



# **DOOR OPERATOR**

## **AUTOLOCK CONVERSION**

**This document contains important installation and safety information to be reviewed prior to Installing and Operating the door.**

**Retain this document for future reference**



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# Introduction

Congratulations on your purchase of a Diamond Door quality bi-fold door system. Following a few simple steps will help ensure you get years of trouble free operation.

## IMPORTANT INSTALLATION INSTRUCTIONS



### WARNING

#### To reduce the risk of SEVERE INJURY or DEATH:

1. READ AND FOLLOW ALL INSTALLATION WARNINGS AND INSTRUCTIONS.
2. Refer to the electrical installation manual for details on hooking up the door to line power.
3. NEVER let children play with or operate the door, keep remote controls (where applicable) out of the reach of children.
4. Keep people and equipment clear of a door that is in motion and keep the moving door in sight until it is completely closed or opened. NO ONE SHOULD CROSS THE PATH OF A MOVING DOOR.
5. Test and check the doors safety features once a month, adjust the upper and lower limits as needed. Failure to adjust the operator properly may cause severe injury or death.
5. Power connection to the door should be made by a qualified electrician after the door has been securely mounted onto the building.
6. Locate the up/down/stop wall station within sight of the door and at a minimum height of 5 feet to keep it out of the reach of children.
7. Ensure all guards are in place before operating door.
8. Ensure all warning labels are visible and intact prior to operating the door.
9. Follow the maintenance schedules outlined in this manual.
10. SAVE THIS INSTALLATION AND OWNERS MANUAL FOR FUTURE REFERENCE

## Door Wiring and Controller Hookup

**All Electrical connections and wiring should be performed only by qualified electricians, refer to the Electrical Installation Manual.**

# Tools and Equipment Required

- Measuring Tape
- Utility Knife
- Stepladder or scaffolding
- Electric Drill
  - 11/32" Drill bit
  - #2 Phillips Drill bit
- Angle grinder
- Cut off tool for metal
- Flathead screwdriver
- Wrenches: 3/4" and 9/16"
- Hand ratchet with the following sockets; 3/4", 1/2", 7/16"

## Door Identification

On the face of the electrical box next to the lift motor, there is a label. This label contains important information that is specific to your door.

The door S/N: (Serial Number) is unique to each door and will be needed when calling customer service or ordering any replacement parts you may need.

**DIAMOND DOORS**  
400 Airport Drive  
Westborough, MA 01581  
Phone: 508-326-1800  
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**ETL**  
Intertek  
4011087

Model: **DD1SS21** S/N: **1234**  
Volts: **230** Ph: **1** Mfg Date: **Jan 1, 2016**  
FREQ: **60 Hz** Max Breaker Size: **25**  
HP: **1.5** F.L.A.: **8.8** Min Circuit Ampacity: **11**  
Max Power: **825** Ft-Lbs

