

1) Optical axis receiver, 2) Light reception, 3) Operating voltage, 4) rotatable 270°



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 50K-X-RS10 -..
Series	50K
Style	Square Connection can be rotated

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Display/Operation

Display	LED green: Power LED yellow: Light received
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Photoelectric Sensors
BOS 50K-PA-RE10-S4
Order Code: BOS01CK

BALLUFF

Electrical data

Load capacitance max. at Ue	7 μ F
No-load current I _o max. at Ue	35 mA
Operating voltage U _b	10...30 VDC
Protection class	II
Rated insulation voltage U _i	250 V AC
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.	10 μ A
Ripple max. (% of U _e)	10 %
Switching frequency	400 Hz
Turn-off delay t _{off} max.	1.25 ms
Turn-on delay t _{on} max.	1.25 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	2.5 V

Environmental conditions

Ambient temperature	-5...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	617 a
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Remarks

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

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.

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.

Interface

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

Housing material	PC ABS
Material sensing surface	Glass

Mechanical data

Dimension	28.5 x 80.5 x 62 mm
Mounting part	Screw M5

Optical features

Ambient light max.	10000 Lux
Light type	LED, red light
Principle of optical operation	Through-beam sensor (receiver)
Switching function, optical	Light-on dark-on

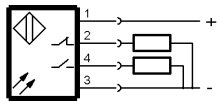
Range/Distance

Range	0...60 m
Rated operating distance S _n	60 m Adjustable
Temperature drift max. (% of S _r)	10 %

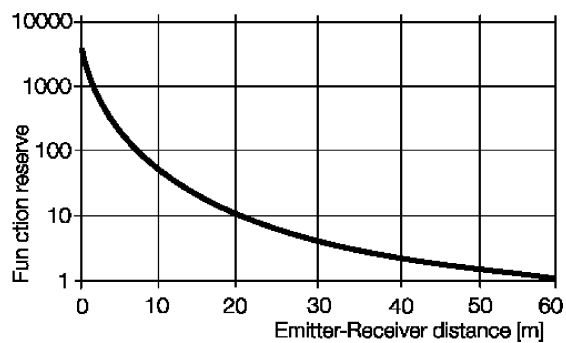
Connector Drawings



Wiring Diagrams (Schematic)



Technical Drawings



Opto Symbols

