

1) Optical axis emitter



### Basic features

<b>Approval/Conformity</b>	Ecolab cULus CE UKCA WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Reference receiver</b>	BOS 18E-PA-RE20-S4
<b>Series</b>	18E
<b>Style</b>	Cylinder Straight optics

### Environmental conditions

<b>Ambient temperature</b>	-25...70 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 100 gn, 2 ms, 3x8000 Half-sinus, 30 gn, 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
<b>IP rating</b>	IP68/IP67
<b>IP rating per DIN 40050</b>	IPx9K

### Display/Operation

<b>Adjuster</b>	no
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### Functional safety

<b>MTTF (40 °C)</b>	950 a
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### Electrical connection

<b>Connection</b>	Connector, M12x1-Male, 4-pin
<b>Contact, surface protection</b>	Gold plated
<b>Polarity reversal protected</b>	yes

### Material

<b>Housing material</b>	1.4404 stainless steel
<b>Material sensing surface</b>	Glass

### Electrical data

<b>No-load current I<sub>0</sub> max. at U<sub>e</sub></b>	25 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %

### Mechanical data

<b>Dimension</b>	Ø 18 x 75 mm
<b>Mounting part</b>	Nut M18x1
<b>Tightening torque max.</b>	40 Nm

Photoelectric Sensors  
**BOS 18E-X-RS20-S4**  
**Order Code: BOS01KT**

**BALLUFF**

**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 640 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.

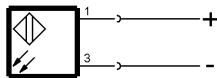
For more information about MTTF and B10d see MTTF / B10d Certificate

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**



1) Emitter

**Opto Symbols**

