

Bolisila TPS3010H

User Manual

BOLISILA TPS3010H ADJUSTABLE DC LAB POWER SUPPLY

Model: TPS3010H

1. Introduction

Thank you for choosing the Bolisila TPS3010H Adjustable DC Lab Power Supply. This device is designed to provide a stable and precise DC power output, making it ideal for various applications including laboratory experiments, electronic repair, DIY projects, communication equipment maintenance, and scientific research. This manual provides essential information for the safe and efficient operation of your power supply.

Key features include:

- Bright 3-digit back-lit LED display for accurate voltage and current readings.
- Compact design for space-saving on your workbench.
- Reliable and stable output for consistent performance.
- Intelligent temperature-controlled fan for efficient heat dissipation.

2. Safety Precautions

Please read and understand all safety instructions before operating the device.

- **Power Source:** Ensure the input voltage switch on the rear panel is set correctly (115V or 230V) to match your local power supply before connecting the power cord. Incorrect voltage selection can cause severe damage to the unit.
- **Grounding:** Always connect the power supply to a grounded AC outlet. Do not defeat the grounding plug.
- **Ventilation:** Ensure adequate ventilation around the unit. Do not block the ventilation openings on the sides and rear panel. Overheating can lead to malfunction.
- **Environment:** Do not operate the device in wet or damp conditions, or in areas with flammable gases or vapors. Avoid direct sunlight and high temperatures.
- **Handling:** Do not open the casing of the power supply. There are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- **Output Terminals:** Ensure the output terminals are correctly connected to the load. Do not short-circuit the output terminals for extended periods.

3. Product Overview

The Bolisila TPS3010H features a user-friendly interface with clear displays and intuitive controls.

3.1 Front Panel



Figure 3.1: Front Panel Layout

The front panel includes:

- **LED Display:** Shows real-time voltage (V), current (A), and power (W) output. Indicators for Constant Voltage (C.V), Constant Current (C.C), and Over Current Protection (OCP) are also present.
- **Control Knob:** Used to adjust voltage and current settings. Pressing the knob typically switches between voltage and current adjustment modes.
- **OUT Button:** Toggles the power output ON/OFF.

- **V/A Button:** Selects between voltage and current adjustment modes.
- **OCP Button:** Activates or deactivates the Over Current Protection function.
- **Output Terminals:** Red (+) for positive, Black (-) for negative, and Green for ground.

3.2 Rear Panel



Figure 3.2: Rear Panel Layout

The rear panel includes:

- **AC Power Input:** Standard IEC C14 inlet for connecting the AC power cord.
- **Cooling Fan:** Automatically adjusts speed based on internal temperature to ensure optimal heat dissipation.
- **Voltage Selector Switch:** Allows selection between 115V and 230V AC input voltage. This must be set correctly before use.

4. Setup

1. **Unpacking:** Carefully remove the power supply from its packaging. Inspect the unit for any signs of damage during transit.
2. **Placement:** Place the power supply on a stable, level surface, ensuring sufficient space around the unit for proper ventilation. Do not place it near heat sources or in enclosed spaces.
3. **Input Voltage Selection:** Locate the voltage selector switch on the rear panel. Use a small screwdriver to set the switch to either 115V or 230V, matching your local AC mains voltage. **Failure to set this correctly will damage the unit.**
4. **Power Connection:** Connect the provided AC power cord to the AC power input on the rear panel, then plug the other end into a grounded wall outlet.
5. **Load Connection:** Connect your load to the output terminals on the front panel. Ensure correct polarity: positive (+) to the red terminal, negative (-) to the black terminal. For safety, connect the ground terminal (green) to the chassis of your load if applicable.

5. Operating Instructions

1. **Power On:** Press the power switch (usually located on the front or rear panel, refer to your specific unit if unsure) to turn on the power supply. The LED display will illuminate.
2. **Setting Voltage and Current:**
 - Press the **V/A** button to select whether you want to adjust voltage or current. The corresponding indicator (V or A) on the display will flash.
 - Rotate the large control knob to adjust the desired voltage or current value. The display will show the set value.
 - Press the control knob to switch between coarse and fine adjustment for more precise settings.
3. **Output Enable/Disable:** After setting the desired voltage and current, press the **OUT** button to enable the power output to your load. The OUT indicator will light up. Press it again to disable the output.
4. **Constant Voltage (C.V) and Constant Current (C.C) Modes:**
 - When the load resistance is high, the power supply operates in Constant Voltage (C.V) mode, maintaining the set voltage. The C.V indicator will be lit.
 - When the load resistance is low, and the current reaches the set limit, the power supply automatically switches to Constant Current (C.C) mode, maintaining the set current. The C.C indicator will be lit.
5. **Over Current Protection (OCP):**
 - Press the **OCP** button to activate or deactivate the Over Current Protection. When OCP is active, the OCP indicator will be lit.
 - If the output current exceeds the set OCP limit, the power supply will automatically cut off the output to protect the load and the unit.
 - To reset OCP, disable the output, resolve the overcurrent condition, and then re-enable the output.
6. **Power Off:** Press the power switch to turn off the power supply when not in use.

6. Maintenance

- **Cleaning:** Disconnect the power supply from the AC outlet before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use abrasive cleaners or solvents.
- **Ventilation:** Regularly check the ventilation openings and cooling fan for dust accumulation. Use compressed air to gently clear any blockages to ensure efficient heat dissipation.
- **Storage:** When not in use for extended periods, store the power supply in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Internal Maintenance:** Do not attempt to open the unit for internal maintenance. This should only be performed by qualified service personnel.

7. Troubleshooting

Problem	Possible Cause	Solution
No power when switched on	Power cord not connected; AC outlet faulty; Voltage selector switch incorrect; Internal fuse blown.	Check power cord connection; Test AC outlet; Verify voltage selector setting (115V/230V); Contact support if fuse is suspected.
No output voltage/current	Output disabled (OUT button); OCP tripped; Load not connected correctly; Output terminals shorted.	Press OUT button to enable output; Check OCP status and reset if necessary; Verify load connections; Disconnect load and check for short circuit.
Incorrect voltage/current reading	Measurement error; Device malfunction.	Verify readings with an external multimeter; If discrepancy persists, contact support.
Unit overheats	Blocked ventilation; Excessive load.	Ensure ventilation openings are clear; Reduce load or operate within specified limits.

8. Specifications

Parameter	Value
Output Voltage	0-30V DC
Output Current	0-10A
Output Power	300W
Input Voltage	115V/230V AC (selectable)
Display Type	3-digit Back-lit LED
Cooling	Intelligent Temperature-Controlled Fan

Parameter	Value
Item Weight	1000 Grams (2.2 Pounds)
Model Number	TPS3010H

9. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact the seller directly. If you encounter any issues or require technical assistance, please reach out to the Bolisila customer support team or your authorized dealer.

Please have your product model (TPS3010H) and purchase details ready when contacting support.

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