

# Installation/Operating Instructions

## Targa Electric Projection Screen by Draper

### ⚠ Caution

- ① Read instructions through completely before proceeding.
- ② Follow instructions carefully. Installation contrary to instructions invalidates warranty.
- ③ Screen should be accessible for complete removal should fabric become damaged or should other service be required.
- ④ Screen should be installed level (using a carpenter's level).
- ⑤ Nothing should be fastened to screen dowel or viewing surface.
- ⑥ Operating switch(es) packed separately in screen carton.  
Do not discard with packing material.
- ⑦ Screen operates on 110-120V, 60 Hz., 1.1 amp current draw.

**NOTE:** Screen has been thoroughly inspected and tested at factory and found to be operating properly prior to shipment.

*These instructions are meant as a guide only. They do not imply any responsibility on the part of Draper, Inc. for improper installation or faulty workmanship at the jobsite.*

### Hanging Screen

#### General:

When locating viewing surface and checking clearance for screen's operation, remember surface is centered in case. Handle case carefully to protect its finish. Regardless of mounting method, screen should be positively and securely supported so that vibration or even abusive pulling on the viewing surface will not cause case to work loose or fall. Installer must insure that fasteners used are of adequate strength and suitable for the mounting surface chosen.

#### Suspended Installation:

Suspend screens from holes in endcaps as shown. "S" hooks, chains (or cable) and turnbuckles should be provided by installer. "S" hooks should go through the front holes on the endcaps (see drawing on page 3), and both ends of the "S" hooks should be crimped for additional safety. Chains should be attached to beams or other structural members. Turnbuckles should be adjusted so screen hangs level.

#### Wall Installation:

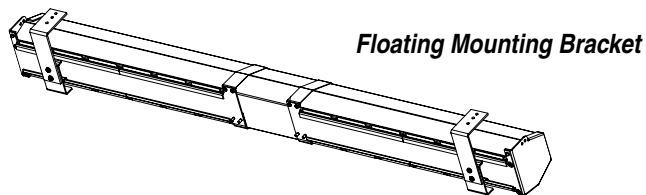
Mount screen through holes in back of endcaps as shown. Installer should furnish screws, toggle bolts, molly bolts, nylon or lead anchors as required.

#### Wall Installation with 6" Extension Brackets:

Mount the brackets (not included with screen—see diagram on page 3) using hardware recommended for "Wall Installation" (above). Then, suspend the screen from the front holes with "S" hooks (as in "Suspended"). For added safety, be sure to **crimp both ends** of the "S" hooks so the screen cannot come off. For a more rigid installation, mount the screen from the back holes to the front of the bracket by using the screws and nuts provided with the brackets.

#### Wall or Ceiling Installation with Floating Brackets:

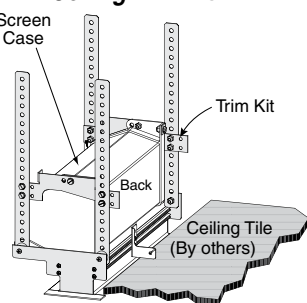
Floating brackets should be located on studs or joists. The bracket then attaches at any almost any point along the case. For details, see separate instruction sheet that ships with the Floating Wall Bracket.



#### Recessed Installation:

Recess should permit access for removal of screen if necessary. Screen may be mounted as in suspended or wall installation. Optional Ceiling Opening Trim Kit available; see diagrams at right and on page 3, and separate instruction sheet (included with Ceiling Opening Trim Kit). *The Ceiling Opening Trim Kit is for use in an acoustical, drop ceiling only. Not recommended for drywall or hard ceilings.*

#### Ceiling Trim Kit



# DRAPER

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### Electrical Connections

Screen operates on 110-120V, 60 Hz., 1.1 amp current draw. Duty cycle: On 28 seconds/Off 4 minutes.

Junction box is located inside left endcap and cover plate is secured to endcap with two screws which may be removed with a Torx-head or small straight-blade screwdriver. Junction box contains red, black and white pigtail leads and green internal ground wire, per wiring diagram on reverse.

Screen is shipped with internal wiring complete and control switch(es) fully boxed. Wire connecting screen to switch(es) and switch(es) to power supply should be furnished by installer. Please Note: Screen 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. An appropriate disconnect device shall be provided as part of the building installation. **Please Note: Do NOT wire motors in parallel.**

**⚠ All operating switches should be "off" before power is connected.**

Plug-in power cord option available with built-in low voltage motor.

