



## Capacitive Proximity Sensors Cylindrical threaded housing, CM30

CM30-25NPP-KC1



**Model Name** > **CM30-25NPP-KC1**  
**Part No.** > **6020477**



#### At a glance

- M30 - cylindrical housing
- Adjustable sensing range from 2 to 16 mm shielded and 4 to 25 mm unshielded
- Best-in-class electromagnetic compatibility
- Short-circuit, reverse polarity, and power-up pulse suppression protection
- LED status indicator
- Sensitivity control via potentiometer
- IP 67 enclosure rating
- Complementary output function

#### Your benefits

- Reliably detect objects at a long sensing distance up to 25 mm (non-flush)
- Quick and easy adjustment via potentiometer saves installation and setup time
- Simple, cost-saving detection alternative to photoelectric and inductive sensors in applications such as detecting product in a sealed box, container or tank
- High EMC immunity prevents false switching, reduces material loss and increases throughput
- High shock and vibration resistance increases sensor life and reduces maintenance costs



#### Features

|                           |                      |
|---------------------------|----------------------|
| Housing:                  | Cylindrical          |
| Thread size:              | M30 x 1.5            |
| Sensing range Sn:         | 25 mm                |
| Assured sensing range Sa: | 18 mm                |
| Installation type:        | Non-flush            |
| Sensitivity adjustment:   | Potentiometer        |
| Switching frequency:      | 50 Hz                |
| Output type:              | PNP                  |
| Output function:          | Complementary        |
| Electrical wiring:        | DC 4-wire            |
| Enclosure rating:         | IP 67 <sup>1)</sup>  |
| Connection type:          | Connector M12, 4-pin |

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

#### Mechanics/electronics

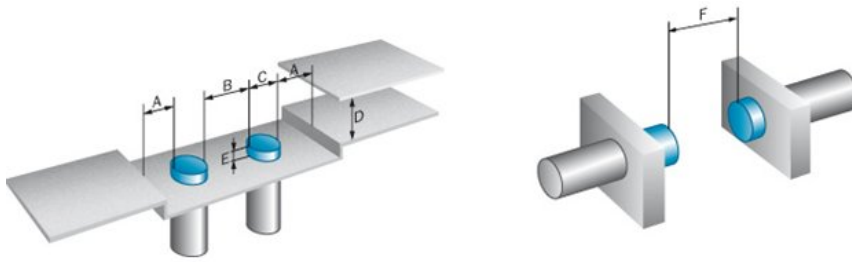
|                                 |                                         |
|---------------------------------|-----------------------------------------|
| Supply voltage:                 | 10 V DC ... 40 V DC                     |
| Ripple:                         | $\leq 10\%$ <sup>1)</sup>               |
| Voltage drop:                   | $\leq 2.5\text{ V DC}$ <sup>2)</sup>    |
| Power consumption:              | $\leq 10\text{ mA}$ <sup>3)</sup>       |
| Time delay before availability: | $\leq 100\text{ ms}$                    |
| Hysteresis:                     | $4\% \dots 20\%$                        |
| Repeatability:                  | $\leq 5\%$ <sup>4)</sup> <sup>5)</sup>  |
| Temperature drift (% of Sr):    | $\pm 10\%$                              |
| EMC:                            | According to EN 60947-5-2 <sup>6)</sup> |
| Output current Ia:              | $\leq 200\text{ mA}$                    |
| Short-circuit protection:       | ✓                                       |
| Reverse polarity protection:    | ✓                                       |
| Power-up pulse protection:      | ✓                                       |
| Shock/vibration:                | 30 g, 11 ms/10 ... 55 Hz, 1 mm          |
| Ambient operating temperature:  | -25 °C ... 80 °C                        |
| Housing material:               | PBT                                     |
| Housing length:                 | 91 mm                                   |
| Thread length:                  | 50 mm                                   |
| Tightening torque, max.:        | 7.5 Nm                                  |

<sup>1)</sup> Of Ub <sup>2)</sup> At I<sub>a</sub> max <sup>3)</sup> Without load <sup>4)</sup> Of Sr <sup>5)</sup> Ub and Ta constant <sup>6)</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)

