LDHJBNAC UDP6721

LDHJBNAC UDP6721 DC Bench Power Supply

Instruction Manual

1. Introduction

This manual provides detailed instructions for the safe and efficient operation of your LDHJBNAC UDP6721 DC Bench Power Supply. The UDP6721 is a high-precision, compact, and adjustable stabilized power supply designed for laboratory, production line testing, electrical maintenance, product aging, and battery charging applications. It features a high-precision LED display, encoder adjustment knob for coarse and fine tuning, and multiple protection functions.

2. Safety Instructions

- Always connect the power supply to a grounded AC outlet.
- Ensure the input voltage (110V/220V) matches your local power supply before connecting.
- Do not operate the device in wet or damp conditions.
- Avoid blocking the ventilation openings to prevent overheating.
- Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.
- Always disconnect power before making or changing connections to the output terminals.
- Be aware of the maximum output voltage and current to prevent damage to connected devices.

3. Product Overview

The LDHJBNAC UDP6721 features a clear front panel display and intuitive controls for precise voltage and current regulation. The unit is designed for durability and efficient heat dissipation.


60V/8A/180W
DC POWER SUPPLY
KEEP
MEM.001
ON
CV
60.00 V
3.000 A
180.00 W
设置值
60.00 V
3.000 A
180.00 W
保护值
60.00V
6.195A
M1
M2
M3
LOCK
LONG PUSH
V
OVP
A
OCP
MENU
OUTPUT
ESC
ENTER
POWER
C.V
C.C
+
−
GND
0~60V,8A

Figure 3.1: Front view of the UDP6721 DC Bench Power Supply, showing the display, control buttons, and output terminals.

Front Panel Controls and Display

- **LED Display:** Shows real-time voltage, current, and power output, along with set values and protection status.
- **Encoder Adjustment Knob:** Used for coarse and fine adjustment of voltage and current settings.
- **M1, M2, M3 Buttons:** Memory recall buttons for saving and loading frequently used settings.
- **V, A Buttons:** Select voltage or current for adjustment.
- **OVP, OCP Buttons:** Over-Voltage Protection and Over-Current Protection settings.
- **MENU Button:** Accesses system settings and configurations.
- **OUTPUT Button:** Toggles the power output on and off.
- **LOCK Button (Long Push):** Locks the control panel to prevent accidental changes.
- **ESC, ENTER Buttons:** Navigation and confirmation buttons for menu operations.
- **Arrow Buttons:** Used for navigating menus and adjusting digits.
- **Output Terminals:** Positive (red), Negative (black), and Ground (green) terminals for connecting loads.
- **POWER Button:** Main power switch for the unit.

