

COMMERCIAL PROTECTOR SYSTEM®

MODELS CPS-UN4 AND CPSUN4G

INTRODUCTION

APPLICATION

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

The Commercial Protector System is suitable for use in applications where the photoelectric sensors will be exposed to moisture. The CPS-UN4 and CPSUN4G are LiftMaster Monitored Entrapment Protection (LMEP) devices and are compatible with the following operators:

LiftMaster Commercial Door Operators	Models FDC, FDCL, FDO, and LGE, Medium Duty Logic, Logic 3, Logic 4, and Logic 5
LiftMaster Legacy Gate Operators	Models CSL24V, CSW24V, RSL12V, RSW12V, LA400, LA412 and LA500
LiftMaster 2016 UL 325 Gate Operators	Models HCTDCU, LA400PKG, LA412PKG, LA500PKG, CSL24U, CSW24U, RSL12U, RSW12U, CSW200501U, CSW200101U, SL3000501U, SL3000101U, SL585U family, and SL595U family

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 emitter and receiver sensors face each other across the entrapment zone and the beam is no more than 6" (15 cm) above the floor for a commercial door and no more than 27.5" (69.8 cm) above grade for a gate for entrapment protection. Either can be installed on the left or right of the entrapment zone as long as the sun never shines directly into the receiver 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 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.

For commercial doors, additional photoelectric sensors may be added at heights greater than 6" (15 cm) above the floor for vehicle/property detection.

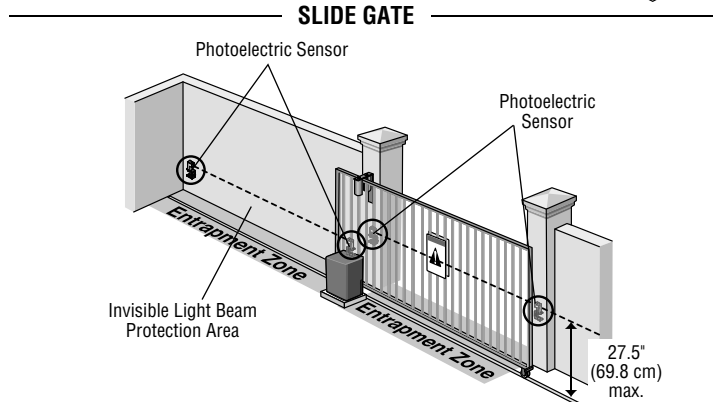
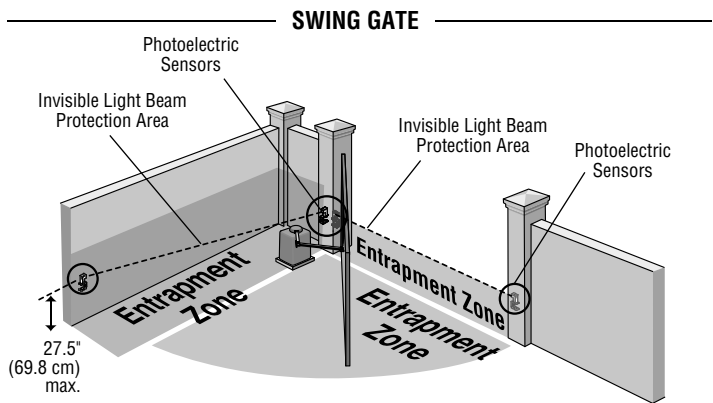
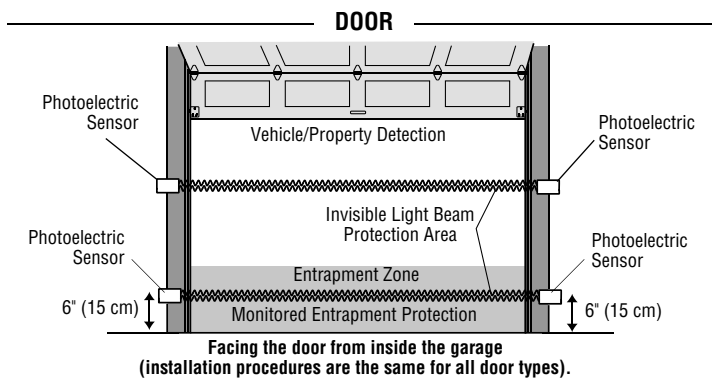


WARNING

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 for each entrapment zone.
- 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.
- For entrapment protection, 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.

