

# XRS Roll Up Door

# www.AirliftDoors.com

1-888-368-4403





The material provided in this owner's manual is meant for reference purposes only. Only persons trained and qualified to work on Airlift Doors, Inc. products should perform maintenance and service on any products supplied by Airlift Doors, Inc.

This owner's manual only provides partial information regarding our products. Further information such as installation guides, wiring diagrams, and other technical information should be referenced to ensure safe and proper installation and maintenance of Airlift Doors, Inc. products.

Always consult a trained professional installer or service provider to properly service your equipment. Garage doors and garage door openers are extremely dangerous and improper handling of these products may result in serious injury or death if handled improperly.

Always ensure that all power is disconnected to components before you perform any service to any Airlift control box or motor.

Always shut off and drain any air supply associated with an Airlift operator before performing service on the component.

Never work on a door that is counterbalanced without referencing the installation guide or consulting the factory for proper methods to work on counterbalanced doors.

Never stand underneath a garage door to test any function of the door, opener, or safety devices.

Thank you for purchasing a XRS Vinyl Roll Up Door from Airlift Doors, Inc. We take great pride in the quality and workmanship of our products and stand behind our products 100%. If you have any questions or concerns please contact us directly and we would be glad to assist you in any way possible.

This owner's manual is meant to be an informational tool for you to operate and maintain your XRS Vinyl Roll Up Door. Further information is available on our website or by contacting us directly. Please reference the contact information below.

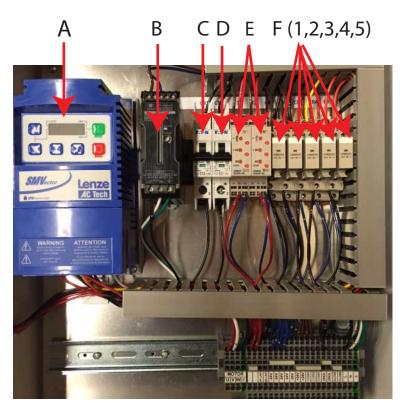
We greatly appreciate your business and promise to work hard to provide you with the highest level of service at all times.

Thank you again for choosing Airlift Doors.

Airlift Doors, Inc. 1-888-368-4403 www.airliftdoors.com

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# XRS Plus Model VFD Control Component Descriptions

A: R08R5100 - XRS Plus VFD/Inverter Drive B: R08R5103 - XRS Plus 24VDC Power Supply C: R08R5101 - XRS Plus 13 Amp Circuit Breaker D: R08R5102 - XRS Plus 2 Amp Circuit Breaker E: R08R5104 - XRS Plus Limit Interrupt Timer (2) F: R08R5105 - XRS Plus 24VDC Signal Relay (5)

- A: The VFD/Inverter drive is the brains of the control. It takes 120VAC power and converts it to 3 Phase / 230VAC power to be used by the motor. It also allows us to vary the electrical frequency which is how we change the speed of the door.
- B: The 24VDC power supply takes the 120VAC incoming power and converts it to 24VDC to be used by all accessories, timers, relays, etc. inside the control.
- C: The 13 amp circuit breaker provides electrical over-current safety for the incoming 120VAC power. This basically protects the 24VDC power supply and the VFD/Inverter drive.
- D: The 2 amp circuit breaker protects all 24V accessories, timers, & relays.
- E: The Limit Interrupt Timers interrupt the STOP signal that is sent to the VFD when either the Open or Close limit is reached. They turn off this stop signal so the door can be be operated in the opposite direction. Without these, when a limit is reached, the stop signal would remain on constantly. The left hand timer is for the open limit and the right hand timer is for the close.
- F1: This 24VDC Signal Relay turns on when the Open limit is pressed in. It's purpose is to prevent the door from traveling past the open limit if an open signal is received when the door is open.
- F2: This 24VDC Signal Relay turns on when the Closed limit is pressed in. It's purpose is to prevent the door from traveling past the close limit if a close signal is received when the door is closed.
- F3: This 24VDC Signal Relay turns on when a open signal is received. It sends the open signal to the VFD.
- F4: This 24VDC Signal Relay turns on when a close signal is received. It sends the close signal to the VFD.
- F5: This 24VDC Signal Relay turns on when any open signal is present. It prevents a close signal from overriding an open signal.

# **XRS Plus - Normal Operation Explanation**

# **Door Opening**

- 1. When an open signal is sent to the control from any source, the following happens:
  - a. Signal relay #3 is energized, which causes the VFD to run.
  - b. Signal relay #5, on the lower DIN rail, energizes. This allows an open signal to override any existing close signal.
- 2. As the door opens, the limit cam switches rotate clockwise.
- 3. Once the open limit cam (Inner Green) reaches the limit switch, the following happens:
  - a. The left hand Limit Interrupt Timer energizes and sends a Stop signal to the VFD.
  - b. There are 2 lights on the timer, orange and green. The orange light turns on for 1 second when the stop signal is being sent. The green light remains on until the door closes.
  - c. Signal relay #1 energizes when the open limit is pressed in. This prevents the door from opening past the open limit. To verify this, press the open button when signal relay #1 is energized and notice that signal relay #3 does not energize. Relay #1 will remain energized until the door closes.

# **Door Closes**

- 1. When a close signal is sent to the control from any source signal relay #4 is energized, which causes the VFD to run.
- 2. As the door closes, the limit cam switches rotate counterclockwise.
- 3. Once the close limit cam (Inner White) reaches the limit switch, the following happens:
  - a. The right hand Limit Interrupt Timer energizes and sends a Stop signal to the VFD.
  - b. There are 2 lights on the timer, orange and green. The orange light turns on for 1 second when the stop signal is being sent. The green light remains on until the door opens.

c. Signal relay #2 energizes when the close limit is pressed in. This prevents the door from closing past the close limit. To verify this, press the close button when signal relay #2 is energized and notice that signal relay #4 does not energize. Relay #2 will remain energized until the door opens.

# XRS - Extreme Roll Up Series - Owner's Manual

# I. Normal Operation and Adjustments A. Speed Adjustments

The speed of the door is controlled by adjusting the speed setting on the Variable Frequency Drive (VFD) located in the control box. See below.

\*\*IMPORTANT\*\* ANY ADJUSTMENT OF THE DOOR SPEED AFTER THE INTITAL DOOR LIMITS HAVE BEEN SET WILL REQUIRE YOU TO RESET THE LIMITS !



- UP arrow increases opener speed
- Digital readout shows current opener speed as a percentage of the maximum speed. The range is from 0% to 100%. A setting of 100% is equal to approximately 30" per second of door travel.
- DOWN arrow decreases opener speed

\*\*NOTE\*\* The remaining buttons on the VFD are NOT USED.

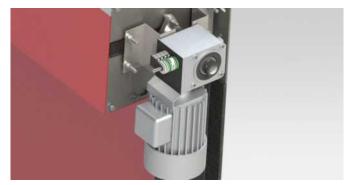
# OPEN AND CLOSE SPEED ARE NOT INDIVIDUALLY ADJUSTABLE

\*\*CAUTION\*\* When adjusting the speed of the door, be prepared to press the STOP button on the front of the control box to prevent the door from rolling up or down too far.

# **B. Open and Close Limit Adjustments**

\*\*The opener limits are set by adjusting the Open and Close limit cams inside the gear head portion of the motor. Before proceeding, remove the black plastic cover from the opener so you have access to the Limit Assembly.





### LImit Set Screws

Each limit cam has two hex screws that can be used to adjust its position. These are a Set Screw and a Fine Tune Adjustment Screw.

\*\*NOTE\*\* A small adjustment of the limit cam will result in a comparatively large change in door travel.

Loosening the Set Screw will completely loosen the cam from its shaft and allow you to rotate it freely. This screw should be used for large adjustments only.

