

# RS-500/600 Doors

## Troubleshooting Guide

RollSeal  
1733 County Road 68  
Bremen, Alabama 35033  
256-287-7000

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## 1 Warnings (Avertissements)

### Warning!

Disconnect All Power Sources Before Installing This Equipment. Failure To Disconnect Power Source Can Result In Property Damage, Serious Injury Or Death!

### Warning!

Dangerous Rotating Machinery!  
Keep Hands, Clothing, Etc. Clear When Operating!  
Do Not Operate Without All Guards And Covers In Place!

### Warning!

All Wiring Should Be In Accordance with National Electrical Codes Or Other Local Codes.

### Warning!

The Installer Is Responsible For Complying With All Relevant Regulations, Such As National Wiring Regulations And Accident Prevention Regulations. Particular Attention Must Be Given To The Cross-sectional Areas Of Conductors, The Selection Of Fuses Or Other Protection, And Protective Earth/Ground Connections!

### Warning!

The Voltages In The Power Cables And Certain Parts Of The Drive Can Result In Death. Whenever The Drive Has Been Used, It Must Be Isolated And Disconnected For 5 Minutes Before Any Work Commences.

## ! Danger!

Only Qualified Electrical Personnel Familiar With The Construction And Operation Of This Equipment And The Hazards Involved Should Install, Adjust, And/Or Service This Equipment. Read And Understand This Manual In Its Entirety Before Proceeding. Failure To Observe This Precaution Could Result In Severe Bodily Injury Or Death!

## ! Warning!



Item 4501-6312  
(Warning Moving Door Label)  
Supplied With Door,  
MUST Be Installed  
On Inside Of Cooler/Freezer  
Beside Door Opening.

## IMPORTANT INSTALLATION INSTRUCTIONS

### ! Warning!

#### To Reduce The Risk Of Severe Injury Or Death:

1. READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
2. Do not connect the door operator to the source of power until instructed to do so.
3. Locate the control station: (a) within sight of the door, (b) at a minimum height of 5 feet so small children cannot reach it, and (c) away from all moving parts of the door. Remove all ropes and remove or make inoperative all locks connected to the garage door before installing opener.
4. For products having a manual release, instruct the end user on the operation of the manual release. Where possible, install the door opener 8 feet or more above the floor. For products having an emergency release, mount the emergency release within reach, but at least 6 feet above the floor and avoiding contact with vehicles to avoid accidental release.

# IMPORTANT SAFETY INSTRUCTIONS



## Warning!

### To Reduce The Risk Of Severe Injury Or Death:

1. READ AND FOLLOW ALL INSTRUCTIONS!
2. Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
3. Personnel should keep away from a door 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.**
4. Test the door's safety features at least once a month. After adjusting either the speed or the limit of travel, retest the door operator's safety features. Failure to adjust the operator properly may cause severe injury or death. **NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR.**
5. For products having a manual release, if possible, use the manual release only when the door is closed. Use caution when using this release when the door is open.
6. **KEEP DOORS PROPERLY OPERATING AND BALANCED.** See Door Manufacturer's Owner's Manual. An improperly operating or balanced door can cause severe injury or death. Have trained door systems technician make repairs to cables, spring assemblies, and other hardware.
7. Install the Entrapment Warning label next to the control button in a prominent location. Install the Emergency Release Marking. Attach the marking on or next to the emergency release.
8. After installing the opener, the door must reverse when it contacts a 1-1/2 inch high object (or a 2 x 4 board laid flat) on the floor.
9. **SAVE THESE INSTRUCTIONS.**

## French Translated Warnings



### Avertissement!

Disjoindre fournissent de l'énergie tout les sources avant qu'installer cet équipement. Échec à disjoindre la source de pouvoir peut résulter dans dommage de propriété, blessure sérieuse ou mort !



### Avertissement !

Mécanisme tournant dangereux !  
Garder les mains, vêtements, etc. à l'écart quand fonctionner !  
Ne fonctionnez pas sans toutes gardes et couvertures dans lieu !

## ⚠ Avertissement !

Tout montage sur fil de fer doit être selon codes électriques nationaux ou autres indicatifs régionaux.

## ⚠ Avertissement !

L'Installer est responsable pour conformer avec tout règlement pertinent, telles que règlement et règlement de prévention d'accident de montage sur fil de fer nationaux. Pl'attention articulaire doit être donnée pour les aires sectionnelles transversales de conducteurs, le choix d'elles fusées ou autre protection, et terre / prises de terre protecteur !

## ⚠ Avertissement !

Les tensions dans le pouvoir câblent et certains parties de la promenade en voiture peuvent résulter dans la mort. Wle |henever| la promenade en voiture a été utilisé il doit être isolé et détaché pendant 5 procès avant que tout travail commence.

## ⚠ Danger !

Seulement familier électrique de personnel qualifié avec la construction et opération de cet équipement et les hasards ont enveloppé devoir installer, arranger, et/ou - la révision cet équipement. R|ead| et comprendre ce manuel en entier avant que procéder. F|ailure| à observer cette précaution peut résulter dans dommage corporel sévère ou mort !

## ⚠ Avertissement !



Point 4501-6312  
(Avertissement Moving étiquette de porte)  
Livré avec porte,  
doit être installé à  
l'intérieur du réfrigérateur / congélateur  
côté Ouverture de la porte.

# LES INSTRUCTIONS D'INSTALLATION IMPORTANTES



## AVERTISSEMENT!

### À réduire le risque de blessure sévère ou mort:

1. LU ET SUIVENT TOUTES INSTRUCTIONS D'INSTALLATION.
2. Ne liez pas l'opérateur de porte per la source de pouvoir jusqu'à instruit faire ainsi.
3. Localisez la station de commande: (a) en vue de la porte, (b) à un minimum la hauteur de 5 pieds ainsi petit enfants ne peuvent pas l'atteindre, et (c) loin de tous parties en mouvement de la porte.
4. Pour produits ayant un délivrance manuelle, instruire l'utilisateur final sur l'opération de la délivrance manuelle.

# RÈGLEMENTS DE SÉCURITÉ IMPORTANTS



## AVERTISSEMENT!

### À réduire le risque de blessure sévère ou mort:

1. LU ET SUIVENT TOUTES INSTRUCTIONS!
2. Jamais laisser fonctionner enfants ou mouvoir vivement avec les autorités de porte. Gardez la télécommande (où a fourni) loin des enfants.
3. Le personnel devrait garder loin une porte dans mouvement et subsistance la porte en mouvement dans vue jusqu'à est complètement fermé ou avoir ouvert. **CES AUCUNS DOIVENT CROISER LE CHEMIN D'UNE PORTE EN MOUVEMENT.**
4. Éprouvez les traits de sécurité de la porte au moins une fois par mois. Après qu'arrangeant la vitesse ou la fin de course, retest les traits de sécurité de l'opérateur de porte. Manque à arranger l'opérateur correctement peut causer blessure sévère ou mort.
5. Pour produits ai manuel la délivrance, si possible, utiliser la délivrance manuelle seulement quand la porte est fermée. Précaution d'utilisation à utiliser cette délivrance quand la porte est ouverte.
6. **GARDER LES PORTES CORRECTEMENT QUI OPÈRE ET ÉQUILIBRÉ.** Voir la porte fabricant propriétaire manuel. Un improprement qui opère ou balancé porte peut causer blessure sévère ou mort. Formez les technicien de systèmes de porte faites les réparations per les câbles, réunions de source, et autre quincaillerie.
7. **SAUVEZ CES INSTRUCTIONS.**

## 2 Limited Warranty

All products are warranted to be free from defects in material and workmanship for a period of one (1) year or 100,000 cycles, whichever occurs first, from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturers' option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and/or a return-goods authorization (RGA) number is issued.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below, directed to the attention of Customer Service Manager.

This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products. (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

**Warrantor:**  
RollSeal  
1733 County Road 68  
Bremen, AL 35055  
256-287-7000



### 3 Introduction

Look over this manual to get familiar with the RS-500/600 Door and SC-325 & SC-650 Controllers before troubleshooting. Begin troubleshooting with the Flow Chart provided. When starting with the Flow Chart, it is assumed that the Controller has already been set up and the limits have been programmed. Programming information can be found in the 4801-5156 Manual for the SC-325 & SC-650 Controllers. Also, the display in which the Flow Chart refers to is the Display Indicator on the front of the SC-325 & SC-650 Controllers which is shown in Diagram 3A.



## Caution!

Any Electrical Troubleshooting Performed In This Guide  
Should Be Performed By A Qualified Electrician.

The RollSeal SC-325 & SC-650 are Intelligent Controllers manufactured specifically for the RollSeal RS-500/600 Automatic Doors. The SC-325 & SC-650 Controllers will provide safe opening and closing of the door by using a number of internal safety devices plus those features provided in the components of the RS-500/600 Door. The SC-325 & SC-650 Controllers can control the opening and closing speeds of the door, count the number of door operations, and provide status information for remote monitoring of the door position. In addition, the SC-325 & SC-650 Controllers can combine a number of auxiliary devices to improve the operability of the RS-500/600 Door such as:

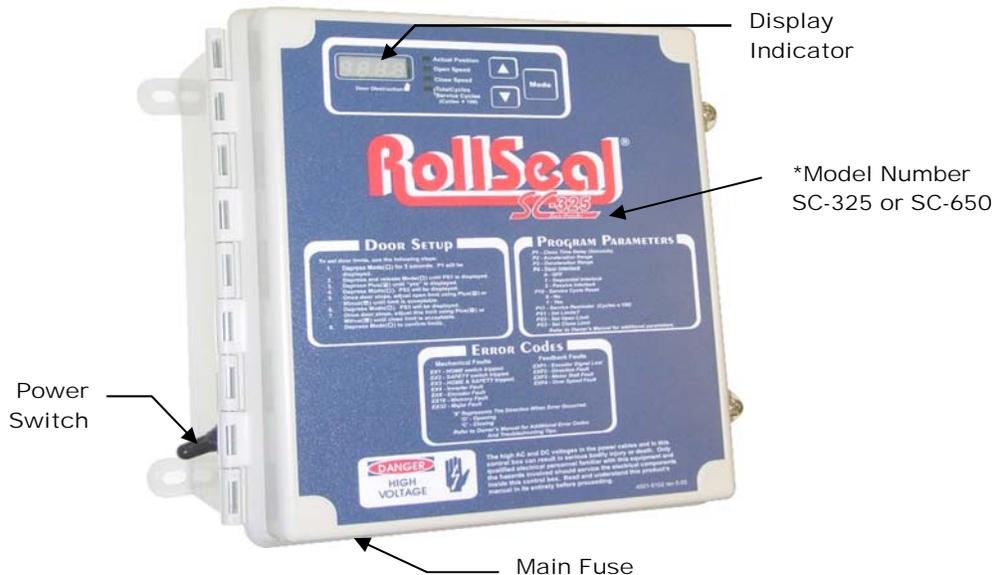
- Infrared sensors to detect the presence of personnel or machinery requiring passage through the door.
- Remote radio controlled inputs for operating the door.
- Auxiliary lights or alarms that operate in conjunction with door opening or closing.

The SC-325 & SC-650 Controllers are very versatile and simple to operate. The controls are easily operated from the front panel.

**\*NOTE: In this Manual, the only difference shown between the SC-325 & SC-650 Controllers is the model number as shown in Diagram 3A.**

### Diagram 3A

#### SC-325 & SC-650 Controllers



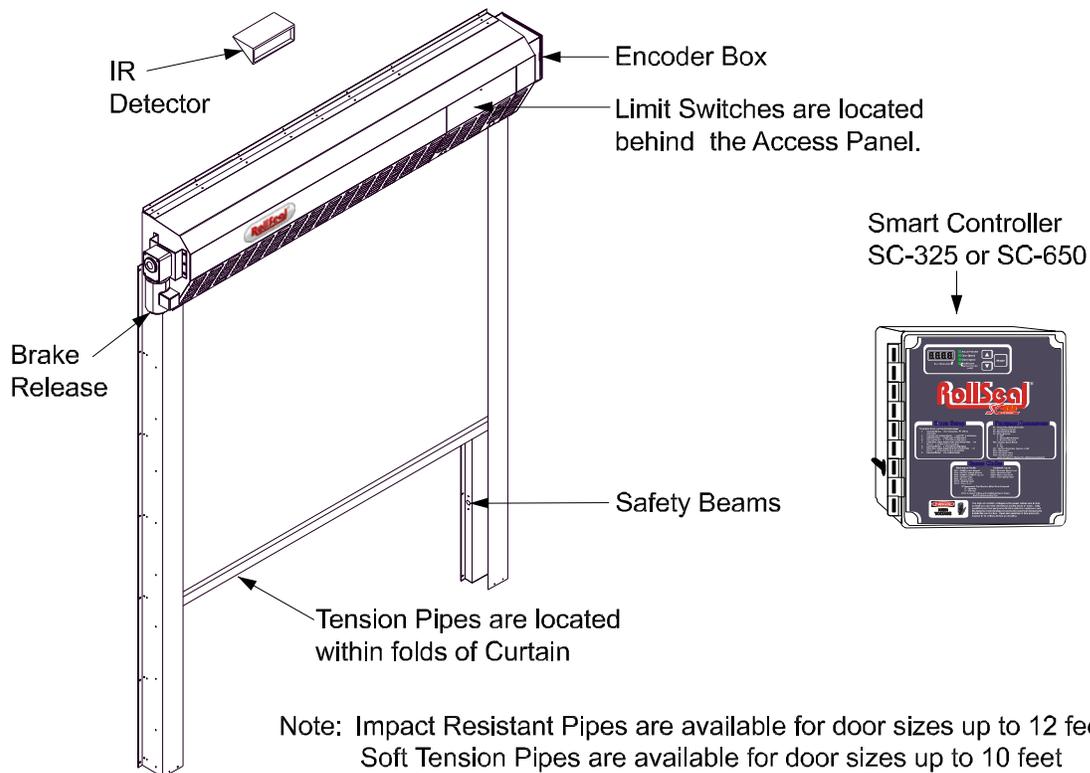
## 4 How the SC-325 & SC-650 Controllers Communicate with the RollSeal RS-500/600 Door.

