

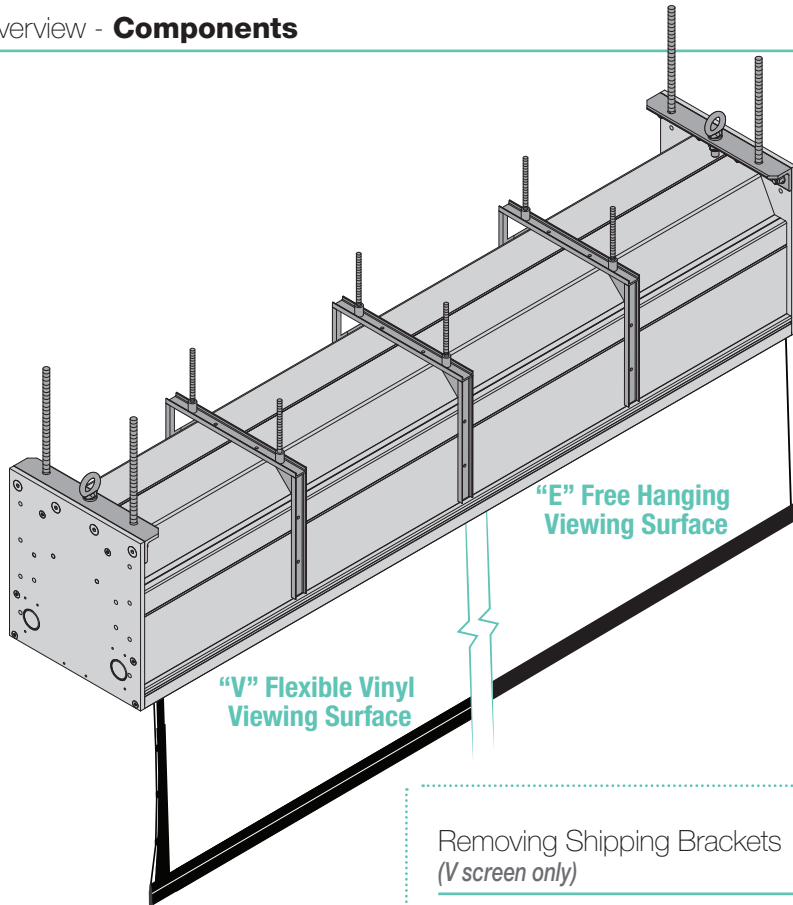
Paragon E & V

Large, ceiling-recessed screen designed for auditoriums and lecture halls.



INSTRUCTIONS INSTALLATION & OPERATION

Overview - Components



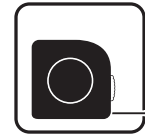
TOOLS REQUIRED



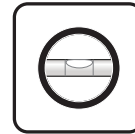
Pencil



Power Drill



Tape Measure



Level



Hardware
(by Others)



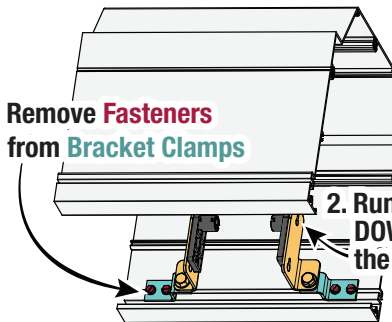
WRENCH
1 1/16"

Removing Shipping Brackets (V screen only)

⚠ Please Note: Shipping brackets must remain in place until product has been mounted and connected to power (Sections 1 and 4).

⚠ Please Note: DO NOT operate screen before removing shipping brackets from screen case.

1. Remove Fasteners from Bracket Clamps



2. Run the screen DOWN to expose the Dowel Screws

3. Loosen screws and remove the shipping bracket.

4. Retighten dowel endcap screws.

⚠ CAUTION ⚠

Read and understand all warnings (Page 2 of this document) before beginning installation.

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If you have any difficulties installing or servicing your Paragon projection screen, call your dealer or Draper, Inc.

