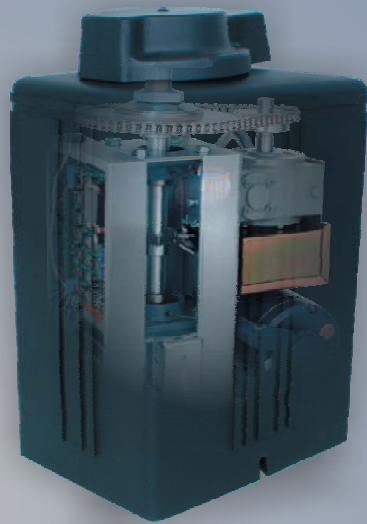


SW-350



SW-300

Swinger Instruction Manual



UL325
compliant

UL991
compliant

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IMPORTANT SAFETY INSTRUCTIONS

WARNING

To reduce the risk of **injury**:

READ THE FOLLOWING DIRECTIONS. DO NOT EVEN THINK OF STARTING UNTIL YOU HAVE READ AND UNDERSTAND THESE DIRECTIONS. IF THERE IS SOMETHING YOU DO NOT UNDERSTAND CALL US.

Never let children operate or play with gate controls. Keep the remote control away from children.

Always keep people and objects away from the gate. No one should cross the path of the moving gate.

This operator must be tested monthly. The gate must reverse on contact with a ridged object or stop when an object activates the non-contact sensors. After adjusting the force or the limit travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury.

Keep gates properly maintained. Have a qualified service person make repairs to gate hardware. It takes many years of experience to make proper adjustments to gate hardware or operators.

There is nothing on a gate operator that is easily repaired without a great deal of experience. Save yourself some time and call a qualified Gate Service Contractor who knows your type of gate operator.

INSTALL THE GATE OPERATOR ONLY WHEN YOU HAVE READ THE FOLLOWING:

- *Confirm that the gate operator being installed is appropriate for the application.
- *Confirm that the gate is designed and built according to current published industry standards.
- *Confirm that all appropriate safety features and safety accessory devices are being incorporated, including both primary and secondary entrapment protection devices.
- *Make sure that the gate works freely before installing the operator.
- *Repair or service worn or damaged gate hardware before installation of the operator.
- *Eliminate all gaps in a sliding gate below a 4 foot height that permits a 2 ¼ inch sphere to pass through any location, including the area of the adjacent fence covered when the gate is in the open position.
- *Eliminate all gaps in a swinging gate below a 4 foot height that permit a 4 inch sphere to pass through any location, including the hinge area of the gate.
- *Operator must be disconnected from the power source before attempting any installation of accessories.
- *Install this gate operator according to our installation instructions.
- *Adjust the operator clutch or load sensing device to the minimum force setting that will still allow for reliable gate operation.
- *Install the operator inside the fence line(do not install the operator on the public side of fence line).
- *Install a proper electrical ground to a gate operator.
- *Install controls where users cannot touch or reach through the gate to operate the controls.
- *Install all warning signs and take pictures of the installation.
- *Test all safety features for proper function before placing the automatic vehicular gate into service.
- *Train owner/users about basic functions and safety features of the gate system, including how to turn off the power and how to operate the manual disconnect feature.
- *Leave safety instructions, product literature, installation manual and maintenance manual with end user.
- *Explain to the owner/user the importance of routine service and retesting on a monthly basis.

DIFFERENT UL 325 CLASS TYPES

Class one: Residential

A vehicle gate operator intended for use at a home of one to four single family dwellings, garages or parking area.

Class Two: Commercial or General Public Access

A vehicular gate operator intended for use at a commercial location or building such as a multi-family housing unit (five or more single family units), hotel, garages, retail stores, other buildings servicing the general public.

Class three: Industrial or limited Access

A vehicular gate operator intended for use at an industrial location or building such as a factory, loading dock area, or other locations not intended to service the general public.

Class Four: Restricted Access

A vehicular gate operator intended for use at a guarded industrial location or building such as airport security areas or other restricted access locations not servicing the general public where unauthorized access is prevented via supervision by security personnel.

Other components required to satisfy UL 325

Each class must have a primary and secondary means to sense and react to obstructions within two seconds.

The six types of obstruction sensing systems are:

Type A:

Inherent obstruction sensing system. This system must sense and initiate the reverse of the gate within two seconds of contact with a solid object.

Type B 1:

Provision for connection of a non-contact device can be used, such as a secondary protection.

Type B2:

Provision for connection of a contact sensor. Examples include an edge device or equivalent. This can be used for secondary protection.

Type C:

Inherent adjustable clutch or pressure relief valve.

Type D:

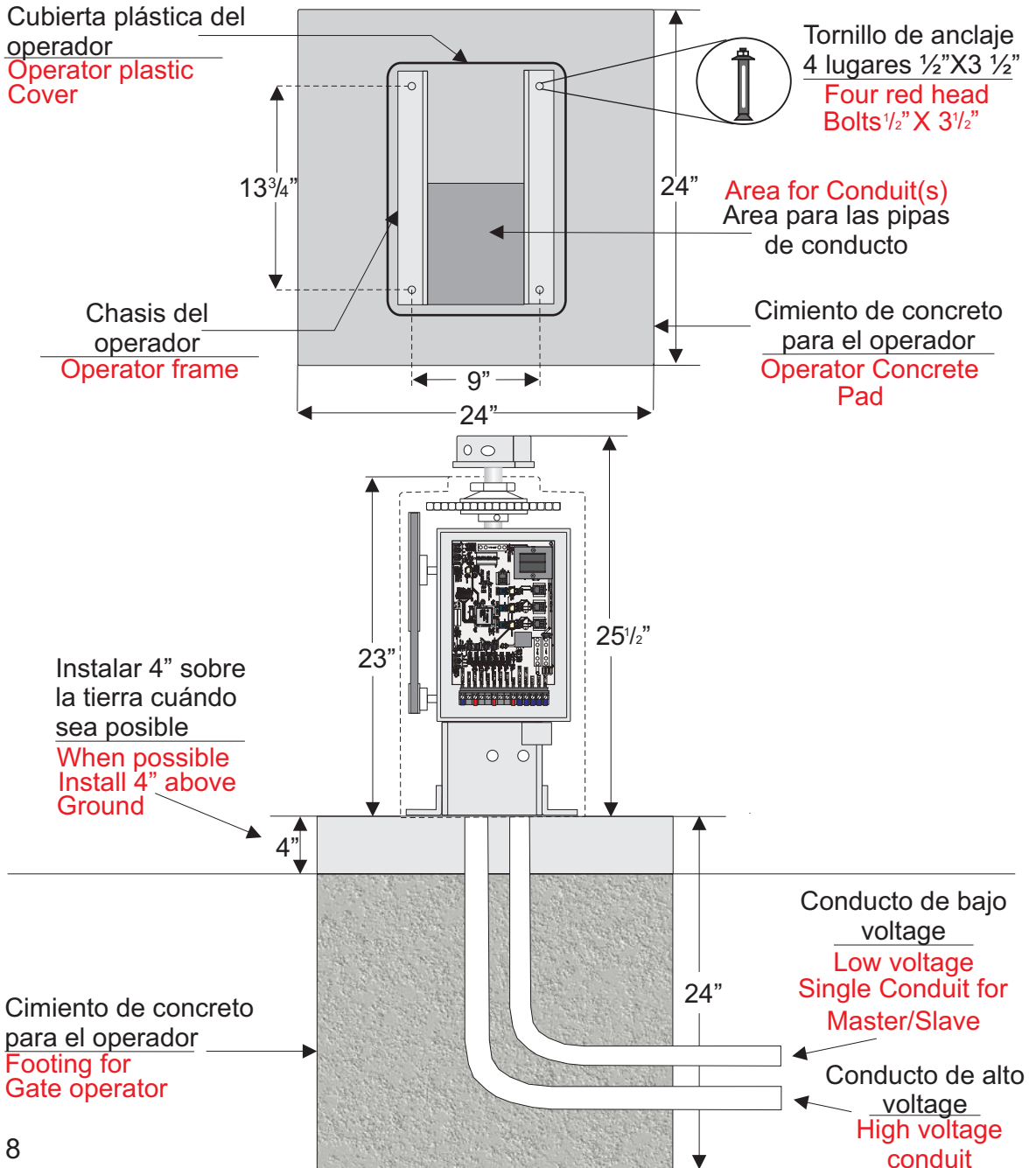
Provision for connection of or provided with and actuation device requiring continuous pressure.

Type E:

Inherent audio alarm.

All of All-O-Matic Inc's Gate operators conform to the most ridged Class One.

CIMIENTO DE CONCRETO PARA EL CONCRETE PAD FOR SW-300

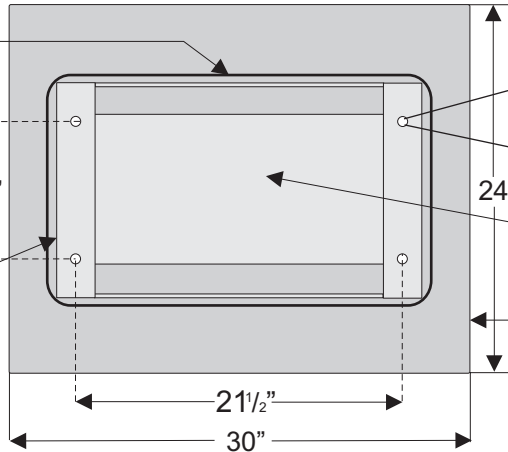


CIMIENTO DE CONCRETO PARA EL CONCRETE PAD FOR SW-350

Cubierta plástica del operador

Operator plastic
Cover

Chasis del operador
Operator frame



Tornillo de anclaje
4 lugares 1/2" X 3 1/2"

Four red head
Bolts 1/2" X 3 1/2"

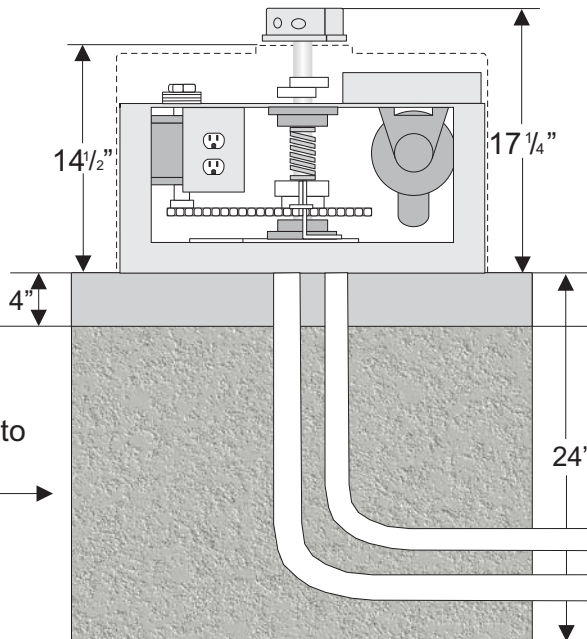
Area for Conduit(s)
Area para las pipas
de conducto

