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DATA SHEET

CQ4-08EPSKP1

CQ
Capacitive proximity sensors

SICK Sensor Intelligence

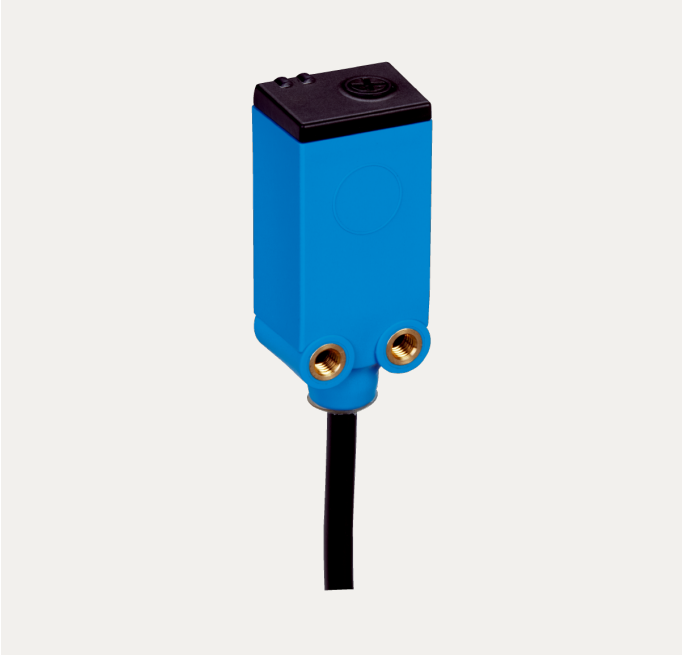


Illustration may differ

CAPACITIVE PROXIMITY SENSORS

CQ4-08EPSKP1

ORDERING INFORMATION

Type	part no.
CQ4-08EPSKP1	6051000

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

DETAILED TECHNICAL DATA

FEATURES

Housing	Rectangular
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Sensing range S_n	1 mm ... 8 mm [1] 1 mm ... 6 mm [2]
Safe sensing range S_a	5.76 mm
Installation type	Non-flush Flush
Switching frequency	100 Hz
Connection type	Cable with connector M8, 3-pin, 0.3 m [3]
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Adjustment Potentiometer	 Sensitivity (5 turns)
Enclosure rating	IP67 [4]
Items supplied	Screwdriver for potentiometer adjustment (1 x)

[1] For non-flush installation.

[2] For flush mounting.

[3] Do not bend below 0 °C.

[4] According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2.5 V DC [1]
Current consumption	12 mA [2]
Time delay before availability	≤ 200 ms
Hysteresis	4 % ... 20 % [3]
Reproducibility	≤ 5 % [4] [5]
Temperature drift (of S_r)	± 20 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 150 mA
Cable material	PVC
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	–20 °C ... +75 °C
Ambient temperature, storage	–40 °C ... +85 °C
Housing material	Plastic, ABS
Sensing face material	Plastic
UL File No.	NRKH.E191603

[1] At I_a max.

[2] Without load.

[3] Depending on installation and environmental conditions and sensitivity adjustment, hysteresis may vary.

[4] Of Sr.

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

SAFETY-RELATED PARAMETERS

$MTTF_D$	1,344 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

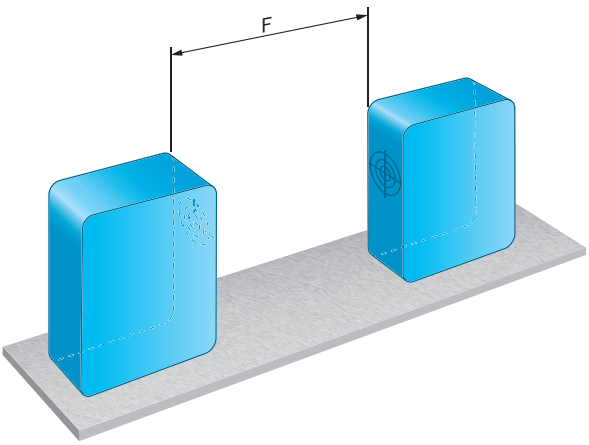
Remark	Associated graphic see "Installation"
A	16 mm

