GE
Lumination

Installation Guide

2.8 Volt

Tetra® **PS3 & PS4 Power Supply**

LED Lighting System

(GECLPS3, GECLPS4)

PLEASE READ AND FOLLOW ALL SAFETY WARNINGS AND CAUTION STATEMENTS

Power Supply Installation Quick Steps

1. Mount the Power Supply to the back of the channel letter, inside a raceway, or to an interior wall. Maintain a 0.5" inch (13mm) clearance from any side of the power supply to the walls of the channel letter or raceway.

   NOTE: Use at least two of the mounting holes with either an #8 or #10 screw.

   NOTE: For self-contained letters, maintain a 0.5" (13mm) spacing between the Tetra Strip and the Power Supply to avoid shadows.

2. Open integral junction box cover by loosening screw and sliding cover outward and then lift, or remove the single screw and lift cover, depending on model.

NOTE: **For CSA approval, a disconnect/toggle switch of appropriate rating needs to be placed within 29.5 feet (9 meters) of primary side of the power supply. The minimum rating of the switch must be either 120 or 220 Volts AC. The switch must also support twice the amount of input current.**

3. Run the AC line input into the integral junction box through one of the knockouts provided. Attach the line wire to the black (or brown) wire of the Power Supply. Attach the neutral wire to the white (or blue) wire of the Power Supply.

   NOTE: Use standard electrical fittings for connection to the integral junction box.

4. Attach the input ground wire to the green hexagonal screw within the integral junction box. Secure the integral junction box cover.

   CAUTION: Do not over tighten the screw: 10 in. lbs. maximum torque.

5. Connect the Supply Wire(s) attached to the Tetra® Strip(s) in the channel letter to the pre-attached Load Wire from the Power Supply using the Splice Connector.

   NOTE: Multiple letters/sections can be attached to one output lead of the power supply. However, do not exceed the total footage per bank as stated in the Dip Switch section on page 2.

   Conforms to the following standards:

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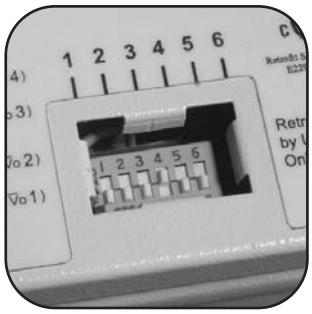
6 Flip the correct dip switch according to the chart provided below. (See section 2 for detailed explanation.)

Dip Switch Setting	1	2	3	4	5	6
Character Code of Tetra® Strip	XX1	XX2	XX3	XX4	XX5	XX6



NOTE: For proper operation, verify that only one switch is set to the "ON" position. Refer to the Chart Section 2 for additional details.

7 Replace the dip switch cover to close.

8 Perform a quick test by turning the system on to ensure the channel letter LEDs are lit.

Dip Switch Settings

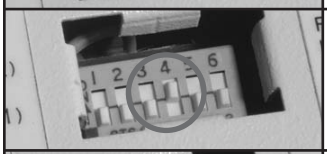
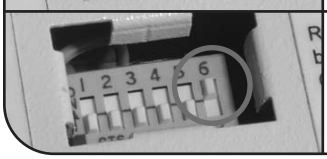
GECLPS3 Power Supply

The following chart indicates the Tetra Strip load that can be placed on the Power Supply based on the character code on the LED and the dip switch setting chosen. For example, when the Tetra Strip is marked with the character code HN3, the "3" on the dip switch can be set to the ON position to achieve neon-equivalent performance. At this setting, the GECLPS3 power supply can support up to 64 ft. (19.5m) of the 6 LED per foot Tetra Strip. If you change the dipswitch setting and flip #2 switch to the ON position, the power supply can support up to 80 ft. (24.4m) of Tetra Strip. The footage guidelines vary based on the type of Tetra Strip being used. The charts below provide the footage requirements for each Tetra Strip type.

GECLPS4 Power Supply

CAUTION: Avoid setting the dip switch to the ON position with any setting not listed in the chart unless stated otherwise (i.e. Border Tube Installation). If these requirements are not followed, the Tetra Strip and Power Supply warranty will be void.

Dip Switch Setting Chart Legend

Chart Assumes LED Code of "XX5"	Tetra Strip Type / Dip Switch Setting	GECLPS4		GECLPS3		Notes
		6 LEDs/Ft. (20/m)	5 LEDs/Ft. (16/m)	6 LEDs/Ft. (20/m)	5 LEDs/Ft. (16/m)	
	Matches Bin Code	16 ft. (4.8m)	20 ft. (6.1m)	64 ft. (19.5m)	80 ft. (24.4m)	Recommended for Optimal Performance
	-1	20 ft. (6.1m)	24 ft. (7.3m)	80 ft. (24.4m)	96 ft. (29.3m)	Intensity of the Tetra Strip will be reduced by approximately 10% to 20%
	+1	12 ft. (3.7m)	16 ft. (4.8m)	48 ft. (14.6m)	64 ft. (19.5m)	Intensity of the Tetra Strip will be increased by approximately 10% to 20%

