

FACTORY AUTOMATION

SERIES 61

HIGH-PERFORMANCE PHOTOELECTRIC SENSORS



MULTIPLE OPTIONS IN AN INDUSTRY-STANDARD HOUSING



"4-IN-1" OUTPUT



Reduce your inventory by having one sensor replace four with Pepperl+Fuchs' 4-in-1 output. The 4-in-1 technology offers a normally open and a normally closed output, which will automatically detect the connected load. A single sensor can operate in NPN normally open, NPN normally closed, PNP normally open, or PNP normally closed. No external wiring to select the mode. No sinking or sourcing confusion.

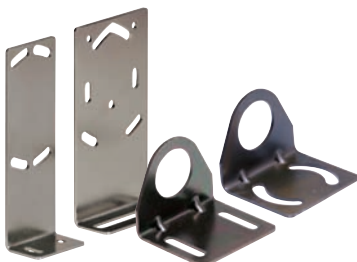


UNIVERSAL POWER SUPPLY

With both DC and AC/DC models, whatever your application, RL(K) 61 has you covered. These flexible sensors offer a built-in SPDT relay in AC/DC models and a 4-in-1 output in DC models.

ACCESSORIES

Simplify your installation with Pepperl+Fuchs' accessories. From simple mounting solutions to cordsets and reflectors, our broad range of accessories will complement and extend the capability of your Series 61 photoelectric sensor.



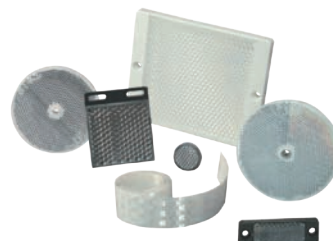
BRACKETS

Stainless steel brackets designed for mounting flexibility



CORDSETS

Complete line of nano, micro, mini-style cordsets, straight or right-angled



REFLECTORS

Wide variety of materials, shapes, sizes, and reflectivity



FIBER-OPTIC CABLES

Wide variety of sizes, shapes, and modes

SIMPLE, POWERFUL, AND MULTIPURPOSE

SIMPLY POWERFUL

- Easy to set up using DIP switches and potentiometers
- Timer adjustment via pot (0-50 ms DC, 0-10 s AC/DC)
- Sensitivity adjustment
- ON delay, OFF delay, and one-shot timers
- Light ON/Dark ON selectable



Fiber-optic model compatible with glass fiber cables

Single captive screw enables easy access to the controls



2 m fixed cable

1/2"-14 NPT internal thread

Strong optical performance

Multipurpose, rugged, IP67 housing

Integral timers, sensitivity adjustment, and Light ON/Dark ON selectable

Powerful "4-in-1" or relay output

Cabled or quick-disconnect versions

High ambient light resistance

Automatic cross-talk protection

FOUR SENSING MODES

Easy identification of sensing modes provided by color-coded labels



Note: No label for fiber-optic models.

SENSING MODES

A comprehensive and powerful product line offering five sensing modes.

- BACKGROUND SUPPRESSION:** 500 mm (1.64 ft.) & 2 m (5.56 ft.)
- DIFFUSE:** 1 m (3.28 ft.) & 4 m (13.12 ft.)
- POLARIZED RETROREFLECTIVE:** 18 m (59 ft.)
- THRU BEAM:** 60 m (196.8 ft.)

Note: Fiber-optic range is dependent on which fiber cable is used.



HIGH-VISIBILITY LED INDICATION

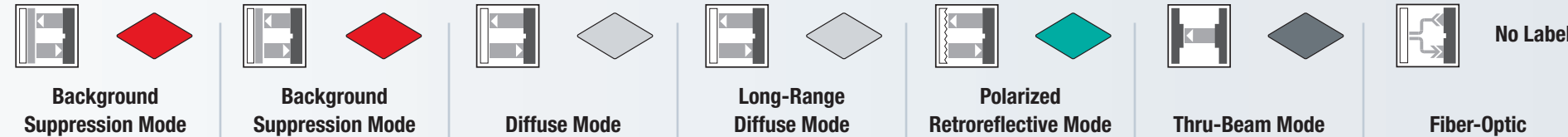
Yellow LED indicates when light is received and flashes to indicate marginal excess gain

