

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



**Basic features**

|                               |                                    |
|-------------------------------|------------------------------------|
| <b>Approval/Conformity</b>    | cULus<br>CE<br>UKCA<br>EAC<br>WEEE |
| <b>Basic standard</b>         | IEC 60947-5-2                      |
| <b>Principle of operation</b> | Photoelectric sensor               |
| <b>Series</b>                 | Q08M                               |
| <b>Style</b>                  | Square<br>Connection 90°           |

**Display/Operation**

|                |  |
|----------------|--|
| <b>Display</b> | Limit range - LED yellow, flashing<br>LED yellow: Light received |
|----------------|--|

**Electrical connection**

|  |                             |
|--|-----------------------------|
| <b>Connection</b>                        | Connector, M8x1-Male, 3-pin |
| <b>Contact, surface protection</b>       | Gold plated                 |
| <b>Polarity reversal protected</b>       | yes                         |
| <b>Protection against device mix-ups</b> | yes                         |
| <b>Short-circuit protection</b>          | yes                         |

**Electrical data**

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

**Environmental conditions**

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

**Functional safety**

|                     |         |
|---------------------|---------|
| <b>MTTF (40 °C)</b> | 997.4 a |
|---------------------|---------|

**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  
**Principle of optical operation** Diffuse sensor, energetic  
**Switching function, optical** Light-on  
**Wave length** 645 nm

**Range/Distance**

**Range** 1...60 mm  
**Rated operating distance Sn** 60 mm

**Remarks**

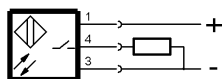
Order accessories separately.  
 For additional information, refer to user's guide.  
 Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.  
 Actuation object (target): gray card, 200 x 200, 90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



**Opto Symbols**

