Online data sheet



IM12-04N-N-ZW0

IMN

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
IM12-04N-N-ZW0	6021125

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

Detailed technical data

Features

Housing	Cylindrical thread design
Thread size	M12 1
Diameter	Ø 12 mm
Sensing range S_n	4 mm
Safe sensing range S_a	3.24 mm
Installation type	Non-flush
Switching frequency	1,500 Hz
Connection type	Cable, 2-wire, 2 m
Switching output	NAMUR
Output function	NC
Enclosure rating	IP67 [1]

[1] According to EN 60529.

Mechanics/electronics

Supply voltage	7.5 V DC ... 25 V DC [1]
Current consumption	≤ 30 mA [1]
Hysteresis	1 % ... 15 %
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-6
Current consumption, sensor is activated	≤ 1 mA
Current consumption, sensor is not activated	≥ 2.2 mA
Cable material	PVC

[1] When used outside the hazardous area.
[2] For connection to a separately certified intrinsically safe circuit only.
[3] 1 kΩ.

Conductor size	0.34 mm²
Cable diameter	Ø 4.9 mm
Cable resistance	50 Ω
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	–20 °C ... +70 °C
Housing material	Metal, Nickel-plated brass
Sensing face material	Plastic, Plastic
Housing length	30 mm
Thread length	25 mm
Tightening torque, max.	7 Nm
Weight	127 g
Items supplied	Fastening nuts (2x); width across 17, metal
EC Approval Certificate	PTB 03 ATEX 2037
Ex area category	1G
Input voltage U_i max.	15 V [2]
Input power P_i max.	120 mW [2]
Input current I_i max.	50 mA [2]
Internal capacitance C_i max.	140 nF [2]
Internal inductance L_i max.	130 µH [2]
Nominal voltage	8.2 V DC [3]
Device labeling	II 1G Ex ia IIC T6 Ga Ta –20 °C ... +70 °C

[1] When used outside the hazardous area.
[2] For connection to a separately certified intrinsically safe circuit only.
[3] 1 kΩ.

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cu)	Approx. 0.3
Brass (Br)	Approx. 0.5

Installation note

Remark	Associated graphic see "Installation"
A	12 mm
B	24 mm
C	12 mm
D	12 mm
E	8 mm
F	32 mm

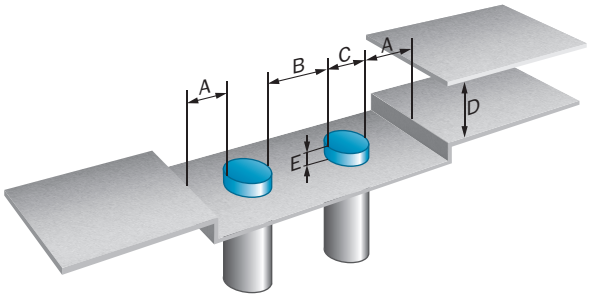
Classifications

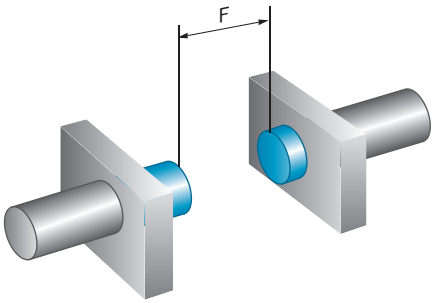
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ECl@ss 5.1.4	27270101
ECl@ss 6.0	27270101
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ECl@ss 8.0	27270101
ECl@ss 8.1	27270101
ECl@ss 9.0	27270101
ETIM 5.0	EC002714
ETIM 6.0	EC002714
UNSPSC 16.0901	39122230

Installation note

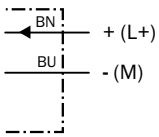
Non-flush installation





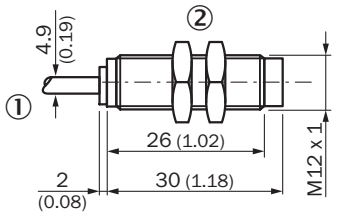
Connection diagram

Cd-012



Dimensional drawing (Dimensions in mm (inch))

IM12 Namur, non flush



① Connection
② Fastening nuts (2x); width across 17, metal

Recommended accessories

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

	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
Modules and gateways			
	NAMUR isolatig amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 24 V ... 230 V, Voltage type: AC/DC	EN2-2EX1	6041096

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