

| Part #    | Description                             |
|-----------|---|
| 41K4629   | CPS-N4 - Commercial Protector Interface |
| CPS3CARD  | CPS3 PC Board (Only)                    |
| K77-16011 | Sensor Hardware Kit                     |
| 50-15514  | Emitter                                 |
| 50-15515  | Receiver                                |

### Application

- CPS-N4:** Suitable for use on all operators with a reversing N.O. contact input.
- CPS-LN4:** Direct connect photo eyes suitable with Logic 2 and Logic 3 operators.
- CPS-N4:** Suitable for use with Logic 2 and Logic 3 operators when more than (1) set of photo eyes are required. Example: Fire station, use (1) set of direct connect CPS-LN4 and CPS-N4.

### Install the Protector System®

#### IMPORTANT INFORMATION ABOUT THE SAFETY REVERSING SENSOR

**Be sure power to the operator is disconnected.**

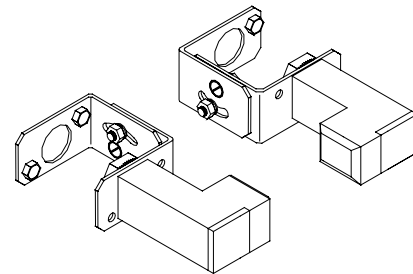
When properly connected and aligned, the sensor will detect an obstacle in the path of its electronic beam. The sending eye (emitter with an amber indicator light) transmits an invisible light beam to the receiving eye (receiver with a green indicator light). If an obstruction breaks the light beam while the door is closing, the door will stop and reverse to full open position.

The units must be installed inside the garage so that the sending (emitting) and receiving eyes face each other across the door, no more than 6" (15 cm) above the floor. Either can be installed on the left or right of the door as long as the sun never shines directly into the receiving eye lens.

### ⚠ WARNING

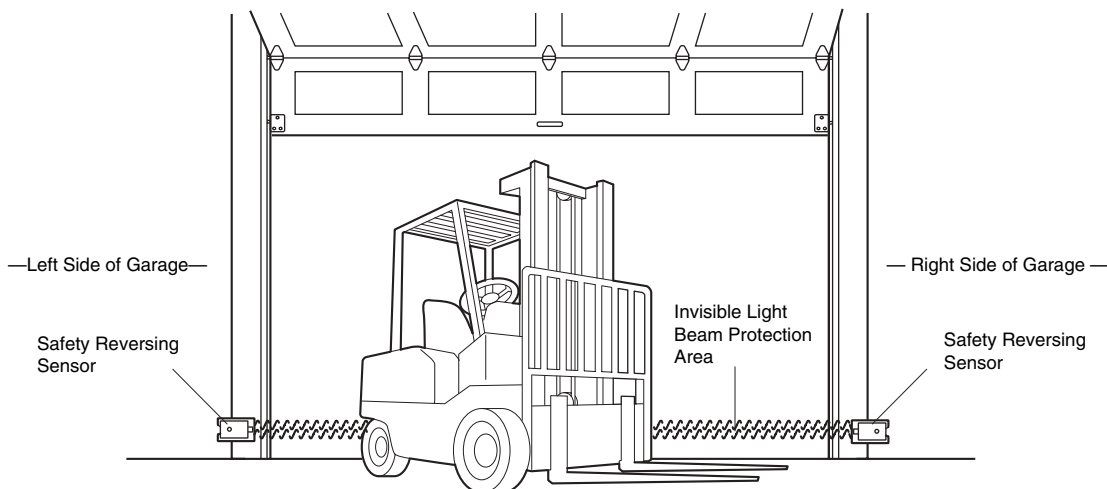
To reduce the risk of **SERIOUS INJURY** or **DEATH**,

- This device is for use **ONLY** on LiftMaster® Commercial Door Operators.
- Disconnect power **BEFORE** installing the Commercial Protector System®.
- Read and follow **ALL** instructions.



The brackets must be securely fastened to a solid surface such as the wall framing. If installing in masonry construction, add a piece of wood at each location to avoid drilling extra holes in masonry if repositioning is necessary.

The invisible light beam path must be unobstructed. No part of the garage door (or door tracks, springs, hinges, rollers or other hardware) may interrupt the beam while the door is closing. If it does, use a piece of wood to build out each sensor mounting location to the minimum depth required for light beam clearance.



Facing the door from inside the garage (installation procedures are the same for all door types).

# INSTALLATION FOR LIFTMASTER COMMERCIAL OPERATORS

## INSTALLING THE BRACKETS

**Be sure power to the operator is disconnected.** Install and align the brackets so the sensors will face each other across the door/gate, with the beam no higher than 6" (15 cm) above the floor. For sensing above 6" a second set of eyes would be required.