 **WARNING:** This product can expose you to chemicals including lead, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



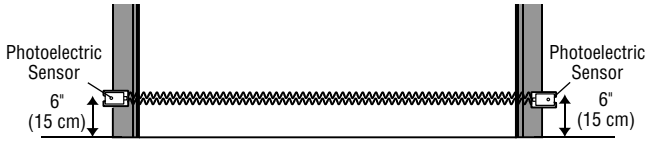
INSTALLATION

ASSEMBLE AND MOUNT THE BRACKETS

Make sure the brackets are aligned so the photoelectric sensors will face each other across the entrapment zone. The brackets can be mounted on the ground, door track, or wall.

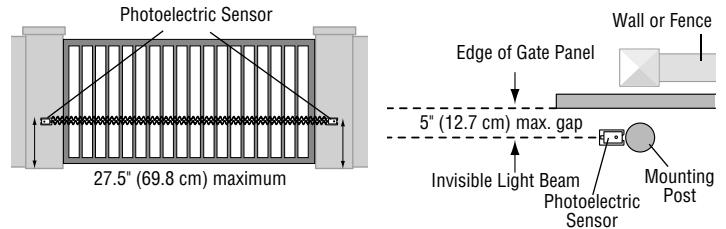
DOOR

Mount sensors no more than 6" (15 cm) above the floor and at a width between 7'-45" (2.1 m - 13.7 m).



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" (2.1 m - 13.7 m). The recommended mounting location is on the inside of the gate.



Assemble to either side

Flip one bracket and assemble to either side

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

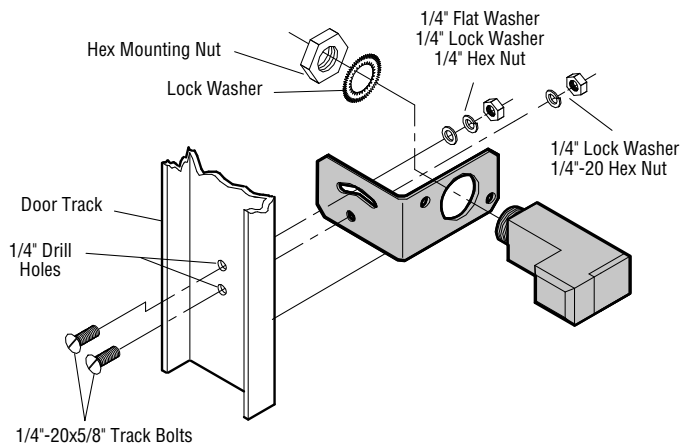
2" (5.1 cm) Hole Spacing

1/2" (1.3 cm) Hole Spacing

BRACKET ASSEMBLY CONFIGURATIONS

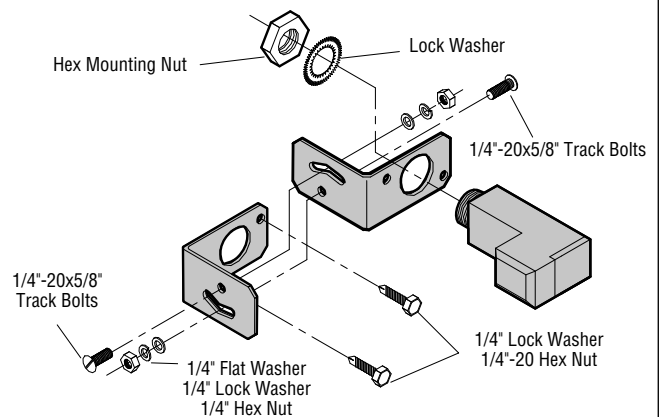
DOOR TRACK INSTALLATION (FOR DOOR ONLY)

1. 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.
2. Insert the sensor into the bracket and fasten with the hex mounting nut and lock washer.



GROUND OR WALL INSTALLATION

1. 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.
2. Attach the bracket assembly to the wall with lag screws (provided) or to the ground with concrete anchors (not provided).
3. Insert the sensor into the brackets and fasten with the hex mounting nut and lock washer.

