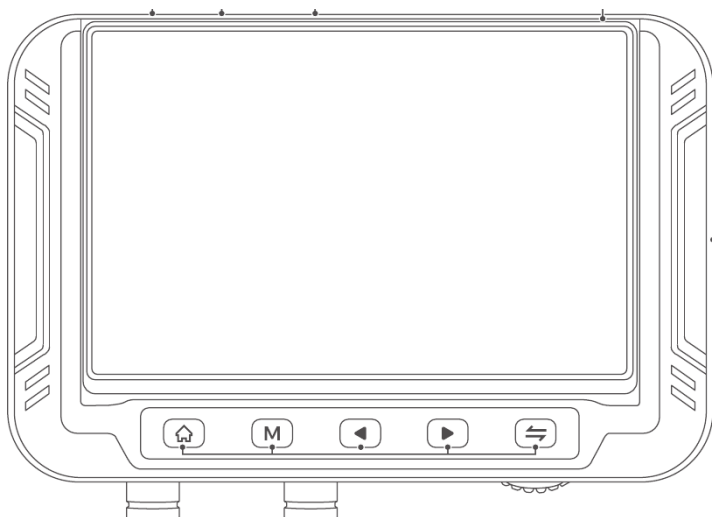




Fnirsi DPS-150

Programmable laboratory power supply
User manual



Before first use, read this manual carefully and keep it for future reference.

Based on the original manufacturer's manual V1.1 (2024) · Importer: Rotorama, s.r.o. · www.rotorama.cz

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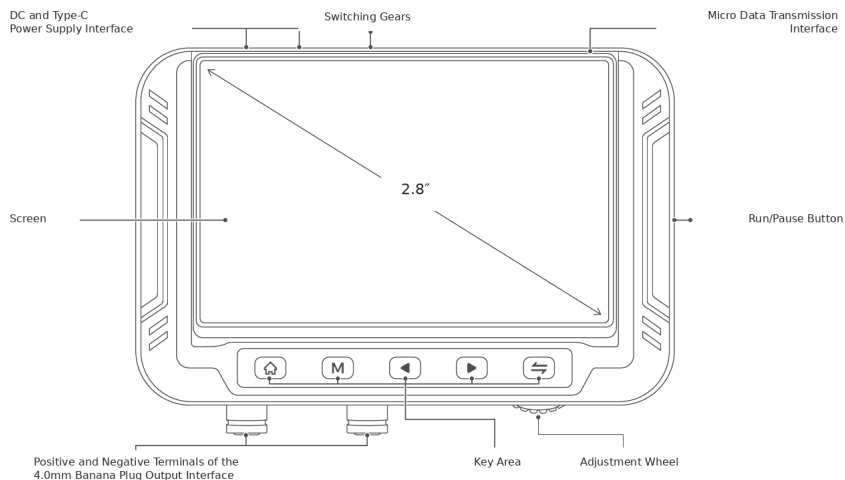
User Notice

- This manual provides detailed instructions on how to use the product and important precautions. Please read this manual carefully and use the product according to the instructions to ensure optimal performance.
- Do not use the instrument in flammable or explosive environments.
- Dispose of used batteries and discarded instruments separately according to national or local regulations; do not dispose of them with household waste.
- If you encounter any quality issues with the instrument or have any questions about its use, please contact “FNIRSI” online customer service or the manufacturer, and we will promptly assist you.

1. Product Introduction

The FNIRSI DPS-150 is a high-performance adjustable DC power supply launched by our company. It features a Type-C input interface and multiple power supply modes, allowing precise adjustment of output voltage (0–30 V) and current (0–5 A). It provides efficient, low-consumption and stable output, equipped with multiple safety protection functions including overvoltage, overcurrent, overload, overheating and reverse connection. It can be flexibly applied to serial connection of multiple devices, with rich and user-friendly display and operation, compact and portable humanized design, meeting various application needs. It is designed to provide you with high-performance and stable CNC power supply.

2. Panel Introduction



Controls and connection interfaces

3. Parameter Introduction

Model	DPS-150
Screen	2.8" (320 × 240)
Dimensions	106 × 76 × 28 mm
Weight	≈ 178 g
Operating environment	0 °C ~ 40 °C, 0 % ~ 75 % RH

Parameter	Input	Output
Voltage	DC 5.0 V ~ 32 V	0 ~ 30 V
Current	100 mA ~ 5 A	0 ~ 5 A
Power		0 ~ 150 W
Power supply	Supports PD and QC fast charging protocols, power bank.	

