



# Retroreflective sensor RLK31-6/31/115

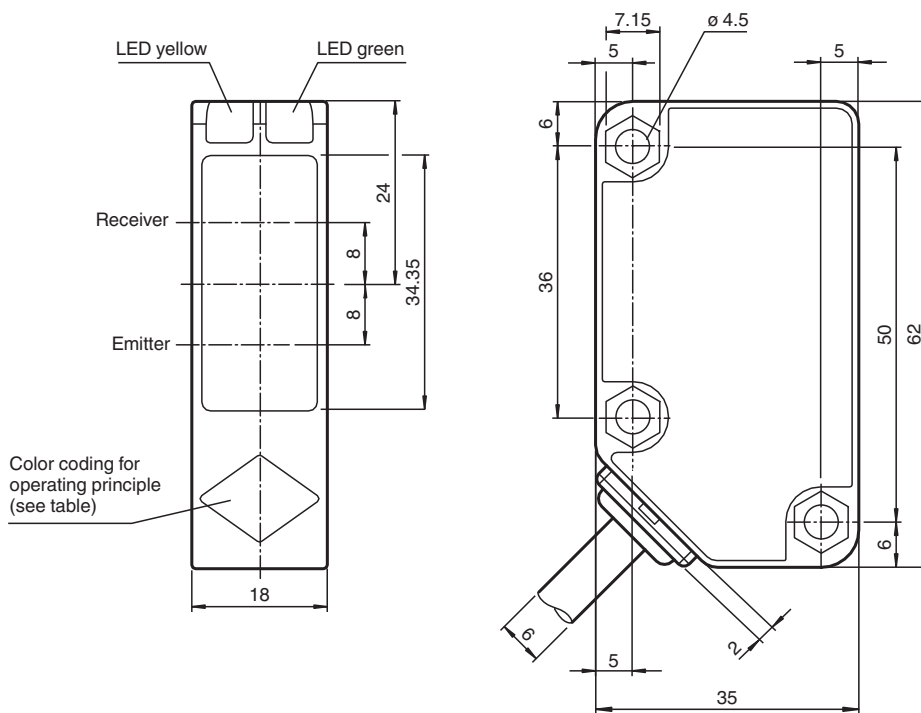


- Cost-optimized series for standard tasks
- Large construction with small housing
- Version for universal voltages
- Relay output

Retroreflective sensor without polarization filter, plastic housing, 14 m detection range, red light, dark on, AC/DC version, relay contact output, no control elements, fixed cable



## Dimensions



| Operating principle                               | color |
|---|-------|
| Retroreflective sensor with polarisation filter   | green |
| Retroreflective sensor                            | blue  |
| Diffusive mode sensor                             | white |
| Thru -beam sensor                                 | grey  |
| Diffusive mode sensor with background suppression | red   |

## Technical Data

### General specifications

|                           |      |
|---------------------------|------|
| Effective detection range | 14 m |
|---------------------------|------|

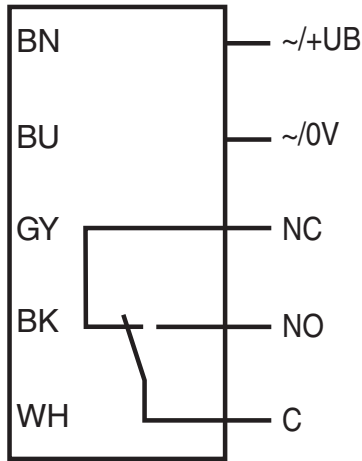
Release date: 2023-12-28 Date of issue: 2023-12-28 Filename: 183067\_eng.pdf

