

### WARNING

To prevent possible SERIOUS INJURY or DEATH from a closing gate or door:

- Entrapment protection devices MUST be installed per the operator owner's manual.
- Be sure to DISCONNECT POWER to the operator BEFORE installing the photoelectric sensor.
- The gate or door MUST be in the fully opened or closed position BEFORE installing the LiftMaster Monitored Entrapment Protection device.
- Correctly connect and align the photoelectric sensor.
- Install the photoelectric sensor beam NO HIGHER than 6" (15 cm) above the floor for door and 27.5" (69.8 cm) above grade for gate operators.

## APPLICATION

**NOTE:** The images throughout this manual are for reference and your product may look different.

The CPS-U and CPS-UN4 are suitable for use with LiftMaster Commercial Door Operators (Medium Duty Logic, Logic 3 or 4, models FDC, FDCL, FDO, and LGE). The CPS-UN4 may also be used with gate operator (Series models: CSL24V, CSW24V, RSW12V, RSL12V, LA400, LA412, and LA500). The CPS-UN4 is suitable for use in applications where the photoelectric sensors will be exposed to moisture. These photoelectric sensors are LiftMaster Monitored Entrapment Protection (LMEP) devices.

## THE PROTECTOR SYSTEM®

### IMPORTANT INFORMATION ABOUT THE PHOTOELECTRIC SENSOR

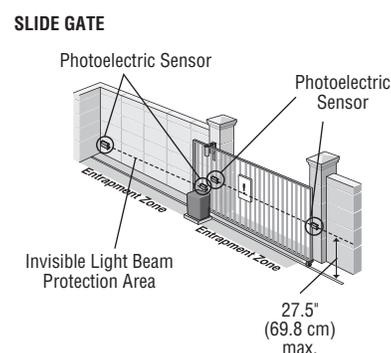
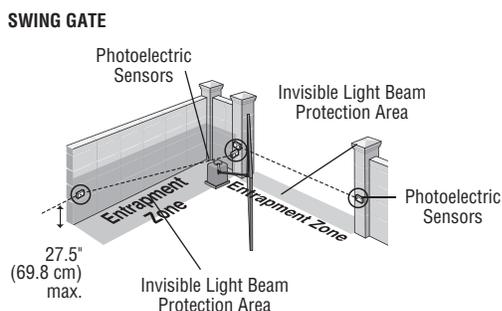
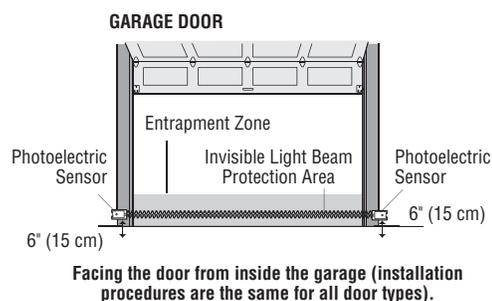
**Be sure power to the operator is disconnected.**

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/gate is closing, the operator will stop and typically reverse to the full open position.

The sensors must be installed so that the sending and receiving sensors face each other across the entrapment zone, no more than 6" (15 cm) above the floor for a garage door and no more than 27.5" (69.8 cm) above grade for a gate. Either can be installed on the left or right of the entrapment zone as long as the sun never shines directly into the receiving eye 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 gate or garage door (or door tracks, springs, hinges, rollers or other hardware) may interrupt the beam while the door/gate 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.



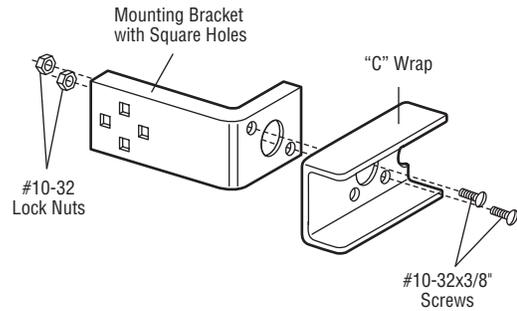
# INSTALL MODEL CPS-U

## ASSEMBLE AND MOUNT THE BRACKETS

The following instructions show recommended assembly of the bracket(s) and "C" wrap 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.

