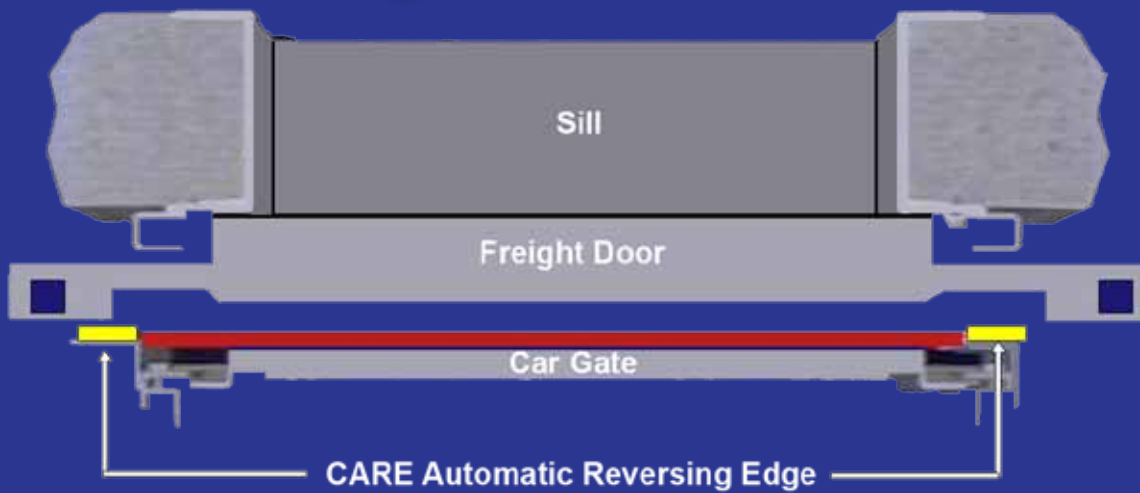
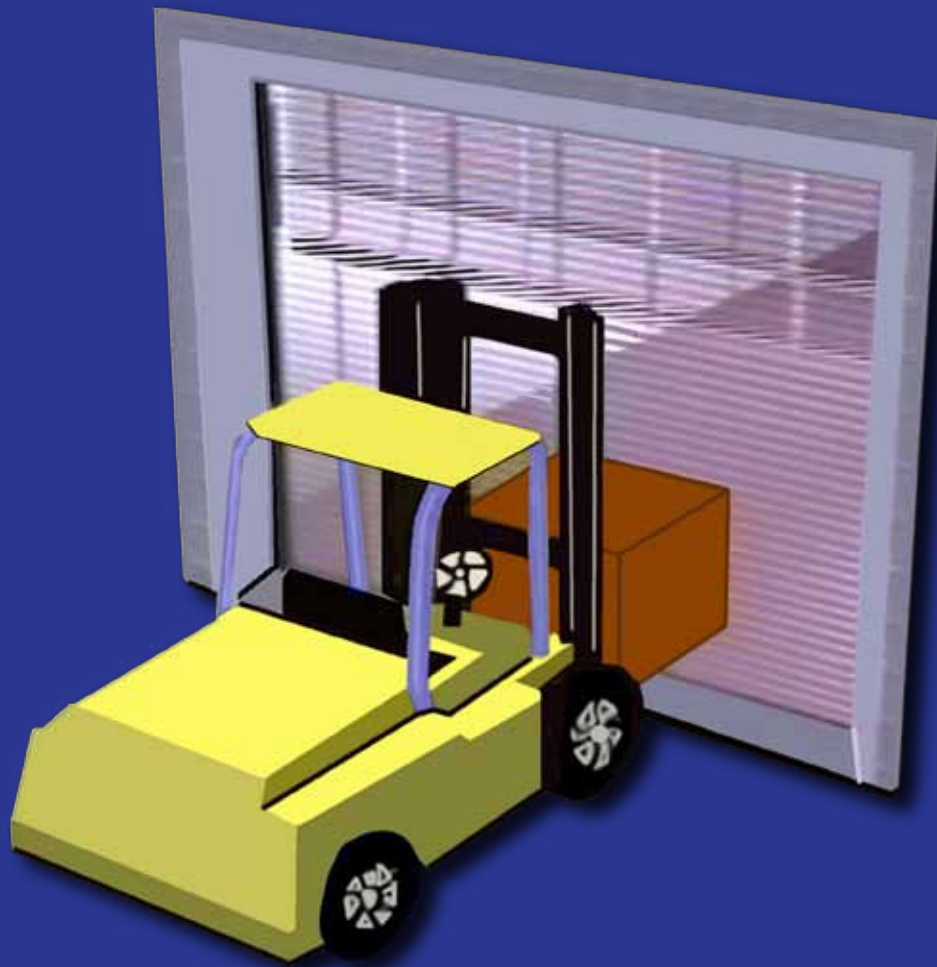




