



Retroreflective sensor OBR17M-R202-E5



- Medium design with versatile mounting options
- Degree of protection IP67
- Mounting on full metal sockets
- Very bright, highly visible light spot
- Highly visible LEDs for Power ON and switching state
- Easy to use
- Image is generic for this device type and may deviate from the specific variant



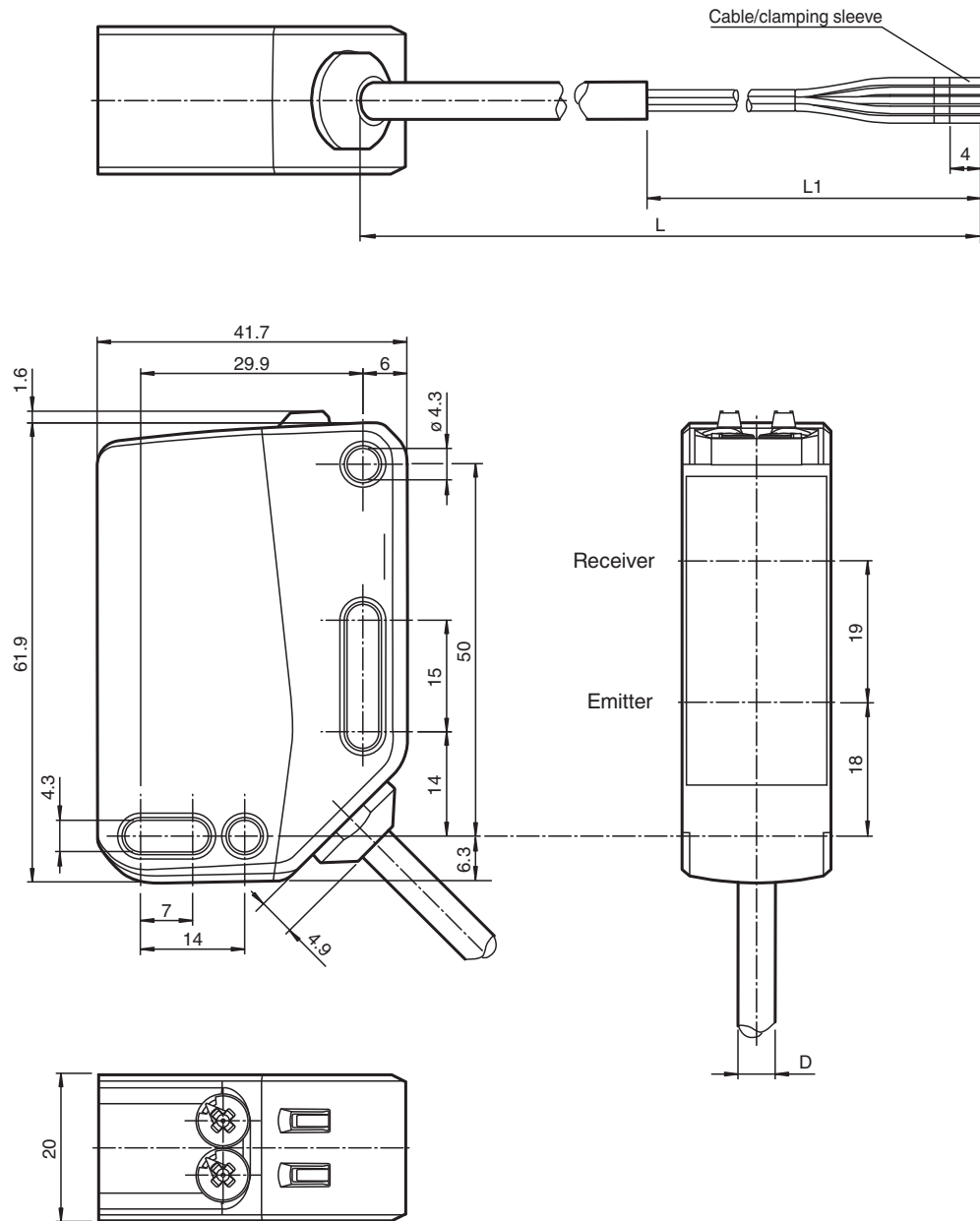
Function

The optical sensors of this series for applications in standard automation have a modern housing design. The sensors are characterized by the many mounting options, easy handling and highly visible LED status indicators. The integrated full metal bushings ensure long-term secure and dimensionally stable mounting.

Dimensions

Drawing is generic for this device type and may deviate from the specific variant.
For the number of cores refer to connection diagram.

Dimensions



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Technical Data

General specifications

| | |
|---------------------------|-----------------------------|
| Effective detection range | 0 ... 17 m |
| Reflector distance | 0.02 ... 17 m |
| Threshold detection range | 20 m |
| Reference target | H85-2 reflector |
| Light source | LED |
| Light type | modulated visible red light |
| LED risk group labelling | exempt group |

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

Technical Data

| | | |
|---|----------------|---|
| Polarization filter | | yes |
| Diameter of the light spot | | approx. 500 mm at a distance of 17 m |
| Opening angle | | 2 ° |
| Ambient light limit | | EN 60947-5-2 : 60000 Lux |
| Functional safety related parameters | | |
| MTTF _d | | 876 a |
| Mission Time (T _M) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| Indicators/operating means | | |
| Operation indicator | | LED green: on - power on flashing (4 Hz) - short circuit |
| Function indicator | | Yellow LED: Permanently lit - light path clear Permanently off - object detected Flashing (4 Hz) - insufficient operating reserve Flashing (8 Hz) - fault detected, the outputs maintain the status |
| Control elements | | Light-on/dark-on changeover switch |
| Control elements | | sensitivity adjustment |
| Electrical specifications | | |
| Operating voltage | U _B | 10 ... 30 V DC |
| Ripple | | max. 10 % |
| No-load supply current | I ₀ | < 30 mA at 24 V Operating voltage |
| Protection class | | III |
| Output | | |
| Switching type | | The switching type of the sensor is adjustable. The default setting is: Q - Pin4: PNP normally open / dark-on |
| Signal output | | 1 PNP, short-circuit protected, reverse polarity protected, open collector |
| Switching voltage | | max. 30 V DC |
| Switching current | | max. 100 mA , resistive load |
| Usage category | | DC-12 and DC-13 |
| Voltage drop | U _d | ≤ 1.5 V DC |
| Switching frequency | f | 1000 Hz |
| Response time | | 0.5 ms |
| Conformity | | |
| Product standard | | EN 60947-5-2 |
| Approvals and certificates | | |
| UL approval | | E87056 , cULus Listed , class 2 power supply , type rating 1 |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| Ambient conditions | | |
| Ambient temperature | | -30 ... 60 °C (-22 ... 140 °F) , fixed cable -20 ... 60 °C (-4 ... 140 °F) , movable cable not appropriate for conveyor chains |
| Storage temperature | | -40 ... 70 °C (-40 ... 158 °F) |
| Mechanical specifications | | |
| Housing width | | 20 mm |
| Housing height | | 62 mm |
| Housing depth | | 42 mm |
| Degree of protection | | IP67 |
| Connection | | 2 m fixed cable |
| Material | | |
| Housing | | PC (Polycarbonate) |
| Optical face | | PMMA |
| Mass | | approx. 80 g |
| Cable length | | 2 m |

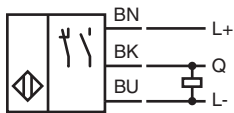
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

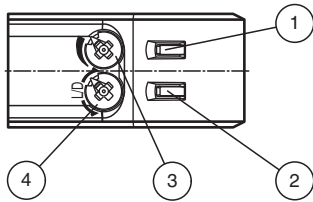
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Connection

