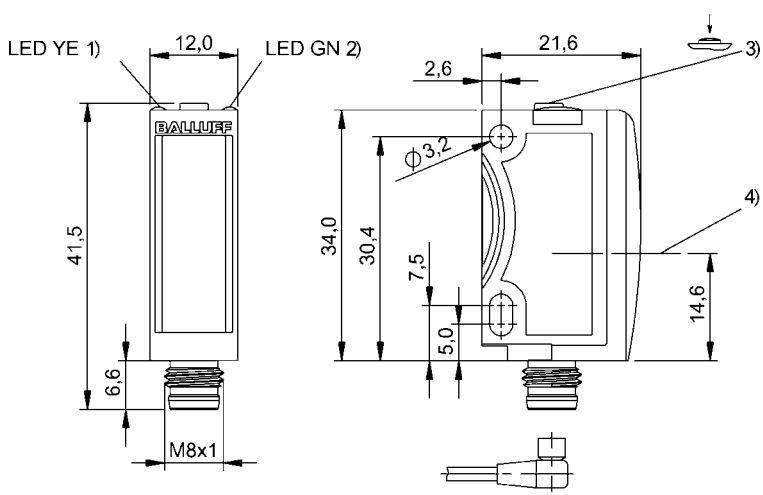


Photoelectric Sensors  
BOS 6K-PU-LK10-S49  
Order Code: BOS01MN



1) Output function, 2) Operating voltage, 3) Sensitivity, light/dark, 4) Optical axis



Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-22
Series	6K
Style	Square Connection 90°

Display/Operation

Adjuster	button
Display	Output function- LED yellow LED green: Power
Setting	Sensitivity (Sn) Light-on/dark-on Teach mode Stand./Dyn./Refl.

Electrical connection

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

Electrical data

Input function	Same function as button Key disable on/off
No-load current $I_o$ max. at $U_e$	30 mA
Operating voltage $U_b$	10...30 VDC
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Ripple max. (% of $U_e$ )	12 %
Switching frequency	4000 Hz
Turn-off delay $t_{off}$ max.	0.13 ms
Turn-on delay $t_{on}$ max.	0.13 ms
Voltage drop $U_d$ max. at $I_e$	2.4 V

Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 $g_n$ , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67
IP rating per DIN 40050	IP69K

Functional safety

MTTF (40 °C)	432 a
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Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Material

Housing material	ABS
Material sensing surface	PMMA

Mechanical data

Dimension	12 x 41.5 x 21.6 mm
Mounting part	Screw M3

Optical features

Ambient light max.	5000 Lux
Average power Po max.	390 µW
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	Ø 2 mm at 2.5 m
Light type	Laser red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Pulse duration t max.	3000 µs
Pulse frequency	5 kHz
Special optical feature	Coaxial optics
Switching function, optical	dark-on/light-on
Wave length	650 nm

Range/Distance

Range	0...4 m
Rated operating distance Sn	4 m Adjustable

Remarks

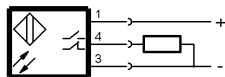
The sensor is functional again after the overload has been eliminated.  
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.  
When using as a UL product the ambient temperature Ta max. must not exceed 50°C.  
Only for applications 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.  
For additional information, refer to user's guide.  
Order accessories separately.  
Do not press key using a pointed tool.  
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



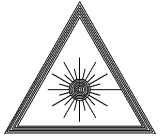
Photoelectric Sensors  
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Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1