Cimiento de concreto
para el operador
Operator Concrete
Pad

Instalar 4" sobre
la tierra cuándo
sea posible

When possible
Install 4" above
Ground

Cimiento de concreto
para el operador
Footing for
Gate operator



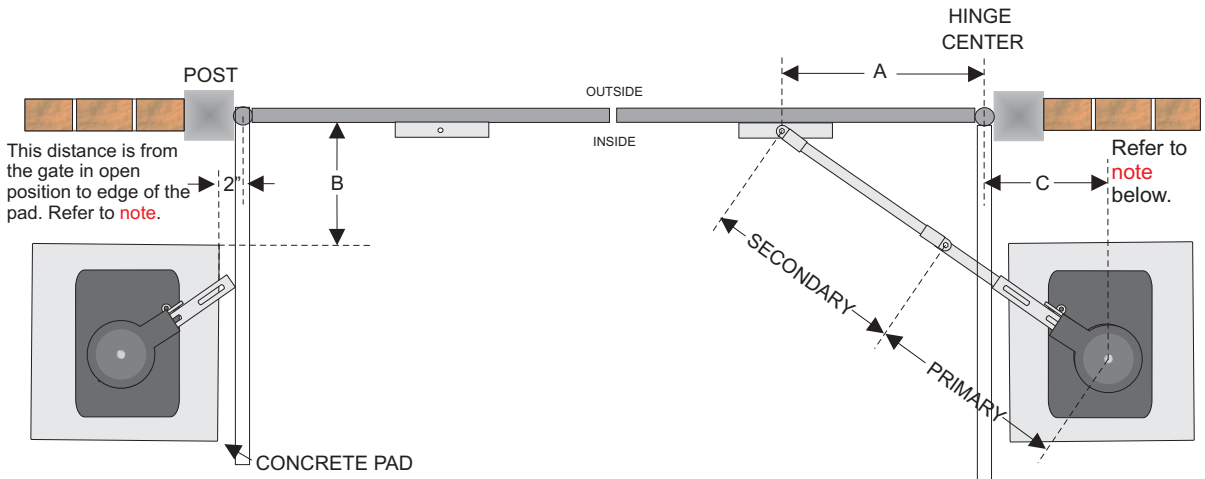
Conducto de bajo
voltage

Low voltage
Single Conduit for
Master/Slave

Conducto de alto
voltage

High voltage
conduit

OPERATOR AND ARM DIMENSIONS



Dimensions Chart

| Gate length | A | B | C | Minimum Distance |
|---------------|-----|-----|-----|------------------|
| Less than 12" | 36" | 35" | 14" | 34" |
| 13'-15' | 42" | 41" | 14" | 37" |
| 16'-22" | 48" | 47" | 14" | 40" |

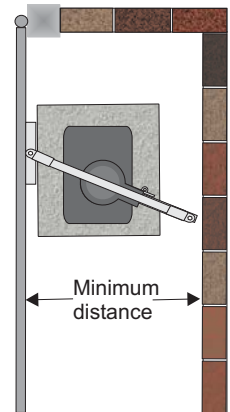
A: Is the distance between the gate bracket and the gate hinge point.

B: Is the distance between the gate hinge point and the edge of the concrete pad.

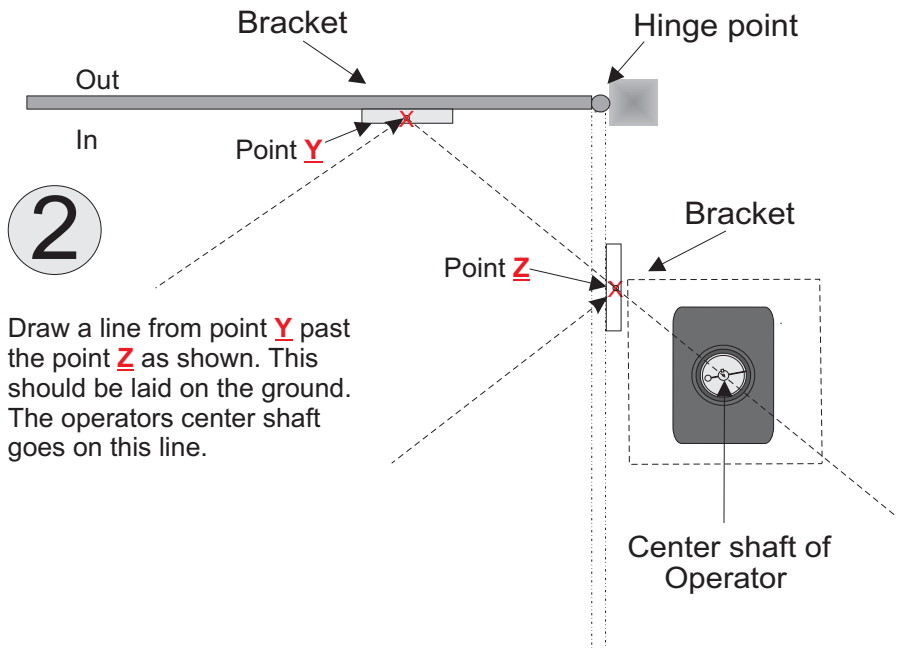
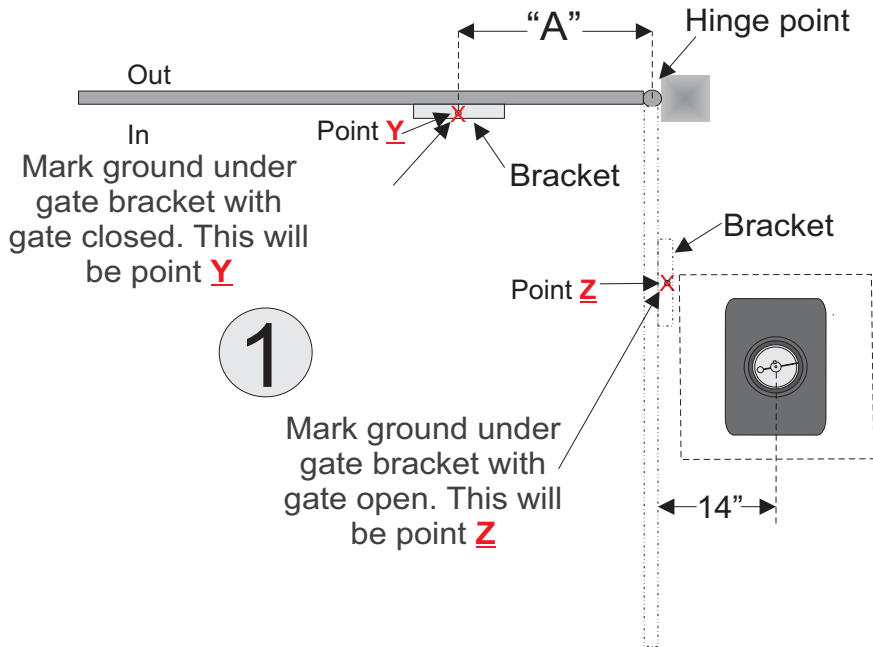
C: Is the distance from the gate in the open position to the center shaft of the operator.

Minimum distance: Is the minimum distance required behind the open gate. If the distance between the open gate and the back wall is between 20" and 33" refer to compact installation.

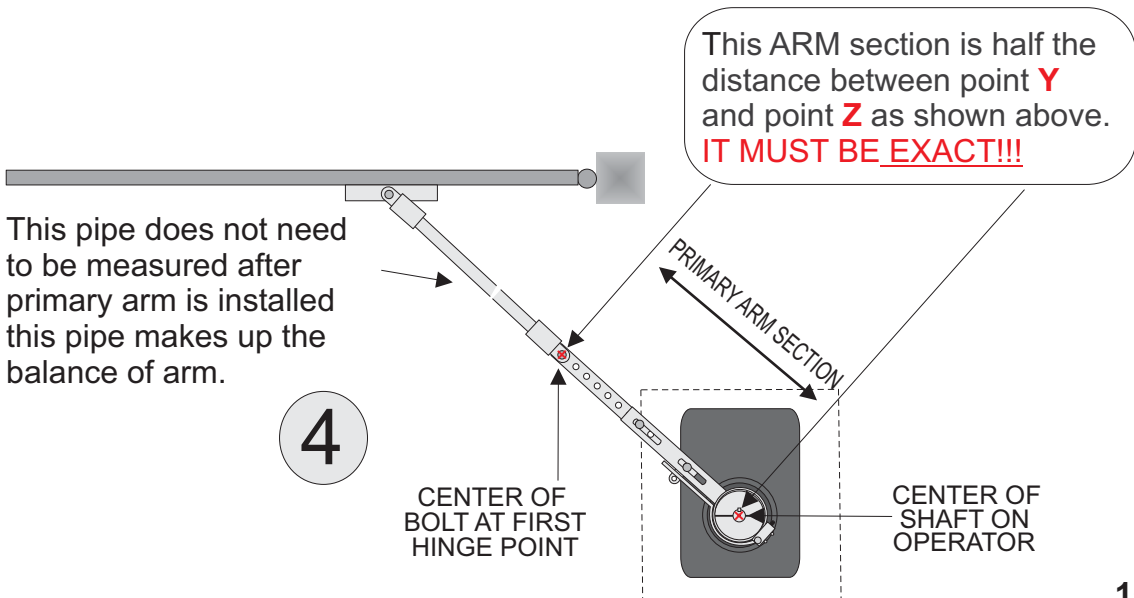
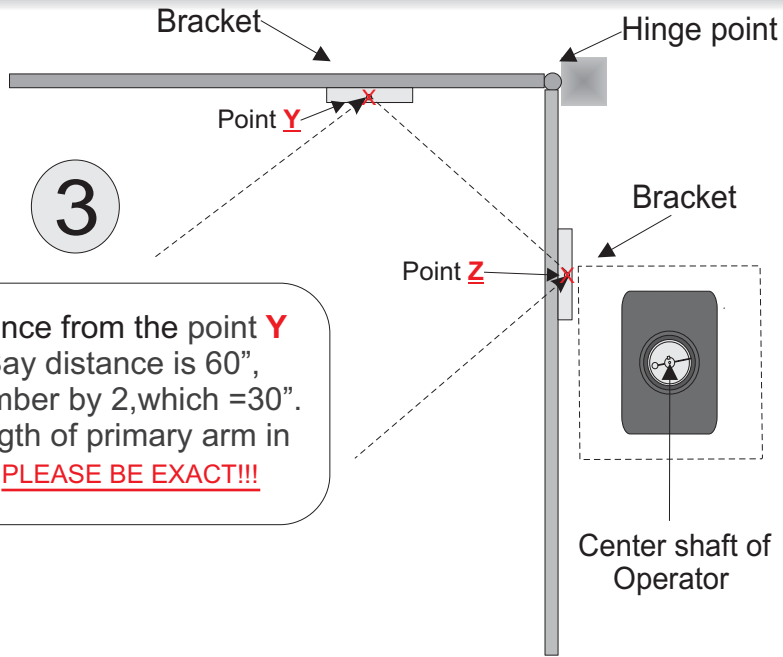
Note: The 2" distance shown above is from the gate in the open position to the edge of the pad. If the gate must open more than 90 degrees, the pad needs to move back accordingly. The distance between the open gate and the pad needs to remain 2". The distance "C" also needs to move back accordingly if the opening is more than 90 degrees.



