



## Inductive proximity sensors Cylindrical threaded housing, IM12

IM12-04NNS-ZW1



**Model Name** > [IM12-04NNS-ZW1](#)  
**Part No.** > [6011976](#)



#### At a glance

- Size M12
- IP 67 enclosure rating
- Operating temperature from -25° C to +75° C

#### Your benefits

- Reduced machine downtime
- Reduced mechanical damage
- Fewer maintenance costs due to longer service life
- High resistance to shock and vibrations



#### Features

|                      |                     |
|----------------------|---------------------|
| Housing:             | Cylindrical         |
| Thread size:         | M12 x 1             |
| Sensing range Sn:    | 4 mm                |
| Installation type:   | Non-flush           |
| Switching frequency: | 2,000 Hz            |
| Output type:         | NPN                 |
| Output function:     | NO                  |
| Electrical wiring:   | DC 3-wire           |
| Enclosure rating:    | IP 67 <sup>1)</sup> |
| Connection type:     | Cable, 3-wire, 2 m  |
| Housing:             | Standard            |

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

#### Mechanics/electronics

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Supply voltage:                 | 10 V DC ... 30 V DC               |
| Ripple:                         | ≤ 10 % <sup>1)</sup>              |
| Voltage drop:                   | ≤ 1.2 V <sup>2)</sup>             |
| Power consumption:              | ≤ 20 mA <sup>3)</sup>             |
| Time delay before availability: | ≤ 100 ms                          |
| Hysteresis:                     | 2 % ... 10 %                      |
| Repeatability:                  | ≤ 2 % <sup>4)</sup> <sup>5)</sup> |
| Temperature drift (% of Sr):    | ± 10 %                            |
| EMC:                            | According to EN 60947-5-2         |
| Output current I <sub>a</sub> : | ≤ 200 mA                          |

|                                |                                |
|--------------------------------|--------------------------------|
| Cable material:                | PVC                            |
| Conductor cross-section:       | 0.22 mm <sup>2</sup>           |
| Wire-break protection:         | 0                              |
| 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:              | Metal, Nickel-plated brass     |
| Housing cap material:          | Plastic                        |
| Housing length:                | 50 mm                          |
| Thread length:                 | 35 mm                          |
| Tightening torque, max.:       | 10 Nm                          |

1) Of V<sub>S</sub> 2) At I<sub>a</sub> max 3) Without load 4) Ub and Ta constant 5) Of Sr

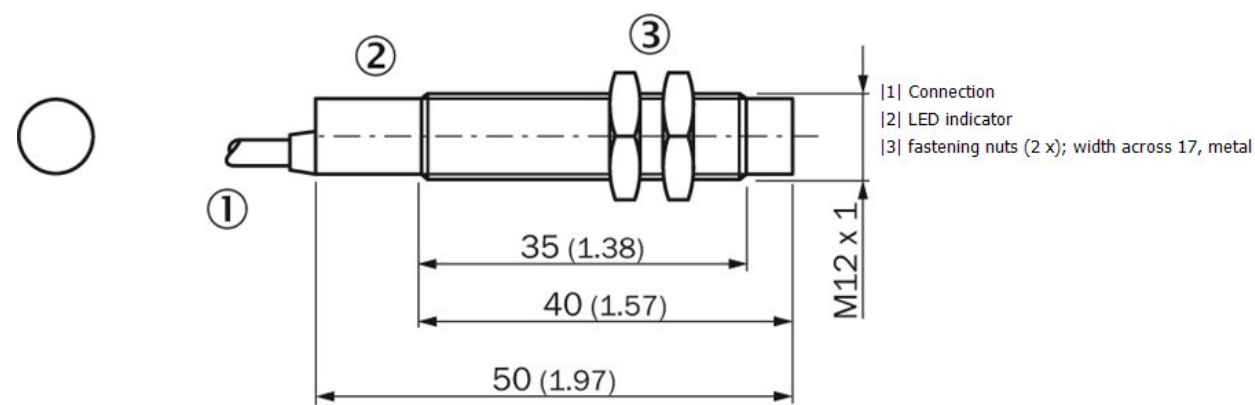
#### Installation note

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

#### Installation note

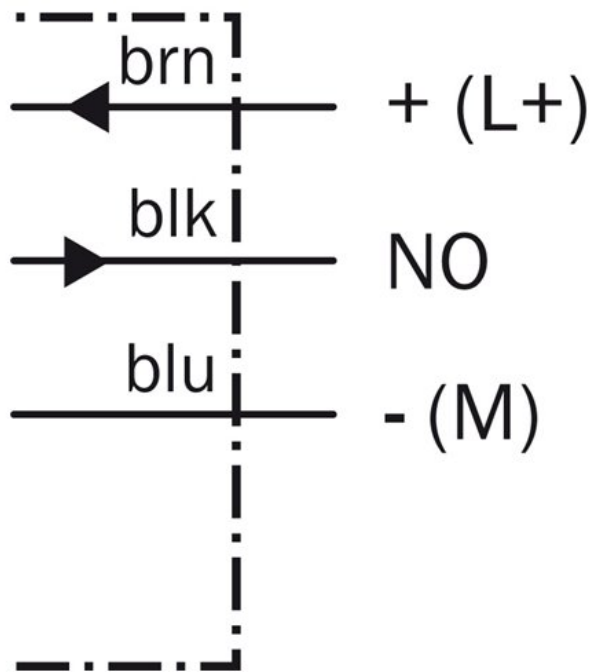


Dimensional drawing



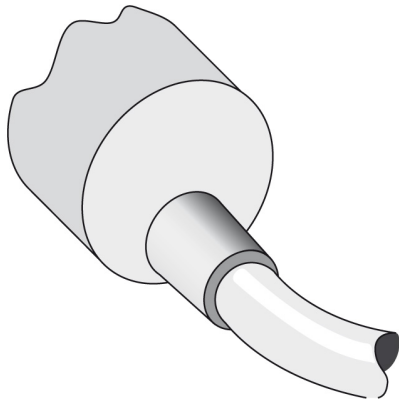
All dimensions in mm (inch)

Connection diagram



## Connection type

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