



AIRLIFT DOORS, INC.

# Owner's Manual

## Standard Control Box

[www.AirliftDoors.com](http://www.AirliftDoors.com)

1-888-368-4403





# WARNING

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 control box 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 control box. 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](http://www.airliftdoors.com)**

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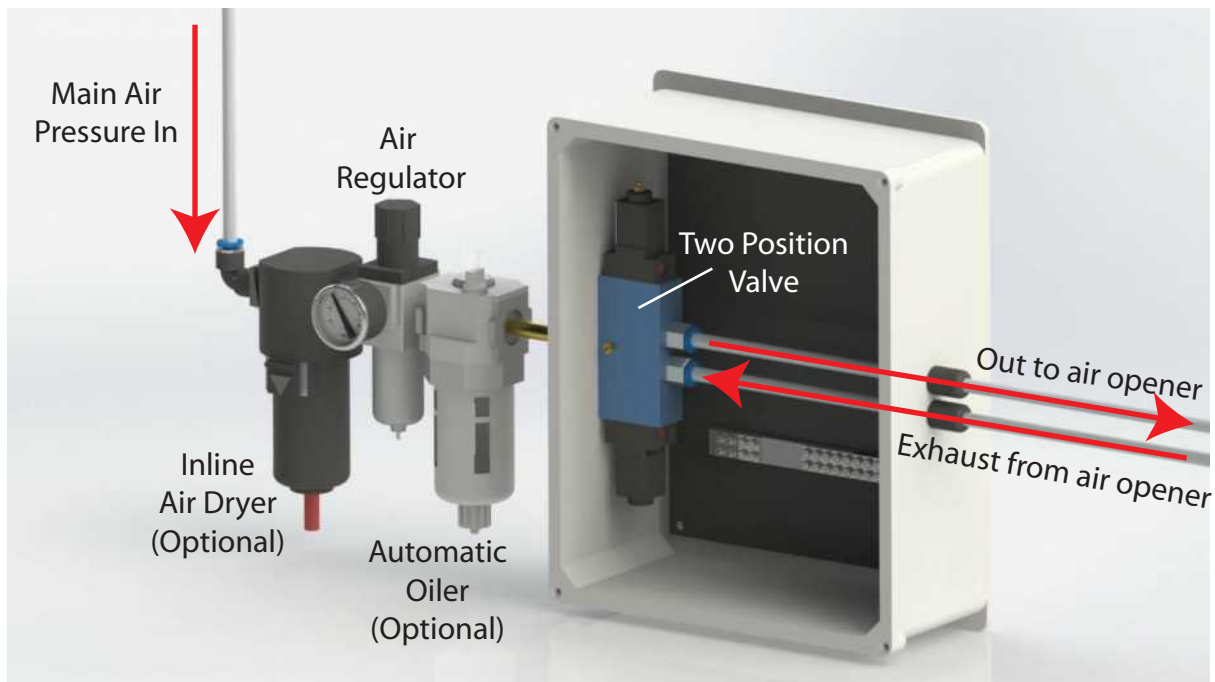
- I. Basic Operation of the Standard E-Open Control Box**
- II. Control Box Measurements and Accessory Layout**
- III. Standard Electrical and Plumbing Requirements**
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## I. NORMAL OPERATION

### A. BASIC OPERATION

Main air pressure is routed to an air regulator on the left side of the control box. Please note that there may be additional accessories besides the regulator depending on the application and customer preferences. (Inline air dryer, automatic oiler). The air regulator is used to adjust the incoming air pressure down to an operating range of 60-80psi.

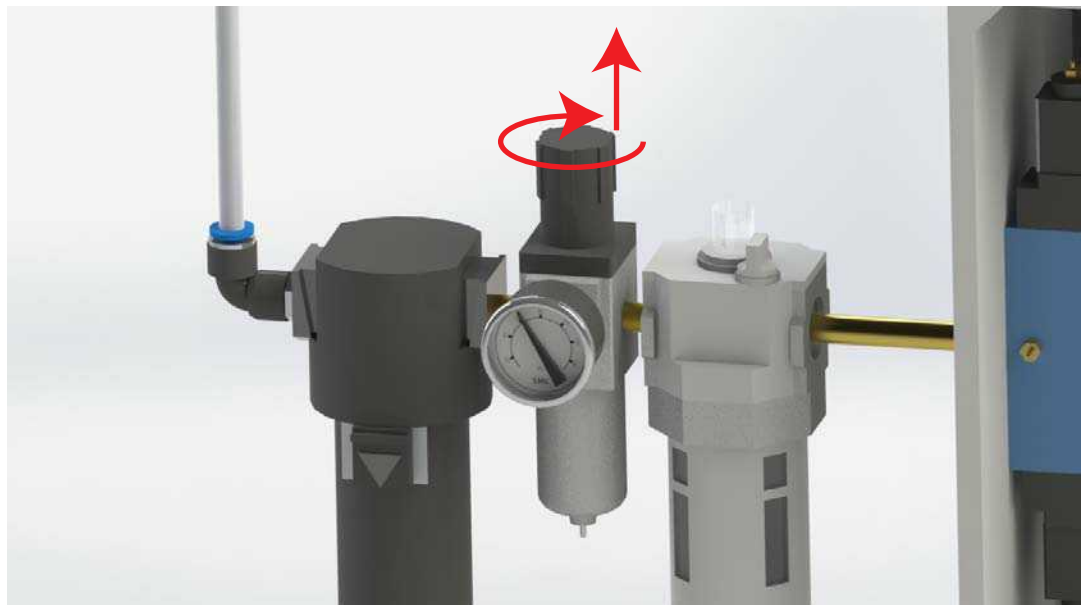
Regulated air pressure is routed to a two position pneumatic valve then routed out to the air opener via one of two outlet air lines. Two electric solenoids on the valve are used to electronically switch the outlet air pressure between the two air lines. Being the valve is a two position valve, air pressure is always present on one of the two air lines. The non-pressurized air line allows exhaust air to flow back through the valve and out through an exhaust port on the left side of the control.



### B. REGULATOR ADJUSTMENT

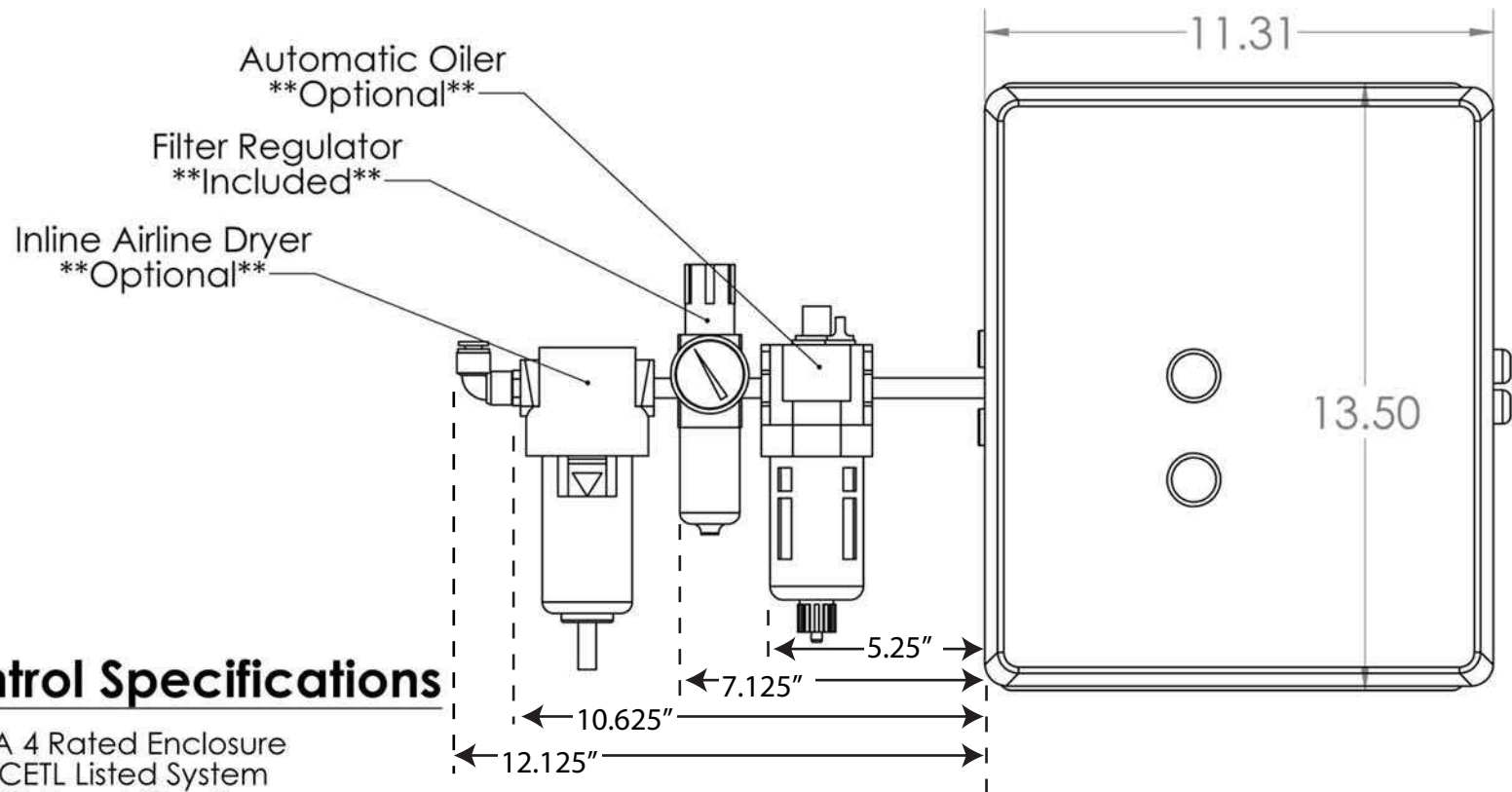
To increase air pressure, lift up on the regulator adjustment knob and turn the knob clockwise until the desired air pressure is reached.

To decrease air pressure, lift up on the regulator adjustment knob and turn the knob counter-clockwise until the desired air pressure is reached.





