



Model Number

RLK31-54/25/31/115 SET

Retroreflective sensor

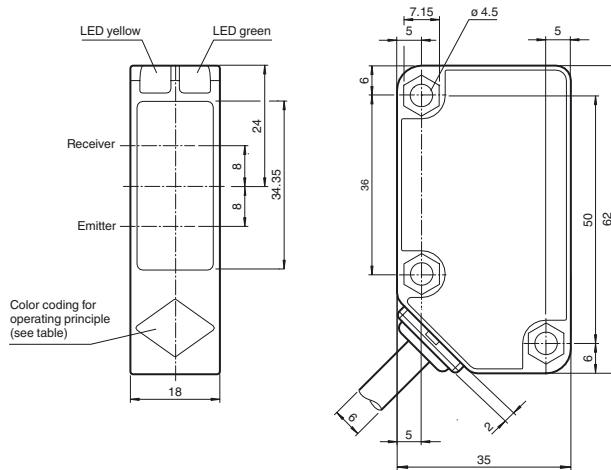
Features

- Photoelectric sensor for detecting people, objects and vehicles
- Large construction with small housing
- Not sensitive to ambient light
- Version for universal voltages
- Relay output
- Version with accessories in scope of delivery

Product information

Series 31 is a range of cost-effective and, most importantly, reliable photoelectric sensors for standard applications in the fields of material handling and logistics, and for monitoring industrial doors, elevators, and automatic gates. The ultrasonic-welded plastic housing provides a high degree of protection, making these sensors ideal for tasks in harsh outdoor conditions. These sensors are currently the most compact "wide range power supply sensors" that can work with any DC and AC voltage between 24 V and 240 V. In addition to the robust technology, the sensors offer numerous product details that help the user with assembly, connection and operation.

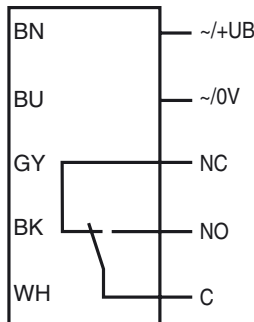
Dimensions



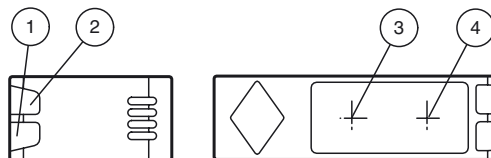
Operating principle	color
Retroreflective sensor with polarisation filter	green
Retroreflective sensor	blue
Diffusive mode sensor	white
Thru -beam sensor	grey
Diffusive mode sensor with background suppression	red

Electrical connection

Option:



Indicators/operating means



1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

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Subject to modifications without notice

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Technical data

General specifications

Effective detection range	0 ... 9000 mm
Reflector distance	20 ... 9000 mm
Threshold detection range	12 m
Reference target	reflector C110-2
Light source	LED
Light type	modulated visible red light , 630 nm
Diameter of the light spot	approx. 200 mm at a distance of 6 m
Angle of divergence	3 °
Ambient light limit	50000 Lux
Accessories provided	reflector C110-2 OMH-RL31-01 mounting bracket with mounting materials

Functional safety related parameters

MTTF _d	790 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green: power on
Function display	LED yellow: 1. LED lit constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point

Electrical specifications

Operating voltage	U _B	24 ... 240 V AC 12 ... 240 V DC
No-load supply current	I ₀	≤ 40 mA
Power consumption	P ₀	≤ 2 VA

Output

Switching type	light on	
Signal output	Relay, 1 alternator	
Switching voltage	max. 240 V AC	
Switching current	max. 3 A	
Switching power	DC: max. 150 W AC: max. 750 VA	
Switching frequency	f	20 Hz
Response time	≤ 25 ms	

Ambient conditions

Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

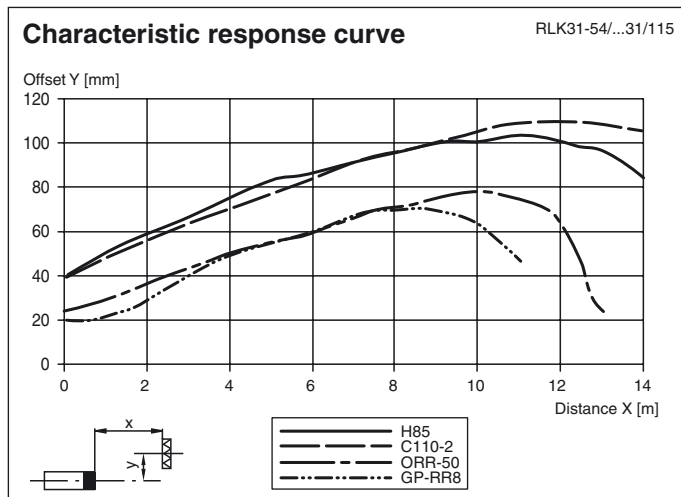
Mechanical specifications

Protection degree	IP67
Connection	2 m fixed cable
Material	
Housing	Polycarbonate
Optical face	PMMA
Mass	154 g

Approvals and certificates

Protection class	II , rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 Output circuit basis insulation of input circuit according to EN 50178, rated insulation voltage 240 V AC
CCC approval	Certified by China Compulsory Certification (CCC)

Curves/Diagrams



Typical applications

- Monitoring closing edges of automatic industrial doors and elevators
- Monitoring the swing range of automatic gates
- Detecting and tracking objects in material handling

Detection area



Accessories

REF-H50

Reflector, rectangular 51 mm x 51 mm, mounting holes, fixing strap

REF-H60-2

Reflector with mounting holes

REF-H85-2

Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

REF-H160

Reflector, rectangular 60 mm x 18 mm, mounting holes

REF-H180

Reflector, rectangular 180 mm x 40 mm, mounting holes

REF-C110-2

Reflector, round ø 84 mm, central mounting hole

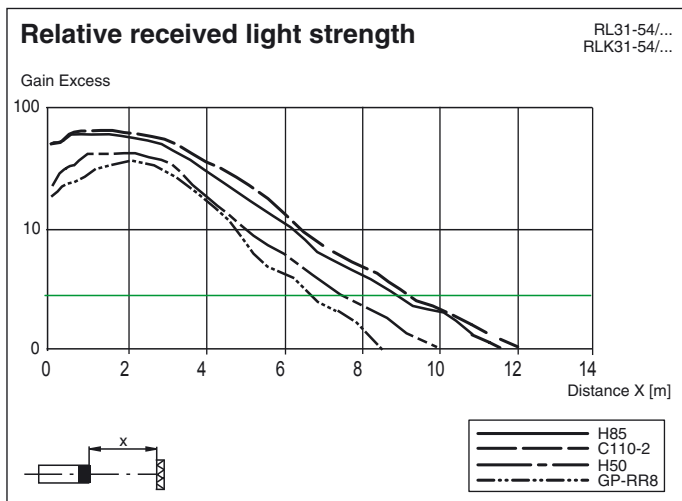
OFR-100/100

Reflective tape 100 mm x 100 mm

Reflector Weather Cap

Weather hood for series reflector

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



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