PLEASE READ - Safety Information

Important Safety Information



WARNING



Important Safety Information

Improper installation and use of the Paragon 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 1 - Mounting Screen

Regardless of mounting method used, the following points apply:

1. Screen should be lifted into position only by the end mounting brackets. Keep case level by lifting end plates simultaneously to prevent surface damage. Draper provides eyebolts to use in hoisting the screen. Using both mounting holes in the mounting brackets makes for a much more stable installation. Never attempt to lift screen along its length.
2. Entire weight of unit **MUST BE** supported by end plates during installation. Anchoring intermediate case support brackets is only needed to reduce visible case deflection when unit mounts into a ceiling pocket or ceiling tile opening. For installations that are not recessed, case deflection is usually not noticeable.
3. Screen should be positively and securely supported so that vibration or abusive pulling will not weaken installation.
4. Installer must ensure that fasteners used are of adequate strength and suitable for mounting surface. Installer must also ensure that structure is of adequate strength. Supporting hardware (*chains, cables, rods, etc.*) must be essentially vertical.
5. Entire bottom of case must be readily accessible after installation is complete.
6. Front, back and top of case must be straight — not forced to warp or bow. Use threaded rod and support brackets to keep large cases from warping. **DO NOT** use support brackets to support weight of screen.
7. Do not use case to support adjacent sections of ceiling.
8. If optional ceiling flange trim kits are attached, use hardware provided.
9. If case is painted, slots on bottom of case should be shielded to protect viewing surface from paint splatters or overspray.
10. After headbox is mounted, and before operating shade, you **MUST** remove shipping spacers from inside headbox. First, remove closure panel (*see Page 5*). Find the hexagonal spacers on the motor end — one in front of roller and one behind (*Fig. 1*). Remove these spacers with a $\frac{1}{16}$ " wrench, taking care not to damage fabric or loosen wiring (*see caution note below*). Replace closure panel.

CAUTION: Screen ships with motor wiring mounted to case. Be careful not to pull wiring loose from case while removing spacers — if wiring is loose, it could be damaged during screen operation. If wiring does come loose, re-mount as it was.

11. Do not seal unit in ceiling until electrical connections have been made and screen has been operated successfully.

CAUTION: Do not remove roller assembly from case unless necessary for repairs. If roller assembly is removed, be sure motor is fully re-seated in the bracket, and re-secure it carefully with motor retaining spring and screw (*Fig. 3*).

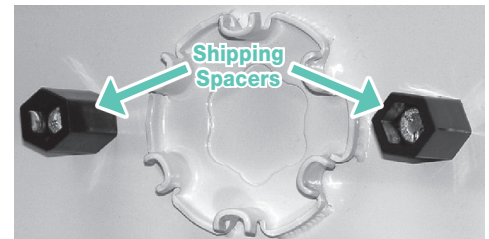


Figure 1
(roller and fabric removed for clarity)

