



## Retroreflective sensor RL31-54/115/136-5M

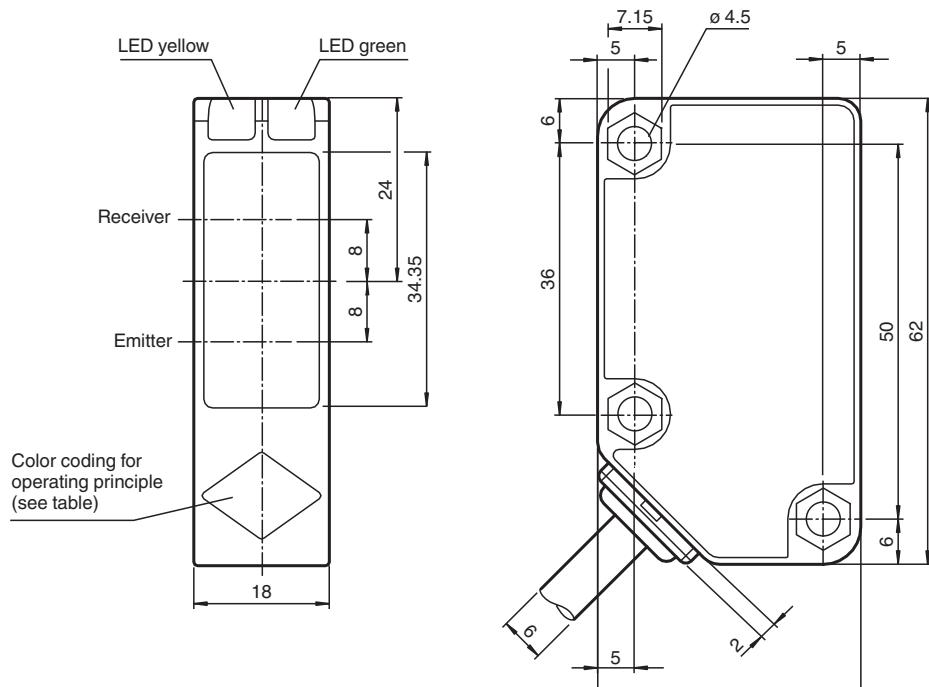


- Compact and stable housing
- Glare protected with polarization filter
- Highly visible LED
- Powerful push-pull output
- Protection class II

Retroreflective sensor with polarization filter, plastic housing, 9 m detection range, red light, dark on, DC version, 2 push-pull outputs, no control elements, fixed cable