### Floor or Wall Mount Installation (Figure 1)

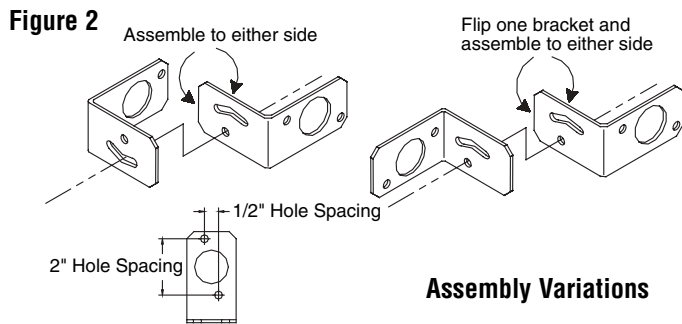
If necessary, see Figure 2 for various assembly options to fit your application. Always use flat washer next to slot with radius as shown in Figure 3. Insert track bolts through holes as shown.

**NOTE:** Putting track bolts in slots will prevent brackets from pivoting. Attach brackets to wall with lag screws provided. Fasten to the floor with concrete anchors (not provided).

### Track Installation (Figure 3)

To mount to door track use only one bracket per side.

To vertically attach to 2" x 4" wall stud it may become necessary to rotate bracket to prevent wood from splitting.



## CONDUIT CONNECTIONS

Use a liquid tight fitting (1/2" trade size) with sealing washer to connect to sensors. The sensors are supplied with 36" long leads. We recommend the use of a liquid tight junction box near each sensor to make the connection to the sensor leads (Figure 4). Use rigid or flexible liquid tight conduit (depending on local codes) from junction boxes to operator.

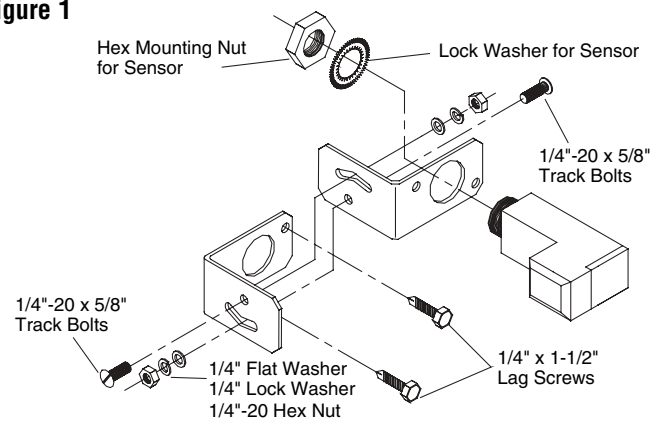
**IMPORTANT:** Use a minimum size 20 ga. copper wire for connection between the sensors and the operator.