*THE NEXT GENERATION OF
FREIGHT ELEVATOR DOORS*

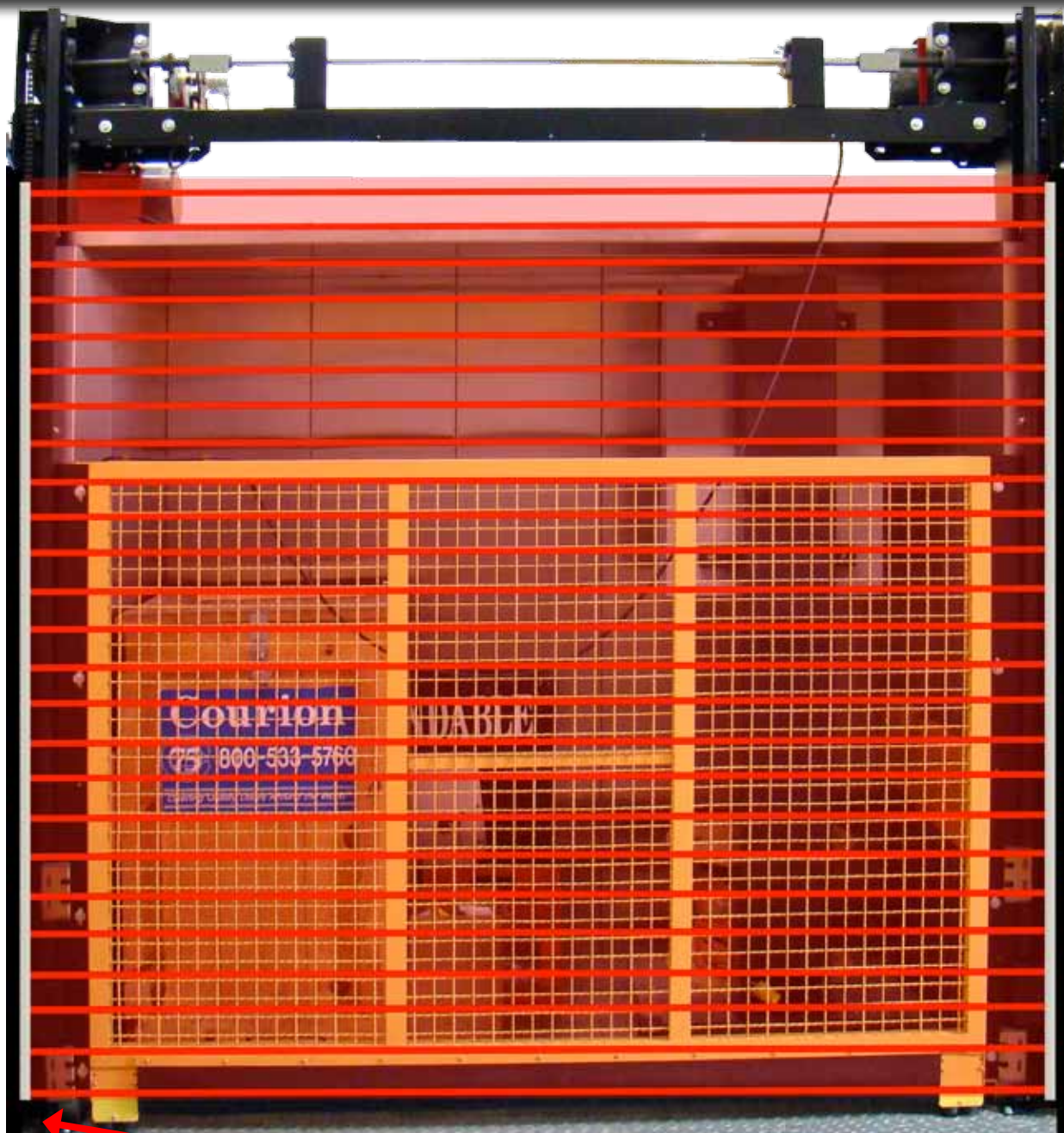


CARE-C Light Curtain Installation Instructions

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.



