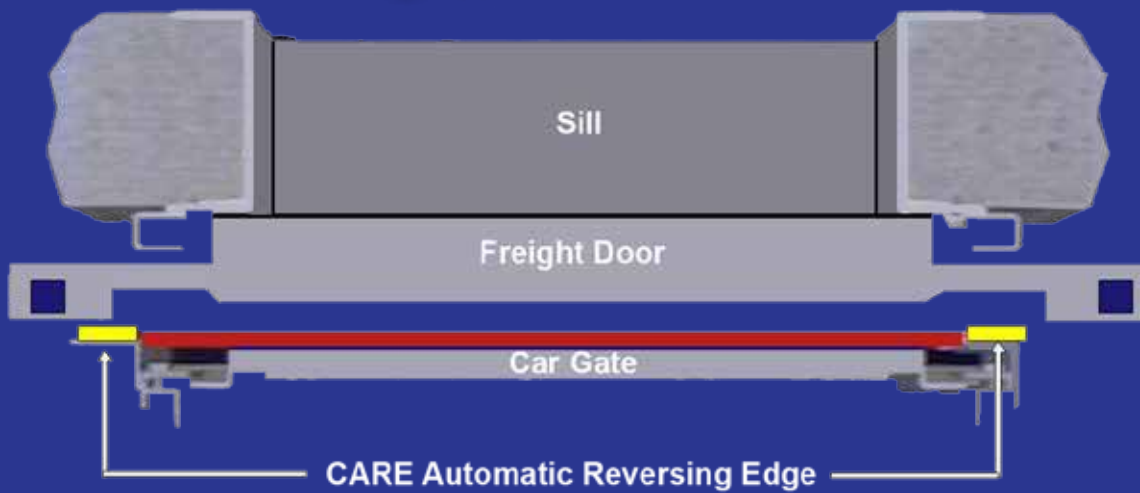
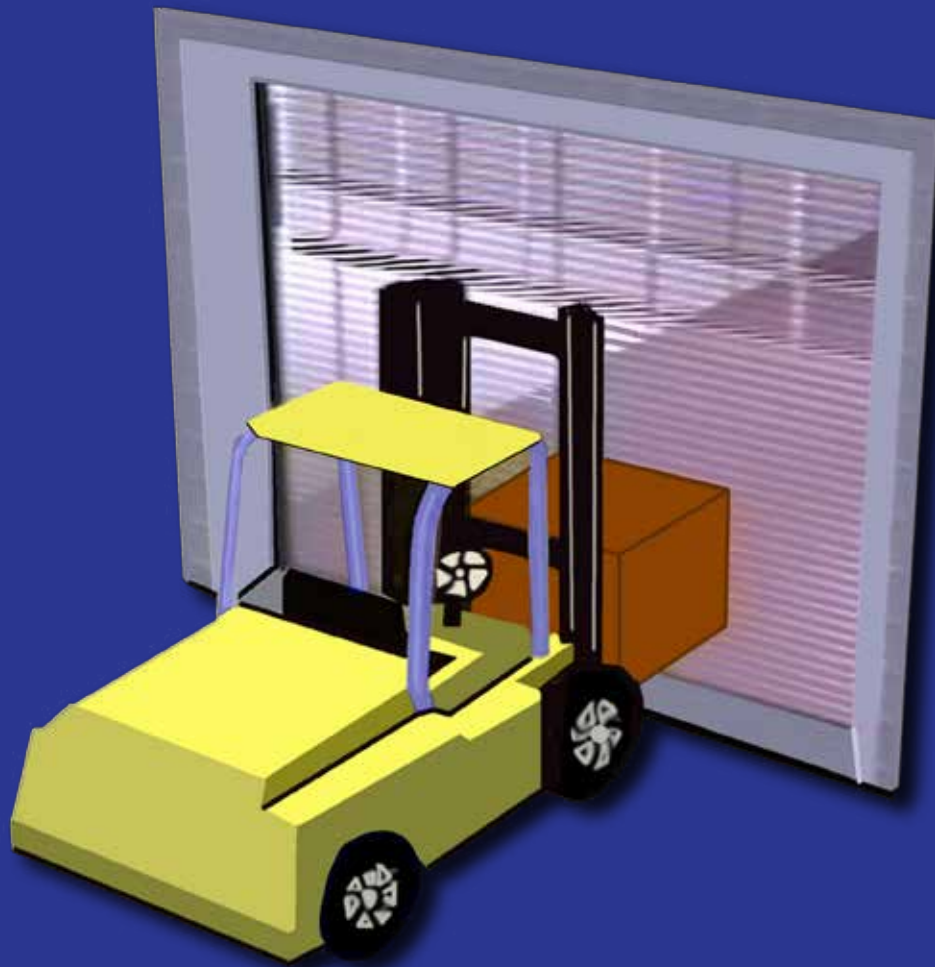




*THE NEXT GENERATION OF
FREIGHT ELEVATOR DOORS*



CARE-C Light Curtain Installation Instructions

1

Install Mounting Brackets

If your Gate Guides do **NOT** have CARE C Mounting Brackets, please install utilizing one of these two options: (1) Tack weld the CARE Mounting Bracket to the Gate Guides, or (2) Drill 17/64" holes thru the Gate Guides and attach with the mounting hardware provided by Courion.



