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› MEAN WELL RS-150-12 AC to DC Power Supply User Manual

## MEAN WELL RS-150-12 (323839)

# MEAN WELL RS-150-12 AC to DC Power Supply User Manual

Model: RS-150-12 (323839)

Brand: MEAN WELL

## 1. PRODUCT OVERVIEW

The MEAN WELL RS-150-12 is a 150W AC to DC enclosed switching power supply, designed to provide a stable 12V DC output at up to 12.5 Amps. This compact unit is suitable for various industrial and electronic applications requiring a reliable power source.

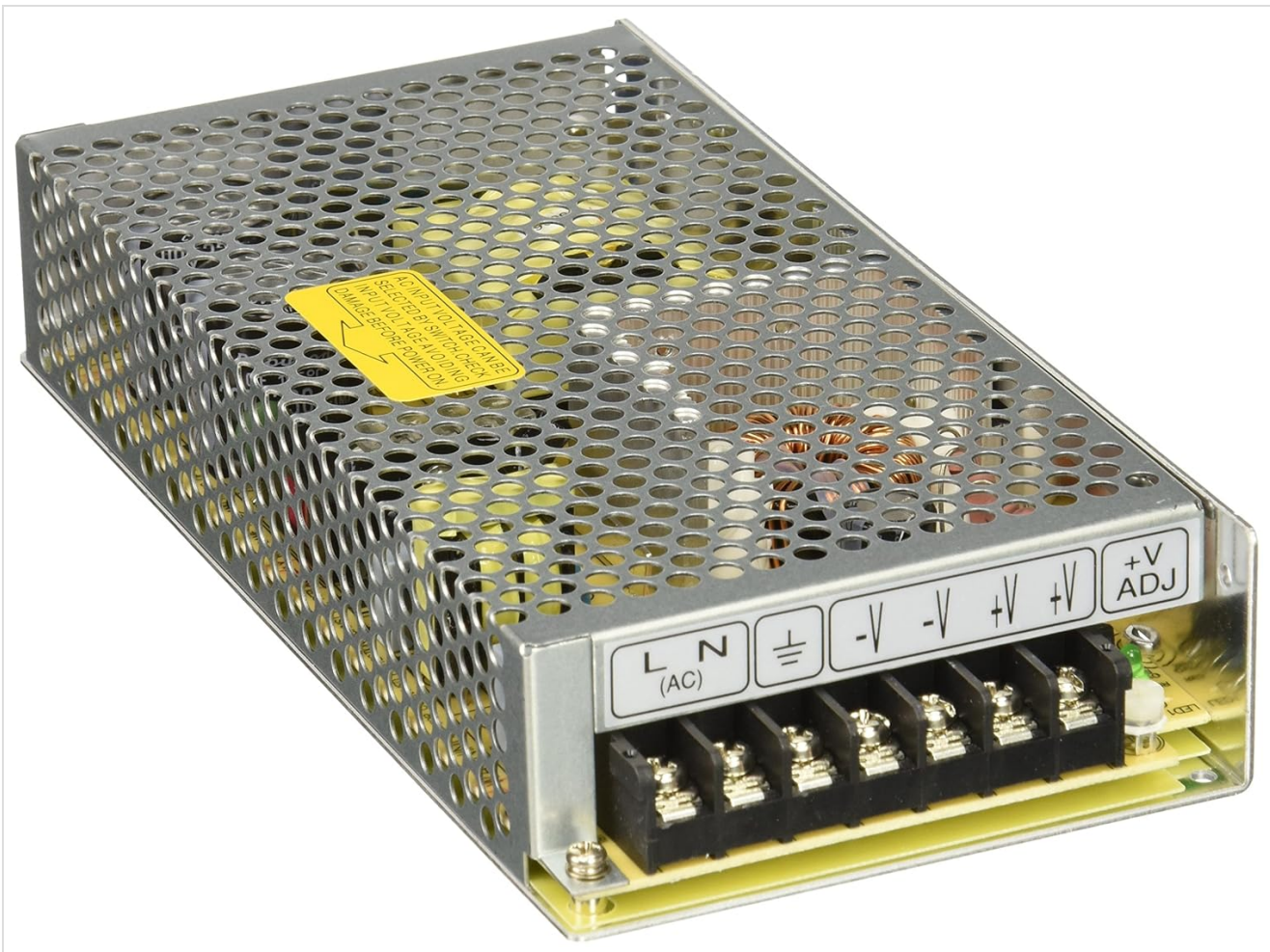


Image: The MEAN WELL RS-150-12 power supply, featuring its perforated metal enclosure for ventilation and the terminal block for AC input (L, N, Ground) and DC output (-V, +V), along with a voltage adjustment potentiometer.

Key features include short-circuit, overload, and overvoltage protection, ensuring safe and stable operation. It is designed to withstand a 300VAC surge input for 5 seconds and is certified by UL, CUL, TUV, CE, and CB standards.

## 2. SAFETY INFORMATION

**WARNING: Before connecting or operating this power supply, carefully read and understand all safety instructions. Incorrect installation or operation can lead to electric shock, fire, or damage to the unit and connected equipment.**

- **Input Voltage Selection:** The AC input voltage range (88-264Vac) can be selected via a switch. **ALWAYS check and set the input voltage switch to match your local AC supply (120V or 230V) BEFORE powering on the unit.** Failure to do so will cause severe damage to the power supply.
