# IMR08-02BPSTC0S

IMR

**INDUCTIVE PROXIMITY SENSORS**

**SICK**
Sensor Intelligence.

# IMR08-02BPSTC0S | IMR
## INDUCTIVE PROXIMITY SENSORS

## Ordering information

| Type | Part no. |
|------|----------|
| IMR08-02BPSTC0S | 6069273 |

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

## Detailed technical data

### Features

| | |
|---|---|
| Housing | Cylindrical thread design |
| Housing | Standard design |
| Thread size | M8 |
| Diameter | Ø 8 mm |
| Sensing range $S_n$ | 2 mm |
| Safe sensing range $S_a$ | 1.6 mm |
| Installation type | Flush |
| Switching frequency | 1,000 Hz |
| Connection type | Male connector M12, 4-pin |
| Switching output | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP68 |
| Special features | Reduction factor 1, Weld immune |
| Special applications | Welding range, Difficult application conditions |
| Items supplied | Mounting nut, brass, PTFE coating (2x)<br>Washer, brass, PTFE coating, with locking teeth (2x) |

### Mechanics/electronics

| | |
|---|---|
| Supply voltage | 10 V DC … 30 V DC |
| Ripple | ≤ 10 % |
| Voltage drop | ≤ 1.8 V [1] |
| Hysteresis | 3 % … 15 % |
| Reproducibility | ≤ 2 % [2] [3] |
| Temperature drift (of $S_r$) | ≤ ± 10 % ≤ ± 15 % [4] |

[1] At $I_a$ max.
[2] Supply voltage Ub and constant ambient temperature Ta.
[3] Of Sr.
[4] –25 °C … +70 °C.
[5] Reference voltage: 50 V DC.

| | |
|---|---|
| **EMC** | According to EN 60947-5-2 |
| **Continuous current $I_a$** | ≤ 150 mA |
| **No load current** | ≤ 15 mA |
| **Off-state current** | ≤ 0.1 mA |
| **Short-circuit protection** | ✓ |
| **Reverse polarity protection** | ✓ |
| **Magnetic field strength** | ≤ 100 mT |
| **Shock and vibration resistance** | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| **Ambient operating temperature** | –30 °C ... +85 °C |
| **Housing material** | PTFE coating, stainless steel |
| **Sensing face material** | Plastic, PTFE coating |
| **Housing length** | 57 mm |
| **Thread length** | 40 mm |
| **Tightening torque, max.** | Typ. 5 Nm |
| **Protection class** | II [5] |
| **UL File No.** | E191603 |

[1] At $I_a$ max.

[2] Supply voltage Ub and constant ambient temperature Ta.

[3] Of Sr.

[4] –25 °C ... +70 °C.

[5] Reference voltage: 50 V DC.

## Safety-related parameters

| | |
|---|---|
| **$MTTF_D$** | 139 years |
| **$DC_{avg}$** | 0% |
| **$T_M$ (mission time)** | 20 years |

## Reduction factors

| | |
|---|---|
| **Note** | The values are reference values which may vary |
| **Reduction factor** | Reduction factor 1 |
| **Stainless steel (V2A, 304)** | 1 |
| **Aluminum (Al)** | 1 |
| **Copper (Cu)** | 1 |
| **Brass (Br)** | 1 |

## Installation note

| | |
|---|---|
| **Remark** | Associated graphic see "Installation" |
| **A** | 8 mm |
| **B** | 8 mm |
| **C** | 8 mm |
| **D** | 6 mm |
| **E** | 0 mm |
| **F** | 12 mm |
| **G** | 24 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 |
| eCl@ss 10.0 | 27270101 |
| eCl@ss 11.0 | 27270101 |
| eCl@ss 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
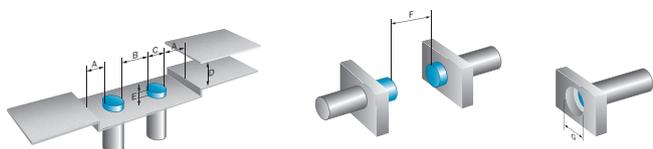


## Connection diagram

Cd-007



| | | |
|---|---|---|
| BN | 1 | + (L+) |
| BK | 4 | NO |
| | 2 | not connected |
| BU | 3 | - (M) |

## Response diagram

Distance in mm (inch)
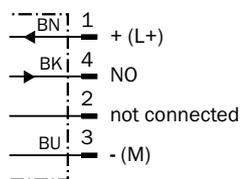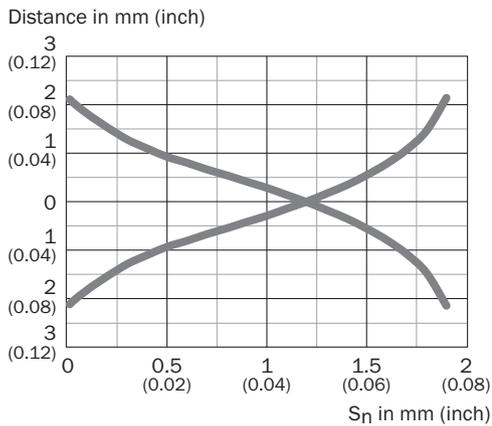


$S_n$ in mm (inch)

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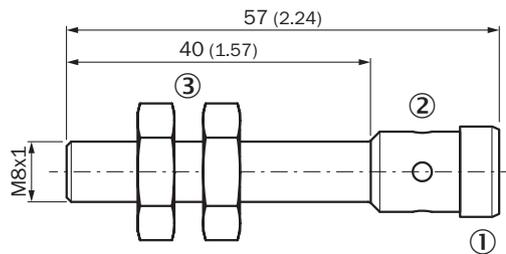


① M12 x 1
② LED output state, yellow
③ Fastening nuts (2 x); width across 13, stainless steel

## Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|---|---|
| **Mounting brackets and plates** | | | |
| | Mounting bracket for M8 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M08 | 5321721 |
| **Plug connectors and cables** | | | |
| | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A14-020UW1XLEAX | 2104883 |
| | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YF2A14-050UB3XLEAX | 2095608 |
| | | YF2A14-050UW1XLEAX | 2104884 |

| | Brief description | Type | Part no. |
|---|---|---|---|
|  | Head A: female connector, M12, 4-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YG2A14-020UW1XLEAX | 2104886 |
| | Head A: female connector, M12, 4-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YG2A14-050UW1XLEAX | 2104887 |

## 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**

SICK AG   |   Waldkirch   |   Germany   |   www.sick.com

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