Online data sheet



# IH06-02BPS-VW1

## IMM

**INDUCTIVE PROXIMITY SENSORS**

SICK
Sensor Intelligence.



Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| IH06-02BPS-VW1 | 7900177 |

Other models and accessories ➜ www.sick.com/IMM

## Detailed technical data

### Features

| | |
|---|---|
| **Housing** | Cylindrical smooth housing |
| **Housing** | Standard design |
| **Diameter** | Ø 6.5 mm |
| **Sensing range $S_n$** | 2 mm |
| **Safe sensing range $S_a$** | 1.62 mm |
| **Installation type** | Flush |
| **Switching frequency** | 5,000 Hz |
| **Connection type** | Cable, 3-wire, 2 m |
| **Switching output** | PNP |
| **Output function** | NO |
| **Electrical wiring** | DC 3-wire |
| **Enclosure rating** | IP67 [1] |

[1] According to EN 60529.

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage** | 10 V DC ... 30 V DC |
| **Ripple** | ≤ 10 % [1] |
| **Voltage drop** | ≤ 2 V [2] |
| **Current consumption** | ≤ 10 mA [3] |
| **Time delay before availability** | ≤ 50 ms |
| **Hysteresis** | 1 % ... 20 % |

[1] Of $V_S$.
[2] With Ia = 200 mA.
[3] Without load.
[4] Ub = 20 V DC ... 30 V DC, Ta = 23 °C ± 5 °C.
[5] Of Sr.

| | |
|---|---|
| **Reproducibility** | ≤ 5 % [4) 5)] |
| **Temperature drift (of $S_r$)** | ± 10 % |
| **EMC** | EN 60947-5-2<br>IEC 61000-4-2: (Testlevel 2)<br>IEC 61000-4-4: (Testlevel 3) |
| **Continuous current $I_a$** | ≤ 200 mA |
| **Cable material** | PVC |
| **Conductor size** | 0.14 mm² |
| **Cable diameter** | Ø 3.1 mm |
| **Short-circuit protection** | ✓ |
| **Reverse polarity protection** | ✓ |
| **Power-up pulse protection** | ✓ |
| **Shock and vibration resistance** | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| **Ambient operating temperature** | –25 °C ... +70 °C |
| **Housing material** | Stainless steel, Stainless steel (V2A, 304) |
| **Sensing face material** | Plastic, Plastic |
| **Housing length** | 45 mm |
| **UL File No.** | NMFT2.E175606 |

[1)] Of $V_S$.
[2)] With Ia = 200 mA.
[3)] Without load.
[4)] Ub = 20 V DC ... 30 V DC, Ta = 23 °C ± 5 °C.
[5)] Of Sr.

## Reduction factors

| | |
|---|---|
| **Note** | The values are reference values which may vary |
| **Stainless steel (V2A, 304)** | Approx. 0.6 |
| **Aluminum (Al)** | Approx. 0.17 |
| **Copper (Cu)** | Approx. 0.1 |
| **Brass (Br)** | Approx. 0.25 |

## Installation note

| | |
|---|---|
| **Remark** | Associated graphic see "Installation" |
| **A** | 3.25 mm |
| **B** | 6.5 mm |
| **C** | 6.5 mm |
| **D** | 6 mm |
| **E** | 4 mm |
| **F** | 16 mm |

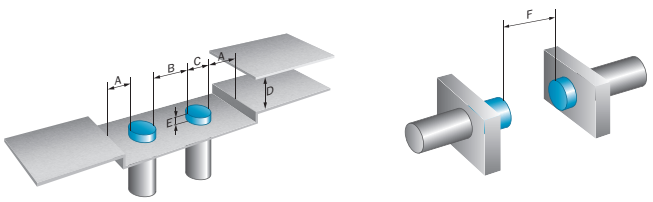
## Classifications

| | |
|---|---|
| **ECl@ss 5.0** | 27270101 |
| **ECl@ss 5.1.4** | 27270101 |
| **ECl@ss 6.0** | 27270101 |
| **ECl@ss 6.2** | 27270101 |

| | |
|---|---|
| **ECl@ss 7.0** | 27270101 |
| **ECl@ss 8.0** | 27270101 |
| **ECl@ss 8.1** | 27270101 |
| **ECl@ss 9.0** | 27270101 |
| **ETIM 5.0** | EC002714 |
| **ETIM 6.0** | EC002714 |
| **UNSPSC 16.0901** | 39122230 |

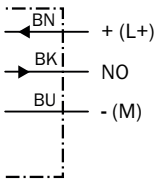
## Installation note

Quasi-flush installation



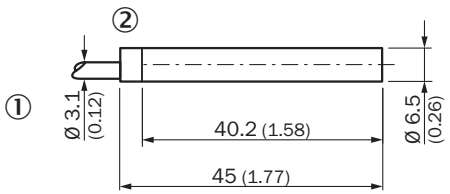

## Connection diagram

cd-001




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

Standard-body, flush, cable




① Connection
② Indication LED

## Recommended accessories

Other models and accessories ➜ www.sick.com/IMM

| | Brief description | Type | Part no. |
|---|---|---|---|
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF8U13-020VA1XLEAX | 2095860 |
| | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF8U13-050VA1XLEAX | 2095884 |
| | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 10 m | YF8U13-100VA1XLEAX | 2095885 |
|  | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YG8U13-020VA1XLEAX | 2096165 |
| | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YG8U13-050VA1XLEAX | 2096166 |
| | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 10 m | YG8U13-100VA1XLEAX | 2096209 |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: male connector, M12, 3-pin, straight, A-coded<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF8U13-020VA1M2A13 | 2096605 |
| | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: male connector, M12, 3-pin, straight, A-coded<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF8U13-050VA1M2A13 | 2096606 |
|  | Head A: female connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded | DOS-0803-G | 7902077 |
|  | Head A: female connector, M8, 3-pin, angled<br>Head B: -<br>Cable: unshielded | DOS-0803-W | 7902078 |
|  | Head A: male connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded | STE-0803-G | 6037322 |

# 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