

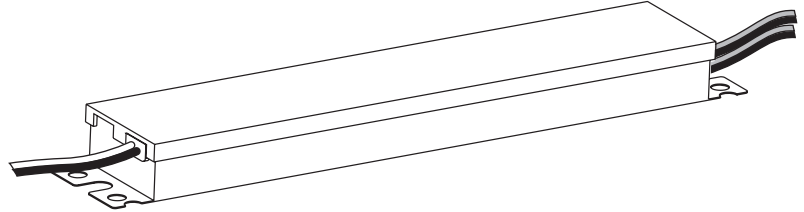
# LED Systems Power Supply

12  
Volt

GEPS12-120U-NA (120-277 VAC input/12VDC output/120W)

## Power Supply Features

- Supports all 12 VDC Tetra Products
- Dry and Damp Locations Rated
- UL: Class 2, Class P, Type HL
- Two 60 Watt Output Banks
- 120-277 VAC Input



## BEFORE YOU BEGIN

Read these instructions completely and carefully.

### ⚠ WARNING / AVERTISSEMENT

#### RISK OF ELECTRIC SHOCK

- Disconnect power at fuse box or circuit breaker before servicing or installing product.
- Properly ground Tetra® power supply.
- Use only within an enclosure.
- When utilized within a sign, only the AC input connections need be suitably enclosed.

#### RISK OF FIRE

- Use only approved wire for input/output connection. Minimum size 18 AWG (0.82 mm<sup>2</sup>).
- Follow all local codes.

#### RISK OF ELECTRIC SHOCK OR FIRE

- Do not connect outputs in series or in parallel.

#### RISQUES DE DÉCHARGES ÉLECTRIQUES

- Coupez l'alimentation électrique à la boîte de fusibles ou au disjoncteur avant l'entretien ou l'installation du produit.
- Assurez-vous de correctement mettre à terre le bloc d'alimentation Tetra®.
- Les connexions d'entrée CA doivent être convenablement enfermées. Le bloc d'alimentation doit être enfermée ou rendue inaccessible aux utilisateurs pendant l'utilisation normale.
- Utiliser uniquement dans une enceinte.
- Lorsqu'il est utilisé dans un panneau, seules les connexions d'entrée CA doivent être convenablement fermées.

#### RISQUES D'INCENDIE

- N'utilisez que des fils approuvés pour les entrées/sorties de connexion. Taille minimum 18 AWG (0.82 mm<sup>2</sup>).
- Respectez tous les codes locaux.

#### RISQUES DE CHOC ÉLECTRIQUES OU D'INCENDIE

- Ne pas connecter les sorties en série ou en parallèle.

### ⚠ CAUTION / ATTENTION

#### RISK INJURY

- While performing installations described, gloves, safety glasses or goggles should be worn.

#### RISQUES DE BLESSURE

- Lors de l'exécution des installations décrites, des gants, des lunettes de sécurité ou des lunettes de protection doivent être portées.

## Prepare Electrical Wiring



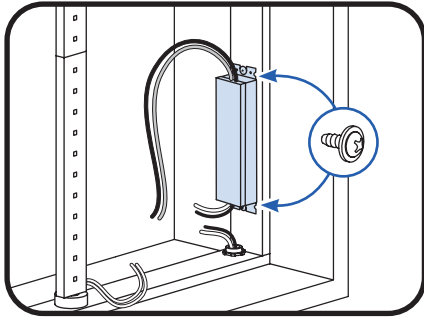
### Electrical Requirements

- Limited to use in dry and damp locations.
- The suitability of rain enclosure shall be determined if intended for wet location.
- The grounding and bonding of the LED Driver shall be done in accordance with National Electric Code (NEC) Article 600.
- Follow all National Electric Codes (NEC) and local codes.

## Save These Instructions

Use only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.

## Power Supply Installation

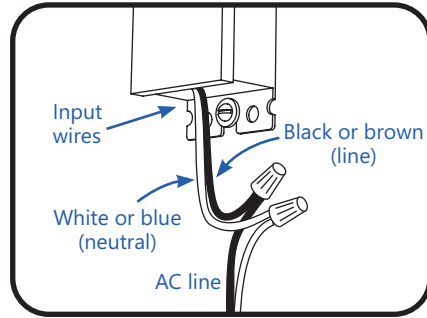


- 1 Mount the power supply. Mounting the power supply base directly to a thermally conductive installation surface can improve thermal performance.

**NOTE:** For good performance, we suggest a minimum power supply spacing to other power supply or other heat producing component shall be at least 4" (101.6 mm) from side to side and 1" (25.4mm) from end to end.

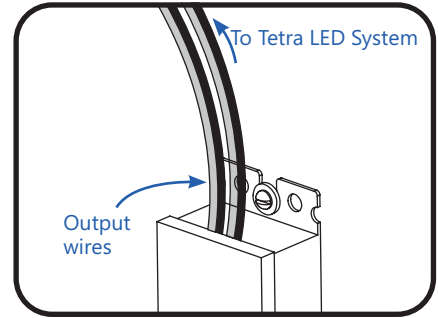
Application considerations potentially requiring additional spacing include high ambient temperature seen by the power supply, poor contact with a heat dissipating material, inadequate ventilation, or direct exposure to sun.

