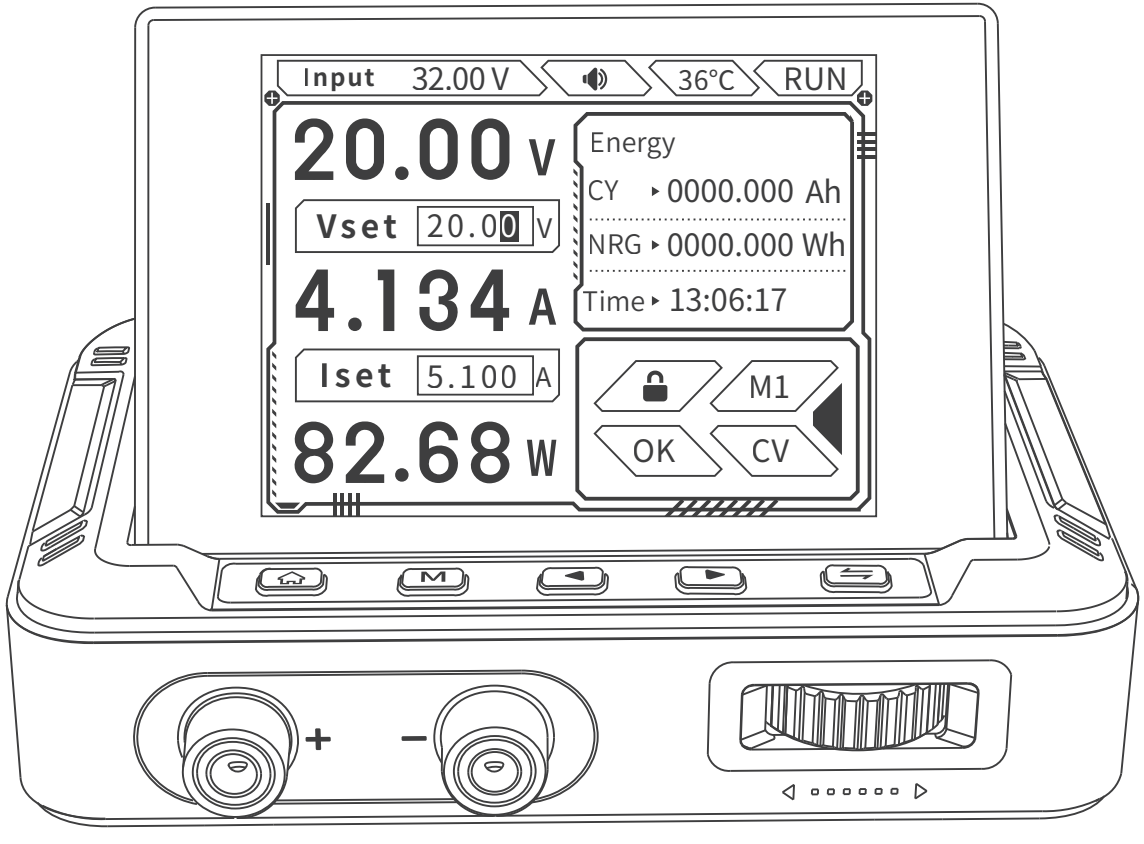
FNIRSI

Portable CNC DC Power Supply User Manual V1.0

DPS-150P



※Please read this instruction manual carefully before using the product and keep it properly

