Jesverty SPS-12003H

Jesverty SPS-12003H DC Variable Power Supply User Manual

Model: SPS-12003H | Brand: Jesverty

1. Introduction

The Jesverty SPS-12003H is a high-precision DC variable power supply designed for various applications including laboratory work, school projects, maintenance, electrolysis, electroplating, brush plating, lamp testing, aging testing, and battery charging. This manual provides detailed instructions for the safe and efficient operation of your device.

Key Features:

- High-precision encoder knobs for precise voltage and current adjustment (up to 0.01V and 0.001A).
- 4-digit backlit LED display for clear readings in various lighting conditions.
- Integrated 5V/2A USB port with fast charging protocol recognition chip for charging mobile phones and other devices.
- Output enable/disable button to prevent accidental load damage.
- Multiple safety protections: grounding wire, leakage protection, thermal protection, over-voltage protection, over-current protection, and short-circuit protection.
- Intelligent temperature-controlled fan for efficient heat dissipation and extended product lifespan.
- Compact and lightweight design (18 x 8.5 x 15.5 cm, 1.1 kg) for space-saving on the workbench.

2. Safety Information

Please read all safety warnings and instructions carefully before operating the device to ensure safe and proper use. Keep this manual for future reference.

General Safety Precautions:

- Always connect the power supply to a grounded outlet.
- Do not operate the device in wet or damp conditions.
- Ensure proper ventilation around the unit to prevent overheating. Do not block ventilation openings.
- Do not open the casing; there are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- Disconnect power before making any connections or disconnections to the output terminals.
- Verify the input voltage matches your local power supply (AC220V 50Hz for EU plug model).
- Avoid short-circuiting the output terminals for extended periods.

Built-in Safety Features:

- **Grounding Wire:** Provides essential protection against electrical shock.
- **Leakage Protection:** Safeguards against current leakage.
- **Thermal Protection:** Automatically shuts down the unit if internal temperature exceeds safe limits.
- **Over-Voltage Protection (OVP):** Protects connected loads from excessive voltage.
- **Over-Current Protection (OCP):** Prevents damage due to excessive current draw.
- **Short-Circuit Protection:** Safeguards the unit and load in case of a short circuit.
- **Intelligent Temperature Control Fan:** Activates and adjusts speed based on internal temperature, ensuring optimal cooling and extending product life.

Image: Overview of the Jesverty SPS-12003H highlighting its safety features including short-circuit protection, overload protection, overheat protection, and grounding terminal. Also shown are various international plug types and the intelligent cooling fan.

3. Package Contents

Please check the package contents upon receipt. If any items are missing or damaged, contact your vendor immediately.

- Jesverty SPS-12003H DC Variable Power Supply Unit
- Power Cord (EU plug for this model)
- Output Test Leads (typically alligator clips to banana plugs)
- User Manual (this document)

4. Product Overview

Familiarize yourself with the components and controls of your Jesverty SPS-12003H power supply.

Image: Front panel of the Jesverty SPS-12003H showing the display, control knobs, USB port, and output terminals.

Front Panel Components:

- **LED Display:** 4-digit display showing Voltage (V), Current (A), and Power (W). Includes indicators for OVP, OCP, OPN, RMT, CV, CC.

- **CURRENT Knob:** Encoder knob for adjusting output current. Press to select digit for adjustment.
- **VOLTAGE Knob:** Encoder knob for adjusting output voltage. Press to select digit for adjustment.
- **5V/2A USB Port:** Standard USB-A port for charging external devices.
- **POWER Button:** Main power switch for the unit.
- **OUTPUT Button:** Toggles the power output ON/OFF. Long press for advanced settings (OPN, OCP).
- **Output Terminals:**
  - **GND (Green):** Ground terminal.
  - **- (Black):** Negative output terminal.
  - **+ (Red):** Positive output terminal.