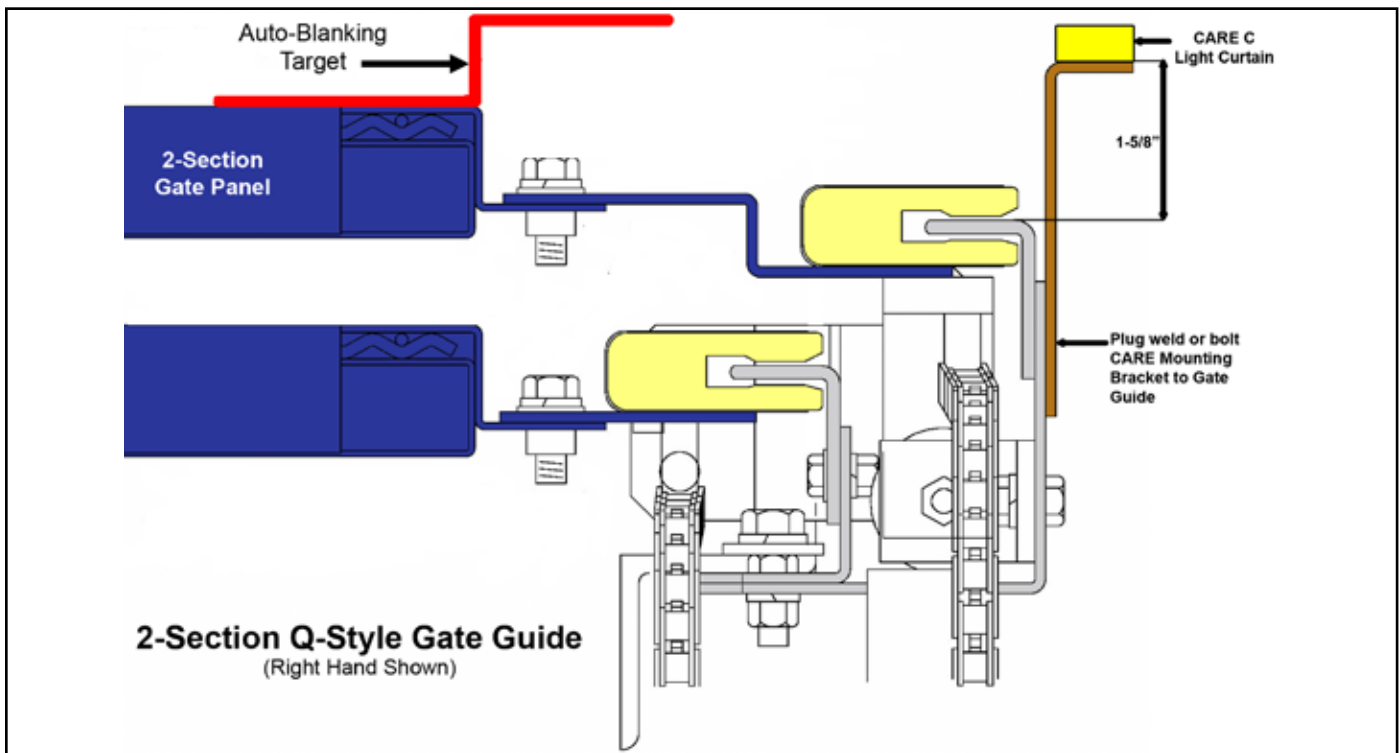
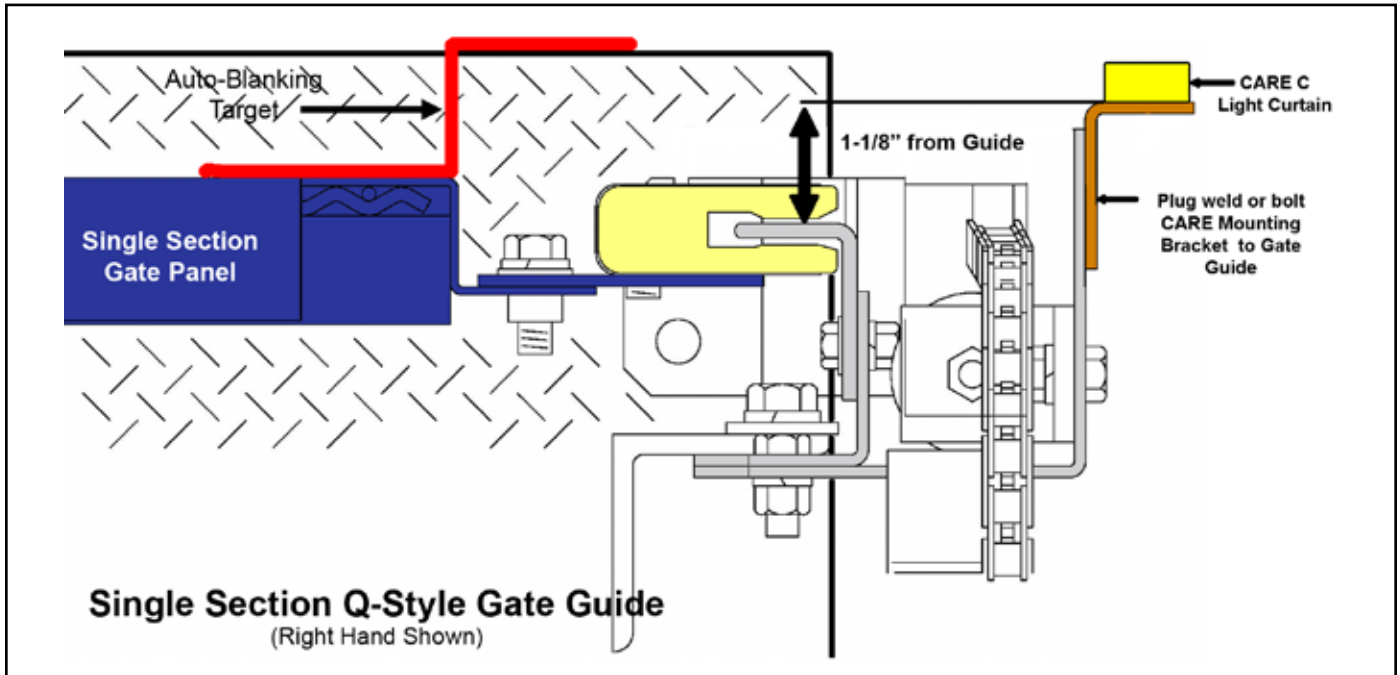
Distance From Car
Floor

