iDili H56C

iDili H56C Battery Monitor Hall Coulomb Meter User Manual

DC 9-100V 200A Lithium & Lead-Acid Battery Capacity Power LCD Display

1. Product Overview

The iDili H56C Battery Monitor is a professional Hall Coulomb meter designed to accurately measure and display the real-time status of various battery types. It provides essential data such as voltage, current, power, remaining capacity, and usage time, enabling users to monitor their battery's performance effectively.



Image 1.1: The iDili H56C Battery Monitor display unit, Hall current sensor, and included user manual.

This device utilizes a scientific method and unique algorithm to calculate battery capacity without requiring manual calibration. It automatically detects charge and discharge currents, eliminating the need for manual wiring direction changes. The monitor also features multiple configurable warning alarms for conditions such as over-voltage, over-current, low-voltage, low-capacity, and high-temperature (note: temperature function may not be equipped on all models). A power-off memory function ensures that battery capacity and percentage values are retained even after power loss. The intuitive LCD interface allows for easy adjustment of settings.

2. Features

- **Universal Battery Compatibility:** Supports Lithium, LiFePo4, and Lead-acid batteries.
- **Wide Voltage Range:** Operates with DC 9V to 100V systems.
- **Comprehensive Display:** Shows battery capacity (Ah), current (A), charge/discharge time, battery percentage, and power (W).
- **Automatic Current Detection:** Automatically identifies and detects charge and discharge currents.

- **Configurable Alarms:** Features settable alarms for over-voltage, over-current, low-voltage, low-capacity, and high-temperature (model dependent).
- **Power-Off Memory:** Retains battery capacity and percentage data upon power interruption.
- **Visualized Setting Menu:** Easy-to-navigate LCD menu for adjusting parameters.
- **Broad Application:** Suitable for vehicles, emergency power supplies, power backups, measurement equipment, and medical devices.

3. Specifications

Parameter	Value
Product Name	Coulomb Meter
Working Voltage	9V ~ 100V DC
Current Range	200A
Capacity Range	0 ~ 99999Ah
Working Current	7.5mA
Current (Backlight Off)	3.5mA
Voltage Precision	1% (±1 digit)
Current Precision	1% (±1 digit)
Capacity Precision	1% (±1 digit)
Item Size (Display)	79mm x 43mm x 27mm
Mounting Hole Size	76.5mm x 39.5mm
LCD Size	49mm x 24mm
Backlight Color	Green
Working Temperature	-10°C ~ 65°C
Wire Length	15cm
Material	ABS
Manufacturer	iDili
Part Number	23ID-1215-0011



Image 3.1: Detailed dimensions of the H56C display unit (79mm x 43mm x 27mm).



Image 3.2: Detailed dimensions of the Hall current sensor (49mm x 55mm x 15mm).

4. Package Contents

Upon opening the package, please verify that all components are present and undamaged:

- 1x iDili H56C Battery Monitor Display Unit
- 1x Hall Current Sensor (200A)
- 1x Connection Cable for Hall Sensor
- 1x User Manual (Printed)



Image 4.1: The main components included in the package: the H56C display and the Hall current sensor.

5. Setup and Installation

Careful installation is crucial for accurate readings and safe operation. Please follow these steps:

5.1 Mounting the Display Unit

- Identify a suitable location for the display unit, ensuring it is easily visible and accessible.
- Cut a mounting hole with dimensions of 76.5mm x 39.5mm.
- Insert the display unit into the cutout and secure it.

5.2 Connecting the Hall Current Sensor

The Hall sensor measures current by detecting the magnetic field around the wire. Ensure the wire carrying the current to be measured passes through the center of the Hall sensor.

- Connect the Hall sensor's cable to the designated port on the back of the H56C display unit.
- Ensure the connection is firm and secure.



Image 5.1: Rear view of the H56C display unit, highlighting the connection port for the Hall sensor.



Image 5.2: Close-up of the Hall current sensor with its connection cable.

5.3 Wiring Diagram

Refer to the following diagram for correct wiring of the battery monitor system. Incorrect wiring can lead to damage or inaccurate readings.

