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> CAMWAY Battery Monitor 8-120V 0-500A User Manual

## CAMWAY CAMCAM021CAV

# CAMWAY Battery Monitor 8-120V 0-500A User Manual

Model: CAMCAM021CAV

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your CAMWAY Battery Monitor. This device is designed to accurately measure and display key battery parameters such as State of Charge (%), remaining battery capacity (up to 999AH), charge and discharge current (A), and voltage (V). It is suitable for various applications including RVs, golf carts, motorhomes, and other portable equipment.

## 2. WHAT'S IN THE BOX

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Please verify that all components are present upon unpacking:

- CAMWAY Battery Monitor Display Unit
- Base Mount & Sampler/Shunt (up to 500A current)
- Screwdriver
- Red M8 Ground Wire
- Shielded Wire
- Instruction Manual

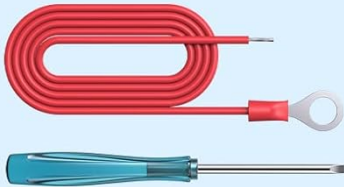
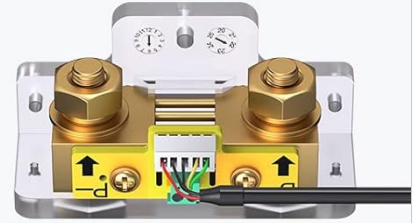


Figure 2.1: All components included in the CAMWAY Battery Monitor package.



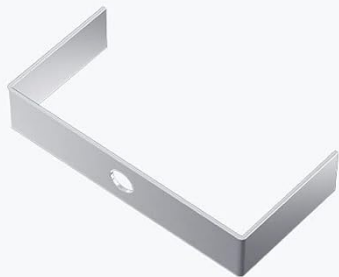
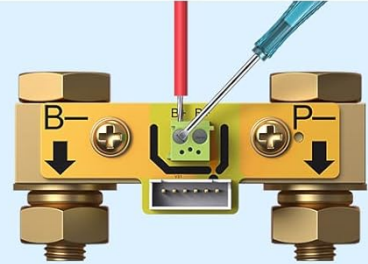
## Base Mount & Sampler/Shunt

(Plastic insulation fixing bracket, The sampler/shunt is pure copper, low resistance, up to 500A current)



## Screwdriver & Red M8 Ground Wire

(Connect the sampler to the battery easily)



## CAMWAY Battery Monitor

(Easy to install)



## Shielded Wire

(Improve signal stability and prevent interference)

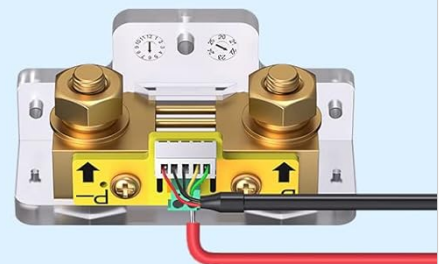


Figure 2.2: Close-up of the Base Mount & Sampler/Shunt, Screwdriver, Red M8 Ground Wire, and Shielded Wire.

