



# IMP05-01BPSVU2S

IMP

**INDUCTIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
IMP05-01BPSVU2S	6050109

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

## Detailed technical data

### Features

<b>Housing</b>	Cylindrical thread design
<b>Thread size</b>	M5 x 0.5
<b>Diameter</b>	Ø 5 mm
<b>Pressure resistance</b>	≤ 500 bar
<b>Sensing range S<sub>n</sub></b>	1 mm
<b>Safe sensing range S<sub>a</sub></b>	0.8 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	1,000 Hz
<b>Connection type</b>	Cable, 3-wire, 2 m
<b>Switching output</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>
<b>Voltage drop</b>	≤ 2 V <sup>2)</sup>
<b>Time delay before availability</b>	≤ 30 ms

<sup>1)</sup> Of V<sub>S</sub>.

<sup>2)</sup> With I<sub>a</sub> = 200 mA.

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

<sup>4)</sup> U<sub>b</sub> = 20 ... 30 VDC.

<sup>5)</sup> T<sub>a</sub> = 23 °C ± 5 °C.

<sup>6)</sup> -25 °C ... +70 °C.

<sup>7)</sup> +70 °C...+100 °C.

<sup>8)</sup> Front.

<b>Hysteresis</b>	1 % ... 15 % <sup>3)</sup>
<b>Reproducibility</b>	≤ 5 % <sup>4) 5)</sup>
<b>Temperature drift (of S<sub>r</sub>)</b>	± 10 % <sup>6)</sup> ± 15 % <sup>7)</sup>
<b>EMC</b>	According to EN 60947-5-2
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA
<b>Vacuum resistance</b>	10 <sup>-8</sup> Torr <sup>8)</sup>
<b>Size support ring</b>	7.5 mm x 4.4 mm x 1 mm
<b>Cable material</b>	PUR
<b>Conductor size</b>	0.14 mm <sup>2</sup>
<b>Cable diameter</b>	Ø 3.5 mm
<b>Short-circuit protection</b>	✓
<b>Reverse polarity protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	-25 °C ... +100 °C
<b>Housing material</b>	Phynox, DIN 2.4711
<b>Sensing face material</b>	Ceramics, ZrO <sub>2</sub>
<b>Material, supporting ring</b>	FPM
<b>Housing length</b>	27 mm
<b>Thread length</b>	5 mm
<b>Tightening torque, max.</b>	≤ 5 Nm

<sup>1)</sup> Of V<sub>S</sub>.

<sup>2)</sup> With I<sub>a</sub> = 200 mA.

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

<sup>4)</sup> U<sub>b</sub> = 20 ... 30 VDC.

<sup>5)</sup> T<sub>a</sub> = 23 °C ± 5 °C.

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<sup>8)</sup> Front.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	171 years
<b>DC<sub>avg</sub></b>	0%
<b>T<sub>M</sub> (mission time)</b>	20 years

### 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
<b>Aluminum (Al)</b>	0
<b>Copper (Cu)</b>	0
<b>Brass (Br)</b>	0

### Installation note

<b>Remark</b>	Associated graphic see "Installation"
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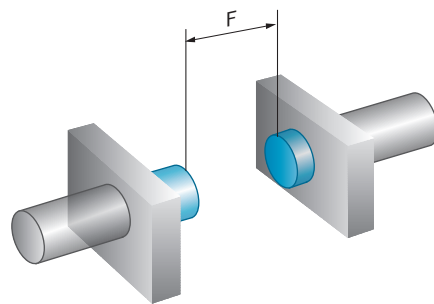
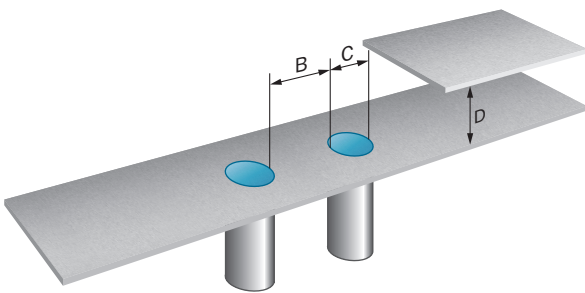
<b>B</b>	5 mm
<b>C</b>	5 mm
<b>D</b>	3 mm
<b>F</b>	8 mm

Classifications

<b>eCl@ss 5.0</b>	27270101
<b>eCl@ss 5.1.4</b>	27270101
<b>eCl@ss 6.0</b>	27270101
<b>eCl@ss 6.2</b>	27270101
<b>eCl@ss 7.0</b>	27270101
<b>eCl@ss 8.0</b>	27270101
<b>eCl@ss 8.1</b>	27270101
<b>eCl@ss 9.0</b>	27270101
<b>eCl@ss 10.0</b>	27270101
<b>eCl@ss 11.0</b>	27270101
<b>eCl@ss 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

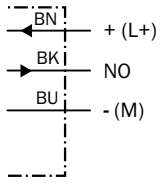
Installation note

Flush installation

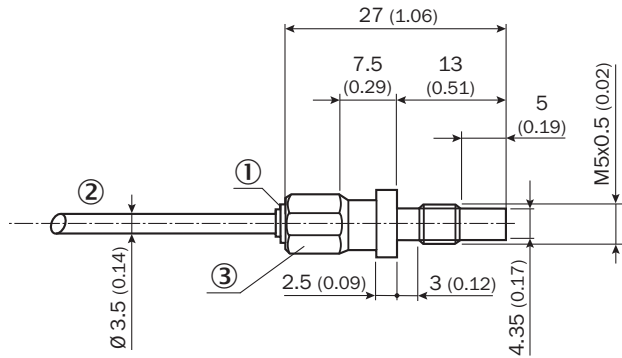


### Connection diagram

Cd-001



### Dimensional drawing (Dimensions in mm (inch))



- ① Display LED
- ② Cable, 3-wire
- ③ Width across O8

### Recommended accessories

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

Type	Part no.
Other mounting accessories	
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)