ATUUKOPC H56CH

ATUUKOPC H56CH LCD Digital Coulomb Meter User Manual

Model: H56CH (300A)

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the ATUUKOPC H56CH LCD Digital Coulomb Meter. This device is designed for precise bidirectional detection of battery parameters, including voltage, current, power, capacity, and charging/discharging time, compatible with various battery types within a DC 9-100V range. Please read this manual thoroughly before use to ensure correct operation and to prevent damage.

Figure 1: ATUUKOPC H56CH LCD Digital Coulomb Meter with its external shunt sensor.

2. Product Features

- Bidirectional precise detection for accurate measurements.
- Compatible with all battery types within the specified voltage range.
- Isolated measurement design to protect the original circuit.
- Simple installation and convenient wiring.
- Efficient and stable performance with a long operational life.
- Equipped with high-end polymer chips, high-precision circuit boards, and processors for reliable data.
- Real-time display of battery parameters: battery percentage, battery capacity (Ah), voltage (V), current (A), power (W), and charging/discharging time.

Figure 2: The H56CH meter displaying various battery parameters including percentage, capacity, voltage, current, power, and time.

3. Package Contents

- H56CH LCD Digital Coulomb Meter (Display Unit) x 1
- External Shunt Sensor (300A) x 1

4. Specifications

Parameter	Value
Working Voltage	DC 9-100V
Current Range	300A (Specific to this model)
Capacity Range	0-99999Ah
Working Current	7.5mA
Backlight Off Current	3.5mA

Parameter	Value
Voltage Accuracy	1% (± 1 word)
Current Accuracy	1% (± 1 word)
External Dimensions (Meter)	79 x 43 x 27mm
Opening Size (Panel Cutout)	76.5 x 39.5mm
Display Size	49 x 24mm
Sensor Size (Shunt)	55 x 49 x 15mm
Backlight Color	Green
Working Temperature	-10°C to 65°C

Figure 3: Detailed dimensions of the H56CH Coulomb Meter and its external shunt sensor.

5. Panel Description

The H56CH Coulomb Meter features a clear LCD display and three control buttons for navigation and

settings adjustment. Refer to the diagram below for an overview of the display elements and button functions.