Rear Panel Components:

- **AC Power Input:** Connector for the power cord.
- **Cooling Fan:** Intelligent temperature-controlled fan for heat dissipation.

5. Setup

Follow these steps for initial setup of your power supply.

1. **Placement:** Place the power supply on a stable, flat surface with adequate ventilation. Ensure the cooling fan at the rear is not obstructed.
2. **Power Connection:**
   - Ensure the power supply's main power button is in the OFF position.
   - Connect the provided power cord to the AC power input on the rear panel of the unit.
   - Plug the other end of the power cord into a grounded AC outlet (AC220V 50Hz for EU plug model).
3. **Output Lead Connection:**
   - Connect the test leads to the output terminals: Red to '+', Black to '-', and Green to 'GND' if grounding is required for your application.
   - Ensure connections are secure before applying power to your load.

6. Operating Instructions

This section details the operation of the Jesverty SPS-12003H.

6.1 Powering On/Off

- To power on the unit, press the green **POWER** button. The display will illuminate.
- To power off the unit, press the green **POWER** button again.

6.2 Adjusting Voltage and Current

The SPS-12003H uses precise encoder knobs for setting voltage and current values.

Image: Detailed view of the encoder knobs for current and voltage adjustment, emphasizing their precision.

1. **Selecting a Digit:** Press the **VOLTAGE** knob or **CURRENT** knob momentarily. The digit that can be adjusted will start blinking. Press the knob repeatedly to cycle through the digits (e.g., hundreds, tens, units, tenths, hundredths).
2. **Adjusting Value:** Once a digit is blinking, rotate the knob clockwise to increase the value or counter-clockwise to decrease it. The selected digit will blink for approximately 3 seconds after selection or change.
3. **Precision:** The encoder knobs allow for fine adjustments, with voltage precision up to 0.01V and current precision up to 0.001A.

Image: Visual guide demonstrating how to adjust voltage and current by pressing the knob to select a digit and then rotating to change its value.

6.3 Output Enable/Disable Button

The **OUTPUT** button controls the power output to your connected load, preventing accidental damage.