Made in Canada  
Conforms to UL STD 508  
Certified to CSA STD 220-2 Rev. 2011

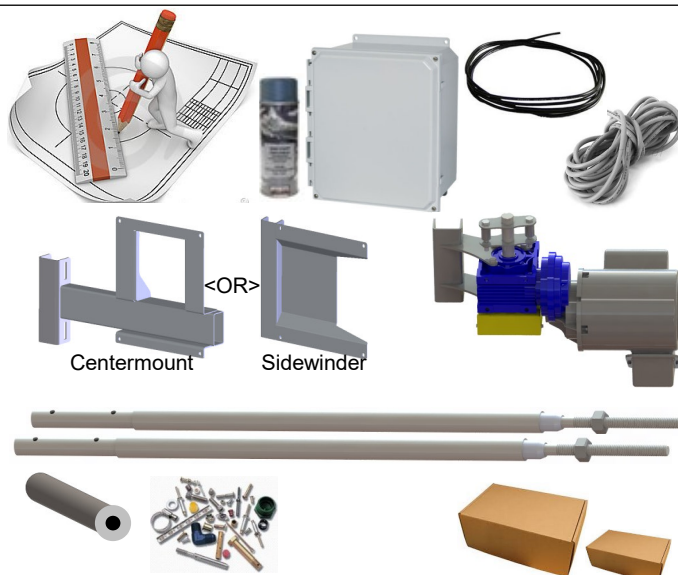
WARNING	CAUTION	AVERTISSEMENT	ATTENTION
DO NOT OPEN THE ELECTRICAL BOX OR LIFT MOTOR COVER. THIS IS A HIGH VOLTAGE AREA. ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT TO REPAIR OR MAINTAIN THIS EQUIPMENT.	DO NOT OPEN THE ELECTRICAL BOX OR LIFT MOTOR COVER. THIS IS A HIGH VOLTAGE AREA. ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT TO REPAIR OR MAINTAIN THIS EQUIPMENT.	NE PAS OUVRIR LA BOÎTE ÉLECTRIQUE NI LE COUVERCLE DU MOTEUR À SOUS-TENSION. C'EST UNE ZONE À HAUTE TENSION. SEULES DES PERSONNELS QUALIFIÉS DEVRAIENT RÉPARER OU ENTREtenir CE MATÉRIEL.	NE PAS OUVRIR LA BOÎTE ÉLECTRIQUE NI LE COUVERCLE DU MOTEUR À SOUS-TENSION. C'EST UNE ZONE À HAUTE TENSION. SEULES DES PERSONNELS QUALIFIÉS DEVRAIENT RÉPARER OU ENTREtenir CE MATÉRIEL.

OWNERS MANUAL ENCLOSED PROPRIÉTAIRES MANUEL JOINT

# Setup for Autolock Conversion

1. All parts and materials are on site
  - Location drawing
  - Photo-eye kit (boxed-cables, photo-eyes, mountings brackets and hardware, wall station, and junction box)
  - Touch up paint
  - Remote Control Kit (boxed-receiver, transmitters)
  - Ebox (only on doors not equipped with circuit controlled Bud ebox)
  - Control and Power wires for Autolock
  - E-box mounting bracket (maybe attached to E-box)
  - Autolock assembly
  - Slideshaft assemblies (2x)
  - Double Threaded Collar (1x)
  - Mounting hardware
  - Box containing junction box, cable, wall station, photo-eyes, hardware
  - Box containing Remotes and Receiver
2. Door is in the down and locked position
3. Disable power to the door
4. Secure the door in the locked position with strapping. The door needs to be secured in the fully locked position to proceed. Anchor from one of the horizontal trusses.

NOTE: Some parts listed may be optional and not included



## IMPORTANT INSTRUCTIONS



**WARNING**

**Disconnect power to the door prior to proceeding with Autolock Conversion**

# Component Removal

1. Remove lock rod clips and hardware.
2. Remove horizontal lock rods
3. Remove manual locking handle assembly
4. Remove lock handle safety switch and wire
5. Disconnect and remove E-box only on doors NOT equipped with Bud E-box. (If there is no replacement E-box in your parts package, do not remove your E-box, mounting brackets or safety shields). See page 9 for details
6. For sidewinder doors remove mounting bracket only from the square vertical tube. (May require grinding)  
For centermount doors, remove the vertical tube with the mounting bracket. See page 9 for details
7. Remove Yellow Safety shield

