

FNIRSI IPS3608 Έξυπνο ψηφιακό τροφοδοτικό AC-DC

FNIRSI · EAN 5905156102170

Machine translation from Polski. In case of doubt the manufacturer's original document prevails.

User manual for the intelligent AC-DC power supply with digital control

Before using the product, please read this user manual carefully and keep it in a safe place.

IPS3608

FNIRSI IPS3608 — User Manual

TABLE OF CONTENTS

1. Safety requirements
2. Product description
3. Technical specifications
4. Operating guide
5. Quick start
6. Troubleshooting
7. Maintenance
8. Contact
9. Warranty information

Warranty card Last page

— 1 —

FNIRSI IPS3608 — User Manual

1. Safety requirements
- 1.1 Environmental requirements

Precautions

Avoid high temperatures, open flames, corrosive gases, and humid or dusty environments to prevent device failure. Before starting work, check if the power supply casing is damaged or deformed, if the power connector is loose or damaged, and if the connection cable is damaged or cracked. Any irregularities affect the proper functioning of the power supply and may even lead to its damage. Before use, ensure that the ventilation openings are not blocked by foreign objects — this will ensure proper heat dissipation from the device. Before starting to use the power supply, carefully read the user manual and familiarize yourself with its operation. This will allow you to operate the device correctly and efficiently and to detect and resolve problems in a timely manner, ensuring safe and stable operation of the power

supply. When connecting a load, turn off the power beforehand and ensure that the power supply is disconnected. After properly connecting the load, you can turn the power back on. After turning on the power, do not immediately set the voltage or current to the maximum value. First, set the output parameters to a lower level, and then gradually and slowly adjust the output voltage or current according to the actual needs of the load. When using the intelligent AC-DC power supply with digital control, continuously monitor the operation of the load to avoid overload and short circuits. FNIRSI IPS3608 — User Manual

During the operation of the power supply, pay attention to its working condition — including the stability of the output voltage and current, as well as any unusual sounds or excessive heating. After finishing work, use the control panel to bring the output voltage and current to zero, and then turn off the power supply output. This will help avoid damage to the load and the power supply itself from back electromotive force or surge current generated by sudden power interruption. Keep away from the following elements:

Heaters: avoid the risk of overheating or fire. Water, chemicals: solvent leakage can damage the device or cause a fire. Strong magnetic fields: prevent interference with the operation of the device from magnetic fields. Waste disposal

Do not dispose of used batteries or the device with municipal waste. Dispose of according to national or local regulations.

2. Product description

2.1 Introduction

IPS3608 is an intelligent AC-DC power supply with digital control that uses digital technology to efficiently convert alternating current (AC) to direct current (DC). It is significantly smarter than traditional power supplies. It features convenient parameter adjustment, high output precision, large dynamic response, a user-friendly digital control interface, and multi-level electrical protections. It is suitable for various applications — as a measurement power supply, in industrial production, in powering laboratory equipment, or medical devices. It meets diverse requirements for precise power supply and provides stable DC voltage to electronic devices, being an essential component of modern technical equipment. FNIRSI IPS3608 — User Manual

2.2 Product operation

1. Encoder button (knob): on the main screen, rotating the knob scrolls pages left and right, and a long press of the middle button clears statistics. When entering the input field, rotating the knob adjusts the value. In the settings menu, rotation selects options, and a short press of the middle button confirms or opens the operation.

2. Navigation button panel: up, down, left, right buttons, and V/A button.

3. Power output switch: RUN/STOP output switch and lock button.
4. Power indicator: indicates the device's power status.
5. Settings menu button: entry/exit from the settings menu; when entering parameters, it acts as a return button.
6. USB-C: USB-C port.
7. USB-A: USB-A port.
- 8.

Negative terminal of the power output: connected to the negative terminal of the load.