Inside the upper right housing of the RollSeal RS-500/600 Door is an Encoder that sends electrical pulses to the SC-325 & SC-650 Controllers. When the door is moving, the Controller is in normal operating mode. (See **Section 20** or Manual #4801-5156 for wiring diagram of the Encoder). The SC-325 & SC-650 Controllers refer to the position of the door in units of “Counts”, which is based upon the number of encoded pulses that the Encoder sends to the Controller.

**NOTE: The term Position Units is used throughout this document and refers to the position of the door in units of Counts.**

A Count of zero is assigned to the full open position where the Home Switch operates, and the highest count is assigned to the full closed position. The maximum number of Counts that the SC-325 & SC-650 will read depend upon the particular installation. In general, a Count is approximately equal to 1/8 inch of door movement. Several of the parameters of the SC-325 & SC-650 are displayed in units of Counts, such as the Actual Position, the Open and Closed Limit Positions and the Acceleration and Deceleration Ranges.

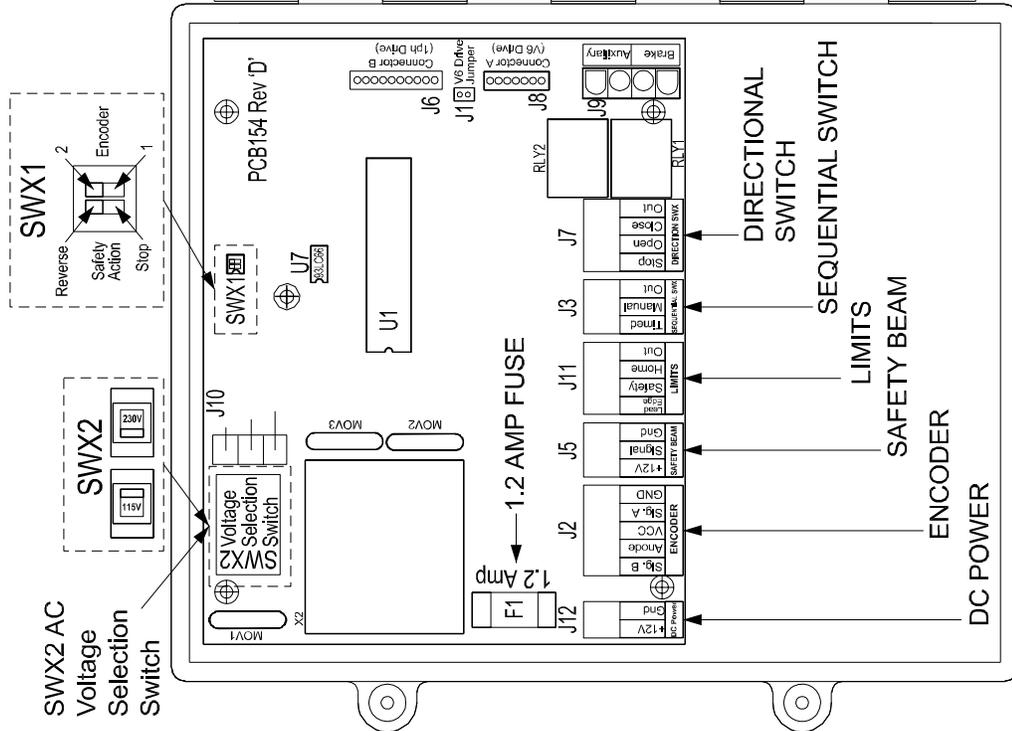
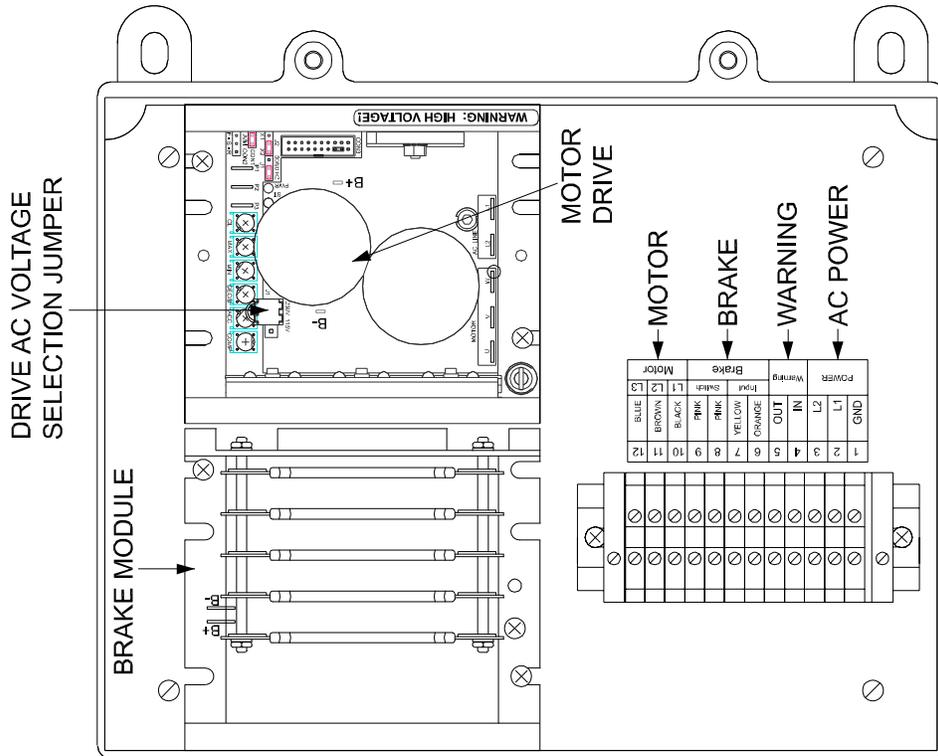
**Diagram 4A** RS-500/600 Door and Controller





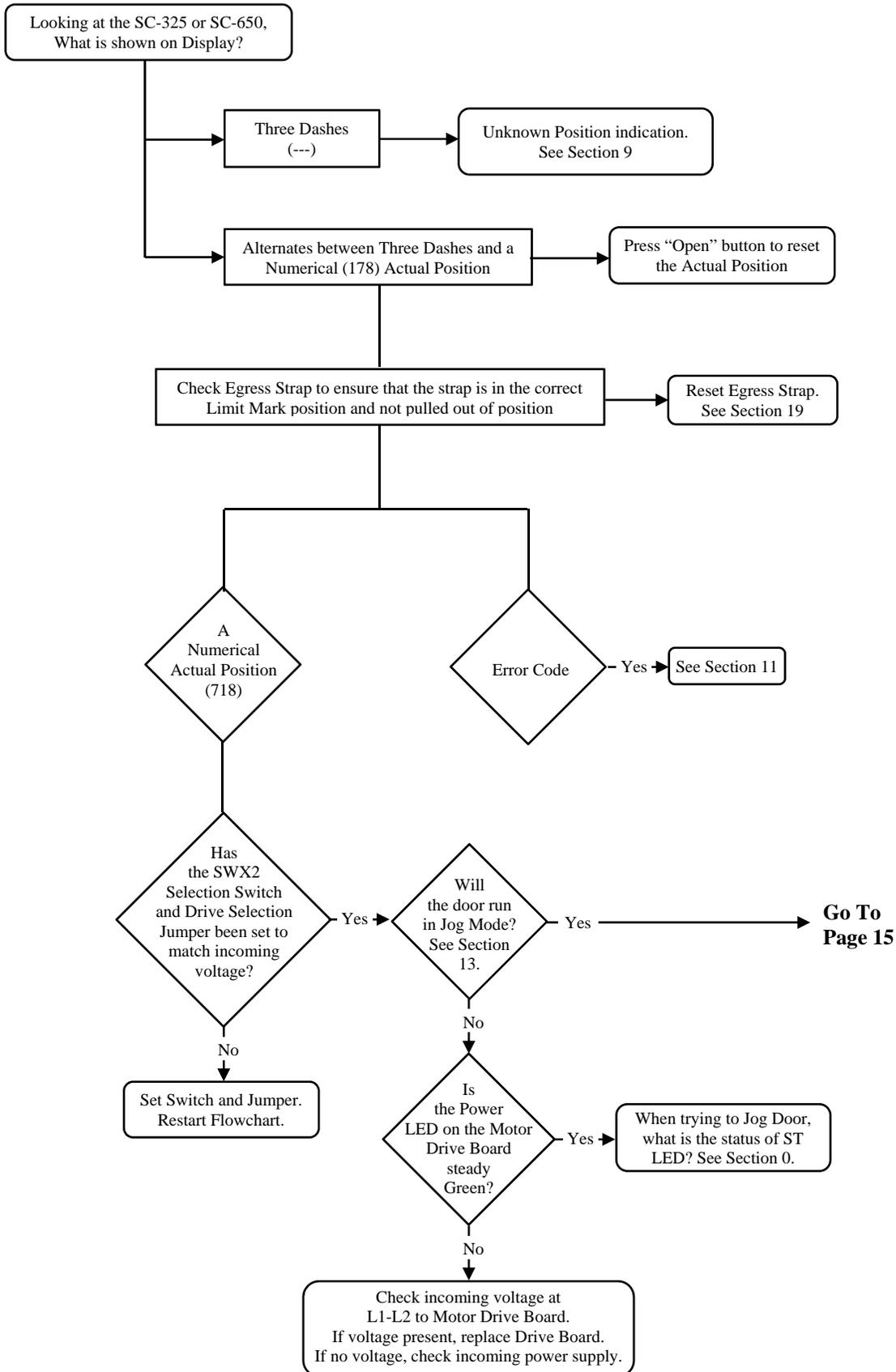
# 6 SC-325 V2 Controller Layout

**⚠ WARNING!**  
 Ensure The Drive  
 AC Selection  
 Jumper AND PCB  
 154 AC Selection  
 Switch Are Set  
 Accordingly  
 BEFORE Power Is  
 Applied To The  
 Controller.

