

USER'S GUIDE

KAISEN

1. GENERAL INFORMATION & PRODUCTS' FEATURES

Thank you for purchasing our LED POWER SUPPLY (LED Driver, Switching Power Supply).

This device is an independent constant voltage LED POWER SUPPLY, it converts 100~240V input to 12V, 24V or 5V (please refer to the specification marked on the product's label) constant voltage output. It is designed and manufactured for LED lightings, with below features:

- Over-load / over-current / short circuit protection, Safety Approvals pass.
- Able to work under 100% full loading continuously, tough working condition suitable.
- High transfer efficiency, energy saving.
- Compact size and easy installation.

2. WIRE CONNECTION

Waterproof type(Leads connection):

- AC Input: brown wire for Live, blue wire for Null. Yellow/green wire for grounding,
- DC Output: red wire for positive+, black wire for negative -.

Non-waterproof type & Rainproof type (Terminal Screw Connection):

Please make sure correct positive + and negative - connection (COM means -), please always keep balanced wattage loading and connection. Tight and isolated connection is to be 100% assured before power on.

*Grounding connection is required for all aluminum housing power supplies.

3. INSTALLATION AND ENVIRONMENTAL INFORMATION

- The input voltage must fall into 100~240VAC input.
- Make sure work in proper environments as stated in this Guide.
- Do not overload.
- Avoid free of load while a power supply is powered on, keep proper loading.
- Always keep good ventilation around while the power supply is installed.
- Keep minimum 5cm for LED power supplies each other.
- Keep away from inflammable or explosive environments.
- Maximum extension wire length: 200cm.
- Working Environment: -25°C~+50°C, Storage environment: -30°C~+60°C.

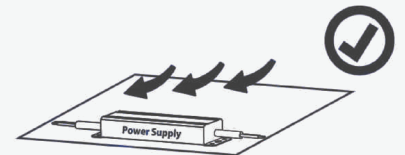
4. CAUTIONS FOR CONNECTING LEADS AND LOADING

- The power supply will be automatically protected and enter into abnormal state of intermittent connection (Hic-cup mode) while the load power exceeds the maximal rated output power (normally 5~20% exceeds).
- For models have multi-outlets, do not connect all loading with single outlet, Keep balanced loading is important. If connect with single outlet is necessary, please connect all positive output leads together to provide electricity fully, also do the same on negative leads.
- Too long output wire extension causes voltage drop and power dissipation. Please reduce the loading wattage accordingly if too long extension wires being used.
- Input/output lead's surface listed its diameter and industrial standard, please choose proper extension leads accordingly. In view of the line loss, the longer extension, the thicker leads is needed.
- This power supply can be connected with plugs, but please make sure good connection and insulation.
- Make sure good waterproof treatment on the wire connection while outdoor application.

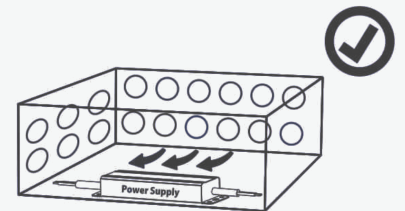
Please Read This User's Guide Carefully Before Installation

DO'S AND DONT'S

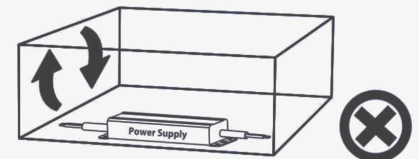
*Conduct By Qualified Personnel Only



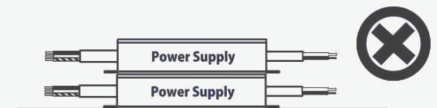
OPEN-AIR LOCATIONS: OK



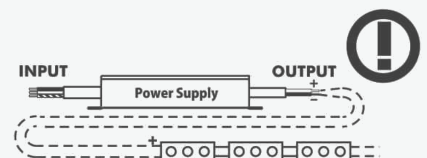
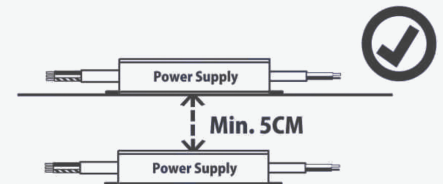
GOOD VENTILATION LOCATIONS: OK



