



# IMP08-1B5NSVU2S

IMP

**INDUCTIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type            | part no. |
|-----------------|----------|
| IMP08-1B5NSVU2S | 6050112  |

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>                         | M8 x 1                                          |
| <b>Diameter</b>                            | Ø 8 mm                                          |
| <b>Pressure resistance</b>                 | ≤ 500 bar                                       |
| <b>Sensing range <math>S_n</math></b>      | 1.5 mm                                          |
| <b>Safe sensing range <math>S_a</math></b> | 1.2 mm                                          |
| <b>Installation type</b>                   | Flush                                           |
| <b>Switching frequency</b>                 | 800 Hz                                          |
| <b>Connection type</b>                     | Cable, 3-wire, 2 m                              |
| <b>Switching output</b>                    | NPN                                             |
| <b>Switching output detail</b>             | NPN                                             |
| <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> | $\pm 10 \%^{6)}$<br>$\pm 15 \%^{7)}$                                                    |
| <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>                       | 9.9 mm x 6.6 mm x 1 mm                                                                  |
| <b>Cable material</b>                          | PUR                                                                                     |
| <b>Conductor size</b>                          | 0.14 mm <sup>2</sup>                                                                    |
| <b>Cable diameter</b>                          | Ø 3.4 mm                                                                                |
| <b>Bending radius</b>                          | With fixed installation > 10 x cable diameter<br>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 °C ... +100 °C                                                                      |
| <b>Housing material</b>                        | Stainless steel V2A, DIN 1.4305 / AISI 303                                              |
| <b>Sensing face material</b>                   | Ceramics, ZrO <sub>2</sub>                                                              |
| <b>Material, supporting ring</b>               | FPM                                                                                     |
| <b>Housing length</b>                          | 30 mm                                                                                   |
| <b>Thread length</b>                           | 6 mm                                                                                    |
| <b>Tightening torque, max.</b>                 | $\leq 12 \text{ Nm}$                                                                    |

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

|                                     |           |
|-------------------------------------|-----------|
| <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> | Approx. 0.66                                   |
| <b>Aluminum (Al)</b>              | Approx. 0.26                                   |
| <b>Copper (Cu)</b>                | Approx. 0.22                                   |

|                   |              |
|-------------------|--------------|
| <b>Brass (Br)</b> | Approx. 0.39 |
|-------------------|--------------|

#### Installation note

|               |                                       |
|---------------|---------------------------------------|
| <b>Remark</b> | Associated graphic see "Installation" |
| <b>B</b>      | 6 mm                                  |
| <b>C</b>      | 8 mm                                  |
| <b>D</b>      | 4.5 mm                                |
| <b>F</b>      | 12 mm                                 |

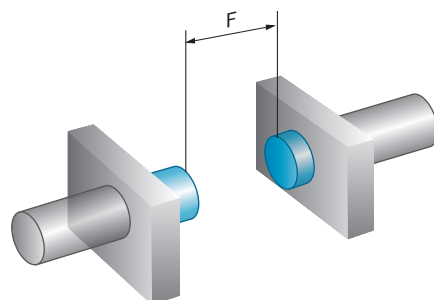
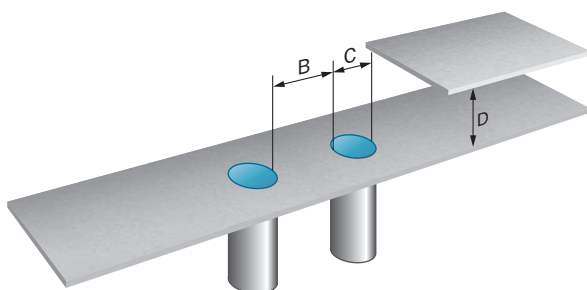
#### Certificates

|                                           |   |
|-------------------------------------------|---|
| <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 |

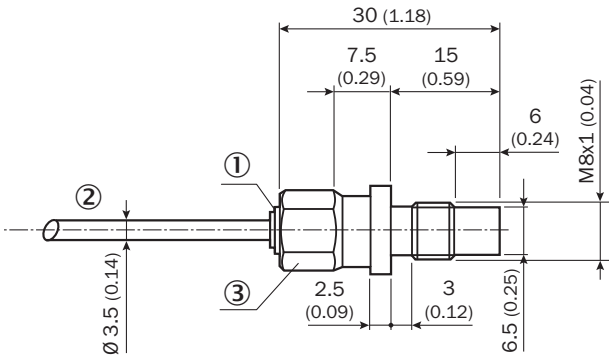
#### Installation note Flush installation



Connection diagram Cd-001



Dimensional drawing



Dimensions in mm (inch)

- ① Display LED
- ② Cable, 3-wire
- ③ width across 10

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): 9.9 mm x 6.6 mm x 1 mm</li><li>• Suitable for: IMP08</li></ul> | O-ring IMP08 | 5327493  |

## 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)