

ONLINE DATA SHEET
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Inductive proximity sensors
Cylindrical threaded housing, IMP14

IMP14-03BPOVC0S



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Inductive proximity sensors
Cylindrical threaded housing, IMP14

Model Name > IMP14-03BPOVC0S
Part No. > 6050138





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:	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

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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::	≤ 4 % [6] [7]
Temperature drift (of Sr):	15 %
EMC:	According to EN 60947-5-2 [8]
Output current Ia:	≤ 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, ZrO2
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

[1] Front [2] Of V_S [3] With Ia = 200 mA [4] Without load [5] Typ. 8% [6] [7] [8] IEC61000-4-4: 1kV

Reduction factors

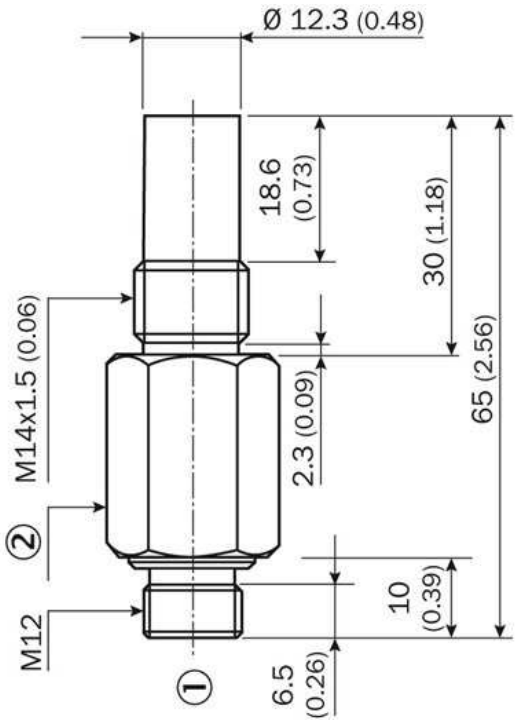
Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	1
Stainless steel (V2A, 304):	Ca. 0.85
Copper (Cu):	Ca. 0
Aluminum (Al):	Ca. 0
Brass (Br):	Ca. 0.15

Installation note

Remark:	Associated graphic see "Installation"

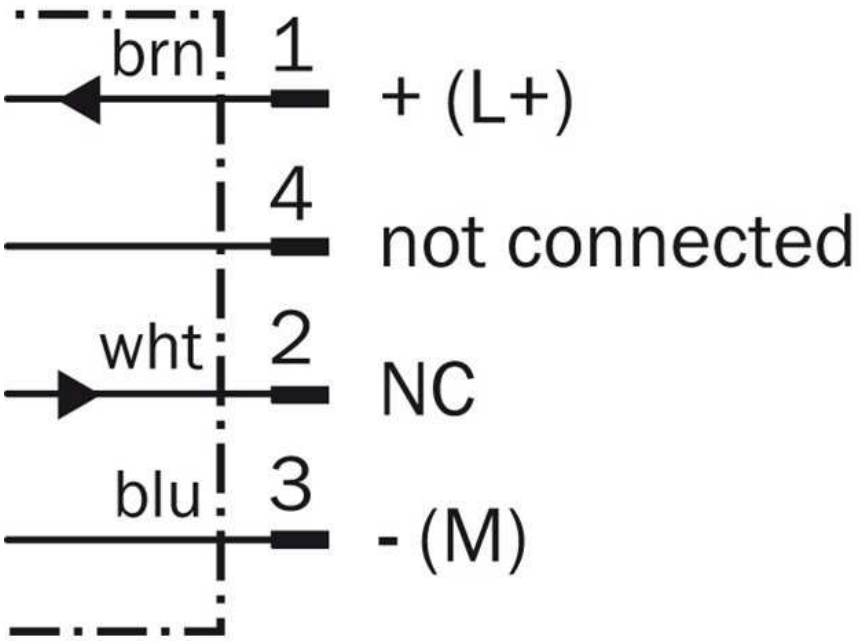
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Dimensional drawing



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

Connection diagram



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