Midzooparts XH-M608

Midzooparts XH-M608 Battery Charge/Discharge Integrated Module Voltage Tester User Manual

Model: XH-M608 | Brand: Midzooparts

Introduction

This manual provides detailed instructions for the proper setup, operation, and maintenance of the Midzooparts XH-M608 Battery Charge/Discharge Integrated Module Voltage Tester. Please read this manual thoroughly before using the device to ensure safe and efficient operation.
The XH-M608 is designed for monitoring and controlling the charge and discharge cycles of various batteries within a 6-40V range, featuring an integrated voltage tester and relay output for automated control.

Product Overview

The XH-M608 module is a compact and versatile device for battery management. It features a digital display for voltage readings and three control buttons for setting parameters. The module includes a relay for controlling external charging or discharging circuits.

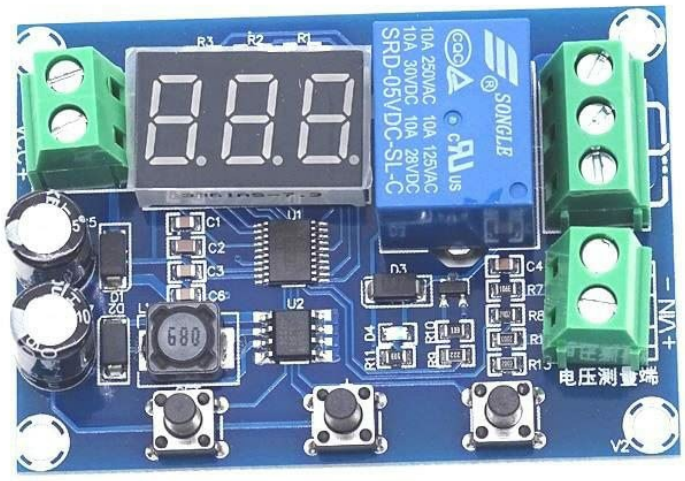

Figure 1: Top view of the XH-M608 module, highlighting the digital display and control interface.

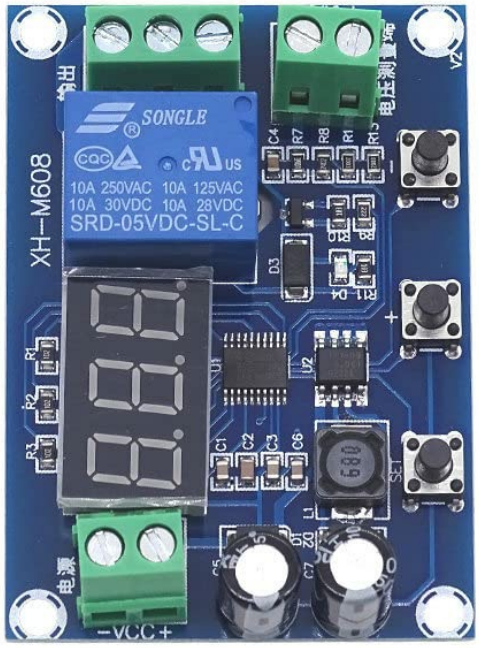

Figure 2: Angled view of the XH-M608 module, showing the model identification.

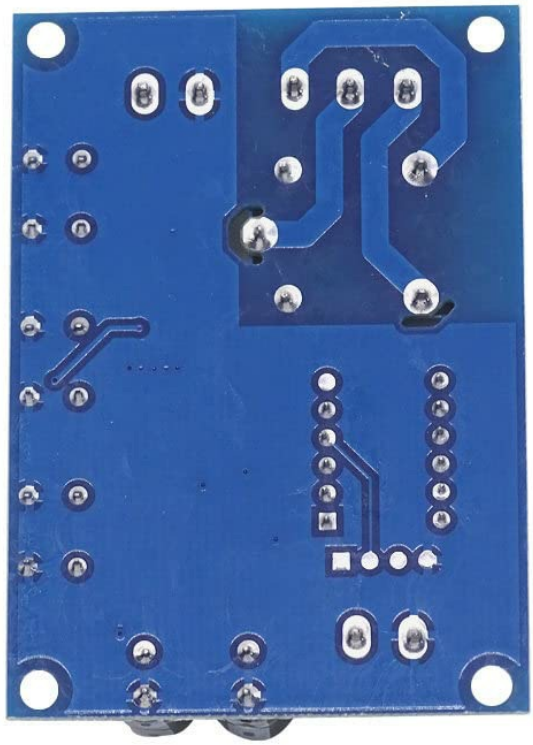

Figure 3: Bottom view of the XH-M608 module, illustrating the PCB traces and mounting holes.

