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› [diymore 0.28" DC 100V 10A Digital Voltmeter Ammeter Instruction Manual](#)

diymore 11286400-00a4-4719-befa-ff5839e3bcaf

diymore 0.28" DC 100V 10A Digital Voltmeter Ammeter Instruction Manual

Model: 11286400-00a4-4719-befa-ff5839e3bcaf

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the diymore 0.28" DC 100V 10A Digital Voltmeter Ammeter. This compact device is designed for precise measurement of DC voltage and current in various applications, including automotive, electric vehicles, and other electronic projects.



Image 1.1: Five diymore 0.28" Digital Voltmeter Ammeters. These meters simultaneously display voltage in blue and current in green, providing clear readings for various DC applications.

2. PRODUCT FEATURES

- **Dual Display:** Simultaneous display of voltage and current on a 0.28" digital tube with blue (voltage) and green (current) LEDs.
- **Wide Measurement Range:** Measures DC voltage from 0V to 100V and DC current from 0A to 10A.
- **Operating Voltage:** Requires a DC input voltage between 4V and 30V for internal operation.
- **High Accuracy:** Current and voltage measurement accuracy of 1% (± 1 digit).
- **Compact Design:** Miniaturized panel-mount design suitable for integration into various projects.
- **Applications:** Ideal for battery monitoring in automotive, electric cars, motorcycles, and general electronic circuit testing.



Image 2.1: A single diymore digital voltmeter ammeter. The clear 0.28" LED display shows voltage in blue and current in green, ensuring easy readability.

3. TECHNICAL SPECIFICATIONS

Parameter	Value
Voltage Measuring Range	DC 0 - 100V
Current Measuring Range	DC 0 - 10A
Display Type	0.28" Digital Tube, 3 Bits Dual LED
Display Color	Blue (Voltage), Green (Current)
Working Voltage (Meter Power)	DC 4 - 30V (Max 30V)
Working Current	≤20mA

Measurement Accuracy	1% (± 1 digit)
Voltage Resolution	0.1V
Current Resolution	0.01A
Refresh Rate	Approximately 300ms / time
Cable Length	15cm
Dimensions	48mm x 29mm x 26mm
Operating Temperature	-10°C to +65°C

4. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the device. Failure to follow these instructions may result in electric shock, fire, or damage to the product or other equipment.

- **Power Supply:** Ensure the working voltage for the meter (DC 4-30V) is strictly adhered to. Exceeding 30V will damage the meter.
- **Polarity:** Always observe correct polarity when connecting the power supply and measurement leads. Incorrect connections can cause damage.
- **Current Measurement:** For current measurement, the meter uses a shunt. Ensure the load common is correctly connected relative to the power supply common, especially for higher currents.
- **Insulation:** Ensure all connections are properly insulated to prevent short circuits.
- **Environment:** Do not expose the meter to excessive moisture, dust, or extreme temperatures outside its operating range.
- **Professional Installation:** If you are unsure about any aspect of the installation, consult a qualified electrician or electronics technician.

5. SETUP AND WIRING

The diymore digital voltmeter ammeter requires careful wiring for both its power supply and the circuit under measurement. Refer to the wiring diagram below for proper connection.

5.1. Wiring Diagram Overview



Image 5.1: Detailed wiring diagram for the diymore voltmeter ammeter. It illustrates the connections for the meter's power supply (DC 4-30V) and the circuit being measured (DC 0-100V, 0-10A load).

The meter typically comes with two sets of wires:

- **Thin Wires (Power Supply for Meter):**

- **Red (thin):** Positive (+) terminal for the meter's internal power supply (DC 4-30V).
- **Black (thin):** Negative (-) terminal for the meter's internal power supply.
- **Yellow (thin):** Voltage measurement input positive (+). This wire connects to the positive side of the circuit you want to measure voltage from.

- **Thick Wires (Current Measurement):**

- **Red (thick):** Current input positive (+). This connects to the positive side of the load.
- **Black (thick):** Current input negative (-). This connects to the negative side of the load, completing the series circuit for current measurement.

Important Note: The thin black wire (meter power negative) and the thick black wire (current measurement negative) are often internally connected or share a common ground. Ensure your wiring configuration respects this to avoid short circuits or incorrect readings. The current measurement must be done in series with the load.

5.2. Installation Steps

1. **Prepare Panel Cutout:** Create an appropriate rectangular cutout in your panel for the meter. The dimensions are approximately 48mm x 29mm.
2. **Insert Meter:** Gently push the meter into the cutout. The retaining clips on the sides will secure it. If the clips are too tight, you may need to carefully remove the PCB from the casing, insert the empty casing, and then reinsert the PCB.
3. **Connect Power (Thin Wires):**
 - Connect the **thin red wire** to the positive (+) terminal of your DC 4-30V power source.
 - Connect the **thin black wire** to the negative (-) terminal of your DC 4-30V power source.
4. **Connect Voltage Measurement (Thin Yellow Wire):**
 - Connect the **thin yellow wire** to the positive (+) point of the circuit where you want to measure voltage.
5. **Connect Current Measurement (Thick Wires):**
 - Disconnect the positive supply line to your load.
 - Connect the **thick red wire** to the positive supply side (where the positive supply line was disconnected from the load).
 - Connect the **thick black wire** to the positive input of your load. This places the ammeter in series with the load.
6. **Verify Connections:** Double-check all connections for correct polarity and secure contact before applying power.

