

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**

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

**Display/Operation**

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

**Electrical connection**

<b>Connection</b>	Connector, M12x1-Male, 5-pin
<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

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

# BALLUFF

## 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 gn, 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)

## 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.

## 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

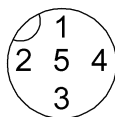
## Optical features

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

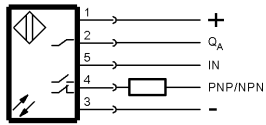
## Range/Distance

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

## Connector Drawings



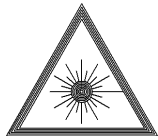
## Wiring Diagrams



## Opto Symbols



## Warning Symbols



LASER CLASS 1 per IEC 60825-1