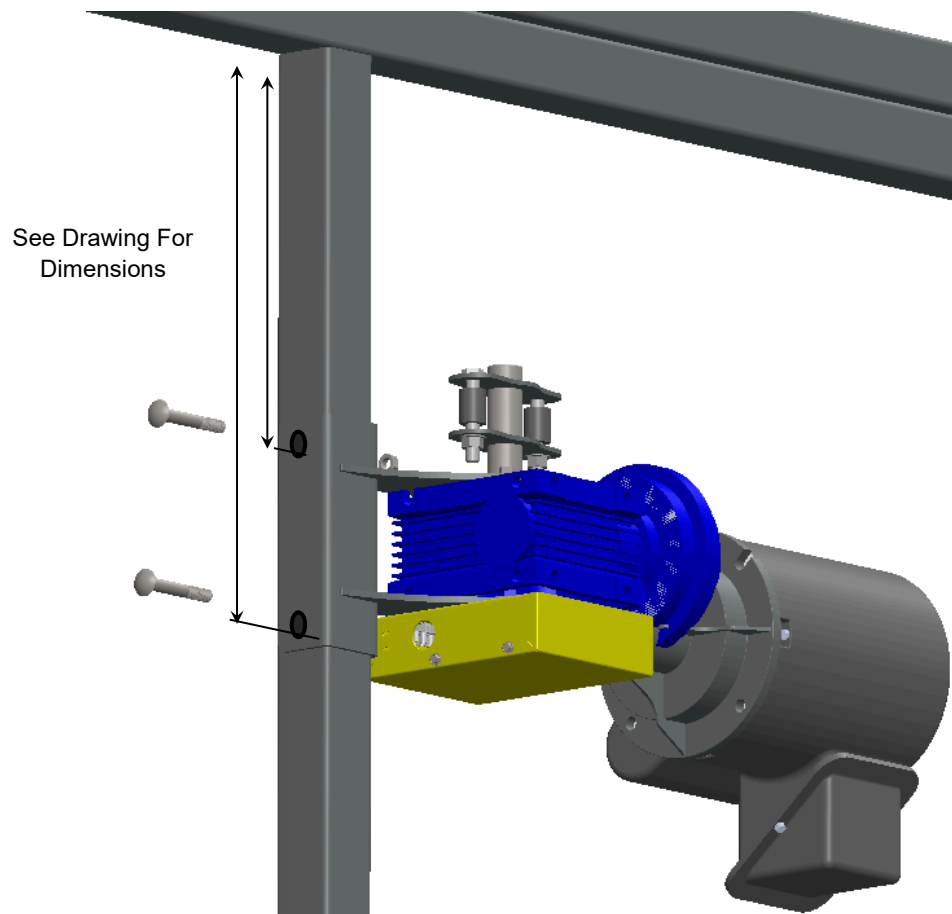
## IMPORTANT

**Do not destroy or discard any removed parts. Many will be required during the reassembly process.**

# Install Autolock Assembly

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1. Determine the mounting location for autolock assembly (see the included drawing)
  - The assembly should not be behind a cable
  - Avoid blocking man doors or windows if possible
2. Mark hole locations on door and drill 5/16" holes (2x), refer to the included drawing for dimensions
3. Securely attach the Autolock assembly with the included hardware



