

1) Sensitivity, 2) Light-on/dark-on, 3) Optical axis, 4) Output function, 5) Operating voltage



### Basic features

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

### Electrical connection

|                             |                             |
|-----------------------------|-----------------------------|
| Connection                  | Connector, M8x1-Male, 3-pin |
| Contact, surface protection | Gold plated                 |
| Polarity reversal protected | yes                         |
| Short-circuit protection    | yes                         |

### Display/Operation

|          |   |
|----------|---|
| Adjuster | Potentiometer 270° (2x)                         |
| Display  | Output function- LED yellow<br>LED green: Power |
| Setting  | Light-on/dark-on<br>Sensitivity                 |

## Electrical data

|  |             |
|--|-------------|
| Load capacitance max. at Ue                        | 1 µF        |
| No-load current I <sub>o</sub> max. at Ue          | 35 mA       |
| Operating voltage U <sub>b</sub>                   | 10...30 VDC |
| Rated insulation voltage U <sub>i</sub>            | 75 V DC     |
| Rated operating current I <sub>e</sub>             | 200 mA      |
| Rated operating voltage U <sub>e</sub> DC          | 24 V        |
| Ready delay t <sub>v</sub> max.                    | 200 ms      |
| Residual current I <sub>r</sub> max.               | 50 µA       |
| Ripple max. (% of U <sub>e</sub> )                 | 10 %        |
| Switching frequency                                | 2000 Hz     |
| Turn-off delay t <sub>off</sub> max.               | 0.25 ms     |
| Turn-on delay t <sub>on</sub> max.                 | 0.25 ms     |
| Utilization category                               | DC -13      |
| Voltage drop U <sub>d</sub> max. at I <sub>e</sub> | 2.5 V       |

## Environmental conditions

|                         |  |
|-------------------------|--|
| Ambient temperature     | -10...60 °C                                |
| EN 60068-2-27, Shock    | Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6 |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min            |
| IP rating               | IP67                                       |

## Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 316 a |
|--------------|-------|

## Interface

|                  |   |
|------------------|---|
| Switching output | NPN normally open/normally closed (NO/NC) |
|------------------|---|

## Material

|                          |                            |
|--------------------------|----------------------------|
| Housing material         | Zinc, Die casting, Painted |
| Material sensing surface | Glass                      |
| Surface protection       | Painted                    |

## Mechanical data

|               |                 |
|---------------|-----------------|
| Dimension     | 10 x 40 x 58 mm |
| Fork opening  | 20 mm           |
| Mounting part | Screw M4        |

## Optical features

|                                |                     |
|--------------------------------|---------------------|
| Ambient light max.             | 5000 Lux            |
| Beam characteristic            | Divergent           |
| Light spot size                | Ø 2.0 mm Light exit |
| Light type                     | Infrared            |
| Principle of optical operation | Through-beam sensor |
| Smallest part typ.             | 0.80 mm             |
| Switching function, optical    | dark-on/light-on    |
| Wave length                    | 880 nm              |

## Range/Distance

|                              |        |
|------------------------------|--------|
| Hysteresis H max.            | 0.3 mm |
| Repeat accuracy lateral max. | 100 µm |

## Remarks

Order accessories separately.

For additional information, refer to user's guide.

Factory default setting for switching output: Normally open.

Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.

The sensor is functional again after the overload has been eliminated.

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

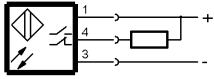
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

## Connector Drawings



## Wiring Diagrams (Schematic)



## Opto Symbols