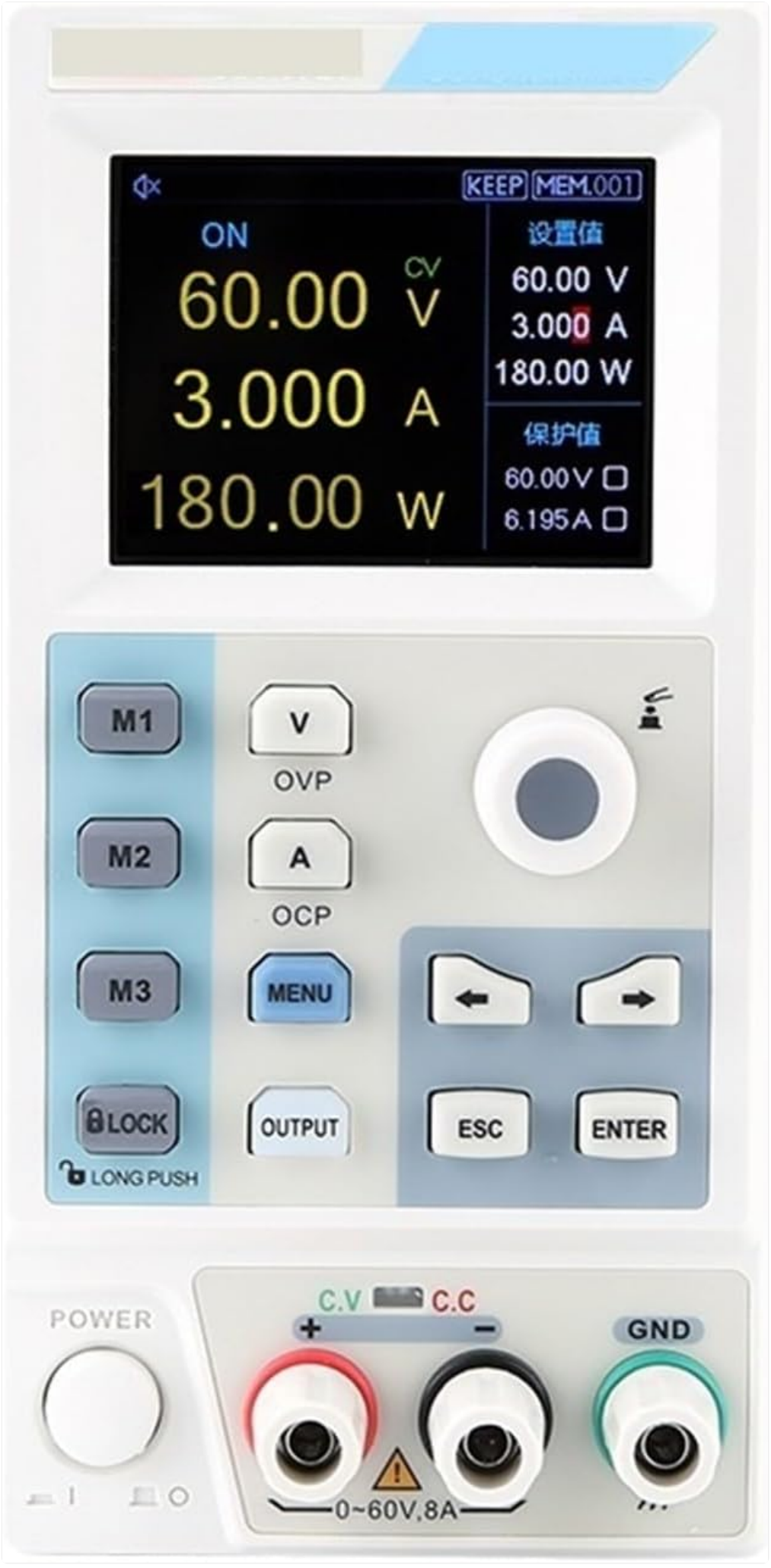
KEEP
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Figure 3.2: Close-up of the UDP6721 front panel, highlighting the display, encoder knob, and control buttons.

Rear Panel and Ventilation

The rear panel includes the AC power input and a cooling fan for thermal management.

Figure 3.3: Side view of the UDP6721, illustrating the ventilation grilles for effective heat dissipation.

4. Setup

4.1 Unpacking and Inspection

- Carefully remove the power supply and all accessories from the packaging.
- Inspect the unit for any signs of damage during transit. If damage is found, contact your supplier immediately.
- Verify that all components are present: power supply unit, power cord, and test leads.

Figure 4.1: The UDP6721 power supply shown with its standard accessories, including the power cord and test leads.

4.2 Power Connection

- Ensure the power supply's input voltage setting (if adjustable) matches your local AC supply (110V or 220V). The UDP6721 supports both.
- Connect the provided power cord to the AC input socket on the rear panel of the power supply.
- Plug the other end of the power cord into a grounded AC power outlet.

4.3 Connecting a Load

- Before connecting any load, ensure the power supply output is OFF (press the OUTPUT button if necessary).
- Connect the positive (+) terminal of your load to the red output terminal of the power supply.
- Connect the negative (-) terminal of your load to the black output terminal of the power supply.
- For safety, connect the ground terminal of your load (if applicable) to the green ground terminal of the power supply.
- Ensure all connections are secure to prevent arcing or accidental disconnections.