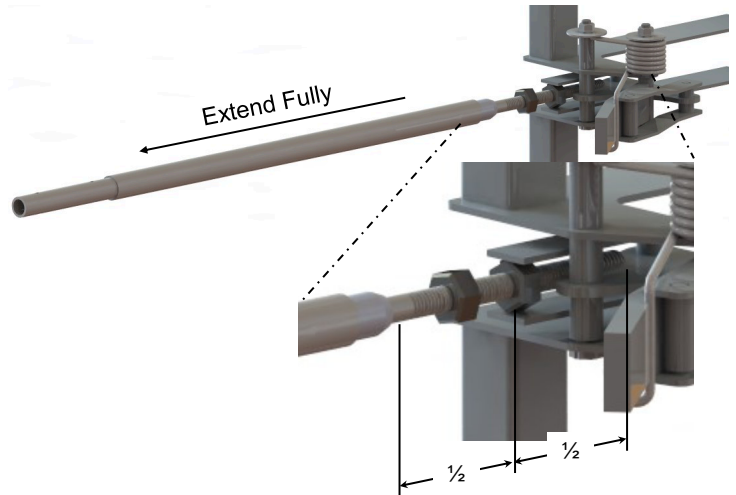
## IMPORTANT

**The Autolock Assembly is shipped in the unlocked position for install purposes.**

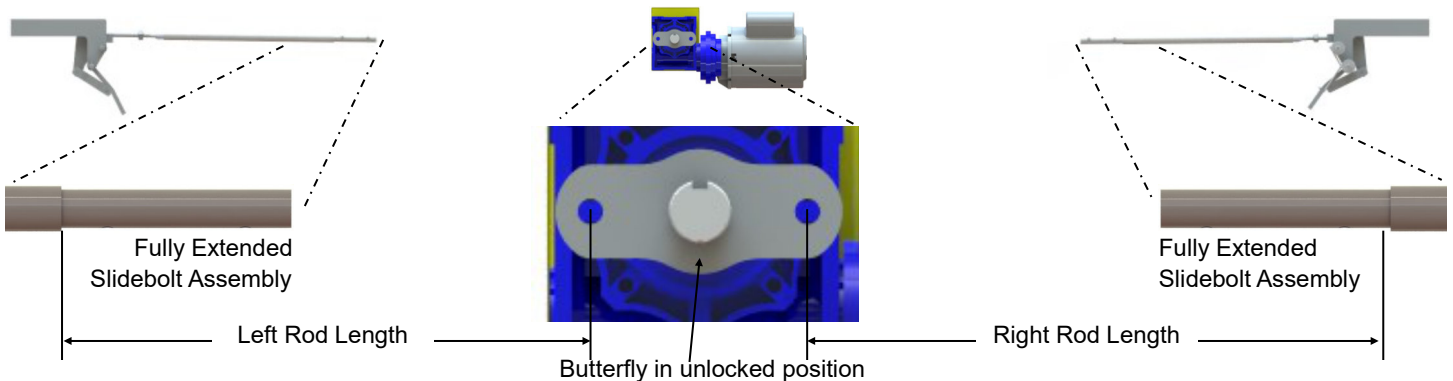
# Modify Horizontal Lock Rods

1. Install slidebolt assemblies, on both sides of the door, into the existing lock finger assemblies as shown (thread in half way only)
2. Extend slidebolts fully towards the center of the door

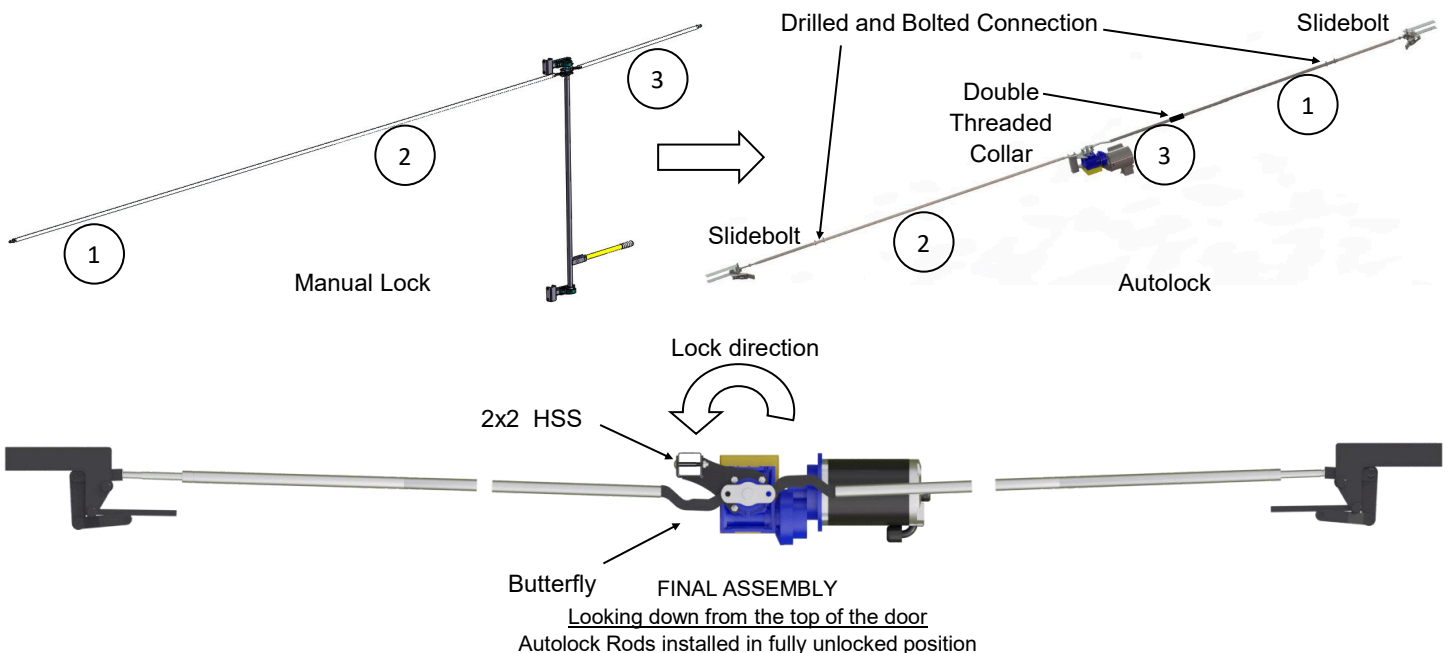
**Note: There are no external springs in our new autolock system, they are integrated into the lock rod itself.**



