



Inductive proximity sensors
Cylindrical threaded housing, IMP05

IMP05-01BNSVU2S



Model Name > [IMP05-01BNSVU2S](#)
Part No. > [6050110](#)



At a glance

- Pressure resistant up to 500 bar
- Expected service life of up to 1 million pressure cycles
- Expanded temperature range of up to 100 °C
- Sensing range of 1 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

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

| | |
|---------------------------|---------------------|
| Housing: | Cylindrical |
| Thread size: | M5 x 0.5 |
| Sensing range Sn: | 1 mm |
| Assured sensing range Sa: | 0.8 mm |
| Pressure resistance: | ≤ 500 bar |
| Installation type: | Flush |
| Switching frequency: | 1,000 Hz |
| Output type: | NPN |
| Output function: | NO |
| Electrical wiring: | DC 3-wire |
| Enclosure rating: | IP 68 ¹⁾ |
| Connection type: | Cable, 3-wire, 2 m |

¹⁾ Sensing face

Mechanics/electronics

| | |
|---------------------------------|---------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC |
| Vacuum resistance: | 10-8Torr ¹⁾ |
| Ripple: | ≤ 20 % ²⁾ |
| Voltage drop: | ≤ 2 V ³⁾ |
| Power consumption: | ≤ 10 mA ⁴⁾ |
| Time delay before availability: | ≤ 30 ms |
| Hysteresis: | 1 % ... 15 % ⁵⁾ |
| Repeatability:: | ≤ 5 % ^{6) 7)} |
| Temperature drift (% of Sr):: | ± 10 %, ± 15 % ^{8) 9)} |
| EMC: | According to EN 60947-5-2 |
| Output current Ia: | ≤ 200 mA |
| Cable material: | PUR |
| Conductor cross-section: | 0.14 mm ² |
| Cable diameter: | Ø 3.5 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 ... 100 °C |
| Housing material: | Stainless steel, Phynox |
| Housing cap material: | Ceramics, ZrO ₂ |
| Size support ring: | 7.5 mm x 4.4 mm x 1 mm |
| Material support ring: | FPM |
| Housing length: | 27 mm |
| Thread length: | 5 mm |
| Tightening torque, max.: | ≤ 5 Nm |

1) Front 2) Of V_S 3) With Ia = 200 mA 4) Without load 5) Typ. 8% 6) 7) 8) -25 °C...+70 °C 9) +70 °C...+100 °C

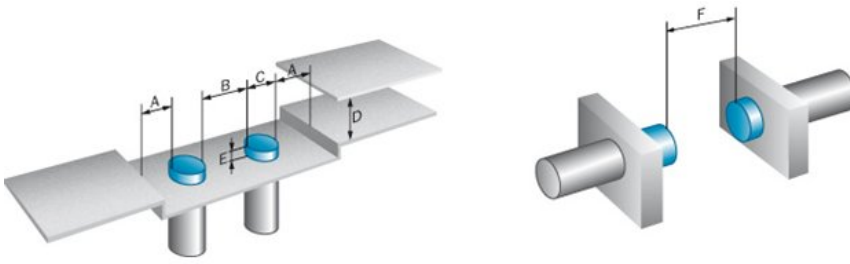
Reduction factors

| | |
|-----------------------------|--|
| Note: | The values are reference values which may vary |
| Carbon steel St37 (Fe): | 1 |
| Stainless steel (V2A, 304): | 0 |
| Copper (Cu): | 0 |
| Aluminum (Al): | 0 |
| Brass (Br): | 0 |

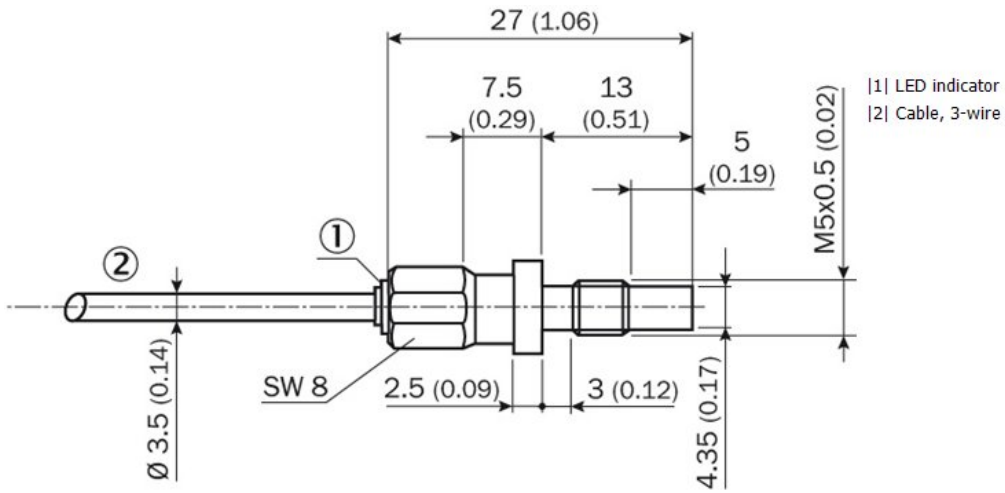
Installation note

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

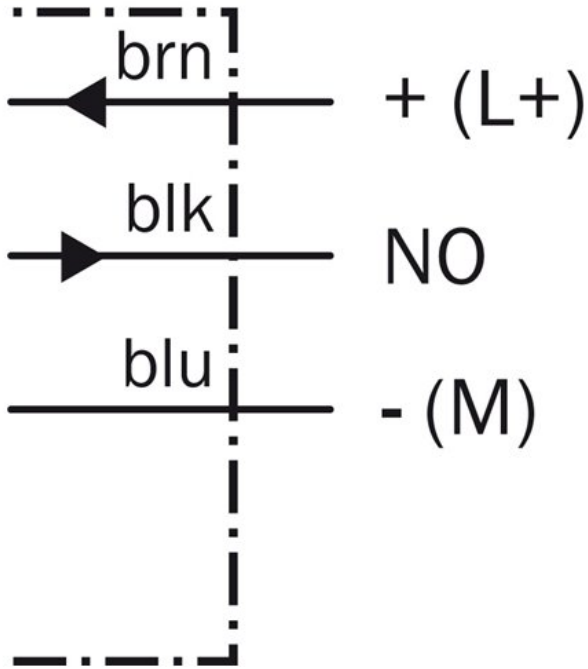
Installation note



Dimensional drawing



Connection diagram



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