



Inductive proximity sensors
Cylindrical threaded housing, IMP12

IMP12-1B5NPVCOF



Model Name > [IMP12-1B5NPVC0F](#)
Part No. > [6050136](#)



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

Housing:	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:	NPN
Output function:	Complementary
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 68 ¹⁾
Connection type:	Connector M12, 4-pin

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:	≤ 50 ms
Hysteresis:	1 % ... 15 % ⁵⁾
Repeatability::	≤ 7 % ^{6) 7)}
Temperature drift (% of Sr)::	± 10 %, ± 15 % ^{8) 9)}
EMC:	According to EN 60947-5-2
Output current Ia:	≤ 200 mA
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, V2A
Housing cap material:	Ceramics, ZrO2
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:	93 mm
Thread length:	75 mm
Tightening torque, max.:	≤ 40 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):	Ca. 0.75
Copper (Cu):	Ca. 0.12
Aluminum (Al):	Ca. 0.2
Brass (Br):	Ca. 0.34

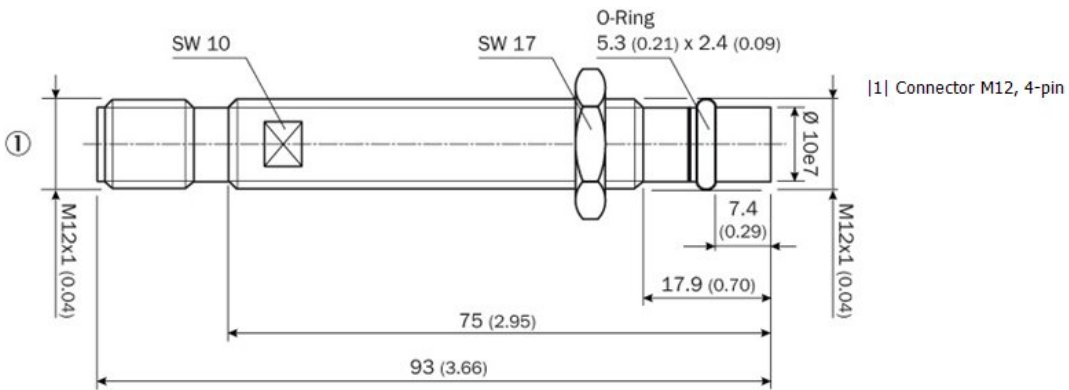
Installation note

Remark:	Associated graphic see "Installation"
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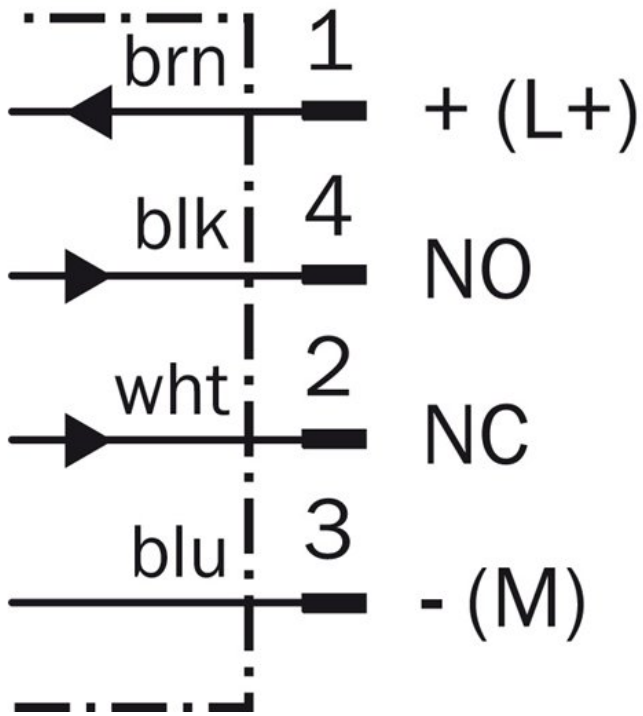
Installation note



Dimensional drawing



Connection diagram



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