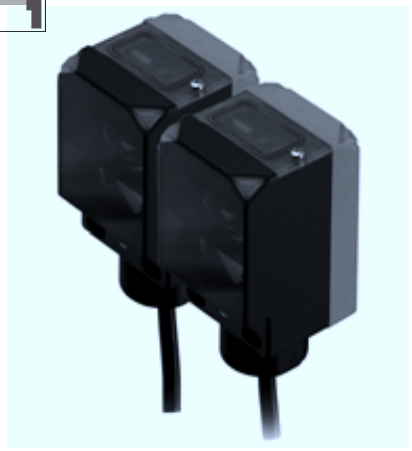


## Model Number

**LA61/LK61-Z/31/115**

Thru-beam sensor

with fixed cable

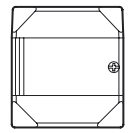
## Features

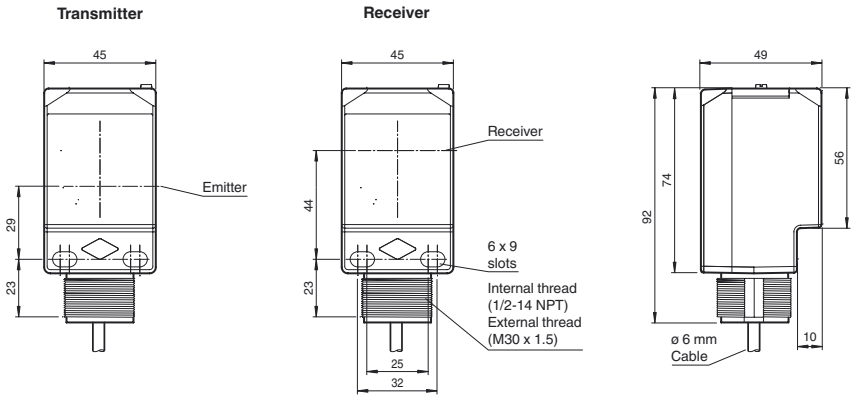
- Cost-optimized series for standard tasks in a special design
- Compact design
- Wide range of mounting options thanks to cubic housing design with M30 thread
- 360° high visibility LEDs
- Programmable ON-delay, OFF-delay, and One-shot timers
- Version for universal voltages
- Relay output

## Product information

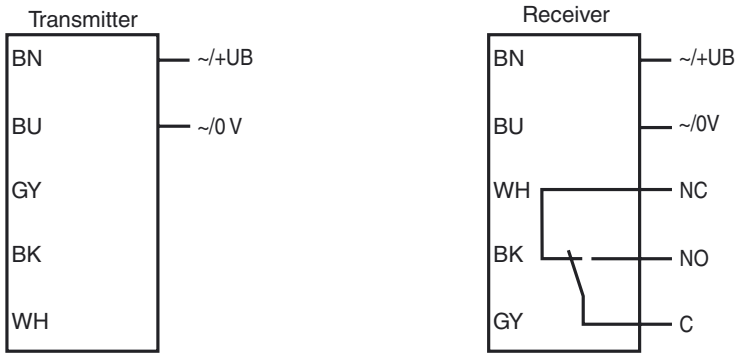
The Series 61 sensor family is a comprehensive product line, offering five sensing modes. Each sensor is equipped with four LEDs that are highly visible from all directions, indicating Power-On, target presence and marginal excess gain. The widely recognized, polycarbonate housing provides a IP67 protection degree rating. Color-coded labels are clearly printed on the housing to easily identify the sensing mode. DC models offer a 4-in-1 output while AC/DC models have a SPDT relay output rated to 3 A. All versions come standard with an integral multifunction timer, sensitivity adjustment and Light-ON/Dark-ON switch. Series 61 sensors are cross-talk protected and have a high degree of resistance to ambient lighting. Each sensor can be mounted via front and rear slots, rear dovetail guide or M30 x 1.5 mounting base. Additionally, cabled sensor models provide ½" - 14 NPT internal threads for use with flexible conduit.

