

1) Operating voltage, 2) Output function, 3) Optical axis



**Basic features**

|                               |                              |
|-------------------------------|------------------------------|
| <b>Approval/Conformity</b>    | CE<br>UKCA<br>cULus<br>WEEE  |
| <b>Basic standard</b>         | IEC 60947-5-2                |
| <b>Principle of operation</b> | Angle sensor                 |
| <b>Series</b>                 | B                            |
| <b>Style</b>                  | Angle<br>Straight connection |

**Display/Operation**

|                |   |
|----------------|---|
| <b>Display</b> | Output function- LED yellow<br>LED green: Power |
|----------------|---|

**Electrical connection**

|  |                              |
|--|------------------------------|
| <b>Connection</b>                        | Connector, M12x1-Male, 4-pin |
| <b>Contact, surface protection</b>       | Gold plated                  |
| <b>Polarity reversal protected</b>       | yes                          |
| <b>Protection against device mix-ups</b> | yes                          |
| <b>Short-circuit protection</b>          | yes                          |

**Electrical data**

|   |             |
|---|-------------|
| <b>Load capacitance max. at Ue</b>                      | 0.5 µF      |
| <b>No-load current I<sub>o</sub> max. at Ue</b>         | 35 mA       |
| <b>Operating voltage U<sub>b</sub></b>                  | 10...30 VDC |
| <b>Output resistance R<sub>a</sub></b>                  | 33.0 kOhm   |
| <b>Protection class</b>                                 | II          |
| <b>Rated insulation voltage U<sub>i</sub></b>           | 250 V AC    |
| <b>Rated operating current I<sub>e</sub></b>            | 200 mA      |
| <b>Rated operating voltage U<sub>e</sub> DC</b>         | 24 V        |
| <b>Ready delay t<sub>v</sub> max.</b>                   | 100 ms      |
| <b>Residual current I<sub>r</sub> max.</b>              | 50 µA       |
| <b>Ripple max. (% of U<sub>e</sub>)</b>                 | 15 %        |
| <b>Switching frequency</b>                              | 1000 Hz     |
| <b>Turn-off delay t<sub>off</sub> max.</b>              | 0.5 ms      |
| <b>Turn-on delay t<sub>on</sub> max.</b>                | 0.5 ms      |
| <b>Utilization category</b>                             | DC -13      |
| <b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b> | 2.5 V       |

**Environmental conditions**

|                                |   |
|--------------------------------|---|
| <b>Ambient temperature</b>     | -10...60 °C   |
| <b>Contamination scale</b>     | 3   |
| <b>EN 60068-2-27, Shock</b>    | Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6<br>Half-sinus, 100 g <sub>n</sub> , 2 ms, 3x8000 |
| <b>EN 60068-2-6, Vibration</b> | 10...2000 Hz, amplitude 1 mm, 30 g <sub>n</sub> , 3x5 h                                     |
| <b>IP rating</b>               | IP67  |

**Interface**

|                         |                        |
|-------------------------|------------------------|
| <b>Switching output</b> | PNP normally open (NO) |
|-------------------------|------------------------|

## Material

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>Housing material</b>         | 1.4408 stainless steel, Powder coated |
| <b>Material sensing surface</b> | Epoxy resin                           |
| <b>Surface protection</b>       | Powder coated                         |

## Mechanical data

|                      |                     |
|----------------------|---------------------|
| <b>Dimension</b>     | 14 x 45.4 x 99.5 mm |
| <b>Mounting part</b> | Screw M6            |

## Optical features

|                                       |                     |
|---------------------------------------|---------------------|
| <b>Ambient light max.</b>             | 5000 Lux            |
| <b>Beam characteristic</b>            | Divergent           |
| <b>Light spot size</b>                | Ø 3.0 mm Light exit |
| <b>Light type</b>                     | Infrared            |
| <b>Principle of optical operation</b> | Through-beam sensor |
| <b>Switching function, optical</b>    | dark-on             |
| <b>Wave length</b>                    | 880 nm              |

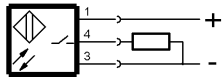
## Remarks

The sensor is functional again after the overload has been eliminated.  
 For additional information, refer to user's guide.  
 Order accessories separately.  
 Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.

## Connector Drawings



## Wiring Diagrams



## Opto Symbols

