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› NICE-POWER SPS-E3010 DC Power Supply User Manual

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NICE-POWER SPS-E3010 DC Power Supply User Manual

Model: SPS-E3010 | Brand: NICE-POWER

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation of your NICE-POWER SPS-E3010 DC Power Supply. This device is a variable DC power supply capable of outputting 0-30V and 0-10A, with a maximum power output of 150W. It features a 3-digit LED display and encoder buttons for precise adjustments. Please read this manual thoroughly before use.



Figure 1: Front view of the NICE-POWER SPS-E3010 DC Power Supply, showing the display, control knobs, and output terminals.

2. SAFETY INSTRUCTIONS

- Ensure the input AC voltage is within the specified range of 100V~240V, 50~60Hz.
- Do not operate the power supply in wet or damp conditions.
- Avoid blocking the ventilation openings. The cooling fan starts automatically to prevent overheating.
- If the power supply becomes excessively hot, discontinue use immediately and allow it to cool down to prevent irreversible damage.
- Always connect the load before turning on the power supply.
- Do not exceed the maximum output power of 150W. The device will prevent setting values that exceed this limit.
- Ensure proper grounding.
- Keep out of reach of children.

3. PRODUCT OVERVIEW

The NICE-POWER SPS-E3010 is a compact and portable DC power supply designed for various applications. Key features include:

- **Variable Output:** Adjustable voltage from 0-30V and current from 0-10A.
- **Power Limit:** Maximum output power is 150W. Note that when current is set to 10A, voltage cannot exceed 15V. When voltage is set to 30V, current cannot exceed 5A.
- **3-Digit LED Display:** Provides clear readings for voltage (accurate to 0.1V) and current (accurate to 0.01A).
- **Encoder Buttons:** High-precision encoder knobs for accurate digital adjustment of voltage and current.
- **Automatic Cooling Fan:** Activates automatically to maintain optimal operating temperature and extend service life.
- **Wide AC Input:** Supports 100V~240V AC input, suitable for global use.

PRODUCT PARAMETERS

Encode knob for precise adjustment



Figure 2: Overview of the power supply's display and controls, highlighting voltage display, current display, constant voltage indicator, constant current indicator, and encoder knobs.