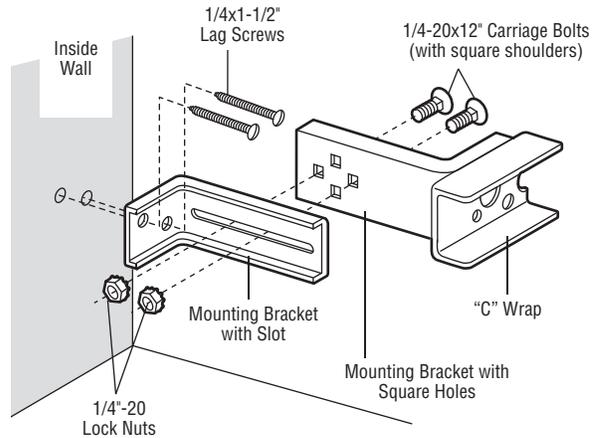
**Make sure the wraps and brackets are aligned so the photoelectric sensors will face each other across the door. Mount sensors no more than 6" (15 cm) above the floor and at a width between 7'-30".**

1. Fasten the "C" wraps to the mounting brackets having square holes, using hardware shown.



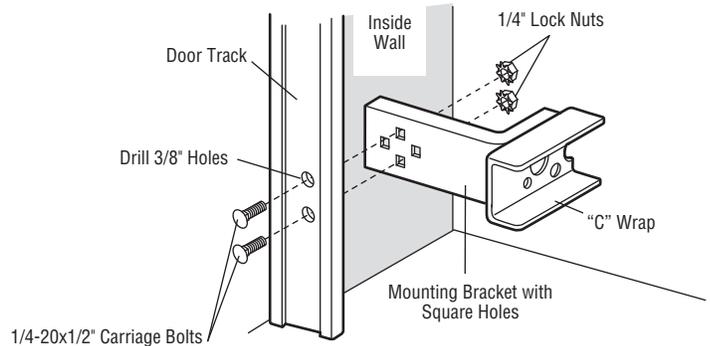
## WALL INSTALLATION

2. Connect each assembly to a slotted bracket, using the hardware shown. **Note alignment of brackets for left and right sides of the door.**
3. Finger tighten the lock nuts.
4. Use bracket mounting holes as a template to locate and drill (2) 3/16" diameter pilot holes on both sides of the garage door, 4-6" (10-15 cm) above the floor. Do not exceed 6" (15 cm).
5. Attach bracket assemblies with 1/4"x1-1/2" lag screws.
6. Adjust right and left side bracket assemblies to the same distance out from mounting surface. Make sure all door hardware obstructions are cleared. Tighten the nuts securely.

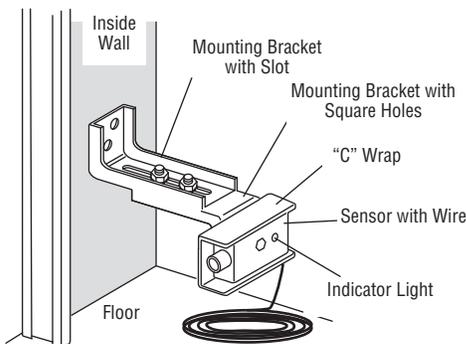


## DOOR TRACK INSTALLATION

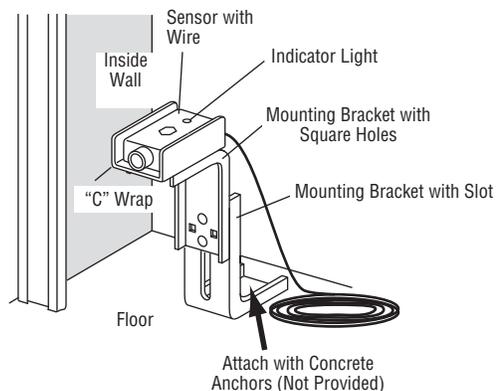
2. Discard slotted bracket. Drill 3/8" holes in each track and fasten securely with hardware.



