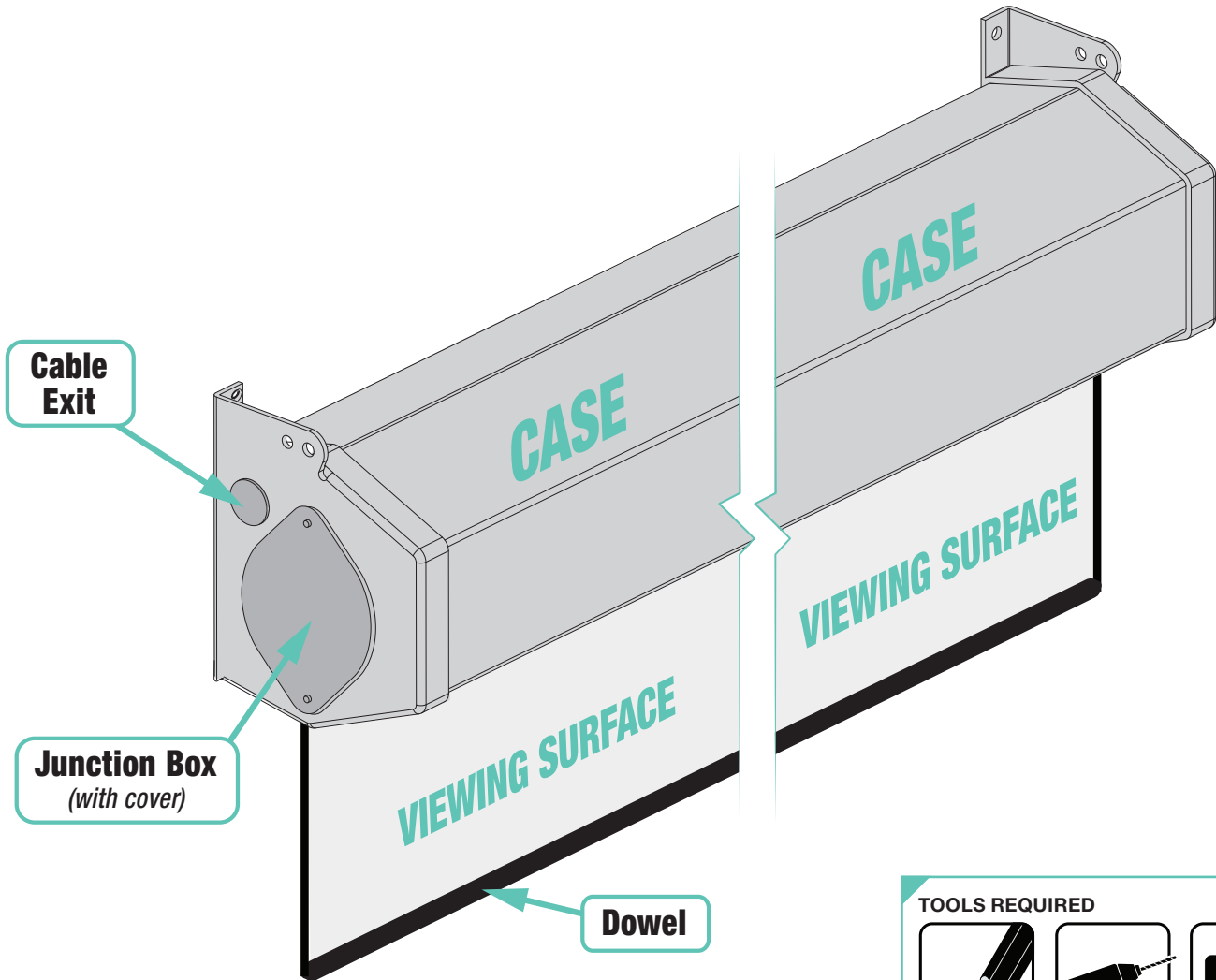


Overview - Components



⚠ CAUTION ⚠
 Read and understand all warnings
 (Page 2) before beginning installation.



TOOLS REQUIRED

PENCIL	POWER DRILL	TAPE MEASURE
LEVEL	HARDWARE (by others)	

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If you have any difficulties installing or servicing your Targa Projection Screen, call your dealer or Draper®, Inc.

Section 1 - Electrical Connections

⚠ CAUTION: All operating switches should be "off" before power is connected. Plug-in power cord option available with built-in low-voltage motor.

- 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 secures to endcap with two screws which may be removed with star key or small flat head screwdriver. Junction box contains red, black, and white pigtail leads and green internal ground wire, per wiring diagram.
- Screen ships complete with internal wiring. Control switch(es) may be packed in cartons separate from screen. Wire connecting screen to switch(es) and switch(es) to power supply 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.

