



INSTRUCTION BOOK FOR
Tensioned Advantage® Electrol®

DA-LITE®

Original Instructions

Disclaimer

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Important Safety Instructions

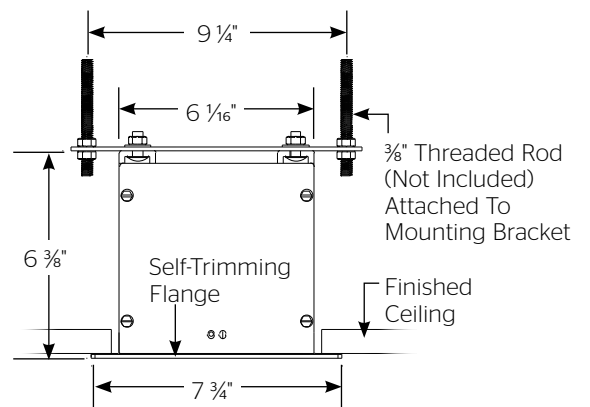
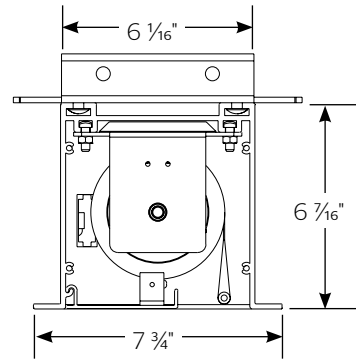
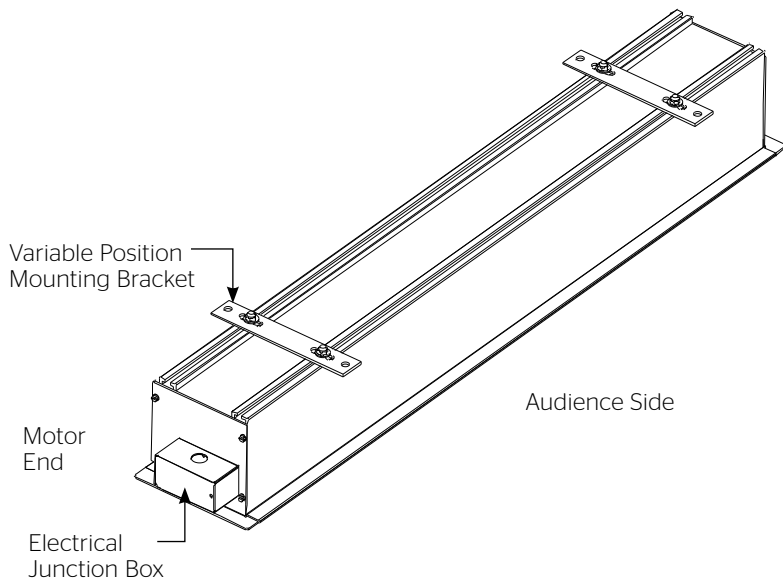
When using your video equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions before using.
2. Maximum surrounding air temperature 122°F (50°C).
3. Main disconnect must be incorporated in the fixed wiring in accordance with the wiring rules.
4. Rated for indoor use only.
5. Use copper rated conductors rated 167°F (75°C) or higher.
6. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid hazard.
7. Supplied drive is only intended for use in Da-Lite screen models Advantage, Contour, and Cosmopolitan.
8. Position the cord so that it will not be tripped over, pulled, or contact hot surfaces.
9. If an extension cord is necessary, a cord with a current rating at least equal to that of the appliance should be used. Cords rated for less amperage than the appliance may overheat.
10. To reduce the risk of electric shock, do not disassemble this appliance. Contact an authorized service dealer when repair work is required. Incorrect reassembly can cause electric shock when the appliance is used subsequently.
11. The use of an accessory attachment not recommended by the manufacturer may cause a risk of fire, electric shock, or injury to persons.
12. Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support the weight of all equipment. Reinforce the structure as required before installing the component.
13. Use this projection screen only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.

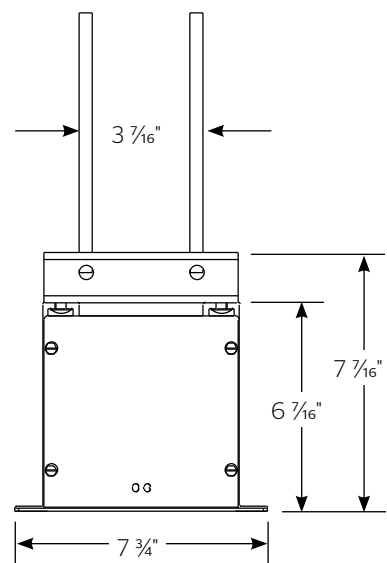
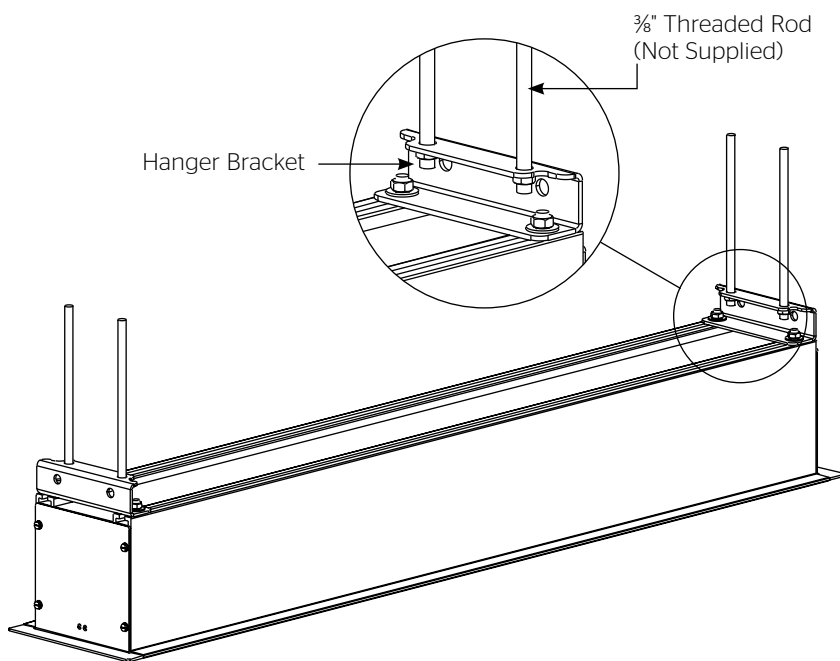
Save These Instructions

Tensioned Advantage® Electrol® Suggested Methods of Installation

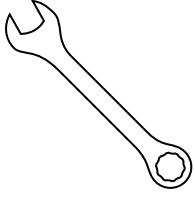
Method 1



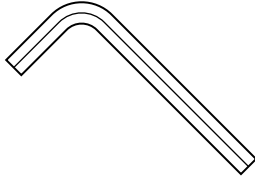
Method 2



Tools Required for Installation



1/2" and 5/16" Open Wrench
or Socket Driver



1/8" Hex Key
(included)

Pre-Installation

1. Carefully unpack case from shipping carton.
2. Set aside the Installation Kit. Items inside will be used during installation.
3. Make sure to recheck measurement of case for proper installation clearance.
4. Remove any protective foam covering the outside of the case.
5. For shipping purposes, foam is also inserted between the roller brackets and end caps (Figure 1). Remove these foam blocks from the ends.
6. Remove the hanger brackets from the top of the case using a 1/2" wrench. Do not discard the hardware; it will be used during case installation to re-attach the hanger brackets for mounting.