For smaller adjustments (12" of door travel or less) use the Fine Tune Adustment Screw. Turning this screw will rotate the cam as you turn it rather than completely loosen the cam.

Turning the Fine Tune Adustment Screw clockwise will rotate the cam in the opposite direction (counterclockwise).

Likewise, turning the Fine Tune Adustment Screw in the counter-clockwise direction will rotate the cam clockwise.

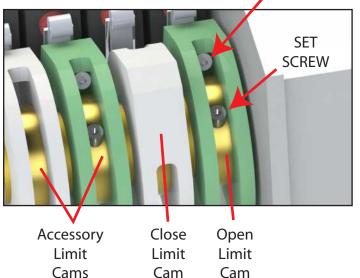
# **Open Limit Adjustment**

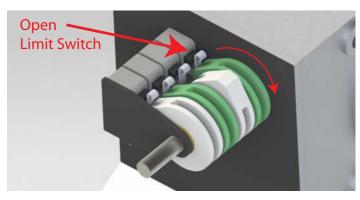
During normal door travel, the Open Limit Cam rotates in the clockwise direction and contacts the limit switch from the bottom. To decrease the door travel, rotate the open limit cam (Green) slightly clockwise. To increase door travel, rotate the open limit cam slightly counterclockwise.

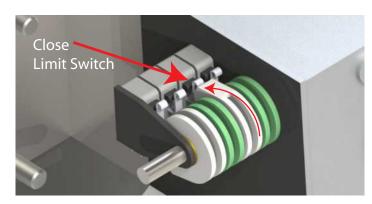
# **Close Limit Adjustment**

During normal door travel, the Close Limit Cam rotates in the counter-clockwise direction and contacts the limit switch from the top. To decrease the door travel, rotate the close limit cam (White) slightly counter-clockwise. To increase door travel, rotate the close limit cam slightly clockwise.

# FINE TUNE ADJUSTMENT SCREW







# \*\*IMPORTANT\*\*

Once the opener limits have been set, any adjustment to the opener speed will require that you adjust the opener limits as well.

# **Manual Door Operation**

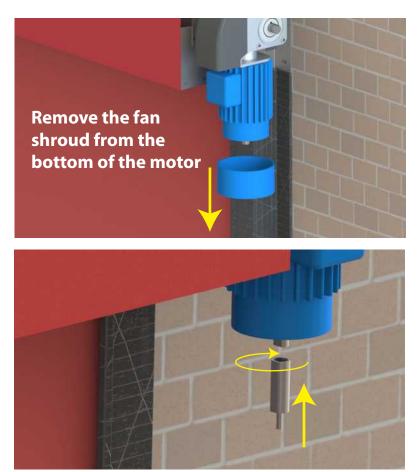
In the event of a power outage, the XRS door can be opened manually. How this is done depends on which XRS model you purchased. See below.

# Elite Model XRS Door Manual Operation - (Non-counterweighted model)

To open the Elite model door manually, you must use the manual motor socket on an electric drill to physically turn the motor shaft. See below.

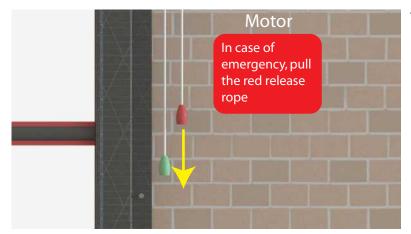
Manual Motor Socket \*\*Can be found on the inside cover of your VFD control box.

Slide the manual motor socket over the motor drive shaft and use a drill to spin the motor shaft. The door can be both opened and closed in this manner.



# Premium Model XRS Door Manual Operation - (With Strapeze<sup>®</sup>Counterweight System)

To open the Premium model door manually simply disengage the gear head by pulling down on the emergency release rope. This will allow the counterweights to open the door manually. To re-engage the gear head, pull the opposite rope and run the door with the Open/Close buttons. \*\*Failure to re-engage the gear head will prevent the door from running automatically.

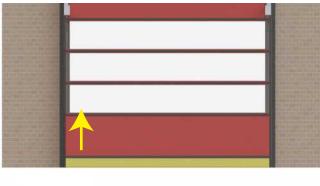


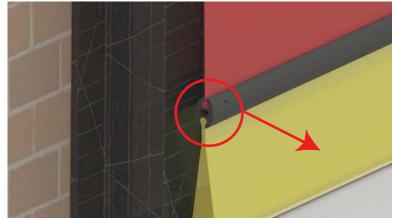
# To close the XRS Premium Model Door manually:

- 1. Pull down on the emergency release rope to disengage the motor.
- 2. Manually pull the door down to the closed position.
- 3. While holding the door in the closed position, pull the re-engage rope to lock the door closed.

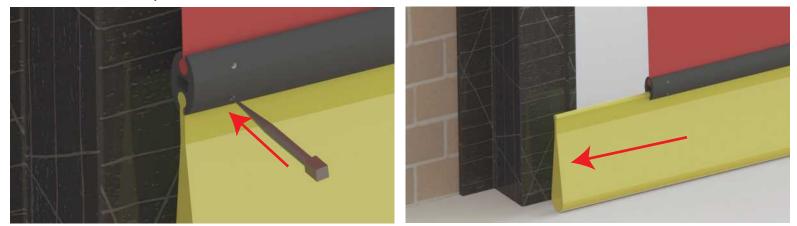
# **XRS Section Replacement Instructions**

- 1. Turn the power off to the control box.
- 2. Lift up on one side of the door until you can pull the black windbar out of the track.



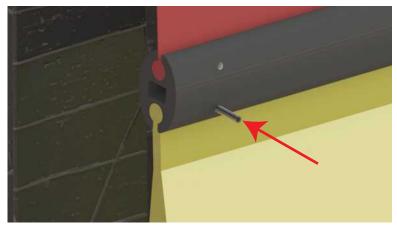


- 3. Once one side of the section is out of the track, repeat step 2 for the opposite side so the entire section and windbars are outside of the track.
- 4. To remove the section from the windbar, use a hammer and nail punch to remove the section retaining roll pin as shown below. Repeat for both sides of the section.
- 5. Please note that if you are replacing a section other than the bottom yellow section, you will have to remove a total of 4 retaining roll pins., one in each corner of the section.
- 6. Once the roll pins are removed, slide the section out of the windbar. See below.



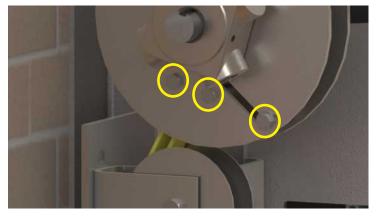
7. Once the section is in position, use a hammer to pound the roll pins back into position. If the roll pin does not want to pound through the section, you can use a 1/8" drill bit to drill a hole through the section first.

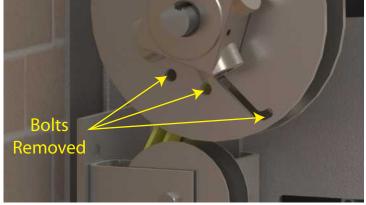
8. Turn the power back on and either lift the section back into the track one side at a time, or open the door with the motor and allow it to reset itself.



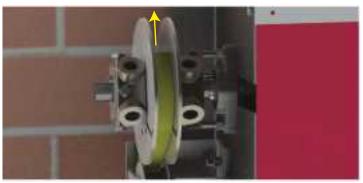
# **Counterweight Strap Replacement - Premium Model Only**

- 1. With the door in the closed position, remove the PVC guide tube by pulling out on the bottom of the tube and sliding it down off the weight stack.
- 2. Place the door in the Open position. \*\*CAUTION\*\* The weights will travel down as you open the door. Be sure no personnel are in the way and the weights will not hit or hang up on any obstruction.
- 3. Turn power off to the door control box.
- 4. Make sure the emergency release ropes are in the "engaged" position and the door is locked in place.
- 5. Remove the 3 bolts running between the stainless steel guide disks on the Strapeze assembly. See below.