# Airlift Doors O13R1600 Control Box and Accesories



## Control Specifications

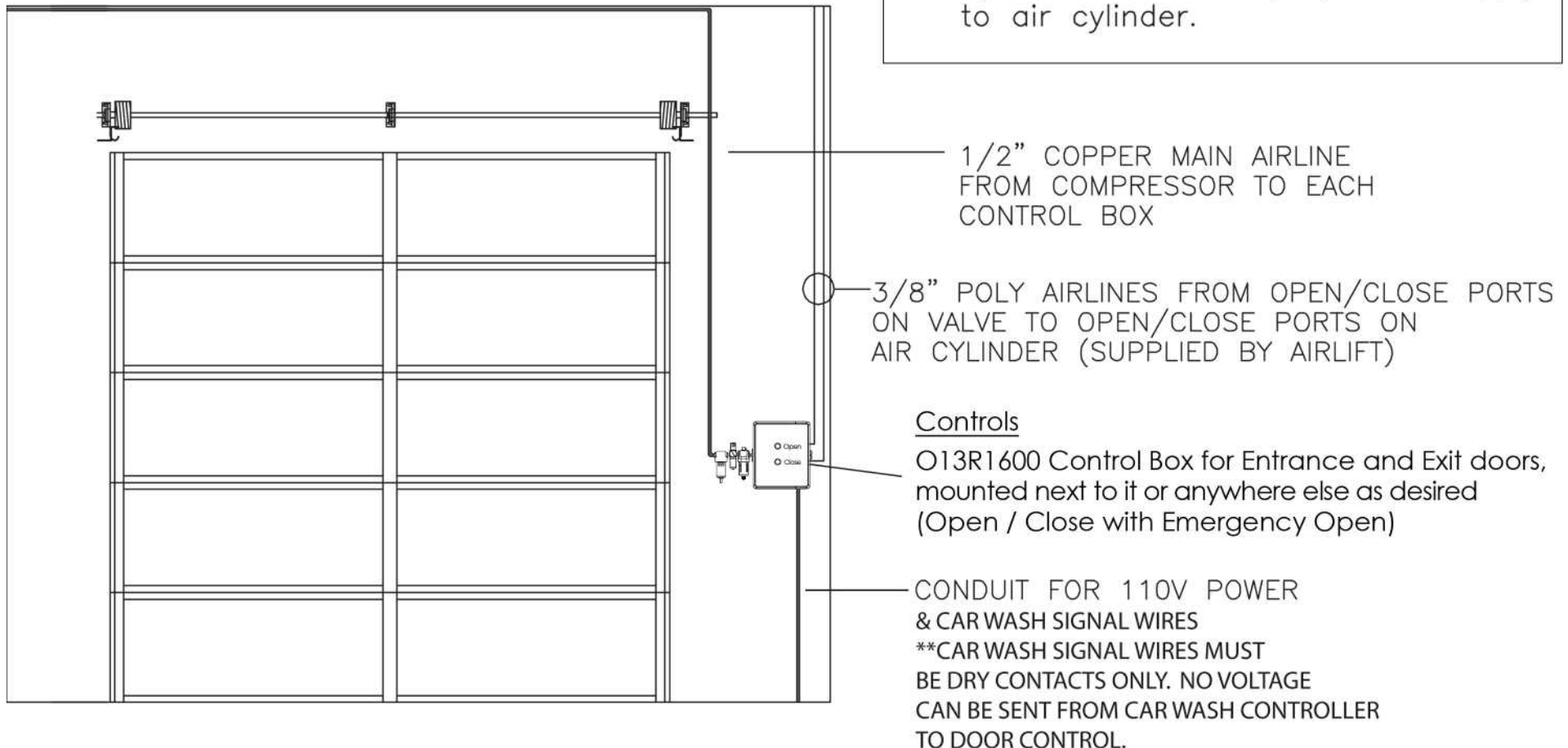
- NEMA 4 Rated Enclosure
- ETL / CETL Listed System
- 24VAC, Fused Circuitry
- Standard Open / Close / E-Open Buttons
- Ten Place Terminal Strip for Easy Wiring
- Pre-Wired Photo Eye Base
- Automatic Closing Timer Not Included
- Optional Airline Dryer, Automatic Oiler

| SIZE     | DWG. NO.                              | REV          |
|----------|---------------------------------------|--------------|
| <b>A</b> | Airlift Doors O13R1600<br>Control Box |              |
|          |                                       | SHEET 1 OF 1 |

# Airlift Doors O13R1600 Control Box Installations Requirements

## Control Box Requirements

- 110v power supply
- 1/2" main airline terminated at 1/2" ball valve for air shutoff
- 3/8" airlines for open/close supply to air cylinder.



# Automatic Oiler

## Fill and Adjustment Instructions

### **\*\*IMPORTANT\*\***

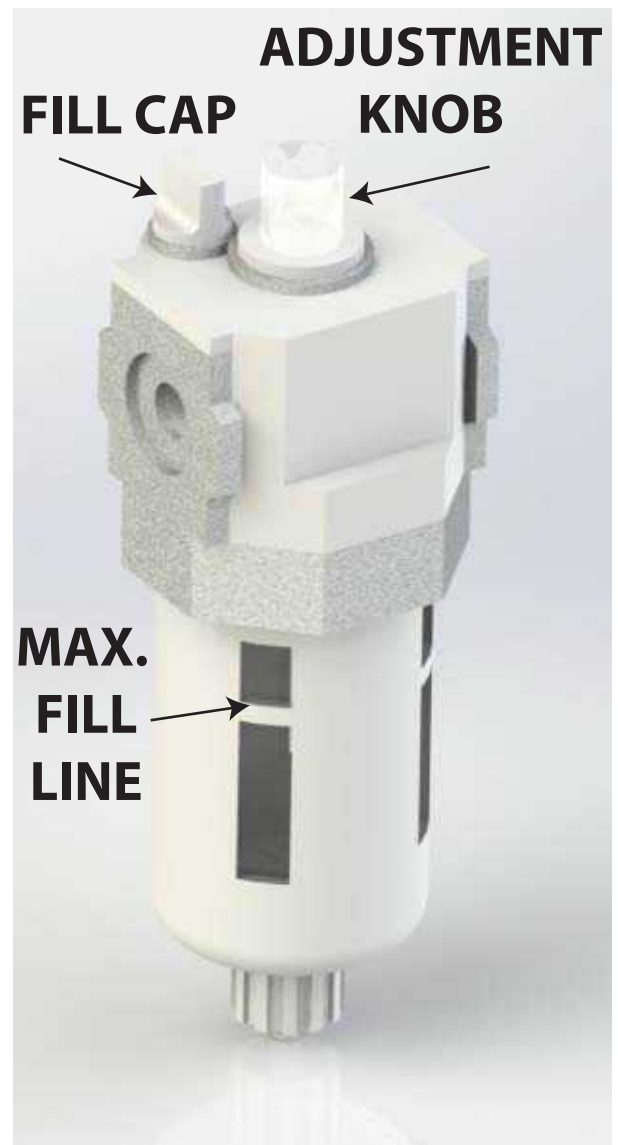
Before filling the oiler or performing any maintenance on the unit, be sure to turn the air pressure on the regulator to zero psi and drain all residual air from the system by pressing open and close on the control box.

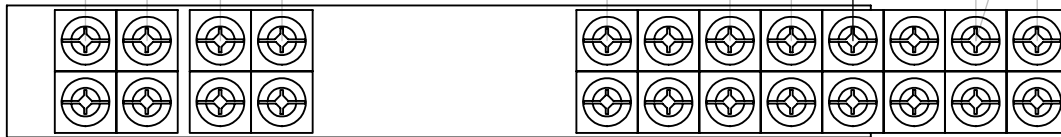
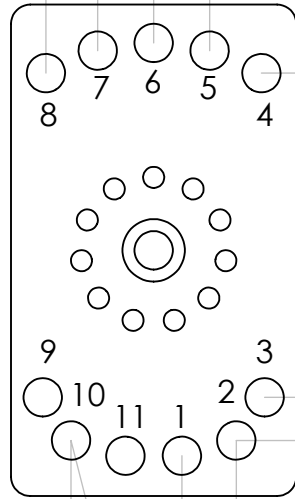
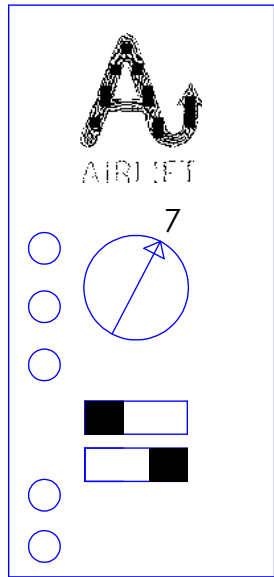
### FILLING THE OILER WITH OIL.

- Unscrew the fill cap from the top of the oiler.
- Pour Airlift Cylinder Lubricant, or other non-detergent 10W oil, into the fill hole until the oil level reaches the max fill line as shown to the right.

### ADJUSTING THE OILER

- Turn the adjustment knob completely clockwise. (This is the OFF position.)
- Turn the adjustment knob counter-clockwise 1/4 turn. This will allow approximately one drop of oil per cycle.





