

Titoe AD-01

Titoe Adjustable DC Power Voltage Converter (Model AD-01) User Manual

AC 110V-220V to DC 0-48V 10A Module Switching Power Supply Digital Display 480W

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Titoe Adjustable DC Power Voltage Converter, Model AD-01. This device is designed to convert AC input voltage (110V-220V) to an adjustable DC output voltage ranging from 0-48V with a maximum current of 10A and a power output of 480W. It features a digital display for real-time voltage monitoring and a built-in cooling fan for thermal management.

2. SAFETY INFORMATION

- **Input Voltage Selection:** Before connecting the power supply, ensure the input voltage switch (located on the side of the unit) is set correctly to either 110V or 220V, matching your local power supply. Incorrect selection can cause damage to the unit.
- **Overload Protection:** The unit includes overload, overvoltage, and short-circuit protection to safeguard connected loads.
- **Inductive Loads:** When connecting inductive loads such as motors or fans, pay close attention to the load's maximum starting current. This parameter should not exceed the power supply's maximum current capacity (10A). Consider using a soft-starting protection circuit for the load to absorb impact current and prevent damage to the power supply.
- **Ventilation:** Ensure adequate ventilation around the unit. The built-in cooling fan requires clear airflow to prevent overheating.
- **Professional Installation:** Installation and wiring should be performed by qualified personnel to ensure safety and proper functionality.

3. PRODUCT FEATURES

- Input: AC 110V-220V, Output: DC 0-48V adjustable.
- Maximum output current: 10A.
- Power output: 480W.
- Digital LED display for real-time voltage monitoring.
- Built-in automatic on/off cooling fan for temperature control.
- Overload, overvoltage, and short-circuit protection.
- Durable metal casing.

4. SPECIFICATIONS

Parameter	Value
Product Dimensions (L x W x H)	8.46 x 4.52 x 1.96 inches (215mm x 115mm x 50mm)
Item Weight	1.8 pounds
Input Voltage	AC 110V-220V (Universal AC input/full range)
Output Voltage	DC 0-48V (Adjustable)
Maximum Output Current	10A
Power Output	480W
Cooling	Automatic on/off cooling fan
Protections	Overload, Overvoltage, Short Circuit, Over Temperature

5. SETUP

5.1. Unpacking

Carefully remove the power supply from its packaging. Inspect the unit for any signs of damage during transit. Ensure all components are present.

5.2. Input Voltage Selection

Locate the red switch on the side of the power supply. This switch allows you to select the appropriate input voltage (110V or 220V) for your region. **It is crucial to set this switch correctly before connecting the unit to AC power to prevent damage.**

