Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

DEWIN QIBYICBYA-D110498X03

DEWIN DC 6-36V to 0.6-36V 80W 5A Step-Up/Step-Down Converter User Manual

Model: QIBYICBYA-D110498X03

1. Introduction

This manual provides detailed instructions for the safe and efficient operation of your DEWIN DC 6-36V to 0.6-36V 80W 5A Step-Up/Step-Down Converter. Please read this manual thoroughly before use and retain it for future reference.



Image: The DEWIN DC Step-Up/Step-Down Converter, showing its compact design with an LCD screen and connection terminals.

2. Product Features

- **Adjustable Step-Up/Step-Down Conversion:** Input voltage range DC 6-36V; output voltage range DC 0.6-36V; output current range 0-5A; maximum output power 80W.
- **Full-Angle LCD Display:** Upgraded 2.0 version features a clear LCD screen that simultaneously displays voltage, current, and power, eliminating the need for frequent switching.
- **Efficient Heat Dissipation:** Equipped with a thick heatsink, securely fastened with screws, ensuring improved heat dissipation and operational stability.
- **Multiple Protection Mechanisms:** Includes reverse polarity protection, anti-backflow protection, undervoltage protection, overvoltage protection, overcurrent protection, overtemperature protection, and overpower protection for safe and reliable use.
- **Versatile Application:** Suitable for laboratory power supplies, outdoor camping, electric scooters, golf carts, and other applications requiring stable and adjustable power.



Image: A close-up of the converter's LCD display, highlighting its input voltage (DC 6-36V), output voltage (DC 0.6-36V), output current (0-5A), and output power (80W) capabilities.

3. Package Contents

- 1 x DEWIN Programmable DC-DC Converter

4. Safety Information and Protection Mechanisms

The device incorporates several protection features to ensure safe operation:

- **Input Anti-Reverse Protection:** Prevents damage if input polarity is reversed.
- **Output Anti-Backflow Protection:** Prevents current from flowing back into the input from the output.
- **Undervoltage Protection (UVP):** Adjustable from 4.7-30V (default 4.7V). Shuts off output if input voltage drops below the set threshold.
- **Overvoltage Protection (OVP):** Adjustable from 0-37V (default 37V). Shuts off output if output voltage exceeds the

set threshold.

- **Overcurrent Protection (OCP):** Adjustable from 0-5.2A (default 5.2A). Shuts off output if output current exceeds the set threshold.
- **Overpower Protection (OPP):** Adjustable from 0-82W (default 82W). Shuts off output if output power exceeds the set threshold.
- **Overtemperature Protection (OTP):** Activates at 100°C (default). Shuts off output if the device temperature becomes too high.
- **Overtime Protection (OHP):** Adjustable from 0-100 hours (disabled by default). Shuts off output after the set operating time.
- **Overcapacity Protection (OAH):** Adjustable from 0-9999 Ah (disabled by default). Shuts off output after the set accumulated capacity.
- **Overenergy Protection (OPH):** Adjustable from 0-9999 Wh (disabled by default). Shuts off output after the set accumulated energy.

Always ensure proper connections and settings to prevent damage to the device or connected equipment.

5. Product Overview

The converter features an intuitive interface with an LCD screen, buttons, and a rotary encoder for adjustments. Key components include:

- **LCD Display:** Shows real-time voltage, current, and power.
- **V/A Button:** Used to enter voltage/current setting interface and switch input/output display.
- **SW Button:** Used to switch parameters in setting interface and switch uplink input/output display.
- **Switch Button (ON/OFF):** Controls output, clears data, and selects functions in parameter settings.
- **Rotary Encoder:** Adjusts values and navigates menus.
- **Input/Output Terminals:** Screw terminals for secure wire connections.
- **Cooling Fan:** Automatically controlled for optimal temperature management.



Image: An internal view of the converter, highlighting the intelligent temperature-controlled fan, dual inductors, and a table detailing the functions of the V/A, SW, Switch, and Encoder buttons across different operational interfaces.

6. Setup and Connection

Before connecting, ensure the input power source is within the specified range (DC 6-36V) and the output load is appropriate for the converter's capabilities.

