approx. 0.4
<b>Oil</b>	Approx. 0.25
<b>Glass</b>	0.6
<b>Ceramics</b>	0.5
<b>Alcohol</b>	0.7
<b>Wood</b>	0.2 ... 0.7

### Installation note

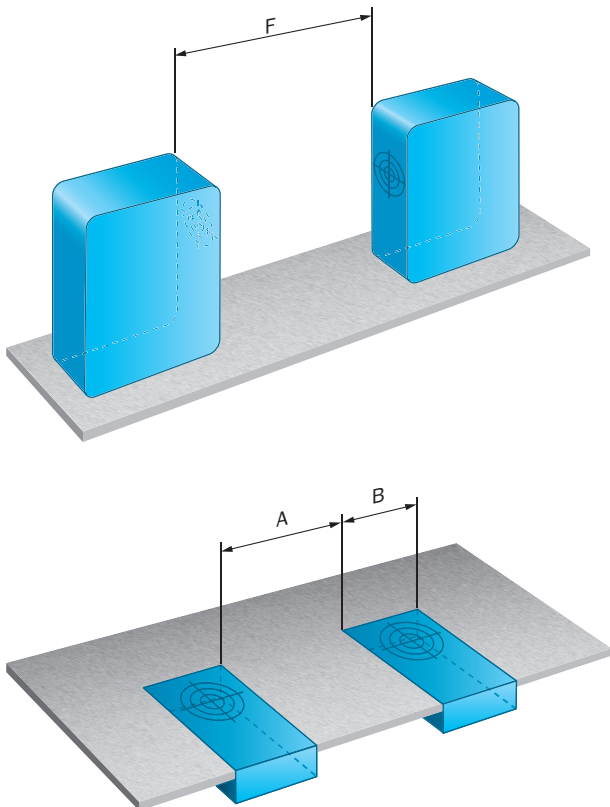
<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	27.6 mm
<b>B</b>	27.6 mm
<b>F</b>	6 x S <sub>n</sub> (max. 60 mm)

### Classifications

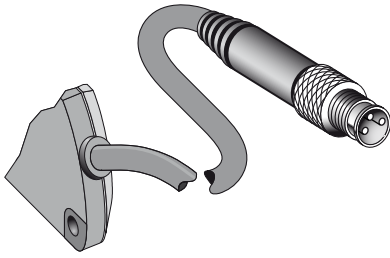
<b>eCl@ss 5.0</b>	27270102
<b>eCl@ss 5.1.4</b>	27270102

<b>eCl@ss 6.0</b>	27270102
<b>eCl@ss 6.2</b>	27270102
<b>eCl@ss 7.0</b>	27270102
<b>eCl@ss 8.0</b>	27270102
<b>eCl@ss 8.1</b>	27270102
<b>eCl@ss 9.0</b>	27270102
<b>eCl@ss 10.0</b>	27270102
<b>eCl@ss 11.0</b>	27270102
<b>eCl@ss 12.0</b>	27274201
<b>ETIM 5.0</b>	EC002715
<b>ETIM 6.0</b>	EC002715
<b>ETIM 7.0</b>	EC002715
<b>ETIM 8.0</b>	EC002715
<b>UNSPSC 16.0901</b>	39122230

Installation note

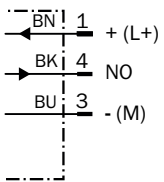


### Connection type

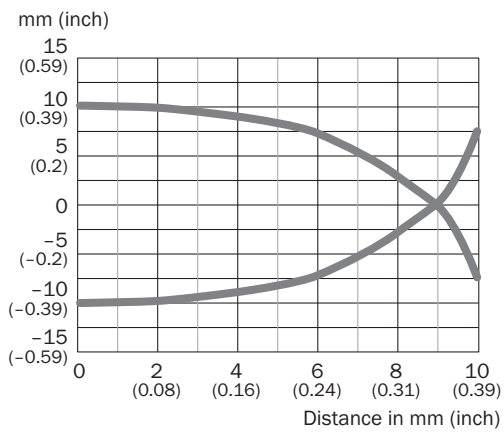


### Connection diagram

Cd-002

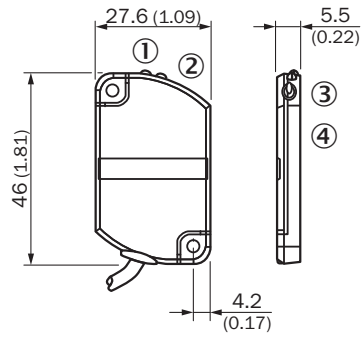


### Response diagram



**Dimensional drawing** (Dimensions in mm (inch))

CQ28, cable with male connector



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

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