Data sheet

CM18-08BPP-TW0

CM

CAPACITIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
CM18-08BPP-TW0	6026195

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

Detailed technical data

Features

Housing	Metric
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	3 mm ... 8 mm
Safe sensing range S_a	5.76 mm
Installation type	Flush
Switching frequency	30 Hz
Connection type	Cable, 4-wire, 2 m [1]
Switching output	PNP
Switching output detail	PNP
Output function	Complementary
Electrical wiring	DC 4-wire
Adjustment	
Potentiometer	Sensitivity (270°)
Enclosure rating	IP67 [2]
Items supplied	Mounting nut, PTFE plastic (2x) Screwdriver for potentiometer adjustment (1 x)

[1] Do not bend below 0 °C.
[2] According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 36 V DC
Ripple	≤ 10 % [1]

[1] Of Ub.
[2] At I_a max.
[3] Without load.
[4] Of Sr.
[5] Supply voltage U_B and constant ambient temperature Ta.
[6] 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.).

Voltage drop	≤ 2.5 V DC [2]
Current consumption	10 mA [3]
Time delay before availability	≤ 100 ms
Hysteresis	4 % ... 20 %
Reproducibility	≤ 5 % [4] [5]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2 [6]
Continuous current I_a	≤ 200 mA
Cable material	PVC
Conductor size	0.34 mm²
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	–25 °C ... +60 °C
Housing material	PTFE coating, PTFE
Housing length	71.5 mm
Thread length	46.5 mm
Tightening torque, max.	≤ 2.6 Nm

[1] Of Ub.
[2] At I_a max.
[3] Without load.
[4] Of Sr.
[5] Supply voltage U_B and constant ambient temperature Ta.
[6] 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.).

Safety-related parameters

$MTTF_D$	897 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	18 mm
C	18 mm
D	24 mm

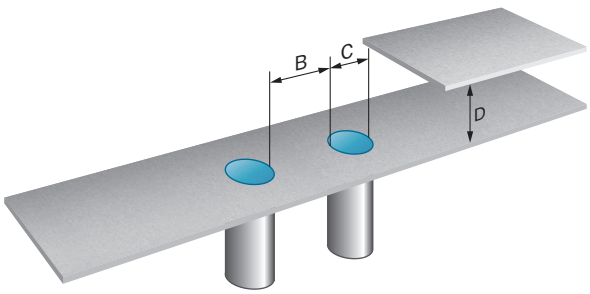
Certificates

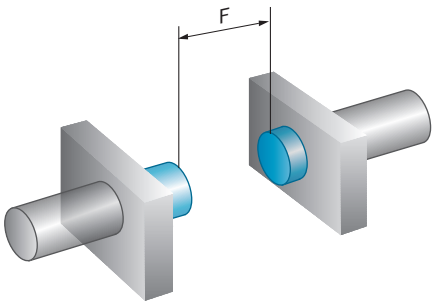
EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

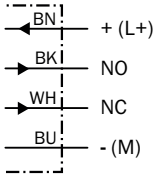
ECLASS 5.0	27270102
ECLASS 5.1.4	27270102
ECLASS 6.0	27270102
ECLASS 6.2	27270102
ECLASS 7.0	27270102
ECLASS 8.0	27270102
ECLASS 8.1	27270102
ECLASS 9.0	27270102
ECLASS 10.0	27270102
ECLASS 11.0	27270102
ECLASS 12.0	27274201
ETIM 5.0	EC002715
ETIM 6.0	EC002715
ETIM 7.0	EC002715
ETIM 8.0	EC002715
UNSPSC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

Installation note Flush installation

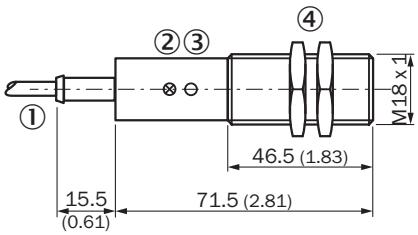




Connection diagram Cd-005



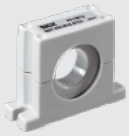
Dimensional drawing CM18 PTFE, flush, cable



Dimensions in mm (inch)
① Connection
② Display LED
③ Potentiometer
④ fastening nuts (2 x); 34 mm hex, plastic

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Clamping block for round sensors M18, with fixed stop • **Material:** Plastic • **Details:** Plastic (PA12), glass-fiber reinforced • **Items supplied:** Mounting hardware included • **Suitable for:** GR18, MH15V, V180-2, V18	BEF-KHF-M18	2051482
	• **Description:** Clamping block for round sensors M18, without fixed stop • **Material:** Plastic • **Details:** Plastic (PA12), glass-fiber reinforced • **Items supplied:** Mounting hardware included • **Suitable for:** GR18, MH15V, V180-2, V18	BEF-KH-M18	2051481
	• **Description:** Plate N06N for universal clamp bracket, M18 • **Material:** Stainless steel, stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** MH15, MH15V, V180-2, V18V, W15, GR18, V18, V18 Laser, V12-2, SimpleSense, SureSense, M18 round sensors	BEF-KHS-N06N	2051622
	• **Description:** Mounting plate for M18 sensors • **Material:** Stainless steel • **Details:** Stainless steel • **Items supplied:** Without mounting hardware	BEF-WG-M18N	5320948
	• **Description:** Mounting bracket for M18 sensors • **Material:** Stainless steel • **Details:** Stainless steel • **Items supplied:** Without mounting hardware	BEF-WN-M18N	5320947
	• **Description:** Mounting bracket with ball-and-socket • **Material:** Plastic • **Details:** Plastic • **Items supplied:** Mounting hardware included • **Suitable for:** GR18, MH15V, V180-2, V18	BEF-WN-M18-ST02	5312973
connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-G	6007302
	• **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-W	6007303
	• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932
	• **Connection type head A:** Male connector, M12, 4-pin, angled, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-W	6022084

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

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