INSTALLATION INSTRUCTIONS

# RELAY LIGHT CURTAIN

**MODEL: RLC-K36, RLC-K72**

**WARNING**

Read and understand all instructions before beginning installation. Disconnect power to motor and test upon completion. Photo optics should be installed by qualified personnel to ensure the requirements herein have been met. Keep these instructions with the installation. Always abide by local and national electrical code specifications when wiring accessories to motor controls.

**The Relay Light Curtain (RLC-K36, RLC-K72) is a non-monitored, fail-safe photo optic solution that has a normally open and a normally closed dry contact output. It provides additional protection for the area above the floor, protecting people and vehicles more effectively than a single-beam photo eye. Consult the manufacturer manual for detailed instructions about connecting RLC to the door operator.**

## CONTENTS

- **RLC-K36**: 3 ft., 8 elements
  - (1) Emitter
  - (1) Receiver
  - (4) Universal mounting brackets
  - (8) #4 ½ inch zinc plated oval head self-tapping screws
- **RLC-K72:** 6 ft., 16 elements
  - (1) Emitter
  - (1) Receiver
  - (6) Universal mounting brackets
  - (12) #4 ½ inch zinc plated oval head self-tapping screws

## REQUIRED

- Hand tools for installing brackets

## OPTIONAL

- Alternative mounting hardware, as required

## SUGGESTED

- Operator manual

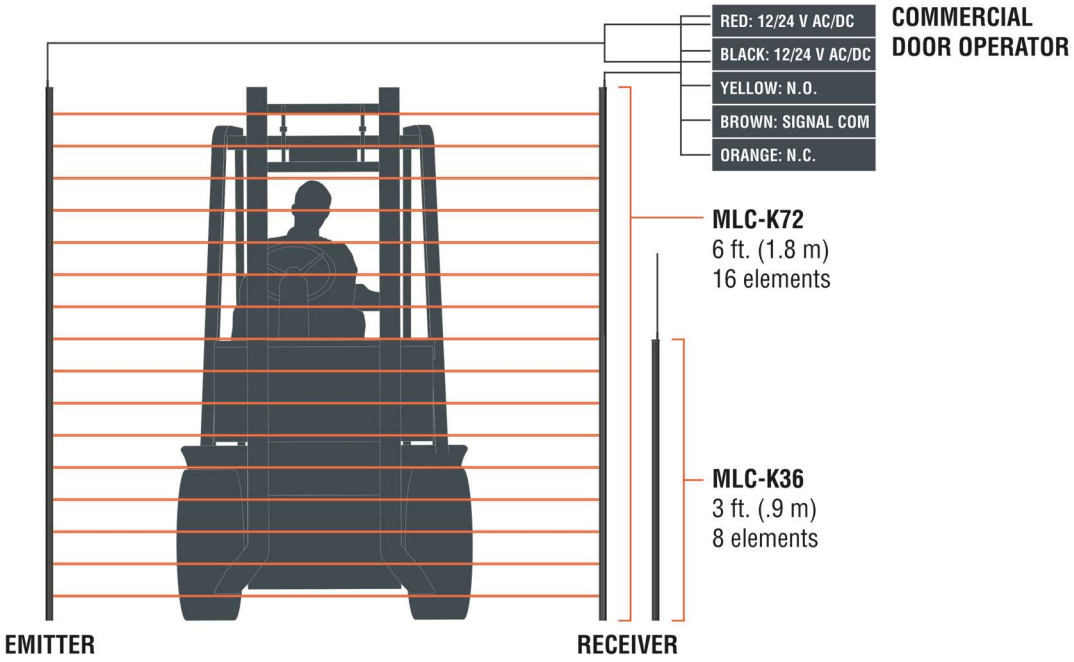


**IMAGE 1:**
**WIRING DIAGRAM**

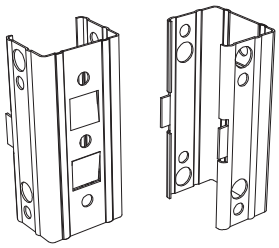

**IMAGE 2:**
**UNIVERSAL MOUNTING BRACKETS**

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## I. INSTRUCTIONS

1. Identify the emitter (2 wires) and the receiver (5 wires).

2. Identify the locations you will install the RLC, usually close to the door tracks on the inside of the door opening. Be certain no part of the moving door will obstruct the infrared beams.

3. Install the universal mounting brackets (Image: 2) onto the mounting points, using the hardware provided or other appropriate hardware. The brackets should be installed approximately 6 inches from the top and bottom ends of the emitter and receiver. For RLC-K72, a third bracket should be installed centered in between the top and bottom brackets. Make sure the brackets are all in-line.

4. Install the emitter and receiver by clipping them into the mounting brackets. The flat surfaces of the emitter and receiver, where the optics are located, should point at each other, across the door opening. The bottom of the RLC should be 6 inches above the floor or directly above the existing single-beam photo eye.