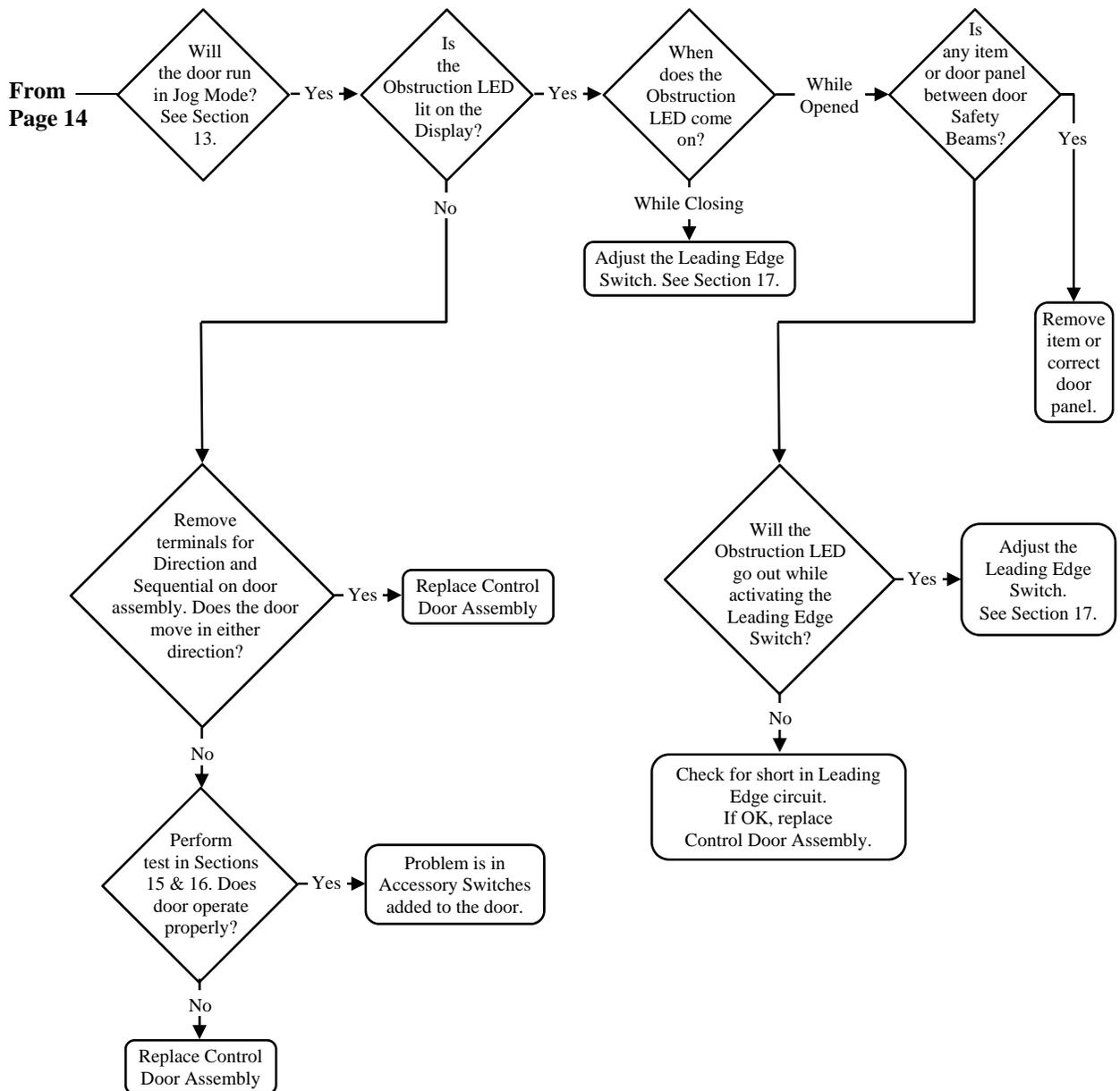




# 8 Troubleshooting Flowchart



## Troubleshooting Flowchart (cont.)

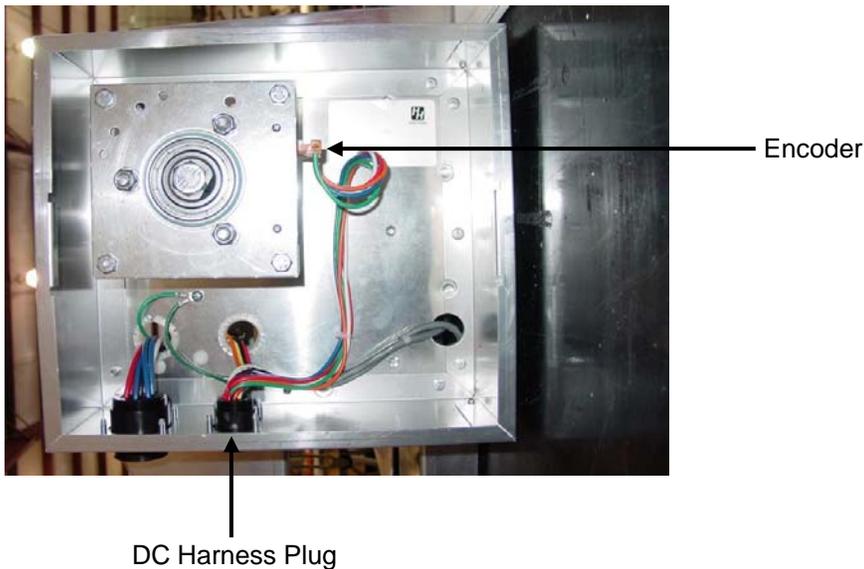
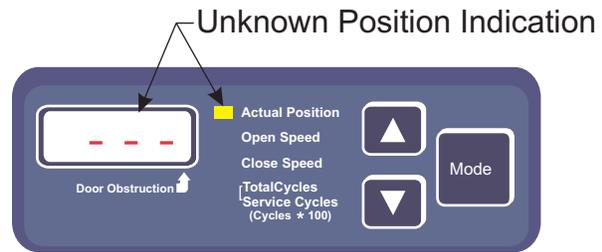


## 9 Unknown Position Indication

There are occasions when the Controller may not know the exact position of the door. For example, when returning from the Jog Mode. In these cases the Display Indicator will display a series of three bars as shown to the right. This is known as the Unknown Position Indication.

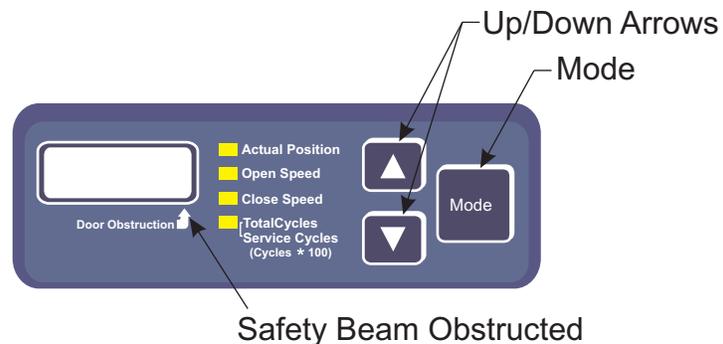
When the door is actuated, the door will proceed to the full open position, however the speed of the door will be reduced. When the door has returned from the Home Switch position to the Open Limit position, the Display Indicator will show the Actual Position of the door. This indicates that the door has reset its position and is ready for normal operation.

If the Door Encoder fails, the control will not be able to recognize the position of the door. This problem can also arise from a loose or bad connection in the DC Harness. Check the DC Harness to insure it is connected properly and that there are no loose wires in the connection to the Encoder.



## 10 Obstructed LED

The Obstructed LED is located directly below the right side of the Display Indicator. This light indicates that there is an object detected by the Safety Beam preventing the Door from closing. Check for any items or areas of the Door panel that may be blocking the beam. Also see the Troubleshooting Flowchart (Section 8) for more information.



## 11 Error Codes

### Mechanical Errors

Code	Condition	Panel Movement	Problem Area	Possible Solutions
EO1	Opening, Home Switch		Home Switch	Try to activate door normally (open), should fix itself.
				Use Jog Mode to lower door panel below Home Switch. <b>See Section 13</b>
				Manually release Brake and pull panel below Home Switch. <b>See Diagram 11A</b>
				Home Switch arm may be loose. Retighten. <b>See Section 17</b>
EC1	Closing, Home Switch		Home Switch	Lower Limit is not set correctly. Reset Door Limits.
				Home Switch arm may be loose. Retighten. <b>See Section 17</b>
				Faulty connections, check DC Harness (Grey Cable) at the door and the DC connections on the PCB154. <b>See Diagram 11B &amp; Diagram 11C</b>
EO2	Opening, Safety Switch		Safety Switch	Safety Switch arm may be loose. Retighten. <b>See Section 17</b>
				Faulty connections, check DC Harness (Grey Cable) at the door and the DC connections on the PCB154. <b>See Diagram 11B &amp; Diagram 11C</b>
EC2	Closing, Safety Switch		Safety Switch	Safety Switch arm may be loose. Retighten. <b>See Section 17</b>
				Faulty connections, check DC Harness (Grey Cable) at the door and the DC connections on the PCB154. <b>See Diagram 11B &amp; Diagram 11C</b>
EO3	Opening, Safety Switch		Home & Safety	Manually release Brake and pull panel below Home Switch. <b>See Diagram 11A</b>
				Check DC Harness connection, especially if "Door Obstruction" LED is on. <b>See Diagram 11B</b>
EC3	Closing, Safety Switch		Home & Safety	Manually release Brake and pull panel below Home switch. <b>See Diagram 11A</b>
				Check DC Harness connection, especially if "Door Obstruction" LED is on. <b>See Diagram 11B</b>

### Feedback Errors

Code	Condition	Panel Movement	Problem Area	Possible Solutions
EOF1	Opening, Encoder Fault	Up or Down	Encoder	Check DC Harness, make sure optics are clean, inspect Encoder wire connections in door J-Box and on PCB154 board. <b>See Diagram 11B &amp; Diagram 11C</b>
		None	Brake	To prove the Brake is not releasing automatically, disengage manual brake release ( <b>See Diagram 11A</b> ) and attempt to operate door. If it operates, one or more of the following is the problem:

## Feedback Errors (Cont.)

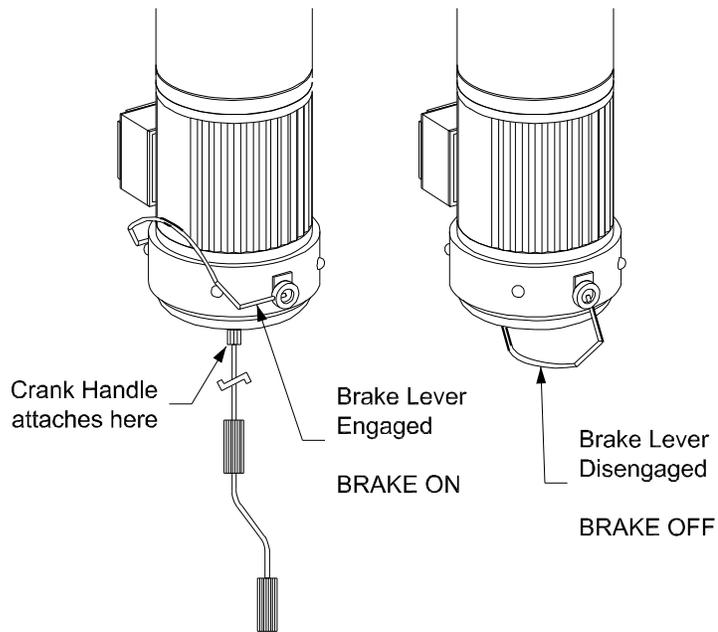
Code	Condition	Panel Movement	Problem Area	Possible Solutions
EOF1	Opening, Encoder Fault	None	Brake	Check Brake Relay on PCB154 Control Board. <b>See Section 18</b>
			Brake Rectifier	Check Brake Rectifier in motor. <b>See Section 18</b>
			Brake Assembly	Make sure Brake is not adjusted too tight or that the brake assembly is defective. <b>See Section 12</b>
			Egress Strap	Check Egress Strap to ensure that the strap is in the correct reset Limit Mark position and not pulled out of position.
			Tension Pipe Pockets	Ensure correct pipe location in panel pockets. Inspect pipes for bends.
			Drive Board	Ensure both PWR and ST LEDs are "ON" steady <b>See Section 0</b>
ECF1	Closing, Encoder Fault	Up or Down	Encoder	Check DC Harness, make sure optics are clean, inspect Encoder wire connections in door's J-Box and on PCB154 Control Board. <b>See Diagram 11B &amp; Diagram 11C</b>
ECF1		None	Brake	To prove the Brake is not releasing automatically, disengage manual brake release ( <b>See Diagram 11A</b> ) and attempt to operate door. If it operates, one or more of the following is the problem:
			Brake Relay	Check Brake Relay on PCB154 Control Board. <b>See Section 18</b>
			Brake Rectifier	Check Brake Rectifier in motor. <b>See Section 18</b>
ECF1			Brake Assembly	Make sure Brake is not adjusted too tight or that the brake assembly is defective. <b>See Section 12</b>
EOF2	Opening, Direction Fault	Up then panel stops and rolls down a few inches	Drive Overload Trip	If a Drive Overload occurs due to over-current, over-voltage, or temperature levels out of range, the drive may trip while the door is opening.
		Up	Encoder	Signal Wires (A, B) reversed. <b>See Diagram 11C</b>
			Drive	Reverse two phases to the motor
		Down	Drive	The Drive or the Gear Motor may not be functioning.
			Drive	If the gear motor seems to be functioning, then two phases to the motor must be reversed.
			Egress Strap	Check Egress Strap to ensure that the strap is in the correct reset Limit Mark position and not pulled out of position. <b>See Section 19</b>

## Feedback Errors (Cont.)

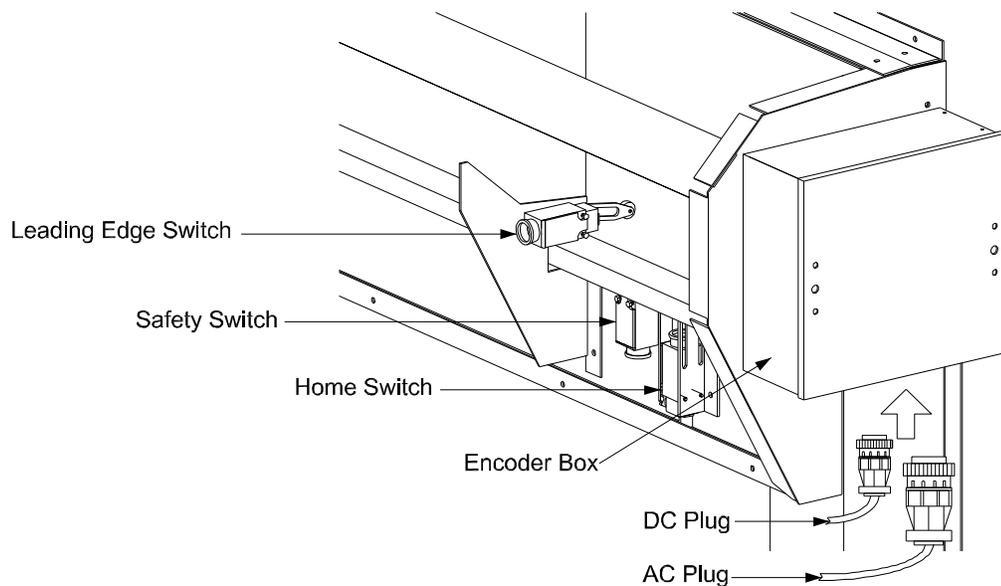
Code	Condition	Panel Movement	Problem Area	Possible Solutions
ECF2	Closing, Direction Fault	Up	Drive	Reverse two phases to the motor Signal Wires (A, B) reversed. <b>See Diagram 11C</b>
		Down	Encoder	

