



DATA SHEET

CM30-25NAP-KW1

CM
Capacitive proximity sensors

SICK

Sensor Intelligence



Illustration may differ

CAPACITIVE PROXIMITY SENSORS

CM30-25NAP-KW1

ORDERING INFORMATION

Type	part no.
CM30-25NAP-KW1	6028413

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	4 mm ... 25 mm
Safe sensing range S_a	18 mm
Installation type	Non-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
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¹⁾ Of U_b .
²⁾ At I_s max.
³⁾ Without load.
⁴⁾ Of S_r .
⁵⁾ Supply voltage U_s and constant ambient temperature T_a .
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	$\leq 10\%$ ¹⁾
Voltage drop	$\leq 10\text{ V DC}$ ²⁾
Current consumption	10 mA ³⁾
Time delay before availability	$\leq 100\text{ ms}$
Hysteresis	$4\% \dots 20\%$
Reproducibility	$\leq 5\%$ ⁴⁾ ⁵⁾
Temperature drift (of S _r)	$\pm 10\%$
EMC	According to EN 60947-5-2 ⁶⁾
Continuous current I _s	$\leq 500\text{ mA}$
Cable material	PVC
Conductor size	0.5 mm^2
Power-up pulse protection	✓
Shock and vibration resistance	$30\text{ g}, 11\text{ ms} / 10 \dots 55\text{ Hz}, 1\text{ mm}$
Ambient operating temperature	$-25\text{ °C} \dots +80\text{ °C}$
Housing material	Plastic, PBT
Housing length	75.6 mm
Thread length	50 mm
Tightening torque, max.	$\leq 7.5\text{ Nm}$

¹⁾ Of Ub.²⁾ At I_s max.³⁾ Without load.⁴⁾ Of Sr.⁵⁾ Supply voltage U_s 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	$0.2 \dots 0.7$

INSTALLATION NOTE

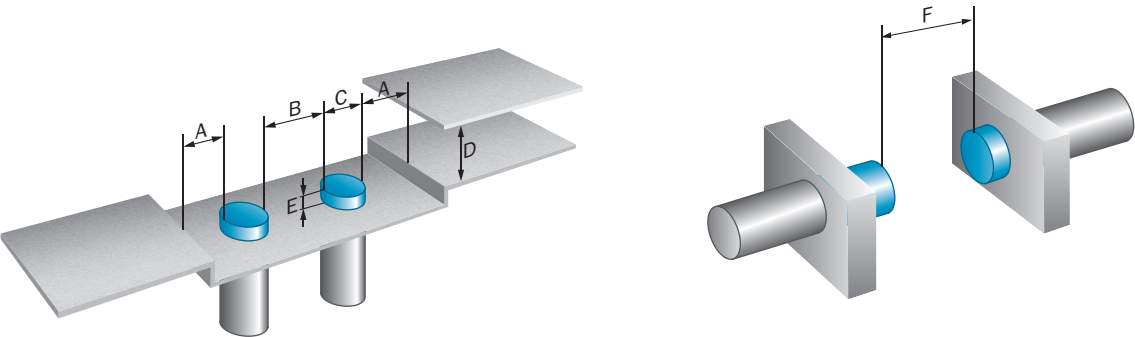
Remark	Associated graphic see "Installation"
A	30 mm
B	60 mm
C	30 mm

D	75 mm
E	14.5 mm In critical distances, the sensor should be tested in the application

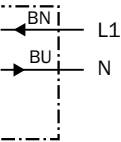
CERTIFICATES

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

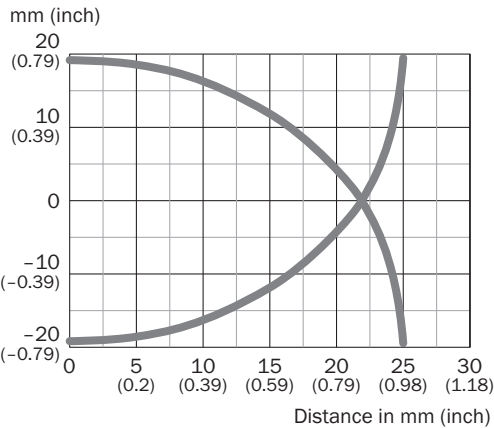
INSTALLATION NOTE NON-FLUSH INSTALLATION

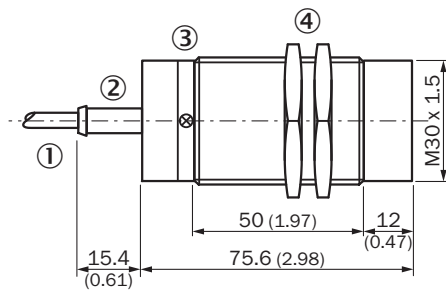


CONNECTION DIAGRAM CD-013



RESPONSE DIAGRAM CM30, NON-FLUSH INSTALLATION



DIMENSIONAL DRAWING CM30, NON-FLUSH, CABLE

Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Potentiometer for sensitivity adjustment
- ④ fastening nuts (2 x); 36 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/6028413



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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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