



## Capacitive Proximity Sensors Cylindrical threaded housing, CM30

CM30-16BNP-KW1



**Model Name** > **CM30-16BNP-KW1**  
**Part No.** > **6021459**



**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**

Design:	Cylindrical
Thread size:	M30 x 1.5
Sensing range Sn:	16 mm
Assured sensing range Sa:	11.52 mm
Installation type:	Flush
Switching frequency:	50 Hz
Output type:	NPN
Output function:	Complementary
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 67 <sup>1)</sup>
Electrical connection:	Cable, 4-wire, 2 m <sup>2)</sup>
Adjustment:	Potentiometer , Sensitivity

<sup>1)</sup> According to EN 60529 <sup>2)</sup> Do not bend below 0 °C

## Mechanics/electronics

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Housing material:	Plastic
Supply voltage:	10 V DC ... 36 V
Residual 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 % ... 20 %
Repeatability:	$\leq 5\%$ <sup>4) 5)</sup>
Temperature drift (of Sr):	$\pm 10\%$
EMC:	According to EN 60947-5-2 <sup>6)</sup>
Output current I <sub>a</sub> :	$\leq 200\text{ mA}$
Cable material:	PVC
Conductor cross-section:	0.34 mm <sup>2</sup>
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	✓
Shock and vibration resistance:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient temperature operation:	-25 °C ... +80 °C
Housing cap material:	PBT
Housing length:	63.6 mm
Thread length:	50 mm
Tightening torque, max.:	7.5 Nm

<sup>1)</sup> Of U<sub>b</sub> <sup>2)</sup> At I<sub>a</sub> max <sup>3)</sup> Without load <sup>4)</sup> Of Sr <sup>5)</sup> U<sub>b</sub> and T<sub>a</sub> 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

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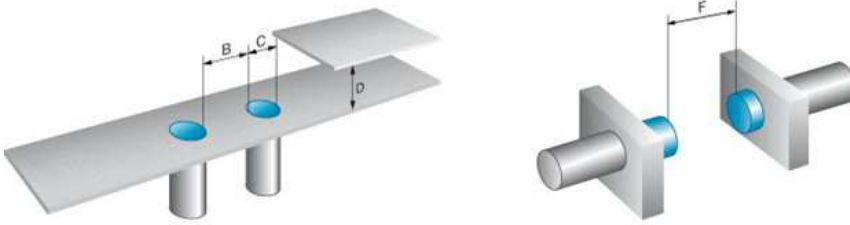
Note:	The values are reference values which may vary
Metal:	1
Water:	1
PVC:	Ca. 0.4
Oil:	Ca. 0.25

## Installation note

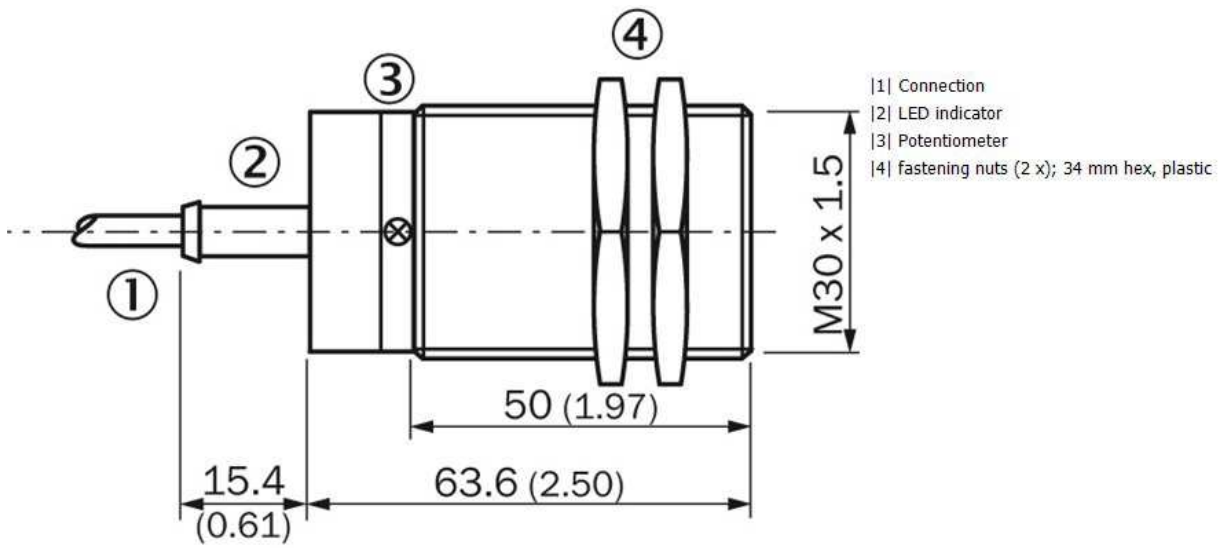
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Remark:	Associated graphic see "Installation"
B:	30 mm
C:	30 mm
D:	48 mm

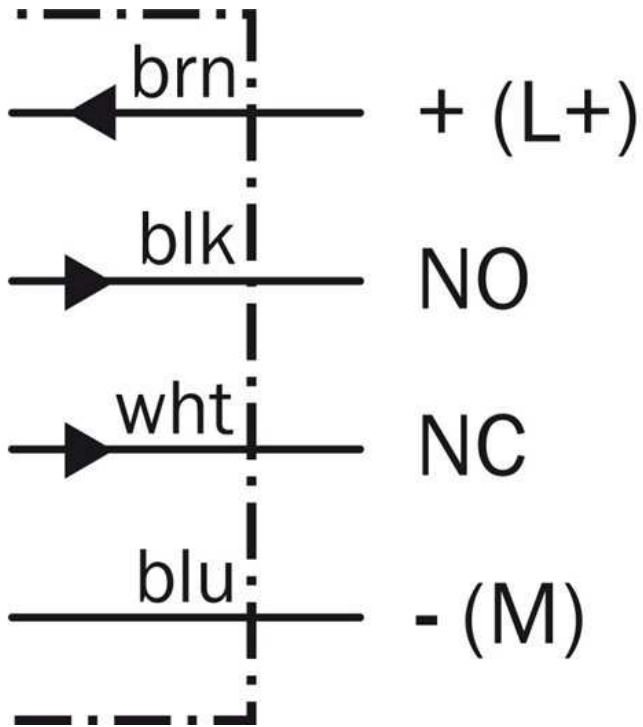
## Installation note



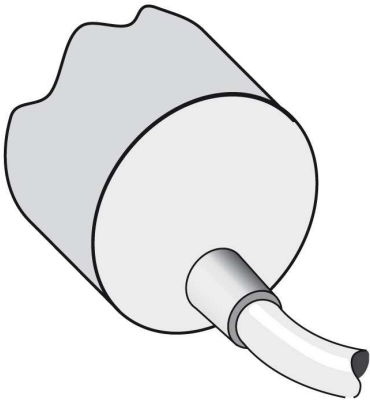
## Dimensional drawing



Connection diagram



Connection type



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