### WIRING CONNECTIONS:

- CPS-N4** - See page 3
- CPS3-N4** - See page 4
- CPS-LN4** - See page 5

### Floor or Wall Mounting

Figure 1



### Door Track Mounting

Figure 3

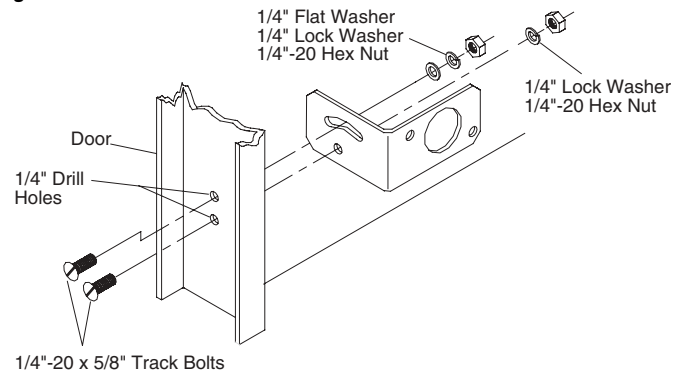
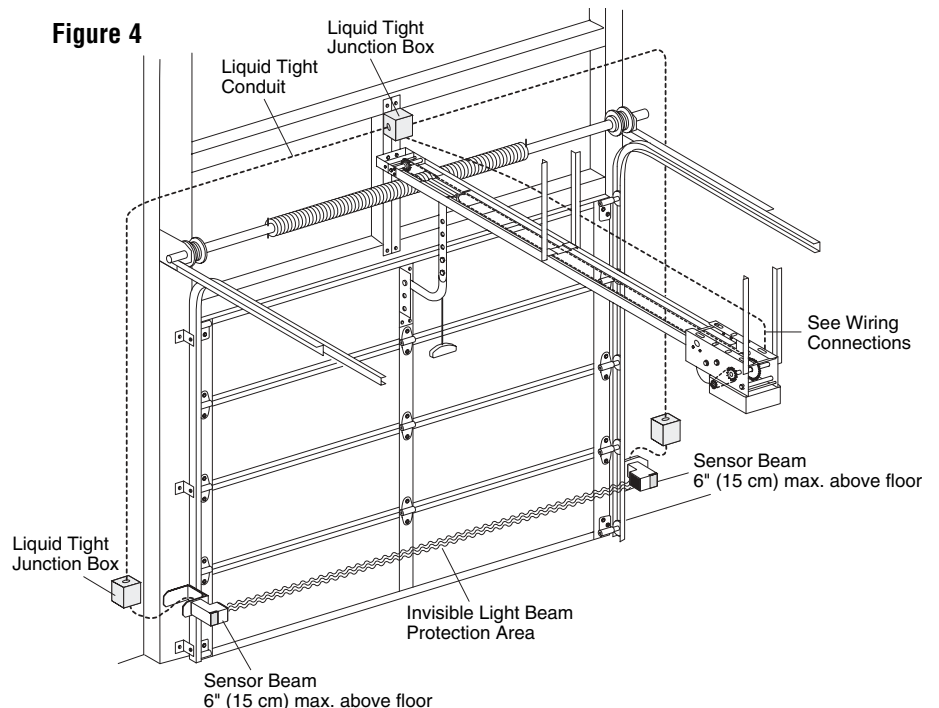
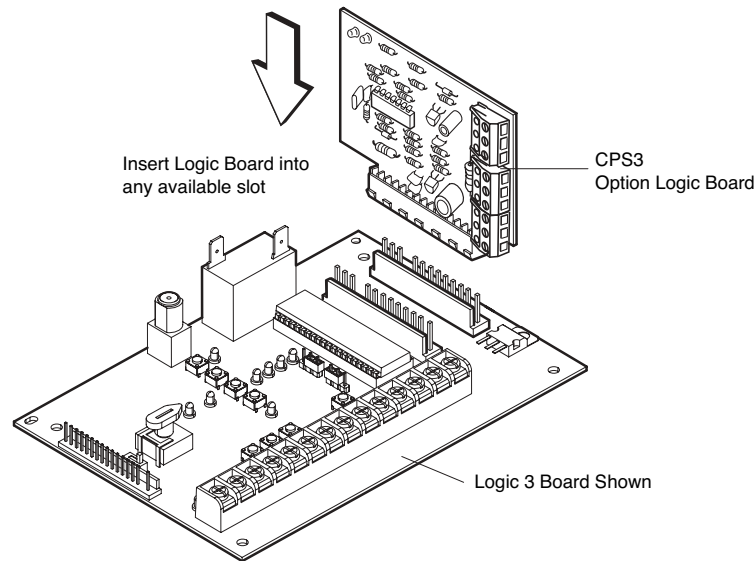


