

### **WARNING**

To prevent SERIOUS INJURY, DEATH, ENTRAPMENT, or PROPERTY DAMAGE:

- Disconnect power BEFORE installing the Commercial Protector System®.
- The door MUST be in the fully opened or closed position BEFORE installing the LiftMaster Monitored Entrapment Protection device.
- Correctly connect and align the photoelectric sensors.
- Install the photoelectric sensor beam NO HIGHER than 6" (15 cm) above the floor.
- LiftMaster Monitored Entrapment Protection devices are for use with LiftMaster Commercial Door Operators ONLY. Use with ANY other product voids the warranty.
- If an edge sensor is being used on a horizontal slide door, then place one or more edge sensors on both the leading and trailing edge.
- If an edge sensor is being used on a vertically moving door, then place one or more edge sensors on the bottom edge of the door.
- READ AND FOLLOW ALL INSTRUCTIONS.

## PARTS LIST

PART#	DESCRIPTION	QTY.
CPS3CARD	Option Card	1
CPS-UN4	Photoelectric Sensors With Mounting Hardware	1

## APPLICATION

Suitable for use with Logic 2, Logic 3 or Logic 4 LiftMaster commercial door operators when more than one set of photoelectric sensors are required.

**EXAMPLE:** A fire station using one set of primary direct connect CPS-UN4 and CPS3-N4.

Also used for 2-wire or 4-wire monitored door edge (not to be used as a primary LiftMaster Entrapment Protection device (LMEP), but only as an ancillary or secondary LMEP).

## THE PROTECTOR SYSTEM®

### IMPORTANT INFORMATION ABOUT THE PHOTOELECTRIC SENSOR

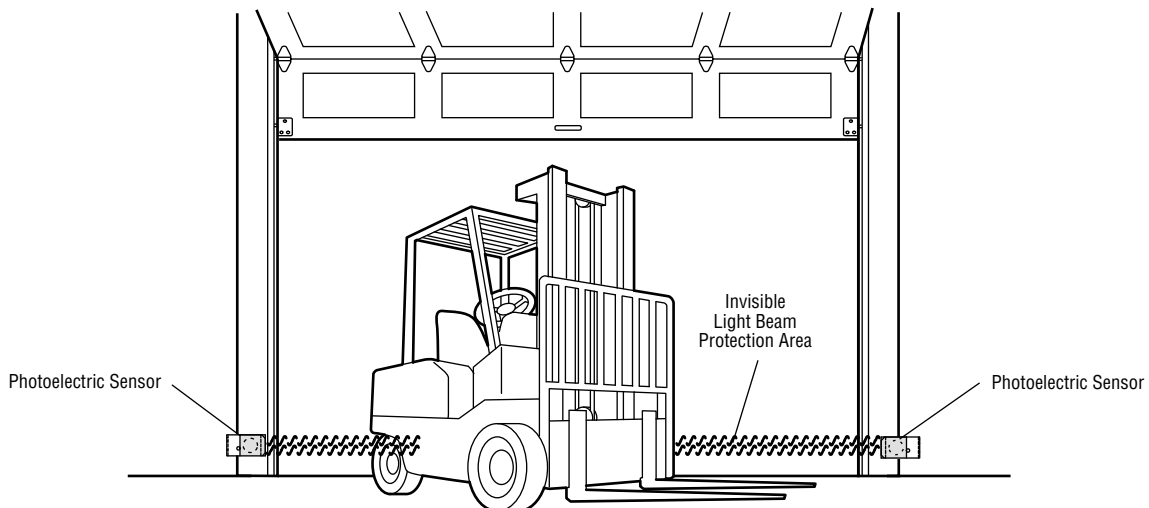
**Be sure power to the operator is disconnected.**

When properly connected and aligned, the photoelectric sensor will detect an obstruction in the path of its invisible light beam. If an obstruction breaks the light beam while the door is closing, the door will stop and typically reverse to the full open position.

The photoelectric sensors must be installed facing 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 sensor lens.

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 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 photoelectric sensor mounting location to the minimum depth required for light beam clearance.



# INSTALLATION

## ASSEMBLE AND MOUNT THE BRACKETS

The following instructions show recommended assembly of the bracket(s) based on the wall installation of the photoelectric sensors on each side of the door or on the door tracks themselves. There are also alternate mounting methods which may fit your installation requirements better.

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

- 1 Assemble the brackets using hardware shown. Always use flat washer next to curved slot. Alternate bracket assembly options may fit your installation. For door track installation use only one bracket. **Note alignment of brackets for left and right sides of the door.**
- 2 Insert track bolts through holes as shown. **NOTE: Putting track bolts in curved slots will prevent brackets from pivoting.**
- 3 Finger tighten the hex nuts.

