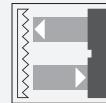




## Retroreflective sensor

### RL91-6-IR/49/59/73c



- 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
- Dark on version

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



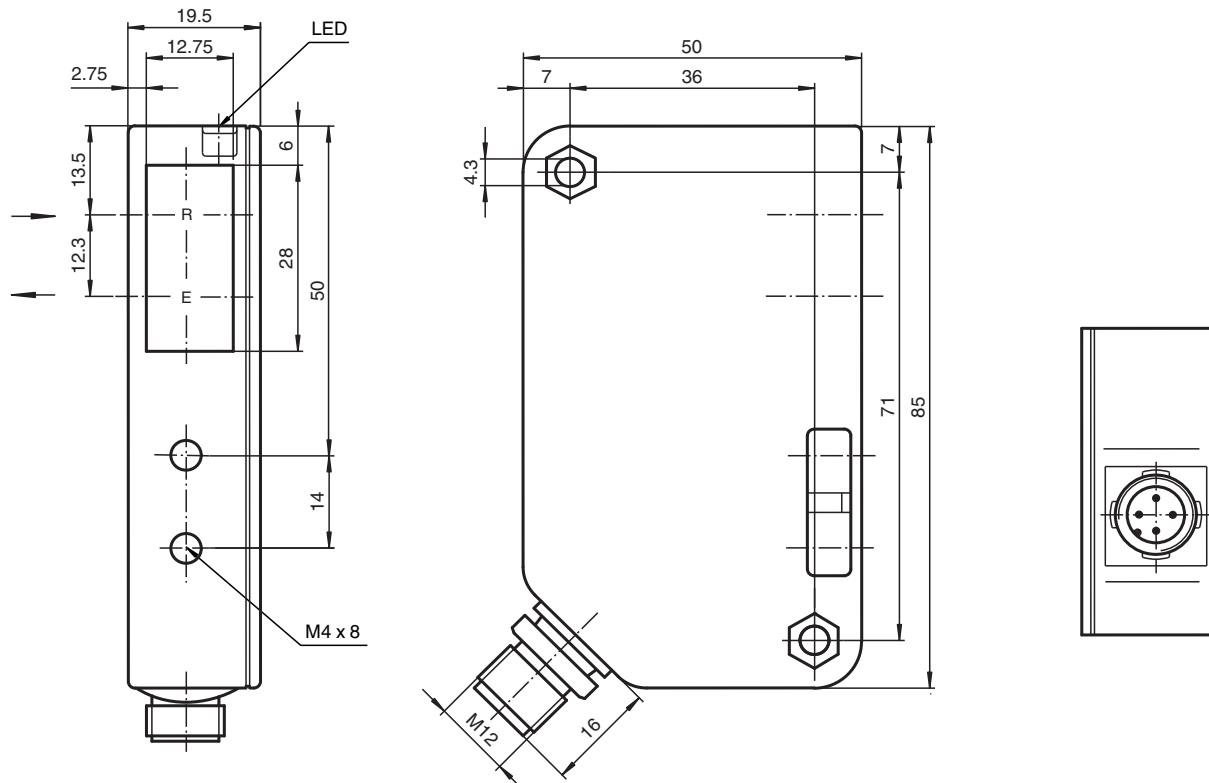
## Function

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: 419060\_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
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## Indicators/operating means

Function indicator	LED red, flashes when falling short of the operating reserve
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## Electrical specifications

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

## Output

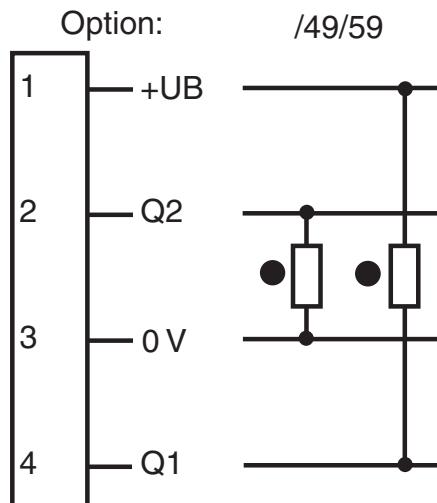
Switching type	dark-on
Signal output	1 NPN, 1 PNP synchronized-switching, short-circuit protected, reverse polarity protected
Switching voltage	max. 30 V DC