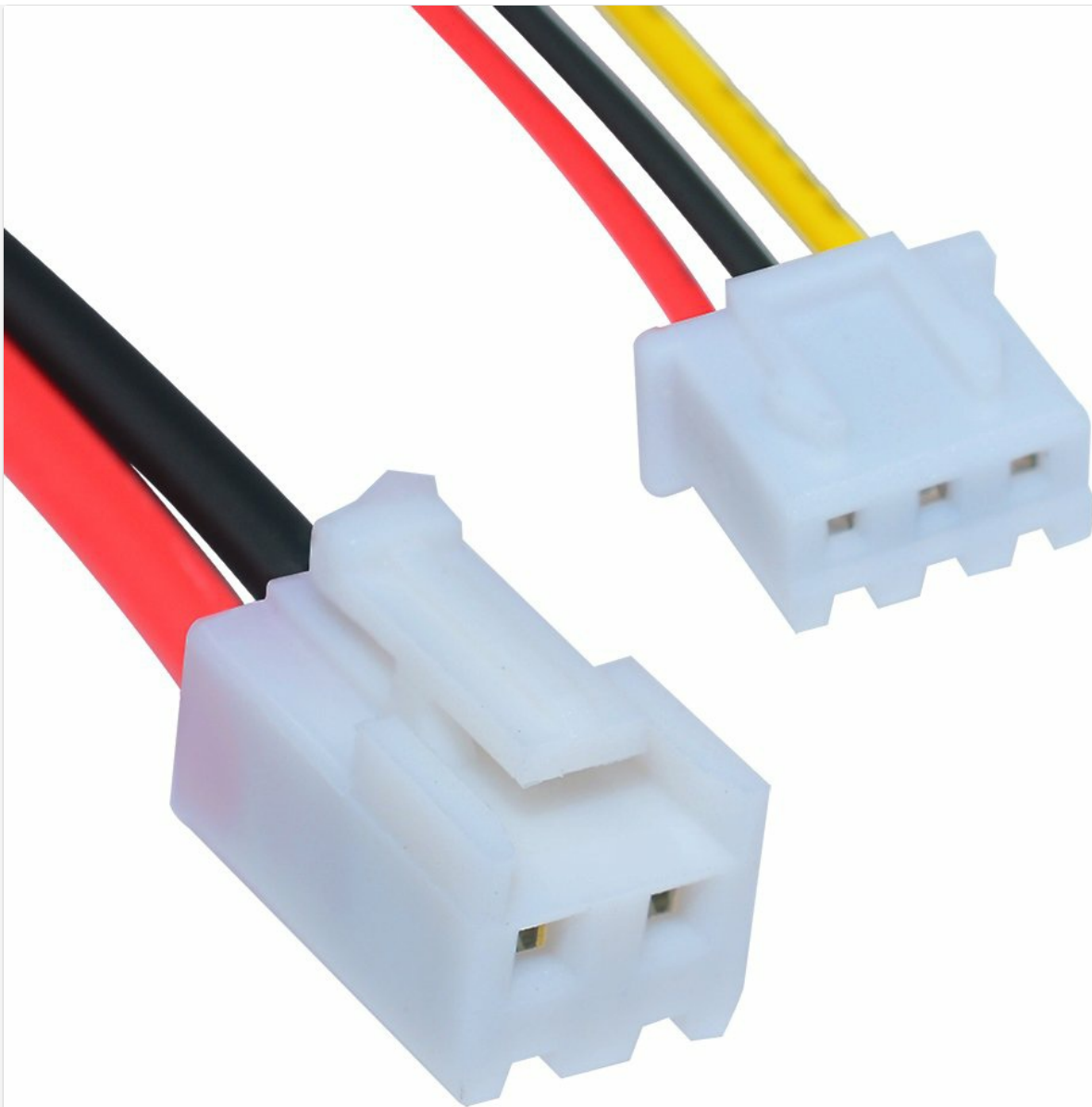


Image 5.2: Close-up view of the connectors. The smaller connector typically handles the meter's power and voltage sensing, while the larger connector is for current measurement.

6. OPERATING INSTRUCTIONS

Once properly wired and powered, the diymore digital voltmeter ammeter will automatically display the measured voltage and current.

- **Voltage Display:** The upper display, typically in blue, shows the DC voltage in Volts (V).
- **Current Display:** The lower display, typically in green, shows the DC current in Amperes (A).
- **Reading Accuracy:** Readings are accurate to 1% (± 1 digit). For precise applications, consider calibration as described in Section 7.
- **Refresh Rate:** The display updates approximately every 300 milliseconds.