RED  
TRANSMITTER  
BLACK  
YELLOW  
RECEIVER  
SHIELD

COMMON  
COMMON  
OPEN  
OPEN  
CLOSE  
CLOSE  
24 VAC  
24 VAC

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MINNEAPOLIS, MN 55430  
612-529-1000

WIRING DIAGRAM FOR 12X10  
BOX, PHOTO EYE BASE, RELAY  
& VALVE.  
AIRLIFT P/N#: O13R1600

5

4

3

2

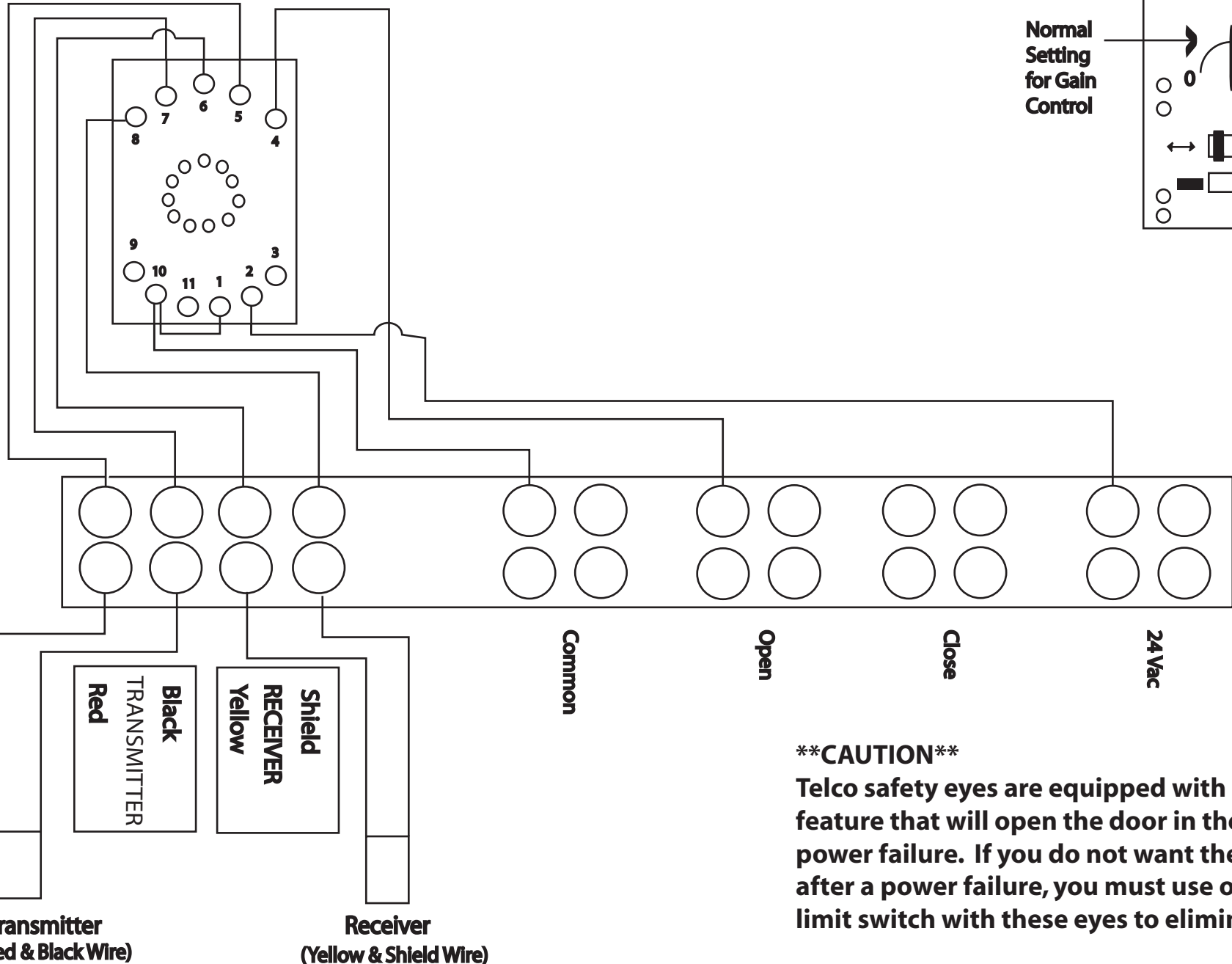
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# Wiring Diagram for Telco Eyes in a Standard Airlift Control Box

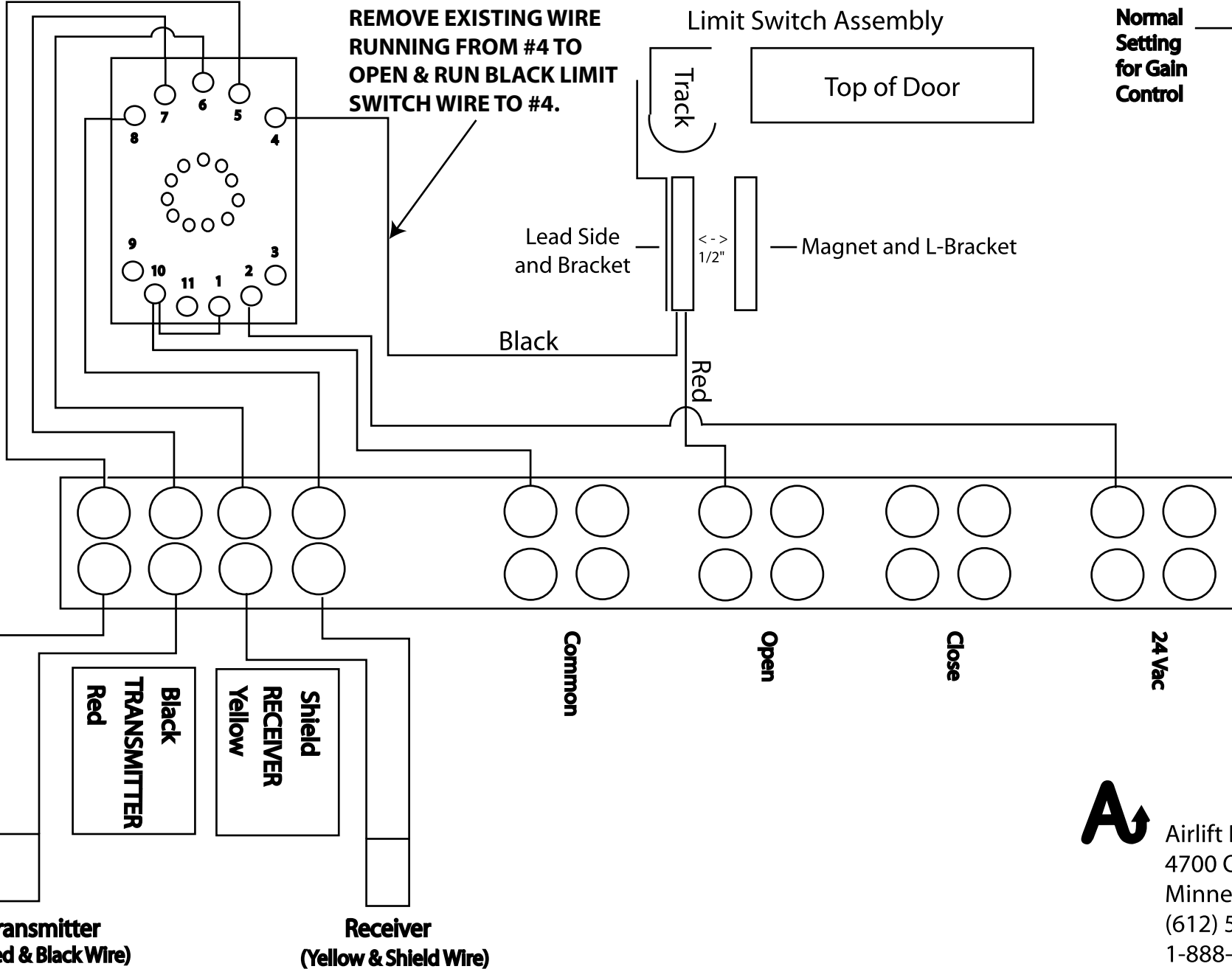
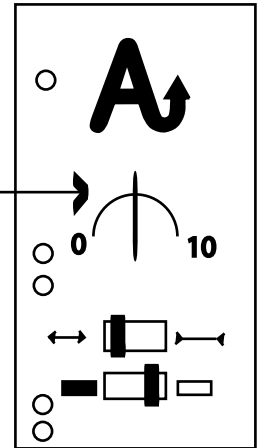


**\*\*CAUTION\*\***

Telco safety eyes are equipped with a Safety Up feature that will open the door in the event of a power failure. If you do not want the door to open after a power failure, you must use our magnetic limit switch with these eyes to eliminate this feature.

# Wiring Diagram for Telco Eyes with Limit Switch in a Standard Airlift Control Box

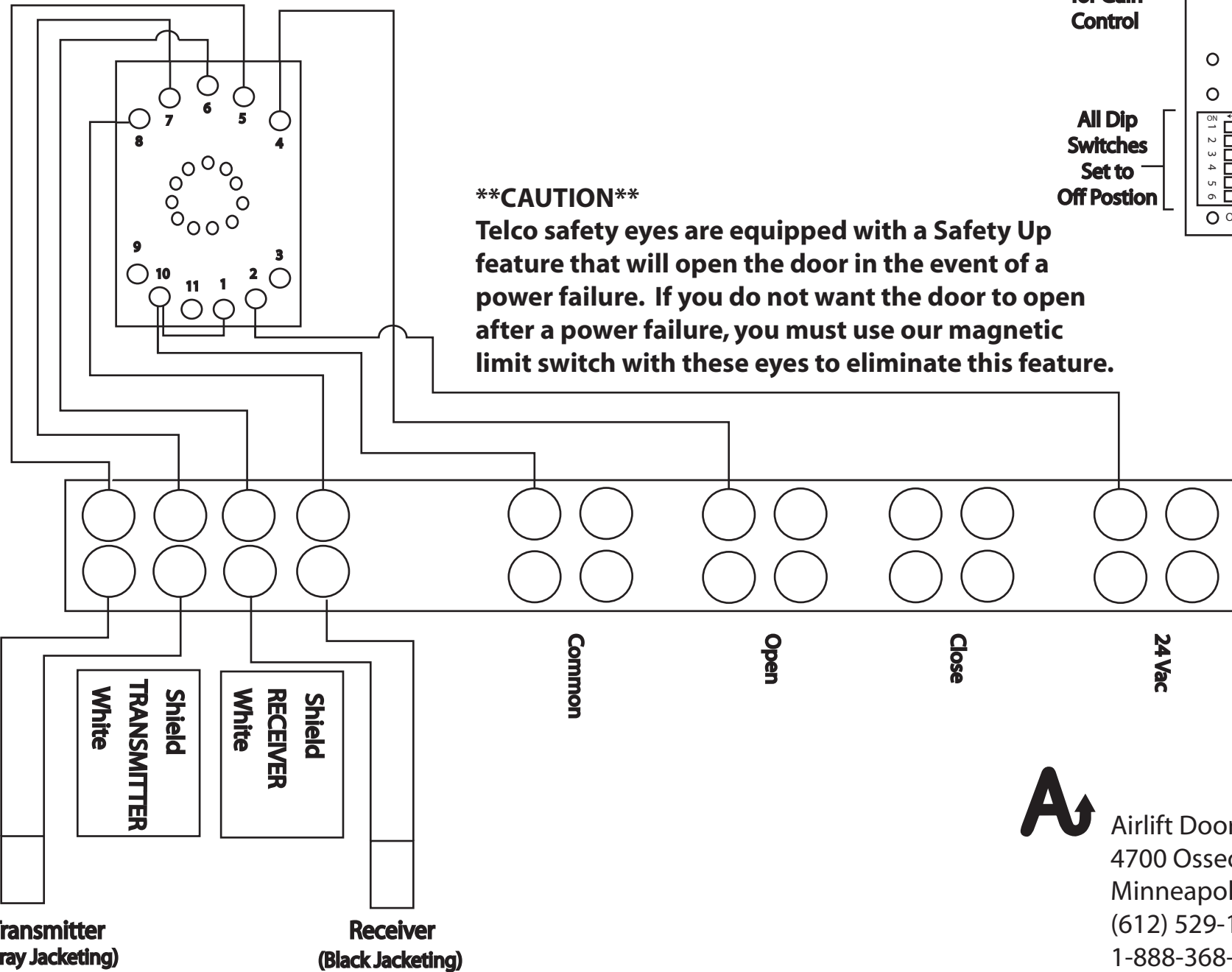
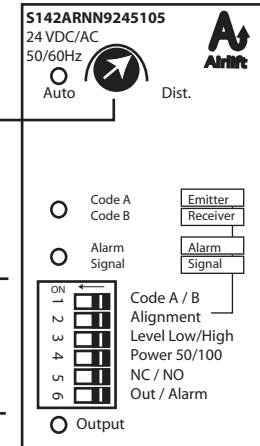
**Telco Amplifier**