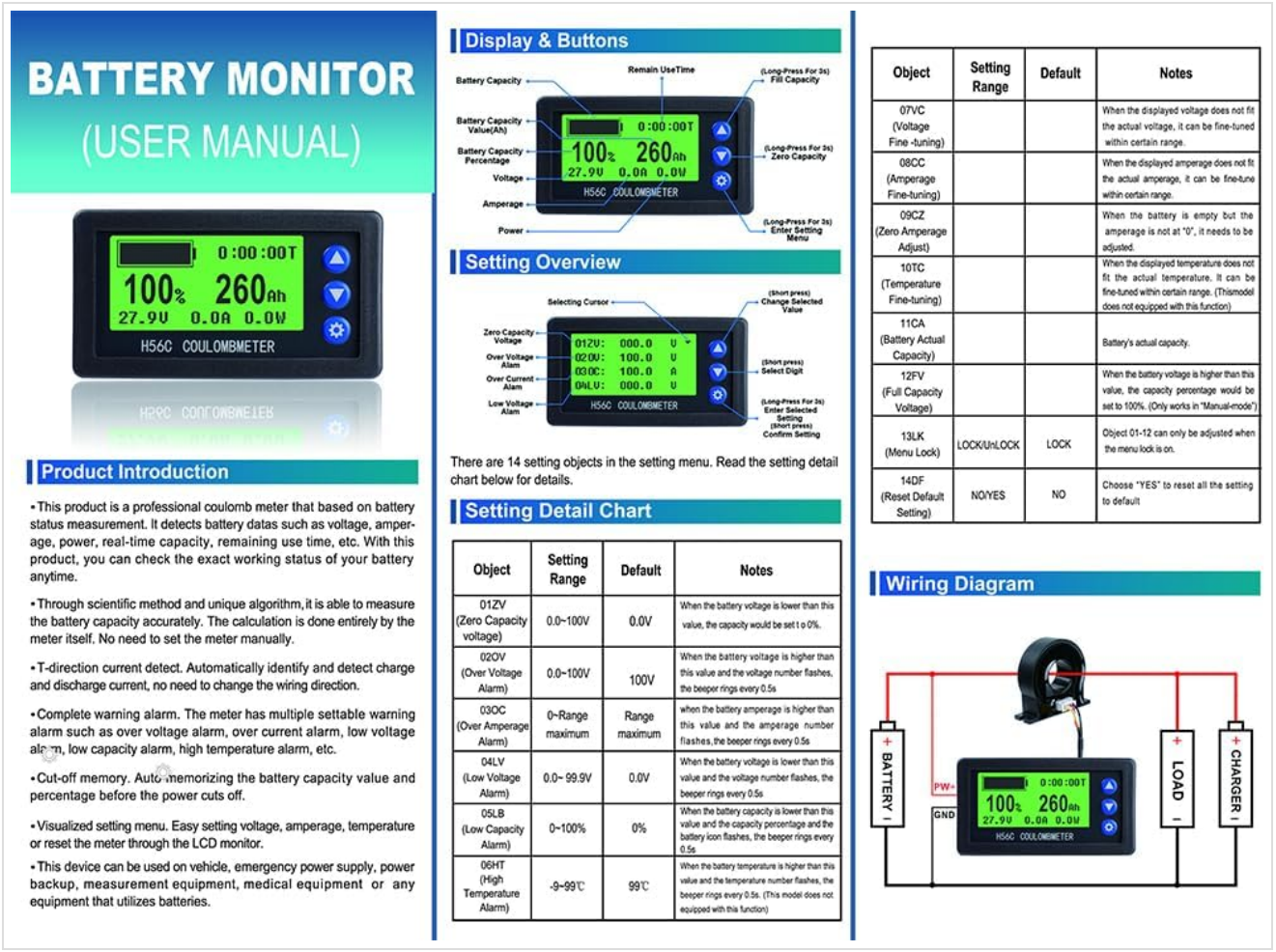


Image 5.3: Wiring diagram showing connections between the battery, Hall sensor, load/charger, and the H56C display unit. The battery's positive terminal connects to the 'PW' input of the display, and the negative terminal connects to 'GND'. The main current path (battery to load/charger) passes through the Hall sensor.

- Connect the power input (PW) and ground (GND) of the H56C display unit directly to the battery terminals.
- Ensure the main current path from the battery to the load/charger passes through the aperture of the Hall current sensor. The Hall sensor is non-directional for current measurement.
- Double-check all connections before applying power.

6. Operating Instructions

The H56C monitor features an intuitive LCD display and three control buttons for navigation and settings adjustment.

6.1 Display and Buttons

The LCD screen provides real-time information. The three buttons (Up, Down, Set/Gear) are used for interaction.

