

1) Optical axis receiver, 2) Optical axis emitter, 3) Power/short-circuit, 4) Light reception/limit area, 5) Sn



### Basic features

<b>Approval/Conformity</b>	cULus CE UKCA EAC WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Series</b>	18M
<b>Style</b>	Cylinder Straight optics

### Display/Operation

<b>Adjuster</b>	button
<b>Display</b>	LED green: Power Limit range - LED yellow, flashing Short circuit - LED green, flashing LED yellow: Light received
<b>Setting</b>	Rated switching distance (Sn)

### 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>	0.1 µF
<b>No-load current I<sub>o</sub> max. at Ue</b>	40 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Protection class</b>	II
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<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>	-5...55 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

### Functional safety

<b>MTTF (40 °C)</b>	400 a
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Photoelectric Sensors  
**BOS 18M-PUV-PR30-S4**  
**Order Code: BOS01J9**



**Interface**

<b>Supplementary output</b>	PNP stability output
<b>Switch function, supplementary output</b>	Normally closed (NC)
<b>Switching output</b>	PNP normally open/normally closed (NO/NC)

**Material**

<b>Housing material</b>	Brass, nickel-plated
<b>Material sensing surface</b>	Glass
<b>Surface protection</b>	nickel-plated

**Mechanical data**

<b>Dimension</b>	Ø 18 x 75 mm
<b>Mounting part</b>	Nut M18x1
<b>Tightening torque max.</b>	15 Nm 30 Nm

**Optical features**

<b>Ambient light max.</b>	10000 Lux
<b>Beam characteristic</b>	Divergent
<b>LED group per IEC 62471</b>	Risk group 1
<b>Light type</b>	LED, red light
<b>Polarizing filter</b>	yes
<b>Principle of optical operation</b>	Retroreflective sensor
<b>Switching function, optical</b>	dark-on/light-on
<b>Wave length</b>	626 nm

**Range/Distance**

<b>Range</b>	0...5 m
<b>Rated operating distance Sn</b>	5 m Adjustable
<b>Temperature drift max. (% of Sr)</b>	10 %

**Remarks**

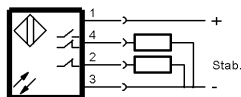
Order accessories separately.  
 For additional information, refer to user's guide.  
 Polarizing filters prevent spurious switching due to reflecting and shiny parts.  
 The sensor is functional again after the overload has been eliminated.  
 For more information about MTTF and B10d see MTTF / B10d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

