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> DROK Switching Power Supply AC 110/220V to DC 0-48V 0-10A 480W Adjustable Voltage Stabilized Power Supply DC Power Converter Overload Overvoltage Protection with Cooling Fan User Manual

DROK DC 0-48V 0-10A 480W

DROK Switching Power Supply User Manual

Model: DC 0-48V 0-10A 480W

Brand: DROK

1. INTRODUCTION

Thank you for choosing the DROK Adjustable Switching Power Supply. This device is designed to provide a stable and adjustable DC power source for a wide range of applications, including DC equipment, motor speed control, LED dimming, chemical electrolysis, research, and educational experiments. It features an input voltage range of AC 110/220V and an adjustable output of DC 0-48V with a maximum current of 10A. Equipped with advanced protection mechanisms and a high-precision LED display, this power supply offers reliability and ease of use for both professionals and DIY enthusiasts.

2. SAFETY PRECAUTIONS

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

- **Input Voltage Selection:** Before powering on, ensure the input voltage switch (located on the right side of the unit) is set correctly to either 110V or 220V, matching your local power supply. Incorrect selection can cause severe damage to the unit.
- **Ventilation:** Ensure adequate ventilation around the power supply. Do not block the cooling fan or ventilation openings.
- **Environment:** Operate the device in a dry, well-ventilated area, away from moisture, dust, and direct sunlight.
- **Overload Protection:** This unit has overload protection. Do not exceed the maximum rated output current of 10A. Exceeding this limit can trigger protection or damage the device.
- **Wiring:** All wiring should be performed by a qualified individual. Ensure all connections are secure and correct before applying power.
- **Grounding:** The power supply must be properly grounded to prevent electric shock.
- **Maintenance:** Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.

3. PRODUCT OVERVIEW

3.1 Key Features

- Adjustable Output: DC 0-48V voltage and 0-10A current, steplessly adjustable.
- High-Precision LED Display: Real-time monitoring of output voltage and current.
- Robust Design: Superior aluminum casing for durability and heat dissipation.
- Comprehensive Protection: Built-in overload, overvoltage, and short-circuit protection.
- Intelligent Cooling: Temperature-controlled cooling fan activates automatically when needed.

3.2 Components and Controls



Figure 3.2.1: Overall view of the power supply, highlighting the digital display for voltage and current readings.



Figure 3.2.2: Detailed view of the input/output terminals and the voltage/current adjustment knobs.



Figure 3.2.3: Illustration of the high-accuracy LCD display and the adjustable DC output range.



Figure 3.2.4: Important switch for selecting input voltage between 110V and 220V.

4. SETUP

4.1 Input Voltage Selection

Before connecting the power supply to the AC mains, it is crucial to select the correct input voltage (110V or 220V) using the switch located on the right side of the unit.

1. Locate the red switch on the right side panel of the power supply.
2. Using a small screwdriver or similar tool, slide the switch to match your local AC mains voltage (110V for North America, Japan; 220V for Europe, etc.).
3. Verify the selection before proceeding to avoid damage.

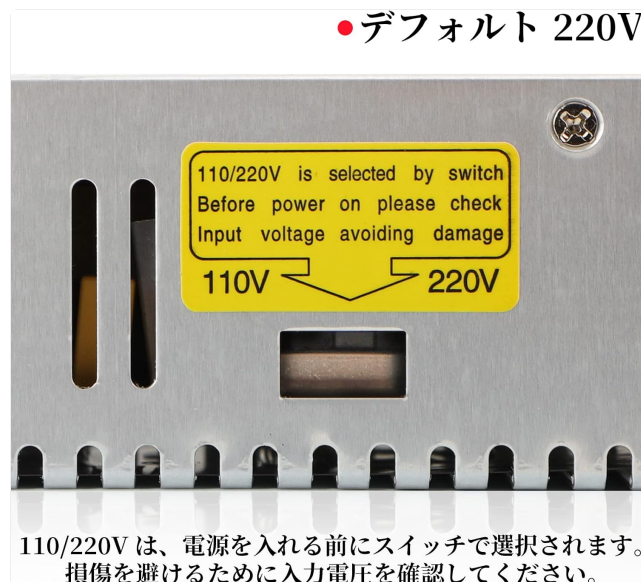


Figure 4.1.1: Input voltage selection switch. Ensure it matches your local power supply.