Figure 4

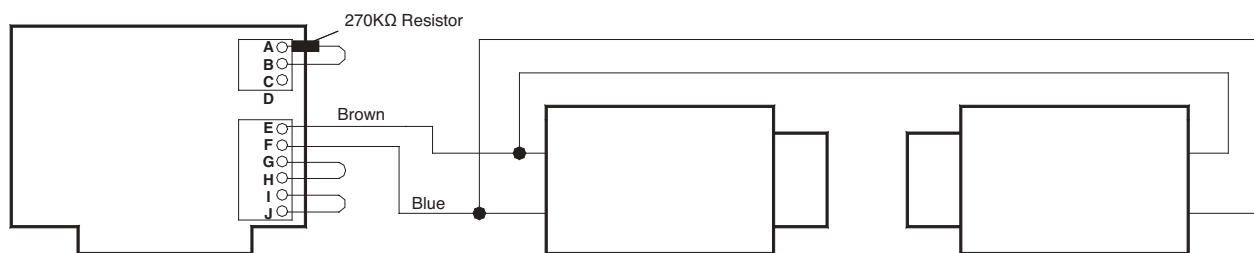


# WIRING FOR LIFTMASTER COMMERCIAL OPERATORS

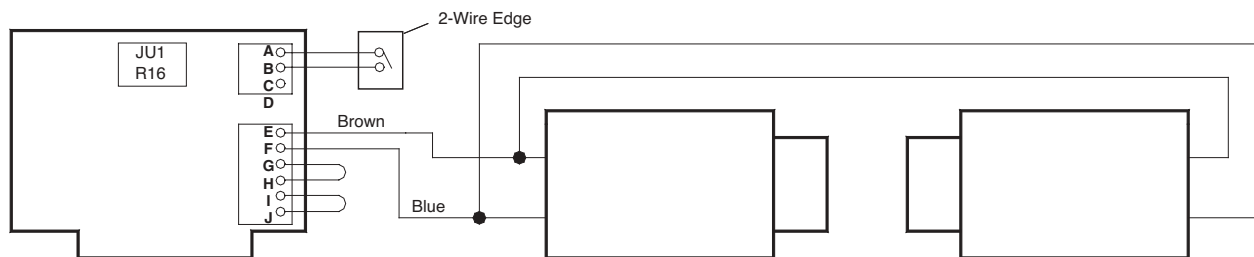
## CPS3-N4 Wiring Connections for use with Logic Operators (L2 or L3)



### Commercial Door Opener Protector System® Only



### Commercial Door Opener Protector System® and 2-Wire Fail Safe Door Edge



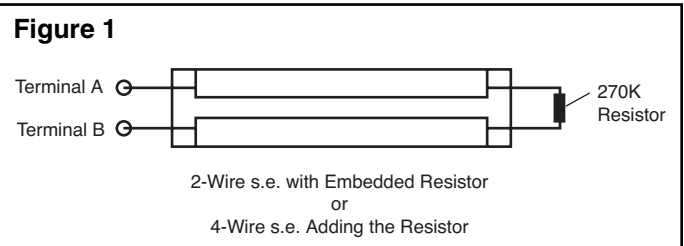
### CPS3 protector and 2-wire fail-safe door edge connections

- For a 2-wire safety edge with an embedded resistor;
1. Remove the 270K resistor from the A & B terminals.
  2. Connect 2-wire coil cord or cord reel to the A & B terminals.

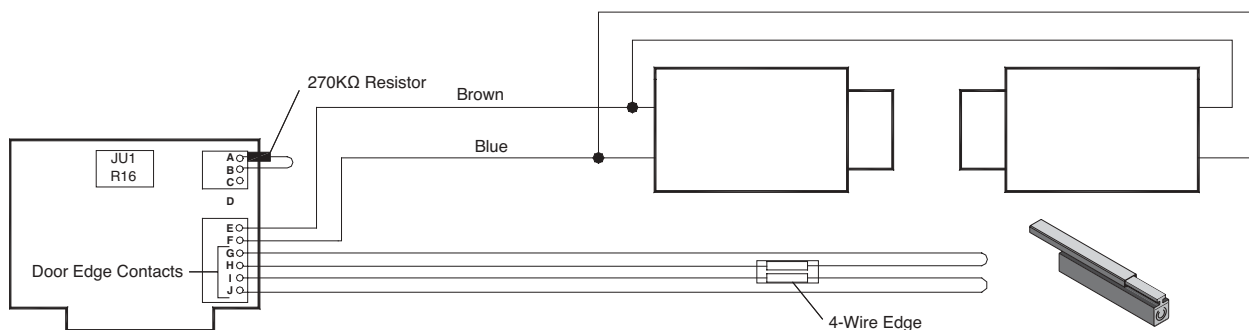
- For a 4-wire safety edge using a 2-wire coil cord;
1. Remove the 270K resistor from the A & B terminals.
  2. Add the resistor to 2 of the 4 wires at the safety edge, connect the coil cord to the other 2 safety edge wires (Figure 1).

3. Connect the 2-wire coil cord or cord reel to the A & B terminals.

**NOTE:** If the LiftMaster® photo eyes are not being connected you must remove the JU1 and R16 resistors from the CPS3CARD.



## Commercial Door Opener Protector System® and 4-Wire Fail Safe Door Edge



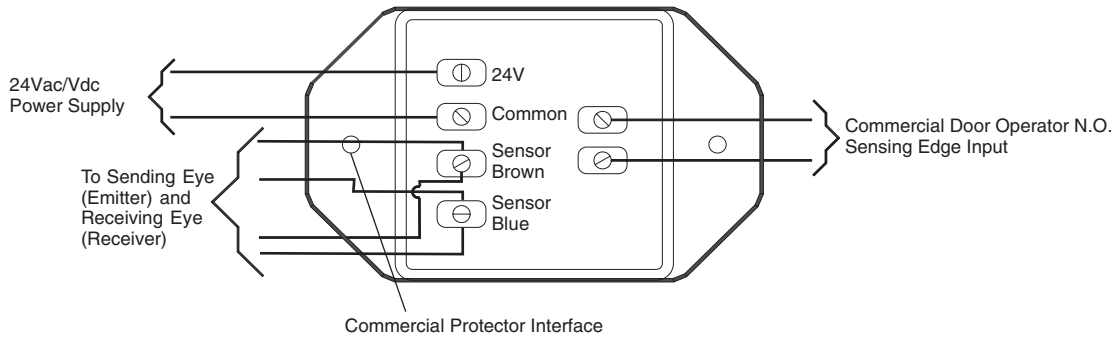
**NOTE:** When using a 4-wire door edge only (without the LiftMaster® photo eyes), you must remove the JU1 and R16 resistors from the CPS3 card. Logic 3 Board will have the same connection. The maximum door edge resistance should be less than 1000 ohms as measured between any 4 conductors. This measurement should be taken when the door edge is in the closed contact state.