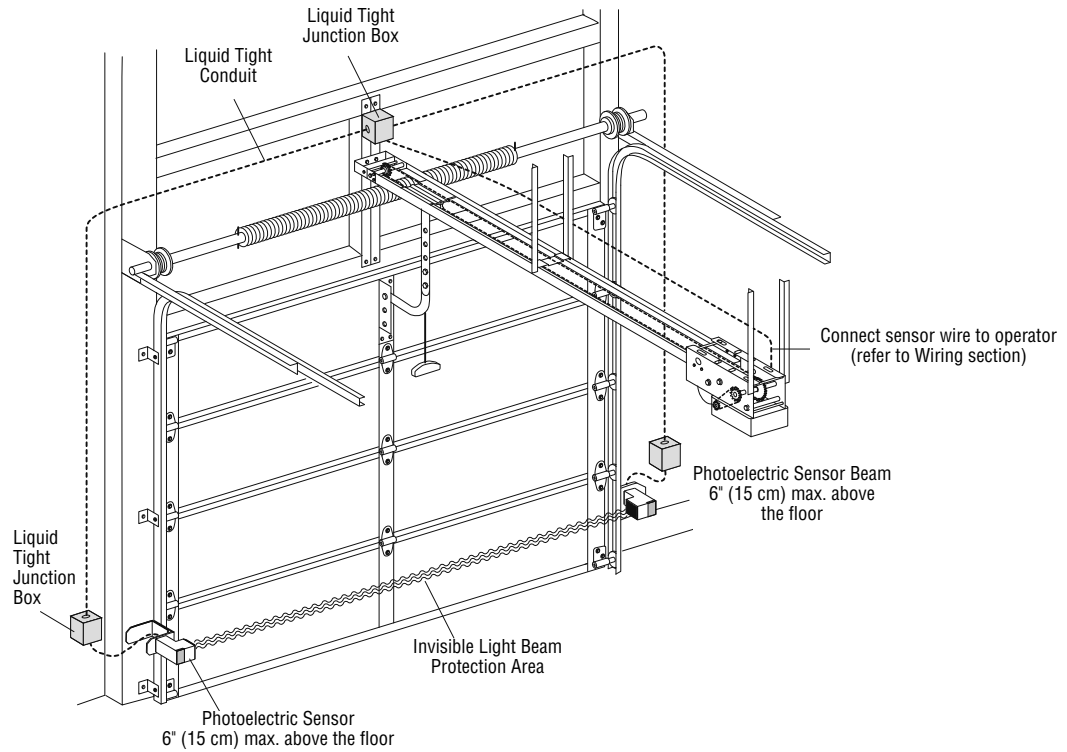


INSTALLATION

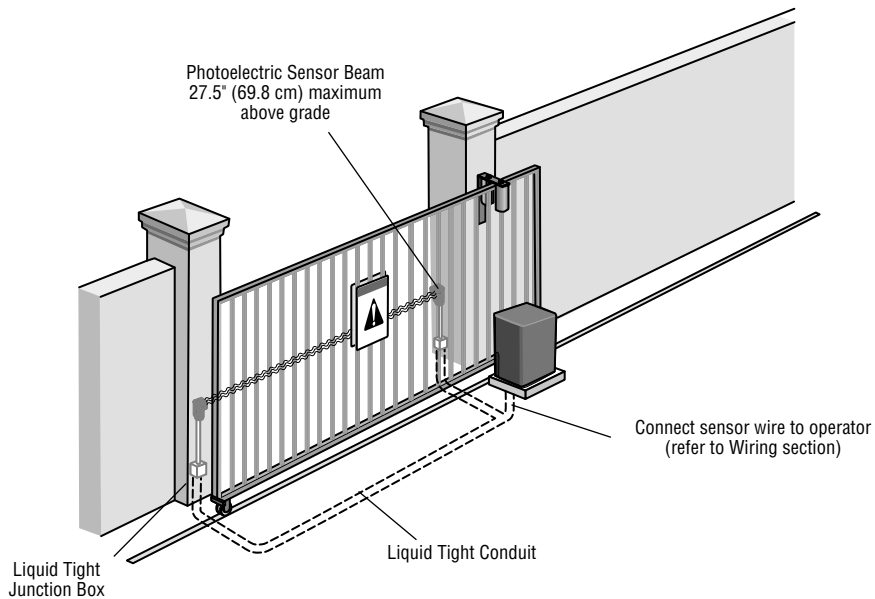
CONDUIT CONNECTIONS

1. Disconnect power to the operator.
2. Use a liquid tight fitting (1/2" [1.3 cm] trade size) with sealing washer to connect to sensors. The sensors are provided with 36" (91.4 cm) long leads. LiftMaster recommends 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.