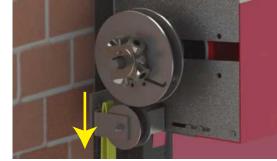
6. Lift the strap up from between the guide disks and slide it off the shaft.





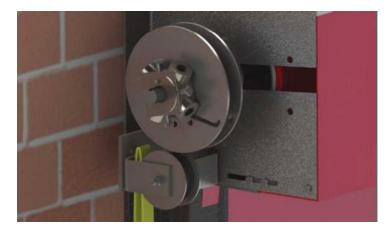
- 7. Disassemble the strap clevis at the bottom of the strap that joins the weight stack to the strap.
- 8. Slide the strap down and out from behind the strap pulley.

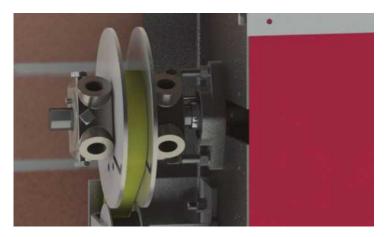




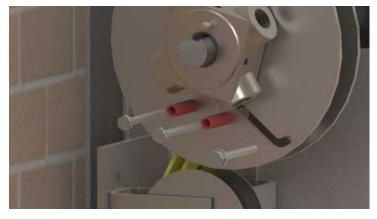
# Strap Replacement Instructions cont.....

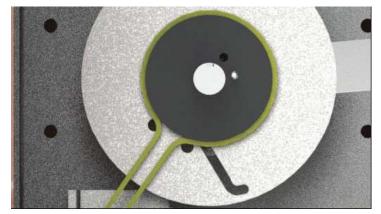
9. Slide the new strap up behind the strap pulley and loop it over the shaft in between the guide disks.





10. Insert the sleeves and bolts through the holes in the guide disks making sure the strap runs in between the sleeves as shown below. \*\*NOTE, the bolts going through the sleeves should be tight, but the bolt going through the "J" slot should remain loose so it can move freely..





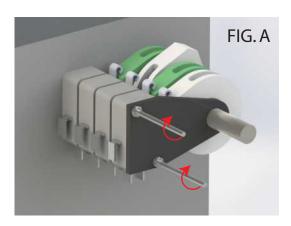
11. Reattach the strap clevis bracket to the bottom of the strap and restack the weights on the threaded rod.

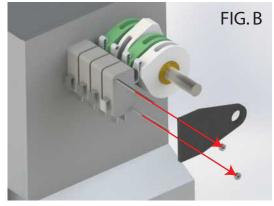


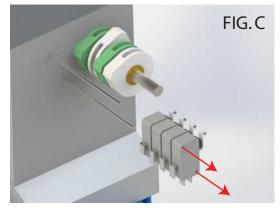
- 12. Use the small tubes of grease provided with the new strap to grease the entire length of the strap inside and out.
- 13. Re-install the PVC guide tube and guide tube bracket.

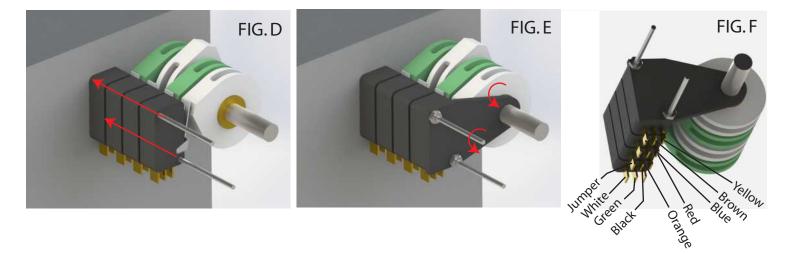
# XRS Extreme Roll Up Series Replacement Limit Switch Instructions

- 1. Use a pliers or vice grips to turn each retaining bolt slightly in the clockwise direction. This will allow you to then turn each bolt by hand and then pull out on the bolts to expose the nuts. (FIG. A)
- Once the bolts are loose enough to expose the nuts, unthread the nuts completely and slide the black plastic retaining plate off the bolts and cam shaft. (FIG. B)
- 3. Note where the wires are attached to the existing limit switches. Next, remove the wires from the limit switch terminals and slide the 4 switches off the retaining bolts. (FIG. C)
- 4. Slide 4 new limit switches onto the bolts making sure the lever side of the switches face the green/white cams. (FIG. D)
- 5. Slide the black plastic retaining plate over the bolts and the cam shaft. Thread the nuts onto the bolts until they are close to the plate. Push in on the bolts so the nut pushes into the recessed area of the plate. Rotate the bolts by hand counterclockwise until tight. (FIG. E)
- 6. Reattach the wires to the limit switches in the same position that they originally were. (FIG. F)

