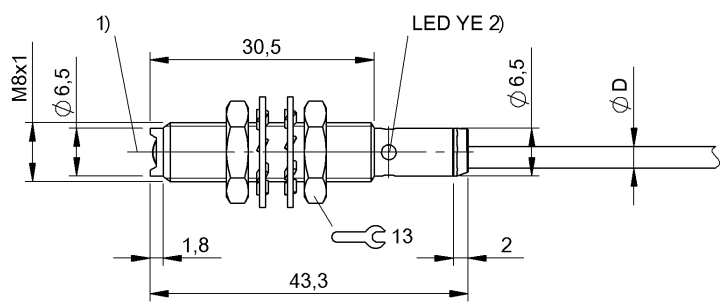


Photoelectric Sensors  
BOS 08E-PS-KF20-02  
Order Code: BOS01H9



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

Display/Operation

Display	Output function- LED yellow Limit range - LED yellow, flashing
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Electrical connection

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

Electrical data

Load capacitance max. at U <sub>e</sub>	0.1 µF
No-load current I <sub>o</sub> max. at U <sub>e</sub>	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	450 Hz
Turn-off delay t <sub>off</sub> max.	1.11 ms
Turn-on delay t <sub>on</sub> max.	1.11 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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Interface

Switching output	PNP normally open (NO)
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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 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	640 nm

Range/Distance

Distance deviation 18 % max. (% of Sr)	5 % on 90 % rem.
Hysteresis H max. (% of Sr)	10.0 %
Range	20 mm
Rated operating distance Sn	20 mm
Repeat accuracy max. (% of Sr)	3.0 %
Temperature drift max. (% of Sr)	10 %

Remarks

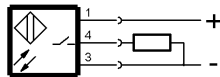
Order accessories separately.  
For additional information, refer to user's guide.  
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.  
Reference object (target): gray card, 200 x 200, 90 %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



Opto Symbols

