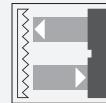




## Retroreflective sensor

### RL91-6-IR/25/49/115



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

Mid-range photoelectric sensors for detecting people, objects, and vehicles



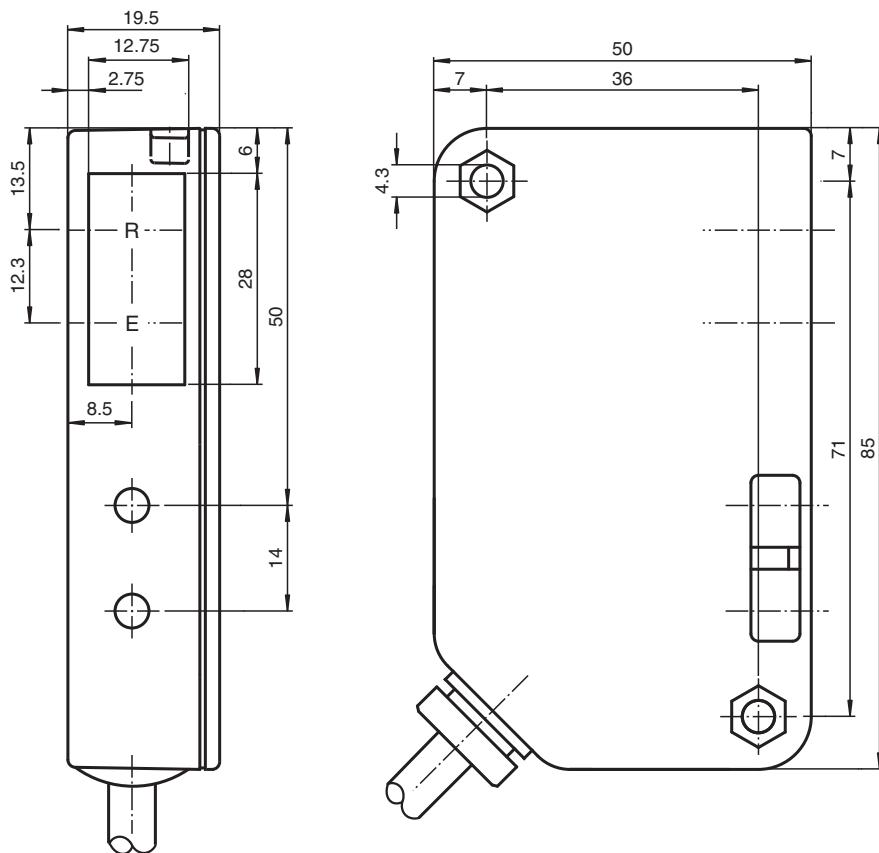
## Function

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.

## Application

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

## Dimensions



## Technical Data

Release date: 2022-11-18 Date of issue: 2022-11-18 Filename: 419062\_eng.pdf

### General specifications

|                            |   |
|----------------------------|---|
| Effective detection range  | 0 ... 6 m                               |
| Reflector distance         | 0 ... 6 m                               |
| Threshold detection range  | 9 m                                     |
| Reference target           | H85-2 reflector                         |
| Light source               | LED                                     |
| Light type                 | modulated infrared light                |
| Diameter of the light spot | approx. 230 mm at a distance of 6000 mm |
| Opening angle              | approx. 2.5 °                           |
| Ambient light limit        | 90000 Lux                               |

### Functional safety related parameters

|                   |          |
|-------------------|----------|
| MTTF <sub>d</sub> | 1083.4 a |
|-------------------|----------|

### Indicators/operating means

|                    |  |
|--------------------|--|
| Function indicator | LED red, flashes when falling short of the operating reserve |
|--------------------|--|

### Electrical specifications

|                        |                |                |
|------------------------|----------------|----------------|
| Operating voltage      | U <sub>B</sub> | 12 ... 30 V DC |
| No-load supply current | I <sub>0</sub> | < 100 mA       |

### Output

|                   |  |
|-------------------|--|
| Switching type    | light-on   |
| Signal output     | 1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected |
| Switching voltage | max. 30 V DC   |

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

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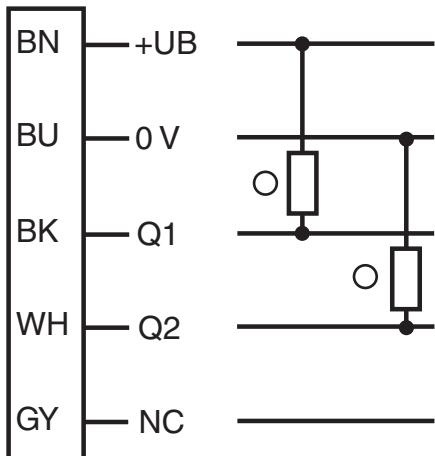
 PEPPERL+FUCHS

## Technical Data

|                                   |   |
|-----------------------------------|---|
| Switching current                 | 200 mA  |
| Switching frequency               | f 25 Hz   |
| Response time                     | 20 ms   |
| <b>Conformity</b>                 |   |
| Product standard                  | EN 60947-5-2  |
| <b>Approvals and certificates</b> |   |
| UL approval                       | cULus<br>For overcurrent protection, install a fuse with a rated current of max. 5 A and min. 30 V DC |
| CCC approval                      | CCC approval / marking not required for products rated $\leq$ 36 V                                    |
| <b>Ambient conditions</b>         |   |
| Ambient temperature               | -20 ... 55 °C (-4 ... 131 °F)   |
| Storage temperature               | -20 ... 75 °C (-4 ... 167 °F)   |
| <b>Mechanical specifications</b>  |   |
| Degree of protection              | IP65  |
| Connection                        | 5 m fixed cable   |
| Material                          |   |
| Housing                           | Luran®  |
| Optical face                      | Luran®  |
| Mass                              | 100 g   |