Parameter	Set resolution	Set value precision
Voltage	10 mV	≤ 0.1 % ± 5 mV
Current	1 mA	≤ 0.1 % ± 3 mA

Readback value precision	Value
Input voltage	$\leq 0.2 \% \pm 5 \text{ mV}$
Output voltage	$\leq 0.1 \% \pm 10 \text{ mV}$
Output current (0 ~ 3.5 A)	$\leq 0.1 \% \pm 5 \text{ mA}$
Load regulation	0.49 %
Full load efficiency	96.30 %

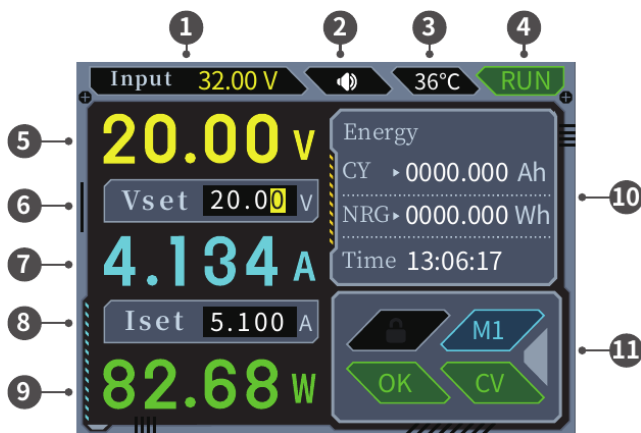
Protection mechanisms

- Overvoltage protection
- Overcurrent protection
- Undervoltage protection
- Overpower protection
- Overtemperature protection
- Reverse input protection
- Reverse output protection

4. Operation Instructions

Button	Button type	Interface	Function
	Short press	/	Run / Pause
	Long press	/	Lock button
	Short press	/	Enter settings page
	Long press	Measurement switch off state Measurement switch on state	Zero time Zero capacity, energy and time
M	Short press	Main interface	Enter data group page
	Short press	Waveform display interface	Change data group
	Long press	Waveform display interface	Continuously change data group

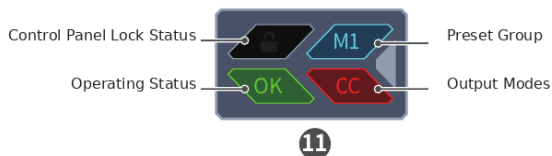
Button	Button type	Interface	Function
	Short press	Main interface	Switch data group
		Waveform display interface	Decrease time base / increase time base
	Long press	Highlight appears on setting page Highlight appears on page	Left / right Continuously cycle left / continuously cycle right
	Short press	Main interface Settings	Highlight appears on page Enter specific setting option
	Long press	/	Switch between main page and waveform display page
	Slip to left	/	Decrease value while adjusting parameters
	Slip to right	/	Increase value while adjusting parameters



Main interface

- ① Input Voltage: displays the current input voltage, unit V.
- ② Sound Icon: indicates whether the sound of the device is enabled.
- ③ Temperature Display: shows the internal temperature of the device.
- ④ Operating Status: indicates whether the device is currently running.
- ⑤ Current Voltage: real-time display of the current voltage of the device, unit V.
- ⑥ Set Output Voltage: 00.00~30.00 V, resolution 0.01 V, unit V.
- ⑦ Current Current: real-time display of the current of the device, unit A.
- ⑧ Set Output Current: 00.00~5.10 A, resolution 0.001 A, unit A.
- ⑨ Current Power: real-time display of the current power of the device, unit W.
- ⑩ Energy Statistics: displays the capacity (Ah) and the energy (Wh) output by the device.
- ⑪ Operating Status: includes operating status, preset group information, control panel lock status, output mode.