| Operator/Auxiliary Point Connections      |  | Connection at CPS CPS-N4 Interface Box |                                  |                         |                        |   |   | Diagram Reference Page |
|---|--|--|----------------------------------|-------------------------|------------------------|---|---|------------------------|
|   |  | 24V                                    | Common                           | Sensor Black or Brown   | Sensor White or Blue   | Sensing Edge Input (1/2)                          | Sensing Edge Input (2/2)  |                        |
| Emitter Wire                              | at CPS CPS-N4                          |  |                                  | Emitter Black or Brown  | Emitter White or Blue  |   |   |                        |
| Receiver Wire                             | at CPS CPS-N4                          |  |                                  | Receiver Black or Brown | Receiver White or Blue |   |   |                        |
| Mechanical Terminal                       | at Operator                            | 3*                                     | Wire Nut*                        |                         |                        | 3*  | 10*   | 7                      |
| Logic 2 Terminal                          | at Operator                            | 12                                     | 13                               |                         |                        | 8   | 11  | 5                      |
| Logic 3 Terminal                          | at Operator                            | 13                                     | 14                               |                         |                        | 8   | 11  | 5                      |
| HCT Terminal                              | OmniControl Surge Suppressor Terminals | 13                                     | 11                               |                         |                        | 3   | 4   | 7                      |
| Elite Gate Application 1                  | OmniBoard Terminals                    |  |                                  |                         |                        | Sensor (1/2)                                      | Sensor (1/2)  | 7                      |
|   | OmniControl Surge Suppressor Terminals | 13                                     | 11                               |                         |                        |   |   |                        |
| Elite Gate Application 2                  | OmniControl Surge Suppressor Terminals | 13                                     | 11                               |                         |                        | 3   | 4   | 7                      |
| Estate Series with X3 or B3 Control Board | at Operator                            | TB7 1/2 Available                      | TB7 2/2 Available                |                         |                        | TB3 1/3 See page 5 for inside vs outside photoeye | TB3 2/3 See page 5 for inside vs outside photoeye                   | 5                      |
| Operators with GL Control Board           | at Operator                            | External Radio Terminal Strip R1       | External Radio Terminal Strip R2 |                         |                        | GL Board Terminal 5                               | GL Board Terminal 9 or 10 See page 6 for inside vs outside photoeye | 6                      |

**\*NOTES:** Typical connections shown. On mechanical operators always refer to diagram that came with the operator. For gate operator controls not listed above, refer to their respective owner's manuals.

# WIRING FOR LIFTMASTER COMMERCIAL OPERATORS

## CPS-N4 Wiring Connections

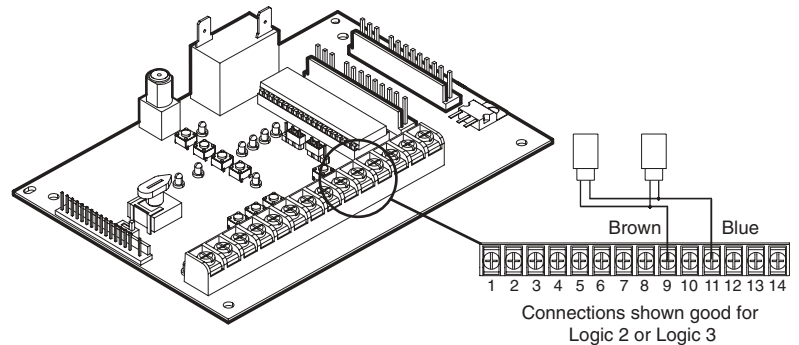


## CPS-LN4 Wiring Connections for use with Logic Operators (L2 or L3)

The eyes are required for all timer modes and fail-safe modes. The eyes are automatically learned once connected and operating correctly.