**Diagram 11A**

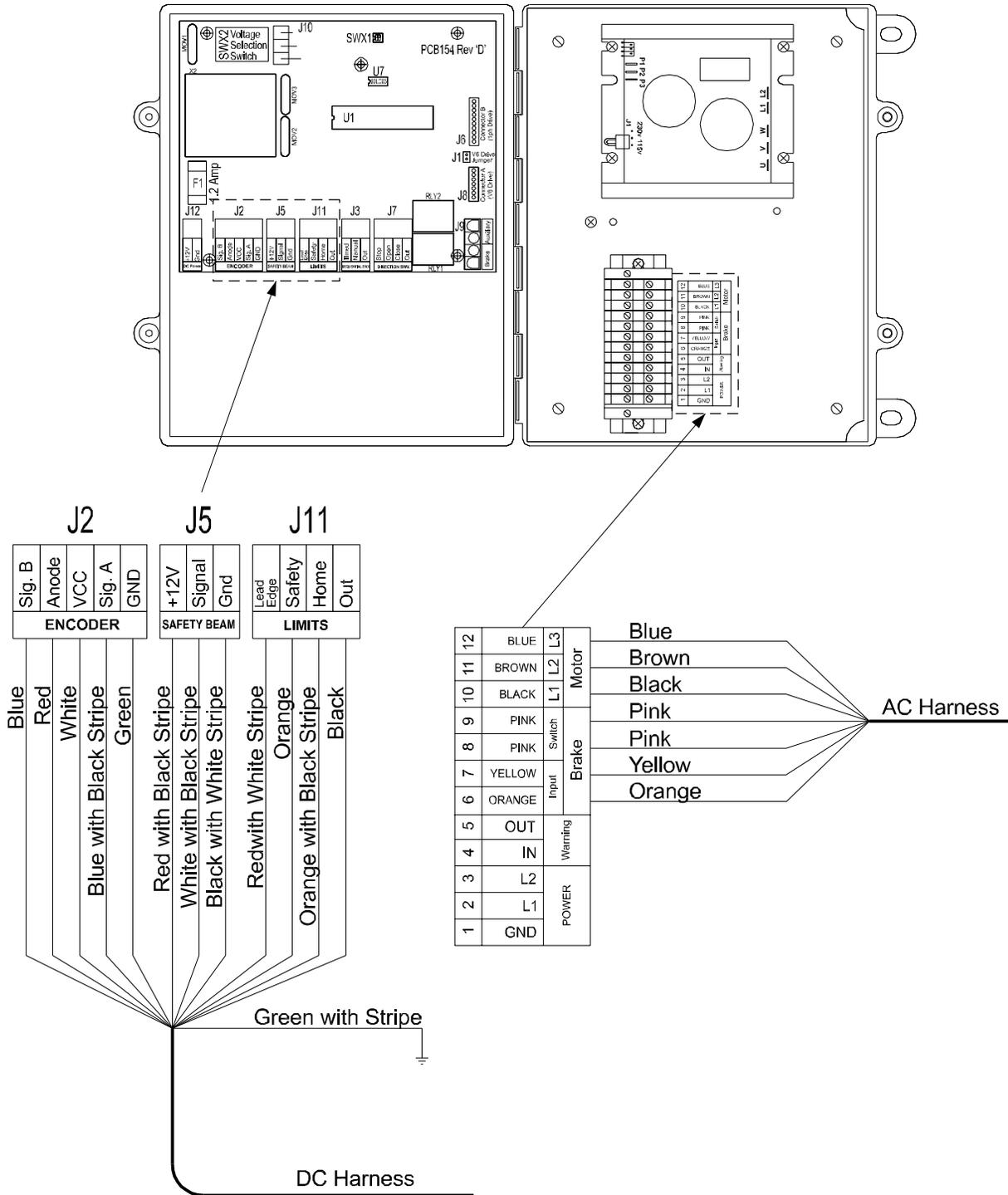
Disengage Brake



**Diagram 11B** AC & DC Harness



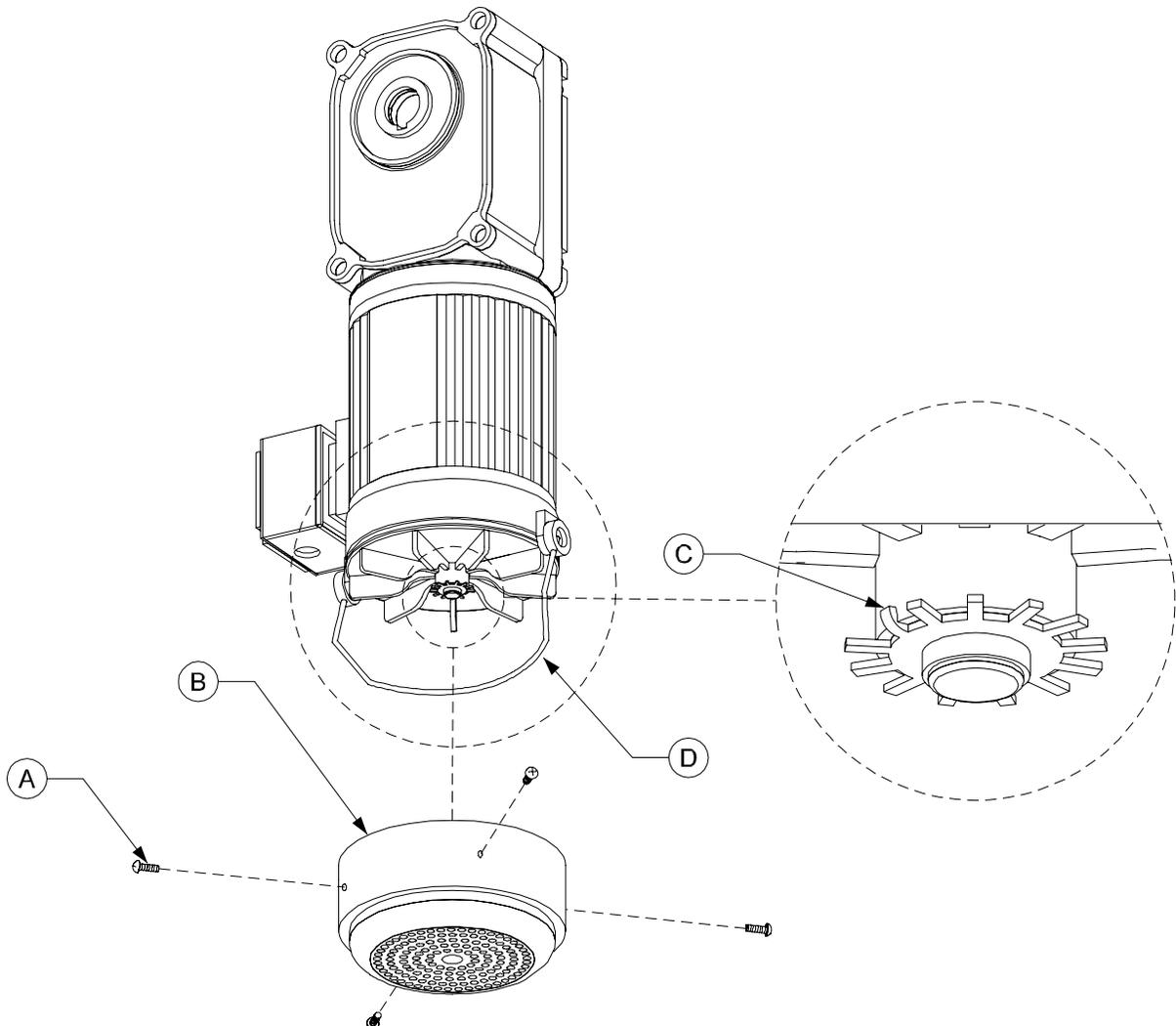
# Diagram 11C AC & DC Harness



## 12 Adjustment of Brake

After extended operation of the brake lever, the brake may become worn. As the brake wears, some adjustment to the brake is required. Lettered diagrams below correspond to lettered instructions. Follow instructions to adjust brake:

1. Close door curtain to fully lowered position.
2. Engage Brake lever.
3. Disconnect electrical power to motor.
4. Remove four Phillips screws (A).
5. Remove cover (B).
6. Straighten the bent tab (C) of spider nut.
7. Tighten spider nut (C) snugly against blower wheel. Make sure a tab of spider nut is aligned with a notch in the shaft.
8. Bend tab (C) upward into notch of shaft.
9. Replace cover (B).
10. Replace four Phillips screws (A).
11. Disengage brake lever (D).
12. Adjustment complete.

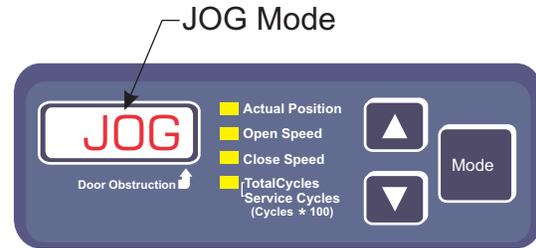


## 13 Jog Mode

The Jog Mode will permit an operator to manually control the position of the door with the **Up** (▲) and **Down** (▼) arrow buttons. To enter the Jog Mode, press both the **Up** (▲) and **Down** (▼) arrows at the same time for at least 5 seconds. The controller will indicate the Jog Mode in the display as shown below.

In the Jog Mode the door can be opened and closed and is not affected by the Home Limit Switch or the Safety Beam. The operator must carefully watch the door movement when nearing the full open and full closed positions. To exit the Jog Mode, press and hold the **Up** (▲) and **Down** (▼) arrow buttons for at least 5 seconds. The Controller will return to the normal operating mode with the Actual Position shown in the display.

When returning to the normal operating mode, the controller will not know the exact position that the operator has left the door when exiting the Jog Mode. Therefore, the Controller will display a series of three horizontal bars. Upon the next command the door will slowly proceed to the full open position to reset its memory. The door will always follow this procedure after exiting the Jog Mode.



## 14 SC-325 & SC-650 Drive Diagnostics LEDs

### KB Drive Diagnostic LEDs

#### Door Idle

PWR LED	ST LED	Operating Condition	Possible Causes
OFF	OFF	Drive is Off	No AC Power Applied
			Fuse Blown
			Defective Drive
Green	Steady Yellow	Normal Condition	
Green	Quick Flash Red/Yellow	AC Input Under voltage	Input AC=115 VAC/Drive Jumper set on 230 VAC
Green	Slow Flash Red/Yellow	AC Input Overvoltage	Input AC=230 VAC/Drive Jumper set on 115 VAC
Green	Steady Red	Current Overload	Drive tripped due to current overload
Green	Red/Yellow/Green	Under voltage or Overvoltage	Drive tripped due to out of range voltage condition

#### Door Moving

PWR LED	ST LED	Operating Condition	Possible Causes
Green	Slow Flash Green	Normal Condition	
Green	Quick Flash Red	Overcurrent	Drive operating at 120%-200% of full rated load
Green	Slow Flash Red	Short Circuit	Two phases may be shorted
			Phase may be shorted to ground
			Gear motor may be defective

Status LED



Slow Flash = LED flashes 1 second off, 1 second on

Quick Flash = LED flashes 0.25 second off, 0.25 second on

Steady = LED is constantly on

## 15 Switch Testing

With the Sequential Switch and the Direction Switch terminal blocks removed all input signals are disabled. Any input signal to make the door operate will come from this test. For a quick overview there are two types of operator inputs that can be connected to the SC-325 & SC-650 Controllers for opening and closing the RS-500/600 Doors. They are Directional Input and Sequential Input. Switches can be connected to one or both connections simultaneously to the SC-325 & SC-650 Controllers. The table below describes the response of the door when a specific operation of the door is being carried out and what the door does when a specific operator button has been pressed.

	Manual Activated	Timed Activated	Open Activated	Close Activated	Stop Activated	Notes
During the specific operation below.....						
TIMED Opening	N/A	N/A	N/A	N/A	Stops Door after 1-2 Seconds	
TIMED Closing	N/A	Reopens Door & Starts Delay	N/A	N/A	Stops Door (Immediately)	
During TIMED Countdown	Closes Immediately	Restarts Time Delay	Exits Time Delay	Closes Door	Should Terminate Timed Cycle	
MANUAL Opening	N/A	N/A	N/A	N/A	① Stops Door after 1-2 Seconds	① When Stop is pressed & door stops, pressing the Manual button again will cause the door to reverse direction at that point.
MANUAL Closing	N/A	Opens then starts Time Delay	N/A	N/A	① Stops Door (Immediately)	
While Completely Open (after MANUAL)	Closes	N/A	N/A	Closes Door	N/A	
While OPENING	N/A	N/A	N/A	N/A	Stops Door after 1-2 Seconds	
While CLOSING	N/A	Reopens door & starts Time Delay	N/A	N/A	Stops Door (Immediately)	

### 15.1 Directional Switch Input

The Directional Switch Input is primarily for use with a three position direction switch similar to the one shown to the right. Operation is simple. Momentarily push "OPEN" to open the door, momentarily push "CLOSE" to close the door and momentarily push "STOP" to stop the door. The SC-325 & SC-650 Controllers can be programmed to perform special events with these directional switches. For example, if the "STOP" button is pressed and held, the door will remain in the stopped position. None of the other control switches will operate as long as the "STOP" connection to the controller is completed. Similarly, if the "OPEN" button is pressed and held, the door will remain in the open position. And, if the "CLOSE" button is pressed and held, the door will remain in the closed position.



Three Position Operator Station

These features would be useful if an operator wanted to “lock” the door in a particular position with the use of external switches connected in parallel with the directional switch. *For safety reasons, these directional buttons have a priority built into the SC-325 & SC-650 Controllers in case one or more of the buttons are pressed at the same time.* The “STOP” switch has **first priority**, the “OPEN” has **second priority** and the “CLOSE” has **third priority**.

## 15.2 Sequential Switch Input Test and Manual (Single) Switch Input Test

This switch provides a conventional means of connecting a single button that responds to each momentary press sequentially. For example, if the last movement of the door was in the open direction and the manual input is made, the door will attempt to close. If the last movement of the door was in the close direction and the manual input is made, the door will attempt to open. If this single position manual switch is used with the three position directional switch (See **Section 15.1**), the **manual switch** has **fourth priority**.



Single Position Operator Switch

NOTE: This input will be reconfigured for use with the Interlock circuit if the P4 setting is programmed to anything other than zero. See SC-325 & SC-650 Controllers Owners Manual for more information on controller settings.

## 15.3 Timed Switch Input Test

The Timed Switch is intended for the connection of automatic door operating equipment, such as motion detectors or floor loops. For example, the timed feature would be used when a vehicle or forklift would open the door by means of a floor loop. After the door is opened and all safety sensors are clear, a timer would count down and close the door automatically. In order for the timed feature to work, the door must have initially been in a closed or stopped position. If the door was already opened by some other means, the timer would not operate and the door would remain open.