- **Proper Grounding:** Ensure the unit is properly grounded using the designated ground terminal. This is crucial for safety and to prevent electrical hazards.
- **Enclosure and Ventilation:** This is an enclosed power supply. Do not operate the unit without its protective metal casing. Ensure adequate ventilation around the unit to prevent overheating. Do not block the ventilation holes.
- **Terminal Protection:** The terminal screws for AC input and DC output are exposed. For safety, it is highly recommended to install the unit within an appropriate enclosure or to provide a protective cover over the terminals to prevent accidental contact with live parts.

- **Qualified Personnel:** Installation and servicing should only be performed by qualified personnel.
- **Indoor Use Only:** This power supply is designed for indoor use in dry environments. Do not expose it to moisture, water, or extreme temperatures.

### 3. SETUP AND INSTALLATION

#### 3.1 Unpacking and Inspection

Carefully remove the power supply from its packaging. Inspect the unit for any visible damage that may have occurred during shipping. If damage is found, do not attempt to operate the unit and contact your supplier.

#### 3.2 Input Voltage Selection

Locate the voltage selector switch on the side of the unit. This switch allows you to select between 115V (for 100-120VAC regions) and 230V (for 200-240VAC regions). **Ensure this switch is set to the correct voltage for your region before connecting the AC power.** An incorrect setting will damage the unit upon power-up.