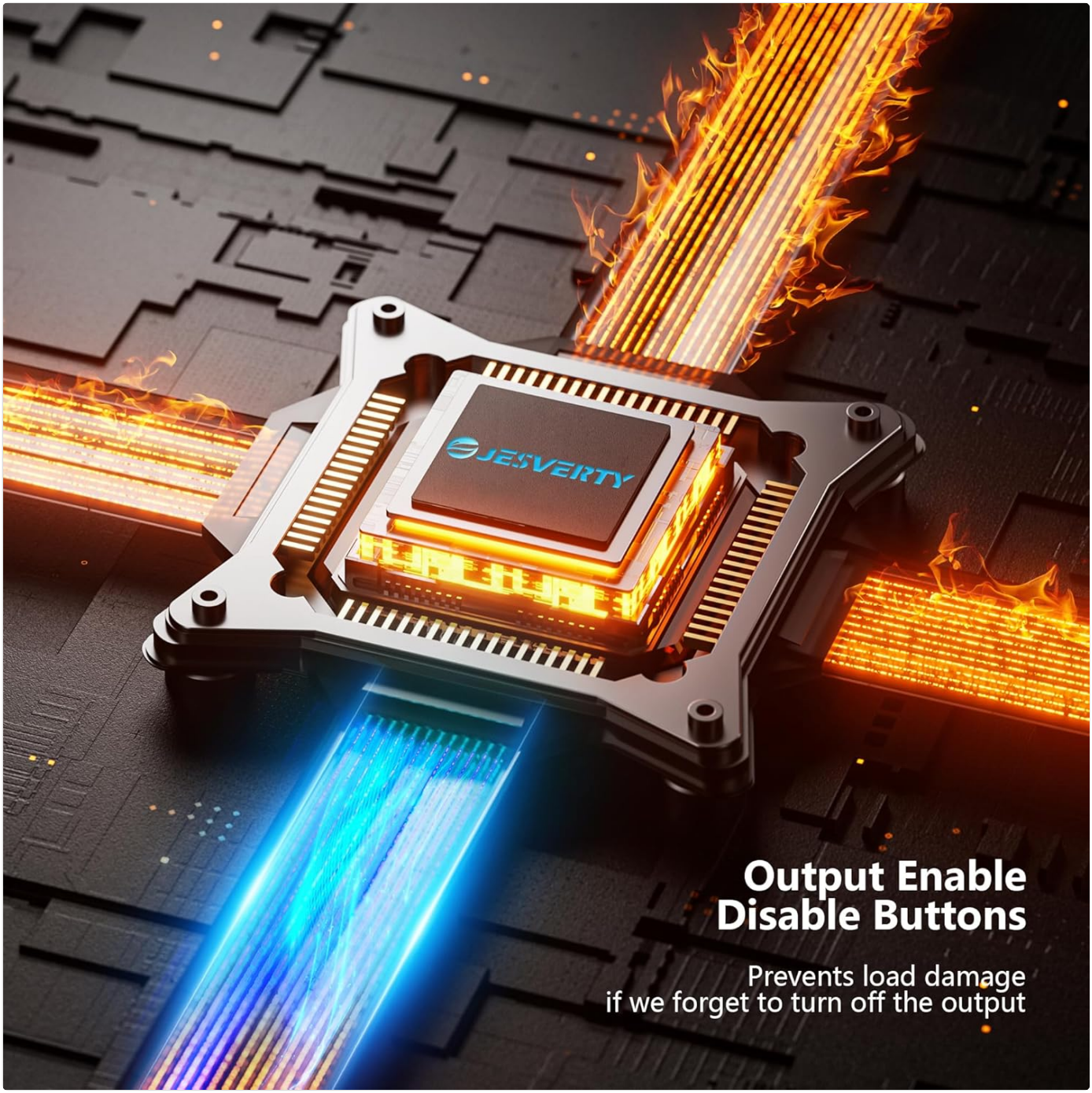


Image: Close-up of the output enable/disable button, indicating its function to prevent load damage.

- Press the **OUTPUT** button momentarily to toggle the power output ON or OFF.
- When the output is OFF, you can safely adjust voltage and current settings without affecting the connected load.

6.4 USB Charging Function

The integrated 5V/2A USB port allows for convenient charging of compatible devices.

Image: The 5V/2A USB port on the front panel, shown charging a mobile phone, demonstrating its fast charging capability.

- Simply connect your USB-compatible device to the 5V/2A USB port on the front panel.
- This port provides a fixed 5V output at up to 2A and supports fast charging protocols.

6.5 Screen Brightness Adjustment

You can adjust the brightness of the LED display for optimal visibility.

Image: Instructions for adjusting screen brightness by simultaneously rotating the CURRENT and VOLTAGE knobs. Rotating right increases brightness, rotating left decreases it.

- To increase brightness, simultaneously rotate both the **CURRENT** and **VOLTAGE** knobs clockwise.
- To decrease brightness, simultaneously rotate both the **CURRENT** and **VOLTAGE** knobs counter-clockwise.

6.6 Over Current Protection (OCP) Setting

OCP provides an additional layer of protection by setting a maximum current threshold independent of the normal current limit.

Image: Visual guide for enabling and disabling Over Current Protection (OCP) and setting its value using the CURRENT knob.

1. **Entering OCP Setting:** Press and hold the **CURRENT** button for 3 seconds. The display will show the OCP setting interface. The OCP light will illuminate.
2. **Setting OCP Value:** Rotate the **CURRENT** knob to adjust the OCP threshold. Press the knob to select individual digits for precise adjustment.
3. **Enabling/Disabling OCP:**
    - To enable OCP, ensure the power display value is '1'. The OCP light will be ON.
    - To disable OCP, rotate the **CURRENT** knob left until the power display value is '0'. The OCP light will turn OFF.
4. **Saving Settings:** Press and hold the **CURRENT** button for 3 seconds to save the setting and return to the main interface.