B	16 mm
F	48 mm

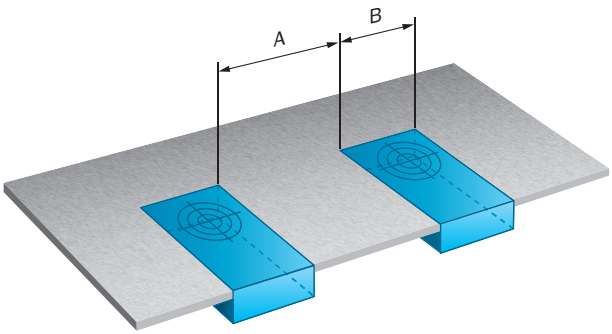
CERTIFICATES

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

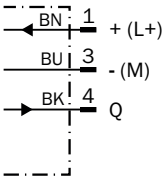
INSTALLATION NOTE



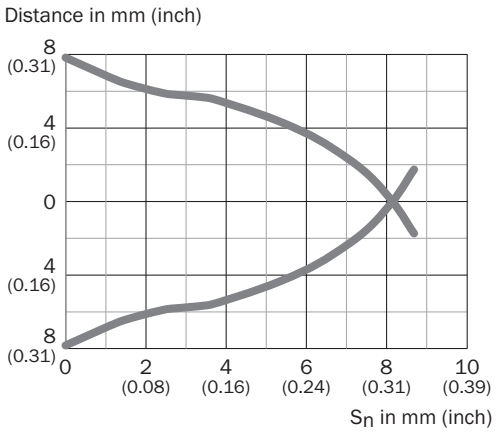
INSTALLATION NOTE



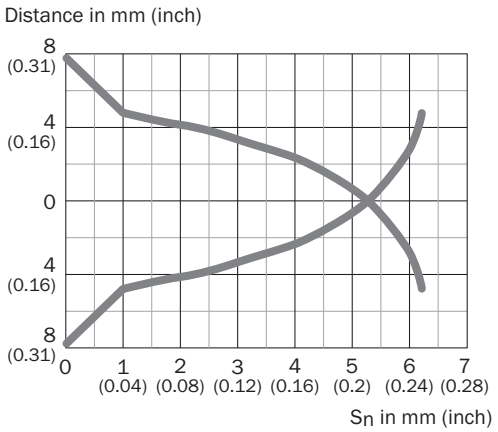
CONNECTION DIAGRAM CD-045



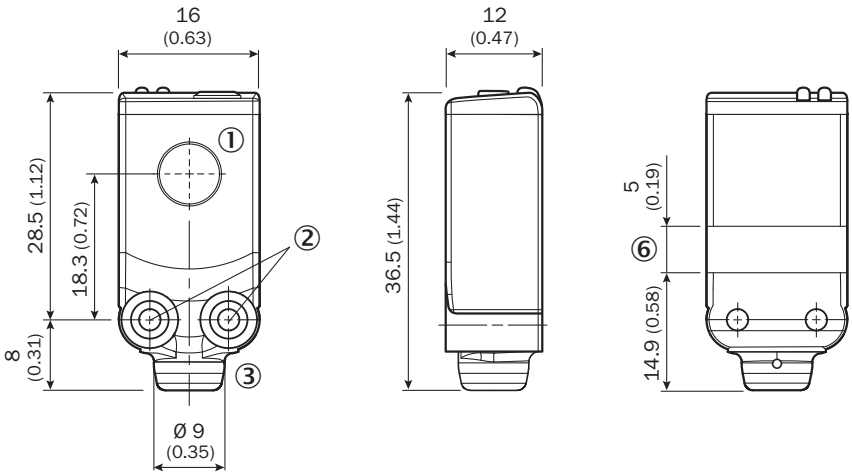
RESPONSE DIAGRAM CQ4, NON-FLUSH INSTALLATION

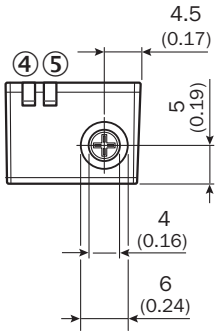


RESPONSE DIAGRAM CQ4, FLUSH INSTALLATION



DIMENSIONAL DRAWING CQ4, CABLE WITH MALE CONNECTOR





Dimensions in mm (inch)
① Sensing face
② Threaded hole M3 (2 x)
③ Connection
④ yellow LED: status detection of object/medium
⑤ LED green: operating indicator
⑥ line for cable tie

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/6051000

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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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