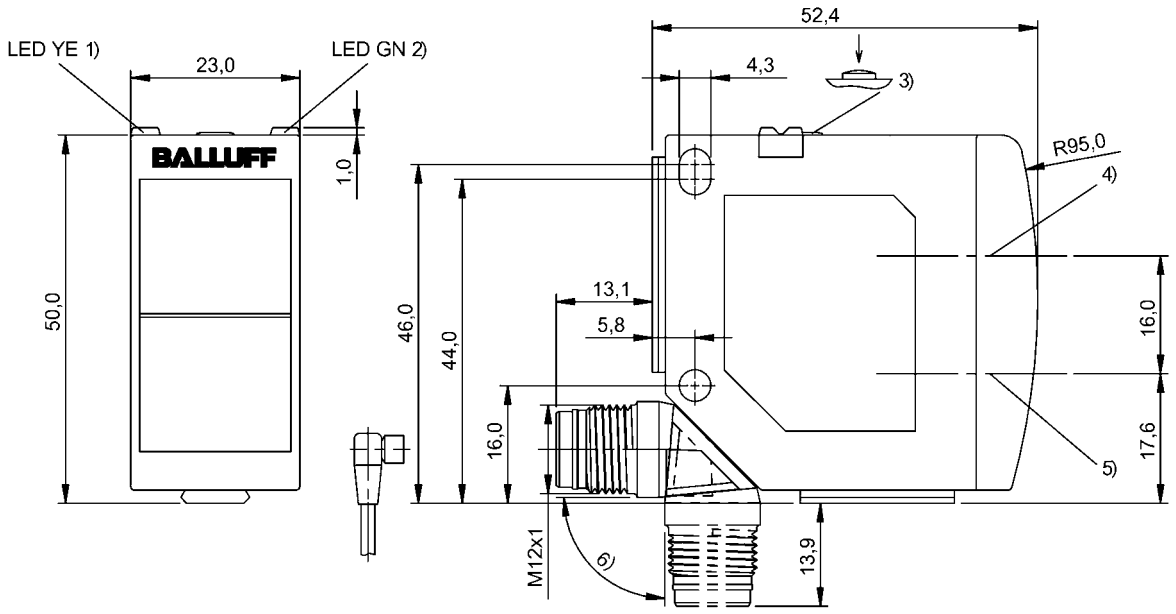
Photoelectric Sensors

BOS 23K-GI-RD10-S4
Order Code: BOS0171



1) Output function/Error, 2) Power/setting mode, 3) Sn, light/dark, 4) Optical axis receiver, 5) Optical axis emitter, 6) rotatable 270°

Basic features

Approval/Conformity	CE Ecolab cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	23K
Style	Square Connection can be rotated

Display/Operation

Adjuster	button
Display	Output function- LED yellow LED green: Power Teach - LED yellow+green, alt. Setting NO/NC - LED green, flashing Error - LED yellow, flashing
Setting	Light-on/dark-on Rated switching distance (Sn)

Electrical connection

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

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Electrical data

Input function	Same function as button Key disable on/off
No-load current Io max. at Ue	30 mA
Operating voltage Ub	18...30 VDC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	300 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	10 %
Switching frequency	600 Hz
Turn-off delay toff max.	0.83 ms
Turn-on delay ton max.	0.83 ms
Voltage drop Ud max. at Ie	2 V

Environmental conditions

Ambient temperature	-20...60 °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	IP6x
IP rating per DIN 40050	IPx9K

Functional safety

MTTF (40 °C)	494 a

IO-Link

IO-Link Profil IDs	0x0006 SSP2.3

Interface

Baud rate	38.4 kBaud
Interface	IO-Link
Process data cycle min.	5 ms
Switching output	PNP/NPN NO/NC push-pull

Material

Housing material	PC ABS
Material sensing surface	PMMA

Mechanical data

Dimension	23 x 51 x 52.4 mm
Mounting part	Screw M4
Tightening torque max.	1.5 Nm

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focus, typical at 600 mm
LED group per IEC 62471	Exempt Group
Light spot size	14 x 14 mm at 600 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light/dark switching
Wave length	640 nm

Range/Distance

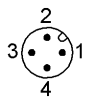
Range	0...2000 mm
Rated operating distance Sn	2 m Adjustable

Remarks

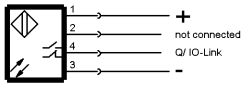
The sensor is functional again after the overload has been eliminated.
Teach-in also possible when object is in motion.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.
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