Specifications

Parameter	Value
Product Model	XH-M608
Input Voltage	DC 6-40V
Voltage Measurement Error	±0.1V
Application Range	6-40V batteries
Output Type	Relay Output
Dimensions (L x W x H)	66 x 46 x 16 mm
Weight	35 grams
Mounting Hole Diameter	3.3 mm

Setup and Wiring

Before connecting the module, ensure all power sources are disconnected. Incorrect wiring can damage the module or connected components.

1. **Power Connection:** Connect the DC 6-40V power supply to the input terminals labeled**VCC+** and **VCC-**. Observe polarity.
2. **Battery Connection:** Connect the battery to be monitored to the terminals labeled**BAT+** and **BAT-**. These terminals are typically used for voltage sensing.
3. **Relay Output:** The module features a relay output. Connect your charging or discharging circuit to the relay terminals. The relay acts as a switch, controlling the power flow to your external device based on the set voltage parameters. Refer to the module's PCB for specific relay contact labels (e.g., NO, NC, COM).

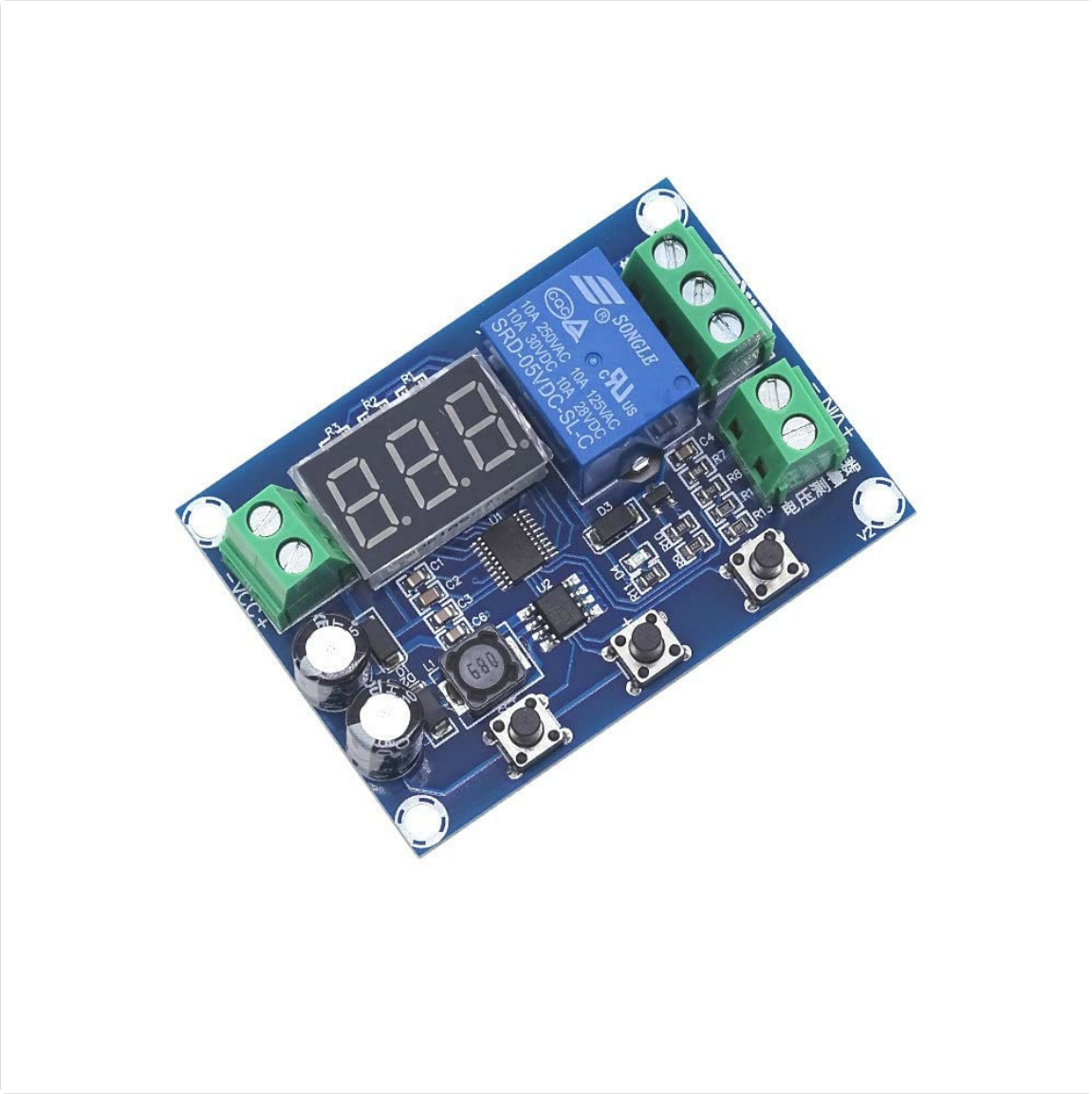

Figure 4: Connection points on the XH-M608 module for power, battery, and relay output.