4.2 Wiring Instructions

Connect the power supply to your load and AC mains as follows:

- **AC Input:** Connect your AC power cord to the 'L' (Live), 'N' (Neutral), and ' ' (Ground) terminals. Refer to Figure 4.2.1 for terminal layout.
- **DC Output:** Connect your DC load to the '+V' (Positive) and '-V' (Negative) terminals. There are multiple '+V' and '-V' terminals for convenience.
- Ensure all connections are tight and secure to prevent loose contacts and potential hazards.



Figure 4.2.1: Terminal block for AC input and DC output connections.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Once all connections are secure and the input voltage is correctly selected, connect the AC power cord to the mains outlet. The unit will power on, and the LED display will illuminate.

5.2 Adjusting Voltage and Current

The power supply features two potentiometers for precise adjustment of output voltage and current.

- **Voltage Adjustment:** Use the potentiometer labeled for voltage (typically on the left side, near the 'V' display) to adjust the output voltage from 0V to 48V.
- **Current Adjustment:** Use the potentiometer labeled for current (typically on the right side, near the 'A' display) to adjust the output current from 0A to 10A.
- The high-precision LED display will show the real-time output voltage and current values.



Figure 5.2.1: Adjusting voltage and current using the dedicated knobs and monitoring with the LED display.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your DROK power supply.

- **Cleaning:** Keep the unit clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Cooling Fan:** The intelligent temperature-controlled cooling fan will activate automatically when the internal temperature rises. Ensure the fan vents are not obstructed.
- **Storage:** When not in use for extended periods, store the power supply in a cool, dry place.



Figure 6.1.1: Location of the intelligent cooling fan.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No output voltage/current, or unit does not power on.	Incorrect input voltage selection (110V/220V switch). Loose power connections. Internal protection triggered (overload/short circuit).	Verify the 110V/220V switch is set correctly for your region. Check all AC input and DC output wiring for secure connections. Disconnect the load, power cycle the unit. If it powers on, check your load for short circuits or excessive current draw.
Output voltage is lower than expected.	Voltage adjustment knob not set correctly. Load drawing too much current (voltage sag).	Adjust the voltage potentiometer to the desired level. Ensure the load's current requirement does not exceed 10A.
Unit gets excessively hot.	Insufficient ventilation. Prolonged operation at high load. Cooling fan obstruction or malfunction.	Ensure adequate airflow around the unit. Reduce the load if operating continuously at maximum capacity. Check if the cooling fan is spinning when the unit is warm. Clear any obstructions.

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

8. SPECIFICATIONS

Parameter	Value
Brand	DROK
Model	DC 0-48V 0-10A 480W

Parameter	Value
Input Voltage Range	AC 110/220V ±15% (Switchable)
Output Voltage Range	DC 0-48V (Adjustable)
Output Current Range	0-10A (Adjustable)
Rated Power	480W
Cooling Method	Air Cooling (Intelligent Fan)
Dimensions	27.5 x 20.3 x 7.3 cm
Weight	910 g
Protection Features	Overload Protection, Overvoltage Protection, Short Circuit Protection



Figure 8.1.1: Product dimensions.

9. WARRANTY AND SUPPORT

DROK offers a comprehensive after-sales service for this product.

- **Initial Defects:** For any initial defects within 6 months of arrival, we offer product replacement or a full refund.
- **Customer Support:** If you have any questions, concerns, or require technical assistance, please do not hesitate to contact DROK customer support. We are committed to providing prompt and helpful service.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question