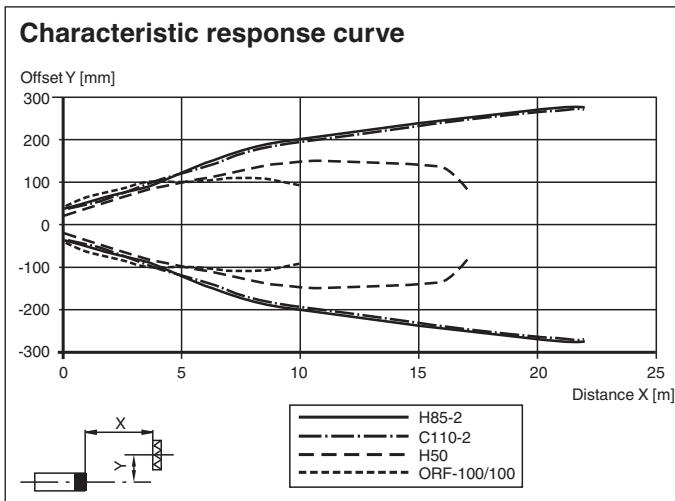


Assembly



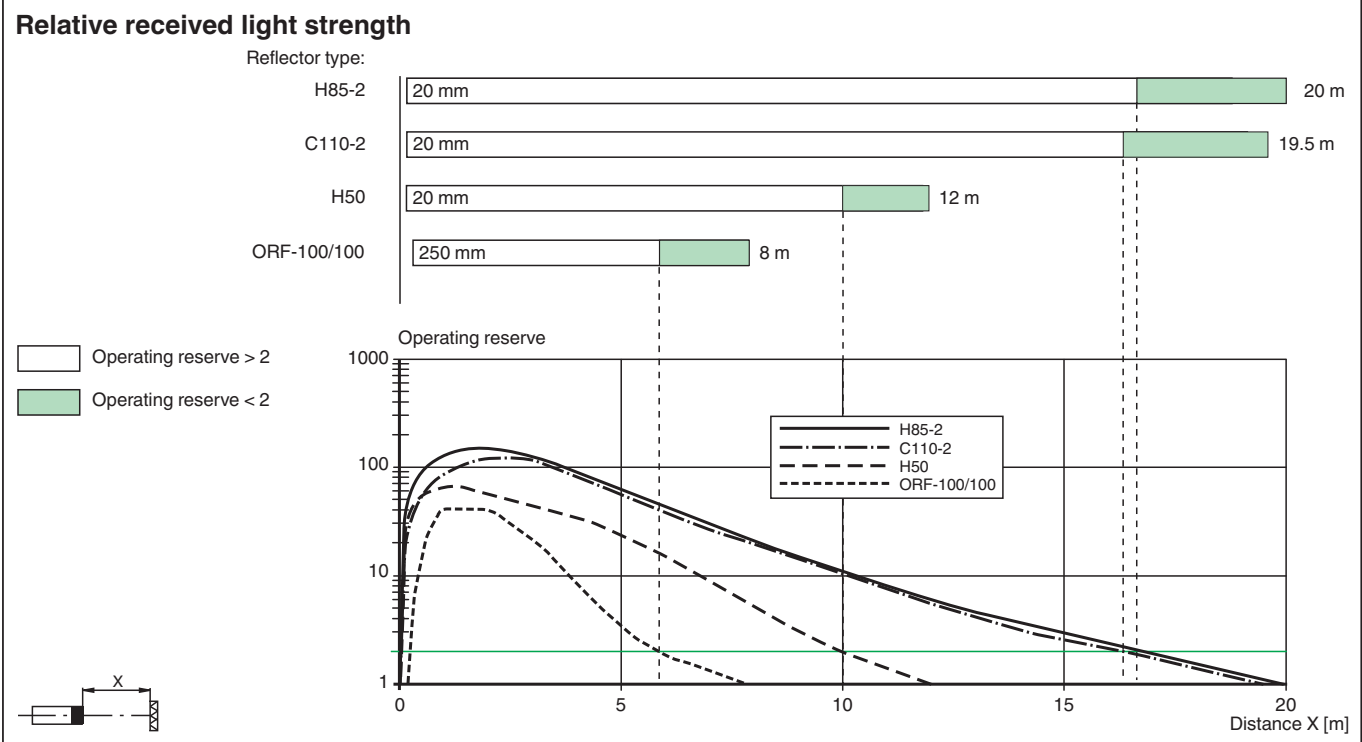
| | | |
|---|--------------------------------------|----|
| 1 | Function indicator | YE |
| 2 | Operation indicator | GN |
| 3 | Sensitivity adjuster | |
| 4 | Light-on / dark-on changeover switch | |

Characteristic Curve



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Characteristic Curve



Commissioning

Sensing Range / Sensitivity
 Turn sensing range / sensitivity adjuster clockwise to increase sensing range / sensitivity.
 Turn sensing range / sensitivity adjuster counter clockwise to decrease sensing range / sensitivity.
 The internal end stop signals the end of the adjustment range.

Light-on / Dark-on Configuration
 To set light switching or dark switching, turn the light/dark changeover switch to the end stop:

- clockwise: dark switching
- counterclockwise: light switching

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