

NICE-POWER SPS3010-2KD

NICE-POWER Dual DC Power Supply SPS3010-2KD User Manual

Model: SPS3010-2KD

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective operation of your NICE-POWER Dual DC Power Supply, Model SPS3010-2KD. This device is a versatile 4-in-1 power supply, capable of operating as two independent 30V 10A outputs, a single 60V 10A series output, or a single 30V 20A parallel output. It also features a 5V/2A USB port for charging and powering small devices. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. SAFETY INSTRUCTIONS

To prevent electric shock, fire, or damage to the product, observe the following safety precautions:

- Always connect the power supply to a grounded outlet.
- Do not operate the device in wet or damp conditions.
- Ensure proper ventilation to prevent overheating. The unit is equipped with cooling fans.
- Do not open the casing; refer servicing to qualified personnel.
- Verify voltage and current settings before connecting to a circuit.
- This power supply includes multiple protections: overvoltage protection, overcurrent protection, overheating protection, overpower protection, short circuit protection, and leakage protection.
- Always disconnect test leads from the circuit before making adjustments or powering off the unit, as there is no dedicated output disable switch.

3. PRODUCT OVERVIEW

3.1 Front Panel Controls and Displays

The front panel features a large 4-digit LED display for precise voltage, current, and power readings for both

channels. Control knobs allow for fine adjustment of output parameters.

Product Description



Figure 1: Front Panel Layout with labeled controls and displays.

- **Voltage Display (CH1/CH2):** Shows the output voltage for each channel.
- **Current Display (CH1/CH2):** Shows the output current for each channel.
- **Power Display (CH1/CH2):** Shows the output power for each channel.
- **Current/Voltage Encoder Knobs (CH1/CH2):** Used to adjust current and voltage settings. Press the knob to switch between digits for precise adjustment, then rotate to change the value.
- **POWER Button:** Turns the unit on/off.
- **INDEP Button:** Selects Independent Output Mode.
- **SER Button:** Selects Series Output Mode.
- **PAR Button:** Selects Parallel Output Mode.
- **5V/2A USB Port:** Provides a regulated 5V, 2A output for charging or powering USB devices.
- **Output Terminals (CH1, CH2, SER/PAR):** Connect test leads here.

3.2 Rear Panel Features

The rear panel includes the AC power input and cooling fans to maintain optimal operating temperature.

Product Size



Figure 2: Rear Panel with cooling fans and power input, along with product dimensions.

3.3 Key Features

- **4-in-1 Functionality:** Operates as two independent 30V 10A supplies, one 60V 10A series supply, or one 30V 20A parallel supply.
- **High Precision:** 4-digit LED display with encoder knobs for accurate voltage and current adjustment (0.01V, 0.01A).
- **Compact Design:** Space-saving dimensions (15.3 x 7.3 x 8.7 inches, 6.6 lbs).
- **Integrated USB Port:** 5V/2A USB output for convenient device charging.
- **Safety Protections:** Overvoltage, overcurrent, overheating, overpower, short circuit, and leakage protection.

4. SETUP

1. **Unpacking:** Carefully remove the power supply and accessories from the packaging. Verify that all components are present: DC power supply unit, power cord, English manual, and two low power output cables.
2. **Placement:** Place the unit on a stable, level surface with adequate ventilation around the sides and rear to ensure proper cooling.
3. **Power Connection:** Connect the provided power cord to the AC input on the rear panel of the power supply and then to a grounded 115V AC power outlet.
4. **Initial Power On:** Press the POWER button on the front panel. The display should illuminate.

5. OPERATING MODES

The SPS3010-2KD offers three primary output configurations, selectable via the front panel buttons: Independent, Series, and Parallel.

■ One-Key Series and Parallel Output Instructions

30.00 V 30.00 2184 A 10.00 6540 W 30.00 C.V. • C.C. C.V. • C.C.	60.00 V 10.00 A 6000 W C.V. • C.C. C	30.00 V 20.00 A 6000 W C.V. • C.C. C
1 PRESS INDEP 30V Switch to Independent Output 10A	2 PRESS SER 60V Switch to Series Output 10A	3 PRESS PAR 30V Switch to Parallel Output 20A
30.00 V 30.00 2184 A 10.00 6540 W 30.00 NICE-POWER CURRENT VOLTAGE CURRENT VOLTAGE CH1 CH2 CH1 CH2 POWER INDEP SER PAR SV2A	60.00 V 10.00 A 6000 W NICE-POWER CURRENT VOLTAGE CURRENT VOLTAGE CH1 CH2 CH1 CH2 POWER INDEP SER PAR SV2A	30.00 V 20.00 A 6000 W NICE-POWER CURRENT VOLTAGE CURRENT VOLTAGE CH1 CH2 CH1 CH2 POWER INDEP SER PAR SV2A

Figure 3: Overview of Independent, Series, and Parallel Output Modes.

