



IM08-06NPS-VT1

IMI

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|----------------|----------|
| IM08-06NPS-VT1 | 6068716 |

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

Detailed technical data

Features

| | |
|---|--|
| Housing | Cylindrical thread design |
| Thread size | M8 x 1 |
| Diameter | Ø 8 mm |
| Pressure resistance | ≤ 100 bar |
| Sensing range S_n | 6 mm |
| Safe sensing range S_a | 4.86 mm |
| Installation type | Non-flush |
| Switching frequency | 700 Hz |
| Connection type | Connector M8, 3-pin |
| Switching output | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP68, IP69K ¹⁾ |
| Special features | Sensing face made of stainless steel V2A, Resistant against coolant lubricants, triple sensing range, Visual adjustment indicator, IO-Link |
| Special applications | Zones with coolants and lubricants, Difficult application conditions |
| Items supplied | Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x) |

¹⁾ According to EN 60529.

Mechanics/electronics

| | |
|---|--|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | $\leq 20\%$ ¹⁾ |
| Voltage drop | $\leq 2\text{ V}$ ²⁾ |
| Time delay before availability | $\leq 10\text{ ms}$ |
| Hysteresis | 1 % ... 20 % |
| Reproducibility | $\leq 5\%$ ^{3) 4)} |
| Temperature drift (of S_r) | $\leq 10\%$ |
| EMC | According to EN 60947-5-2 |
| Continuous current I_a | $\leq 200\text{ mA}$ |
| 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 ... +85 °C |
| Housing material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Sensing face material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Housing length | 60 mm |
| Thread length | 45.5 mm |
| Tightening torque, max. | $\leq 8\text{ Nm}$ |
| Protection class | III |
| UL File No. | E191603 |

¹⁾ Of V_S.

²⁾ At I_a max.

³⁾ Of S_r.

⁴⁾ U_B = 20 V DC ... 30 V DC, T_A = 23 °C ± 5 °C.

Communication interface

| | |
|---------------------------------------|--------------------------------|
| Communication interface | IO-Link V1.0 |
| Communication Interface detail | COM2 (38,4 kBaud) |
| Process data length | 1 Byte |
| Process data structure | Bit 0 = S _r reached |
| Process data structure A | Bit 1 = S _a reached |

Reduction factors

| | |
|------------------------------------|--|
| Note | The values are reference values which may vary |
| St37 steel (Fe) | Approx. 1 |
| Stainless steel (V4A, 316L) | Approx. 0.3 ¹⁾ |
| Aluminum (Al) | Approx. 1 |
| Copper (Cu) | Approx. 0.8 |
| Brass (Br) | Approx. 1.35 |

¹⁾ Material thickness/Reduction factor: 1 mm/0.3 2 mm/0.8.

Installation note

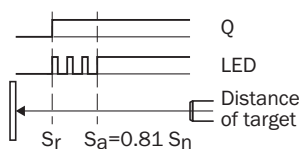
| Remark | Associated graphic see "Installation" |
|----------|--|
| A | 14 mm |
| B | 52 mm |
| C | 8 mm |
| D | 18 mm |
| E | Aluminum: 9 mm, Steel: 14 mm, Brass: 10 mm, Stainless steel: 13 mm |
| F | 80 mm |

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 |

Adjustments

Installation aid



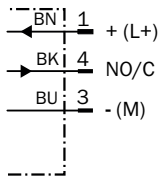
Installation note

Non-flush installation

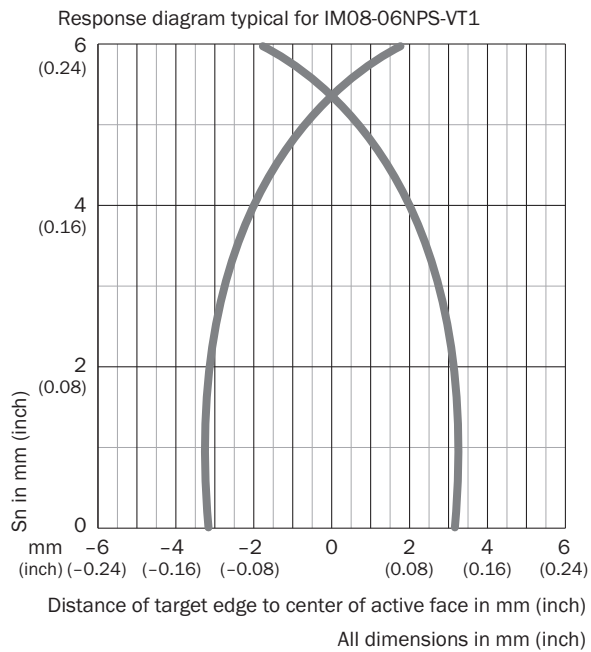


Connection diagram

Cd-453

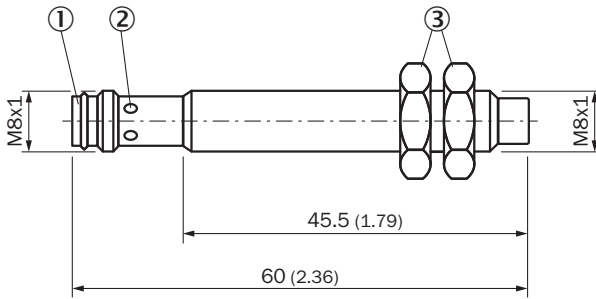


Response diagram



Dimensional drawing (Dimensions in mm (inch))

IM08 Inox, non-flush








- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); width across 13, stainless steel V2A

Recommended accessories

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

| | Brief description | Type | Part no. |
|-------------------------------------|--|-----------------|----------|
| Mounting brackets and plates | | | |
| | Mounting plate for M8 sensors, steel, zinc coated, without mounting hardware | BEF-WG-M08 | 5321722 |
| | Mounting bracket for M8 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M08 | 5321721 |
| Others | | | |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-G02MRN | 6058504 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-G05MRN | 6058505 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-W02MRN | 6058507 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked. • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-W05MRN | 6058508 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded, LED function display • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2), only suitable for PNP sensors • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-L02MRN | 6058787 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PP • Description: Sensor/actuator cable, unshielded, LED function display • Connection systems: Flying leads • Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked. • Application: Hygienic and washdown zones, Drag chain operation | DOL-0803-L05MRN | 6058788 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF8U13-020UA1XLEAX | 2094782 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG8U13-020UA1XLEAX | 2094794 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded, LED function display • Note: Only suitable for PNP sensors • Application: Zones with oils and lubricants, Drag chain operation, Robot | YI8U13-020UA1XLEAX | 2095593 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Male connector, M8, 3-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF8U13-020UA1M8U13 | 2096304 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Male connector, M8, 3-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF8U13-050UA1M8U13 | 2096308 |

Recommended services

Additional services → www.sick.com/IMI

| | Type | Part no. |
|--|------------------------|------------|
| Function Block Factory | | |
| <ul style="list-style-type: none"> • Description: The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here. • Note: You can configure your function block at Function Block Factory. As a login please use your SICK ID. | Function Block Factory | On request |

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.”

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