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

## Technical Data

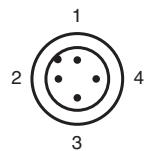
Switching current	200 mA
Switching frequency	f 25 Hz
Response time	20 ms
<b>Conformity</b>	
Product standard	EN 60947-5-2
<b>Approvals and certificates</b>	
UL approval	cULus
CCC approval	CCC approval / marking not required for products rated $\leq$ 36 V
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-20 ... 75 °C (-4 ... 167 °F)
<b>Mechanical specifications</b>	
Degree of protection	IP65
Connection	4-pin, M12 x 1 connector
Material	
Housing	Luran®
Optical face	Luran®
Mass	100 g

## Connection Assignment



○ = Light on  
 ● = Dark on

## Connection Assignment

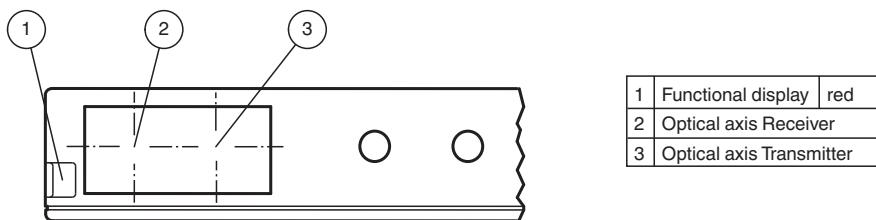


## Connection Assignment

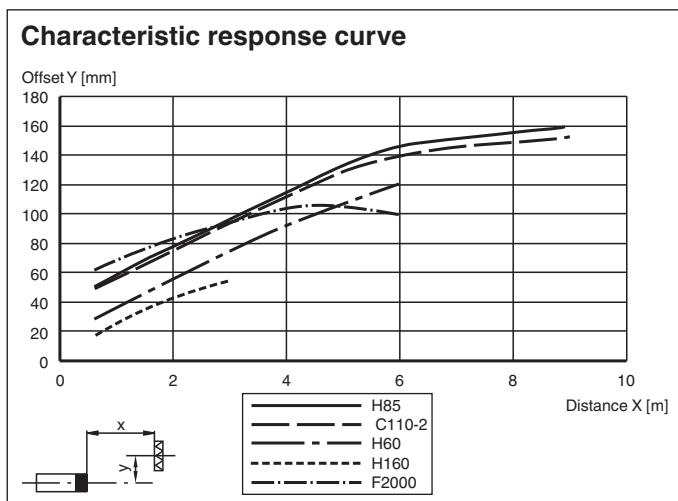
Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

## Assembly



## Characteristic Curve



## Characteristic Curve

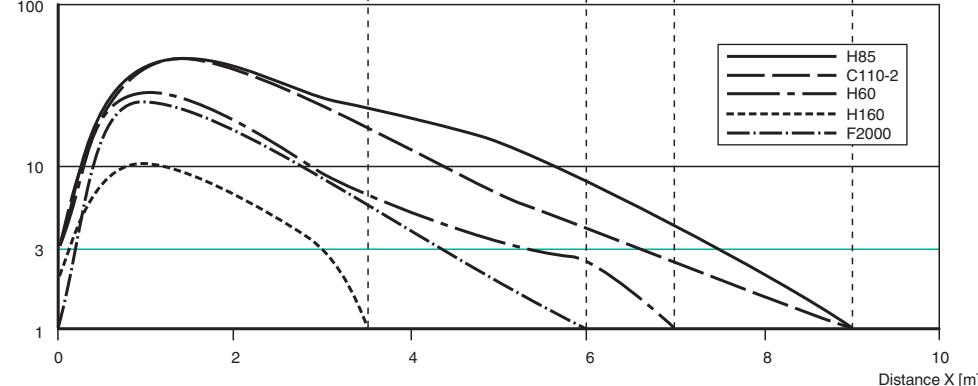
### Relative received light strength

Reflector type:

H85 (80 mm x 80 mm)	0 mm	9.0 m
C110_2 ( $\varnothing = 84$ mm)	0 mm	9.0 m
H60 (60 mm x 40 mm)	0 mm	7.0 m
F2000 (Foil, 100 mm x 100 mm)	0 mm	6.0 m
H160 (60 mm x 18 mm)	0 mm	3.5 m

Stability control > 3  
 Stability control < 3

Stability control



## Accessories



OMH-91

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.