#### For Reconfiguration/Conversion of Non-detachable Power Cord to Field Wiring for Models TAR-28, TAR-29 and TAR-30 Only:

- ① Disconnect cord plug from outlet.
- ② Remove junction box cover.
- ③ Disconnect wire nuts from black, white and green wires.
- ④ Remove power cord and strain relief from screen.
- ⑤ Connect the black motor wire to "hot" supply wire.
- ⑥ Connect white motor wire to "neutral" supply wire.
- ⑦ Connect green/yellow wire to "ground" supply wire.
- ⑧ Replace junction box cover.

### Operation

Before operating screen remove tape securing fabric and dowel to roller. If viewing surface hangs out of case 8"-9", tape has probably been broken by rough handling in shipment, allowing surface to "unwrap" one turn about the roller. Manually wrap fabric back around the roller without turning the roller itself.

**110-120V Single Station Control** — 3-position up-off-down switch permits operation to be stopped at any point. Factory adjusted limit switches automatically stop screen when fully down or fully up.

**110-120V Multiple Station Control**—Switches are similar in appearance to 110-120V Single Station Control. Screen stops when switch is released and may be restarted in either direction. Factory adjusted limit switches stop screen automatically when fully down or fully up.

**24V Control** — Three-button up-stop-down switches stop at any point desired, operate in any sequence. Factory adjusted limit switches automatically stop screen when fully down or fully up.

**Key Operated Switching** — Two kinds of key-operated switches are optionally available with this unit. ① The key-operated power supply switch controls power to the screen and switches. When it is "off", the switches will not operate screen. Key may be removed from the switch in either "on" or "off" position. ② A three-position key switch permits the screen to be operated directly by key. In this case, the screen's operator must always have a key.

**RS232/Ethernet**—Serial communication and network communication optionally available with wall switches, RF or IR remote.

**Plug & Play™**—Provided with handheld IR remote control transmitter and 10' (3m) cord. No wiring necessary except to connect to RS232. Screen is equipped with a handheld remote or 3-position operating switch. Three positions (up-off-down) permit operation to be stopped at any point. Factory adjusted limit switches automatically stop screen when fully down or fully up.

(Continued on next page)

If you encounter any difficulties installing or servicing your Targa screen, call your dealer or Draper Inc., Spiceland, Indiana, (765) 987-7999 or fax (765) 987-7142.

## Limit Adjustments (Standard Motors/Quiet Motors)

**Please Note:** Screen limits are factory set for optimum performance of the screen. Any adjustment of these limits could void the warranty. Please check with Draper prior to resetting screen limits.

(Height adjustments are made at the motor using white/yellow screws)  
Tools needed: Flashlight, small flathead screwdriver/Allen wrench (4mm or 5/32").  
**CAUTION:** Always be prepared to shut screen off manually when new adjustment is being tested. Screen may be severely damaged if viewing surface is allowed to run too far up or too far down.

The motor limit screws are normally located on the audience left of screen roller, and the viewing surface rolls off the back of the roller. If the viewing surface is coming off the front of the roller (motor on left), or the motor is on the audience right of the screen roller (with viewing surface rolling off the back), reverse the following instructions.

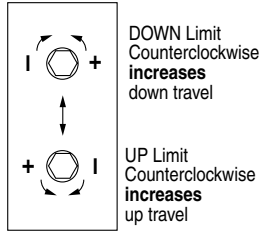
### "DOWN" LIMIT ADJUSTMENT

#### To Reduce Screen Drop

- 1 Raise screen surface about 1' above desired setting and turn off.
- 2 Turn the DOWN limit screw clockwise (three screw turns = 1/2 roller revolution).
- 3 Test by running screen down and repeat steps 1 and 2 until desired position is reached.

#### To Increase Screen Drop

- 1 Run screen to the down limit.
- 2 With the down switch on, turn the DOWN limit screw counterclockwise (three turns of screw equals 1/2 roller revolution) to increase drop.
- 3 Test by running screen up about 1' and back down to new down limit.
- 4 Repeat steps 2 and 3 until desired position is reached.



### "UP" LIMIT ADJUSTMENT

#### Screen is Running Too Far Up

- 1 Lower screen surface about 1' below desired setting and turn off.
- 2 Turn the UP limit screw clockwise (three screw turns = 1/2 roller revolution).
- 3 Test by running screen up.
- 4 Repeat steps 1 through 3 until desired position is reached.

