



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

Detailed technical data

Features

Housing	Metric
Thread size	M5 x 0.5
Diameter	Ø 5 mm
Pressure resistance	≤ 500 bar
Sensing range S_n	1 mm
Safe sensing range S_a	0.8 mm
Installation type	Flush
Switching frequency	1,000 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68 ¹⁾
Special features	High pressure resistant, Temperature resistance
Special applications	Hydraulic application

¹⁾ Sensing face.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 20 % ¹⁾

¹⁾ Of V_S .

²⁾ With $I_a = 200 \text{ mA}$.

³⁾ Typ. 8%.

⁴⁾ $U_b = 20 \dots 30 \text{ VDC}$.

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

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

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

⁸⁾ Front.

Voltage drop	$\leq 2 \text{ V}^{2)}$
Time delay before availability	$\leq 30 \text{ ms}$
Hysteresis	$1 \% \dots 15 \%^{3)}$
Reproducibility	$\leq 5 \%^{4) 5)}$
Temperature drift (of S_r)	$\pm 10 \%^{6)}$ $\pm 15 \%^{7)}$
EMC	According to EN 60947-5-2
Continuous current I_a	$\leq 200 \text{ mA}$
Vacuum resistance	$10^{-8} \text{ Torr}^{8)}$
Size support ring	7.5 mm x 4.4 mm x 1 mm
Cable material	PUR
Conductor size	0.14 mm ²
Cable diameter	Ø 3.4 mm
Bending radius	With fixed installation > 10 x cable diameter For flexible use > 15 x cable diameter
Short-circuit protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +100 °C
Housing material	Phynox, DIN 2.4711
Sensing face material	Ceramics, ZrO ₂
Material, supporting ring	FPM
Housing length	27 mm
Thread length	5 mm
Tightening torque, max.	$\leq 5 \text{ Nm}$

1) Of V_S .

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

3) Typ. 8%.

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

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

6) -25 °C ... +70 °C.

7) +70 °C...+100 °C.

8) Front.

Safety-related parameters

MTTF_D	171 years
DC_{avg}	0%
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	0
Aluminum (Al)	0
Copper (Cu)	0

Brass (Br)	0
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Installation note

Remark	Associated graphic see "Installation"
B	5 mm
C	5 mm
D	3 mm
F	8 mm

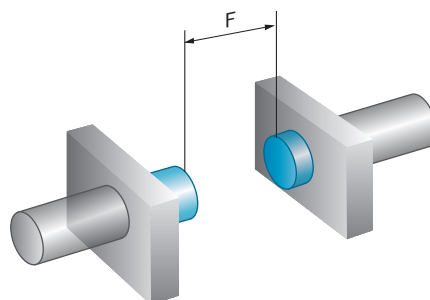
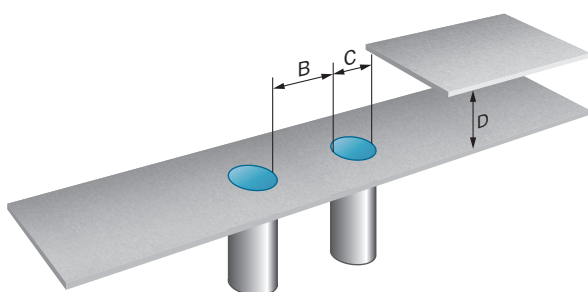
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

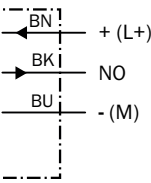
Classifications

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

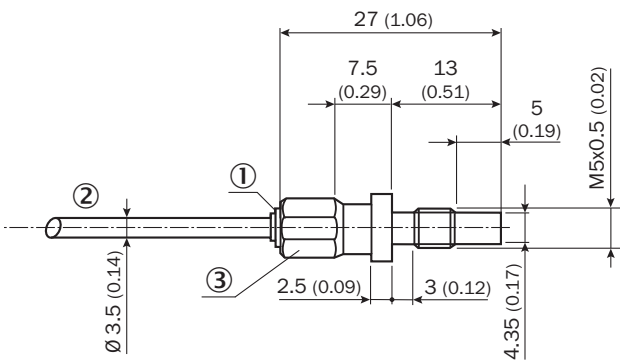
Installation note Flush installation



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

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