Positive terminal of the power output: connected to the positive terminal of the load. Screen: displays the output data area; the screen can be tilted up/down at an angle for comfortable reading. FNIRSI IPS3608 — User Manual. Ventilation hole of the device. Power switch: turns the device on/off. Power cable socket: power input from the mains. USB connector: USB-C charging port. Ventilation holes: recessed ventilation holes are located on the left and right sides of the device — they improve heat dissipation and facilitate the portability of the device. FNIRSI IPS3608 — User Manual. 2.3 Main screen of the AC-DC power supply. Volume indicator: informs about the volume status of the device. A black icon indicates that the volume is on. Cooling fan: when the device reaches a certain temperature, the fan automatically turns on. At that time, the icon is black; the icon of the turned-off fan is white. Lock indicator: a long press of the power output button activates the lock. The icon changes color to black, and the screen and parameters are locked — only the power output button remains active, while the others are inactive. Active OK button: pressing the OK button takes you to the voltage and current settings. Data group: area displaying the currently used data group. The device supports 6 data groups; they are switched using the up/down buttons. CV: constant voltage mode indicator. RUN/STOP: state of the power supply output, switched by the power output button. Statistics area: displays capacity, energy, and operating time of the device. Temperature area: displays output power and temperature of the device (not manually adjustable); unit — °C. Current settings area: displays the output current and set value. Voltage settings area: displays the output voltage and set value. FNIRSI IPS3608 — User Manual. Button Operation Function Description. Switch On/Off the device. Long Press Long press activates the lock mode. Long press again deactivates the lock. Short Press RUN/STOP. Rotate If the input field is not selected — rotating the knob switches pages; in the value input field on the main screen — rotating the knob adjusts the value. Long Press Long press of the middle button clears the statistics. Short Press Enter the input field; pressing left/right buttons switches the position (digit). Short Press Enter the settings menu; pressing

again exits the menu. Short Press Enter voltage settings; pressing again — current settings; third press — exits the input field. If no operation is performed for more than 15 seconds, the input field will close. Button Operation Function Description. Short Press Switching data groups — up/down buttons increase/decrease the data group number. FNIRSI IPS3608 — User Manual. Volume indicator: informs about the volume status — a black icon indicates that it is on. Lock indicator: a long press of the power output button activates the lock. The icon changes color to black, and the screen and parameters are locked — except for the power output button, the other buttons are inactive. Cooling fan: when a certain temperature is reached, the fan automatically turns on, and the icon turns black. When the fan is off, the icon is white. Time base: range 0.1 s – 0.5 s. OK button: takes you to the voltage and current settings. Data group: currently used data group. The device supports 6 groups; switching is done with the up/down buttons. CV: constant voltage mode indicator. RUN/STOP: state of the power supply output, switched by the power output button. MAX/MIN area: maximum and minimum values of the VI curve. Blue color — current; yellow — voltage. VI curve: reflects the output voltage and current — blue is current, yellow is voltage. Voltage settings area: output voltage and set value. Current settings area: output current and set value. FNIRSI IPS3608 — User Manual. Button Operation Function Description. Switch On/Off the device. Long Press Long press activates the lock mode. Long press again deactivates the lock. Short Press RUN/STOP. Rotate If the input field is not selected — rotating switches pages;

in the input field on the main screen — rotation adjusts the value. Long press of the middle button clears the statistics. Short press switches data groups, and the "up" and "down" buttons are used to increase and decrease the data group number, respectively. Short press uses the left and right buttons to set the time scale; time scale adjustment range: 0.1 s–0.5 s. Enter the voltage value in the input field, short press again to enter the current value, and then press a third time to exit the input field. If no action is taken for more than 15 seconds, the system will automatically exit the input field. Short press goes to the settings menu, and then press again to exit the menu. FNIRSI IPS3608 — User Manual 2.5 A/C Output (Fast Charging). 1. Volume indicator: volume on state — a black icon means it is on. 2. Cooling fan: turns on automatically when a certain temperature is reached; the icon is black then, white when off. 3. Lock indicator: long press of the power output button activates the lock. The icon turns black, the screen and parameters are locked. Except for the power output button, the others are inactive. 4. CV voltage mode indicator. 5. Output area: displays output voltage and current — the value results from the settings. 6. Fast charging area C: voltage, current, and status of the USB-C output. 7. Fast charging area A: voltage, current, and status

of the USB-A output. Button Operation Function Description Switch On/Off the device. Long press activates lock mode; another long press deactivates the lock. Button Operation Function Description Short press RUN/STOP. Rotation When the input field is not selected — rotation switches pages. Short press enters the menu; another press exits the menu. FNIRSI IPS3608 — User Manual 2.6 Settings. 1. About the device: this area displays the model, version number, factory reset option, etc. 2. System section indicator: area of system settings in the menu. Blue font indicates that the System section is currently selected. 3. Data group: six groups are available; parameters can be set in each: voltage 0–36 V, current 0–8.2 A, overvoltage protection 0 V – 36.10 V, overcurrent protection 0–8.2 A, overload protection 0 W – 295.2 W, thermal protection 0–99 °C, etc. 4. Language settings: the device supports simplified Chinese and English. 5. Brightness adjustment: screen brightness range 5%–100%, quick adjustment with the knob. 6. Volume: adjustment range 0%–100%, quick adjustment with the knob. 7. Measurement switch: turn on/off measurement functions. 8. Device address: can be set in the range 000–255. 9. Interface style: the device supports two themes — light and dark. FNIRSI IPS3608 — User Manual Button Operation Function Description Switch On/Off the device. Rotation When the input field is not selected — rotating the knob selects the operation. Short press enters the selected settings option; pressing again saves the value and closes the input field. Short press exits the menu and re-enters the menu interface. Short press basic navigation operations. After entering the input field: left/right — selects the digit position, up/down — sets the value. Note: In first-level navigation, the cursor selects: data group/system/information, etc. — then simply press the down button to go to the second level of navigation and select the appropriate options. 3.

