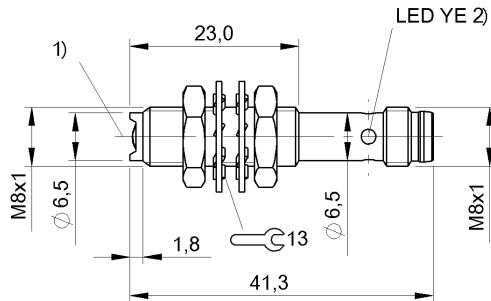


Photoelectric Sensors  
BOS 08E-PS-PR20-S49  
Order Code: BOS01RK

**BALLUFF**



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
Reference reflector	BOS R-2
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 $U_e$	0.5 $\mu$ F
No-load current $I_0$ max. at $U_e$	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 $t_{vmax}$	20 ms
Ripple max. (% of $U_e$ )	10 %
Switching frequency	500 Hz
Turn-off delay $t_{offmax}$	1 ms
Turn-on delay $t_{onmax}$	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 <sub>n</sub> , 11 ms, 3x6
EN 60068-2-6, Vibration	Half-sinus, 100 g <sub>n</sub> , 2 ms, 3x8000 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
IP rating	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 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 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

Range 30 mm...1 m

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.

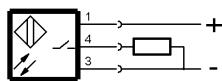
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

#### Connector Drawings



#### Wiring Diagrams



#### Opto Symbols

