KETOTEK B0BD41MQSN

KETOTEK DC 100A Digital Ammeter Voltmeter User Manual

Model: B0BD41MQSN

1. Introduction

This KETOTEK Digital Ammeter Voltmeter is designed to measure DC voltage, current, active power, and energy consumption. It features a clear LCD display with backlight and includes functions such as voltage alarm, energy reset, and data storage upon power loss. This device is suitable for monitoring various DC electrical systems, including batteries, solar setups, and electric bicycle generators. It is intended for indoor use only.

Image 1.1: KETOTEK DC 100A Digital Ammeter Voltmeter with included 100A shunt.

2. Product Features

- **4-in-1 Measurement:** Measures DC voltage, current, active power, and energy.
- **Wide Measuring Range:**
  - Voltage: DC 6.5V to 100V
  - Current: 0A to 100A
  - Active Power: 0kW to 10kW
  - Energy: 0kWh to 9999kWh
- **LCD Display:** Large, clear LCD with blue backlight for easy reading.
- **Voltage Alarm:** User-settable voltage alarm threshold.
- **Energy Reset:** Function to clear accumulated energy data.
- **Data Storage:** Automatically saves data when power is off.
- **Included Shunt:** Comes with a 100A/75mV shunt for current measurement.

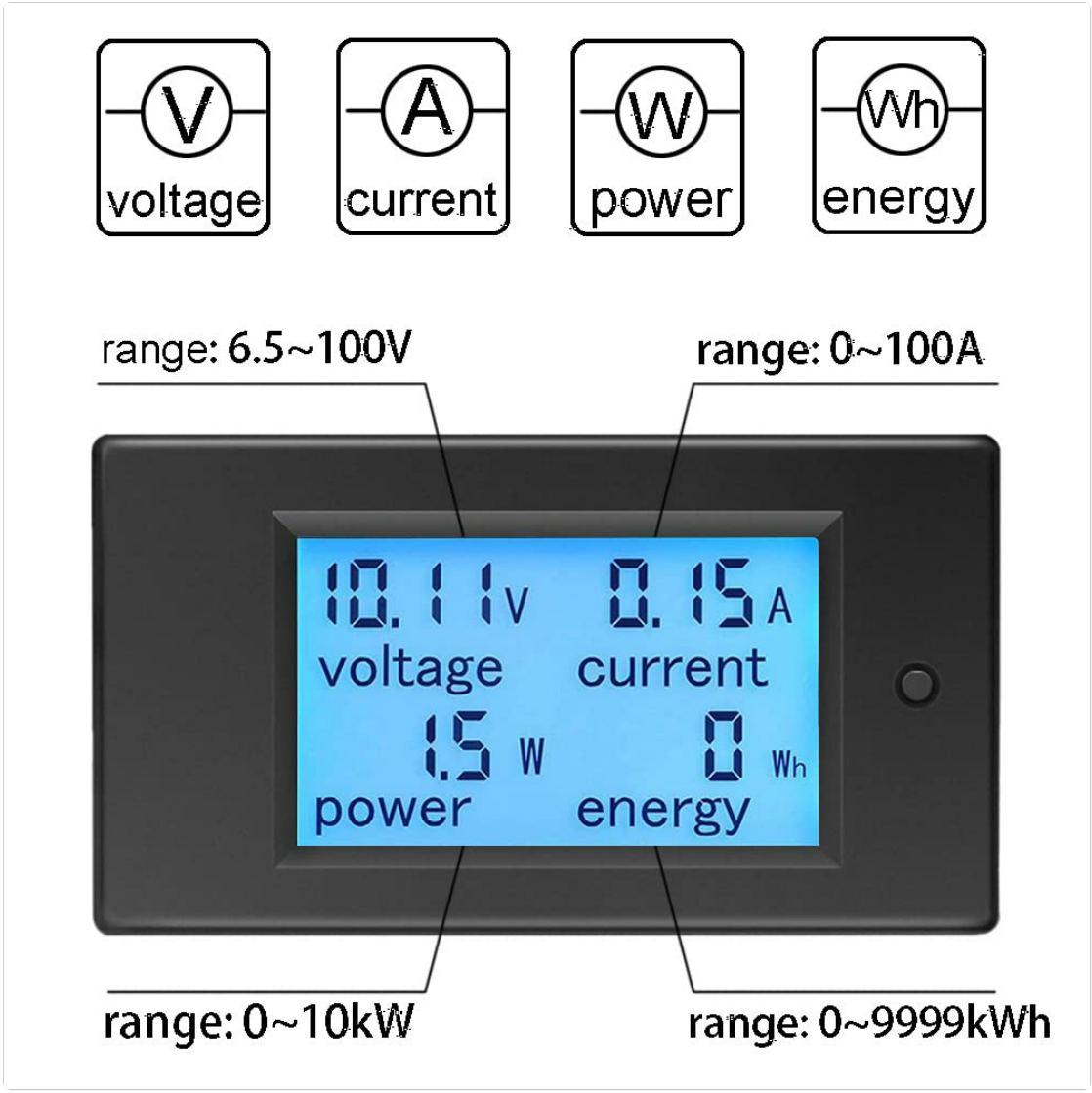

Image 2.1: The meter's LCD display indicating measurement types and their respective ranges.

3. Package Contents

