



# IMI18-08BNOVC0S

IMI

**INDUCTIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



## Ordering information

| Type            | Part no. |
|-----------------|----------|
| IMI18-08BNOVC0S | 1093926  |

**Included in delivery:** BEF-MU-M18N (2)

Other models and accessories → [www.sick.com/IMI](http://www.sick.com/IMI)

Illustration may differ



## Detailed technical data

### Features

|                                            |                                                                                |
|--------------------------------------------|--------------------------------------------------------------------------------|
| <b>Housing</b>                             | Cylindrical thread design                                                      |
| <b>Thread size</b>                         | M18 x 1                                                                        |
| <b>Diameter</b>                            | Ø 18 mm                                                                        |
| <b>Sensing range <math>S_n</math></b>      | 8 mm                                                                           |
| <b>Safe sensing range <math>S_a</math></b> | 6.48 mm                                                                        |
| <b>Installation type</b>                   | Flush                                                                          |
| <b>Switching frequency</b>                 | 50 Hz                                                                          |
| <b>Connection type</b>                     | Male connector M12, 4-pin                                                      |
| <b>Switching output</b>                    | NPN                                                                            |
| <b>Output function</b>                     | NC                                                                             |
| <b>Electrical wiring</b>                   | DC 3-wire                                                                      |
| <b>Enclosure rating</b>                    | IP68, IP69K <sup>1)</sup>                                                      |
| <b>Special features</b>                    | Sensing face made of stainless steel V2A, Resistant against coolant lubricants |
| <b>Special applications</b>                | Zones with coolants and lubricants, Difficult application conditions           |

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

|                                       |                      |
|---------------------------------------|----------------------|
| <b>Supply voltage</b>                 | 10 V DC ... 30 V DC  |
| <b>Ripple</b>                         | ≤ 10 % <sup>1)</sup> |
| <b>Voltage drop</b>                   | ≤ 2 V <sup>2)</sup>  |
| <b>Current consumption</b>            | 10 mA <sup>3)</sup>  |
| <b>Time delay before availability</b> | ≤ 300 ms             |

<sup>1)</sup> Of  $V_S$ .

<sup>2)</sup> With I max.

<sup>3)</sup> Without load.

<sup>4)</sup> Of  $S_r$ .

|                                             |                                                                                                   |
|---------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Hysteresis</b>                           | 1 % ... 20 %                                                                                      |
| <b>Reproducibility</b>                      | ≤ 2 % <sup>4)</sup>                                                                               |
| <b>Temperature drift (of S<sub>r</sub>)</b> | ≤ 10 %                                                                                            |
| <b>EMC</b>                                  | According to EN 60947-5-2                                                                         |
| <b>Continuous current I<sub>a</sub></b>     | ≤ 200 mA                                                                                          |
| <b>Short-circuit protection</b>             | ✓                                                                                                 |
| <b>Reverse polarity protection</b>          | ✓                                                                                                 |
| <b>Power-up pulse protection</b>            | ✓                                                                                                 |
| <b>Shock and vibration resistance</b>       | 100 g / 5 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz, 1 mm / 55 Hz ... 500 Hz / 60 g |
| <b>Ambient operating temperature</b>        | -25 °C ... +75 °C                                                                                 |
| <b>Housing material</b>                     | Stainless steel V2A, DIN 1.4305 / AISI 303                                                        |
| <b>Sensing face material</b>                | Stainless steel V2A, DIN 1.4305 / AISI 303                                                        |
| <b>Housing length</b>                       | 64.7 mm                                                                                           |
| <b>Thread length</b>                        | 45.7 mm                                                                                           |
| <b>Tightening torque, max.</b>              | ≤ 90 Nm                                                                                           |
| <b>Items supplied</b>                       | Mounting nut, V2A stainless steel, with locking teeth (2x)                                        |
| <b>Protection class</b>                     | III                                                                                               |
| <b>UL File No.</b>                          | E181493                                                                                           |

<sup>1)</sup> Of V<sub>S</sub>.

<sup>2)</sup> With I max.

<sup>3)</sup> Without load.

<sup>4)</sup> Of S<sub>r</sub>.

