

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 μ 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 g_n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	560 a
--------------	-------

Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
------------------	---

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.

Material

Housing material	ABS
Material sensing surface	PMMA

Mechanical data

Dimension	15 x 44.8 x 29.3 mm
Mounting part	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

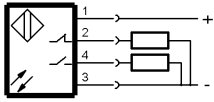
Range/Distance

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

Connector Drawings



Wiring Diagrams



Opto Symbols