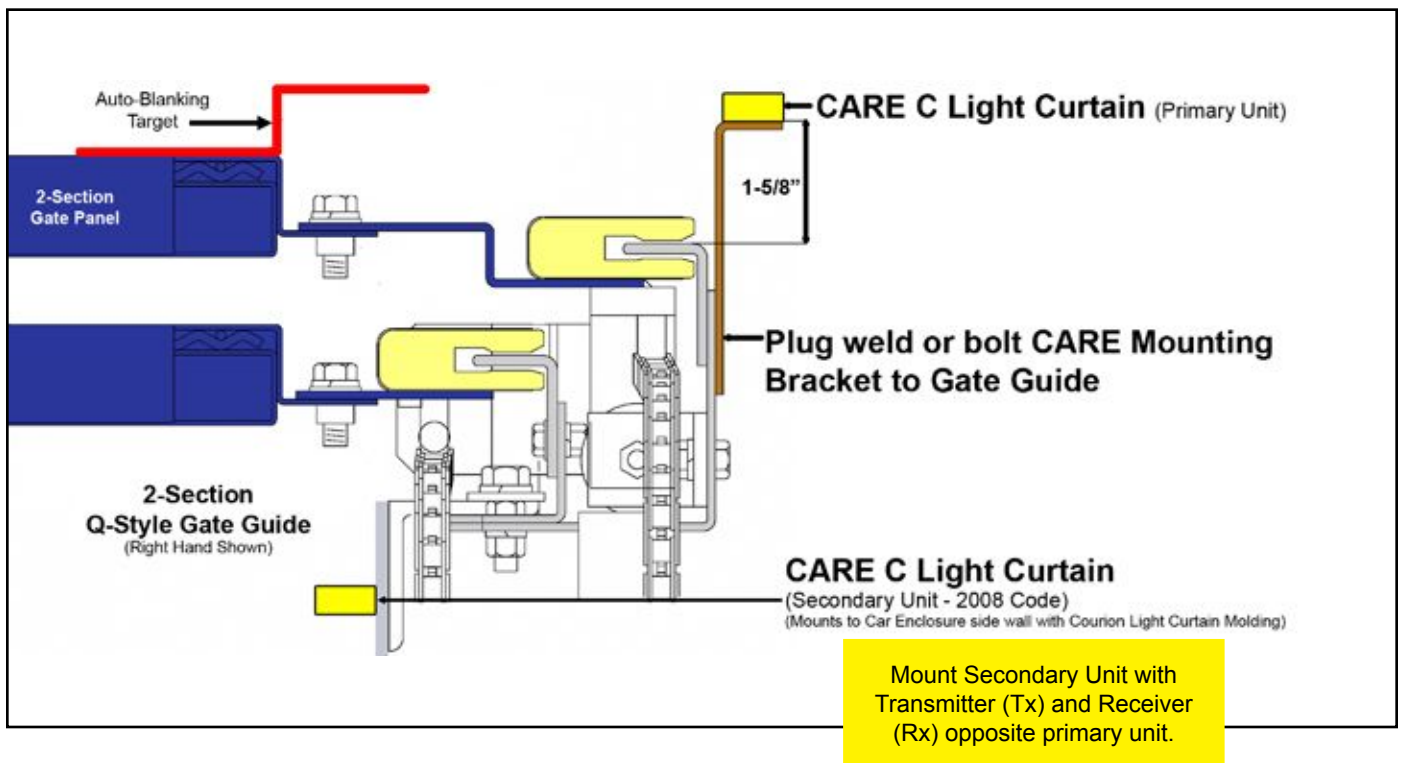
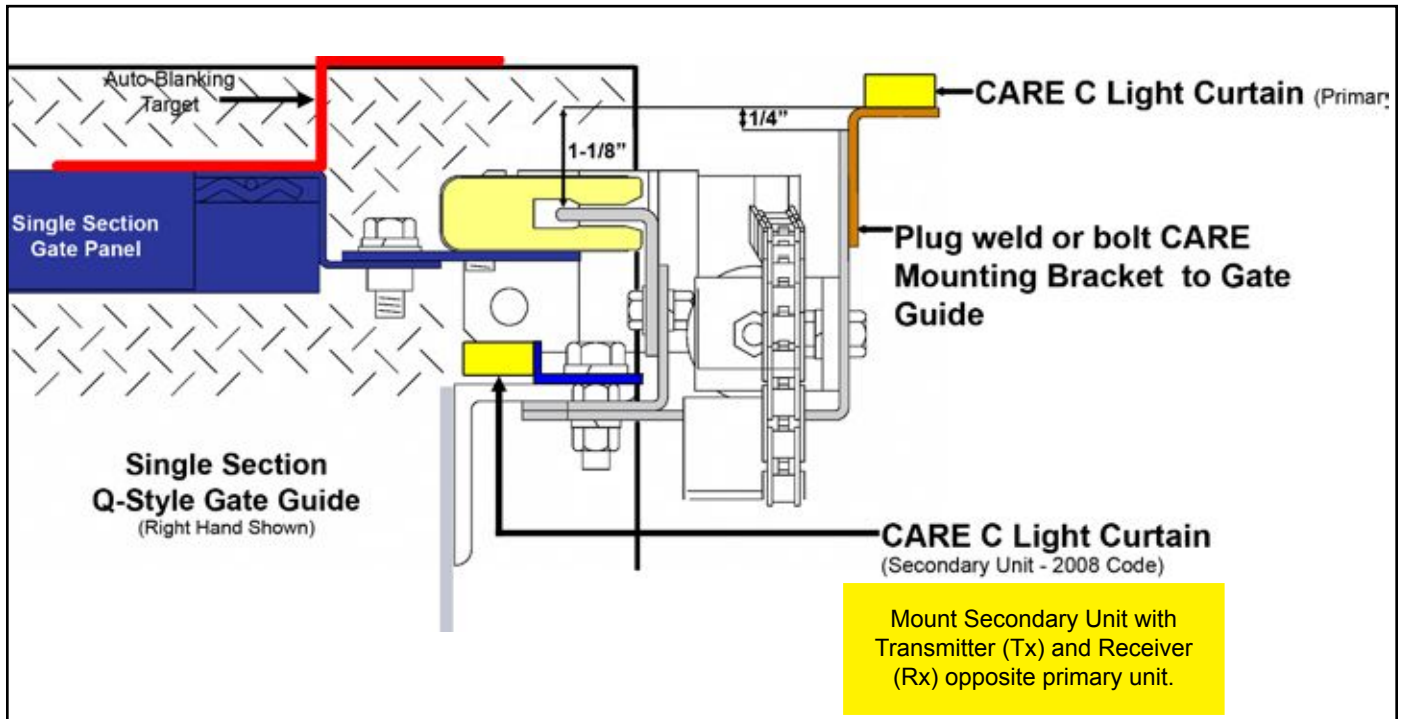
Distance From Car
Floor

