



Inductive proximity sensors  
Cylindrical threaded housing, IM05

IM05-1B5NSVT0S



**Model Name** > **IM05-1B5NSVT0S**  
**Part No.** > **6049737**



**At a glance**

- Operating distance up to 1,5 mm
- Small housing sizes and low weight
- Integrated LED indicator and snubber circuit
- Rugged stainless steel housing
- Thread sizes M5 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:              | M5 x 0.5            |
| Sensing range Sn:         | 1.5 mm              |
| Assured sensing range Sa: | 1.215 mm            |
| Installation type:        | Flush               |
| Switching frequency:      | 3,000 Hz            |
| Output type:              | NPN                 |
| Output function:          | NO                  |
| Electrical wiring:        | DC 3-wire           |
| Enclosure rating:         | IP 67 <sup>1)</sup> |
| Electrical connection:    | Connector M8, 3-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:      | ≤ 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> : | ≤ 200 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 ... 70 °C               |
| Housing material:               | Stainless steel                |
| Housing cap material:           | Plastic, PA 66                 |
| Housing length:                 | 38 mm                          |
| Thread length:                  | 22 mm                          |
| Tightening torque, max.:        | ≤ 1.8 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. 0.75                                       |
| Copper (Cu):                | Ca. 0.4  |
| Aluminum (Al):              | Ca. 0.4  |
| Brass (Br):                 | Ca. 0.5  |

### Installation note

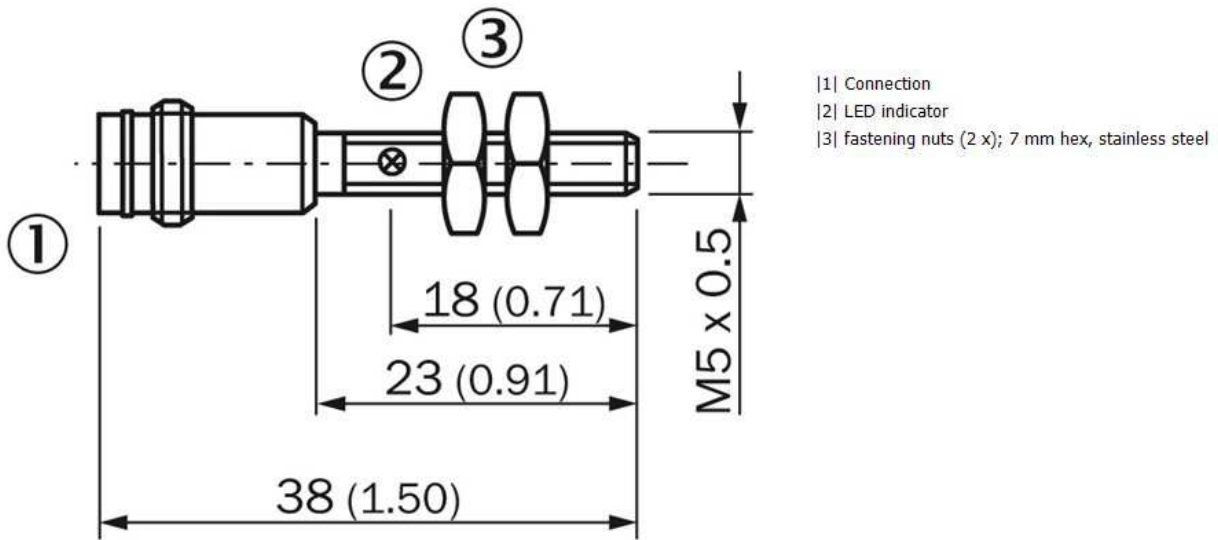
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|         |                                       |
|---------|---------------------------------------|
| E:      | 0 mm                                  |
| Remark: | Associated graphic see "Installation" |

## Installation note

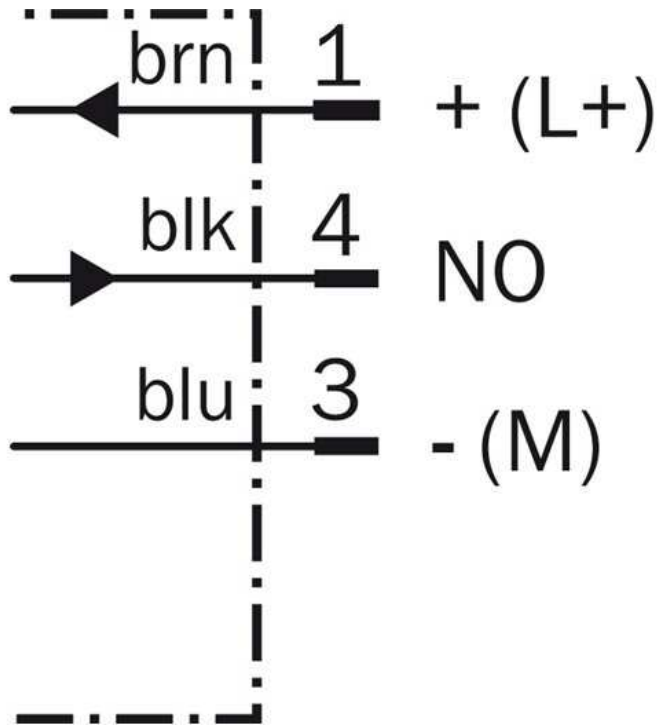


## Dimensional drawing



All dimensions in mm (inch)

Connection diagram



Connection type



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