

FNIRSI FNIRSI-DPS-150

FNIRSI DPS-150 DC Power Supply Variable User Manual

Model: FNIRSI-DPS-150

Brand: FNIRSI

1. INTRODUCTION

The FNIRSI DPS-150 is a high-performance, adjustable DC power supply designed for precision electronic equipment, laboratory use, DIY projects, and phone repair. It offers stable output, high-precision display, and multiple input and protection features, making it a versatile tool for various applications.

2. SAFETY INFORMATION

This device incorporates 8 advanced safety protection mechanisms to ensure safe operation and protect connected equipment. These include:

- Overvoltage Protection (OVP)
- Overcurrent Protection (OCP)
- Undervoltage Protection (UVP)
- Overload Protection (OLP)
- Overheat Protection (OTP)
- Reverse Input Prevention (RIP)
- Reverse Output Protection (ROP)
- Short Circuit Protection (SCP)

Important Note: When charging batteries, it is strongly recommended to add a reverse current protection module (such as a Schottky diode) to the output end to protect the device from damage.



8 KEY PROTECTION WORK SAFETY GUARDS

- Over-Voltage Protection
- Over-Current Protection
- Undervoltage Protection
- Over Load Protection
- Overheat Protection
- Reverse Input Prevention
- Reverse Output Prevention
- Short Circuit Protection



OVP OCP UVP OLP
OTP RIP ROP SCP

Figure 2.1: Visual representation of the 8 key safety protection features.

3. PRODUCT OVERVIEW

3.1. Key Features

- **High-Performance Stable Output:** 30 V, 5 A, 150 W DC power supply variable with 0.01 V, 0.001 A high-precision display.
- **Ultra-Low Power Ripple:** Less than 20 mV, effectively protecting precision electronic equipment.
- **Multiple Input Modes:** Supports PD, QC, and DC input.
- **PC Programmable Output:** Allows presetting of 6 groups of output parameters for quick adjustment.

- **Versatile Connections:** Integrates 4mm banana heads, U-shaped terminals, and fine copper wires.
- **HD Interactive Display:** Equipped with a 2.8-inch IPS color screen that supports 90° flip for multi-angle observation. UI supports numerical and curve display.

3.2. Components Included

- 1 x DPS-150 Host
- 2 x Alligator Clip Wire (Black & Red)
- 1 x USB Data Cable
- 1 x User Manual
- 1 x Packing Box



Figure 3.1: FNIRSI DPS-150 unit with alligator clip wires and USB cable.

DPS-150 F-NRST
Programmable numerical control Current control



<20mV POWER RIPPLE EFFICIENT & STABLE OUTPUT

Seamless Voltage Stability for Sensitive Devices



Figure 3.2: The DPS-150 features efficient and stable output with less than 20mV power ripple.