► Operating Status:



Status bar of the main interface

- ① Normal OK
- ② Overvoltage Protection OVP
- ③ Overcurrent Protection OCP
- ④ Overpower Protection OPP
- ⑤ Overheat Protection OTP
- ⑥ Reverse Connection Protection REP
- ⑦ Undervoltage Protection LVP

❖ **When any status other than normal is detected, the device automatically shuts off the output and emits a beep alarm. Output is prohibited under undervoltage protection status.**

- **Preset Group Information:** information about the currently used preset output group. The device supports 6 groups (1–6) of preset groups, where each preset group includes output voltage setting and constant current setting.
- **Control Panel Lock Status:** grey indicates unlocked, which turns into a white lock status after being locked. When locked, control panel operations are invalid. It automatically locks when connected to the PC software and cannot be unlocked by pressing buttons.
- **Output Modes:** there are two types, Constant Voltage Output (CV) and Constant Current Output (CC).

Operation Steps

Parameter Adjustment:

- ① Press  once to enter parameter adjustment mode. The highlight will appear at the voltage setting. Press  again to cycle between output voltage and current settings.
- ② Use  and the adjustment wheel to adjust the highlighted numerical value by scrolling left or right.

Preset Data Group Operation:

- ① Short press **M** on the main page to enter the preset data group interface.
- ② Press  once to enter parameter adjustment mode. The voltage setting will be highlighted. Press  again to cycle between output voltage and current settings.
- ③ Adjust the highlighted numerical value by scrolling the adjustment wheel  left or right.
- ④ Short press **M** again to save.
- ⑤ Short press **◀ / ▶** on the main page to switch to the previously preset data group.

Operating Status Operations and Control Panel Lock Status Operations:

- ① Short press the  to turn on/off output.
- ② Long press the  to unlock/lock the keypad panel.

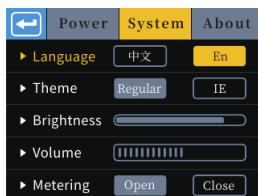
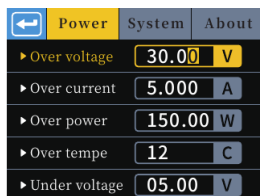
Abnormal Working State Prompt:

- ① Red colour indication for abnormal status, including overcurrent protection, overvoltage protection, overpower protection, overheat protection, undervoltage protection and reverse connection protection, followed by output shutdown.

Menu Interface and Operations:

- ① Press  once to enter the menu page.
- ② Use **◀ / ▶** to switch between setting pages.
- ③ Press  once to enter the setting page, where the highlighted area appears. Adjust the highlighted numerical value by scrolling the adjustment wheel  left or right.
- ④ After setting is completed, short press  to save and exit.

Menu item	Adjustable range
Overvoltage protection	0 V ~ 30.00 V
Overcurrent protection	0 A ~ 5.1 A
Overpower protection	0 W ~ 150.00 W
Overheat protection	0 °C ~ 99 °C
Undervoltage protection	0 V ~ 30 V
Language setting	Chinese / English
Style switching	Regular / Industrial
Brightness adjustment	adjustable (higher level means brighter backlight)
Volume control	adjustable (higher level means louder volume)
Measurement switch	on / off
About	/



Menu interfaces

5. Instructions for PC Software Use

5.1 Basic Function Interface



Basic function interface

- ① Waveform Display Area: records, stores and deletes waveform data, including voltage and current. When viewing a single waveform, you can zoom in and out using the mouse scroll wheel.
- ② Output Voltage and Current Settings: change the output voltage and current values of the current preset group (changes are temporary and not saved; the device will revert to initial values after reboot).
- ③ Data Group Data: click on a data group to set preset voltage and current values. Up to 6 different preset values can be saved.
- ④ Measurement Switch: measures output capacity and energy. Measurements are reset upon closing and reopening.
- ⑤ Brightness Settings: 14 levels (higher level means brighter backlight).
- ⑥ USB Interface: product model / firmware version / communication rate / communication port / device address / online status.
- ⑦ Basic Information: input voltage / output voltage / output current / output power / temperature display / status display.

Control device on/off status on this interface.