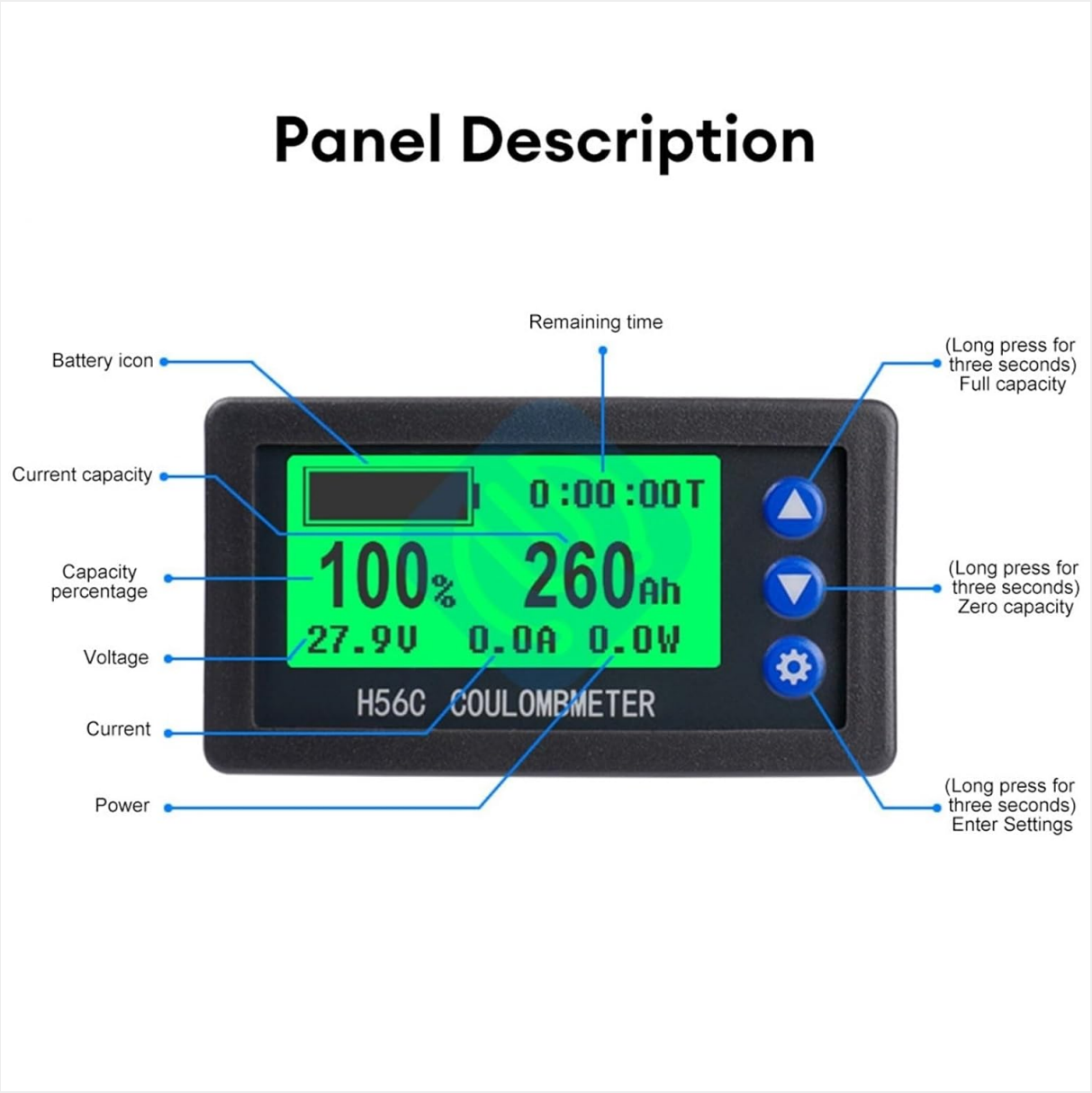

Figure 4: Front panel description of the H56CH Coulomb Meter, indicating display elements and button controls.

- **Battery Icon:** Indicates the current battery charge level visually.
- **Remaining Time:** Displays the estimated time remaining for charging or discharging.
- **Current Capacity (Ah):** Shows the current Amp-hour capacity.
- **Capacity Percentage (%):** Displays the battery's state of charge as a percentage.
- **Voltage (V):** Indicates the real-time battery voltage.
- **Current (A):** Shows the real-time current flow (charging or discharging).
- **Power (W):** Displays the real-time power consumption or generation.
- **Up Button (▲):** Short press for one second to modify setting values. Long press for three seconds to set full capacity.
- **Down Button (▼):** Short press for one second to select addition and subtraction positions in settings. Long press for three seconds to set zero capacity.
- **Settings Button (⚙):** Long press for three seconds to enter settings. Short press for one second to save and exit settings.

6. Setup

6.1. Installation

The H56CH Coulomb Meter is designed for panel mounting. Follow these steps for installation:

1. Determine the desired mounting location on your equipment panel.
2. Using the specified opening size (76.5 x 39.5mm), create a rectangular hole in the panel. Refer to Figure 5 for dimensions.
3. Insert the Coulomb Meter into the prepared opening.
4. Secure the meter using the provided buckle, pressing firmly to ensure it is tightly fastened.