Section 2 - Operation

⚠ CAUTION: When operating for the first time, cycle unit down and up several times to confirm satisfactory operation. Be prepared to cut POWER if necessary.

- **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.
- **24V CONTROL** (optional and requires optional LVC-IV) - 3-button UP-STOP-DOWN switches stop at any point desired and operate in any sequence. Factory adjusted limit switches automatically stop screen when fully up or fully down. Installer should incorporate an all-pole disconnect in fixed wiring available with RF or IR remote.
- **RS232 / ETHERNET** - Serial communication and network communication optionally available.
- **PLUG & PLAY** - Provided with 3-button wall switch and 10' (3m) cord. No hard wiring required. 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.
- **KEY OPERATED SWITCHING** - Two key-operated switches optionally available with this unit:
 - Key-operated power supply switch controls power to screen and switches. When "off", switches will not operate screen. Key may be removed from switch in either "on" or "off" position.
 - Three-position key switch permits the screen to be operated directly by key. Requires screen operator to have a key.

PLEASE READ - Safety Information

Important Safety Information



Important Safety Information

Improper installation and use of the Targa Projection Screen can result in serious injury or death. Primarily, injuries can occur if the unit falls due to imprecise installation, mishandling of the unit during installation, or installation on an insufficient wall or ceiling structure. Please use extreme care.

1. Please read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and could result in serious injury.
2. Installation and calibration of the unit should only be performed by an authorized, qualified, and experienced professional. In particular, electrical work and wiring [indicated in diagram by dashed lines] must be completed only by a qualified professional electrician who has read this manual completely and is familiar with the construction and operation of this equipment and the hazards involved.
3. Do not affix the unit to walls or ceilings that have inadequate strength to permanently hold the unit during use. It is the owner's and installer's responsibility to confirm the wall or ceiling to which the unit attaches is sufficient to permanently hold the weight and stress loads of the unit at all times. Draper®, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation.
4. It is the installer's responsibility to make sure appropriate fasteners are used for mounting.
5. All hardware must be installed level. Unit must be level and square.
6. Never leave the area while operating the unit during installation, maintenance, or normal operation, unless it is secure and safe.
7. Before testing or operation, carefully inspect the entire area and path (especially underneath) of unit to be sure no persons or objects are in the area.
8. Turn off power and any nearby equipment or cables carrying electricity before connecting switches, wires, controls, or electrical components.
9. Do not wire motors in parallel without written permission from Draper, Inc.
10. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.
11. After installation, the entire system, including all sensors, should be carefully tested to ensure safe and normal operation. Extreme care should be taken during testing to remain clear of moving parts to avoid possible injury.
12. Operation of unit should be performed only by authorized and qualified personnel, who have been trained in its safe and effective operation and understand its safety features.
13. The safety features of the unit should never be disabled, bypassed, or overridden. The system should not be operated until all safety features are properly and completely installed, calibrated, and tested.
14. Unit may need to comply with local, state, or district rules and regulations, in particular when installed in schools. All applicable rules and regulations should be reviewed before installation and use.
15. **Failure to precisely follow installation guidelines invalidates all warranties.**
16. Custom products/installations may not be reflected in this manual. Call Draper, Inc., if you have questions about the installation of custom products or any questions about your installation.

Before Beginning Installation

1. Look for any job site conditions that could interfere with installation or operation of the system.
2. Read carefully and be sure to understand all installation instructions and all related operations manuals. These instructions are intended to serve as a guide for the installer and owner. They should be followed closely and combined with the expertise of experienced qualified installers. Draper, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation. Please retain all instructions for future use.
3. Open cartons lengthwise.
4. Locate and lay out all pieces.
5. Inspect all boxes to make sure you have received the proper unit and parts. Controls may be shipped separately, or in same carton as unit.
6. If you have any difficulties with installing, servicing, or operating your unit, call your dealer or Draper, Inc., 765-987-7999.

Section 3 - Hanging Screen and Methods of Installation

CAUTION: Product is heavy: Installer must provide adequate attachment hardware and anchors as required. Installer must also ensure that structure is of adequate strength.

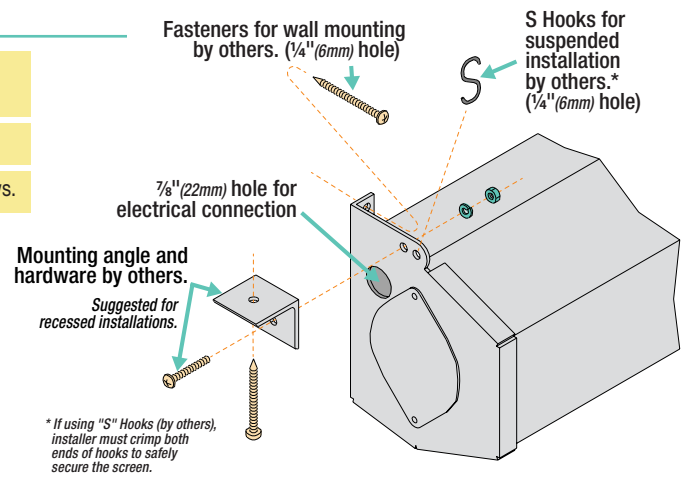
CAUTION: Safe installation may require two people.

