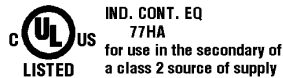


1) Output function/Error, 2) Operating voltage, 3) Sn, 4) Bar display for switching distance, 5) Optical axis receiver, 6) Optical axis emitter, 7) rotatable 270°



## Basic features

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

## Display/Operation

Adjuster	Adjusting screw
Display	Output function- LED yellow LED green: Power Error - LED yellow, flashing Switching distance - bar display
Setting	Rated switching distance (Sn)

## Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

## Electrical data

Border range energetic	1200 mm
No-load current $I_0$ max. at $U_e$	30 mA
Operating voltage $U_b$	10...30 VDC
Protection class	II
Rated insulation voltage $U_i$	75 V DC
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Ready delay $t_v$ max.	300 ms
Residual current $I_r$ max.	50 $\mu$ A
Ripple max. (% of $U_e$ )	10 %
Switching frequency	600 Hz
Turn-off delay $t_{off}$ max.	0.83 ms
Turn-on delay $t_{on}$ max.	0.83 ms
Utilization category	DC -13
Voltage drop $U_d$ max. at $I_e$	2 V

## Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating per DIN 40050	IPx9K
Protection degree	IP6x

## Functional safety

MTTF (40 °C)	441 a
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## Material

Housing material	PC ABS
Material sensing surface	PMMA

## Mechanical data

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

## Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focus, typical at 500 mm
LED group per IEC 62471	Exempt Group
Light spot size	15 x 15 mm at focal point
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on dark-on
Wave length	640 nm

## Output/Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
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## Range/Distance

Distance deviation 18 % max. (% of Sr)	15 %
Hysteresis H max. (% of Sr)	4.0 %
Range	3...800 mm
Rated operating distance Sn	800 mm Adjustable

## Remarks

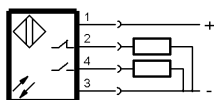
The sensor is functional again after the overload has been eliminated.  
 Order accessories separately.  
 For additional information, refer to user's guide.  
 Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
 For more information about MTTF and B10d see MTTF / B10d 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