#### Screen Needs to Run Up More

- 1 Run screen down about 1' and turn off.
  - 2 With the up switch on, turn the UP limit screw counterclockwise (three turns of screw equals 1/2 roller revolution).
  - 3 Repeat steps 1 and 2 until desired position is reached.
- CAUTION:** Do NOT allow the dowel to wrap up over the roller when the screen is running up! This could damage the screen.

## Limit Adjustments (Built-in Low Voltage Motors)

**Please Note:** Screen limits are factory set for optimum performance of the screen. Any adjustment of these limits could void the warranty. Please check with Draper prior to resetting screen limits.

(Height adjustments are made from wall switch)

- 1 Connect the switch to the motor via the terminal blocks, or via the modular port using four conductor modular cable. When using modular cable, the cable connectors MUST NOT be crimped in reverse, as with standard telephone cable.
- 2 Set the slide switch to the lower position. Press and hold the DOWN button on the switch to move the viewing surface to the desired lower limit. If the screen moves in the opposite direction, release the DOWN button and press and hold down the STOP button for four seconds. This will reverse the operation of the UP and DOWN switches.
- 3 Move slider switch into center position. Wait a couple of seconds.

**Please Note:** If you move the slider switch from down to up in one motion it sets the two limits in the same position.

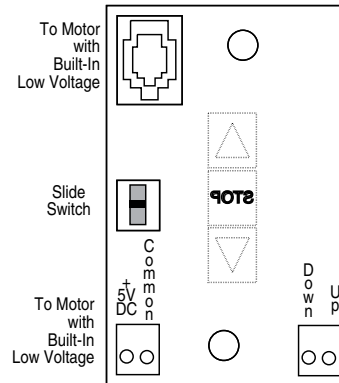
- 1 Set the slide switch to the higher position. Move the viewing surface to the desired upper limit by pressing and holding the UP button on the wall switch.
- 2 Return the slide switch to the center position to return to normal operation.
- 3 To set the viewing surface to an alternate format position, move the viewing surface to the desired position and press the STOP button. Press and hold STOP for at least three seconds to record the position.

**Please Note:** Pressing and releasing the UP button on the switch will move the screen to its upper limit. Pressing and releasing the DOWN button will move the screen to its lower limit.

While the motor is in motion, pressing STOP for less than two seconds will stop the viewing surface at its present position.

Once the motor is stopped, pressing the STOP button will move the viewing surface to its alternate format position.

Pressing and holding the STOP button, when the motor is at rest or in motion, for at least three seconds will record a new alternate format position.



**Please Note:** 5V DC must be connected to be able to set limits using the wall switch.

POSITION	FUNCTION
DOWN	Set LOWER limit
UP	Set UPPER limit
CENTER	Normal Operation

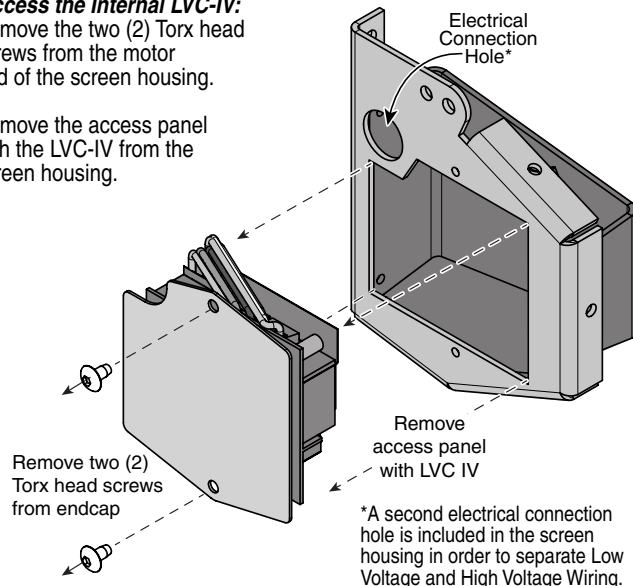
Back View

## Accessing Internal Low Voltage Control Unit (LVC-IV)

### To access the Internal LVC-IV:

- 1 Remove the two (2) Torx head screws from the motor end of the screen housing.

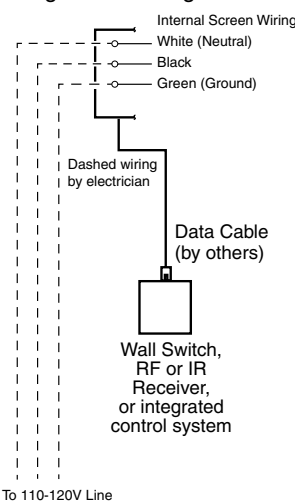
- 2 Remove the access panel with the LVC-IV from the screen housing.