## ALTERNATE WALL INSTALLATION



## ALTERNATE FLOOR INSTALLATION

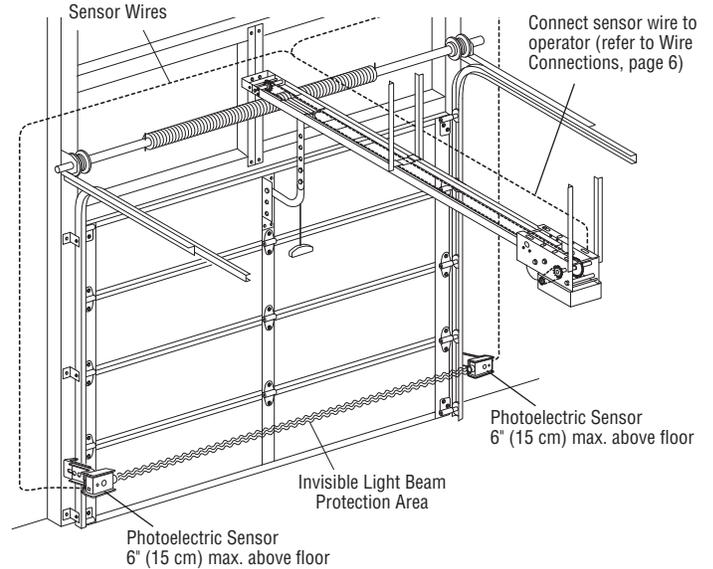
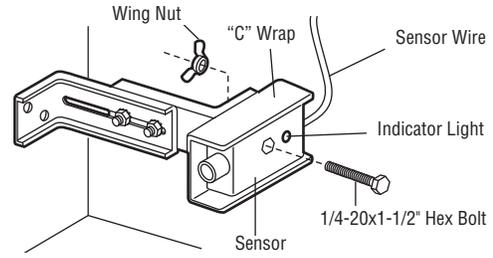


# INSTALL MODEL CPS-U

## MOUNT AND WIRE THE PHOTOELECTRIC SENSORS

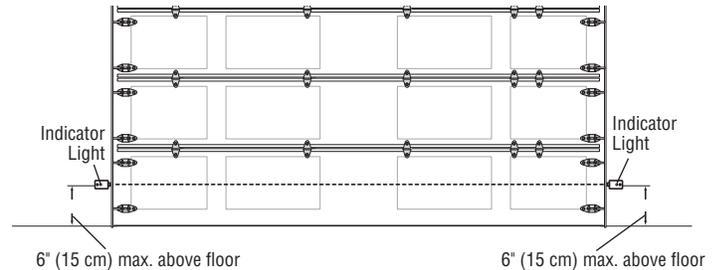
Be sure power to the operator is disconnected.

1. Center each sensor in the bracket with the lenses pointing toward each other across the door.
2. Attach the sensors to the brackets with the provided hardware. Finger tighten the receiving sensor wing nut. Securely tighten the sending sensor wing nut.
3. Run the sensor wires to the operator. Fasten the sensor wire appropriately.
4. Connect the sensor wires to the operator (refer to Wiring Connections, page 6).

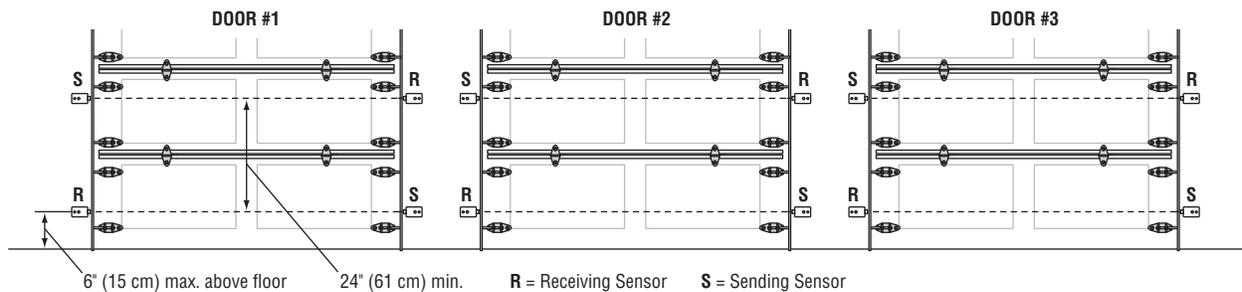


## ALIGN THE PHOTOELECTRIC SENSORS

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.



## Recommended installation for adjacent doors and more than one set of photoelectric sensors.



# INSTALL MODEL CPS-UN4

## ASSEMBLE AND MOUNT THE BRACKETS

Make sure the brackets are aligned so the photoelectric sensors will face each other across the entrapment zone.

### FOR DOORS

Mount sensors no more than 6" (15 cm) above the floor and at a width between 7'-45'.

### FOR GATE

Mount within 5" (12.7 cm) of the moving gate panel with a maximum height of 27.5" (69.8 cm) above grade (21" (53.3 cm) is recommended) and at a width between 7'-45'.

The recommended mounting location is on the inside of the gate.

The brackets can be mounted on the ground, door track, or wall. Refer to examples shown below.

