LED 12VDC Power Supply (60Wx5) Part No: L-12DCH60X5-120/277V-1

LED 24VDC Power Supply (96Wx4) Part No: L-24DCH96X4-120/277V-1

Accessories (sold separately): LED dimmers, mounting blocks (12VDC), 5-output barrel splices (24VDC), extension and link cords (various lengths)

Installation Instructions
Hardwire LED Power Supplies
Class 2 • Dimmable 300W 12VDC & 384W 24VDC
Constant Voltage • Multiple Output

Read all instructions before installing system.

Before beginning installation, be sure power is turned OFF to the power supply and light system.

- The 300W 12VDC power supply operates on line voltage 100-277 VAC.
- The 384W 24VDC power supply operates on line voltage 100-277 VAC.

For best operation, use LED-compatible wall dimmers.
All wiring must be in accordance with NEC and local electrical codes.

Installing the Power Supply:

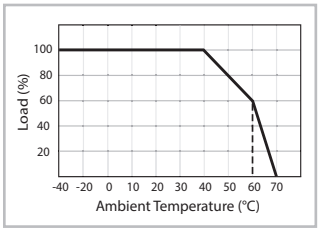
1. Roughly lay out the lighting system before installation to verify final positioning of all components. Keep power supply in an accessible location.
2. Have a qualified electrician route Romex® 120V cable from the wall to the LED wall dimmer (optional) and to the LED Class 2 power supply. (see Figs. #1 and #2)
   The power supplies are rated for minimum 18 AWG for the input wiring.
   Depending on your lighting requirements, use either the 12VDC 60Wx5 or the 24VDC 96Wx4 LED power supplies. These multiple output power supplies provide 5 (12VDC) or 4 (24VDC) sets of output wires, typically allowing the installer to use one power supply instead four (24VDC) or five (12VDC). (see Figs. #1, #2 and #3)

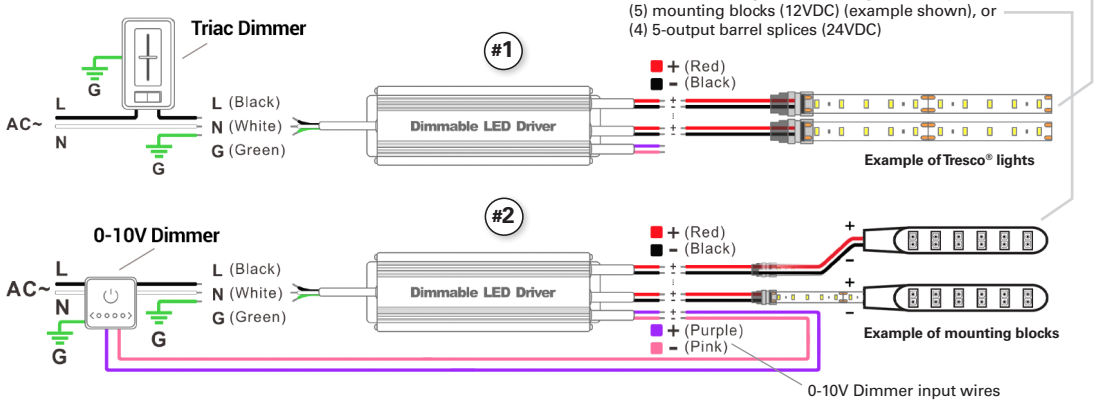
NOTE: The power supplies must be installed in a well-ventilated area. For a bank of multiple power supplies, mount the units with spacing at least equal to the width of one unit (3-7/16", 87 mm). Never install a power supply face down or resting on its side. *See "Important Safety Instructions" on page 2 for further information on installing power supplies.*

