

PHOTO062/064 - Photo Cells



Specifications and Installation Instructions

WARNING

TO REDUCE THE RISK OF SEVERE INJURY OR DEATH TO PERSONS:

1. READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
2. Always shut OFF the main power before performing any electrical intervention.
3. Do NOT connect more than one (1) monitored entrapment protection device simultaneously on the MONIT terminals without the use of an interface module.
4. Photoelectric cells must be installed facing each other across the door's path within 6" (15 cm) of the plane of the door and the beam no more than 5-3/4" (14,6 cm) above the floor).

Contents PHOTO 062 and PHOTO 064

Article No.	Components	Description	Specifications
<p>PHOTO 062 Monitored External Entrapment Protection Device</p> <p>Used to safeguard doors according to the requirements of UL325</p>	 <p>Photo cell transmitter (Tx) and receiver (Rx)</p>	<p>◆ Transmitter (Tx) and Receiver (Rx) sensor pair for use as monitored photo cells.</p>	<ul style="list-style-type: none"> → 2-wires for transmitter. 2-wires for receiver. Can be mixed and matched. → Connects to specific MONIT terminal on electronic control board (BOARD 070M). → Through beam type. → Nema 1 – indoor beam. → 30" (76.2cm) of 2-solid conductor wires (UL CL-2 Type). → Range 20' (6.1m). → Includes L-shape metal mounting brackets, hardware and receiver sunlight lens tube protector.
<p>PHOTO 064 Monitored External Entrapment Protection Device</p> <p>Used to safeguard doors according to the requirements of UL325</p>	 <p>Photo cell transmitter (Tx) and receiver (Rx)</p>	<p>◆ Transmitter (Tx) and Receiver (Rx) sensor pair for use as monitored photo cells.</p>	<ul style="list-style-type: none"> → 2-wires for transmitter. 2-wires for receiver. Can be mixed and matched. → Connects to specific MONIT terminal on electronic control board (BOARD 070M). → Through beam type. → Nema 4 enclosures – outdoor beam. → Use in harsh environments. → 30" (76.2cm) of 2-solid conductor wires (UL CL-2 Type). → Easy installation of receiver/ transmitter into Nema 4 enclosures. → Range 20' (6.1m). → Includes L-shape metal mounting brackets and hardware.

Technical Specifications – Photo Cells

Electrical	→ Powered on the ECB's MONIT terminals.
Environmental	<ul style="list-style-type: none"> → Operating Ambient Temperature -30°C to 70°C (-34°F to 21°F) → Enclosure: <ul style="list-style-type: none"> → PHOTO 062: Nema 1 – Indoor → PHOTO064: Nema 4 – Outdoor
Optical	<ul style="list-style-type: none"> → Range: Variable 0-35' (10.7m) → Immunities: as required by UL 325 Article 34 & 35
Mechanical Dimensions	→ 2,3" H x 1,2" W x 1,65" D (58.4mm x 30.4mm x 41.9mm)

Installation Instructions

NOTICE

- Sunlight may affect the sensors. In order to reduce this effect, identify which side of the garage door is exposed to the most sunlight and mount the sending unit (Tx) on this side.

Mount the photo cell transmitter and photo cell receiver facing each other across the area to be sensed using the "L" brackets and hardware provided.

1. Select and mark a mounting location at 5"(15,7 cm) above the floor. The sensors should be mounted as close as possible to the door track or the inside edge of the door, to offer maximum entrapment protection, as seen in Figure 1. It is very important that both of the wall mounting brackets be mounted at the same height for proper alignment. Repeat this step and install the 2nd wall mounting L shape bracket to the opposite side of the door.
2. Drill pilot hole, using a 3/16" drill bit where pencil mark was made in step 1. Using one 5/16" x 1-1/2" lag screw, mount the L bracket to the door jamb. Repeat this step and install the second L bracket to the opposite wall door jamb.

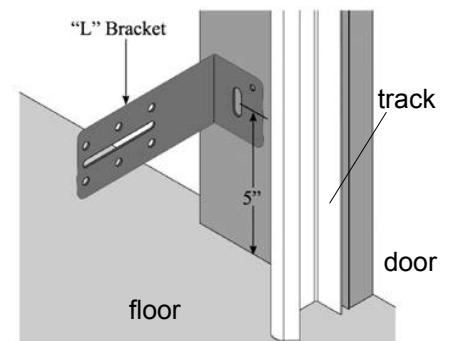


Figure 1 - "L" Bracket Installation

NOTICE

- An extension bracket is available for installations with a longer distance from the door jamb. Use the two 1/4" carriage bolts, a 1/4" flat washer and a 1/4" locking nut provided.

3. **For PHOTO062:** Attach the transmitter and receiver to the L shape bracket securely (orienting the lens upward) using the wing nut provided (don't over tighten). Confirm that the center of the lens is 5-3/4" (14,6 cm) above the floor, as seen in Figure 2.

For PHOTO064: Use the four (4) 8-32 x 1/2" self-threading screws (provided) to attach the beam enclosures to the mounting brackets. Then, mount them to the L brackets securely (orienting the lens upward) using the wing nuts provided (don't over tighten). Confirm that the center of the lens is 5-3/4" (14,6 cm) above the floor, as seen in Figure 2.

