



# IQ20-07BPPDU5S

IQV

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

| Type           | Part no. |
|----------------|----------|
| IQ20-07BPPDU5S | 6072660  |

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



## Detailed technical data

### Features

|                                            |                      |
|--------------------------------------------|----------------------|
| <b>Housing</b>                             | Rectangular          |
| <b>Dimensions (W x H x D)</b>              | 20 mm x 32 mm x 8 mm |
| <b>Sensing range <math>S_n</math></b>      | 7 mm                 |
| <b>Safe sensing range <math>S_a</math></b> | 5.67 mm              |
| <b>Installation type</b>                   | Flush                |
| <b>Switching frequency</b>                 | 150 Hz               |
| <b>Connection type</b>                     | Cable, 4-wire, 5 m   |
| <b>Switching output</b>                    | PNP                  |
| <b>Output function</b>                     | Complementary        |
| <b>Electrical wiring</b>                   | DC 4-wire            |
| <b>Enclosure rating</b>                    | IP67 <sup>1)</sup>   |

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

### Mechanics/electronics

|                                                |                                       |
|------------------------------------------------|---------------------------------------|
| <b>Supply voltage</b>                          | 10 V DC ... 30 V DC                   |
| <b>Ripple</b>                                  | $\leq 10\%$ <sup>1)</sup>             |
| <b>Voltage drop</b>                            | $< 2.5\text{ V}$ <sup>2)</sup>        |
| <b>Time delay before availability</b>          | $\leq 20\text{ ms}$                   |
| <b>Hysteresis</b>                              | 1 % ... 15 %                          |
| <b>Reproducibility</b>                         | $\pm 5\%$ <sup>3)</sup> <sup>4)</sup> |
| <b>Temperature drift (of <math>S_n</math>)</b> | $\pm 10\%$                            |
| <b>EMC</b>                                     | According to EN 60947-5-2             |
| <b>Continuous current <math>I_a</math></b>     | $\leq 200\text{ mA}$                  |
| <b>Cable material</b>                          | PUR                                   |

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

<sup>2)</sup> At  $I_a$  max.

<sup>3)</sup> Supply voltage  $U_b$  and constant ambient temperature  $T_a$ .

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

|                                       |                                  |
|---------------------------------------|----------------------------------|
| <b>Short-circuit protection</b>       | ✓                                |
| <b>Reverse polarity protection</b>    | ✓                                |
| <b>Shock and vibration resistance</b> | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| <b>Ambient operating temperature</b>  | -25 °C ... +70 °C                |
| <b>Housing material</b>               | Zinc diecast, GD Zn              |
| <b>Sensing face material</b>          | Plastic, PA12                    |
| <b>UL File No.</b>                    | E191603                          |

1) Of  $V_S$ .

2) At  $I_a$  max.

3) Supply voltage  $U_b$  and constant ambient temperature  $T_a$ .

4) Of  $S_r$ .

## Reduction factors

|                                   |                                                |
|-----------------------------------|------------------------------------------------|
| <b>Note</b>                       | The values are reference values which may vary |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.7                                    |
| <b>Aluminum (Al)</b>              | Approx. 0.4                                    |
| <b>Copper (Cu)</b>                | Approx. 0.3                                    |
| <b>Brass (Br)</b>                 | Approx. 0.4                                    |

## Installation note

|               |                                       |
|---------------|---------------------------------------|
| <b>Remark</b> | Associated graphic see "Installation" |
| <b>A</b>      | 0 mm                                  |
| <b>B</b>      | 20 mm                                 |
| <b>C</b>      | 20 mm                                 |
| <b>D</b>      | 21 mm                                 |
| <b>E</b>      | 0 mm                                  |
| <b>F</b>      | 60 mm                                 |

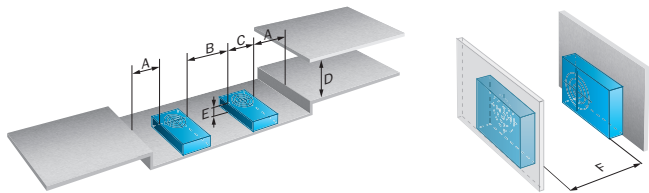
## Classifications

|                     |          |
|---------------------|----------|
| <b>eCl@ss 5.0</b>   | 27270101 |
| <b>eCl@ss 5.1.4</b> | 27270101 |
| <b>eCl@ss 6.0</b>   | 27270101 |
| <b>eCl@ss 6.2</b>   | 27270101 |
| <b>eCl@ss 7.0</b>   | 27270101 |
| <b>eCl@ss 8.0</b>   | 27270101 |
| <b>eCl@ss 8.1</b>   | 27270101 |
| <b>eCl@ss 9.0</b>   | 27270101 |
| <b>eCl@ss 10.0</b>  | 27270101 |
| <b>eCl@ss 11.0</b>  | 27270101 |
| <b>eCl@ss 12.0</b>  | 27274001 |
| <b>ETIM 5.0</b>     | EC002714 |
| <b>ETIM 6.0</b>     | EC002714 |
| <b>ETIM 7.0</b>     | EC002714 |
| <b>ETIM 8.0</b>     | EC002714 |

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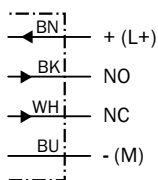
39122230

Installation note



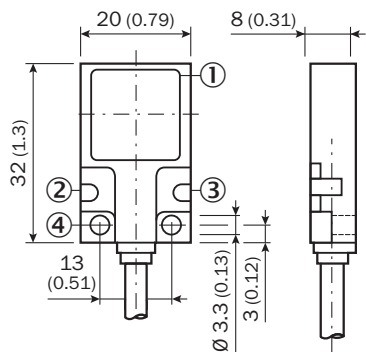
Connection diagram

Cd-005



Dimensional drawing (Dimensions in mm (inch))

IQ20, cable



- ① Sensing face
- ② Operational status LED, green
- ③ LED output state, yellow
- ④ Fixing hole

## 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](http://www.sick.com)