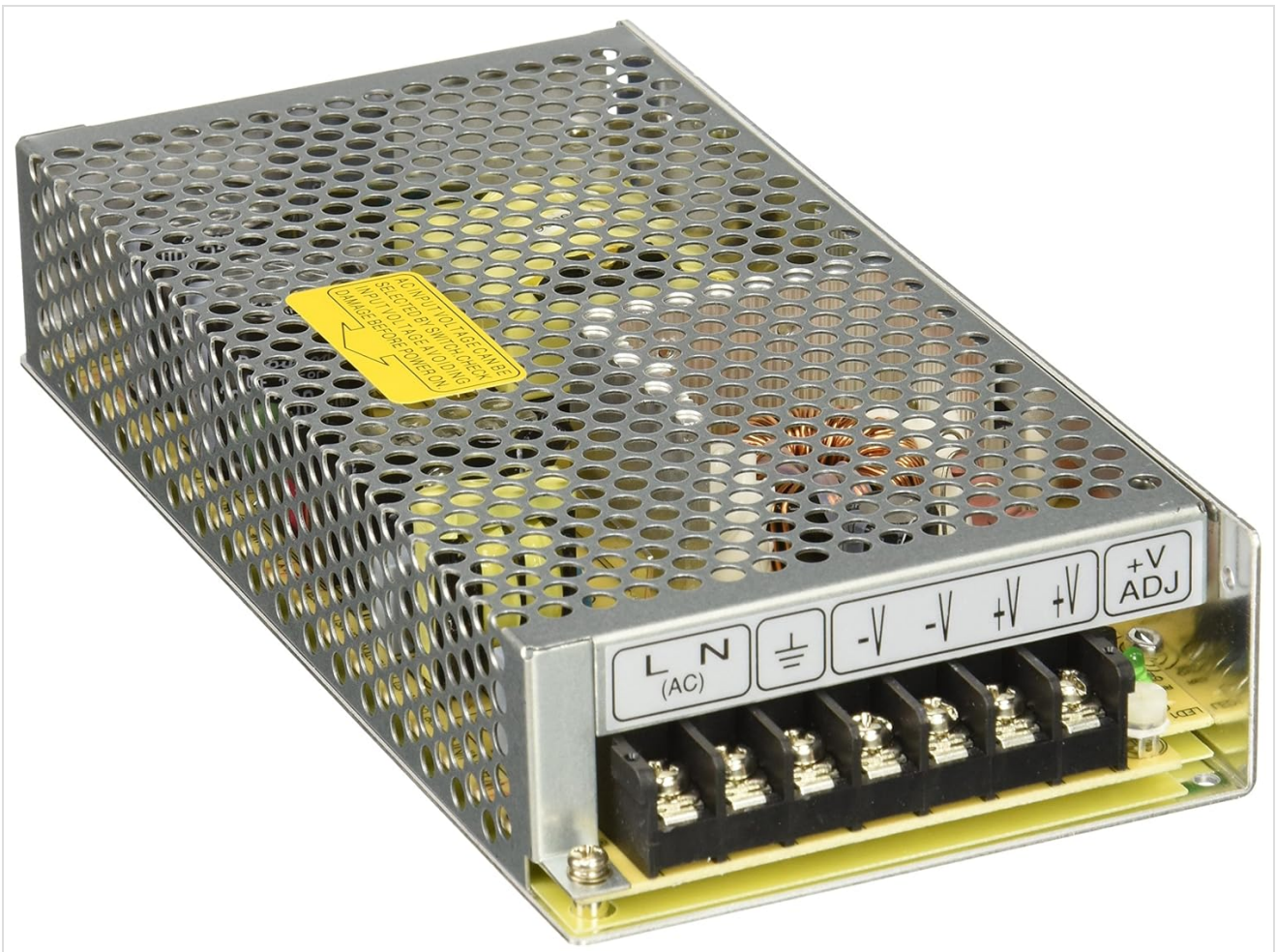


Image: A yellow label on the power supply indicates the location of the AC input voltage selector switch, emphasizing the need to check and set it correctly before applying power to prevent damage.

#### 3.3 Wiring Connections

The power supply features a screw terminal block for connections. Refer to the labels on the terminal block for correct wiring:

- **L (AC):** Live AC input.
- **N (AC):** Neutral AC input.
- **(Ground):** Protective Earth Ground. Connect this to a reliable earth ground.
- **-V:** DC Negative Output.
- **+V:** DC Positive Output.

Use appropriate gauge wiring for your application to ensure safe and efficient power delivery. Securely tighten all screw terminals to prevent loose connections, which can cause arcing or overheating.

### 3.4 Mounting

The unit can be mounted using screws through the designated mounting holes. Ensure the mounting surface is stable and can support the weight of the power supply. Allow sufficient clearance around the unit for proper airflow and heat dissipation. While the unit is sturdy, applying excessive force when tightening terminal screws can bend the internal PCB; exercise care during installation.

## 4. OPERATING INSTRUCTIONS

### 4.1 Powering On

After all connections are securely made and the input voltage switch is correctly set, apply AC power to the unit. The power supply should begin operating, providing 12V DC output.