Case Installation

1. Hang case and attach to support structure with bolts. See Suggested Methods of Installation.
2. Tighten bolts until trim flange is flush with ceiling.
NOTE: For proper operation, case must be levelled side to side and front to back.
3. Remove 2 screws to open junction box. Install electrical connections that apply to your unit. Make sure to review the wiring diagram for proper hook up. Replace junction box cover and secure with 2 screws.

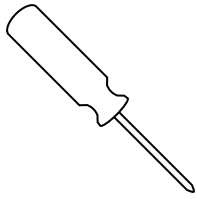
NOTE: Must be installed in accordance with the requirements of the Local Building Codes, the Canadian Electrical Code (CEC), CAN/CSA C22.1 and the National Electric Code (NEC), NFPA 70.

If your case was ordered in advance of the screen and roller assembly, your installation is now complete. Continue to step 4 if your Tensioned Advantage Electrol was ordered as a complete unit.

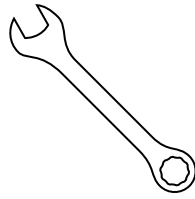
4. Use a 5/16" socket or wrench and the supplied 1/8" hex key to remove silver shipping brackets attached to slat and screen case.
5. Test installation by running screen up and down a few times. Be prepared to stop screen should any objects obstruct the movement of the screen. To prevent damage to the motor, the standard duty cycle is 1 minute on and 3 minutes off.

Screen And Roller Assembly Installation

Tools required for screen and roller assembly:



#2 Phillips Screwdriver



1/2", 1/4" and 5/16"
Open Wrench
or Socket Driver

Follow these steps if your screen and roller assembly was ordered separately from the case.

1. Remove the access door. First, remove the 2 screws from the ends using a #2 Phillips screwdriver. Be sure to support the door during this step to avoid injury. Then lift the door slightly and pull away from the edge of the case (Figure 1).
2. Carefully unpack screen and roller assembly. Use a 5/16" socket or wrench and a #2 Phillips Screwdriver to remove shipping brackets attached to slat. Remove fabric and roller assembly from shipping board using a 1/2" wrench. Leave packing paper on roller.
3. To install screen and roller assembly, loosen (but do not remove) four 1/4-20 nuts securing pin end bracket (opposite end from the junction box) to the case housing. Slide the pin end bracket towards the end of the case (Figure 2).
4. Insert the motor end square shaft into the motor end bracket (junction box end) and secure with the cotter pin (Figure 2).
5. Moving to the pin end of the case, slide the pin end bracket until the hole fits securely over the pin and secure with the cotter pin. Tighten the 1/4-20 nuts on the pin end bracket securely (Figure 2).
6. Complete electrical hook-up by snapping motor wire connector into case connector (Figure 2).
8. Test installation by running screen up and down a few times. Be prepared to stop screen should any objects obstruct the movement of the screen. To prevent damage to the motor, the standard duty cycle is 1 minute on and 3 minutes off.
9. Re-install the access door. Procedure is the reverse of step 1 listed above.

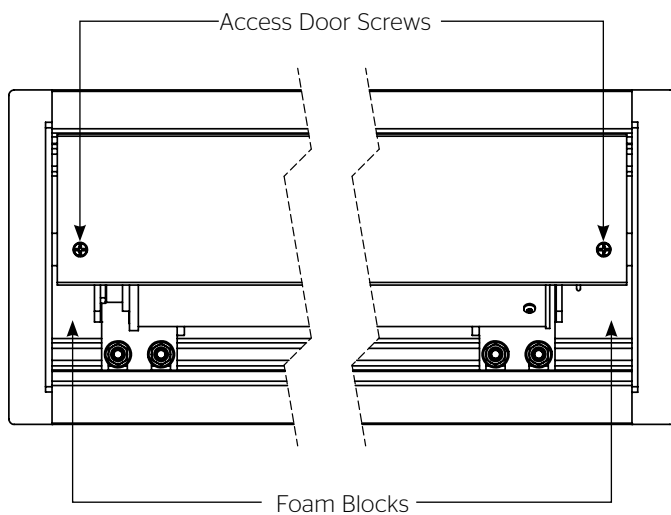


Figure 1

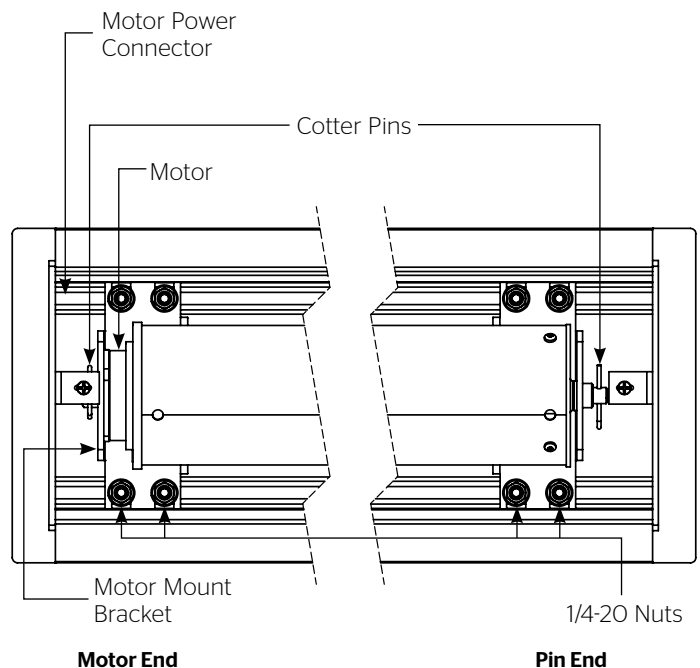


Figure 2

Screen And Roller Assembly Installation (continued)