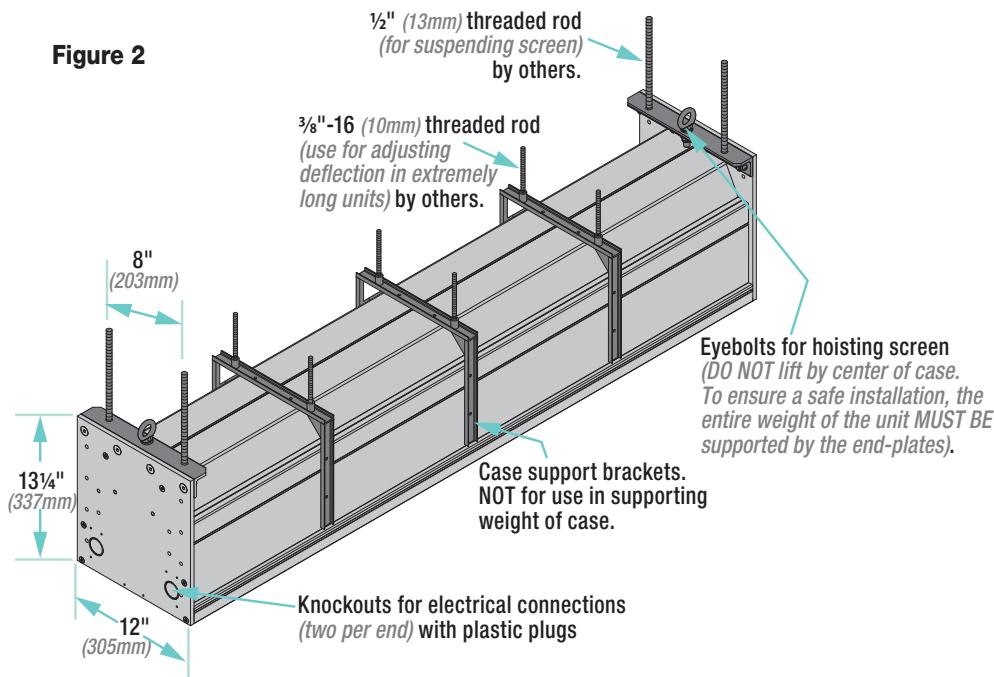


Figure 2

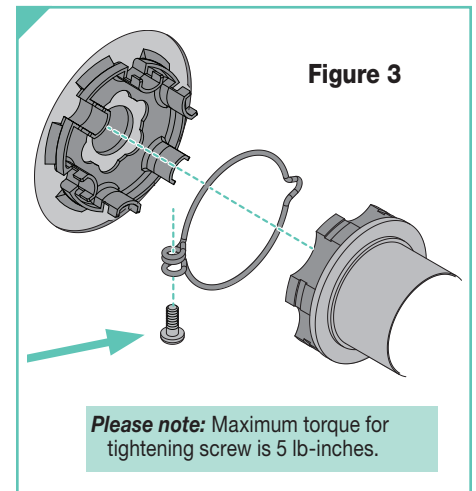


Figure 3

Please note: Maximum torque for tightening screw is 5 lb-inches.

Section 2 - Electrical Connections

1. Screen operates on 110-120V, 60 Hz., 1.1 amp current draw.
2. Junction box is located just above the bottom access panel at the left end of the screen.
3. Open the access panel/trap door for access to the junction box cover. (See bottom access panel/trap door opening and closing instructions below).
4. Remove two (2) hex head screws that secure the cover to the junction box to expose the red, black, and white pigtail leads and the green ground wire per wiring diagram (Page 7).
5. If optional low voltage control or video interface control is specified and factory installed, please refer to wiring diagram (Page 7).
6. Screen is shipped with internal wiring complete and control switch(es) fully boxed. Wire to connect screen to switch(es) and switch(es) to power supply should be furnished by installer. Connections should be made in accordance with attached wiring diagram, and wiring should comply with national and local electrical codes.
7. All operating switches should be "off" before power is connected.

Section 3 - 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.
- **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.

Section 4 - Limit Adjustments

Please Note: Screen limits are factory set. Instructions below for minor adjustments only. Please check with Draper prior to resetting screen limits.

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.
- Motor must be installed so that limit switches are pointed down.

CAUTION:

Rough handling in transit may cancel/reset motor limit settings. To prevent viewing surface damage, be prepared to stop descending screen if surface begins to retract instead of stopping or if motor does not shut off when screen has fully retracted into case.

ADJUSTING "FULLY UP" POSITION:

1. Place small screwdriver in groove of yellow button on motor and press vertically until it "clicks."
2. Raise screen by pressing UP switch. Press STOP switch when screen reaches desired position. Then press yellow button on motor until hearing a "click", then release.

ADJUSTING "FULLY DOWN" POSITION:

1. Place small screwdriver in groove of white button on motor and press vertically until it "clicks."
2. Lower screen by pressing DOWN switch. Press STOP switch when screen reaches desired position. Then press white button on motor until hearing a "click", then release.

CAUTION: AT NO TIME SHOULD SCREEN BE UNROLLED ENOUGH TO EXPOSE ANY PART OF SCREEN ROLLER

Section 5 - Bottom Closure Removal/Replacement

Please Note: Removal and replacement of the bottom closure panel requires two people positioned about 5' from each end of the panel. Closure should be handled as shown in Step 5 to prevent bowing of the closure during handling.

Step 1

CAUTION: Before removing bottom closure, you must first remove screws at each end of case (see drawing).