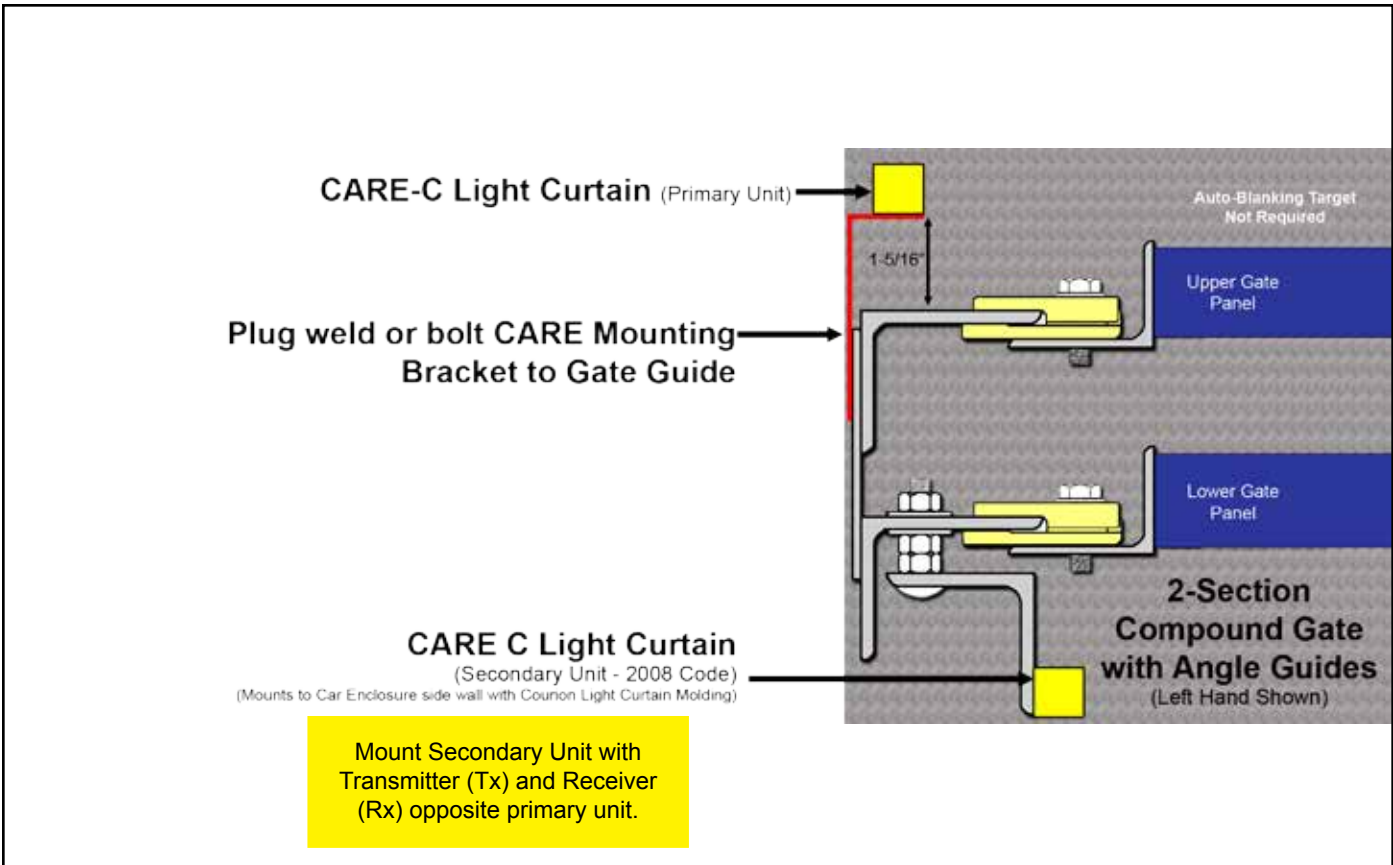
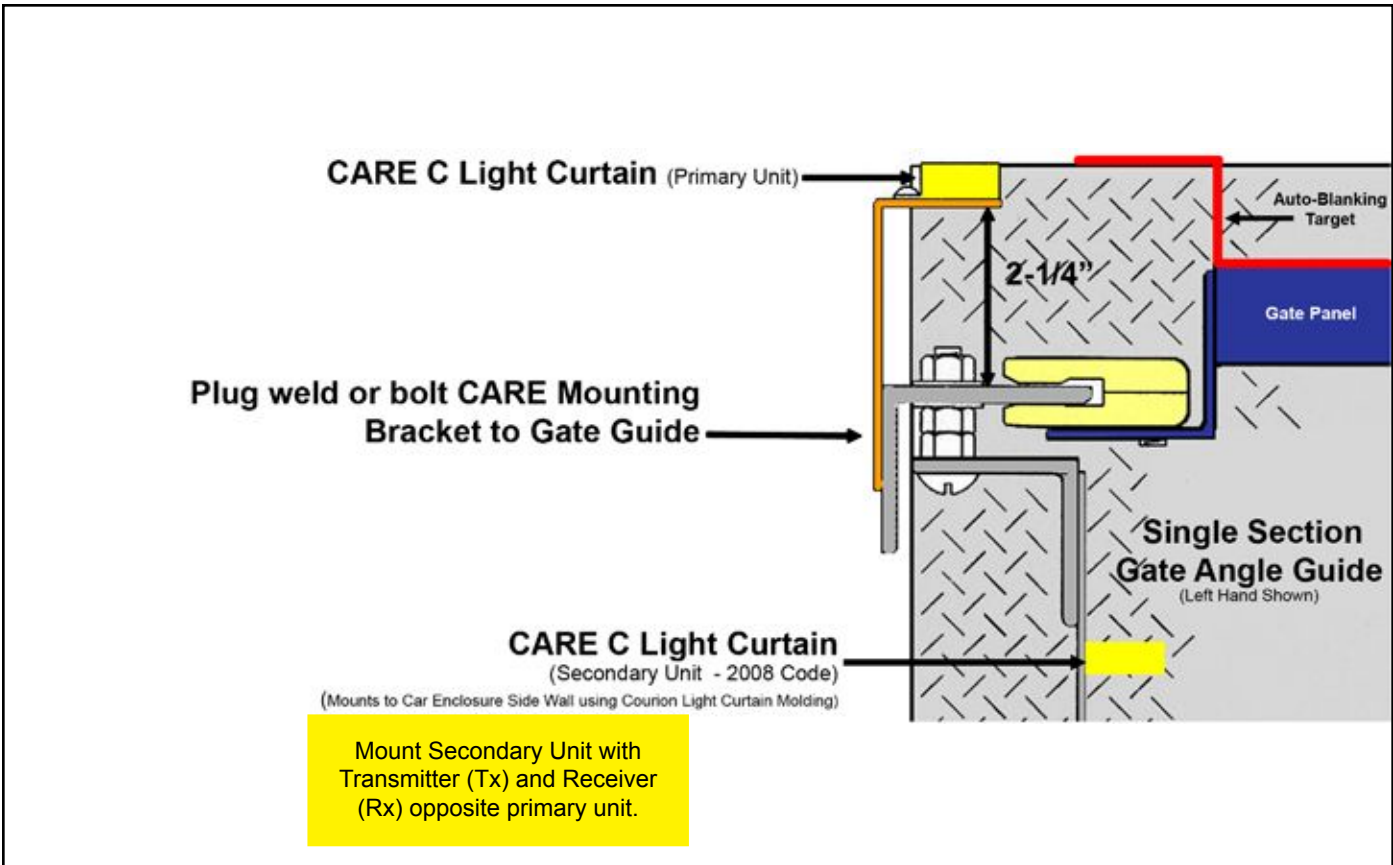
1" (25mm)
(Q Guides Shown)



Distance From Face of Gate Guide as Shown on Following Plan Views

Single Section Q-Style (shown)	1-1/8" (29mm)
2-Section Q-Style	1-5/8" (41mm)
Single Section Angle Guide	2-1/4" (57mm)
2-Section Angle Guide	1-5/16" (31mm)





2 *Install Sensor Edges*

Mount the sensor edges to the Mounting Brackets with 3 screws provided by CEDES.

