



Capacitive Proximity Sensors Cylindrical threaded housing, CM18

CM18-12NNP-KW1



Model Name > [CM18-12NNP-KW1](#)
Part No. > [6021457](#)



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:	NPN
Output function:	Complementary
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 67 ¹⁾
Connection type:	Cable, 4-wire, 2 m ²⁾

¹⁾ According to EN 60529 ²⁾ Do not bend below 0 °C

Mechanics/electronics

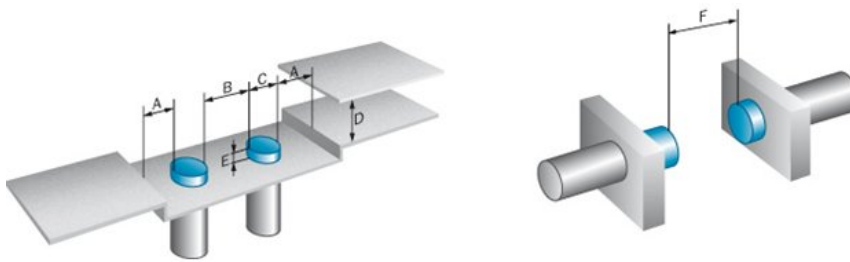
Supply voltage:	10 V DC ... 40 V DC
Ripple:	$\leq 10\%$ ¹⁾
Voltage drop:	$\leq 2.5\text{ V DC}$ ²⁾
Power consumption:	$\leq 10\text{ mA}$ ³⁾
Time delay before availability:	$\leq 100\text{ ms}$
Hysteresis:	$4\% \dots 20\%$
Repeatability:	$\leq 5\%$ ⁴⁾ ⁵⁾
Temperature drift (% of Sr):	$\pm 10\%$
EMC:	According to EN 60947-5-2 ⁶⁾
Output current Ia:	$\leq 200\text{ mA}$
Cable material:	PVC
Conductor cross-section:	0.34 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

¹⁾ Of Ub ²⁾ At I_a max ³⁾ Without load ⁴⁾ Of Sr ⁵⁾ Ub and Ta constant ⁶⁾ 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)

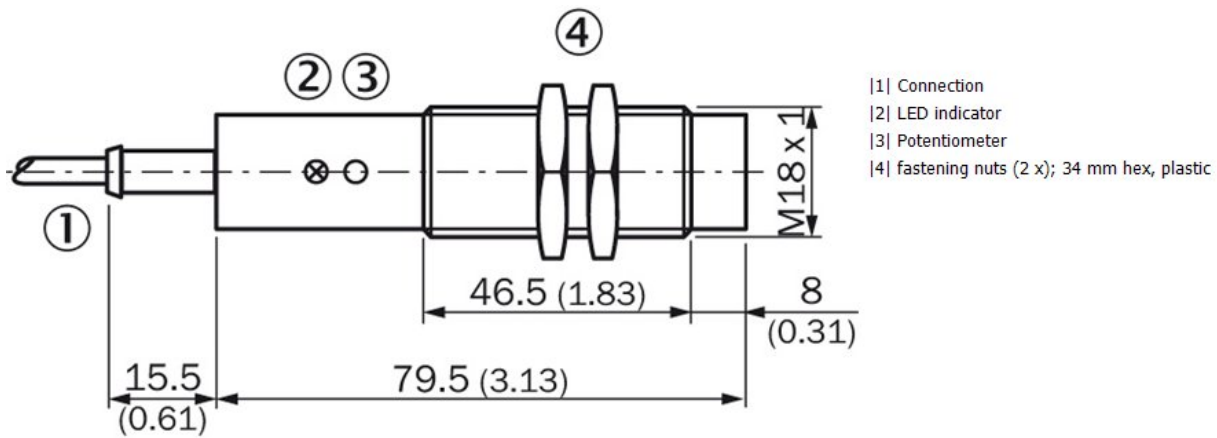
Reduction factors

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

Installation note

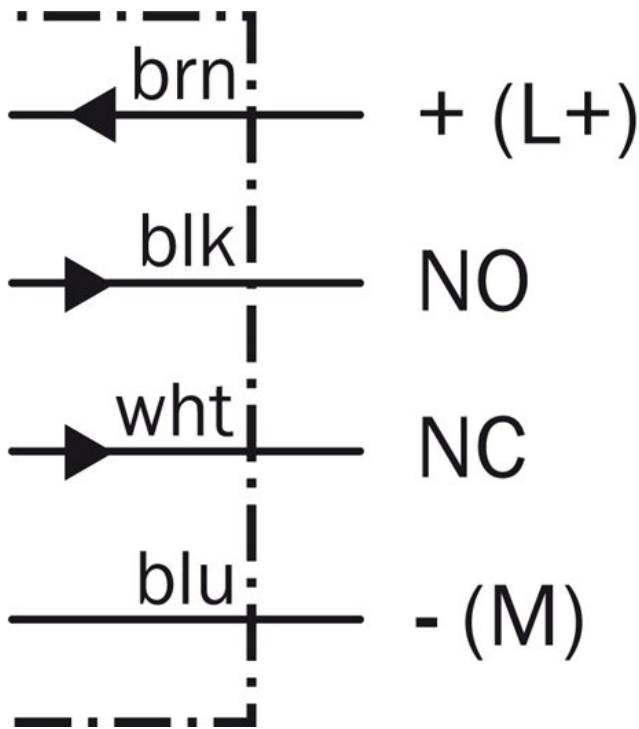


Dimensional drawing

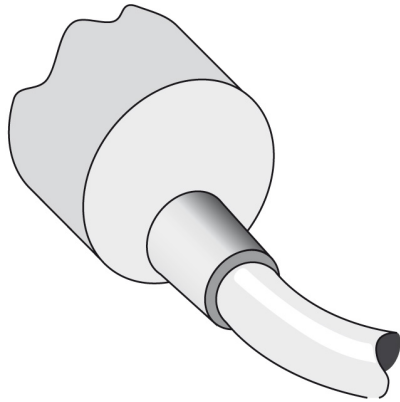


All dimensions in mm (inch)

Connection diagram



Connection type



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