

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
Reference reflector	BOS R-9
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 Io max. at Ue	10 mA
Operating voltage Ub	10...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	150 ms
Residual current Ir max.	50 μ A
Switching frequency	500 Hz
Turn-off delay toff max.	1 ms
Turn-on delay ton max.	1 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	0.7 V

Environmental conditions

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

Functional safety

MTTF (40 °C) 466 a

Interface

Switching output PNP normally closed (NC)

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
Blind zone 25 mm
LED group per IEC 62471 Exempt Group
Light spot size Ø 3.0 mm Light exit
Light type LED, red light
Polarizing filter yes
Principle of optical operation Retroreflective sensor
Switching function, optical Light-on
Wave length 650 nm

Range/Distance

Range 1 m
Rated operating distance Sn 1 m
Temperature drift max. (% of Sr) 10 %

Remarks

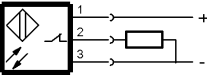
The sensor is functional again after the overload has been eliminated.
Order accessories separately.
For additional information, refer to user's guide.
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
For 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