CAUTION: Case must be mounted low enough from ceiling to gain access to bracket screws.

General Information

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 ensure that fasteners used are of adequate strength and suitable for the mounting surface chosen.



WALL

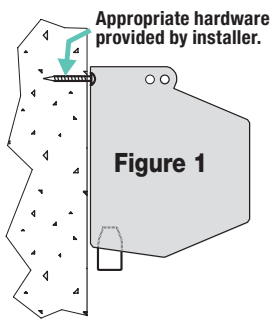


Figure 1

SUSPENDED

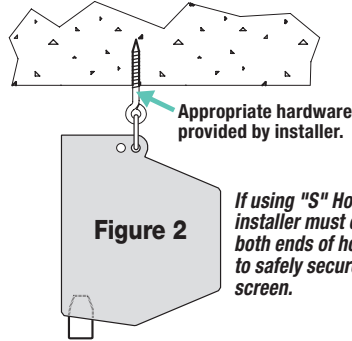


Figure 2

If using "S" Hooks, installer must crimp both ends of hooks to safely secure the screen.

Wall Installation (Fig. 1)

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

Suspended Installation (Fig. 2)

Suspend screens from holes in endcaps as shown. "S" hooks, chains (or cables), and turnbuckles should be provided by installer. "S" hooks should go through the front holes on the endcaps, and **both ends of "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.

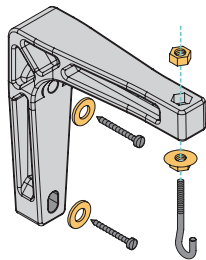


Figure 3

Wall Installation with Optional 6" (15.2cm) Extension Brackets (Fig. 3)

Please Note: Optional - must be specified.

1. Mount brackets using hardware recommended for "Wall Installation" (above).
2. Suspend screen from front holes with "S" hooks (as in "Suspended Installation," above).

For added safety, **crimp both ends of "S" hooks** so screen cannot come off.

Wall or Ceiling Installation with Optional Floating Brackets (Fig. 4)

Please Note: Optional - must be specified.

Floating brackets should be located on studs or joists. Bracket then attaches at almost any point along case. (See separate instruction sheet that ships with Floating Mounting Bracket.)

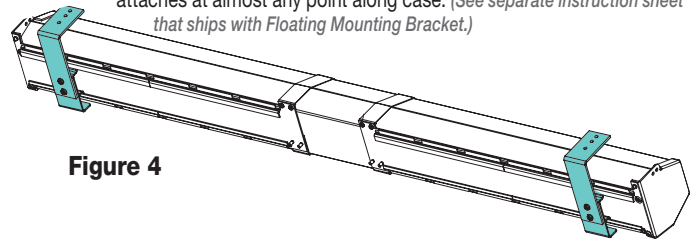


Figure 4

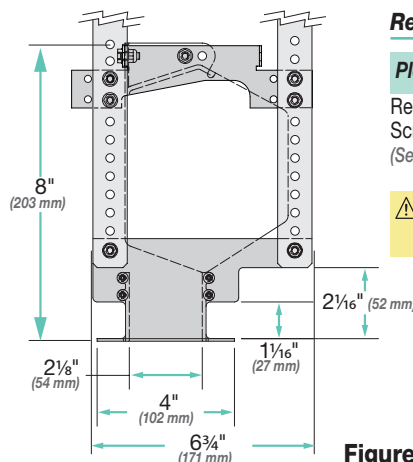
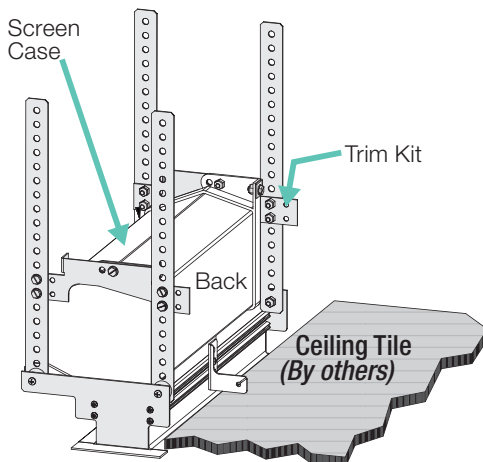


Figure 5

Recessed Installation (Fig. 5)

Please Note: Ceiling Opening Trim Kit is optional - must be specified.