## Safety-related parameters

|                         |             |
|-------------------------|-------------|
| <b>MTTF<sub>D</sub></b> | 1,892 years |
| <b>DC<sub>avg</sub></b> | 0%          |

## Reduction factors

|                                   |                                                |
|-----------------------------------|------------------------------------------------|
| <b>Note</b>                       | The values are reference values which may vary |
| <b>St37 steel (Fe)</b>            | Approx. 1                                      |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.83                                   |
| <b>Aluminum (Al)</b>              | Approx. 0.52                                   |
| <b>Copper (Cu)</b>                | Approx. 0.32                                   |
| <b>Brass (Br)</b>                 | Approx. 0.6                                    |

## Installation note

|               |                                       |
|---------------|---------------------------------------|
| <b>Remark</b> | Associated graphic see "Installation" |
| <b>B</b>      | 25 mm                                 |
| <b>C</b>      | 18 mm                                 |
| <b>D</b>      | 24 mm                                 |
| <b>F</b>      | 50 mm                                 |

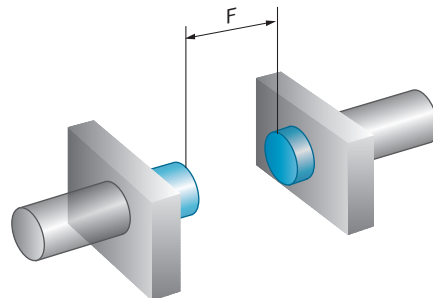
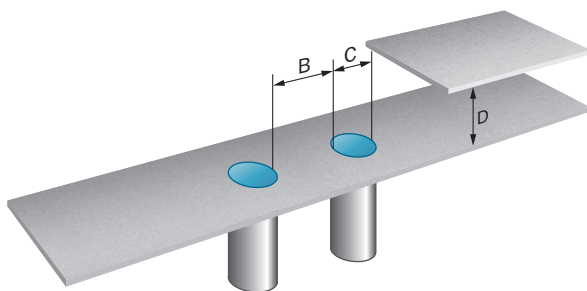
## Classifications

|                   |          |
|-------------------|----------|
| <b>ECI@ss 5.0</b> | 27270101 |
|-------------------|----------|

|                       |          |
|-----------------------|----------|
| <b>ECI@ss 5.1.4</b>   | 27270101 |
| <b>ECI@ss 6.0</b>     | 27270101 |
| <b>ECI@ss 6.2</b>     | 27270101 |
| <b>ECI@ss 7.0</b>     | 27270101 |
| <b>ECI@ss 8.0</b>     | 27270101 |
| <b>ECI@ss 8.1</b>     | 27270101 |
| <b>ECI@ss 9.0</b>     | 27270101 |
| <b>ECI@ss 10.0</b>    | 27270101 |
| <b>ECI@ss 11.0</b>    | 27270101 |
| <b>ETIM 5.0</b>       | EC002714 |
| <b>ETIM 6.0</b>       | EC002714 |
| <b>ETIM 7.0</b>       | EC002714 |
| <b>UNSPSC 16.0901</b> | 39122230 |