The product package includes the following items:

- 1 x KETOTEK DC Multimeter
- 1 x 100A/75mV Shunt
- 1 x User Manual (English)

Image 3.1: The 100A/75mV shunt, an essential component for current measurement.

4. Specifications

Parameter	Value
Brand	KETOTEK
Model Number	B0BD41MQSN
Voltage Measurement Range	DC 6.5V - 100V
Current Measurement Range	0A - 100A
Active Power Measurement Range	0kW - 10kW
Energy Measurement Range	0kWh - 9999kWh
Minimum Operating Voltage	6.5V DC
Display Type	LCD with Backlight

Parameter	Value
Dimensions (Approx.)	89.6mm x 49.6mm x 24.4mm (L x W x D)
Item Weight	7.4 ounces
Power Source	Battery Powered (from measured circuit)

Image 4.1: Physical dimensions of the KETOTEK DC 100A Digital Ammeter Voltmeter.

5. Installation and Wiring

5.1 Safety Precautions

- Ensure all power is disconnected before attempting any wiring.
- Connect the device strictly according to the provided wiring diagrams. Incorrect wiring can cause damage to the meter or the connected system.
- Do not exceed the rated voltage and current parameters of the device.
- This device is for indoor use only. Avoid exposure to moisture or extreme temperatures.

5.2 Basic Wiring Diagram

The meter requires connection to both the power supply and the load through the 100A/75mV shunt. The shunt is critical for accurate current measurement.

