



Model Number

RL91-54-RT/49/59/73c

Retroreflective sensor
with 4-pin, M12 x 1 plastic connector

Features

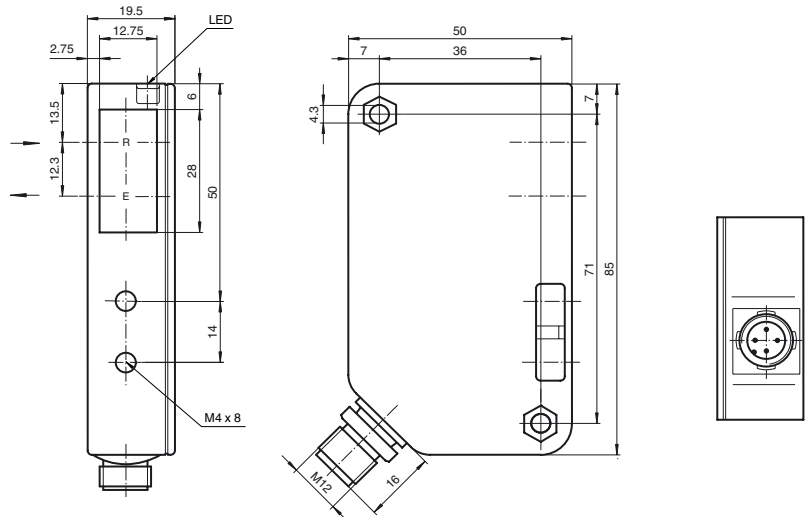
- Retroreflective sensor for single-beam closing edge protection
- Narrow housing suitable for small gaps
- Sturdy plastic housing
- Various possibilities for mounting
- Version with red light
- Version for supply voltage of up to 30 V DC
- Dark on version

Product information

Concentration on the essentials is the hallmark of the 91 series. As ac/dc supply devices, these economical, reliable and easy-to-use photoelectric sensors can be used almost universally. Their narrow design means that they can be used in any environment.

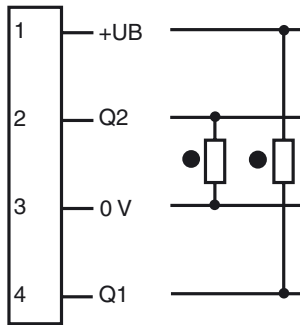
The single-beam photoelectric sensors of the 91 series are suitable for closing-edge monitoring for elevators, barriers and doors, as well as for object detection and object tracking in material handling systems.

Dimensions



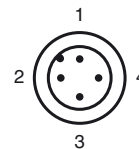
Electrical connection

Option: /49/59

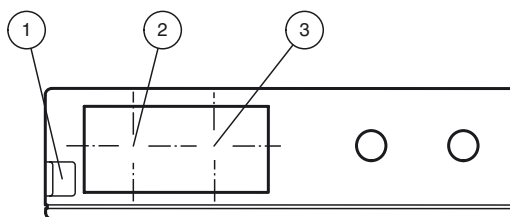


○ = Light on
● = Dark on

Pinout



Indicators/operating means



| | | |
|---|--------------------------|-----|
| 1 | Functional display | red |
| 2 | Optical axis Receiver | |
| 3 | Optical axis Transmitter | |

Release date: 2012-06-01 13:39 Date of issue: 2012-08-16 419070_eng.xml

Subject to modifications without notice

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Technical data**General specifications**

| | |
|----------------------------|---|
| Effective detection range | 0 ... 4 m |
| Reflector distance | 0.2 ... 4000 mm |
| Threshold detection range | 8 m |
| Reference target | H85-2 reflector |
| Light source | LED |
| Light type | modulated visible red light |
| Diameter of the light spot | approx. 160 mm at a distance of 4000 mm |
| Angle of divergence | approx. 2.5 ° |
| Ambient light limit | 90000 Lux |

Functional safety related parameters

| | |
|-------------------|----------|
| MTTF _d | 1083.4 a |
|-------------------|----------|

Indicators/operating means

| | |
|------------------|--|
| Function display | LED red, flashes when falling short of the stability control |
|------------------|--|