All electrical connections should be suitably protected from mechanical damage and the environment. Seal all connections exposed to water with electrical grade self-hardening silicone.



- 2 Connect the AC line to the black (line) and white (neutral) input wires of the power supply using suitable wire connectors.

**⚠ WARNING**  
**RISK OF ELECTRIC SHOCK**  
 AC input connections shall be suitably enclosed.



- 3 Connect the supply wire that is attached to the Tetra LED System to the red (CH1 +) and red/white (CH1 -), or blue (CH2 +) and blue/white (CH2 -) output wires of the power supply as outlined in the "Electrical Connections" section of your LED system's Installation Instructions.

**NOTE:** Two 60 watt output banks per power supply. Do not interconnect output terminations.

To avoid overloading this power supply with LED modules, please refer to the specific module loading guides.

Exceeding maximum load per bank will cause the LEDs to dim or blink. Once the excess load is removed, cycle the input power to restart the power supply.

**NOTE:** For installation in Canada, a disconnect switch of appropriate rating needs to be placed within 29.5 feet (9 meters) of primary side of the power supply. The switch voltage rating shall not be less than the branch circuit voltage. The switch must also support twice the amount of input current.

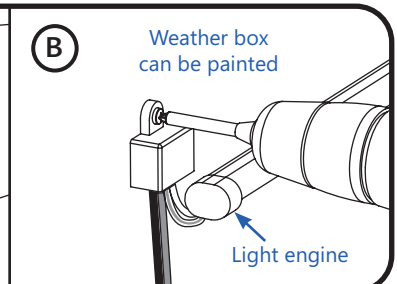
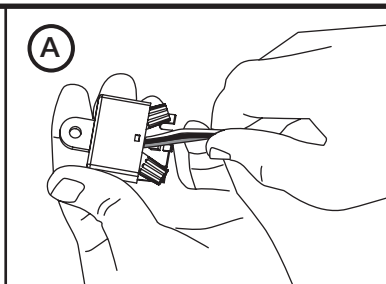
**NOTE:** When installing power supply, connect to the appropriate sized building breaker or disconnect device for line, neutral and ground connections, in accordance with National Electric Code (NEC) Article 600 and all local regulations.

### OPTIONAL

A Weather Box (GEXNWB2) may be used to house and seal Class 2 connections.

A) Insert wire connectors into weather box. Fill with electrical grade silicone and close box.

B) Secure the weather box using a #6 or #8 (M2 or M3) screw.



## Power Supply Specifications

Performance Data	Min	Typical	Max
Input Voltage (VAC)	108	120-277	305
Input Frequency (Hz)	–	50/60	–
Input Current (A)	–	–	1.15
THD**	–	10	–
PF**	0.95	–	–
Output Voltage (VDC)	11.4	12.0	12.6
Output Current per Channel (ADC)	–	–	5.0
Output Power per Channel (W)	–	–	60
Total Output Power - 2 Channels (W)	–	–	120
Environmental Operating Temperature Range	-40°C	+25°C	+55°C*
Environmental Humidity (non-condensing)	10%	–	90%
Environmental Storage Temperature Range	-40°C	–	+85°C
Environmental Rating	UL Dry and Damp Locations, IP54 rated: must be protected from direct exposure to the weather.		
Dimensions	11.75 in. x 1.70 in. x 1.18 in. (298.5 mm x 43.1 mm x 30 mm)		

\*Maximum rated case temperature is 85°C .

\*\*At 120VAC - 277VAC Full Load

## Troubleshooting

Symptom	Solution
All letters are OFF	<ul style="list-style-type: none"> <li>Recycle AC power, turn it off, then turn on again.</li> <li>If still off, check the power supply DC output voltage using a voltmeter. It should be nominally 12V.                             <ul style="list-style-type: none"> <li>» If there is DC output, inspect and correct all DC wire damage/polarity issues; If no issue is found, replace the OFF-module string.</li> <li>» If there is no DC output, have a licensed electrician check the input AC voltage and if there is correct AC voltage, replace the power supply.</li> <li>» If there is no AC voltage, correct the upstream AC issue.</li> </ul> </li> </ul>
Some LEDs appear dim	<ul style="list-style-type: none"> <li>Ensure the overall length of the Tetra® LED System does not exceed the maximum load.</li> <li>Ensure the length of supply wire is equal to or below the recommended remote mounting distance.</li> </ul>
Some of the letters are not illuminated	<ul style="list-style-type: none"> <li>Inspect and correct the wires of the non-illuminated letters for damage/polarity issues; If no issues are found, see the troubleshooting solution for "All letters are OFF."</li> </ul>
Shadows	<ul style="list-style-type: none"> <li>Re-route supply wire and secure to the back of the can with electrical grade RTV silicone. Adjust wire connector orientation so that it does not cover any LEDs.</li> <li>Adjust LED layout to ensure uniformity of illumination of the face of the letter.</li> </ul>

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class [A] RFLD complies with the Canadian standard ICES-005. Ce DEFR de la classe [A] est conforme à la NMB-005 du Canada.

This product is intended to be used as a lamp control gear that is installed after the mains control switch.

Conforms to the following standards:



Current Lighting Solutions, LLC.  
Cleveland, OH 44124

For the most up-to-date version of this installation guide, please visit <https://products.LED.com/sign-lighting>