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› LY LIU YUN LED Driver LYN-100-01A (100W): 110V AC to 12V DC Low Voltage Transformer User Manual

LY LIU YUN LYN-100-01A

LY LIU YUN LED Driver LYN-100-01A (100W) User Manual

110V AC to 12V DC Low Voltage Transformer

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your LY LIU YUN LYN-100-01A LED Driver. This device is designed to convert standard 110V AC household current to a stable 12V DC low voltage output, suitable for various LED lighting applications, both indoors and outdoors.

The LYN-100-01A model features a robust IP67 waterproof rating, ensuring reliable performance in challenging environmental conditions. It incorporates multiple protection mechanisms to safeguard the unit and connected devices.



Figure 1: The LY LIU YUN LYN-100-01A 100W LED Driver. This image displays the silver aluminum casing, input and output cables, and product labeling with specifications and safety warnings.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installation and operation. Failure to follow these instructions may result in electric shock, fire, or other hazards.

- **Electrical Safety:** Always disconnect power at the circuit breaker before installing or servicing the LED driver. Ensure all connections are secure and insulated to prevent short circuits.
- **Load Capacity:** Do not exceed the maximum output power of 100W. Overloading the driver can lead to overheating and damage.
- **Ventilation:** Although the unit is IP67 rated, ensure it is installed in a location that allows for adequate heat dissipation. Avoid enclosing it in tightly sealed spaces without ventilation.
- **Waterproof Rating:** The IP67 rating indicates protection against dust ingress and immersion in water up to 1 meter for 30 minutes. Ensure all cable entries are properly sealed if modified.
- **Protection Features:** The driver includes built-in protection against short circuit, overload, overvoltage, overcurrent, and overheating. In case of a fault, the unit will automatically recover after the issue is resolved.

Four Protection

Ensure safety and stability



Overvoltage protection



Overcurrent protection



Overpower protection



Short-circuit protection

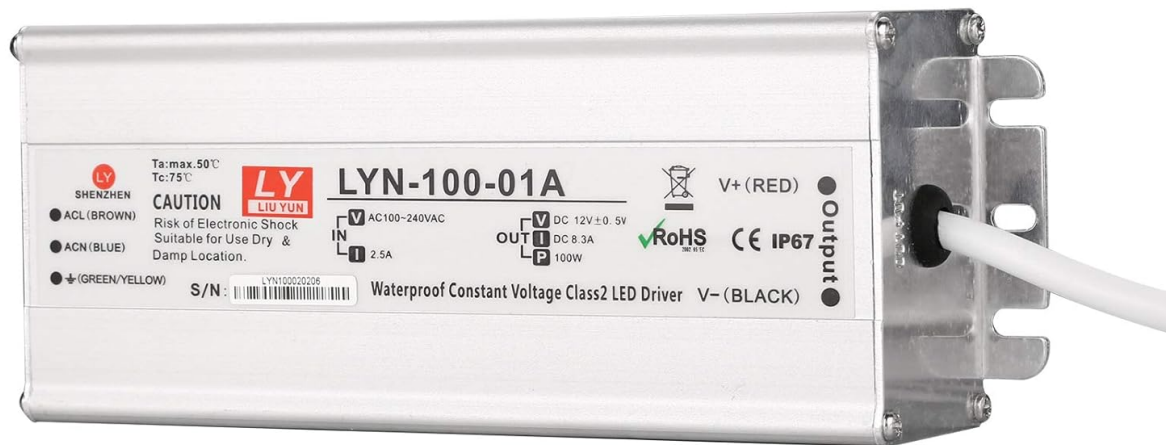


Figure 2: Visual representation of the four primary protection features: Overvoltage, Overcurrent, Overpower, and Short-circuit protection. These features ensure the safety and stability of the LED driver and connected lighting.

3. PRODUCT OVERVIEW

The LY LIU YUN LYN-100-01A LED Driver is housed in a durable aluminum alloy case, designed for efficient heat dissipation and protection against environmental elements.

3.1 Components and Connections

- **Input Cable:** A 3-pin plug cable for AC input (Brown: Live, Blue: Neutral, Green/Yellow: Ground).
- **Output Cable:** A two-wire cable for DC output (Red: Positive V+, Black: Negative V-).
- **Casing:** IP67 rated aluminum alloy for durability and heat management.

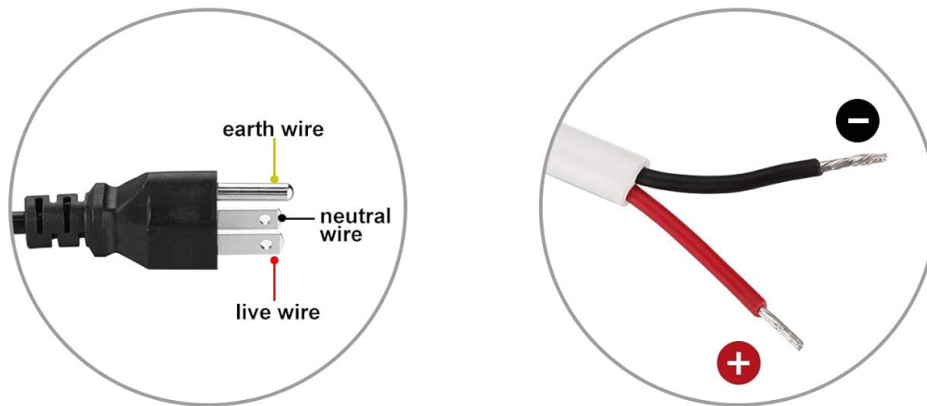


Figure 3: This image illustrates the physical dimensions of the LED driver (6.46in length, 1.65in width, 2.71in height) and provides a clear wiring diagram for both the AC input (earth, neutral, live wires) and DC output (positive and negative terminals).

