

1) Optical axis, 2) Operating voltage, 3) Light reception/limit area



### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 18M-...-RS21-...
Scope of delivery	User manual 2x nut M18x1
Series	18M
Style	Cylinder Straight optics

### Display/Operation

Adjuster	no
Display	LED green: Power Error - LED green, flashing LED yellow: Light received Limit range - LED yellow, flashing

### 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

### Electrical data

Load capacitance max. at Ue	0.2 µF
No-load current I <sub>o</sub> max. at Ue	14 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Protection class	II
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	20 ms
Residual current I <sub>r</sub> max.	30 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	800 Hz
Turn-off delay t <sub>off</sub> max.	0.63 ms
Turn-on delay t <sub>on</sub> max.	0.63 ms
Utilization category	DC -13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	2.5 V

### 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 Half-sinus, 100 g <sub>n</sub> , 2 ms, 3x8000
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 g <sub>n</sub> , 3x5 h
IP rating	IP67

Photoelectric Sensors  
**BOS 18M-PS-RE25-S4**  
**Order Code: BOS025K**



**Functional safety**

MTTF (40 °C) 1208 a

**Interface**

Switching output PNP normally open (NO) Pin 4

**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 part Nut M18x1  
 Tightening torque max. 15 Nm  
 30 Nm

**Optical features**

Ambient light max. 10000 Lux  
 Light type LED, red light  
 Principle of optical operation Through-beam sensor (receiver)  
 Switching function, optical dark-on

**Range/Distance**

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

**Remarks**

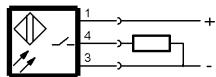
Order accessories separately.  
 For additional information, refer to user's guide.  
 The sensor is functional again after the overload has been eliminated.  
 For more information about MTTF and B10d see MTTF / B10d Certificate

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**