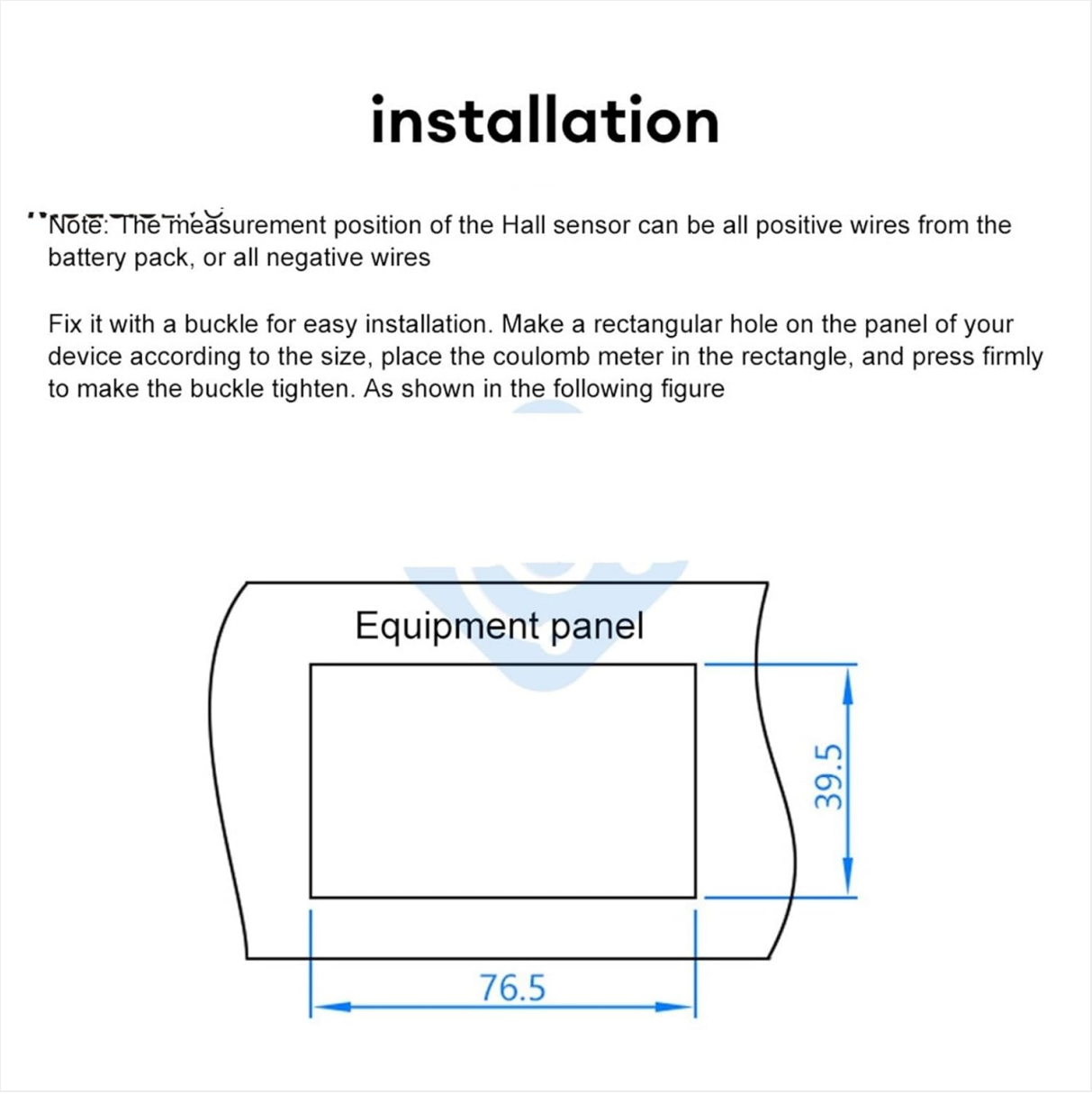

Figure 5: Panel cutout dimensions for installing the H56CH Coulomb Meter.

6.2. Wiring Diagram

Proper wiring is crucial for accurate measurement and safe operation. The Hall sensor (shunt) must be installed on either the positive or negative wire of the battery pack. Ensure all connections are secure.