Electrical specifications

| | | |
|------------------------|----------------|----------------|
| Operating voltage | U _B | 12 ... 30 V DC |
| No-load supply current | I ₀ | < 100 mA |

Output

| | | |
|---------------------|--|-------|
| Switching type | dark on | |
| Signal output | 1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected | |
| Switching voltage | max. 30 V DC | |
| Switching current | 200 mA | |
| Switching frequency | f | 25 Hz |
| Response time | 20 ms | |

Ambient conditions

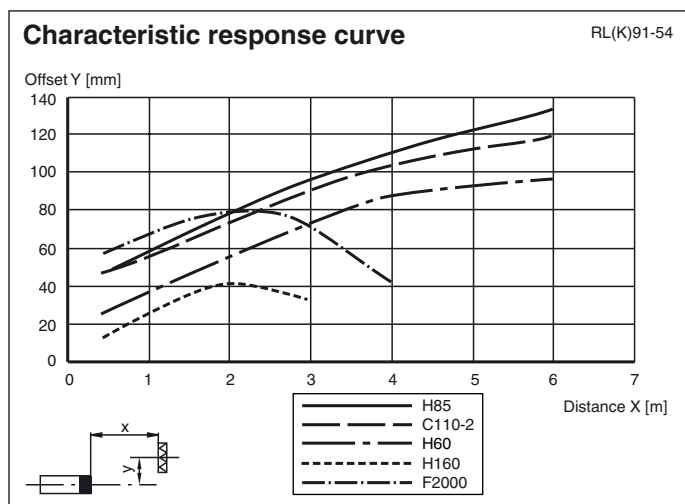
| | |
|---------------------|-------------------------------|
| Ambient temperature | -20 ... 55 °C (-4 ... 131 °F) |
| Storage temperature | -20 ... 75 °C (-4 ... 167 °F) |

Mechanical specifications

| | |
|-------------------|--------------------------|
| Protection degree | IP65 |
| Connection | connector M12 x 1, 4-pin |
| Material | |
| Housing | Luran |
| Mass | 100 g |

Approvals and certificates

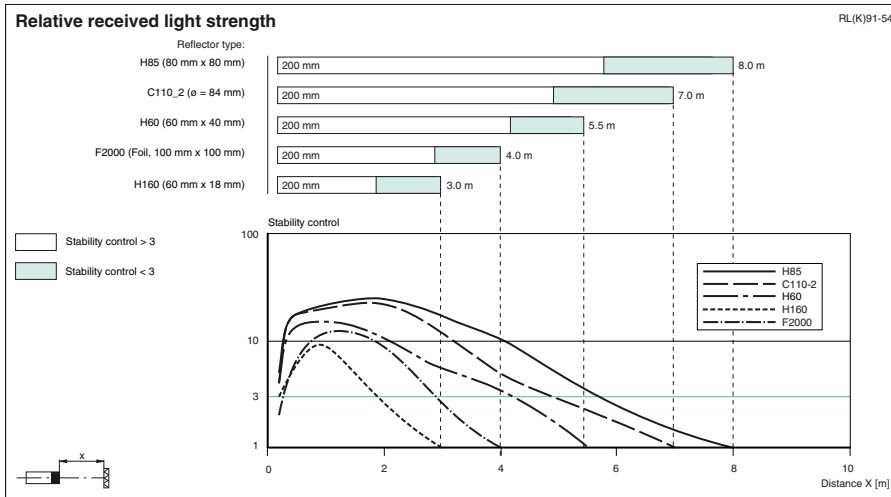
| | |
|--------------|--|
| UL approval | cULus |
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |

Curves/Diagrams**Typical applications**

- Closing-edge monitoring for elevators, barriers and industrial doors
- Detecting and tracking objects in material handling

Detection area**Accessories****OMH-91**
Mounting bracket

Other suitable accessories can be found at www.pepperl-fuchs.com



Operating principle

The retroreflective sensor contains the transmitter and receiver in a single housing. The light from transmitter is beamed back from a reflector to the receiver. If an object interrupts the light beam the switching function is initiated.