### 3. KEY FEATURES

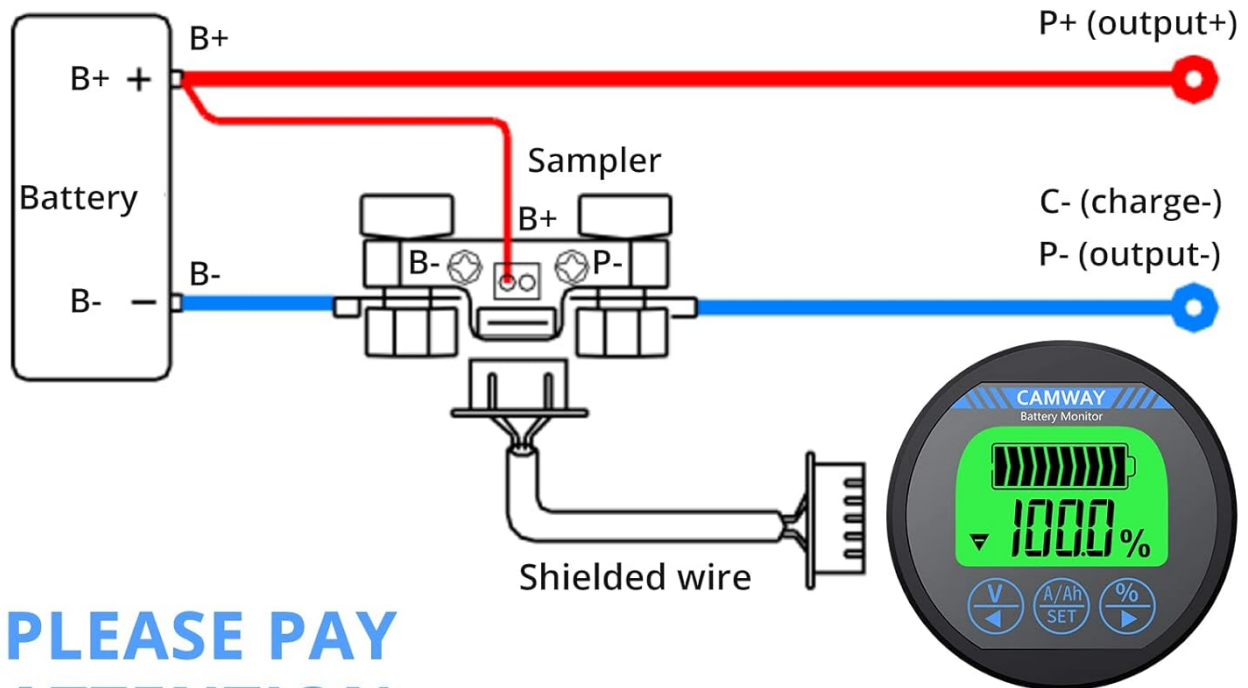
- **All-in-one Battery Monitoring:** Displays State of Charge (%), remaining battery capacity (up to 999AH), charge/discharge current (A), and voltage (V).
- **High-definition Backlight Display:** Clear visibility of parameters with a two-way detection and display function.
- **Automatic Sleep Mode:** Enters sleep mode when current is less than 50mA, with a button press to reactivate the backlight.
- **Wide Application Range:** Supports 8-120V batteries up to 500A, suitable for golf carts, RVs, mobile equipment, e-bikes, and more.
- **Data Storage:** Automatically saves the last testing data upon system shutdown.
- **Humanized Design:** Touch-sensitive buttons for backlight activation and parameter switching.
- **Waterproof and Durable:** Designed for resilience in various environments.

### 4. SETUP AND INSTALLATION

Proper wiring is crucial for accurate readings and safe operation. Please follow the instructions carefully.

## 4.1 Wiring Method

The battery monitor uses a shunt for current measurement. Ensure all negative current flows through the shunt.



## PLEASE PAY ATTENTION TO THE WIRING METHOD:

### NOTICE1

sampler/shunt B- TO battery pack B-  
sampler/shunt P- TO P-/C- of the charger

### NOTICE2

Charging: Backlight flashing  
Discharging: Backlight always on  
Otherwise, B- and P- connection reversed

Figure 4.1: Wiring diagram for the CAMWAY Battery Monitor.

1. Connect the sampler/shunt B- terminal to the battery pack B- terminal.
2. Connect the sampler/shunt P- terminal to the P-/C- of the charger.
3. Connect the shielded wire from the sampler/shunt to the display unit.
4. Connect the battery B+ terminal to the P+ (output+) terminal.

### Important Notices:

- The sampler/shunt must connect to the negative circuit of the battery. It is forbidden to lengthen or cut the shielded wire. The connection principle ensures that all current passes through the sampler.
- When charging, the backlight will flash. When discharging, the backlight will always be on. If B- and P- connections are reversed, this behavior will be reversed.

## 4.2 Video Installation Guide

Your browser does not support the video tag.

Video 4.1: A short demonstration of the BINTA 8-120V 0-500A Battery Monitor, showcasing its display and basic functionality. This video provides a visual overview of a similar product's operation.

## 5. OPERATING INSTRUCTIONS

### 5.1 Display and Button Functions

The monitor features a 1.5-inch large screen with a green backlight for clear visibility.



Figure 5.1: The monitor display and backlight control.

