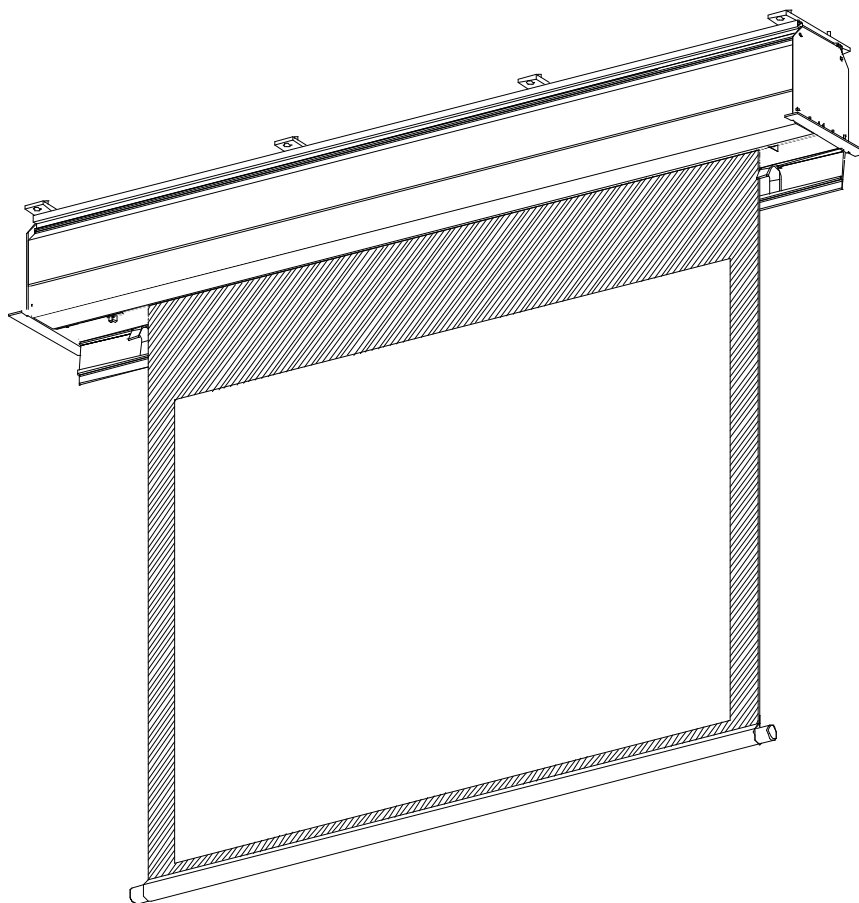


Installation Instructions

Lectric 2 & 4

FLUSH CEILING MOUNT SCREEN FULL TRAP DOOR CLOSURE



IMPORTANT SAFETY INSTRUCTIONS

Basic safety precautions should always be followed; including the following:

- ♣ Read and understand all instructions before proceeding with the installation and operations.
- ♣ Lectric 2 and Lectric 4 meet requirement for fire-resistant and low smoke-producing characteristics suitable for operation in a building's environmental air space, such as above suspended ceilings, in accordance with Section 300-22 (C) of the national Electric Code, ANSI/NFPA 70, and sections 2-128, 12-010(3) and 12-100 of the Canadian Electric Code, Part 1, CSAC22.1.
- ♣ Be certain that the supporting structure is sound and capable of carrying the weight as required.
- ♣ Seek qualified electricians to perform electrical requirements.
- ♣ This permanently connected projection screen must be protected by a fuse or circuit breaker. Make sure that there is a readily disconnect device incorporated on the building installation wiring.
- ♣ Obtain proper lifting mechanism to raise and hold the unit steady for installation.
- ♣ Plan ahead so the installation can go smoothly and efficiently.



IMPORTANT WARNINGS AND CAUTIONS!



WARNING: A WARNING ALERTS THE POSSIBILITY OF SERIOUS INJURY OR DEATH IF THE INSTRUCTIONS ARE NOT FOLLOWED.



CAUTION: A CAUTION ALERTS THE POSSIBILITY OF DAMAGE OR DESTRUCTION OF EQUIPMENT IF THE INSTRUCTIONS ARE NOT FOLLOWED.



WARNING: FAILURE TO READ, THOROUGHLY UNDERSTAND, AND FOLLOW ALL INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY, DAMAGE TO EQUIPMENT, OR VOIDING OF FACTORY WARRANTY! IT IS THE INSTALLER'S RESPONSIBILITY TO MAKE SURE ALL COMPONENTS ARE PROPERLY ASSEMBLED AND INSTALLED USING THE INSTRUCTIONS PROVIDED.



WARNING: FAILURE TO INSTALL ELECTRICAL REQUIREMENTS ACCORDING TO NATIONAL/LOCAL ELECTRICAL CODES AND REGULATIONS MAY CAUSE PREMATURE FAILURE, FIRE HAZARD, ELECTRICAL SHOCK, UNSAFE PRACTICE AND REVOCATION OF USE.

DISCLAIMER

Vutec Corporation intends to make this manual accurate and complete. However, Vutec makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation for use of this product. The information contained in this document is subject to change without notice. Vutec makes no representation of warranty, expressed or implied, regarding the information contained herein. Vutec assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

PRE- INSTALLATION

- 1) Carefully cut and remove packing materials.
- 2) Carefully unpack and inspect the unit for sign of damages.
- 3) Be sure to recheck and measure all pertinent dimensions before installation.
- 4) Most basic tools are required for installation.