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# Wiring Diagram for Carlo Gavazzi Eyes in a Standard Airlift Control Box

## Carlo Gavazzi Amplifier

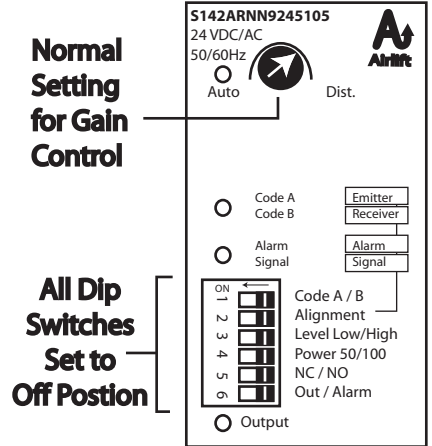


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# Wiring Diagram for Carlo Gavazzi Eyes with Limit Switch in a Standard Airlift Control Box



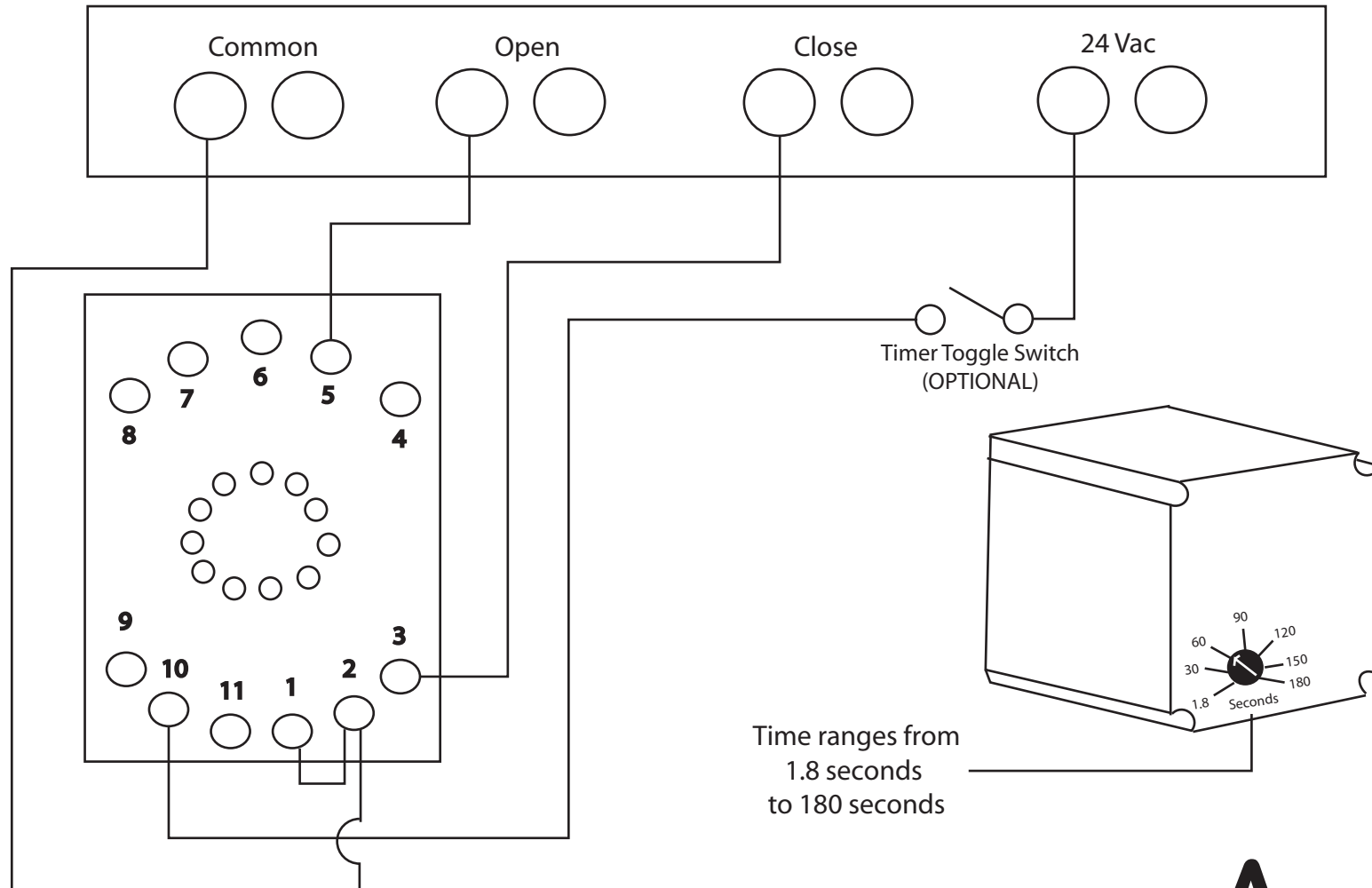
**Carlo Gavazzi Amplifier**



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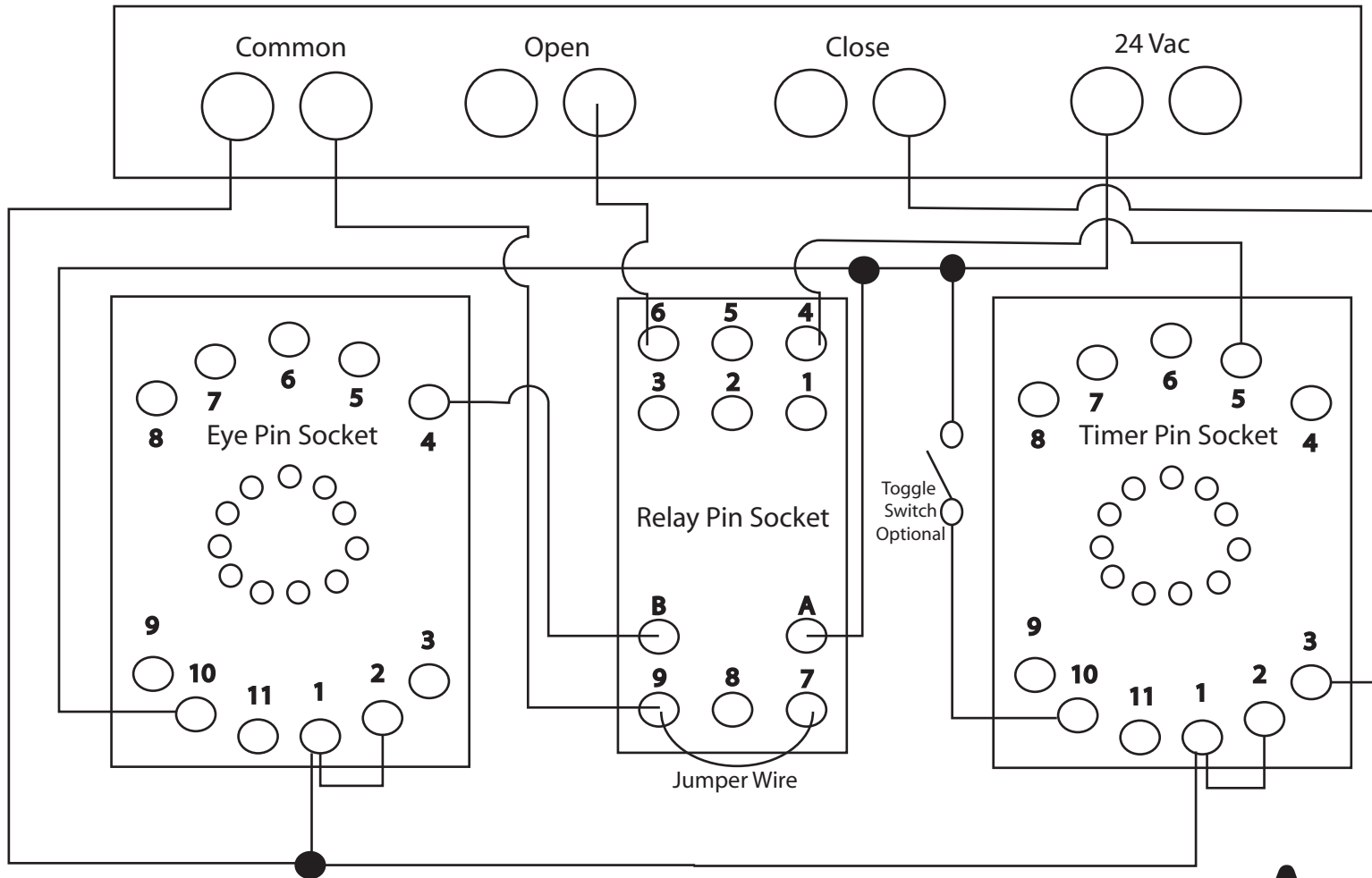
# Macromatic Timer Wiring Diagram