OPERATOR AND ARM LAYOUT

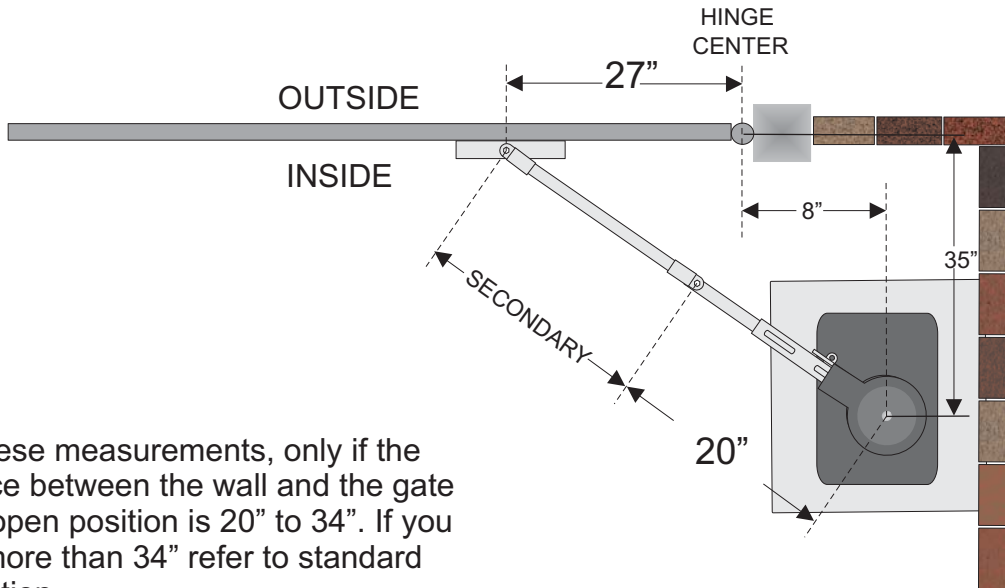


ARM LAYOUT & OPERATOR PLACEMENT CONTINUED

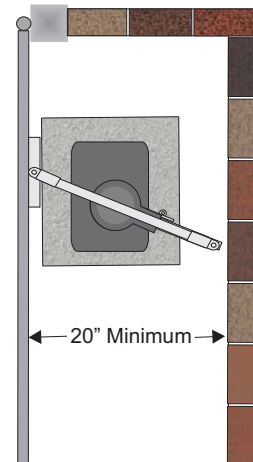


SWINGER COMPACT INSTALLATION

To use this installation the gate must be 12' or less.



Use these measurements, only if the distance between the wall and the gate in the open position is 20" to 34". If you have more than 34" refer to standard installation.

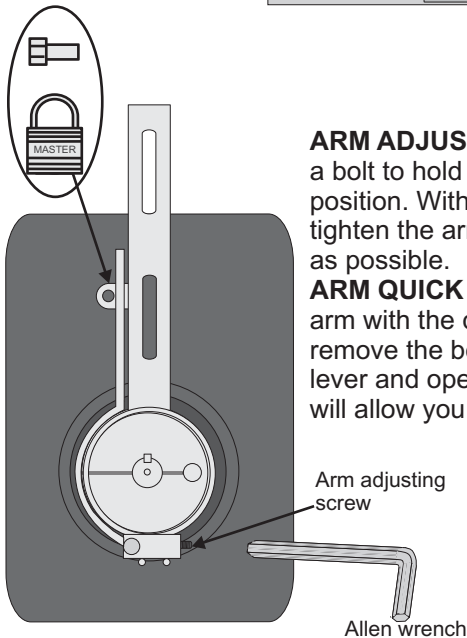
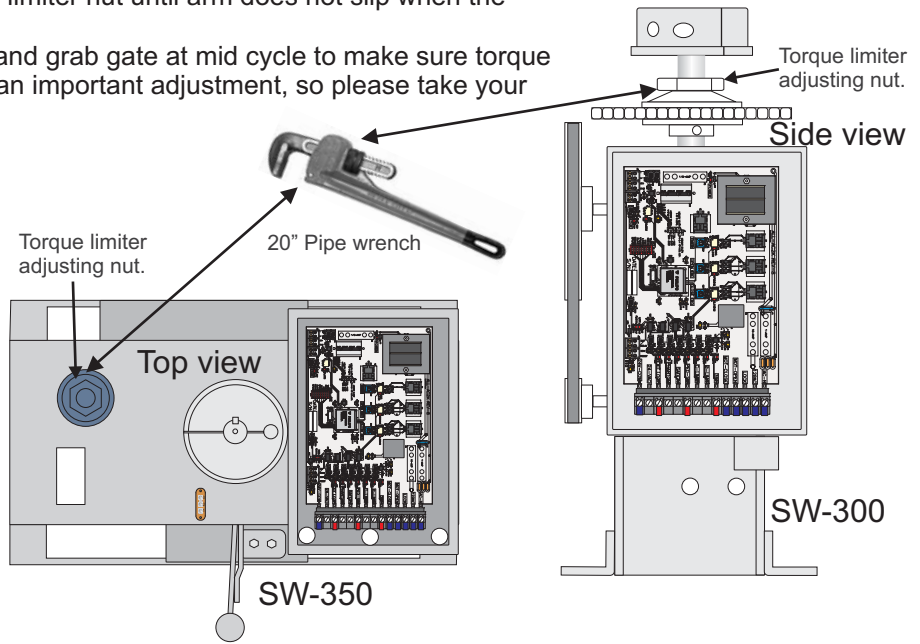


TORQUE LIMITER AND ARM ADJUSTMENT

The torque limiter is shipped loose (not adjusted). You must use a 20" pipe wrench to adjust the large torque limiter nut on the operator as shown in the images below.

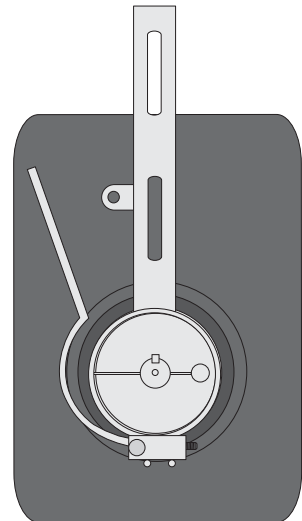
Tighten torque limiter nut until arm does not slip when the operator is running.

Also run gate and grab gate at mid cycle to make sure torque limiter will slip. This is an important adjustment, so please take your time and do it right.



ARM ADJUSTMENT: Use a pad lock or a bolt to hold the arm lever in closed position. With the arm lever closed tighten the arm adjusting screw as tight as possible.

ARM QUICK RELEASE: To release the arm with the quick release, simply remove the bolt or padlock from the arm lever and open it. Opening the arm lever will allow you to manually open the gate.



GATE TRAVEL ADJUSTMENT

Locate limit switch.

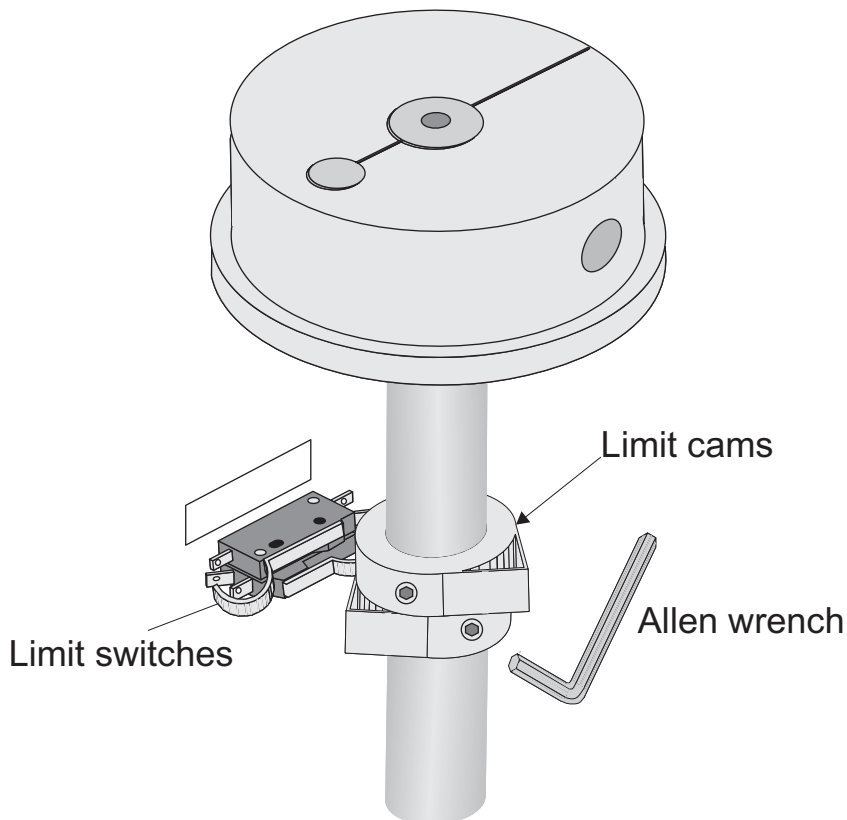
Step 1: Turn the **power off** on operator.

Step 2: Use an allen wrench to loosen up the limit cams. Turn the limit Cams to desired direction.

Step 3: tighten the allen screw.

