



Retroreflective sensor RL91-54-RT/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 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



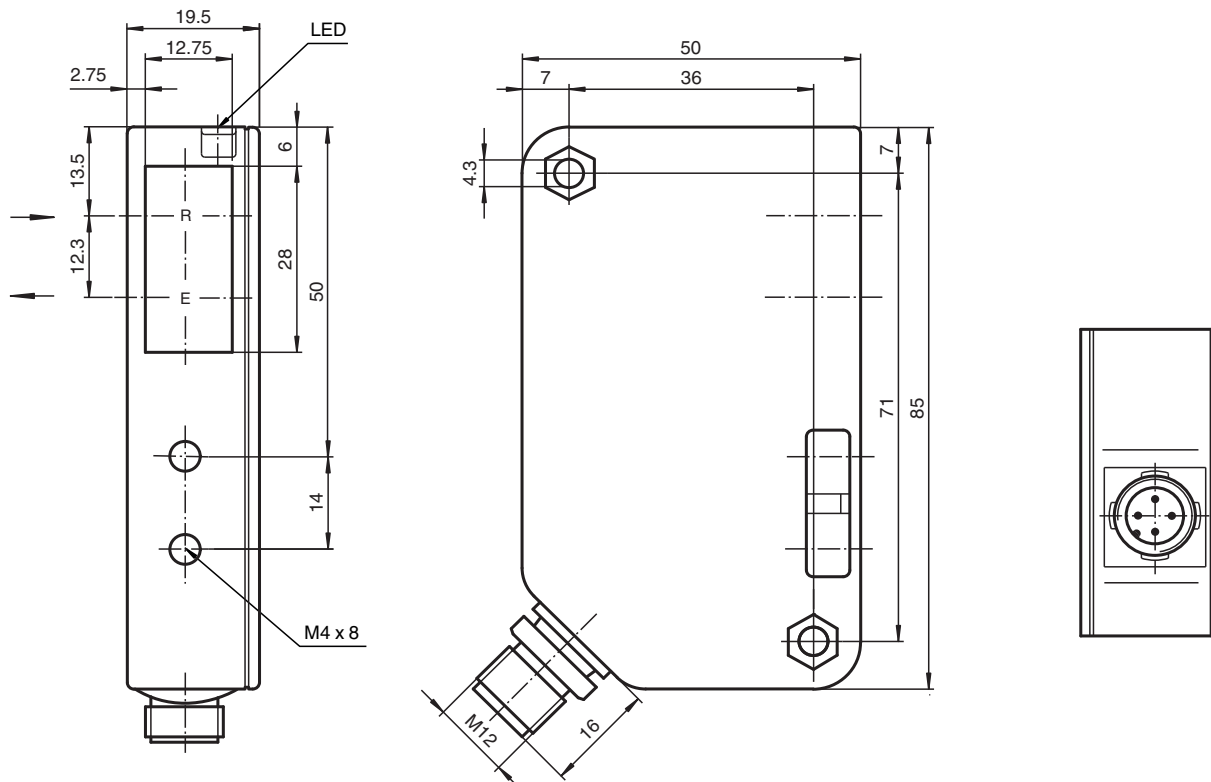
Function

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 _d	1083.4 a
Indicators/operating means	
Function indicator	LED red, flashes when falling short of the operating reserve
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

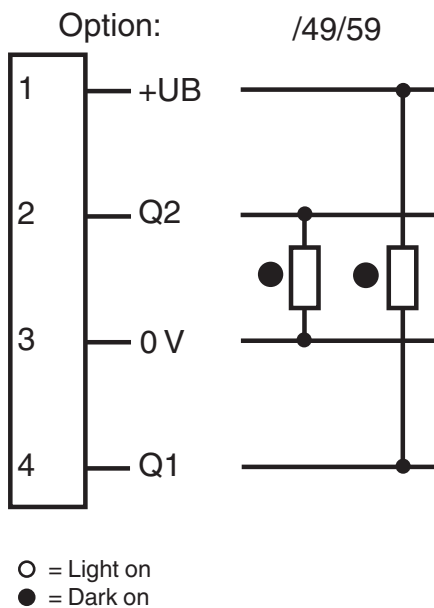
Release date: 2022-11-18 Date of issue: 2022-11-18 Filename: 419070_eng.pdf

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

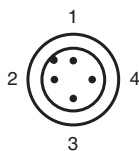
Technical Data

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

Connection Assignment



Connection Assignment



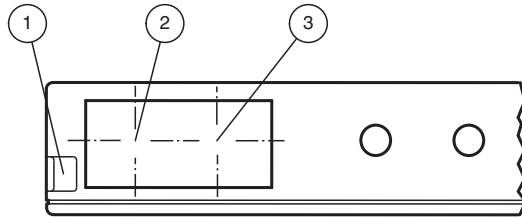
Release date: 2022-11-18 Date of issue: 2022-11-18 Filename: 419070_eng.pdf