5.2 Advanced Function Interface



Advanced function interface

- ① Sequential Output: within the specified range of sequence numbers and loop counts, sequentially output voltage and current parameters. Click “Start” to execute sequential output (other interfaces are locked and inactive). Numbers that have been executed show “OK”, while numbers that haven’t been executed show “Waiting”. Click “Pause” to maintain the current sequence output. Click “Continue” to execute subsequent steps according to the set delay. **Manual Mode:** click “Single Step” for testing, testing proceeds according to the number of clicks. Stopping will maintain the current sequence output.
- ② Current Sweep: with fixed voltage, the current is scanned and output within the set range according to the step current and delay, commonly used in constant current mode. Voltage setting needs to be greater than 0 V. Starting current, ending current range: 0.000 A ~ 5.000 A (if the starting and ending values are the same, it’s invalid). Step current range: 0.001 A ~ 5.000 A. Delay time: 1 s ~ 86 400 s. Click “Start” to execute current scanning output (other interfaces are locked and inactive). Click “Stop” to stop the scan and close the output.
- ③ Voltage Sweep: with fixed current, the voltage is scanned and output within the set range according to the step voltage and delay, commonly used in constant voltage mode. Current setting needs to be greater than 0 A. Starting voltage, ending voltage range: 00.00 V ~ 30.00 V (if the starting and ending values are the same, it’s invalid). Step voltage range: 00.01 V ~ 30.00 V. Delay time: 1 s ~ 86 400 s. Click “Start” to execute voltage scanning output (other interfaces are locked and inactive). Click “Stop” to stop the scan and close the output.

5.3 PC Software Connection

- ① Turn on the device and connect it to the computer using a Micro data transfer cable.
- ② After connection, select the communication port. You can view it through Device Manager in Computer Management.
- ③ Click “Connect”. Once “Connected” is displayed in the left text box, the connection is successful.

✱ **NOTE: during the PC software connection process, the device buttons will be locked and cannot be operated.**

6. Firmware Upgrade



Firmware upgrade interface

Method One:

- ① Obtain the latest firmware from the official website and download it to the desktop after decompression.
- ② Press and hold , then connect the device to the computer using a Micro data transfer cable to enter firmware upgrade mode. At this point, the computer will recognize the device as a USB flash drive.
- ③ Copy the firmware to the USB flash drive. After successful copying, the device will automatically start the firmware upgrade process.
- ④ Observe the upgrade progress percentage. After the upgrade is completed, the device will restart. If the upgrade fails, please contact customer service immediately.

Method Two (Connecting to PC Software):

- ① On the device's About page, ensure that the device address matches the device address displayed in the PC software.
- ② Connect the device to the computer using a Micro data transfer cable. Confirm the port and click "Connect" on the PC software.
- ③ Once the connection is successful, click on "Firmware Upgrade" above, then click "BOOT/Restart".
- ④ The computer will recognize the device as a USB flash drive. Copy the firmware to the USB flash drive. After successful copying, the device will automatically start the firmware upgrade process.
- ⑤ Observe the upgrade progress percentage. After the upgrade is completed, the device will restart. If the upgrade fails, please contact customer service immediately.



*QR code for
downloading the
user manual, app
and software*

7. Precautions

- The product operates in step-down mode, so ensure that the input voltage is higher than the output voltage.
- The power supply range for this product is DC 5 V ~ 30 V. Output will be disabled if the input voltage is lower than 5.0 V due to undervoltage lockout, and the device may be damaged if the input voltage exceeds 30 V. It is recommended to use a power supply ranging from 5 V to 30 V.
- When supplying power to inductive and capacitive loads, it is recommended to connect the load before turning on the device output.
- When outputting high power, some heat generation is normal. It is recommended to use the device in a well-ventilated environment.
- Please remember not to connect power to both power ports of the device simultaneously, as simultaneous power supply may potentially damage the input source with lower voltage.
- 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. Information for the EU and Czech Market

8.1 Manufacturer, importer and responsible person in the EU

Manufacturer	Shenzhen FNIRSI Technology Co., Ltd.
Address	West of Building C, Weida Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong, China
E-mail	fnirsiofficial@gmail.com (business) fnirsiofficialcs@gmail.com (service)
Phone	0755-28020752 / +86 135 3688 4686

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorاما.cz.
- **Product identification:** the type designation (DPS-150) and the serial number are given on the label on the device or on its packaging; the type designation, device address and firmware version number are also shown on the device in the menu on the *About* page.

8.3 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also <https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu>.

9. Warranty and rights arising from defective performance

9.1 Rights of the buyer under Czech law

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection. The manufacturer's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.

9.2 Manufacturer's warranty terms

❖ **The following text is the manufacturer's original warranty statement.**

Any FNIRSI user with any question who comes to contact us will have our promise to get a satisfactory solution and **an extra 6 months warranty** to thank you for your support.

By the way, we have created an interesting community – you are welcome to contact FNIRSI staff to join our community.