## Standard Airlift Control Box



# Wiring Diagram for Safety Eyes to Start Timer

## Standard Airlift Control Box

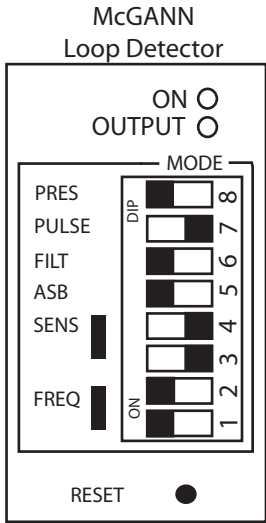
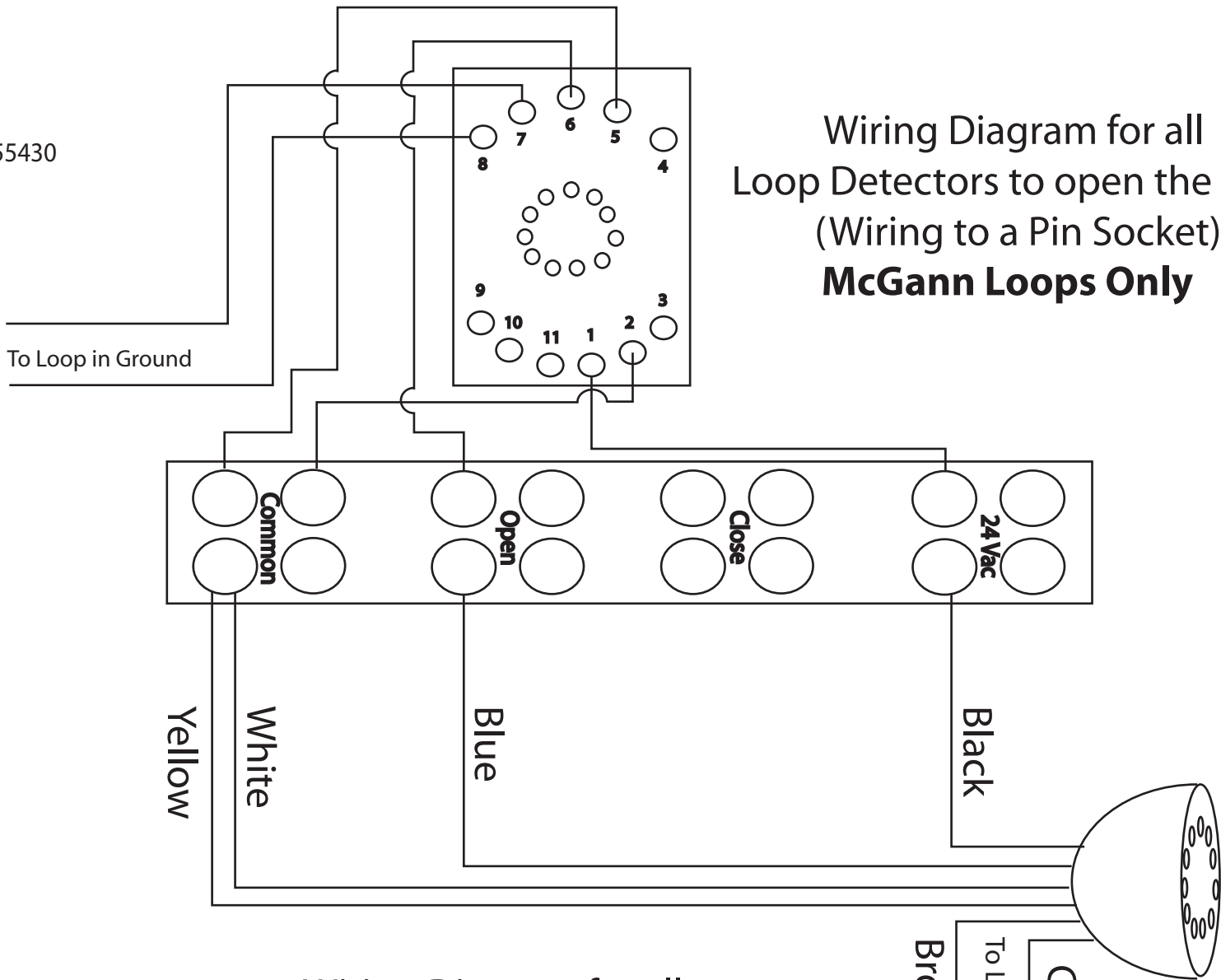


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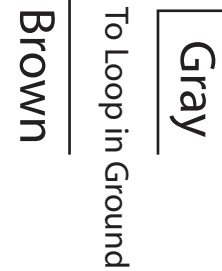


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Wiring Diagram for all  
 Loop Detectors to open the door  
 (Wiring to a Pin Socket)  
**McGann Loops Only**



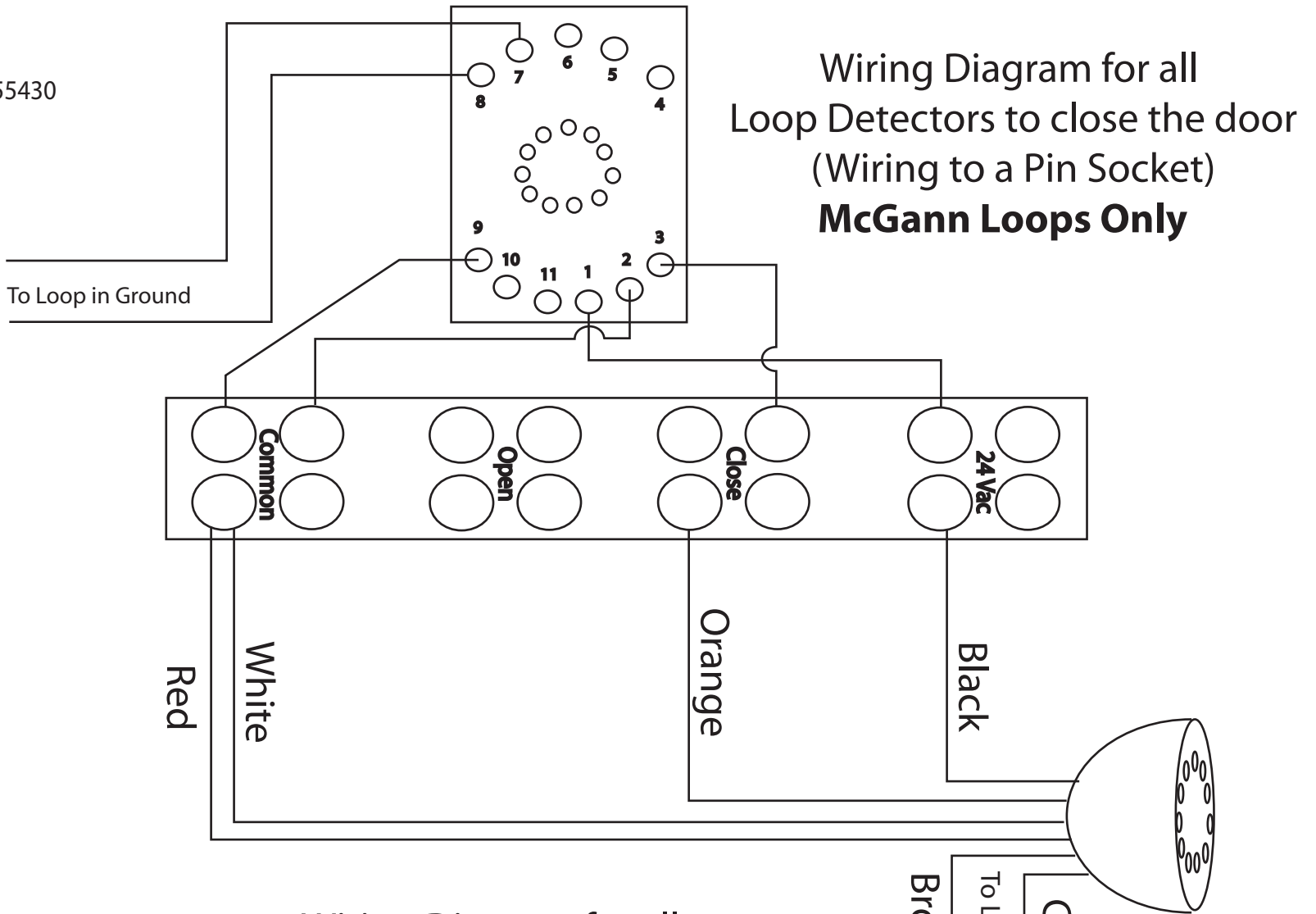
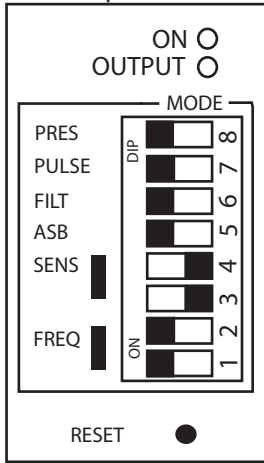
Wiring Diagram for all  
 Loop Detectors to open the door  
 (Wiring from a Wiring Harness)  
**McGann Loops Only**





