

MEAN WELL HLG-240H-24B

Instruction Manual

MEAN WELL HLG-240H-24B SWITCHING LED POWER SUPPLY

Model: HLG-240H-24B

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the MEAN WELL HLG-240H-24B Switching LED Power Supply. This unit is designed to provide a stable 24V output with a current range of 0-10A, delivering up to 240W of power. It is suitable for various LED lighting applications and other industrial uses requiring a reliable power source.

2. Safety Information

Please read all safety warnings and instructions carefully before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Hazard:** Installation and wiring must be performed by a qualified electrician in accordance with all local and national electrical codes.
- **Power Disconnection:** Always disconnect power at the circuit breaker before performing any installation, wiring, or maintenance.
- **Proper Grounding:** Ensure the power supply is properly grounded to prevent electric shock.
- **Ventilation:** Do not obstruct ventilation openings. Adequate airflow is essential for proper operation and to prevent overheating.
- **Environmental Conditions:** This unit is rated IP67, suitable for dry, damp, and wet locations. However, avoid submerging the unit or exposing it to extreme temperatures outside its specified operating range.
- **Load Compatibility:** Ensure the connected load does not exceed the power supply's maximum output capacity (240W, 10A).

3. Product Overview

The HLG-240H-24B is a high-performance switching power supply designed for reliability and efficiency. It features a

robust aluminum casing and sealed design for environmental protection.



Figure 3.1: Top view of the HLG-240H-24B power supply, showing input and output wiring, model number, and various certifications. The input wires (brown, blue, green/yellow) and output wires (black, red, white) are clearly visible.



Figure 3.2: Angled view of the power supply, highlighting the robust aluminum casing and the integrated mounting tabs on one end for secure installation.



Figure 3.3: Side view of the power supply, illustrating the sealed cable entries for both input and output wiring, contributing to its IP67 rating.



Figure 3.4: Bottom view of the power supply, revealing the ribbed surface designed for efficient heat dissipation, ensuring stable operation.

4. Setup and Installation

Follow these steps for safe and proper installation:

1. **Mounting:** Select a suitable mounting location that allows for adequate ventilation and is protected from physical damage. Use the integrated mounting tabs to secure the unit firmly to a stable surface. Ensure the power supply is mounted horizontally or vertically with proper airflow.
2. **Input Wiring (AC):**
 - Connect the **Brown** wire to the AC Line (L).
 - Connect the **Blue** wire to the AC Neutral (N).
 - Connect the **Green/Yellow** wire to Earth Ground ().

Note: Ensure all connections are secure and insulated. Refer to local electrical codes for proper wiring practices.

3. Output Wiring (DC):

- Connect the **Red** wire to the DC Positive (+V).
- Connect the **Black** wire to the DC Negative (-V).
- The **White** wire is for dimming control (DIM+).
- The **Blue** wire is for dimming control (DIM-).

Note: Verify polarity before connecting to your LED load or other DC devices. Incorrect polarity can damage the power supply or the connected device.

4. **Dimming Function (Optional):** If using the dimming function, connect the DIM+ and DIM- wires to a compatible 0-10V dimmer or PWM signal source. Refer to the dimmer's instructions for specific wiring.
5. **Power On:** After all connections are verified and secure, restore power to the circuit. The power supply should begin operating.

5. Operating Instructions

Once installed, the HLG-240H-24B operates automatically. It provides a constant voltage output of 24V. The current output will vary depending on the connected load, up to a maximum of 10A.

- **Output Voltage:** The unit provides a regulated 24V DC output.
- **Output Current:** The current delivered will be determined by the load, up to 10A. Do not exceed this limit.
- **Dimming Control:** If connected to a compatible dimmer, the brightness of the connected LEDs can be adjusted via the 0-10V or PWM signal.
- **Protection Features:** The power supply includes built-in protections against short circuit, over current, over voltage, and over temperature. In case of a fault, the unit may shut down automatically to protect itself and the connected load.

6. Maintenance

The HLG-240H-24B power supply is designed for long-term, maintenance-free operation. However, periodic checks can help ensure optimal performance and longevity.

- **Cleaning:** Ensure the power supply's surface is kept clean and free of dust or debris, especially around the heat dissipation fins. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Periodically check that the area around the power supply remains clear and that airflow is not obstructed.
- **Connections:** Occasionally inspect wiring connections for any signs of loosening, corrosion, or damage. Ensure all connections remain secure.
- **Environmental Check:** Verify that the operating environment remains within the specified temperature and humidity ranges.

Caution: Do not attempt to open or repair the power supply. There are no user-serviceable parts inside. Opening the unit will void the warranty and may expose you to dangerous voltages.

7. Troubleshooting

If you experience issues with your HLG-240H-24B power supply, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
---------	----------------	----------

Problem	Possible Cause	Solution
No output voltage / Unit not powering on	No AC input power Incorrect wiring Overload or short circuit protection activated Internal fault	Check circuit breaker and power source. Verify input and output wiring connections. Disconnect load, check for short circuits in wiring or load. Reduce load if overloaded. Cycle power. If problem persists after checking above, unit may be faulty.
Output voltage is low or unstable	Overload condition Poor connections Overheating	Reduce connected load. Check all wiring connections for tightness and corrosion. Ensure adequate ventilation and ambient temperature is within limits.
Dimming function not working	Incorrect dimming wiring Incompatible dimmer Dimmer faulty	Verify DIM+ and DIM- connections. Ensure dimmer is compatible with 0-10V or PWM input. Test dimmer with another compatible device if possible.

If troubleshooting steps do not resolve the issue, contact a qualified technician or the manufacturer for assistance. Do not attempt to repair the unit yourself.

8. Specifications

Parameter	Value
Model Number	HLG-240H-24B
Input Voltage Range	100-240VAC (4.0A), 277VAC (1.5A for North America only)
Output Voltage	24V DC
Output Current Range	0-10A
Rated Power	240W
Efficiency	(Typically >90%)
Dimming Function	0-10V / PWM / Resistance
IP Rating	IP67 (Suitable for dry, damp, and wet locations)
Operating Temperature	-40°C to +80°C (Refer to derating curve in full datasheet)
Dimensions (L x W x H)	9.45 x 2.76 x 1.57 inches (240 x 70 x 40 mm)
Weight	2.5 Pounds (1.13 kg)
Certifications	UL, CUL, CE, SELV, IP67
Country of Origin	China

9. Warranty and Support

This MEAN WELL product is manufactured to high quality standards. Specific warranty terms and conditions are typically provided with your purchase documentation or can be found on the official MEAN WELL website. For technical support, product inquiries, or warranty claims, please contact your authorized MEAN WELL distributor or visit the official MEAN WELL website for contact information.

For more information, please visit: www.meanwell.com