VERSATILE CONNECTIONS EFFORTLESS FLEXIBILITY

4.0mm Banana Plugs

U-Shaped Terminals

Fine Copper Wire

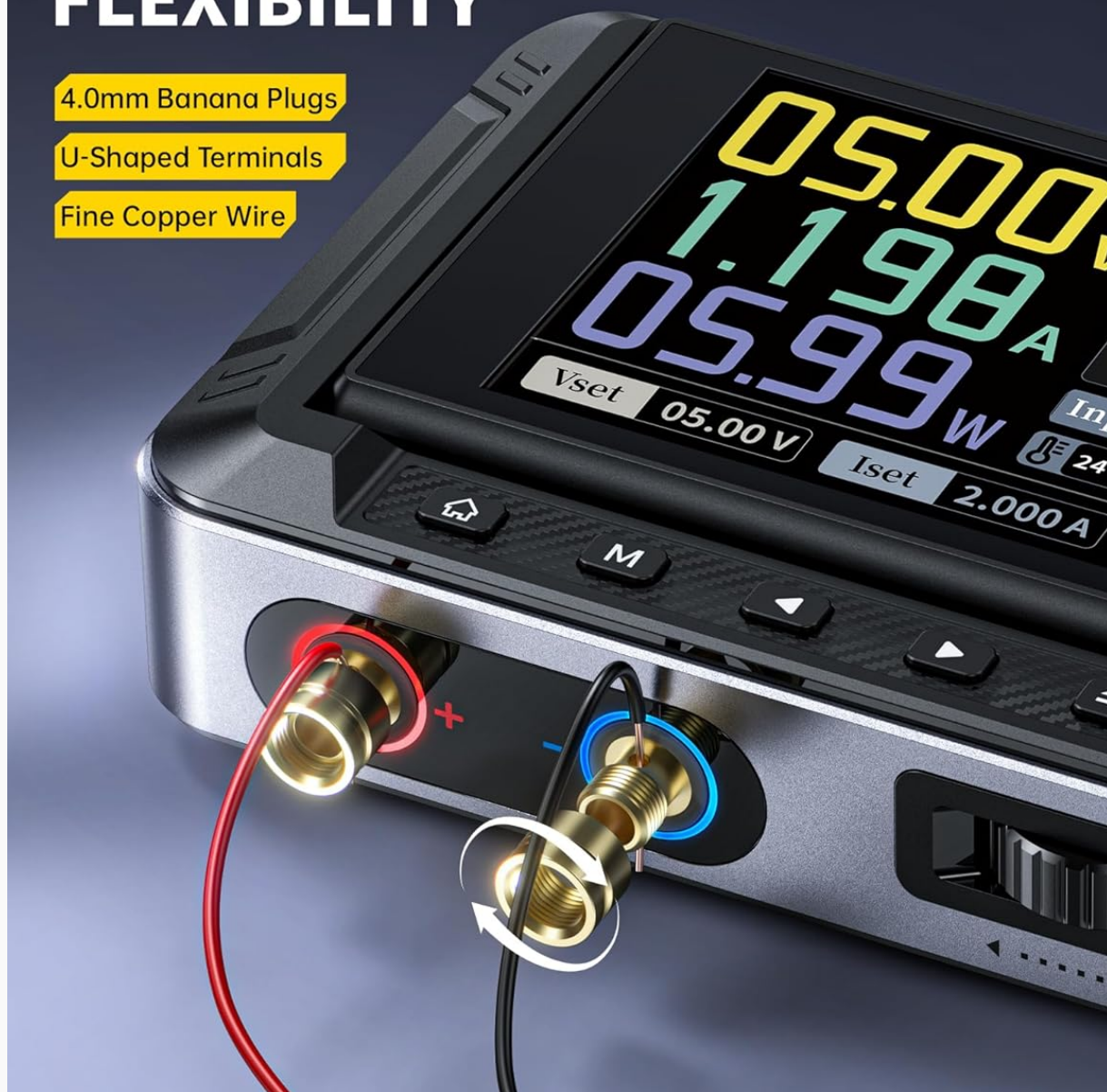


Figure 4.1: The DPS-150 offers versatile connections including 4.0mm banana plugs, U-shaped terminals, and fine copper wire.

5. OPERATING INSTRUCTIONS

The DPS-150 features a 2.8-inch IPS color screen for intuitive operation. The screen can be flipped 90° for optimal viewing angles.

5.1. Display and Navigation

The UI interface provides both numerical and curve displays, allowing you to visually monitor voltage, current, and power status. Use the navigation buttons below the screen to adjust settings and switch between display modes.



CURVE & DIGITAL DISPLAY 90 ° FLIP DESIGN



Figure 5.1: The 90° flip design allows for flexible viewing of both curve and digital displays.

5.2. Setting Voltage and Current

The device offers high-precision adjustment with 0.01V and 0.001A resolution. Use the rotary encoder and buttons to precisely set your desired output voltage and current. The display will show the set values (Vset, Iset) and the actual output values.

5.3. PC Programmable Output and Presets

The DPS-150 supports PC programmable output, allowing you to control the device via a computer. Additionally, you can preset up to 6 groups of output parameters (M1-M6) for quick recall and adjustment. This is particularly useful for repetitive tasks or testing different voltage/current scenarios.



Figure 5.2: The DPS-150 allows PC control and storage of 6 output data presets.

5.4. Operational Demonstration

Video 5.1: An official demonstration of the FNIRSI DPS-150 DC Power Supply Variable in operation, showcasing its features and ease of use.

6. MAINTENANCE

To ensure the longevity and optimal performance of your FNIRSI DPS-150, follow these maintenance guidelines:

- Keep the device clean and free from dust. Use a soft, dry cloth for cleaning.

- Avoid exposing the device to extreme temperatures, humidity, or direct sunlight.
- Do not block the ventilation openings to ensure efficient cooling. The device uses high-grade thermal silicone and a metal aluminum alloy shell for optimal heat dissipation.
- Store the device in a safe place when not in use to prevent physical damage.

7. TROUBLESHOOTING

If you encounter issues with your FNIRSI DPS-150, consider the following common troubleshooting steps:

- **No Power:** Ensure the power adapter is correctly connected and providing sufficient voltage (5-32V DC). Check the power source (outlet, power bank).
- **No Output:** Verify that the output is enabled (RUN mode). Check output connections for proper contact and polarity. Ensure voltage and current limits are set appropriately for your load.
- **Overload/Protection Triggered:** If a protection mechanism (OVP, OCP, OTP, etc.) is triggered, the device will stop output. Disconnect the load, identify and resolve the issue (e.g., short circuit, excessive current draw, overheating), and then restart the device.
- **Display Issues:** If the display is unresponsive or shows abnormal readings, try restarting the device. Ensure the USB data cable is not interfering if connected.
- **PC Connectivity Issues:** Ensure the correct drivers are installed and the USB data cable is securely connected. Refer to the PC software manual for detailed instructions.

For persistent issues, please contact FNIRSI customer support.

8. SPECIFICATIONS

Parameter	Value
Model	FNIRSI-DPS-150
Product Dimensions	4.06 x 3.07 x 1.18 inches
Item Weight	6.2 ounces (0.39 Pounds)
Input Voltage	DC 5.0V - 32V (Supports PD/QC fast charging protocols, power bank)
Output Voltage	0-30V
Output Current	0-5A
Output Power	0-150W
Voltage Set Resolution	10mV
Current Set Resolution	1mA
Voltage Set Precision	<0.1%±5mV
Current Set Precision	<0.1%±3mA
Screen	2.8-inch IPS (320*240)
Load Regulation	0.49%
Full Load Efficiency	96.30%

Parameter	Value
Operating Environment	0°C-40°C, 0%-75%RH
Country of Origin	China

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official FNIRSI website or contact the seller directly. Keep your purchase receipt for warranty claims.

You can also visit the official FNIRSI store on Amazon for more information and support:[FNIRSI Technology Store](#)