The sensor lenses (black dots on one side of the sensor edges) have to face each other.

3 *Mount The Control Unit*

Mount the CARE-C Control Unit to a stable and safe location on top of your Car Enclosure. If you have an iDRIVE.G Gate Control, you can mount it directly to the outside of the Control cabinet

IMPORTANT!

The CARE-C Cables are 16' long. Be sure to mount the Control Unit in a location that can be reached by the cables. If you require cable extensions, please call Courion



4 *Install the Auto-Blanking Target to the Reversing Edge*

Attach the Auto-Blanking Target found in Courion Hardware Kit #760 (Part #94-000760) over the Gate Reversing Edge Cover. Auto-Blanking Target not required on Courion P Style 2-Section Compound Gates.

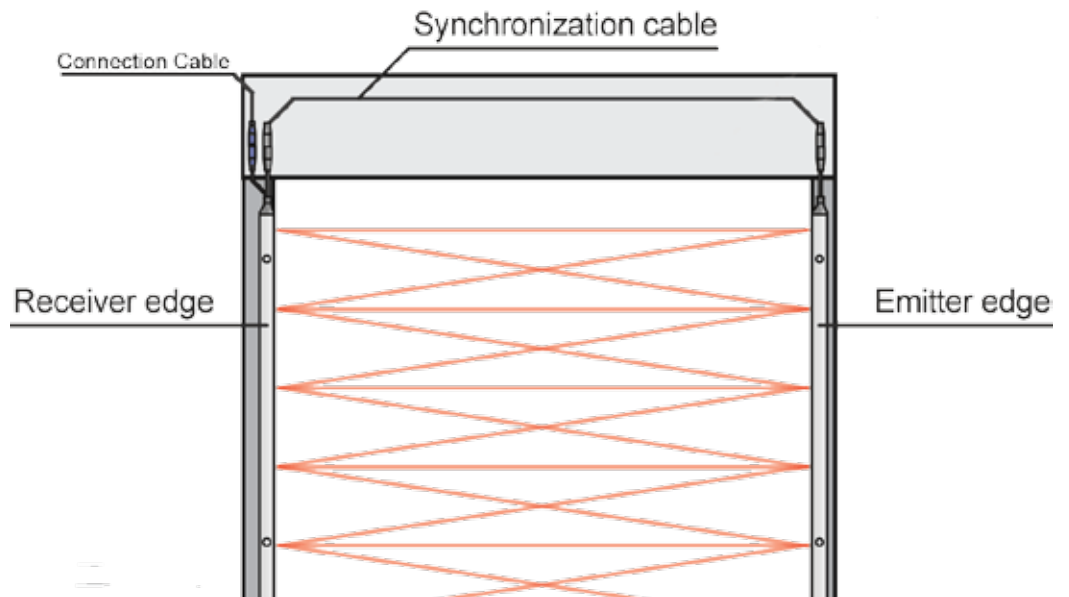


5 *Connect the Light Curtain Cables*

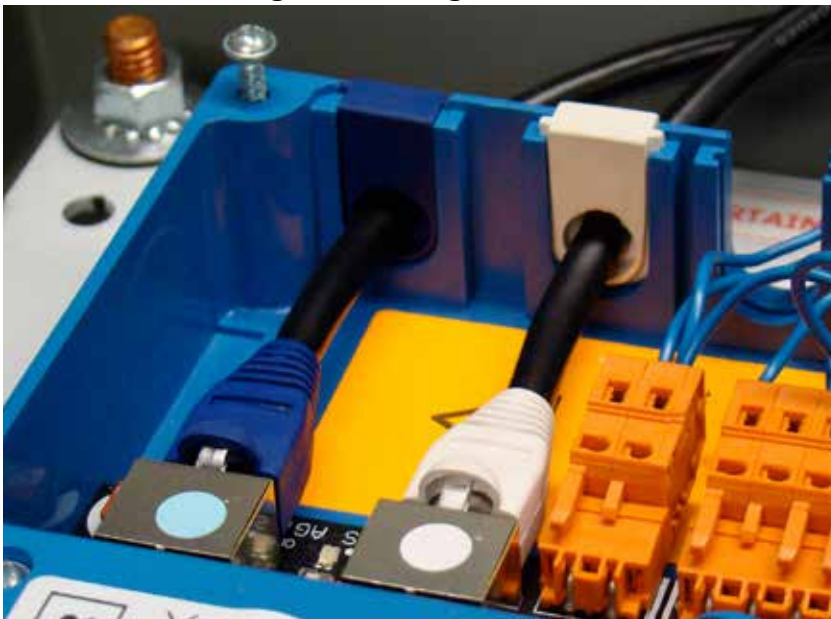
If you have a **Cegard Max Light Curtain**, connect the cables from the Emitter and Receiver Edges to the Light Curtain Control Unit (White to White/Blue to Blue). Connect the Light Curtain Control Unit to the Courion Door Control using the Wiring Diagrams provided by Courion.

If you have a **Cegard GridScan/Mini Light Curtain**, connect the Emitter and Receiver Edges using the Synchronization Cable. Then plug the Connection Cable into the Blue Plug on the Receiver Edge and connect it to your Courion Door Control using the Wiring Diagrams supplied by Courion.

Cegard Grid/Scan MiniLight Curtain



Cegard Max Light Curtain



IMPORTANT!
Make sure the CARE-C cables do not run on top of or next to high voltage or VFD motor lines. These electric lines can cause interference with the CARE-C Light Curtain signals.



Cegard Grid Scan/Mini Operational Information

The following Operational Data is from Cedes, the manufacturer of the Cegard Grid Scan/Mini Light Curtains utilized by Courion with Next Generation iSYSTEMs. To make sure you have the latest version, visit www.couriondoors.com where this manual and related documents can be downloaded.

Overview

The Emitter and Receiver Edges create a grid of infrared beams offering up to 8.2 ft (2.5 m) in protection height. When the infrared beams are interrupted, the output sends a signal to the Courion Door Control. As soon as the hoistway opening is clear again, the output switches to indicate that the area is “clear”. The blanking system is designed to mount directly onto the leading edge of the Car Gate Panel. As the Car Gate closes, the Grid Scan/Mini recognizes the Car Gate and does not switch the output.

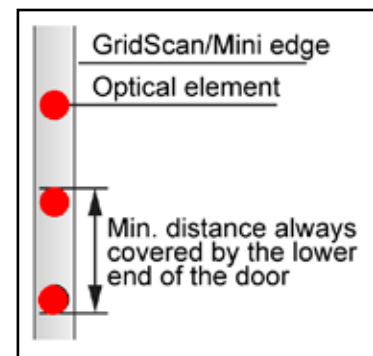
Alignment

The optical axis of the Emitter (Tx) and the Receiver Edge (Rx) need to be aligned towards each other to ensure the light curtain functions reliably. Reflective surfaces near to or parallel to the surveillance area can cause reflections and interfere with the Grid Scan/Mini functions. Keep a reasonable distance between the sensor edges and any reflective surface.