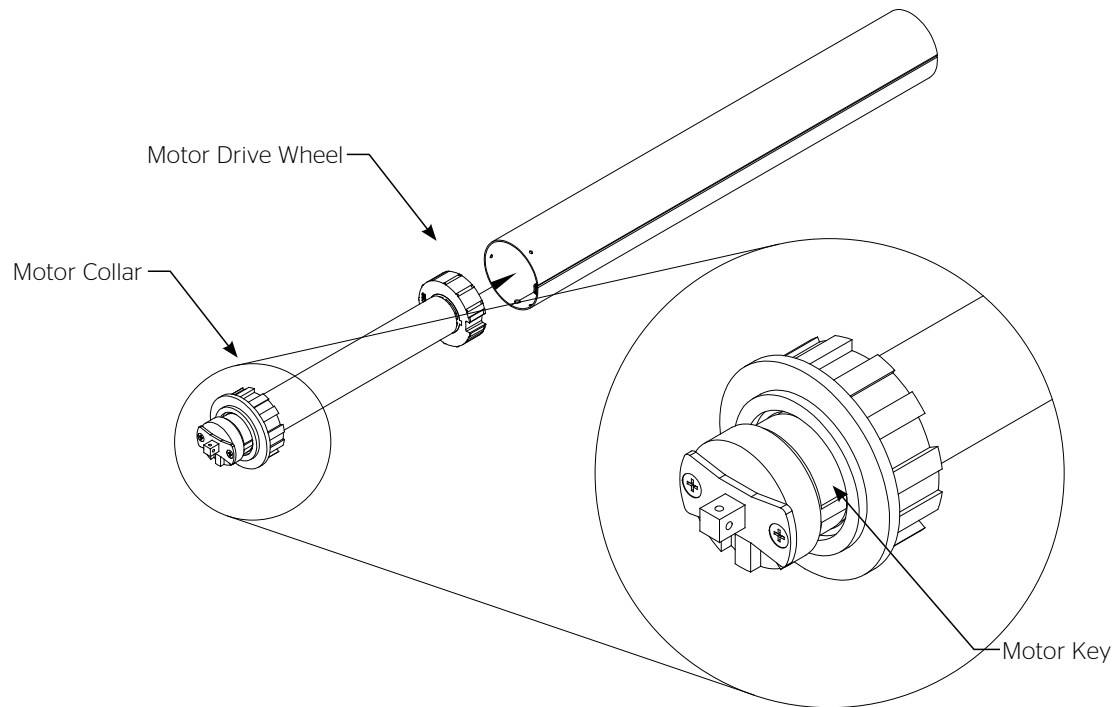
Replacement Motor Instruction

Rated torque of model DL45E-10/26 is 10 N/m with a duty cycle of 1 min. on / 3 min. off.

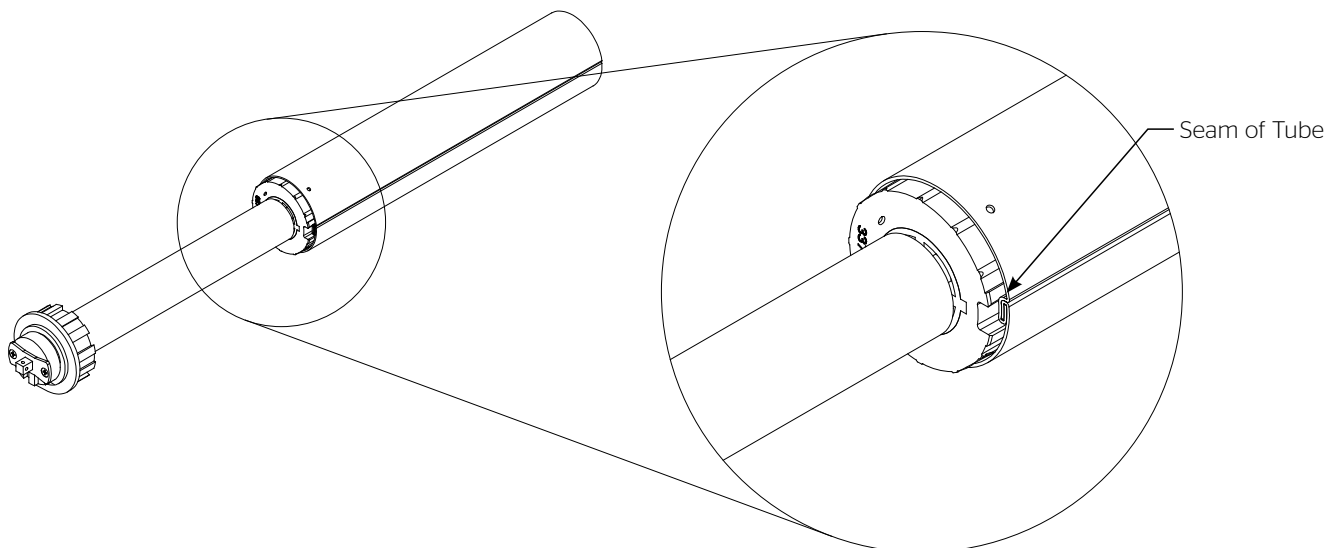
Rated torque of model DL45EQ-6/28 is 6 N/m with a duty cycle of 1 min. on / 3 min. off.

Motor is intended for use in Da-Lite screens incorporating a 3.00" and 3.25" roller diameter.

1. Make sure motor collar is on motor.
2. Collars keyway must line up with the key on the motor.
3. Secure motor drive wheel on output shaft of motor and insert retaining clip.



4. Insert motor in tube with seam of tube lined up with drive wheel and collar cutouts.

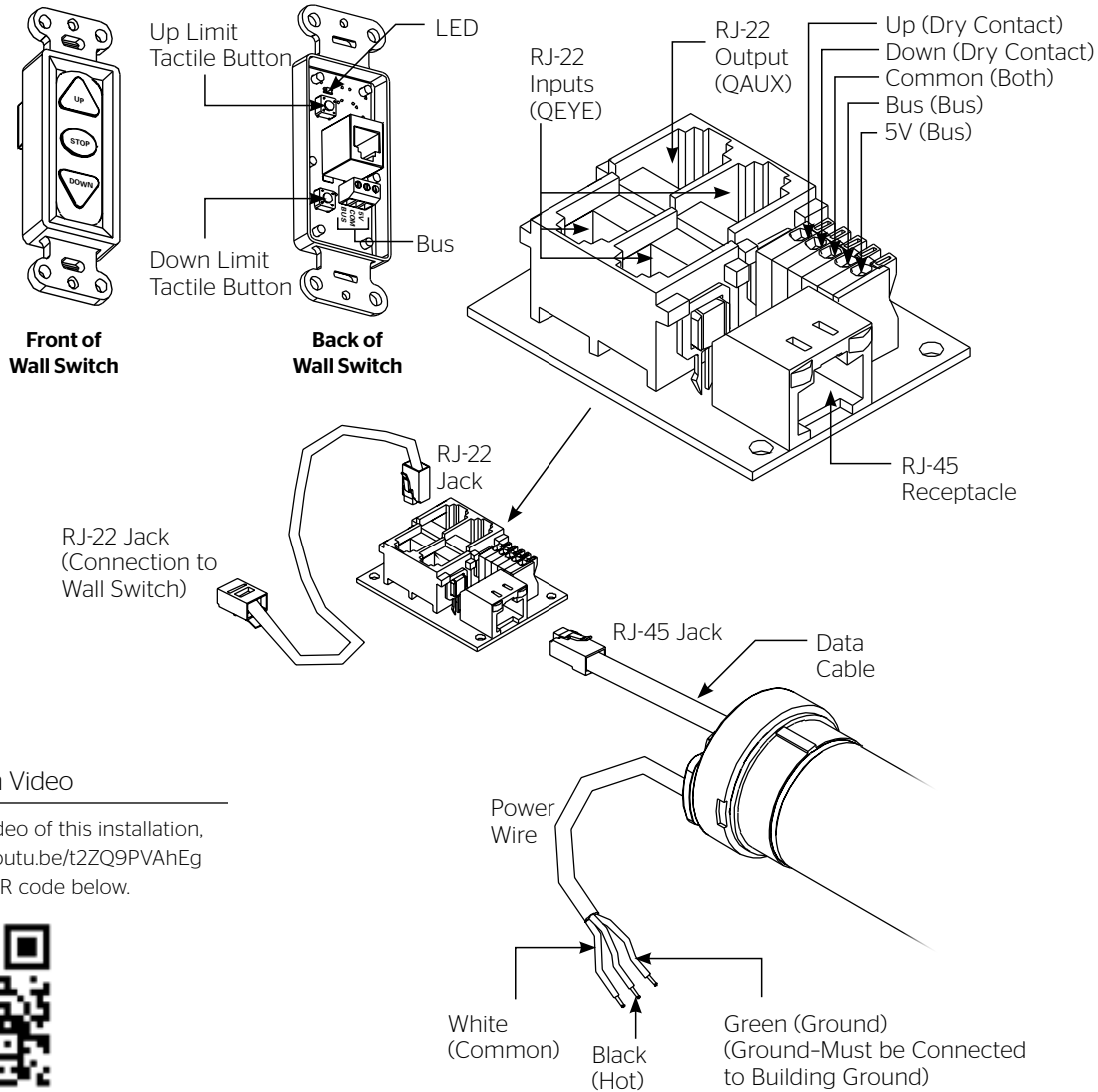


Tensioned Advantage® Electrol® Installation for 120V Screens

120V Wiring Diagram

3-conductor 20-24 gauge wire can be used in place of the supplied RJ-14 cable to connect the wall switch. Connect the BUS terminals on the wall switch to the corresponding BUS terminals on the splitter board.