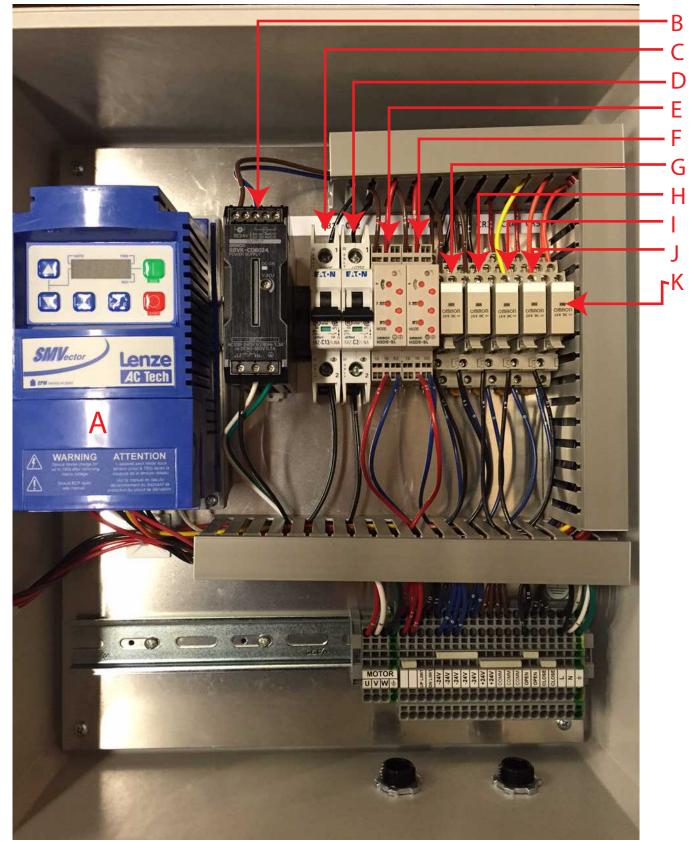




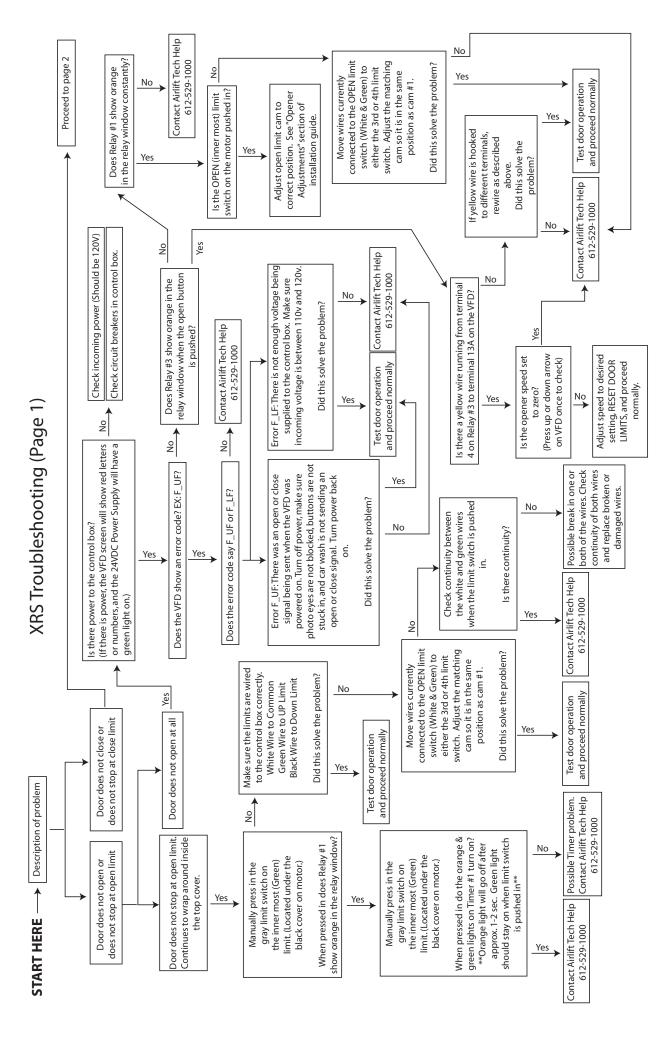


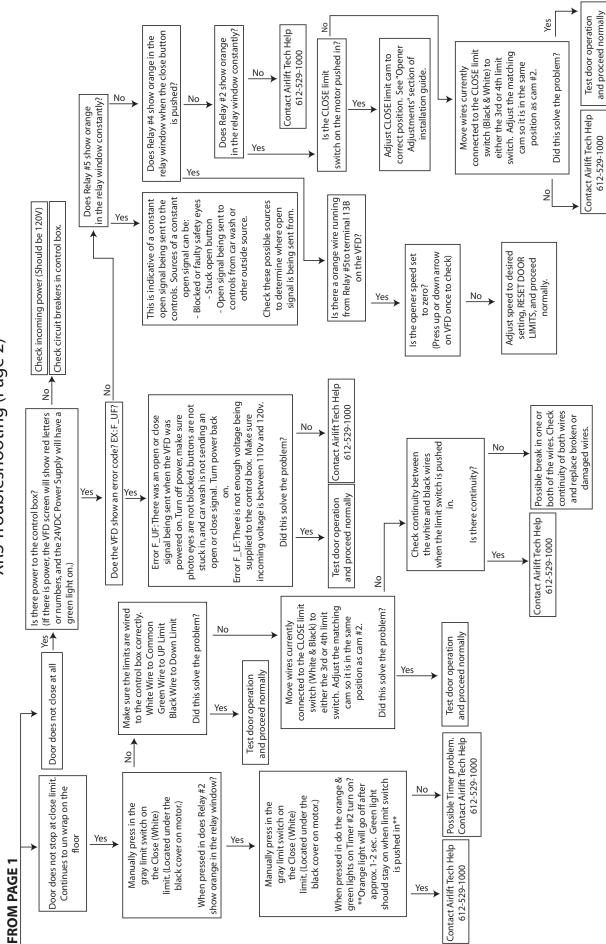


# XRS Troubleshooting Control Components



A: VFD Drive B: 24VDC Power Supply C: VFD Circuit Breaker D: Control Circuit Breaker E:Timer #1 (Open Limit Timer) F:Timer #2 (Close Limit Timer) G:Relay #1 H:Relay #2 I: Relay #3 J: Relay #4 K: Relay #5

