



## Retroreflective sensor RL91-54-RT/49/59/115



- 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

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



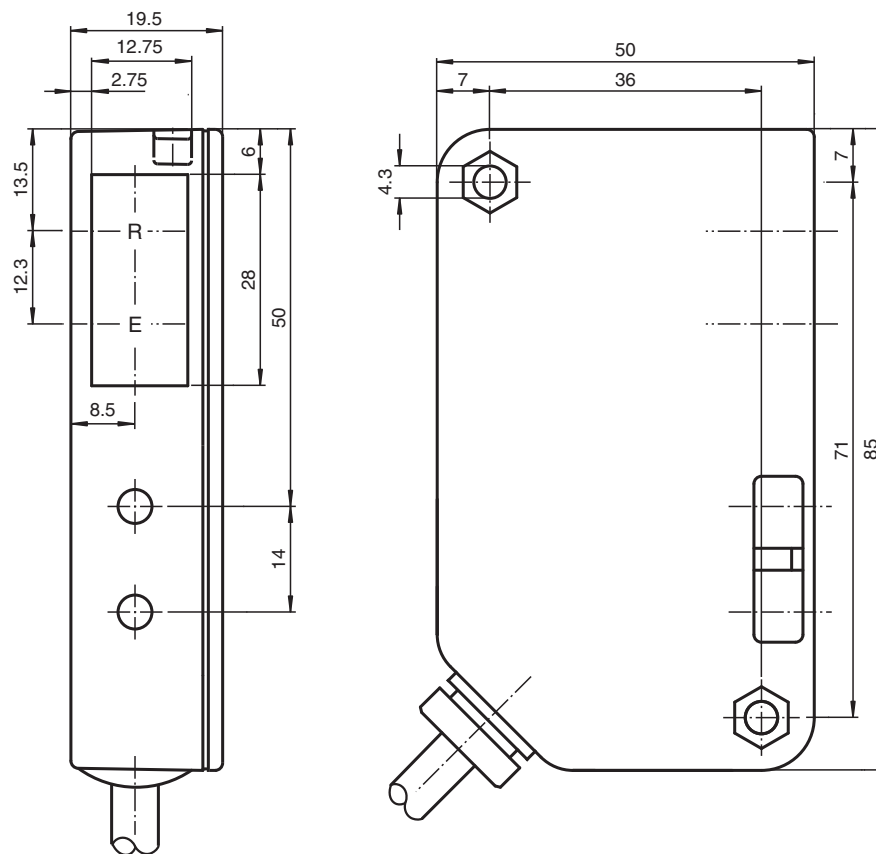
### Function

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

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

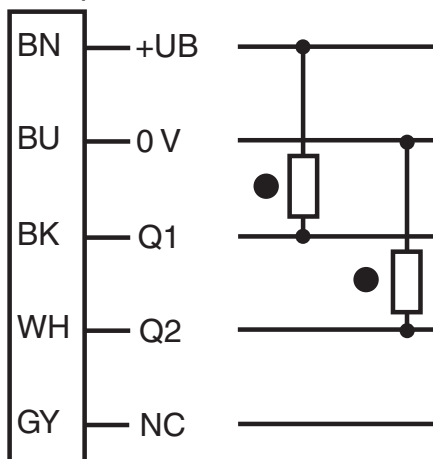
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## Technical Data

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 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 ≤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
<b>Material</b>		
Housing		Luran®
Optical face		glass pane
Mass		100 g