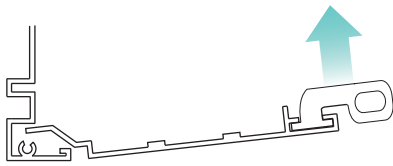
Screw and Washer



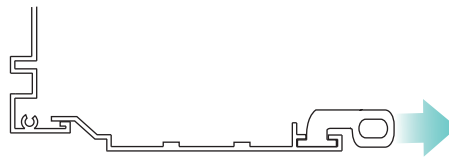
Step 2



Step 3

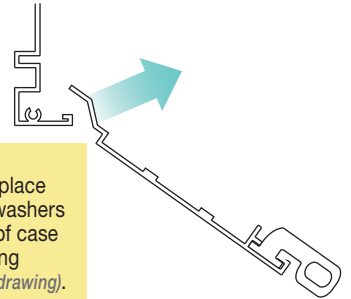


Step 4



Step 5

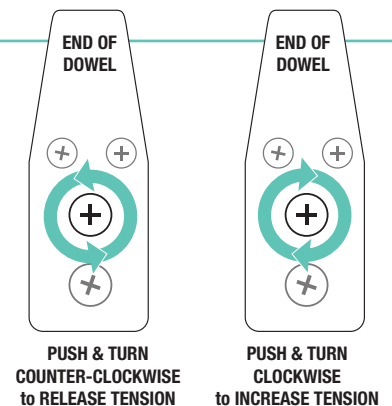
CAUTION: Be sure to replace screws and washers at each end of case when replacing closure! (see drawing).



Section 6 - Tab-Tension Adjustment Procedure

Please Note: Draper's Tab-Tensioning System is factory-set, and under normal circumstances will not require field adjustment. If wrinkles are observed, however, follow the adjustment procedure shown in Figure 4.

Figure 4

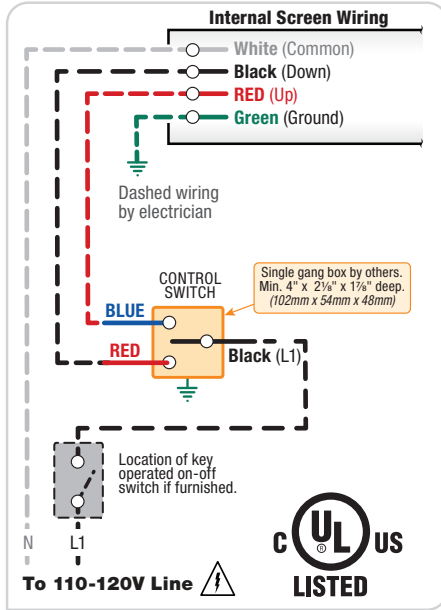


Section 7 - Wiring Diagrams: Standard and Quiet Motor

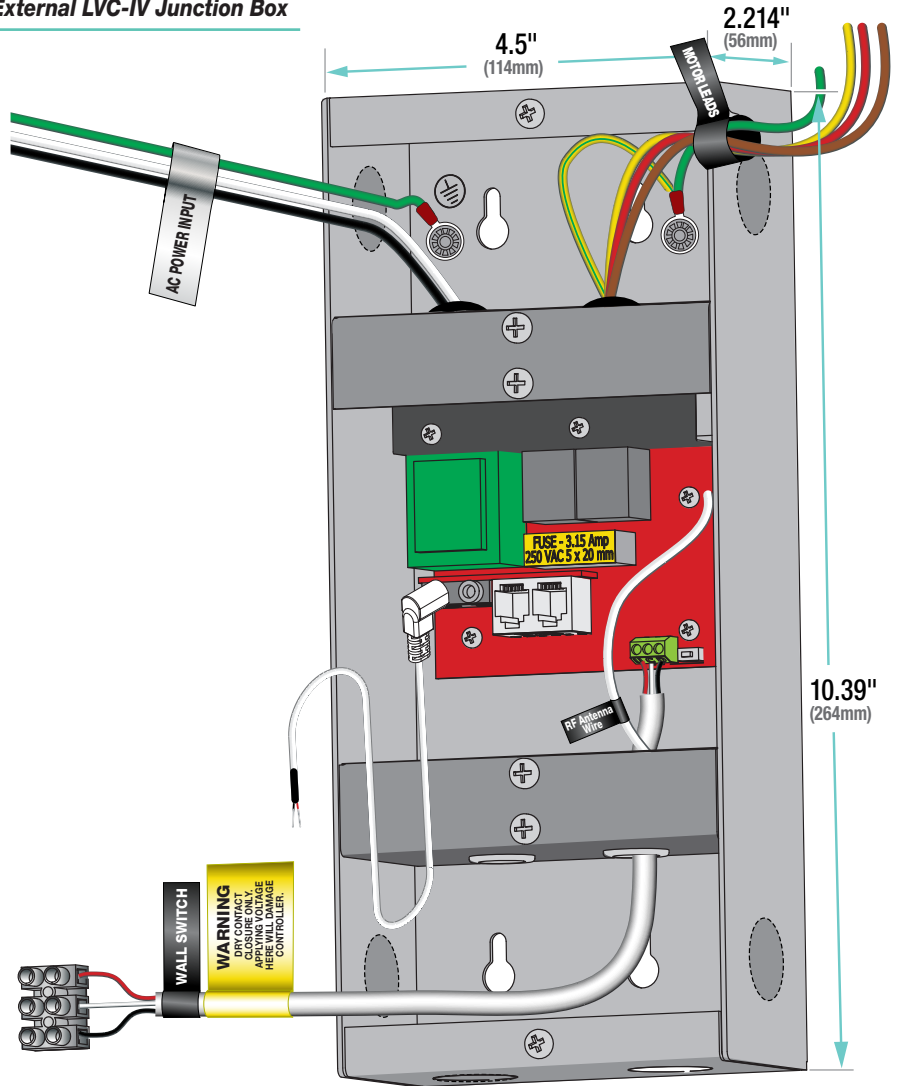
Please Note: Do not wire motors in parallel.



