

SECURITY SHUTTER INSTALLATION

INTRODUCTION

Thank you for purchasing a quality Security Shutter. We are assured you will be impressed by the product, however, if for any reason you find something not up to your standard, please fill in the "Customer Survey Report". Your comments will help us to improve.

SPECIAL NOTE

Please read all installation instructions, as most problems with shutters are related to poor installation, rather than the product. Also please note the shutter housing must be fastened to solid backing, or the housing could fall and cause bodily injury. You, the installer are responsible that the shutter is sufficiently supported. Be careful not to put undue weight or stress on the leg during installation as it is liable to break it. These instructions are for a "face of wall" installation, however a "between jamb mount" is similar except instead of fastening the guide rails through the front face, you attach them through the opening in the guide rail.

STEP 1 (fig. 1 & 2)

Your shutter has been professionally packaged to ensure you receive it in good order. Carefully unpack your shutter.

STEP 2 (fig. 3)

Remove the protective film from the top and back of the shutter housing. Remove the 2 shipping screws from the bottom bar. (not all models are shipped with them).

STEP 3 (fig. 4)

Compare opening size to actual shutter size as shown on shop drawing. Ensure opening is square and level.

STEP 4 (fig. 5)

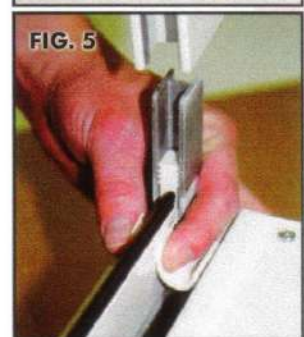
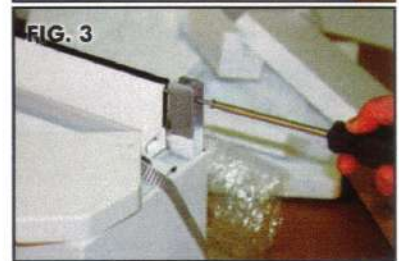
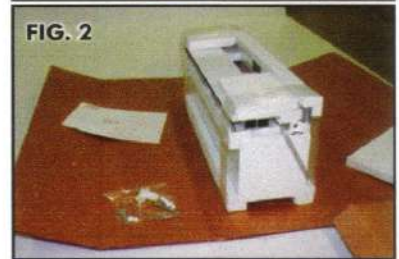
Slide the guide rails down over the end cap legs. Be careful to align the plastic entry guide into the end of the guide rail. Make sure the large holes in the guide rail face the box side of the shutter. Larger shutters are supplied with support brackets - secure both of these now with the screws provided.

STEP 5

Now roll the shutter onto its back and then into the upright position. Grasp the guide rail and the bottom of the shutter housing box and carefully position up against opening. Be very careful when moving the shutter into this position, as undue pressure on the endcap leg could weaken or break it.

STEP 6 (fig. 6)

Once you have the shutter at the proper height, and centered on the opening, adjust the guide rails vertically to make sure the housing is level. Making sure they are equal distance apart at the top and bottom, fasten a screw into the top hole on each guide rail.



Steps 7-12 are only for when the manual tape operation is being mounted on the other side of the wall from the shutter. All other operations go to step 13.

STEP 7 (fig. 7)

Make a vertical 2" long mark alongside the top of end cap on the control side, and 2" across the top of the box. Remove the 2 screws in the top of the guide rails and carefully lower shutter to a stable surface.

STEP 8

On the vertical line just made, measure in towards the window $5/8"$ (16mm) and mark. Then measure down from the horizontal line 1" (25mm) and cross the first mark.

STEP 9 (fig. 8)

On this mark drill a 1" (25mm) hole for the control tape. Control hole must be drilled perfectly straight and level to avoid fraying of the strap.

STEP 10

Insert control tube into hole until it is flush with the inside wall. Make a mark on the tube flush with the outside of the wall. Remove tube and cut off excess tube with a hacksaw. File this cut so that it does not snag the tape. Insert tube into hole so that it is flush on both sides of the wall.

STEP 11 (fig. 9)

Now holding the tape assembly pull out all of the tape until you can see where the tape is hooked onto the tape wheel. Lock tape wheel with a temporary screw to stop the wheel from winding the tape back up. Make a mark on the tape so that you know which side faces out when you reconnect it later. Note the routing of the tape and then remove it from the assembly. Unhook the tape and pull out of the assembly.