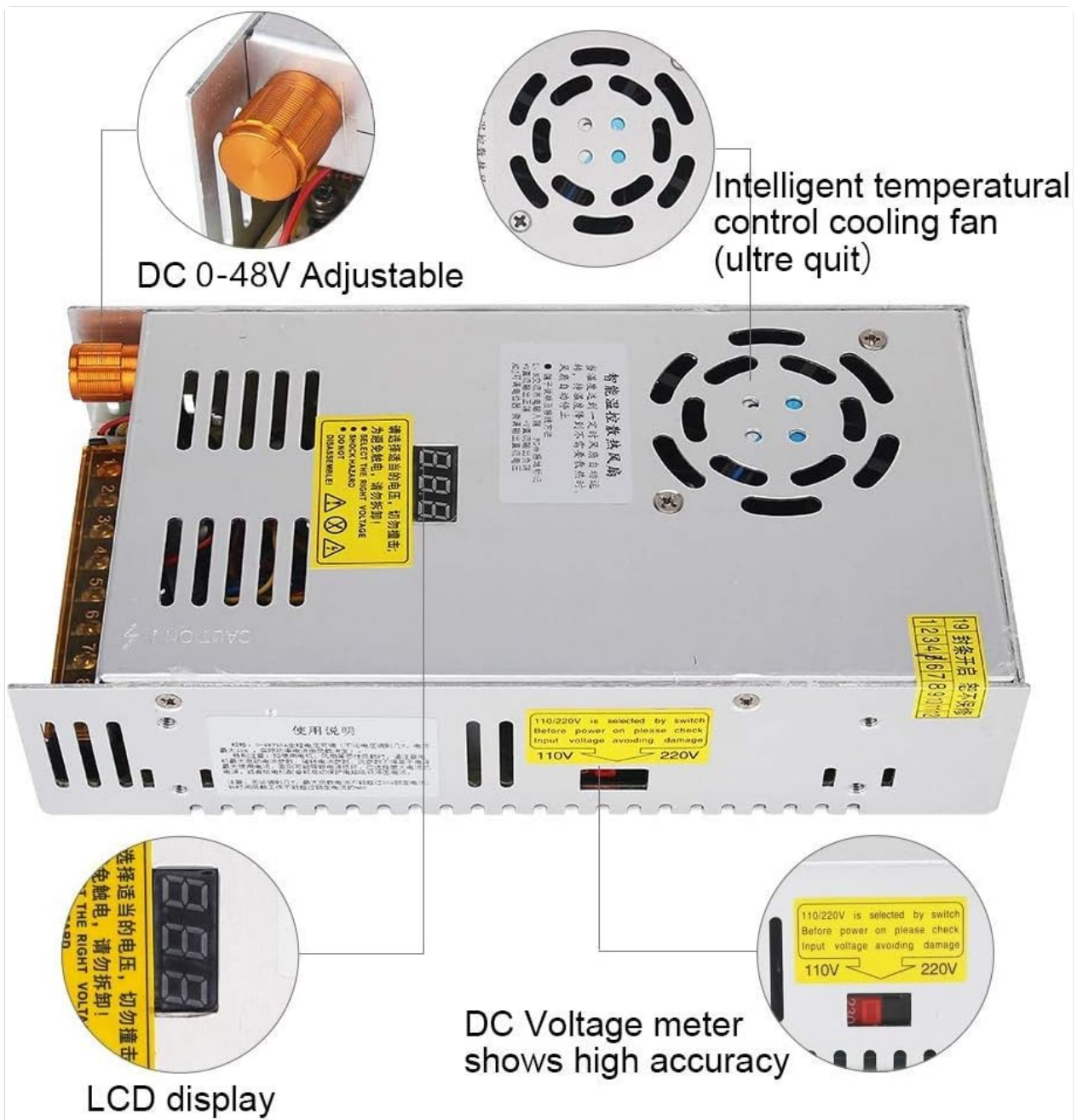


Figure 1: Input Voltage Selection Switch and DC Output Adjustment

5.3. Wiring Method

The power supply features a terminal block for connecting AC input and DC output. Refer to the diagram below for correct wiring:

- **L:** Live wire (AC Input)
- **N:** Neutral wire (AC Input)
- **⊙:** Ground (Earth)
- **V+:** DC Output Positive
- **V-:** DC Output Negative

