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> [Aideepen DC 4.5-100V Digital Volt Amp Voltmeter Instruction Manual](#)

Aideepen 50A Ammeter Voltmeter

Aideepen DC 4.5-100V Digital Volt Amp Voltmeter Instruction Manual

Model: 50A Ammeter Voltmeter | Brand: Aideepen

1. INTRODUCTION

This instruction manual provides essential information for the safe and effective use of your Aideepen DC 4.5-100V Digital Volt Amp Voltmeter. This device is designed for monitoring DC voltage and current in various applications, including storage batteries, solar panels, model railroads, RVs, motorcycles, and other electrical systems. Please read this manual thoroughly before installation and operation.

2. PRODUCT FEATURES

- **Voltage Measuring Range:** DC 4.5-100V
- **Current Measuring Range:** DC 0-50A
- **Display:** 0.28" digital tube, dual color display (blue for current, red for voltage)
- **Wide Applications:** Suitable for monitoring storage batteries, solar panels, model railroads, RVs, motorcycles, house batteries, motors, and more.

3. SPECIFICATIONS

Specification	Value
Manufacturer	Aideepen
Item Model Number	50A Ammeter Voltmeter
Colour	Black
Style	Digital
Material	ABS
Power Source Type	Corded Electric
Min. Operating Voltage	4 Volts (DC)
Maximum Operating Voltage	100 Volts

Upper Temperature Rating	65 Degrees Celsius
Measurement Type	Ammeter, Voltmeter
Item Weight	0.28 g (0.01 Ounces)
Parcel Dimensions	16.1 x 11.99 x 4.9 cm

Note: The 50A 75mV shunt is required for current measurement and is typically purchased separately.

4. SAFETY INFORMATION

WARNING: The shunt must be connected when wiring the device for current measurement. Failure to connect the shunt will result in damage to the meter. Ensure all connections are secure and correct according to the wiring diagrams to prevent electrical hazards and product malfunction. This device measures current on the negative side of the circuit. Review wiring diagrams carefully to ensure compatibility with your circuit's grounding scheme.

5. SETUP AND INSTALLATION

Proper installation is critical for accurate readings and safe operation. Refer to the diagrams and video below for detailed wiring instructions.



Front view of the Aideepen DC Volt Amp Voltmeter, showing the dual LED display and connected wiring harness.



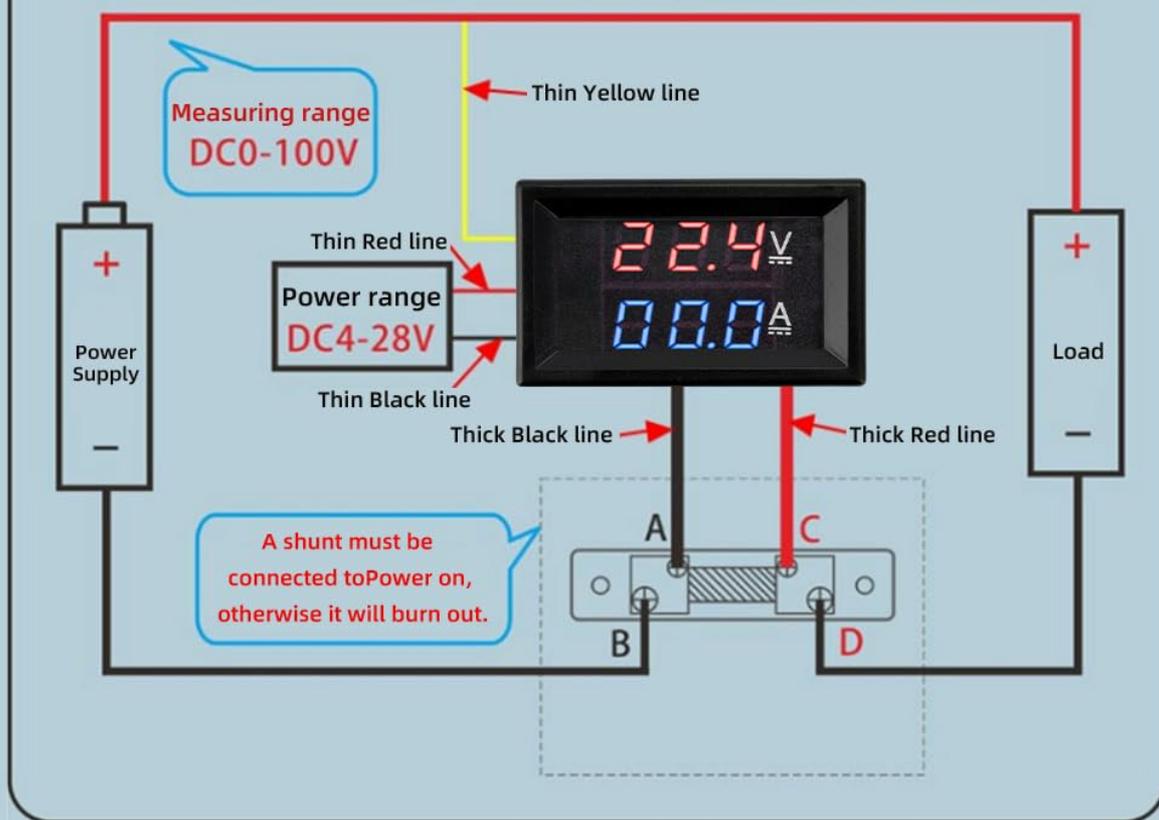
Close-up view of the 50A 75mV shunt resistor, a critical component for accurate current measurement with the voltmeter.