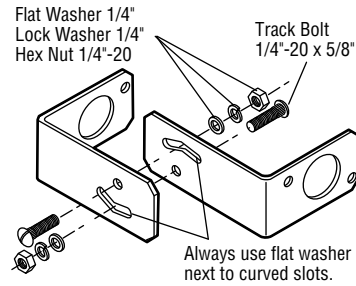
## WALL INSTALLATION

- 4 Align the brackets so the sensors will face each other across the door.
- 5 Use bracket mounting holes as a template to locate and drill (2) 3/16" diameter pilot holes on both sides of the door, 4-6 inches (10-15 cm) above the floor. Do not exceed 6 inches (15 cm). For sensing above 6" a second set of photoelectric sensors will be required.
- 6 Attach brackets to wall with lag screws provided.
- 7 Install the photoelectric sensors with the lenses pointing toward each other across the door using the provided hardware.
- 8 To vertically attach to 2" x 4" wall stud it may become necessary to rotate bracket to prevent wood from splitting.

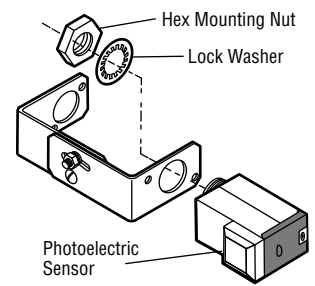
## DOOR TRACK INSTALLATION

- 4 Use only one bracket per side. Drill 3/8" holes in each door track and fasten securely with hardware.
- 5 Install the photoelectric sensors with the lenses pointing toward each other across the door using the provided hardware.