.. MINI SIZE

Mini size is small and easy to carry

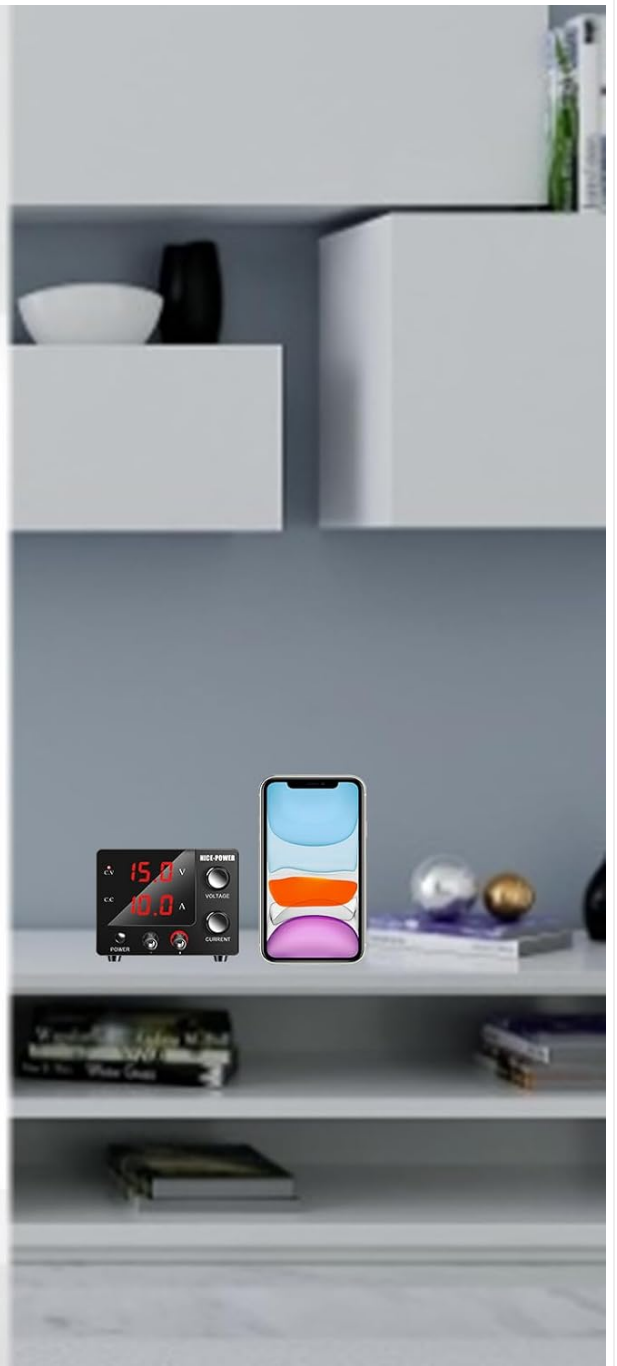


Figure 3: The compact size of the power supply, demonstrating its portability and space-saving design.

SET POWER 150W

Voltage: 0~30V Adjustable Current: 0~10A Adjustable



SET Power 150W Instructions:

Voltage **0-30V** Adjustable, Current **0-10A** Adjustable,
But the Output Power Cannot Exceed **150W**



$30V \times 5A = 150W$



$25V \times 6A = 150W$



$20V \times 7.5A = 150W$



$15V \times 10A = 150W$

Figure 4: Illustration of 150W power output combinations, such as $30V \times 5A = 150W$ and $15V \times 10A = 150W$.

4. SETUP

1. **Unpacking:** Carefully remove the power supply and all accessories from the packaging. Verify that all components listed in the packing list are present: 1x DC power supply, 1x Output Power Cords, 1x Input Power Cord, 1x User Manual.
2. **Placement:** Place the power supply on a stable, flat surface with adequate ventilation. Ensure that the air vents on the sides and rear are not obstructed.
3. **Power Connection:** Connect the provided input power cord to the AC inlet on the rear of the power supply and then to a suitable AC power outlet (100V~240V).
4. **Output Connection:** Connect the red output power cord to the red (+) terminal and the black output power cord to the black (-) terminal on the front panel. Connect the other ends of the output cords to your load device.
5. **Initial Power On:** Press the power button on the front panel. The LED display will illuminate, and the cooling fan may start briefly.

Video 1: Demonstrates the initial power-on sequence, fan activation, and basic voltage/current adjustment of the SPS-E3010 DC Power Supply.

5. OPERATING INSTRUCTIONS

5.1 Adjusting Voltage and Current

The SPS-E3010 uses encoder knobs for precise adjustment of output voltage and current. This allows for setting exact values rather than just adjusting them.

1. **Select Digit:** Press the Voltage knob or Current knob to select the specific digit you wish to adjust on the LED display. The selected digit will typically blink or be highlighted.
2. **Adjust Value:** Rotate the selected knob (Voltage or Current) to set the desired value for that digit (from 0 to 9).
3. Repeat steps 1 and 2 for each digit until the desired voltage and current values are displayed.
4. **Power Output Limit:** Remember the 150W power limit. For example, if you set the current to 10A, the maximum adjustable voltage will be 15V. If you set the voltage to 30V, the maximum adjustable current will be 5A. The device will prevent settings that exceed 150W.

.. ENCODER ADJUSTMENT KNOB

High-precision Encoder Adjustment Knob



Press the knob to switch the digits and turn the knob to set the value you want for each digit in the range of 0-9

Figure 5: Detailed view of the encoder adjustment knobs, illustrating how to press to switch digits and rotate to set values.

Video 2: Demonstrates the precise adjustment of voltage and current using the encoder knobs and a constant power test with an electronic load.

5.2 Constant Voltage (C.V) and Constant Current (C.C) Modes

The power supply operates in two primary modes:

- **Constant Voltage (C.V):** When the load current is below the set current limit, the power supply maintains a constant output voltage. The C.V indicator will be lit.
- **Constant Current (C.C):** When the load current reaches the set current limit, the power supply automatically switches to constant current mode, maintaining the set current by reducing the output voltage. The C.C indicator will be lit.

6. APPLICATION SCENARIOS

The NICE-POWER SPS-E3010 DC Power Supply is suitable for a variety of applications, including:

- LifePO4 battery charging and testing.
- Electroplating processes.
- Photovoltaic system testing.
- DIY electronics projects.
- Benchtop power for various electronic devices.



