

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



### Basic features

Approval/Conformity	cULus CE UKCA WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-2
Series	Q08M
Style	Square Connection 90°

### Display/Operation

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

Connection	Connector, M8x1-Male, 3-pin
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	0.5 µF
No-load current I <sub>o</sub> max. at Ue	15 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	20 ms
Ripple max. (% of U <sub>e</sub> )	10 %
Switching frequency	500 Hz
Turn-off delay t <sub>off</sub> max.	1 ms
Turn-on delay t <sub>on</sub> max.	1 ms
Utilization category	DC -13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	0.7 V

### Environmental conditions

Ambient temperature	-5...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6 Half-sinus, 100 g <sub>n</sub> , 2 ms, 3x8000
EN 60068-2-6, Vibration	10...2000 Hz, amplitude 1 mm, 30 g <sub>n</sub> , 3x5 h 10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Functional safety

MTTF (40 °C)	972.7 a
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## Interface

Switching output PNP normally open (NO)

## Material

Housing material Zinc, Die casting, nickel-plated  
 Material sensing surface PMMA  
 Surface protection nickel-plated

## Mechanical data

Dimension 8 x 59 x 8 mm  
 Mounting part Screw M3

## Optical features

Beam characteristic Divergent  
 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 dark-on  
 Wave length 645 nm

## Range/Distance

Range 0...1 m  
 Rated operating distance Sn 1 m

## Remarks

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.

The sensor is functional again after the overload has been eliminated.

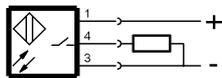
For more information about MTTF and B10d see MTTF / B10d Certificate

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 (Schematic)



## Opto Symbols