NO INSTALLATION AT ENCLOSED ENVIRONMENT



NO STACKING



MAX LENGTH OF EXTENSION WIRE 2 METERS

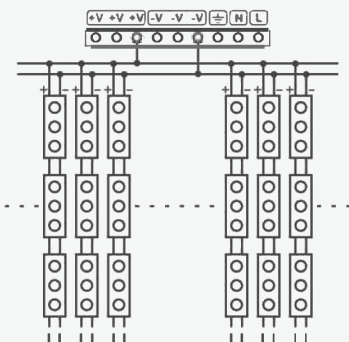


NO INSTALLATION AT INFLAMMABLE & EXPLOSIVE LOCATIONS

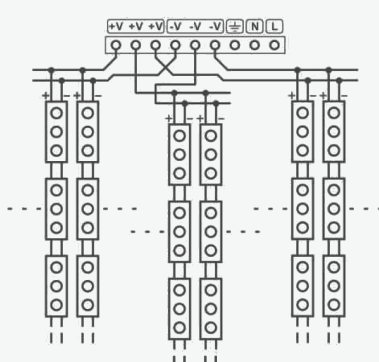
IMPORTANT NOTICE FOR LEADS CONNECTION



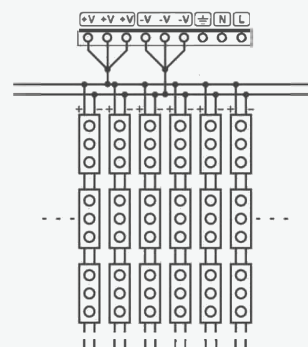
**Avoid full loading
on only one terminal**



**Install the Power Supply with
balanced loading**



**Combine all output terminals
for full loading**



TROUBLE-SHOOTING TIPS

A protection circuit inside the Power Supply which will cut off (trip) the power whenever an short circuit or overload condition occurs, please make sure correct connection of positive and negative terminals(+,-) before power on.

A. No output:

- Check power on/off status, and check whether there's poor wire connection.
- Check whether there's short-circuit/overload/overheat on loading.
(Power Supply will be in protected mode if there's short-circuit/overload/overheat on the loading).
- Check if wrong positive and negative terminal connection.

B. Over-heating of the Power Supply:

- Keep good ventilation.
- Check the loading status, avoid over loading.

C. Unsteady power output:

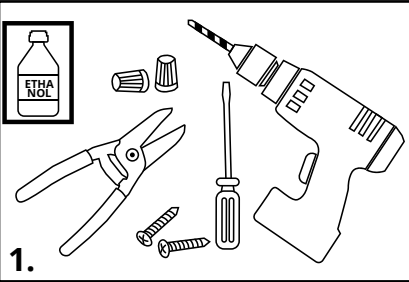
- Check if there's over-loading or improper output extension leads connected.
- Check if there's strong interference in the working environment.
- Check if there's magnetic field around the working environment.
- Check if the output voltage is good for your requirement (5V /12V /24V ... etc.).
- Choose proper wires in aspects of wire's thickness and voltage capacity.
- Check if there's over-load or too long extension leads been used.

INSTALLATION TIPS

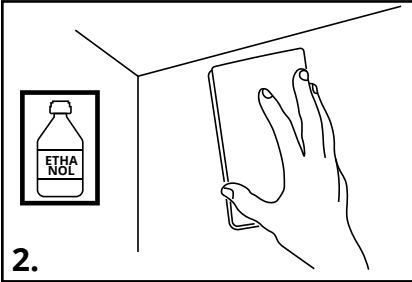
1. Please identify the power supply's input and output before installation.
2. Correct output + & - wire connection is to be ensured. Power on after wire connection is done.
3. Loading wattage must be less than the rated wattage, 50%~90% loading is recommended.
4. To avoid voltage drop and loading capacity's wasting on the output extension wire, please install the power supply to the loading as near as possible, if must use long extension wires, please choose thicker wires and reduce the loading wattage.
5. The power supply to be installed at good ventilation and cooling environment.

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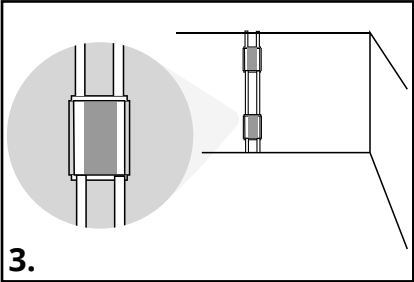
WARNING: Risk of electrical shock. New installation requires knowledge of sign electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.



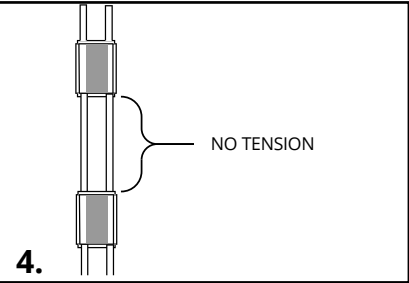
1. Tool required: wire, wire stripper and connectors, drill, screwdriver, screws, sponge or clean towel, wire connectors, and end fittings.



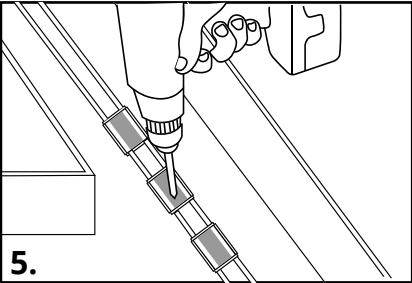
2. Clean the inner part of the sign with a sponge or clean towel soaked by detergent or ethanol.