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McGANN  
 Loop Detector



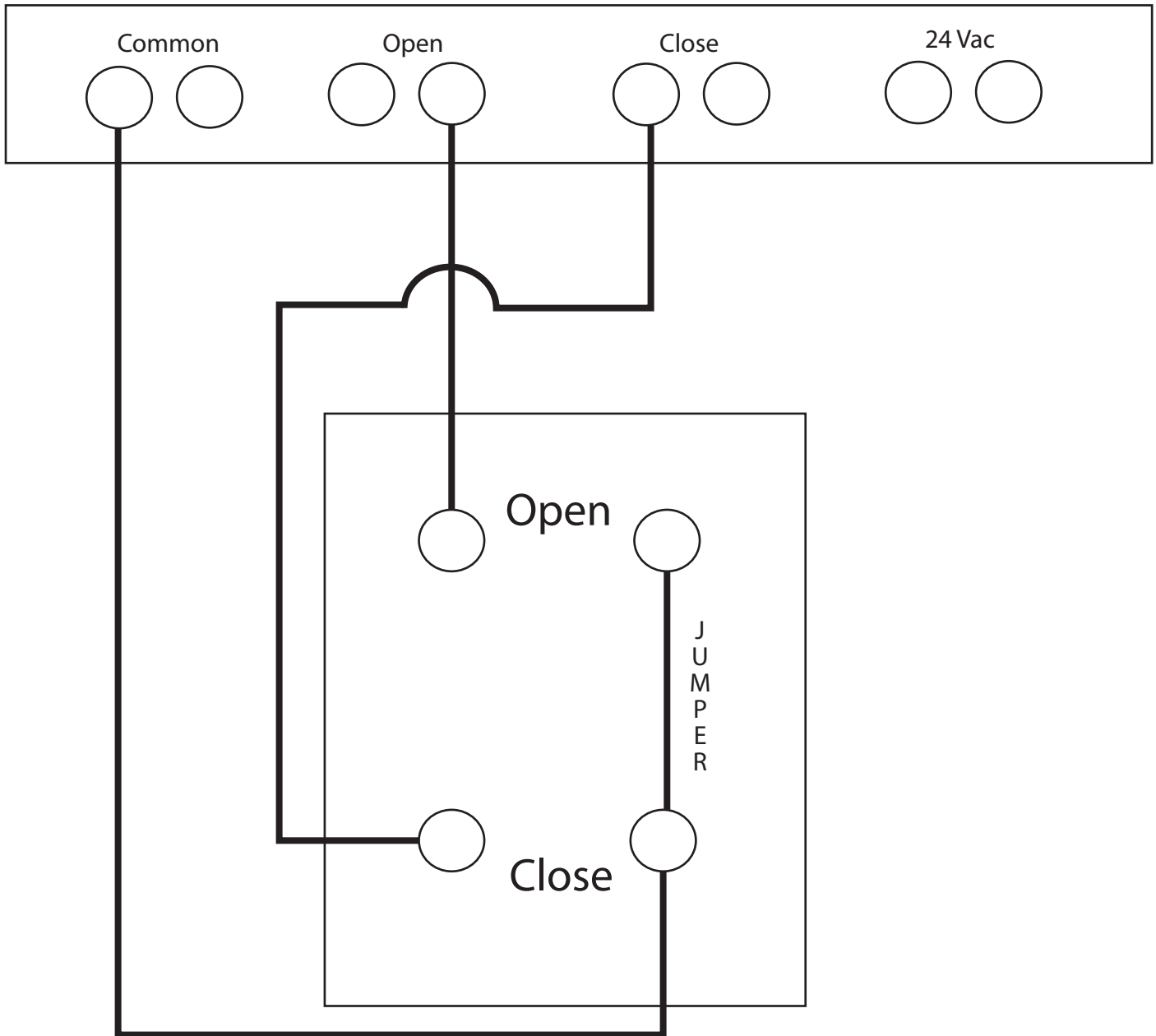
Wiring Diagram for all  
 Loop Detectors to close the door  
 (Wiring to a Pin Socket)  
**McGann Loops Only**

Wiring Diagram for all  
 Loop Detectors to close the door  
 (Wiring from a Wiring Harness)  
**McGann Loops Only**



# NEMA 4 Two-Button Wiring Diagram

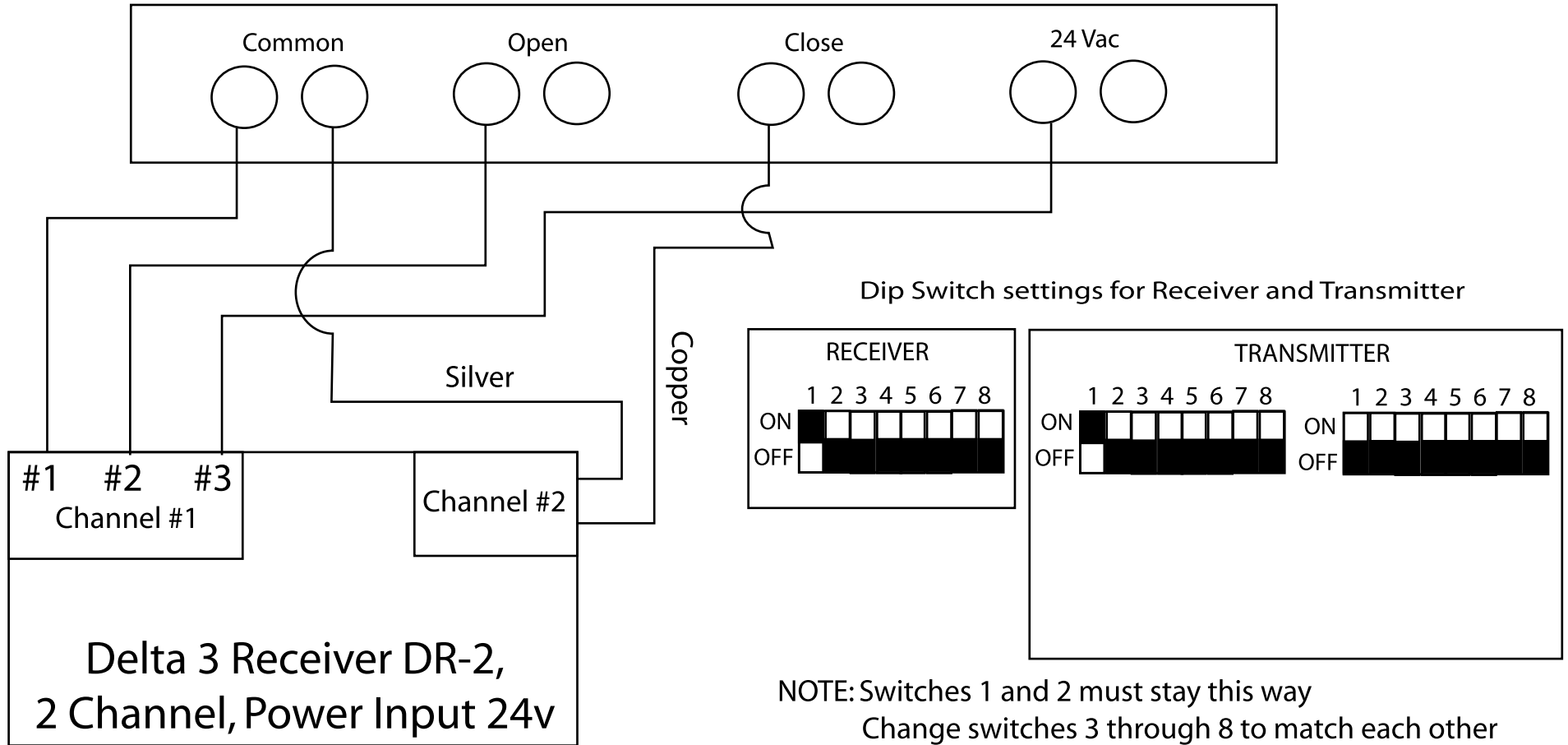
## Standard Airlift Control Box



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# Wiring Diagram for Remote

## Standard Airlift Control Box

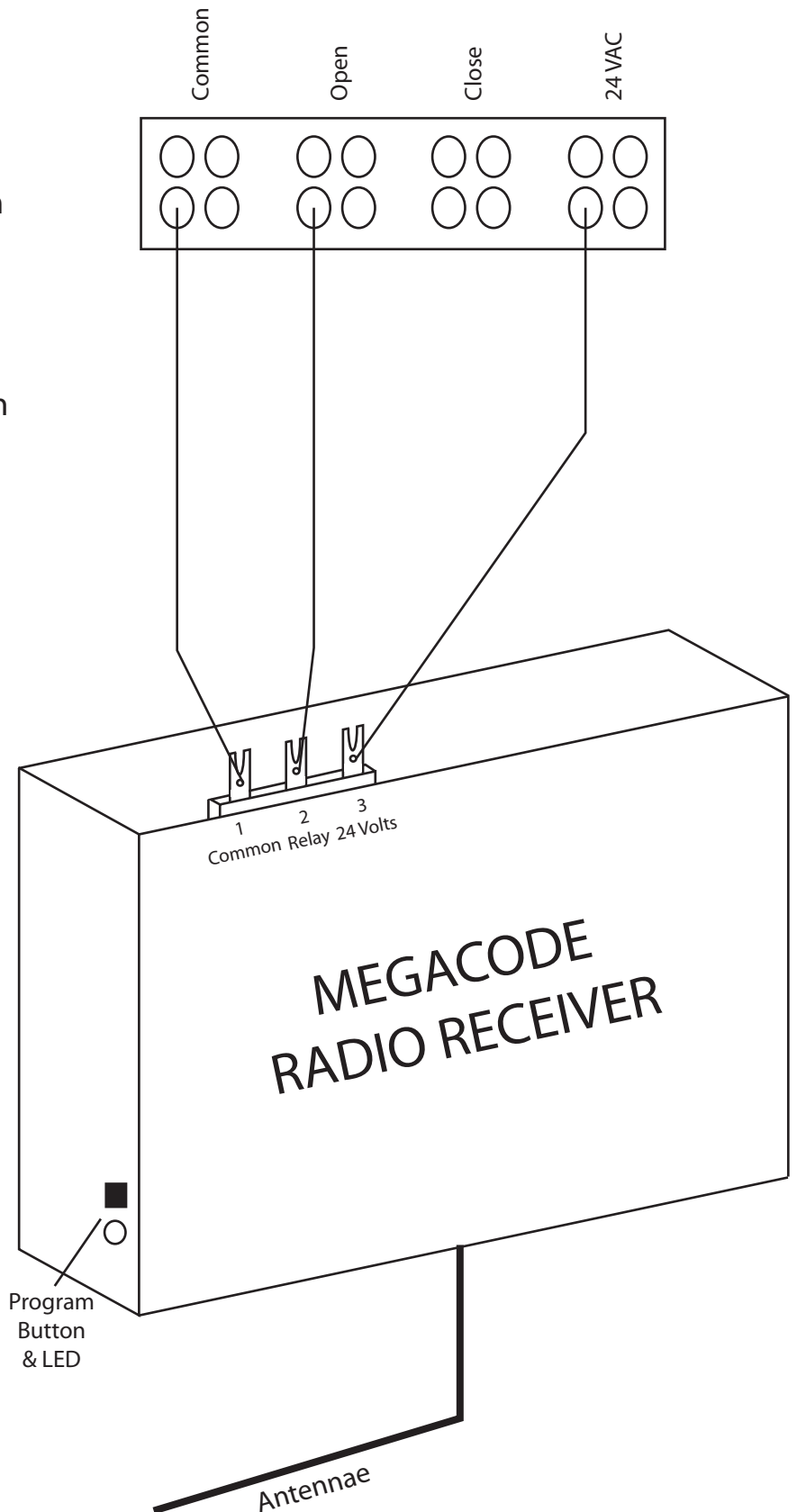


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# Megacode Model: MDR Radio Receiver Wiring Instructions