- **Backlight Control:** To turn off the backlight, press the left and right buttons simultaneously for 3 seconds.
- **Mode Switching:** Briefly touch the buttons to switch between displaying voltage (V), current (A/Ah), and State of Charge (%).
- **Automatic Sleep:** When the current is less than 50mA, the monitor automatically enters sleep mode. Press any

button to wake it up.

## 5.2 Capacity Setting

To ensure accurate State of Charge readings, set the total capacity of your battery bank in Amp-hours (Ah).

1. Access the capacity setting mode by pressing the 'A/Ah SET' button.
2. Use the arrow buttons to adjust the capacity value.
3. Confirm the setting by pressing the 'A/Ah SET' button again or waiting for a few seconds for it to auto-save.

## 6. SPECIFICATIONS

This product is applicable for 8V~120V battery packs, such as lithium battery, lithium iron phosphate battery, lead-acid battery, nickel metal hydride batteries, etc.

### Applicable Battery Specification:

- This product is applicable for 8V~120V battery pack, such as lithium battery, lithium iron phosphate battery, lead-acid battery, nickel metal hydride batteries, etc.

Parameter	Min.	Regular	Max.	Unit
Working voltage	8.0		120.0	v
Working Consumption		10.0	12.0	mA
Stand-by Consumption		0.5	0.6	mA
Sleep Consumption		50.0	60	uA
Accuracy of Voltage Collecting		±1.0		%
Accuracy of Current Collecting		±1.0		%
Accuracy of Capacity Collecting		±1.0		%
Backlight on current(50A specification)		50		mA
Backlight on current(>50A specification)		100		mA
Setting Value of Capacity	0.1		999.0	AH
50A Sampler Current	0	50.0	75.0	A
100A Sampler Current	0	100.0	150.0	A
350A Sampler Current	0	350.0	500.0	A
Temperature Range in Application Environment	-10	20	60	℃
Weight (50A/100A/350A)		200/270/410		g
Appearance size		ø59*20		mm
Hole size		ø54.50		mm

EN-2

Figure 6.1: Applicable Battery Specifications.

## Product Specifications

Parameter	Value
Working Voltage	8-120V
Working Consumption	10.0-12.0 mA
Stand-by Consumption	0.5-0.6 mA
Sleep Consumption	50.0-60 uA
Accuracy of Voltage Collecting	±1.0 %
Accuracy of Current Collecting	±1.0 %
Accuracy of Capacity Collecting	±1.0 %
Setting Value of Capacity	0.1-999.0 AH
50A Sampler Current	0-50.0 A
100A Sampler Current	0-100.0 A
350A Sampler Current	0-350.0 A
Temperature Range in Application Environment	-10 to 60 °C
Weight (50A/100A/350A)	200/270/410 g
Appearance Size	Ø59*20 mm
Hole Size	Ø54.50 mm
Product Dimensions	5.89 x 5.89 x 1.98 cm
Material	Plastic



Figure 6.2: Product dimensions and typical applications.

## 7. MAINTENANCE

To ensure the longevity and accurate performance of your CAMWAY Battery Monitor, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the display and housing. Avoid abrasive cleaners or solvents that could damage the unit.
- **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 Protection:** Although the unit is waterproof, avoid prolonged exposure to extreme temperatures or direct submersion in water.

## 8. TROUBLESHOOTING

If you encounter issues with your battery monitor, refer to the following common troubleshooting steps:

- **No Display/Power:** Check all power connections to the monitor and the battery. Ensure the battery has sufficient

voltage to power the unit.

- **Inaccurate Readings:** Verify that the shunt is correctly wired in the negative circuit and that all negative loads and charge sources pass through it. Check the battery capacity setting in the monitor to ensure it matches your battery bank.
- **Backlight Issues:** If the backlight is not functioning as expected, ensure the unit is not in automatic sleep mode (press any button to wake). If the issue persists, check wiring.
- **Display Frozen:** Disconnect power to the monitor for a few seconds, then reconnect to perform a soft reset.

If problems persist after attempting these steps, please contact customer support.

## 9. WARRANTY

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The CAMWAY Battery Monitor comes with an **18-Months Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or improper installation. Please retain your proof of purchase for warranty claims.

## 10. CUSTOMER SUPPORT

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For any questions, technical assistance, or warranty inquiries, please contact CAMWAY customer support through the retailer where the product was purchased or visit the official CAMWAY website for contact information.