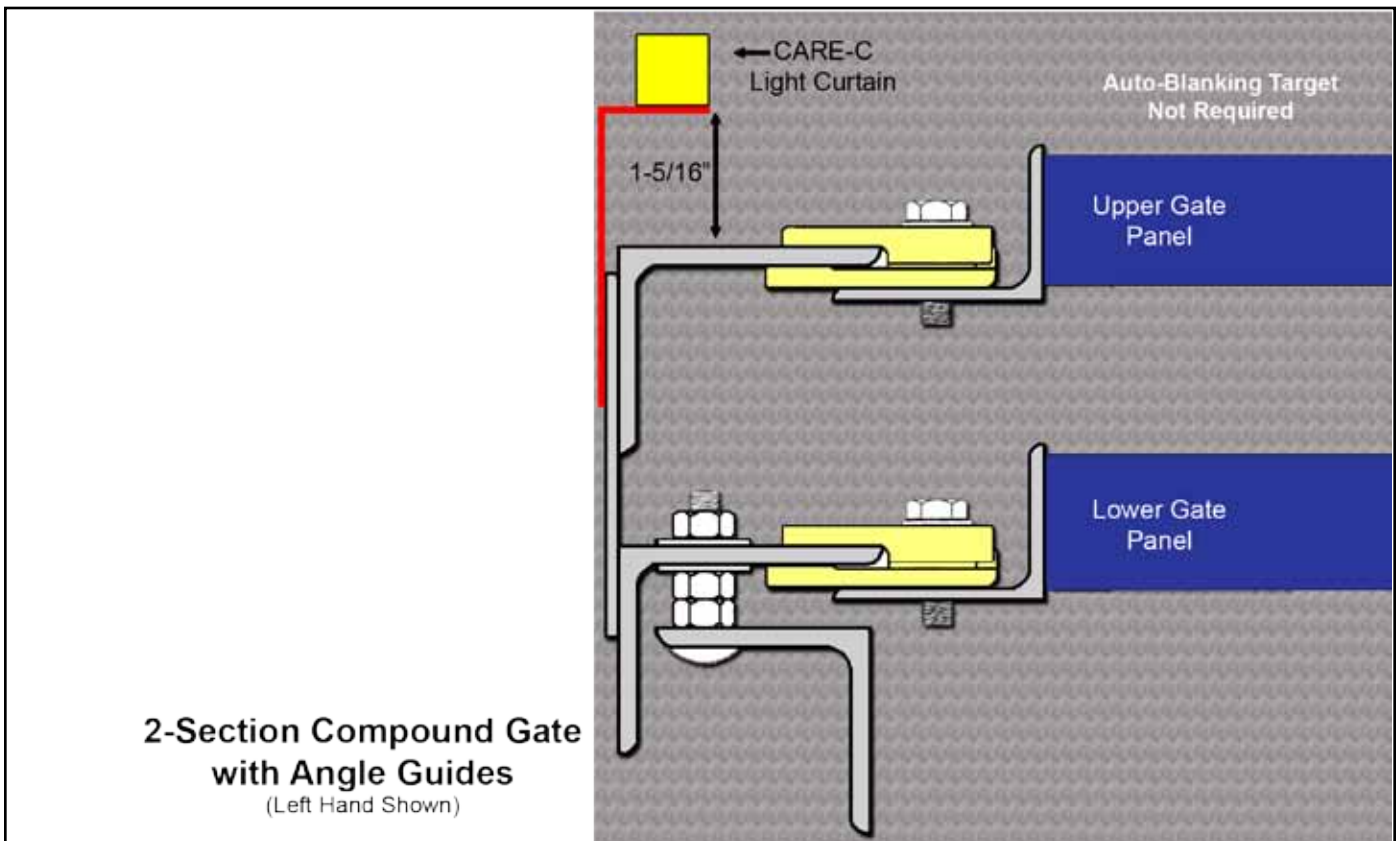
