

1) Output function, 2) Operating voltage, 3) Optical axis, 4) Sn



### Basic features

Approval/Conformity	cULus CE EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	11K
Style	Square Connection 90°
Trademark	Global

### Electrical connection

Connection	Cable with connector, M12x1- Male, 4-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow LED green: Power
Setting	Sensitivity (Sn)

Photoelectric Sensors  
**BOS 11K-PA-PR10-00,15-S4**  
Order Code: BOS012W

**BALLUFF**

### Electrical data

No-load current $I_0$ max. at $U_e$	25 mA
Operating voltage $U_b$	10...30 VDC
Protection class	II
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 $t_v$ max.	200 ms
Residual current $I_r$ max.	100 $\mu$ A
Ripple max. (% of $U_e$ )	10 %
Switching frequency	500 Hz
Turn-off delay $t_{off}$ max.	1 ms
Turn-on delay $t_{on}$ max.	1 ms
Voltage drop $U_d$ max. at $I_e$	2 V

### Environmental conditions

Ambient temperature	-20...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67

### Functional safety

MTTF (40 °C)	560 a
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### Material

Housing material	ABS
Material sensing surface	PMMA

### 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.

Polarizing filters prevent spurious switching due to reflecting and shiny parts.

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

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.

### Mechanical data

Dimension	15 x 44.8 x 29.3 mm
Mounting	Screw M3 Nut M18x1

### Optical features

Ambient light max.	10000 Lux
Beam characteristic	Divergent
Blind zone	50 mm
Light spot size	100 x 100 mm at 150 mm
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	Light-on dark-on
Wave length	626 nm

### Output/Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
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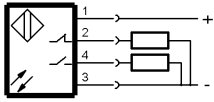
### Range/Distance

Range	0...3.5 m
Rated operating distance $S_n$	3.5 m Adjustable

## Connector Drawings



## Wiring Diagrams



## Opto Symbols