7. CALIBRATION

Some units may require calibration for optimal accuracy. The meter typically features two small potentiometers (trim pots) on the Printed Circuit Board (PCB) for adjusting voltage and current readings.



Image 7.1: Internal view of the diymore digital meter. The PCB contains various components, including small potentiometers (trim pots) that can be used for calibration of voltage and current readings.

7.1. Calibration Procedure

1. **Access PCB:** Carefully remove the meter from its casing to access the PCB.
2. **Identify Trim Pots:** Locate the two small potentiometers on the PCB. One is for voltage calibration, and the other is for current calibration. They may be labeled or identifiable by their proximity to voltage/current sensing circuitry.
3. **Connect Reference Meter:** Connect a known accurate reference voltmeter and ammeter in parallel and series, respectively, with the circuit being measured by the diymore meter.
4. **Adjust Voltage:** Apply a stable DC voltage (e.g., 12V or 24V) within the meter's range. Using a small screwdriver, carefully turn the voltage trim pot until the diymore meter's voltage reading matches the reference voltmeter.
5. **Adjust Current:** Apply a stable DC current (e.g., 1A or 5A) through the diymore meter. Using a small screwdriver, carefully turn the current trim pot until the diymore meter's current reading matches the reference ammeter.
6. **Reassemble:** Once calibrated, carefully reassemble the meter into its casing.

Caution: Exercise extreme care when handling the exposed PCB to avoid electrostatic discharge or damage to components.

8. MAINTENANCE

The diymore digital voltmeter ammeter is designed for low maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Use a soft, dry cloth to clean the display and casing. Do not use abrasive cleaners or solvents.
- **Environmental Protection:** Keep the device away from direct sunlight, excessive heat, moisture, and corrosive environments.
- **Connection Integrity:** Periodically check wiring connections to ensure they remain secure and free from corrosion.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display / Meter not powering on	<ul style="list-style-type: none">◦ Incorrect power supply voltage (outside DC 4-30V).◦ Incorrect polarity for meter power wires (thin red/black).◦ Loose or faulty power connections.◦ Meter is damaged.	<ul style="list-style-type: none">◦ Verify power supply is within DC 4-30V.◦ Check thin red and black wire polarity.◦ Ensure all connections are secure.◦ Replace meter if damaged.
Inaccurate voltage or current readings	<ul style="list-style-type: none">◦ Meter requires calibration.◦ Incorrect wiring for measurement.◦ External interference.	<ul style="list-style-type: none">◦ Perform calibration as described in Section 7.◦ Review wiring diagram (Section 5.1) for correct connections.◦ Ensure meter is not near strong electromagnetic fields.
Current reading is 0A or incorrect	<ul style="list-style-type: none">◦ Ammeter not wired in series with the load.◦ Thick red/black wires incorrectly connected.◦ No current flowing through the load.	<ul style="list-style-type: none">◦ Ensure the thick wires are in series with the positive line to the load.◦ Verify thick wire polarity and connection points.◦ Check if the load is functioning and drawing current.
Voltage reading is 0V or incorrect	<ul style="list-style-type: none">◦ Thin yellow wire not connected to the voltage source.◦ No voltage present at the measurement point.	<ul style="list-style-type: none">◦ Connect the thin yellow wire to the positive point of voltage measurement.◦ Verify voltage presence with a multimeter.

10. WARRANTY AND SUPPORT




diymore products are designed for reliability and performance. While specific warranty details are not provided in this manual, standard return policies typically apply for products purchased through authorized retailers. For technical assistance, troubleshooting beyond this manual, or inquiries regarding product functionality, please contact diymore customer support through your point of purchase or visit the official diymore brand store online.

Online Resources:

- Official diymore Store: [diymore Amazon Store](#)
- User Manual (PDF): [Download PDF Manual](#)

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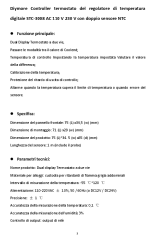
Related Documents - 11286400-00a4-4719-befa-ff5839e3bcaf

	<p>Diymore 0.28-inch Dual Display DC Voltmeter Ammeter 100V 10A - User Guide</p> <p>Concise guide to wiring and using the Diymore 0.28-inch dual display DC voltmeter and ammeter, capable of measuring up to 100V and 10A. Includes wiring diagrams for different power supply configurations. Supports DC 4-30V power input and DC 0-100V measurement range.</p>
	<p>Operating Instructions for Diymore Adjustable Voltage Regulator</p> <p>Detailed operating instructions and parameter settings for the Diymore Adjustable Voltage Regulator DC Buck Boost Converter, covering voltage and current adjustment, protection settings, and calibration.</p>
	<p>5918 Digital Voltage Meter User Manual</p> <p>User manual for the 5918 Digital Voltage Meter by diymore. Covers product parameters, description, key functions, and detailed setup instructions for various battery types (ternary lithium, iron-lithium, lead-acid) and custom voltage/backlight settings.</p>



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