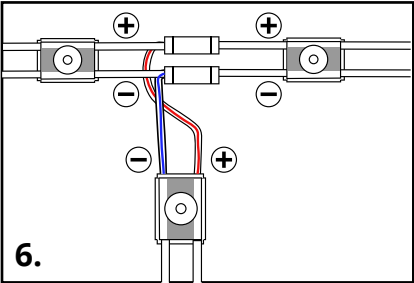
3. Remove tape backing and stick LED modules into place. Continue until you have reached the end of the strip.



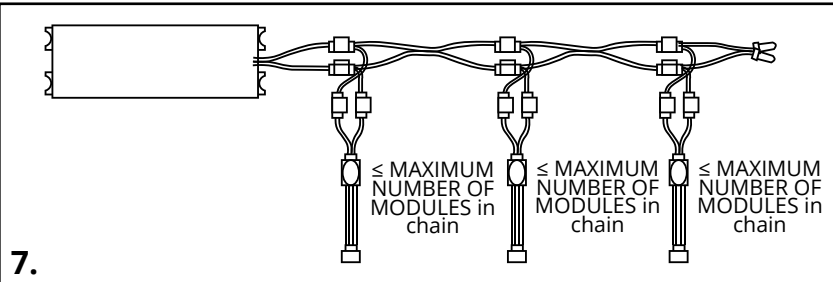
4. Installing modules on full wire length there should be no tension on the wire.



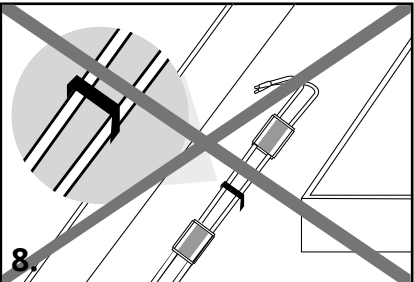
5. Use rivets, screws, or silicone to secure at least every third LED module within the sign.



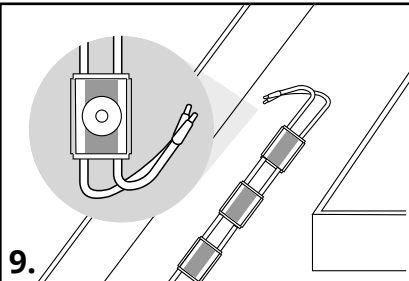
6. It is recommended to use waterproof connectors.



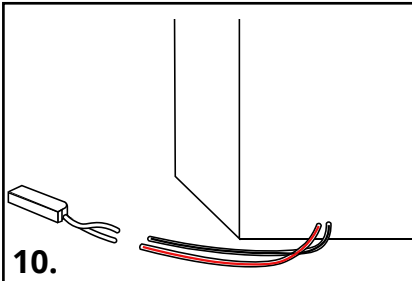
7. Power supply loading chart. To avoid significant light loss in a chain, do not use more than MAXIMUM NUMBER OF MODULES in series. Please check the MAXIMUM NUMBER OF MODULES in the product datasheet.



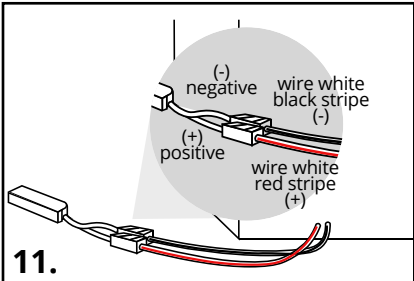
8. Do not use metal staple clips to fixate the loose wire.



9. Do not loop the loose ends of the wire. Cap all unused wires.



10. Use the recommended in the KaisenElectric layout 12 VDC power supply.



11. Connect the white wire with the red stripe (+) of the LED modules to the positive wire (+) of the power supply. The white wire with the black stripe (-) to the negative wire (-) of the power supply.

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TROUBLESHOOTING	
The illumination from all LEDs isn't uniform	• Check the number of modules in the chains. Make sure not to exceed the maximum number of modules per chain. Please check the datasheet for the maximum number of modules per chain.
One or more LED chains do not light	• Check that loose wire ends do not loop at the end of the chain. Properly terminate or replace the wire connections. • Check if the white wire with red stripe (+) of the LED modules is connected to the positive wire (+) of the power supply. The white wire with black stripe (-) to the negative wire (-) of the power supply.
When applied face material the illumination is not uniform	• Check the number of modules in the chains. Make sure not to exceed the maximum number of modules per chain. Please check the datasheet for the maximum number of modules per chain. • Check that the modules are placed according to the provided Kaisen Electric layout. • In the letters, in case of shadows, check the positioning of LEDs on the sharp corners.

Tips and recommendations

- Store modules in a dry place without direct sunlight.
- All electrical connections should be made within the sign box.
- Connect the power supply to the grid only after modules are connected and all electrical connections are completed.
- Make sure water can leak out from bottom of the sign.
- The signs shouldn't be fully hermetic. Some airflow should be possible for moisture to evaporate.
- Please keep in mind products operating temperatures. Especially when installing individual power supply boxes with many power supplies inside. Leave enough distance between power supplies to allow them to cool down.