Green LED for power status

Universal footprint thru-hole mounting

M30 x 1.5 mounting snout

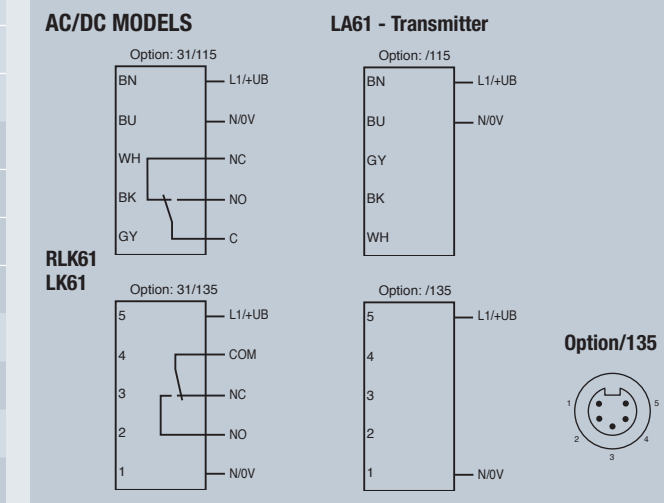
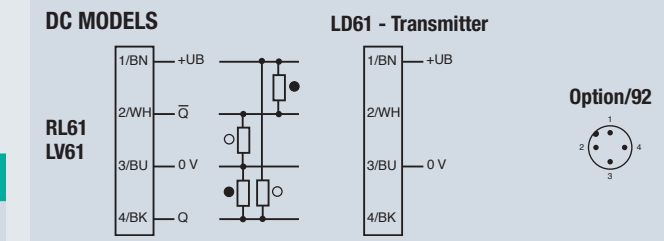
Quick disconnect (M12, 4-pin for DC or Mini, 5-pin for AC/DC)



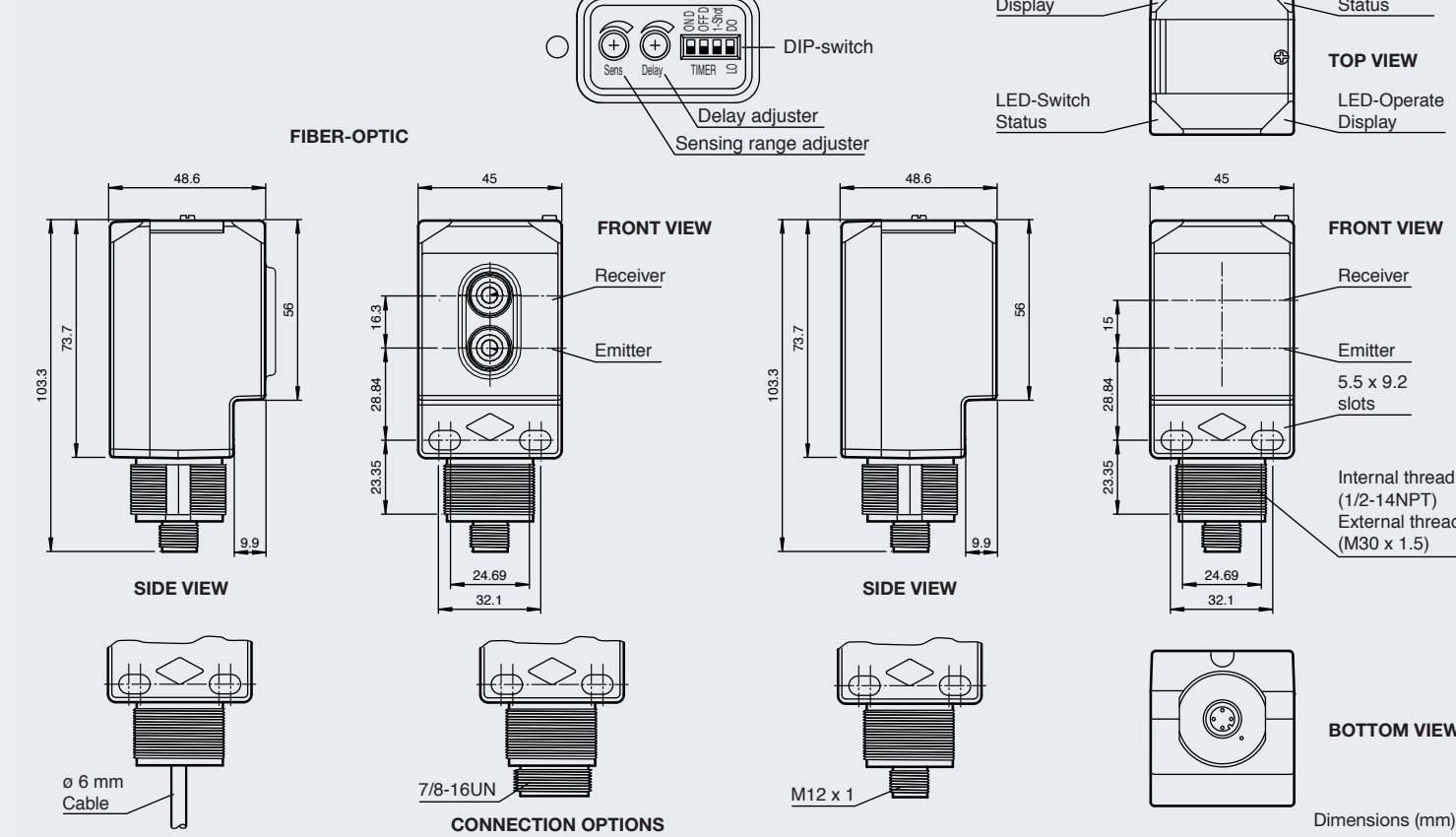
| SENSING RANGE | 500 mm | 2 m | 0 – 1 m | 0 – 4 m | 0 – 18 m | 0 – 60 m | Dependent on cable used |
|--|---------------------------|----------------------------|-----------------------|-----------------------|------------------------|------------------------------------|-------------------------|
| DC Models | | | | | | | |
| 2-meter cable 4-in-1 Output Thru-Beam Transmitter | RL61-8-H-500-IR-Z/115/136 | RL61-8-H-2000-IR-Z/115/136 | RL61-8-1000-Z/115/136 | RL61-8-4000-Z/115/136 | RL61-55-Z/115/136 | LV61-Z/115/136 | RL61-LL-IR-Z/115/136 |
| Quick disconnect M12, 4-pin (V1) Thru-Beam Transmitter | RL61-8-H-500-IR-Z/92/136 | RL61-8-H-2000-IR-Z/92/136 | RL61-8-1000-Z/92/136 | RL61-8-4000-Z/92/136 | RL61-55-Z/92/136 | LV61-Z/92/136 | RL61-LL-IR-Z/92/136 |
| AC/DC Models | | | | | | | |
| 2-meter cable Relay Output Thru-Beam Transmitter | RLK61-8-H-500-IR-Z/31/115 | RLK61-8-H-2000-IR-Z/31/115 | RLK61-8-1000-Z/31/115 | RLK61-8-4000-Z/31/115 | RLK61-55-Z/31/115 | LK61-Z/31/115 | RLK61-LL-IR-Z/31/115 |
| Mini 5-pin (V95) Relay Output Thru-Beam Transmitter | RLK61-8-H-500-IR-Z/31/135 | RLK61-8-H-2000-IR-Z/31/135 | RLK61-8-1000-Z/31/135 | RLK61-8-4000-Z/31/135 | RLK61-55-Z/31/135 | LK61-Z/31/135 | RLK61-LL-IR-Z/31/135 |
| Sensitivity Adjustment | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LEDs | Yes (4) | Yes (4) | Yes (4) | Yes (4) | Yes (4) | Yes: transmitter (2), receiver (4) | Yes (4) |
| Light Spot Diameter | ≈ 6 mm at 500 mm range | ≈ 24 mm at 2 m range | ≈ 17 mm at 1 m range | ≈ 45 mm at 4 m range | ≈ 350 mm at 18 m range | ≈ 840 mm at 20 m range | Fiber dependent |
| Light Beam Angle | ≈ 0.7° | ≈ 0.7° | ≈ 1° | ≈ 0.7° | ≈ 1.1° | ≈ 2.4° | Fiber dependent |

