



Inductive proximity sensors  
Cylindrical threaded housing, IM04

IM04-0B6NS-ZU1



**Model Name** > [IM04-0B6NS-ZU1](#)  
**Part No.** > [6020146](#)



**At a glance**

- Operating distance up to 0,6 mm
- Small housing sizes and low weight
- Integrated LED indicator and snubber circuit
- Rugged stainless steel housing
- Thread sizes M4 available

**Your benefits**

- Trouble-free installation in space-critical applications provides a high degree of design freedom, saving machine space
- Reliable detection of rapid handling and assembly processes increases throughput
- High-visibility indicator LED for simple monitoring of operational state reduces commissioning time
- High positioning accuracy increases machine throughput
- High resistance to shock and vibrations reduces maintenance costs



**Features**

Design:	Cylindrical
Thread size:	M4 x 0.5
Sensing range Sn:	0.6 mm
Assured sensing range Sa:	0.486 mm
Installation type:	Flush
Switching frequency:	5,000 Hz
Switching output:	NPN
Output function:	NO
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 67 <sup>1)</sup>
Connection type:	Cable, 3-wire, 2 m

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

**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC
Ripple:	≤ 20 % <sup>1)</sup>
Voltage drop:	≤ 2 V <sup>2)</sup>
Power consumption:	≤ 10 mA <sup>3)</sup>

Time delay before availability:	≤ 10 ms
Hysteresis:	1 % ... 10 %
Repeatability:	≤ 2 % <sup>4)</sup>
Temperature drift (of Sr):	≤ 10 %
EMC:	According to EN 60947-5-2
Output current I <sub>a</sub> :	≤ 100 mA
Cable material:	PUR
Conductor cross-section:	0.06 mm <sup>2</sup>
Cable diameter:	2.6 mm
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	-
Shock/vibration:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient operating temperature:	-25 °C ... 70 °C
Housing material:	Stainless steel, Stainless steel
Housing cap material:	Plastic, Polyester
Housing length:	22 mm
Thread length:	19 mm
Tightening torque, max.:	≤ 0.8 Nm

1) Of V<sub>S</sub> <sup>2)</sup> With I<sub>a</sub> = 200 mA <sup>3)</sup> Without load <sup>4)</sup> U<sub>b</sub> = 20 V DC ... 30 V DC, T<sub>a</sub> = 23 °C ± 5 °C

### Reduction factors

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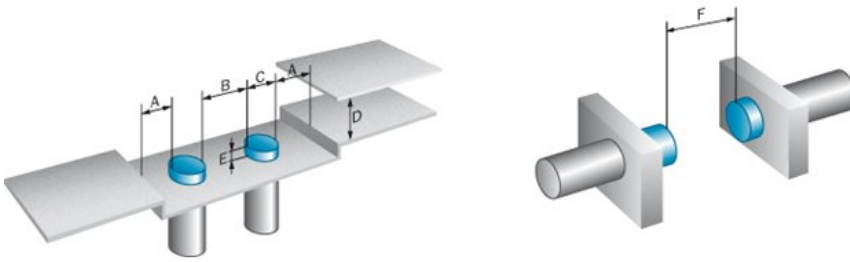
Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.8
Copper (Cu):	Ca. 0.5
Aluminum (Al):	Ca. 0.55
Brass (Br):	Ca. 0.65

### Installation note

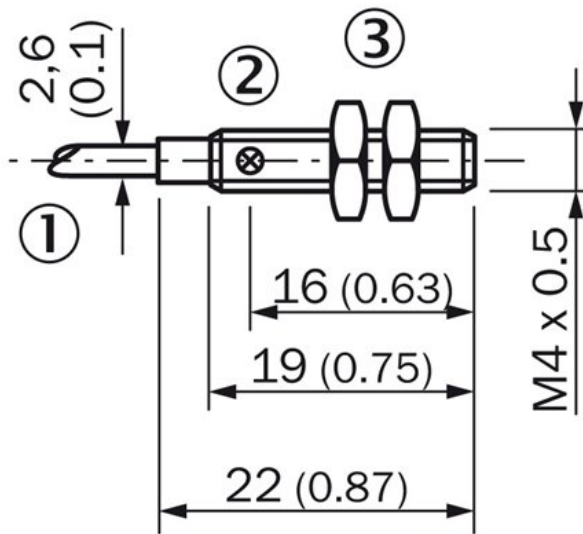
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A:	0 mm
B:	0 mm
C:	4 mm
D:	1.8 mm
E:	0 mm
F:	5 mm
Remark:	Associated graphic see "Installation"

## Installation note



## Dimensional drawing

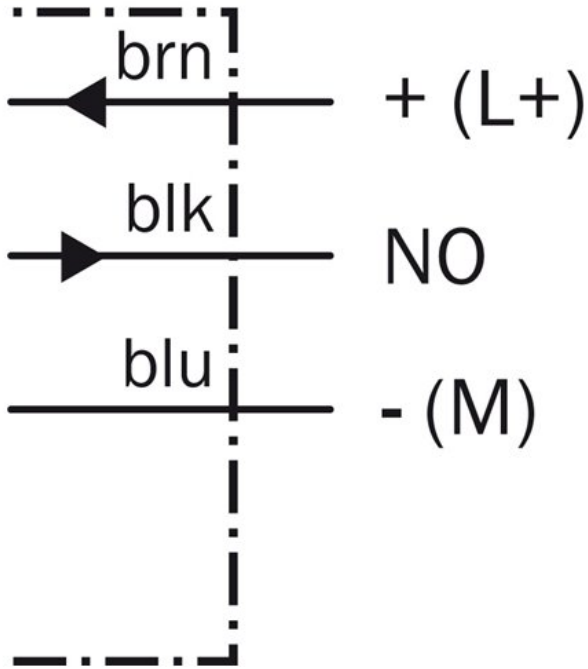


- |1| Connection
- |2| LED indicator
- |3| fastening nuts (2 x); 6 mm hex, stainless steel

All dimensions in mm (inch)

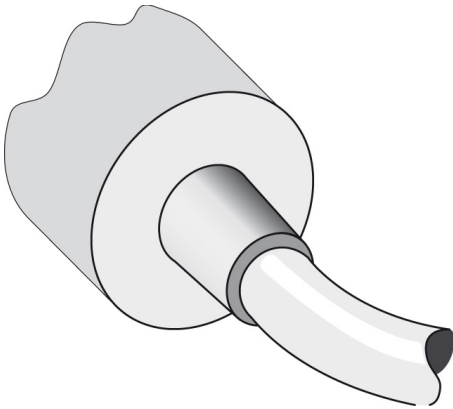
Connection diagram

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Connection type

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