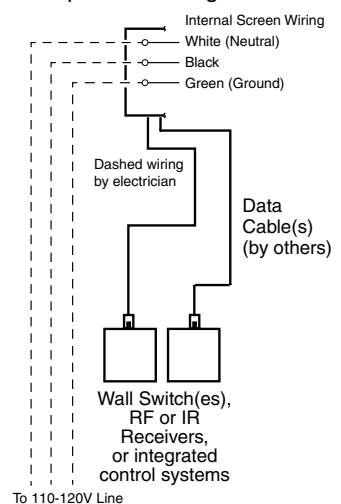
**PLEASE NOTE:** Internal LVC-IV will increase overall case length by 1 1/2".

## Wiring Diagrams—110-120V Motor and Quiet Motor with Internal Low Voltage Controller (LVC-IV)

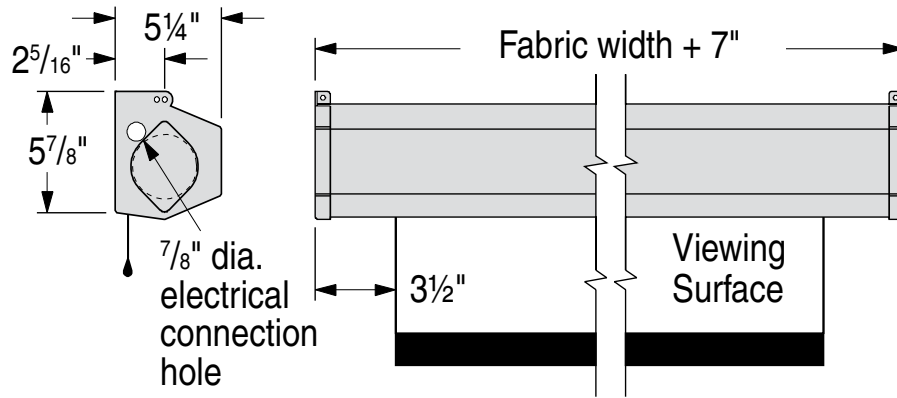
### Single Low Voltage Control



### Multiple Low Voltage Controls



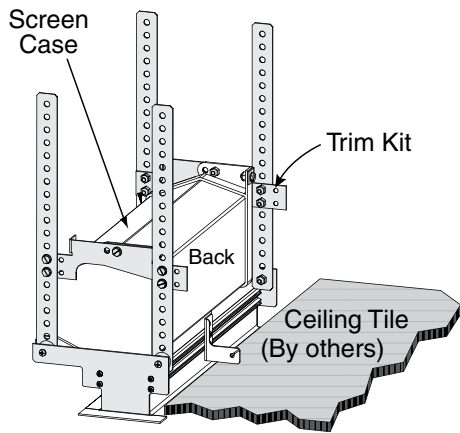
**Case Dimensions\***



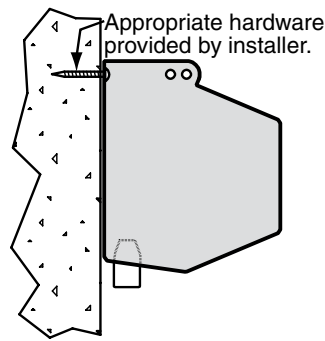
**\*PLEASE NOTE:**  
Internal LVC-IV will increase overall case length by 1 1/2".

