IMR12-10NPSTC0S

IMR

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

IMR12-10NPSTC0S | IMR
INDUCTIVE PROXIMITY SENSORS

Ordering information

Type	part no.
IMR12-10NPSTC0S	6069276

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

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	2,000 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68
Special features	Reduction factor 1, Magnetic-field-resistant, triple sensing range
Special applications	Welding range, Difficult application conditions
Items supplied	Mounting nut, brass, PTFE coating (2x) Washer, brass, PTFE coating, with locking teeth (2x)

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 1.8 V [1]
Hysteresis	3 % ... 15 %

[1] At I_a max.
[2] Supply voltage U_B and constant ambient temperature Ta.
[3] Of Sr.
[4] –25 °C ... +70 °C.
[5] Reference voltage: 50 V DC.

Reproducibility	≤ 2 % [2] [3]
Temperature drift (of S$_r$)	≤ ± 10 % ≤ ± 15 % [4]
Continuous current I$_a$	≤ 200 mA
No load current	≤ 15 mA
Off-state current	≤ 0.1 mA
Short-circuit protection	✓
Magnetic field strength	≤ 100 mT
Shock and vibration resistance	30 g, 11 ms / 10 … 55 Hz, 1 mm
Ambient operating temperature	–30 °C … +85 °C
Housing material	PTFE coating, brass
Sensing face material	Plastic, PTFE coating
Housing length	52 mm
Thread length	26 mm
Tightening torque, max.	Typ. 7 Nm
Protection class	II [5]
UL File No.	E191603

[1] At I$_a$ max.

[2] Supply voltage U$_B$ and constant ambient temperature Ta.

[3] Of Sr.

[4] –25 °C … +70 °C.

[5] Reference voltage: 50 V DC.

Safety-related parameters

MTTF$_D$	139 years
DC$_{avg}$	0%
T$_M$ (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Reduction factor	Reduction factor 1
Stainless steel (V2A, 304)	1
Aluminum (Al)	1
Copper (Cu)	1
Brass (Br)	1

Installation note

Remark	Associated graphic see "Installation"
A	12 mm
B	36 mm
C	12 mm
D	30 mm
E	10 mm
F	60 mm

G	45 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

Certificates

EU declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Installation note
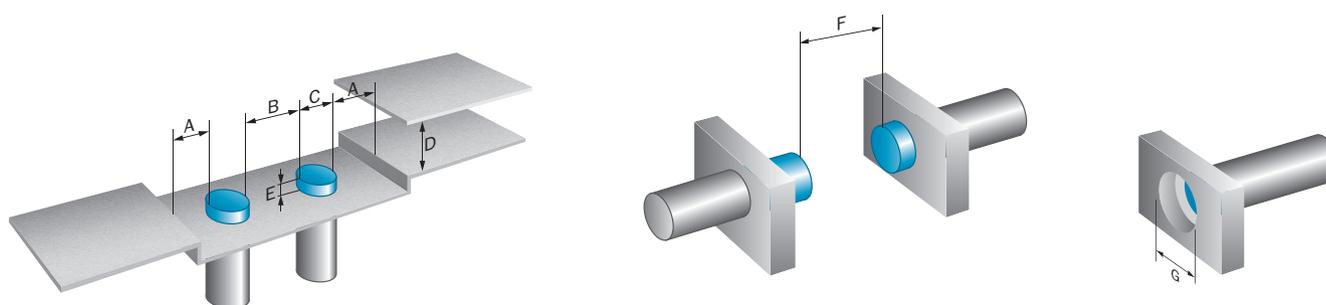
Connection diagram Cd-007

BN	1	+ (L+)
BK	4	NO
	2	not connected
BU	3	- (M)

Response diagram

Distance in mm (inch)
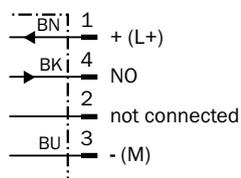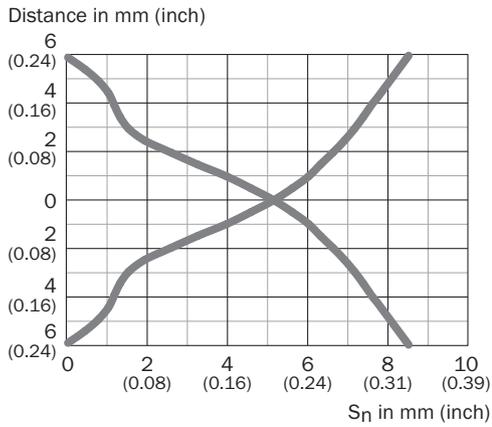
S_n in mm (inch)

Dimensional drawing
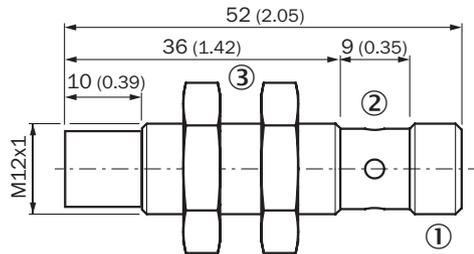
Dimensions in mm (inch)
① M12 x 1
② LED output state, yellow
③ Fastening nuts (2x); width across 17, metal

Recommended accessories

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

Brief description	Type	part no.
Mounting systems		
• **Description:** Mounting bracket for M12 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware	BEF-WN-M12	5308447

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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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