SAVE THESE INSTRUCTIONS

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02/20/08 - 06/10 Rev. D
 2-INSTL_D



LECTRIC 2 & 4

FLUSH CEILING MOUNT WITH TRAP DOOR
SELF-SUPPORTED (shown) and TAB-TENSIONED screens

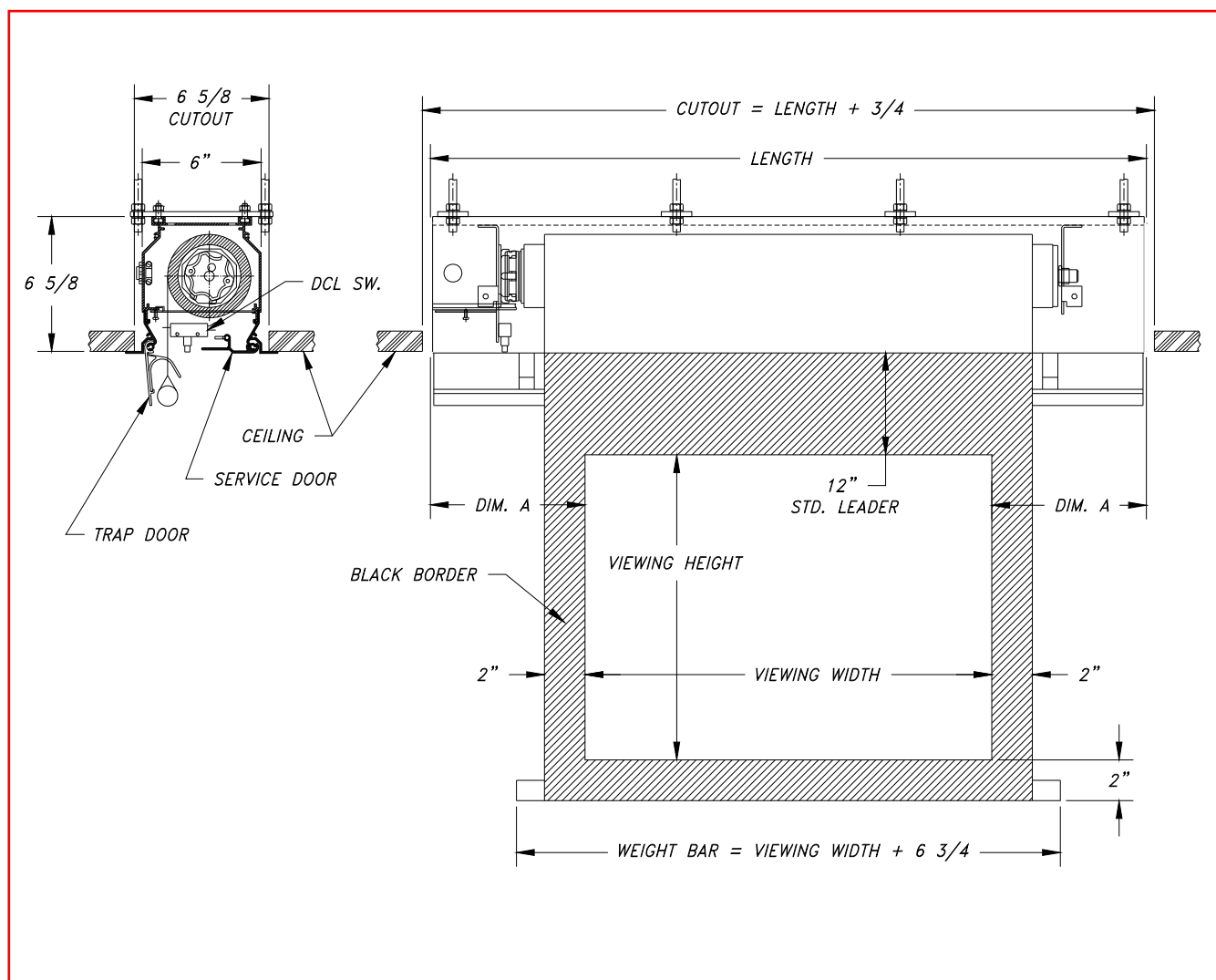


Figure 1

SCREEN TYPE	LENGTH	DIM. A
SELF-SUPPORTED	VIEWING WIDTH + 15 1/2	7 3/4
TAB-TENSIONED	VIEWING WIDTH + 22 1/2	11 1/4

HOUSING INSTALLATION Lectric 2 (Self-supporting fabric) and Lectric 4 (Tab-tensioned fabric) are designed for flush ceiling mount. *These units are suitable for use in environmental air space in accordance with Section 300-22 (C) of the National Electric Code, ANSI/NFPA 70, and Sections 2-128, 12-010(3) and 12-100 of the Canadian Electric Code, Part 1, CSAC22.1.* As shown in Figure 2a, Option 1 is the preferred mounting method which requires access space above the ceiling. The mounting brackets may be placed anywhere along the housing length as desired. However, it is best to evenly space them for uniform weight distribution. It is recommended the end mounting brackets should not be more than 4 inches from each end of housing. The housing has a built-in trim flange around the bottom. Ceiling tiles or drywall may be placed on top of this flange to provide a finished appearance.



WARNING: SUPPORTING STRUCTURE MUST BE CAPABLE OF CARRYING 4 TIMES THE UNIT WEIGHT. CHECK WEIGHT DATA AT THE END OF THIS DOCUMENT.

Threaded rods of 3/8 (10mm) diameter, hex nuts and helical lock washers are to be provided by installers.

After securing the housing in the ceiling check that the housing is level and plumb. Make adjustments as necessary then tighten the hex nuts.

