



# CM18-08BNP-KC1

CM

**CAPACITIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
CM18-08BNP-KC1	6021456

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

## Detailed technical data

### Features

<b>Housing</b>	Cylindrical thread design
<b>Thread size</b>	M18 1
<b>Diameter</b>	Ø 18 mm
<b>Sensing range <math>S_n</math></b>	3 mm ... 8 mm
<b>Safe sensing range <math>S_a</math></b>	5.76 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	30 Hz
<b>Connection type</b>	Male connector M12, 4-pin
<b>Switching output</b>	NPN
<b>Output function</b>	Complementary
<b>Electrical wiring</b>	DC 4-wire
<b>Adjustment</b>	Potentiometer, 270° (Sensitivity)
<b>Enclosure rating</b>	IP67 <sup>1)</sup>

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 36 V DC
<b>Ripple</b>	≤ 10 % <sup>1)</sup>
<b>Voltage drop</b>	≤ 2.5 V DC <sup>2)</sup>
<b>Current consumption</b>	≤ 10 mA <sup>3)</sup>
<b>Time delay before availability</b>	≤ 100 ms

<sup>1)</sup> Of  $U_b$ .

<sup>2)</sup> At  $I_a$  max.

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

<sup>4)</sup> Of  $S_r$ .

<sup>5)</sup>  $U_b$  and  $T_a$  constant.

<sup>6)</sup> In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

<b>Hysteresis</b>	4 % ... 20 %
<b>Reproducibility</b>	≤ 5 % <sup>4) 5)</sup>
<b>Temperature drift (of S<sub>r</sub>)</b>	± 10 %
<b>EMC</b>	According to EN 60947-5-2 <sup>6)</sup>
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA
<b>Short-circuit protection</b>	✓
<b>Reverse polarity protection</b>	✓
<b>Power-up pulse protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	-25 °C ... +80 °C
<b>Housing material</b>	Plastic, PBT
<b>Housing length</b>	83.5 mm
<b>Thread length</b>	46.5 mm
<b>Tightening torque, max.</b>	≤ 2.6 Nm
<b>Items supplied</b>	Mounting nuts (plastic)

<sup>1)</sup> Of U<sub>b</sub>.

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

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

<sup>4)</sup> Of S<sub>r</sub>.

<sup>5)</sup> U<sub>b</sub> and T<sub>a</sub> constant.

<sup>6)</sup> In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

## Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>Metal</b>	1
<b>Water</b>	1
<b>PVC</b>	Approx. 0.4
<b>Oil</b>	Approx. 0.25
<b>Glass</b>	0.6
<b>Ceramics</b>	0.5
<b>Alcohol</b>	0.7
<b>Wood</b>	0.2 ... 0.7

## Installation note

<b>Remark</b>	Associated graphic see "Installation"
<b>B</b>	18 mm
<b>C</b>	18 mm
<b>D</b>	24 mm

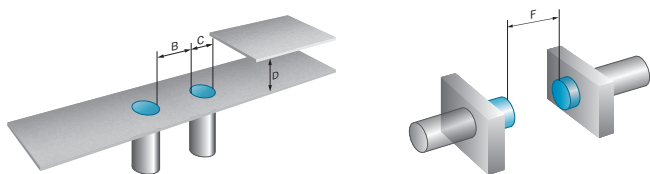
## Classifications

<b>ECI@ss 5.0</b>	27270102
<b>ECI@ss 5.1.4</b>	27270102
<b>ECI@ss 6.0</b>	27270102
<b>ECI@ss 6.2</b>	27270102

<b>ECI@ss 7.0</b>	27270102
<b>ECI@ss 8.0</b>	27270102
<b>ECI@ss 8.1</b>	27270102
<b>ECI@ss 9.0</b>	27270102
<b>ETIM 5.0</b>	EC002715
<b>ETIM 6.0</b>	EC002715
<b>UNSPSC 16.0901</b>	39122230

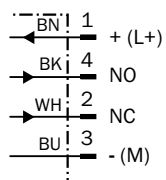
## Installation note

Flush installation



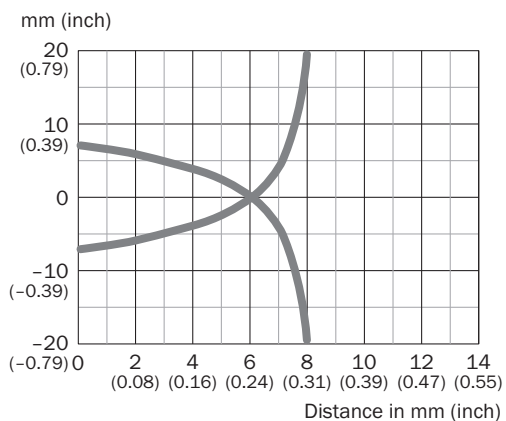
## Connection diagram

cd-006



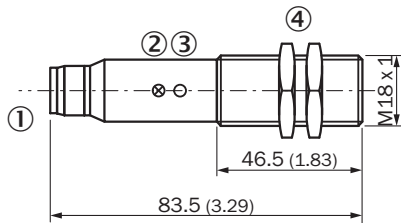
## Characteristic curve

CM18, Flush installation



## Dimensional drawing (Dimensions in mm (inch))

CM18, flush, connector



- ① Connection
- ② Indication LED
- ③ Potentiometer
- ④ Fastening nuts (2 x); 34 mm hex, plastic

## Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N06 for universal clamp bracket, M18, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N06	2051612
	Plate N06N for universal clamp bracket, M18, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware	BEF-KHS-N06N	2051622
Mounting brackets and plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Terminal and alignment brackets			
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482

## 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)