3. When hardwiring to the power supply use Romex® connectors 3/8" (10 mm). The power supply provides 4 knockouts for the input and 5 knockouts for the output wires (see Fig. #3).
   IMPORTANT: On the input wiring, make sure to connect black to black (hot), white to white (neutral), and green to green (ground). On the output wiring, make sure to connect red to red (positive) and black to black (negative). Refer to Figures #1 and #2 for typical applications.
4. Each set of output wires can be used to directly connect Tresco® lights or a run of lights (see Fig. #1); or to (5) mounting blocks (12VDC) (see Fig. #2); or to (4) 5-output barrel splices (24VDC). For the 12VDC power supply, each set of output wires is rated at 60W (300W total). For the 24VDC power supply, each set of output wires is rated at 96W (384W total).
5. See Figure #1 that shows wiring for an (optional) Triac Dimmer and Figure #2 that shows wiring for an (optional) 0-10V Dimmer.
   NOTE: **mounting blocks** (12VDC) allow up to (6) connections using AMP® connectors. **5-output barrel splices** (24VDC) allow up to (5) connections using barrel connectors.
   Cut off AMP® Connector from mounting block or barrel connector from 5-output barrel splice to allow you to hardwire directly to power supply.
   NOTE: Follow NEC approved wiring methods for all hardwiring.
6. Complete installation of Tresco® low voltage LED lights per separate instruction sheets.
   Maximum cable length from power supply to lights is 5 m (16 ft.) when using wiring that comes with Tresco® lights (18 AWG) or equivalent. If using heavier gauge wire, lighting distance can be extended.
7. Final step: check all connections and turn 120V power source onto the system.

Typical Dimming Applications (optional)

Derating Curve





Optional: connect up to ...
(4 or 5) Tresco® lights or run of lights (example shown), or
(5) mounting blocks (12VDC) (example shown), or
(4) 5-output barrel splices (24VDC)

Technical Specifications

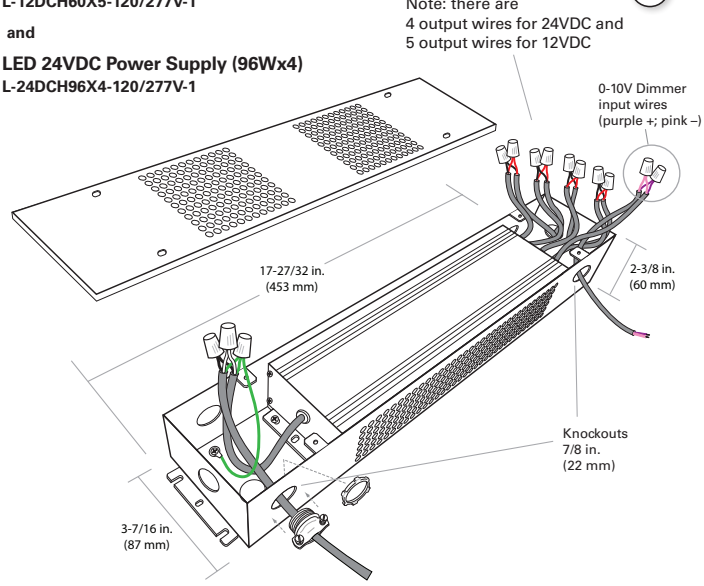
Part No.	L-12DCH60X5-120/277V-1	L-24DCH96X4-120/277V-1
Output:		
DC Voltage	12V	24V
Rated Current	5*5A	4*4A
Rated Power	300W max. (5*60W)	384W max. 4*96W)
Minimum Load	10% per output (not all outputs need to be utilized)	
Input:		
Voltage Range	100-277VAC	100-277VAC
Frequency Range	47-63Hz	47-63Hz
Power Factor (Typ.) @ full load	0.99@120VAC 0.95@277VAC	0.99@120VAC 0.99@277VAC
Efficiency (Typ.) @ full load	85%@120VAC 90%@277VAC	88%@120VAC 91%@277VAC
Wiring	Suitable for minimum 18 AWG, rated min. 300V, min. 90°C	
Protection:		
Short Circuit	Shut down o/p voltage, re-power on to recover after fault condition is removed	
Over Loading	≤ 120% Hiccup mode, recovers automatically after fault condition is removed	
Over Temperature	100°C ± 10°C shut down o/p voltage, automatically recover after cooling	
Working Temperature	-40°C ~ +60°C (see Derating Curve chart above)	

LED 12VDC Power Supply (60Wx5)
L-12DCH60X5-120/277V-1

and

LED 24VDC Power Supply (96Wx4)
L-24DCH96X4-120/277V-1

#3



IMPORTANT SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of fire, electric shock, or injury to persons:

Shock Hazard: Whenever hardwiring the LED power supply to a 120-volt circuit with an AC dimmer, turn off power at the circuit breaker before installing. Failure to do so may result in serious personal injury or death.