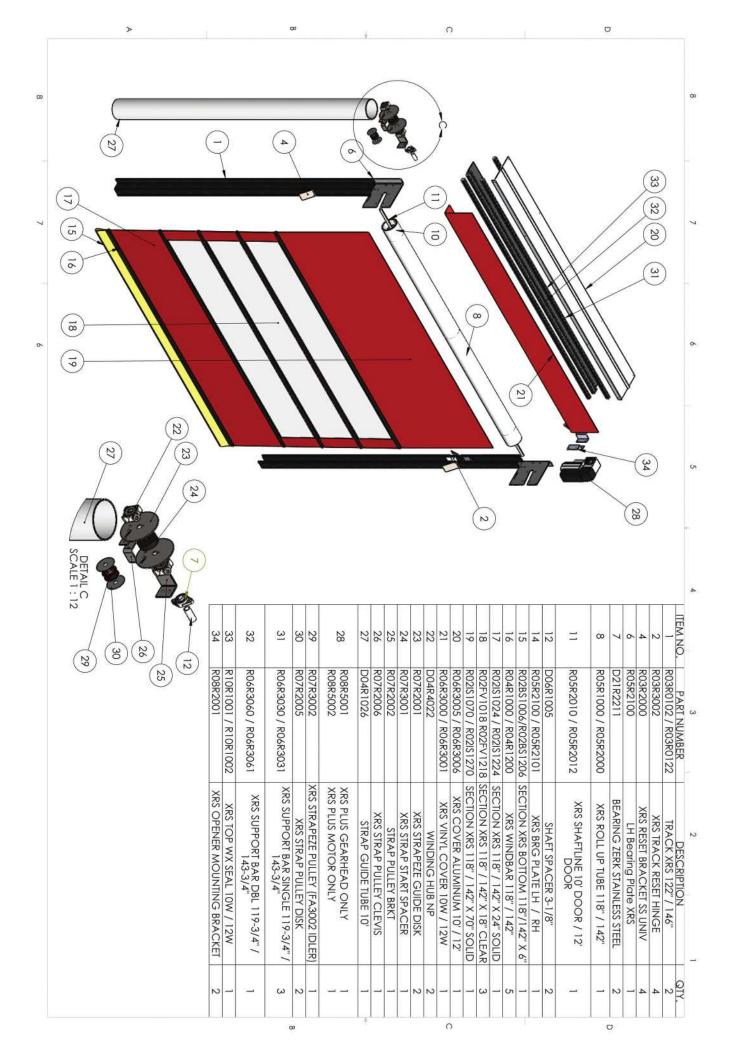


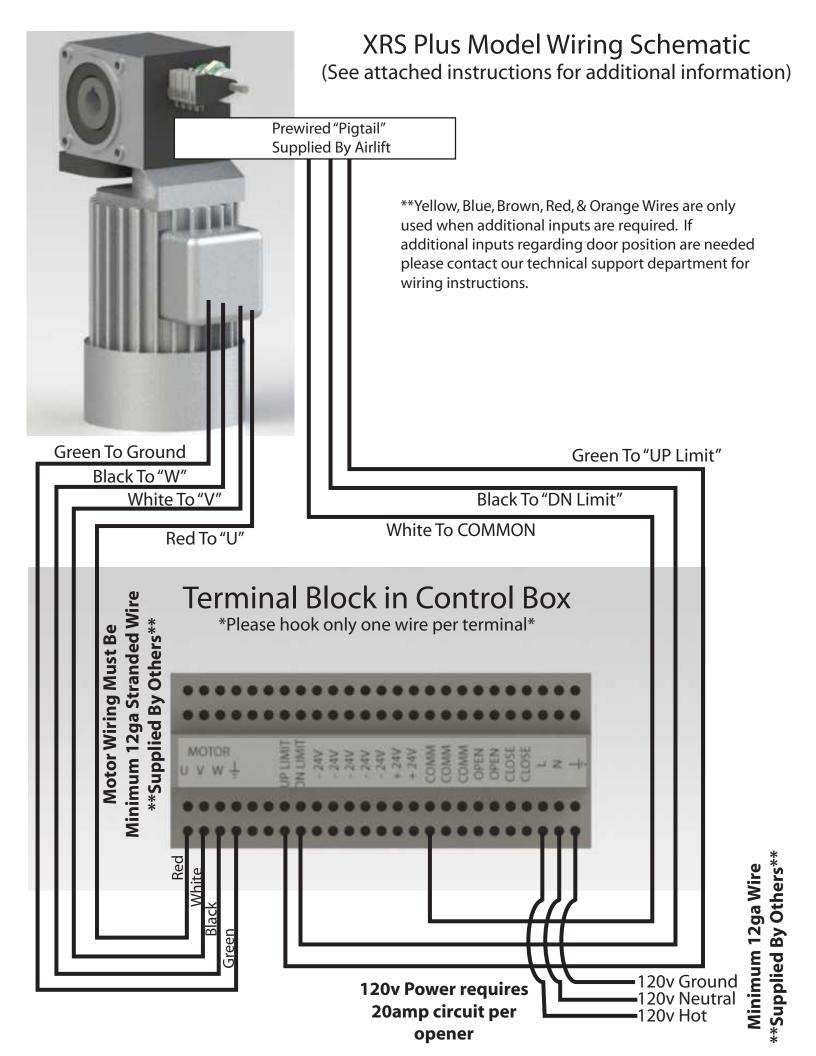


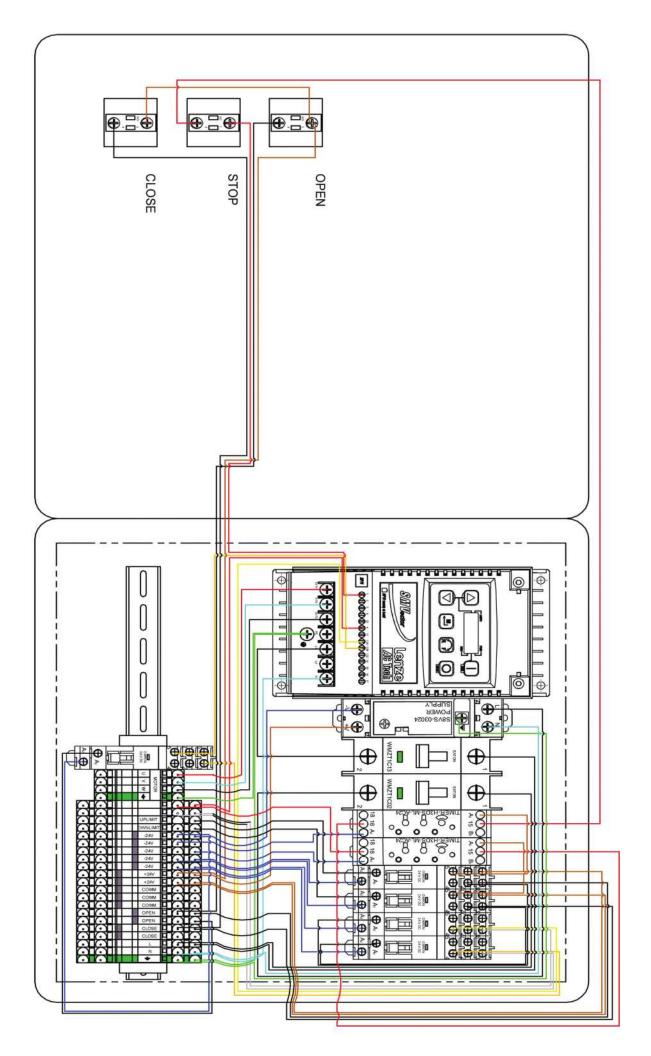
XRS Troubleshooting (Page 2)

# PAGE 3 - VFD ERROR CODE TROUBLESHOOTING

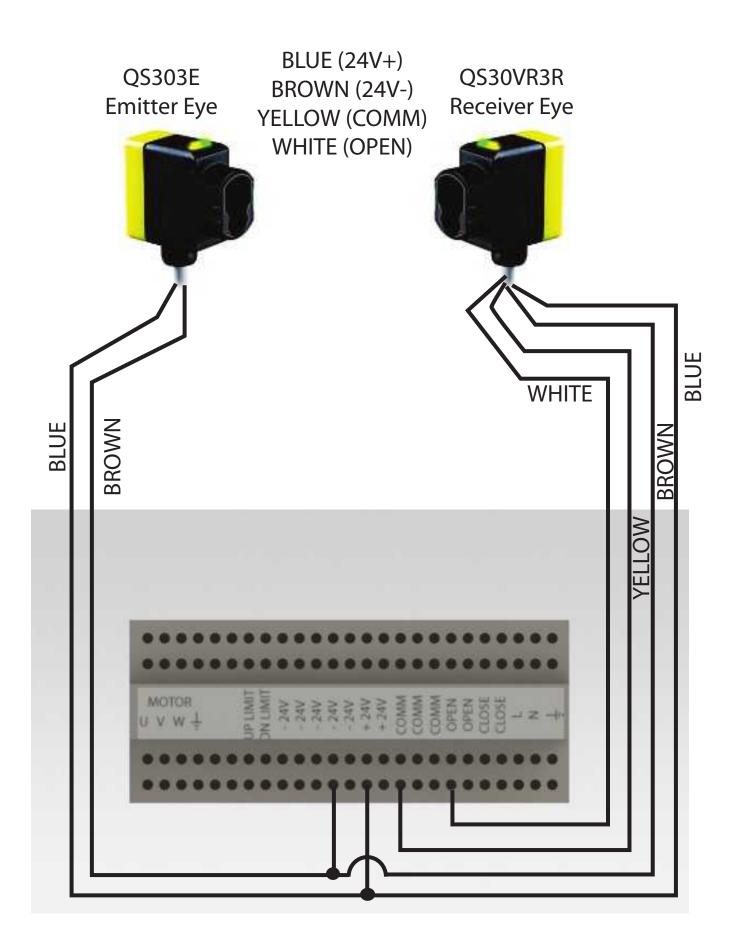
GROUND FAULT GROR ERROR FOLLOW STEPS 1-8 TO THE		MOTOR OVERLOAD (Preceded by F.CL) OUTPUT FAULT GROUND FAULT ERROR	MOTOR OVERL (Preceded by F OUTPUT FAU GROUND FAU ERROR	MOTOR OVE (Preceded b OUTPUT F GROUND F ERROI	CURRENT LIMIT EXCEEDED MOTOR OVERLOA (Preceded by F.Cl OUTPUT FAULT GROUND FAULT ERROR	LOW ING VOL CURREN EXCE EXCE OUTPU GROUN	START I LOW IN VOL CURRE EXCT EXCT (Precedi (Precedi GROUN ER
Ground Short c	Gra RIC			RLOAD RULT	DED DED FRLOAD by F.CL) FAULT FAULT PAULT	Coming Fage T Limit Eded d by F.CL) d by F.CL) D FAULT D FAULT	START UP FAULT LOW INCOMING VOLTAGE CURRENT LIMIT EXCEEDED EXCEEDED Preceded by F.CL) OUTPUT FAULT GROUND FAULT ERROR
ded motor phase or ircuit to or in motor.	ort circuit to or in motor Sever Motor Overload LLOW STEPS 1-8 TO THE IHT. ounded motor phase or ounded motor phase or	See F.CL Possible Causes Short circuit to or in motor or Sever Motor Overload FOLLOW STEPS 1-8 TO THE RIGHT. Grounded motor phase or short circuit to or in motor.			Gr Rice	Gr Rice	Sher Rice Sher
<ol> <li>Turn power on and press Open or Close. If error persists, the VFD drive will need to be replaced. If error code goes away, go to Step 4.</li> <li>Turn power off, rehook motor leads to control box.</li> <li>Disconnect motor leads from the motor itself making sure none of the wires</li> </ol>	<ol> <li>Turn power off to control box and make sure wires leading to the two circuit breakers are not loose. If they are tight, move to Step 2.