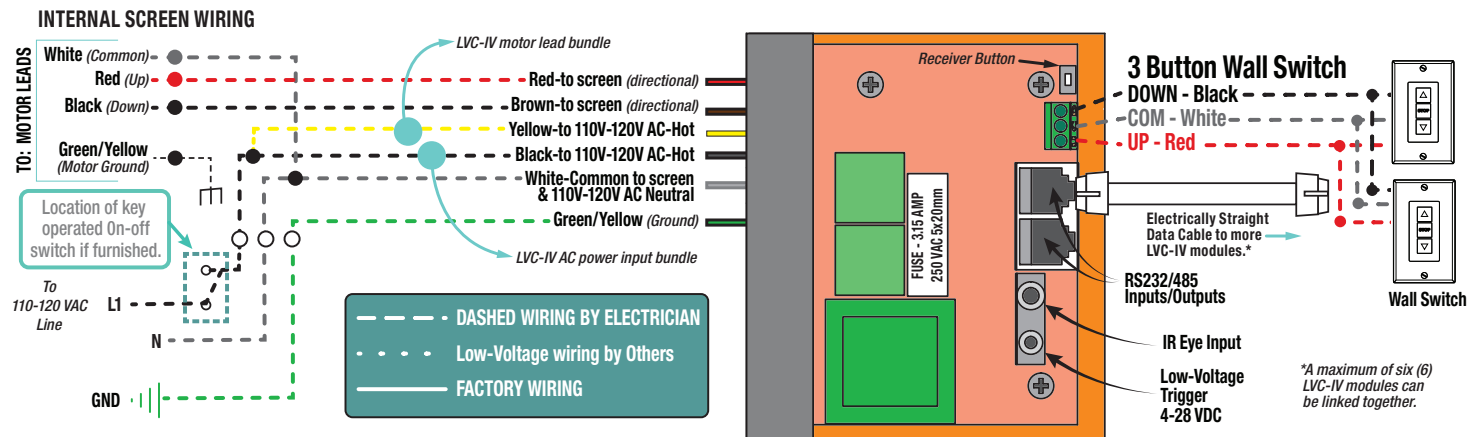
110-120V Motor and Quiet Motor Single Station Control