Figure 6: Wiring schematic for connecting the H56CH Coulomb Meter, shunt sensor, battery, load, and charger.

- Connect the **PW+** terminal of the meter to the positive terminal of the battery.
- Connect the **GND** terminal of the meter to the negative terminal of the battery.
- Install the external Hall sensor (shunt) on either the main positive or main negative wire of the battery system. This sensor measures the current flowing through it.
- Connect the small wire harness from the Hall sensor to the corresponding port on the back of the H56CH meter.
- Ensure that the load and charger are connected to the battery system as shown in the diagram, with all current passing through the Hall sensor for accurate measurement.

Important Note: The measurement position of the Hall sensor can be on either the positive or negative wire from the battery pack. Choose a location that allows all current (charging and discharging) to pass through the sensor.

7. Operating Instructions

7.1. Basic Operation

Once powered on and correctly wired, the H56CH meter will display real-time battery parameters. The main display shows battery percentage, capacity, voltage, current, power, and remaining time.

7.2. Accessing and Adjusting Settings

To configure the meter's settings, such as voltage alarms or capacity calibration, follow these steps:

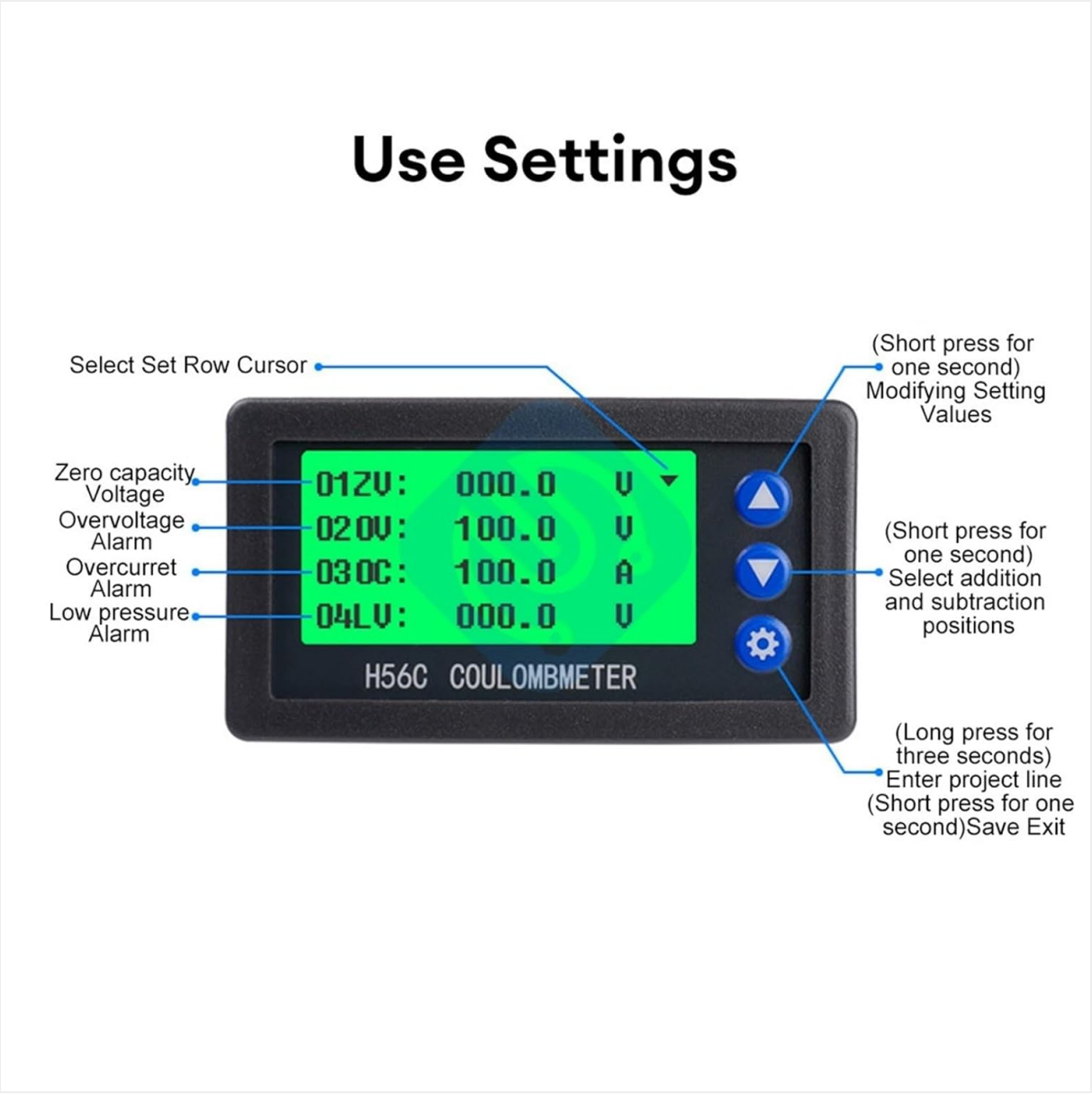

Figure 7: Settings menu interface of the H56CH Coulomb Meter, illustrating navigation and parameter adjustment.

1. **Enter Settings:** Long press the **Settings Button (⚙)** for three seconds to enter the settings menu.
2. **Navigate Settings:** Use the **Up (▲)** and **Down (▼)** buttons to select different setting rows (e.g., 01ZV: Zero capacity voltage, 02OV: Overvoltage Alarm, 03OC: Overcurrent Alarm, 04LV: Low pressure Alarm).
3. **Modify Values:**
    - With a setting row selected, short press the **Up Button (▲)** for one second to modify the value.
    - Short press the **Down Button (▼)** for one second to select the digit position for adjustment (e.g., units, tens, hundreds).
    - Use the **Up (▲)** button to increase the value of the selected digit.