Figure 6: Examples of the power supply in use for photovoltaic testing, electroplating, and LifePO4 battery applications.

7. MAINTENANCE

- **Cleaning:** Disconnect the power supply from the AC outlet before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use liquid cleaners or aerosols.
- **Ventilation:** Regularly check that the ventilation openings are clear of dust and debris to ensure proper cooling.
- **Storage:** When not in use for extended periods, store the power supply in a cool, dry place away from direct

sunlight and extreme temperatures.

- **Overheating:** As noted in safety instructions, if the unit becomes too hot, stop use and allow it to cool. Persistent overheating may indicate an issue requiring professional inspection.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power/Display off	Power cord not connected; Power switch off; Blown fuse.	Check power cord connection; Turn on power switch; Replace fuse (refer to specifications for fuse type).
No output voltage/current	Output terminals not connected; Voltage/current set to zero; Overload protection activated.	Ensure output cables are securely connected; Adjust voltage/current knobs to desired values; Reduce load or check for short circuit.
Unit overheats	Blocked ventilation; Excessive load; Prolonged use at high power.	Ensure vents are clear; Reduce load; Allow unit to cool down.
Inaccurate readings	External measurement device error; Calibration needed.	Verify external multimeter accuracy; Contact support if persistent.

9. SPECIFICATIONS

Feature	Detail
Model Number	SPS-E3010
Input AC Voltage	100V~240V AC
Frequency	50~60Hz ±10%
Output Voltage	0~30V DC (Adjustable)
Output Current	0~10A DC (Adjustable)
Max Output Power	150W
Voltage Accuracy	0.1V
Current Accuracy	0.01A
Display Type	3-Digits LED
Cooling Method	Air (Automatic Fan)
Fuse	5x20mm 3.15A
Dimensions	Approx. 10cm x 18.5cm x 8cm (4.0in x 7.2in x 3.2in)
Weight	Less than 1KG (Approx. 2.25 lbs)

.. PRODUCT SIZE

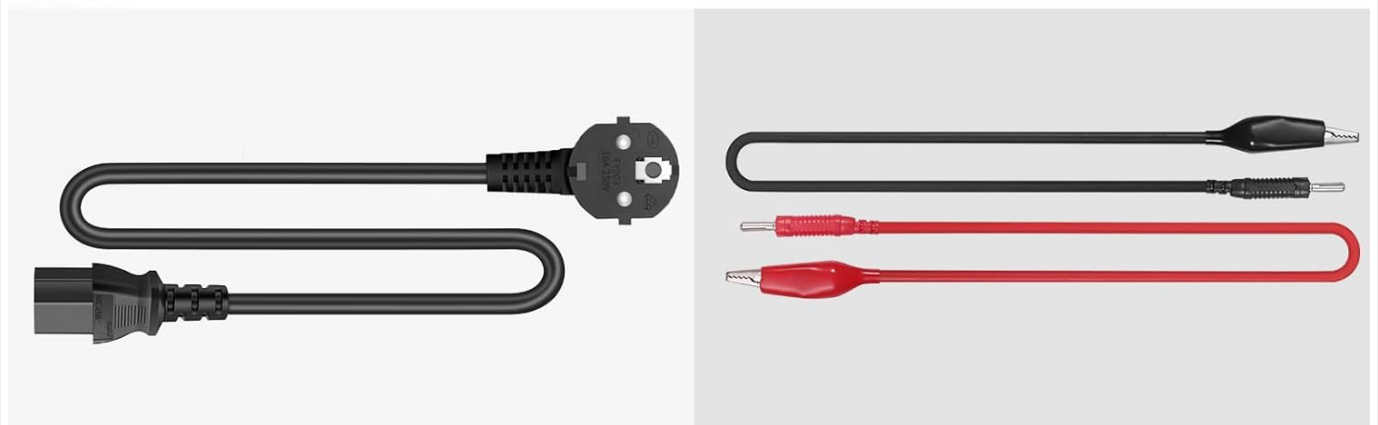


Figure 7: Physical dimensions of the power supply and included cables for reference.

10. WARRANTY AND SUPPORT

NICE-POWER offers after-sales service and 24-hour technical support for this product. If you encounter any questions or issues during setup or operation, please do not hesitate to contact our customer support team for assistance. For contact information, please refer to the product packaging or the official NICE-POWER website.

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