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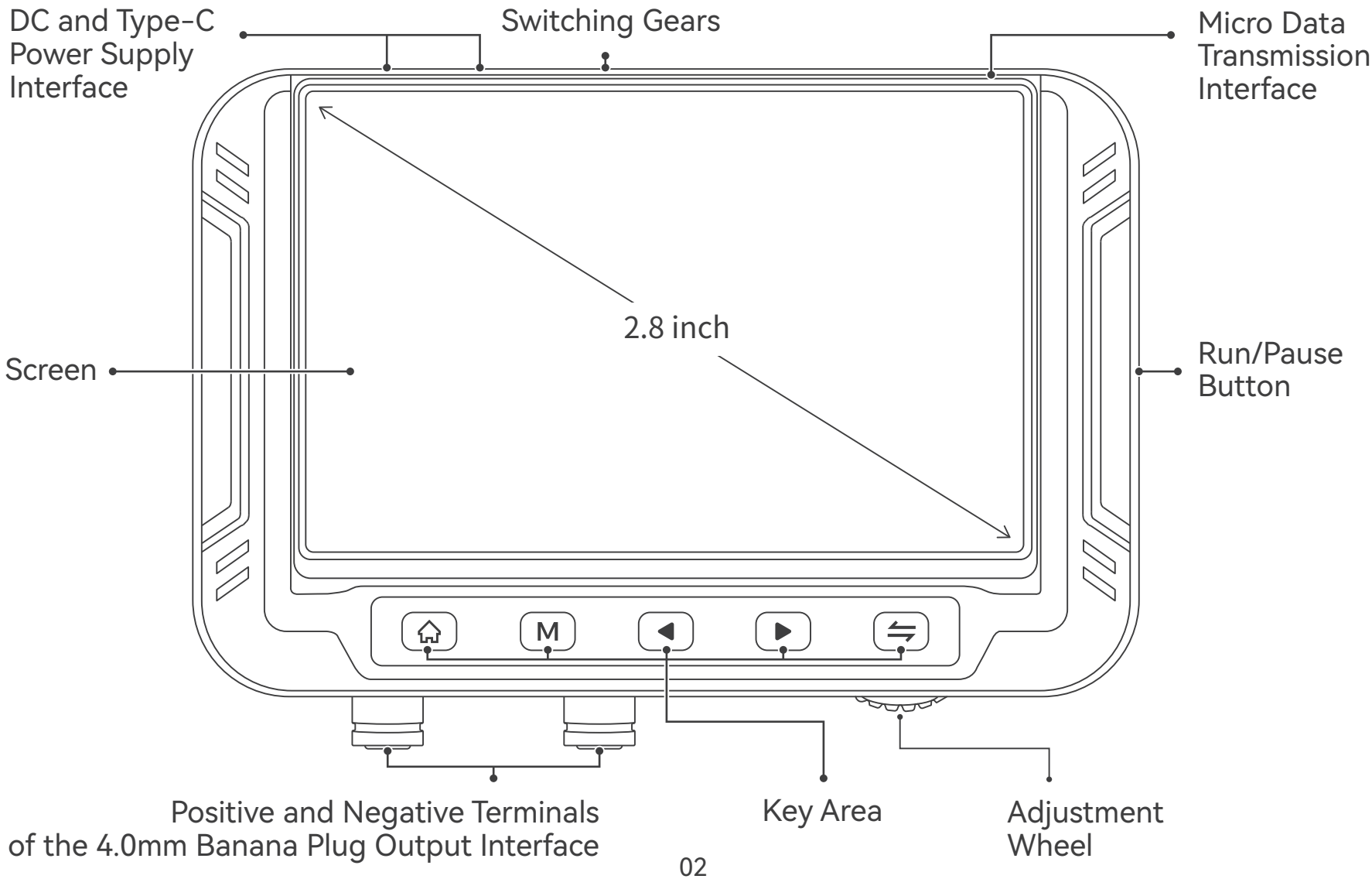
User Notice

- 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-150P 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 (0-30V) and current (0-5A). It provides efficient, low-consumption, and stable output, equipped with multiple safety protection functions including overvoltage, overcurrent, overload, overheating, and reverse connection. 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



3. Parameter Introduction

Model	DPS-150P	
Input	Voltage	DC5.0V~32V
	Current	100 mA~5A
	Supports PD and QC fast charging protocols, power bank	
Output	Voltage	0~30V
	Current	0~5A
	Power	0~150W
Set Resolution	Voltage	10 mV
	Current	1mA
Load Regulation	0.49%	
Full Load Efficiency	96%	
Operating Environment	0℃~40℃，0%~75%RH	

Readback Value Precision	Input Voltage	≤0.2% ± 5mV
	Output Voltage	≤0.1% ±10mV
	Current(I>50mA)	≤0.1%+5mA
	Current(500μA<I<50mA)	≤0.2%+100μA
	Current(500μA)	≤0.2%+5μA
Display	2.8 inch（320*240）	
Weight	≈178g	
Dimensions	106×76×28mm	
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 On State	Zero Capacity, Energy, and Time
M	Short Press	Main Interface	Switch Data Group
	Long Press	Main Interface	Access Data Group
		Waveform Display Interface	Continuously Change Data Group
◀ / ▶	Short Press	Waveform Display Interface	Decrease Time Base / Increase Time Base
		Highlight Appears on Setting Page	Left / Right
	Long Press	Highlight Appears on Page	Continuously Cycle Left / Continuously Cycle Right

Button	Button Type	Interface	Function
⇋	Short Press	Main Interface	Highlight Appears on Page
		Settings	Enter Specific Setting Option
	Long Press	/	Switch Between Main Pageand Waveform Display Page
	Slip to Left	/	Decrease Value While Adjusting Parameters
	Slip to Right	/	Increase Value While Adjusting Parameters