Door Blanking

The Grid Scan/Mini can differentiate between a light beam interruption caused by an object and a light beam interruption caused by the closing Car Gate. The Grid Scan/Mini does this by analyzing the different interruption patterns.

The light beam interruption of a closing Car Gate starts at the topmost beam going downwards. The lower end of the Car Gate needs to always cover at least one beam during the Car Gate closure.



Test Input

To fulfill current code requirements, the Grid Scan/Mini must be tested by the Courion Door Control before each door closing cycle.

LED Status Description

Receiver Edge		Emitter Edge	
LED Green	Light Curtain Free	LED On	Power OK
LED Red	Light Curtain Interrupted	LED Off	No Power
LED Blinking Green or Red	Internal Malfunction		



For Immediate Help Call 1-314-533-5700

Maintenance

Although the Grid Scan/Mini does not need regular maintenance, a periodic functional check is strongly recommended:

- Make sure the optical elements are clear of dirt and dust. If necessary, clean the front surface with a soft towel.
- Make sure the edges are securely fastened to the Courion CARE Mounting Bracket.
- Check the mounting position, cable routing, and connection of the sensors.

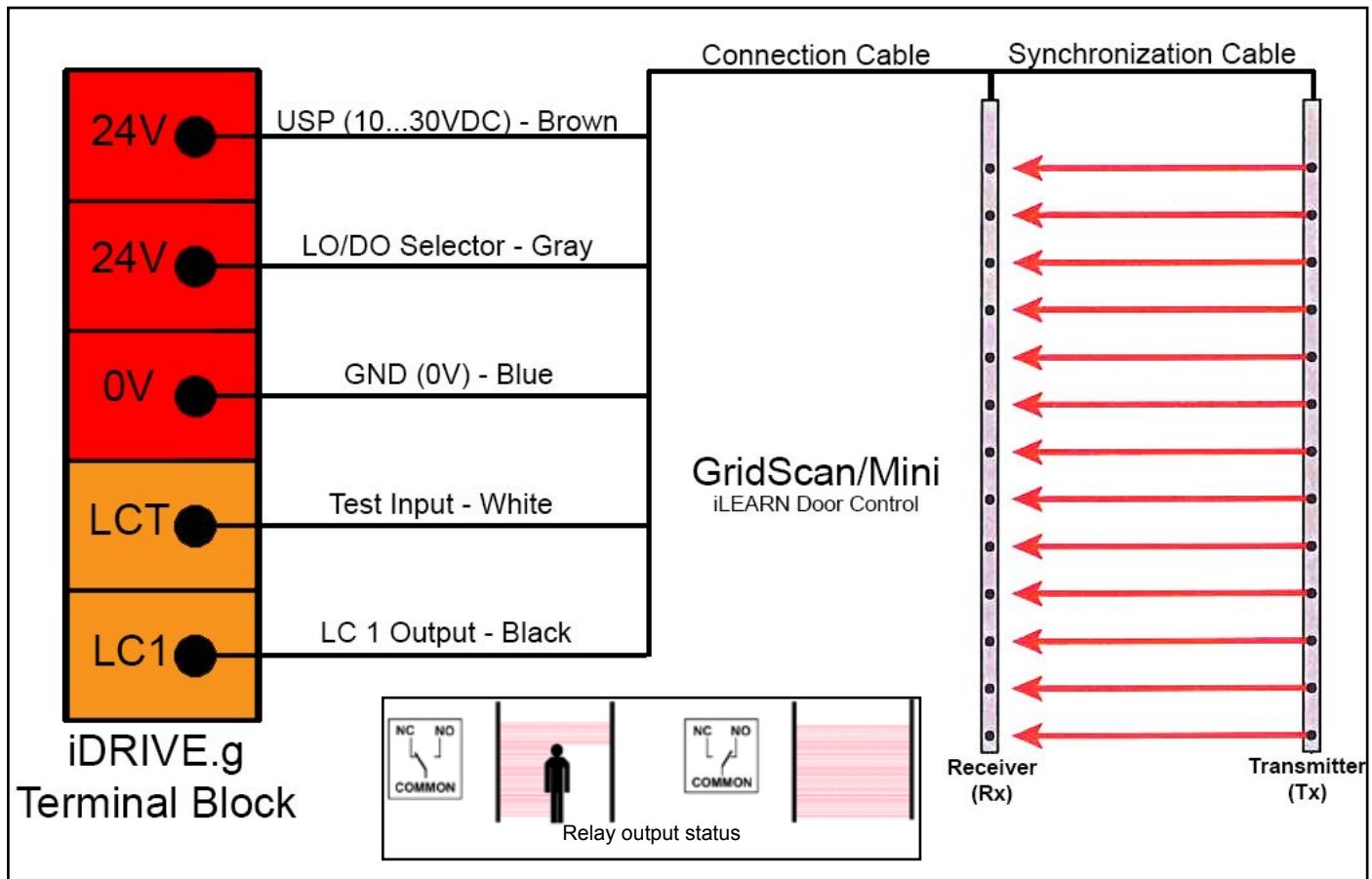
Troubleshooting

Emitter Edge (Tx)	Receiver Edge (Rx)	Action
LED off	LED off	<ul style="list-style-type: none">• Check electrical connections.
LED off	LED Red	<ul style="list-style-type: none">• Check the connections of the Synchronization Cable
LED on	LED always Red	<ul style="list-style-type: none">• Make sure the hoistway opening is clear.• Check the alignment of the light curtain.• Check that the test input is connected to the test output signal of the Courion Door Control unit and that the signal level and logic are correct.• If the test input is not used, connect it permanently to 24V.
LED on	LED always Green	<ul style="list-style-type: none">• Make sure the sensor edges are not mounted close to any shiny or reflective surface.
LED on	LED switching between Red and Green without interruption	<ul style="list-style-type: none">• Make sure that the cables and edges are located away from sources of electromagnetic interference.• Ensure that the Emitter and Receiver are correctly aligned and remain so during door closure.



For Immediate Help Call 1-800-533-5760

Wiring Diagram: iLEARN System with CEDES Grid Scan/Mini- CARE Grid Scan/Mini wires directly to the iDRIVE.g VFD Gate Control Terminal Block using the Cedes Connection Cable.