3. Measure and record right and left lock rods lengths



4. Reuse existing lock rods as indicated and cut rods so assembled length matches measured length
5. Install lock rods onto slidebolt assemblies and drill 5/16" hole (2x each side)
6. Attach the lock rods to the slidebolt assemblies with included hardware
7. Reinstall plastic clips over lock rods
8. Do NOT bolt lock rods into the autolock butterfly at this time





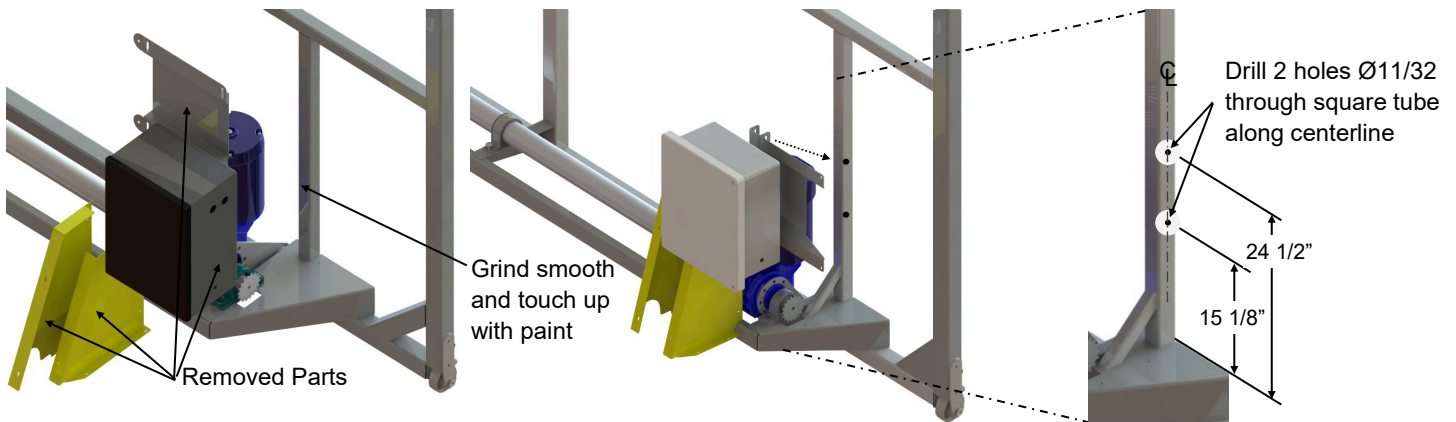
# Mount Ebox

## For Sidewinder Doors

- ▶ Components should be removed as shown
- ▶ Square tube should be ground smooth and touch up paint applied as needed
- ▶ Drill 2 holes Ø11/32 in the locations indicated
- ▶ Mount new parts as shown and ensure the limit chain has been reinstalled inside the safety shields