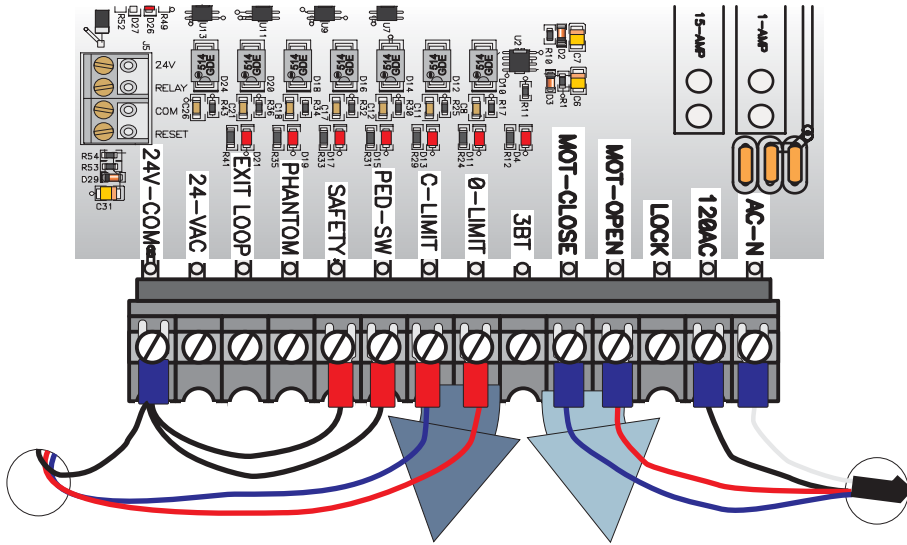
Step 4: Turn the operator back on.

Step 5: Run gate operator. If more adjustment is needed, repeat the steps.



LEFT HAND OPENING SETTINGS

See chart below for specific operator model wiring direction.

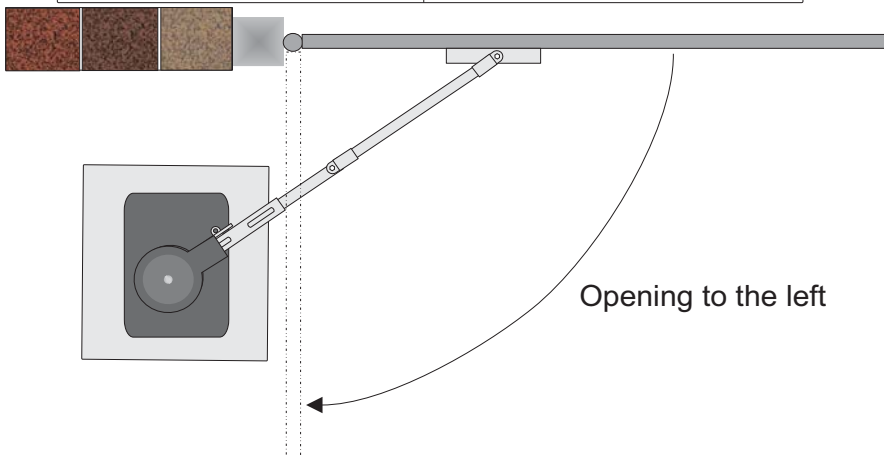


Use these wire settings for SW-300 & SW-350 opening direction.

IMPORTANT:

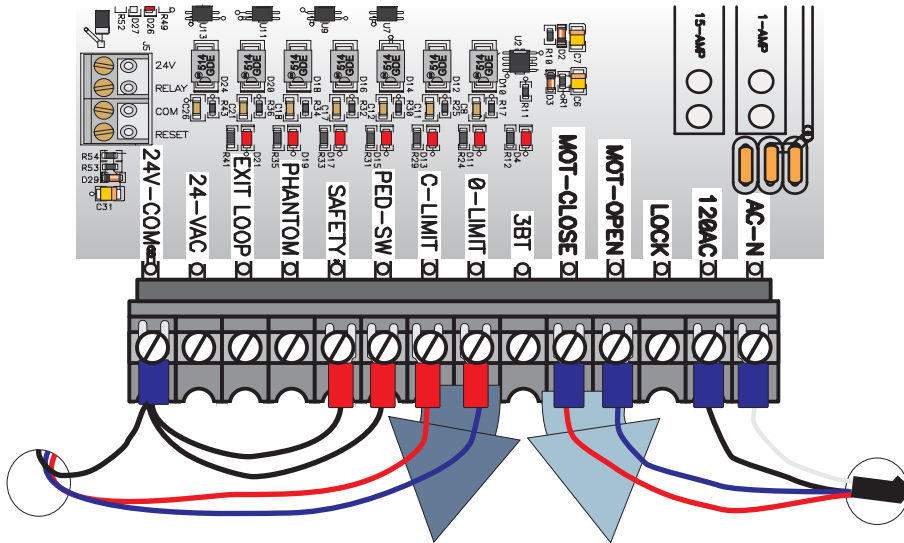
This setting is for left hand opening. Be sure to follow the wire sequence as the two Swinger models are the opposite of each other.

| Limit wires SW-300 | Motor wires SW-300 |
|-----------------------|-----------------------|
| C-LIMIT = Blue wire | MOT-CLOSE = Blue wire |
| O-LIMIT = Red wire | MOT-OPEN = Red wire |
| SW-350 | SW-350 |
| C-LIMIT = Red wire | MOT-CLOSE = Red wire |
| O-LIMIT = Blue wire | MOT-OPEN = Blue wire |



RIGHT HAND OPENING SETTINGS

See chart below for specific operator model wiring direction.

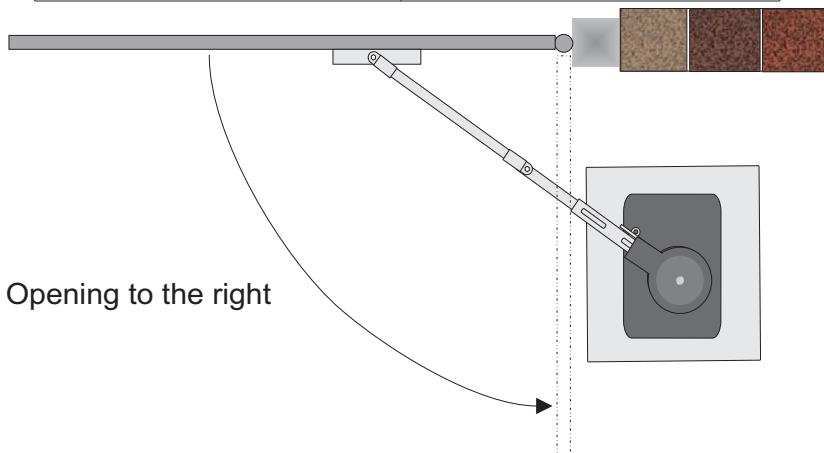


Use these wire settings for SW-300 & SW-350 opening direction.

IMPORTANT:

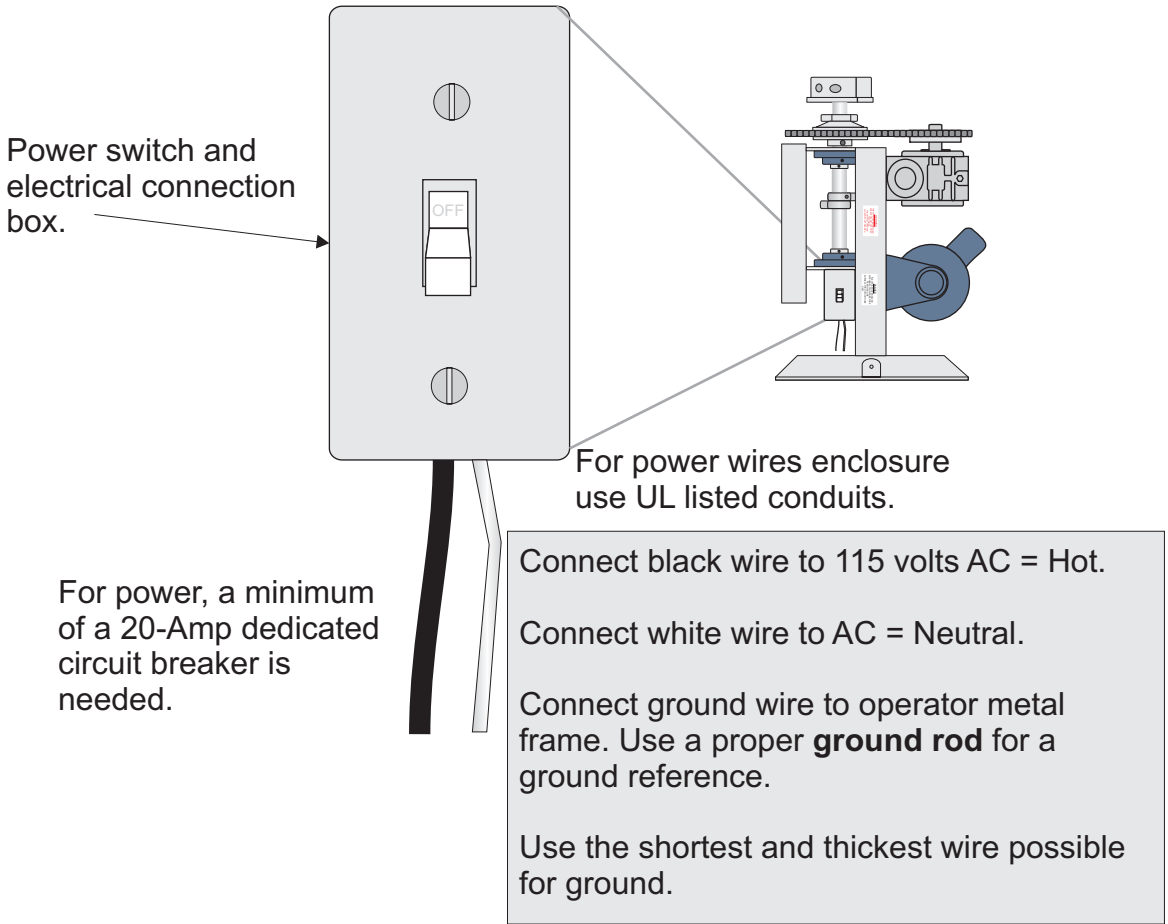
This setting is for right hand opening. Be sure to follow the wire sequence as the two Swinger models are the opposite of each other.

| Limit wires SW-300 | Motor wires SW-300 |
|------------------------------|------------------------------|
| C-LIMIT = Red wire | MOT-CLOSE = Red wire |
| O-LIMIT = Blue wire | MOT-OPEN = Blue wire |
| Limit wires SW-350 | Motor wires SW-350 |
| C-LIMIT = Blue wire | MOT-CLOSE = Blue wire |
| O-LIMIT = Red wire | MOT-OPEN = Red wire |



ELECTRICAL CONNECTION

OPERATORS MUST BE PROPERLY GROUNDED!



