



Model Number

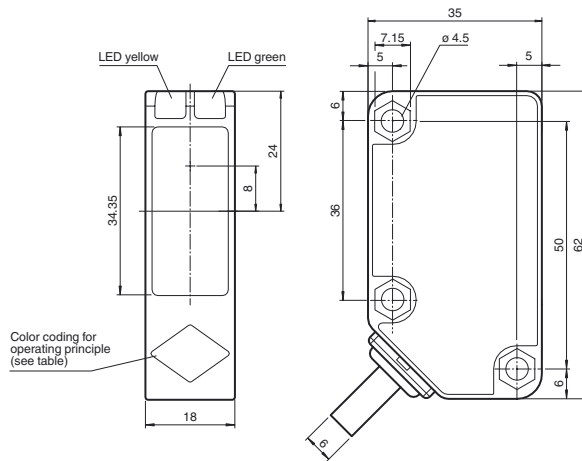
LA31/LK31/31/115

Thru-beam sensor
with 2 m fixed cable

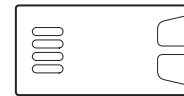
Features

- 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

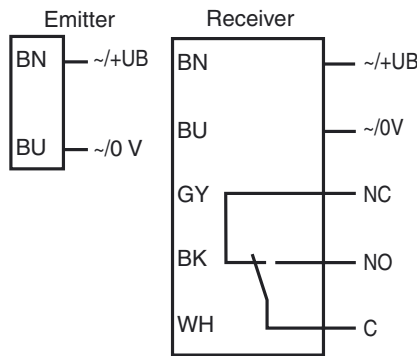
Dimensions



| | |
|---|-------|
| 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



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Technical data**System components**

| | |
|----------|-------------|
| Emitter | LA31/115 |
| Receiver | LK31/31/115 |

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 |
| Angle of divergence | Emitter: 0.5 ° , Receiver: 1.5 ° |
| Ambient light limit | 50000 Lux ; according 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 | 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 | dark 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 |

Ambient conditions

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

Mechanical specifications

| | |
|-------------------|---|
| Protection degree | 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 |

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 |
| 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) |

Accessories

OMH-RL31-01
Mounting bracket

OMH-RL31-02
Mounting bracket narrow

OMH-RL31-03
Mounting bracket narrow

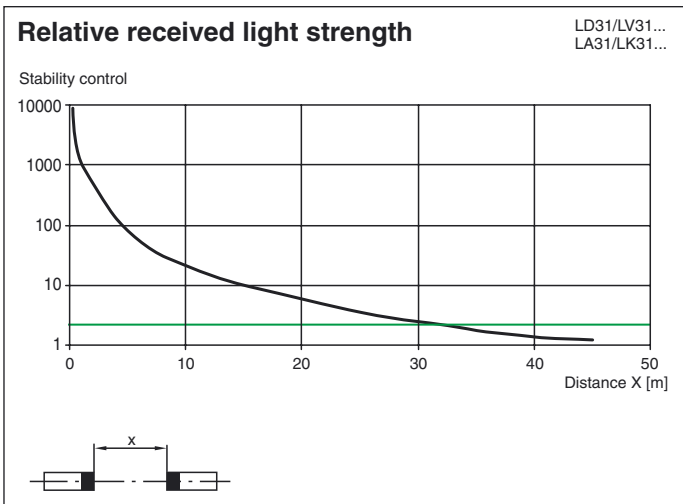
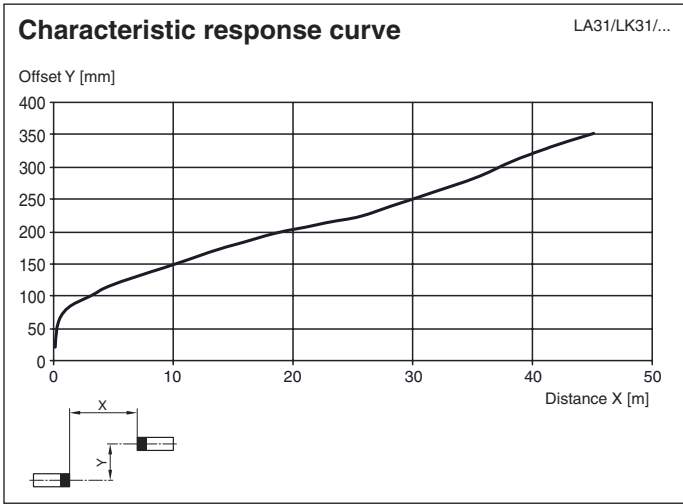
OMH-RL31-04
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-RL31-05
Mounting bracket with M10 threaded rod

OMH-RL31-06
Stainless steel mounting bracket with adjustable half clamp on the side

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

Curves/Diagrams



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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com