

1) Optical axis, 2) Output function



### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	08E
Style	Cylinder Straight optics

### Display/Operation

Display	Limit range - LED yellow, flashing LED yellow: Light received
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### Electrical connection

Connection	Connector, M8x1-Male, 3-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	0.05 µF
No-load current I <sub>o</sub> max. at Ue	10 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
Ready delay t <sub>v</sub> max.	20 ms
Ripple max. (% of U <sub>e</sub> )	10 %
Switching frequency	500 Hz
Turn-off delay t <sub>off</sub> max.	1 ms
Turn-on delay t <sub>on</sub> max.	1 ms
Utilization category	DC -13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	0.7 V

### Environmental conditions

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

### Functional safety

MTTF (40 °C)	1989 a
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Photoelectric Sensors  
**BOS 08E-PS-KE20-S49**  
Order Code: BOS020F

**BALLUFF**

**Interface**

**Switching output** PNP normally open (NO)

**Material**

**Housing material** Stainless steel  
**Material sensing surface** PMMA

**Mechanical data**

**Dimension** Ø 8 x 40 mm  
**Mounting part** Nut M8x1

**Optical features**

**Light type** LED, red light  
**Principle of optical operation** Through-beam sensor (receiver)  
**Switching function, optical** dark-on

**Range/Distance**

**Range** 0...2.2 m  
**Rated operating distance Sn** 2.2 m

**Remarks**

Order accessories separately.

For additional information, refer to user's guide.

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

The sensor is functional again after the overload has been eliminated.

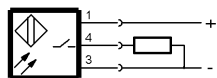
For more information about MTTF and B10d see MTTF / B10d Certificate

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**