1. Determine the configuration for your brackets. The assembly of the brackets will vary depending on your installation.

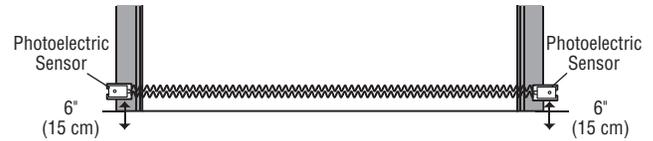
## GROUND OR WALL INSTALLATION

2. Fasten the bracket with the track bolts. **NOTE:** Always use a flat washer next to the radius slot. Putting track bolts in slots will prevent brackets from pivoting.
3. Attach the bracket assembly to the wall with lag screws (provided) or to the ground with concrete anchors (not provided).
4. Insert the sensor into the brackets and fasten with the hex mounting nut and lock washer.

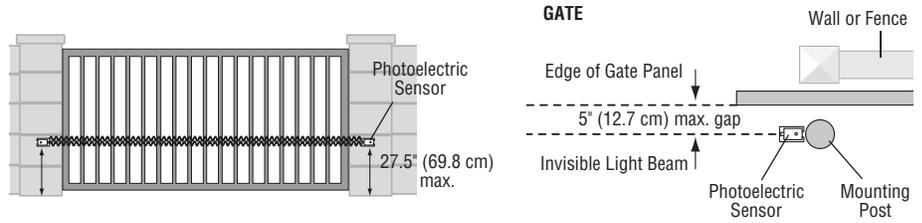
## DOOR TRACK INSTALLATION (FOR GARAGE DOOR ONLY)

2. Drill 1/4" holes in each track and securely fasten the bracket with the track bolts. **NOTE:** Always use a flat washer next to the radius slot. To vertically attach to 2 x 4 wall stud it may become necessary to rotate bracket to prevent wood from splitting.
3. Insert the sensor into the bracket and fasten with the hex mounting nut and lock washer.