STEP 12 (fig. 10)

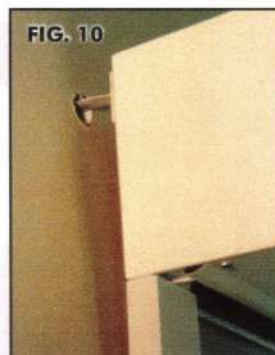
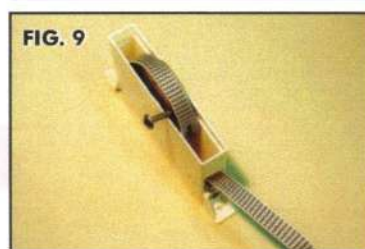
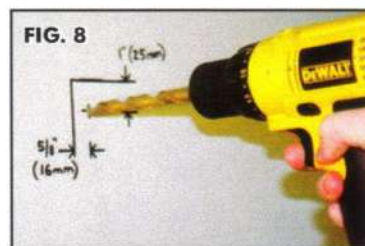
Lift shutter up against the opening and with it slightly leaning out, feed the end of the strap through the control tube. Make sure it is not twisted. Gently lower shutter down guide rails. Be sure to prevent tape from twisting as it is pulled into the box. Re-fasten the top two screws.

STEP 13 (fig. 11)

Double check guide rails are level and equal distance apart top and bottom, fasten shutter using screws provided through the remaining holes. DETERMINE WHICH OF STEPS 14-17 APPLIES TO YOUR APPLICATION.

STEP 14 - FOR TAPE OPERATION MOUNTED ON OTHER SIDE OF WALL TO SHUTTER (fig. 12 & 13)

Where tape came out of control tube, check tape has sufficient clearance. Thread the tape through the tape guide and then fasten it to wall over the $3/4"$ control tube. Making sure the tape is not twisted, feed tape into pull tape assembly under the catch plate and over the support pin and behind the retraction wheel until it comes out the bottom. Now hook tape onto tape wheel making sure



the mark you made is facing out. Pull tape where it comes out of assembly until retraction wheel starts to turn. Still holding tape, remove the temporary screw you put in from tape wheel and slowly feed the tape in to the assembly. Tape should wind up onto wheel. Mount pull tape assembly at the desired height. Snap front cover onto assembly. Test operation. GO TO STEP 18.

STEP 15 - TAPE OPERATION MOUNTED SAME SIDE AS SHUTTER (fig. 14)

Pull tape assembly to desired height and fasten to outside edge of guide rail using drill/tap screws provided or mount to wall. Test operation. GO TO STEP 18.

STEP 16 - CRANK OPERATION (fig. 15)

If crank operation is on the same side as the shutter, the swivel assembly will need to be attached. Slide crank bar up through end cap, making sure it engages with crank assembly. Fasten to shutter using screws provided.

If crank operation is on the other side of the wall from the shutter, remove the shutter housing lid and using a long 1/4" drill bit, place drill bit through the square hole in the crank assembly and drill right on through the wall. Then from the other side of the wall enlarge the hole using a 3/8" or 1/2" bit. Push crank swivel through the hole in the wall and through the crank assembly and fasten to the wall. Swivel bar may need to be cut to length.

Use crank handle to test operation. Mount crank handle clips in the desired position. GO TO STEP 18.

STEP 17 - ELECTRIC MOTOR OPERATION (fig. 16)

Once electric motor has been wired up by an authorized electrician, test shutter operation. See wiring diagram for correct wiring procedures. The limit switch has been factory preset, and should not need to be adjusted. However if for some reason the limits do need adjusting, this may be done using the tool provided. Before the electrician energizes the unit, you need to be sure the bottom bar is in the side rails and not pushed up into the box. Ideally you should be present when the unit is energized. Be sure to read all instructions and warnings before attempting this. GO TO STEP 18.