Operating Instructions

The XH-M608 module uses three buttons for operation: **SET**, **ADD** (Plus), and **DEC** (Minus).

Power On and Initial Display

Upon powering on, the module will display the current voltage. This is the normal display mode.

Parameter Setting Mode (P0, P1, P2, P3)

1. From the normal display, short press the **SET** button to enter the parameter selection mode. The display will show "P0".
2. Use the **ADD** or **DEC** buttons to cycle through P0, P1, P2, P3.
3. Once the desired parameter (P0, P1, P2, or P3) is displayed, short press **SET** again to enter its sub-menu for adjustment.

P0: Mode Selection

- Enter P0 sub-menu (short press **SET** when P0 is displayed). The display will show "U".
- Use **ADD** or **DEC** to switch between modes:
  - **U**: Undervoltage protection mode.
  - **P**: Overvoltage protection mode.
  - **C**: Charge control mode.
  - **D**: Discharge control mode.

P1: Lower Voltage Limit Setting

- Enter P1 sub-menu (short press **SET** when P1 is displayed). The display will show a voltage value (e.g., "12.0").
- Use **ADD** or **DEC** to adjust the lower voltage limit.
  - Short press for slow adjustment.
  - Long press for rapid adjustment.

P2: Upper Voltage Limit Setting

- Enter P2 sub-menu (short press **SET** when P2 is displayed). The display will show a voltage value (e.g., "14.5").
- Use **ADD** or **DEC** to adjust the upper voltage limit.
  - Short press for slow adjustment.
  - Long press for rapid adjustment.

P3: Voltage Correction/Calibration

- Enter P3 sub-menu (short press **SET** when P3 is displayed). The display will show a value (e.g., "A.00"). The decimal point will not blink.
- Use **ADD** or **DEC** to adjust the voltage correction value. This allows for fine-tuning the voltage reading if it deviates from a known accurate measurement.
  - Short press for slow adjustment.
  - Long press for rapid adjustment.

Quick View Functions (Normal Display)

- **View Lower Voltage Limit:** From normal display, short press **ADD**. The display will show the set lower voltage limit. Short press **SET** to return to normal display.
- **View Upper Voltage Limit:** From normal display, short press **DEC**. The display will show the set upper voltage limit. Short press **SET** to return to normal display.
- **Countdown Timer (if applicable):** From normal display, long press **DEC** to display the countdown time.
  - Short press **SET** to start the countdown (decimal point flashes).
  - Long press **SET** to stop the countdown and display the set countdown time (decimal point stops flashing).
- **Return to Normal Display:** From any non-menu parameter display, long press **ADD** to return to the normal voltage display.

Maintenance

The XH-M608 module is designed for low maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents.
- **Environment:** Operate the module in a dry environment, away from excessive moisture, extreme temperatures, and corrosive substances.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Inspection:** Visually inspect the module for any signs of physical damage, such as cracked components or burnt traces.

Troubleshooting

Problem	Possible Cause	Solution
Module does not power on.	Incorrect power supply voltage or polarity. Loose connections.	Verify input voltage is within DC 6-40V. Check power supply polarity. Ensure all power connections are secure.
Voltage reading is inaccurate.	Calibration error. External interference.	Use the P3 parameter to calibrate the voltage reading against a known accurate voltmeter. Ensure stable power supply.
Relay does not activate/deactivate as expected.	Incorrect P0 mode selection. Incorrect P1/P2 voltage limits. Faulty relay.	Verify the P0 mode (U, P, C, D) is set correctly for your application. Check P1 (lower limit) and P2 (upper limit) settings. Test the relay functionality.

Problem	Possible Cause	Solution
Buttons are unresponsive.	Module frozen. Physical damage to buttons.	Disconnect and reconnect power to reset the module. Inspect buttons for physical damage.

Note: Light shooting and different displays may cause the color of the item in the picture to differ slightly from the real product. The measurement allowed error is +/- 1-3cm for physical dimensions.

Warranty and Support

Midzooparts products are manufactured to high-quality standards. For warranty information or technical support, please contact your retailer or the manufacturer directly. Please have your product model (XH-M608) and purchase details ready when seeking support.
For further assistance, you may refer to the official Midzooparts website or contact their customer service department.