



Model Number

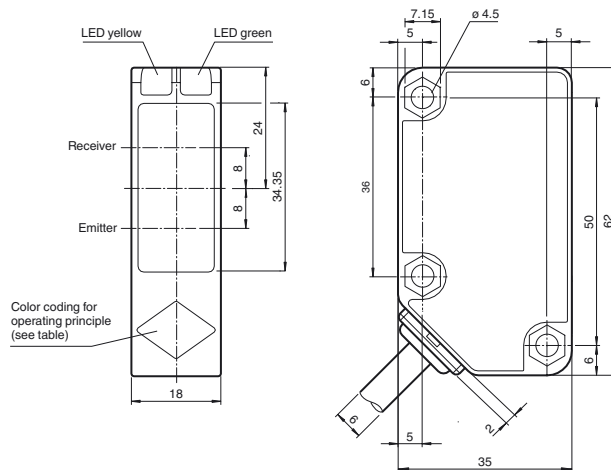
RL31-54/115/136

Retroreflective sensor
with 4-pin, M12 x 1 connector

Features

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

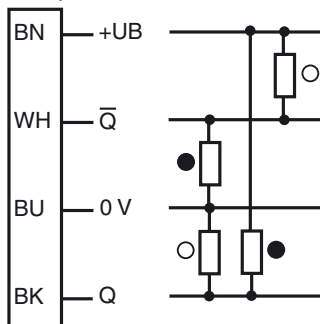
Dimensions



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

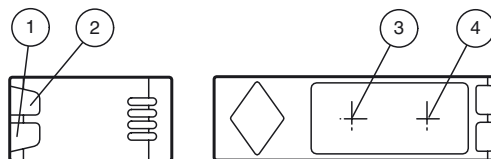
Option:



○ = Light on

● = Dark on

Indicators/operating means



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

**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 ; according EN 60947-5-2

Functional safety related parameters

MTTF _d	920 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	10 ... 30 V DC
Ripple		10 %
No-load supply current	I ₀	≤ 20 mA

Output

Switching type	dark on	
Signal output	2 Push-pull outputs, short-circuit protected, reverse polarity protection	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Voltage drop	U _d	≤ 1.5 V
Switching frequency	f	≤ 500 Hz
Response time	≤ 1 ms	

Ambient conditions

Ambient temperature	-30 ... 55 °C (-22 ... 131 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Protection degree	IP67
Connection	2 m fixed cable
Material	
Housing	plastic
Optical face	PMMA
Mass	133 g

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

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	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Accessories

OMH-RL31-01
Mounting bracket

OMH-RL31-02
Mounting bracket

OMH-RL31-03
Mounting bracket

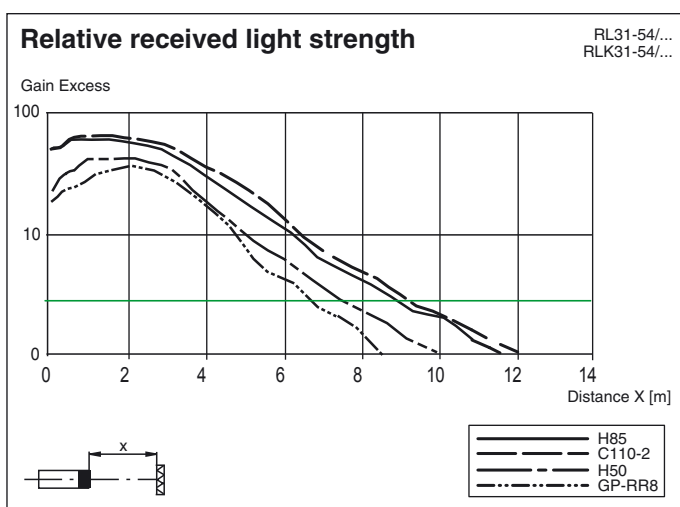
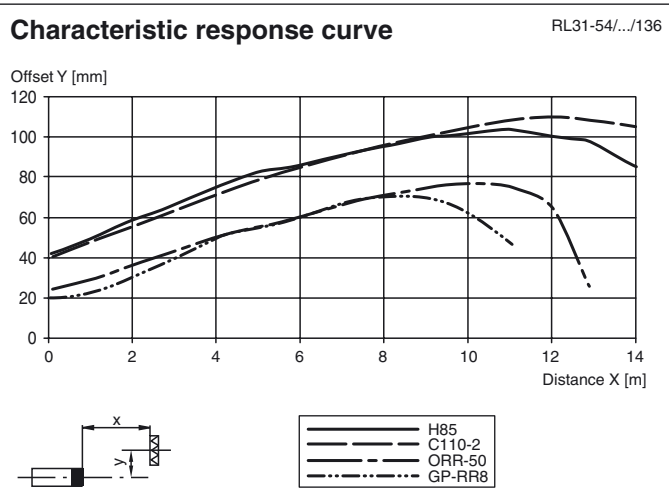
OMH-RL31-04
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-RL31-05
Mounting bracket

OMH-RL31-06
Mounting bracket

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

Curves/Diagrams



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Photoelectric Sensors](#) *category:*

Click to view products by [Pepperl & Fuchs](#) *manufacturer:*

Other Similar products are found below :

[E3JM-DS70R4T-US](#) [E3L2DC4](#) [E3RA-DN12 2M](#) [E3RA-DP12 2M](#) [E3S5LE4S](#) [E3S-AD38](#) [E3S-CR11 5M](#) [E3SCT11D5M](#) [E3SCT11M1J03M](#)
[E3T-CT22S](#) [E3T-FD12R](#) [E3T-SL14R](#) [E3T-SL24 5M](#) [E3T-ST12R](#) [E3T-ST24 2M](#) [E3X-CN02](#) [E3X-CN11 5M](#) [E3X-CN21 10M](#) [E3ZM-B66](#)
[E3ZM-CL81H 2M](#) [E3Z-T62 2M](#) [NJL5303R-TE1](#) [PB10CNT15PO](#) [PD60CNX20BP](#) [FZS](#) [CX-491-P-J](#) [CX-491-Z](#) [XUM2BKC NL2T](#)
[XUM2BKC NL2T](#) [XUM2BNANL2R](#) [Y92E-ES30M](#) [Y92E-GS08SS](#) [ZXTDS04T](#) [ZX-XC4A 4M](#) [E3E23Y2US](#) [E3JM-DS70S4-US](#) [E3RA-](#)
[RN11 2M](#) [E3S5LE42M](#) [E3S-LS20XB4 5M](#) [E3S-LS3PW 2M](#) [E3TFD14N](#) [E3T-FD14R](#) [E3T-SL21 5M](#) [E3T-SL21M](#) [E3T-ST11R](#) [E3T-ST12](#)
[5M](#) [E3X-DA41-S-M1J 0.3M](#) [E3X-DAB6](#) [E3X-DAG8](#) [E3ZM-B86](#)