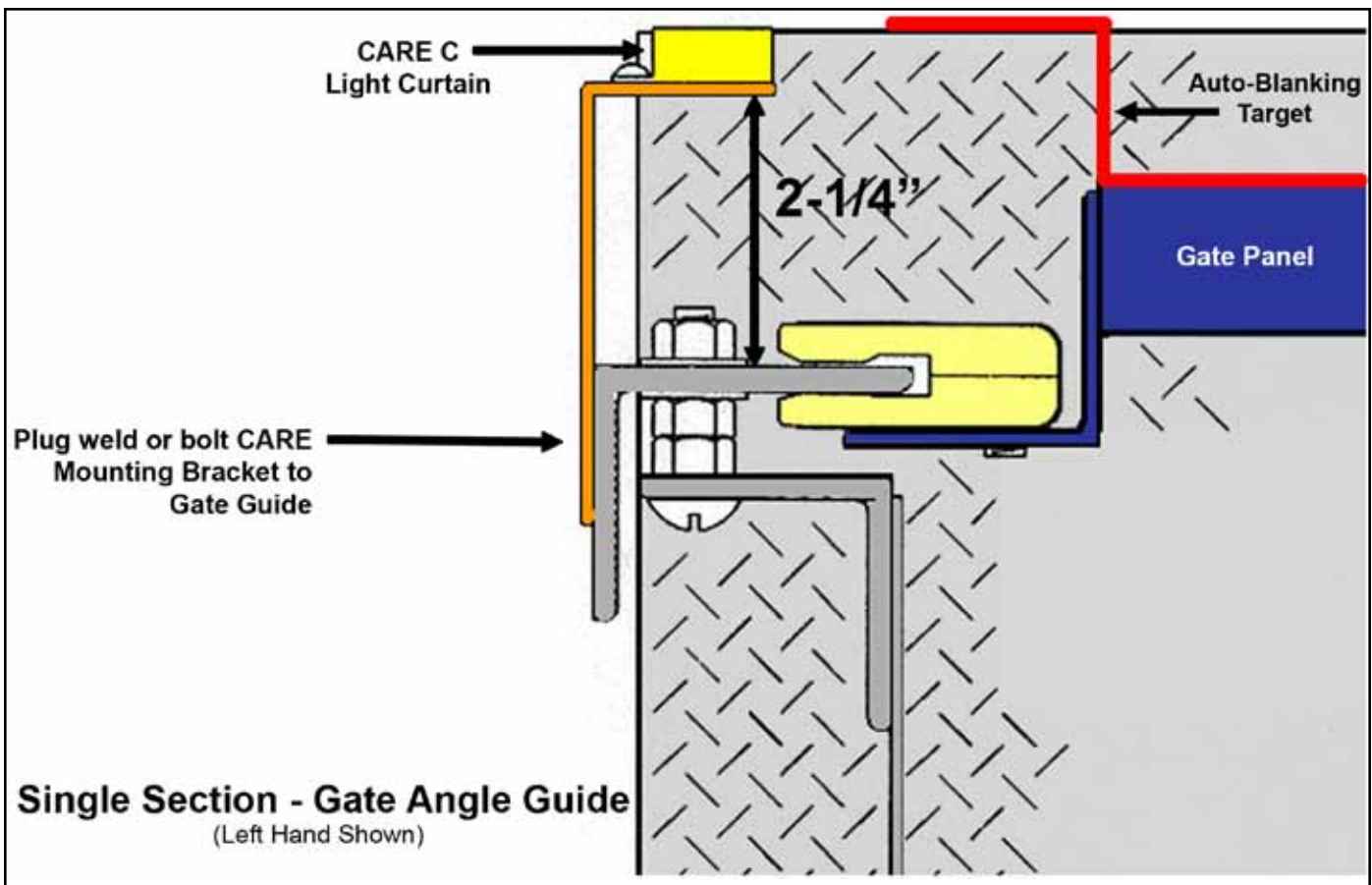
1" (25mm)
(Q Guides Shown)