DOOR

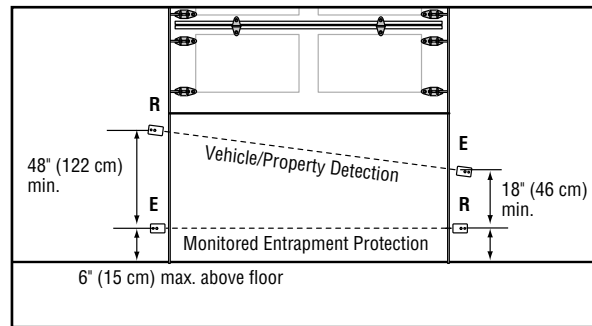
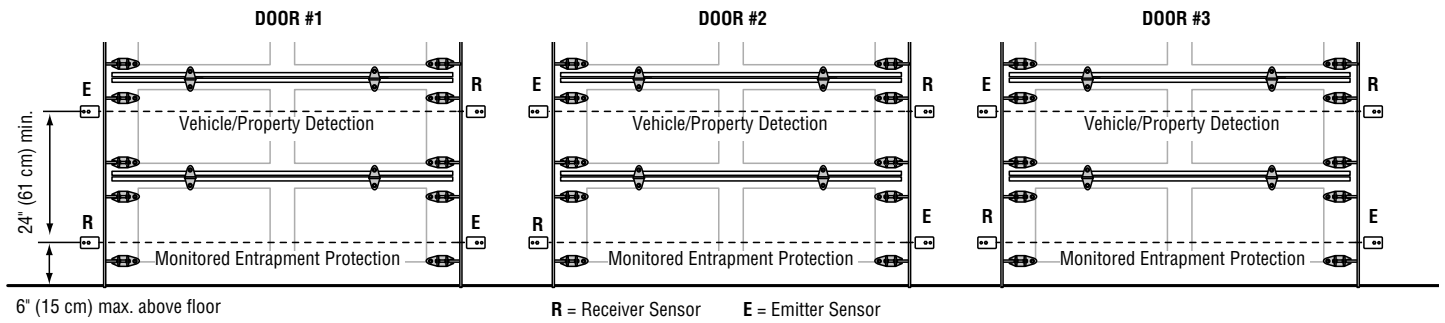


GATE



INSTALLATION

Recommended installation for adjacent doors and more than one set of photoelectric sensors. For LOGIC 4 and LOGIC 5 Operators, a CPS3CARD is required to wire a second set of monitored photoelectric sensors.

