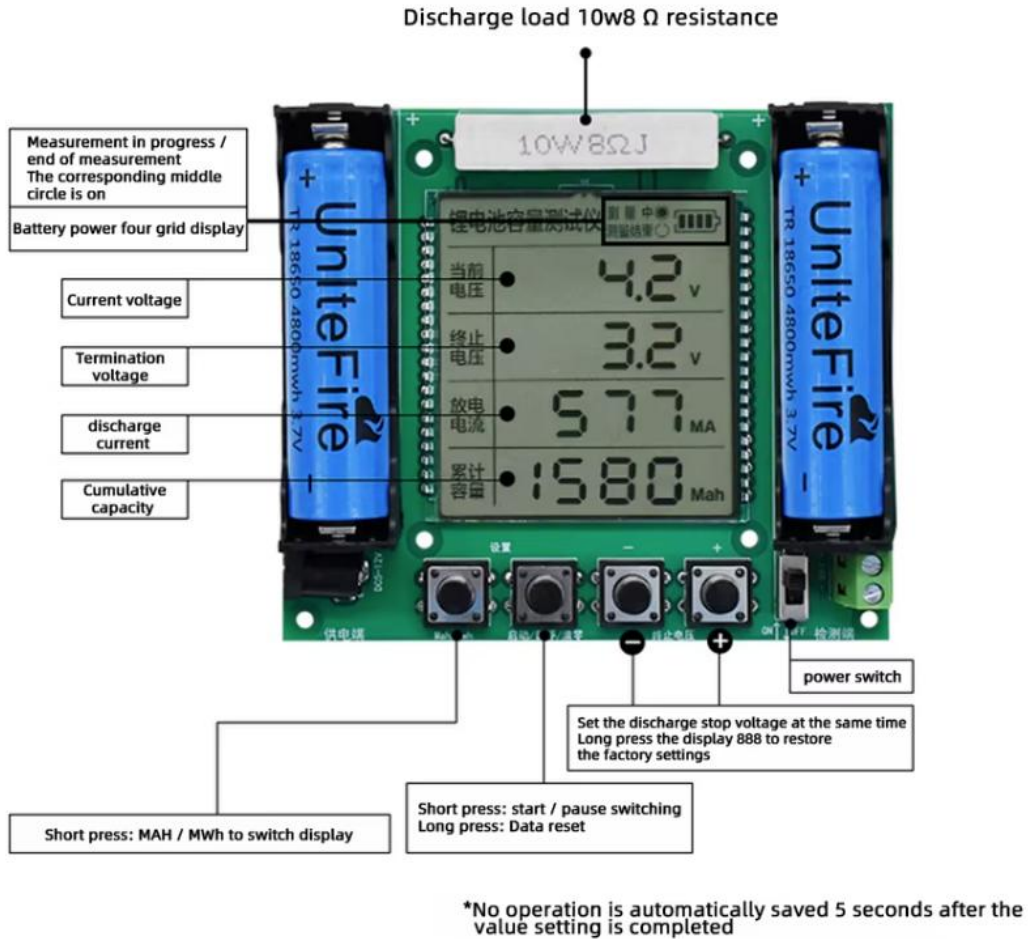


BAT-C-18650-M239 18650 Lithium Battery True Capacity Tester – High-Precision Digital Measurement

Instruction Manual



I. Product Use

About 18650 Battery

- The minimum discharge stop voltage for 18650 batteries is **2.75V**.
- It is recommended to charge the battery when the voltage drops to **3.24V** (0.875 times the rated voltage).
- Continuing to discharge beyond this can cause rapid voltage drops, potentially damaging the battery due to over-discharge and reducing its lifespan.
- The recommended discharge termination voltage is **3.5V**.
- The standard charging voltage ranges from **4.20V to 4.35V**.

Measurement Time Calculation

To estimate the measurement time:

- Assume the battery capacity is **2000mAh**.
- The discharge current of the tester is approximately **500mA**.
- Using the formula: (**2000mAh - 500mAh = 4 hours**), the estimated measurement time is **4 hours**.

II. Testing the Capacity of 18650 Batteries

Steps for Use:

1. Connect the Power Supply and Battery:

- Attach the **18650 lithium battery** to be tested.
- The screen will display the **current battery voltage (e.g., 4.2V)**.
- Set the **termination voltage** to **3.5V** (recommended) or use the factory default of **3.0V**.

2. Start the Test:

- Press the **Start** button to begin testing.
- The tester discharges the battery at approximately **500mA**.
- You can switch the accumulated capacity display between **mAh (milliamp-hours)** and **mWh (milliwatt-hours)** using the **leftmost button**.

3. Pause or Resume Testing:

- Press the **Start/Pause/Zero** button again to **pause** the test.
- The discharge current will drop to **0mA**.
- Press the **Start** button again to **resume** the test.

4. End of Measurement:

- When the battery voltage reaches the **termination voltage**, the test will end automatically.
- The discharge current will drop to **0mA**.
- The displayed accumulated capacity is the battery's tested capacity.

- If the battery capacity exceeds **9999mAh**, long-press the **Start/Pause/Zero** button to **reset** the accumulated capacity value.

III. Battery Icon Display Interpretation

The battery icon indicates charge levels based on voltage:

- **4 Cells:**
 - **Current voltage** $\geq (\text{Initial voltage} - \text{Set voltage}) \times 75\% + \text{Set voltage}$
- **3 Cells:**
 - **Current voltage** $\geq (\text{Initial voltage} - \text{Set voltage}) \times 50\% + \text{Set voltage}$
- **2 Cells:**
 - **Current voltage** $\geq (\text{Initial voltage} - \text{Set voltage}) \times 25\% + \text{Set voltage}$
- **1 Cell:**
 - **Current voltage** $\geq (\text{Initial voltage} - \text{Set voltage}) \times 10\% + \text{Set voltage}$

This guide ensures proper use of the 18650 Battery Capacity Tester, maximizing battery life and measurement accuracy. Always adhere to recommended settings for optimal results.