

1) Optical axis, 2) Output function



## Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode
Principle of operation	Photoelectric sensor
Series	08E

## Display/Operation

Display	Output function- LED yellow Limit range - LED yellow, flashing
Setting	Rated switching distance (Sn)

## Electrical connection

Connection	Connector, M8x1-Male, 3-pin
Polarity reversal protected	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at Ue	0.1 $\mu$ F
No-load current I <sub>o</sub> max. at Ue	15 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.	30 ms
Ripple max. (% of U <sub>e</sub> )	5 %
Switching frequency	500 Hz
Turn-off delay t <sub>off</sub> max.	1 ms
Turn-on delay t <sub>on</sub> max.	1 ms
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	0.7 V

## Environmental conditions

Ambient temperature	-5...55 °C
IP rating	IP67

## Functional safety

MTTF (40 °C)	75.9 a
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## IO-Link

IO-Link Profil IDs	0x0001 SSP0
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## Interface

Baud rate	38.4 kBaud
Function class, smart sensor	Switching signal channel
Interface	IO-Link 1.1
Interface setting option	BDC mode 1-pt./2-pt./window
Process data IN	Teaching active/inactive Limit range yes/no Switching state active/inactive
Process data cycle min.	2.3 ms
Profile	Smart Sensor
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

Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	Ø 2.5 mm Light exit
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on
Wave length	670 nm

## Range/Distance

Distance deviation 18 % max. (% of Sr)	10 % on 90 % rem.
Hysteresis H max. (% of Sr)	10.0 %
Range	30 mm, adjustable
Rated operating distance Sn	30 mm Adjustable
Repeat accuracy max. (% of Sr)	4.0 %
Temperature drift max. (% of Sr)	10 %

## 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.

Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.

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

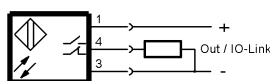
For more information about MTTF and B10d see MTTF / B10d Certificate

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



Photoelectric Sensors  
BOS 08E-PI-KH22-S49  
Order Code: BOS0247



Opto Symbols