IMPORTANT NOTE: The wall switch is REQUIRED to make any limit switch adjustments, EVEN if a third party control system is used. Therefore, it is advised to wire the switch or provide a 3-conductor connection that is accessible.



Installation Video

To view a video of this installation, visit <http://youtu.be/t2ZQ9PVAhEg> or use the QR code below.



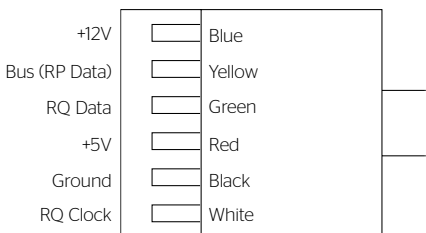
Power Input 120VAC / 60Hz

RJ-14 Pin-Outs (Tab Is Facing Down)



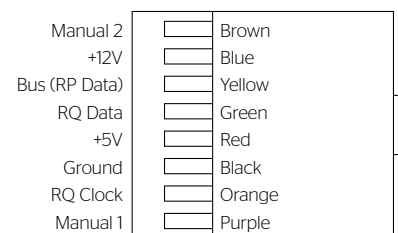
Supplied RJ-14 cable

RJ-22 Pin-Outs (Tab Is Facing Down)



Standard RJ-22 can be used in place of RJ-14 cable

RJ-45 Pin-Outs (Tab Is Facing Down)

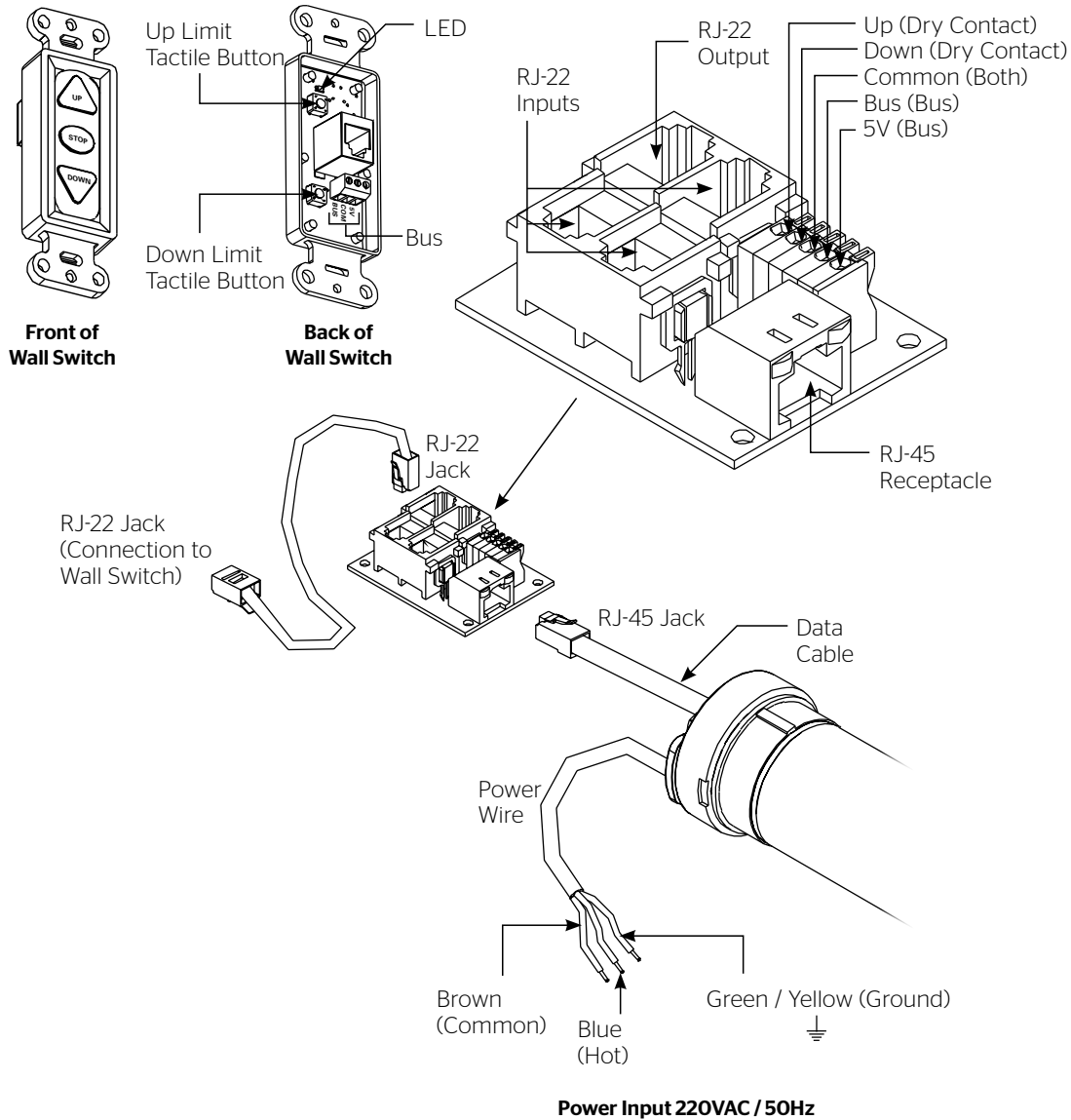


Tensioned Advantage® Electrol® Installation for 220V Screens

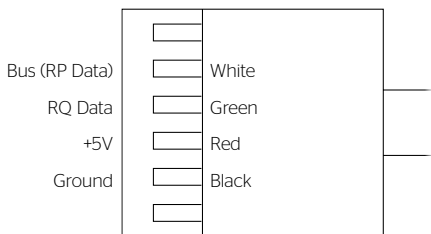
220V Wiring Diagram with Operation & Limit Adjustment Wall Switch

3-conductor 20-24 gauge wire can be used in place of the supplied RJ-14 cable to connect the wall switch. Connect the BUS terminals on the wall switch to the corresponding BUS terminals on the splitter board.

IMPORTANT NOTE: The wall switch is REQUIRED to make any limit switch adjustments, EVEN if a third party control system is used. Therefore, it is advised to wire the switch or provide a 3-conductor connection that is accessible.

