



Inductive proximity sensors  
Cylindrical threaded housing, IMP12

IMP12-1B5POVC0C



**Model Name** > [IMP12-1B5POVC0C](#)  
**Part No.** > [6050120](#)



**At a glance**

- Pressure resistant up to 500 bar
- Expected service life of up to 1 million pressure cycles
- Sensing range of 1.5 mm flush
- IP 68
- Stainless steel housing with active surface made from stable high-performance ceramic
- State-of-the-art ASIC technology from SICK
- Gas-tight at the sensor face
- 3 and 4-wire versions

**Your benefits**

- Reduced maintenance costs
- Extremely resilient and durable
- Up to 50 times longer service life compared to conventional sensors under pressure cycles
- Simple compensation of cylinder tolerances
- Simple integration due to small design
- Controlled piston deceleration
- Increased piston service life due to collision prevention at the end of the work cycle



**Features**

|                           |                      |
|---------------------------|----------------------|
| Design:                   | Cylindrical          |
| Thread size:              | M12 x 1              |
| Sensing range Sn:         | 1.5 mm               |
| Assured sensing range Sa: | 1.2 mm               |
| Pressure resistance:      | ≤ 500 bar            |
| Installation type:        | Flush                |
| Switching frequency:      | 600 Hz               |
| Output type:              | PNP                  |
| Output function:          | NC                   |
| Electrical wiring:        | DC 3-wire            |
| Enclosure rating:         | IP 68 <sup>1)</sup>  |
| Electrical connection:    | Connector M12, 4-pin |

<sup>1)</sup> Sensing face

## Mechanics/electronics

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|                                 |                                |
|---------------------------------|--------------------------------|
| Supply voltage:                 | 10 V DC ... 30 V DC            |
| Vacuum resistance:              | 10-8Torr <sup>1)</sup>         |
| Residual ripple:                | ≤ 20 % <sup>2)</sup>           |
| Voltage drop:                   | ≤ 2 V <sup>3)</sup>            |
| Power consumption:              | ≤ 10 mA <sup>4)</sup>          |
| Time delay before availability: | ≤ 50 ms                        |
| Hysteresis:                     | 1 % ... 15 % <sup>5)</sup>     |
| Repeatability:                  | ≤ 7 % <sup>6) 7)</sup>         |
| Temperature drift (of Sr):      | ≤ 15 %                         |
| 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 ... +80 °C              |
| Housing material:               | Stainless steel, V2A           |
| Housing cap material:           | Ceramics, ZrO <sub>2</sub>     |
| Size support ring:              | 10 mm x 5.9 mm x 1 mm          |
| Size sealing ring:              | 5.3 mm x 2.4 mm                |
| Material sealing ring:          | FPM                            |
| Housing length:                 | 69 mm                          |
| Thread length:                  | 38 mm                          |
| Tightening torque, max.:        | ≤ 40 Nm                        |

<sup>1)</sup> Front <sup>2)</sup> Of V<sub>S</sub> <sup>3)</sup> With I<sub>a</sub> = 200 mA <sup>4)</sup> Without load <sup>5)</sup> Typ. 8% <sup>6) 7)</sup>

## Reduction factors

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|                             |  |
|-----------------------------|--|
| Note:                       | The values are reference values which may vary |
| Carbon steel St37 (Fe):     | 1  |
| Stainless steel (V2A, 304): | Ca. 0.75                                       |
| Copper (Cu):                | Ca. 0.12                                       |
| Aluminum (Al):              | Ca. 0.2  |
| Brass (Br):                 | Ca. 0.34                                       |

## Installation note

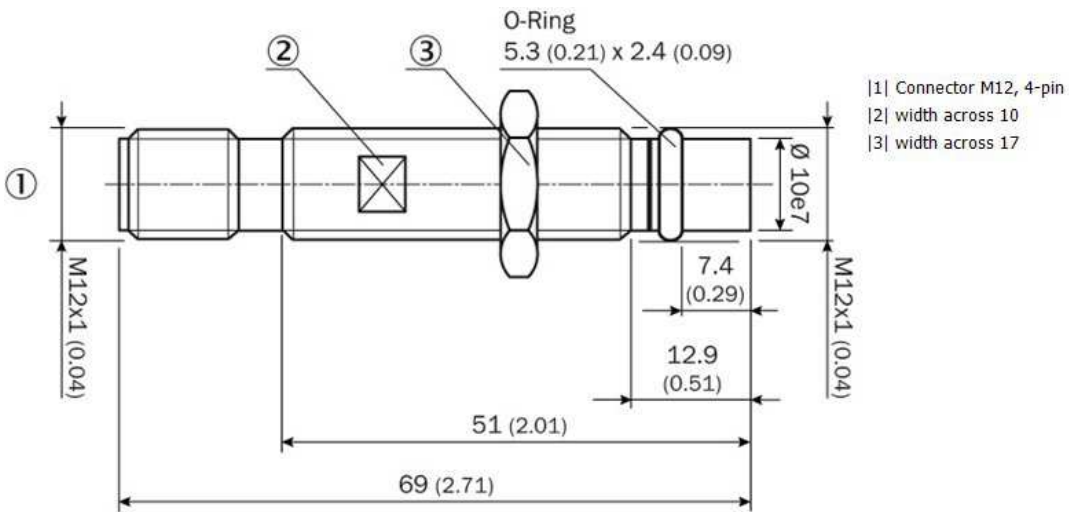
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|         |                                       |
|---------|---------------------------------------|
| Remark: | Associated graphic see "Installation" |
|---------|---------------------------------------|

## Installation note

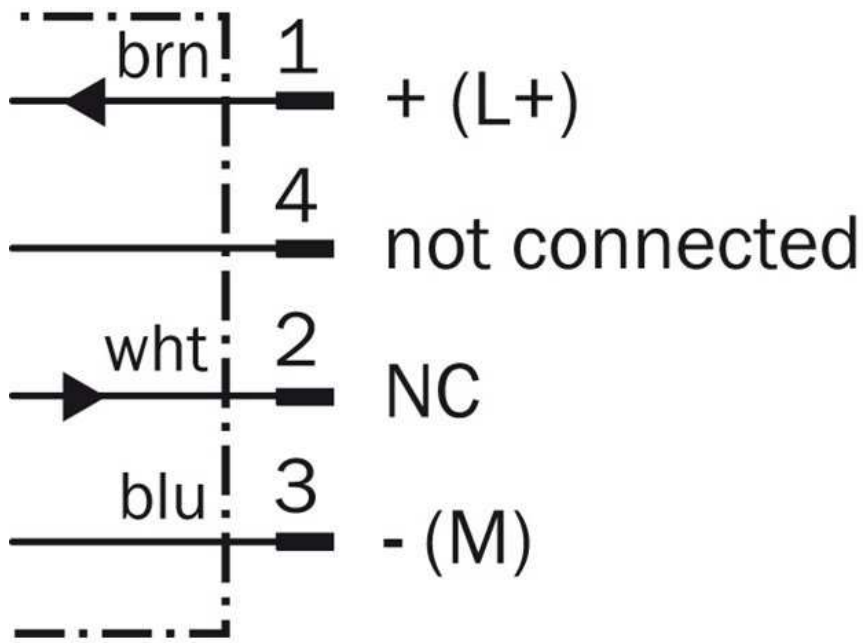


## Dimensional drawing



Connection diagram

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