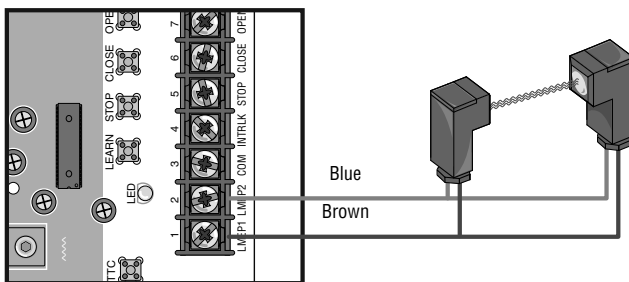


WIRING

COMMERCIAL DOOR OPERATORS

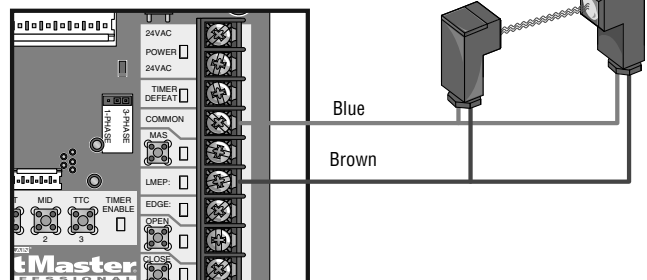
MEDIUM DUTY LOGIC

LOGIC BOARD



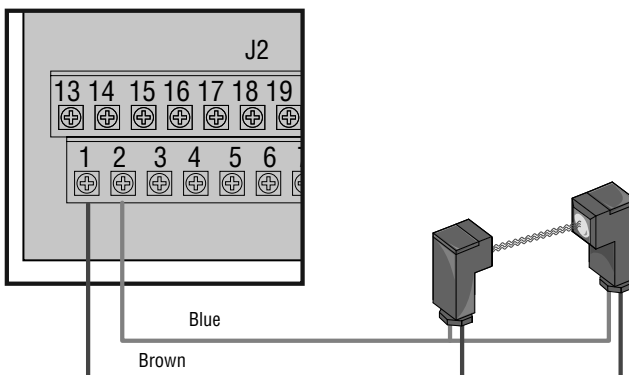
LOGIC 3, 4, AND 5

LOGIC BOARD



MODELS FDC, FDCL, FDO, AND LGE

LOGIC BOARD



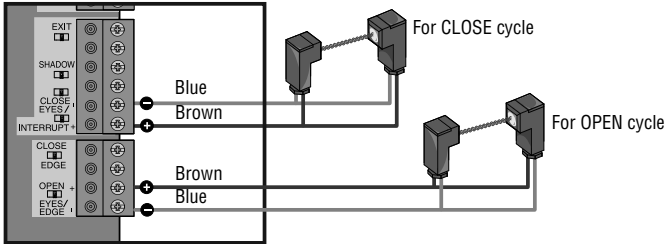
WIRING

The photoelectric sensors can be wired to function for either the open or close cycle depending on where they are wired on the control board. Refer to your gate operator manual for more information.

