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## EverSale HRP-450-12

# Mean Well HRP-450-12 Single Output Power Supply User Manual

Model: HRP-450-12 | Brand: EverSale

## INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of the Mean Well HRP-450-12 Single Output Power Supply. This unit is designed to deliver a stable 12V output at 37.5A, with a total power of 450W, and features an active Power Factor Correction (PFC) function. Please read this manual thoroughly before using the product to ensure safe and efficient operation.

## IMPORTANT SAFETY INSTRUCTIONS

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**WARNING:** Failure to follow these safety instructions may result in electric shock, fire, or serious injury.

- Ensure the power supply is disconnected from the main power source before any installation or maintenance.
- This unit should be installed by qualified personnel only.
- Do not operate the unit in environments with high humidity, extreme temperatures, or corrosive substances.
- Ensure proper ventilation to prevent overheating. Do not block ventilation openings.
- Verify input voltage and current ratings match your power source before connection.
- Grounding is essential for safety. Ensure the FG (Frame Ground) terminal is properly connected to earth ground.
- Do not open the power supply casing. There are no user-serviceable parts inside.

## SETUP AND INSTALLATION

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Follow these steps for proper installation of the HRP-450-12 power supply:

1. **Mounting:** Mount the power supply in a well-ventilated area. Ensure adequate clearance around the unit for proper airflow. Refer to the mechanical specifications for dimensions and mounting hole locations.
2. **Input Connection:** Connect the AC input power to the terminal block labeled "AC Input Terminal Pin No."

Assignment".

- Pin 1-3: AC/L (Live)
- Pin 2: AC/N (Neutral)
- Pin 3: FG (Frame Ground) - *Crucial for safety.*

3. **Output Connection:** Connect your load to the DC output terminal block labeled "DC Output Terminal Pin No. Assignment".

- Pin 4-6: +V (Positive Output)
- Pin 2: -V (Negative Output)

4. **Remote Sense (Optional):** For applications requiring precise voltage regulation at the load, connect the remote sense pins (CN100) to the load. Refer to the "Function Manual" section for detailed instructions.

5. **DC-OK Signal (Optional):** The DC-OK signal provides a TTL level signal indicating the output status. Refer to the "Function Manual" section for connection details.



*Figure 1. Mechanical specifications, terminal assignments, block diagram, and derating curves for the HRP-450-12 power supply. This diagram illustrates the physical dimensions, input/output connections, internal block diagram, and operational limits based on ambient temperature and input voltage.*

## OPERATION

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Once the power supply is correctly installed and all connections are secure, you can power on the unit. The HRP-450-12 features several functions to ensure stable and reliable power delivery.

### Remote Sense Function

The remote sense function compensates for voltage drop across the load wiring, ensuring accurate voltage delivery at the load terminals. This is particularly useful for applications with long wiring runs or high currents.

- Connect the +S (Pin 3 of CN100) to the positive terminal of the load.
- Connect the -S (Pin 4 of CN100) to the negative terminal of the load.
- The +S and -S leads should be twisted in pairs to minimize noise pick-up. The maximum line drop compensation is 0.5V.

### DC-OK Signal

The DC-OK signal is a TTL level signal that indicates the output status of the power supply. It is referenced to pin 2 (DC-OK GND) of CN100.

- When the power supply output is within specifications, the DC-OK signal (Pin 1 of CN100) is HIGH.
- When the output is outside specifications (e.g., due to overvoltage, undervoltage, or no output), the DC-OK signal is LOW (0-1V).



*Figure 2. Detailed function description of the CN100 connector, illustrating the wiring for remote sensing and the behavior of the DC-OK signal. This diagram helps in understanding and implementing advanced control features of the power supply.*

## MAINTENANCE

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The HRP-450-12 power supply is designed for long-term reliability with minimal maintenance. However, adhering to the following guidelines can extend its lifespan and ensure optimal performance:

- **Cleaning:** Periodically inspect the unit for dust accumulation, especially around ventilation openings. Use a soft, dry cloth or compressed air to gently clean the exterior. Ensure the unit is powered off and disconnected before cleaning.
- **Ventilation:** Ensure that the operating environment maintains proper airflow and that the ambient temperature remains within the specified range. Blocked vents can lead to overheating and reduced lifespan.
- **Connections:** Periodically check all input and output connections to ensure they are secure and free from corrosion. Loose connections can cause intermittent operation or damage.
- **Environmental Conditions:** Avoid exposing the power supply to excessive moisture, direct sunlight, or extreme temperatures.

*No user-serviceable parts are inside. Do not attempt to open or repair the unit. Refer all servicing to qualified service personnel.*

## TROUBLESHOOTING

If you encounter issues with your HRP-450-12 power supply, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No output voltage	No input power; Blown fuse; Overload; Internal fault	Check AC input connections and power source; Check for tripped circuit breakers; Reduce load; Contact support if internal fault is suspected.
Output voltage too low/unstable	Overload; Loose connections; Remote sense not connected or faulty; High ambient temperature	Reduce load; Check all wiring connections; Verify remote sense wiring (if used); Ensure proper ventilation.
Unit overheating	Insufficient ventilation; Overload; High ambient temperature	Ensure clear airflow around the unit; Reduce load; Operate within specified temperature range.
DC-OK signal is LOW	Output voltage out of range; Power supply fault	Check output voltage with a multimeter; Verify load conditions; If output is correct, check DC-OK signal wiring; Contact support if fault persists.

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

## SPECIFICATIONS

Feature	Detail
Model Number	HRP-450-12
Output Voltage	12V
Output Current	37.5A
Output Power	450W

Feature	Detail
Input Voltage Range	85 ~ 264VAC (Full range)
PFC Function	Built-in active PFC function
Current Limiting	Built-in constant current limiting circuit
Remote Sense	Built-in remote sense function
Dimensions (L x W x H)	8.58 x 4.13 x 1.61 inches (218 x 105 x 41 mm)
Cooling Method	Air (Fan-cooled)
Operating Temperature	Refer to derating curve (Figure 1)
ASIN	B07MP3FC7T
UPC	888777017779

## WARRANTY INFORMATION

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The Mean Well HRP-450-12 power supply comes with a **5-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 damages resulting from:

- Improper installation or wiring.
- Unauthorized modifications or repairs.
- Operation outside of specified environmental or electrical limits.
- Physical damage or misuse.

For warranty claims, please retain your proof of purchase and contact customer support.

## CUSTOMER SUPPORT

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If you have any questions, require technical assistance, or need to report a problem with your Mean Well HRP-450-12 power supply, please contact our customer support team.

### Contact Information:

- **Manufacturer:** Mean Well
- **Brand:** EverSale
- **Website:** [www.meanwell.com](http://www.meanwell.com) (for technical documentation and general inquiries)
- **Retailer Support:** Refer to your point of purchase for specific customer service contact details.