Wiring Methode

- V+:DC output+
- V-:DC output-
- L:Live wire
- N:Null wire
- \perp :Ground

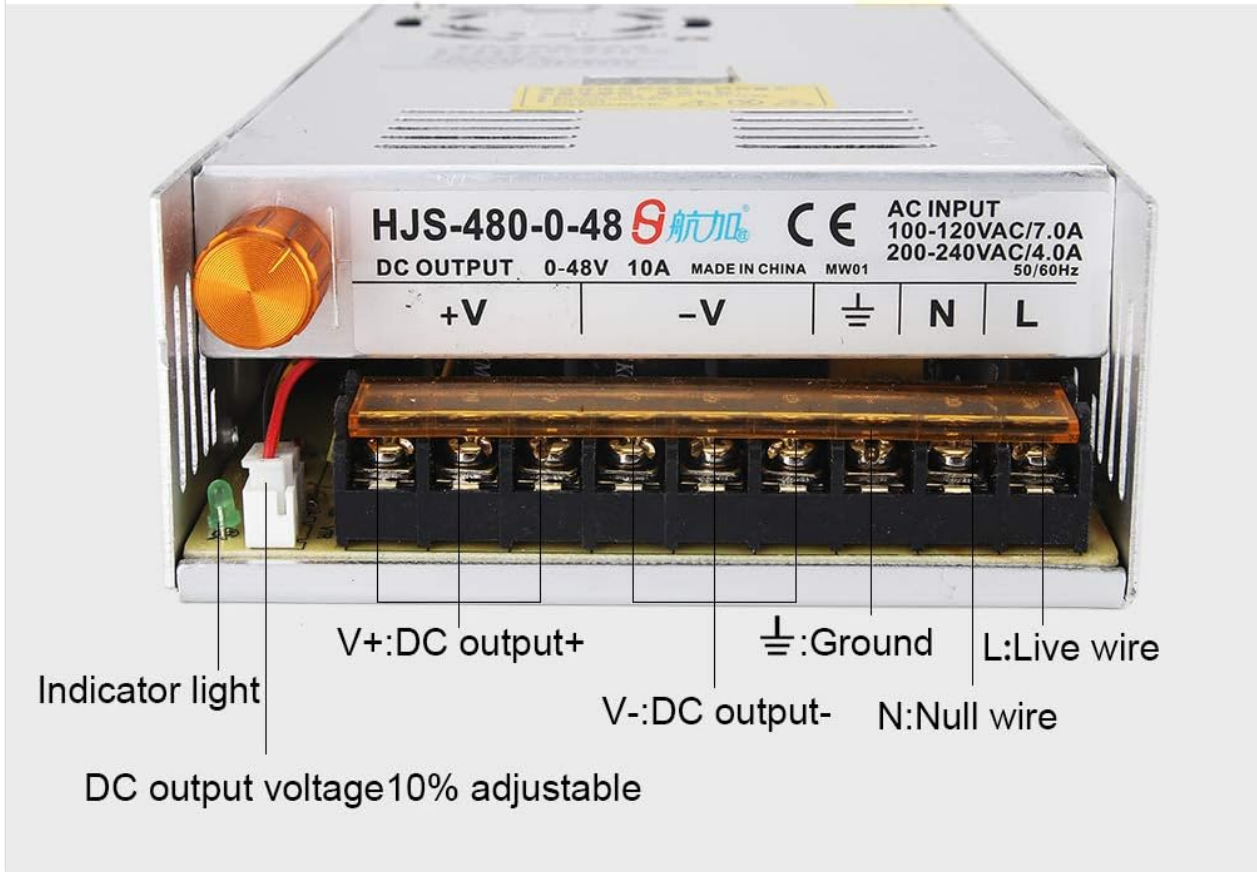


Figure 2: Wiring Terminals

Use appropriate gauge wires and ensure all connections are secure to prevent loose contacts and potential hazards.

6. OPERATING INSTRUCTIONS

6.1. Power On/Off

After ensuring correct input voltage selection and wiring, connect the power supply to an AC outlet. The unit does not have a separate on/off switch for the AC input; it powers on when connected to the mains. The digital display will illuminate, showing the current output voltage.

6.2. Adjusting Output Voltage

The DC output voltage can be adjusted from 0V to 48V using the potentiometer (knob) located on the front panel. Turn the knob clockwise to increase the voltage and counter-clockwise to decrease it. The digital display will show the real-time output voltage.