5. Connect the emitter and receiver to the operator. A total of six (6) wires need to connect to the operator; two (2) wires from the emitter and four (4) wires from the receiver. Refer also to the Wiring Diagram (Image: 1).

| WIRE | DESCRIPTION | OPERATOR INPUT |
|---|---|---|
| **Black and Red** (emitter/receiver) | Power | Accessory power<br>(usually 24 volts AC or 12 volts DC) |
| **Brown and Yellow** (receiver) | For a normally open input | Reversing input or<br>along with photo eye input |
| **Brown and Orange** (receiver) | For a normally closed input or to connect in series with a photo eye | Normally closed reversing input |

6. Confirm the green LEDs at the bottom of both the emitter and receiver are on, indicating power. The light curtains have a wide acceptance angle and should align easily upon powering. The red receiver LED indicates either an obstruction or a misalignment. To test proper operation, step in and out of the door opening, observing the red LED turning on and off.

| EMITTER LED | RECEIVER LED |
|---|---|
| Green: Power | Green: Power |
| | Red: Obstruction or misalignment |

7. Consult the operator manufacture's manual for proper operation with the door.

## II. TECH SUPPORT

For additional assistance, contact Miller Edge Tech Support: 800-220-3343

## III. GENERAL SPECIFICATIONS

| | RLC-K36 | RLC-K72 |
|---|---|---|
| **PERFORMANCE** | | |
| Operating Range | 8-32 ft. (2-10 m) | 8-32 ft. (2-10 m) |
| Number of Elements | 8 elements | 16 elements |
| Maximum Ambient Light | >100,000 lux | >100,000 lux |
| Aperture Angle | EM: ±8° RX: ±15° | EM: ±8° RX: ±15° |
| **ELECTRICAL** | | |
| Power Source | 12-24 volts AC/DC | 12-24 volts AC/DC |
| Current Consumption | <150 mA @ 24 volts DC | <150 mA @ 24 volts DC |
| Relay Rating | 1A current switching at 24 volts DC | 1A current switching at 24 volts DC |
| Output | N.O. or N.C. | N.O. or N.C. |

| | RLC-K36 | | RLC-K72 | |
|---|---|---|---|---|
| **PHYSICAL** | | | | |
| Max. Protection Height | 36 in. (~1 m) | | 72 in. (~2 m) | |
| Dimensions | 1 W x 38 H x 1.1 D in. (25 mm x ~1 m x 28 mm) | | 1 W x 74 H x 1.1 D in. (25 mm x ~2 m x 28 mm) | |
| Weight | 32 oz. | | 64 oz. | |
| Housing Material | PVC over aluminum | | PVC over aluminum | |
| Temperature Range | -40°F to +140°F (-40°C to +60°C) | | -40°F to +140°F (-40°C to +60°C) | |
| LED Indicators | EM: Power, Obstruction | RX: Power | EM: Power, Obstruction | RX: Power |
| Cable Length | EM: 50 ft. (~15 m) | RX: 50 ft. (~15 m) | EM: 50 ft. (~15 m) | RX: 50 ft. (~15 m) |
| Mounting | (4) Universal mounting brackets | | (6) Universal mounting brackets | |
| Degree of Protection | IP67 | | IP67 | |

## IV. MODELS

- **RLC-K36**: 3 ft., 8 elements, non-monitored/fail safe
- **RLC-K72**: 6 ft., 16 elements, non-monitored/fail safe

## V. COMPLIANCE

The RLC-K36 and RLC-K72 are not approved for use as external entrapment protection devices for garage doors. For post-2010 operators, please leave the external entrapment protection intact.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Re-orient or relocate the receiver antenna
2. Increase the separation between the equipment and the receiver
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
4. Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## VI. MAINTENANCE

It is strongly recommended that users check photo optics at least once per month for low batteries alerts (where applicable) and damage to housings and mountings. Also check for signs of damage to cables or connection points. Refer to your operator manual for detailed instructions about motor connections.

## VII. REPLACEMENT

To replace your Miller Edge photo optic, contact your sales representative. Attempting to repair your Miller Edge photo optic is not recommended and will void the manufacturer warranty.

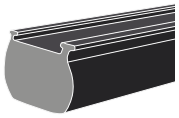
## VIII. WARRANTY

The Relay Light Curtain carries a **2-year warranty** from date of shipment from Miller Edge for credit or replacement. This warranty applies to normal use, which is found to have defective materials or workmanship, as determined solely by an authorized factory representative. This warranty is void where evidence of misuse or abuse is present. This warranty covers repair or replacement of the purchased product only; product installation/labor charges are not covered. Miller Edge manufactures its products to meet stringent specifications and cannot assume responsibility for those consequences arising from improper installation or misuse. Installation

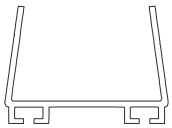
instructions and testing procedures provided by Miller Edge must be followed for proper operation and maintenance.

## IX. ACCESSORIES

Contact your Miller Edge sales representative for photo optics accessories:



**SENSING EDGES**



**MOUNTING CHANNELS (EDGES)**

**JUNCTION BOXES**

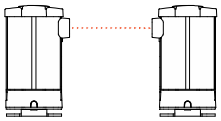
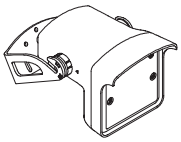


**PHOTO OPTICS (SINGLE BEAM)**



**MOTION SENSORS**


**INTERFACE MODULES**