It is recommended that safety cables be added to the housing for additional safety concern. The cables may be looped and tied to end mounting brackets between the housing and bracket (Figure 2c).

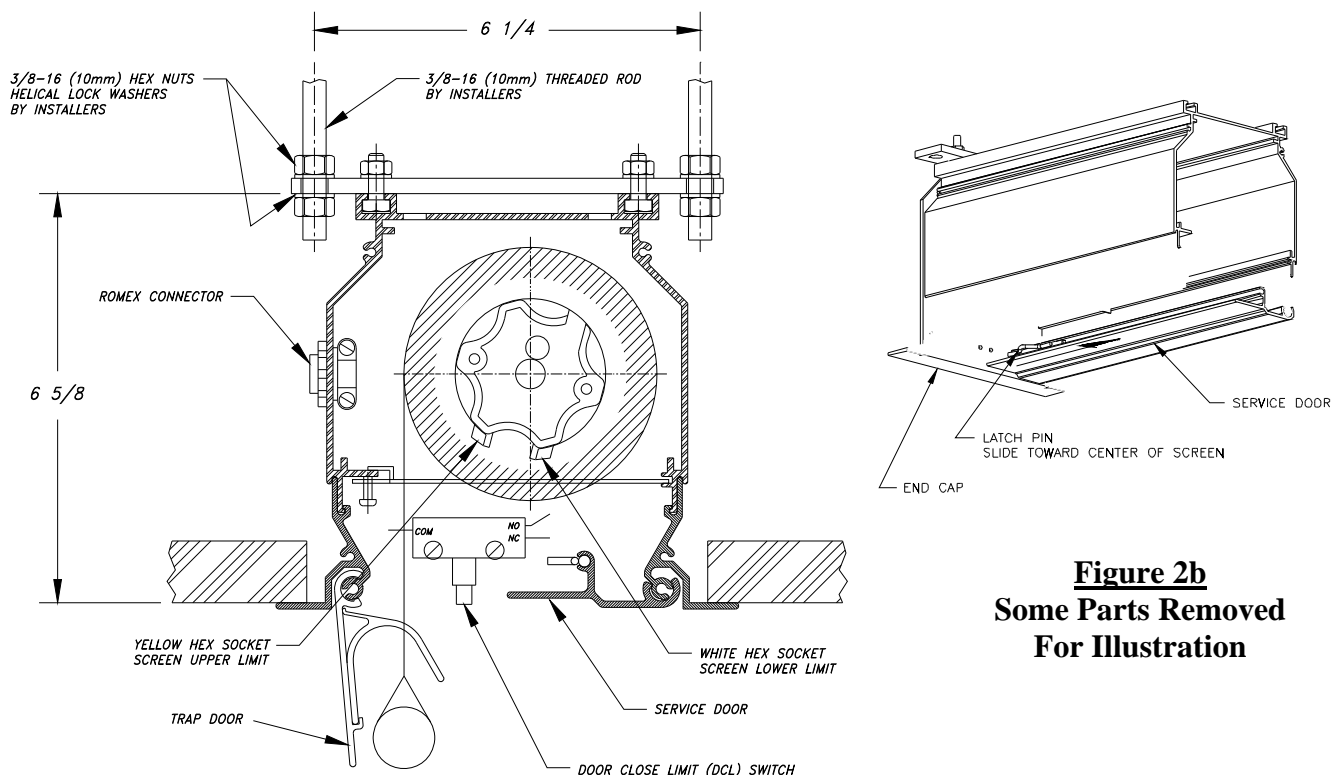


Figure 2a
Option 1 - Suspended Mounting

An alternate mounting method is available as shown in Figure 3. This mounting option must be requested in advance at the time of order placement for the mounting holes to be drilled.

It is the installer responsibility to supply proper mounting hardware for option 2 mounting.

Option 2 mounting requires the screen roller assembly to be removed to gain clearance for the mounting screws along the middle section of the housing.

If the unit was shipped complete with the screen roller assembly installed; proceed to **SCREEN ROLLER ASSEMBLY REMOVAL** Section for instructions.



CAUTION: BE SURE TO PLACE THE CONNECTING WIRES INSIDE BEFORE PROCEEDING WITH THE HOUSING INSTALLATION.

Install the housing once the screen roller assembly is removed. Be sure the housing is level and plumb.

