



**Inductive proximity sensors**  
**Cylindrical threaded housing, IM12 NAMUR**

IM12-02B-N-ZW0



**Model Name** > [IM12-02B-N-ZW0](#)  
**Part No.** > [6021124](#)



**At a glance**

- Operating distance up to 4 mm
- NAMUR
- ATEX device category 1G and 2G
- Output according to DIN EN 60947-5-6
- Types M12

**Your benefits**

- Exceptional protection in explosive areas
- Category 1G and 2G for zones 0 and 1 provides protection in explosive areas
- Output according to DIN EN 60947-5-6



**Features**

Design:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	2 mm
Assured sensing range Sa:	1.62 mm
Installation type:	Flush
Switching frequency:	1,200 Hz
Output type:	NAMUR
Output function:	NC
Enclosure rating:	IP 67 <sup>1)</sup>
Electrical connection:	Cable, 2-wire, 2 m

<sup>1)</sup> According to EN 60529

**Mechanics/electronics**

Supply voltage:	7.5 V DC ... 25 V DC <sup>1)</sup>
Power consumption:	≤ 30 mA <sup>2)</sup>
Current consumption, sensor is activated:	≤ 1 mA
Current consumption, sensor is not activated:	≥ 2.2 mA
Hysteresis:	1 % ... 15 %
Temperature drift (of Sr):	± 10 %
EMC:	According to EN 60947-5-6
Cable material:	PVC
Conductor cross-section:	0.34 mm <sup>2</sup>
Cable diameter:	4.9 mm

Shock and vibration resistance:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient temperature operation:	-20 °C ... +70 °C
Housing cap material:	Plastic, PBT
Housing length:	30 mm
Thread length:	29 mm
Tightening torque, max.:	7 Nm
Items supplied:	Fastening nuts (2 x); width across 17, metal
EC Approval Certificate:	PTB 03 ATEX 2037
Hazardous area category:	1G, 2G
Input voltage $U_i$ max.:	15 V <sup>3)</sup>
Input power $P_i$ max.:	120 mW <sup>4)</sup>
Input current $I_i$ max.:	50 mA <sup>5)</sup>
Internal capacitance $C_i$ max.:	140 nF <sup>6)</sup>
Internal inductance $L_i$ max.:	340 $\mu$ H <sup>7)</sup>
Nominal voltage:	8.2 V DC
ATEX marking:	II 1 G Ex ia IIB T6 Ta: -20 °C ... +70 °C, II 2 G Ex ia IIC T6 Ta: -20 °C ... +70 °C
Cable resistance:	50 $\Omega$
Housing material:	Metal, Nickel-plated brass
Weight:	130 g

1) 2) When used outside the hazardous area 3) 4) 5) 6) 7) For connection only to a separately certified, intrinsically safe electrical circuit

#### Reduction factors

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

#### Installation note

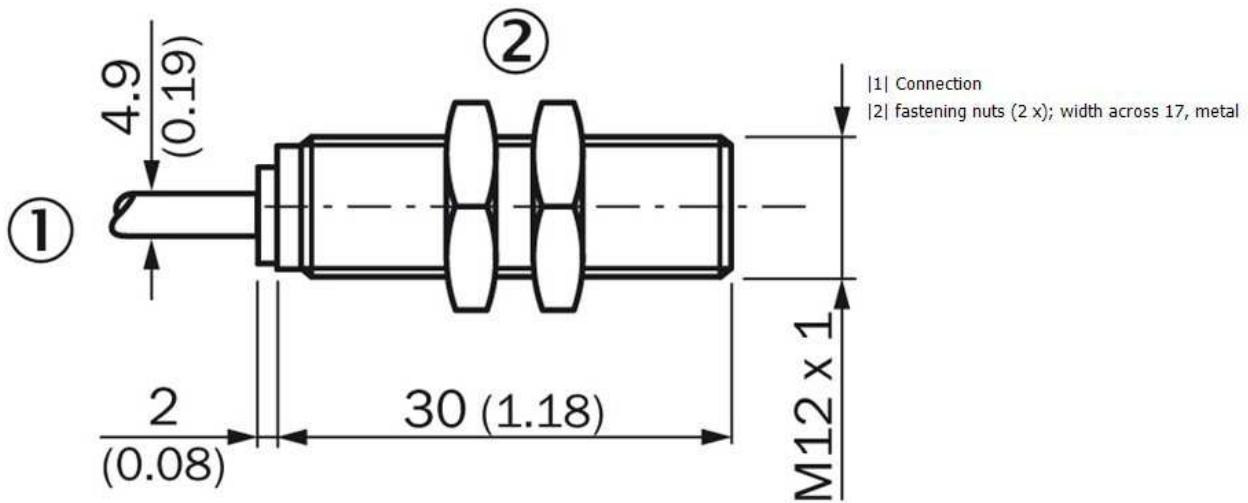
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B:	12 mm
C:	12 mm
D:	6 mm
F:	16 mm
Remark:	Associated graphic see "Installation"

## Installation note

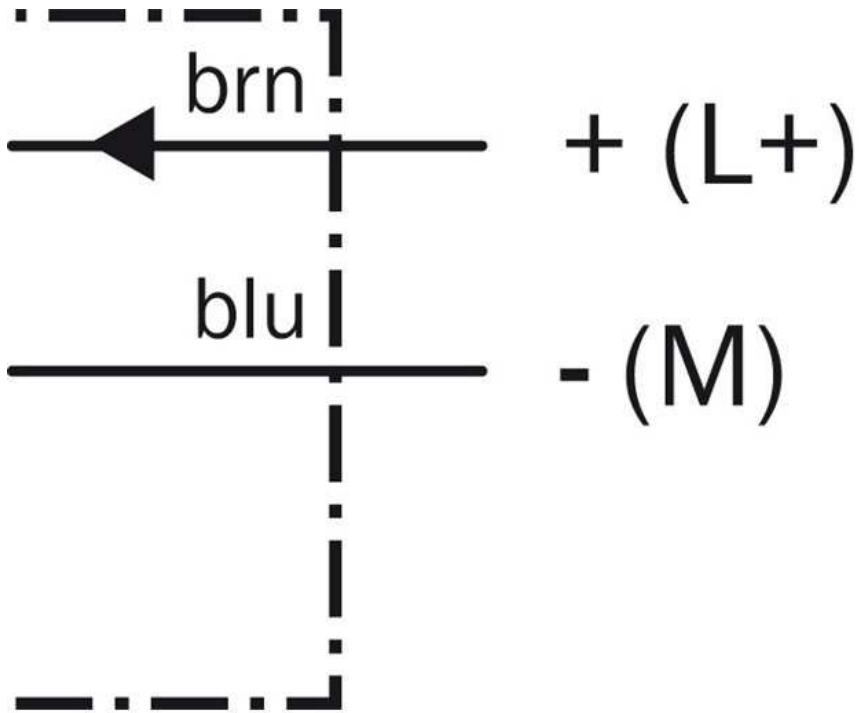


## Dimensional drawing



All dimensions in mm (inch)

Connection diagram



Connection type



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