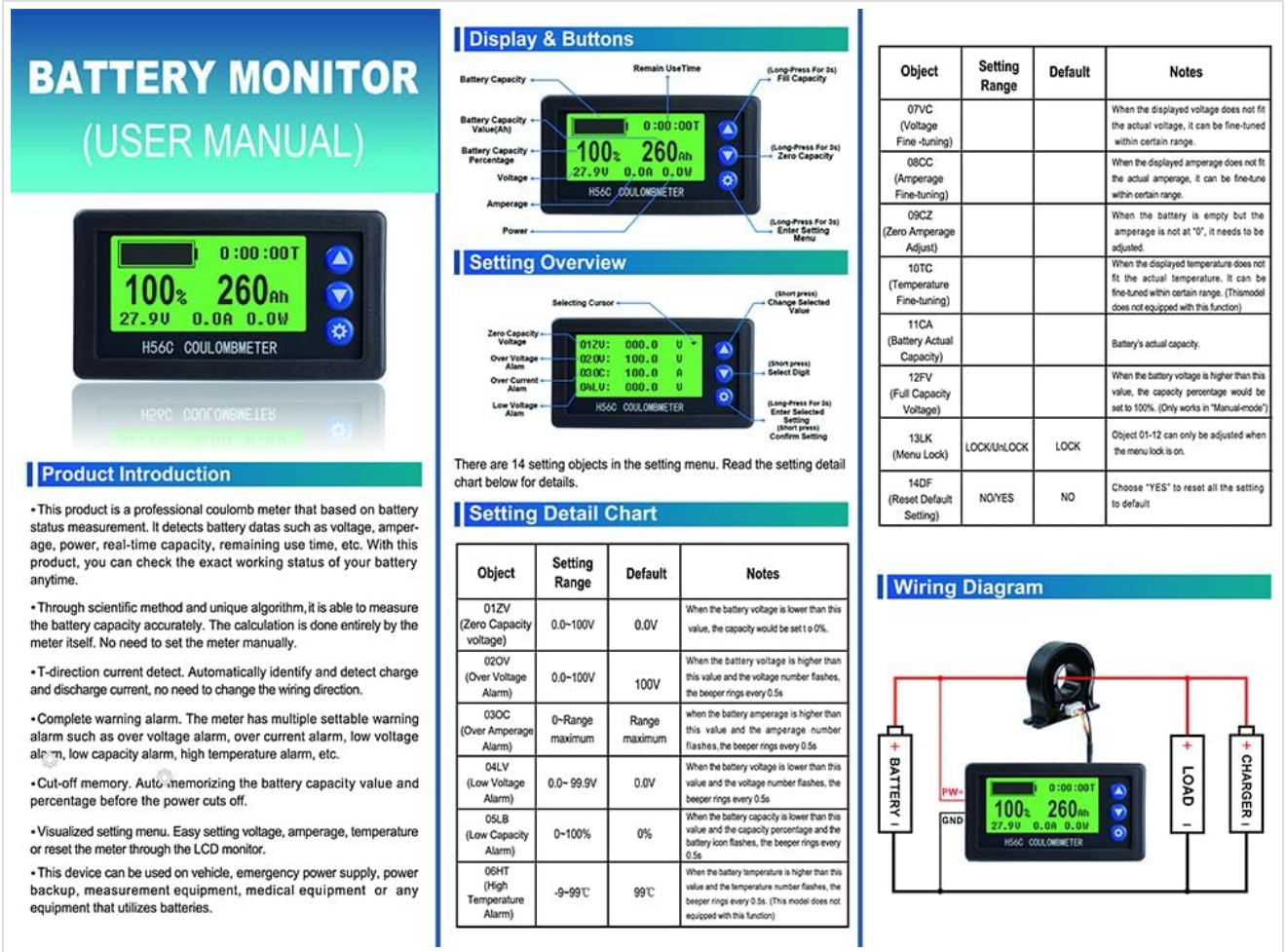


Image 6.1: Illustration of the H56C display layout and button functions. The display shows battery capacity (Ah), voltage (V), current (A), power (W), remaining time, and percentage. Buttons are for navigation and settings.

- **Up Button:** Short press to navigate up in menus or increase values. Long press to quickly adjust values.
- **Down Button:** Short press to navigate down in menus or decrease values. Long press to quickly adjust values.
- **Set (Gear) Button:** Short press to enter/exit setting menus. Long press to save settings.