**Types of Installation**

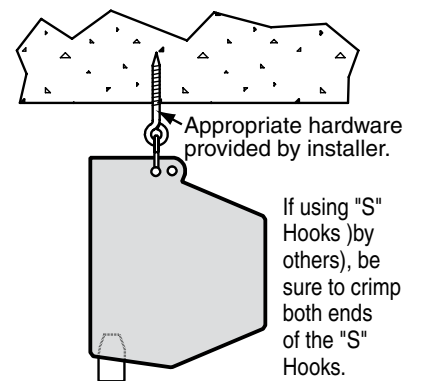
**Optional Ceiling Opening Trim Kit**



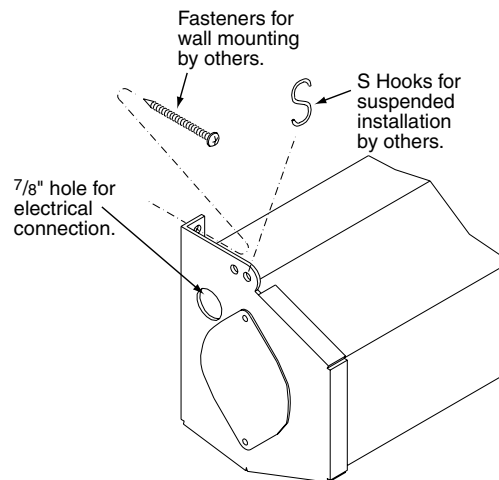
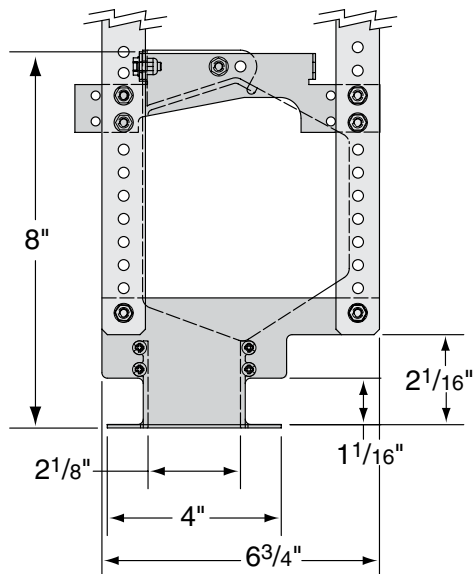
**Wall**



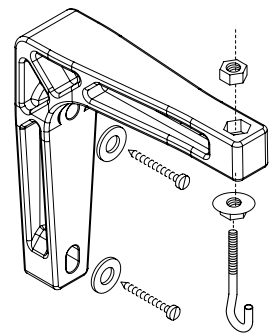
**Suspended**



**Installation Methods**



**6" Extension Bracket**

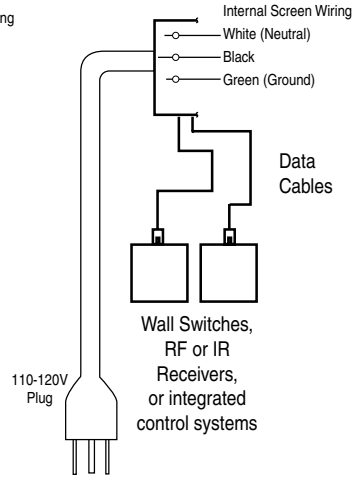
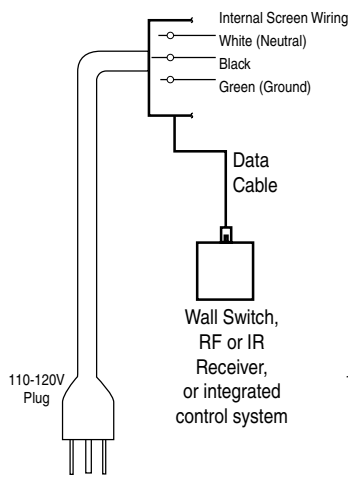


**Wiring Diagrams—Plug & Play 110-120V Motor**  
(Low Voltage Control Built Into Motor)

**Wiring Diagrams—110-120V Motor**  
(Low Voltage Control Built Into Motor)

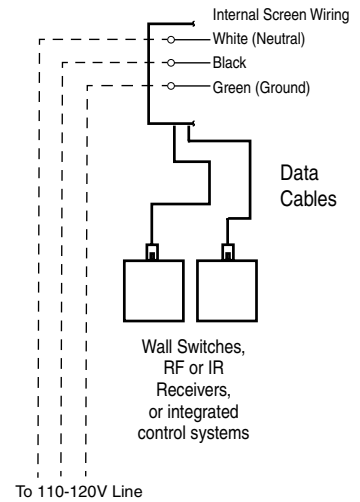
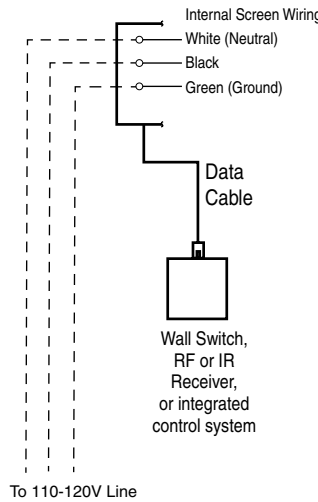
Single Low Voltage Control

