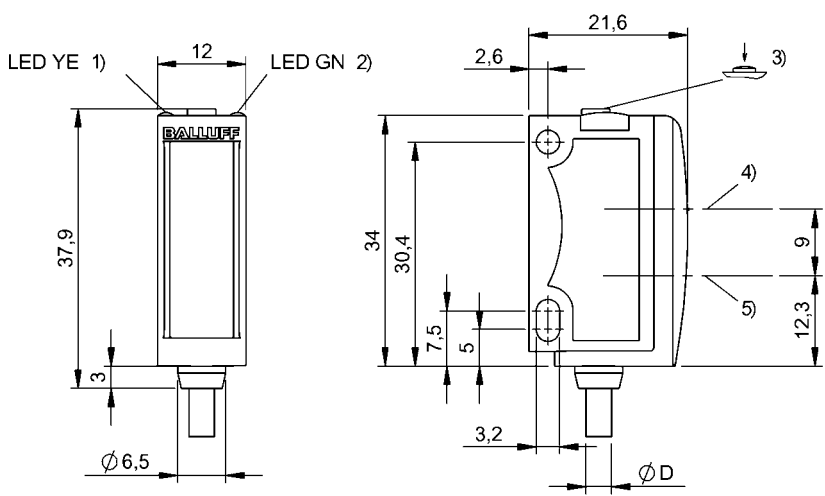


Photoelectric Sensors  
BOS 6K-PU-RD10-02  
Order Code: BOS01LN



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	LED yellow: Light received Stability - LED green
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	Same function as button Key disable on/off
No-load current I <sub>o</sub> max. at U <sub>e</sub>	30 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Protection class	II
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)	499 a
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### Interface

Switching output	PNP 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	Divergent
Light spot size	20 x 20 mm at 180 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light/dark switching
Wave length	660 nm

Range/Distance

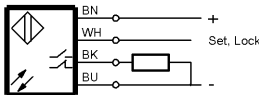
Hysteresis H max. (% of Sr)	10.0 %
Range	0...800 mm
Rated operating distance Sn	800 mm Adjustable

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

