



Inductive proximity sensors  
Cylindrical threaded housing, IMP14

IMP14-03BNSVCOS



**Model Name** > [IMP14-03BNSVC0S](#)  
**Part No.** > [6050139](#)



**At a glance**

- Pressure resistant up to 500 bar
- Expected service life of up to 1 million pressure cycles
- Sensing range of 3 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**

Design:	Cylindrical
Thread size:	M14 x 1.5
Sensing range Sn:	3 mm
Assured sensing range Sa:	2.4 mm
Pressure resistance:	≤ 500 bar
Installation type:	Flush
Switching frequency:	500 Hz
Output type:	NPN
Output function:	NO
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**

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:	≤ 4 % <sup>6) 7)</sup>
Temperature drift (of Sr):	15 %
EMC:	According to EN 60947-5-2 <sup>8)</sup>
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, V4A
Housing cap material:	Ceramics, ZrO <sub>2</sub>
Size sealing ring:	11.5 mm x 2.0 mm
Material sealing ring:	NBR
Housing length:	65 mm
Thread length:	11 mm
Tightening torque, max.:	≤ 70 Nm

<sup>1)</sup> Front <sup>2)</sup> Of V <sup>3)</sup> S <sup>4)</sup> With I<sub>a</sub> = 200 mA <sup>5)</sup> Without load <sup>6) 7)</sup> Typ. 8% <sup>8)</sup> IEC61000-4-4: 1kV

### Reduction factors

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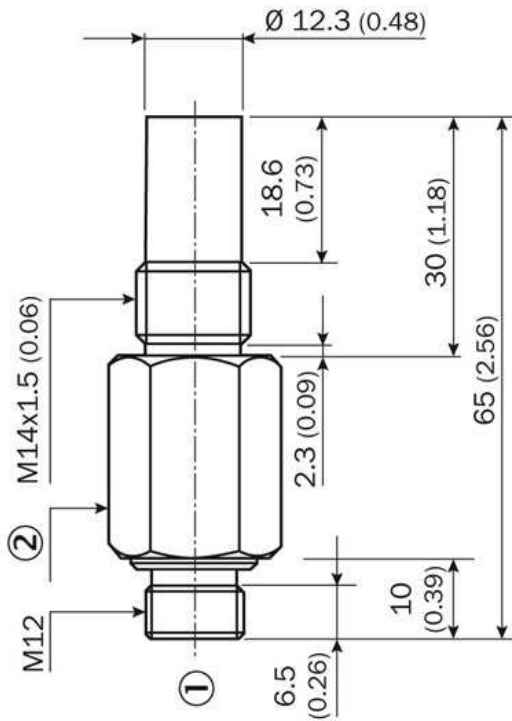
Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	1
Stainless steel (V2A, 304):	Ca. 0.85
Copper (Cu):	Ca. 0
Aluminum (Al):	Ca. 0
Brass (Br):	Ca. 0.15

### Installation note

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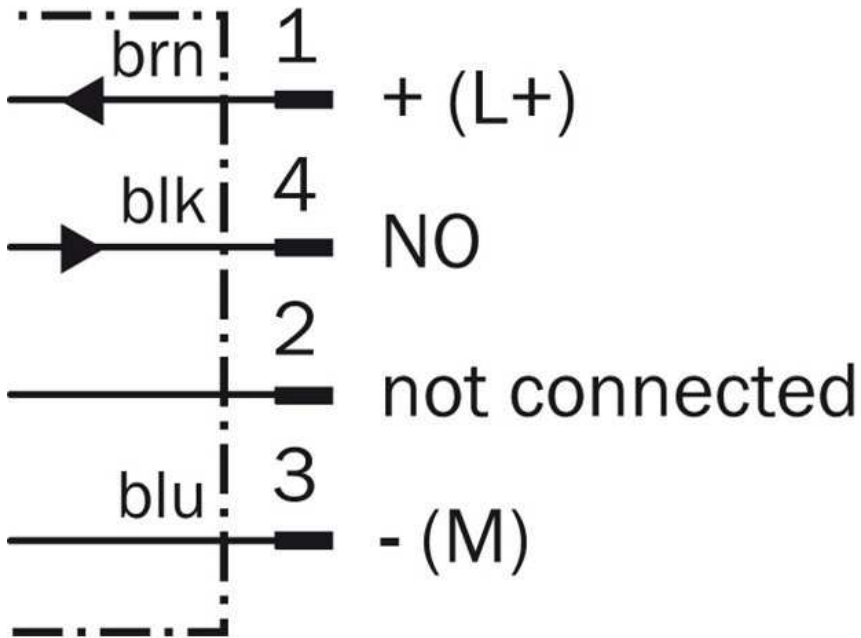
Remark:	Associated graphic see "Installation"
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**Dimensional drawing**



- |1| Connector M12, 4-pin
- |2| width across 19

**Connection diagram**



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