</li> <li>Disconnect motor leads (U,V,W,Ground) from control box.</li> <li>Turn power on and press Open or Close. If error persists, the VFD drive will need to be replaced. If error code goes away, go to Step 4.</li> <li>Turn power off, rehook motor leads to control box.</li> <li>Disconnect motor leads from the motor itself making sure none of the wires</li> </ol>	See F.CL Resolution         1. Turn power off to control box and make sure wires leading to the two circuit breakers are not loose. If they are tight, move to Step 2.         2. Disconnect motor leads (U,V,W,Ground) from control box.         3. Turn power on and press Open or Close. If error persists, the VFD drive will need to be replaced. If error code goes away, go to Step 4.         4. Turn power off, rehook motor leads to control box.         5. Disconnect motor leads from the motor itself making sure none of the wires	If counterweights and obstructions have been ruled out, the motor may be excessively worn. Consult with factory for troubleshooting.         See F.CL Resolution         1. Turn power off to control box and make sure wires leading to the two circuit breakers are not loose. If they are tight, move to Step 2.         2. Disconnect motor leads (U,V,W,Ground) from control box.         3. Turn power on and press Open or Close. If error persists, the VFD drive will need to be replaced. If error code goes away, go to Step 4.         4. Turn power off, rehook motor leads to control box.         5. Disconnect motor leads from the motor itself making sure none of the wires				er d p.
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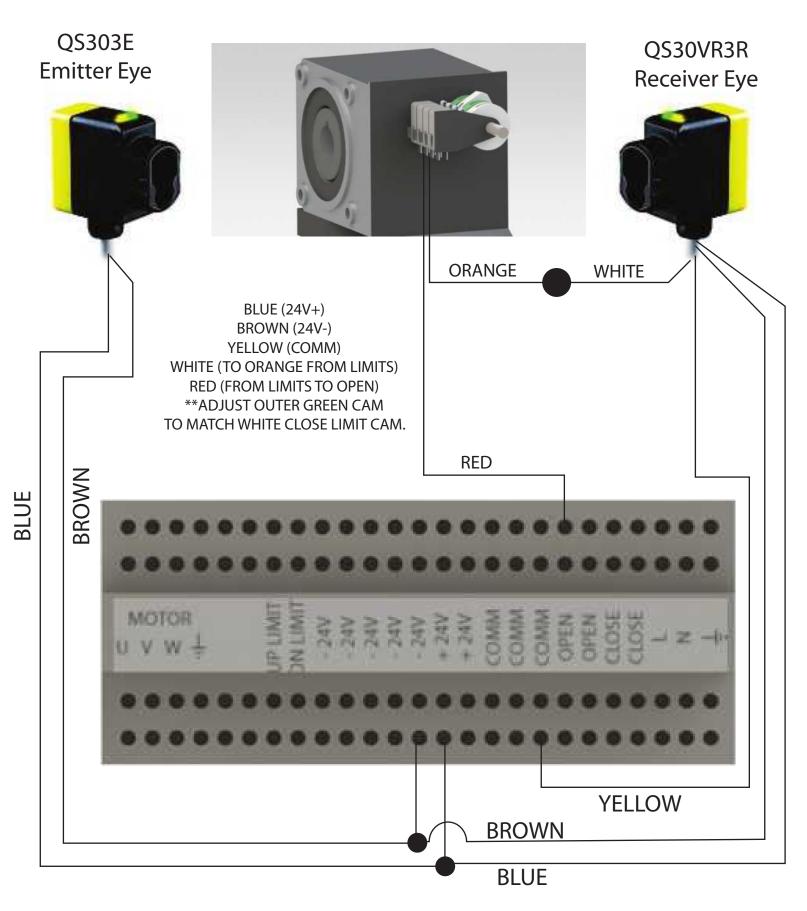