6.2 Setting Overview

To enter the setting menu, short press the 'Set' button. Use the 'Up' and 'Down' buttons to navigate through the settings (e.g., 012V, 020C, etc.). Short press 'Set' again to enter a specific setting, use 'Up'/'Down' to adjust values, and long press 'Set' to confirm and save.

6.3 Setting Detail Chart

The following table details each setting option available in the H56C Battery Monitor.

Object	Setting Range	Default	Notes
012V (Zero Capacity Voltage)	0.0-100V	0.0V	When the battery voltage is lower than this value, the capacity will be set to 0%.
020V (Over Voltage Alarm)	0.0-100V	When the battery voltage is higher than this value and the voltage number flashes, the beeper rings every 0.5s.	

Object	Setting Range	Default	Notes
030C (Over Amperage Alarm)	0-Range maximum	When the amperage is higher than this value and the amperage number flashes, the beeper rings every 0.5s.	
04LV (Low Voltage Alarm)	0.0-99.9V	When the battery voltage is lower than this value and the voltage number flashes, the beeper rings every 0.5s.	
05LB (Low Capacity Alarm)	0-100%	0%	When battery capacity is lower than this value and the capacity number flashes, the beeper rings every 0.5s.
06HT (High Temperature Alarm)	-99-99°C		When battery temperature is higher than this value and the temperature number flashes, the beeper rings every 0.5s. (This model may not be equipped with this function).
07VC (Voltage Fine-tuning)	0-99%		Adjusts displayed voltage if it does not match the actual voltage.
08CC (Amperage Fine-tuning)	0-99%		Adjusts displayed amperage if it does not match the actual amperage.
09CZ (Zero Amperage Adjust)	0-99%		Adjusts amperage to zero if it displays a non-zero value when no current is flowing.
10TC (Temperature Fine-tuning)	0-99%		Adjusts displayed temperature if it does not match the actual temperature. (This model may not be equipped with this function).
11CA (Battery Actual Capacity)	0-99999Ah		Sets the battery's actual capacity. (Only works in 'Manual' mode).
12FV (Full Capacity Voltage)	0-100V		When battery voltage is higher than this value, the capacity percentage will be set to 100%. (Only works in 'Manual' mode).
13LK (Menu Lock)	LOCK/UNLOCK		Objects 01-12 can only be adjusted when the menu lock is OFF.
14DF (Reset Default Setting)	NO/YES	NO	Choose 'YES' to reset all settings to default values.

7. Maintenance

To ensure the longevity and accurate performance of your iDili H56C Battery Monitor, observe the following maintenance guidelines:

- **Cleaning:** Gently wipe the display and unit housing with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Environmental Conditions:** Operate the device within its specified working temperature range (-10°C to 65°C). Avoid exposure to extreme temperatures, high humidity, or direct sunlight for extended periods.
- **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.
- **Physical Protection:** Protect the unit from physical impact or drops.

8. Troubleshooting

If you encounter issues with your iDili H56C Battery Monitor, refer to the following common problems and solutions:

- **Display Not Turning On:**
  - Check the power connection (PW and GND) to the battery. Ensure correct polarity and secure contact.
  - Verify that the battery voltage is within the 9V-100V operating range.
- **Inaccurate Voltage/Current Readings:**
  - Ensure the Hall sensor is correctly installed and the main current wire passes through its center.
  - Check all wiring for loose connections or damage.
  - Use the 'Voltage Fine-tuning' (07VC) and 'Amperage Fine-tuning' (08CC) settings to calibrate if necessary.
  - If amperage reads non-zero with no current, use 'Zero Amperage Adjust' (09CZ).
- **Capacity/Percentage Readings Incorrect:**
  - Ensure the 'Battery Actual Capacity' (11CA) setting is correctly configured for your battery.
  - Verify the 'Full Capacity Voltage' (12FV) is set appropriately for your battery type.
  - If the capacity is stuck at 0%, check the 'Zero Capacity Voltage' (012V) setting.
- **Alarms Triggering Incorrectly:**
  - Review the alarm settings (020V, 030C, 04LV, 05LB, 06HT) to ensure they are set to appropriate thresholds for your battery system.
- **Settings Cannot Be Changed:**
  - Check the 'Menu Lock' (13LK) setting. If it is set to 'LOCK', you will not be able to modify other settings. Change it to 'UNLOCK'.

9. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact the retailer. For technical support, please reach out to iDili customer service through the contact information provided on their official website or through your point of purchase.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question