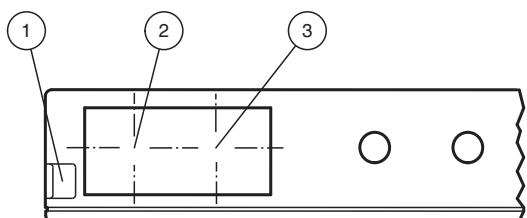
## Connection Assignment

Option: /25/49



○ = Light on  
● = Dark on

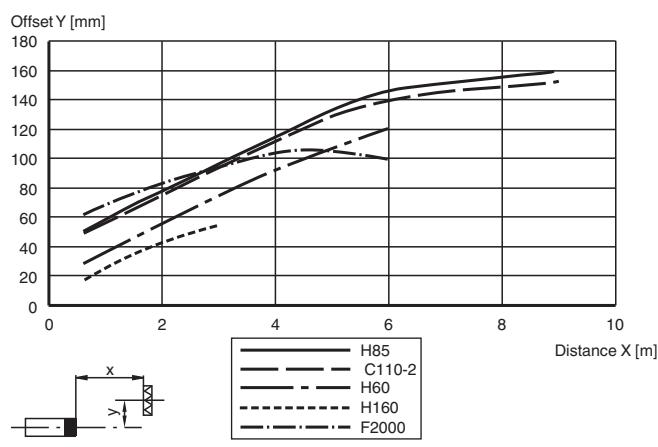
## Assembly



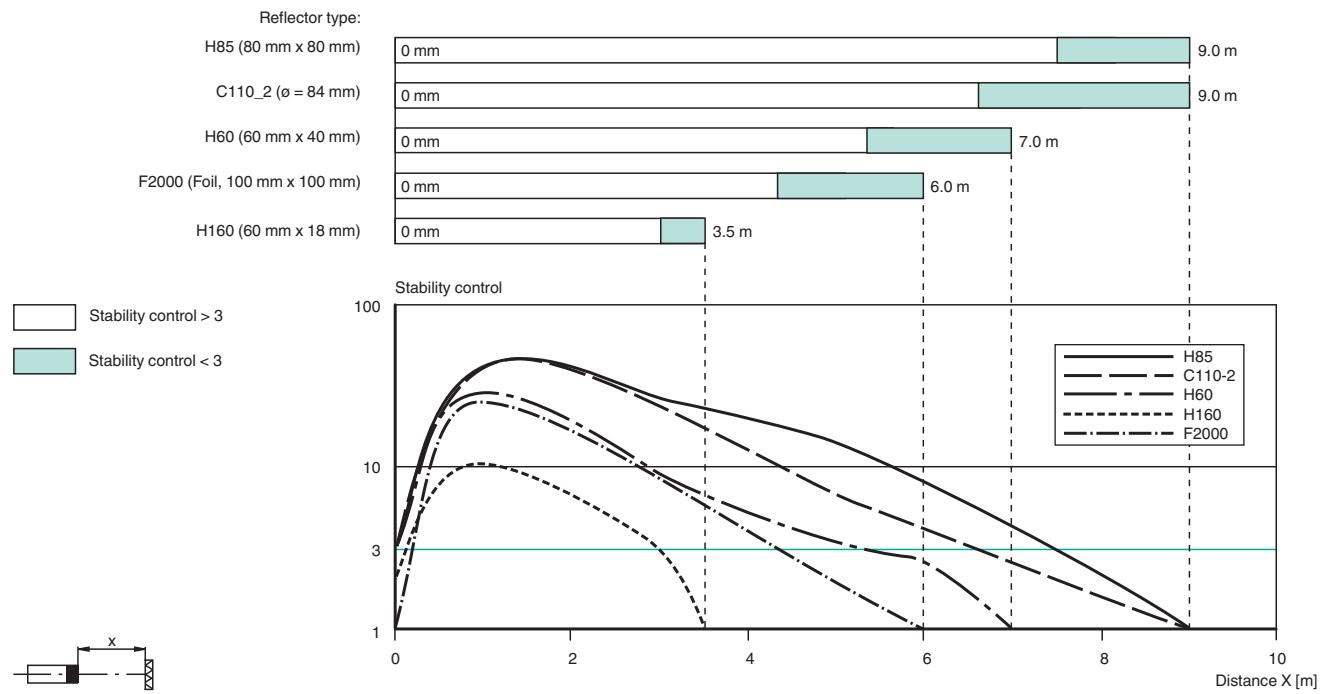
|   |                          |     |
|---|--------------------------|-----|
| 1 | Functional display       | red |
| 2 | Optical axis Receiver    |     |
| 3 | Optical axis Transmitter |     |

## Characteristic Curve

### Characteristic response curve



### Relative received light strength



## Accessories

|  |               |                  |
|--|---------------|------------------|
|  | <b>OMH-91</b> | Mounting bracket |
|--|---------------|------------------|

## System Description

### System Description

The retro-reflective sensor contains both an emitter and a receiver in a single housing. A reflector reflects the light from emitter back to the receiver. If an object interrupts the light beam, the switching function is initiated.