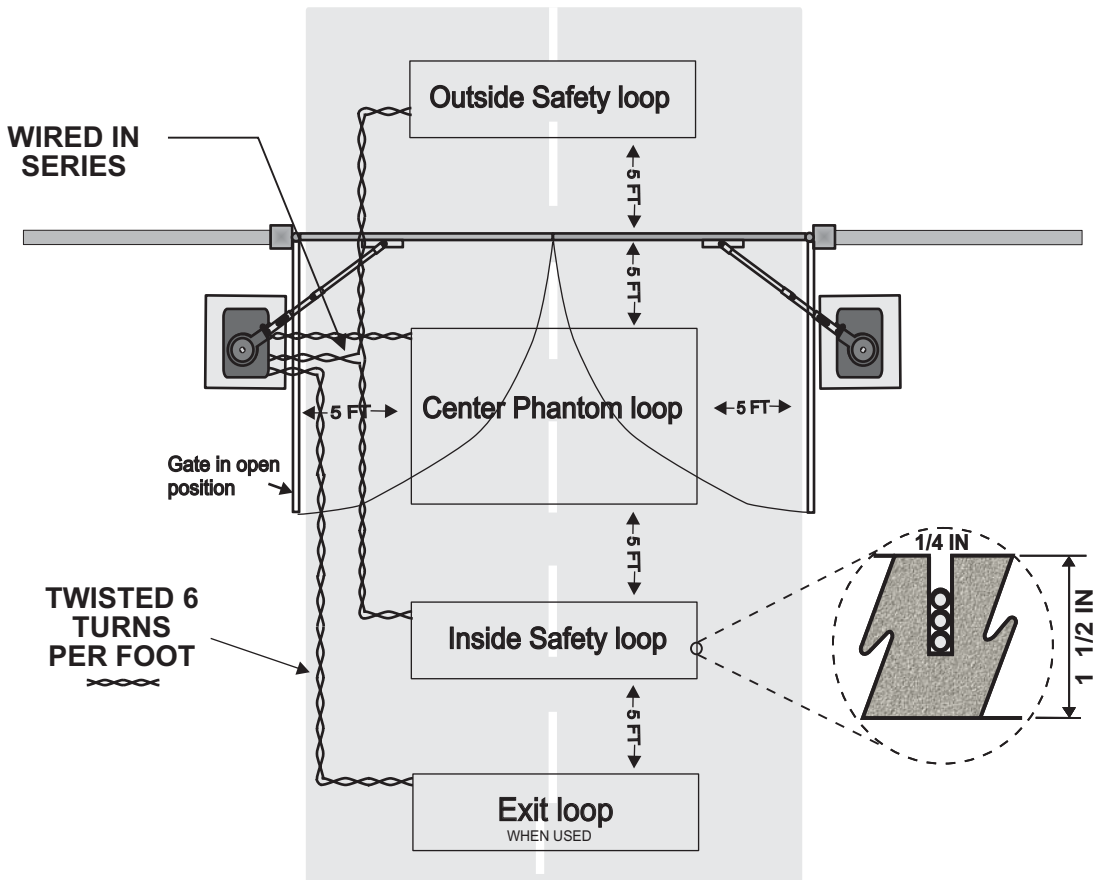
All gate operators **MUST** be properly grounded.

A proper ground in a gate operator installation minimizes or prevents damage from an electrical charge, such as a near lightning strike or an electrical static discharge.

Use a single wire for the ground. **DO NOT** splice two wires for the ground. If the wire breaks or is cut, replace it with a single length. **NEVER** use two wires for the ground.

Check with your City code for proper earth ground rod type and proper grounding procedures.

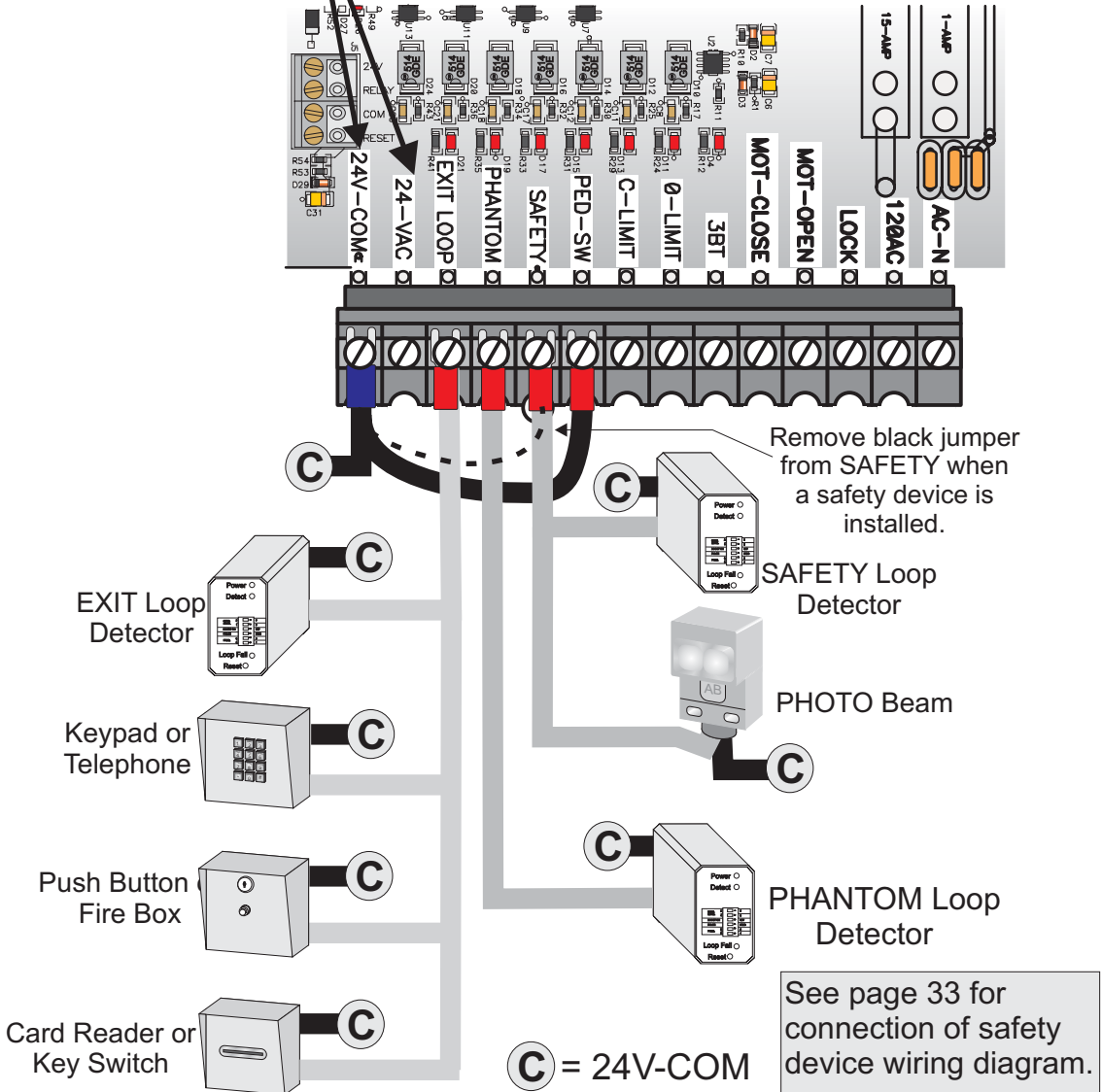
SWINGER LOOP LAYOUT



This is a normal loop layout. Remember when connecting to an All-O-Matic circuit board you use the **normally closed contacts** for your safety loop detector and **normally open contacts** from the exit loop. You must twist your wires from your exit point of the saw cut all the way to the circuit board, no exceptions.

ACCESSORY CONNECTIONS

The circuit board **24-VAC** output provides up to 700 mAmps of power for accessories. More than two or three accessories will require a separate power supply.



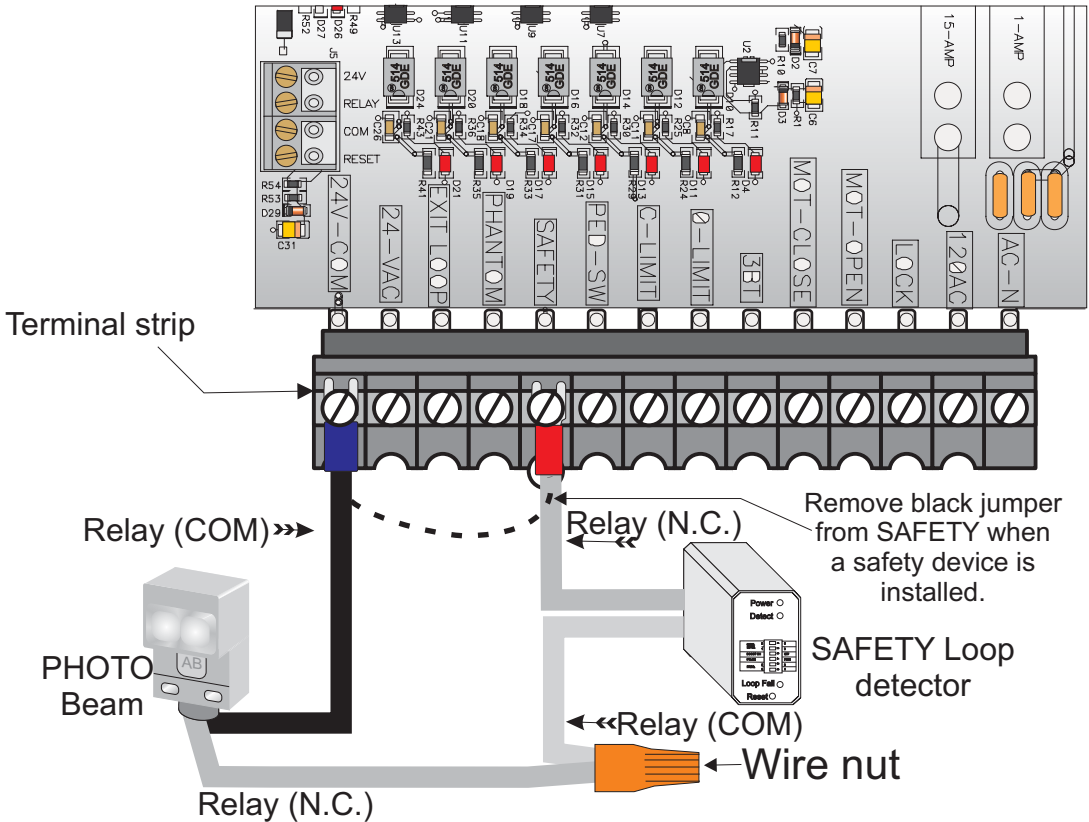
MULTIPLE SAFETY DEVICES CONNECTIONS

Multiple **SAFETY** devices installed together must be connected “in series”. Locate the normally closed (N.C.) dry contact from each accessory relay. Also, before installing the accessory devices, remove the black wire jumper from the **SAFETY** terminal position on the terminal strip of the control board.

