



CM12-08EBP-KC1

CM

CAPACITIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
CM12-08EBP-KC1	6051030

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

Illustration may differ



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 ^{5) 6)}

¹⁾ For non-flush installation.

²⁾ For flush mounting.

³⁾ For flush mounting, Teach-in necessary.

⁴⁾ Automatic detection.

⁵⁾ According to EN 60529.

⁶⁾ 1.3 m water depth / 60 min.

Mechanics/electronics

Supply voltage	10 V DC ... 36 V DC
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¹⁾ Of U_b .

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Of S_r .

⁵⁾ U_b and T_a constant.

⁶⁾ For non-flush installation min. 1 x S_n and sensor grounded.

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
Items supplied	Mounting nut, PA12 plastic (2x)
UL File No.	NRKH.E191603

¹⁾ Of Ub.

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Of Sr.

⁵⁾ Ub and Ta constant.

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

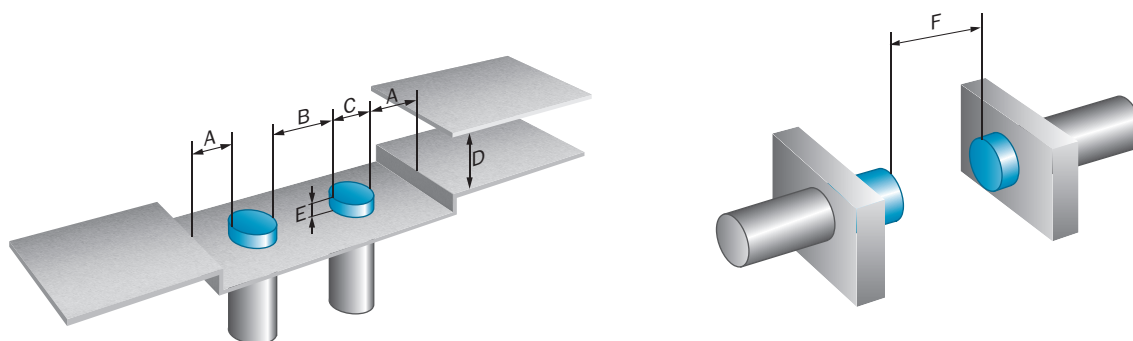
Remark	Associated graphic see "Installation"
B	12 mm
C	12 mm
D	12 mm
E	8 mm

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
ETIM 5.0	EC002715
ETIM 6.0	EC002715
ETIM 7.0	EC002715
ETIM 8.0	EC002715
UNSPSC 16.0901	39122230

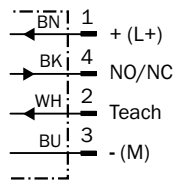
Installation note

Non-flush installation



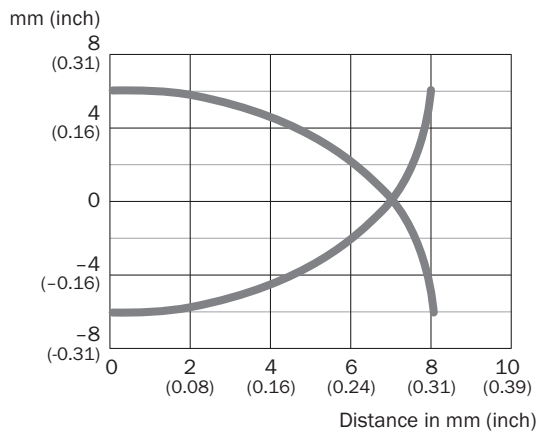
Connection diagram

Cd-235



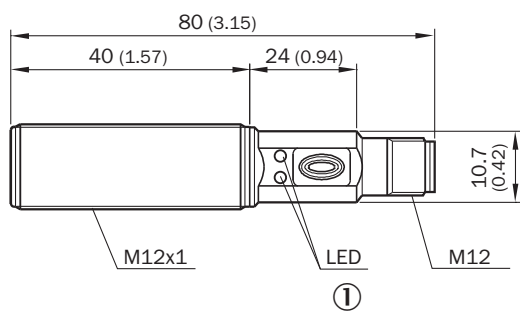
Characteristic curve

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			
	<ul style="list-style-type: none"> Description: Plate N05 for universal clamp bracket, M12 Material: Steel, zinc diecast Items supplied: Universal clamp (5322626), mounting hardware Usable for: IMA, IMF, M12 round sensors, UC4, V12-2, MultiV, MultiLine, W4-3 	BEF-KHS-N05	2051611
Mounting brackets and plates			
	<ul style="list-style-type: none"> Description: Mounting plate for M12 sensors Material: Steel Items supplied: Without mounting hardware 	BEF-WG-M12	5321869
	<ul style="list-style-type: none"> Description: Mounting bracket for M12 sensors Material: Steel Items supplied: Without mounting hardware 	BEF-WN-M12	5308447
Plug connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Authorizations: CE, UL Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals 	YF2A14-020VB3XLEAX	2096234
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Authorizations: CE, UL Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Authorizations: CE, UL Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals 	YG2A14-020VB3XLEAX	2095895
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Authorizations: CE, UL Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals 	YG2A14-050VB3XLEAX	2095897
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: - Authorizations: UL Description: Unshielded, Head A: female connector, M12, 4-pin, straight, unshielded, for power supply, for cable diameter 4 mm ... 6 mm Head B: - Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	DOS-1204-G	6007302
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: - Authorizations: UL Description: Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: - Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	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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