

# CM12-08EBP-KW1

**CAPACITIVE PROXIMITY SENSORS** 





### Ordering information

Туре	part no.
CM12-08EBP-KW1	6051029

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

Illustration may differ



#### Detailed technical data

#### **Features**

Housing	Metric
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S <sub>n</sub>	0.5 mm 8 mm <sup>1)</sup> 0.5 mm 4 mm <sup>2)</sup>
Safe sensing range S <sub>a</sub>	5.76 mm
Installation type	Non-flush / flush <sup>3)</sup>
Switching frequency	15 Hz
Connection type	Cable, 4-wire, 2 m <sup>4)</sup>
Switching output	PNP / NPN
Switching output detail	PNP / NPN
Output function	NC or NO
Output characteristic	Wire configurable <sup>5)</sup>
Electrical wiring	DC 4-wire
Adjustment	
Teach-in button	Sensitivity
Wire/pin	Sensitivity
Enclosure rating	IP68 (According to EN 60529) <sup>6)</sup>
Items supplied	Mounting nut, PA12 plastic (2x)

 $<sup>^{1)}</sup>$  For non-flush installation.

<sup>&</sup>lt;sup>2)</sup> For flush mounting.

 $<sup>^{</sup>m 3)}$  For flush mounting, Teach-in necessary.

 $<sup>^{4)}</sup>$  Do not bend below 0 °C.

<sup>&</sup>lt;sup>5)</sup> Automatic detection.

 $<sup>^{6)}</sup>$  1.3 m water depth / 60 min.

#### Mechanics/electronics

Supply voltage	10 V DC 36 V DC
Ripple	≤ 10 % <sup>1)</sup>
Voltage drop	$\leq$ 2.5 V DC $^{2)}$
Current consumption	12 mA <sup>3)</sup>
Time delay before availability	≤ 120 ms
Hysteresis	3 % 20 %
Reproducibility	≤ 5 % <sup>4)</sup> <sub>5)</sub>
EMC	According to EN 60947-5-2 <sup>6)</sup>
Continuous current I <sub>a</sub>	≤ 200 mA
Cable material	PVC
Conductor size	0.14 mm <sup>2</sup>
Short-circuit protection	<b>√</b>
Power-up pulse protection	<b>√</b>
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

<sup>&</sup>lt;sup>1)</sup> Of Ub.

#### Safety-related parameters

MTTFD	603 years
<b>DC</b> <sub>avg</sub>	0 %
T <sub>M</sub> (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

<sup>&</sup>lt;sup>2)</sup> At I<sub>a</sub> max.

<sup>3)</sup> Without load.

<sup>&</sup>lt;sup>4)</sup> Of Sr.

 $<sup>^{5)}</sup>$  Supply voltage  $\mathrm{U}_{\mathrm{B}}$  and constant ambient temperature Ta.

 $<sup>^{6)}</sup>$  For non-flush installation min. 1 x Sn and sensor grounded.

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## CAPACITIVE PROXIMITY SENSORS

Wood	0.2 0.7

#### Installation note

Remark	Associated graphic see "Installation"
A	8 mm
В	12 mm
C	12 mm
D	12 mm
E	8 mm
F	6 x S <sub>n</sub> (max. 48 mm)

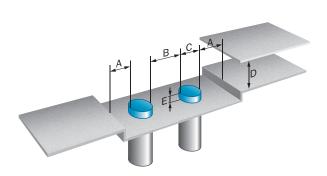
#### Certificates

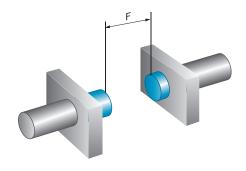
EU declaration of conformity	1
UK declaration of conformity	1
Moroccan declaration of conformity	1
China RoHS	✓
cULus certificate	✓

#### Classifications

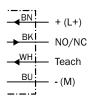
ECLASS 5.0	27270102
ECLASS 5.1.4	27270102
ECLASS 6.0	27270102
ECLASS 6.2	27270102
ECLASS 7.0	27270102
ECLASS 8.0	27270102
ECLASS 8.1	27270102
ECLASS 9.0	27270102
ECLASS 10.0	27270102
ECLASS 11.0	27270102
ECLASS 12.0	27274201
ETIM 5.0	EC002715
ETIM 6.0	EC002715
ETIM 7.0	EC002715
ETIM 8.0	EC002715
UNSPSC 16.0901	39122230

#### Installation note Non-flush installation

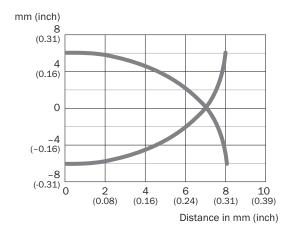




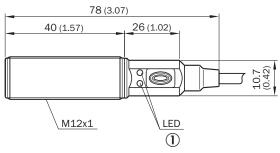
## Connection diagram Cd-236



## Response diagram CM12



#### Dimensional drawing CM12, cable



Dimensions in mm (inch)

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

#### Recommended accessories

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

	Brief description	Туре	part no.	
Mounting syst	Mounting systems			
	<ul> <li>Description: Mounting plate for M12 sensors</li> <li>Material: Steel</li> <li>Details: Steel, zinc coated</li> <li>Items supplied: Without mounting hardware</li> </ul>	BEF-WG-M12	5321869	
40	Description: Mounting bracket for M12 sensors     Material: Steel     Details: Steel, zinc coated     Items supplied: Without mounting hardware	BEF-WN-M12	5308447	
	<ul> <li>Description: Plate N05 for universal clamp bracket, M12</li> <li>Material: Steel, zinc diecast</li> <li>Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket)</li> <li>Items supplied: Universal clamp (5322626), mounting hardware</li> <li>Usable for: IMA, IMF, M12 round sensors, UC4, V12-2, MultiV, MultiLine, W4-3, MultiV, MultiLine</li> </ul>	BEF-KHS-N05	2051611	

## 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:**

Contacts and other locations -www.sick.com

