IM12-10NNS-ZW1

IML

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

IM12-10NNS-ZW1 | IML

INDUCTIVE PROXIMITY SENSORS

Ordering information

Type	Part no.
IM12-10NNS-ZW1	6027513

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	NPN
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	≤ 10 % [1]
Voltage drop	≤ 2 V [2]

[1] Of V_S.
[2] At I_a max.
[3] Of Sr.
[4] UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C.
[5] LED lights continuously (0 ≤ s ≤ 0.8 Sr); LED flashing (0.8 Sr < s ≤ Sr).

Time delay before availability	≤ 50 ms
Hysteresis	1 % ... 15 %
Reproducibility	≤ 5 % [3] [4]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Cable material	PVC
Conductor size	0.34 mm²
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 max.

[3] Of Sr.

[4] UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C.

[5] LED lights continuously (0 ≤ s ≤ 0.8 Sr); LED flashing (0.8 Sr < s ≤ 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"
A	10 mm
B	30 mm
C	12 mm
D	30 mm
E	13 mm

F	100 mm

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
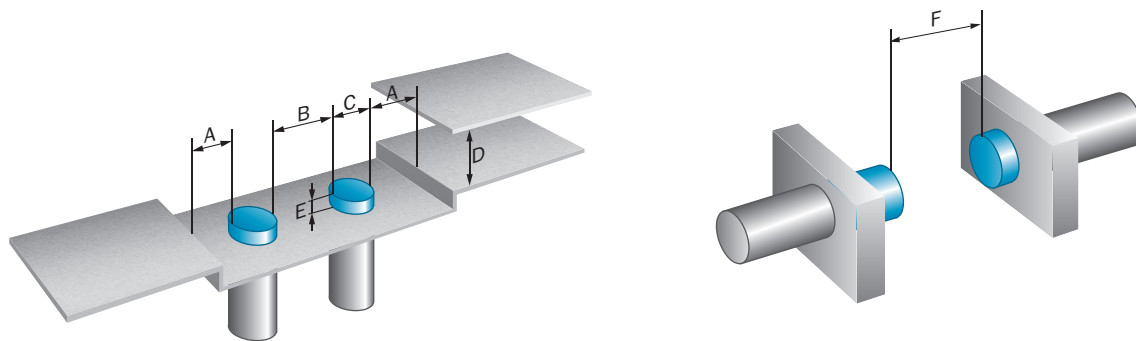
Connection type
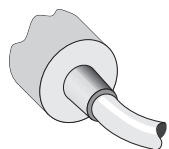
Connection diagram

Cd-001

```
BN    + (L+)
BK    NO
BU    - (M)
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Dimensional drawing (Dimensions in mm (inch))

IM12 Triplex, cable, non-flush

① 5.7 (0.22)
② ③
37 (1.46)
50 (1.97)
M12 x 1
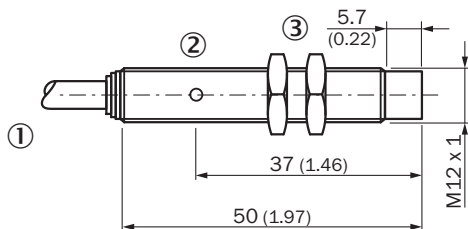
① Connection
② Display LED
③ Fastening nuts (2x); width across 17, metal

Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N05 for universal clamp bracket, M12, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N05	2051611
Mounting brackets and plates			
	Mounting plate for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M12	5321869
	Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M12	5308447
Terminal and alignment brackets			
	Clamping block for round sensors M12, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M12	2051480

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."

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