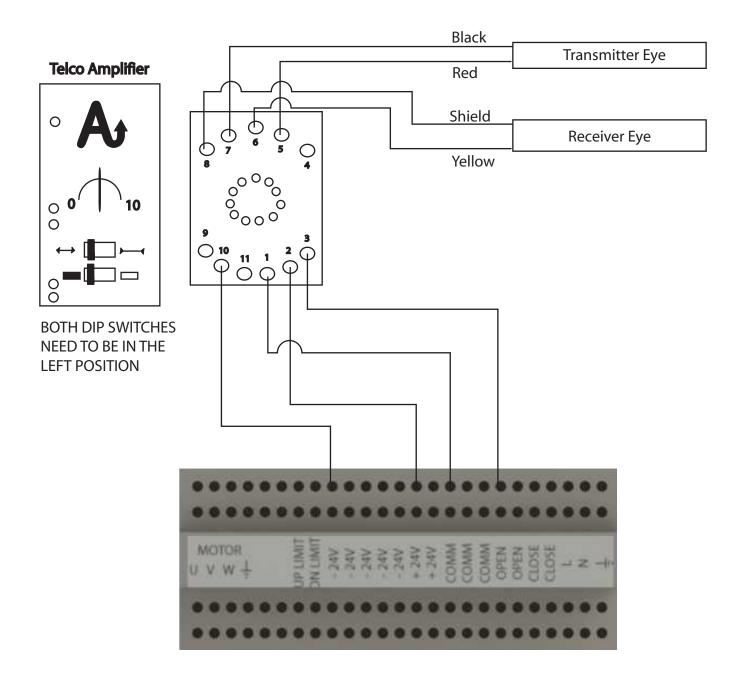
# **Banner Infrared Safety Eyes**

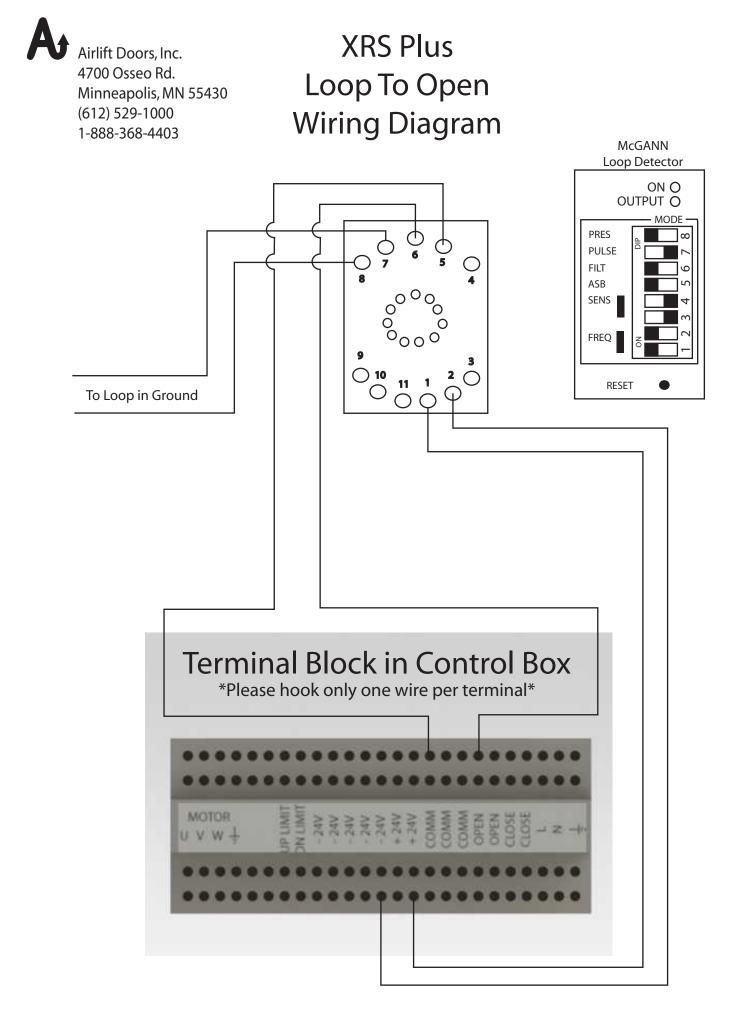


# Banner Infrared Safety Eyes With Limit Switch Shut Off

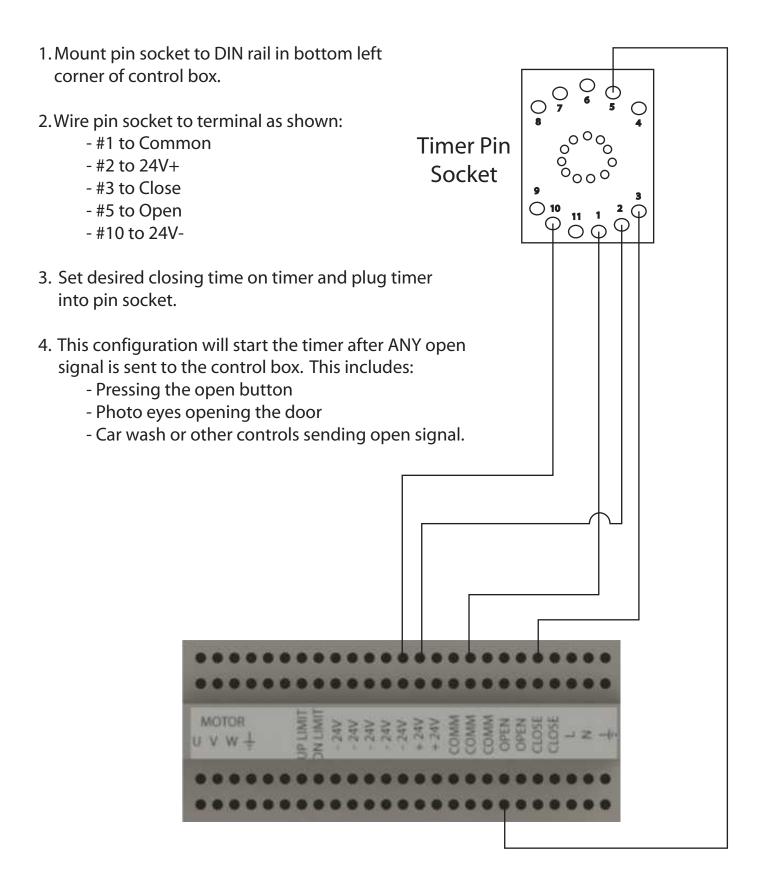


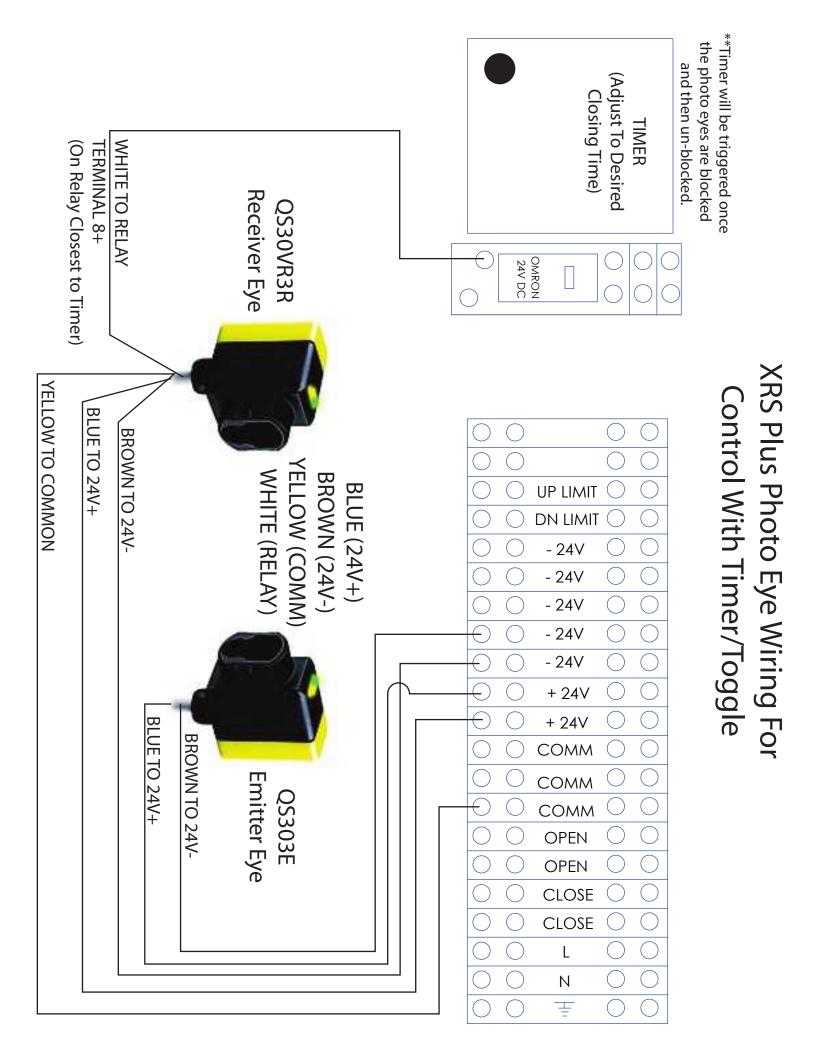
# **XRS Plus Telco Photo Eye Wiring**



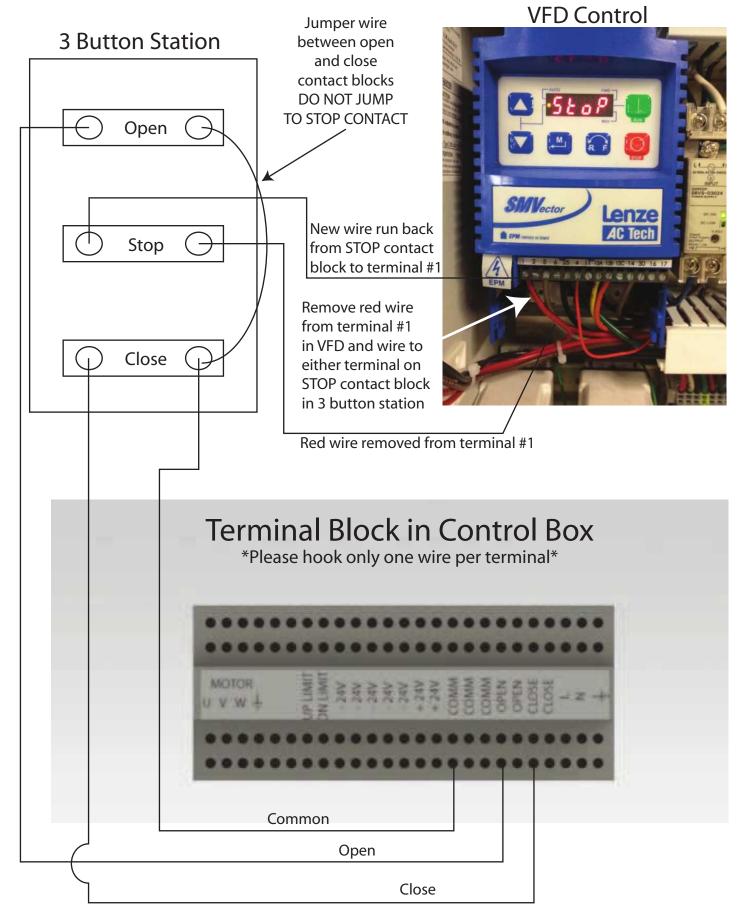


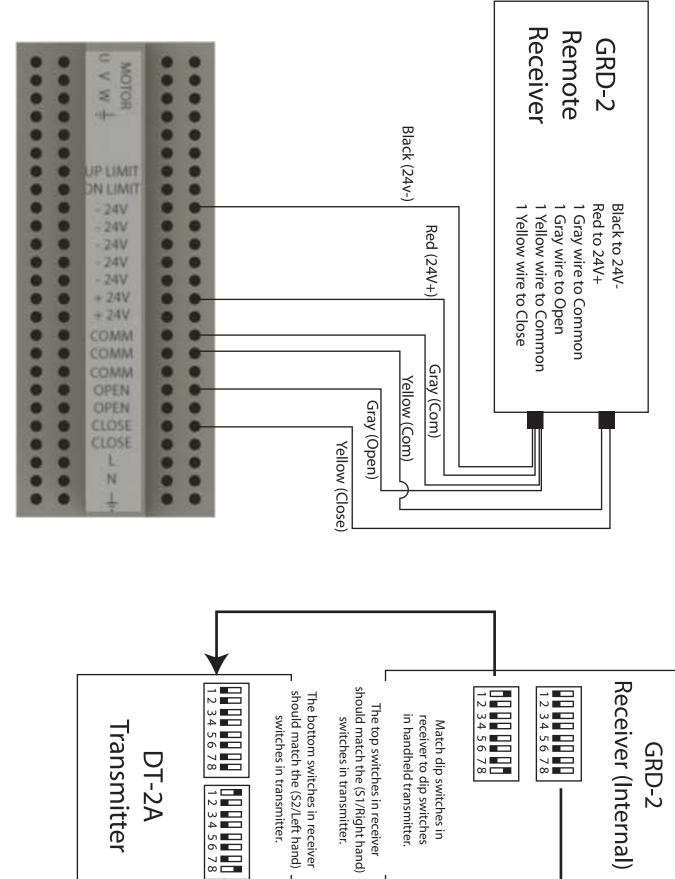
# XRS Plus Timer to Close Wiring Macromatic timer





# XRS Plus Model 3 Button Station Wiring





Airlift Doors, Inc. XRS Extreme Roll Up Series GRD-2 Remote Control Wiring



# AIRLIFT DOORS, INC.

# QUARTERLY MAINTENANCE PROGRAM XRS ROLL UP DOOR

Airlift Doors, Inc. recommends performing quarterly maintenance on your XRS roll up door.

# Maintenance steps explained:

# A. Grease Zerk Bearings

Grease all zerk bearings located on the shaftline with lithium grease. Use a grease gun and attach to the zerk and pump with grease until the grease begins to push through the bearing. Perform this step quarterly to ensure proper lubrication and operation of the shaftline.

### **B.** Weatherstrip Inspection

Check all brush seal or vinyl seal on the vertical tracks. Note: The seals are on the inside and outside of the door. Check for any missing or damaged portions and anything that would allow air gaps. Any damaged portions should be replaced. Check top rubber seal along the door to make sure it is not falling out and is still sealing against the vinyl of the door. Weatherstrip should be inspected quarterly.

### C. Strap Inspection (Premium Model Only)

Perform a visual inspection of the counterweight strap for any wear or signs of fraying. You may need to remove the PVC guide tube to get afull view of the strap. Consult strap replacement instructions in this manual for further instruction on removing the tube. If the strap shows signs of wear or fraying it should be replaced. Inspect strap quarterly.

# **D.** Test Emergency Release (Premium Model Only)

Pull the emergency exit cord attached to the motor. The motor should disengage and the door should open. If the door does not open or the motor will not disengage, consult factory for recommended solution to the problem. Make sure you reengage the motor by pulling the opposite rope after testing. Perform this step quarterly.

# E. Cleaning

Clean all vinyl sections of the door to eliminate buildup of chemical, water spots, mold, and mildew. To clean spray entire door with a mild soap or Airlift vinyl cleaner (part number D24R1007). Use a sponge or soft cloth to wash the door. Spray with high pressure rinse to remove all soap and chemical from the door. This step should be performed quarterly or as needed.

### F. Safety Eyes

Operate motor with open and close buttons. Test photo eyes by obstructing the photo eyes when the door is closing to see if the door reverses instantly upon obstruction. Do not stand under the door while performing this step. Test eyes quarterly. Refer to the troubleshooting area of this manual or consult your service provider if eyes are not working properly.

# Quarterly Maintenance Program For XRS Roll Up Door

Year:\_\_\_\_\_

### Note: Mark date in each box when maintenance is performed to keep accurate records

01				
<u>Steps</u>	<u>1st Quarter</u>	2nd Quarter	<u>3rd Quarter</u>	<u>4th Quarter</u>
A. Grease Zerk Bearings				
B. Weatherstrip Inspection				
C. Strap Inspection (Premium Model Only)				
D. Emergency Pull Rope (Premium Model Only)				
E. Cleaning				
F. Safety Eyes				
1st Quarter Notes:				
2nd Quarter Notes:				
3rd Quarter Notes:				
Sid Quarter Notes:				
4th Quarter Notes:				