5.1 Independent Output Mode (INDEP)

In this mode, the power supply functions as two separate 30V 10A DC power supplies. Each channel (CH1 and CH2) has independent voltage and current controls and output terminals.

Video 1: Demonstration of Dual Output Mode operation.

1. Press the **INDEP** button. Both CH1 and CH2 displays will be active.
2. Use the CH1 Current and Voltage knobs to set the desired output for Channel 1.
3. Use the CH2 Current and Voltage knobs to set the desired output for Channel 2.
4. Connect your load to the respective CH1 or CH2 output terminals.

5.2 Series Output Mode (SER)

This mode combines the two channels in series to provide a higher voltage output, up to 60V, with a maximum current of 10A. Only the left display (CH1) will be active, showing the combined output.



Figure 4: Series Output Mode (60V 10A).

1. Press the **SER** button. The right display (CH2) will turn off.
2. Use the CH1 Current and Voltage knobs to set the desired combined output (up to 60V, 10A).
3. Connect your load to the SER/PAR output terminals.

5.3 Parallel Output Mode (PAR)

This mode combines the two channels in parallel to provide a higher current output, up to 20A, with a maximum voltage of 30V. Only the left display (CH1) will be active, showing the combined output.

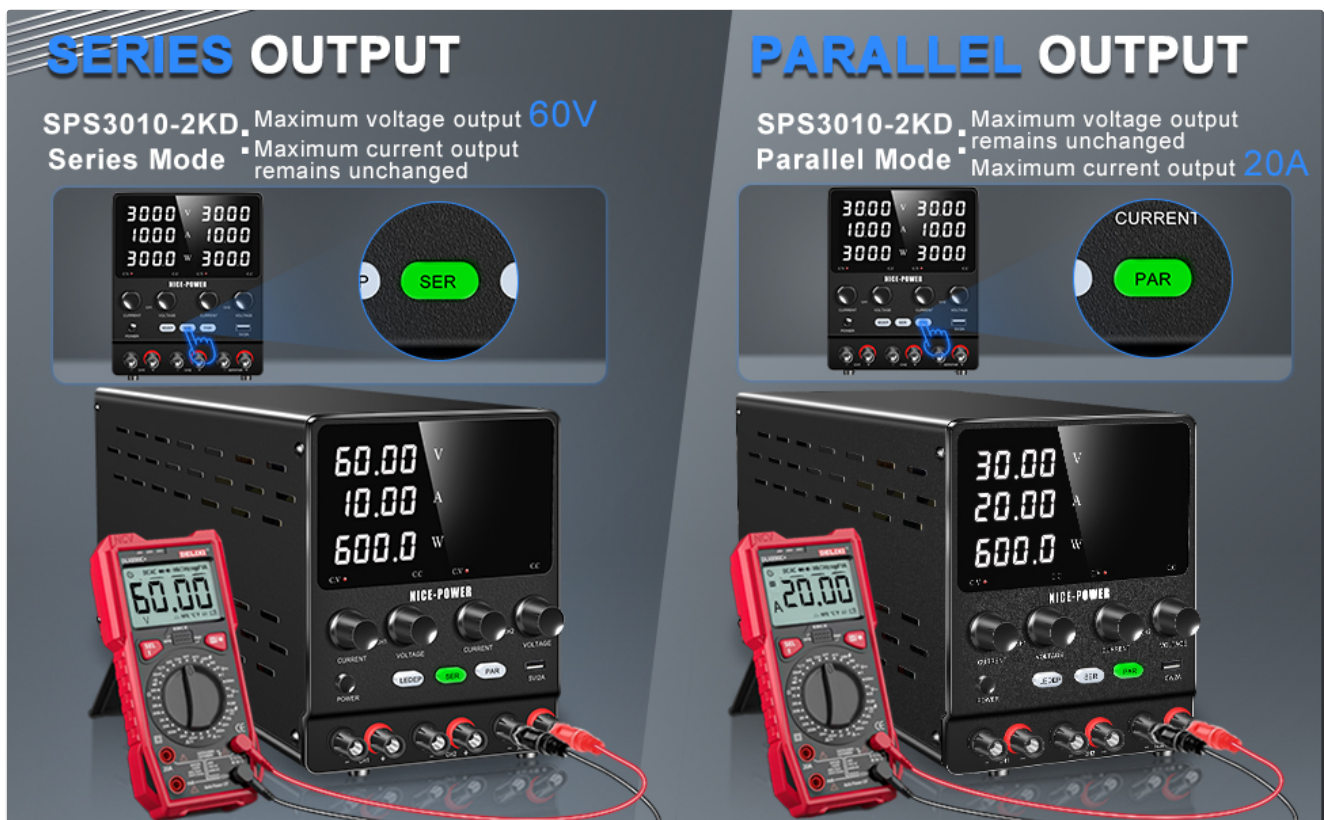


Figure 5: Parallel Output Mode (30V 20A).

1. Press the **PAR** button. The right display (CH2) will turn off.
2. Use the CH1 Current and Voltage knobs to set the desired combined output (up to 30V, 20A).
3. Connect your load to the SER/PAR output terminals.

5.4 Encoder Knob Adjustment

The encoder knobs allow for precise adjustment of voltage and current. To adjust a specific digit, press the knob repeatedly until the desired digit is highlighted, then rotate the knob to change its value (0-9).

Upgrade encoder Adjustment Knob



Press To switch Digits



Rotate to Adjust numbers

You Can Start by Pressing the Knob to Switch the Digital Position and Turn the Knob to Set the Voltage and Current Value you Need in the 0-9 Number.

Figure 6: Encoder Knob Adjustment for precise control.

6. USB PORT USAGE

The 5V/2A USB port on the front panel can be used to charge mobile phones, power small fans, or supply LED lights. Simply connect your USB device to the port.



Figure 7: USB Charging Port in use.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure the cooling fans on the rear panel are free from dust and obstructions. Periodically clean the fan grilles to maintain efficient cooling.