1. **Identify Terminals:** Locate the input terminals (VIN+, VIN-) and output terminals (OUT+, OUT-) on the device.
2. **Connect Input Power:** Connect the positive (+) terminal of your DC power source to VIN+ and the negative (-) terminal to VIN-. Ensure connections are secure.
3. **Connect Load:** Connect the positive (+) terminal of your load device to OUT+ and the negative (-) terminal to OUT-. Ensure connections are secure.
4. **Verify Connections:** Double-check all wiring for correct polarity and secure connections before applying power.

7. Operating Instructions

7.1. Setting Voltage and Current

7.1 Capacity/Energy/Operation Time Statistics
Statistics will start automatically after the power is turned on (ON), and the value of the previous state will be displayed after the power is turned off (OFF). Recording will automatically restart after the power is turned on again (ON); in the corresponding interface, long press the ⏻ ON/OFF button for 2 seconds to automatically clear the corresponding data

7.2 Set the maximum capacity/maximum energy/maximum operation time

7.2.1. Set the maximum capacity (OAH)/energy (oPH): After the OAH/OPH function is started, when the statistical capacity/energy is higher than the set maximum capacity/energy, the power supply will automatically turn off the output and flash "OAH"/OPH; after the alarm is lifted, the capacity/energy statistics will be automatically cleared;

7.2.2. Set the maximum discharge time (OHP): After the OHP function is started, when the power supply operation time is greater than the set maximum discharge time, the power supply will automatically turn off the output and flash "OHP": after the OHP alarm is lifted, the time statistics will be automatically cleared; this function can well realize quantitative/timed power supply

Note: When the OAP/OPH and OHP functions are not turned on, the power supply will automatically record the capacity/energy and operating time. When the OAH/OPH and OHP functions are turned on, the power supply will automatically shut down the output after reaching the set value; when the OHP function is turned on, the operating time of the power supply is in countdown mode;

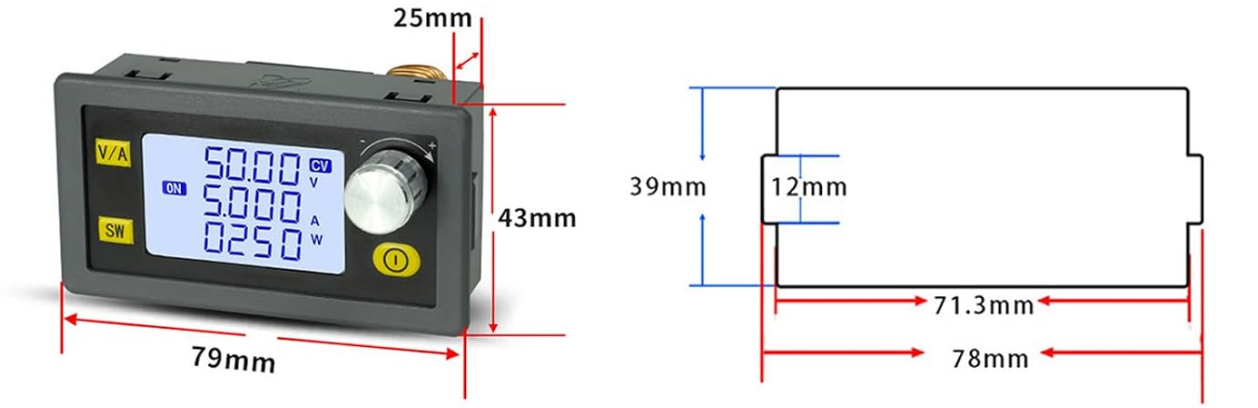


Image: A visual guide demonstrating how to set the output voltage (CV) and current (CC) using the V/A button and rotary encoder.

1. In the running interface, short press the **V/A** button to enter the voltage and current setting interface.
2. The lower line of the LCD will display 'CV' flashing, indicating voltage setting mode.
3. Short press the **SW** button to switch the bit selector (the flashing digit). Rotate the encoder to adjust the voltage value.
4. Short press the **V/A** button again; the lower line of the LCD will display 'CC' flashing, indicating current setting mode.
5. Short press the **SW** button to switch the bit selector. Rotate the encoder to adjust the current value.
6. To exit and save settings: Short press the **V/A** button for 2 seconds, or wait for 6 seconds without any button operation. The settings will be automatically saved, and the device will return to the running interface.

7.2. Quickly Set Voltage or Current

In the parameter setting interface, you can quickly set the FET parameter to CV (Constant Voltage) or CC (Constant

Current). Rotate the encoder to quickly set the voltage or current.

