

# CQ35-25NNP-KC1

CQ

CAPACITIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.

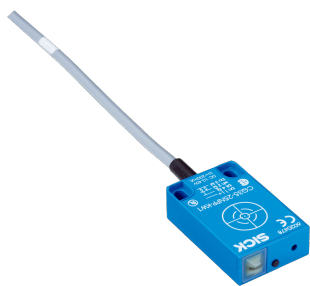
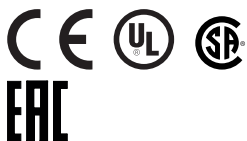


Illustration may differ



## Ordering information

Type	Part no.
CQ35-25NNP-KC1	6021464

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>	Male connector M12, 4-pin
<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>1)</sup>

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

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

<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>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>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>Items supplied</b>	Screwdriver for potentiometer adjustment (1 x)
<b>UL File No.</b>	NRKH.E191603

1) Of Ub.

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

3) Without load.

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

5) Ub and Ta 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

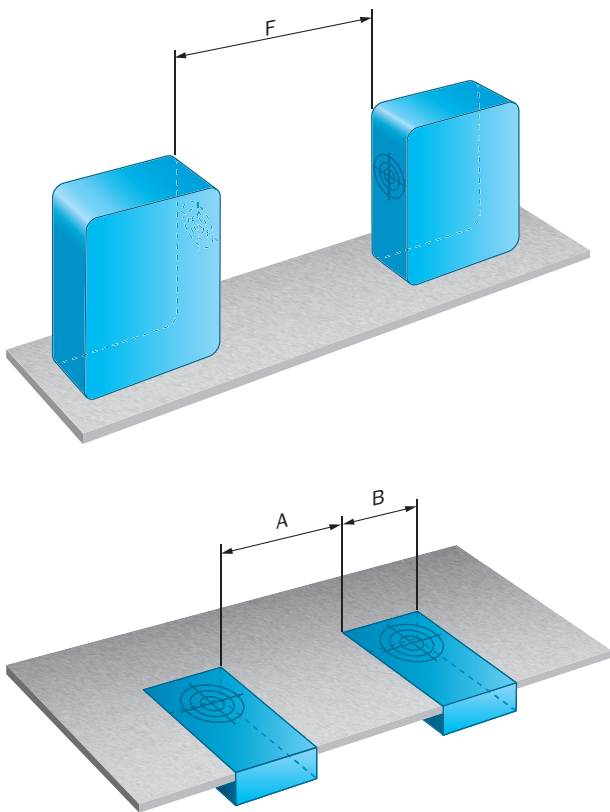
<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	35 mm
<b>B</b>	35 mm

### Classifications

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

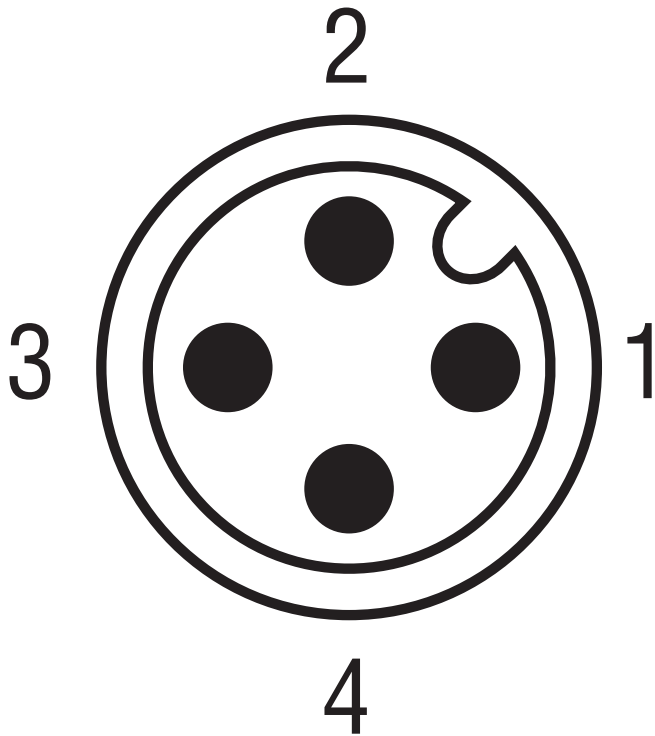
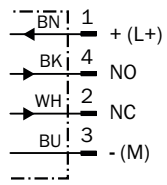
<b>ECl@ss 6.0</b>	27270102
<b>ECl@ss 6.2</b>	27270102
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<b>ECl@ss 8.0</b>	27270102
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<b>ECl@ss 9.0</b>	27270102
<b>ECl@ss 10.0</b>	27270102
<b>ECl@ss 11.0</b>	27270102
<b>ETIM 5.0</b>	EC002715
<b>ETIM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

Installation note



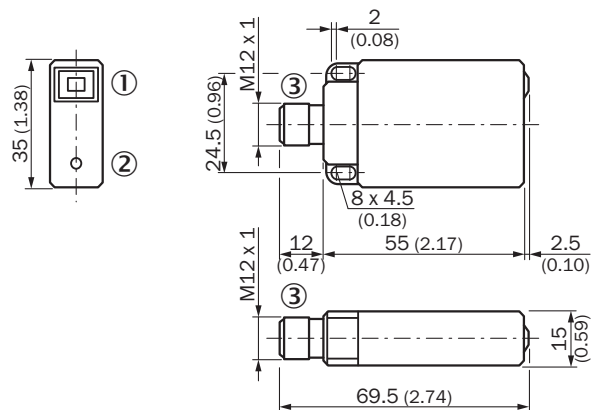
Connection diagram

Cd-006



Dimensional drawing (Dimensions in mm (inch))

CQ35, connector



- ① Display LED
- ② Potentiometer
- ③ Connection

### Recommended accessories

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

	Brief description	Type	Part no.
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A14-020UB3XLEAX	2095607
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14-020VB3XLEAX	2096234
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A14-050UB3XLEAX	2095608
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG2A14-020UB3XLEAX	2095766
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A14-020VB3XLEAX	2095895
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG2A14-050UB3XLEAX	2095767
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14-050VB3XLEAX	2095897
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303

## 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)