

KWS-DC26 DC Power Meter Battery Load Tester User Manual

Model: KWS-DC26

1. INTRODUCTION

The KWS-DC26 DC Power Meter is a high-precision instrument designed for measuring voltage, current, power, and energy consumption in direct current (DC) circuits. It is suitable for various applications including battery performance testing, solar system monitoring, and electric vehicle charging station analysis. This device features a high-precision color LCD display, multiple alarm indicators, bidirectional measurement capabilities, and data logging for comprehensive analysis and reliable operation.

2. SAFETY INFORMATION

- Read all instructions carefully before operating the device.
- Ensure all connections are secure and correct before applying power. Incorrect wiring can damage the device or connected equipment.
- Do not exceed the specified voltage and current limits to prevent damage and ensure safety.
- Avoid exposing the device to water, moisture, or extreme temperatures.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- Keep the device away from children.

3. PRODUCT OVERVIEW

The KWS-DC26 DC Power Meter provides real-time monitoring of various electrical parameters through its clear color LCD display. It is designed for ease of use and high reliability in diverse DC power applications.



Figure 3.1: KWS-DC26 DC Power Meter displaying various electrical parameters.

Key features include:

- **Color LCD Display:** Provides clear, simultaneous readings of voltage, current, power, energy, ampere-hours, watt-hours, time, and temperature.
- **Bidirectional Measurement:** Capable of measuring both charge and discharge currents and energy.
- **Multiple Alarm Indicators:** Alerts for overvoltage, overcurrent, and overtemperature conditions.
- **Data Logging:** Features power failure memory to retain recorded data.
- **Temperature Monitoring:** Includes a thermostat for real-time temperature monitoring to prevent overheating.

Electric Vehicle Charger Tester

Bidirectional Measurement

Voltage 8-80V

Current 0-50A



Figure 3.2: KWS-DC26 functioning as an electric vehicle charger tester.

4. SPECIFICATIONS

Parameter	Specification
Model	KWS-DC26
Voltage Measurement Range	DC 8-80V $\pm 1\% + 0.5V$
Current Measurement Range	0-20A/50A $\pm 1\% + 0.2A$ (Connector dependent)
Power Measurement Range	0-4000W $\pm 1\% + 2W$
Energy Range	0-99999Wh
Ampere-Hour Range	0-99999Ah
Timer Range	0-99 days 59 hours
Temperature Range	-20°C to 99°C $\pm 2\%$
Display Size	51 x 30mm color LCD
Power Failure Memory	Yes
Protections	Overvoltage, Overcurrent, Overtemperature
Power Compensation	Yes
Time Clear Function	Yes
Product Dimensions	3.94 x 3.15 x 1.57 inches
Item Weight	3.53 ounces (100 Grams)

5. SETUP

The KWS-DC26 DC Power Meter is designed for easy integration into various DC systems. It comes with different connector types to suit your application.



Figure 5.1: KWS-DC26 with XT60 connectors.

Connection Instructions:

1. **Identify Connectors:** The meter is available with various connectors such as XT60, XT90, or Anderson. Ensure you have the correct version for your application.
2. **Connect to Power Source:** Connect the input side of the KWS-DC26 to your DC power source (e.g., battery, solar panel output). Observe correct polarity (positive to positive, negative to negative).
3. **Connect to Load:** Connect the output side of the KWS-DC26 to your DC load (e.g., electric vehicle, outdoor power source, device under test). Again, ensure correct polarity.
4. **Thermostat Connection:** If temperature monitoring is desired, connect the provided thermostat probe to the designated port on the meter and place the probe near the component whose temperature you wish to monitor.

Compatible with Various Devices

Precisely displays remaining battery power. Suitable for electric vehicles, outdoor power sources, and other models.



Figure 5.2: KWS-DC26 compatible with various devices like outdoor power sources and electric vehicles.

6. OPERATING INSTRUCTIONS

Once connected, the KWS-DC26 will automatically power on and display real-time measurements on its color LCD screen.

Display Interpretation:

- **Voltage (V):** Displays the current DC voltage.
- **Current (A):** Shows the current flowing through the circuit. The arrows indicate the direction of current flow (bidirectional).

- **Power (W):** Indicates the instantaneous power consumption or generation.
- **Energy (Wh):** Accumulates the total watt-hours consumed or generated.
- **Ampere-Hours (Ah):** Accumulates the total ampere-hours consumed or generated.
- **Time:** Displays the elapsed time of measurement.
- **Temperature (°C):** Shows the temperature detected by the connected thermostat probe.