Installation Do's & Don'ts

Action	Do	Don't
Installing the Tetra Power Supply	Provide a minimum of 0.5" (13mm) clearance on all sides.	Mount to the sides of the channel letter.
Splice connecting the Tetra Supply Wire	Splice Connect the red stripe on the Supply Wire from the channel letter to the red stripe of the exposed Supply Wire attached to the Power Supply.	Exceed the stated amount of footage per load bank in the dip switch settings chart.
Mounting the Tetra Strip	5-6" (14cm) Returns: Mount the Tetra Strip 2" (5cm) from the side of the Chanel Letter can and additional strokes on 4-5" (11-12cm) centers.	
	7" (17cm) and Deeper Returns: Tetra Strip can be spaced wider apart; i.e. 3.5" (9cm) from the edge and 5-6" (14cm) centers, depending on intensity and uniformity requirements	

All dimensions are in inches (mm) unless otherwise stated.

Trouble Shooting

Symptom	Condition	Solution
All LEDs are blinking	Underload (Too few feet of strip).	**PS3 Only:** Ensure at least a total of 4 ft. (120cm) of Tetra are installed on the Power Supply and check dip switch settings.
	Overload (Too many feet of strip).	Ensure Tetra Strip footage does not exceed the maximum length as stated in the dip switch setting chart for each bank.
LEDs are dim	Incorrect dip switch setting.	Increase/decrease dip switch setting. Check bin code on attached LED and set according to chart.
Some of the letters are not illuminated	Verify wire attachments to the load banks are correct.	Make sure the connections are red wire to red wire and white to white.
	Check splice connection(s) in the letter and to the supply wire attached to the Power Supply.	Verify connections are red-to-red and white-to-white (Refer to picture in Section 1, Step 5). Re-squeeze. If not connected properly, replace.
All letters are off	Check breaker.	Reset or turn on breaker.
	Short on bank or current is above 5 amps.	Shut down power supply and correct short or reduce Tetra Power footage on output bank; cycle primary power to reset.
	Both fuses are blown (PS2)	Turn off power, replace fuses, check for shorts or excess footage. Cycle primary power to reset.
Shadows	Shadows appearing around the Power Supply.	Verify Tetra Strip is not installed flush to the Power Supply. Move Tetra Strip 0.5-inch (13mm) away from Power Supply.

⚠ WARNING

RISK OF ELECTRIC SHOCK:

- Turn power off before inspection, installation or removal.
- Properly ground power supply enclosure.
- Shut off power at fuse box or circuit breaker before installation.

RISK OF FIRE:

- Use only Tetra Supply Wire to make connection from Tetra Power Supply to Tetra LED Strip.
- Follow all NEC and local codes.
- Use only approved wire for input connection. Minimum size 1.02mm

GECLPS3 Power Supply Specifications

Input	Minimum	Typical	Maximum
Voltage (VAC)	96	115/220	254
Current (A)	1.5	0.90	0.53
Frequency Hz	47	-	63
Output	**Minimum**	**Typical**	**Maximum**
Voltage (VDC) Dip Switch selectable 1 thru 6	2.0	-	2.8
Current (ADC)	2.0	-	20.0
Output Power (W)	4.0	-	56
Load	**Minimum**	**Typical**	**Maximum**
Lineal ft. 6 LEDs/ft (20/m)	4 ft. (120cm)	-	See Chart in Section 3
Lineal ft. 5 LEDs/ft (16/m)	4 ft. (120cm)	-	See Chart in Section 3
Environmental	**Minimum**	**Typical**	**Maximum**
Operating Temp. Range	-25°C	+25°C	+70°C
Outdoor Rated (Condensing Humidity)	0%	-	95%
Storage Temp. Range	-40°C	-	+85°C
Enclosure Specification	**GECLPS3 Dimensions**		
Damp Location Rated	9.0" (23cm) x 2.9" (7.3cm) x 1.6" (3.8cm)		

GECLPS4 Power Supply Specifications

Input	Minimum	Typical	Maximum
Voltage (VAC)	96	115/220	254
Current (A)	.37	0.25	0.18
Frequency Hz	47	-	63
Output	**Minimum**	**Typical**	**Maximum**
Voltage (VDC) Dip Switch selectable 1 thru 6	2.0	-	2.8
Current (ADC)	1.0	-	5.0
Output Power (W)	4.0	-	15
Load	**Minimum**	**Typical**	**Maximum**
Lineal ft. 6 LEDs/ft (20/m)	1 ft. (30cm)	-	See Chart in Section 3
Lineal ft. 5 LEDs/ft (16/m)	1 ft. (30cm)	-	See Chart in Section 3
Environmental	**Minimum**	**Typical**	**Maximum**
Operating Temp. Range	-25°C	+25°C	+70°C
Outdoor Rated (Condensing Humidity)	0%	-	95%
Storage Temp. Range	-40°C	-	+85°C
Enclosure Specification	**GECLPS4 Dimensions**		
Damp Location Rated	7.5" (19cm) x 2.25" (5.7cm) x 1.5" (3.8cm)		

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