Technical Specification

3.1 Model Parameters

Device Name User Manual for Smart AC-DC Power Supply with Digital Control

Device Model IPS3608

Backlight Adjustable backlight brightness

Product Dimensions $\approx 138 \times 214 \times 115$ mm

Screen Type 2.8 inch Color Screen

Language ☐ , English

Product Weight ≈ 1539 g

FNIRSI IPS3608 — User Manual

3.2 Electrical Parameters

Category	Parameter	Description
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Input Voltage Range: 100–240 V AC (50/60 Hz)

Output Voltage: DC 0–36 V

Current: 0–8 A

Power: 0–285 W

Load Regulation $\pm (0.2 \% + 2 \text{ digits})$

Resolution Voltage: 0.01 V

Settings Current: 0.001 A

Accuracy $\pm (0.3 \% + 3 \text{ digits})$

of Output Voltage

Accuracy $\pm (0.15 \% + 5 \text{ digits})$

of Output Current

Operating Environment $-10\text{ }^{\circ}\text{C} - 40\text{ }^{\circ}\text{C}$, Humidity 0%–75% RH

Protections • Overvoltage Protection

- Overcurrent Protection
- Overload Protection (Power)
- Thermal Protection
- Undervoltage Protection
- Short Circuit Protection
- Reverse Polarity Protection at Output
- Reverse Polarity Protection at Input

※ Method of calculating accuracy: one digit (bit) is the minimum resolution, e.g., for 5 V the error is $\pm (5 \times 0.3 \% + 3 \times 0.01)$, which is $5 \pm 0.045 \text{ V}$. FNIRSI IPS3608 — User Manual

3.3 Fast Charging Parameters

Fast Charging Protocol Output Connector Type

PD3.0 USB-C

HUAWEI FCP

HUAWEI SCP

AFC

QC2.0 USB-A

QC3.0

FNIRSI IPS3608 — User Manual

4. User Guide

4.1 Starting Up

Slide the power switch at the back of the device to turn it on, wait for the system to load and transition to the main screen of the smart AC-DC power supply.

4.2 Language Settings

On the main screen, briefly press the menu button to enter the system menu. Use the knob or selection button to choose the System option, then press the V/A / down / middle encoder button to enter the system settings. Use the knob to select Language Settings, enter this option with the V/A button or the middle encoder button. Use the left/right buttons or the knob to select Chinese or English, then confirm your selection with the V/A button or the middle encoder button. FNIRSI IPS3608 — User Manual

4.3 DataSet Group

Data Group Adjustment:

On the main screen, briefly press the menu button to enter the system menu. Use the knob or selection button to choose Data Group, then press the V/A / down / middle encoder button to enter the group settings. Use the knob to select the appropriate group number and confirm with the V/A button or the middle encoder button — you will enter its editing mode. In the data group, you can set: voltage, current, overvoltage protection, overcurrent protection, overload protection, and thermal protection. Select the option to adjust with the knob or buttons, then confirm with V/A / the middle button to enter the input field. After setting the parameters, press the menu button to exit the settings.

4.4 Brightness Adjustment

Screen Brightness Adjustment:

On the main screen, briefly press the menu button. Use the knob to select System, confirm with the V/A / down / middle button, and enter the system settings. Use the knob to select Brightness Adjustment, confirm. Use the left/right buttons or the knob to set the screen brightness and confirm with V/A or the middle encoder button. Adjustment of other functions in General Settings:

Selection and activation of other functions follow a similar navigation path — the description of the steps is omitted for brevity. FNIRSI IPS3608 — User Manual

5. Quick Start

5.1 Quick Measurement

Turn on the smart AC-DC power supply with digital control. After turning it on, go to the main screen and wait for the next action. If the data group parameters have already been set, use the up/down buttons to quickly switch to the needed group. If the data groups have not yet been set, review the button operation description below to learn how to do it. After setting the parameters, ensure — according to the load requirements — that the set values are within the safety range of the load device. Only after confirming the safety of the settings, turn on the output with the RUN/STOP button. Monitor the device screen to check if the

output voltage and current have correct values. By turning the knob, you can switch between screens and observe changes in output parameters on screen VI.