5.1 Wiring Diagrams

The voltmeter requires connection to a 50A 75mV shunt for current measurement. There are two primary wiring methods:

5.1.1 50A Range Wiring Method (Shared Power Supply)

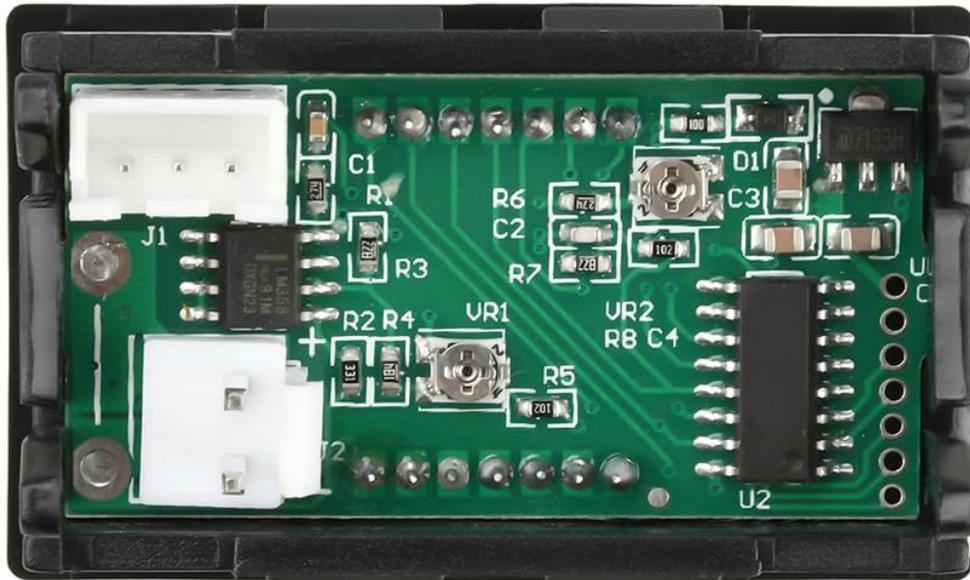
四. The independent power supply wiring diagram of the meter head with a range of 50A or 100A



Detailed wiring diagram illustrating the connection of the 50A 75mV shunt with the voltmeter for current measurement in a 50A range circuit. This diagram shows the power supply, load, shunt, and voltmeter connections. When the power supply is shared, the thin black wire does not need to be connected to the shunt.

In this configuration, the voltmeter draws its power from the same source as the circuit being measured. The thin black wire from the voltmeter's wiring harness should NOT be connected to the shunt if the power supply is shared. The shunt is connected in series with the negative line of the load.

5.1.2 Independent Power Supply Wiring Diagram



Wiring diagram for the voltmeter when using an independent power supply for the meter itself, separate from the circuit being measured. It shows connections for both voltage and current measurement with the shunt. The thin black wire from the voltmeter's harness connects to the negative terminal of the independent power supply.

For applications requiring higher accuracy or when the measured circuit's voltage is outside the meter's operating range (DC 4.5-100V), an independent power supply (DC 4-28V) can be used for the voltmeter. In this setup, the thin black wire from the voltmeter's harness connects to the negative terminal of the independent power supply. The shunt is still connected in series with the negative line of the load.

5.2 Installation Video

Watch this video for a visual guide on wiring and testing the Aideepen DC Volt Amp Voltmeter.

Your browser does not support the video tag.

This video demonstrates the wiring process for the Aideepen DC Volt Amp Voltmeter, including connecting the shunt and powering on the device to display voltage and current readings.

6. OPERATION

Once correctly wired and powered, the voltmeter will automatically display the measured DC voltage and current on its dual LED screen. The red display indicates voltage (V), and the blue display indicates current (A). Ensure the power supply is within the specified range (DC 4.5-100V for measurement, DC 4-28V for meter power if independent supply is used).

7. MAINTENANCE

- Keep the device clean and free from dust and moisture.
- Avoid exposing the meter to extreme temperatures or direct sunlight for prolonged periods.
- Regularly check wiring connections for tightness and signs of wear or corrosion.
- Do not attempt to open or modify the device, as this may void the warranty and cause damage.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display/Meter not powering on	Incorrect power connection; Power supply outside range; Damaged wiring.	Verify power connections (red and black thin wires). Ensure power supply is within DC 4.5-100V. Check for loose or damaged wires.
Voltage displays, but current shows 0.00A	Shunt not connected; Incorrect shunt wiring; No current flowing through the load.	Ensure the 50A 75mV shunt is correctly installed in series with the negative line of the load. Verify the thick red and black wires are connected to the shunt. Confirm there is a load drawing current.
Inaccurate readings	Poor connections; Shunt not properly rated; Interference; Meter requires calibration.	Check all connections for tightness. Ensure the shunt is rated for 50A 75mV. Minimize electrical interference. Some meters may have internal potentiometers for fine-tuning calibration (refer to specific product details if available, otherwise professional calibration may be needed).
Meter burnt out	Shunt not connected during current measurement; Overcurrent.	This indicates a critical wiring error, specifically operating the meter for current measurement without the shunt. The meter is likely damaged and requires replacement. Always connect the shunt before applying power for current measurement.

9. WARRANTY AND SUPPORT

Aideepen products typically come with a 24-month service period. If you encounter any quality issues with your product, you may be eligible for a replacement. For technical support or warranty claims, please contact Aideepen customer service through the retailer where the product was purchased or visit the official Aideepen store online.