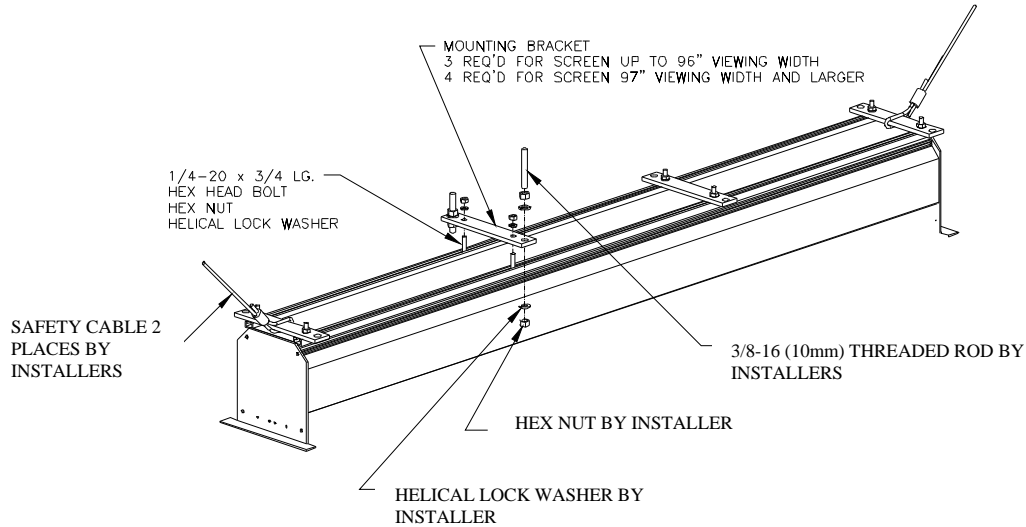


Figure 2c
Option 1 - Suspended Mounting

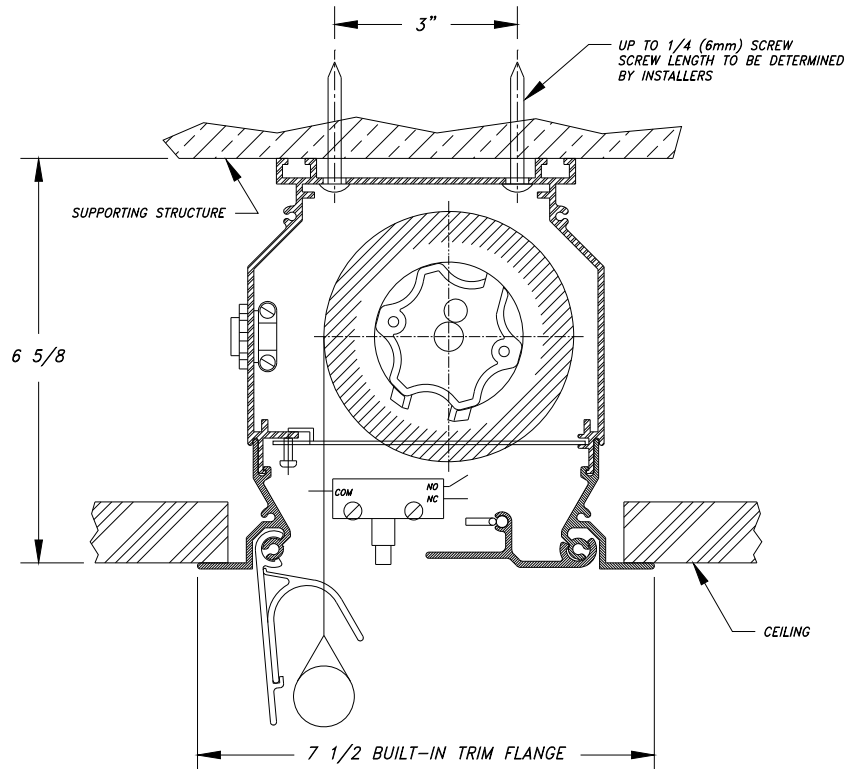


Figure 3
Option 2 - Blind Pocket Mounting

ELECTRICAL CONNECTIONS

If the unit was shipped complete with the motor and roller assembly inside; then there is a 4-wire pigtail provided for a quick hook-up to operate the screen. Refer to Figure 4; make the required connections to the switch for operations.



WARNING: THE INITIAL HOOK-UP AND CALIBRATION PROCEDURES ARE INTENDED TO BE PERFORMED BY A QUALIFIED SERVICE MAN.

Send the screen down just enough for the trap door to open.

At each end of the service door; slide the latch pin (Figure 2b) toward the center to open the door.

Turn off power and disconnect the switch from the pigtail.

