

**INSTALLATION INSTRUCTIONS FOR  
CLASS 2, 24VOLTS ELECTRONIC LED POWER SUPPLY  
INDOOR AND OUTDOOR DRY AND DAMP USE**

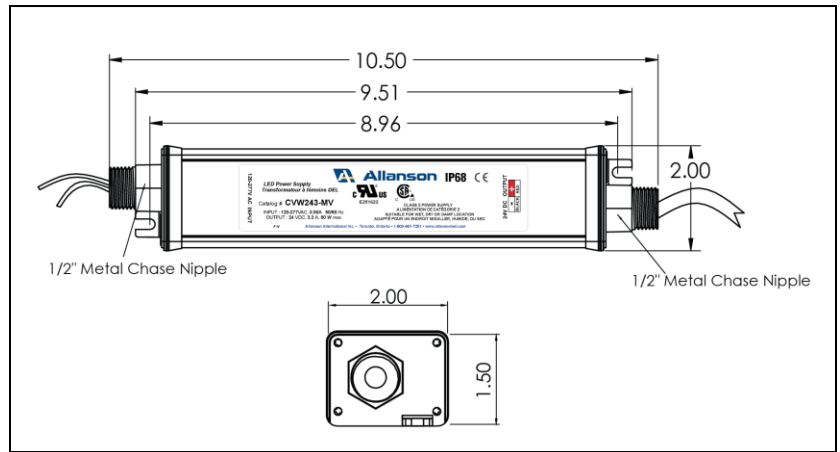
**⚠ WARNING**

To avoid electrical shock or fire: Disconnect power at service panel prior to installation, troubleshooting or maintenance.  
Always follow NEC and local wiring requirements. Properly ground power supply and fixture. Do not connect output of power supplies in series or parallel.

Thanks for purchasing Allanson's LED Power Supply. Should you have questions or concerns please do not hesitate to contact us. Please read all installation instructions before installing this system.

**SPECIFICATIONS**

Part #	CVW243-MV
Input Voltage	120-277VAC
Input Frequency	50/60Hz
Input Current @ Rated Load	0.80A rms
Power Factor	HPF>90%
Output Voltage	24Vdc +/-5%
Output Current	3.3A
Size (LxWxH)	10.5"x2.00"x1.50"
Max Ambient Operating Temperature	40° C
Input Wires Length	36"
Output Cable Length	29"
Certification	UL recognized, CSA



**INSTALLATION AND OPERATION**

- Firmly secure the case to the application with proper size screws.
- If the power supply is mounted on metal surface, make sure it is grounded to the metal frame. All metal parts of the individual channel letter and the sign frame must be grounded to the point of power connection in accordance with local electrical codes and other ordinances.
- Wire the power supply to a standard three-wire grounded power source.
- Use output leads #18 AWG or heavier to wire the LED modules. For best results, keep the leads as short as possible. The recommended length between the output of the power supply and first LED module should be less or equal to 12 feet using 18 AWG (expected 5% voltage drop).
- If you need to extend the distance between the power supply to the LED modules, please increase the wire gauge to minimize the voltage drop to the modules. A reduction in voltage to the modules will cause a proportional reduction in light output. The table attached is only a guide.

Distance to Power Supply	Standard Copper Wire Gauge	Expected Voltage Drop
13 ft.	16 AWG	5%
20 ft.	14 AWG	5%
30 ft.	12 AWG	5%

- Firmly secure the LED modules to a flat metal surface.
- Attach the positive lead wire of the LED module to the positive (+) terminal of the power supply. Attach the negative terminal of the LED module to the negative (-) terminal of the power supply.
- Do not overload the unit. Follow each system's specification for correct loading.
- The power supply and the LED modules generate heat during normal operation and it is necessary to allow heat to dissipate. It is recommended they are mounted with as much of their surface in direct contact with other metal surfaces as possible. Letters should be well ventilated.
- Power supplies may be joined together on the primary side with a junction box in a wide array of configurations. All connections must be performed in accordance with NEC and local wiring requirements (see Illustration 1 on page 2).
- For installation in a "wet" location, the junction box MUST BE UL Listed and be suitable for wet locations. For installations in "dry" locations, the junction box MUST BE a UL listed junction box.**
- Licensed electricians should provide all installation and hook-up of both the primary and secondary input/outputs of the power supply.

