



IMB08-04NPSVT0S

IMB

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-----------------|----------|
| IMB08-04NPSVT0S | 1072592 |

Included in delivery: BEF-MU-M08N (1)

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

Detailed technical data

Features

| | |
|--|---|
| Housing | Metric |
| Housing | Standard design |
| Thread size | M8 x 1 |
| Diameter | Ø 8 mm |
| Sensing range S_n | 4 mm |
| Safe sensing range S_a | 3.24 mm |
| Installation type | Non-flush |
| Switching frequency | 4,000 Hz |
| Connection type | Connector M8, 3-pin ¹⁾ |
| Switching output | PNP |
| Switching output detail | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP68 ²⁾ IP69K ³⁾ |
| Special features | Resistant against coolant lubricants, Visual adjustment indicator, Temperature resistance |
| Special applications | Zones with coolants and lubricants, Mobile machines, Difficult application conditions |
| Items supplied | Mounting nut, V2A stainless steel, with locking teeth (2x) |

¹⁾ With gold plated contact pins.

²⁾ According to EN 60529.

³⁾ According to ISO 20653:2013-03.

Mechanics/electronics

| | |
|---|--|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 10 % |
| Voltage drop | ≤ 2 V ¹⁾ |
| Hysteresis | 3 % ... 20 % |
| Reproducibility | ≤ 2 % ²⁾ ³⁾ |
| Temperature drift (of S_r) | ± 10 % |
| EMC | According to EN 60947-5-2 |
| Continuous current I_a | ≤ 200 mA |
| No load current | ≤ 10 mA |
| Short-circuit protection | ✓ |
| Power-up pulse protection | ✓ |
| Shock and vibration resistance | 100 g / 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz, 1 mm / 55 Hz ... 500 Hz / 15 g |
| Display | |
| | LED yellow |
| | Switching status Flashing: Switching output active |
| Ambient operating temperature | -40 °C ... +100 °C |
| Housing material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Sensing face material | Plastic, LCP |
| Housing length | 50 mm |
| Thread length | 34 mm |
| Tightening torque, max. | Typ. 7 Nm ⁴⁾ Typ. 14 Nm ⁵⁾ |
| Protection class | III |
| UL File No. | E181493 |

¹⁾ At I_a max.

²⁾ Supply voltage U_B and constant ambient temperature T_a.

³⁾ Of S_r.

⁴⁾ When using the non-toothed side of the nut.

⁵⁾ Valid if toothed side of nut is used.

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,971 years |
| DC_{avg} | 0 % |

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 Bit 1 = S _a reached |

Reduction factors

| | |
|-------------|--|
| Note | The values are reference values which may vary |
|-------------|--|

| | |
|-----------------------------------|--------------|
| St37 steel (Fe) | 1 |
| Stainless steel (V2A, 304) | Approx. 0.69 |
| Aluminum (Al) | Approx. 0.37 |
| Copper (Cu) | Approx. 0.28 |
| Brass (Br) | Approx. 0.4 |

Installation note

| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 8 mm |
| B | 18 mm |
| C | 8 mm |
| D | 12 mm |
| E | 8 mm |
| F | 32 mm |

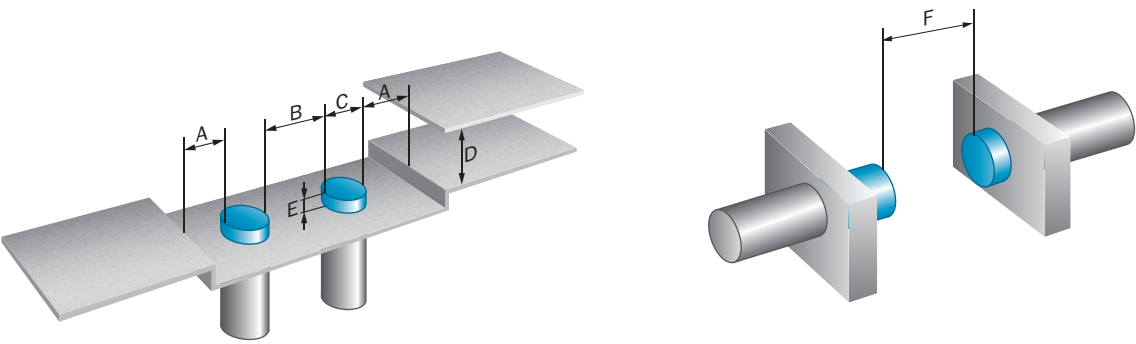
Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