### 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

### Technical Data

#### General specifications

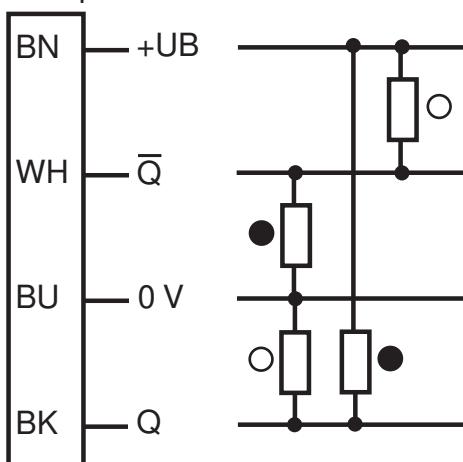
Effective detection range 0 ... 9000 mm

## Technical Data

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	
Polarization filter	yes	
Diameter of the light spot	approx. 200 mm at a distance of 6 m	
Opening angle	3 °	
Ambient light limit	50000 Lux ; according to EN 60947-5-2	
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>	920 a	
Mission Time (T <sub>M</sub> )	20 a	
Diagnostic Coverage (DC)	0 %	
<b>Indicators/operating means</b>		
Operation indicator	LED green: power on	
Function indicator	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	
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		10 %
No-load supply current	I <sub>0</sub>	≤ 20 mA
<b>Output</b>		
Switching type	dark-on	
Signal output	2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U <sub>d</sub>	≤ 1.5 V
Switching frequency	f	≤ 500 Hz
Response time	≤ 1 ms	
<b>Conformity</b>		
Product standard	EN 60947-5-2	
<b>Approvals and certificates</b>		
EAC conformity	TR CU 020/2011	
Protection class	II , rated insulation 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	
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure	
CCC approval	CCC approval / marking not required for products rated ≤36 V	
<b>Ambient conditions</b>		
Ambient temperature	-30 ... 55 °C (-22 ... 131 °F)	
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)	
<b>Mechanical specifications</b>		
Housing width	18 mm	
Housing height	62 mm	
Housing depth	35 mm	
Degree of protection	IP67	
Connection	5 m fixed cable	
Material		
Housing	plastic	
Optical face	PMMA	
Mass	133 g	

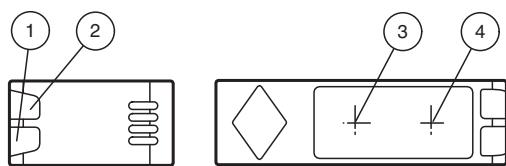
## Connection Assignment

Option:



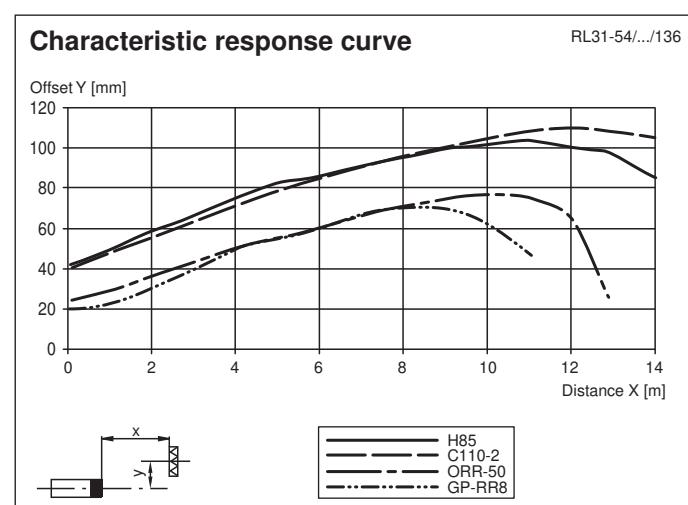
○ = Light on  
● = Dark on

## Assembly

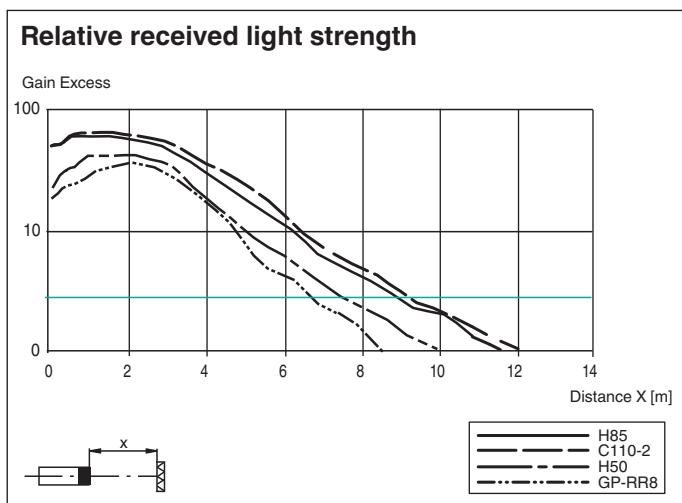


1	Operating display	green
2	Signal display	yellow
3	Emitter	
4	Receiver	

## Characteristic Curve



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## Accessories

	<b>OMH-RL31-01</b>	Mounting bracket
	<b>OMH-RL31-02</b>	Mounting bracket narrow
	<b>OMH-RL31-03</b>	Mounting bracket narrow
	<b>OMH-RL31-04</b>	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-RL31-05</b>	Mounting bracket for mounting on flat surfaces with 2 M4 screws
	<b>OMH-RL31-06</b>	Stainless steel mounting bracket with adjustable half clamp on the side