SICK.COM



DATA SHEET

CM18-12NNP-KC1

CM
Capacitive proximity sensors

SICK Sensor Intelligence



Illustration may differ

CAPACITIVE PROXIMITY SENSORS

CM18-12NNP-KC1

ORDERING INFORMATION

Type	part no.
CM18-12NNP-KC1	6021458

Further device versions and accessories at www.sick.com/CM

DETAILED TECHNICAL DATA

FEATURES

Housing	Cylindrical thread design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	3 mm ... 12 mm
Safe sensing range S_a	8.64 mm
Installation type	Non-flush
Switching frequency	30 Hz
Connection type	Male connector M12, 4-pin
Switching output	NPN
Output function	Complementary
Electrical wiring	DC 4-wire
Adjustment	Potentiometer, 270° (Sensitivity)
Enclosure rating	IP67 [1]

[1] According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 36 V DC
Ripple	≤ 10 % [1]

[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 within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

Voltage drop	≤ 2.5 V DC [2]
Current consumption	10 mA [3]
Time delay before availability	≤ 100 ms
Hysteresis	4 % ... 20 %
Reproducibility	≤ 5 % [4] [5]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2 [6]
Continuous current I_a	≤ 200 mA
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	–25 °C ... +80 °C
Housing material	Plastic, PBT
Housing length	91.5 mm
Thread length	46.5 mm
Tightening torque, max.	2.6 Nm
Items supplied	Mounting nut, PA12 plastic (2x) Screwdriver for potentiometer adjustment (1 x)

[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 within 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	Approx. 0.4
Oil	Approx. 0.25
Glass	0.6
Ceramics	0.5
Alcohol	0.7
Wood	0.2 ... 0.7

INSTALLATION NOTE

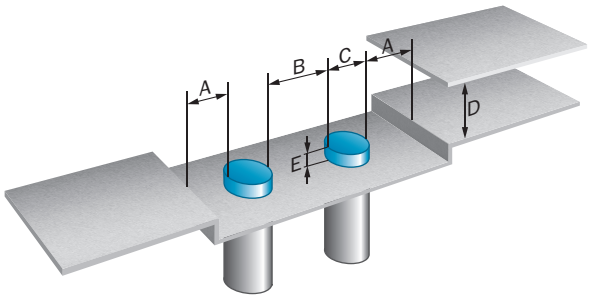
Remark	Associated graphic see "Installation"
A	18 mm
B	36 mm
C	18 mm
D	36 mm
E	8 mm

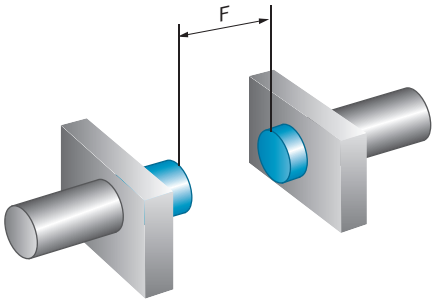
CLASSIFICATIONS

ECl@ss 5.0	27270102

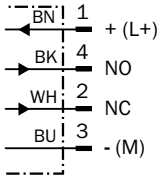
ECl@ss 5.1.4	27270102
ECl@ss 6.0	27270102
ECl@ss 6.2	27270102
ECl@ss 7.0	27270102
ECl@ss 8.0	27270102
ECl@ss 8.1	27270102
ECl@ss 9.0	27270102
ECl@ss 10.0	27270102
ECl@ss 11.0	27270102
ETIM 5.0	EC002715
ETIM 6.0	EC002715
ETIM 7.0	EC002715
ETIM 8.0	EC002715
UNSPSC 16.0901	39122230

INSTALLATION NOTE NON-FLUSH INSTALLATION

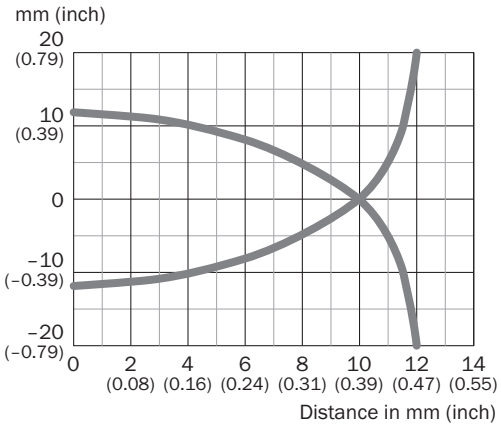




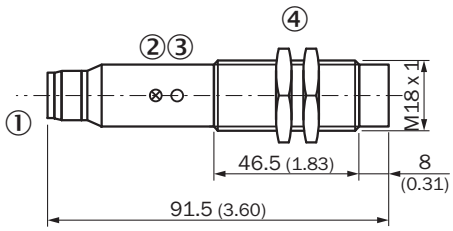
CONNECTION DIAGRAM CD-006



RESPONSE DIAGRAM CM18, NON-FLUSH INSTALLATION



DIMENSIONAL DRAWING CM18, NON-FLUSH, CONNECTOR



Dimensions in mm (inch)
① Connection
② Display LED
③ Potentiometer
④ fastening nuts (2 x); 34 mm hex, plastic

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6021458

SICK AG
WALDKIRCH
GERMANY
SICK.COM

SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK

Sensor Intelligence