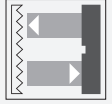




Retroreflective sensor

RL31-54-B043/25/31/115b

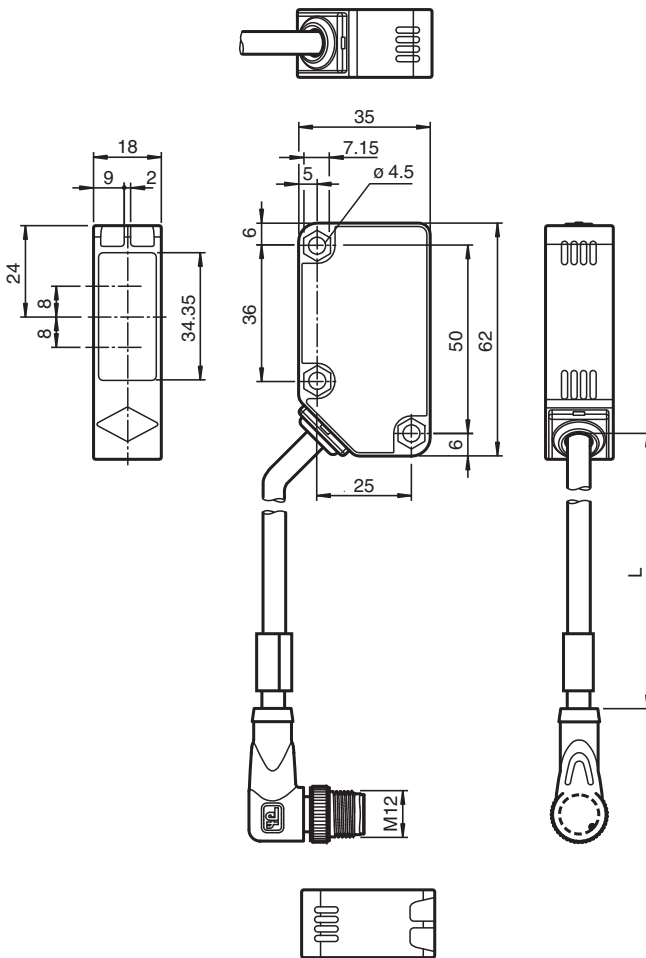


- Cost-optimized series for standard tasks
- Large construction with small housing
- Relay output

Retroreflective sensor with polarization filter, plastic housing, 9 m detection range, red light, light on, DC version, relay contact output, no control elements, single-ended male cordset with right-angle V11 connector



Dimensions



Technical Data

General specifications

Release date: 2023-10-13 Date of issue: 2023-10-13 Filename: 70137282_eng.pdf

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

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Technical Data

| | | |
|---|---|----------------|
| Effective detection range | 0 ... 9000 mm | |
| 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 | |
| Functional safety related parameters | | |
| MTTF _d | 790 a | |
| Mission Time (T _M) | 20 a | |
| Diagnostic Coverage (DC) | 0 % | |
| Indicators/operating means | | |
| Operation indicator | LED green: power on | |
| Function indicator | LED yellow: 1. LED lit constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point | |
| Electrical specifications | | |
| Operating voltage | U _B | 12 ... 30 V DC |
| No-load supply current | I ₀ | ≤ 40 mA |
| Power consumption | P ₀ | ≤ 1 W |
| Output | | |
| Switching type | light-on | |
| Signal output | relay, 1 NO | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 3 A | |
| Switching power | DC: max. 90 W | |
| Switching frequency | f | 20 Hz |
| Response time | ≤ 25 ms | |
| Conformity | | |
| Product standard | IEC / EN 60947-5-2 | |
| Approvals and certificates | | |
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure | |
| Ambient conditions | | |
| Ambient temperature | -25 ... 55 °C (-13 ... 131 °F) | |
| Storage temperature | -40 ... 70 °C (-40 ... 158 °F) | |
| Mechanical specifications | | |
| Housing width | 18 mm | |
| Housing height | 62 mm | |
| Housing depth | 35 mm | |
| Degree of protection | IP67 | |
| Connection | Single-ended male cordset, right-angled, M12, 3-pin | |
| Material | | |
| Housing | Polycarbonate | |
| Optical face | PMMA | |
| Cable | | |
| Length | L | 3 m |
| Mass | 225 g | |

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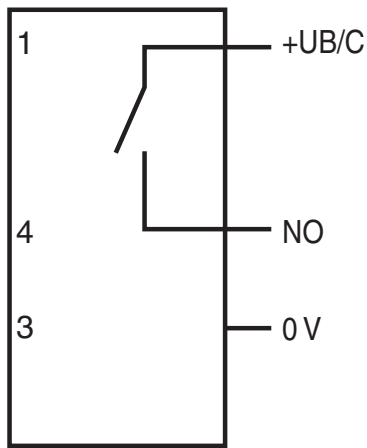
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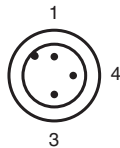
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Connection

Option:



Connection Assignment

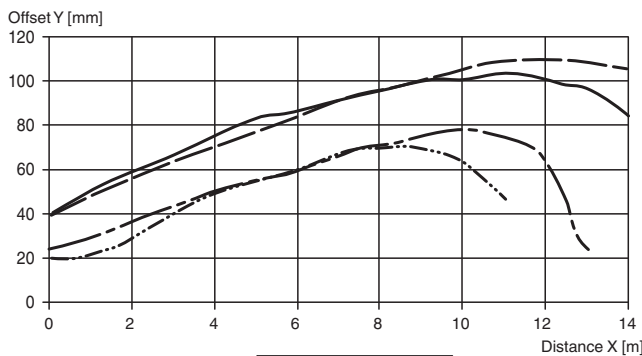


Wire colors in accordance with EN 60947-5-2

| | | |
|---|----|---------|
| 1 | BN | (brown) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Characteristic Curve

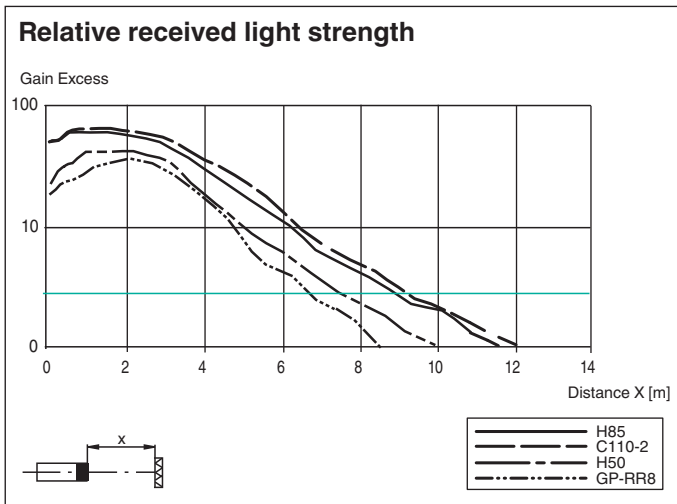
Characteristic response curve




Release date: 2023-10-13 Date of issue: 2023-10-13 Filename: 70137282_eng.pdf

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

Characteristic Curve



Accessories

| | | |
|---|--------------------------|--|
|  | <p>REF-C110-2</p> | <p>Reflector, round ø 84 mm, central mounting hole</p> |
|---|--------------------------|--|