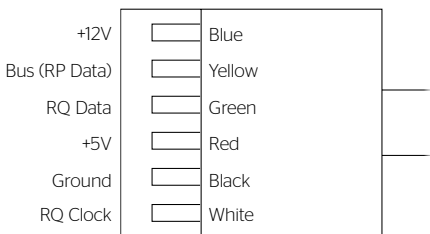


RJ-14 Pin-Outs (Tab Is Facing Down)



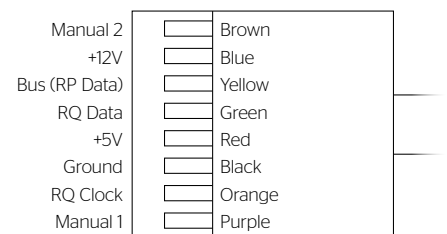
Supplied RJ-14 cable

RJ-22 Pin-Outs (Tab Is Facing Down)



Standard RJ-22 can be used in place of RJ-14 cable

RJ-45 Pin-Outs (Tab Is Facing Down)

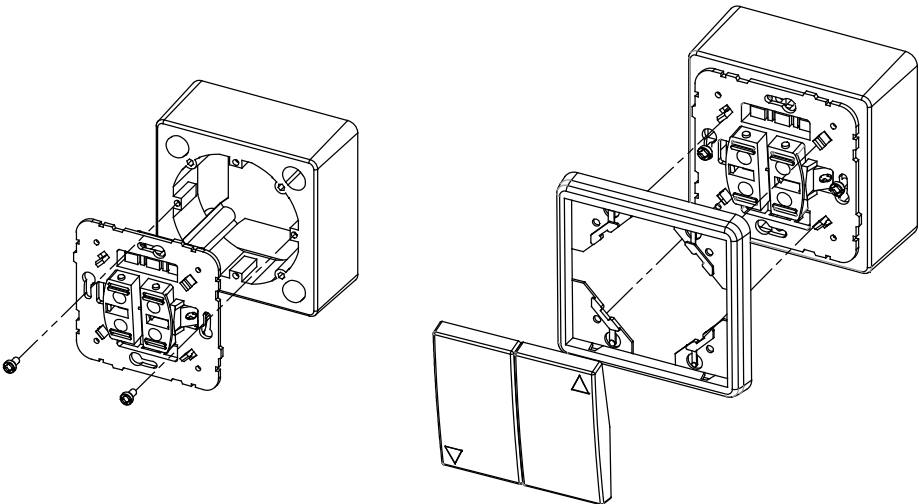
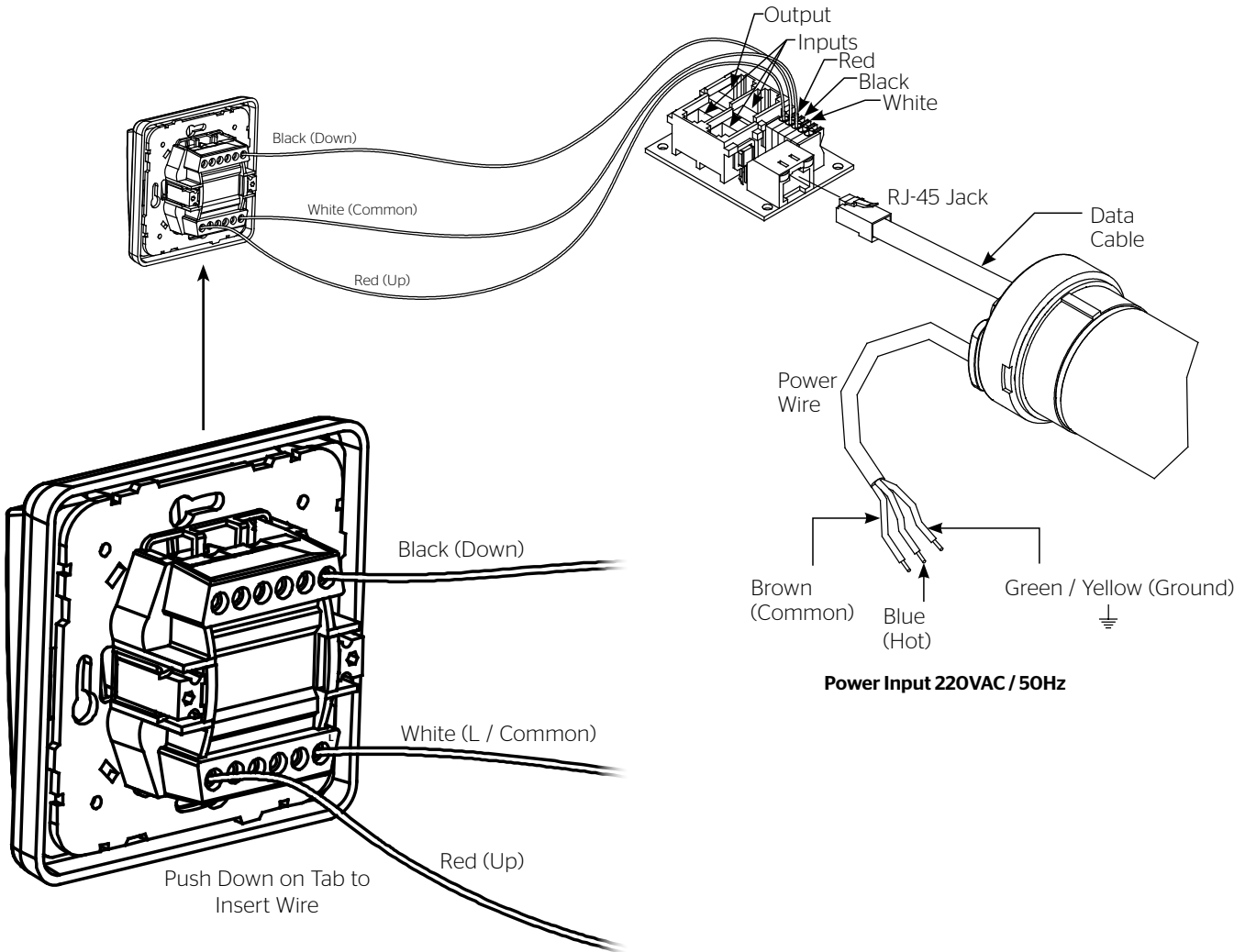


Tensioned Advantage® Electrol® Installation for 220V Screens (continued)

220V Wiring Diagram with European Style Wall Switch

Use 3-conductor 20-24 gauge wire for wall switch connections.

IMPORTANT NOTE: The European style wall switch is for operation only and CANNOT be used to make limit switch adjustments. Therefore, it is advised to wire the limit adjustment switch or provide a 3-conductor connection that is accessible.



Optional Built-In Video Projector Interface

⚠ CAUTION: The projector must be turned off before connecting the trigger wires to the projector. Failure to do so may damage the controller.

⚠ ATTENTION: Le projecteur doit être éteint avant de brancher les fils de déclenchement à celui-ci. Tout manquement à cette instruction pourrait endommager le contrôleur.