## Dimensions

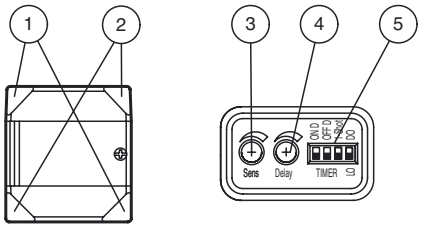





## Electrical connection




## Indicators/operating means




| | | |
|---|---|---|
| 1 | Operating display | green |
| 2 | Signal display | yellow |
| 3 | Sensing range adjuster | |
| 4 | Time adjuster | |
| 5 | DIP-switches | |

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## Technical data

| | | |
|---|---|---|
| **System components** | | |
| Emitter | | LA61/115 |
| Receiver | | LK61-Z/31/115 |
| **General specifications** | | |
| Effective detection range | | 0 ... 60 m |
| Threshold detection range | | 85 m |
| Light source | | IRED |
| Light type | | modulated infrared light , 850 nm |
| Diameter of the light spot | | approx. 1600 mm at a distance of 60 m |
| Angle of divergence | | Emitter: 1.5 ° , Receiver: 1.5 ° |
| Ambient light limit | | 5000 Lux ; according EN 60947-5-2 |
| **Indicators/operating means** | | |
| Operation indicator | | 2 LEDs green |
| Function indicator | | 2 LEDs yellow Receiver: receiver LED yellow, lights up when light beam is free, flashes when falling short of the stability control ; OFF when light beam is interrupted |
| Control elements | | Light/Dark switch |
| Control elements | | Detection range adjuster |
| Control elements | | Time adjuster ( 0 ... 10 s ) |
| **Electrical specifications** | | |
| Operating voltage | $U_B$ | 24 ... 240 V AC<br>12 ... 240 V DC |
| No-load supply current | $I_0$ | ≤ 35 mA |
| 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 |
| Power consumption | $P_0$ | ≤ 2 VA |
| **Output** | | |
| Switching type | | light/dark on, switchable |
| Signal output | | Relay, 1 alternator |
| Switching voltage | | max. 240 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 |
| Timer function | | DIP-switch for selection of operating modes |
| **Ambient conditions** | | |
| Ambient temperature | | -40 ... 55 °C (-40 ... 131 °F) |
| Storage temperature | | -40 ... 70 °C (-40 ... 158 °F) |
| **Mechanical specifications** | | |
| Degree of protection | | IP67 |
| Connection | | fixed cable |
| Material | | |
| Housing | | PC (glass-fiber-reinforced Makrolon) |
| Optical face | | PMMA |
| Mass | | Emitter: 150 g<br>Receiver: 150 g |
| Tightening torque, fastening screws | | < 2 Nm |
| **Compliance with standards and directives** | | |
| Standard conformity | | |
| Product standard | | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |
| **Approvals and certificates** | | |
| UL approval | | cULus |
| CCC approval | | Certified by China Compulsory Certification (CCC) |

## Accessories

**MPZB01**
Mounting bracket with vertical slots

**MPZB02**
Mounting bracket with circular slots

**MPZB06**
Ball and Swivel Mounting Bracket

**MPZB07**
Ball and Swivel Vertical Mounting Plate

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

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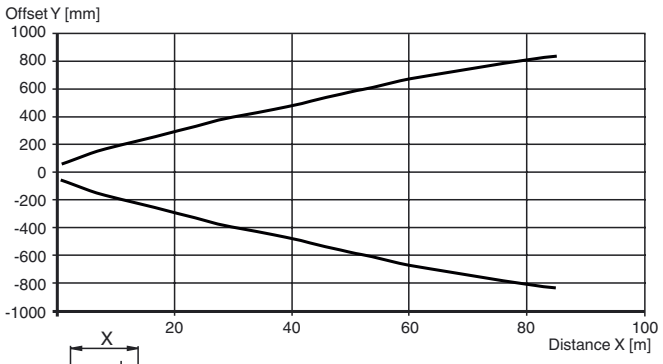
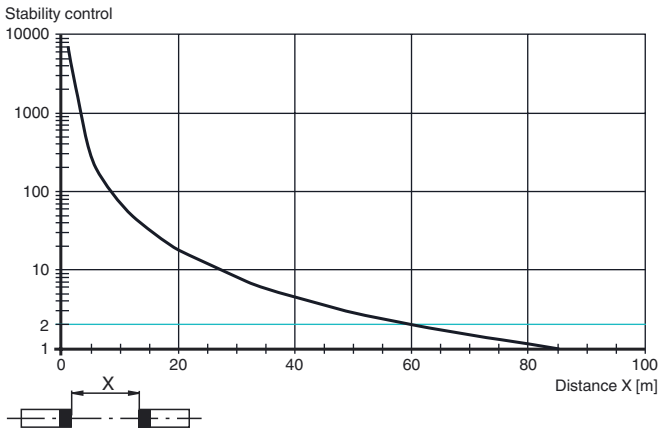
## Curves/Diagrams