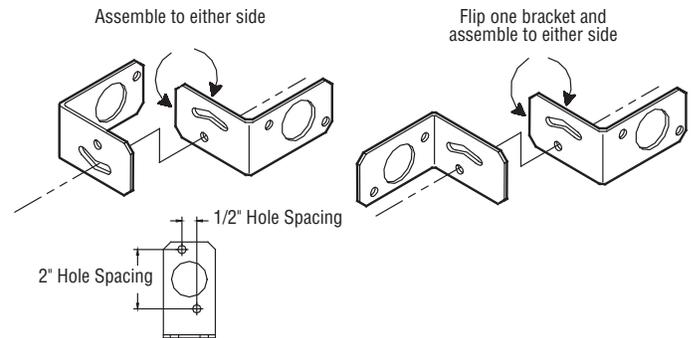
GARAGE DOOR



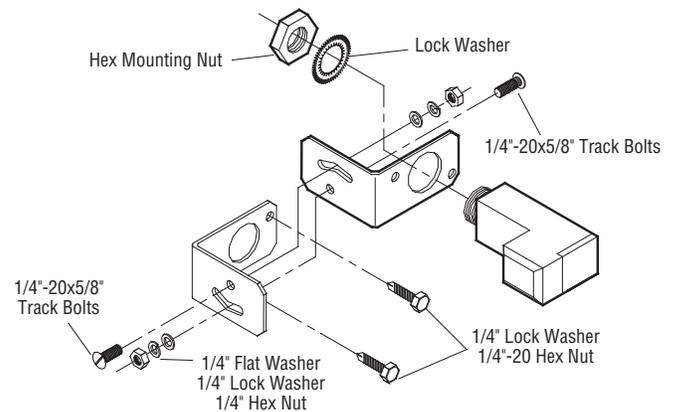
GATE



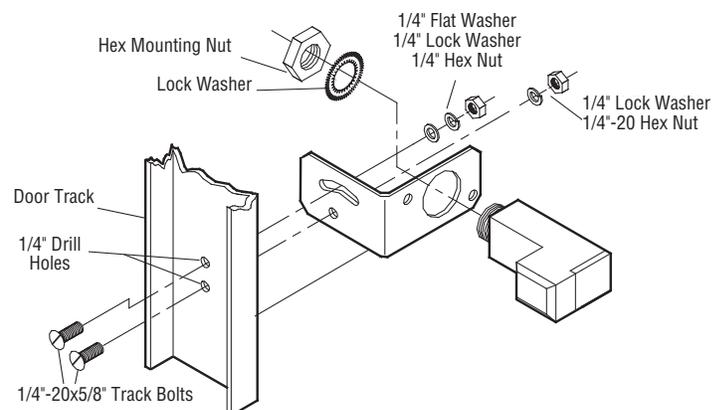
BRACKET ASSEMBLY CONFIGURATIONS



TYPICAL INSTALLATION



TYPICAL INSTALLATION



# INSTALL MODEL CPS-UN4

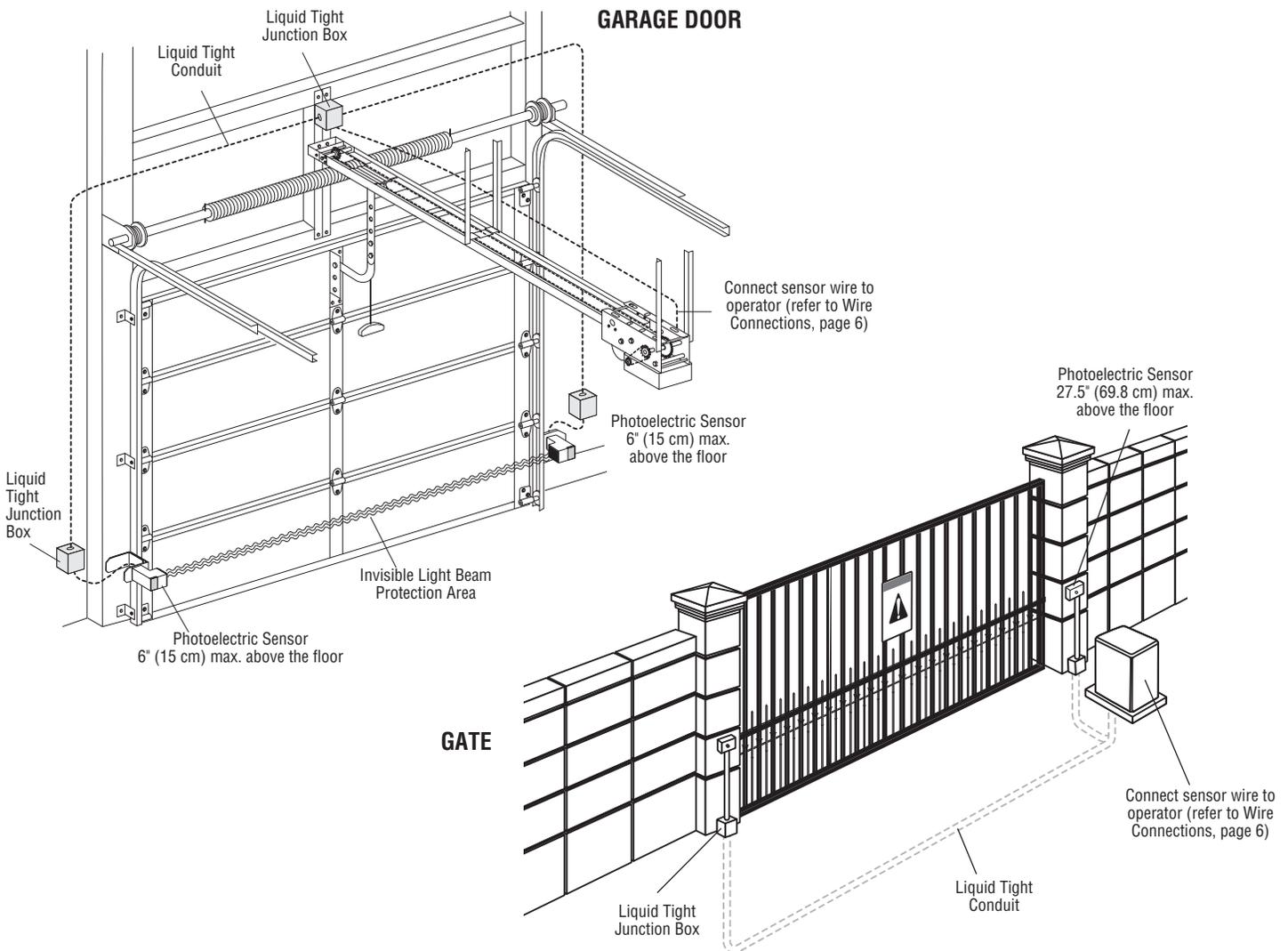
## CONDUIT CONNECTIONS

Be sure power to the operator is disconnected.

1. Use a liquid tight fitting (1/2" trade size) with sealing washer to connect to sensors. The sensors are provided 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. 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.

