



## CM

Rugged and cost-effective capacitive sensors

**SICK**  
Sensor Intelligence.



### Technical data overview

<b>Housing</b>	Metric
<b>Thread size</b>	M12 x 1 M18 x 1 M30 x 1.5
<b>Sensing range <math>S_n</math></b>	4 mm ... 25 mm (depending on type)
<b>Housing material</b>	Plastic / PTFE coating (depending on type)
<b>Enclosure rating</b>	IP68 IP69K IP67 (depending on type)
<b>Connection</b>	Male connector Cable Cable with male connector (depending on type)
<b>Electrical wiring</b>	DC 4-wire / AC 2-wire (depending on type)
<b>Communication interface</b>	-

### Product description

The CM capacitive proximity sensors detect objects and levels regardless of color, reflectance, and gloss of the surfaces. In the process, they detect powdery, granulated, liquid, and solid materials – even through non-metallic walls made of plastic or glass. The proven and rugged sensors are cost-effective and feature high electromagnetic compatibility (EMC), which prevents switching errors and reduces downtime. The variants with a PTFE housing are ideal for detecting the levels of chemical compounds, e.g. acids or solvents.

### At a glance

- Cylindrical housing in M12, M18, and M30 models
- Sensing ranges of up to 25 mm
- Enclosure rating: IP67, IP68, IP69K
- Visual adjustment indicator
- High electromagnetic compatibility
- Electrical configuration: DC 4-wire and AC 2-wire
- Adjustment of the switching point via potentiometer (M18 and M30) and teach-in button (M12)

### Your benefits

- Cost-effective sensors for traditional maximum fill level detection and object detection
- Less machine downtimes thanks to high shock and vibration resistance
- Stable processes thanks to high EMC and easy switching point adjustment using a potentiometer or teach-in button
- Quick installation thanks to visual adjustment indicator and universal mounting systems
- Especially durable PTFE variants for use in aggressive ambient conditions

### Fields of application

- Detection of solar wafers in the solar and electronics industry
- Detection of aluminum, cardboard, and paper in the packaging industry
- Detection of wood in wood processing machines
- Detection of rubber and plastic granulates in the plastics industry
- Detection of various liquids in the pharmaceuticals and chemicals industry

## Ordering information

Other models and accessories → [www.sick.com/CM](http://www.sick.com/CM)

Sensing range S <sub>n</sub>	Installation type	Electrical wiring	Connection type	Switching output	Output function	Type	Part no.
0.5 mm ... 8 mm <sup>1)</sup> 0.5 mm ... 4 mm <sup>2)</sup>	Non-flush, flush	DC 4-wire	Cable, 4-wire	PNP, NPN	NC or NO	CM12-08EBP-KW1	6051029
			Male connector M12, 4-pin	PNP, NPN	NC or NO	CM12-08EBO-KC1	6078709
						CM12-08EBP-KC1	6051030
0 mm ... 12 mm	Non-flush	DC 4-wire	Cable, 4-wire	PNP	Complementary	CM18-12NPP-EW1	6058148
			Male connector M12, 4-pin	PNP	Complementary	CM18-12NPP-EC1	6058149
0 mm ... 16 mm	Flush	DC 4-wire	Cable, 4-wire	PNP	Complementary	CM30-16BPP-EW1	6058152
			Male connector M12, 4-pin	PNP	Complementary	CM30-16BPP-EC1	6058153
0 mm ... 25 mm	Non-flush	DC 4-wire	Cable, 4-wire	PNP	Complementary	CM30-25NPP-EW1	6058156
			Male connector M12, 4-pin	PNP	Complementary	CM30-25NPP-EC1	6058157
0 mm ... 8 mm	Flush	DC 4-wire	Cable, 4-wire	PNP	Complementary	CM18-08BPP-EW1	6058144
			Male connector M12, 4-pin	PNP	Complementary	CM18-08BPP-EC1	6058145
2 mm ... 16 mm	Flush	AC 2-wire	Cable, 2-wire	–	NC or NO	CM30-16BAP-KW1	6028411
3 mm ... 12 mm	Non-flush	DC 4-wire	Cable, 4-wire	NPN	Complementary	CM18-12NNP-EW1	6058150
			Male connector M12, 4-pin	NPN	Complementary	CM18-12NNP-EC1	6058151
3 mm ... 16 mm	Flush	DC 4-wire	Cable, 4-wire	NPN	Complementary	CM30-16BNP-EW1	6058154
			Cable with AMP male connector, 3-pin	NPN	Complementary	CM30-16BNP-EWDS03	6080314
			Male connector M12, 4-pin	NPN	Complementary	CM30-16BNP-EC1	6058155
3 mm ... 8 mm	Flush	DC 4-wire	Cable, 4-wire	NPN	Complementary	CM18-08BNP-EW1	6058146
						CM18-08BNP-TW0	6026194
			Male connector M12, 4-pin	PNP	Complementary	CM18-08BPP-TW0	6026195
				NPN	Complementary	CM18-08BNP-EC1	6058147
4 mm ... 25 mm	Non-flush	AC 2-wire	Cable, 2-wire	–	NC or NO	CM30-25NAP-KW1	6028413
		DC 4-wire	Cable, 4-wire	NPN	Complementary	CM30-25NNP-EW1	6058158
			Male connector M12, 4-pin	NPN	Complementary	CM30-25NNP-EC1	6058159

<sup>1)</sup> For non-flush installation.

<sup>2)</sup> For flush mounting.

## 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](http://www.sick.com)