After finishing work, it is recommended to reduce the set voltage and current to minimal values, and then turn off the output using the RUN/STOP button. To set the output parameters, press the appropriate button; click V/A to enter the voltage and current settings, then in the appropriate input field adjust the parameters using the buttons and the encoder (knob). The set values should not exceed the overvoltage protection threshold to avoid the output being turned off by the protection. Press the settings menu button and enter the data group to set its parameters. In the data group, you can set: voltage, current, overvoltage protection, overcurrent protection, overload protection, and thermal protection.

5.2 Firmware Update

Turn off the device, press and hold the upper button, and then turn on the device's power. The firmware update interface will appear on the screen. Connect the MICRO USB cable to the computer to enter firmware update mode. Once in update mode, the computer will recognize the device as a USB flash drive. Drag the firmware file directly onto this drive. In the firmware update interface, briefly press the RUN/STOP button to turn on the device.

FNIRSI IPS3608 — User Manual

6. Troubleshooting

6.1 Unable to Start

Possible causes:

Damaged power cord. Loose or damaged power connector.

Solutions:

Replace the power cord. Do not use a damaged cord. Disconnect the power from the device and wait a moment to discharge any residual voltage. Then restart the device and check what is causing the loose connection. If it is due to a loose construction, try to reinforce it. If that does not help, it is recommended to repair or replace the connector. — 37 —

FNIRSI IPS3608 — User Manual

6.2 No Image on Screen

Possible causes:

Screen backlight is off. Hardware failure of the display. Malfunction of the system software.

Solution:

Check and adjust the backlight brightness settings according to the instructions. Try restarting the device to restore proper system operation. If the screen still does not work

correctly, it may require repair or replacement.

7. Maintenance

7.1 Cleaning the Device Housing

Frequency: clean every 3–6 months depending on operating conditions.

Method: first disconnect the device from the mains and ensure that the capacitors inside the power supply have been discharged — this will help avoid electric shock. Use a clean, damp cloth or a soft brush to remove dust, dirt, and other contaminants from the housing. Avoid chemical cleaning agents, especially those containing alcohol, strong acids, or bases, to prevent damage to the housing or screen.

Notes:

Regularly clean dust around the device and buttons to keep the equipment in good condition. Ensure that no liquids, dust, or crumbs enter the device's connectors.

FNIRSI IPS3608 — User Manual

7.2 Storage and Transport

Storage conditions: the device should be stored in a dry, ventilated room — avoid high temperatures, high humidity, and sudden temperature changes. Do not expose it to direct sunlight.

Transport: take care to avoid dropping it — especially when carrying. It is recommended to use a protective case or dedicated transport bag.

7.3 Software Update

Regularly check for newer firmware versions. The latest version may fix known bugs and improve device performance. During the update, strictly follow the instructions, use only officially provided firmware files, and avoid power interruptions and other disturbances.

7.4 Factory Reset

If the device is functioning improperly or unpredictably, try restoring factory settings. After resetting, the device will remove all custom configurations and return to its initial state. Instructions for restoring factory settings can be found in the user manual — if in doubt, contact the manufacturer's service.

8. Contact

Every user of FNIRSI devices who contacts us with questions or concerns will be guaranteed a satisfactory solution and an additional 6 months of warranty as a token of appreciation for their trust. We also invite you to join our community — to learn more, contact the FNIRSI team.

FNIRSI IPS3608 — User Manual

SHENZHEN FNIRSI TECHNOLOGY CO., LTD

Address: West of Building C, Weida Industrial Park, Dalang Street, Longhua District,
Shenzhen, Guangdong, China

Tel.: 0755-28020752

WWW: www.fnirsi.com

E-mail (business inquiries): business@fnirsi.com

E-mail (device service): service@fnirsi.com

Service page: <http://www.fnirsi.com/>

9. Warranty Information

Thank you for choosing our company's product. The warranty period begins on the date of sale. During the warranty period, if the product has been installed and used according to the instructions, under normal environmental and operating conditions, and the defect occurred due to material or workmanship defects, you can benefit from free repair in accordance with the provisions of these warranty conditions. Please keep the warranty card carefully as proof of warranty entitlement. A duplicate is not issued. The following situations result in paid repair:

1. Inability to present the original, valid warranty card.
2. Damage resulting from improper installation — not in accordance with the product requirements, applicable standards, or relevant specifications.
3. Damage caused by using accessories that do not meet the product requirements, standards, or relevant specifications in the installation environment.
4. Damage caused by improper use, incorrect storage, unauthorized disassembly, or unauthorized repair by the user.
5. Expiration of the warranty period.