7.3. Parameter Settings

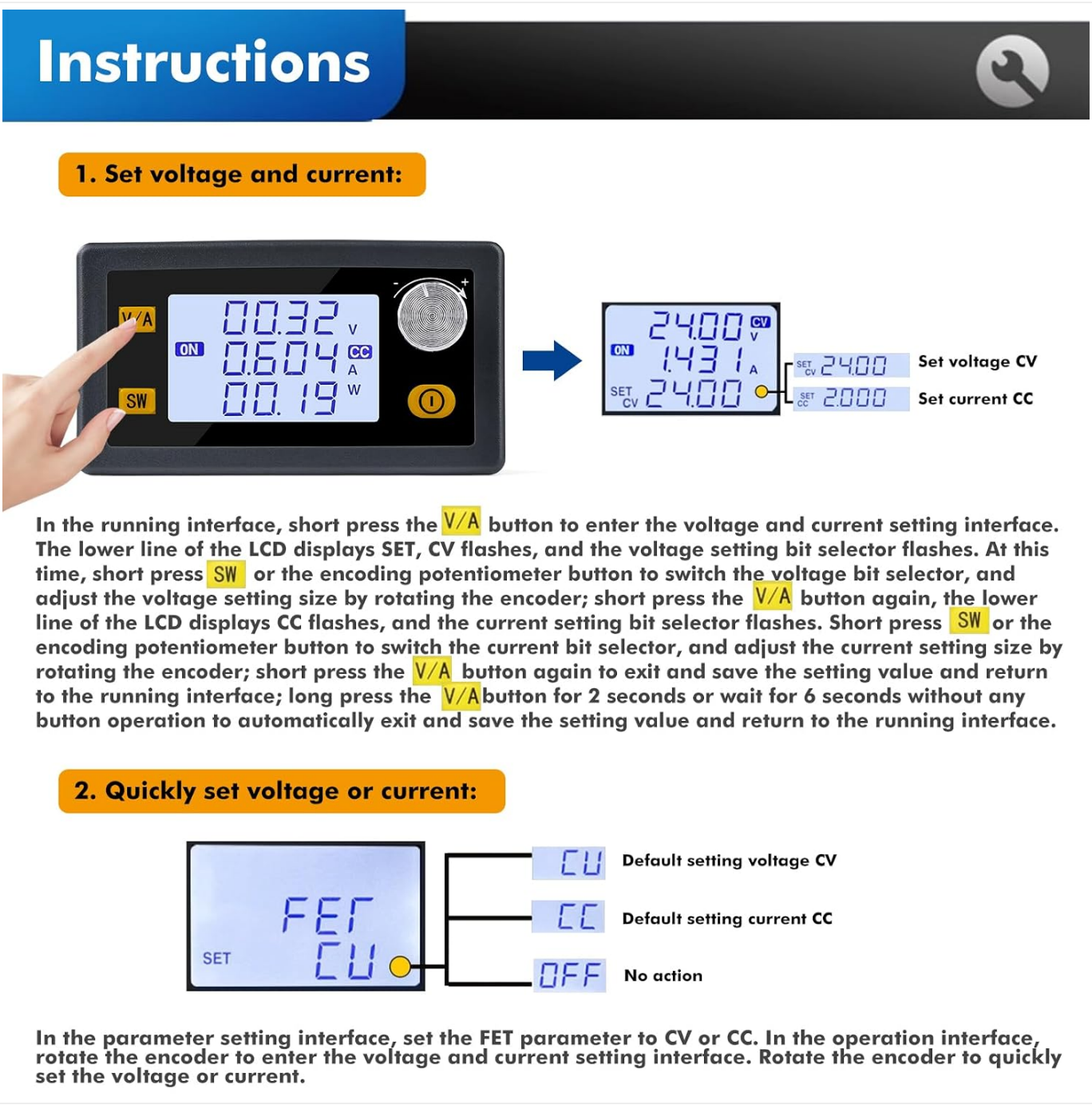
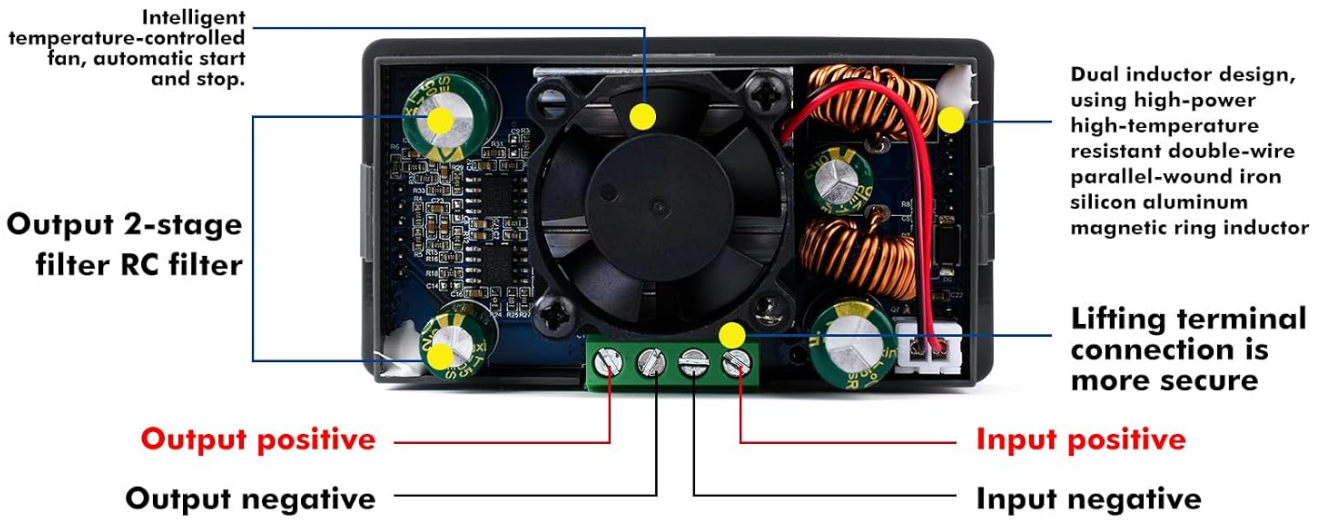


