



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

IM12-10NNS-NC1



**Model Name** > [IM12-10NNS-NC1](#)  
**Part No.** > [6027576](#)



**At a glance**

- Stainless steel housing (316L/1.4404)
- Extremely watertight (IP 68/IP 69K)
- Triple sensing distance
- High resistance to mechanical stress
- Watertight housing suitable for use in hygienic and wash down areas
- Resistant to aggressive cleaning agents
- Visual adjustment indicator via output LED

**Your benefits**

- Less machine downtime due to rugged sensor design
- Cost reduction due to long service life even under the most extreme ambient conditions
- Quick and easy installation due to adjustment indicator via LEDs
- Large operating reserve due to triple operating distance
- High resistance to shock and impact due to stainless steel sensing face
- No restrictions on cleaning agents or processes, ensuring reliable operation



**Features**

Design:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	10 mm
Assured sensing range Sa:	8.1 mm
Installation type:	Non-flush
Switching frequency:	400 Hz
Output type:	NPN
Output function:	NO
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 68 <sup>1)</sup> IP 69K
Electrical connection:	Connector M12, 4-pin

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

**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC
Residual ripple:	≤ 20 % <sup>1)</sup>

Voltage drop:	$\leq 2 \text{ V}^{2)}$
Power consumption:	$\leq 10 \text{ mA}^{3)}$
Time delay before availability:	$\leq 40 \text{ ms}$
Hysteresis:	1 % ... 15 %
Repeatability:.	$\leq 5 \%^{4) 5)}$
Temperature drift (of Sr):	$\leq 10 \%$
EMC:	According to EN 60947-5-2
Output current I <sub>a</sub> :	$\leq 200 \text{ mA}$
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	✓
Shock and vibration resistance:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient temperature operation:	-25 °C ... +85 °C
Housing material:	Stainless steel, Stainless steel V4A (1.4435, 316L)
Housing cap material:	Metal
Housing length:	60 mm
Thread length:	36 mm
Tightening torque, max.:	$\leq 20 \text{ Nm}$

1) Of V<sub>S</sub> 2) At I<sub>a</sub> max 3) Without load 4) Of Sr 5) UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C

### Reduction factors

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Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	Ca. 1
Copper (Cu):	Ca. 0.8
Aluminum (Al):	Ca. 1
Brass (Br):	Ca. 1.3
Stainless steel (V4A, 316L):	Ca. 0.5

### Installation note

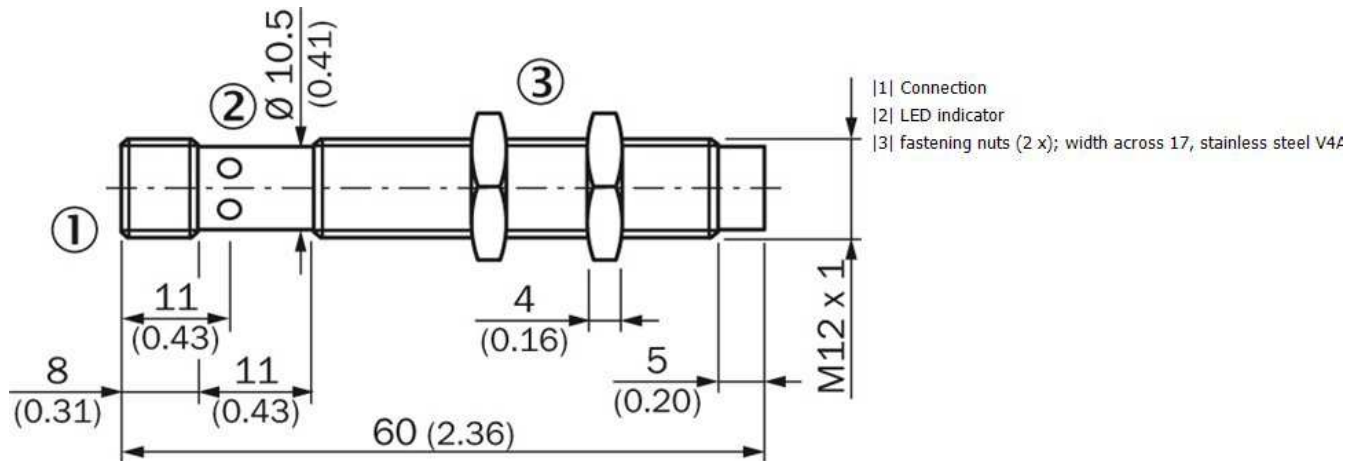
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A:	24 mm
B:	108 mm
C:	12 mm
D:	30 mm
E:	Aluminium: 13 mm, Stainless steel: 21 mm, Brass: 15 mm, Steel: 22 mm
F:	100 mm
Remark:	Associated graphic see "Installation"

## Installation note



## Dimensional drawing



All dimensions in mm (inch)

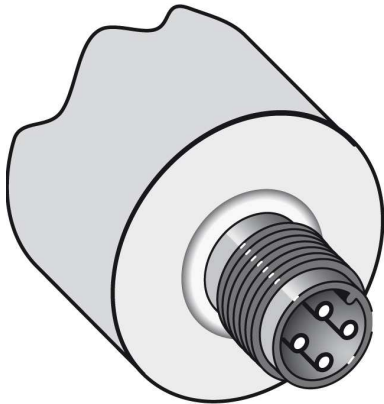
Connection diagram

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Connection type

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