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MEAN WELL HLG-240H-24A LED Driver Instruction Manual

240W 24V 10A AC-DC Constant Voltage + Constant Current Power Supply

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the MEAN WELL HLG-240H-24A LED Driver. This device is a high-performance AC-to-DC switching power supply designed to provide a stable 24V output at up to 10A, suitable for various LED lighting applications requiring constant voltage and constant current operation.

2. SAFETY INFORMATION

- **Disconnect Power:** Always ensure the AC input power is disconnected before any installation, wiring, or maintenance procedures to prevent electric shock.
- **Professional Installation:** Installation should be performed by a qualified electrician in accordance with all local and national electrical codes.
- **Proper Grounding:** Ensure the driver is properly grounded to prevent electrical hazards.
- **Ventilation:** Provide adequate ventilation around the driver to prevent overheating. Do not cover the unit.
- **Environmental Conditions:** Do not expose the driver to excessive moisture, rain, or extreme temperatures outside its specified operating range. This unit is rated IP65 for suitable use in dry and wet locations, but direct submersion is not recommended.
- **Load Compatibility:** Ensure the connected LED load is compatible with the driver's output voltage and current specifications. Do not exceed the maximum rated power of 240W.
- **Wiring:** Use appropriate gauge wiring for input and output connections to handle the current without overheating.

3. PRODUCT OVERVIEW

The HLG-240H-24A is a robust LED driver featuring a metal casing for durability and efficient heat dissipation. It offers both constant voltage (C.V) and constant current (C.C) modes, making it versatile for various LED applications. The unit is designed for high reliability and efficiency.



Figure 1: Front view of the HLG-240H-24A LED Driver, showing input/output labels and specifications.



Figure 2: Angled view of the HLG-240H-24A LED Driver, highlighting the input and output cables and adjustment potentiometers.



Figure 3: Side view of the HLG-240H-24A LED Driver, showing the robust metal casing and mounting tabs.

4. SPECIFICATIONS

Parameter	Value
Brand	MEAN WELL
Model	HLG-240H-24A
Input Voltage Range	100-240VAC (277VAC for North America only)
Output Voltage	+24VDC
Output Current	10A
Rated Power	240W
Current Rating	10 Amps
Minimum Frequency	60 Hz
Ingress Protection (IP) Rating	IP65 (Suitable for Dry and Wet Locations)

Parameter	Value
Certifications	CE, RoHS, UL
Item Weight	0.17 Pounds

5. SETUP AND INSTALLATION

5.1 Mounting

- Mount the driver in a location that allows for adequate airflow and heat dissipation.
- Use the integrated mounting tabs to securely fasten the driver to a stable surface.
- Avoid mounting near heat sources or in enclosed spaces without ventilation.

5.2 Wiring Connections

Refer to Figure 1 for visual guidance on wiring terminals. Ensure all connections are secure and insulated.

- **AC Input (Brown, Blue, Green/Yellow):**
 - Connect the **Brown (ACL)** wire to the Live/Phase (L) terminal of your AC power source.
 - Connect the **Blue (ACN)** wire to the Neutral (N) terminal of your AC power source.
 - Connect the **Green/Yellow** wire to the Earth Ground (PE) terminal. This connection is crucial for safety.
- **DC Output (Red, Black):**
 - Connect the **Red (+Vo)** wire to the positive (+) input of your LED load.
 - Connect the **Black (-Vo)** wire to the negative (-) input of your LED load.

5.3 Output Adjustments

The HLG-240H-24A features built-in potentiometers for adjusting output voltage (Vo ADJ) and output current (Io ADJ). These are typically located near the output cables (refer to Figure 2).

- **Vo ADJ (Voltage Adjustment):** Use a small screwdriver to carefully adjust the output voltage within the specified range (e.g., 22V to 26V for a 24V model).
- **Io ADJ (Current Adjustment):** Use a small screwdriver to carefully adjust the output current within the specified range (e.g., 5A to 10A for a 10A model).
- *Note:* Adjustments should only be made by qualified personnel with appropriate measurement tools while the unit is powered on and under load.

6. OPERATING INSTRUCTIONS

- After completing all wiring and mounting, ensure all connections are secure and correct.
- Apply AC input power to the driver. The LED load should illuminate.
- The driver operates in Constant Voltage (C.V) mode when the load current is below the set constant current limit, maintaining a stable output voltage.
- When the load current reaches the set constant current limit, the driver switches to Constant Current (C.C) mode, maintaining a stable output current while the output voltage may drop.
- Monitor the LED load for proper operation. If any issues arise, refer to the Troubleshooting section.

7. MAINTENANCE

- **Cleaning:** Periodically inspect the driver for dust accumulation. If necessary, disconnect power and gently clean the exterior with a soft, dry cloth. Do not use liquid cleaners.
- **Connection Checks:** Annually, or as needed, inspect all wiring connections for tightness and signs of wear or corrosion. Re-tighten if necessary.
- **Environmental Monitoring:** Ensure the operating environment remains within the specified temperature and humidity ranges to prolong the driver's lifespan.
- No user-serviceable parts are inside. Do not attempt to open the casing.

8. TROUBLESHOOTING

- **No Output Power:**
 - Check if the AC input power is connected and active.
 - Verify all input and output wiring connections are correct and secure.
 - Ensure the LED load is properly connected and not short-circuited.
 - Check for any tripped circuit breakers or blown fuses in the AC supply line.
- **Incorrect Output Voltage/Current:**
 - Verify the Vo ADJ and Io ADJ potentiometers are set correctly for your application.
 - Ensure the load is within the driver's specified operating range (24V, 10A, 240W).
 - Measure the output voltage and current with a multimeter to confirm readings.
- **Overheating:**
 - Ensure adequate ventilation around the driver. Remove any obstructions.
 - Verify the ambient temperature is within the driver's operating limits.
 - Confirm the load does not exceed the driver's maximum rated power.

9. WARRANTY AND SUPPORT

MEAN WELL products are manufactured to high standards and are typically covered by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official MEAN WELL website.

For technical support, troubleshooting assistance beyond this manual, or warranty claims, please contact your authorized MEAN WELL distributor or reseller.