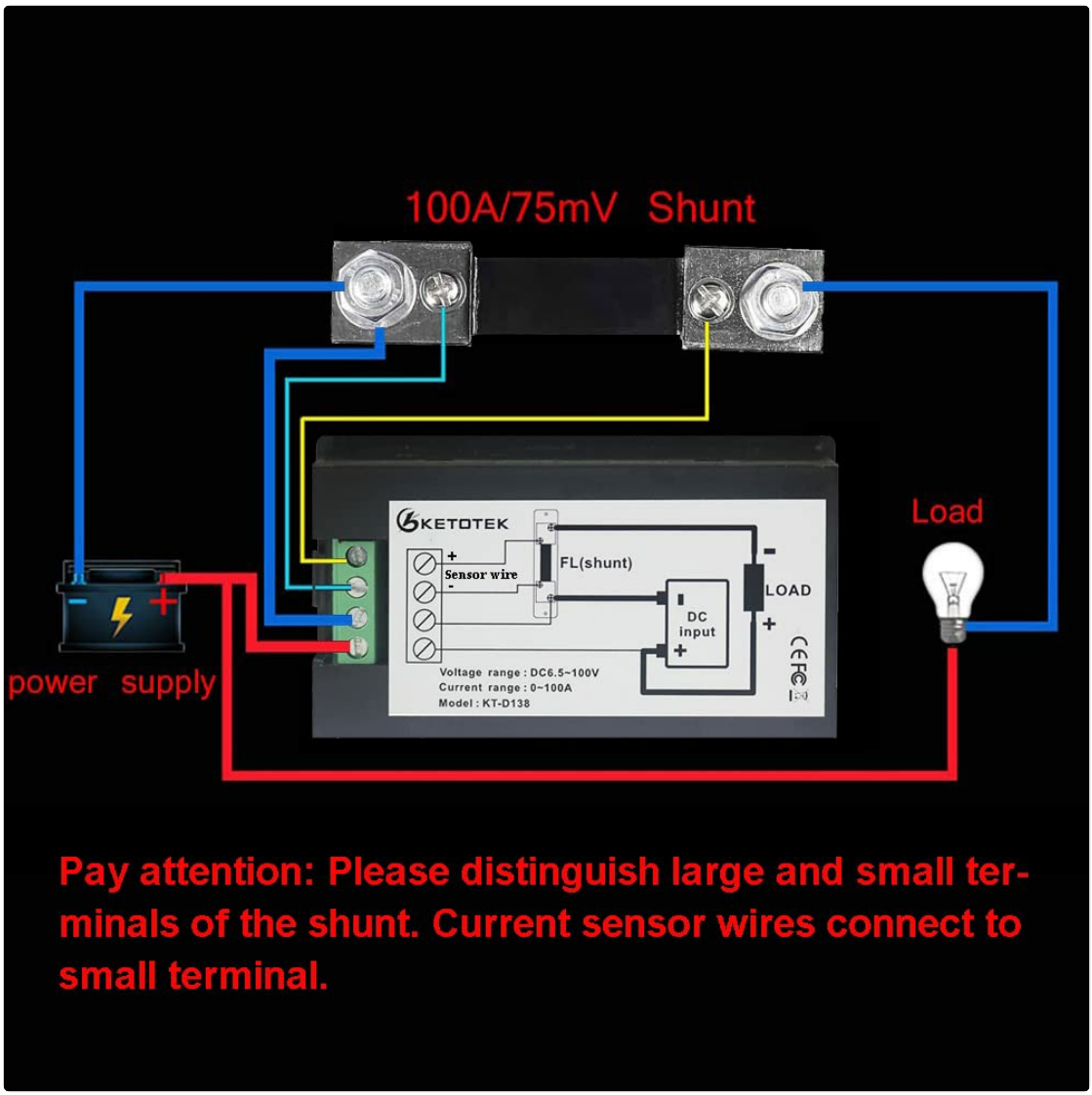

Image 5.1: Basic wiring diagram showing connections between power supply, shunt, meter, and load. Note the distinction between large and small terminals on the shunt; current sensor wires connect to the small terminals.

Important: Distinguish between the large and small terminals of the shunt. The current sensor wires must connect to the small terminals for proper operation.

5.3 Solar System Wiring Example

The KETOTEK meter can be integrated into various points of a solar power system to monitor different aspects of performance. Below are examples of how to connect the KT-D138 model to monitor charging, discharging, power generation, and load usage.