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.

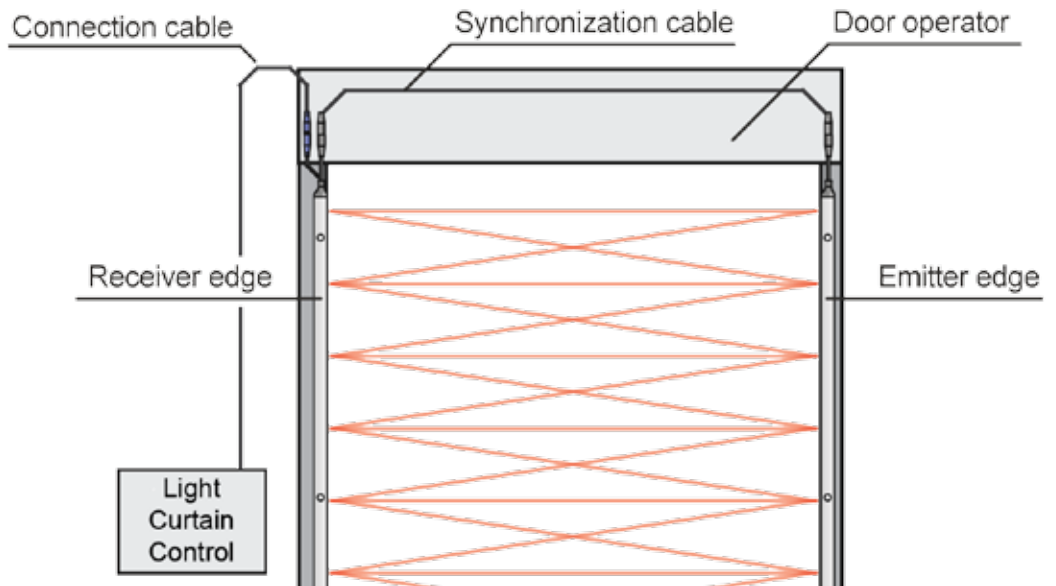


5 *Connect the Light Curtain Cables*

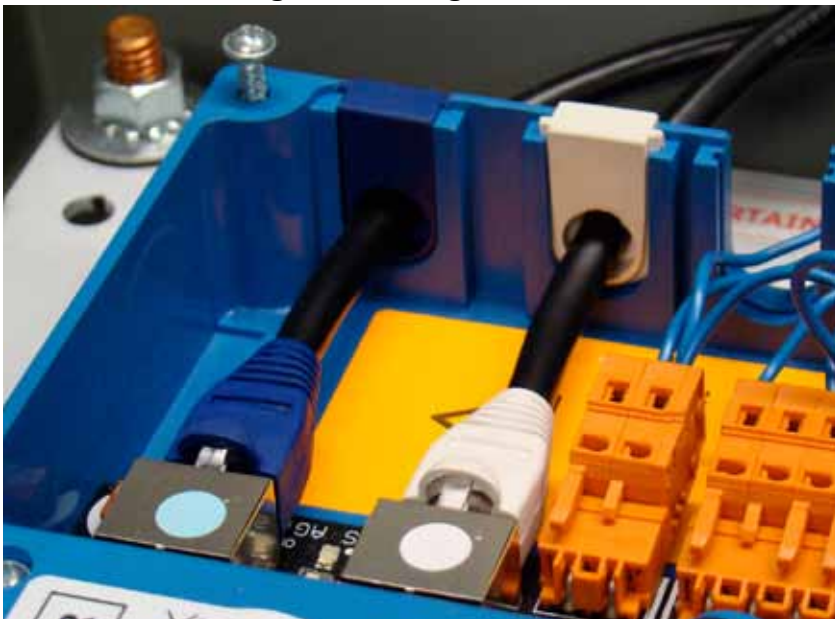
If you have a **Cegard Max Light Curtain**, connect the cables from the Emitter and Receiver Edges to the Light Curtain Control Unit (White to White/Blue to Blue). Connect the Light Curtain Control Unit to the Courion Door Control using the Wiring Diagrams provided by Courion.

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. 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 2.5 m (8.2 ft) 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 as such and does not switch the output.

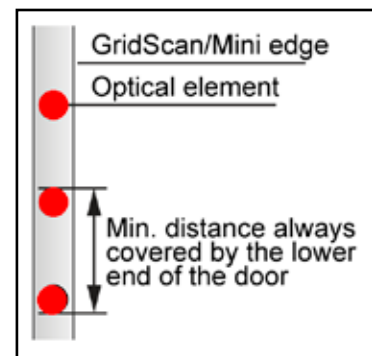
Alignment

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 door. The GridScan/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 cover always 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