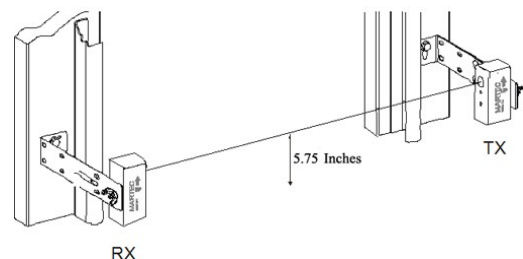


Figure 2 - Installation of PHOTO062 or PHOTO064

PHOTO062/064 - Photo Cells

Specifications and Installation Instructions

- Uncoil the wires from the units, route and connect them to **Terminals 15 and 16** on the electronic control board (BOARD070M), as seen in Figure 3.

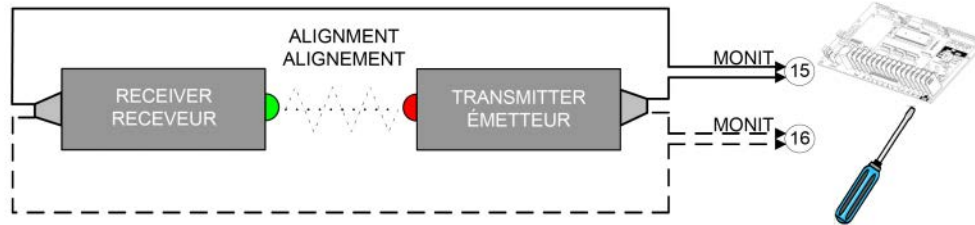


Figure 3 - Connection to the Electronic Control Circuit

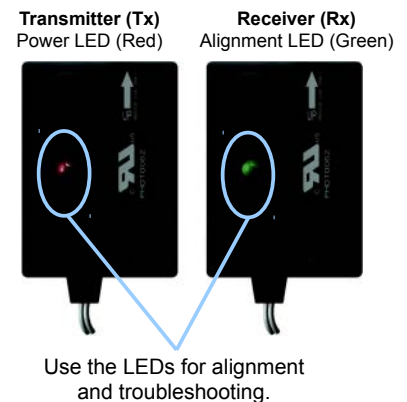
Trouble Shooting Tips - On-Board LED Monitoring Status

The electronic control board's LEDs help with wiring and troubleshooting diagnostics. Every LED indicates the status of the door. The electronic control board has a non-volatile memory and the LEDs return to their initial state after a power interruption.

PHOTO062 & PHOTO064 (Monitored - BOARD070M)	
 LED D4 ON (ORANGE)	Indicates the activation or absence of/ defectiveness of Monitored Photo Electric Cells.

Photo Eyes – LED Status Descriptions

Red LED	Green LED	Status
 ON	 ON	Normal operation Power on
 OFF	 OFF	No power, check wiring Check if the wires on Terminals #15/#16 are disconnected
 ON	 OFF	Poor alignment / Obstructed beam / Rx defective



Test Procedures

WARNING

FAILURE TO TEST AND ADJUST THE PHOTO CELL SYSTEM MAY RESULT IN SEVERE INJURY OR DEATH TO PERSONS:

Test the operator periodically using the Test Procedure described below. An open door shall not close and the closing door must reverse when the Photo Cell system is interrupted by a 6" x 12" (15.2cm x 30.4cm) obstruction.

1. Press the CLOSE button to close door.
 - a) Check photo cell alignment and relay contact connection if the door does not start to close.
 - b) Check for obstruction attached to the door if reversal occurs before reaching full close position.
2. Press the OPEN button to open door.
3. Press the CLOSE button to close door. Interrupt the photo cell, which will cause the door to return to the fully open position.
4. Place a 6" X 12" (15.2cm x 30.4cm) object on the floor, as depicted in Figure 4. Test the obstruction in three different locations: 12" (30.4cm) in from both sides of the opening, and on the centerline of the opening. This test is an intentional obstruction of the photo cell system. It shall prevent an open door from closing, and cause a closing door to stop or stop and reverse. If needed, adjust the elevation of the photo cell units to ensure that the system performs as described.

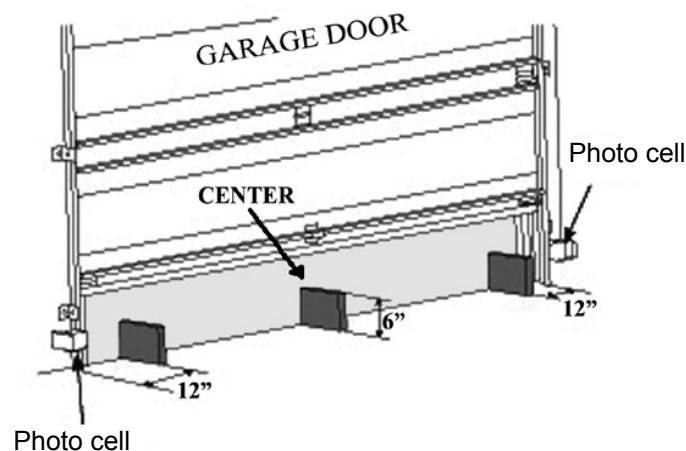


Figure 4 - Mounting of Photo Cells

For further information, please consult the operator's Installation & Instruction Manual or contact our Technical Support Department at **1-800-361-2260**.