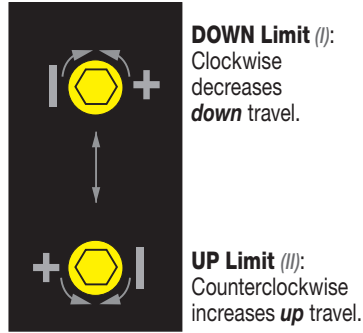
Recess should permit access for removal of screen if necessary. Screen may be mounted as in suspended installation. (See separate instruction sheet included with Ceiling Opening Trim Kit.)

CAUTION: Ceiling Opening Trim Kit is for use in an acoustical, drop ceiling only. Not recommended for drywall or hard ceilings.

Section 4 - Limit Adjustments

Figure 6

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.



Section 4.1 - Standard Motors/Quiet Motors (Fig. 6)

Section 4.1.1 - "Down" Limit Adjustment (requires 5/32" (4 mm) hex key)

To Reduce Screen Drop:

1. Raise screen surface approximately 1' (30 cm) above desired setting and turn switch off.
2. Turn DOWN (I) limit screw clockwise (3 screw turns = 1/2 roller revolution).
3. Test by lowering screen. Repeat steps 1 and 2 until desired position is reached.

To Increase Screen Drop:

1. Lower screen to down limit.
2. With down switch off, turn DOWN (I) limit screw counterclockwise (3 screw turns = 1/2 roller revolution) to increase drop.
3. Test by raising screen approximately 1' (30 cm) then down to new down limit.
4. Repeat steps 2 and 3 until desired position reached.

Please Note: For Quiet Motor with alternate limit screws: WHITE screw = UP and RED screw = DOWN.

Section 4.1.2 - "Up" Limit Adjustment

If Screen Raises Too High:

1. Lower screen surface approx. 1' (30 cm) below desired setting and turn switch off.
2. Turn UP (II) limit screw clockwise (3 screw turns = 1/2 roller revolution).
3. Test by advancing screen up.
4. Repeat steps 1 through 3 until desired position is reached.

If Screen Needs to Raise Higher:

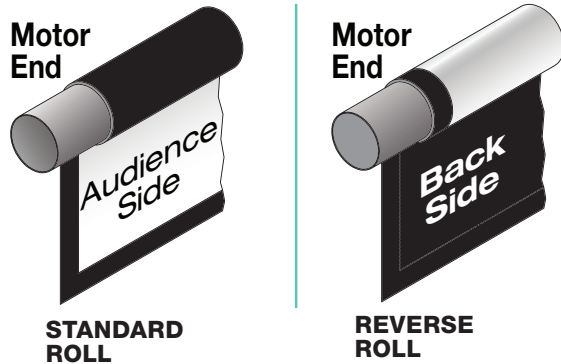
1. Lower screen surface approx. 1' (30 cm) below desired setting and turn switch off.
2. With UP switch off, turn UP (II) limit screw counterclockwise (3 screw turns = 1/2 roller revolution).
3. Repeat steps 1 and 2 until desired position is reached.

CAUTION: DO NOT allow dowel to wrap over roller when operating screen! This could damage screen.

CAUTION:

- Be sure all switches are in "off" position before adjusting limit switches.
- Be prepared to shut off manually while testing.
- Screen may be damaged by lowering it too far and exposing roller.

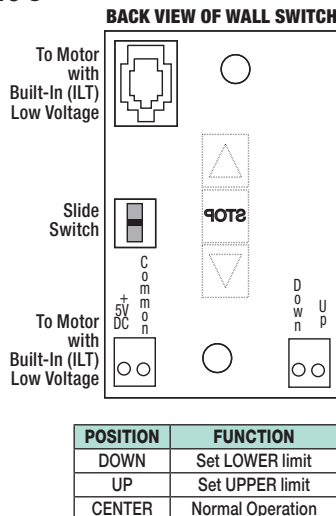
Figure 7



Section 4.2 - ILT Motors with Internal Low-Voltage Control Limit Adjustments (Fig. 8)

Please Note: Hold STOP button for 3-5 seconds while in programming mode to reverse motor direction.

Figure 8



1. Connect ILT switch to motor via terminal blocks, or via modular port using a four conductor modular cable. When using modular cable, cable connectors MUST NOT be crimped in reverse, as with standard telephone cable. (For Dry Contacts Wiring Diagram, see p.7.)

2. Set slide switch to lower position. Hold DOWN button to move viewing surface to desired lower limit. If screen moves in opposite direction, release DOWN button and hold STOP button for 4 seconds. This reverses operation of UP and DOWN switches.

3. Move slide switch into center position. Wait several seconds.

Please Note: Do Not move slide switch from DOWN to UP in one motion. This will set limits in same position.

4. Set slide switch to higher position. Move viewing surface to desired upper limit by holding UP button on wall switch.
5. Return slide switch to center position to resume normal operation.