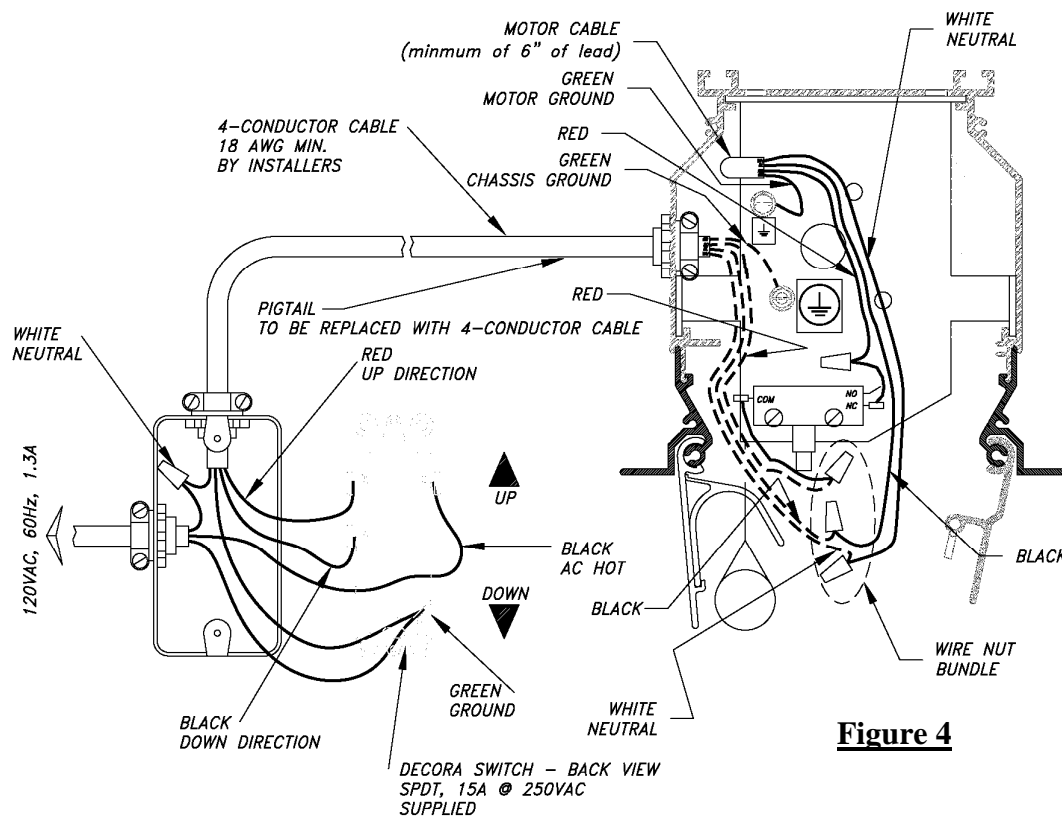


Figure 4

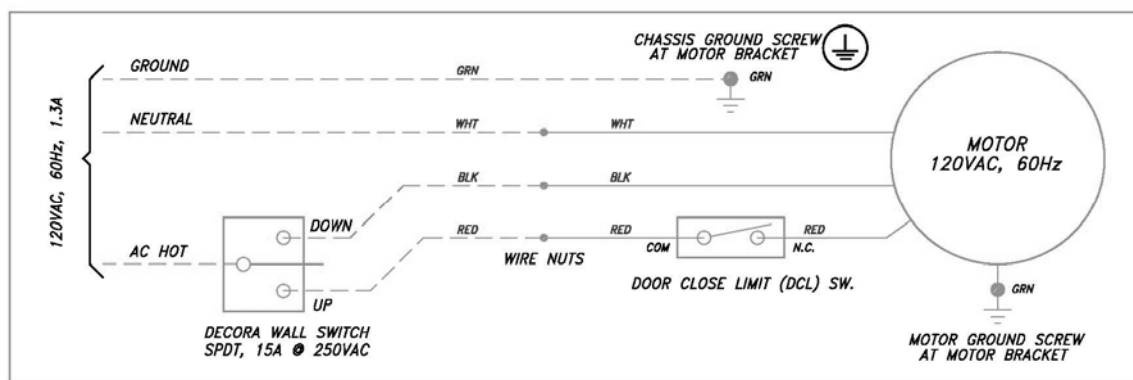
Loosen the screw of the electrical cover (Figures 5a and 5b). Remove the cover to gain access to the electrical compartment. The cover may remain inside the housing. Pull down wire nut bundle (Fig 4), disconnect pigtail.

Connect ground conductor from the 4-conductor cable to chassis ground screw (Fig 4) and hot black, red and white neutral to respect4 wires at wire nut bundle. The cable should go to location where the wall switch is to be located.

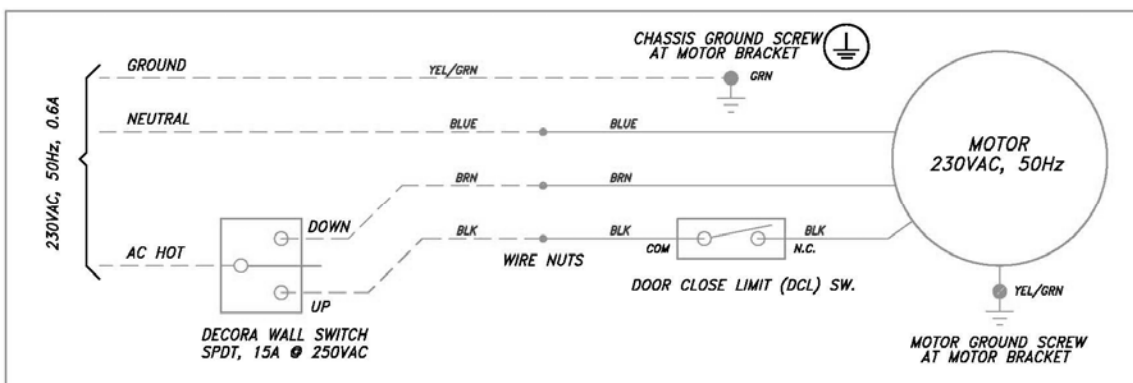
Make connections to the switch as shown in Figure 4. Perform quick test by sending the screen down half way and stop. Send the screen back up without closing the trap door then stop.

Push the wire nuts back up in the electrical compartment and reinstall the electrical cover. Slightly tighten the screw to keep the cover in place.

Close the service door and reinstall the screw at each end.



WIRING DIAGRAM - 120VAC



WIRING DIAGRAM - 220VAC

The screen may also be operated by optional IR/RF remote control, optional 12VDC trigger relay, optional Low Voltage control or optional Home Automation control by AMX, Crestron, etc. Consult Vutec for further details.

FIRST OPERATION



CAUTION: THE FIRST CYCLE DOWN AND UP OF THE SCREEN MUST BE PERFORMED UNDER CONTROL OF AN ATTENDANT. THE MOTOR LIMIT SWITCHES MIGHT BE DISENGAGED DURING SHIPPING WHICH WILL NOT STOP THE SCREEN AUTOMATICALLY AND MAY CAUSE DAMAGE TO THE SCREEN IF IT IS ALLOWED TO COME DOWN BELOW LEADER REQUIREMENT.