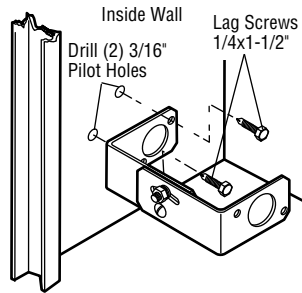
## BRACKET ASSEMBLY



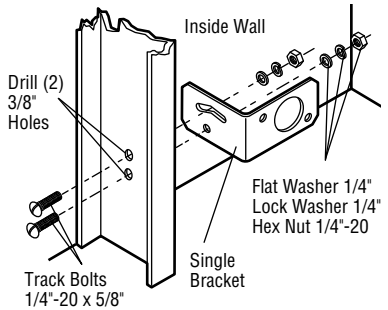
## SENSOR ASSEMBLY



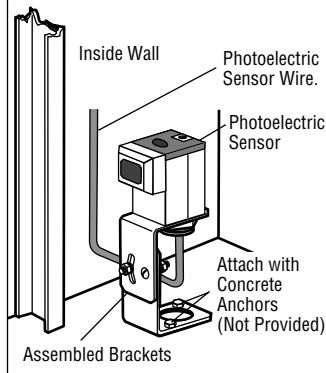
## WALL INSTALLATION



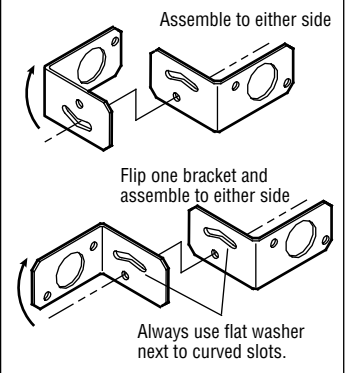
## DOOR TRACK INSTALLATION



## ALTERNATE FLOOR INSTALLATION

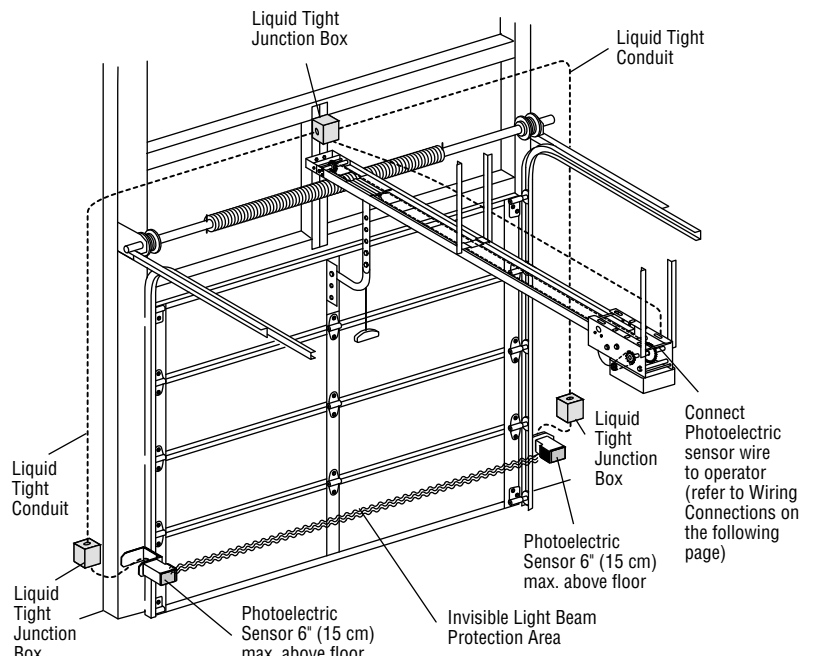


## ALTERNATE BRACKET ASSEMBLY



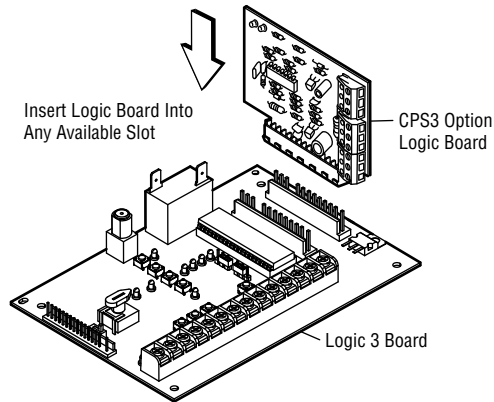
## CONDUIT CONNECTIONS

- 1 Use a liquid tight fitting (1/2" trade size) with sealing washer to connect to sensors. The sensors are supplied with 36" long leads.
  - 2 We recommend the use of a liquid tight junction box near each sensor to make the connection to the sensor leads.
  - 3 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.

