

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



## Basic features

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

## Electrical data

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

## Display/Operation

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

## Environmental conditions

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

## Electrical connection

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

## Functional safety

<b>MTTF (40 °C)</b>	432 a
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## Interface

<b>Switching output</b>	PNP normally open/normally closed (NO/NC)
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Photoelectric Sensors  
**BOS 6K-PU-LK10-02**  
**Order Code: BOS01M6**



**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
Average power Po max.	390 µW
Beam characteristic	Collimated
Blind zone	70 mm
Laser class per IEC 60825-1	1
Light spot size	Ø 1 mm at focal point
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**

Order accessories separately.

For additional information, refer to user's guide.

Do not press key using a pointed tool.

The sensor is functional again after the overload has been eliminated.

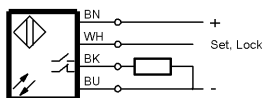
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.

When using as a UL product the ambient temperature Ta max. must not exceed 50°C.

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.

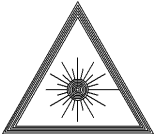
**Wiring Diagrams**



**Opto Symbols**



## Warning Symbols



LASER CLASS 1 per IEC 60825-1