

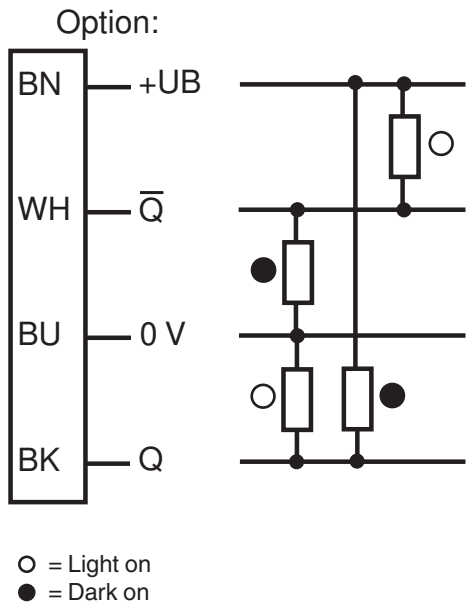


## Technical Data

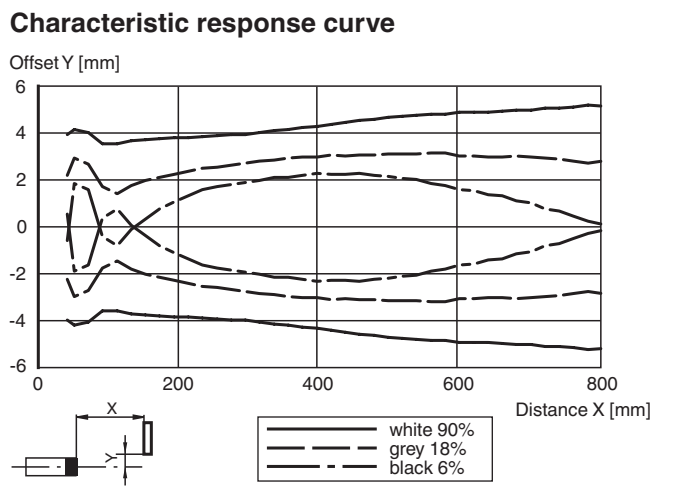
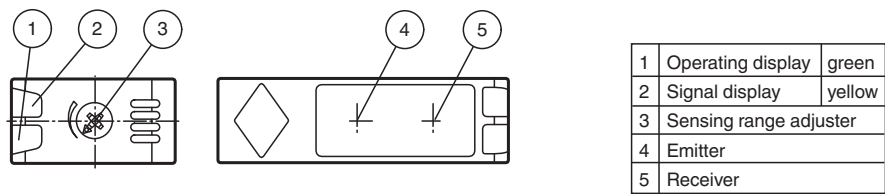
|                                             |                |                                                                                                                                                                                                       |
|---------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Detection range min.                        |                | 50 ... 100 mm                                                                                                                                                                                         |
| Detection range max.                        |                | 50 ... 800 mm                                                                                                                                                                                         |
| Adjustment range                            |                | 100 ... 800 mm                                                                                                                                                                                        |
| Reference target                            |                | standard white, 100 mm x 100 mm                                                                                                                                                                       |
| Light source                                |                | LED                                                                                                                                                                                                   |
| Light type                                  |                | modulated visible red light                                                                                                                                                                           |
| Black-white difference (6 %/90 %)           |                | < 5 %                                                                                                                                                                                                 |
| Diameter of the light spot                  |                | approx. 25 mm at a distance of 800 mm                                                                                                                                                                 |
| Opening angle                               |                | approx. 2 °                                                                                                                                                                                           |
| Ambient light limit                         |                | 20000 Lux                                                                                                                                                                                             |
| <b>Functional safety related parameters</b> |                |                                                                                                                                                                                                       |
| MTTF <sub>d</sub>                           |                | 580 a                                                                                                                                                                                                 |
| Mission Time (T <sub>M</sub> )              |                | 20 a                                                                                                                                                                                                  |
| Diagnostic Coverage (DC)                    |                | 0 %                                                                                                                                                                                                   |
| <b>Indicators/operating means</b>           |                |                                                                                                                                                                                                       |
| Operation indicator                         |                | LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)                                                  |
| Function indicator                          |                | LED yellow ; ON: object inside the sensing range ; OFF: object outside the sensing range                                                                                                              |
| Control elements                            |                | Sensing range adjuster                                                                                                                                                                                |
| <b>Electrical specifications</b>            |                |                                                                                                                                                                                                       |
| Operating voltage                           | U <sub>B</sub> | 10 ... 30 V DC , class 2                                                                                                                                                                              |
| Ripple                                      |                | max. 10 %                                                                                                                                                                                             |
| No-load supply current                      | I <sub>0</sub> | max. 25 mA at 24 V supply voltage                                                                                                                                                                     |
| <b>Output</b>                               |                |                                                                                                                                                                                                       |
| Switching type                              |                | dark-on                                                                                                                                                                                               |
| Signal output                               |                | 2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected                                                                                                                     |
| Switching voltage                           |                | max. 30 V DC                                                                                                                                                                                          |