### To Unlearn Eyes

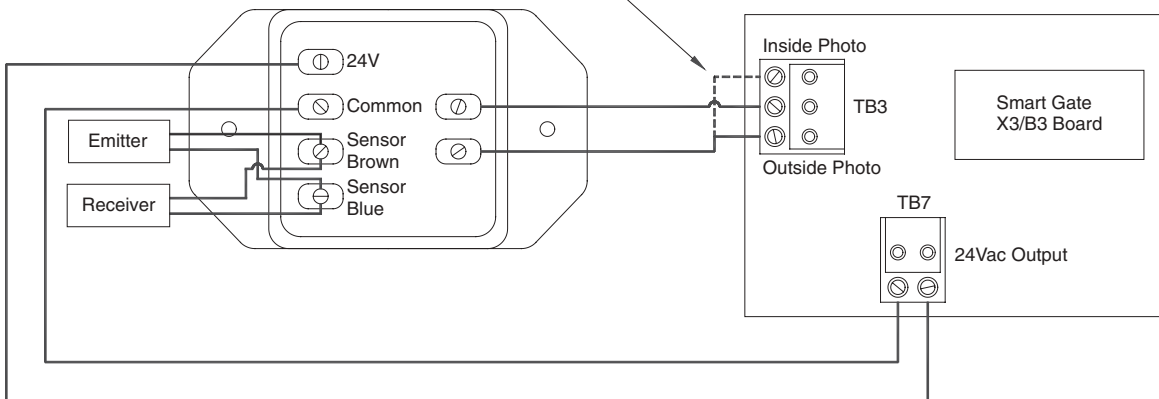
- For Logic 3, remove the eyes from the circuit. Set the selector switch to “DIAG” mode, then press and hold the stop button for 5 seconds until the “MAS” LED blinks. The eyes LED should be off. Set the selector switch back to the desired mode.
- For Logic 2, remove the eyes from the circuit board. Turn dip switches 1 and 2 off, and 3 and 4 on. Then, push the open button twice, the close button twice, and the stop button twice. Return dip switches back to desired mode.