1. Using the screws provided run 3 wires from the terminal strip in the control box and attach them to the radio receiver as shown.
2. The receiver does not need to be "mounted" inside the control box. Instead, wire the receiver as shown and set the receiver inside the control box and leave it loose. Make sure the cover for the box will close and the receiver will not fall out when the cover is opened.
3. Mount the digital keypad in the desired location.
4. To program the keypad:
  - Enter a 1-6 digit code
  - Press the program button on the radio receiver within 20 seconds.
  - The LED on the receiver will light for 5 seconds.
  - Press the Start/Stop button on the keypad within 5 sec.

\*\*Please note programming instructions are included with each keypad.



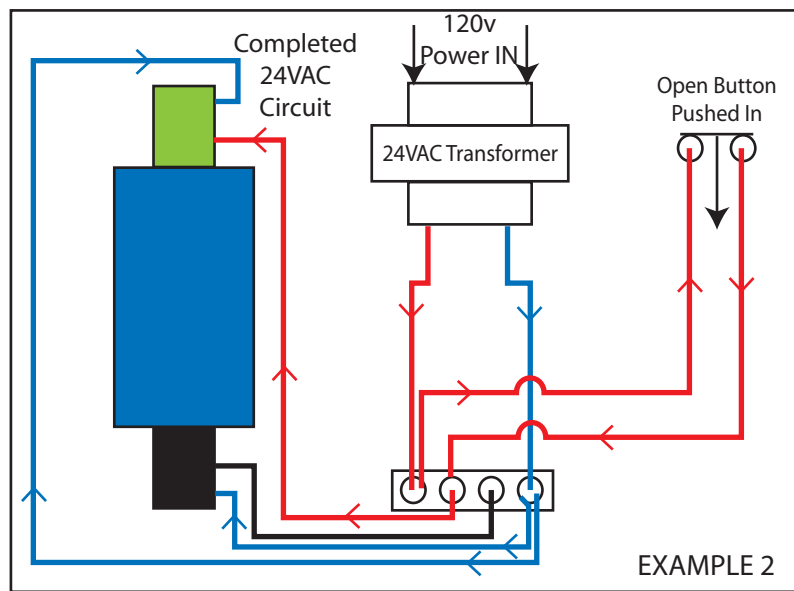
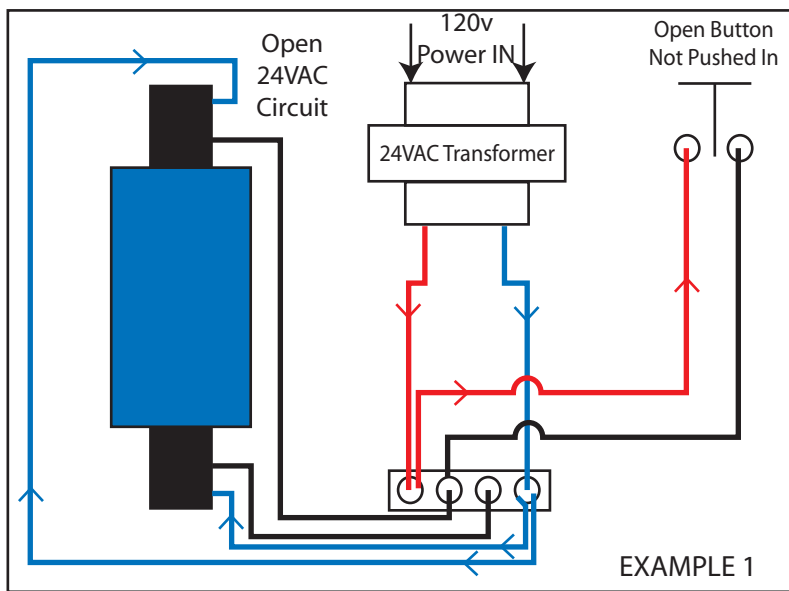
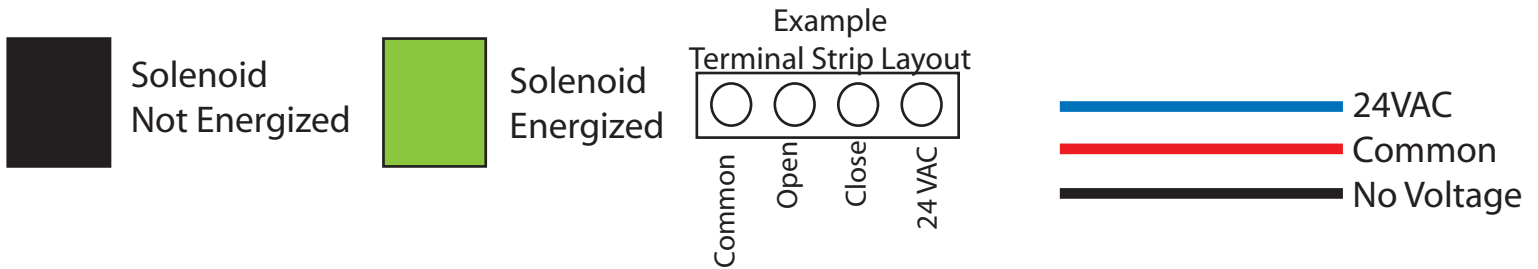
### III. Troubleshooting

#### A. Basic Control Knowledge

- Internal circuitry is powered by the 24VAC transformer.
- Accessory devices may be wired into the control assuming they are a 24VAC device
- 24VAC power is obtained by wiring accessory devices to the 24VAC and COM terminals

#### B. 24VAC Automatic Two Position Valve

- Valve operation is obtained by routing 24VAC power to either the open (upper) or close (lower) valve solenoid.
- 24VAC power flow during normal operation



- All devices that will open and close the door (including car wash equipment) MUST provide a dry, momentary contact.
- Constant (non-momentary) contacts will hold the solenoid in that position. (ie. A constant open signal will be the same as holding in the Open button.)

### III. Troubleshooting

| Description of Problem   | Magnaglide  | Type of Air Opener<br>Powerglide  | Std. Air Opener  |
|--|---|---|--|
| Constant air leaking from flow control on outside of control box while door is in the OPEN position.   | Open control box and remove the lower of the two 3/8" airlines leading from the valve to the air opener. If air is leaking out of the airline that was removed, see Magnaglide owner's manual. If air does not leak from the removed airline, replace the two position valve. | Open control box and remove the lower of the two 3/8" airlines leading from the valve to the air opener. If air is leaking out of the airline that was removed, see Powerglide owner's manual. If air does not leak from the removed airline, replace the two position valve. | Replace two position valve.  |
| Constant air leaking from flow control on outside of control box while door is in the CLOSED position. | Open control box and remove the upper of the two 3/8" airlines leading from the valve to the air opener. If air is leaking out of the airline that was removed, see Magnaglide owner's manual. If air does not leak from the removed airline, replace the two position valve. | Open control box and remove the upper of the two 3/8" airlines leading from the valve to the air opener. If air is leaking out of the airline that was removed, see Powerglide owner's manual. If air does not leak from the removed airline, replace the two position valve. | Replace two position valve.  |
| Door opens too slowly  | Loosen the LOWER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. You can also increase the air pressure on the air regulator, but don't exceed 90 psi.              | Loosen the LOWER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. You can also increase the air pressure on the air regulator, but don't exceed 90 psi.              | Loosen the LOWER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. If the opener slows down too much during the last 2 ft of travel, loosen the metering screw on the bottom cap of the cylinder furthest from the wall. |

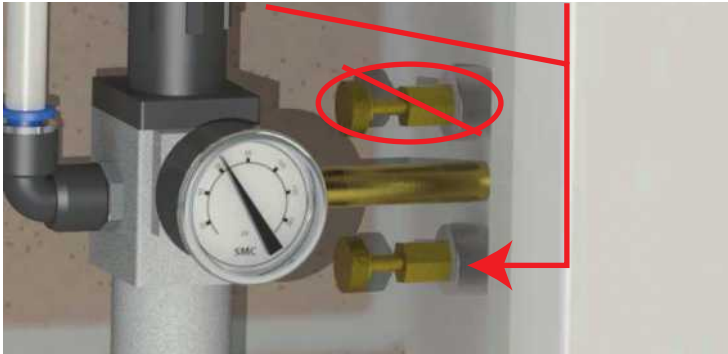
### III. Troubleshooting

| Description of Problem | Magnaglide   | Type of Air Opener<br>Powerglide   | Std. Air Opener   |
|------------------------|--|--|---|
| Door closes too slowly | Loosen the UPPER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. You can also increase the air pressure on the air regulator, but don't exceed 90 psi. | Loosen the UPPER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. You can also increase the air pressure on the air regulator, but don't exceed 90 psi. | Loosen the UPPER flow control on the outer, left side of the control box. This will allow exhaust air to exit the system faster and will increase the speed of the opener. If the opener slows down too much during the last 2 ft of travel, loosen the metering screw on the bottom cap of the cylinder closest to the wall. |

**\*\*Recommended closing speed is no more than 12" per second.**

To open the door faster, loosen the bottom flow control.