| Switching current                           |                | max. 100 mA                                                                                                                                                                                           |
| Voltage drop                                | U <sub>d</sub> | ≤ 2 V DC                                                                                                                                                                                              |
| Switching frequency                         | f              | 200 Hz                                                                                                                                                                                                |
| Response time                               |                | 2.5 ms                                                                                                                                                                                                |
| <b>Conformity</b>                           |                |                                                                                                                                                                                                       |
| Product standard                            |                | EN 60947-5-2                                                                                                                                                                                          |
| <b>Approvals and certificates</b>           |                |                                                                                                                                                                                                       |
| EAC conformity                              |                | TR CU 020/2011                                                                                                                                                                                        |
| Protection class                            |                | II , rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC |
| UL approval                                 |                | cULus Listed, Class 2 Power Source, Type 1 enclosure                                                                                                                                                  |
| CCC approval                                |                | CCC approval / marking not required for products rated ≤36 V                                                                                                                                          |
| <b>Ambient conditions</b>                   |                |                                                                                                                                                                                                       |
| Ambient temperature                         |                | -30 ... 55 °C (-22 ... 131 °F)                                                                                                                                                                        |
| Storage temperature                         |                | -40 ... 70 °C (-40 ... 158 °F)                                                                                                                                                                        |
| <b>Mechanical specifications</b>            |                |                                                                                                                                                                                                       |
| Housing width                               |                | 18 mm                                                                                                                                                                                                 |
| Housing height                              |                | 62 mm                                                                                                                                                                                                 |
| Housing depth                               |                | 35 mm                                                                                                                                                                                                 |
| Degree of protection                        |                | IP67                                                                                                                                                                                                  |
| Connection                                  |                | 2 m fixed cable , 4-wire                                                                                                                                                                              |
| Material                                    |                |                                                                                                                                                                                                       |
| Housing                                     |                | Polycarbonate                                                                                                                                                                                         |
| Optical face                                |                | PMMA                                                                                                                                                                                                  |
| Mass                                        |                | 133 g                                                                                                                                                                                                 |

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Connection Assignment



Assembly



Accessories

|  |             |                         |
|--|-------------|-------------------------|
|  | OMH-RL31-01 | Mounting bracket        |
|  | OMH-RL31-02 | Mounting bracket narrow |
|  | OMH-RL31-03 | Mounting bracket narrow |

**Accessories**

|                                                                                   |                    |                                                                         |
|-----------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------|
|  | <b>OMH-RL31-04</b> | Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm           |
|  | <b>OMH-RL31-05</b> | Mounting bracket for mounting on flat surfaces with 2 M4 screws         |
|  | <b>OMH-RL31-06</b> | Stainless steel mounting bracket with adjustable half clamp on the side |