3.2 Internal Structure (for informational purposes)

The internal circuitry includes high-quality components to ensure stable and efficient power conversion.

12v

Waterproof Power Supply



Figure 4: An internal view of the LED driver's circuit board, highlighting key components such as the bridge rectifier (Yang Jie GBU 1006), PFC inductance (PQ3220), large capacitance (Iowa 450V150UF), MOS tube (Huarunhuajing 20N60), output synchronous rectifier MOS pipe (NCEP60T20A), and transformer (ER3945 skeleton with insulated copper wire).

4. SPECIFICATIONS

Feature	Specification
Model Number	LYN-100-01A
Input Voltage	85-265V AC
Input Frequency	47-63 Hz
Output Voltage	12V DC
Output Current	8.33A
Output Power	100W
Waterproof Rating	IP67
Protection Functions	Short Circuit, Overload, Overvoltage, Overcurrent, Overheating

Feature	Specification
Dimensions (L x W x H)	6.46 x 1.65 x 2.71 inches
Weight	1.81 Pounds
Certifications	CE, ROHS SELV (as per manufacturer)

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your LED driver:

- 1. Power Disconnection:** Before beginning any wiring, ensure that the main power supply to the installation area is turned off at the circuit breaker.
- 2. Mounting:** Select a suitable location for mounting the LED driver. While IP67 rated, mounting in a shaded or protected area can extend its lifespan. Ensure there is sufficient space around the unit for air circulation, especially if it will be operating near its maximum load.
- 3. AC Input Connection:** Connect the AC input cable of the LED driver to your main power supply. Match the wires carefully:
 - Brown wire to Live (L)
 - Blue wire to Neutral (N)
 - Green/Yellow wire to Ground (E)

Ensure all connections are tight and properly insulated.

- 4. DC Output Connection:** Connect the DC output cable to your 12V LED lighting system. Observe polarity:
 - Red wire to LED Positive (+)
 - Black wire to LED Negative (-)

Verify that the total wattage of your connected LED lights does not exceed 100W.

- 5. Secure Connections:** Double-check all wiring connections for security and proper insulation.
- 6. Power Restoration:** Once all connections are verified and secure, restore power at the circuit breaker.



Figure 5: The LY LIU YUN 100W LED Driver shown connected to a 12V LED light strip, illustrating a typical application for low voltage lighting. The image highlights the compact size of the driver relative to the LED strip.

6. OPERATING INSTRUCTIONS

The LY LIU YUN LYN-100-01A LED Driver operates automatically once properly installed and powered. It provides a constant 12V DC output.

- **Automatic Operation:** Upon power-up, the driver will supply stable 12V DC power to the connected LED lights.
- **Non-Dimmable:** This LED driver is designed for constant voltage output and does not support dimming functions. Connecting it to a dimmer switch may cause malfunction or damage.
- **Environmental Use:** Its IP67 rating makes it suitable for both indoor and outdoor applications, including areas exposed to moisture or dust.



- ① Bridge heap: Yang Jie GBU 1006
- ② PFC inductance (PQ3220): Multiple strands of adhesive wire
- ③ Large capacitance: IOWA 450 V150 UF
- ④ MOS tube: using Huarunhuaqing 20N60
- ⑤ Output Synchronous rectifier MOS Pipe: New Energy Saving NCEP60T20A
- ⑥ Transformer: ER3945 skeleton 3 X insulated copper wire and multi-strand wire

Figure 6: The LED driver is depicted near a swimming pool, emphasizing its IP67 waterproof capability for outdoor and wet environment installations. This illustrates its suitability for landscape lighting or other exterior applications.

7. MAINTENANCE

The LY LIU YUN LYN-100-01A LED Driver requires minimal maintenance due to its robust design and IP67 rating.

- **Periodic Inspection:** Periodically inspect the driver and its connections for any signs of physical damage, corrosion, or loose wiring.
- **Cleaning:** If necessary, gently clean the exterior of the unit with a damp cloth. Do not use harsh chemicals or abrasive materials.
- **Ventilation:** Ensure that the installation area remains clear of debris or obstructions that could impede airflow and heat dissipation.
- **Cable Integrity:** Check the integrity of the input and output cables, especially if installed in areas prone to physical stress or animal interference.

8. TROUBLESHOOTING

If you encounter issues with your LED driver, refer to the following troubleshooting guide:

- **No Light Output:**

- Check if the main power supply is active.
- Verify all AC input and DC output connections are secure and correctly wired (polarity).
- Ensure the total wattage of connected LED lights does not exceed 100W.
- Inspect the LED lights themselves for any faults.

- **LEDs Flickering or Dim:**

- Confirm the load is within the 100W limit. An overloaded driver can cause instability.
- Check for loose connections in the DC output wiring.
- Ensure the driver is not connected to a dimmer switch.

- **Driver Overheating:**

- Reduce the connected load if it is close to or exceeding 100W.
- Ensure the driver is installed in a location with adequate ventilation and not in a confined space.
- Verify ambient temperature is within operating limits.

- **Automatic Shutdown:** The driver has built-in protection. If it shuts down, disconnect power, identify and resolve the fault (e.g., short circuit, overload), then restore power. The unit should recover automatically.

9. WARRANTY AND SUPPORT

LY LIU YUN is committed to providing high-quality products. For any quality issues or support inquiries regarding your LED driver, please contact our seller support team.

You can reach us by clicking the "Seller Contact" button within your Amazon account. We are dedicated to assisting you and will respond as soon as possible.