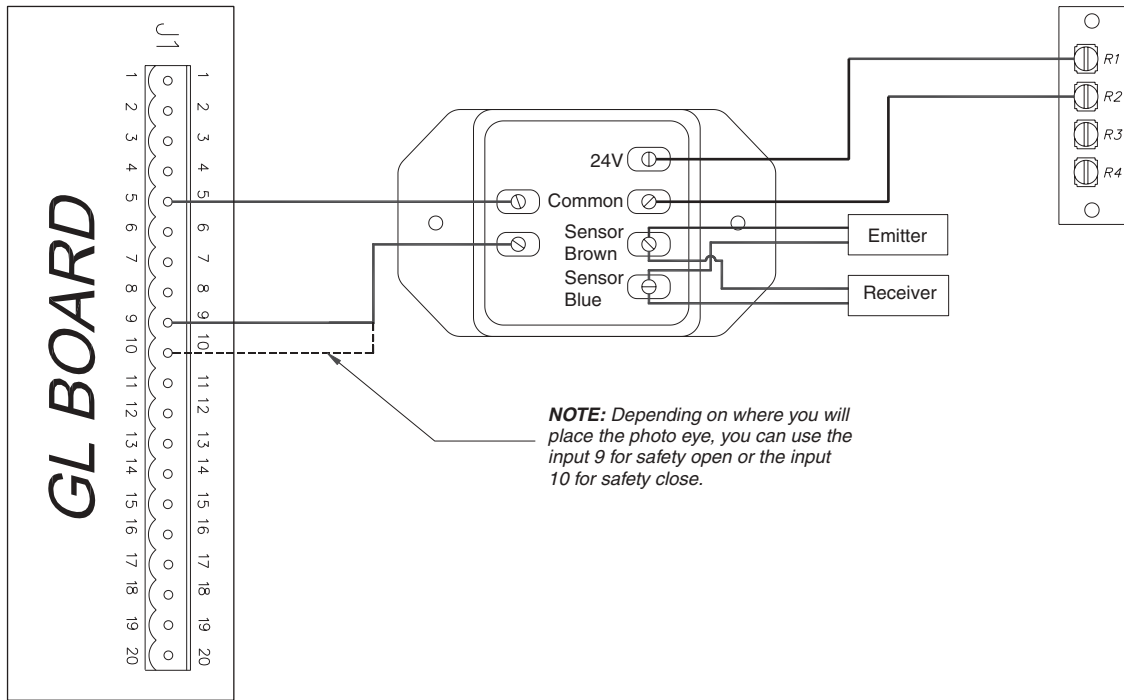
# WIRING FOR LIFTMASTER GATE OPERATORS

## CPS-N4 Wiring Connections for use with Estate Series X3 or B3 Control Board

**NOTE:** Depending on where you will place the photo eye, you can use the inside photo or the outside photo.



# CPS-N4 Wiring Connections for use with GL Control Board

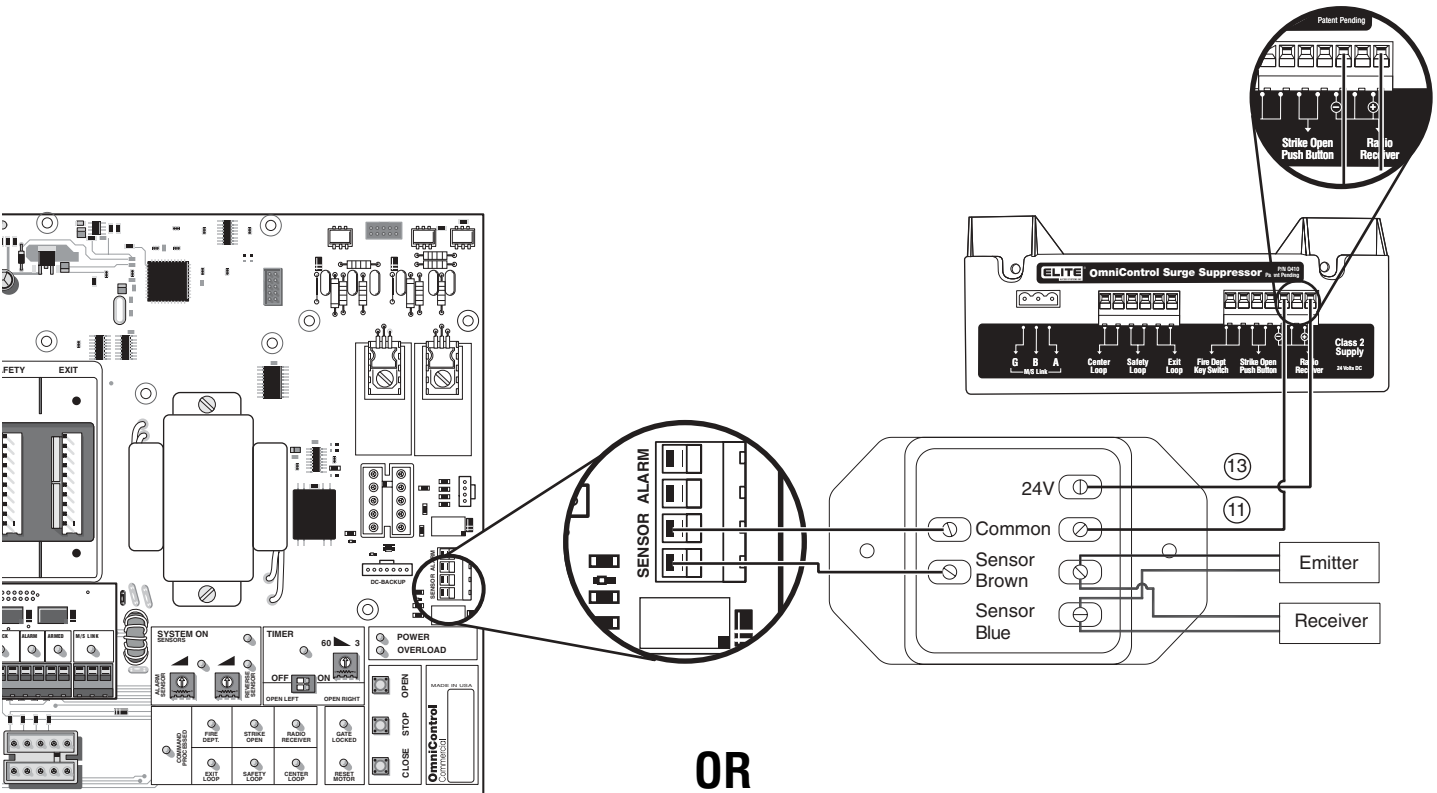


## WIRING FOR LIFTMASTER COMMERCIAL OPERATORS

### CPS-N4 Wiring Connections for use with Elite® Omni Control Board Operators

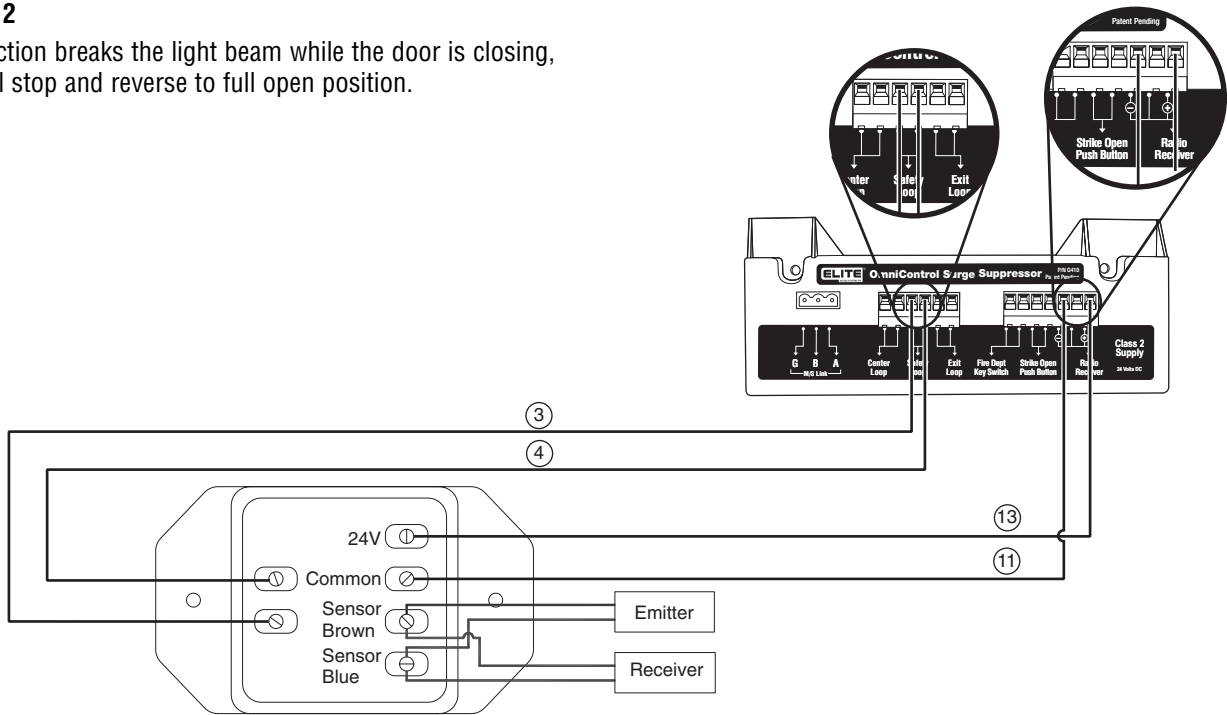
#### Application 1

Wiring the Protector Interface to the Sensor Alarm causes operator to reverse only a few inches before stopping.



## Application 2

If an obstruction breaks the light beam while the door is closing, the door will stop and reverse to full open position.



## Testing the Protector System®

### Test the Commercial Protector System®

- Press the OPEN button to fully open the door.
- Press the CLOSE button to close the door.
- Obstruct the light beam while the door is closing. *The door should stop and reverse.*

The operator will not close if the indicator light in either sensor is not glowing steadily, alerting you to the fact that the sensor is misaligned or obstructed.

**NOTE:** For non-solid state operators, if the door is stopped in a mid position, activation of the sensors will cause the door to open. This is similar to activating a sensor edge.

## TROUBLESHOOTING

1. If the sending eye and receiving eye indicator lights do not glow steadily after installation, check for:
