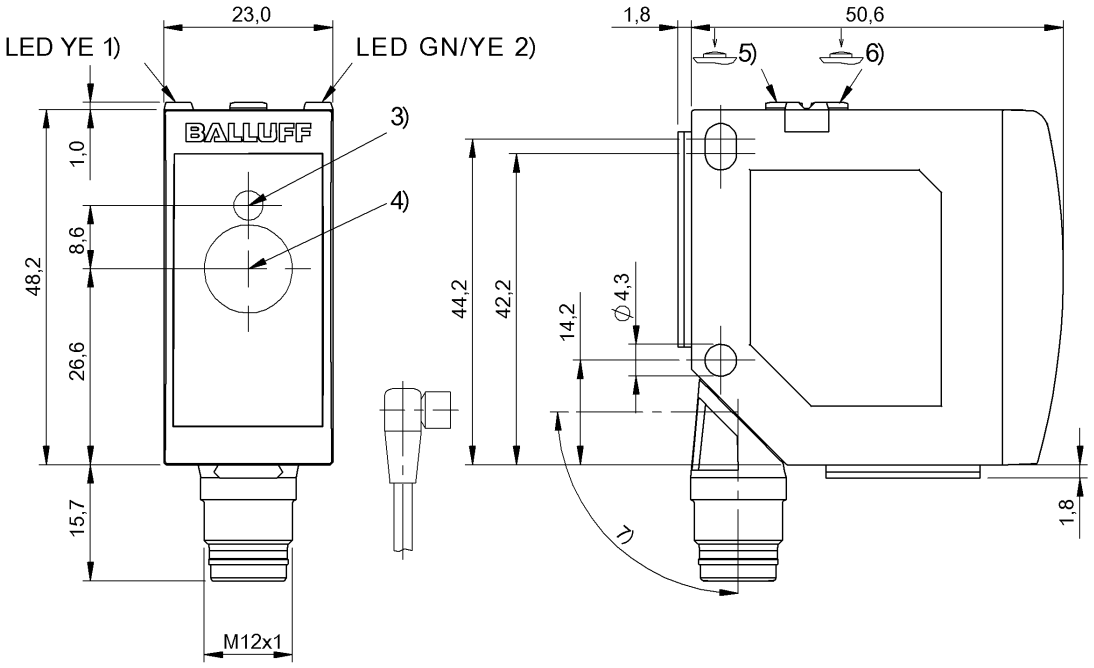
Photoelectric Sensors

BOD 23K-LA01-S92
Order Code: BOD001N



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 EAC 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

Photoelectric Sensors

BOD 23K-LA01-S92
Order Code: BOD001N

Electrical data

Load capacitance max. at Ue	0.1 µF
Load resistance RL min. (Analog V)	4 kOhm
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...60 °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)	156 a

Interface

Analog output	Analog, voltage 0…10 V
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

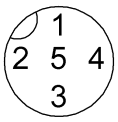
Accuracy	±0.6 % FS
Hysteresis H max. (% of Sr)	0.3 %
Range	100...5000 mm
Rated operating distance Sn	5 m Adjustable
Repeat accuracy	0.024 %FS
Resolution	≤ 5.0 mm

Remarks

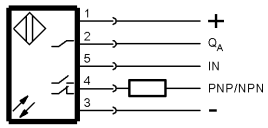
For additional information, refer to user's guide.
Order accessories separately.
For more information about MTTF and B10d see MTTF / B10d Certificate

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



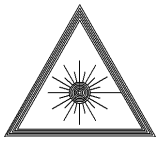
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1