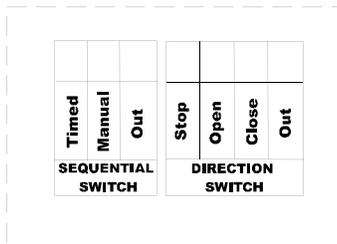
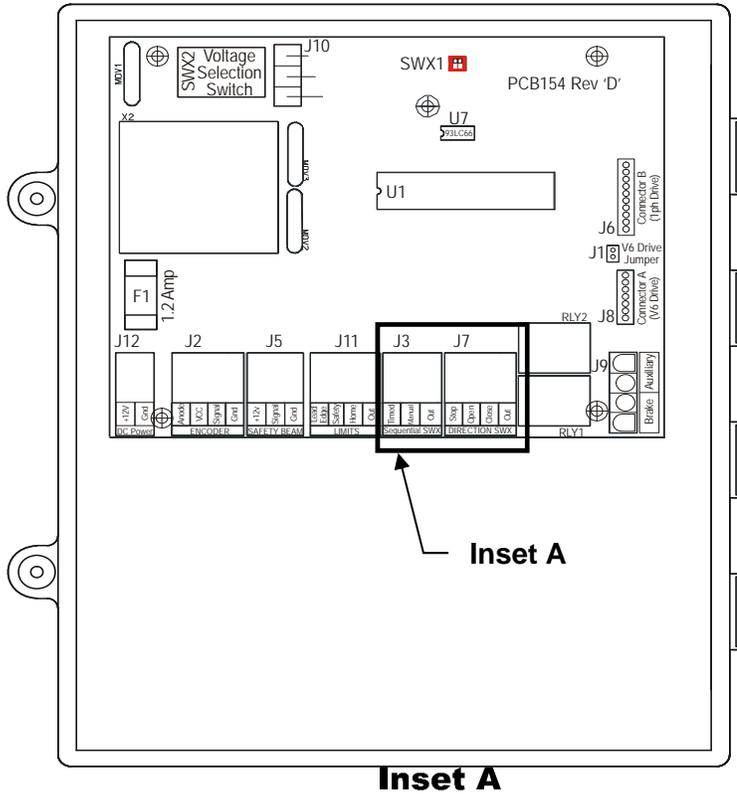
The **timed switch** has **priority five** when the door is in the idle mode. However, if the door is in the process of closing, the timed input will act as a safety feature that will stop and reverse the door until the door is fully opened.

For testing purposes the Direction and Sequential Input Terminals have been removed. This was done from a step in the trouble shooting flow chart.



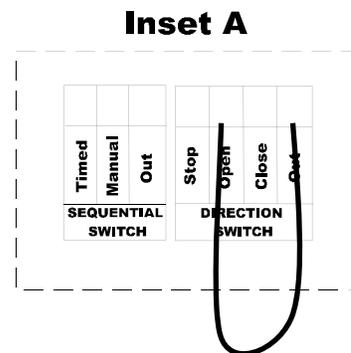
## 16 Direction SWX Test

To perform all tests below you must have a short piece of wire. This wire should be approximately 5 inches long and 16AWG – 18AWG in size. Each test performed will be located in the same area of the PCB 154 of the Door Assembly as show below.



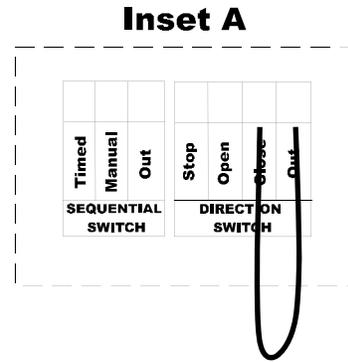
### 16.1 Open Direction Test

Momentarily place the jumper on the pins of **Out to Open**. The door should open to its full open position. Care should be taken that this wire only touches these two points.



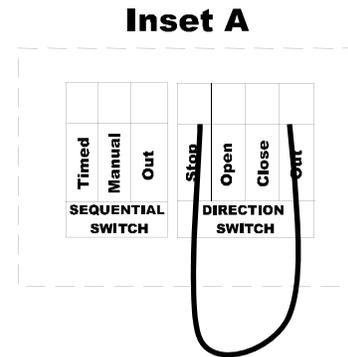
## 16.2 Close Direction Test

Momentarily place the jumper on the pins of **Out to Close**. The door should close to its full close position. Care should be taken that this wire only touches these two points.



## 16.3 Stop Position Test

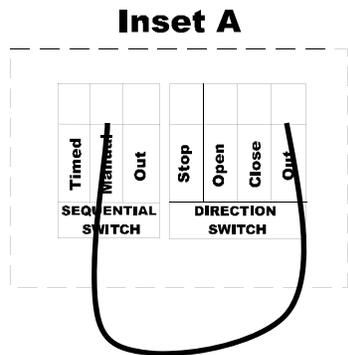
1. Momentarily place the jumper on the Open or Close direction. The door will start to move in that direction.
2. Before the door gets to its full limit, momentarily place the jumper across the **Out to Stop** position. The door should stop at this point. Care should be taken that this wire only touches the specified points.



## 16.4 Sequential SWX Test and Manual Position Test

Momentarily place the jumper on the pins of **Out to Manual**. The door should open or close to its full limit position. The direction will depend on the last signal or input it received from this location.

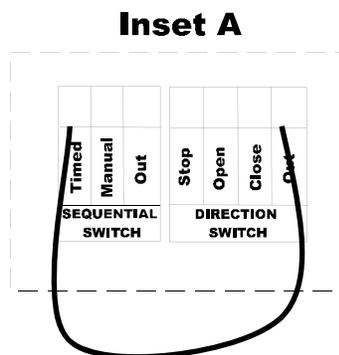
Each time you make contact on this point the door will move opposite of the previous move. Care should be taken that this wire only touches these two points.



## 16.5 Timed Direction Test

The door must be closed before performing this test.

Momentarily place the jumper on the pins of **Out to Timed**. After the door is opened and all safety sensors are clear, a timer will count down and close the door automatically. In order for the timed feature to work, the door must have initially been in a closed or stopped position. If the door is open (by an open test or some other means), the timer will not operate and the door will remain open. Care should be taken that this wire only touches these two points.



## 17 Adjusting the Home, Safety, and Leading Edge Switches

At some point it may be necessary to adjust one of the three switches located within the horizontal member mechanism of the door. You can access these switches by removing the cover or through the Access Door (See **Diagram 4A**). These switches are attached to levers that contact the curtain. See **Diagram 11B**.

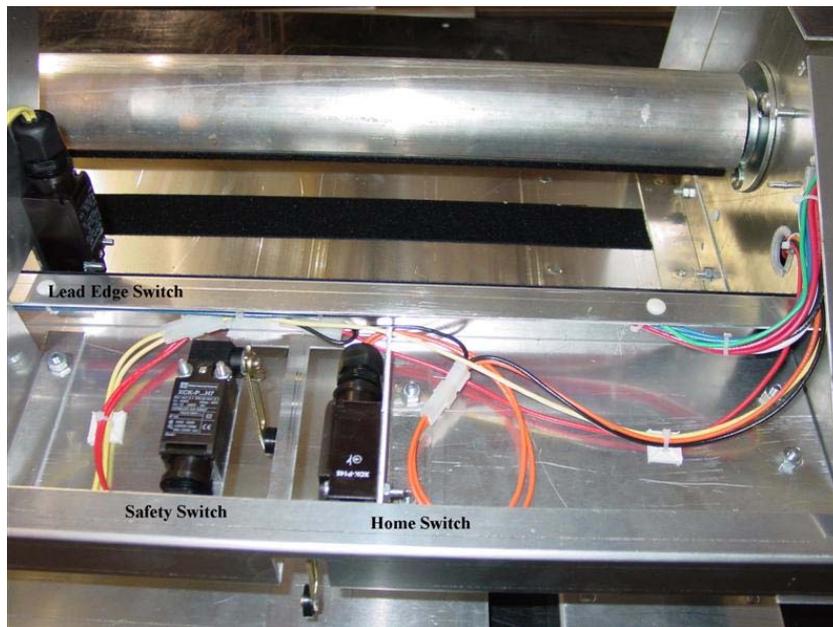
The **Home Switch** sets the “Open” position of the door curtain. When the curtain is raised, the Home Switch limits the height to which the curtain opens.

The **Leading Edge Switch** is a switch that stops the curtain in the event of a doorway obstruction.

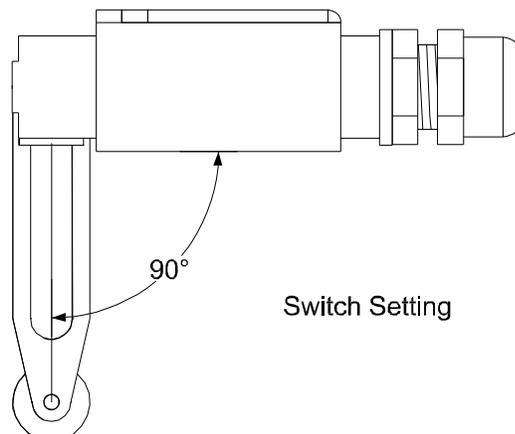
The **Safety Switch** is a failsafe switch that stops the curtain in the unlikely event of malfunction of the Home Switch.

**NOTE: When the Safety Switch is activated the door will no longer operate until corrected.**

The Controller Display will indicate an Error Code if the Home or Safety Switches are out of position. If the Obstruction LED below the Controller Display is lit, the Leading Edge Switch is out of position. The correct position of these switches under normal settings will be without the roller arm having contact with the panel.



Adjust both the Home Switch and Safety Switch at 90 degrees from its mounted position.



The installation of the Leading Edge Switch changed in January 2006. The switch setting will depend on the year model of the door. Notice the difference in the two brackets used and how the switch is mounted to it.



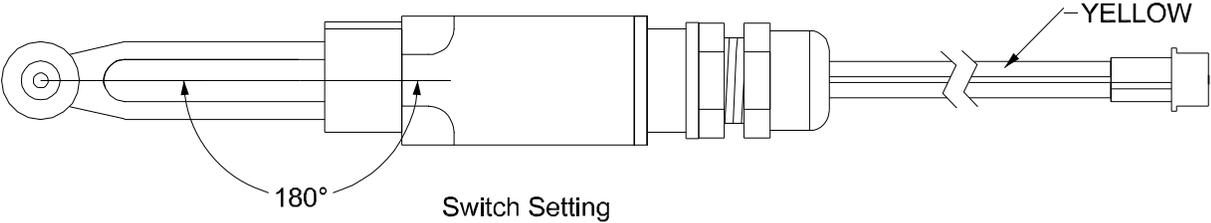
2005 and Earlier



2006 and Later

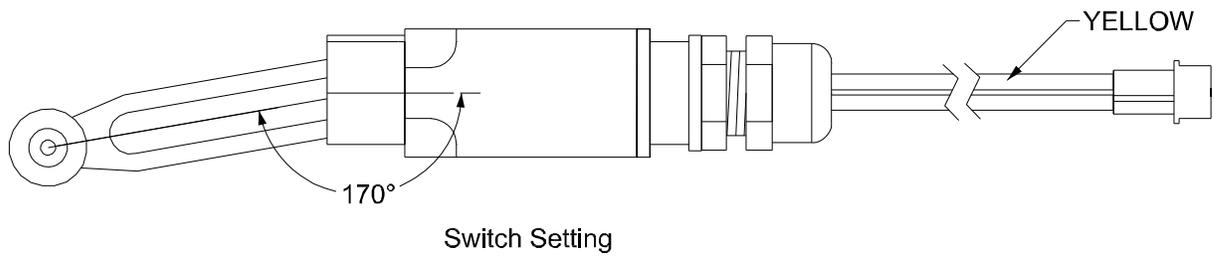
**17.1 2005 and Earlier Switch Adjustment**

Adjust the Leading Edge Switch at 180 degrees from its mounted position.



## 17.2 2006 and Later Switch Adjustment

Adjust the Leading Edge Switch at 170 degrees from its mounted position.

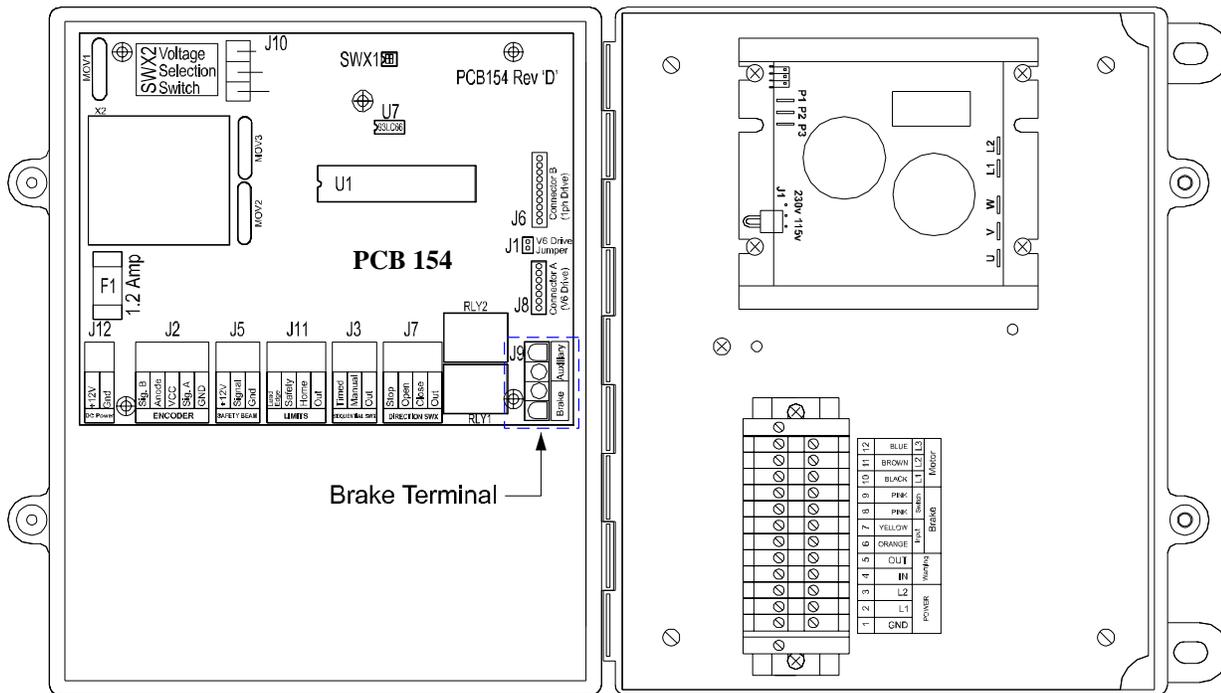


After adjusting the Leading Edge Switch make sure it is positioned downward against the door panel.



