

1) Output function, 2) Operating voltage, 3) Teach-In button, 4) Optical axis emitter, 5) Optical axis receiver, 6) 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	button
Display	LED green: Power Switching state - LED yellow
Power indicator	yes
Setting	Switching output Q Switching output PNP/NPN Normally open/Normally closed Working range

#### Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

**Electrical data**

No-load current $I_0$ max. at $U_e$	60 mA
Operating voltage $U_b$	18...30 VDC
Protection class	II
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Ready delay $t_V$ max.	5 s
Ripple max. (% of $U_e$ )	10 %
Switching frequency	500 Hz
Turn-off delay $t_{off}$ max.	1.2 ms
Turn-on delay $t_{on}$ max.	1.2 ms
Voltage drop $U_d$ max. at $I_e$	2 V

**Environmental conditions**

Ambient temperature	-40...60 °C
Ambient temperature max.	60 °C UL: max. +45 °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)	188 a
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**IO-Link**

IO-Link Profil IDs	0x0001 SSP0
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**Interface**

Interface	IO-Link 1.1
Switching output	PNP/NPN/Auto-Detect normally open/normally closed (NO/NC)

**Remarks**

For additional information, refer to user's guide.

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 $\mu$ s
Pulse frequency	45 kHz
Pulse power $P_p$ max.	930.0 mW
Switching function, optical	Light/dark switching
Wave length	655 nm

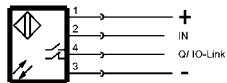
**Range/Distance**

Accuracy	±0.6 % FS
Hysteresis $H$ max.	15 mm
Range	100...5000 mm
Rated operating distance $S_n$	5 m Adjustable
Repeat accuracy	0.024 %FS
Resolution	≤ 5 mm

**Connector Drawings**



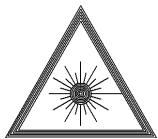
### Wiring Diagrams



### Opto Symbols



### Warning Symbols



LASER CLASS 1 per IEC 60825-1