



Inductive proximity sensors
Cylindrical threaded housing, IMP12

IMP12-1B5POVC0B



Model Name > [IMP12-1B5POVC0B](#)
Part No. > [6050114](#)



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 ¹⁾ |
| Electrical connection: | Connector M12, 4-pin |

¹⁾ Sensing face

Mechanics/electronics

| | |
|---------------------------------|--------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC |
| Vacuum resistance: | 10-8Torr ¹⁾ |
| Residual ripple: | ≤ 20 % ²⁾ |
| Voltage drop: | ≤ 2 V ³⁾ |
| Power consumption: | ≤ 10 mA ⁴⁾ |
| Time delay before availability: | ≤ 50 ms |
| Hysteresis: | 1 % ... 15 % ⁵⁾ |
| Repeatability: | ≤ 7 % ^{6) 7)} |
| Temperature drift (of Sr): | ≤ 15 % |
| EMC: | According to EN 60947-5-2 |
| Output current I _a : | ≤ 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 ₂ |
| 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: | 56 mm |
| Thread length: | 28 mm |
| Tightening torque, max.: | ≤ 40 Nm |

¹⁾ Front ²⁾ Of V_S ³⁾ With I_a = 200 mA ⁴⁾ Without load ⁵⁾ Typ. 8% ^{6) 7)}

Reduction factors

| | |
|-----------------------------|------------------------------------------------|
| 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 |

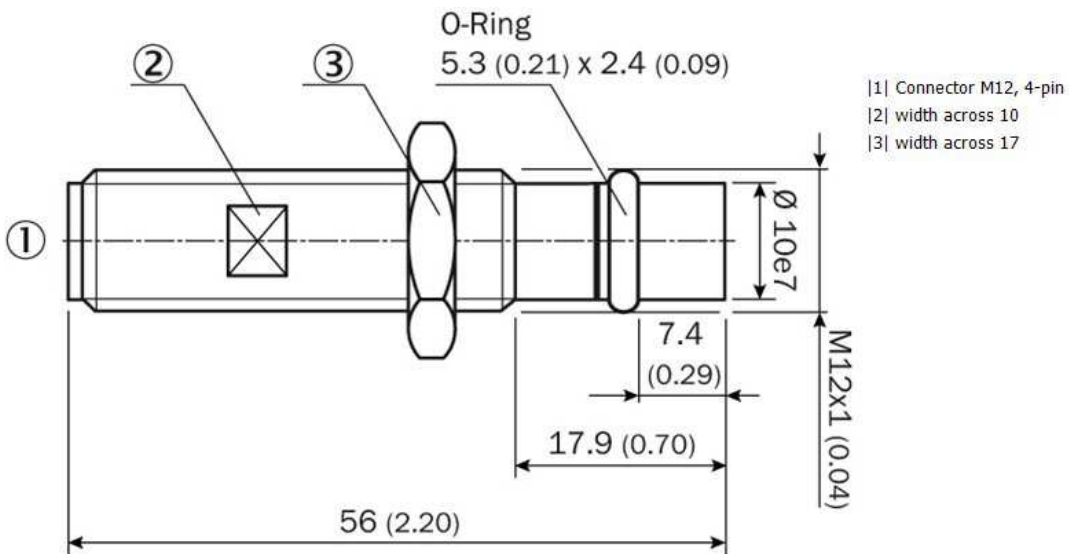
Installation note

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

Installation note



Dimensional drawing



Connection diagram



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