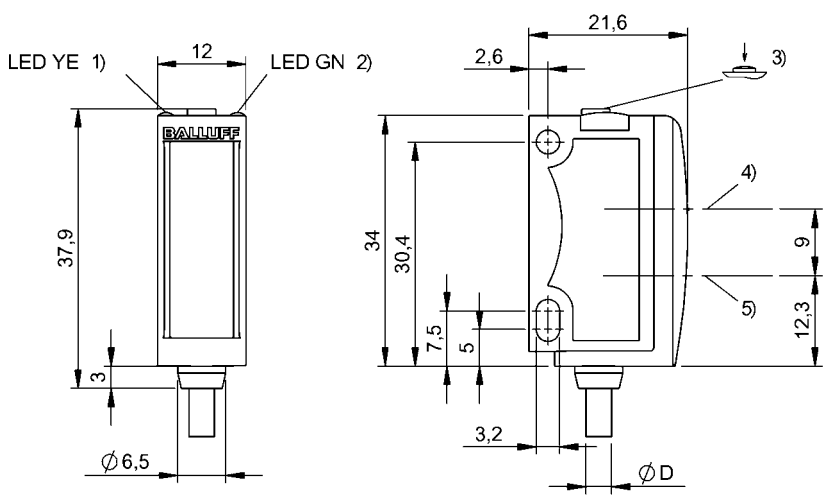


Photoelectric Sensors  
BOS 6K-NU-RH10-02  
Order Code: BOS01L1



1) Output function, 2) Operating voltage, 3) Sn, light/dark, 4) Optical axis receiver, 5) Optical axis emitter



Basic features

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

Display/Operation

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

Electrical connection

Cable diameter D	3.50 mm
Cable length L	2 m
Conductor cross-section	0.14 mm²
Connection	Cable, 2.00 m, PVC
Number of conductors	4
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

Input function	Key disable on/off Same function as button
No-load current I <sub>o</sub> max. at U <sub>e</sub>	30 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ripple max. (% of U <sub>e</sub> )	12 %
Switching frequency	1000 Hz
Turn-off delay t <sub>off</sub> max.	0.5 ms
Turn-on delay t <sub>on</sub> max.	0.5 ms
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	2.4 V

Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 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)	476 a
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Interface

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

Housing material	ABS
Material jacket	PVC
Material sensing surface	PMMA

Mechanical data

Dimension	12 x 37.9 x 21.6 mm
Mounting part	Screw M3

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focus, typical at 50 mm
Light spot size	5 x 5 mm at focal point
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light/dark switching
Wave length	640 nm

Range/Distance

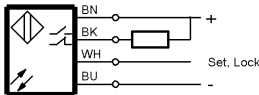
Distance deviation 18 % max. (% of Sr)	5 %
Range	1...200 mm
Rated operating distance Sn	200 mm Adjustable

Remarks

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

Wiring Diagrams



Opto Symbols