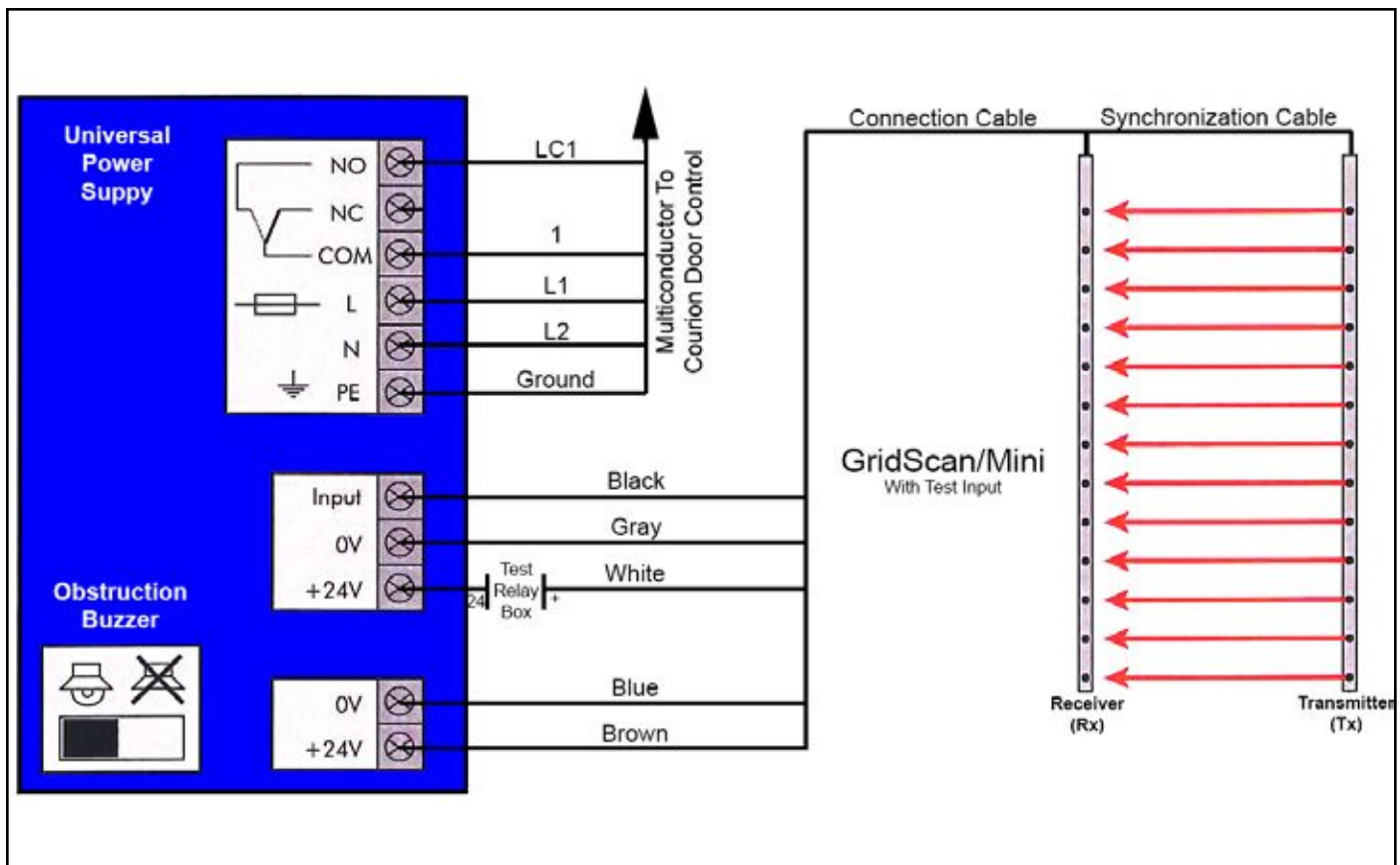
Cedes Universal Power Supply

The following Operational Data is from Cedes, the manufacturer of the CARE C Universal Power Supply which is used in conjunction with the Grid Scan/Mini Light Curtains on freight door jobs utilizing Courion's Model MP or Model E Door Controls. To make sure you have the latest version, visit www.couriondoors.com where this manual and related documents can be downloaded.

Power Supply Input - The CARE C Universal Power Supply has a unique universal power supply that operates within an input voltage range between 17 to 240 Volts AC or DC. No adjustment is necessary. The power supply automatically detects the voltage and adjusts itself for proper function.

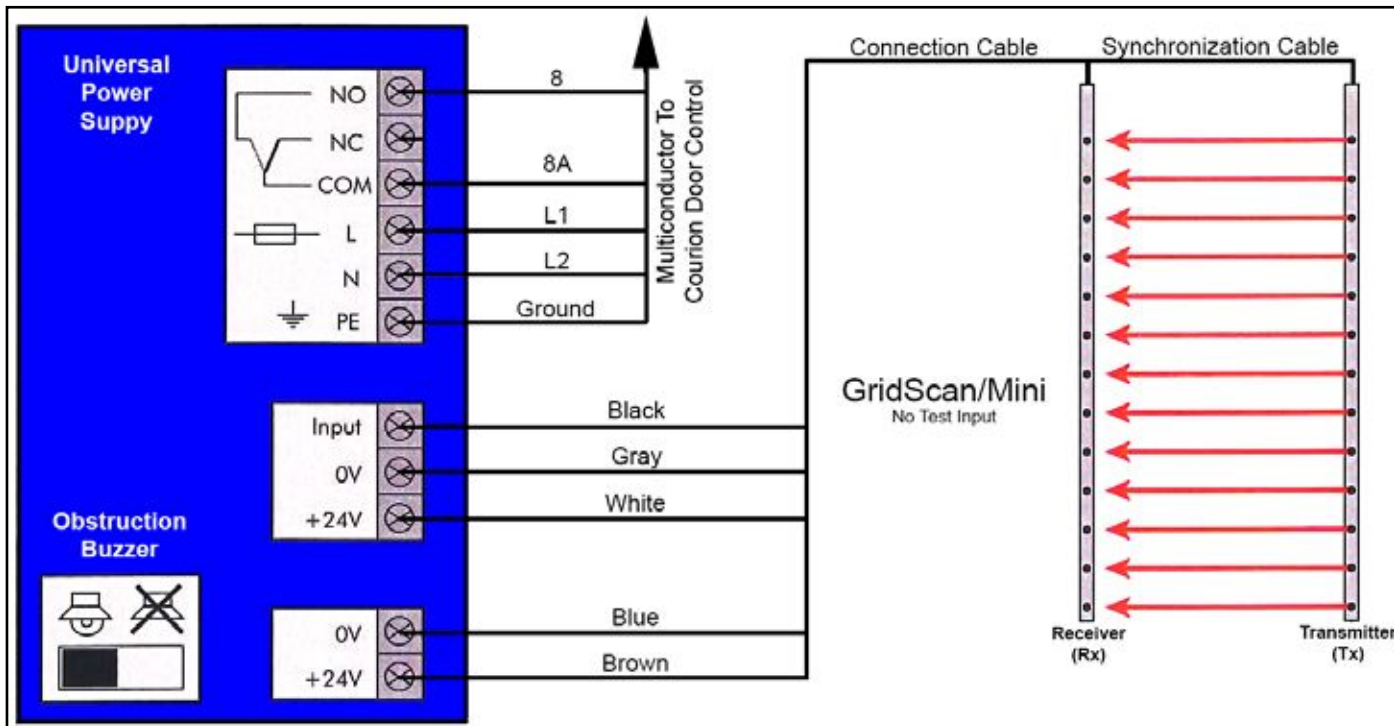
Connect the protective ground terminal of the Control Unit to a protective grounded frame. Connect power to the Control Unit. The GREEN LED (power) should be ON. If all light beams are uninterrupted and the Test Input signal is at a high level, the output relay changes the status to "OK" and the YELLOW LED is turned OFF. If there are different LED readings, then go to the trouble-shooting section at the end of this Manual.