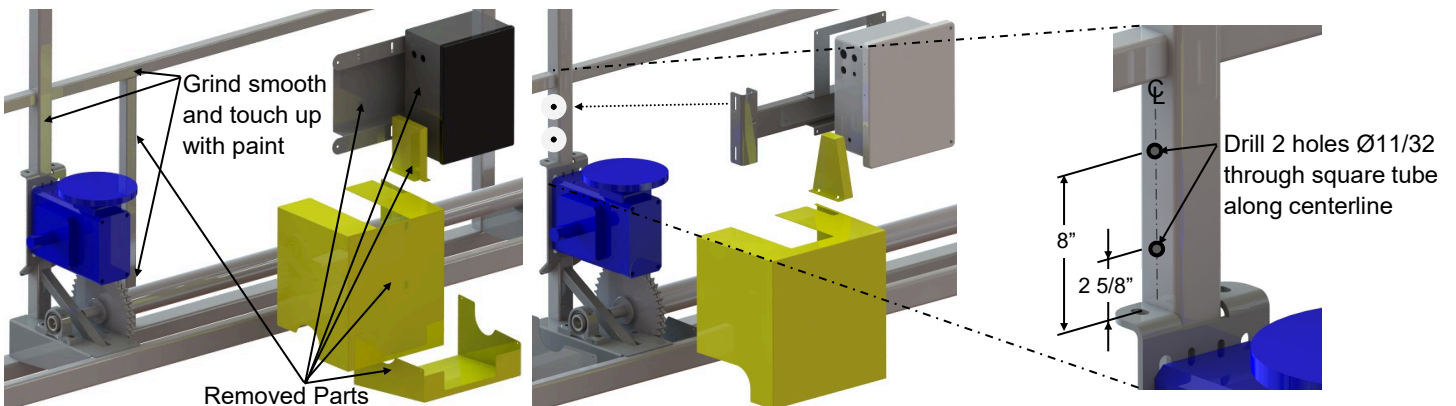
### IMPORTANT

**This step is only for doors requiring Ebox replacement. Doors with the Bud Ebox, skip this step.**



## For Centermount Doors

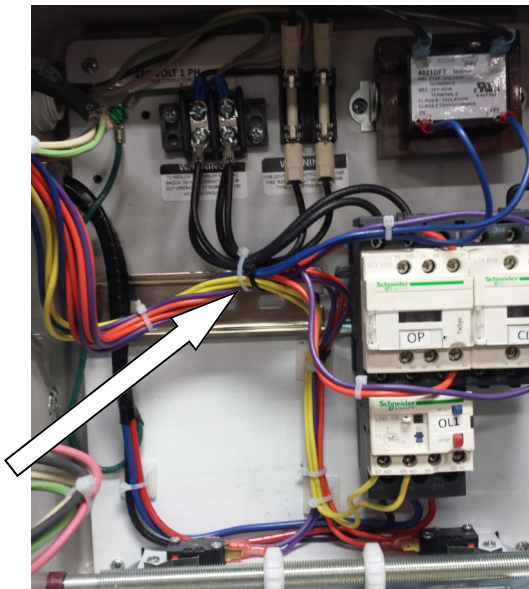
- ▶ Components should be removed as shown
- ▶ Square tube should be ground smooth and touch up paint applied as needed
- ▶ Drill 2 holes Ø11/32 in the locations indicated
- ▶ Mount new parts as shown and ensure the limit chain has been reinstalled inside the safety shields