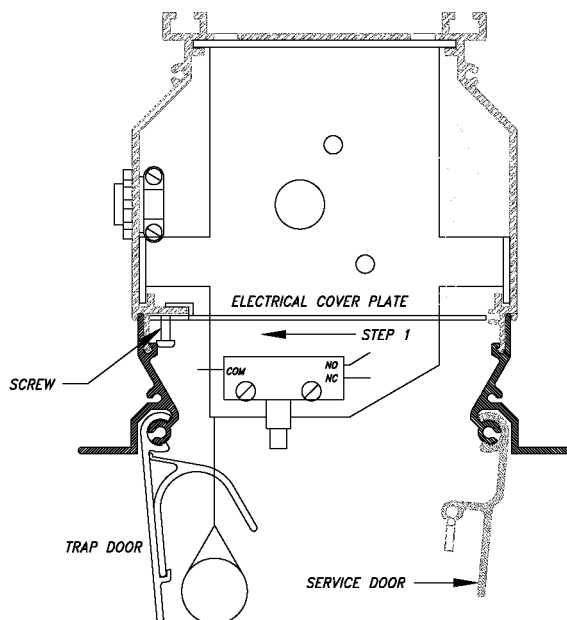
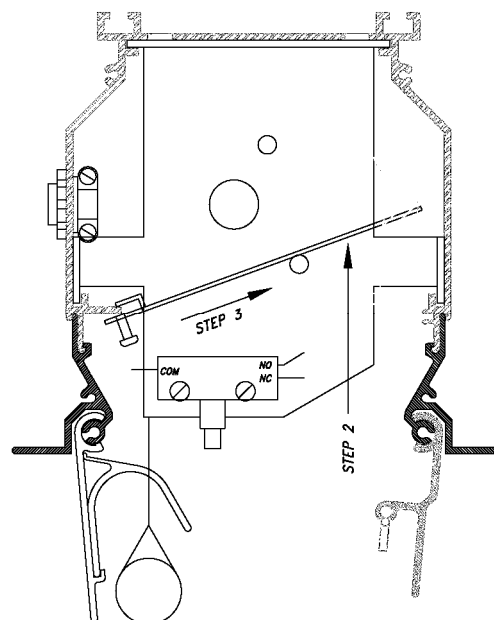
Verify the leader requirement for the installation. Send the screen down and expect it to stop at the leader requirement. Stop if the screen appears to go up on the front side of the roller.

If the screen stopped at the leader requirement; send it back up to close the trap door which in turn trips the DCL switch to stop the motor.

If the screen went below the leader requirement; stop! Send it back up half way, stop! Proceed to **LOWER LIMIT ADJUSTMENT** Section for instructions.



CAUTION: THE MOTOR IS EQUIPPED WITH THERMAL OVERLOAD PROTECTION DEVICE. OPERATING THE SCREEN WITHOUT ALLOWING SUFFICIENT OFF TIME COULD RESULT IN THERMAL OVERLOAD SHUT DOWN. IF THIS OCCURS, SIMPLY ALLOW THE MOTOR TO COOL DOWN (APPROXIMATELY 15 MINUTES) BEFORE RESUMING NORMAL OPERATION.

**Figure 5a****Figure 5b****UPPER LIMIT ADJUSTMENT**

The upper limit for the screen is when the trap door closes to trip the DCL switch to shut off the motor. The DCL switch may be moved up or down to adjust the closeness of the trap door. Make adjustments as necessary.

⚠ CAUTION: BE SURE THE MOTOR IS SHUT OFF WHEN THE TRAP DOOR IS CLOSED. IF THE MOTOR STILL RUNNING (HUMMING) THEN THE DCL SWITCH MUST BE ADJUSTED TO SHUT OFF THE MOTOR.

⚠ WARNING: FAILURE TO CHECK AND CORRECT THE MOTOR SHUT OFF CONDITION AFTER THE TRAP DOOR IS CLOSED MAY CAUSE SEVERE DAMAGE TO THE MOTOR AND VOID THE WARRANTY.

The second upper limit for the screen is set by the motor limit switch (Yellow button or Yellow hex socket).

If the screen missed the hooks of the trap door; it should come up close the screen roller and stop. It should not be allowed to jam between the housing and the roller.

LOWER LIMIT ADJUSTMENT

⚠ WARNING: UNLESS OTHERWISE SPECIFIED AND ORDERED, STANDARD LEADER DROP IS 12 INCHES MAXIMUM. EXCEEDING THE MAXIMUM MAY CAUSE THE SCREEN TO FALL OFF THE ROLLER AND VOID THE WARRANTY.

PUSH BUTTON LIMIT SWITCH

Key features of the push button limit switch:

- ⇒ The limit switch is a spring-loaded button. It works exactly like a push on/off pen.
- ⇒ **Button pushed in** - motor limit switch disengaged, free running, screen must be stopped by control switch.
- ⇒ **Button pushed out** - motor limit switch is engaged to stop the screen at the point at which the screen was stopped and the limit switch pushed out.

Send the screen down to the lower limit and it should stop automatically. Return the control switch to center off position.

Push the White button in.

Send the screen up or down to the new lower limit and stop. Push the White button to pop out. The lower limit has been set.

Send the screen up few inches and stop. Send it back down and expect it to stop at the desired lower limit.

Repeat the steps as necessary until the desired lower limit is satisfied.

HEX SOCKET LIMIT SWITCH

Key features of the hex socket (Figures 2a and 6) limit switch:

- ⇒ Each full turn (360 degrees) of the hex socket cause the screen to travel approximately 3/4 inch.
- ⇒ As the hex socket is turning, the screen will move only in the direction of increasing travel.
Hint: Going down direction (lower limit) will see the screen move as more down being adjusted but not the opposite.

MORE SCREEN DROP

Send the screen down to the lower limit and it should stop automatically. Leave the control switch on.