## 18 Brake Relay Test

The gear motors on the RS-500/600 Series Doors have a Brake Rectifier which will activate the brake in the gear motor to stop the unit when not in use. There is a relay (acting as a switch) on the PCB 154 board in the Door Assembly of the Controller that will turn this brake on and off. This test procedure will allow you to test the relay to see if it is failing or if the problem could be in the Brake Rectifier. First, test the Brake Relay on the PCB 154. The connections are found at the bottom right corner of the board.



If the Brake Relay is at fault, the door will struggle to operate or could cause the drive board to trip. This situation could create an Error code of EOF1 or ECF1 in the Controller Display.

To test the brake relay:

1. Remove Quick Connect connector from the PCB 154 Board. See **Diagram 18A**.
2. The door must be operated in one direction while in Jog Mode. See **Section 13**.
3. While pressing the up or down arrow (while in Jog Mode), place a jumper across the connectors inside the Quick Connect. The jumper will simulate relay switching. See **Diagram 18A**.  
The Brake should release and allow the door to operate. If the door operates properly after performing this step, replace the Door Assembly of the Controller.
4. If the door does not operate after performing Step 3:
  1. Check the Brake Rectifier to see if it is performing correctly.
  2. Confirm that the correct Brake Rectifier is installed for the specific supply voltage.



## 18.2 Brake Rectifier

The Brake Rectifier is a device in the door gear motor junction box. The Brake Rectifier is supplied voltage from the Controller and is activated by a Brake Relay on the PCB 154 Controller Board.

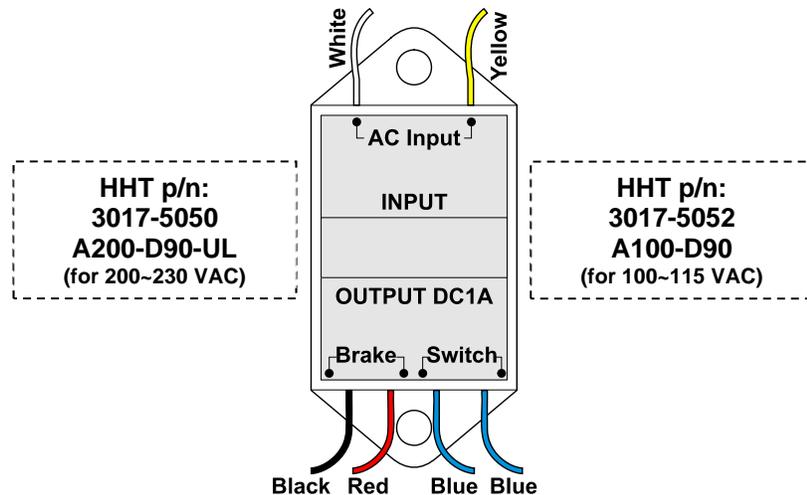
When the Controller supply voltage is 115 VAC and a 3017-5052 A-100 Brake Rectifier is installed inside the door gear motor junction box, the output Brake voltage should be approximately 100 VDC loaded and approximately 110 VDC unloaded.

When the Controller supply voltage is 230 VAC and a 3017-5050 A-200 Brake Rectifier is installed inside the door gear motor junction box, the output Brake voltage should be approximately 100 VDC loaded and approximately 177 VDC unloaded.

**NOTE: Loaded = Connected to the gear motor brake;  
Unloaded = Not connected to the gear motor brake.**

When the Brake Rectifier is activated, it supplies voltage to the brake inside the gear motor and the brake is released. The yellow and white wires supply voltage to the Brake Rectifier. This voltage is dependent on what type of power supply was given to the Controller, either 115 VAC or 230 VAC. The two blue wires on the brake rectifier are the activation connections. When these two wires touch each other, the brake rectifier is activated and output voltage leaves the Brake Rectifier on the black and red wires.

**Diagram 18B** Motor Brake Rectifier Wiring Diagram



The SC-325 Controllers are factory preset to 115 VAC and the RS-500 Doors are factory prewired to require a 115 VAC power supply.

The SC-650 Controllers are factory preset to 230 VAC and the RS-600 Doors are factory prewired to require a 230 VAC power supply.

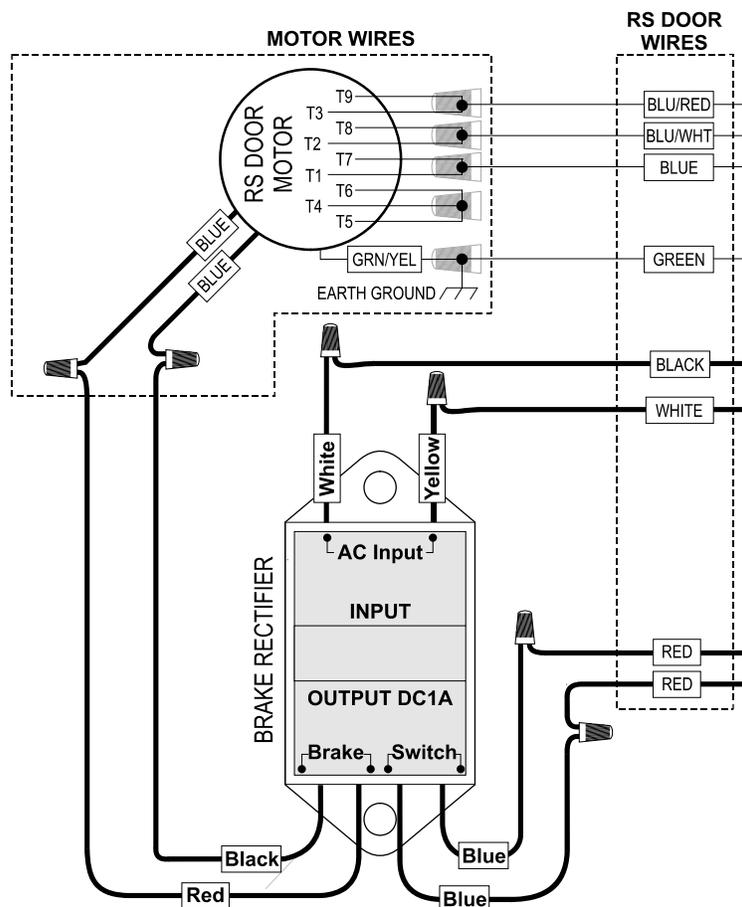
## ! Warning!

Dangerous High Voltages!  
Allow Approximately 5 Minutes For The Controller To Power-Down  
Before Changing Switch Settings, Jumper Placement, Or Wiring.

## ! Warning!

Use The Correct RS Door Brake Rectifier For The Specific Required Voltage!  
Using A 230 VAC Brake Rectifier With A 115 VAC Power Supply Can Result In  
Improper Door Operation Due To The Mechanical Brake Not Releasing Properly.  
Using A 115 VAC Brake Rectifier With A 230 VAC Power Supply Can Result In  
Damage To The Mechanical Brake And/Or Brake Rectifier Resulting In Door Failure.

The SC-325/SC-650 Controllers and RS-500/600 Doors can be field upgraded to accommodate either 115 VAC or 230 VAC power supply. If the desired power supply voltage is different from the factory preset/prewired voltage, the appropriate version Brake Rectifier must be ordered separately, field-installed on the RS Door, and the SC Controller switch and jumper settings changed accordingly.



## ! Note!

If Your Serial # Comes After  
'0010156',  
  
You May Have A Motor  
That Requires The  
Blue W/White Stripe Wire  
To Be Changed  
From T8 & T2  
To Now Use T9 & T3 Instead.  
  
The Blue W/Red Stripe  
Now Uses T8 And T2.

# 19 Emergency Egress (Optional Feature)

## 19.1 Resetting Egress

After the RS-500/600 Door is opened by using the Emergency Egress Strap, the door must be carefully reset to ensure proper operation in the future.

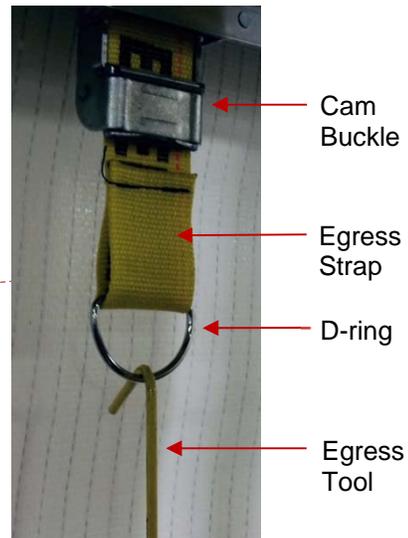
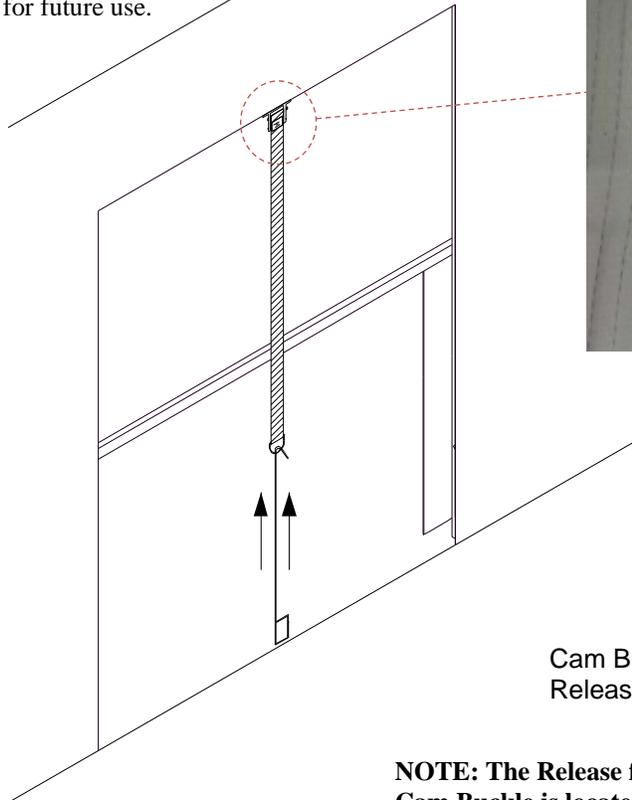
If the Egress Alarm remains active after resetting the Egress Strap, remove the head unit cover and inspect the Egress Bracket where the strap comes into the head unit. Make sure the Egress Strap and roller assembly are allowing the Sensor to release. See **Diagram 19C** and **Diagram 19D**.

### ⚠ CAUTION!

When the Cam Buckle is released, the door will rapidly close unless tension is held on the strap. Keep fingers away from buckle while closing.

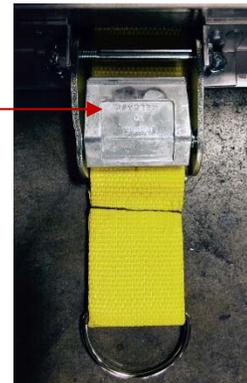
#### Diagram 19A

1. Firmly hold Egress Strap.
2. Press the Cam Buckle Release.
3. Gradually feed Egress Strap through Cam Buckle until door is closed at bottom and D-ring is in the position shown in **Diagram 19A**.
4. Return Emergency Egress Tool to retainers for future use.



#### Diagram 19B

Cam Buckle Release



**NOTE: The Release for the Cam Buckle is located on the panel side of the Buckle. This view shows the Cam Buckle as see from the front of the door.**

## 19.2 Egress Bracket Removal

1. Close the door. If necessary, the door can be closed using “Jog” mode. See your owner’s manual for more information.



**Warning!**

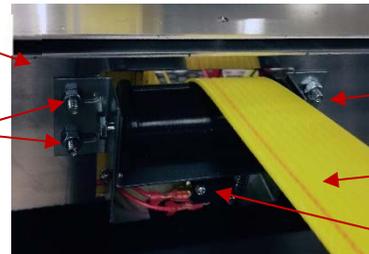
Disconnect All Power Sources Before Installing This Equipment. Failure To Disconnect Power Source Can Result In Property Damage, Serious Injury Or Death!

**Diagram 19C**

2. Locate the door controller and turn off the power switch on the left side of the controller.
3. Remove the door’s head unit cover.
4. Locate the Egress Bracket where the Egress Strap comes through the backplate. See **Diagram 19C**.
5. If there is not enough slack in the Egress Strap to remove and replace the bracket, ensure that the Egress has been properly reset and the D-ring is in the position shown in **Diagram 19A**.
6. Remove the 4 nuts holding the bracket and 2 wires from the sensor. See **Diagram 19C** and **Diagram 19D**.

Backplate

Nuts



Nuts

Egress Strap

Sensor

**Note the placement of the wires on the sensor.**

**Note: This sensor is used to activate optional buzzer. Not all doors are equipped with wires for this sensor.**

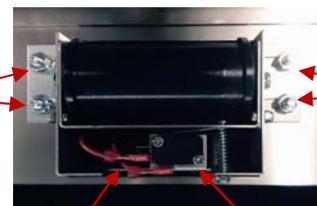
**Diagram 19D**

## 19.3 Egress Bracket Installation

1. Attach the new Egress Bracket with 4 nuts. See Diagrams 1B and 1C.
2. Attach the 2 wires to the sensor as noted when removing the Egress Bracket. See **Diagram 19C** and **Diagram 19D**.

Nuts

Nuts



Note Placement of Wires on Sensor

**Note: This sensor is used to activate optional buzzer. Not all doors are equipped with wires for this sensor.**

3. Cycle the door up and down in normal operating mode to ensure proper re-setting of the door. Adjust if necessary. Door should now function normally. If the door does not operate properly, notify tech support of the manufacturer.
4. Re-attach the cover.

