

1) Optical axis emitter, 2) Optical axis receiver, 3) Output function



Basic features

Approval/Conformity	cULus CE UKCA Ecolab WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	R01E
Style	Square Connection 90°

Display/Operation

Display	Limit range - LED yellow, flashing LED yellow: Light received
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Electrical connection

Cable diameter D	3.00 mm
Cable length L	0.2 m
Connection	Cable with connector, M8x1-Male, 3-pin, 0.20 m, PUR
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.05 μ F
No-load current I ₀ max. at Ue	10 mA
Operating voltage U _b	10...30 VDC
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.	150 ms
Residual current I _r max.	50 μ A
Switching frequency	500 Hz
Turn-off delay t _{off} max.	1 ms
Turn-on delay t _{on} max.	1 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	0.7 V

Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6 Half-sinus, 100 g _n , 2 ms, 3x8000
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
IP rating	IP67
IP rating per DIN 40050	Housing IP69K, Connector IP67

Interface

Switching output PNP normally open (NO)

Material

Housing material	1.4404 stainless steel
Material jacket	PUR
Material sensing surface	PA

Mechanical data

Dimension	20 x 32 x 9 mm
Mounting part	Screw M3

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	Ø 3.0 mm Light exit
Light type	LED, red light
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light-on
Wave length	650 nm

Range/Distance

Hysteresis H max. (% of Sr)	8.0 %
Range	1...100 mm
Rated operating distance Sn	100 mm
Repeat accuracy max. (% of Sr)	0.2 %
Temperature drift max. (% of Sr)	10 %

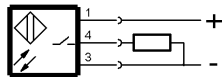
Remarks

The sensor is functional again after the overload has been eliminated.
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
For additional information, refer to user's guide.
Order accessories separately.

Connector Drawings



Wiring Diagrams



Opto Symbols

