



IM12-02BNS-ZT1

IM Standard

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
IM12-02BNS-ZT1	6011968

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

Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	2 mm
Installation type	Flush
Switching frequency	2,000 Hz
Connection type	Connector M8, 3-pin
Switching output	NPN
Switching output detail	NPN
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 % ¹⁾
Voltage drop	≤ 1.2 V ²⁾
Time delay before availability	≤ 100 ms
Hysteresis	2 % ... 10 %
Reproducibility	≤ 2 % ³⁾ ⁴⁾
Temperature drift (of S_n)	± 10 %

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

⁴⁾ Of S_r .

EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
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 ... +70 °C
Housing material	Brass, Nickel-plated brass
Sensing face material	Plastic
Housing length	60.5 mm
Thread length	43 mm
Tightening torque, max.	10 Nm

1) Of V_S .

2) At I_a max.

3) Supply voltage U_B and constant ambient temperature T_a .

4) Of S_r .

Safety-related parameters

MTTF_D	192 years
DC_{avg}	0 %

Installation note

Remark	Associated graphic see "Installation"
A	6 mm
B	12 mm
C	12 mm
D	6 mm
E	0 mm
F	16 mm

Certificates

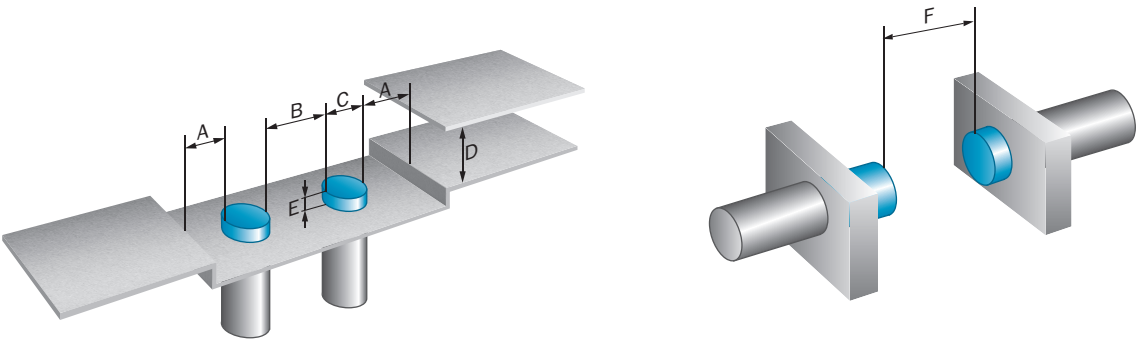
EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

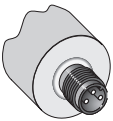
ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101

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

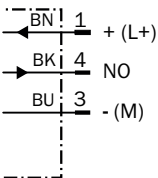
Installation note Non-flush installation



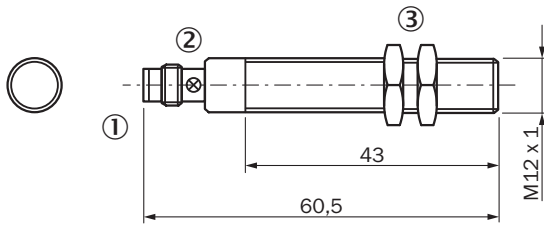
Connection type



Connection diagram Cd-002



Dimensional drawing



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/IM_Standard

	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: Clamping block for round sensors M12, without fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included	BEF-KH-M12	2051479
	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

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	DOS-0803-G	7902077
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Description: Unshielded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm²	DOS-0803-W	7902078
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YF8U13-020VA1XLEAX	2095860
		YF8U13-050VA1XLEAX	2095884
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YG8U13-020VA1XLEAX	2096165
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YG8U13-050VA1XLEAX	2096166
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-050UA1XLEAX	2094788
		YF8U13-C60VA1XLEAX	2146368

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