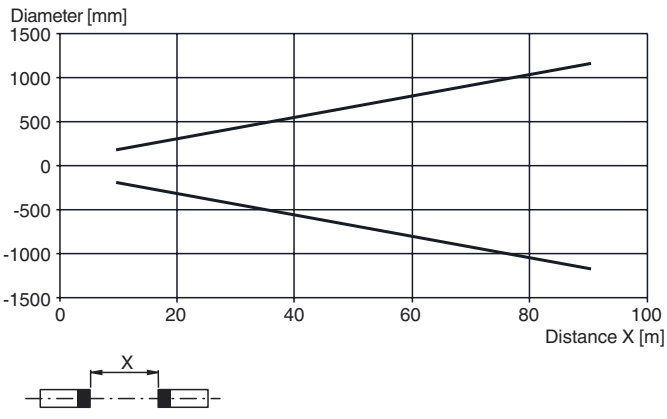
### Characteristic response curve




### Relative received light strength




### Light spot diameter

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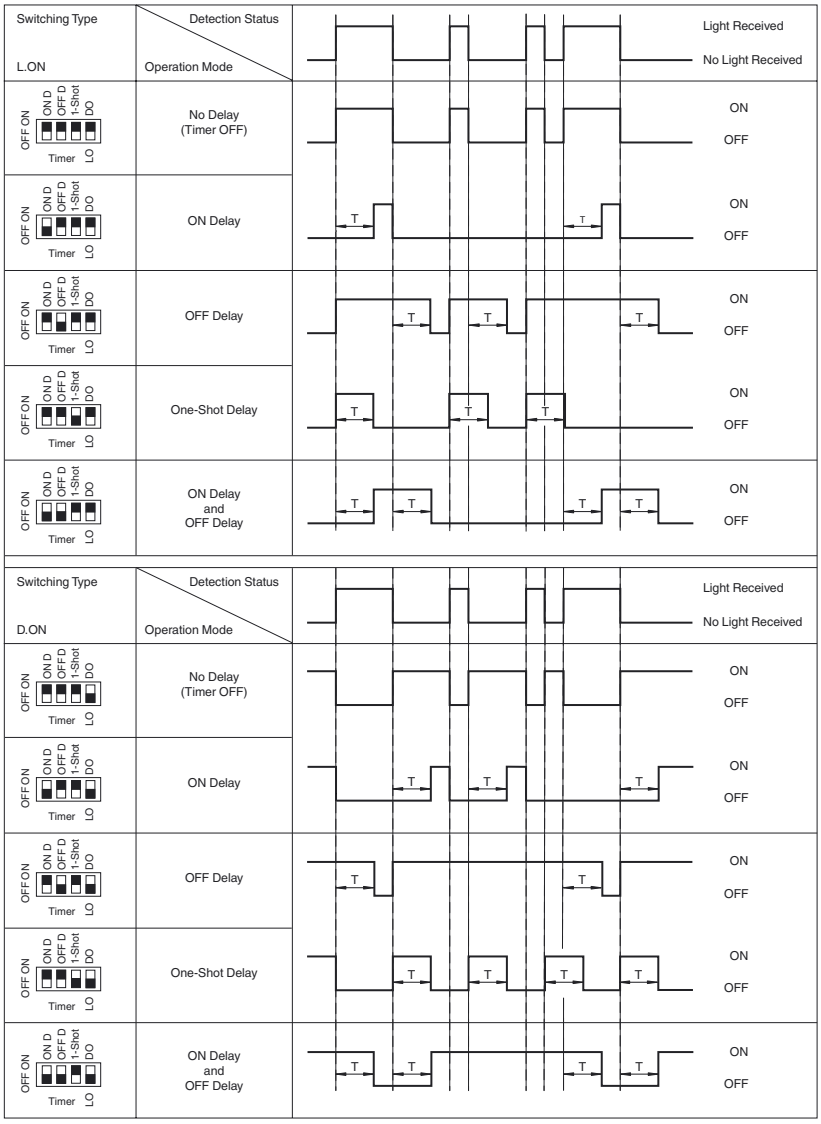
## Timer Functions




Time ( T ) is adjustable from 0 to 10 s

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