Image: A diagram illustrating how to access and navigate the parameter setting interface to configure various protection functions.

1. In the running interface, long press the **SW** button for 2 seconds to enter the parameter setting interface.
2. Short press **SW** to switch between parameters. Short press the encoder button to switch the bit selector. Rotate the encoder to adjust the parameter size.
3. For parameters like maximum capacity (OAH), maximum energy (OPH), or maximum operating time (OHP), short press the **ON/OFF** button to enable or disable the corresponding function. If disabled, "----" will be displayed.
4. For OAH/OPH parameters, long press the **ON/OFF** button to select the capacity range (e.g., 9.999AH, 99.99AH, 999.9AH, 9999AH).
5. After completing parameter settings, press and hold the **SW** button for 2 seconds to exit the setting interface. The set parameters will be automatically saved.

7.4. Viewing Input and Output Voltage Display



Interface / Buttons	Operation interface	Voltage and current setting interface	Parameter setting interface
			
VA button V/A	Short press: Enter the voltage and current setting interface Long press: None	Short press: switch to display voltage and current settings, and exit and save Long press: long press to exit voltage and current settings and save settings	No
SW button SW	Short press: switch the uplink input and output voltage display Long press: enter the parameter setting interface	Short press: set voltage/current shift operation Long Press: no	Short press: switch the parameters to be set Long press: save the parameters and exit the parameter setting interface
Switch button ⏻	Short press: turn on/off output Long press: clear data on capacity/energy/time interface	Short press: turn on/off output Long press: no	Short press: OAH/OWH/OHP function switch Long press: OAH/OWH unit switch
Encoder button 	Short press: power capacity energy time Long press: turn on/off the key lock function	Short press: Set voltage/current shift operation Long press: no	Short press: parameter shift operation Long press: no
Rotary encoder 	Default adjustment voltage/current/no action according to settings	Adjust the voltage/current setting value	Adjust parameter values

Image: A visual guide showing how to switch the display to show input voltage (IN) and output voltage (OUT) using the SW button.

In the operation interface, short press the **SW** button to switch between displaying the input voltage and the output voltage.