  - Electric power to the opener.
  - A short in the Blue or Brown wires.
  - Incorrect wiring between sensors and interface.
  - An open wire (wire break).
2. If receiving eye indicator light is off (and the invisible light beam path is not obstructed), check for alignment of the eyes and/or an open wire to the receiving eye.

## ⚠ WARNING

To reduce the risk of **SERIOUS INJURY** or **DEATH**, the Commercial Protector System® must be properly installed and working.

### CPS-LN4 Only

3. If the sending eye and receiving eye indicator lights are both lit, but interrupting the photo eyes does not cause the door to reverse when closing, check both eyes and make sure one eye is the sending and the other is a receiving eye.

### NOTES:

1. Direct sunlight to the sending eye may cause operator from closing even when both the sending and receiving indicator lights are illuminated. A protective cover shielding both eyes from direct sunlight will resolve this issue.
2. Professional service is required if the operator closes the door when the photo eyes are obstructed.

**HOW TO ORDER REPAIR PARTS**  
OUR LARGE SERVICE ORGANIZATION  
SPANS AMERICA  
INSTALLATION AND SERVICE INFORMATION  
SIMPLY DIAL OUR TOLL FREE NUMBER:  
**1-800-528-2806**  
**[www.liftmaster.com](http://www.liftmaster.com)**

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE  
FOLLOWING INFORMATION:

- PART NUMBER
- PART NAME
- MODEL NUMBER

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6020 S. Country Club Road  
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