### 4.2 Output Voltage Adjustment

The RS-150-12 features a "+V ADJ" potentiometer, typically located near the output terminals. This allows for fine adjustment of the DC output voltage within a small range (e.g., 10.8V to 13.2V). Use a small screwdriver to carefully turn the potentiometer clockwise to increase voltage or counter-clockwise to decrease voltage. Monitor the output voltage with a multimeter during adjustment to ensure it meets your requirements.

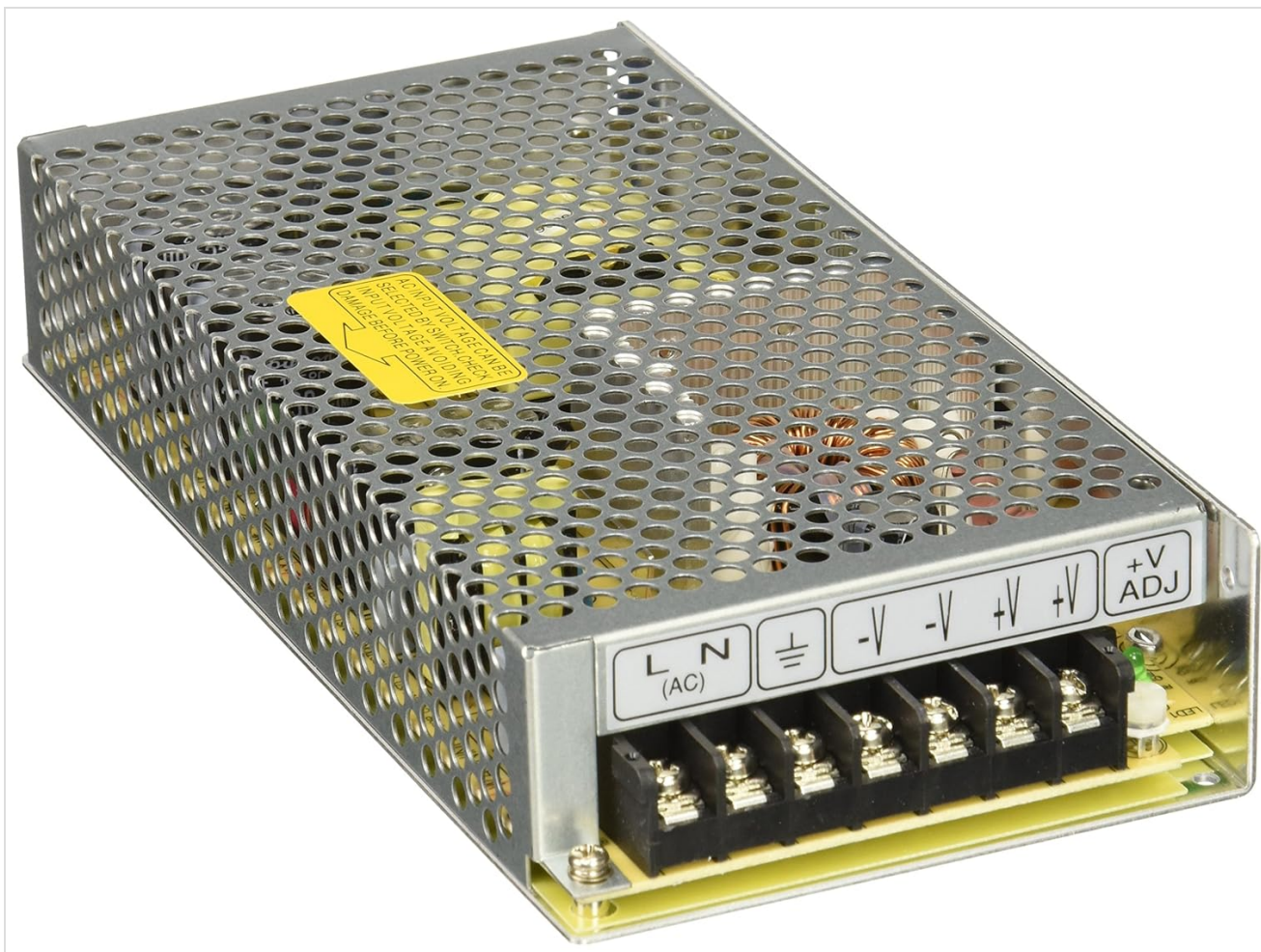


Image: The terminal block of the power supply, showing the clearly labeled AC input (L, N, Ground) and DC output (-V, +V) connections, along with the "+V ADJ" potentiometer for fine-tuning the output voltage.

## 5. MAINTENANCE

The MEAN WELL RS-150-12 is designed for reliable, long-term operation with minimal maintenance. However, periodic checks can help ensure optimal performance and longevity:

- **Cleanliness:** Keep the unit clean and free from dust and debris, especially around the ventilation holes, to ensure proper heat dissipation. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Connections:** Periodically check all wiring connections to ensure they remain secure and free from corrosion.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges.
- **No User-Serviceable Parts:** There are no user-serviceable parts inside the power supply. Do not open the casing. Opening the casing will void the warranty and expose you to dangerous voltages.

## 6. TROUBLESHOOTING

If you encounter issues with your MEAN WELL RS-150-12 power supply, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No output voltage / Unit does not power on.	<p>Input voltage switch set incorrectly.</p> <p>No AC input power.</p> <p>Loose wiring connections.</p> <p>Overload or short-circuit protection activated.</p> <p>Internal fault.</p>	<p><b>Verify the input voltage selector switch is set to the correct voltage (115V or 230V) for your region.</b></p> <p>Check AC power source and input wiring.</p> <p>Ensure all terminal connections are secure.</p> <p>Disconnect load to check if power supply recovers. Check for short circuits in the load.</p> <p>If none of the above resolve the issue, the unit may have an internal fault. Do not attempt to repair.</p>