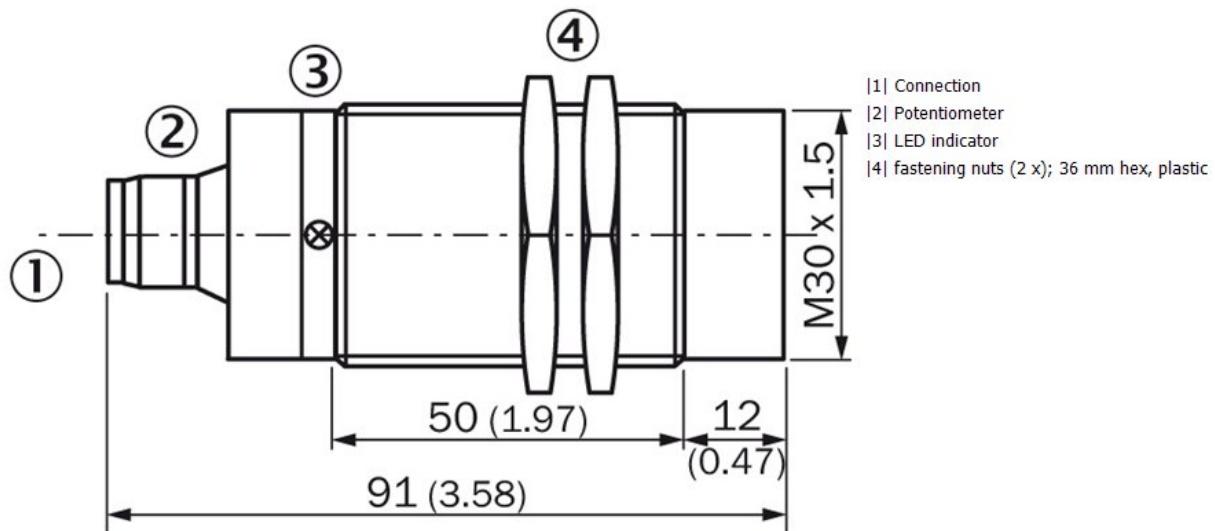
#### Reduction factors

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

## Installation note

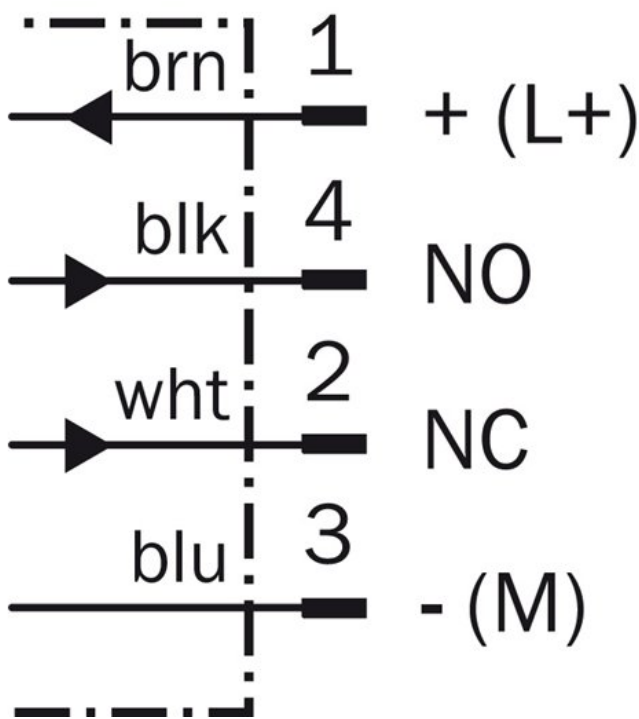


## Dimensional drawing

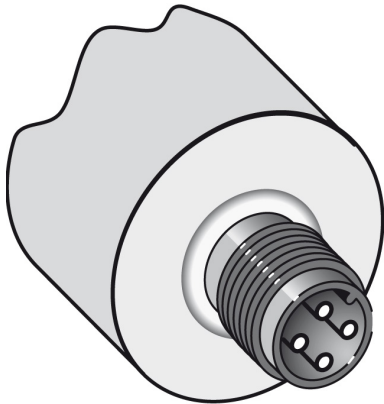


All dimensions in mm (inch)

Connection diagram



Connection type



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