| COMMON SPECIFICATIONS | DC Models | AC/DC Models |
|---|---|-----------------------|
| Load Current/Electrical Contact Rating | 100 mA max. | 3 A max. |
| Voltage Drop | ≤ 2.5 VDC | |
| Short Circuit And Overload Protection | Yes | |
| Reverse Polarity Protection | Yes | |
| Supply Voltage | 10-30 VDC | 24-240 VAC/12-240 VDC |
| Voltage Ripple | 10% | |
| Current/Power Consumption | ≤ 40 mA | ≤ 2 VA |
| Response Time | ≤ 1 ms | ≤ 25 ms |
| Switching Frequency | 500 Hz | 20 Hz |
| Light Source | Infrared or Visible Red (Retroreflective) LED | |
| Standards | EN 60947-5-2 | |
| Protection (IEC) | IP67 | |
| Ambient Light Resistance | ≤ 40,000 lux | |
| Temperature Range | <i>Working</i> | -22 °F to +131 °F |
| | <i>Storage</i> | -40 °F to +158 °F |
| Housing Material | <i>Body</i> | Plastic |
| | <i>Lens</i> | PMMA |
| Approvals | | |

ELECTRICAL CONNECTIONS



PRODUCT DIMENSIONS



FACTORY AUTOMATION – SENSING YOUR NEEDS



Pepperl+Fuchs sets the standard in quality and innovative technology for the world of automation. Our expertise, dedication, and heritage of innovation have driven us to develop the largest and most versatile line of industrial sensor technologies and interface components in the world. With our global presence, reliable service, and flexible production facilities, Pepperl+Fuchs delivers complete solutions for your automation requirements—wherever you need us.

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