## Installation Guide for Wet Location

### Wet Location Sample Configurations

**Note:** Power supplies shall be spaced a minimum of 2 inches from other heat producing components. If multiple power supplies are used in one enclosure, the minimum spacing between them shall not be less than 1 inch when arranged end-to-end, and not less than 4 inches when arranged otherwise.

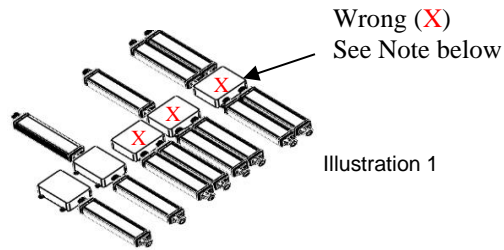


Illustration 1

### Primary side

- Step 1 – Apply Teflon tape or Multi Thread Seal to the PS input side ½" NPT Nipple.
- Step 2 - Pull the three primary wires into the junction box
- Step 3 - Thread the PS ½" NPT Nipple firmly against the junction box.
- Step 4 - Connect the three primary wires to the respective wires coming from the sign's service with wire nuts.
- Step 5 - Plug all unused ports/knockouts on the junction box with suitable plugs and install the junction box cover

### Please see below two options for primary connections:

#### a) Power Supply to junction box

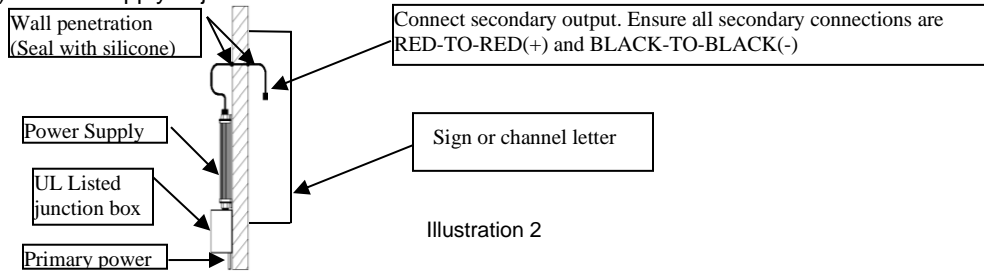
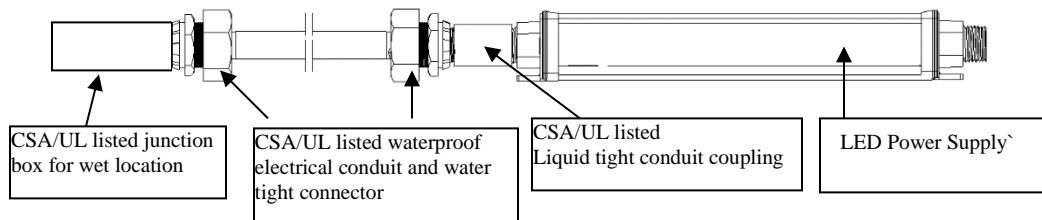


Illustration 2

#### b) Power supply to remote junction box 2' max. Primary leads are 36" long



### Secondary Side

- Secondary class 2 cables do not require conduit per NEC 2008 Articles 725.121 through 725.130.
- Seal all wall penetration with silicone to avoid water damage.

### Trouble Shooting

No Light output	Make sure power at breaker is on. Make sure connections are correct between line and power supply, and between power supply and LED chain. Check output of the power supply using a volt meter. The output should be 24VDC. Have a licensed electrician check the power at the input of the power supply. Short circuit at the output will shut down the unit
Sections of LED strip have no light	Check connections and polarity between power supply and LED strip, connectors and polarity between LED strips
One LED Module has no light	If all other LED modules are working except one, replace this one module The modules are in parallel and will not cause other modules to fail if one fails
Not enough light Light goes off and on periodically	Make sure the LED load does not exceed the output rating of the LED driver. Fasten any loose modules or arrays
Shadows	Tape any wires down that are interfering with the LED modules. Fasten any loose modules
Unit attempts to restart	In fault condition mode, the power supply will attempt to restart periodically and resume normal operation after fault condition removed