



## Retroreflective sensor RLK31-54/25/31/115

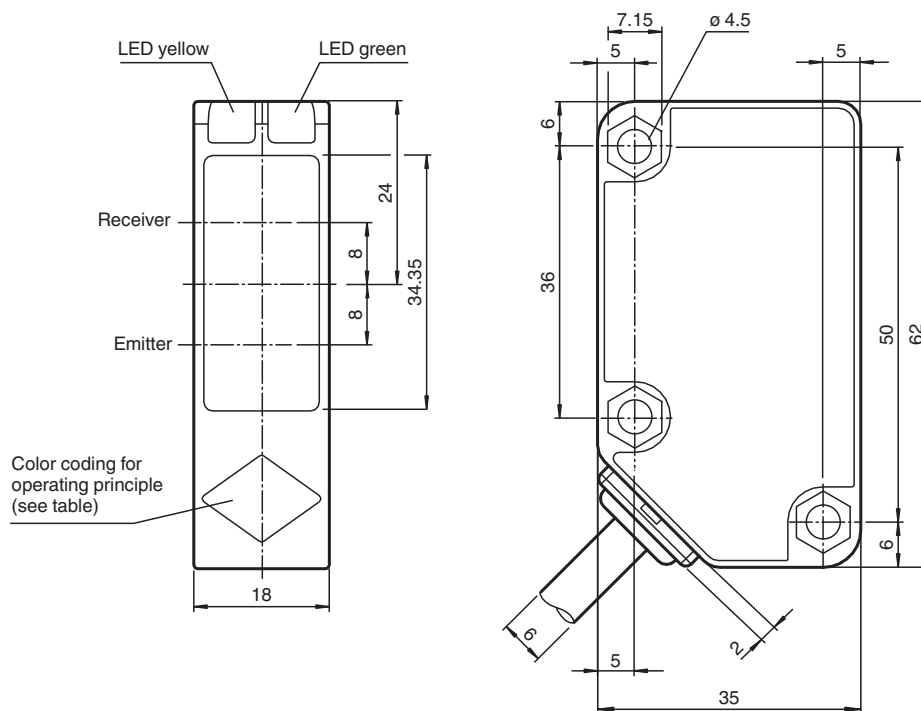


- Cost-optimized series for standard tasks
- Large construction with small housing
- Version for universal voltages
- Relay output

Retroreflective sensor with polarization filter, plastic housing, 9 m detection range, red light, light 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 | 0 ... 9000 mm |
|---------------------------|---------------|

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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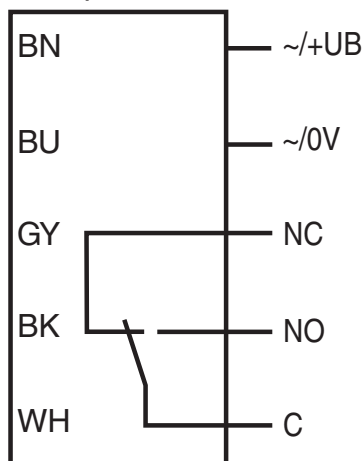
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## Technical Data

|                                             |                |                                                                                                                                                                                                             |
|---------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reflector distance                          |                | 20 ... 9000 mm                                                                                                                                                                                              |
| Threshold detection range                   |                | 12 m                                                                                                                                                                                                        |
| Reference target                            |                | reflector C110-2                                                                                                                                                                                            |
| Light source                                |                | LED                                                                                                                                                                                                         |
| Light type                                  |                | modulated visible red light , 630 nm                                                                                                                                                                        |
| Polarization filter                         |                | yes                                                                                                                                                                                                         |
| Diameter of the light spot                  |                | approx. 200 mm at a distance of 6 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                              |                | light-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                                                                                                                                                                                                       |

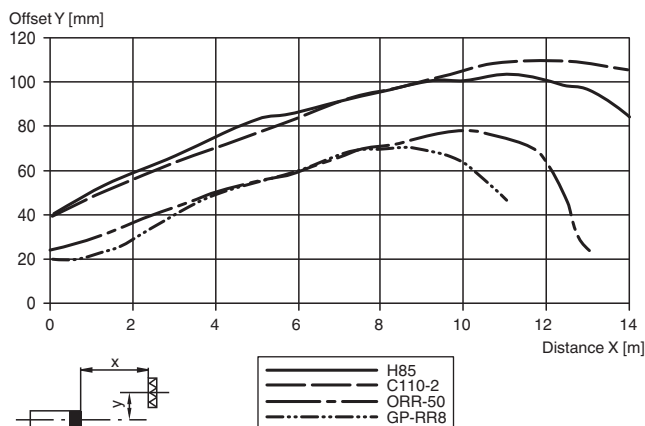
## Connection Assignment

Option:



## Characteristic Curve

### Characteristic response curve



### Relative received light strength