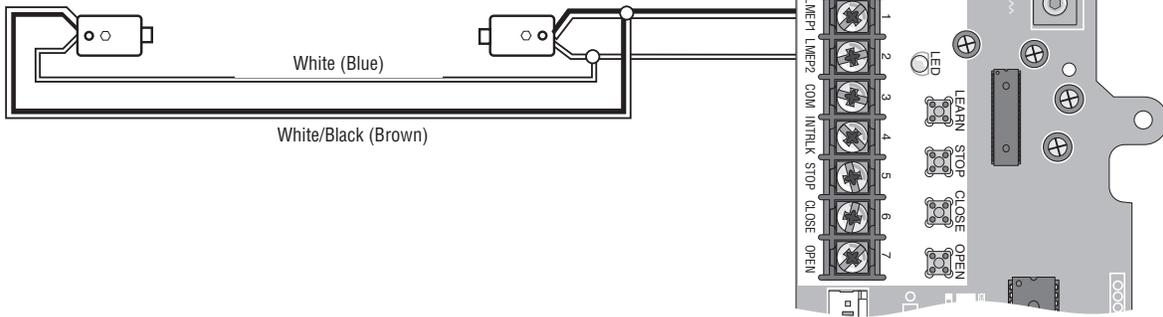
2. Connect the sensor wires to the operator (refer to Wiring Connections, page 6).
3. Connect power to the operator.
4. Align the photoelectric sensors so the green LED on the sending sensor and the Yellow LED on the receiving sensor glow steadily.



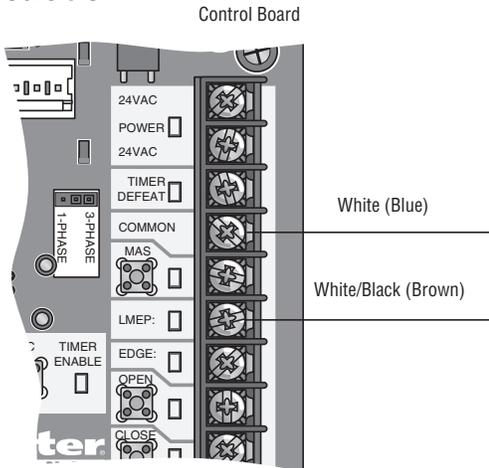
# WIRING CONNECTIONS

## COMMERCIAL DOOR OPERATORS

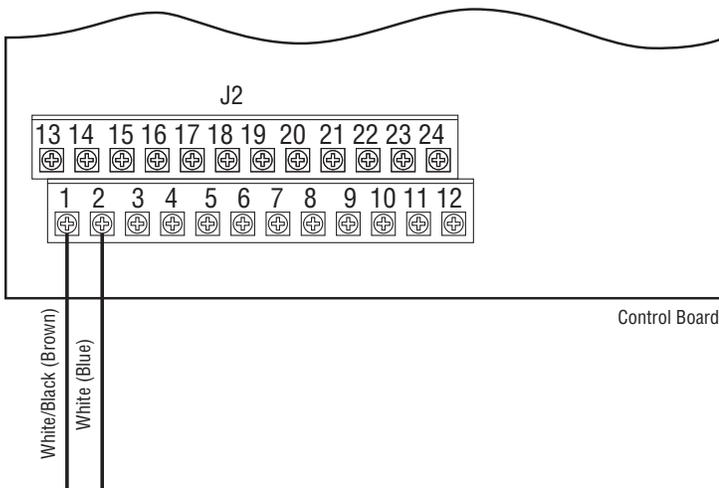
### MEDIUM DUTY LOGIC



### LOGIC 3 OR 4



### MODELS FDC, FDCL, FDO, AND LGE





## TEST THE PROTECTOR SYSTEM®

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1. Press the OPEN button to fully open the door/gate.
2. Press the CLOSE button to close the door/gate.
3. Obstruct the light beam while the door/gate is closing. The door/gate 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.

## TROUBLESHOOTING

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**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/gate 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/gate when the photoelectric sensors are obstructed.*

## **HOW TO ORDER REPAIR PARTS**

### **DEVANCO CANADA**

19192 HAY ROAD, UNIT Q  
SUMMERSTOWN, ON K0C 2E0

TOLL FREE: 855-931-3334

[www.devancocanada.com](http://www.devancocanada.com)

**WHEN ORDERING REPAIR PARTS  
PLEASE SUPPLY THE FOLLOWING INFORMATION:**

- ✓ **PART NUMBER**
- ✓ **DESCRIPTION**
- ✓ **MODEL NUMBER**