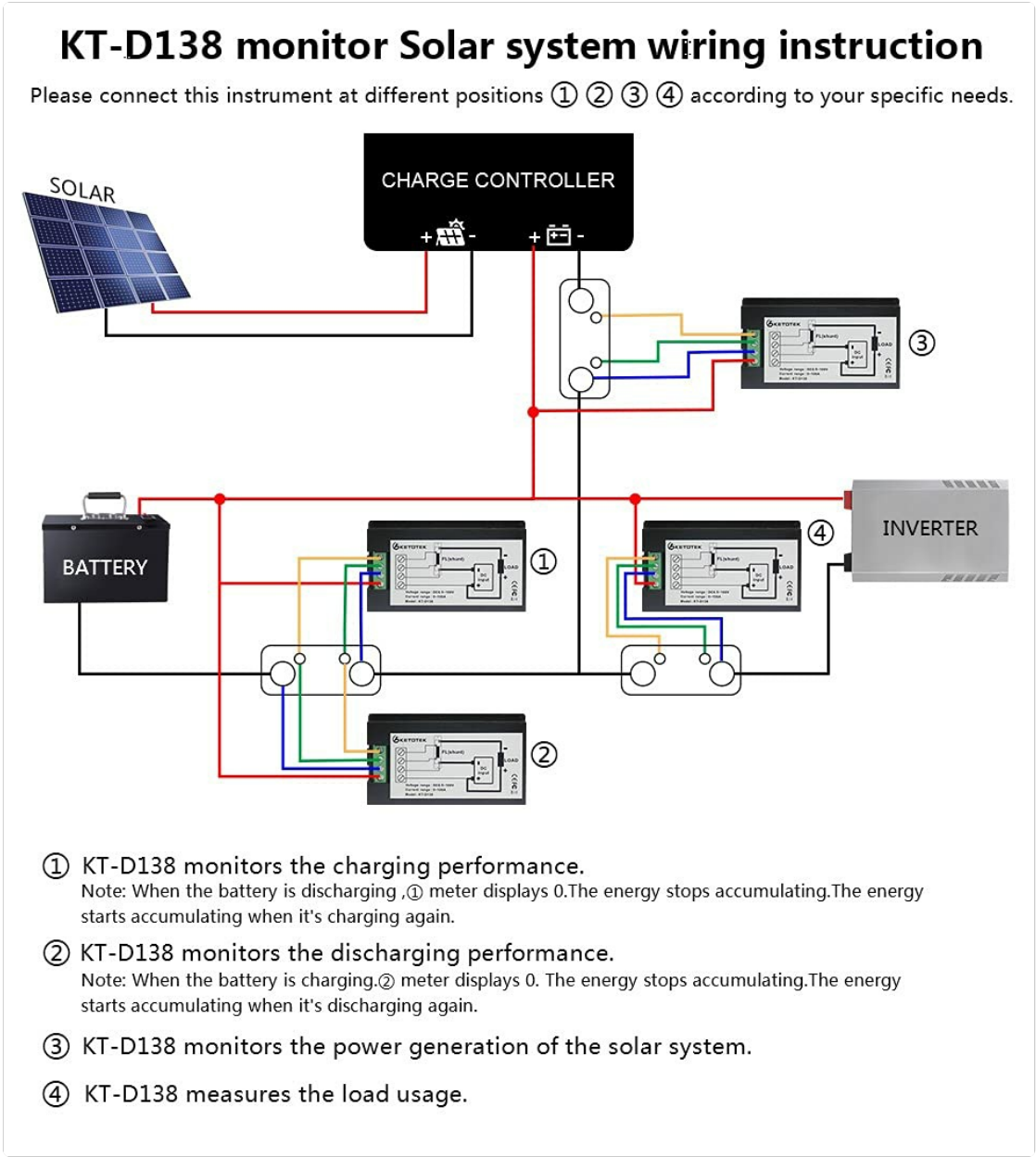

Image 5.2: Diagram illustrating four different connection points (1, 2, 3, 4) for the KT-D138 meter within a solar system, allowing monitoring of charging, discharging, power generation, and load usage.

1. **Position 1:** Monitors charging performance. When the battery is discharging, the meter displays 0. Energy accumulation stops until charging resumes.
2. **Position 2:** Monitors discharging performance. When the battery is charging, the meter displays 0. Energy accumulation stops until discharging resumes.
3. **Position 3:** Monitors the power generation of the solar system.
4. **Position 4:** Measures the load usage.

6. Operating Instructions

The meter features a single button on the right side of the display for various functions.