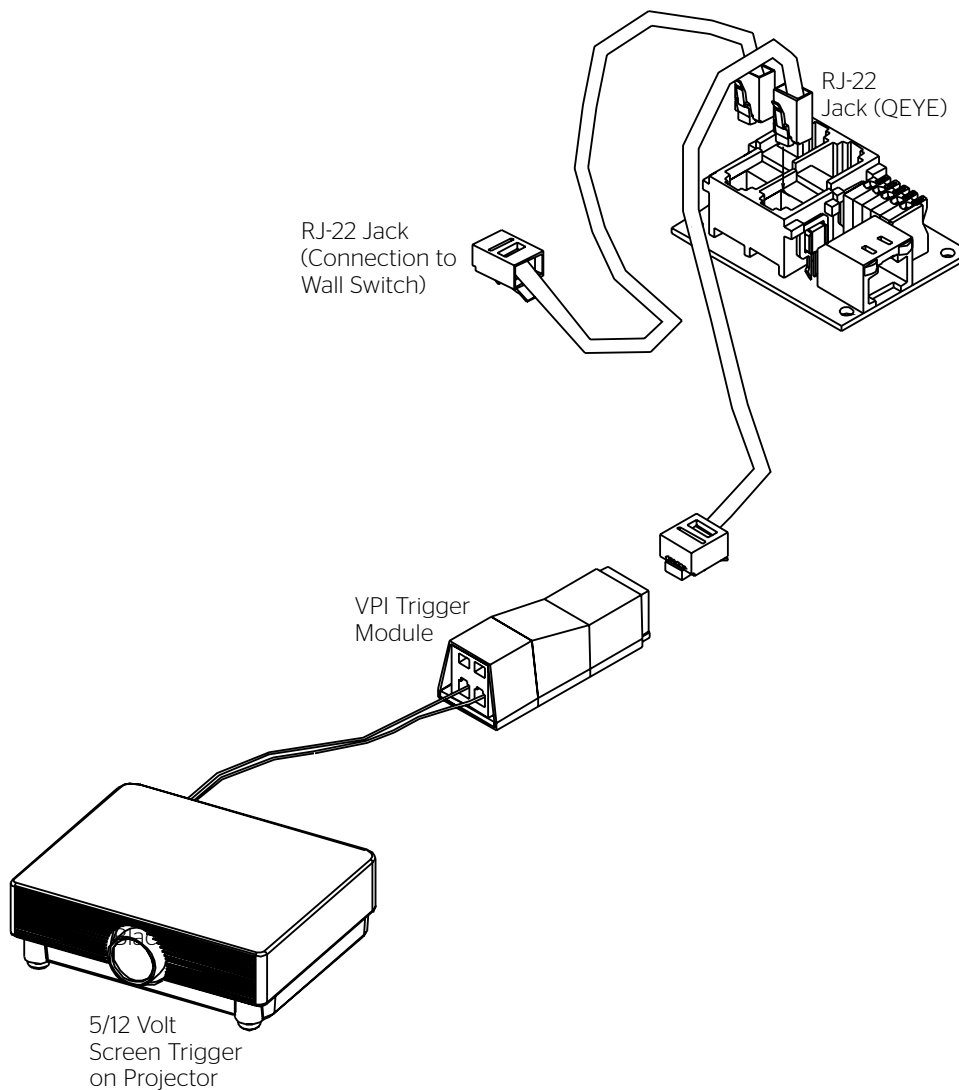
Use 2-conductor 18-24 gauge wire to extend the low voltage connection from the projector's 5 or 12-volt screen trigger output to the length required to reach the VPI.

NOTE: When extending the low voltage connection from the projector's screen trigger output polarity does not matter. **The red and black wires from the VPI are interchangeable.**

IMPORTANT NOTE: The wall switch is REQUIRED to make any limit switch adjustments, EVEN if a third party control system is used. Therefore, it is advised to wire the switch or provide a 3-conductor connection that is accessible.

3-conductor 20-24 gauge wire can be used in place of the supplied RJ-14 cable to connect the wall switch. Connect the BUS terminals on the wall switch to the corresponding BUS terminals on the splitter board.

See 120V or 220V wiring diagram for complete wiring instructions.



Optional Built-In SCB-100

BUILT-IN SCB-100 CONTROL

Locate the 11-pin connector in the junction box of the screen.

RS-232 PORTS

The SCB-100 has two RS-232 ports. Both ports have three wire connections.

- RX-Data being received into the SCB-100
- TX-Data going out of the SCB-100
- G-Ground

WALL SWITCH

The wall switch terminal is a dry contact closure. Do not apply voltage to this terminal or the control will be damaged.

1. Install the wall switch where desired.
2. Use 3-conductor 20-24 gauge wire to extend the switch wire to the required length.

12VDC OUT

The SCB-100 supplies power to the optional NET-100 network adaptor. If you are using the NET-100 adaptor, connect the power wire from the NET-100 to the 12VDC output terminal.

RS-232 COMMUNICATIONS

The command protocols are as follows.

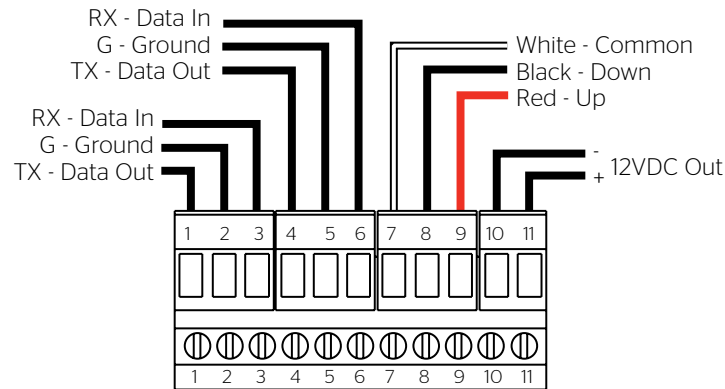
- Screen 1 up: @1U
- Screen 1 stop: @1S
- Screen 1 down: @1D
- Screen 2 up: @2U
- Screen 2 stop: @2S
- Screen 2 down: @2D
- Poll: @P

Response to a poll is @1x2x where x is U for up, S for stop, D for down.

Communications is 9600 baud, 8 data bits, No parity, 1 stop bit.

No "Return" or "Enter" is required at end of string. The command will be executed as soon as the U, D, or S is received.

There is a 50ms time out if a valid character is received but the string is not finished. All command characters must be sent in one packet.



Terminals 1-3 = RS232 Port 2
Terminals 4-6 = RS232 Port 1
Terminals 7-9 = Wall Switch
Terminals 10-11 = Net-100 Controller

For optional SCB-200, see separate instruction manual.

Screen Adjustment

For Screens with Standard Built-In Low Voltage Control or Optional VPI

If your Tensioned Advantage Electrol was ordered as a complete unit, the up and down limits were pre-set by Da-Lite. If your screen and roller assembly was ordered separately from the case, or if general adjustment is needed, please follow the steps below and refer to the Wiring Diagram.

1. Locate the wall switch and remove the cover plate from the wall switch and remove the switch from the junction box.
2. Locate the two tactile buttons on the back of the switch. They are black round buttons on silver plates.
3. To adjust the down limit switch, press and hold the down tactile button until the LED on the back of the switch turns solid red. This will put the motor in limit set mode. Turn the wall switch over and use the down button on the front of the switch. Press and hold the down button until the desired down position is reached. If you travel too far down, press the up button to move the screen upward. If you press and let go of either the up or down buttons, the motor will do a small jog in that direction for fine adjustment of the screen. Once the desired position is reached, turn the switch over; press and hold the down tactile button until the LED on back of switch blinks red twice. The down limit is now set.

⚠ CAUTION: Do not adjust for more drop than what was ordered. At least 1-1/2 wraps of fabric must remain on the roller.

⚠ ATTENTION! N'effectuez pas de réglage pour obtenir un déroulement supérieur à celui commandé. Au moins 1 à 1/2 tour de toile doit être maintenu sur le cylindre.

