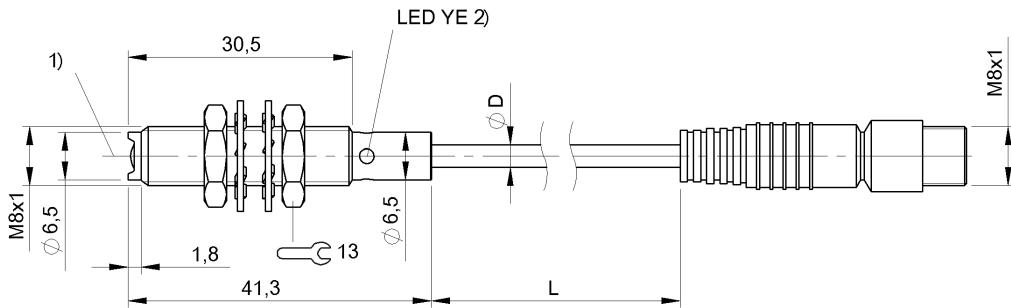


Photoelectric Sensors  
BOS 08E-NS-KD20-00,2-S49  
Order Code: BOS01RF

**BALLUFF**



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

Cable diameter D	3.00 mm
Cable length L	0.2 m
Connection	Cable with connector, 0.20 m, PUR
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 $\mu$ F
No-load current I <sub>0</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.	20 ms
Ripple max. (% of U <sub>e</sub> )	10 %
Switching frequency	500 Hz
Turn-off delay t <sub>off</sub> max.	1 ms
Turn-on delay t <sub>on</sub> max.	1 ms
Utilization category	DC-13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	0.7 V

#### Environmental conditions

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

#### Functional safety

MTTF (40 °C)	1559 a
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#### Interface

Switching output NPN 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  
Principle of optical operation Diffuse sensor, energetic  
Switching function, optical Light-on  
Wave length 645 nm

#### Range/Distance

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

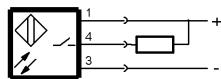
For more information about MTTF and B10d see MTTF / B10d Certificate

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