6. To set viewing surface to alternate format position, move viewing surface to desired position and press STOP button. Hold STOP button for at least 3 seconds to record position.

Please Note: This screen is not tested for alternate positions; surface flatness cannot be guaranteed.

Please Note: Press and release UP button on switch to move screen to upper limit. Press and release DOWN button to move screen to lower limit.

- While motor is in motion, press STOP button for less than 2 seconds to stop viewing surface at present position.
- Once motor is stopped, press STOP button to move viewing surface to alternate format position.
- Hold STOP button, when motor is at rest or in motion, for 3-5 seconds to record new alternate format position.
- Hold STOP button for 3-5 seconds while in programming mode to reverse motor direction.

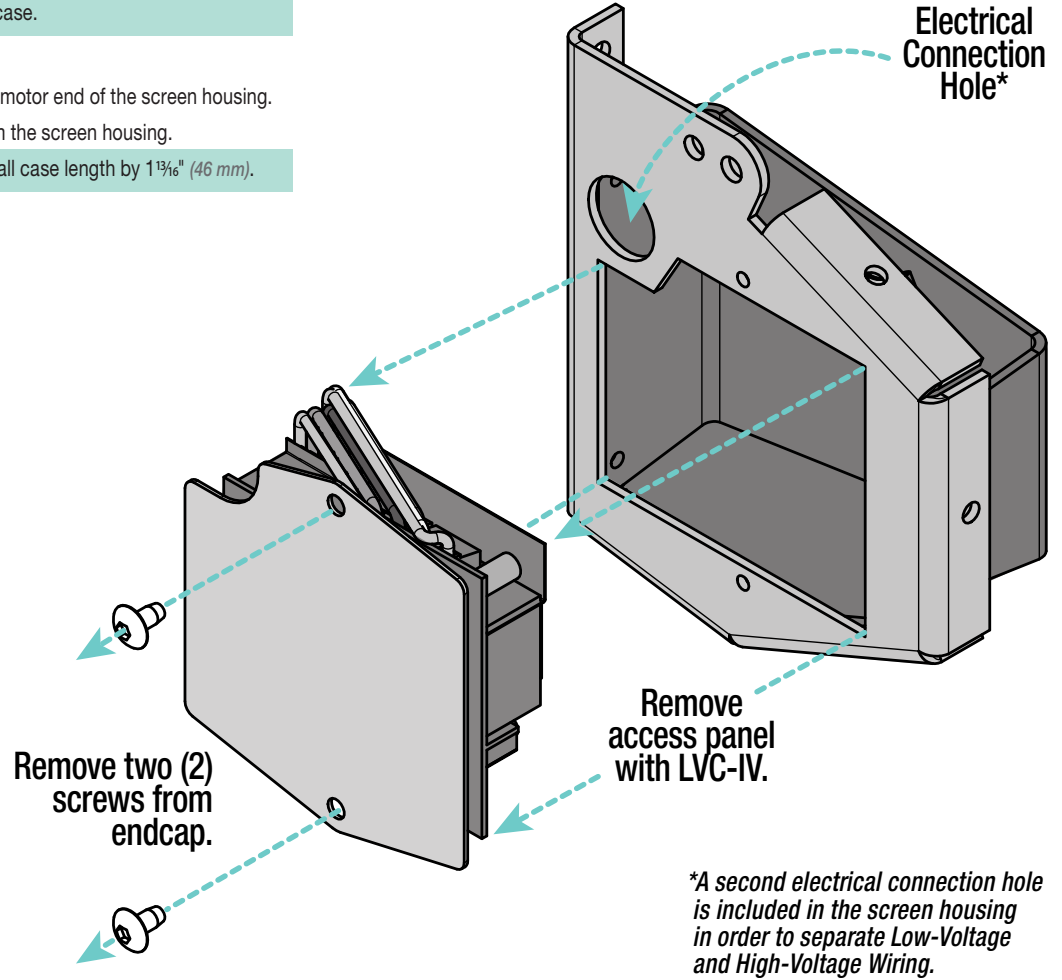
Please Note: 5V DC must be connected to be able to set limits using the wall switch.