STEP 18 (fig. 17 & 18)

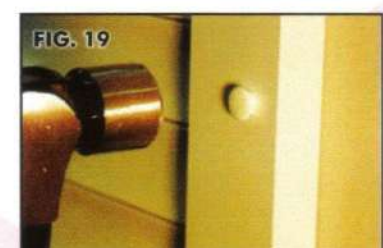
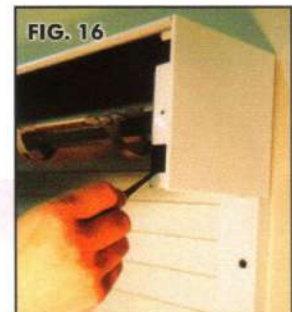
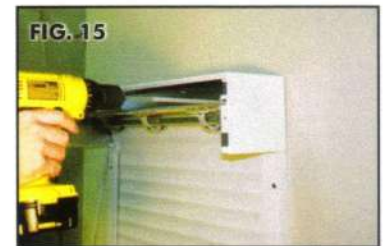
Lower shutter to the bottom. If supplied remove the box support brackets. Remove screws from shutter housing front cover, and carefully remove cover. Fasten the box inside at the top to the wall at about every 18" (460mm). Remove protective film from housing front cover. Replace cover and fasten with screws. Reattach box support bracket if applicable.

STEP 19 (fig. 19)

Carefully hammer plastic hole covers into the large holes on the guide rails.

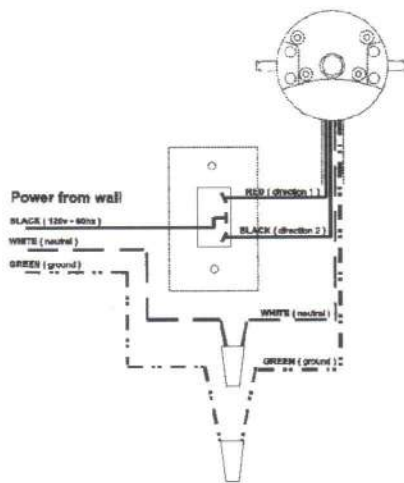
STEP 20

Screw on sill angle at bottom of shutter (if required) to stop bottom bar at end of guide rail.

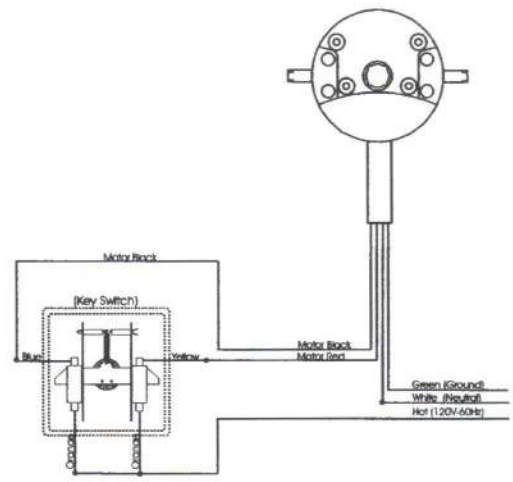


WIRING INSTRUCTIONS FOR MOTORS

Wiring for one motor & one rocker switch



Wiring for one motor & one key switch switch



WARNING

DO NOT wire more than one operator to a single pole switch. A second operator can be wired to the second pole of a double pole double throw (DPDT) switch.

DO NOT connect two switches to an operator without a relay.

Because of the type of motor (Asynchronous with built-in capacitor) and the built-in limit switches, it is important to follow two important recommendations to assure proper operation of the motorized systems - All operators are not universal motors.

DO NOT wire operators in parallel. Parallel wiring means several operators are wired to only one electrical contact per direction of rotation. There will be constant feedback from one motor to another, so stopping points will not be stable and there is a risk of motor burn out. The correct wiring solution is to use a double pole, double throw, centre off switch which would isolate both motors.

DO NOT control one operator from several locations without using a proper controller. These motor control systems are designed to comply with these two basic criteria and assure reliable operation of motorized systems. Non-compliance to these basic principles void the motor warranty.

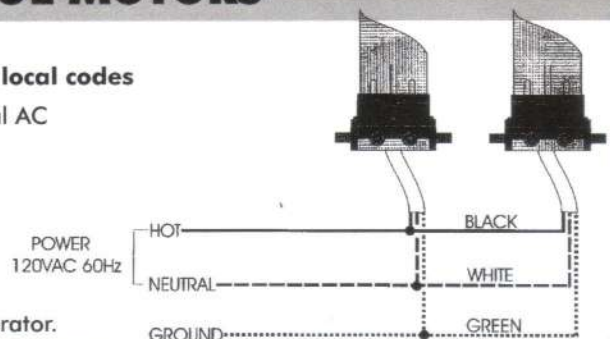
We have a full range of switches, relay systems, remote control systems, group control systems, battery backup systems and electronic sensing edges. Consult factory for further details.