- **Storage:** When not in use for extended periods, store the power supply in a cool, dry environment, away from direct sunlight and excessive dust.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No power/display off	Power cord not connected, power switch off, or power outage.	Check power cord connection, ensure power switch is on, verify wall outlet functionality.
No output voltage/current	Output terminals not connected, voltage/current set to zero, or protection activated.	Ensure test leads are securely connected. Adjust voltage/current settings using encoder knobs. Check for activated protection indicators (e.g., OVP, OCP).
Inaccurate readings	Loose connections, uncalibrated external meter, or internal issue.	Verify all connections are tight. Compare readings with a known calibrated multimeter. If discrepancies persist, contact support.
Unit overheats	Blocked ventilation, excessive load, or fan malfunction.	Ensure clear airflow around the unit. Reduce load if operating near maximum capacity. Check if cooling fans are operating.
Difficulty adjusting values	Incorrect use of encoder knob.	Remember to press the encoder knob to select the digit you wish to adjust before rotating.

Note: This unit does not feature an output disable switch. Always ensure test leads are disconnected from your circuit before powering on or making significant adjustments to prevent accidental damage to connected devices.

9. SPECIFICATIONS

Feature	Specification
Model Number	SPS3010-2KD
Input Voltage	115 Volts
Independent Output	2 x 0-30V, 0-10A
Series Output	0-60V, 0-10A
Parallel Output	0-30V, 0-20A
USB Output	5V/2A
Display	4-Digit LED (Voltage, Current, Power)
Adjustment	Encoder Knobs (0.01V, 0.01A precision)
Product Dimensions	7 x 8.01 x 14 inches
Weight	6.06 Pounds
Certifications	CE & FCC Certified

10. WARRANTY AND SUPPORT

NICE-POWER products are designed for reliability and performance. If you have any questions or require technical assistance with your SPS3010-2KD Dual DC Power Supply, please contact our customer support team. We aim to reply to all inquiries within 24 hours.

For support, please visit the official NICE-POWER store or contact us through the platform where you purchased the product.

11. ADDITIONAL RESOURCES

11.1 Product Demonstration Videos

The following videos provide visual demonstrations of the power supply's features and operation:

Your browser does not support the video tag.

Video 2: Overview of the NICE-POWER Dual DC Power Supply, demonstrating its various modes and features.

Your browser does not support the video tag.

Video 3: Detailed demonstration of the NICE-POWER Dual DC Power Supply's display and adjustment capabilities.

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