



# CQ35-25NPP-KW1

CQ

CAPACITIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type           | Part no. |
|----------------|----------|
| CQ35-25NNP-KW1 | 6021463  |

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>              | 35 mm x 69.5 mm x 15 mm                        |
| <b>Sensing range <math>S_n</math></b>      | 4 mm ... 25 mm                                 |
| <b>Safe sensing range <math>S_a</math></b> | 18 mm  |
| <b>Installation type</b>                   | Non-flush                                      |
| <b>Switching frequency</b>                 | 50 Hz  |
| <b>Connection type</b>                     | Cable, 4-wire, 2 m <sup>1)</sup>               |
| <b>Switching output</b>                    | NPN  |
| <b>Output function</b>                     | Complementary                                  |
| <b>Electrical wiring</b>                   | DC 4-wire                                      |
| <b>Adjustment</b>                          | Potentiometer, 270° (Sensitivity)              |
| <b>Enclosure rating</b>                    | IP67 <sup>2)</sup>                             |
| <b>Items supplied</b>                      | Screwdriver for potentiometer adjustment (1 x) |

<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 ... 36 V DC  |
| <b>Ripple</b>         | ≤ 10 % <sup>1)</sup> |

<sup>1)</sup> Of  $U_b$ .

<sup>2)</sup> At  $I_a$  max.

<sup>3)</sup> Without load.

<sup>4)</sup> Of  $S_r$ .

<sup>5)</sup>  $U_b$  and  $T_a$  constant.

<sup>6)</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>Voltage drop</b>                         | ≤ 2.5 V DC <sup>2)</sup>                |
| <b>Current consumption</b>                  | 10 mA <sup>3)</sup>                     |
| <b>Time delay before availability</b>       | ≤ 100 ms                                |
| <b>Hysteresis</b>                           | 4 % ... 20 %                            |
| <b>Reproducibility</b>                      | ≤ 5 % <sup>4) 5)</sup>                  |
| <b>Temperature drift (of S<sub>r</sub>)</b> | ± 10 %                                  |
| <b>EMC</b>                                  | According to EN 60947-5-2 <sup>6)</sup> |
| <b>Continuous current I<sub>a</sub></b>     | ≤ 200 mA                                |
| <b>Cable material</b>                       | PVC                                     |
| <b>Conductor size</b>                       | 0.34 mm <sup>2</sup>                    |
| <b>Short-circuit protection</b>             | ✓                                       |
| <b>Reverse polarity protection</b>          | ✓                                       |
| <b>Power-up pulse protection</b>            | ✓                                       |
| <b>Shock and vibration resistance</b>       | 30 g, 11 ms / 10 ... 55 Hz, 1 mm        |
| <b>Ambient operating temperature</b>        | -25 °C ... +75 °C                       |
| <b>Housing material</b>                     | Plastic, PC                             |
| <b>Sensing face material</b>                | Plastic                                 |
| <b>UL File No.</b>                          | NRKH.E191603                            |

1) Of U<sub>b</sub>.

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

3) Without load.

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

5) U<sub>b</sub> and T<sub>a</sub> constant.

6) 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>             | 897 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

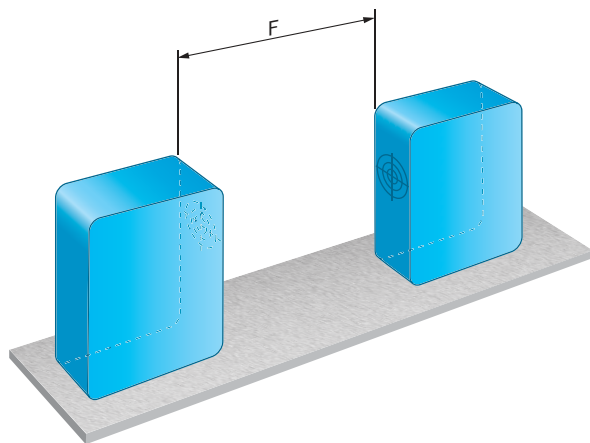
|               |                                       |
|---------------|---------------------------------------|
| <b>Remark</b> | Associated graphic see "Installation" |
| <b>A</b>      | 35 mm                                 |

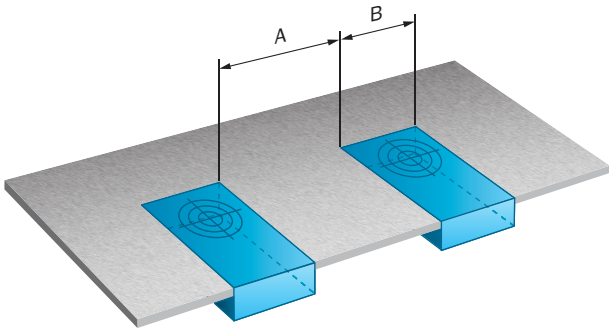
|          |                                  |
|----------|----------------------------------|
| <b>B</b> | 35 mm                            |
| <b>F</b> | 6 x S <sub>n</sub> (max. 150 mm) |

Classifications

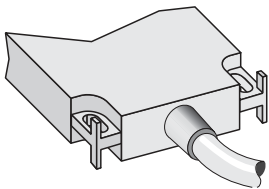
|                       |          |
|-----------------------|----------|
| <b>eCl@ss 5.0</b>     | 27270102 |
| <b>eCl@ss 5.1.4</b>   | 27270102 |
| <b>eCl@ss 6.0</b>     | 27270102 |
| <b>eCl@ss 6.2</b>     | 27270102 |
| <b>eCl@ss 7.0</b>     | 27270102 |
| <b>eCl@ss 8.0</b>     | 27270102 |
| <b>eCl@ss 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



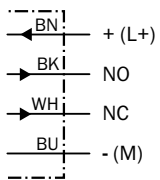


### Connection type



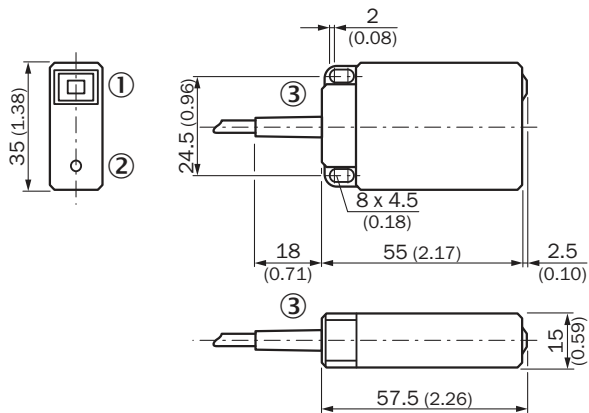
### Connection diagram

Cd-005



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

CQ35, cable



- ① Display LED
- ② Potentiometer
- ③ Connection

## SICK AT A GLANCE

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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:

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