



## Basic features

<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Reference reflector</b>	BOS R-1
<b>Series</b>	18MR
<b>Style</b>	Cylinder Optics 90°

## Display/Operation

<b>Adjuster</b>	Potentiometer 270°
<b>Display</b>	LED green: Power LED yellow: Light received
<b>Setting</b>	Rated switching distance (Sn)

Photoelectric Sensors  
**BOS 18MR-PA-PR20-S4**  
**Order Code: BOS026L**



**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	25 mA
Operating voltage U <sub>b</sub>	10...30 VDC
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
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
IP rating	IP67

**Functional safety**

MTTF (40 °C)	889 a
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**Interface**

Switching output	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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**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**

Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	Light-on dark-on
Wave length	645 nm

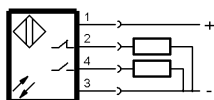
**Range/Distance**

Range	0...6 m
Rated operating distance S <sub>n</sub>	6 m

**Connector Drawings**



**Wiring Diagrams**



## Opto Symbols

