Product data sheet

CM12-08EBP-KC1

CM

CAPACITIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
CM12-08EBP-KC1	6051030

Other models and accessories ➜ www.sick.com/CM

Detailed technical data

Features

Housing	Cylindrical thread design
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	0.5 mm ... 8 mm [1] 0.5 mm ... 4 mm [2]
Safe sensing range S_a	5.76 mm
Installation type	Non-flush / flush [3]
Switching frequency	15 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP / NPN
Output function	Programmable
Output characteristic	Wire configurable [4]
Electrical wiring	DC 4-wire
Adjustment	Single teach-in button (Sensitivity) Cable (Sensitivity)
Enclosure rating	IP68 (According to EN 60529) [5]
Items supplied	Mounting nut, PA12 plastic (2x)

[1] For non-flush installation.
[2] For flush mounting.
[3] For flush mounting, Teach-in necessary.
[4] Automatic detection.
[5] 1.3 m water depth / 60 min.

Mechanics/electronics

Supply voltage	10 V DC ... 36 V DC
Ripple	≤ 10 % [1]
Voltage drop	≤ 2.5 V DC [2]
Current consumption	12 mA [3]
Time delay before availability	≤ 120 ms
Hysteresis	3 % ... 20 %
Reproducibility	≤ 5 % [4] [5]
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	–20 °C ... +85 °C
Ambient temperature, storage	–40 °C ... +85 °C
Housing material	Plastic
Housing length	84.7 mm
Thread length	46.5 mm
Tightening torque, max.	≤ 1 Nm
UL File No.	NRKH.E191603

[1] Of Ub.
[2] At I_a max.
[3] Without load.
[4] Of Sr.
[5] Supply voltage Ub and constant ambient temperature Ta.
[6] For non-flush installation min. 1 x Sn and sensor grounded.

Safety-related parameters

$MTTF_D$	603 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

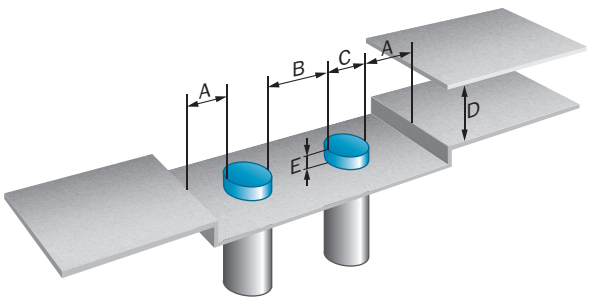
Remark	Associated graphic see "Installation"
A	8 mm
B	12 mm
C	12 mm
D	12 mm
E	8 mm
F	6 x S_n (max. 48 mm)

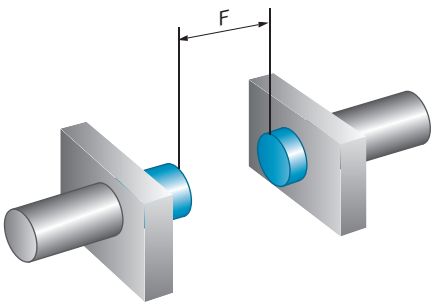
Classifications

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
eCl@ss 12.0	27274201
ETIM 5.0	EC002715
ETIM 6.0	EC002715
ETIM 7.0	EC002715
ETIM 8.0	EC002715
UNSPSC 16.0901	39122230

Installation note

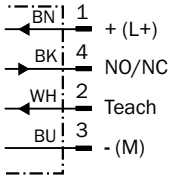
Non-flush installation





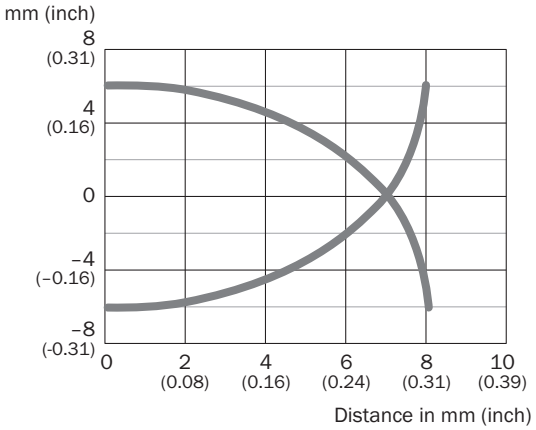
Connection diagram

Cd-235



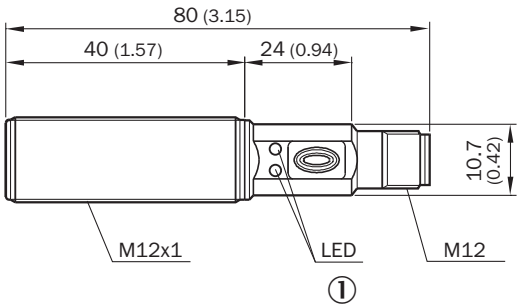
Response diagram

CM12



Dimensional drawing (Dimensions in mm (inch))

CM12, connector



① LED yellow: output active; LED green: Power and signal reserve

Recommended accessories

Other models and accessories ➜ www.sick.com/CM

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N05 for universal clamp bracket, M12, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N05	2051611
Mounting brackets and plates			
	Mounting plate for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M12	5321869
	Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M12	5308447
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14-020VB3XLEAX	2096234
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A14-020VB3XLEAX	2095895
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14-050VB3XLEAX	2095897
	Head A: female connector, M12, 4-pin, straight Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Cable: unshielded	DOS-1204-W	6007303

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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