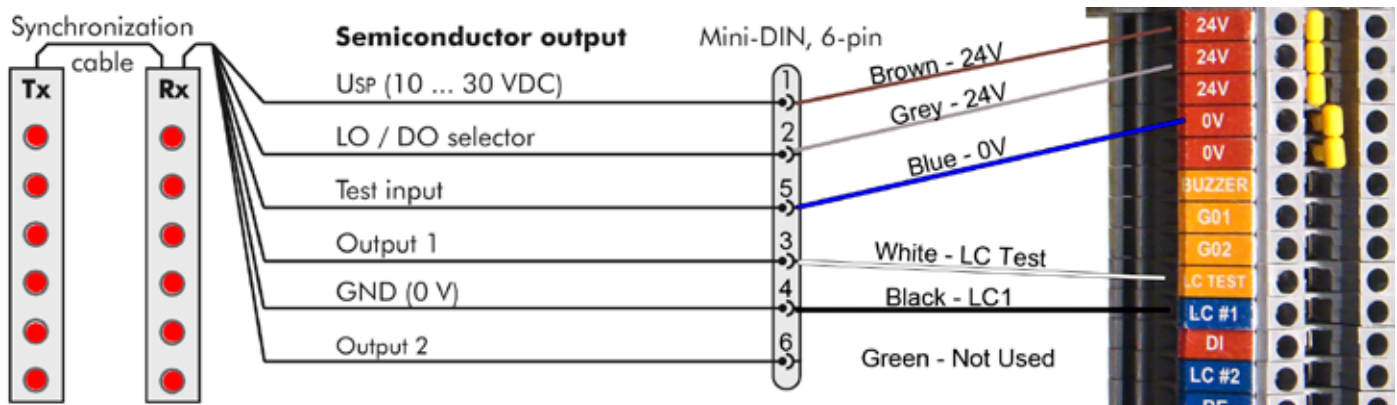
Although the Grid/Scan Mini does not need regular maintenance, a periodic functional check is strongly recommended:

- 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 Usp.
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.

Wiring Diagram for Courion Next Generation iLEARN System - CARE Grid/Scan Mini wires directly to the iDRIVE.g Cartop Control.



Cegard MAX Operational Information

The following Operational Data is from Cedes, the manufacturer of the Cegard Max Light Curtains utilized by Courion. 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 Control Unit 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.

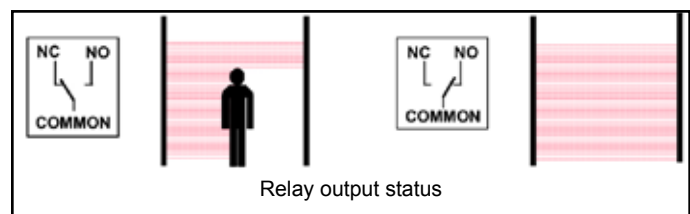
Connect the protective ground terminal of the Control Unit to a protective grounded frame. Connect power to the Control Unit. The GREEN LED (power) should be ON. If all light beams are uninterrupted and the Test Input signal is at a high level, the output relay changes the status to "OK" and the YELLOW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

