



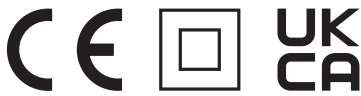
Thru-beam sensor

LD31/LV31/25/38/115

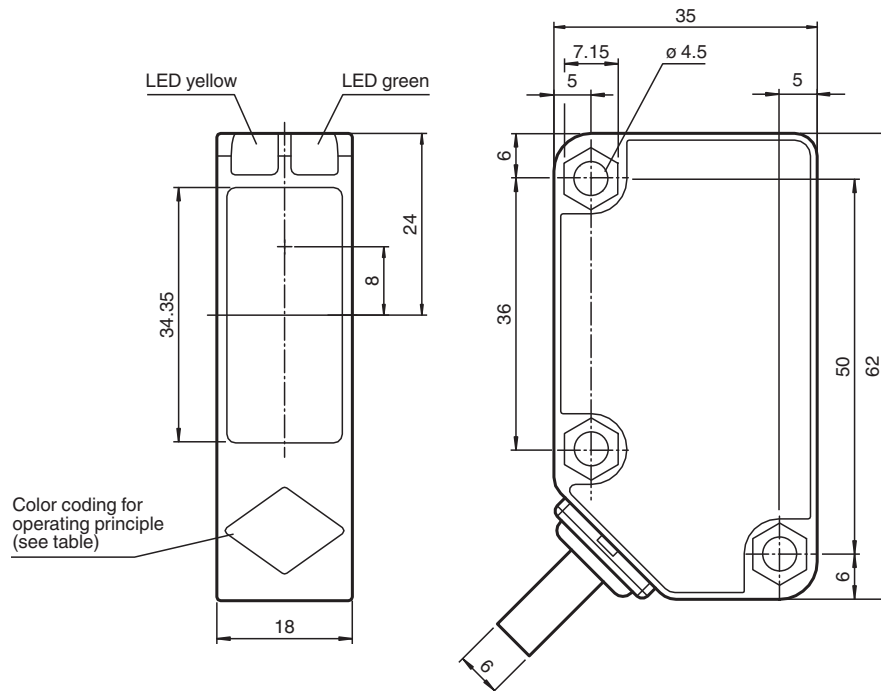


- Operating voltage DC
- Highly visible LED
- Protection class II
- Relay output
- Compact and stable housing

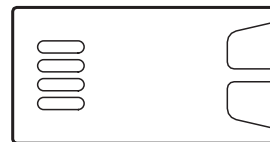
Thru-beam sensor, 30 m detection range, red light, light on, DC version, relay contact output, fixed cable



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

System components	
Emitter	LD31/76a/115
Receiver	LV31/25/38/115
General specifications	
Effective detection range	0 ... 30 m
Threshold detection range	43 m

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

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Technical Data

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
Electrical specifications		
Operating voltage	U _B	12 ... 30 V DC
No-load supply current	I ₀	Emitter: ≤ 18 mA Receiver: ≤ 20 mA
Input		
Test input		emitter deactivation at +U _B
Output		
Switching type		light-on
Signal output		Relay, 1 alternator
Switching voltage		max. 30 V DC
Switching current		max. 1 A
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		CCC approval / marking not required for products rated ≤36 V
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
Degree of protection		IP67
Connection		Emitter: 2 m fixed cable , 3-wire Receiver: 2 m fixed cable , 5-wire
Material		
Housing		Polycarbonate
Optical face		PMMA

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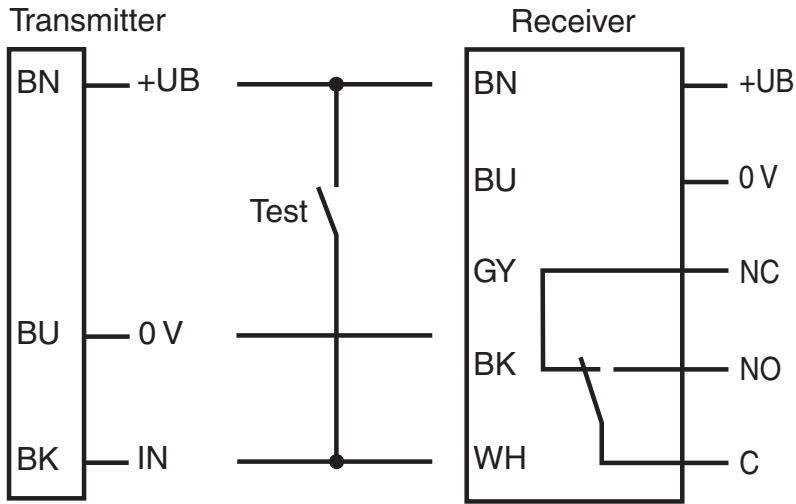
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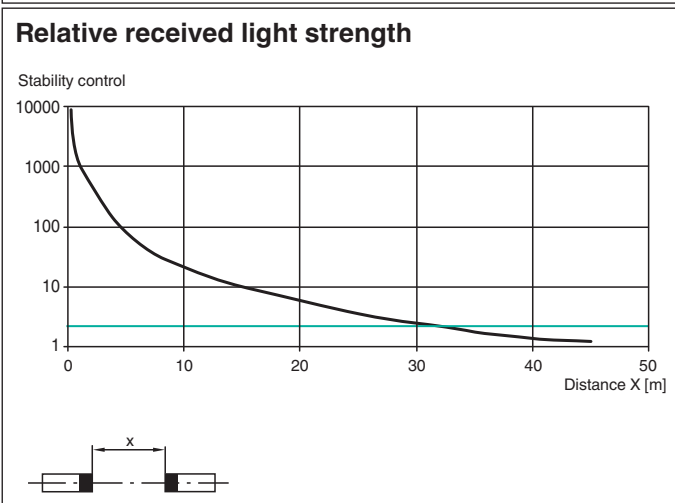
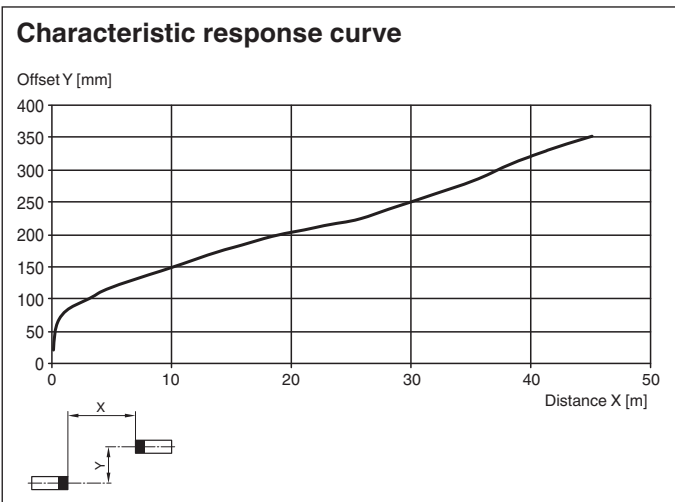
Technical Data

Mass	Emitter: 116 g Receiver: 131 g
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Connection Assignment









Characteristic Curve



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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 \varnothing 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