Multiple Low Voltage Controls



Single Low Voltage Control

Multiple Low Voltage Controls

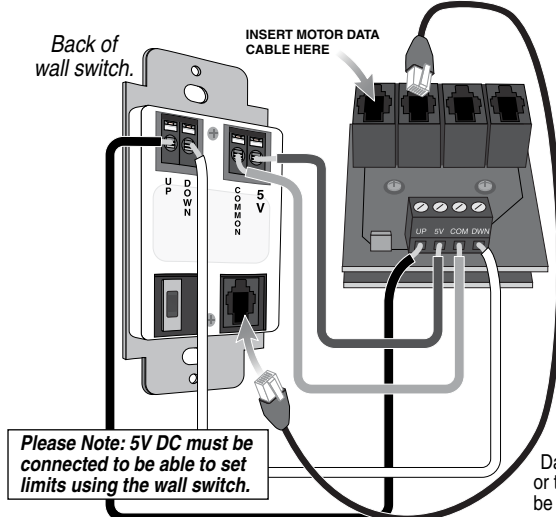
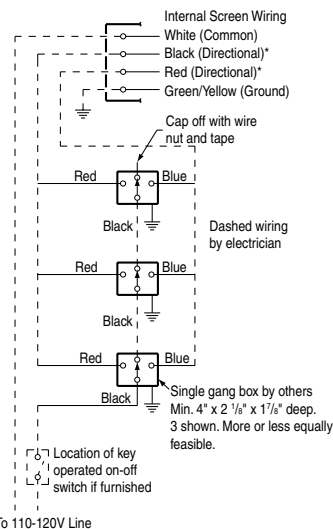
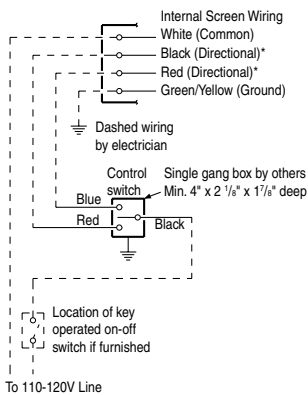


**Wiring Diagrams (Standard and Quiet Motors)**  
Please Note: Do not wire motors in parallel.

**Built-in Low Voltage Motor: Switch-to-Motor—**  
Dry Contacts or Data Cable connection

Single Station Control

Multiple Station Control



**Please Note:** Although both Dry Contact and Data Cable connections are shown, you should only use one connection type per motor.

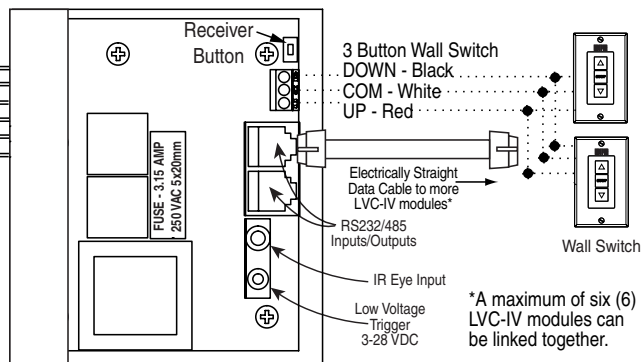
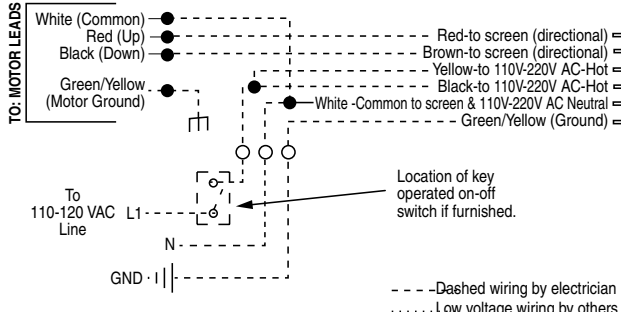
**Please Note:** This Splitter/Jack is located inside the motor-end endcap of your screen. To access, remove access panel from endcap.

Data Cables to switches or to additional motors can be plugged into any of the three open jacks.

*Motor Direction		
Motor Type	Up	Down
Standard	Red	Black
Quiet	Red	Black

**Wiring Diagram – External LVC-IV**

**INTERNAL SCREEN WIRING**



*Motor Direction		
Motor Type	Up	Down
Standard	Red	Black
Quiet	Red	Black

\*A maximum of six (6) LVC-IV modules can be linked together.