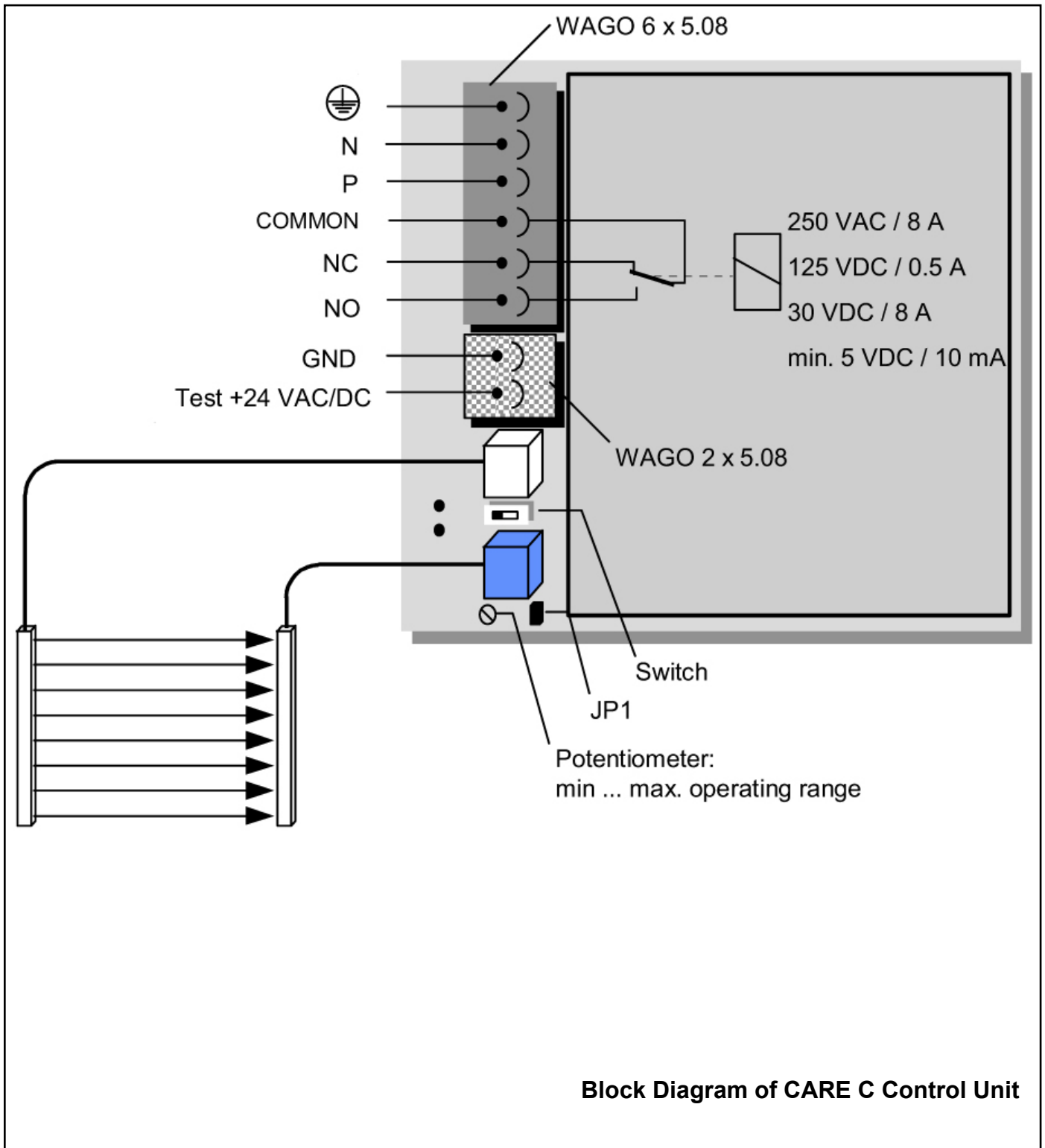
Auto Blanking Mode - The CARE C Light Curtain recognizes the gate movement and automatically blanks the beams that are interrupted by the gate itself.

This auto-blanking mode can be disabled by moving the JP1 jumper on the CARE C Control Unit.

Jumper Position	Auto Blanking Mode	Comments
Set	Enabled	A moving gate is detected and automatically blanked
Not Set	Disabled	A moving gate is detected like any other object and triggers the output relay

Output Relay			
The output relay provides the status of the light grid to the Courion Door Control.			
CARE Control Terminals	Freight Door Control Terminals	CART-MATIC Control Terminals	Dumbwaiter Control Terminals
Common	8A	A	10
NC	8	A1	LC





Block Diagram of CARE C Control Unit

Operating Range Setting - A sensitivity potentiometer is provided to adjust the operating range when the CARE C Light Curtain is used on short range of less than 9'-6" (3m).

Should operating range be less than 9'-6" (3m), adjust the sensitivity potentiometer as follows:

1. Ensure that the protection area is free.
2. Turn the potentiometer counter-clockwise until the yellow LED illuminates.
3. Remember this potentiometer position.
4. Turn the potentiometer clockwise halfway between the prior position and the maximum position.

Factory setting is maximum sensitivity.

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.



Operating range potentiometer setting

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.

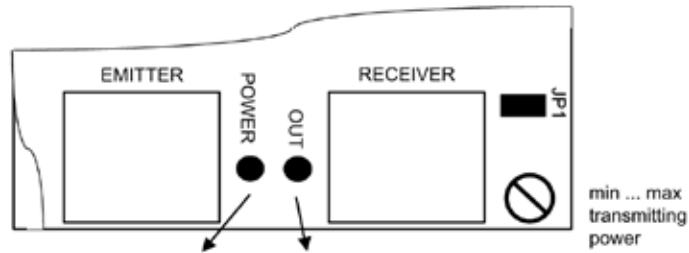
Installation Notes

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

DANGER OF HIGH VOLTAGE!

Always disconnect power before opening the cover of the Control Unit.

Trouble Shooting



Indication	green	yellow	Action
No function, door open	○	○	Power supply ok? Fuse ok?
Door open, free protective area	●	●	Obstruction? Installation? EMC-interference? Protective earth (PE) connected? Control unit damaged? Alignment of sensor edges not appropriate? Dirty sensor edges? Test input set to high level?
Semitransparent objects are not detected	●	●	Operating range < 3m? Sensitivity potentiometer correctly set?
Receiver R problem?		⊗	Receiver not connected? Receiver damaged? Receiver cable damaged?
Emitter E problem?	⊗		Emitter not connected? Emitter damaged? Emitter cable damaged?
Person or object detected	●	●	Normal operation
No object	●	○	Normal operation

● = LED on ○ = LED off ⊗ = LED flashing



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