

1) Optical axis receiver, 2) Optical axis emitter, 3) Sn, 4) Output function



Basic features

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

Display/Operation

Adjuster	6-turn potentiometer
Display	Output function- LED yellow
Setting	Rated switching distance (Sn)

Electrical connection

Connection	Connector, M8x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

No-load current I_0 max. at U_e	30 mA
Operating voltage U_b	10...30 VDC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ready delay t_v max.	100 ms
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

Photoelectric Sensors
BOS 5K-PS-RH12-S75
Order Code: BOS012A

BALLUFF

Environmental conditions

Ambient temperature	-25...55 °C
EN 60068-2-27, Shock	Half-sinus, 50 g _n , 11 ms, 3x10
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.75 mm, 3x20 min
IP rating	IP67

Functional safety

MTTF (40 °C)	21 a
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Interface

Switching output	PNP normally open (NO) Pin 4
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Material

Housing material	PC PBT
Material sensing surface	PMMA

Mechanical data

Dimension	10.8 x 43.2 x 19.5 mm
Mounting part	Screw M3

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focus, typical at 60 mm
Light spot size	Ø 5 mm at 60 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on
Wave length	660 nm

Range/Distance

Range	40...200 mm
Rated operating distance S _n	200 mm Adjustable

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.

Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.

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

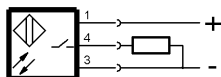
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

Connector Drawings



Wiring Diagrams



Opto Symbols

