

1) rotatable 180°, 2) Output function, 3) stability/error, 4) Fail/short circuit/error, 5) Sensitivity, light/dark



Basic features

|                        |                                   |
|------------------------|-----------------------------------|
| Approval/Conformity    | CE<br>UKCA<br>WEEE                |
| Basic standard         | IEC 60947-5-2                     |
| Principle of operation | Fork sensor                       |
| Series                 | 21                                |
| Style                  | Fork<br>Connection can be rotated |

Display/Operation

|          |  |
|----------|--|
| Adjuster | button   |
| Display  | Fail - LED red<br>Output function- LED yellow<br>Ready - LED green<br>Error - LED red+green, flashing<br>Short circuit - LED red, flashing |
| Setting  | Sensitivity<br>Light-on/dark-on  |

Electrical connection

|                             |                             |
|-----------------------------|-----------------------------|
| Connection                  | Connector, M8x1-Male, 4-pin |
| Polarity reversal protected | yes                         |
| Short-circuit protection    | yes                         |

Electrical data

|                               |             |
|-------------------------------|-------------|
| Load capacitance max. at Ue   | 1 µF        |
| No-load current Io max. at Ue | 55 mA       |
| Operating voltage Ub          | 10...30 VDC |
| Rated insulation voltage Ui   | 75 V DC     |
| Rated operating current Ie    | 100 mA      |
| Rated operating voltage Ue DC | 24 V        |
| Ripple max. (% of Ue)         | 8 %         |
| Switching frequency           | 25000 Hz    |
| Turn-off delay toff max.      | 0.02 ms     |
| Turn-on delay ton max.        | 0.02 ms     |
| Utilization category          | DC -13      |
| Voltage drop Ud max. at Ie    | 2 V         |

Environmental conditions

|                         |  |
|-------------------------|--|
| Ambient temperature     | -20...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               | IP65                                       |

Interface

|                  |  |
|------------------|--|
| Switching output | NPN normally open/normally closed (NO/NC)<br>PNP normally open/normally closed (NO/NC) |
|------------------|--|

Material

|                          |                     |
|--------------------------|---------------------|
| Housing material         | Aluminium, Anodized |
| Material sensing surface | Glass               |
| Surface protection       | Anodized            |

Remarks

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

Mechanical data

|               |                 |
|---------------|-----------------|
| Dimension     | 20 x 26 x 90 mm |
| Fork opening  | 2 mm            |
| Mounting part | Screw M4        |

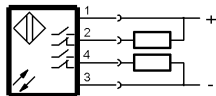
Optical features

|                                |                       |
|--------------------------------|-----------------------|
| Ambient light max.             | 10000 Lux             |
| Beam characteristic            | Divergent             |
| Light spot size                | 0.5 x 4 mm Light exit |
| Light type                     | Infrared              |
| Principle of optical operation | Through-beam sensor   |
| Smallest part typ.             | 1.00 mm               |
| Switching function, optical    | dark-on/light-on      |
| Wave length                    | 880 nm                |

Connector Drawings



Wiring Diagrams



Opto Symbols