Section 5 - Accessing Internal Low-Voltage Control Unit (LVC-IV)

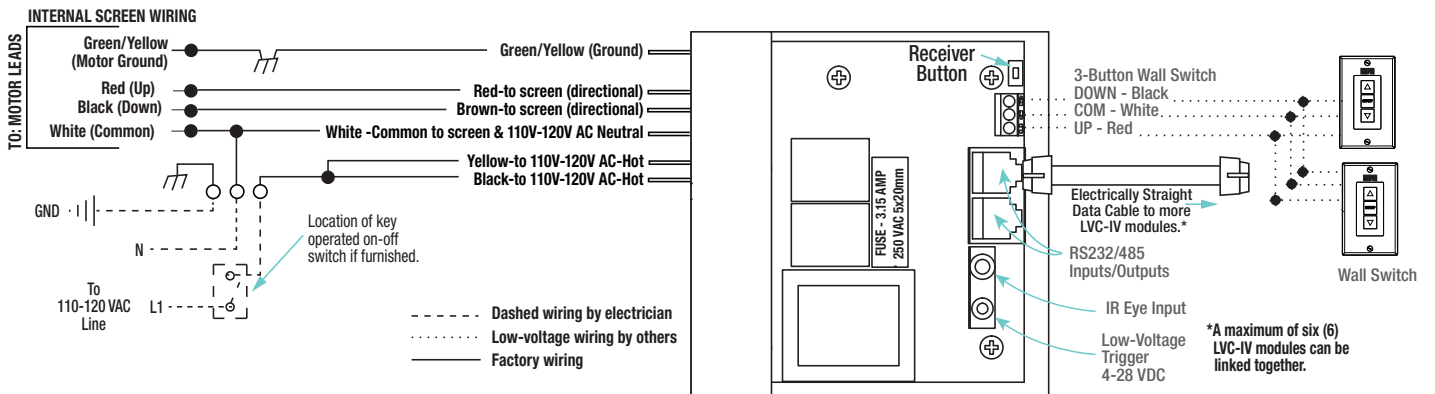
PLEASE NOTE: Applies ONLY if Unit is built into case.

1. Locate LVC-IV Unit.
2. Remove the two (2) star head screws from the motor end of the screen housing.
3. Remove the access panel with the LVC-IV from the screen housing.

PLEASE NOTE: Internal LVC-IV will increase overall case length by $1\frac{13}{16}$ " (46 mm).



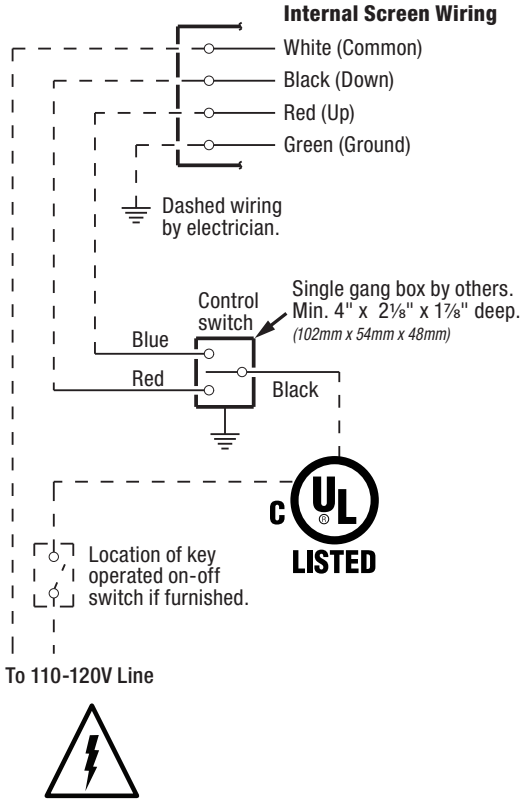
Internal LVC-IV - Single or Multiple Projection Screen Wiring Diagram



