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- › [MEAN WELL](#) /
- › [MEAN WELL RS-15-5 AC to DC Power Supply User Manual](#)

MEAN WELL RS-15-5

MEAN WELL RS-15-5 AC to DC Power Supply User Manual

Model: RS-15-5

PRODUCT OVERVIEW

The MEAN WELL RS-15-5 is a compact and efficient AC to DC single output power supply, designed to provide a stable 5V output at 3 Amps (15W). Its robust aluminum alloy casing ensures durability, while its small footprint makes it suitable for various electronic applications requiring reliable power conversion.



Image: Front view of the MEAN WELL RS-15-5 AC to DC Power Supply, showcasing its compact design and screw terminal block connections.

Key Features:

- **Compact Size:** Measuring approximately 2.5 x 2.0 x 1.1 inches, ideal for space-constrained installations.
- **Wide Input Voltage:** Accepts 88-264VAC at 47-63Hz, ensuring compatibility with various power grids.
- **Stable Output:** Delivers a regulated 5V DC at 3A, suitable for sensitive electronic components.
- **Low Noise:** Designed for minimal ripple and noise (80mV p-p), providing clean power.
- **Durable Construction:** Features a silver aluminum alloy casing for enhanced protection and heat dissipation.

SAFETY INSTRUCTIONS

Before installation or operation, please read and understand all safety instructions. Failure to follow these instructions may result in electric shock, fire, or damage to the product.

- Ensure the power supply is disconnected from the AC mains before any installation or wiring.

- Installation should be performed by qualified personnel only.
- Verify that the input voltage range of the power supply matches your local AC supply.
- Do not operate the power supply in environments with excessive moisture, dust, or extreme temperatures outside its specified operating range.
- Ensure proper grounding of the power supply to prevent electric shock.
- Do not open the casing of the power supply; there are no user-serviceable parts inside.

SETUP AND INSTALLATION

The RS-15-5 power supply is designed for easy integration into various systems. Follow these steps for proper setup:

1. **Mounting:** Secure the power supply in a well-ventilated area using appropriate mounting hardware. Ensure adequate clearance around the unit for proper airflow and heat dissipation.
2. **Input Wiring (AC):**
 - Connect the Live (L) wire from your AC mains to the 'L' terminal on the power supply.
 - Connect the Neutral (N) wire from your AC mains to the 'N' terminal on the power supply.
 - Connect the Ground (PE) wire to the 'FG' (Frame Ground) terminal.
 - *Ensure all connections are secure and properly insulated.*
3. **Output Wiring (DC):**
 - Connect the positive (+) terminal of your device to the '+V' terminal on the power supply.
 - Connect the negative (-) terminal of your device to the '-V' terminal on the power supply.
 - *Double-check polarity before applying power to prevent damage to your device.*
4. **Voltage Adjustment (Optional):** The output voltage can be finely adjusted using the potentiometer located on the unit. Use a small screwdriver to carefully turn the potentiometer to achieve the desired output voltage within the specified range (4.75V to 5.5V).



Video: Product Overview of the MEAN WELL RS-15-5 Power Supply, demonstrating its compact size and connection points. This video provides a visual guide to the physical aspects of the power supply.

OPERATING INSTRUCTIONS

Once properly installed and wired, the MEAN WELL RS-15-5 power supply operates automatically. Simply apply AC power to the input terminals, and the unit will provide a stable 5V DC output.

- **Power On:** Connect the AC input to a live power source. The power supply will immediately begin converting AC to DC.
- **Load Connection:** Ensure your DC-powered device is correctly connected to the output terminals (+V and -V).
- **Monitoring:** While the unit is designed for reliable operation, it is good practice to periodically check for proper function, especially during initial setup.

MAINTENANCE

The MEAN WELL RS-15-5 power supply requires minimal maintenance. Regular checks can help ensure its longevity and optimal performance.

- **Cleaning:** Keep the power supply free from dust and debris. Use a soft, dry cloth to clean the exterior. Do not use

liquid cleaners or solvents.

- **Ventilation:** Ensure that the ventilation holes are not obstructed to allow for proper heat dissipation.
- **Connection Checks:** Periodically inspect all wiring connections to ensure they remain tight and secure. Loose connections can lead to intermittent power or overheating.
- **Environmental Conditions:** Operate the power supply within its specified temperature and humidity ranges to prevent premature failure.

TROUBLESHOOTING

If you encounter issues with your RS-15-5 power supply, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No output voltage	No AC input power; Incorrect wiring; Overload protection activated; Internal fault.	Check AC power source and connections. Verify wiring polarity. Reduce load. If problem persists, contact support.
Output voltage is unstable or incorrect	Loose connections; Output voltage adjustment potentiometer misset; Overload.	Check all wiring connections. Adjust the output voltage potentiometer. Ensure load does not exceed 3A.
Power supply is overheating	Insufficient ventilation; Excessive ambient temperature; Overload.	Ensure proper airflow around the unit. Relocate to a cooler environment. Reduce load.

If the issue cannot be resolved using this guide, please contact MEAN WELL customer support.

SPECIFICATIONS

Parameter	Value
Model Number	RS-15-5
Input Voltage Range	88-264VAC, 47-63Hz
Output Voltage	5VDC (Adjustable: 4.75V - 5.5V)
Output Current	3A
Output Power	15W
Ripple and Noise (max)	80mV p-p
Line Regulation	±0.5%
Load Regulation	±1.5%
Dimensions (L x W x H)	2.44 x 2.01 x 1.1 inches (62 x 51 x 28 mm)
Weight	Approximately 0.01 ounces (0.28 grams) - <i>Note: This weight seems unusually low for a power supply of this type. Please refer to the manufacturer's official datasheet for precise weight.</i>
Casing Material	Aluminum Alloy

Parameter	Value
Connector Type	Screw Terminal Block

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official MEAN WELL website or contact your authorized distributor. Keep your purchase receipt as proof of purchase for warranty claims.

- **Manufacturer:** Mean Well
- **Date First Available:** January 30, 2013
- **Contact:** Refer to the official MEAN WELL website for the latest contact information and support resources.