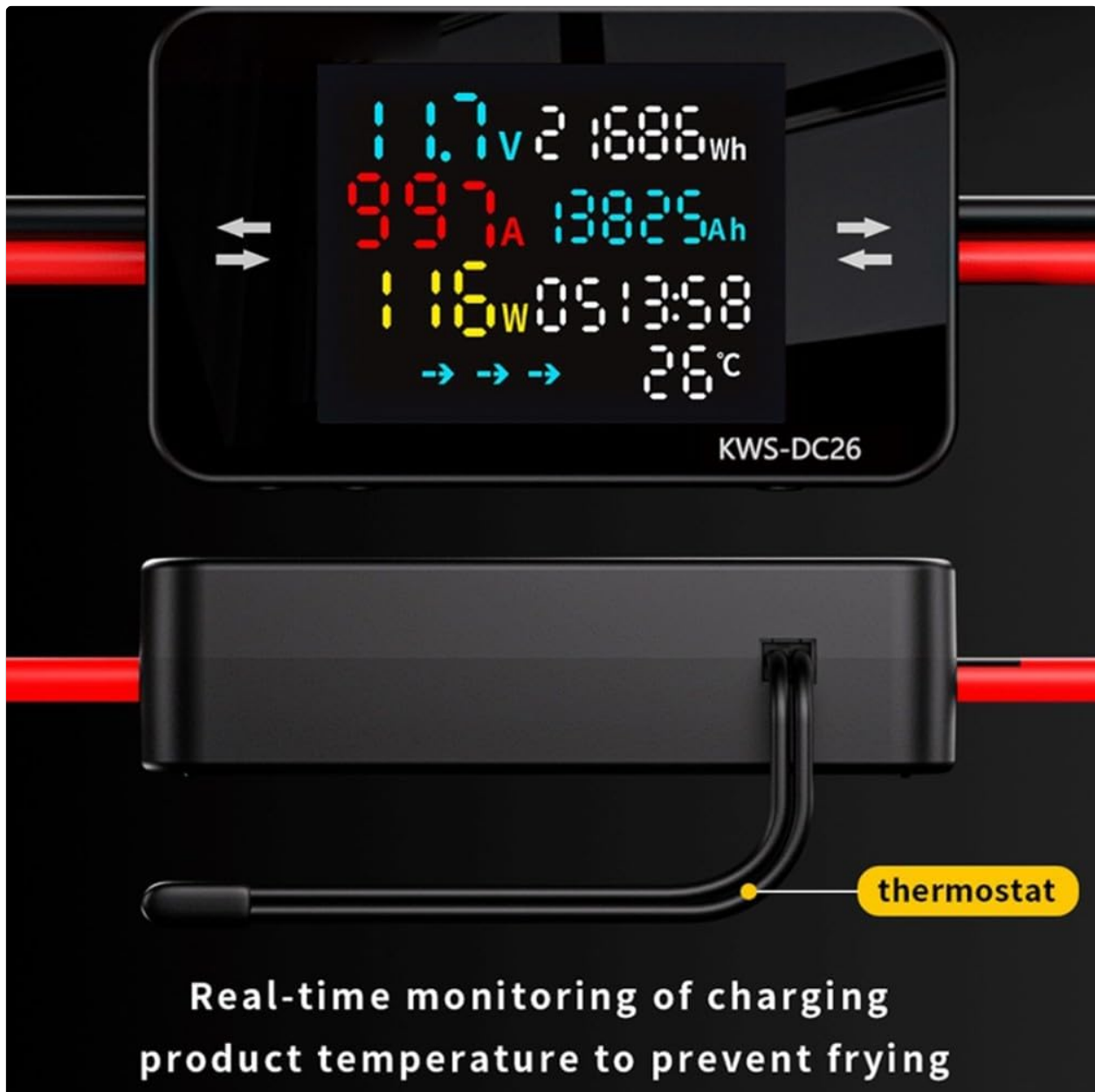


Figure 6.1: Real-time temperature monitoring with thermostat.

Functions:

- **Bidirectional Measurement:** The meter automatically detects and displays the direction of current flow, useful for charging and discharging cycles.
- **Alarm Indicators:** The device will provide visual alerts on the display if voltage, current, or temperature exceed predefined safe limits.
- **Data Logging (Power Failure Memory):** The accumulated energy (Wh, Ah) and time data are saved even if power is interrupted.
- **Power Compensation:** This feature helps maintain measurement accuracy under varying load conditions.

- **Time Clear:** Allows resetting the accumulated time measurement. Refer to the device's physical buttons for specific operation.

7. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your KWS-DC26 DC Power Meter.

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Inspection:** Periodically inspect the connectors and cables for any signs of wear or damage. Replace damaged components immediately.

8. TROUBLESHOOTING

If you encounter issues with your KWS-DC26, refer to the following common troubleshooting steps:

- **Display is Blank:** Ensure the device is properly connected to a DC power source within the specified voltage range (8-80V). Check all cable connections for security.
- **Incorrect Readings:** Verify that the connections are correct and that the device is operating within its specified voltage and current ranges. Ensure proper polarity.
- **Alarm Triggering:** If an overvoltage, overcurrent, or overtemperature alarm triggers, immediately check the connected system. Reduce the load, verify the power source, or allow the system to cool down as necessary.
- **Data Not Logging:** The device has power failure memory. If data is not retained, ensure the device is receiving stable power during operation.

If problems persist, contact customer support for further assistance.

9. WARRANTY AND SUPPORT

This KWS-DC26 DC Power Meter is covered by a manufacturer's warranty. Please refer to the product packaging or your purchase documentation for specific warranty terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact the seller or manufacturer through the platform where the product was purchased. Provide your model number (KWS-DC26) and a detailed description of the issue for efficient service.