Warning: All wiring must be in accordance with national and local electrical codes, low-voltage Class 2 circuit. The power supply is to be mounted and wired in accordance with Article 450 of the National Electric Code (NEC). Failure to install the power supply and light fixture in compliance with applicable codes and regulations may cause serious personal injury, death and/or major property damage.

- Do not conceal the power supply inside a wall, ceiling, soffit, or similar permanent structure. The unit must be accessible.
- The power supply must be installed in a well-ventilated area free from explosive gases and vapors. Do not install in an airtight, boxed-in structure. The power supply is cooled by circulating air and by mounting the unit flush to a surface to allow for heat transfer. Operate the power supply at cooler surrounding air temperatures to extend the life of the unit. See Derating Curve on page 1 for temperatures above 40°C (104°F).
- Operate only within the specified ambient temperature range of -40°C (-40°F) to 60°C (140°F).

  Note: It is normal for the LED power supply to feel warm when under a full wattage load.
- The hardwired installation of the power supply should only be performed by a qualified electrician.
- Do not conceal the line voltage input cord inside a wall, ceiling, soffit, or similar permanent structure, unless proper wire per NEC is being used. This requirement does not apply to 12VDC or 24VDC wiring between the power supply and the cabinet light system. For low voltage wire runs inside a wall, ceiling, soffit, or similar permanent structure, use CL2 or better cabling.
- Do not install low-voltage Class 2 wiring along the same run as AC line voltage. If the line voltage and low-voltage wires need to cross, keep them at 90° angles.
- Use only insulated staples or plastic ties to secure ALL loose wires.
- Route and secure wires so that they will not be pinched or damaged when the cabinet is pushed to the wall.
- Recommended to use LED-compatible wall dimmers with LED power supplies. Tresco® dimming LED power supplies are compatible with forward phase, reverse phase, triac, MLV and ELV dimmers. For best operation, use a dimmer that can be programmed or has an adjustable low-end dial such as the Lutron® C•L and Leviton IllumaTech® Universal Dimmers. If you are unsure of dimmer compatibility, call 1-800-227-1171.
- Only install the wall dimmer on the input (line voltage) side of the power supply.

Do not add a plug-in to input wires and attempt to dim a receptacle. This can cause unwanted lighting effects (such as flickering), is dangerous, and against NEC in certain applications.

- This unit can be mounted in any orientation, horizontal or vertical.
- Power supply provides shut down protection against short circuit, over loading, and over temperature. Unit automatically recovers after fault condition is removed and after cooling.
- Intended for dry or damp locations only. Not intended for wet locations.
- Not intended for recessed installation in ceilings or soffits.
- If any modification is made to the power supply, it will invalidate the warranty and may render the product unsafe.

Troubleshooting

Fixture does not illuminate	• Check installation instructions and diagrams for all components. Check if the system is wired correctly and polarities are correct. • Verify that a compatible constant voltage dimmable fixture is installed. • Verify if the power supply and fixture have the same voltage specifications (i.e. 12VDC with 12VDC, and 24VDC with 24VDC).
Fixture does not dim	• Check that a compatible constant voltage dimmable fixture is installed. • Verify that a compatible dimming control is installed and wired correctly. • For Triac dimming, ensure wiring per Figure #1. For 0-10V dimming, ensure wiring per Figure #2.
Different fixture types do not dim in sync	• Each fixture type has its own circuit design and may respond differently when dimmed. Check that each fixture type is installed on a separate dimmable power supply for best performance.
Fixture is flickering	• Verify that a compatible dimming control is installed. If flickering occurs at low light levels install a compatible dimming control with low-end dial adjustment (i.e. Lutron® C•L). • Check that a compatible constant voltage dimmable fixture is installed. • Check that all connections are properly secured. • Check if fixture is receiving the correct input voltage. • Check to make sure power supply is not wired to a dimmed receptacle.
Fixture is steadily (continuous) flashing	• Check that the power supply is not overloaded. An overloaded power supply will cause the auto-reset to trip repeatedly.
Installation trips main breaker	• Check wiring for any short circuits. If breaker continues to trip there may be a short in the power supply. Call customer service for a replacement unit.

Save these instructions for future reference.
For technical assistance, call 1-800-227-1171

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