Turn the White hex socket one full turn **clockwise** and expect the screen to move down 3/4 inch. If the screen did not move; turn the hex socket two full turns in the opposite direction (**counter-clockwise**) and expect the screen to move down 3/4 inch.

Determine **counter-clockwise** or **clockwise** turn. Continue to turn the White hex socket in the direction that would move the screen down. Stop turning when the screen reaches the desired lower limit.

LESS SCREEN DROP

Send the screen down to the lower limit and it should stop automatically. Leave the control switch on.

Turn the White hex socket one full turn **counter-clockwise** and expect the screen to remain in position. If the screen did move down 3/4 inch; **clockwise** turn will be used for the adjustment.

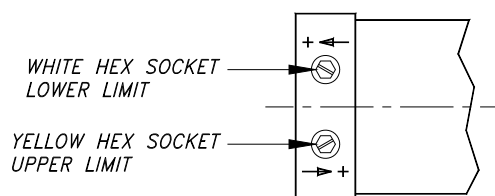
Determine **clockwise** or **counter-clockwise** turn. Determine the number of turns required to stop the screen above the desired lower limit.

Turn the White hex socket in the direction that has been determined to make it stop above the desired lower limit.

Send the screen up half way and stop. Send it down and expect it to stop above the desired lower limit.

If the screen stop is still below the desired lower limit; repeat the steps above until the screen has stopped above the desired lower limit.

When the screen stops above the desired lower limit; proceed to **MORE SCREEN DROP** part to lower the screen to the desired lower limit.



USE 5/32 (4mm) HEX KEY TO TURN
OR SMALL FLAT BLADE SCREWDRIVER

Figure 6

SCREEN ROLLER ASSEMBLY REMOVAL

PRIOR TO INSTALLATION

Support the unit from under end cap flanges (Figure 7) and clear of trap door travel.

Referring to Figure 4, connect the switch to operate the screen.

Send the screen down just enough for the trap door to open. Proceed to next section.

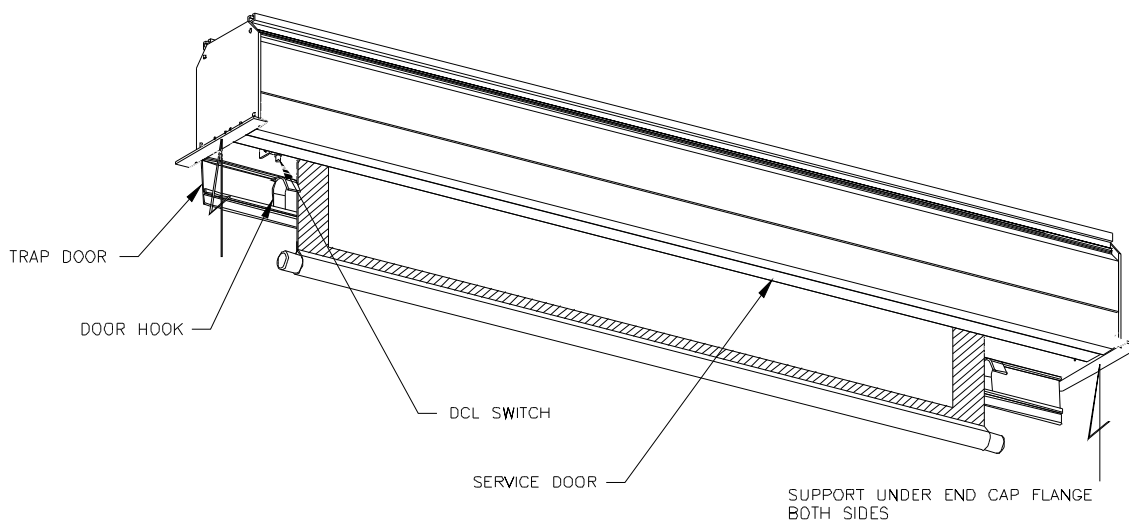


Figure 7

INSTALLED IN CEILING

Send the screen down just enough for the trap door to open.

At each end of the service door; slide the latch pin (Figure 2b) toward the center to open the door.

Send the screen back up without allowing the screen to catch the door hooks. Stop the screen (Figure 8) just above the door hooks.

Turn off power to the screen.

Referring to Figures 5a and 5b, open the electrical cover plate, and pull down the wire nuts bundle.

Disconnect wires from all wire nuts. Use a 5/16" hex key to disconnect motor ground from top ground screw shown and field chassis ground shown in Fig. 4.

Using 1/8 (3mm) hex key to loosen the set screws of the Idler bracket.

Support the full length of the screen roller assembly (Figure 9) while moving the Idler bracket to the right. Move the Idler bracket off the shaft of the roller.

Move the screen roller assembly including the motor to the right just enough to clear the motor head from the head bracket (Figure 9). Lower the screen roller assembly out of the housing.

Reinstalling the screen roller assembly with the motor included is the reverse of the removal. Be sure the limit switches facing down as shown in Figure 2a. Re-wire following Fig 4..



CAUTION: REINSTALL OF THE SCREEN ROLLER ASSEMBLY MAY REQUIRE LOWER LIMIT ADJUSTMENTS.