Connection Assignment

Wire colors in accordance with EN 60947-5-2

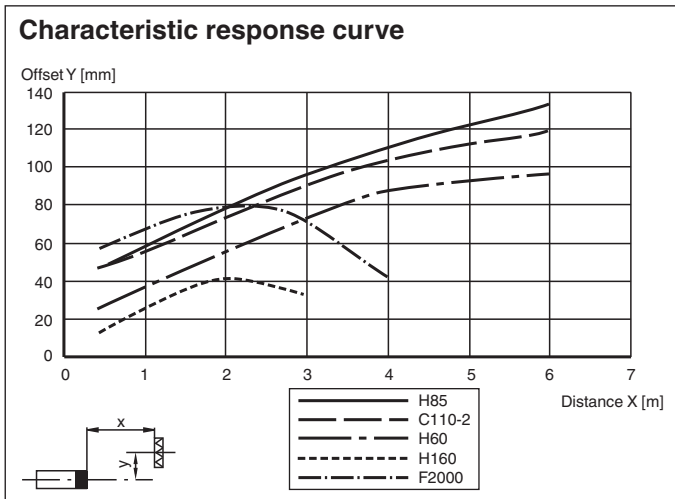
- | | | |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Assembly



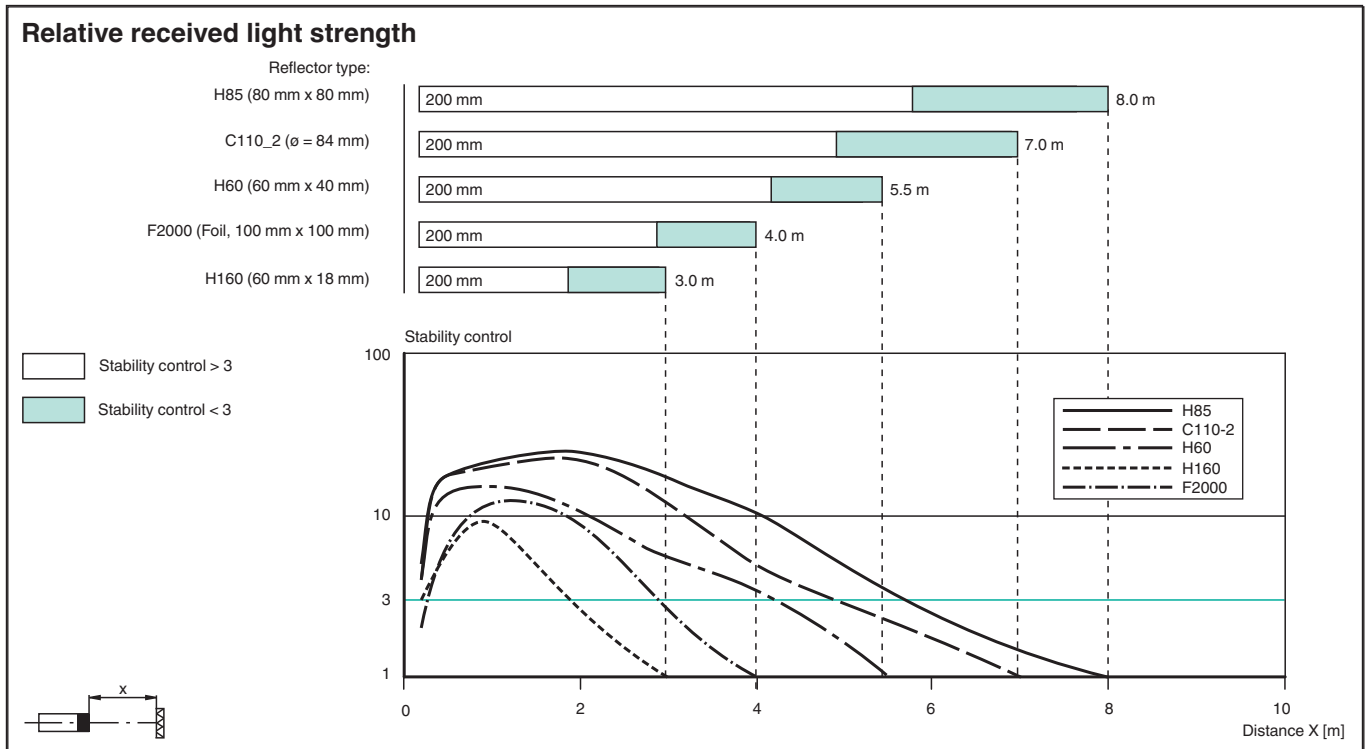
1	Functional display	red
2	Optical axis Receiver	
3	Optical axis Transmitter	

Characteristic Curve



Release date: 2022-11-18 Date of issue: 2022-11-18 Filename: 419070_eng.pdf

Characteristic Curve



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.