

1) Optical axis



## Basic features

<b>Approval/Conformity</b>	cULus CE UKCA WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Reference receiver</b>	BOS 08E-...-LE20-..
<b>Series</b>	08E
<b>Style</b>	Flat cylinder Straight optics

## Display/Operation

<b>Adjuster</b>	no
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## Electrical connection

<b>Connection</b>	Connector, M8x1-Male, 3-pin
<b>Contact, surface protection</b>	Gold plated
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes

## Electrical data

<b>No-load current I<sub>o</sub> max. at U<sub>e</sub></b>	10 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>	10 %

## Environmental conditions

<b>Ambient temperature</b>	-5...55 °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...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h 10...55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

## Functional safety

<b>MTTF (40 °C)</b>	797.3 a
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## Material

<b>Housing material</b>	Stainless steel
<b>Material sensing surface</b>	PMMA

## Mechanical data

<b>Dimension</b>	Ø 8 x 40 mm
<b>Mounting part</b>	Nut M8x1

Photoelectric Sensors  
**BOS 08E-X-LS20-S49**  
**Order Code: BOS01U8**



**Optical features**

Average power $P_o$ max.	390 $\mu$ W
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	$\varnothing$ 3.0 mm Light exit
Light type	Laser red light
Principle of optical operation	Through-beam sensor (Emitter)
Pulse duration $t$ max.	10.0 $\mu$ s

Pulse frequency	10.8 kHz
Pulse power $P_p$ max.	3.1 mW
Smallest part typ.	0.28 mm at 1 m. $R_0 = 3.0$ m
Wave length	655 nm

**Range/Distance**

Range	0...3 m
Rated operating distance $S_n$	3 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.

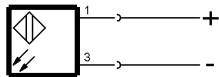
For more information about MTTF and B10d see MTTF / B10d Certificate

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**

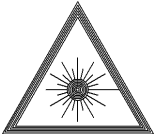


1) Emitter

**Opto Symbols**



## Warning Symbols



LASER CLASS 1 per IEC 60825-1