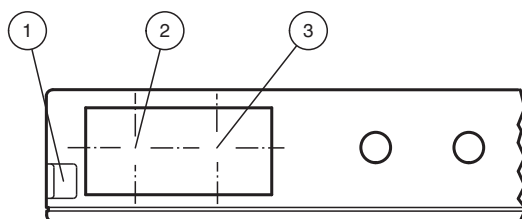
## Connection Assignment

Option: /49/59



- = Light on
- = Dark on

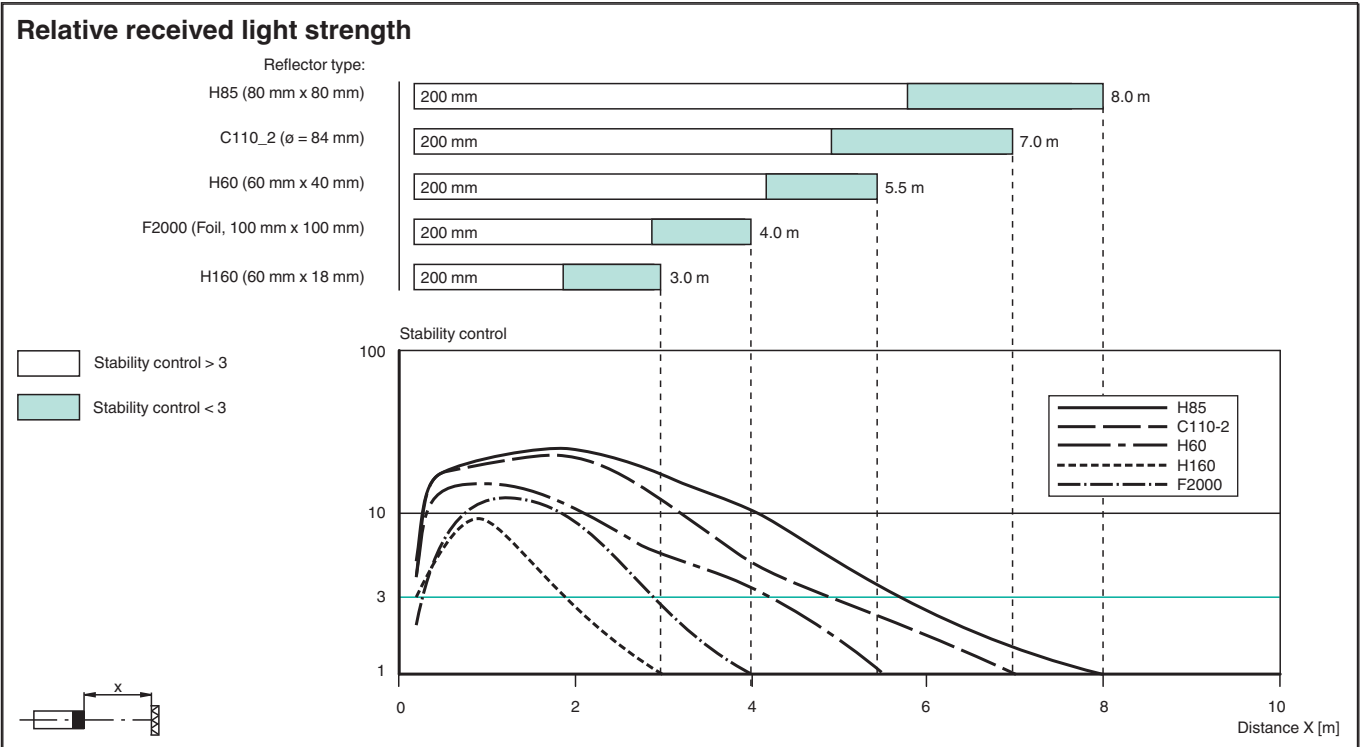
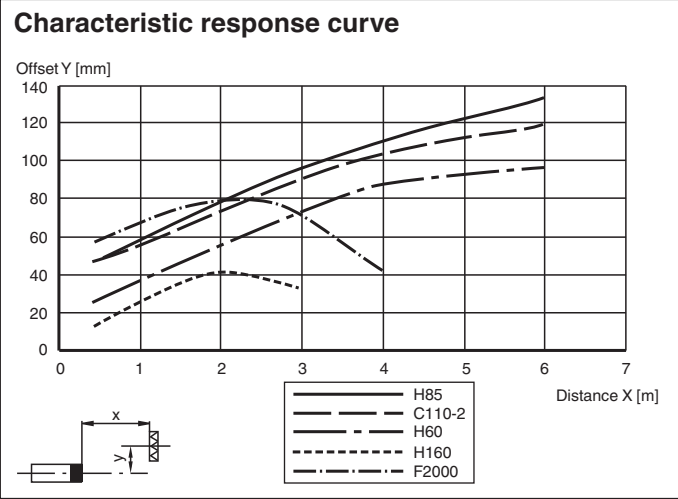
## Assembly




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

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**Characteristic Curve**



**Accessories**

	<b>OMH-91</b>	Mounting bracket
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## System Description

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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.