## 19.4 Egress Alarm Activation Troubleshooting

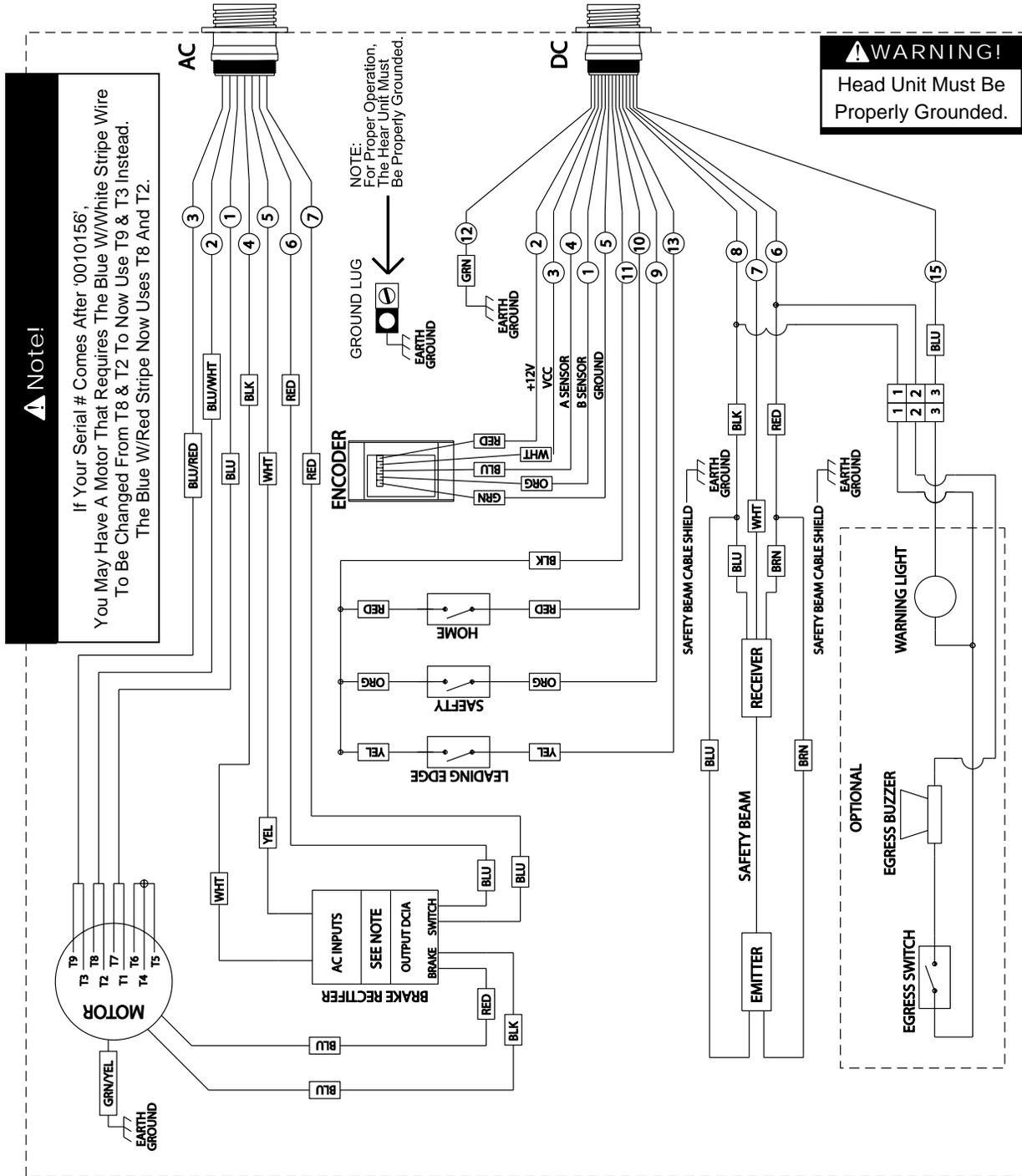
If the door alarm is activated when the door closes, ensure that the Egress strap has been properly reset.

If the alarm is still activates, remove the head cover and inspect the back plate roller where the strap comes into head unit, make sure contact switch is releasing.

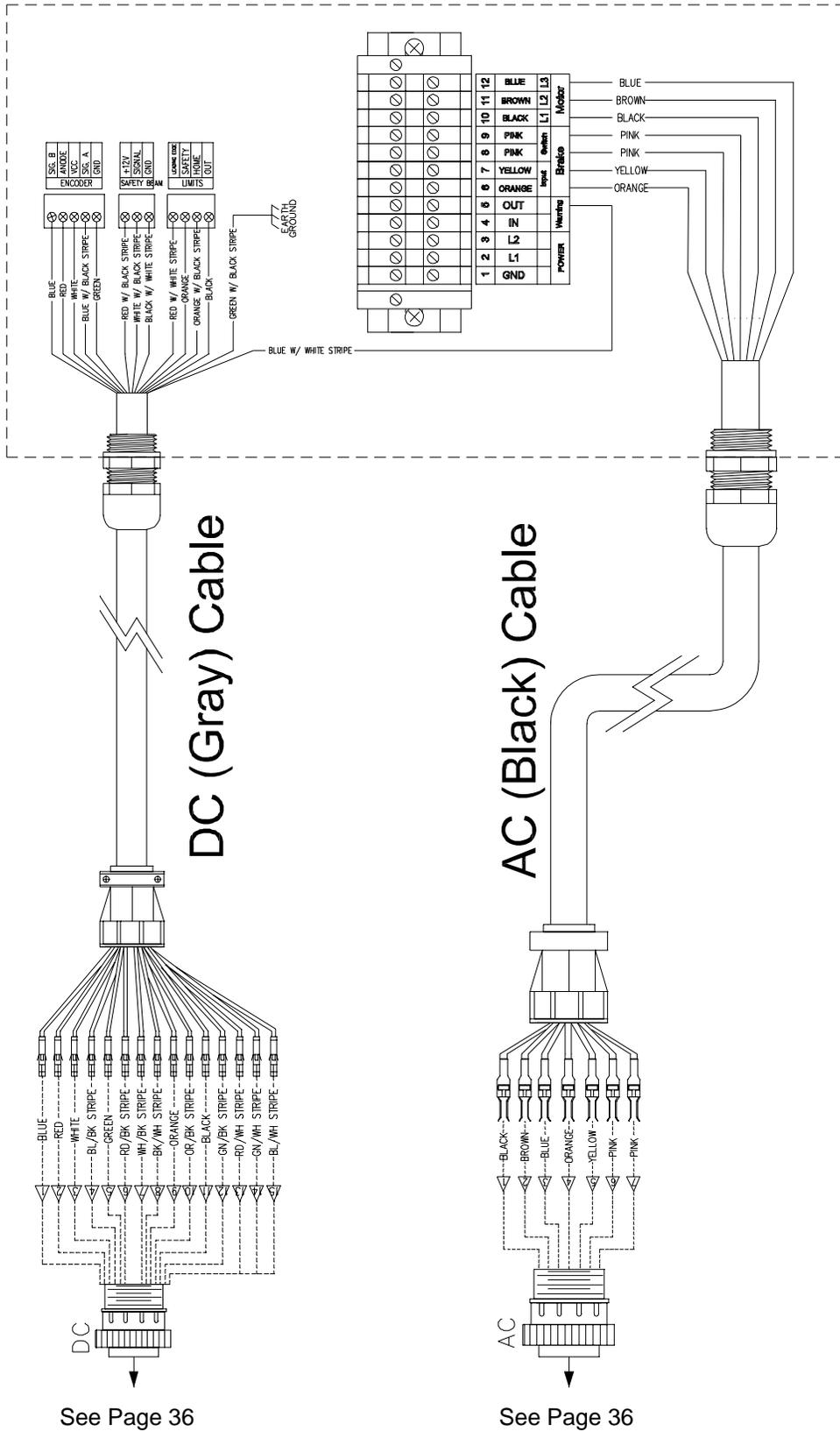
# 20 RollSeal Automatic Door Wiring Diagram

See Page 37

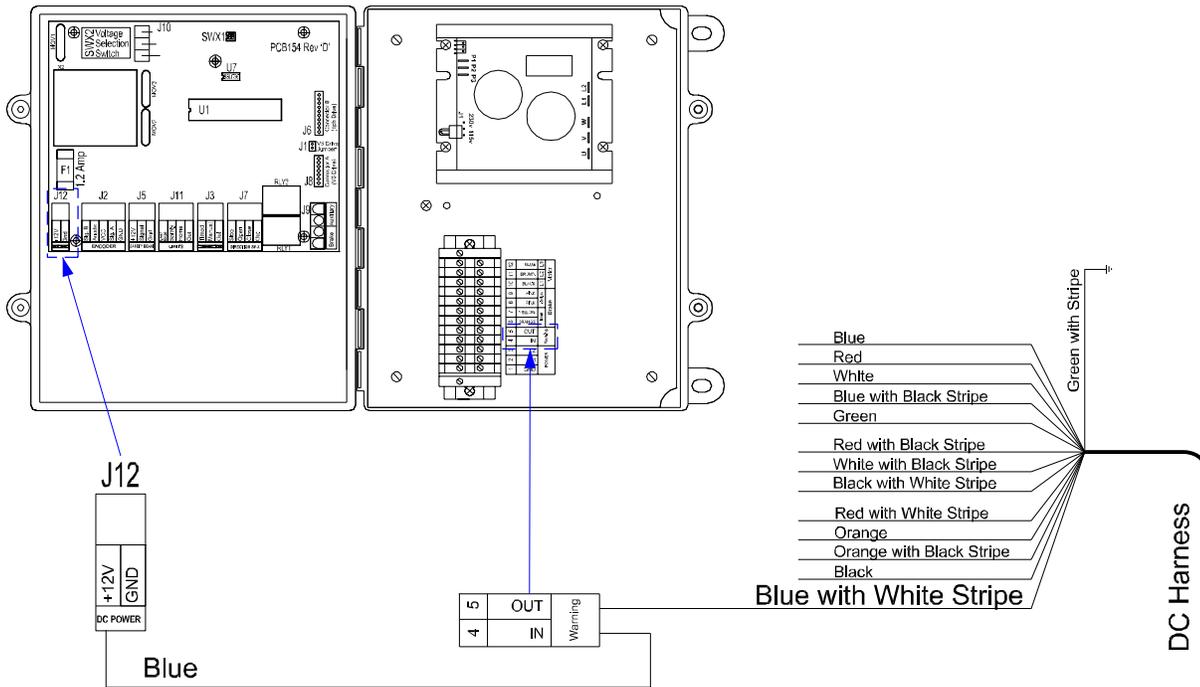
See Page 37



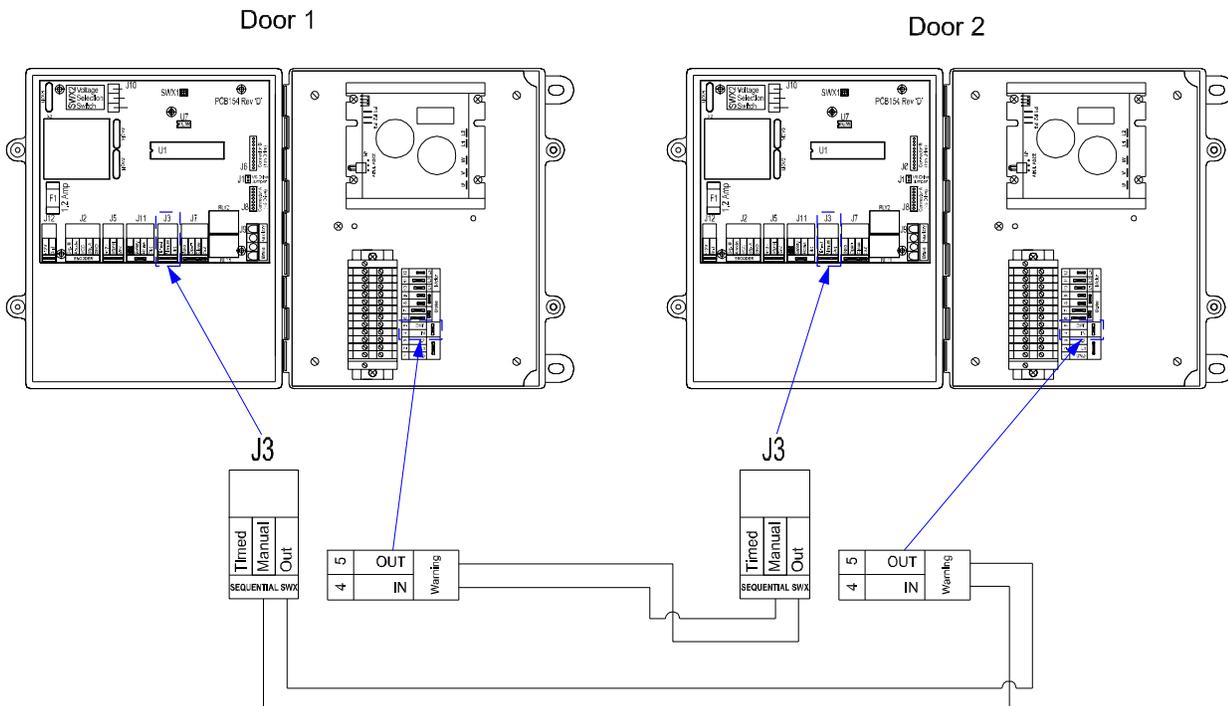
# 21 RollSeal Smart Controller Wiring Diagram