6.7 OPN (Output Power On) Function

The OPN function determines the state of the output when the unit is powered on.

Image: Visual guide for enabling and disabling the OPN (Output Power On) function using the OUTPUT button.

1. **Entering OPN Setting:** Press and hold the **OUTPUT** button for 3 seconds. The display will show the OPN setting interface.
2. **Enabling/Disabling OPN:**
    - To enable OPN (output automatically turns on with power), press the **OUTPUT** button momentarily. The power display value will change to '1', and the OPN light will be ON.
    - To disable OPN (output remains off when powered on), press the **OUTPUT** button momentarily. The power display value will change to '0', and the OPN light will be OFF.
3. **Saving Settings:** Press and hold the **OUTPUT** button for 3 seconds to save the setting and return to the main interface.
4. **Note:** The OPN setting is persistent and cannot be canceled by simply turning the unit on and off. You must manually change it in the OPN setting interface.

7. Maintenance

Proper maintenance ensures the longevity and reliable operation of your power supply.

- **Cleaning:** Disconnect the power supply from the AC outlet before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use abrasive cleaners or solvents.
- **Ventilation:** Regularly check that the ventilation openings and cooling fan are free from dust and debris. Use compressed air to clear any blockages if necessary.
- **Storage:** When not in use for extended periods, store the power supply in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Inspection:** Periodically inspect the power cord and test leads for any signs of damage. Replace them if they are frayed or damaged.

8. Troubleshooting

This section addresses common issues you might encounter with your power supply.

Problem	Possible Cause	Solution
Unit does not power on.	No power from outlet; Power cord loose or damaged; Unit's power button not pressed.	Check AC outlet with another device; Ensure power cord is securely connected; Press the green POWER button.
No output voltage/current.	Output button is OFF; Short circuit in load; OCP/OVP activated.	Press the OUTPUT button to turn output ON; Check load for short circuits; Check OCP/OVP indicators and resolve issue.
Display is dim or unreadable.	Brightness setting is too low.	Adjust screen brightness by rotating both CURRENT and VOLTAGE knobs simultaneously clockwise.
Fan is constantly running or very loud.	High internal temperature; Fan vents obstructed.	Ensure adequate ventilation; Clear any obstructions from fan vents. The fan operates based on temperature.
Voltage/Current adjustment is not precise.	Incorrect digit selected for adjustment.	Press the respective knob (VOLTAGE/CURRENT) repeatedly to select the desired digit for fine adjustment.

9. Specifications

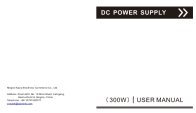
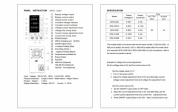
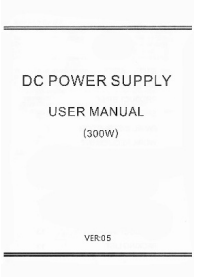
Technical specifications for the Jesverty SPS-12003H DC Variable Power Supply.

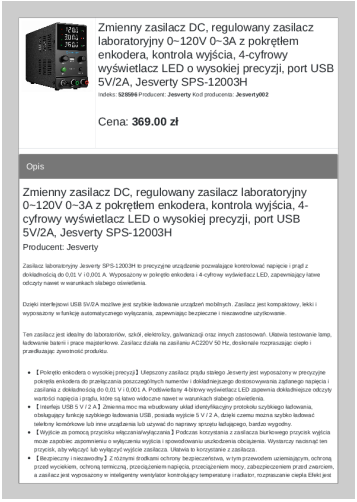
Feature	Specification
Model Number	SPS-12003H
Input Voltage	AC 220V 50Hz (EU Plug)
Output Voltage Range	0-120V DC
Output Current Range	0-3A DC
Max Power Output	360W
Voltage Display Accuracy	0.01V
Current Display Accuracy	0.001A
Display Type	4-digit LED
USB Output	5V/2A (USB Type A)
Dimensions (L x W x H)	18.01 x 8.51 x 15.49 cm (7.09 x 3.35 x 6.1 inches)
Weight	1.56 kg (3.44 lbs)
Color	Black
Manufacturer	Jesverty
Safety Protections	OVP, OCP, OTP, Short-Circuit, Leakage, Grounding