# Wiring

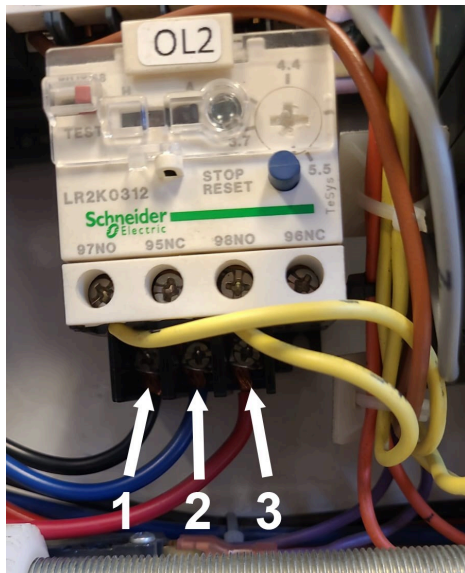
## Step 1:

Clip Autolock contactor assembly onto open portion of DIN-Rail.  
Cut tie-wrap cables holding wire assembly together as necessary to allow it to fit.



## Step 3:

Run Autolock motor wires into box through an open connector. Have wires run along the left side of box as shown in picture. Black wire goes to (1), Blue to (2), and Red to (3). They go into the *bottom* of the contactor.



## IMPORTANT INSTRUCTIONS

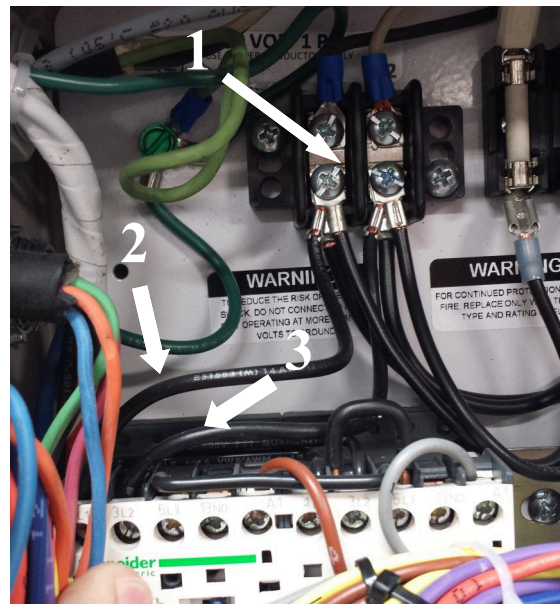


**WARNING**

**Electrical connections should be made by a certified electrician**

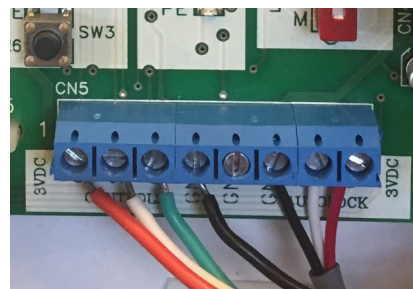
## Step 2:

Loosen power terminals (1) to allow for new power wires to be hooked up. Place wire (2) to the first terminal and wire (3) to the second terminal. Retighten screw terminal to ensure good connection.



## Step 4:

Connect the three autolock wires to the control board to allow the board to control the system. From left to right, Black, White, and Red. Finally, flip the red switch from the "M" position to the "A" position. Lastly, disconnect power and reconnect to reboot the system.



# Test the Install

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1. Verify the bolts at the butterfly have not been installed and that the rods are clear of the butterfly travel.
2. With the door still anchored in the locked position, verify the close limit nut in the ebox is in contact with the close limit switch. (See install manual for more details)
3. Release the anchoring straps that are keeping the door locked.
4. Enable power to the door.
5. Check that the photoeyes are aligned. There should be a solid light on each unit.
6. Open the door about 3 feet and then stop and close it. The lift cables should have a bit of slack in the closed position. The Autolock should cycle to the locked position when the door is closed.
7. Open again to about 3 feet and disable power to the door
8. Bolt lock rods to the butterfly in the unlocked position. The lock fingers should be parallel to the door frame pointed toward the center of the door (see page 8). Adjust the lockrods as needed and secure the locking nut on both sides.
9. Enable the power and cycle the door fully open and closed. Be aware of the door travel, the limits may need to be adjusted, refer to the installation manual for details on setting the upper and lower limits.



**DIAMOND**  
**DOORS**

**VERSION # 2.2.4**

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