7.5. Viewing Power (W), Capacity (AH), Energy (WH), and Time (H)

5. View Power (W) Capacity (AH) / Energy (WH) Time (H):



In the operation interface, short press the encoder button to switch the display to power (W)/capacity (AH) energy (WH)/time (H)

6. Lock function



In the operation interface, press and hold the encoder button for 2 seconds to lock the set voltage and current to prevent misoperation; after locking, press and hold the encoder button for 2 seconds to unlock.

Image: A diagram illustrating how to cycle through displays of power, accumulated capacity, accumulated energy, and operating time by short pressing the encoder button.

In the operation interface, short press the encoder button to switch the display to show power (W), accumulated capacity (AH), accumulated energy (WH), or operating time (H).

7.6. Lock Function

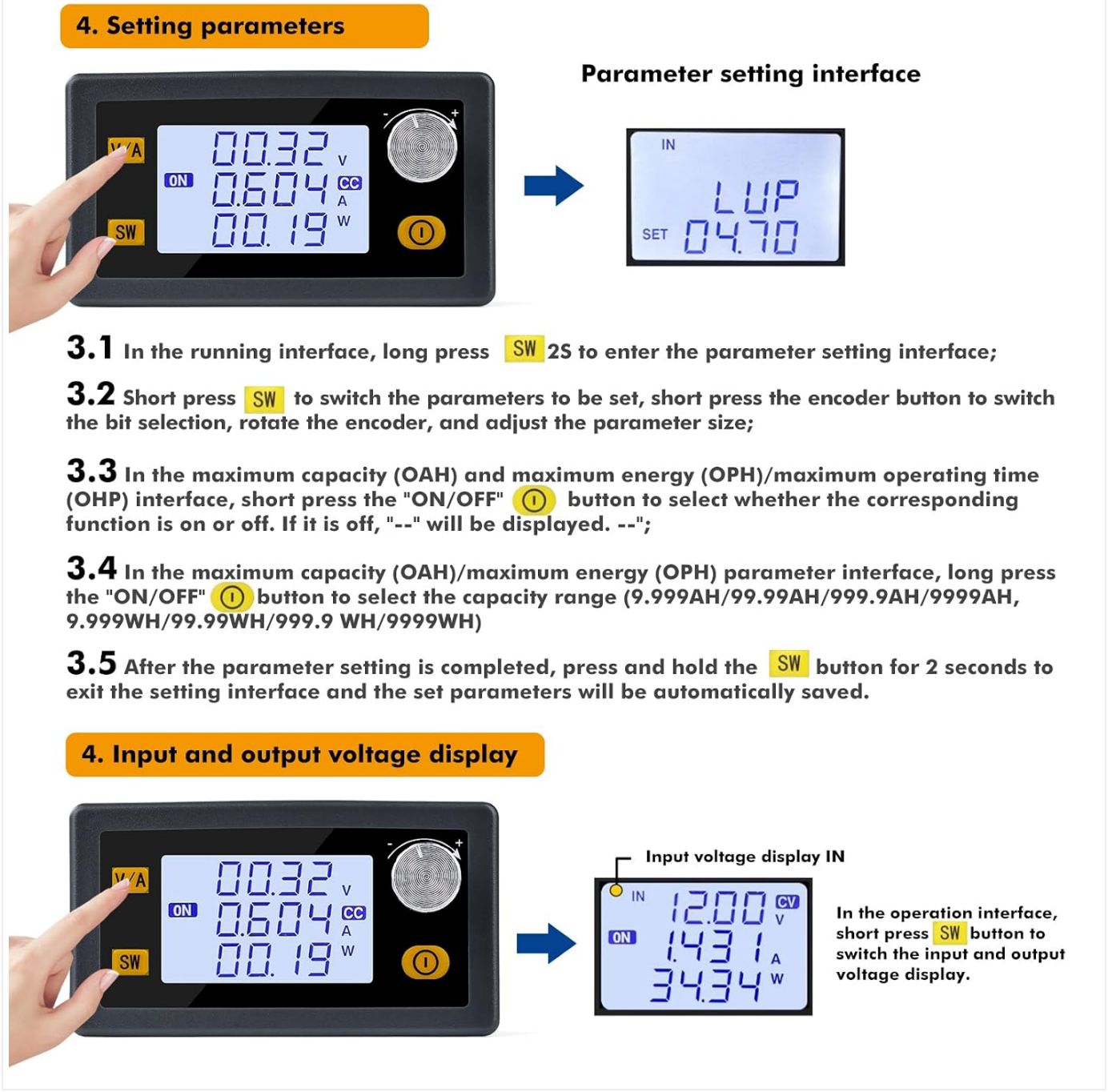


Image: A visual representation of how to lock and unlock the set voltage and current to prevent accidental changes.

