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› Meanwell HLG-40H-12 Power Supply User Manual

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Meanwell HLG-40H-12 Power Supply User Manual

Model: HLG-40H-12 | Brand: MEAN WELL

INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Meanwell HLG-40H-12 Power Supply. Please read this manual thoroughly before installation and use, and retain it for future reference.

The HLG-40H series is a 40W AC/DC LED driver featuring the dual mode constant voltage and constant current output. It operates from 90 to 305VAC and offers models with different rated voltages ranging between 12V and 54V. With high efficiency up to 89.5% and a fanless design, the unit can operate in a wide temperature range. Its metal housing and IP67/IP65 ingress protection level make it suitable for both indoor and outdoor applications. The HLG-40H also includes various dimming options for design flexibility.

SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the unit:

- Ensure the power supply is disconnected from the main power source before any installation, wiring, or maintenance.
- Installation should be performed by a qualified electrician in accordance with all local and national electrical codes.
- Do not operate the unit beyond its specified voltage, current, or wattage ratings.
- Avoid exposing the unit to excessive moisture or extreme temperatures outside its operating range.
- Ensure proper grounding to prevent electrical shock.
- Do not open the power supply casing; there are no user-serviceable parts inside. Opening the casing will void the warranty.

PRODUCT OVERVIEW



A silver-colored, rectangular Meanwell HLG-40H-12 power supply unit with black input and output cables extending from each end. The top label displays product specifications, input/output details, and various certifications.

The Meanwell HLG-40H-12 is a robust power supply designed for various lighting applications. Its durable metal casing provides IP67 ingress protection, making it suitable for demanding environments. The unit features clearly labeled input and output terminals for straightforward wiring.

SETUP AND INSTALLATION

- Mounting:** The HLG-40H-12 is designed for wall mount installation. Secure the unit firmly to a stable surface using appropriate fasteners. Ensure adequate ventilation around the unit for optimal heat dissipation.
- Input Wiring (AC):**
 - Connect the Green/Yellow wire to Earth Ground (\oplus).
 - Connect the Brown wire (ACL) to the AC Line.
 - Connect the Blue wire (ACN) to the AC Neutral.
 - The input voltage range is 100-240VAC (0.43A 50/60Hz) or 277VAC (0.23A 50/60Hz for North America only).
- Output Wiring (DC):**
 - Connect the Brown wire (Vo+) to the positive (+) terminal of your LED lighting system.
 - Connect the Blue wire (Vo-) to the negative (-) terminal of your LED lighting system.
 - For dimming models (if applicable), connect the Gray wire (DIM+) and Black wire (DIM-) to your dimming controller. Refer to your dimming controller's manual for specific wiring instructions.
 - The output is 12V DC at 3.33A, providing approximately 40W of power.
- Verification:** Double-check all connections to ensure they are secure and correctly wired according to the labels on

the unit and this manual.

OPERATING INSTRUCTIONS

Once the Meanwell HLG-40H-12 Power Supply is correctly installed and wired, it is ready for operation.

- **Power On:** Apply AC power to the input terminals. The power supply will automatically convert the AC input to the stable DC output required by your connected load.
- **Dimming (if applicable):** If your model supports dimming, use the connected dimming controller to adjust the light output. Ensure the dimming method is compatible with the power supply's specifications.
- **Normal Operation:** The power supply is designed for continuous operation within its specified temperature and load limits. It features built-in protections against short circuit, over current, over voltage, and over temperature.

MAINTENANCE

The Meanwell HLG-40H-12 Power Supply is designed for minimal maintenance due to its fanless and sealed IP67/IP65 design. However, periodic checks can help ensure its longevity and optimal performance:

- **Cleaning:** Periodically inspect the unit for dust or debris accumulation, especially around cooling fins. Clean with a soft, dry cloth. Do not use liquid cleaners or solvents.
- **Connection Check:** Annually, or as needed, verify that all electrical connections are secure and free from corrosion.
- **Environmental Check:** Ensure the operating environment remains within the specified temperature range (-40°C to +80°C case temperature) and that there is no obstruction to airflow around the unit.
- **No User Serviceable Parts:** Do not attempt to open or repair the unit. Refer all servicing to qualified personnel.

TROUBLESHOOTING

If you encounter issues with your Meanwell HLG-40H-12 Power Supply, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No output voltage / Connected device not powering on.	No AC input power. Incorrect wiring. Overload or short circuit protection activated. Faulty power supply.	Check AC power source and connections. Verify input and output wiring according to the "Setup and Installation" section. Disconnect the load and check for short circuits. Reduce load if overloaded. Reconnect after a few minutes. If all else fails, the unit may be faulty. Contact customer support.
Intermittent operation.	Loose connections. Overheating. Unstable input voltage.	Check and secure all wiring connections. Ensure adequate ventilation and that the ambient temperature is within limits. Verify the stability of the AC input power.
Dimming not working (if applicable).	Incorrect dimming wiring. Incompatible dimming controller.	Verify dimming wire connections (Gray and Black wires). Ensure your dimming controller is compatible with the power supply's dimming method.

If the problem persists after attempting these solutions, please contact MEAN WELL customer support.

SPECIFICATIONS

Parameter	Value
Model Number	HLG-40H-12
Brand	MEAN WELL
Input Voltage Range	90 ~ 305VAC (100-240VAC @ 0.43A, 277VAC @ 0.23A for North America)
Input Frequency	50/60 Hz
Output Voltage	12V DC
Output Current	3.33A
Rated Power	40W (40.32W)
Efficiency	Up to 89.5%
IP Rating	IP67 (Suitable for Dry, Damp, and Wet Locations)
Operating Temperature (Case)	-40°C to +80°C
Operating Temperature (Ambient)	-40°C to +60°C
Mechanical Form	Metal Housing
Dimensions (L x W x H)	8.86 x 3.5 x 2.05 inches (approx.)
Weight	1.55 pounds (approx.)
Certifications	CE, RoHS, UL (Class 2 Power Supply)
Power Source	Corded Electric
Mounting Type	Wall Mount

WARRANTY INFORMATION

The Meanwell HLG-40H-12 Power Supply comes with a **7-Year Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service conditions.

The warranty does not cover damage resulting from:

- Improper installation or wiring.
- Misuse, abuse, or negligence.
- Unauthorized modifications or repairs.
- Operation outside of specified environmental or electrical limits.
- Acts of nature (e.g., lightning, floods).

Please retain your proof of purchase for warranty claims. For detailed warranty terms and conditions, refer to the official MEAN WELL website or contact their customer support.

CUSTOMER SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact MEAN WELL customer support.

Please have your product model number (HLG-40H-12) and purchase information ready when contacting support. You can find contact information on the official MEAN WELL website: www.meanwell.com

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