

1) Optical axis, 2) Output function



## 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 reflector</b>	BOS R-2
<b>Series</b>	08E
<b>Style</b>	Cylinder Straight optics

## Display/Operation

<b>Display</b>	Limit range - LED yellow, flashing LED yellow: Light received
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## Electrical connection

<b>Cable diameter D</b>	3.00 mm
<b>Cable length L</b>	2 m
<b>Conductor cross-section</b>	0.14 mm <sup>2</sup>
<b>Connection</b>	Cable, 2.00 m, PUR
<b>Number of conductors</b>	3
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

## Electrical data

<b>Load capacitance max. at Ue</b>	0.5 µF
<b>No-load current I<sub>o</sub> max. at Ue</b>	15 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 current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ready delay t<sub>v</sub> max.</b>	20 ms
<b>Ripple max. (% of U<sub>e</sub>)</b>	10 %
<b>Switching frequency</b>	500 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	1 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	1 ms
<b>Utilization category</b>	DC -13
<b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b>	0.7 V

## Environmental conditions

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

## Functional safety

<b>MTTF (40 °C)</b>	1559 a
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**Interface**

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

**Material**

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

**Mechanical data**

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

**Optical features**

**Beam characteristic** Divergent  
**LED group per IEC 62471** Exempt Group  
**Light spot size** Ø 3.0 mm Light exit  
**Light type** LED, red light  
**Polarizing filter** yes  
**Principle of optical operation** Retroreflective sensor  
**Switching function, optical** dark-on  
**Wave length** 645 nm

**Range/Distance**

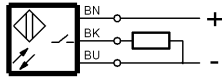
**Rated operating distance Sn** 1 m

**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.

**Wiring Diagrams**



**Opto Symbols**

