



IM12-10NPS-ZW1

IML

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
IM12-10NPS-ZW1	6027512

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	10 mm
Safe sensing range S_a	8.1 mm
Installation type	Non-flush
Switching frequency	400 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾
Special features	Triple sensing range
Items supplied	Mounting nut, brass, chromium-plated (2x) Washer, brass, chromium-plated, with locking teeth (2x)

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	$\leq 10 \% ^{1)}$
Voltage drop	$\leq 2 \text{ V} ^{2)}$
Time delay before availability	$\leq 50 \text{ ms}$
Hysteresis	1 % ... 15 %
Reproducibility	$\leq 5 \% ^{3) 4)}$
Temperature drift (of S_r)	$\pm 10 \%$
EMC	According to EN 60947-5-2
Continuous current I_a	$\leq 200 \text{ mA}$
Cable material	PVC
Conductor size	0.34 mm ²
Cable diameter	Ø 5 mm
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Installation aid	✓ ⁵⁾
Ambient operating temperature	-25 °C ... +70 °C
Housing material	Brass, chromium-plated
Sensing face material	Plastic, PTB
Housing length	52 mm
Thread length	44 mm
Tightening torque, max.	10 Nm

¹⁾ Of V_S .

²⁾ At $I_a \text{ max.}$

³⁾ Of S_r .

⁴⁾ UB = 20 V DC ... 30 V DC, TA = 23 °C $\pm$ 5 °C.

⁵⁾ LED lights continuously ($0 \leq s \leq 0.8 \text{ Sr}$); LED flashing ($0.8 \text{ Sr} < s \leq \text{Sr}$).

Safety-related parameters

MTTF_D	171 years
DC_{avg}	0%
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.77
Aluminum (Al)	Approx. 0.49
Copper (Cu)	Approx. 0.45
Brass (Br)	Approx. 0.56

Installation note

Remark	Associated graphic see "Installation"
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A	10 mm
B	30 mm
C	12 mm
D	30 mm
E	13 mm
F	100 mm

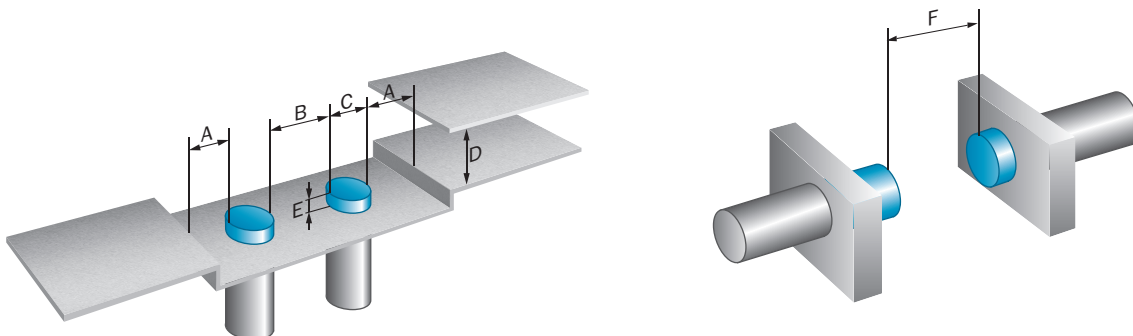
Certificates

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

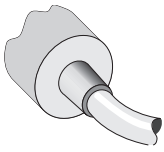
Classifications

ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

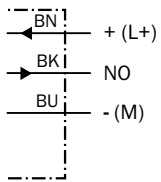
Installation note Non-flush installation



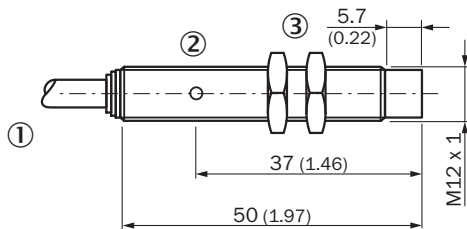
Connection type



Connection diagram Cd-001



Dimensional drawing IM12 Triplex, cable, non-flush



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); width across 17, metal

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	Description: Clamping block for round sensors M12, with fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included	BEF-KHF-M12	2051480
	Description: Plate N05 for universal clamp bracket, M12 Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: IMA, IMF, M12 round sensors, UC4, V12-2, MultiV, MultiLine, W4-3, MultiV, MultiLine	BEF-KHS-N05	2051611
	Description: Mounting plate for M12 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware	BEF-WG-M12	5321869
	Description: Mounting bracket for M12 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware	BEF-WN-M12	5308447

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