INSTALLATION INSTRUCTIONS FOR CLASS 2, 12 VOLTS ELECTRONIC LED POWER SUPPLY INDOOR AND OUTDOOR DRY, DAMP AND WET USE

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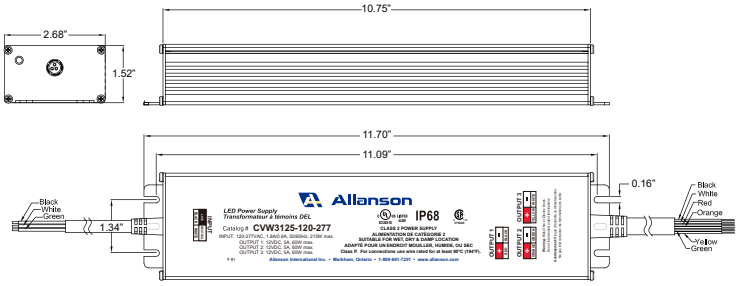
⚠ WARNING

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

Thank you 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 #	CVW3125-120-277
Input Voltage	120-277VAC
Input Frequency	50/60Hz
Input Current @ Rated Load	1.80A @ 120V
	0.80A @ 277V
Power Factor	HPF>90%
Output Voltage	12Vdc +/- 3%
Output Current 1	5A
Output Current 2	5A
Output Current 3	5A
Size (LxWxH)	11.7"x2.68"x1.52"
Max Ambient Operating Temperature	40° C
Certification	UL / CSA



⚠ **Warning** : Do not interconnect output terminations.

Output 1, Output 2 and Output 3 wires should be connected as below:
Output 1 Connection: Red to Positive (+), Black to Negative (-)
Output 2 Connection: Orange to Positive (+), Green to Negative (-)
Output 3 Connection: Yellow to Positive (+), White to Negative (-)

Illustration 1

INSTALLATION AND OPERATION

- Firmly secure the case to the application with proper size screws.
- LED power supply and all surrounding metal should be bonded to ground. 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 the first LED module should be less or equal to 9 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 electrical codes. (See Illustration 2)
- For installation in a wet location, the junction box MUST BE UL Listed or CSA Certified and be suitable for wet locations. For installation in dry locations, the junction box MUST BE a UL Listed or CSA Certified junction box.

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.

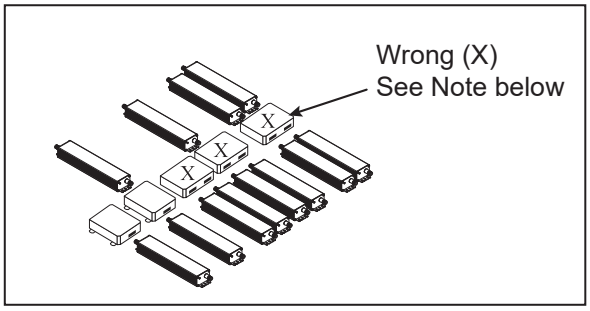


Illustration 2

Primary Side

- Step 1 - Feed the input cord through the ½" NPT cable gland included with the package.
- Step 2 - Pull the input cord into the junction box.
- Step 3 - Thread the PS ½" NPT cable gland firmly against the junction box, apply Teflon tape or Multi Thread Seal if necessary.
- 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 for connections:

Both Primary (input) and Secondary (output) cords are 21 inches long.

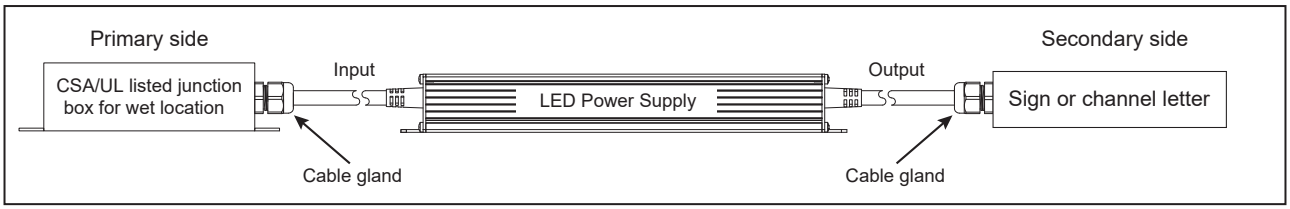


Illustration 3

Secondary Side

- Connect sign or channel letter in the same way as the primary side, use included cable gland.
- Cap off any unused output leads individually.
- Seal all wall penetration with silicone to avoid water damage.

Troubleshooting

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 voltmeter. The output should be 12VDC. 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 module does not light up	Check connections and polarity between power supply and LED module, connectors and polarity between LED modules.
One LED Module does not light up	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 output Light turns off and on periodically	Make sure the LED load does not exceed the output rating of the LED power supply. 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 is removed.

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