

1) Output function Q1, 2) Output function Q2, 3) Operating voltage, 4) Setting Q1, 5) Setting Q2, 6) Optical axis emitter, 7) Optical axis receiver, 8) 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	Key (2x)
Display	Output function- LED yellow LED green: Power

Electrical connection

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

Electrical data

Input function	Same function as button Key disable on/off
No-load current I_o max. at U_e	60 mA
Operating voltage U_b	18...30 VDC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ripple max. (% of U_e)	10 %
Switching frequency	500 Hz
Turn-off delay t_{off} max.	1 ms
Turn-on delay t_{on} max.	1 ms

Photoelectric Sensors
BOS 23K-UU-LH11-S92
Order Code: **BOS01UW**

BALLUFF

Environmental conditions

Ambient temperature	-40...60 °C
Ambient temperature UL max.	45 °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
IP rating per DIN 40050	IPx9K

Functional safety

MTTF (40 °C)	161 a
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Interface

Switching output	PNP/NPN/Auto-Detect normally open/normally closed (NO/NC)
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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
Average power Po max.	390 µW
Beam characteristic	Divergent
Laser class per IEC 60825-1	1
Light spot size	Ø 7 mm at 5 m
Light type	Laser red light
Principle of optical operation	Light time-of-flight
Special optical feature	Background suppression
Switching function, optical	Light/dark switching
Wave length	655 nm

Range/Distance

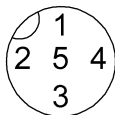
Distance deviation 18 % max. (% of Sr)	0.8 %
Hysteresis H max.	15 mm
Range	0...5 m
Rated operating distance Sn	5 m Adjustable

Remarks

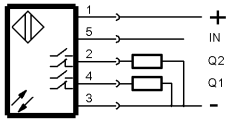
The sensor is functional again after the overload has been eliminated.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.
For more information about MTTF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



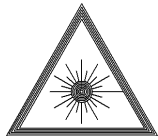
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1