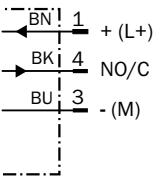
Classifications

| | |
|-----------------------|----------|
| 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 |

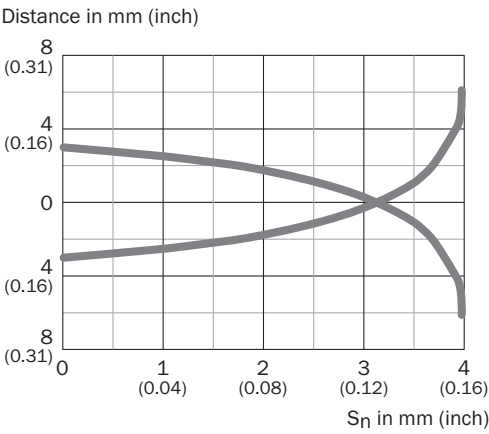
Installation note Non-flush installation



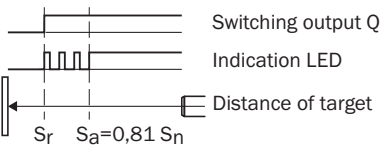
Connection diagram Cd-453



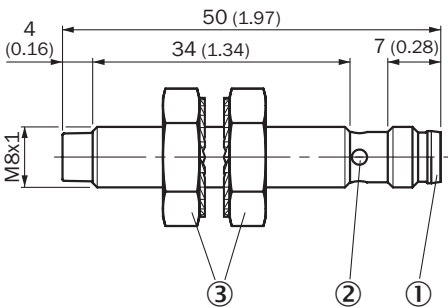
Response diagram



Functional principle Installation aid



Dimensional drawing IMB08 Standard, connector M8, non-flush





Dimensions in mm (inch)

- 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/IMB

| | Brief description | Type | part no. |
|---|--|------------|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none">• Description: Mounting plate for M8 sensors• Material: Steel• Details: Steel, zinc coated• Items supplied: Without mounting hardware | BEF-WG-M08 | 5321722 |
|  | <ul style="list-style-type: none">• Description: Mounting bracket for M8 sensors• Material: Steel• Details: Steel, zinc coated• Items supplied: Without mounting hardware | BEF-WN-M08 | 5321721 |

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
| connectors and cables | | | |
|  | <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, 4-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, Robot, cold bending resistant, seawater resistant | 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, 4-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, Robot, cold bending resistant, seawater resistant | DOL-0803-G05MRN | 6058505 |
|  | <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, 4-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, Robot, cold bending resistant, seawater resistant | 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, 4-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, Robot, cold bending resistant, seawater resistant | 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: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded 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, Robot, cold bending resistant, seawater resistant | DOL-0803-L05MRN | 6058788 |
|  | <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, 4-wire, PP Description: Sensor/actuator cable, unshielded 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, Robot, cold bending resistant, seawater resistant | DOL-0803-L02MRN | 6058787 |
|  | <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 | YF8U13-020UA1M8U13 | 2096304 |

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF8U13-050UA1M8U13 | 2096308 |
|  | <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: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | | |
|  | <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: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF8U13-020UA1XLEAX | 2094782 |
|  | <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: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF8U13-050UA1XLEAX | 2094788 |
|  | <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: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YG8U13-020UA1XLEAX | 2094794 |
|  | <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: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YG8U13-050UA1XLEAX | 2095586 |
|  | <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 Note: Only suitable for PNP sensors Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YI8U13-020UA1XLEAX | 2095593 |
|  | <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: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YG8U13-C60UA1XLEAX | 2145889 |
|  | <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: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YG8U13-030UA1XLEAX | 2145891 |
|  | <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: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Note: Only suitable for PNP sensors Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YI8U13-C60UA1XLEAX | 2145892 |
|  | <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: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Note: Only suitable for PNP sensors | YI8U13-030UA1XLEAX | 2145894 |

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation • Connection type head A: Female connector, M8, 3-pin, straight • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 15 m, 4-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, Robot, cold bending resistant, seawater resistant | YF8P13-150PA1XLEAX | 2146839 |
|  | <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: 20 m, 4-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, Robot, cold bending resistant, seawater resistant | YF8P13-200PA1XLEAX | 2146841 |
|  | <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: 30 m, 4-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, Robot, cold bending resistant, seawater resistant | YF8P13-300PA1XLEAX | 2146842 |
|  | <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: 40 m, 4-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, Robot, cold bending resistant, seawater resistant | YF8P13-400PA1XLEAX | 2146843 |

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