NOTE: If the screen is in limit set mode and no buttons are pushed for 20 seconds, the LED on the back of the wall switch will turn off, the motor will return to run mode and no changes will be saved. If this occurs, return to step 3 for down limit adjustment or step 4 for up limit adjustment.

NOTE: All screens except Parallax standard with 12" black drop at the top. Screens with Parallax surface standard with 2" of black drop at the top.

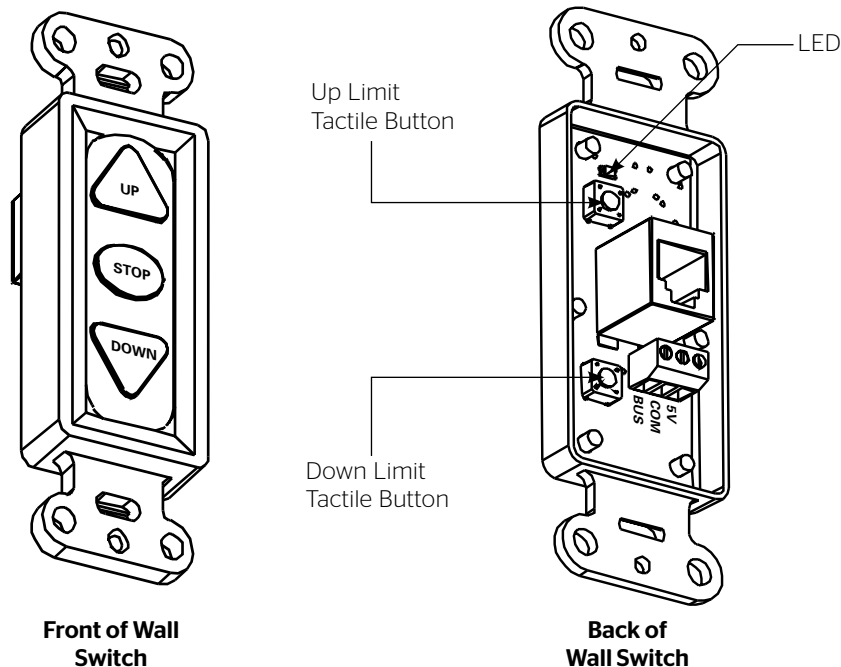
4. To adjust the up limit switch, press and hold the up tactile button until the LED on the back of the switch turns solid green. This will put the motor in limit set mode. Turn the wall switch over and use the up button on the front of the switch. Press and hold the up button until the desired up position is reached. If you travel too far up, press the down button to move the screen downward. If you press and let go of either the up or down buttons, the motor will do a small jog in that direction for fine adjustment of the screen. Once the desired position is reached, turn the switch over; press and hold the up tactile button until the LED on back of switch blinks green twice. The up limit is now set.

⚠ CAUTION: Adjusting the down limit switch for less drop by more than 6" can cause the screen surface to lose proper tensioning.

⚠ ATTENTION! LE FAIT D'AJOUTER NE DÉROULEZ PAS TROP L'ÉCRAN PLUS DE 15 CM (6PO) AUX INTERRUPTEURS DE FIN DE COURSE PEUT FAIRE PERDRE LA BONNE TENSION À LA SURFACE DE L'ÉCRAN.

5. To test the limit switch settings, press and release the up or down buttons on the switch to operate the screen.
6. Replace the switch and cover plate on the wall.

IMPORTANT NOTE: The wall switch is REQUIRED to make any limit switch adjustments, even if a third party control system is used. Therefore, it is advised to wire the switch or provide a 3-conductor connection that is accessible.



Screen Adjustment (continued)

For Screens with Optional SCB-100

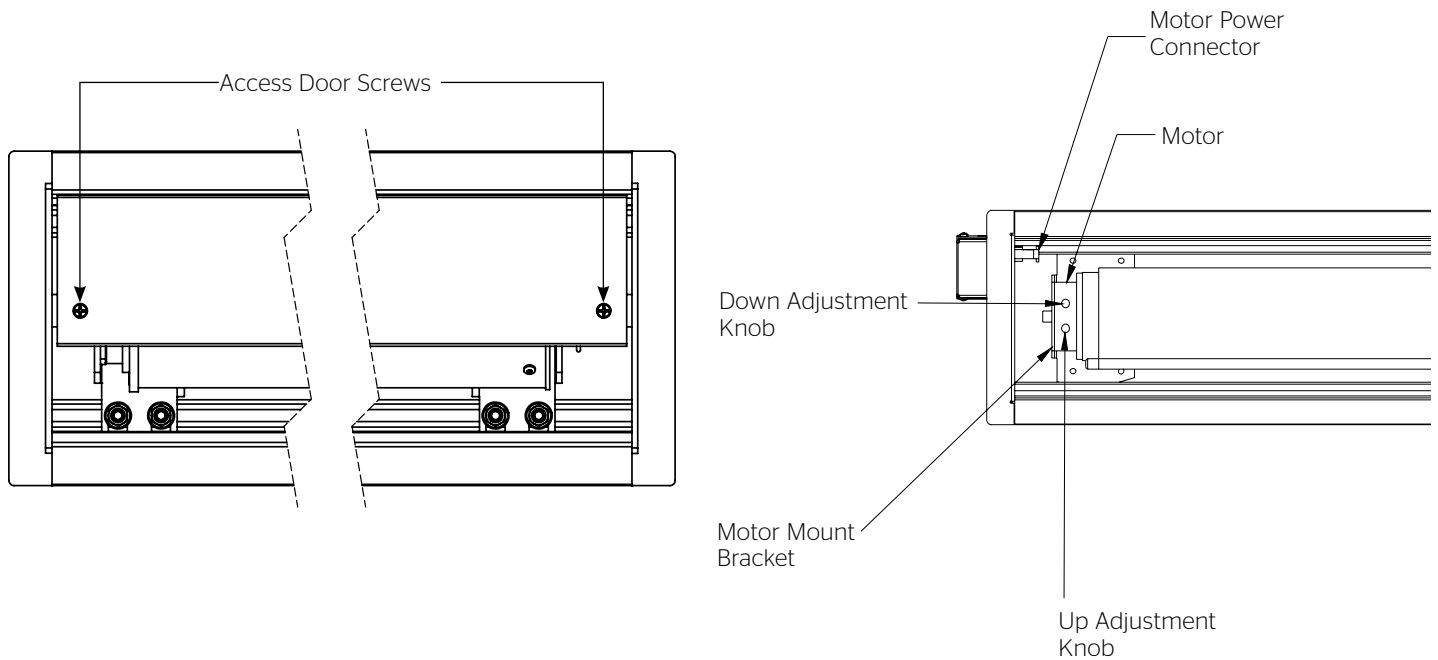
Remove two screws to remove access door.

NOTE: Use a screwdriver or 5/32" Allen wrench to make adjustments.

SETTING THE DOWN LIMIT POSITION

To Reduce Screen Drop: Turn the "down" limit switch screw clockwise to decrease the amount of screen drop. Run the screen down to test the stop position. If the screen drops too far, raise the screen about one foot and adjust the limit switch again. Repeat until the desired position is set.