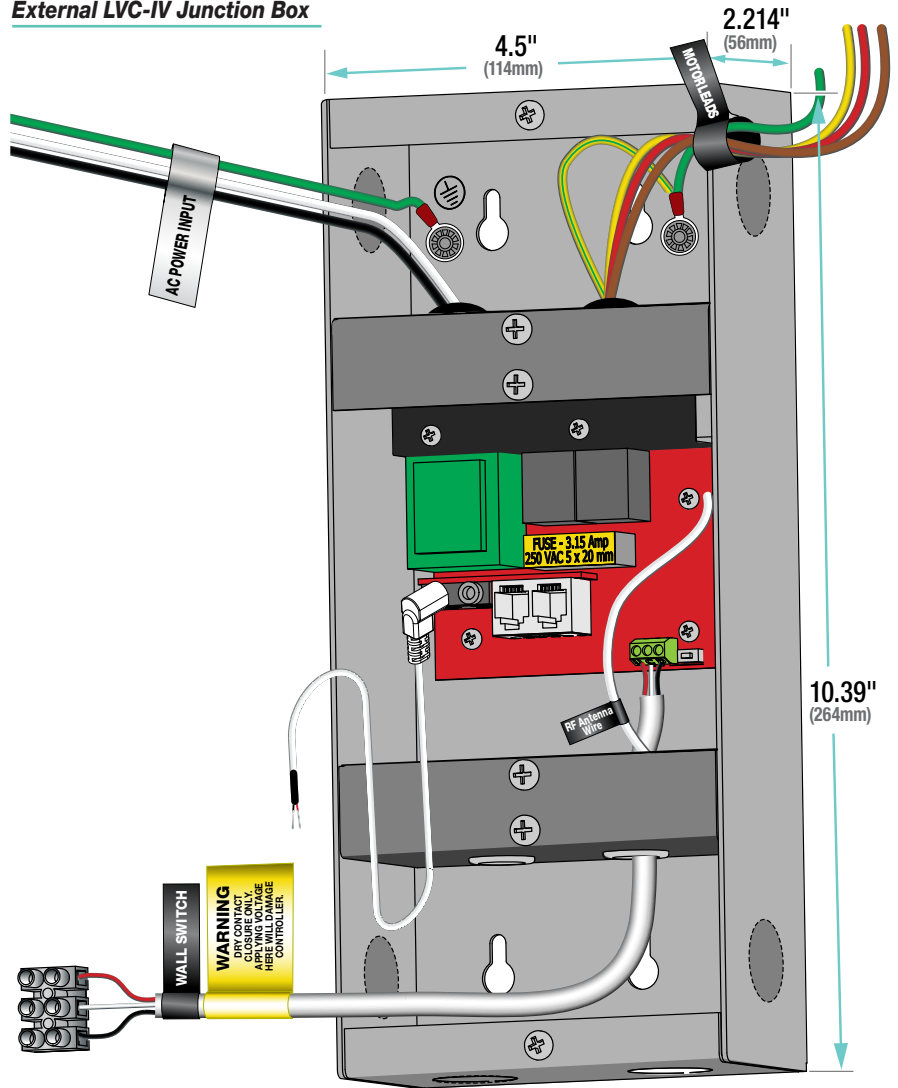
Section 6 - Wiring Diagrams: Standard and Quiet Motor

Please Note: Do not wire motors in parallel.

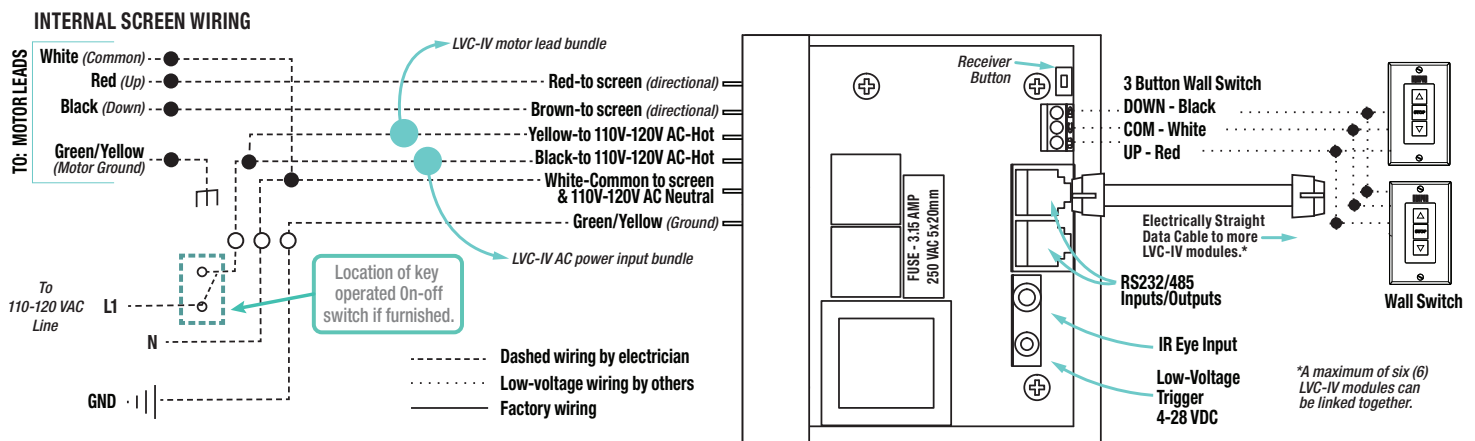
110-120V MOTOR STANDARD Single Station Control



External LVC-IV Junction Box



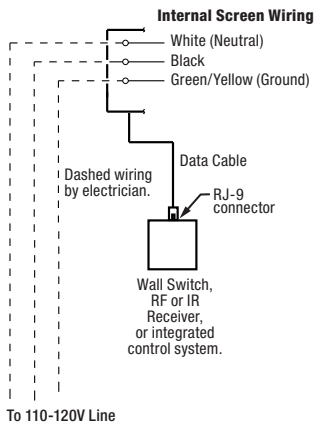
WIRING DIAGRAM - External LVC-IV (Low-Voltage Control Module)



