



# IM05-1B5P0VU2S

IMM

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
IM05-1B5POVU2S	6049736

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

## Detailed technical data

### Features

<b>Housing</b>	Cylindrical thread design
<b>Housing</b>	Standard design
<b>Thread size</b>	M5 x 0.5
<b>Diameter</b>	Ø 5 mm
<b>Sensing range <math>S_n</math></b>	1.5 mm
<b>Safe sensing range <math>S_a</math></b>	1.215 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	3,000 Hz
<b>Connection type</b>	Cable, 3-wire, 2 m
<b>Switching output</b>	PNP
<b>Output function</b>	NC
<b>Electrical wiring</b>	DC 3-wire
<b>Enclosure rating</b>	IP67 <sup>1)</sup>
<b>Items supplied</b>	Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x)

<sup>1)</sup> According to EN 60529.

### 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>	≤ 10 ms
<b>Hysteresis</b>	1 % ... 10 %
<b>Reproducibility</b>	≤ 2 % <sup>3)</sup>

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

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

<sup>3)</sup> Supply voltage  $U_b$  and constant ambient temperature  $T_a$ .

<b>Temperature drift (of S<sub>r</sub>)</b>	≤ 10 %
<b>EMC</b>	EN 60947-5-2 IEC 61000-4-2: (Testlevel 2) IEC 61000-4-4: (Testlevel 3)
<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 ... +70 °C
<b>Housing material</b>	Stainless steel V2A, DIN 1.4305 / AISI 303
<b>Sensing face material</b>	Plastic, POM
<b>Housing length</b>	25 mm
<b>Thread length</b>	20 mm
<b>Tightening torque, max.</b>	≤ 1.8 Nm
<b>UL File No.</b>	NRKH.E191603

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

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

<sup>3)</sup> Supply voltage U<sub>b</sub> and constant ambient temperature T<sub>a</sub>.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	186 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>Stainless steel (V2A, 304)</b>	Approx. 0.75
<b>Aluminum (Al)</b>	Approx. 0.4
<b>Copper (Cu)</b>	Approx. 0.4
<b>Brass (Br)</b>	Approx. 0.5

### Installation note

<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	1.5 mm
<b>B</b>	1 mm
<b>C</b>	5 mm
<b>D</b>	4.5 mm
<b>E</b>	0 mm
<b>F</b>	12 mm

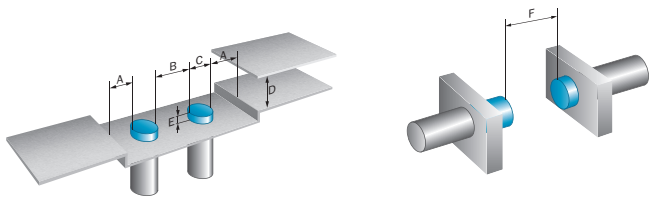
### Classifications

<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

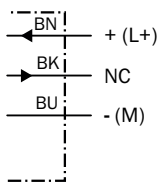
### Installation note

Flush installation



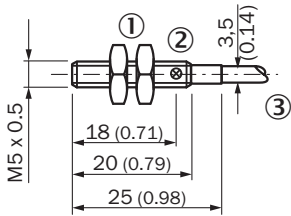
### Connection diagram

Cd-003



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

Standard-body, flush, cable





- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); 7 mm hex, stainless steel

**Recommended accessories**

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

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

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
	Head A: male connector, M8, 3-pin, straight Cable: unshielded	STE-0803-G	6037322
<b>Terminal and alignment brackets</b>			
	Plastic (PA6), without mounting hardware	BEF-KH-M05	2101066

## 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)