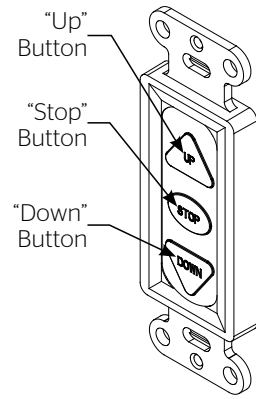
To Increase Screen Drop: Turn the "down" limit switch screw counterclockwise to increase the amount of screen drop. Run the screen down to test the stop position. If the screen does not drop enough, raise the screen about one foot and adjust the limit switch again. Repeat until the desired position is set. Do not adjust for more drop than what was ordered. At least 1-1/2 wraps of fabric must remain on the roller.



Operation of Screen

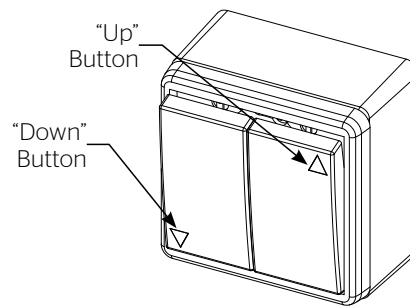
Operation & Limit Adjustment Wall Switch

1. Press "DOWN" button on screen switch and screen will deploy out of case in downward direction.
2. Press "STOP" button on screen switch and screen will stop if in movement.
3. Press "UP" button on screen switch and screen will retract upward into case.



European Style Wall Switch (220V models only)

1. Press "DOWN" button on screen switch and screen will deploy out of case in downward direction.
2. Press "UP" button on screen switch and screen will retract upward into case.

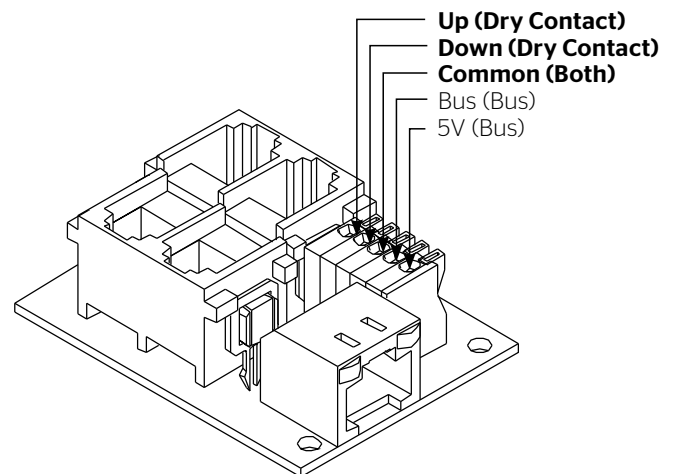


Third Party Control

Control Panel

A control panel may be connected to the splitter board by using the dry contact Up, Down and Common connections. The control panel must provide a momentary, dry contact closure of at least 1/2 second.

1. Use 3-conductor 20-24 gauge wire to connect the control panel to the splitter board.
2. A momentary closure across the common and up wires will be an "up" command.
3. A momentary closure across the common and down wires will be a "down" command.
4. A momentary closure across the common, up and down wires will be a "stop" command.



Troubleshooting

Symptom	Cause	Solution
Screen will not operate and motor does not hum.	Incorrect line voltage.	Verify 115-125V (or 220-240V). If insufficient voltage, rewire incoming electric line.
	Blown fuse.	Replace fuse.
	Tripped circuit breaker.	Reset circuit breaker.
	No power to operating switch or junction.	Check above. Tighten all loose wire connections. Correct any improper connections. Down Position Check for power across black and white leads. Up Position Check for power across red and white leads.
Screen will not operate and motor does not hum. Power at junction box.	Thermal overload tripped.	Let motor cool down for 15 minutes. Try again.
	Broken wire in the "down" or "up" position.	Check for continuity. Cut off old splice and reconnect.
	Defective motor, limit switch or capacitor.	Replace motor assembly. NOTE: Motor is a sealed assembly.
	Capacitor burned out.	Replace motor assembly.
Screen does not stop at correct position.	Limit switch out of adjustment.	See Screen Adjustment section.
Noise. NOTE: Screen will operate with a low pitched hum.	Squeaking, rubber end plug rubbing on motor.	Center roller in case.
	Grinding. Foreign object in screen rubbing on roller or fabric.	Remove.
	Gear noise.	Replace motor assembly.
Coasting.	Defective brake.	Replace motor assembly.
Fabric hangs crooked.	Screen not installed properly.	Check for level and plumb.
	Fabric has backed up inside case.	Adjust "down" limit switch slowly until roller is exposed and wrinkle comes out, then readjust for proper drop.
	Fabric is damaged.	Replace fabric.

Conditions for Transportation and Storage

- Temperature: Between 40 - 100°F (5 - 40°C)
- Relative Humidity: 30% to 70%, non-condensing
- Always keep the projection screen horizontal during transport and storage
- Make sure the entire package is supported when stored
- Do not stack more than six projection screens on top of each other
- Make sure the heaviest package is placed at the bottom of the stack

Screen surface should be allowed to air out once every two months, or otherwise used on a regular basis, if the temperature is above 72°F (22°C) and at least once every month if the temperature goes above 85°F (30°C).

LIMITED FIVE YEAR WARRANTY ON DA-LITE PRESENTATION PRODUCTS

Legrand AV Inc. warrants certain Da-Lite branded products to the original purchaser only, to be free from defects in materials and workmanship for a period of five (5) years from the date of purchase by the original purchaser; provided they are properly operated according to Da-Lite's instructions and are not damaged due to improper handling or treatment after shipment from the factory.

This warranty does not apply to equipment showing evidence of misuse, abuse or accidental damage, or which has been tampered with or repaired by a person other than authorized Da-Lite personnel.

Da-Lite's sole obligation under this warranty shall be to repair or to replace (at Da-Lite's option) the defective part of the merchandise. Returns for service should be made to your Da-Lite dealer. If it is necessary for the dealer to return the screen or part to Da-Lite, transportation expenses to and from Da-Lite are payable by the purchaser and Da-Lite is not responsible for damage in shipment. To protect yourself against damage or loss in transit, insure the product and prepay all transportation expenses.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES AS TO FITNESS FOR USE AND MERCHANTABILITY. Any implied warranties of fitness for use, or merchantability, that may be mandated by statute or rule of law are limited to the five (5) year warranty period. This warranty gives you specific legal rights, and you may also have other rights, which vary from state-to-state. **TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NO LIABILITY IS ASSUMED FOR EXPENSES OR DAMAGES RESULTING FROM INTERRUPTION IN OPERATION OF EQUIPMENT, OR FOR INCIDENTAL, DIRECT, OR CONSEQUENTIAL DAMAGES OF ANY NATURE.**

In the event that there is a defect in materials or workmanship of a Da-Lite product, you may contact our Customer Care Specialists at 3100 North Detroit Street, Warsaw, IN 46582, (574) 267-8101, (800) 622-3737.

IMPORTANT: THIS WARRANTY SHALL NOT BE VALID AND DA-LITE BRANDED PRODUCTS SHALL NOT BE BOUND BY THIS WARRANTY IF THE PRODUCT IS NOT OPERATED IN ACCORDANCE WITH THE DA-LITE WRITTEN INSTRUCTIONS.

Keep your sales receipt to prove the date of purchase and your original ownership.



FOR YOUR IMAGE | legrandav.com

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COMMERCIAL BRANDS

Chief | Da-Lite | Middle Atlantic | Projecta | Vaddio