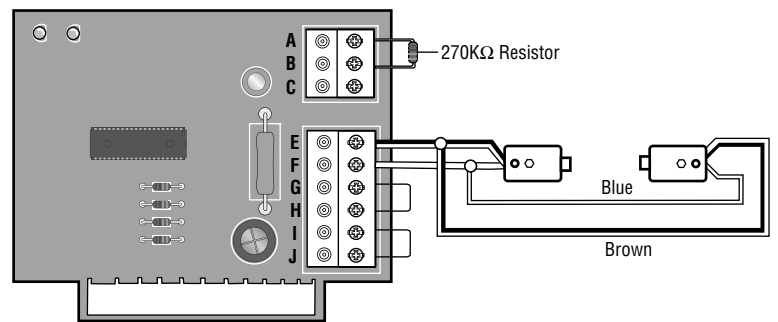


# WIRING CONNECTIONS

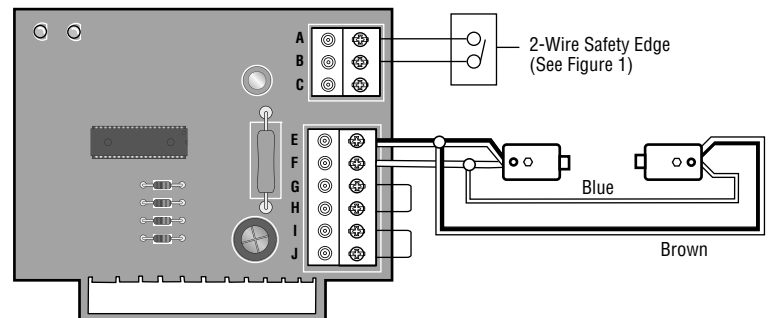
## CPS3-N4 WIRING CONNECTIONS FOR USE WITH LOGIC CONTROL BOARD



### COMMERCIAL DOOR OPERATOR PROTECTOR SYSTEM® ONLY



### COMMERCIAL DOOR OPERATOR PROTECTOR SYSTEM® AND 2-WIRE FAIL-SAFE SAFETY EDGE



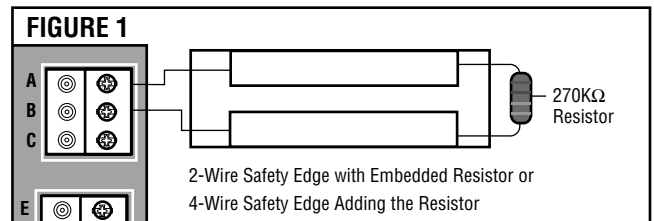
### CPS3 PROTECTOR AND 2-WIRE FAIL-SAFE SAFETY EDGE CONNECTIONS

#### For a 2-wire safety edge with an embedded resistor

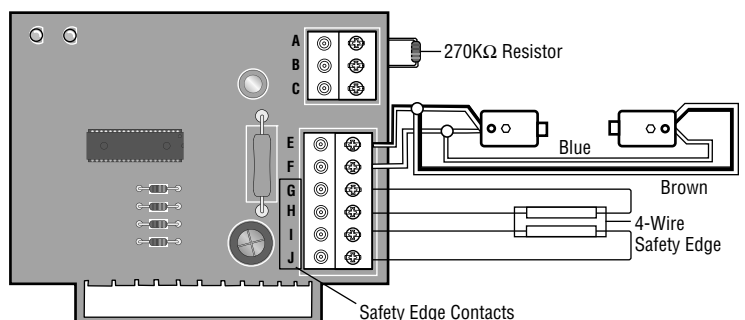
- 1 Remove the 270K resistor from the A and B terminals.
- 2 Connect 2-wire coil cord or cord reel to the A and B terminals.

#### For a 4-wire safety edge using a 2-wire coil cord

- 1 Remove the 270K resistor from the A and 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 and B terminals.



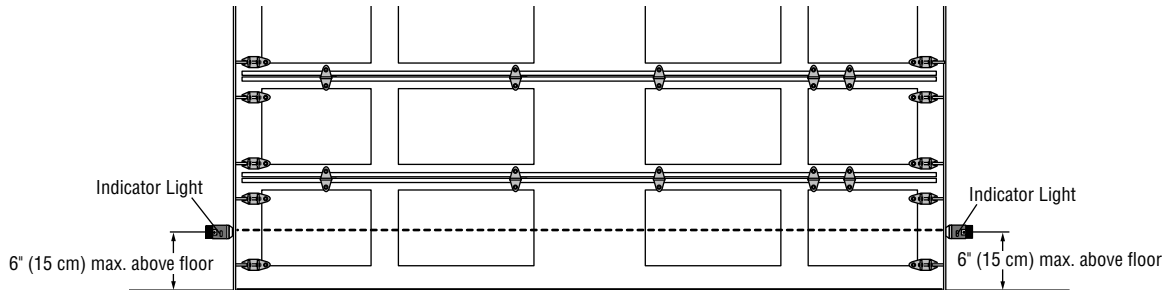
### COMMERCIAL DOOR OPERATOR PROTECTOR SYSTEM® AND 4-WIRE FAIL SAFE SAFETY EDGE



# INSTALL MODEL CPS-UN4

## ALIGN THE PHOTOELECTRIC SENSORS

- 1 Connect power to the operator. The green indicator lights in both the sending and receiving sensors will glow steadily if wiring connections and alignment are correct.
- 2 If the receiving sensor indicator light is not glowing steadily (and the invisible light beam path is not obstructed), alignment is required:
  - Loosen the receiving sensor wing nut to allow slight rotation of the sensor. Adjust sensor vertically and/or horizontally until the green indicator light glows steadily.
  - When the indicator lights are glowing in both sensors, tighten the receiving sensor wing nut.



## TEST THE PROTECTOR SYSTEM®

- 1 Press the OPEN button to fully open the door.
- 2 Press the CLOSE button to close the door. Obstruct the light beam while the door is closing. The door should stop and reverse.
- 3 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.

## TROUBLESHOOTING

If the sending sensor and receiving sensor indicator lights do not glow steadily after installation, check for:

- Photoelectric sensor alignment
- Obstruction
- Power to the operator
- A short in the wires
- Incorrect wiring between photoelectric sensors and interface
- A broken wire (open wire)

If receiving sensor indicator light is off or flashing (and the invisible light beam path is not obstructed), check alignment of the sensors and/or for an open wire to the receiving sensor.

If the sending sensor and receiving sensor indicator lights are both glowing steadily but interrupting the photoelectric sensors does not cause the door to reverse when closing, check both sensors to make sure one sensor is the sending and the other is a receiving sensor.

### NOTES:

- Direct sunlight to the sending sensor may prevent the operator from closing even when both the sending and receiving indicator lights are illuminated. A protective cover shielding both sensors from direct sunlight will resolve this issue.
- Professional service is required if the operator closes the door when the photoelectric sensors are obstructed.

## HOW TO ORDER REPAIR PARTS

OUR LARGE SERVICE ORGANIZATION  
SPANS AMERICA

FOR 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

### ADDRESS ORDERS TO:

THE CHAMBERLAIN GROUP, INC.  
Technical Support Group  
6050 S. Country Club Road  
Tucson, Arizona 85706