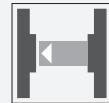




Thru-beam sensor LA31/LK31/16/25/31/115

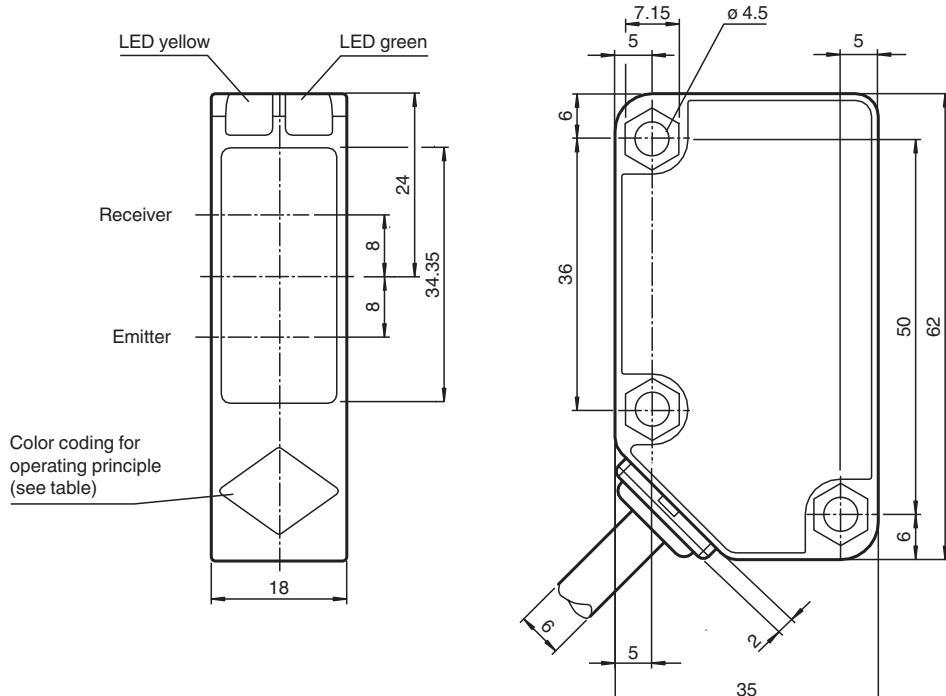


- Cost-optimized series for standard tasks
- Large construction with small housing
- Highly visible LED
- Version for universal voltages
- Relay output
- Wide range of mounting options

Thru-beam sensor, 30 m detection range, red light, light on, sensitivity adjustment, AC/DC version, relais output, fixed cable



Dimensions



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

Technical Data

System components

Emitter

LA31/115

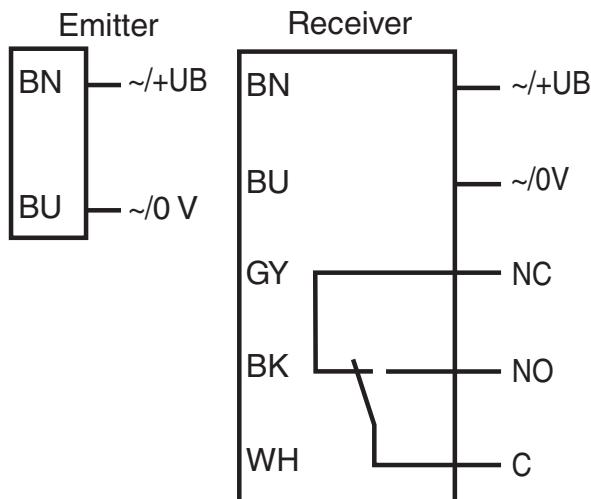
Technical Data

Receiver	LK31/16/25/31/115	
General specifications		
Effective detection range	0 ... 30 m	
Threshold detection range	43 m	
Light source	LED	
Light type	modulated visible red light , 630 nm	
Alignment aid	LED yellow: 1. LED illuminates: Sufficient light signal received, emitter and receiver alignment is correct 2. LED flashes: Reaching switching point 3. LED off: Light beam is interrupted or the alignment is out	
Diameter of the light spot	approx. 800 mm at a distance of 30 m	
Opening angle	Emitter: 0.5 ° , Receiver: 1.5 °	
Ambient light limit	50000 Lux ; according to EN 60947-5-2	
Functional safety related parameters		
MTTF _d	620 a	
Mission Time (T _M)	20 a	
Diagnostic Coverage (DC)	0 %	
Indicators/operating means		
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	
Control elements	sensitivity adjustment	
Electrical specifications		
Operating voltage	U _B	24 ... 240 V AC 12 ... 240 V DC
No-load supply current	I ₀	Emitter: ≤ 20 mA Receiver: ≤ 20 mA
Power consumption	P ₀	Emitter: ≤ 1 VA Receiver: ≤ 1 VA
Output		
Switching type	light-on	
Signal output	Relay, 1 alternator	
Switching voltage	max. 250 V AC/DC	
Switching current	max. 3 A	
Switching power	DC: max. 150 W AC: max. 750 VA	
Switching frequency	f	≤ 20 Hz
Response time	≤ 25 ms	
Conformity		
Product standard	EN 60947-5-2	
Compliance with standards and directives		
Standard conformity		
Standards	EN 62103	
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)	
Ambient conditions		
Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)	
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)	
Mechanical specifications		
Housing width	18 mm	
Housing height	62 mm	
Housing depth	35 mm	

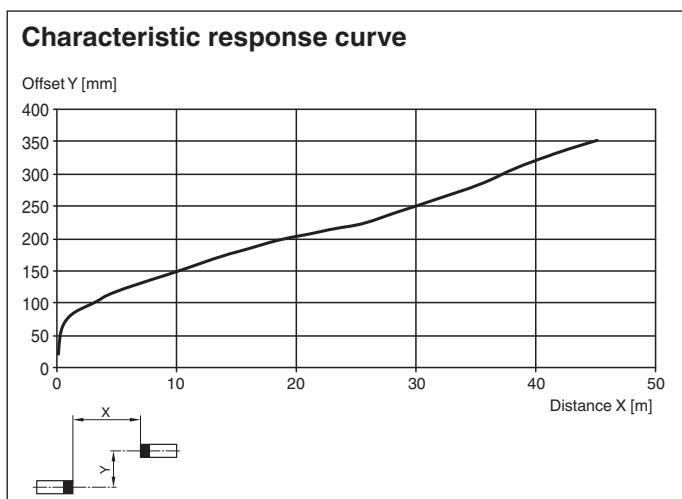
Technical Data

Degree of protection	IP67
Connection	Emitter: 2 m fixed cable , 2-wire Receiver: 2 m fixed cable , 5-wire
Material	
Housing	Polycarbonate
Optical face	PMMA
Mass	Emitter: 116 g Receiver: 131 g

Connection Assignment



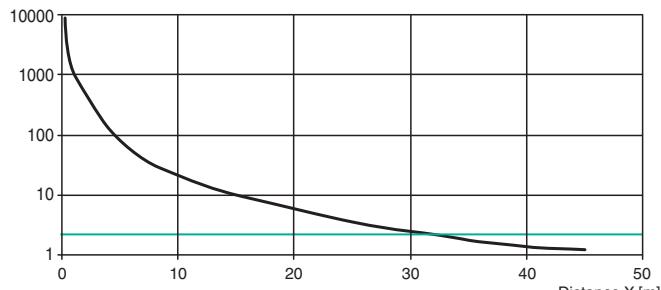
Characteristic Curve



Characteristic Curve

Relative received light strength

Stability control



Accessories

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