



IM05-0B8P0-ZT1

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|----------------|----------|
| IM05-0B8PO-ZT1 | 6020159 |

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

Detailed technical data

Features

| | |
|--|---------------------------|
| Housing | Cylindrical thread design |
| Housing | Standard design |
| Thread size | M5 0.5 |
| Diameter | Ø 5 mm |
| Sensing range S_n | 0.8 mm |
| Safe sensing range S_a | 0.648 mm |
| Installation type | Flush |
| Switching frequency | 5,000 Hz |
| Connection type | Connector M8, 3-pin |
| Switching output | PNP |
| Output function | NC |
| 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 | ≤ 20 % ¹⁾ |
| Voltage drop | ≤ 2 V ²⁾ |
| Current consumption | ≤ 10 mA ³⁾ |
| Time delay before availability | ≤ 10 ms |
| Hysteresis | 1 % ... 10 % |
| Reproducibility | ≤ 1.5 % ⁴⁾ |
| Temperature drift (of S_n) | ≤ 10 % |

¹⁾ Of V_S .

²⁾ With $I_a = 200$ mA.

³⁾ Without load.

⁴⁾ $U_b = 20$ V DC ... 30 V DC, $T_a = 23$ °C ± 5 °C.

| | |
|---------------------------------------|--|
| EMC | EN 60947-5-2 IEC 61000-4-2: (Testlevel 2) IEC 61000-4-4: (Testlevel 2) |
| Short-circuit protection | ✓ |
| Reverse polarity 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 | 38 mm |
| Thread length | 22 mm |
| Tightening torque, max. | 1.5 Nm |
| UL File No. | NRKH.E191603 |

1) Of V_S .

2) With $I_a = 200$ mA.

3) Without load.

4) $U_b = 20$ V DC ... 30 V DC, $T_a = 23$ °C \pm 5 °C.

Reduction factors

| | |
|-----------------------------------|--|
| Note | The values are reference values which may vary |
| Stainless steel (V2A, 304) | Approx. 0.8 |
| Aluminum (Al) | Approx. 0.5 |
| Copper (Cu) | Approx. 0.45 |
| Brass (Br) | Approx. 0.55 |

Installation note

| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 0.8 mm |
| B | 0 mm |
| C | 5 mm |
| D | 2.4 mm |
| E | 0 mm |
| F | 7 mm |

Classifications

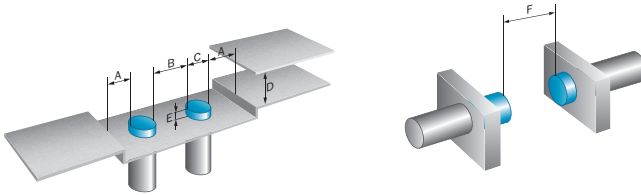
| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270101 |
| ECl@ss 5.1.4 | 27270101 |
| ECl@ss 6.0 | 27270101 |
| ECl@ss 6.2 | 27270101 |
| ECl@ss 7.0 | 27270101 |
| ECl@ss 8.0 | 27270101 |
| ECl@ss 8.1 | 27270101 |
| ECl@ss 9.0 | 27270101 |
| ETIM 5.0 | EC002714 |
| ETIM 6.0 | EC002714 |

UNSPSC 16.0901

39122230

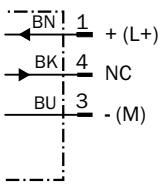
Installation note

Quasi-flush installation



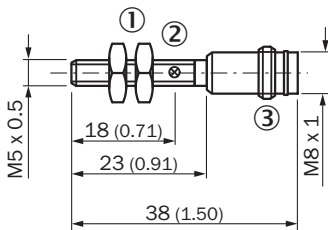
Connection diagram

cd-004



Dimensional drawing (Dimensions in mm (inch))

Standard-body, flush, connector



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

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 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 Head B: - Cable: unshielded | DOS-0803-G | 7902077 |
|  | Head A: female connector, M8, 3-pin, angled Head B: - Cable: unshielded | DOS-0803-W | 7902078 |
|  | Head A: male connector, M8, 3-pin, straight Head B: - 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:

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