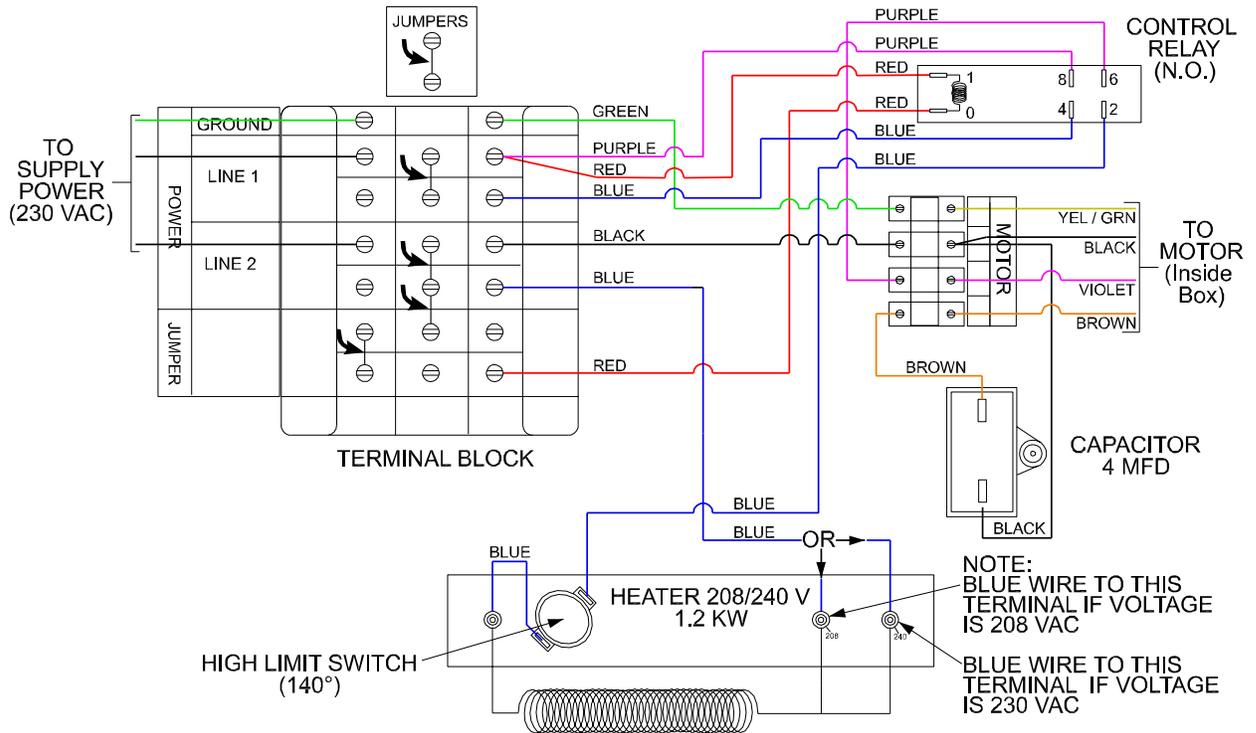
## 21.1 Warning Light Control Wiring



## 21.2 Interlocking Two Automatic Doors

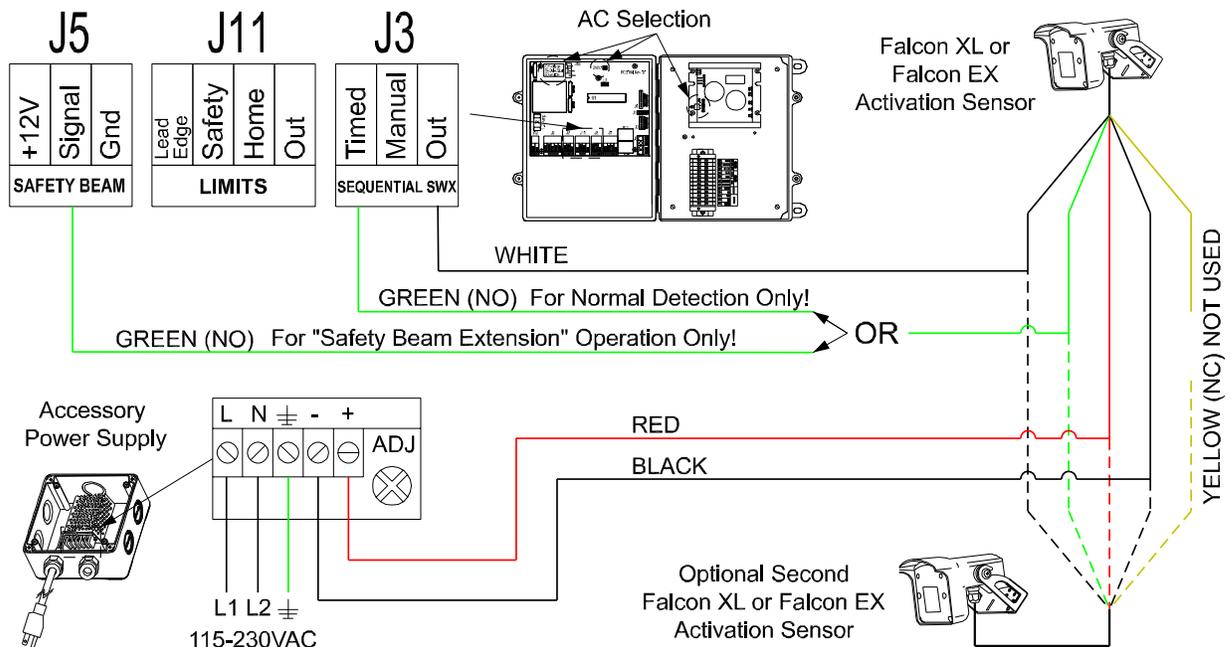


## 22 RollSeal CMS (Condensation Management System) Wiring Diagram

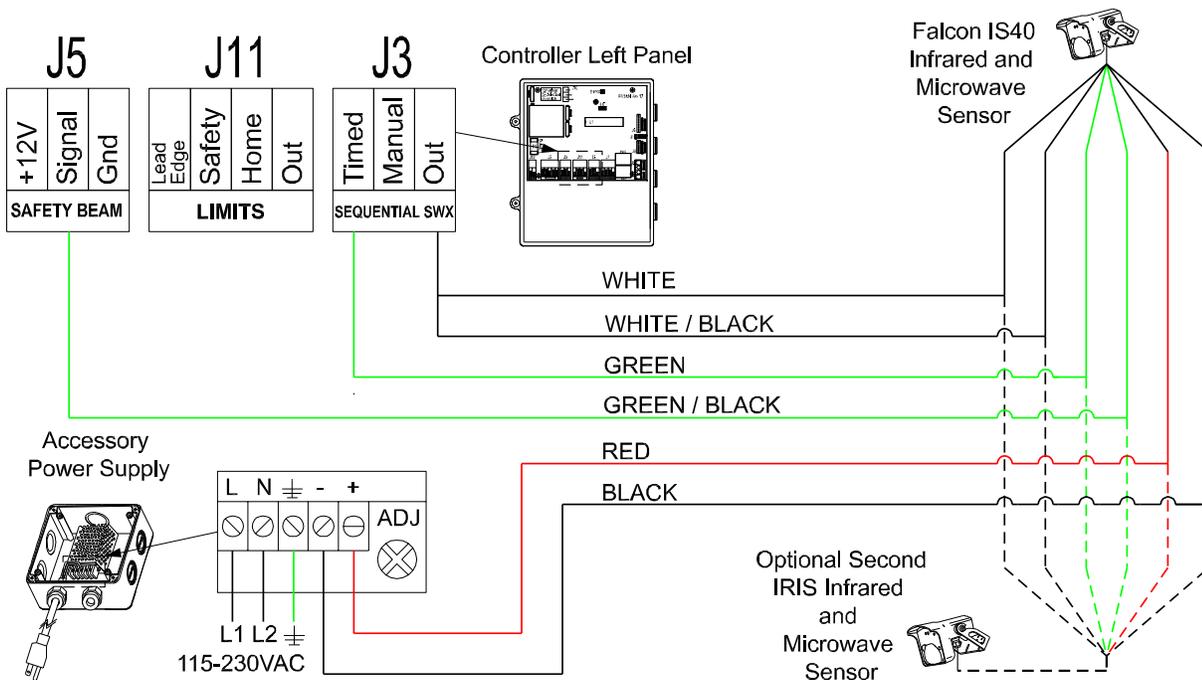


## 23 Optional Accessory Wiring

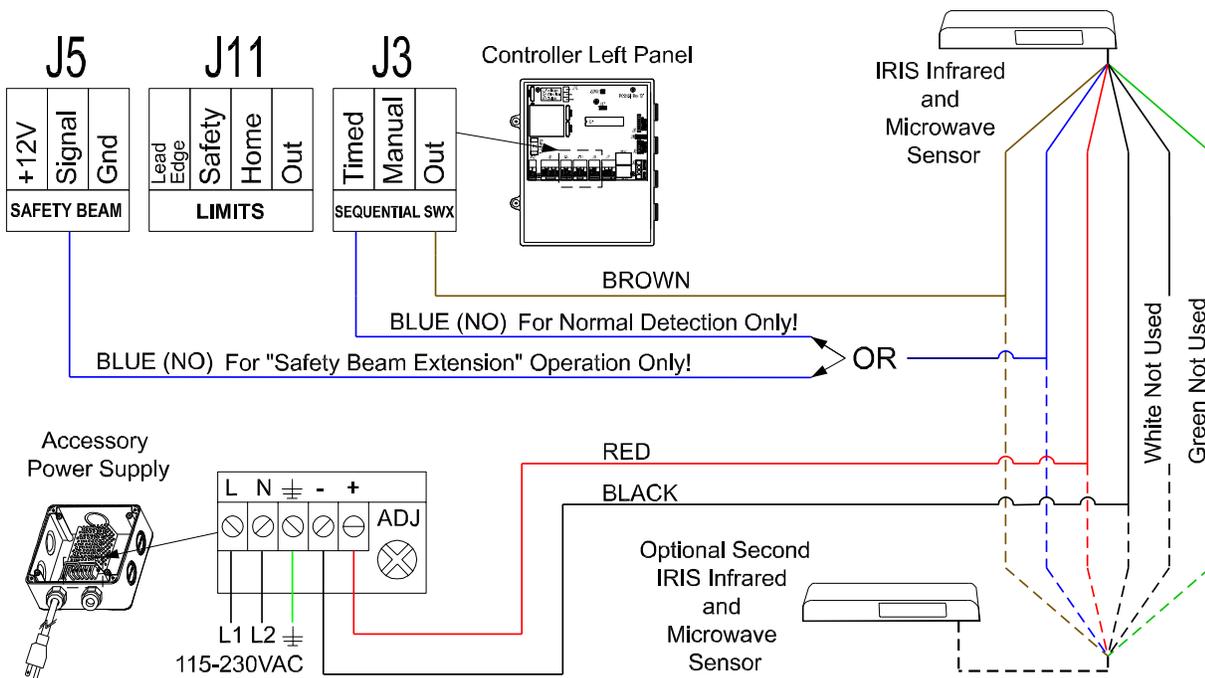
### 23.1 Falcon XL and EX Motion Sensors



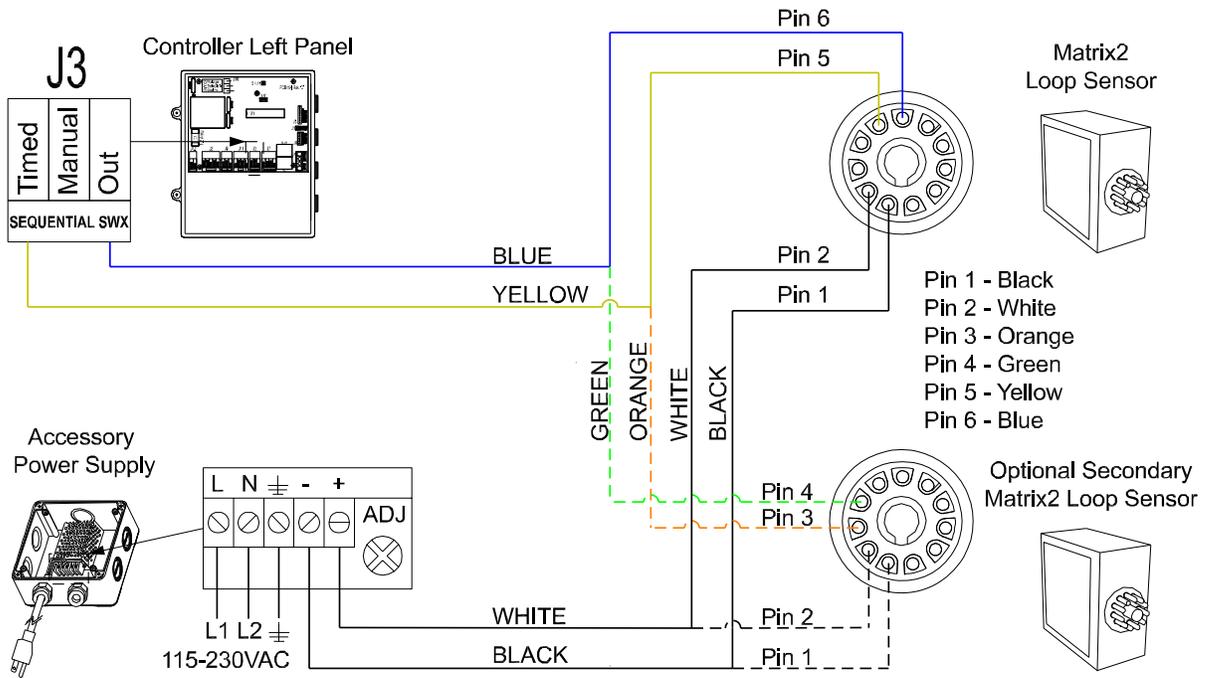
### 23.2 Falcon IS40 Infrared and Microwave Sensor



### 23.3 IRIS Infrared and Microwave Sensor



## 23.4 Matrix2 Loop Sensor



# 24 Switches and Remote Receiver

## 24.1 Controller and Brother Motor