Wiring Diagram: MP Door Control with CEDES Grid Scan/Mini [Test Input Required] - CARE Grid Scan/Mini wires to the Courion MP Door Control via the CARE C Universal Power Supply.



For Immediate Help Call 1-800-533-5760

Wiring Diagram: MP Door Control with CEDES Grid Scan/Mini [Test Input NOT Required]
- CARE Grid Scan/Mini wires to the Courion MP Door Control via the CARE C Universal Power Supply.



Operating Range Setting - The maximum operational range for the Grid Scan/Mini Light Curtains is 25.5' (10 m).

Buzzer - The CARE C Control Unit has a buzzer that is active when one or more beams are interrupted. The buzzer can be switched on and off with the slide switch located between the connectors of the sensor edges.

Test Input - The safety integrity check of the CARE C Light Curtain is initiated by a test input signal as follows:

1. In normal operation, the Test Input has to be set to high level. In this mode, the output relay follows the status of the light beams as shown on page 4.
2. Prior to the car gate closing, the Test Input has to be set to low level. The Output Relay changes its status to 'Stop' as if one or more beams are interrupted. This is the indication that the CARE C Light Curtain is performing an internal safety check.
3. If this internal safety check is successful (no failure detected) and no beam is interrupted, the Output Relay changes its state to 'OK' so the car gate can close.
4. If the internal safety check detects a failure of the CARE C Light Curtain, meaning that the device loses its safety functionality, the status of the Output Relay remains in the 'Stop' position.

Installation Notes

1. The sensor edges have to be aligned better than +/- 10°.
2. The sensor edges must not be bent or be exposed to tension.

Start-Up

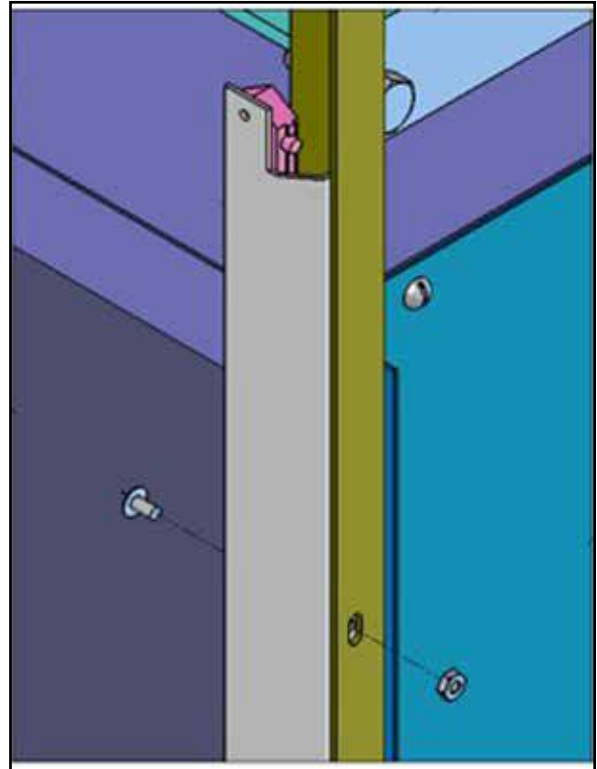
1. Switch on mains and power up the Door Control and CARE C Universal Power Supply, when applicable.
2. Check the LED on both edges (power, status).
3. Test if the system is working correctly by letting the freight doors open and close, interrupting the light curtain during the closing of the car gate.

LED Status and Description				
Receiver Edge			Emitter Edge	
Green LED	Red LED	Sensor Status	Green LED	Sensor Status
●	○	Light curtain free	●	Power OK
○	●	Light curtain interrupted	○	No power or not within limits
●	○	Start-Up (slow blinking)		
○	●	Internal malfunction		



CART LIFT CARE-F LIGHT CURTAINS

- 1 Mount the Transmitter and Receiver to the Gate Guide Rails using the pre-drilled holes provided by Courion.
- 2 The CARE Power Supply can be mounted to the Car top at a location that is convenient for the elevator contractor.
- 3 Adjust the Transmitter and Receiver so the the CARE sensors are aligned.



CARE-F CONTROL

POWER: The CARE-F Control Box can be powered by either 115VAC or 230VAC depending on the voltage of the available supply. However, Courion recommends the following power connections:

