

1) Optical axis, 2) Operating voltage

## Basic features

|                        |                        |
|------------------------|------------------------|
| Approval/Conformity    | CE<br>cULus<br>WEEE    |
| Basic standard         | IEC 60947-5-2          |
| Principle of operation | Photoelectric sensor   |
| Series                 | 18MR                   |
| Style                  | Cylinder<br>Optics 90° |

## Display/Operation

|          |                  |
|----------|------------------|
| Adjuster | no               |
| Display  | LED green: Power |

## Electrical connection

|                                   |                              |
|-----------------------------------|------------------------------|
| Connection                        | Connector, M12x1-Male, 4-pin |
| Contact, surface protection       | Gold plated                  |
| Polarity reversal protected       | yes                          |
| Protection against device mix-ups | yes                          |

## Electrical data

|                               |             |
|-------------------------------|-------------|
| Load capacitance max. at Ue   | 0.2 $\mu$ F |
| Operating voltage Ub          | 10...30 VDC |
| Rated operating current Ie    | 100 mA      |
| Rated operating voltage Ue DC | 24 V        |
| Ripple max. (% of Ue)         | 15 %        |
| Switching frequency           | 800 Hz      |

## Environmental conditions

|                      |  |
|----------------------|--|
| Ambient temperature  | -5...55 °C                                 |
| Contamination scale  | 3  |
| EN 60068-2-27, Shock | Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6 |
| IP rating            | IP67                                       |

## Functional safety

MTTF (40 °C) 950 a

## Material

|                                      |                      |
|--------------------------------------|----------------------|
| Housing material                     | Brass, nickel-plated |
| Housing material, surface protection | nickel-plated        |
| Material sensing surface             | Glass                |
| Surface protection                   | nickel-plated        |

## Mechanical data

|                        |              |
|------------------------|--------------|
| Dimension              | Ø 18 x 92 mm |
| Mounting part          | Nut M18x1    |
| Tightening torque max. | 15 Nm        |

## Optical features

|                                |                               |
|--------------------------------|-------------------------------|
| Beam characteristic            | Divergent                     |
| LED group per IEC 62471        | Exempt Group                  |
| Light type                     | LED, red light                |
| Principle of optical operation | Through-beam sensor (Emitter) |
| Wave length                    | 645 nm                        |

## Range/Distance

|                             |          |
|-----------------------------|----------|
| Range                       | 0...20 m |
| Rated operating distance Sn | 20 m     |

Remarks

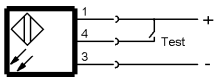
For additional information, refer to user's guide.  
Order accessories separately.  
For more information about MTTF and B10d see MTTF / B10d Certificate

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



Opto Symbols