LEGACY GATE OPERATORS

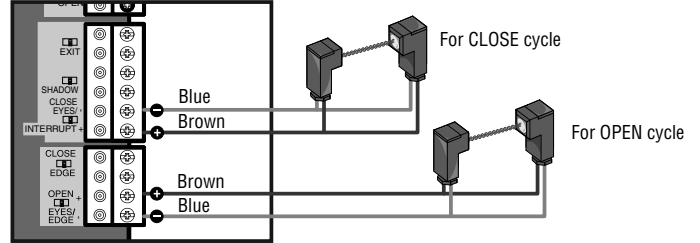
MODELS CSL24V AND CSW24V

CONTROL BOARD



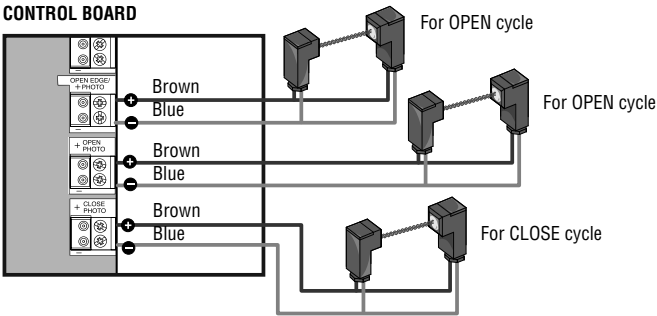
MODEL LA500

CONTROL BOARD



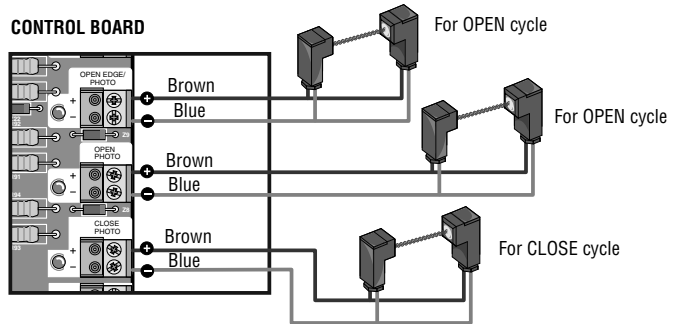
MODELS LA412, RSW12V, AND RSL12V

CONTROL BOARD



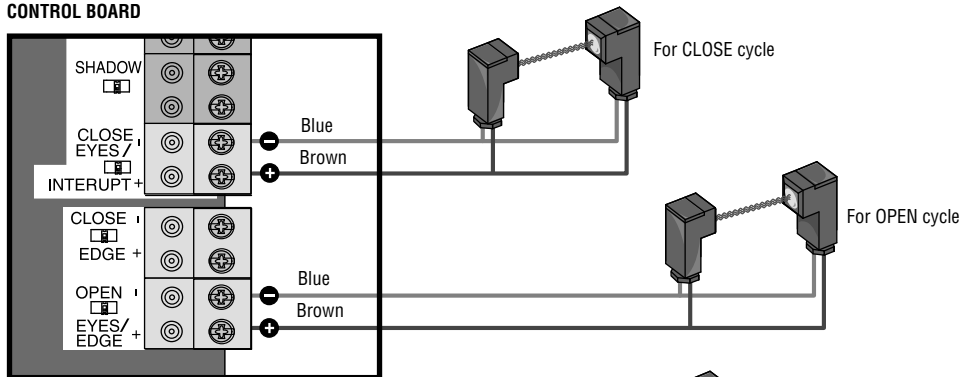
MODEL LA400

CONTROL BOARD

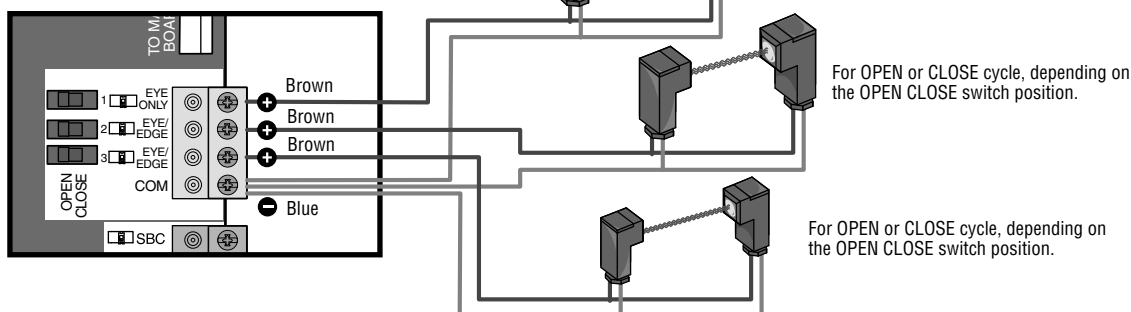


2016 UL 325 GATE OPERATORS

CONTROL BOARD



EXPANSION BOARD



TEST

1. Connect power to the operator.
2. Align the photoelectric sensors so the green LED on the emitter sensor and the yellow LED on the receiver sensor glow steadily.
3. Press the OPEN button to fully open the door/gate.
4. Press the CLOSE button to close the door/gate.
5. **For doors:** Obstruct the light beam while the door is closing. The door should stop and reverse.
For gates: Obstruct the light beam while the gate is opening or closing. If closing, the gate should stop and reverse to the full open position. If opening, the gate should reverse for 4 seconds then stop.

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 emitter sensor and receiver sensor indicator lights do not glow steadily after installation, check for:

- Photoelectric sensor alignment
- Obstruction
- Power to the operator
- A short or broken wire
- Incorrect wiring between photoelectric sensors and the operator

If the receiver 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 receiver sensor.

If the emitter sensor and receiver 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 emitter and the other is a receiver sensor as indicated on the sensor housing.

NOTES:

- *Direct sunlight to the receiver sensor may prevent the operator from closing even when both the emitter and receiver indicator lights are illuminated. Swapping the position of the emitter and receiver sensors will resolve this issue.*
- *To avoid nuisance blockages from snow, install a hood over the photoelectric sensors to keep the snow from obstructing the lenses.*
- *Professional service is required if the operator closes the door/gate when the photoelectric sensors are obstructed.*
- *2016 UL 325 gate operators have diagnostic codes related to entrapment protection devices. Refer to your gate operator manual or wiring diagram for a list of troubleshooting diagnostic codes.*

WARRANTY

LiftMaster® warrants to the first consumer purchaser of this product that it is free from defect in materials and/or workmanship for a period of 1 year from the date of purchase.