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DATA SHEET

CM30-16BAP-KW1

CM
Capacitive proximity sensors

SICK Sensor Intelligence



Illustration may differ

CAPACITIVE PROXIMITY SENSORS

CM30-16BAP-KW1

ORDERING INFORMATION

Type	part no.
CM30-16BAP-KW1	6028411

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

DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Sensing range S_n	2 mm ... 16 mm
Safe sensing range S_a	11.52 mm
Installation type	Flush
Switching frequency	10 Hz
Connection type	Cable, 2-wire, 2 m [1]
Output function	NC or NO
Electrical wiring	AC 2-wire
Adjustment Potentiometer	 Sensitivity (11 turns)
Enclosure rating	IP67 (According to EN 60529)
Items supplied	Mounting nut, PA12 plastic (2x) Screwdriver for potentiometer adjustment (1 x)

[1] Do not bend below 0 °C.

MECHANICS/ELECTRONICS

Supply voltage	20 V AC ... 250 V AC

[1] Of Ub.

[2] At I_a max.

[3] Without load.

[4] Of Sr.

[5] Supply voltage U_B and constant ambient temperature Ta.

[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.).

Ripple	≤ 10 % [1]
Voltage drop	≤ 10 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	≤ 500 mA
Cable material	PVC
Conductor size	0.5 mm²
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	63.6 mm
Thread length	50 mm
Tightening torque, max.	≤ 7.5 Nm

[1] Of Ub.

[2] At I_a max.

[3] Without load.

[4] Of Sr.

[5] Supply voltage U_B and constant ambient temperature Ta.

[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.).

SAFETY-RELATED PARAMETERS

$MTTF_D$	815 years
DC_{avg}	0 %
T_M (mission time)	20 years

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

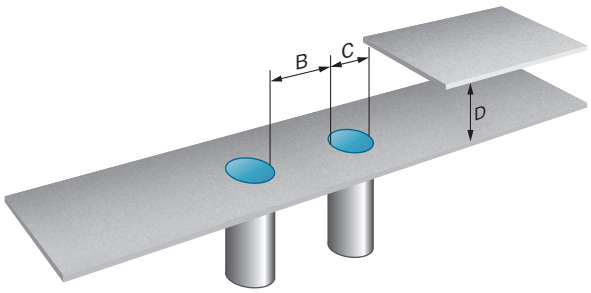
Remark	Associated graphic see "Installation"
B	30 mm
C	30 mm

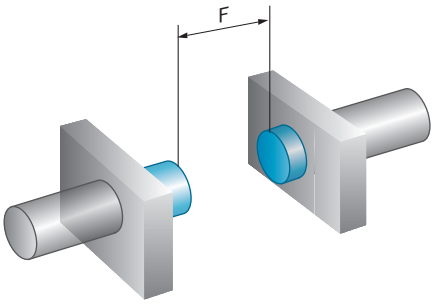
D	48 mm

CERTIFICATES

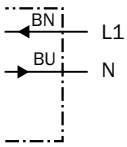
EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

INSTALLATION NOTE FLUSH INSTALLATION

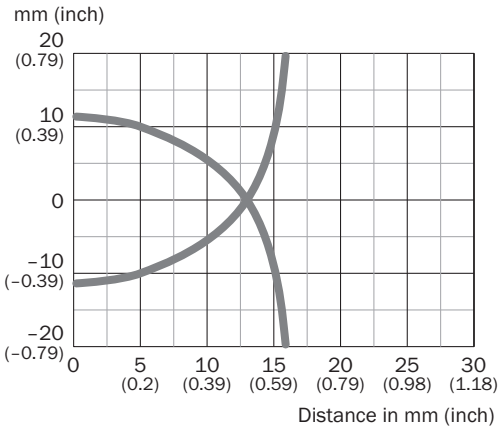




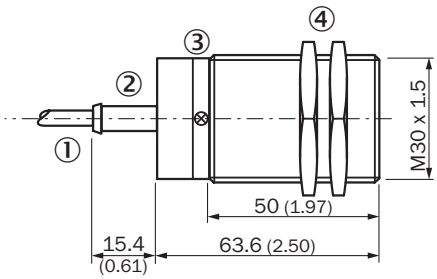
CONNECTION DIAGRAM CD-013



RESPONSE DIAGRAM CM30, FLUSH INSTALLATION



DIMENSIONAL DRAWING CM30, FLUSH, CABLE



Dimensions in mm (inch)
① Connection
② Display LED
③ Potentiometer for sensitivity adjustment
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/6028411

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SICK AT A GLANCE

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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

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