FNIRSI IPS3608 — Warranty Card

Model Quantity

Distributor Name Address

(where purchased)

Contact Invoice/Order Number

Purchase Date (according to Year Month Day
the receipt)

Owner's Name: Address:

Contact: Description of the defect:

— Warranty Card —

Download the user manual, application, and software

The user manual, latest software, and application are available on
www.fnirsi.com

Warnings and Safety Information

All information regarding operation and use can be found in the user manual or on the product label. Before starting to use the products, familiarize yourself with its content and follow the instructions contained therein. Before use, also familiarize yourself with the following information:

User Safety

1. Use measuring tools according to their intended purpose. Do not use measuring tools for tasks they were not designed for to avoid damage or incorrect measurement results.
2. Always ensure that the tool is in good technical condition before use. Damaged tools, such as cracked housings or damaged displays, may lead to incorrect measurements or risk of accidents.
3. Regularly calibrate measuring tools to ensure their accuracy and reliability of measurements. Incorrectly calibrated devices may lead to erroneous results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained individuals to prevent accidental damage or improper use.
3. Avoid using measuring tools in extreme temperature or humidity conditions, or in an atmosphere with a high concentration of dust, which may affect their accuracy and functionality.
4. When working with measuring tools, exercise caution to avoid damaging delicate measuring elements (e.g., sensors, probes).

Safe Use

1. Always ensure that the measuring tool is properly set up and secured to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimize the risk of accidents, such as slippery or uneven surfaces.
3. Never perform measurements on live components or in conditions that may pose a safety hazard.

Rules for Use in Appropriate Conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which

may damage the devices or affect their accuracy.

2. When using measuring tools, ensure they are well seated and not exposed to shocks or impacts that may lead to their damage.

3.

Avoid using measuring tools in extreme conditions, such as high vibrations, hot surfaces, dust, or moisture, unless the tool is designed for such conditions by the manufacturer.

Maintenance Instructions

1. Regularly check the condition of measuring tools, especially the measuring elements (e.g., sensors, probes, displays) and batteries.

2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g., soft cloths) to avoid damaging delicate components.

3. Regularly calibrate measuring tools according to the manufacturer's recommendations to maintain measurement accuracy.

Safe Disposal

1. Used or damaged measuring tools must be disposed of in accordance with applicable environmental protection and electronic recycling regulations.

2. Do not throw measuring tools into regular waste containers, as they may contain components harmful to the environment.

3. Contact local authorities or recycling companies for information on the proper disposal of used measuring tools.

Compliance Statement

The products have been designed in accordance with the safety requirements specified in Regulation (EU) 2023/988 on general product safety, ensuring their compliance with applicable safety and health standards for users.

Environmental Protection

Waste electrical and electronic equipment marked in accordance with the European Union directive must not be placed together with other municipal waste. It is subject to selective collection and recycling at designated points. By ensuring its proper disposal, you prevent potential negative consequences for the natural environment and human health. The system for collecting waste equipment complies with locally applicable environmental protection regulations regarding waste disposal. Detailed information on this can be obtained from the municipal office, cleaning facility, or the store where the product was purchased. The product meets the requirements of the so-called New Approach directives of the European Union (EU) regarding issues related to user safety, health protection, and environmental protection, identifying hazards that should be detected and eliminated. This document is a translation of the original user manual created by the manufacturer. Detailed information about the distributor/manufacturer warranty conditions is available on the website

<https://serwis.innpro.pl/gwarancja>

The product should be regularly maintained (cleaned) by the user or through specialized service points at the user's cost and responsibility. In the absence of information about necessary periodic or service maintenance actions in the user manual, the physical condition of the product should be assessed regularly, at least once a week, for deviations from that of a physically new product. If any deviation is detected or identified, urgent maintenance (cleaning) or service actions should be taken. Failure to perform proper maintenance (cleaning) and respond upon detecting a state of deviation may lead to permanent damage to the product. The guarantor is not responsible for damages resulting from negligence.

Importer:

INNPRO Robert Błędowski sp. z o.o.

ul. Rudzka 65c

44-200 Rybnik, Poland

tel. +48 533 234 303

hurt@innpro.pl

www.innpro.pl

Product Manufacturer:

Shenzhen FNIRSI Technology Co., Ltd.

8F, Weihuada Industrial Park C building West, Li Rong Road

Da Lang Street, Longhua District

518109 Shenzhen, China

toby@fnirsi.com

Responsible Entity:

ALTWAY(PL) Sp. z o.o.

aleja Grunwaldzka 212

80-266 Gdańsk

Poland

bok@altway.pl