In the operation interface, press and hold the encoder button for 2 seconds to lock the set voltage and current, preventing accidental adjustments. To unlock, press and hold the encoder button for another 2 seconds.

7.7. Capacity/Energy/Operation Time Statistics



Image: A detailed guide on how the converter records and manages capacity, energy, and operation time statistics, including setting maximum limits for these parameters.

Statistics for capacity, energy, and operation time begin automatically when the power is turned ON. The values from the previous state are displayed after the power is turned OFF. Recording restarts automatically when power is turned ON again. To clear the corresponding data, long press the **ON/OFF** button for 2 seconds in the respective interface.

7.8. Setting Maximum Capacity/Energy/Operation Time

1. **Set Maximum Capacity (OAH)/Energy (OPH):** When the OAH/OPH function is enabled, if the statistical capacity/energy exceeds the set maximum, the power supply will automatically turn off the output and flash "OAH"/"OPH". Once the alarm is cleared, the capacity/energy statistics will be automatically reset.
2. **Set Maximum Discharge Time (OHP):** When the OHP function is enabled, if the power supply operation time exceeds the set maximum discharge time, the power supply will automatically turn off the output and flash "OHP". Once the alarm is cleared, the time statistics will be automatically reset. This function allows for quantitative/timed power supply control.

Note: If OAP/OPH and OHP functions are not enabled, the power supply will only record capacity/energy and

operating time. When OAH/OPH and OHP functions are enabled, the power supply will automatically shut down the output after reaching the set value. If the OHP function is enabled, the operating time of the power supply is in countdown mode.

8. Specifications

Parameter	Value
Material	Polycarbonate
Input Voltage	DC 6-36 V
Output Voltage	DC 0.6-36 V
Output Current	0-5 A
Voltage Accuracy	± 0.5% + 1
Output Power	80 W (with fan cooling)
Current Accuracy	± 0.5% + 3
Voltage Resolution	0.01 V
Current Resolution	0.001 A
Conversion Efficiency	Approximately 88%
Soft Start	Yes
Dimensions (L x W x H)	Approx. 79mm x 43mm x 25mm (excluding terminals)
Weight	112 Grams



Image: Technical drawing showing the physical dimensions of the DEWIN DC converter in millimeters.

9. Maintenance

To ensure the longevity and optimal performance of your DEWIN converter, follow these general maintenance guidelines:

- **Keep Clean:** Regularly clean the device with a soft, dry cloth. Avoid using liquids or abrasive cleaners.
- **Ensure Ventilation:** Do not obstruct the cooling fan or ventilation openings. Ensure adequate airflow around the device.
- **Avoid Extreme Conditions:** Do not expose the converter to excessive moisture, dust, or extreme temperatures.
- **Check Connections:** Periodically inspect all input and output connections to ensure they are secure and free from corrosion.

10. Troubleshooting

If you encounter issues with your DEWIN converter, consider the following common troubleshooting steps:

- **No Display/No Power:**
  - Check input power source connection and voltage. Ensure it is within 6-36V.
  - Verify input polarity is correct.
- **No Output:**
  - Check if the output is turned ON (indicated by 'ON' on the display). Press the ON/OFF button if necessary.
  - Verify output connections and load.
  - Check for active protection mechanisms (e.g., OVP, OCP, OTP, OAH, OPH, OHP). The display will show corresponding error codes. Adjust settings or reduce load if a protection is triggered.
  - Ensure the set output voltage is not lower than the minimum adjustable voltage (0.6V).
- **Incorrect Voltage/Current Reading:**
  - Ensure the device is properly calibrated (though user calibration is not typically required for this model).
  - Check for stable input power.
- **Device Overheating:**
  - Ensure adequate ventilation and that the cooling fan is not obstructed.
  - Reduce the output load if operating near maximum power.

If problems persist after attempting these steps, please contact customer support.

11. Warranty and Support

For warranty information or technical support, please refer to the purchase documentation or contact your retailer. Keep your proof of purchase for any warranty claims.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B0DDL98MQJ

More documents and user manuals: **https://manuals.plus/**