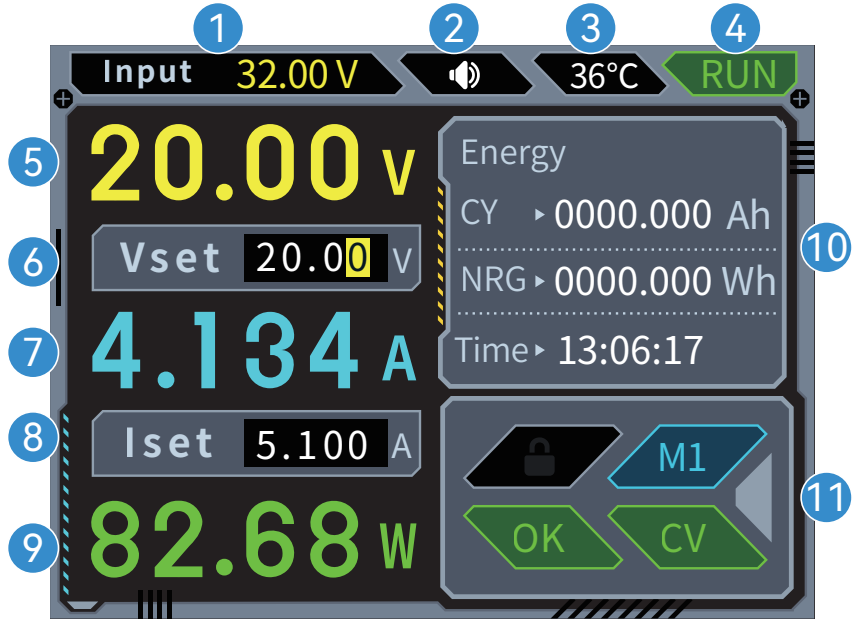
① Input Voltage: Displays the current input voltage, unit V.

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.



主界面

⑥ Set Output Voltage: 00.00~30.00V, resolution 0.01V, unit V.

⑦ Current Current:Real-time display of the current of the device, unit A.

⑧ Set Output Current: 00.00~5.10A, resolution 0.001A, unit A.

⑨ Current Power: Real-time display of the current power of the device, unit W.

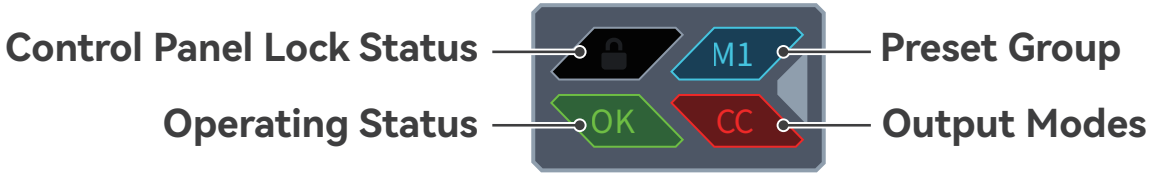
⑩ Energy Statistics: Displays the energy (Ah) and capacity (Wh) output by the device.

⑪ Operating Status: Includes operating status, preset group information, control panel lock status, output mode.

- Operating Status: Normal OK / Overvoltage Protection OVP / Overcurrent Protection OCP / Overpower Protection OPP / Overheat Protection OTP / Reverse Connection Protection REP / 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: Gray 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).



4.1 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 Long 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 using ⟷ .

④ Short press M again to save.

⑤ Short press M 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 color 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.

