



# IMP05-01BPSVR9S

IMP

**INDUCTIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
IMP05-01BPSVR9S	6071960

Other models and accessories → [www.sick.com/IMP](http://www.sick.com/IMP)

### Detailed technical data

#### Features

<b>Housing</b>	Metric
<b>Thread size</b>	M5 x 0.5
<b>Diameter</b>	Ø 5 mm
<b>Pressure resistance</b>	≤ 500 bar
<b>Sensing range <math>S_n</math></b>	1 mm
<b>Safe sensing range <math>S_a</math></b>	0.8 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	1,000 Hz
<b>Connection type</b>	Cable with connector M8, 3-pin, with knurled nuts, 0.3 m
<b>Switching output</b>	PNP
<b>Switching output detail</b>	PNP
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 3-wire
<b>Enclosure rating</b>	IP68 <sup>1)</sup>
<b>Special features</b>	High pressure resistant, Temperature resistance
<b>Special applications</b>	Hydraulic application

<sup>1)</sup> Sensing face.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	≤ 20 % <sup>1)</sup>

<sup>1)</sup> Of  $V_S$ .

<sup>2)</sup> With  $I_a = 200$  mA.

<sup>3)</sup> Typ. 8%.

<sup>4)</sup>  $U_b = 20 \dots 30$  VDC.

<sup>5)</sup>  $T_a = 23 \text{ °C} \pm 5 \text{ °C}$ .

<sup>6)</sup>  $-25 \text{ °C} \dots +70 \text{ °C}$ .

<sup>7)</sup>  $+70 \text{ °C} \dots +100 \text{ °C}$ .

<sup>8)</sup> Front.

<b>Voltage drop</b>	$\leq 2 \text{ V}^{2)}$
<b>Time delay before availability</b>	$\leq 30 \text{ ms}$
<b>Hysteresis</b>	$1 \% \dots 15 \%^{3)}$
<b>Reproducibility</b>	$\leq 5 \%^{4) 5)}$
<b>Temperature drift (of <math>S_r</math>)</b>	$\pm 10 \%^{6)}$ $\pm 15 \%^{7)}$
<b>EMC</b>	According to EN 60947-5-2
<b>Continuous current <math>I_a</math></b>	$\leq 200 \text{ mA}$
<b>Vacuum resistance</b>	$10^{-8} \text{ Torr}^{8)}$
<b>Size support ring</b>	7.5 mm x 4.4 mm x 1 mm
<b>Cable material</b>	PUR
<b>Cable diameter</b>	$\varnothing 3.4 \text{ mm}$
<b>Bending radius</b>	With fixed installation > 10 x cable diameter For flexible use > 15 x cable diameter
<b>Short-circuit protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	$-25 \text{ }^{\circ}\text{C} \dots +100 \text{ }^{\circ}\text{C}$
<b>Housing material</b>	Phynox, DIN 2.4711
<b>Sensing face material</b>	Ceramics, ZrO2
<b>Material, supporting ring</b>	FPM
<b>Housing length</b>	27 mm
<b>Thread length</b>	5 mm
<b>Tightening torque, max.</b>	$\leq 5 \text{ Nm}$

1) Of  $V_S$ .

2) With  $I_a = 200 \text{ mA}$ .

3) Typ. 8%.

4)  $U_b = 20 \dots 30 \text{ VDC}$ .

5)  $T_a = 23 \text{ }^{\circ}\text{C} \pm 5 \text{ }^{\circ}\text{C}$ .

6)  $-25 \text{ }^{\circ}\text{C} \dots +70 \text{ }^{\circ}\text{C}$ .

7)  $+70 \text{ }^{\circ}\text{C} \dots +100 \text{ }^{\circ}\text{C}$ .

8) Front.

## Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>St37 steel (Fe)</b>	1
<b>Stainless steel (V2A, 304)</b>	$0.55^{1)}$
<b>Aluminum (Al)</b>	0
<b>Copper (Cu)</b>	0
<b>Brass (Br)</b>	0

1) Material thickness/Reduction factor: 1 mm/0.55 2 mm/0.55.

## Installation note

<b>Remark</b>	Associated graphic see "Installation"
<b>B</b>	5 mm

<b>C</b>	5 mm
<b>D</b>	3 mm
<b>F</b>	8 mm

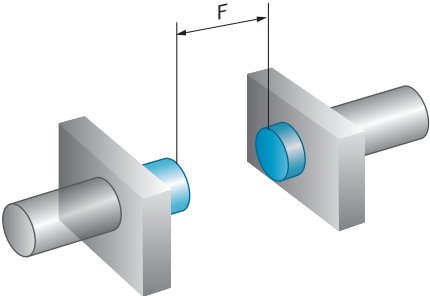
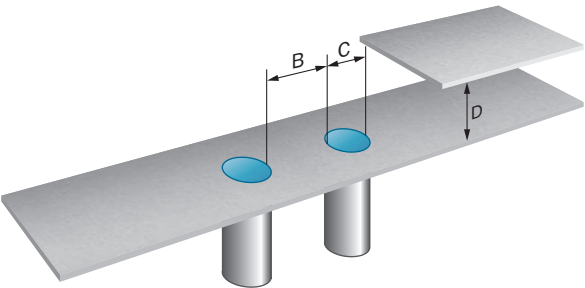
Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China-RoHS</b>	✓

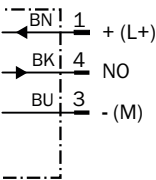
Classifications

<b>ECLASS 5.0</b>	27270101
<b>ECLASS 5.1.4</b>	27270101
<b>ECLASS 6.0</b>	27270101
<b>ECLASS 6.2</b>	27270101
<b>ECLASS 7.0</b>	27270101
<b>ECLASS 8.0</b>	27270101
<b>ECLASS 8.1</b>	27270101
<b>ECLASS 9.0</b>	27270101
<b>ECLASS 10.0</b>	27270101
<b>ECLASS 11.0</b>	27270101
<b>ECLASS 12.0</b>	27274001
<b>ETIM 5.0</b>	EC002714
<b>ETIM 6.0</b>	EC002714
<b>ETIM 7.0</b>	EC002714
<b>ETIM 8.0</b>	EC002714
<b>UNSPSC 16.0901</b>	39122230

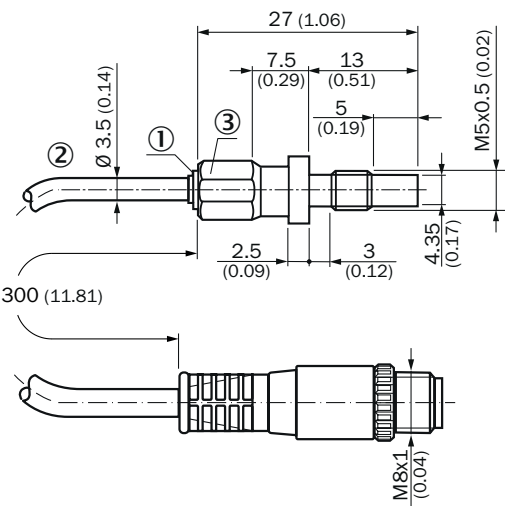
Installation note Flush installation



Connection diagram Cd-002



Dimensional drawing



- Dimensions in mm (inch)
- ① Display LED
  - ② Cable with connector M8, with knurled nuts
  - ③ width across Ø8

Recommended accessories

Other models and accessories → [www.sick.com/IMP](http://www.sick.com/IMP)

Brief description		Type	part no.
Mounting systems			
<ul style="list-style-type: none"><li>• Dimensions (W x H x L): 7.5 mm x 4.4 mm x 1 mm</li><li>• Suitable for: IMP05</li></ul>		O-ring IMP05	5327492

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)