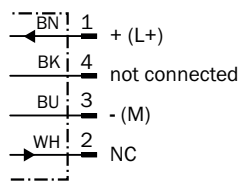
## Installation note

Flush installation

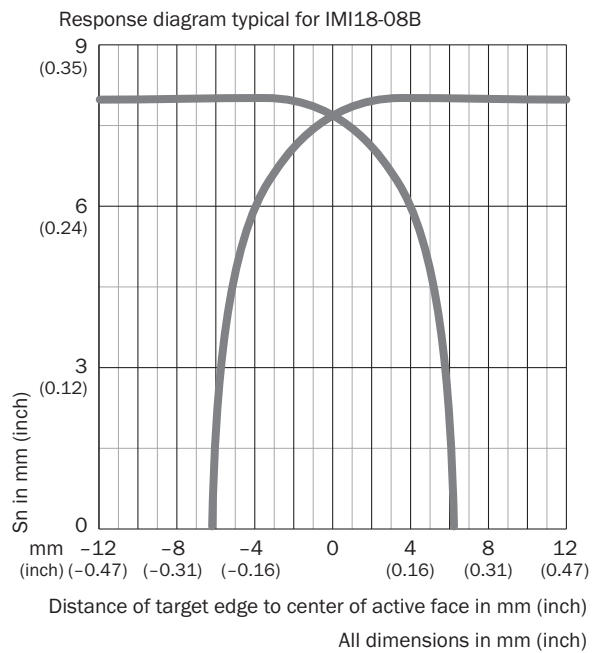


## Connection diagram

Cd-008

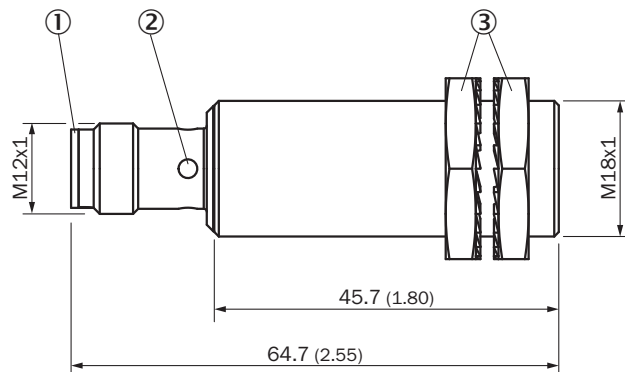


## Response diagram



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

IM18 Inox, flush



- ① Connection
- ② Indication LED
- ③ Fastening nuts (2 x); width across 24, stainless steel V2A

## Recommended accessories

Other models and accessories → [www.sick.com/IMI](http://www.sick.com/IMI)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Type               | Part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| Plug connectors and cables                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |          |
|    | Head A: female connector, M12, 4-pin, straight<br>Head B: Flying leads<br>Cable: PP, unshielded, 2 m<br>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)                                       | DOL-1204-G02MRN    | 6058291  |
|                                                                                     | Head A: female connector, M12, 4-pin, straight<br>Head B: Flying leads<br>Cable: PP, unshielded, 5 m<br>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)                                       | DOL-1204-G05MRN    | 6058476  |
|                                                                                     | Head A: female connector, M12, 4-pin, angled with LED<br>Head B: Flying leads<br>Cable: PP, unshielded, 2 m<br>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 | DOL-1204-L02MRN    | 6058482  |
|                                                                                     | Head A: female connector, M12, 4-pin, angled with LED<br>Head B: Flying leads<br>Cable: PP, unshielded, 5 m<br>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 | DOL-1204-L05MRN    | 6058483  |
|                                                                                     | Head A: female connector, M12, 4-pin, angled<br>Head B: Flying leads<br>Cable: PP, unshielded, 2 m<br>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)                                         | DOL-1204-W02MRN    | 6058474  |
|                                                                                     | Head A: female connector, M12, 4-pin, angled<br>Head B: Flying leads<br>Cable: PP, unshielded, 5 m<br>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)                                         | DOL-1204-W05MRN    | 6058477  |
|    | 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                                                                                                                                                                                                                                                                                                                 | YF2A14-020UB3XLEAX | 2095607  |
|                                                                                     | 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  |
|  | 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                                                                                                                                                                                                                                                                                                                   | YG2A14-050UB3XLEAX | 2095767  |

|                                                                                    | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                     | Type               | Part no. |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
|   | Head A: female connector, M12, 4-pin, angled<br>Head B: male connector, M12, 4-pin, straight<br>Cable: PP, unshielded, 2 m<br>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)   | DSL-1204-B02MRN    | 6058502  |
|                                                                                    | Head A: female connector, M12, 4-pin, angled<br>Head B: male connector, M12, 4-pin, straight<br>Cable: PP, unshielded, 5 m<br>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)   | DSL-1204-B05MRN    | 6058503  |
|   | Head A: female connector, M12, 4-pin, straight<br>Head B: male connector, M12, 4-pin, straight<br>Cable: PP, unshielded, 2 m<br>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) | DSL-1204-G02MRN    | 6058499  |
|                                                                                    | Head A: female connector, M12, 4-pin, straight<br>Head B: male connector, M12, 4-pin, straight<br>Cable: PP, unshielded, 5 m<br>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) | DSL-1204-G05MRN    | 6058500  |
|  | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: male connector, M12, 4-pin, straight, A-coded<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m                                                                                                                                                                                                                                                                  | YF2A14-050UB3M2A14 | 2096001  |

## 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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