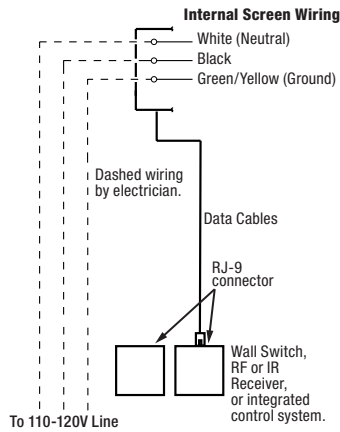
Section 7 - Wiring Diagrams: Motor with Internal Low-Voltage Controller

110-120V Motor (Motor with internal low-voltage controller - ILT)

Single Station Control

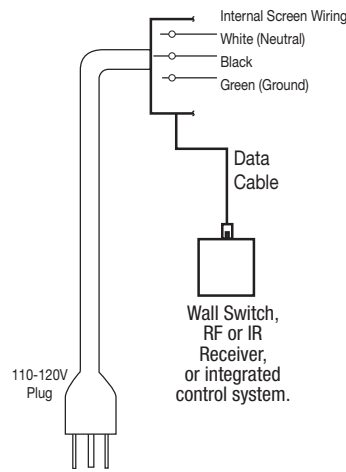


Multiple Station Control

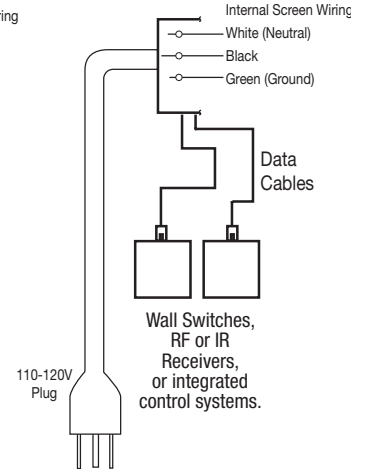


Plug & Play 110-120V Motor (Motor with internal low-voltage controller)

Single Low-Voltage Control



Multiple Low-Voltage Controls



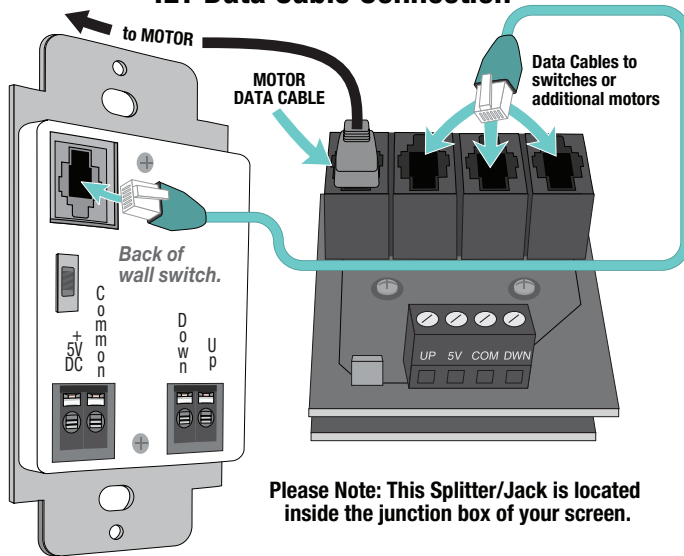
Motor with Internal Low-Voltage Controller: Switch-to-Motor (Dry Contacts or Data Cable connection)

CAUTION: Although both Dry Contact and Data Cable connections are shown, **only one connection type per motor should be used.**

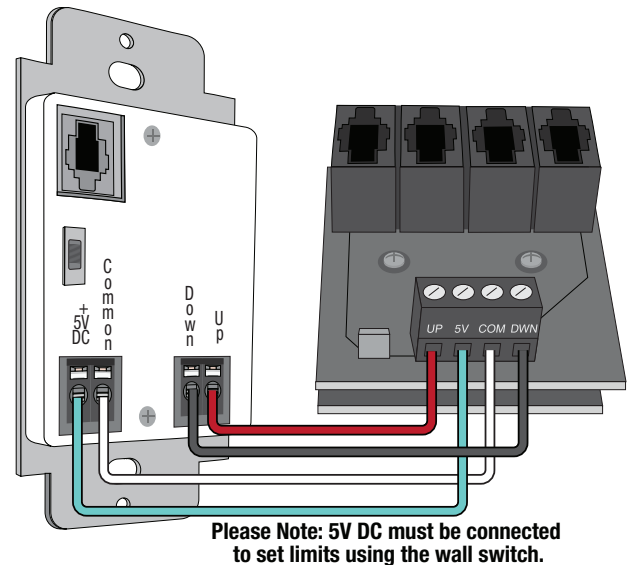
Please Note:

- This Splitter/Jack is located inside the motor-end endcap of 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.

ILT Data Cable Connection



ILT Dry Contacts Connection



— OR —

Section 8 - Dimensions