WIRING FOR H_z REMOTE CONTROL MOTORS

H_z Operator Wiring

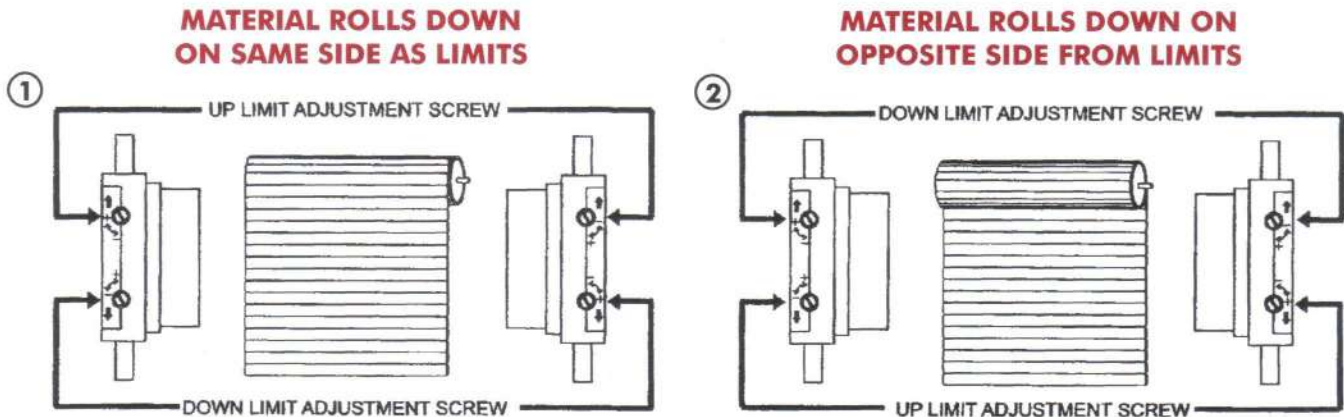
All wiring must conform to the National Electrical Code and local codes

- The H_z operator can be wired to power in parallel (unlike normal AC tubular operators)
- **It is recommended that provisions be made to cut power individually when wiring H_z operator.** This can be in the form of an inline off/on switch, a disconnect plug, or access to the operator cable for use of an installers power cable with off/on switch. The ability to cut the power to each motor individually is required to easily program the receiver in the operator.



LIMIT SWITCH ADJUSTMENT

Your electric roll shutter will leave the factory with the limit switch set for the correct position. However should your roll shutter need adjusting follow the instructions below.



- 1) Identify which limit adjustment screw controls the up limit and which controls the down limit (see above diagrams). It is important to note that the arrows by the limit adjustment screw refer to the tube's rotation. Thus if the material comes off the tube on the back side and the limit adjustment screws face the front (as per diagram 2), the limit adjustment screw facing up controls the down limit and vice versa.
- 2) Turning adjustment screw clockwise will increase the maximum travel in the direction that it controls, and turning it counterclockwise will decrease the maximum travel.
- 3) To set a limit, run the motor in the selected direction.
- 4) If the motor stops on its own before reaching the desired stop, turn the appropriate limit screw positive (clockwise). Every 2 to 3 turns of the limit adjustment screw will allow the motor to travel about 1 inch further. After every few turns of the limit adjustment screw, use the control switch to move the motor to the new limit position. (If the motor does not stop on its own before reaching the desired limit, go to step 6).
- 5) When you are approximately at the desired limit position, use the control switch to run the motor away from the limit 2 to 3 feet, and then back. This will allow you to see precisely where the limit is set. Make small adjustments and repeat.
- 6) If the motor does not stop on its own at least 6 inches before the desired limit position, stop the motor with the control switch 15-18 inches away from the desired stop and then turn the limit adjustment screw 20 revolutions in the negative (counterclockwise) direction. Confirm that the motor is stopped at the limit and set the limit as per steps 4 and 5. If the motor is not stopped at the limit, stop it 15-18 inches away from the desired stop and continue turning the limit adjustment screw counterclockwise (max. 20 revolutions).

NOTE: The motor has a built in thermal cutoff. If after several minutes of use the motor will not run in either direction, allow the motor to cool for approximately 20 minutes.