### Limited Warranty for XRS Vinyl Roll Up Doors

Airlift Doors, Inc. warrants to the original purchaser or original user that all XRS model doors sold by Airlift Doors, Inc. and all parts thereof are free from defects in material or workmanship under normal use and service. Airlift Doors Inc. sole obligation under this warranty shall be limited to furnishing replacement parts F.O.B Maple Lake, Minnesota for the periods specified below from the date of initial shipment by Airlift Doors, Inc.

Panels	(3) Year
Windbars	(3) Year
Track	(3) Year
Motor	(1) Year
Gearbox	(1) Year
Control Box & Components	(1) Year
Photo Eyes	(1) Year

These Warranties are void if the original product warranted has been damaged by accident, abuse, misuse or neglect, improper installation or service, unauthorized modifications, misapplication, or other use not arising out of defects in material and workmanship.

Warranty redemption requires verification of original purchase date and completion in full of return goods form. Returns are only accepted when return authorization number has been provided by Airlift Doors, Inc. before product is returned.

The warranties set out in this certificate are the exclusive remedy of the original owner or user in lieu of all other warranties written, oral or implied (including any warranty or merchantability or fitness for the purpose) and all other obligations or liabilities on the part of Airlift Doors, Inc. Airlift Doors, Inc. neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale, installation, or use of the XRS Door or any parts thereof.

Airlift Doors, Inc. will not be responsible for labor or shipping and handling charges for the analysis of a defective condition or for the replacement and installation of defective parts.

The warranties herein shall be null and void if the XRS Door is not installed by a competent contractor and/or if the XRS Door is not installed according to Airlift Doors, Inc. provided instructions.

The warranties herein shall not cover claims of condensation due to normal temperature changes.

In no event will Airlift Doors, Inc. be responsible for, or liable to anyone for, special, indirect, collateral, punitive, incidental, or consequential damages, even if Airlift Doors, Inc. has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, personal injury, damage to property, loss of goodwill, loss of profits, loss of use, cost of cover with any substitute product, interruption of business, or other similar indirect financial loss.



# AIRLIFT DOORS, INC.

# **RETURN GOODS AUTHORIZATION**

Airlift Doors, Inc. will not accept any return goods without prior authorization. Only the original purchaser is authorized to obtain return approval. If the goods were not purchased directly from Airlift Doors, Inc. please contact the Company the goods were purchased from to process the return with Airlift Doors, Inc.

# **Return Goods Procedure Directions:**

Please complete this form and fax it to 612-588-7660 or e-mail to <u>info@airliftdoors.com</u>. Upon review and approval of this form you will be contacted by your preferred contact method.

Company:		
Address:		
City:	State:	Zip:
Contact:		
Preferred method of Contact:		
Original Invoice #:		
Item(s) being returned:		
Part # (if known):		
Reason for Return:		

### **Return Terms and Conditions:**

All pre-approved returns must have the RGA number printed on the outside of the package

All Returns must be made within 30 days of authorization.

A copy of the RGA Slip and packing slip must be included with the return when replacement items have been shipped. Airlift Doors, Inc. will provide this slip with the replacement shipment.

All items to be returned to:

Airlift Doors, Inc RGA # \_\_\_\_\_ 400 State Hwy. 55 Maple Lake, MN 55358