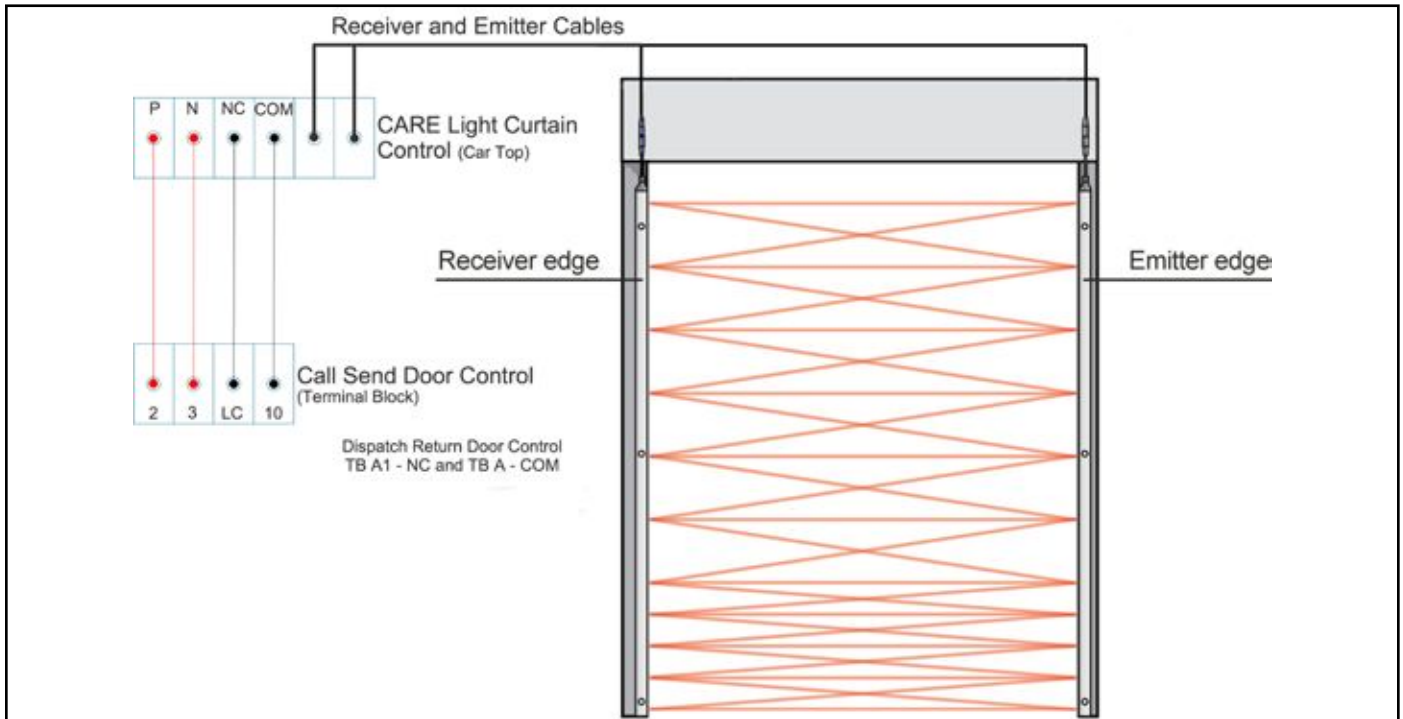
- Call - Send Door Control: TB 2 to P and TB 3 to N
- Dispatch - Return Door Control: TB 3 to P and TB 91 to N

RELAY OUTPUT: Two (2) sets of change over relay contacts are provided to connect the CARE-F Control Box to the Courion Door Controller.

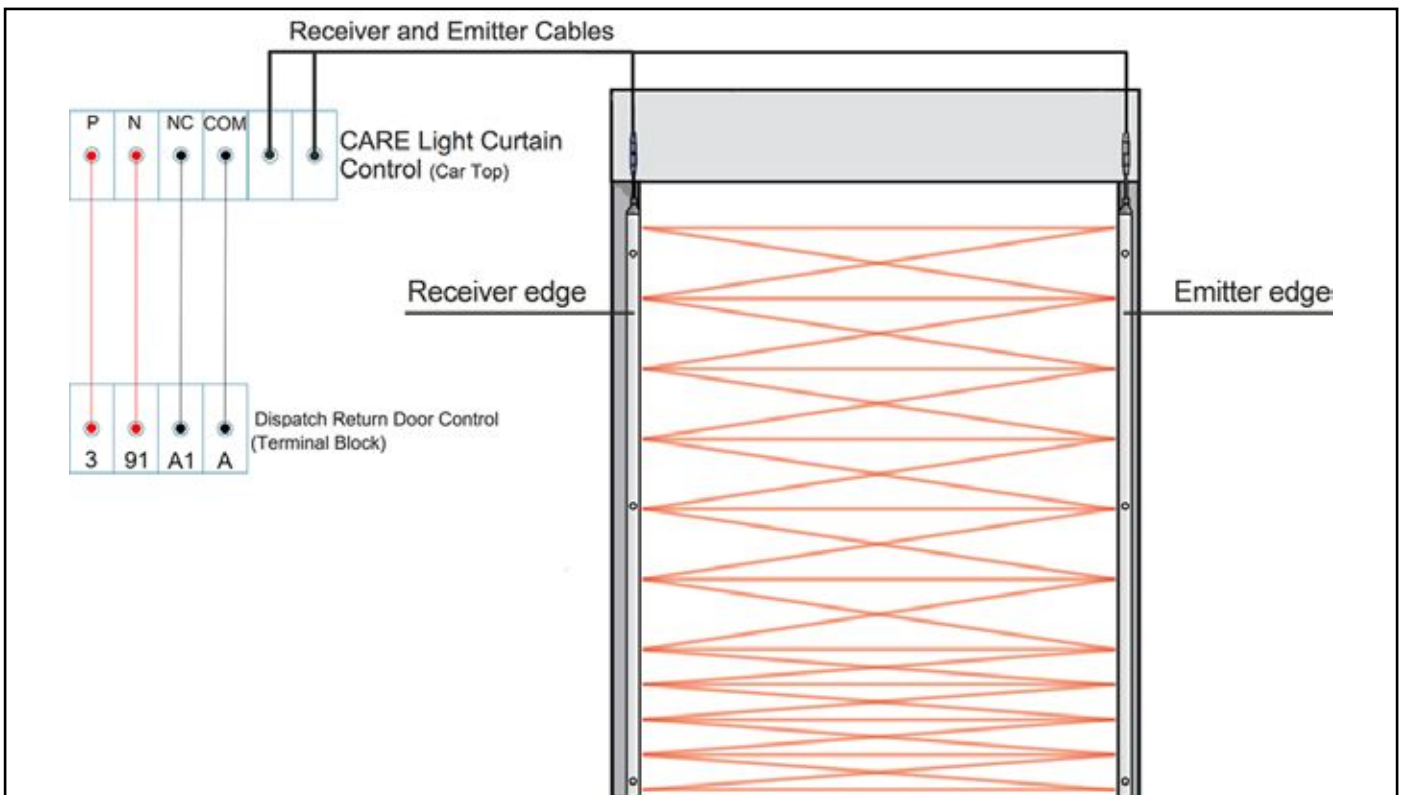
- Call - Send Door Control: TB LC to NC (normally closed) and TB 10 to Com
- Dispatch - Return Door Control: TB A1 to NC (normally closed) and TB A to Com

LED INDICATORS - The GREEN LED indicates that power is present. The RED LED indicates that the system has identified an obstruction and the output relay has dropped out.

Wiring Diagram: Cart Lift CALL - SEND Door Control with Formula Light Curtain



Wiring Diagram: Cart Lift Dispatch - Return Door Control with Formula Light Curtain





*THE NEXT GENERATION OF
FREIGHT ELEVATOR DOORS*

www.couriondoors.com

3044 Lambdin Avenue
St. Louis, Missouri 63115
(314) 533-5700 or (800) 533-5760
(314) 533-5720 (fax)
sales@couriondoors.com