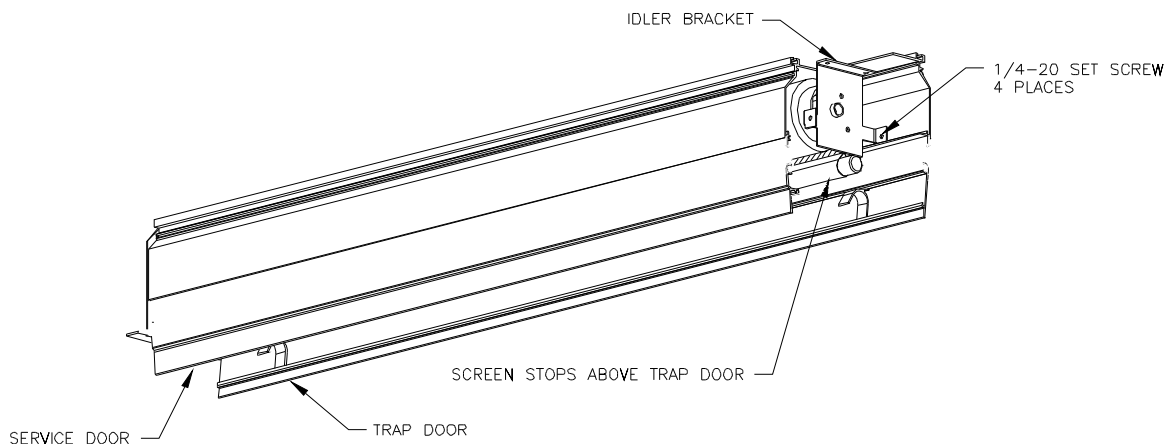
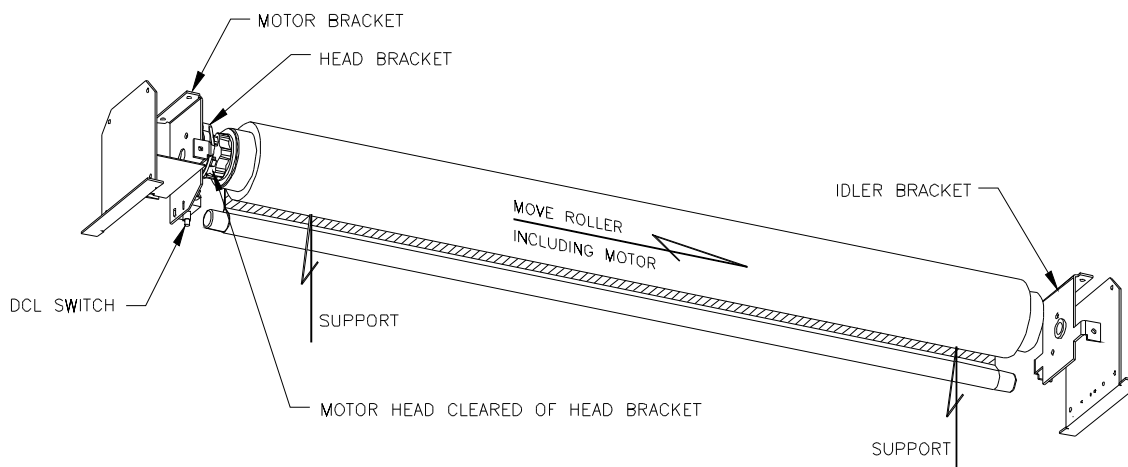


Figure 8



Cut out of housing and end cap removed to illustrate details

Figure 9

Housing components removed to illustrate details

WEIGHT DATA

Some standard viewing sizes are shown. Extrapolate the information for size not showing as necessary or contact Vutec for details. Divide lbs by 2.2 to obtain kgs.

Viewing size (4:3) (HxW)	Weight (lbs)	Viewing size (16:9) (HxW)	Weight (lbs)
60 x 80	88.7	50.5 x 89.75	95.2
72 x 96	103.5	60 x 107	110.5
90 x 120	126.7	72 x 128	129.8
108 x 144	151.3	78 x 138.5	139.8

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Door remains closed and screen will not come down. Motor does not hum.	a- Check breaker fuse. b- Check wall switch. c- Push button limit switches might be tripped. d- Thermal overload tripped. e- Defect4 motor or wall switch.	a- Replace blown fuse. b- Check wall switch connections. Bypassing wall switch as a test. c- Manually open trap door. See Electrical to reset push button limit switch. Reset Yellow button for lower limit. d- Let motor cool down for 15 minutes. e- Replace motor or wall switch.
Motor hums.	f- Temporary binding. g- Capacitor burned out.	f- Manually open trap door check for binding. g- Replace motor.
Screen will not go up. Motor does not hum.	a- Check breaker fuse. b- Check wall switch. c- Push button limit switches might be tripped. d- Thermal overload tripped. e- Defect4 motor or wall switch.	a- Replace blown fuse. b- Check wall switch connections. Bypassing wall switch as a test. c- See Electrical to reset push button limit switch. Reset White button for upper limit. d- Let motor cool down for 15 minutes. e- Replace motor or wall switch.
Motor hums.	f- Temporary binding. g- Capacitor burned out.	f- Check for binding of roller assembly. g- Replace motor.
Coasting.	a- Defect4 brake.	a- Replace motor.
Trap door closed and motor hums. Trap door not quite closed but motor stop.	a- Check Door Close Limit (DCL) switch	a- Adjust DCL switch by moving it up or down.
Noisy operations.	a- Cyclic noise (squeaky) pattern. b- Gear noise	a- Lubricate roller shaft and bearing at Idler bracket with typical oil. b- Replace motor.

ACCESSORIES INCLUDED

- 1 SPDT DECORA SWITCH**
- 1 SWITCH COVER PLATE**
- 4 MOUNTING BRACKET**
- 8 1/4-20 X 1" LONG HEX HEAD BOLT**
- 8 HELICAL LOCK WASHER FOR 1/4 BOLT**
- 8 1/4-20 HEX NUT**