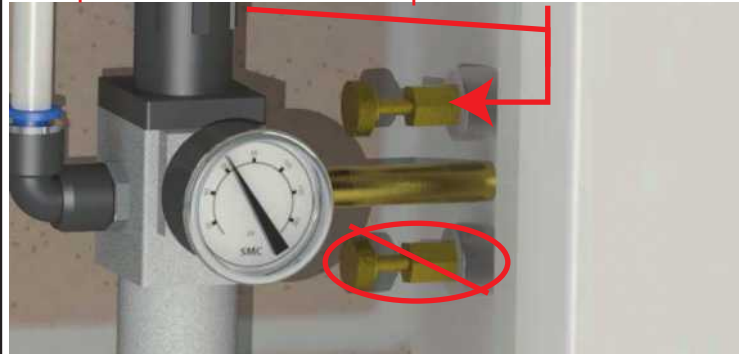
To open the door slower, tighten the bottom flow control.



Opening Speed Adjustments

To close the door faster, loosen the top flow control.

To close the door slower, tighten the top flow control.

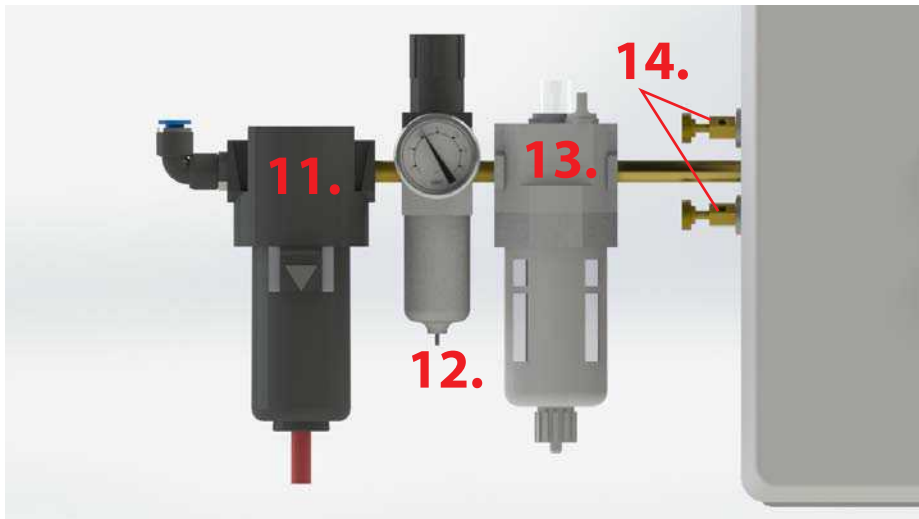
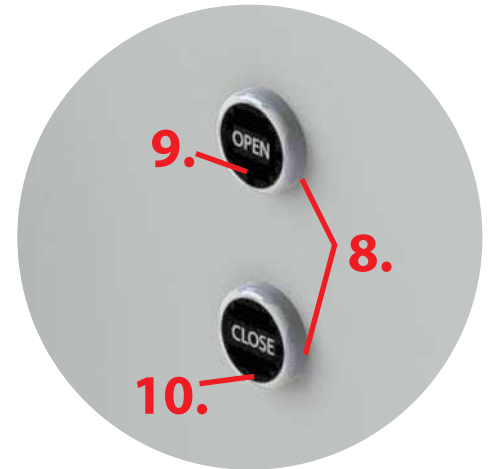
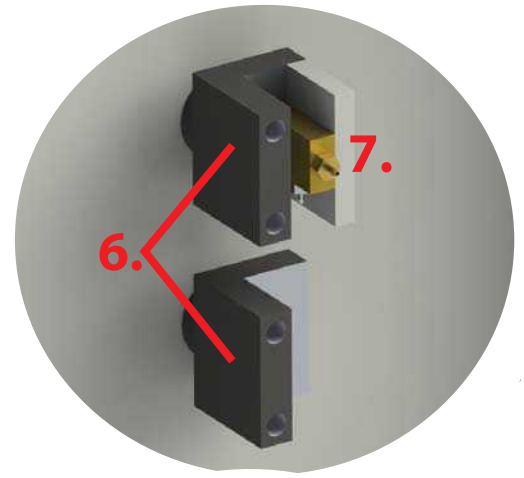
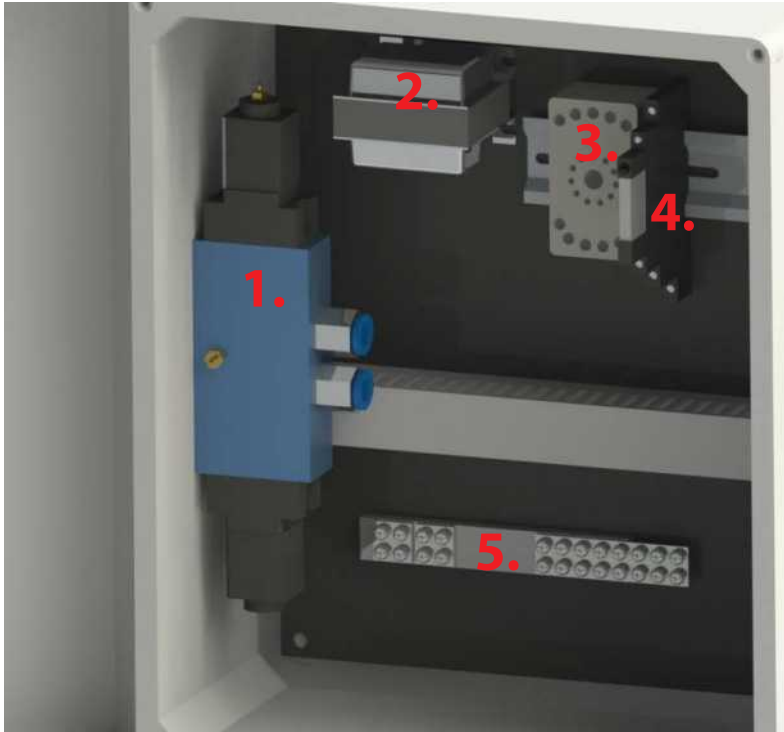


Closing Speed Adjustments

### III. Troubleshooting

| Description of Problem                 | Type of Air Opener   |            |                 |
|--|--|------------|-----------------|
|  | Magnaglide   | Powerglide | Std. Air Opener |
| Door is stuck open and will not close. | <ul style="list-style-type: none"> <li>- Check the safety eyes on the door.               <ul style="list-style-type: none"> <li>- Make sure the eyes aren't blocked or covered by dirt, mud, chemicals, etc.</li> </ul> </li> <li>- Check the safety eye amplifier located in the control box. The amplifier should have 3 LED lights lit up when not blocked and operating normally. If there aren't 3 lights, the safety eyes are currently holding the door open.</li> <li>- If using Non-Airlift safety eyes, or no safety eyes at all, you must place a jumper wire between terminals 11 and 14 on the small, 1/4" black relay located just to the right of the 11 pin socket in the control box.</li> <li>- Determine if there is a constant open signal being sent from an outside source               <ul style="list-style-type: none"> <li>- Remove all the wires that are attached to the bottom side of the open terminals on the terminal strip. <b>**Do not remove the wires leading to the top edge of the open terminals.</b></li> </ul> </li> <li>- Try closing the door. If the door closes, touch each of the removed wires one at a time to the open terminal until you find which wire is sending the open signal. Troubleshoot the problem accessory accordingly.</li> </ul> |            |                 |
| No power to control box.               | <ul style="list-style-type: none"> <li>- Check the incoming 110v power. Be sure there is not a tripped GFI or circuit breaker on the circuit supplying the 110v power.</li> <li>- If 110v power is present, turn power OFF and check the internal fuse in the control box. Remove the fuse and test for continuity.</li> <li>- If the fuse tests ok, test for 24VAC coming from the bottom of the 24VAC transformer in the control box. If 24VAC is not present and the above solutions have been verified, replace the transformer.</li> </ul>  |            |                 |

## IV. Part Diagrams



### Description

1. Two Position Automatic Valve (incl Solenoids)
2. 120VAC/24VAC Sealed Transformer
3. Safety Eye Pin Socket
4. Relay 24VAC/DC Black Card Style
5. Terminal Strip 14 Place
6. Contact Block M22-K10 N/O
7. Emergency Open Contact Block
8. Button Only - No Lens
9. Open Button Lens
10. Close Button Lens
11. Inline Airline Dryer
12. SMC Regulator w/Gauge
13. Automatic Oiler
14. Adjustable Brass Flow Controls

### Part Number

- O16R1501
- O16R1623
- O18R3001
- O16R1620
- O16R1622
- O16R1303
- O16R1003
- O16R1002
- O16R1005
- O16R1004
- O17R1000
- O17R3001
- O17R2001
- O16R1602



## Limited Warranty for Airlift Control Boxes and Accessories

Airlift Doors, Inc. warrants to the original purchaser or original user that all Airlift Control Boxes and Accessories 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.

|                          |          |                     |          |
|--------------------------|----------|---------------------|----------|
| Control Box Complete     | (1) Year | Filter Regulator    | (1) Year |
| Automatic Valves         | (1) Year | Automatic Oiler     | (1) Year |
| Valve Coils              | (7) Year | Inline Dryer        | (1) Year |
| Air Fittings             | (1) Year | Loops/Loop Detector | (1) Year |
| Photo Eyes Telco         | (3) Year | Limit Switch        | (1) Year |
| Photo Eyes Carlo Gavazzi | (3) Year | Closing Timers      | (3) 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 Airlift Control Boxes and Accessories 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 Airlift Control Boxes and Accessories are not installed by a competent contractor and/or if Airlift Control Boxes and Accessories are 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 [info@airliftdoors.com](mailto:info@airliftdoors.com). 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**