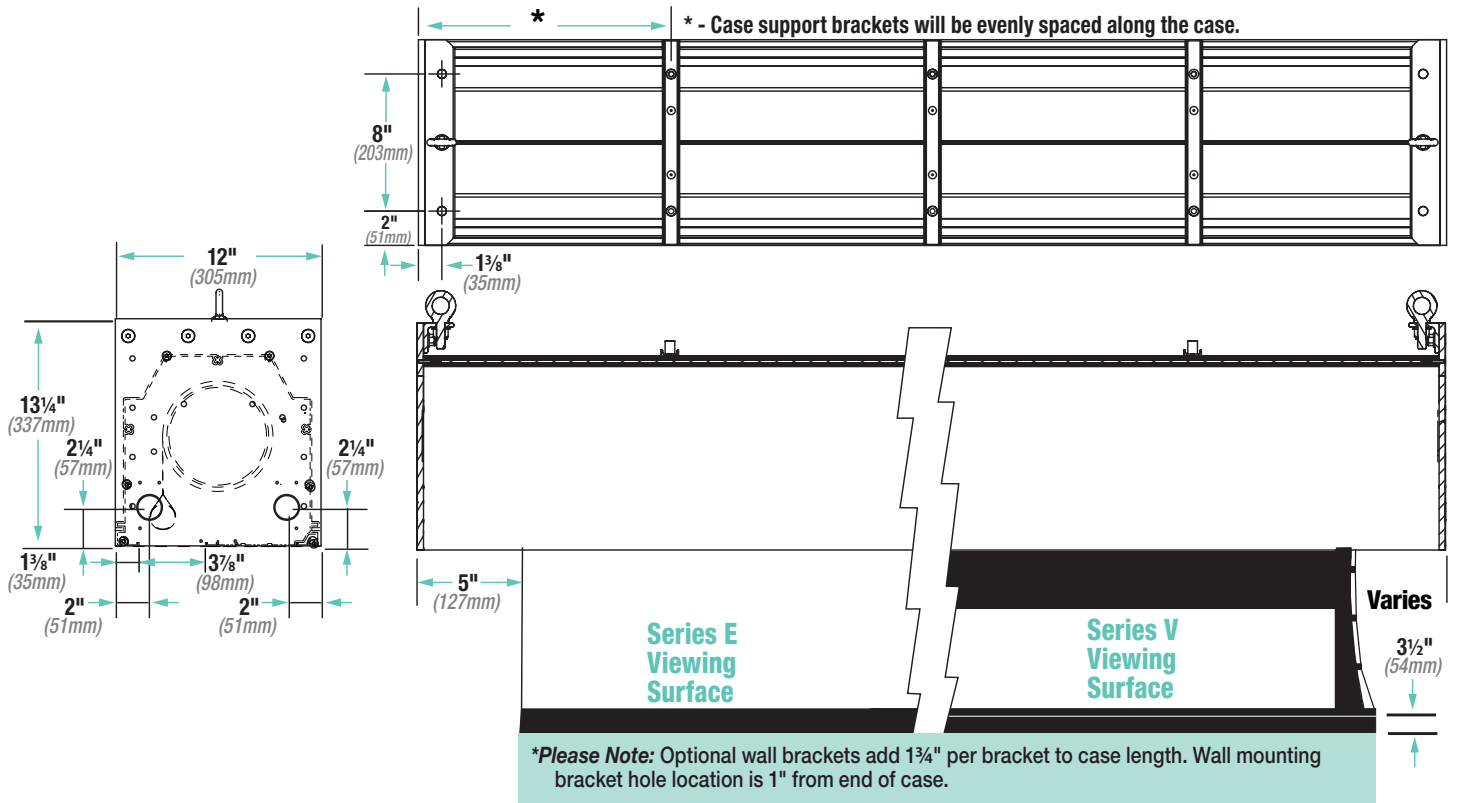
External LVC-IV Junction Box



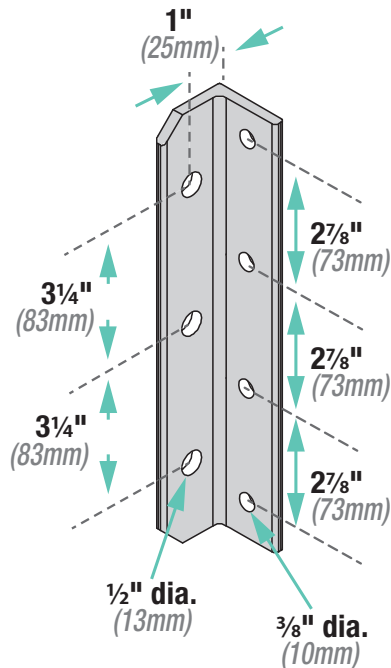
WIRING DIAGRAM - External LVC-IV (Low-Voltage Control Module)



Section 8 - Dimensions



Optional Wall Mounting Bracket



Case Width	Number of Intermediate Brackets
< 96" (< 2.44m)	0
> 96" and < 180" (> 2.44m and < 4.57m)	1
> 180" and < 240" (> 4.57m and < 6.1m)	2
> 240" and < 346" (> 6.1m and < 8.8m)	3

Brackets are equally spaced from each other and each end. For example, if the case length is 202" (5.13m), then each of the two brackets will be placed approximately 67.33" (1.71m) from each end [with 67.33" (1.71m) between them].