



## Capacitive Proximity Sensors Cylindrical threaded housing, CM18

CM18-12NPP-KWD



**Model Name** > **CM18-12NPP-KWD**  
**Part No.** > **6026179**



#### At a glance

- M18 - Cylindrical housing
- Adjustable sensing range of 1 to 8 mm flush and 1 to 12 mm non-flush installation
- Best-in-class electromagnetic compatibility
- Short-circuit reverse polarity and power-up pulse suppression protection
- LED status indicator
- Sensitivity control with potentiometer
- IP 67 enclosure rating
- Complementary output function

#### Your benefits

- Space saving installation with M18 cylindrical mounting
- Quick and easy adjustment via potentiometer saves installation and setup time
- Simple and save 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, which reduces material loss and increases throughput
- High shock and vibration resistance increases sensor life and reduces maintenance costs



#### Features

|                           |                                  |
|---------------------------|----------------------------------|
| Housing:                  | Cylindrical                      |
| Thread size:              | M18 x 1                          |
| Sensing range Sn:         | 12 mm                            |
| Assured sensing range Sa: | 8.64 mm                          |
| Installation type:        | Non-flush                        |
| Sensitivity adjustment:   | Potentiometer, 270°              |
| Switching frequency:      | 30 Hz                            |
| Output type:              | PNP                              |
| Output function:          | Complementary                    |
| Electrical wiring:        | DC 4-wire                        |
| Enclosure rating:         | IP 67 <sup>1)</sup>              |
| Connection type:          | Cable, 4-wire, 6 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 ... 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:              | $\leq 200\text{ mA}$                                           |
| Cable material:                 | PVC                                                            |
| Conductor cross-section:        | $0.34\text{ mm}^2$                                             |
| Short-circuit protection:       | ✓                                                              |
| Reverse polarity protection:    | ✓                                                              |
| Power-up pulse protection:      | ✓                                                              |
| Shock/vibration:                | 30 g, 11 ms/10 ... 55 Hz, 1 mm                                 |
| Ambient operating temperature:  | $-25\text{ }^{\circ}\text{C} \dots 80\text{ }^{\circ}\text{C}$ |
| Housing material:               | PBT                                                            |
| Housing length:                 | 79.5 mm                                                        |
| Thread length:                  | 46.5 mm                                                        |
| Tightening torque, max.:        | 2.6 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)

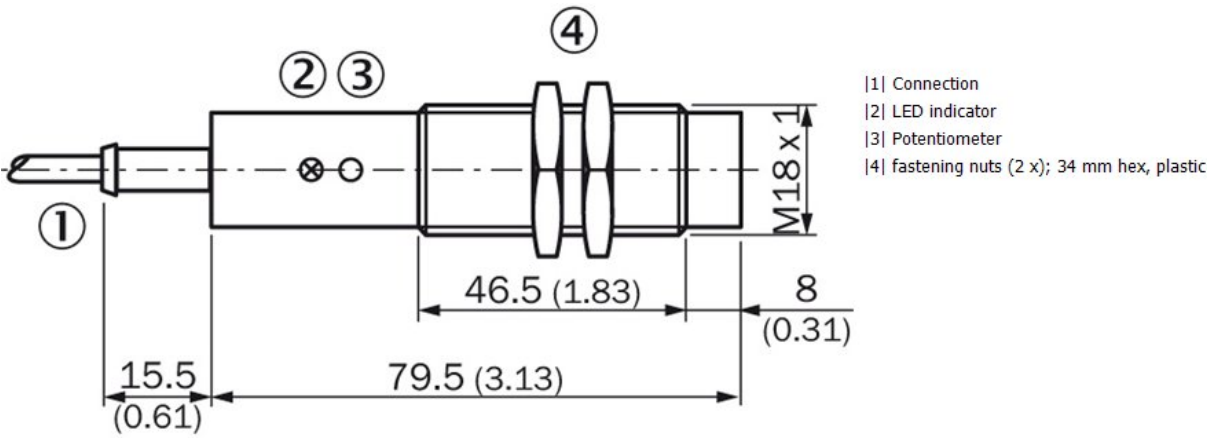
#### Reduction factors

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

Installation note

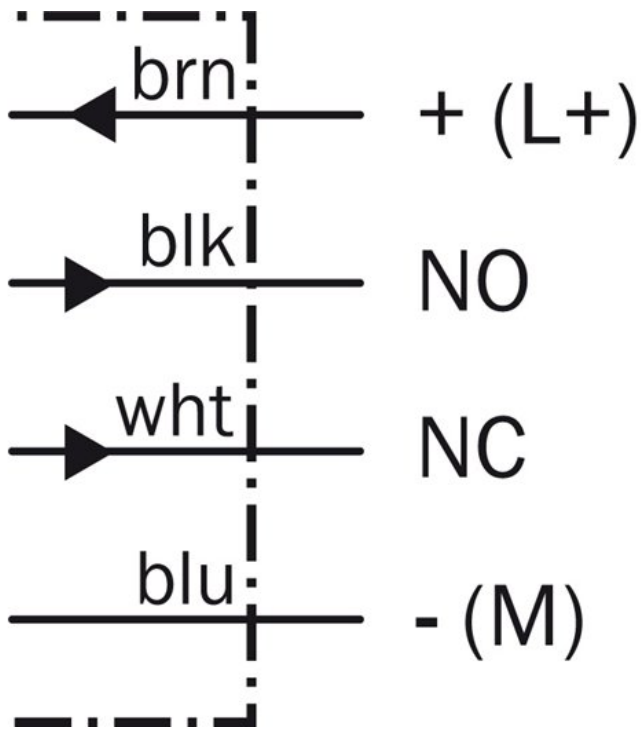


Dimensional drawing

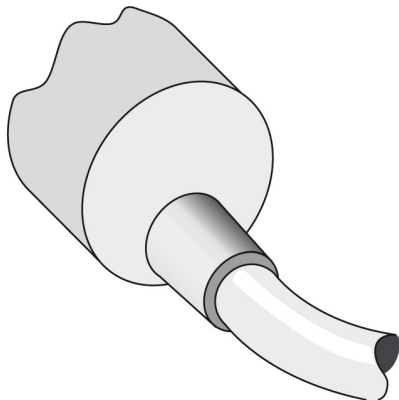


All dimensions in mm (inch)

Connection diagram



Connection type



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