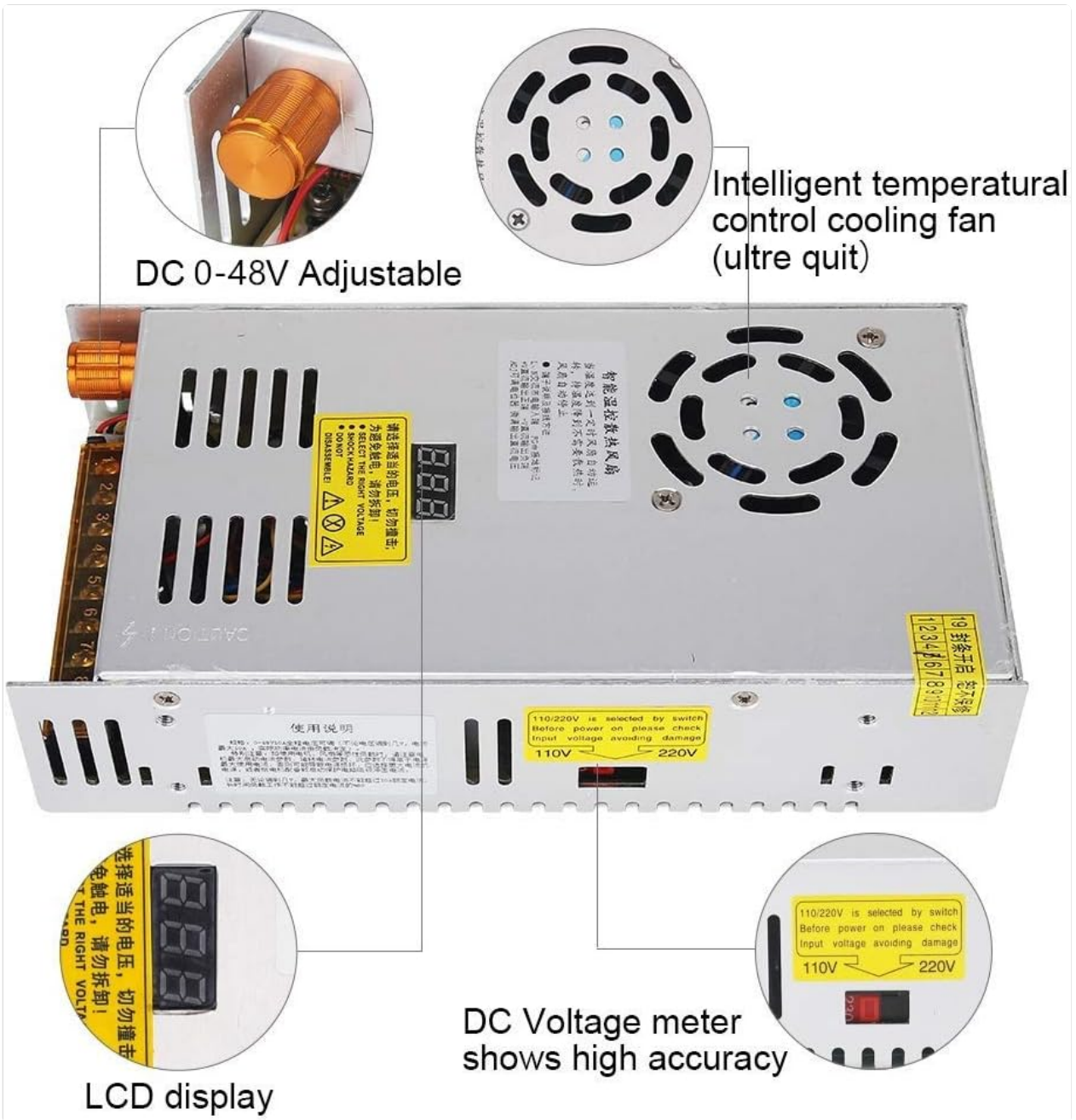


Figure 3: Voltage Adjustment Knob and Digital Display

6.3. Cooling Fan Operation

The power supply is equipped with a temperature-controlled cooling fan. The fan will automatically activate when the internal temperature reaches a certain threshold to maintain optimal operating conditions and prevent overheating. It will turn off once the temperature drops.

With temperature-controlled cooling fan(ultra-quiet)

When the temperature reaches a certain level, the fan runs



Figure 4: Temperature-Controlled Cooling Fan

7. MAINTENANCE

- Keep the unit clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Ensure the ventilation openings and fan are not obstructed to allow proper airflow.
- Regularly check all wiring connections for tightness and integrity.
- Store the power supply in a cool, dry environment when not in use.

8. TROUBLESHOOTING

- **No Power/Display:**
 - Check if the AC input voltage switch is correctly set (110V/220V).
 - Verify the AC power cord is securely connected to both the unit and the wall outlet.
 - Ensure the wall outlet is functional.
- **No Output Voltage:**
 - Check if the output terminals are correctly wired to your load.

- Ensure the voltage adjustment knob is not set to 0V.
 - If an overload or short-circuit protection has been triggered, disconnect the load, resolve the issue, and then reconnect.
- **Overheating:**
 - Ensure the cooling fan and ventilation openings are not blocked.
 - Reduce the load if it exceeds the power supply's maximum capacity.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the product packaging or contact Titoe customer service directly. Keep your purchase receipt for any warranty claims.