

1) Optical axis, 2) Output function



Basic features

Approval/Conformity	cULus CE UKCA 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	0.5 µF
No-load current I _o max. at Ue	15 mA
Operating voltage U _b	10...30 VDC
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	20 ms
Ripple max. (% of U _e)	10 %
Switching frequency	500 Hz
Turn-off delay t _{off} max.	1 ms
Turn-on delay t _{on} max.	1 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	0.7 V

Environmental conditions

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

Functional safety

MTTF (40 °C)	1559 a
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Photoelectric Sensors
BOS 08E-PO-KD20-S49
Order Code: BOS01R9



Interface

Switching output PNP normally closed (NC)

Material

Housing material Stainless steel
 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
 Principle of optical operation Diffuse sensor, energetic
 Switching function, optical dark-on
 Wave length 645 nm

Range/Distance

Range 1...60 mm
 Rated operating distance S_n 60 mm

Remarks

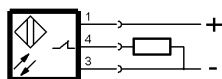
Order accessories separately.
 For additional information, refer to user's guide.
 Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
 Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.
 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

