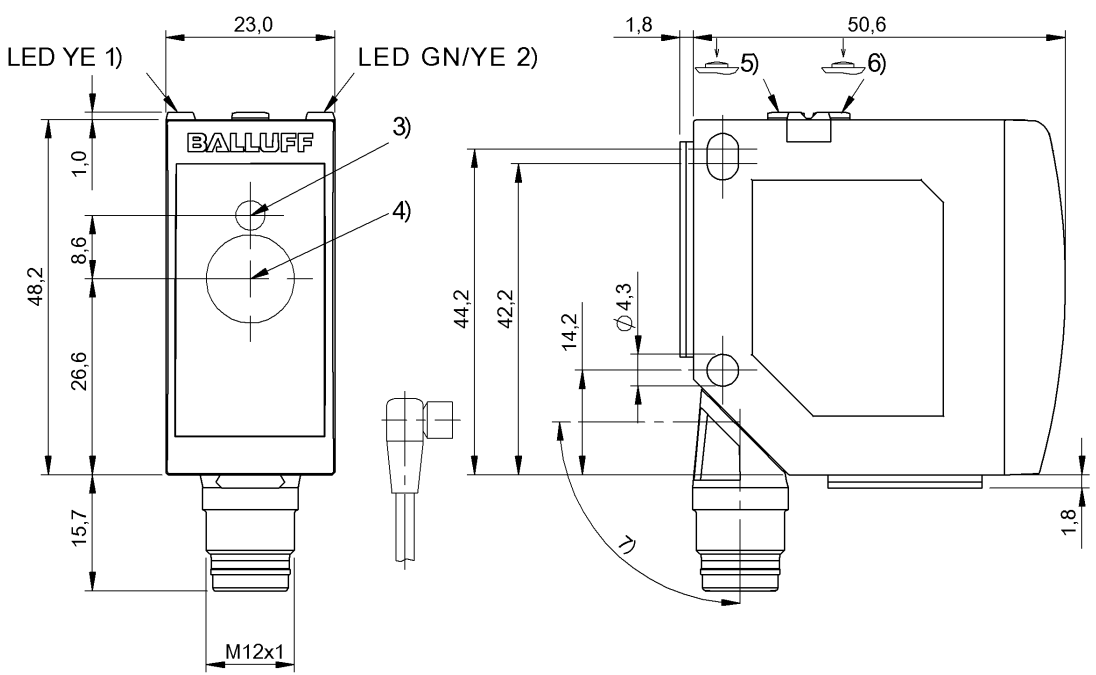


Photoelectric Sensors
BOD 23K-LB01-S92
Order Code: BOD001P



1) Output function, 2) Power/Analog output, 3) Optical axis emitter, 4) Optical axis receiver, 5) Teach-In switching output, 6) Teach-in Analog output, 7) rotatable 270°



Basic features

Application	Distance measurement
Approval/Conformity	CE cULus Ecolab WEEE
Basic standard	IEC 60947-5-2, IEC 60947-5-7
Principle of operation	Photoelectric distance sensor
Series	23K
Style	Square Connection can be rotated

Display/Operation

Adjuster	Key (2x)
Display	Analog output - LED yellow Output function- LED yellow LED green: Power
Setting	Measuring range QA Key disable on/off Output curve rising / falling Switching output Q

Electrical connection

Connection	Connector, M12x1-Male, 5-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.1 µF
Load resistance RL max. (Analog I)	500 ohms
No-load current Io max. at Ue	60 mA
Operating voltage Ub	18...30 VDC
Protection class	II
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ripple max. (% of Ue)	10 %
Switching frequency	250 Hz
Turn-off delay toff max.	1.2 ms
Turn-on delay ton max.	1.2 ms
Voltage drop Ud max. at Ie	2 V

Environmental conditions

Ambient temperature	-40...50 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67
IP rating per DIN 40050	IP69K

Functional safety

MTTF (40 °C)	157 a
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Interface

Analog output	Analog, current 4...20 mA
Output characteristic	linear rising/falling
Switching output	PNP/NPN/Auto-Detect normally open/normally closed (NO/NC)

Material

Housing material	ABS
Material sensing surface	PMMA

Mechanical data

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

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	5.5 x 7 mm at 5 m
Light type	Laser red light
Principle of optical operation	Light time-of-flight
Pulse duration t max.	0.008 µs
Pulse frequency	45 kHz
Pulse power Pp max.	930.0 mW
Switching function, optical	Light/dark switching
Wave length	655 nm

Range/Distance

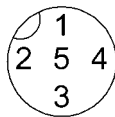
Accuracy	±0.6 % FS
Hysteresis H max. (% of Sr)	0.3 %
Range	100...5000 mm
Rated operating distance Sn	5 m Adjustable
Repeat accuracy	0.024 %FS
Resolution	≤ 5.0 mm

Remarks

For additional information, refer to user's guide.
Order accessories separately.
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.

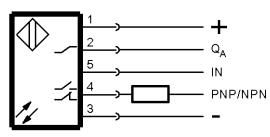
Connector Drawings



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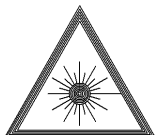
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1