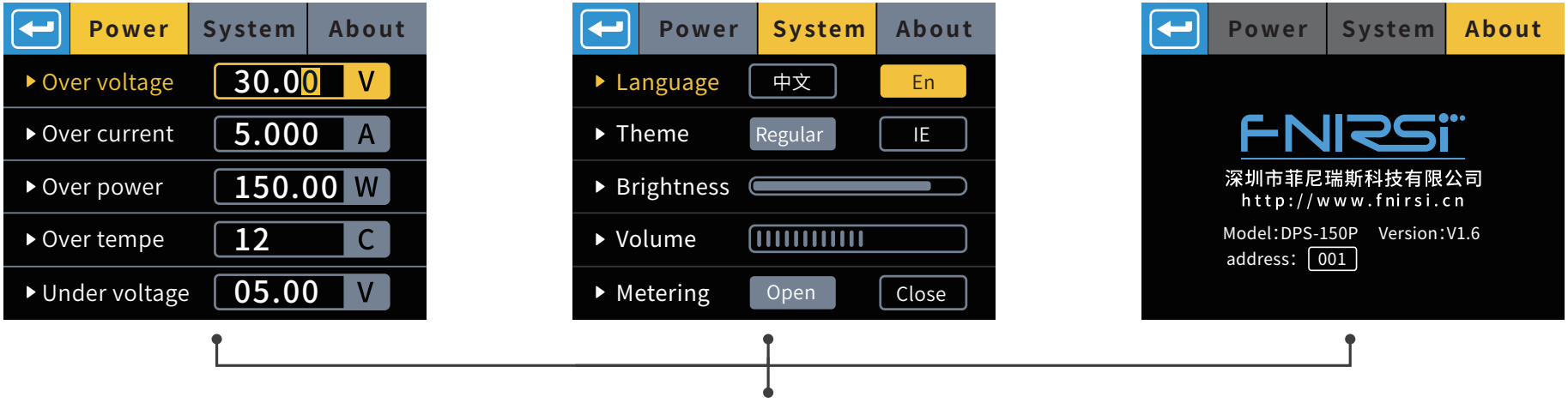
② Use ◀ / ▶ to switch between setting pages.

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 using  .

④ After setting is completed, short press ⌂ to save and exit.

Menu Items	Adjustable Range	Menu Items	Adjustable Range
Overvoltage Protection	0V~31V	**Language Setting**	Chinese/English
Overcurrent Protection	0A~5.1A	**Style Switching**	Regular/Industrial
Overpower Protection	0W~155W	**Brightness Adjustment**	Adjustable (Higher level means brighter backlight)
Overheat Protection	0℃~99℃	**Volume Control**	Adjustable (Higher level means louder volume)

Menu Items	Adjustable Range	Menu Items	Adjustable Range
Undervoltage Protection	4.8V~30V	Measurement Switch	On/Off
About	/		



Menu Interfaces

5. Instructions for PC Software Use

5.1 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



Basic Function Interface

5.2 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 0V; Starting current, ending current range: 0.000A5.000A (if the starting and ending values are the same, it's invalid); Step current range: 0.001A5.000A; Delay time: 1s~86400s. 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 0A; Starting voltage, ending voltage range: 00.00V30.00V (if the starting and ending values are the same, it's invalid); Step voltage range: 00.01V30.00V; Delay time: 1s~86400s.

Click "Start" to execute voltage scanning output (other interfaces are locked and inactive). Click "Stop" to stop the scan and close the output.



Advanced Function Interface

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

Method One:

① Obtain the latest firmware from the official website and download it to the desktop after decompression.

② Press and hold **M** , 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.



Firmware Upgrade Interface

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 5V~32V. Output will be disabled if the input voltage is lower than 4.8 V due to undervoltage lockout, and the device may be damaged if the input voltage exceeds 32V. It is recommended to use a power supply ranging from 5V to 30V.
- 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.Production Information

Product Name: Portable CNC DC Power Supply

Model: FNIRSI / DPS-150P

Manufacturer: Shenzhen FNIRSI Technology Co., Ltd.

Address: 8th Floor, West Side, Building C, Weihua Da Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong, China

Tel: 0755-28020752

Service Email: support@fnirsi.com

Business Email: business@fnirsi.com

Website: www.fnirsi.com

Standard Implemented: GB 20943-2013

9. Warranty Information

※This page is the basic warranty card. Please keep it.

Thank you for choosing our company's products. The warranty period of this product starts from the date of sale. During the product warranty period, if the product is installed and used in accordance with the product manual and used in normal environment and conditions, and the fault is caused by defects in the original materials and processing, you can enjoy free repair services according to the content of this warranty clause. Please keep this warranty card properly as a warranty certificate. No reissue will be issued if it is lost.

The following situations will incur paid repair services:

- Unable to present the original valid warranty card.
- Damage caused by improper installation not meeting product requirements, standards, or relevant regulations.
- Damage caused by accessories in the installation environment not meeting product requirements, standards, or relevant specifications.
- Damage caused by improper use, improper storage, unauthorized disassembly, or unauthorized repairs by the user.
- Expiration of the warranty period.

Warranty Card

Product Model	**DPS-150P**	**Qty.**	
Distributor Name (Where to buy)		**Distributor Address**	
Contact		**Invoice Number** (Order Number)	
Purchase Date	**Year Month Day**		
User Name:		**Address:**	
Contact:		**Fault Description:**	



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