10. Warranty and Support

Jesverty products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please contact your original point of purchase or visit the official Jesverty website. Please have your model number (SPS-12003H) and purchase date ready when contacting support.
For the most up-to-date information and support resources, please refer to the manufacturer's official channels.

Related Documents - SPS-12003H

	JESVERTY SPS-3010X DC Power Supply User Manual User manual for the JESVERTY SPS-3010X 300W DC Power Supply, detailing its specifications, panel instructions, safety precautions, and operational functions including constant voltage/current characteristics and fuel replacement.
	JESVERTY SPS-3010X DC Power Supply User Manual User manual for the JESVERTY SPS-3010X 300W DC Power Supply, detailing its specifications, panel instructions, safety precautions, and operational functions including constant voltage/current characteristics and fuel replacement.
	KUAIQU SPS-C Series DC Power Supply: Panel Instructions and Specifications Detailed panel instructions and specifications for the KUAIQU SPS-C series DC power supplies, including model details, output ranges, and adjustment examples for SPS-C305, SPS-C3010, SPS-C605, SPS-C1203, and SPS-C3206.
	Nice-Power 300W DC Power Supply User Manual User manual for the Nice-Power 300W DC Power Supply, covering specifications, panel instructions, operation, safety precautions, fuse replacement, maintenance, and warranty.
	SPS-3005/3010/6005/12003 Series DC Power Supply User Manual User manual for the SPS-3005/3010/6005/12003 series of adjustable regulated DC power supplies. Covers product brief, specifications, panel instructions, operation, maintenance, warranty, and packing list.
	DC Power Supply User Manual - R-SPS Series User manual for the R-SPS series of adjustable regulated DC Power Supplies, designed for laboratories, schools, and production lines. This document provides essential safety instructions, detailed product specifications for various models, panel component identification, operational guidance for constant voltage and constant current modes, fuse replacement procedures, maintenance recommendations, and warranty information.



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Zmienny zasilacz DC regulowany laboratoryjny 0~120V 0~3A z pokrÄtÅem enkodera kontrola wyjÅcia 4 cyfrowy wyÅwietlacz LED o wysokiej precyzji port USB 5V 2A Jesverty SPS 12003H Sklep internetowy stylem pl zmienny dc 0 120v 3a pokretlem wyjscia wyswietlacz le upload files product led usb 5v 2a jesverty sps 12003h 528596 |||

Zmienny zasilacz DC, regulowany zasilacz laboratoryjny 0-120V 0-3A z pokrtlem enkodera, kontrola wyjcia, 4-cyfrowy wywietlacz LED o wysokiej precyzji, port USB 5V/2A, Jesverty **SPS-12003H** Indeks: 528596 Producent: Jesverty Kod producenta: Jesverty002 Cena: 369.00 zl Opis Zmienny zasilacz DC, regulowa...

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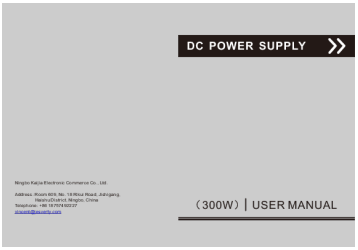

SPS3010H Series Programmable DC Power Supply User Manual

User manual for the Ningbo Kaijia Electronic Commerce Co., Ltd. SPS3010H Series programmable DC power supply, detailing features, specifications, operation, safety, and maintenance.

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