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DATA SHEET

CQ28-10NPO-KW1

CQ
Capacitive proximity sensors

SICK Sensor Intelligence



Illustration may differ

CAPACITIVE PROXIMITY SENSORS

CQ28-10NPO-KW1

ORDERING INFORMATION

Type	part no.
CQ28-10NPO-KW1	6084806

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

DETAILED TECHNICAL DATA

FEATURES

Housing	Rectangular
Dimensions (W x H x D)	28 mm x 46 mm x 5.5 mm
Sensing range S_n	1 mm ... 10 mm
Safe sensing range S_a	7.2 mm
Installation type	Non-flush
Switching frequency	10 Hz
Connection type	Cable, 4-wire, 2 m [1]
Switching output	PNP
Switching output detail	PNP
Output function	NC
Electrical wiring	DC 4-wire
Adjustment	
Teach-in button	Sensitivity
Wire/pin	Sensitivity
Enclosure rating	IP68 [2]

[1] Do not bend below 0 °C.

[2] According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC

[1] At I_a max.

[2] Without load.

[3] Of Sr.

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

[5] 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 %
Voltage drop	≤ 2.5 V DC [1]
Current consumption	12 mA [2]
Time delay before availability	≤ 300 ms
Reproducibility	≤ 5 % [3] [4]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2 [5]
Continuous current I_a	≤ 200 mA
Cable material	PVC
Conductor size	0.14 mm²
Short-circuit protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	–20 °C ... +85 °C
Ambient temperature, storage	–40 °C ... +85 °C
Housing material	Plastic, PBT
Sensing face material	Plastic
UL File No.	NRKH.E191603

[1] At I_a max.

[2] Without load.

[3] Of Sr.

[4] Supply voltage U_a and constant ambient temperature Ta.

[5] 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

$MTTF_D$	1,112 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

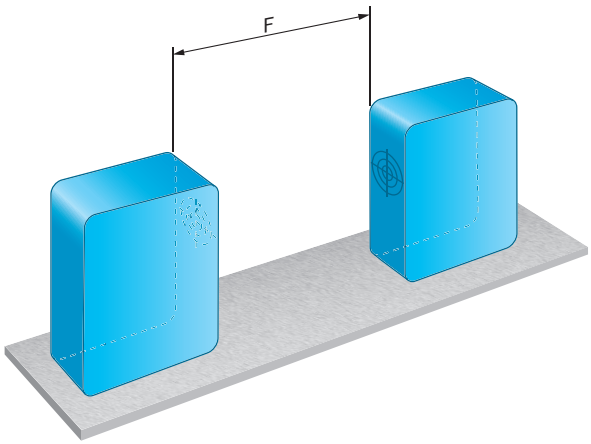
INSTALLATION NOTE

Remark	Associated graphic see "Installation"
A	27.6 mm
B	27.6 mm
F	6 x S_n (max. 60 mm)

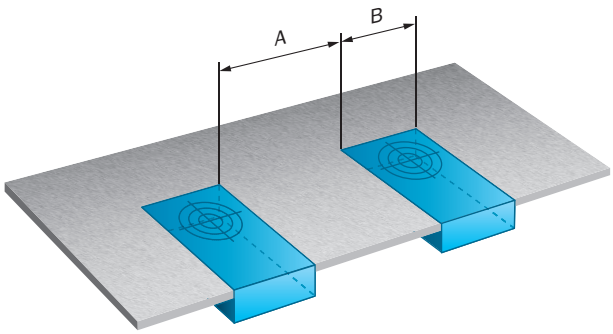
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

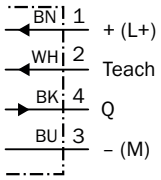
INSTALLATION NOTE



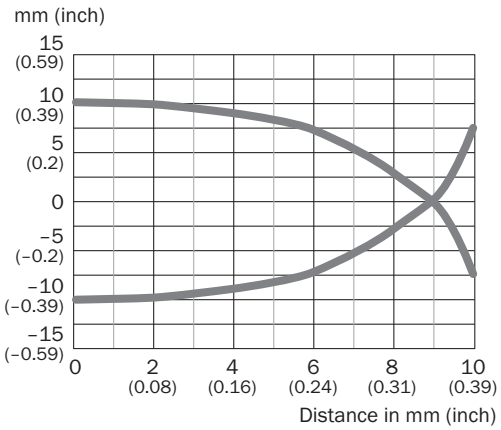
INSTALLATION NOTE



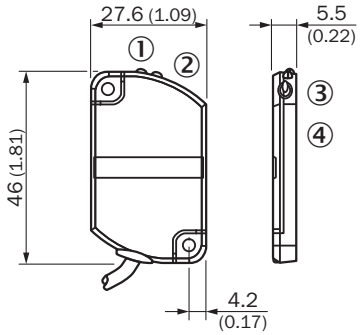
CONNECTION DIAGRAM CD-023



RESPONSE DIAGRAM



DIMENSIONAL DRAWING CQ28, CABLE



Dimensions in mm (inch)
① LED indicator green
② LED indicator yellow
③ Teach-in button
④ Sensing face

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/6084806

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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

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