Safety wire connections

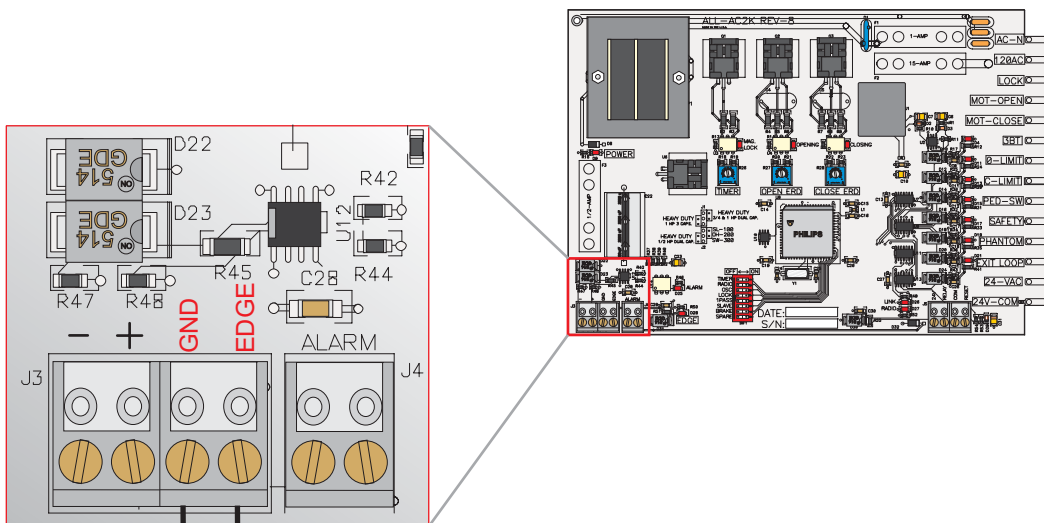
| | |
|--|--|
| From Accessory #1 to Terminal Strip | From Accessory #2 to Terminal Strip |
| Relay Com to 24V-COM | Relay N.C. to SAFETY |

From Accessory #1 to Accessory #2
Relay N.C. To Relay Com



This diagram is for the relay wires of the safety devices, two wires to the terminal strip (one from each device) and two wires to the orange wire nut.

LEADING EDGE CONNECTION



Connect one of the wires from leading edge to **GND** connector on control board.

Connect the other wire from leading edge to **EDGE** connector on control board.



LEADING EDGE SENSOR

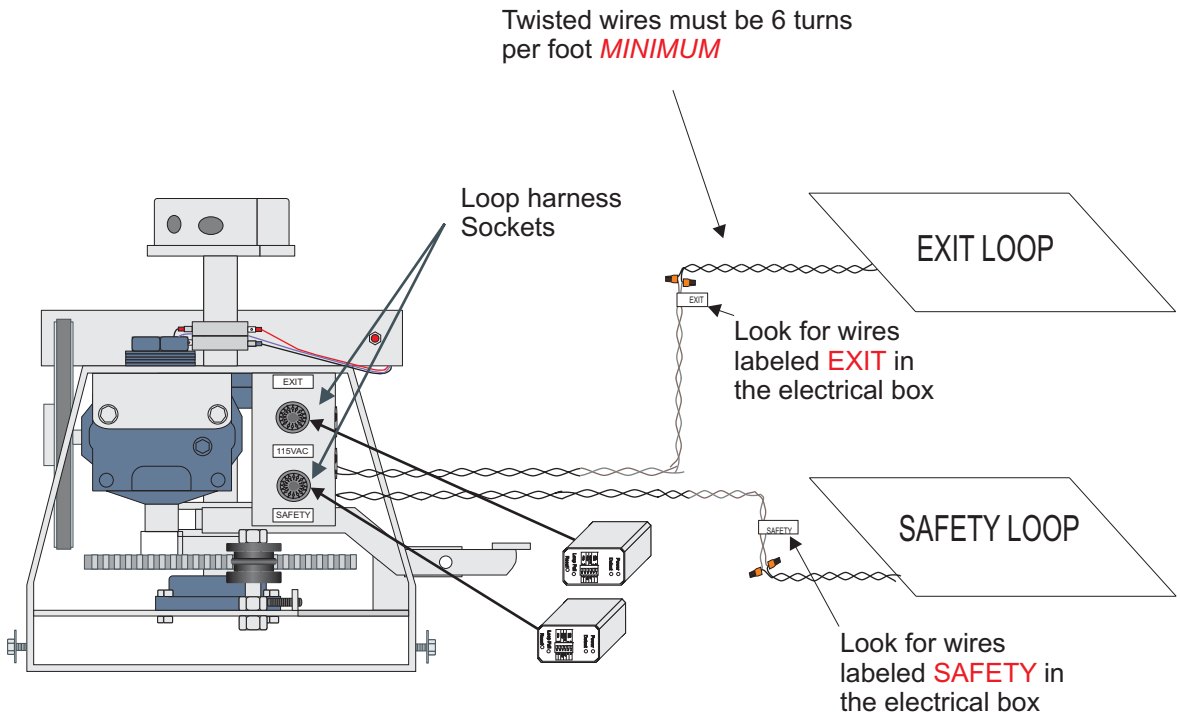
PRE-WIRED LOOP INSTALLATION ON **SW-350**

Model **SW-350** provides three pre-wired loop harnesses one for SAFETY LOOP one for PHANTOM and one for EXIT LOOP. Loop detectors must be 120 VAC.

To install loop detectors make sure power is off in main power source then simply plug detector in designated harness socket and wire the ground loop to the grey and brown wires located inside the electrical box behind operator gearbox. There is one pair labeled EXIT for EXIT LOOP one PHANTOM for PHANTOM LOOP and one SAFETY for SAFETY LOOP.

IMPORTANT: Use different frequencies for every loop detector.

IMPORTANT: When using the safety loop, you must remove the jumper from "SAFETY" on terminal strip.



EMERGENCY RELEASE

For **SW-350**

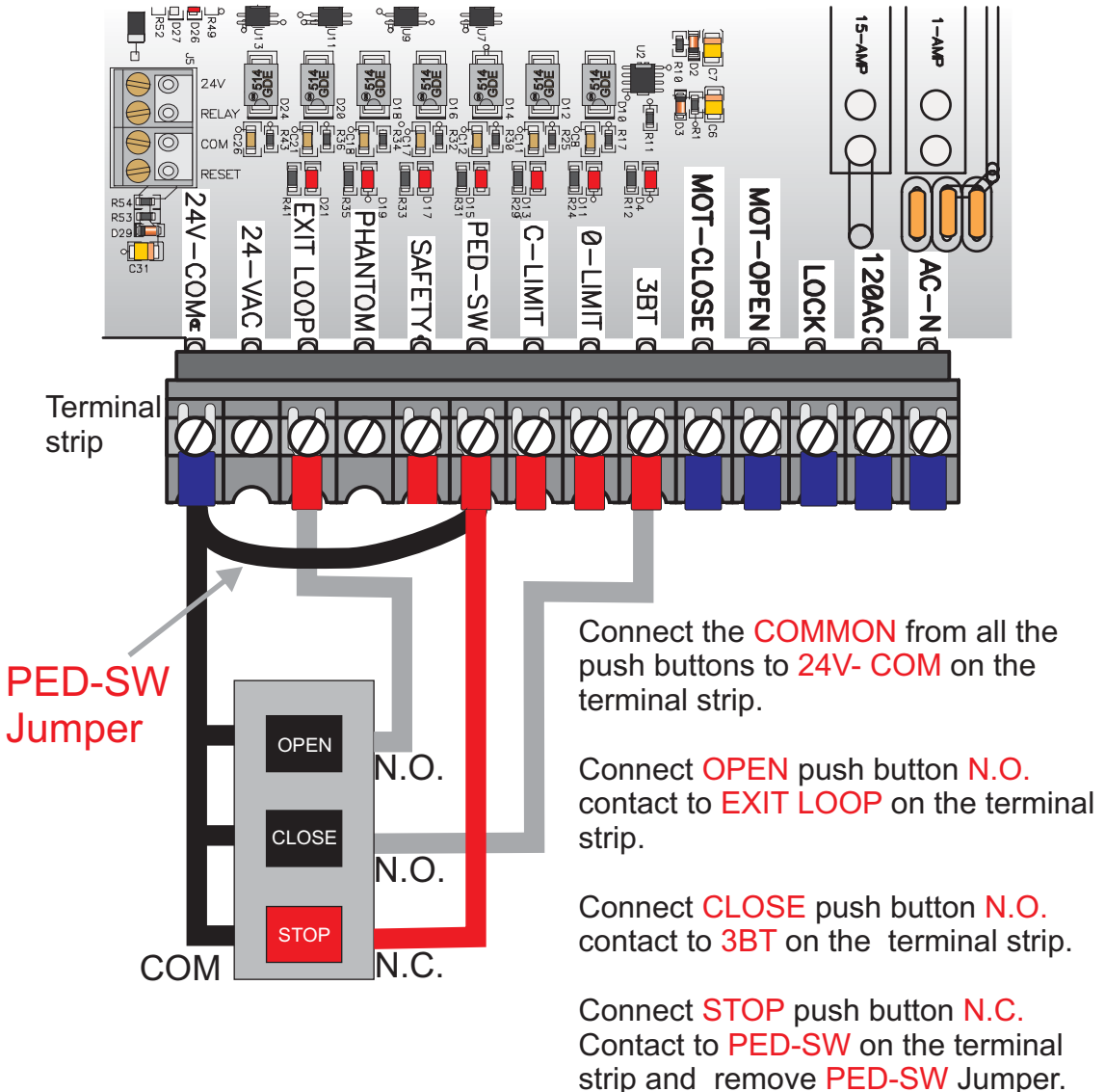
Procedures to release gate:

1. Turn power OFF.
2. Push pedal down & move pedal **slightly to the right** to hold pedal down in position.
3. Push gate open.



THREE BUTTON STATION SYSTEM

See push button connections below.



MASTER/SLAVE CONNECTION

Before connecting master/slave gate operators together, test and adjust the limit switches and the ERDs for each operator as “stand alone” machines. All accessories must be installed on the master board, no exception.

See page 53 for dip switch settings.

