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Product data sheet




# IM30-20NPS-ZC1

## IM Standard

**INDUCTIVE PROXIMITY SENSORS**

SICK
Sensor Intelligence.

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# IM30-20NPS-ZC1 | IM Standard

INDUCTIVE PROXIMITY SENSORS



Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| IM30-20NPS-ZC1 | 7900157 |

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

## Detailed technical data

### Features

| | |
|---|---|
| **Housing** | Cylindrical thread design |
| **Housing** | Standard design |
| **Thread size** | M30 x 1.5 |
| **Diameter** | Ø 30 mm |
| **Sensing range $S_n$** | 20 mm |
| **Installation type** | Non-flush |
| **Switching frequency** | 150 Hz |
| **Connection type** | Male connector M12, 4-pin |
| **Switching output** | PNP |
| **Output function** | NO |
| **Electrical wiring** | DC 3-wire |
| **Enclosure rating** | IP67 [1] |

[1] According to EN 60529.

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage** | 10 V DC ... 30 V DC |
| **Ripple** | ≤ 10 % [1] |
| **Voltage drop** | ≤ 1 V [2] |
| **Time delay before availability** | ≤ 100 ms |
| **Hysteresis** | 2 % ... 15 % |
| **Reproducibility** | ≤ 5 % [3] [4] |
| **Temperature drift (of $S_r$)** | ± 10 % |
| **EMC** | According to EN 60947-5-2 |
| **Continuous current $I_a$** | ≤ 400 mA |

[1] Of $V_S$.
[2] At $I_a$ max.
[3] Ub and Ta constant.
[4] Of Sr.

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| | |
|---|---|
| **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 ... +70 °C |
| **Housing material** | Brass, Nickel-plated brass |
| **Sensing face material** | Plastic |
| **Housing length** | 76 mm |
| **Thread length** | 38 mm |
| **Tightening torque, max.** | ≤ 60 Nm |

[1] Of $V_S$.
[2] At $I_a$ max.
[3] Ub and Ta constant.
[4] Of Sr.

## Installation note

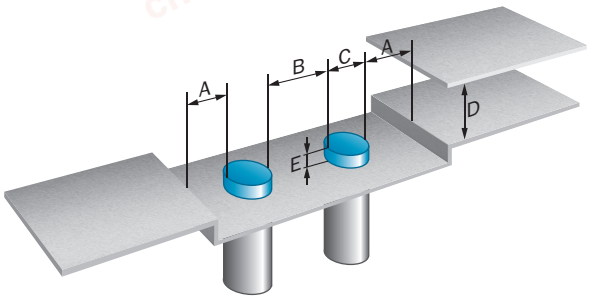
| | |
|---|---|
| **Remark** | Associated graphic see "Installation" |
| **A** | 20 mm |
| **B** | 60 mm |
| **C** | 30 mm |
| **D** | 60 mm |
| **E** | 20 mm |
| **F** | 160 mm |

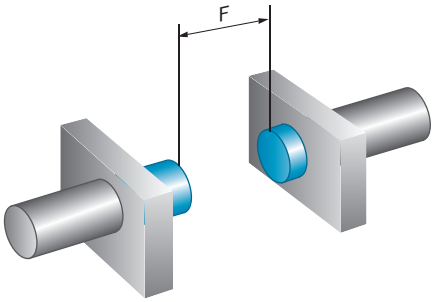
## Classifications

| | |
|---|---|
| **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 |

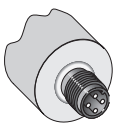
## Installation note

Non-flush installation

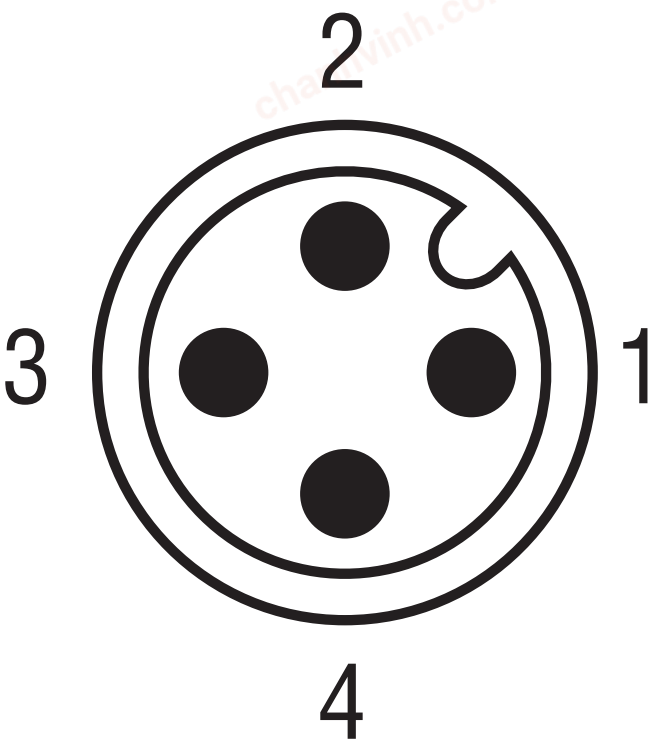



## Connection type



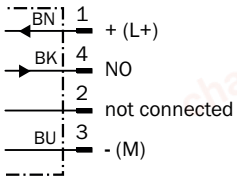
## Connection diagram



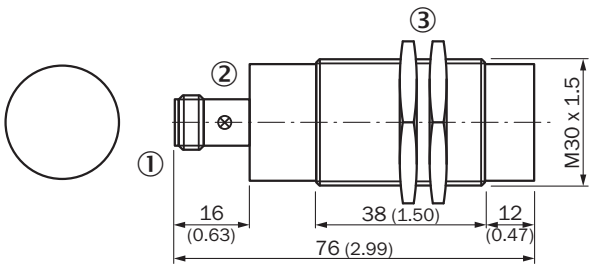
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Cd-007




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




① Connection
② Display LED
③ Fastening nuts (2x); width across 36, metal

## Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|---|---|
| Universal bar clamp systems | | | |
|  | Plate N10 for universal clamp bracket, M30, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware | BEF-KHS-N10 | 2062372 |
| Mounting brackets and plates | | | |
|  | Mounting plate for M30 sensors, steel, zinc coated, without mounting hardware | BEF-WG-M30 | 5321871 |
|  | Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M30 | 5308445 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF2A14-020VB3XLEAX | 2096234 |
| | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235 |

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# IM30-20NPS-ZC1 | IM Standard

## INDUCTIVE PROXIMITY SENSORS

| | 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, PVC, unshielded, 2 m | YG2A14-020VB3XLEAX | 2095895 |
| | Head A: female connector, M12, 4-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YG2A14-050VB3XLEAX | 2095897 |
|  | Head A: female connector, M12, 4-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m<br>Only suitable for PNP sensors | YI2A14-020VB3XLEAX | 2096222 |
| | Head A: female connector, M12, 4-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m<br>Only suitable for PNP sensors | YI2A14-050VB3XLEAX | 2096223 |
|  | Head A: female connector, M12, 4-pin, straight<br>Cable: unshielded | DOS-1204-G | 6007302 |
|  | Head A: female connector, M12, 4-pin, angled<br>Cable: unshielded | DOS-1204-W | 6007303 |
|  | Head A: male connector, M12, 4-pin, straight<br>Cable: unshielded | STE-1204-G | 6009932 |
|  | Head A: male connector, M12, 4-pin, angled<br>Cable: unshielded | STE-1204-W | 6022084 |

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# 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