Output voltage is unstable or incorrect.	<p>Load exceeding capacity.</p> <p>Loose output connections.</p> <p>Voltage adjustment potentiometer misset.</p>	<p>Reduce load to within specified limits.</p> <p>Check output wiring for secure connections.</p> <p>Adjust the "+V ADJ" potentiometer carefully.</p>
Unit is overheating.	<p>Insufficient ventilation.</p> <p>Overload condition.</p> <p>High ambient temperature.</p>	<p>Ensure adequate airflow around the unit. Clear any obstructions from ventilation holes.</p> <p>Reduce the load on the power supply.</p> <p>Operate within specified ambient temperature range.</p>

If the problem persists after following these steps, contact a qualified technician or the manufacturer for assistance. Do not attempt to open or repair the unit yourself.

## 7. SPECIFICATIONS

Parameter	Value
Output Voltage	12V DC
Output Current	12.5 Amps
Output Power	150W
Input Voltage Range	88-264Vac (selectable via switch)
Input Frequency	47-63Hz
Ripple and Noise (Mv P-P)	120
Load Regulation	0.5%
Line Regulation	0.5%
Dimensions (L x W x H)	7.83 x 3.86 x 1.5 inches (19.89 x 9.80 x 3.81 cm)
Weight	1.45 Pounds (0.66 kg)
Protection	Short-Circuit, Overload, Overvoltage
Certifications	UL, CUL, TUV, CE, CB
Material	Alloy Steel
Connector Type	Screw Terminal Block

## 8. WARRANTY AND SUPPORT

### 8.1 Warranty Information

The MEAN WELL RS-150-12 AC to DC Power Supply comes with a **3-Year Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, unauthorized modifications, or natural disasters.

Please retain your proof of purchase for warranty claims.

### 8.2 Customer Support

For technical assistance, troubleshooting beyond the scope of this manual, or warranty inquiries, please contact your authorized MEAN WELL distributor or reseller. Provide your product model number (RS-150-12 or 323839) and a detailed description of the issue when seeking support.