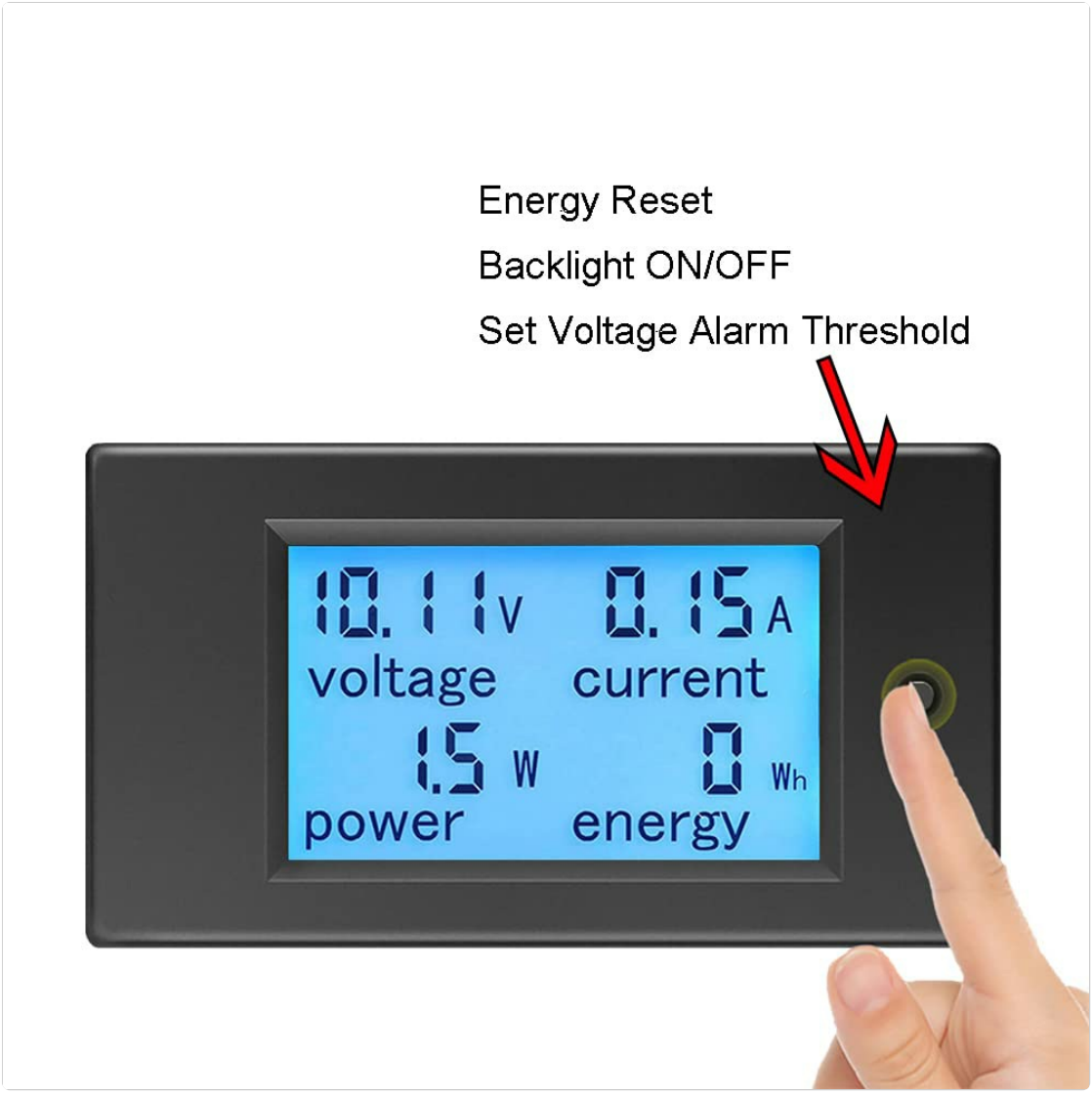

Image 6.1: The meter's button and its associated functions: Energy Reset, Backlight ON/OFF, and Set Voltage Alarm Threshold.

- **Backlight Control:** Briefly press the button to toggle the backlight ON or OFF.
- **Energy Reset:** Press and hold the button for 5 seconds until the energy value (Wh) flashes. Release the button, then briefly press it again to reset the energy accumulation to zero.
- **Voltage Alarm Threshold Setting:**
    1. Press and hold the button for 3 seconds until the voltage value flashes. This indicates entry into the voltage alarm setting mode.
    2. Briefly press the button to adjust the voltage alarm threshold value. Each press increases the value.
    3. After setting the desired value, press and hold the button for 5 seconds to save the setting and exit the setting mode.
- **Data Storage:** The meter automatically stores the last measured energy data when power is removed. This data is retained until manually reset.

7. Maintenance

- Keep the device clean and dry. Use a soft, dry cloth to wipe the display and casing.
- Avoid exposing the meter to direct sunlight, high humidity, or corrosive environments.
- Do not attempt to disassemble or modify the device, as this will void any warranty and may cause damage or injury.
- Store the meter in a cool, dry place when not in use.

8. Troubleshooting

- **Meter does not power on:**
  - Check all wiring connections to ensure they are secure and correct.
  - Verify that the input voltage is within the specified range (DC 6.5V - 100V).
  - Ensure the power supply is active.
- **Incorrect current reading:**
  - Confirm that the 100A/75mV shunt is correctly installed in series with the load.
  - Ensure the current sensor wires are connected to the small terminals of the shunt.
  - Check for loose connections at the shunt or meter terminals.
- **Display is dim or flickering:**
  - Ensure the input voltage is stable and within the operating range.
  - Briefly press the button to check if the backlight was turned off.
- **Energy (Wh) value does not reset:**
  - Follow the energy reset procedure carefully: press and hold for 5 seconds until flashing, then briefly press again.

9. Safety Information

- Always wear appropriate personal protective equipment (PPE) when working with electrical systems.
- Ensure proper insulation for all wiring to prevent short circuits.
- Do not touch live wires or terminals.
- If you are unsure about any wiring or installation steps, consult a qualified electrician.
- Keep the device out of reach of children.

10. Warranty and Support

KETOTEK products are designed for reliability and performance. For warranty information, please refer to the terms and conditions provided at the time of purchase or contact KETOTEK customer support.

If you encounter any issues or have questions regarding the installation or operation of your KETOTEK Digital Ammeter Voltmeter, please contact our customer support team for assistance. Please have your model number (B0BD41MQSN) ready when contacting support.