Figure 4.2: The UDP6721 connected to a device, demonstrating a typical application setup.

5. Operating Instructions

5.1 Powering On/Off

- Press the main POWER button on the front panel to turn the unit ON. The display will illuminate.
- To turn OFF, press the main POWER button again.

5.2 Adjusting Voltage and Current

- **Setting Voltage:** Press the 'V' button. The voltage setting on the display will become active. Rotate the encoder knob to adjust the voltage. A quick turn provides coarse adjustment, while a slow turn allows for fine adjustment. Use the arrow buttons to select specific digits for adjustment.
- **Setting Current:** Press the 'A' button. The current setting on the display will become active. Rotate the encoder knob to adjust the current limit. Similar to voltage, the knob supports both coarse and fine adjustments.
- Press 'ENTER' to confirm settings or 'ESC' to cancel.

5.3 Output Control

- After setting the desired voltage and current, press the 'OUTPUT' button to enable the power output to your connected load. The 'ON' indicator on the display will light up.
- To disable the output, press the 'OUTPUT' button again. The 'ON' indicator will turn off.

5.4 Over-Voltage Protection (OVP) and Over-Current Protection (OCP)

- **Setting OVP:** Press the 'OVP' button. Use the encoder knob and arrow buttons to set the maximum allowable output voltage. If the output voltage exceeds this limit, the power supply will shut down the output to protect the load.
- **Setting OCP:** Press the 'OCP' button. Use the encoder knob and arrow buttons to set the maximum allowable output current. If the output current exceeds this limit, the power supply will shut down the output.
- These protection features enhance safety for both the power supply and the connected device.

5.5 Memory Functions (M1, M2, M3)

- The power supply allows you to save and recall up to three sets of voltage and current settings.
- **Saving Settings:** Set your desired voltage and current. Long press one of the 'M1', 'M2', or 'M3' buttons until the display indicates the settings are saved.
- **Recalling Settings:** Short press one of the 'M1', 'M2', or 'M3' buttons to load the saved settings.

5.6 USB Charging Interface

The front panel includes a USB charging interface, allowing you to charge compatible devices directly from the power supply.

6. Maintenance

6.1 Cleaning

- Disconnect the power supply from the AC outlet before cleaning.
- Use a soft, dry cloth to wipe the exterior of the unit.
- Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the casing or display.

6.2 Ventilation

- Ensure that the ventilation openings on the sides and rear of the unit are clear of obstructions.
- Proper airflow is crucial for preventing overheating and maintaining optimal performance. The built-in fan operates to keep internal temperatures within safe limits.

7. Troubleshooting

Problem	Possible Cause	Solution
No power when turned on	Power cord not connected; AC outlet faulty; Internal fuse blown	Check power cord connection; Test AC outlet; Contact service for fuse replacement.
No output voltage/current	Output is OFF; OVP/OCP activated; Load short-circuited or open-circuited	Press 'OUTPUT' button to turn ON; Check OVP/OCP settings and reset if tripped; Verify load connections and integrity.
Output voltage/current unstable	Poor load connection; Overheating; Faulty test leads	Ensure secure connections; Check ventilation and ambient temperature; Replace test leads if damaged.

Problem	Possible Cause	Solution
Unit becomes hot	Blocked ventilation; Prolonged high-power operation	Clear ventilation openings; Ensure adequate airflow; Reduce load if operating continuously at maximum capacity.

8. Specifications

Parameter	Value
Model	UDP6721
Input Voltage	AC 110V/220V
Output Voltage	0-60V
Output Current	0-8A
Output Power	180W
Voltage Resolution	10mV
Current Resolution	1mA
Display	High Precision LED Display
Protection Features	Over-voltage, Over-current, Over-power, Over-temperature, Short-circuit
Cooling	Intelligent Fan Cooling
Item Weight	900 Grams

9. Warranty and Support

For warranty information or technical support, please refer to the documentation included with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase.