



IMR12-04BPSTC0S

IMR

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-----------------|----------|
| IMR12-04BPSTC0S | 6069275 |

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



Detailed technical data

Features

| | |
|---|--|
| Housing | Cylindrical thread design |
| Housing | Standard design |
| Thread size | M12 |
| Diameter | Ø 12 mm |
| Sensing range S_n | 4 mm |
| Safe sensing range S_a | 3.2 mm |
| Installation type | Flush |
| Switching frequency | 2,000 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) 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_n) | ≤ ± 10 % ≤ ± 15 % ⁴⁾ |

¹⁾ At I_a max.

²⁾ Supply voltage U_B and constant ambient temperature T_a.

³⁾ Of S_r.

⁴⁾ -25 °C ... +70 °C.

⁵⁾ Reference voltage: 50 V DC.

| | |
|--|----------------------------------|
| Continuous current I_a | ≤ 200 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, brass |
| Sensing face material | Plastic, PTFE coating |
| Housing length | 52 mm |
| Thread length | 36 mm |
| Tightening torque, max. | Typ. 7 Nm |
| Protection class | II ⁵⁾ |
| UL File No. | E191603 |

1) At I_a max.

2) Supply voltage U_B and constant ambient temperature T_a .

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 |

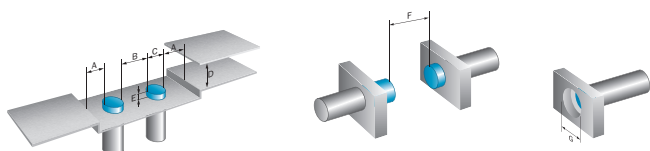
Installation note

| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 12 mm |
| B | 12 mm |
| C | 12 mm |
| D | 12 mm |
| E | 0 mm |
| F | 24 mm |
| G | 36 mm |

Classifications

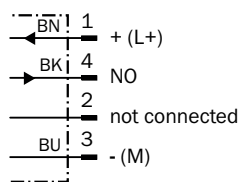
| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270101 |
| ECLASS 5.1.4 | 27270101 |
| ECLASS 6.0 | 27270101 |
| ECLASS 6.2 | 27270101 |
| ECLASS 7.0 | 27270101 |
| ECLASS 8.0 | 27270101 |
| ECLASS 8.1 | 27270101 |
| ECLASS 9.0 | 27270101 |
| ECLASS 10.0 | 27270101 |
| ECLASS 11.0 | 27270101 |
| ECLASS 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

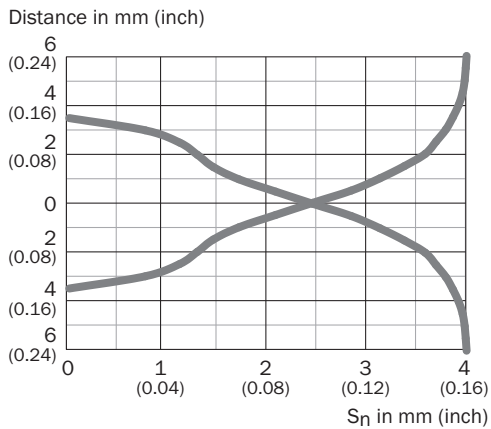


Connection diagram

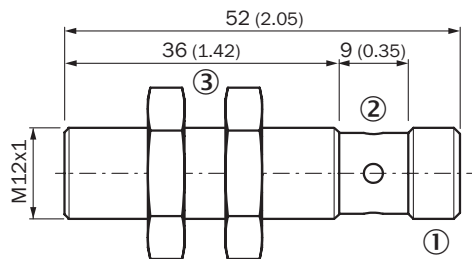
Cd-007



Response diagram





Dimensional drawing (Dimensions in mm (inch))







- ① M12 x 1
- ② LED output state, yellow
- ③ Fastening nuts (2x); width across 17, metal

Recommended accessories

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

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| Mounting brackets and plates | | | |
|  | Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M12 | 5308447 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-050UB3XLEAX | 2095608 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Weld-spark resistant, Robot | YF2A14-020UW1XLEAX | 2104883 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Weld-spark resistant, Robot | YF2A14-050UW1XLEAX | 2104884 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Weld-spark resistant, Robot | YG2A14-020UW1XLEAX | 2104886 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Weld-spark resistant, Robot | 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:

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