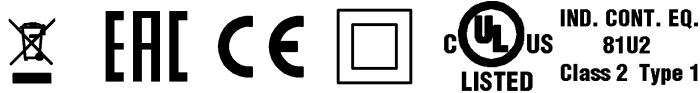


1) Optical axis receiver, 2) Optical axis emitter, 3) Operating voltage, 4) Light reception/limit area, 5) Sn



Basic features

| | |
|-------------------------------|-----------------------------|
| Approval/Conformity | CE cULus EAC WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Photoelectric sensor |
| Reference reflector | BOS R-1 |
| Scope of delivery | 2x nut M18x1 User manual |
| Series | 18M |
| Style | Cylinder Straight optics |

Electrical data

| | |
|---|-------------|
| Load capacitance max. at Ue | 0.2 µF |
| No-load current I_o max. at Ue | 30 mA |
| Operating voltage U_b | 10...30 VDC |
| Protection class | II |
| Rated insulation voltage U_i | 75 V DC |
| Rated operating current I_e | 100 mA |
| Rated operating voltage U_e DC | 24 V |
| Ready delay t_v max. | 20 ms |
| Residual current I_r max. | 30 µA |
| Ripple max. (% of U_e) | 15 % |
| Switching frequency | 800 Hz |
| Turn-off delay t_{off} max. | 0.63 ms |
| Turn-on delay t_{on} max. | 0.63 ms |
| Utilization category | DC -13 |
| Voltage drop U_d max. at I_e | 2.5 V |

Display/Operation

| | |
|-----------------|---|
| Adjuster | 1-turn potentiometer |
| Display | LED green: Power Error - LED green, flashing LED yellow: Light received Limit range - LED yellow, flashing |
| Setting | Sensitivity (Sn) |

Environmental conditions

| | |
|--------------------------------|--|
| Ambient temperature | -5...55 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 gn, 11 ms, 3x6 Half-sinus, 100 gn, 2 ms, 3x8000 |
| EN 60068-2-6, Vibration | 10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h |
| Protection degree | IP67 |

Electrical connection

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

Functional safety

MTTF (40 °C) 1046 a

Material

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

Mechanical data

Dimension Ø 18 x 75 mm
 Mounting Nut M18x1
 Tightening torque max. 15 Nm
 30 Nm

Optical features

Ambient light max. 10000 Lux
 Beam characteristic Divergent
 LED group per IEC 62471 Exempt Group
 Light spot size Ø 300 mm at 7 m
 Light type LED, red light
 Polarizing filter yes
 Principle of optical operation Retroreflective sensor
 Switching function, optical dark-on
 Wave length 626 nm

Output/Interface

Switching output PNP normally open (NO) Pin 4

Range/Distance

Range 0...7 m
 Rated operating distance S_n 7 m Adjustable

Remarks

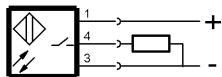
Order accessories separately.
 Polarizing filters prevent spurious switching due to reflecting and shiny parts.
 The sensor is functional again after the overload has been eliminated.
 For additional information, refer to user's guide.
 For more information about MTTF and B10d see MTTF / B10d Certificate

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