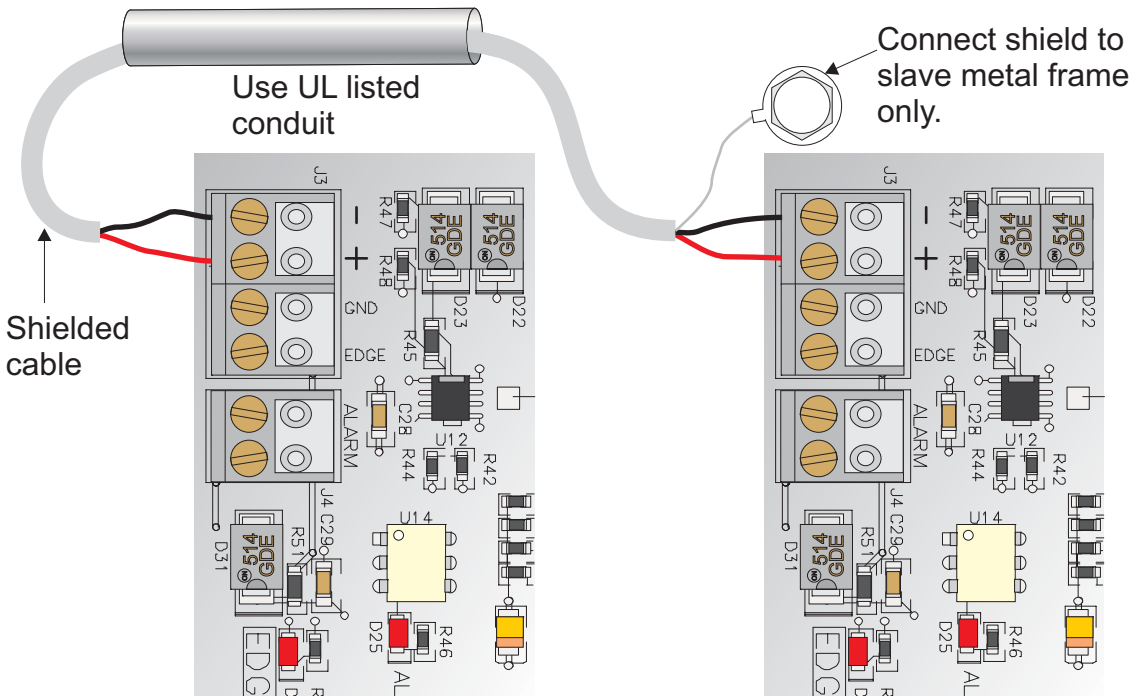
Use a two wire **shielded cable** and run it through a UL listed conduit for master/slave connection. Follow the wiring diagram as shown below.

Master Board

Slave Board

+.....Positive to Positive.....+

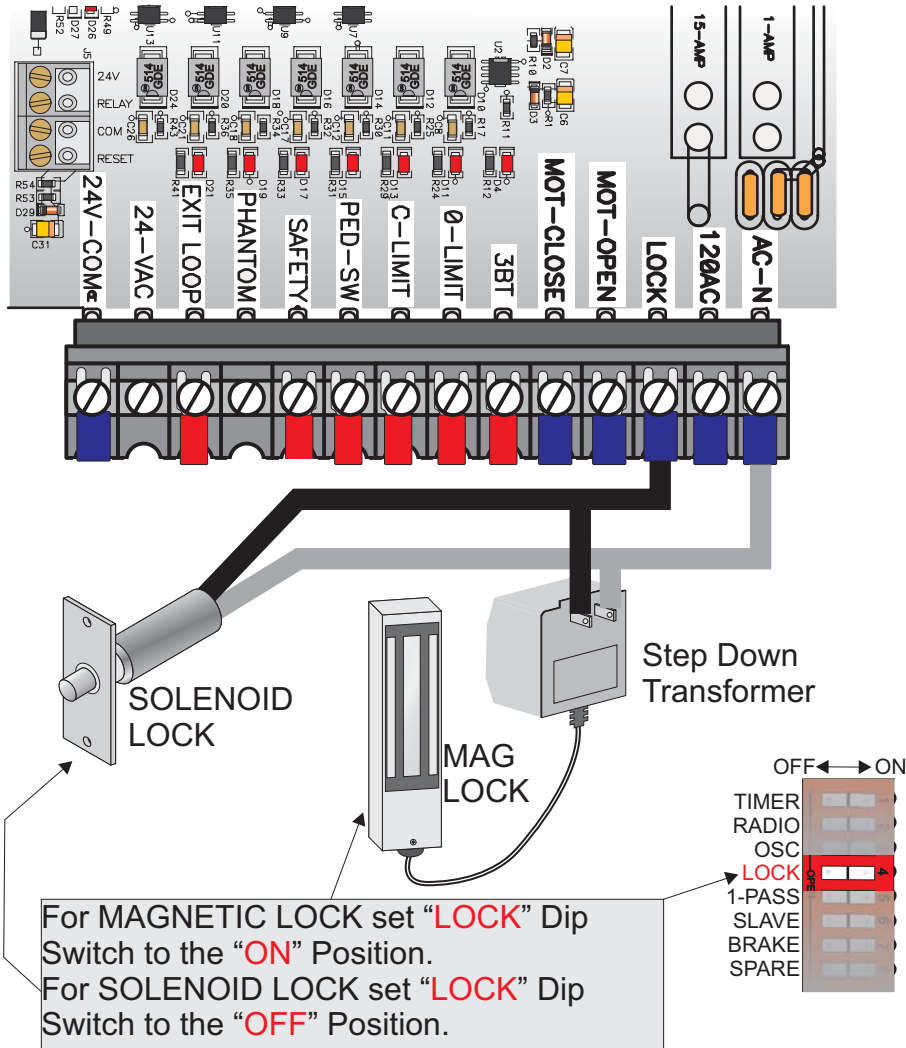
-.....Negative to Negative.....-



MAGNETIC/SOLENOID LOCK CONNECTIONS

Magnetic lock installation requires a step down transformer with appropriate voltage for the specific lock accessory.

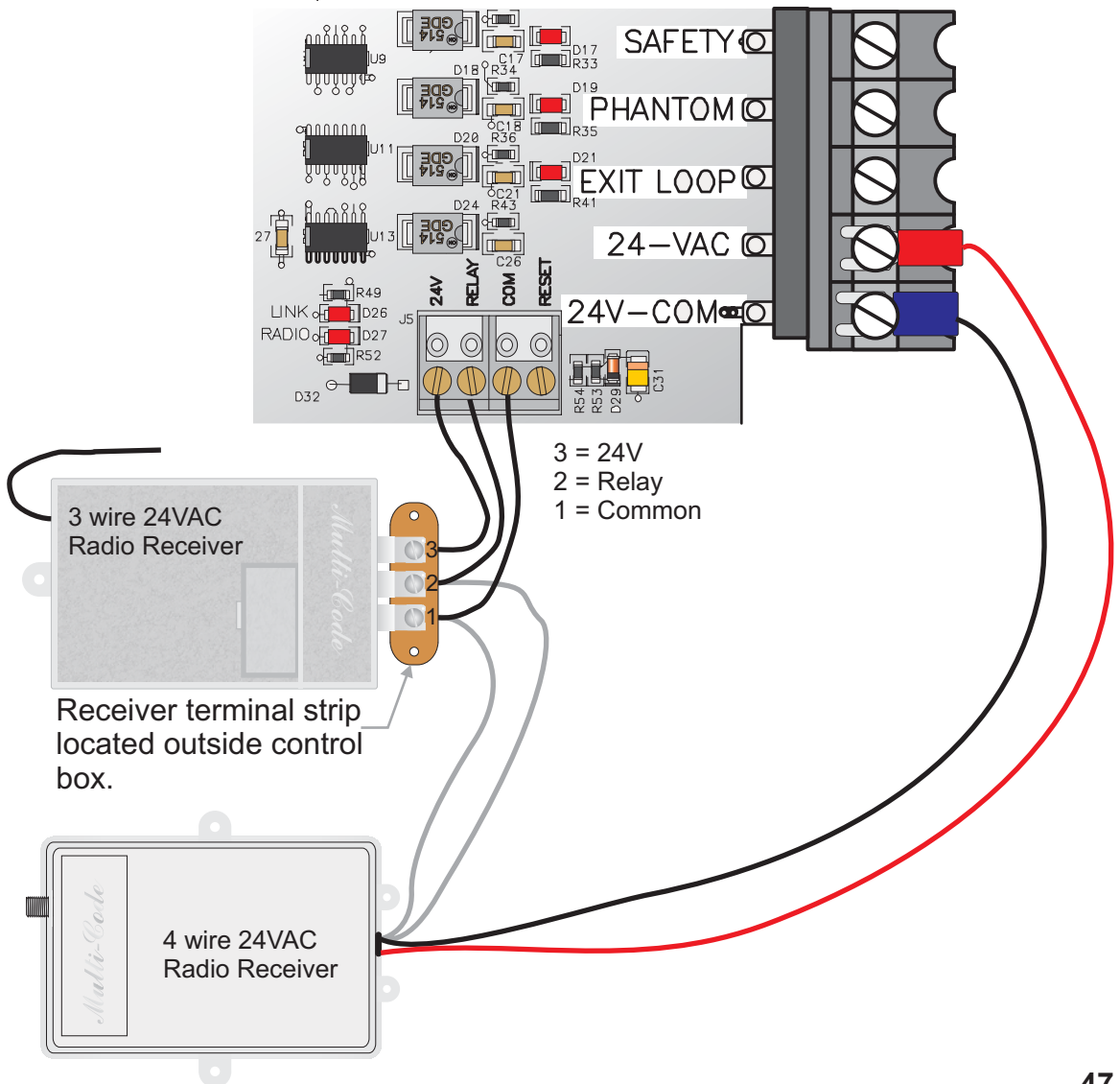
AC-N and **LOCK** from terminal strip supply 110 volts to power the transformer and control the locks'. Connect low voltage wires from transformer directly to the lock as shown below. Only two wires needed for the installation. No relay wires required.



RADIO RECEIVER CONNECTIONS

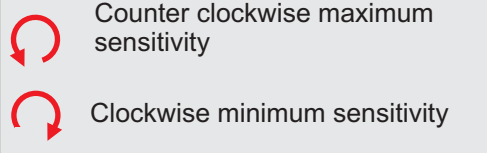
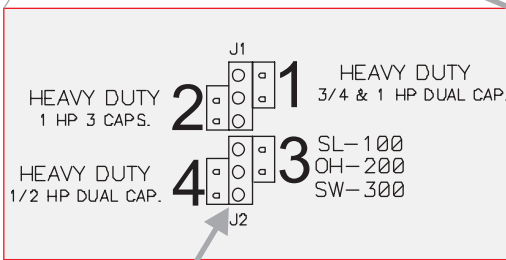
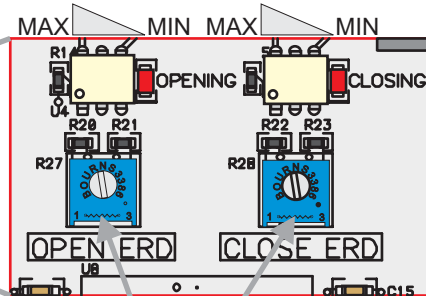
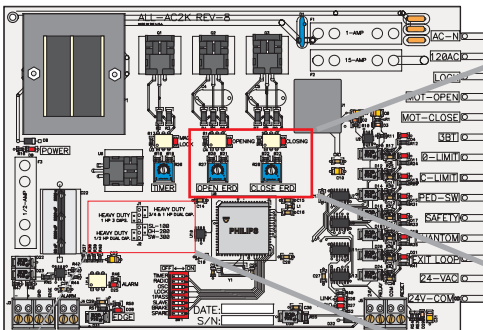
3 wire receiver mounts on receiver strip outside control box as shown below.