## Technical Data

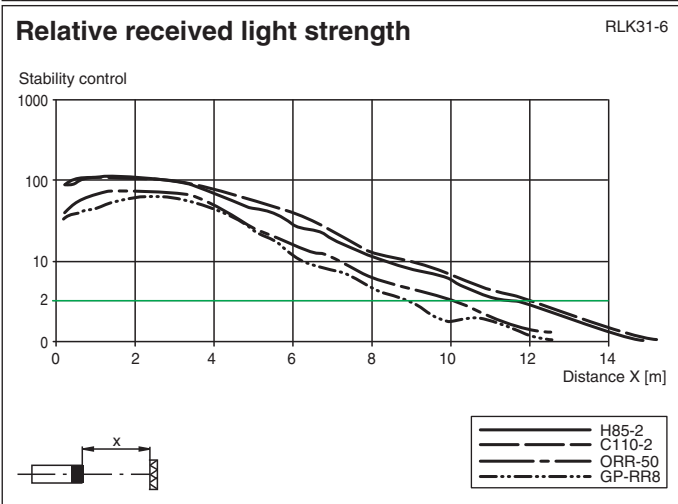
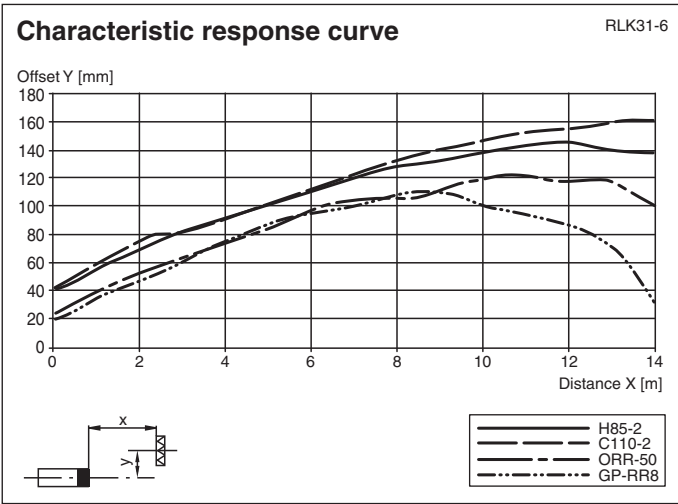
|   |                |   |
|---|----------------|---|
| Reflector distance                          |                | 200 ... 14000 mm  |
| Threshold detection range                   |                | 16.5 m  |
| Reference target                            |                | H85-2 reflector   |
| Light source                                |                | LED   |
| Light type                                  |                | modulated visible red light , 630 nm  |
| Polarization filter                         |                | no  |
| Diameter of the light spot                  |                | approx. 240 mm at a distance of 8 m   |
| Opening angle                               |                | 3 °   |
| Ambient light limit                         |                | 50000 Lux   |
| <b>Functional safety related parameters</b> |                |   |
| MTTF <sub>d</sub>                           |                | 790 a   |
| Mission Time (T <sub>M</sub> )              |                | 20 a  |
| Diagnostic Coverage (DC)                    |                | 0 %   |
| <b>Indicators/operating means</b>           |                |   |
| Operation indicator                         |                | LED green: power on   |
| Function indicator                          |                | LED yellow:<br>1. LED lit constantly: signal > 2 x switching point (function reserve)<br>2. LED flashes: signal between 1 x switching point and 2 x switching point<br>3. LED off: signal < switching point |
| <b>Electrical specifications</b>            |                |   |
| Operating voltage                           | U <sub>B</sub> | 24 ... 240 V AC<br>12 ... 240 V DC  |
| No-load supply current                      | I <sub>0</sub> | ≤ 40 mA   |
| Power consumption                           | P <sub>0</sub> | ≤ 2 VA  |
| <b>Output</b>                               |                |   |
| Switching type                              |                | dark-on   |
| Signal output                               |                | Relay, 1 alternator   |
| Switching voltage                           |                | max. 240 V AC   |
| Switching current                           |                | max. 3 A  |
| Switching power                             |                | DC: max. 150 W AC: max. 750 VA  |
| Switching frequency                         | f              | 20 Hz   |
| Response time                               |                | ≤ 25 ms   |
| <b>Conformity</b>                           |                |   |
| Product standard                            |                | EN 60947-5-2  |
| <b>Approvals and certificates</b>           |                |   |
| Protection class                            |                | II , rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1<br>Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC               |
| CCC approval                                |                | Certified by China Compulsory Certification (CCC)   |
| <b>Ambient conditions</b>                   |                |   |
| Ambient temperature                         |                | -25 ... 55 °C (-13 ... 131 °F)  |
| Storage temperature                         |                | -40 ... 70 °C (-40 ... 158 °F)  |
| <b>Mechanical specifications</b>            |                |   |
| Degree of protection                        |                | IP67  |
| Connection                                  |                | 2 m fixed cable   |
| <b>Material</b>                             |                |   |
| Housing                                     |                | Polycarbonate   |
| Optical face                                |                | PMMA  |
| Mass  |                | 154 g   |
| <b>Dimensions</b>                           |                |   |
| Height                                      |                | 62 mm   |
| Width                                       |                | 18 mm   |
| Depth                                       |                | 35 mm   |

**Connection Assignment**

Option:



**Characteristic Curve**



Release date: 2023-12-28 Date of issue: 2023-12-28 Filename: 183067\_eng.pdf