4. **Save and Exit:** After making all desired adjustments, short press the **Settings Button (⚙)** for one second to save the changes and exit the settings menu.
5. **Set Full Capacity:** From the main display, long press the **Up Button (▲)** for three seconds to set the current capacity as full capacity (100%).
6. **Set Zero Capacity:** From the main display, long press the **Down Button (▼)** for three seconds to

set the current capacity as zero capacity (0%).

8. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the display and casing. Avoid using abrasive cleaners or solvents, which can damage the plastic.
- **Storage:** When not in use for extended periods, store the meter in a dry, cool environment, away from direct sunlight and extreme temperatures.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to inaccurate readings or device malfunction.
- **Environmental Conditions:** Operate the meter within its specified working temperature range (-10°C to 65°C) to ensure optimal performance and longevity.

9. Troubleshooting

Problem	Possible Cause	Solution
No display/Power off	No power supply; Incorrect wiring; Loose connection.	Check power input (9-100V DC). Verify wiring according to the diagram. Ensure all connections are secure.
Inaccurate current/capacity readings	Shunt sensor incorrectly installed; Shunt sensor faulty; Incorrect capacity setting.	Ensure all current passes through the shunt. Verify shunt connection to the meter. Calibrate full capacity setting in the menu.
Voltage reading incorrect	Incorrect wiring to battery voltage sense; Meter fault.	Check voltage sense wire connection to battery positive and negative. If problem persists, contact support.
Buttons unresponsive	Temporary software glitch; Physical damage.	Try power cycling the device. If buttons remain unresponsive, contact support.

10. Warranty and Support

Specific warranty information for the ATUUKOPC H56CH LCD Digital Coulomb Meter is not provided in this manual. For warranty details, technical support, or service inquiries, please contact the manufacturer or your point of purchase. Keep your purchase receipt as proof of purchase.