4 wire receiver :connect the two grey wires to 1 & 2 terminals on receiver strip outside control box. Connect black wire to 24 V-COM and red wire to 24VAC on main control board terminal strip as shown below.



OPEN AND CLOSE ELECTRONIC REVERSING SENSOR(ERDs) ADJUSTMENT

Open and Close ERD SENSITIVITY



Set these pins for different motors using the chart below

When gate stops and reverses by itself, the ERD is **too sensitive**.

The gate must stop and reverse when it hits an obstruction or the ERD is **not sensitive enough**.

| Motor Rating chart | | | |
|--------------------|-----------|-----------|-------|
| Model | HP Rating | # of Caps | Pin # |
| SL-100 | 1/2 | 1 | 3 |
| SW-300 | 1/2 | 1 | 3 |
| OH-200 | 1/2 | 1 | 3 |
| SL-150 | 1/2 | 2 | 4 |
| SL-150 | 3/4 & 1 | 2 | 1 |
| SL-150 | 1 | 3 | 2 |
| SW-350 | 1/2 | 1 | 3 |
| SW-350 | 3/4 & 1 | 2 | 1 |

ERD'S must be adjusted by qualified technician.

The gate operator ERDs must be adjusted so that the gate provides regular, reliable and safe cycles.

ERD must be checked every six months.

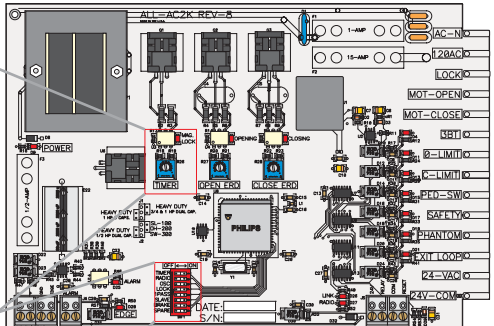
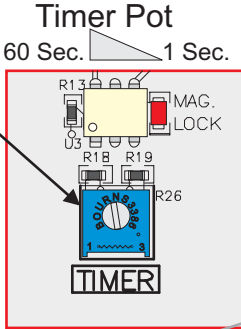
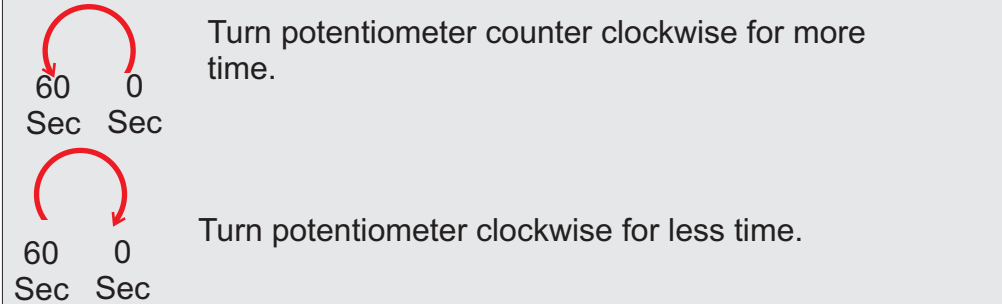
TIMER ADJUSTMENT

TIMER ON: Timer to close, can be set from 1 to 60 seconds.

TIMER OFF: Gate operation is push button to open, push button to close.

TO OVERRIDE THE TIMER: Turn the RADIO switch to the “ON” position. This will allow the radio receiver to close the gate before the timer.

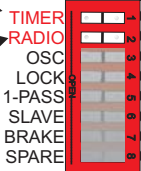
TIMER adjustment



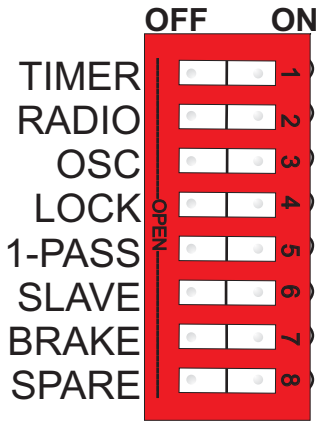
TIMER “ON” to activate the timer

RADIO “ON” = Allows the transmitter to close the gate before the timer.

OFF ← → ON



DIP SWITCH FUNCTIONS



TIMER

TIMER switch “ON” activates the TIMER. See page 51 for details.

RADIO

RADIO switch “ON” allows the radio receiver to override the timer. See page 51 for details.

OSC

OSC switch “ON” allows the radio receiver to stop and reverse the gate in any direction. During a cycle the first signal stops gate, a second signal reverses gate.

LOCK

This function is to change from solenoid position in the “OFF” position, to magnetic lock in the “ON” position. The terminal position marked “LOCK” on the circuit board provides 115 volts for the each type of locks. Use appropriate step down transformer for specific locks. Refer to page 45 for **lock** connections and settings.

1-PASS

This is a true one pass, anti-tailgating feature. This feature may only be used with safety loops. With this switch in the “ON” position, the gate will open until one car passes the safety loops then it will stop and close. If a second car pulls on the loop the gate will stop the car must then back off the loop before the gate will close.

SLAVE

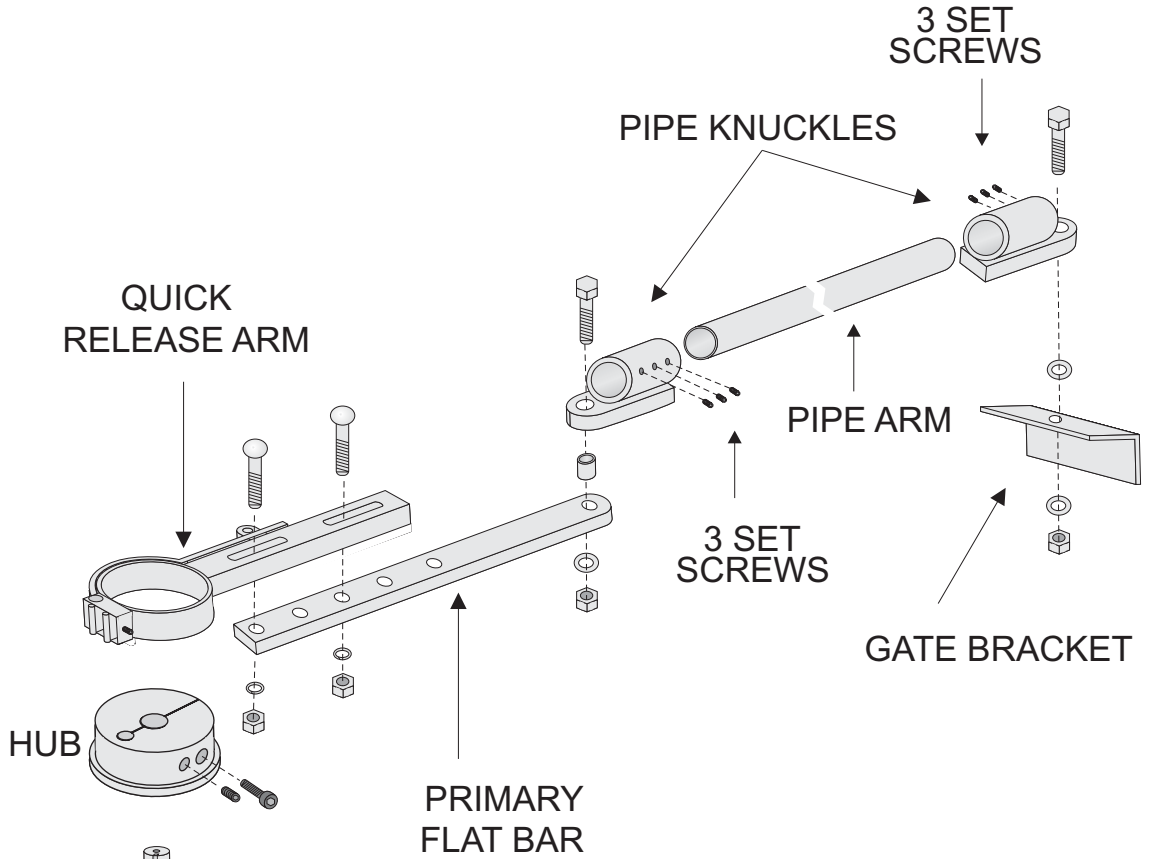
This feature is used on master/slave setups. Set slave switch “ON” on slave machine, all other switches “OFF”. Set slave switch to the “OFF” position on master machine. Set other function switches on master machine as desired. See page 43 for more details on master/slave connections and settings.

BRAKE

The BRAKE helps the gate to stop at the precise moment of contact of the limit nuts with the limit switches. This function should only be used when an uphill or downhill installation is required. Replace the 15 Amps fuse with a 20 Amps fuse when this function is used.

SPARE NOT USED

SWINGER ARM PARTS



ALL-O-MATIC'S good service and high quality by years of, proven reliability place the ALL-O-MATIC Swing gate operators ahead of the competition. The SW-350 is our highest duty rated operator and the most powerful continuous duty operator available in the market today. The SW-350 has a foot pedal release in the event of a power failure.

The SW-300 is our most popular gate operator. It is continuous duty for light commercial and residential use. In the event of power failure, the gate can be released open with a quick release arm. A battery back up is also available on the SW-300.

El buen servicio, la alta calidad y los años de la confiabilidad probada de ALL-O-MATIC, colocan a los operadores batibles, delante de la competencia. El SW-350 es nuestro operador con la capacidad más alta y el operador más potente de uso continuo disponible en el mercado hoy. El SW-350 cuenta con un pedal de pie para liberación del portón en el acontecimiento de un apagón. El SW-300 es nuestro operador más popular. Está clasificado para uso continuo comercial y residencial. En el evento de un apagón, puede abrir el portón con un brazo de liberación rápida. Un respaldo de batería esta también disponible en el SW-300.

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