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> [DALY LiFePo4 72V 40A 24S Smart BMS Instruction Manual](#)

DALY LFP24S

DALY LiFePo4 72V 40A 24S Smart BMS Instruction Manual

1. INTRODUCTION

This instruction manual provides essential information for the safe and effective use of your DALY LiFePo4 72V 40A 24S Smart Battery Management System (BMS). This BMS is designed to protect and optimize the performance of 24-series LiFePo4 battery packs, commonly used in energy storage, electric vehicles, electric tools, and solar systems. Please read this manual thoroughly before installation and operation.

2. SAFETY INFORMATION

Working with high-voltage battery systems requires extreme caution. Failure to follow safety instructions can result in serious injury, property damage, or death. Always adhere to the following safety guidelines:

- Ensure all power sources are disconnected before installation or maintenance.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Verify correct wiring polarity before connecting the BMS to the battery pack. Incorrect wiring can damage the BMS and battery.
- Do not short-circuit battery terminals or BMS connections.
- Keep the BMS away from water, moisture, and flammable materials.
- Only qualified personnel should perform installation and maintenance.
- Do not attempt to open or repair the BMS unit. Contact support for assistance.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- DALY LiFePo4 72V 40A 24S Smart BMS (1 unit)
- Bluetooth Module (1 unit)
- NTC Temperature Sensor (1 unit)
- Sampling Cable (Balance Wires) (1 set)
- UART Communication Cable (1 unit)
- Instruction Manual (1 unit)

Packing Example



Figure 3.1: Example of package contents for the DALY Smart BMS.

4. PRODUCT OVERVIEW

The DALY Smart BMS provides comprehensive protection for your LiFePo4 battery pack, including overcurrent, overcharge, overdischarge, short circuit, and temperature protection. It features a robust design with injection patent technology and a patent shell for waterproof, dustproof, shockproof, and anti-static properties.

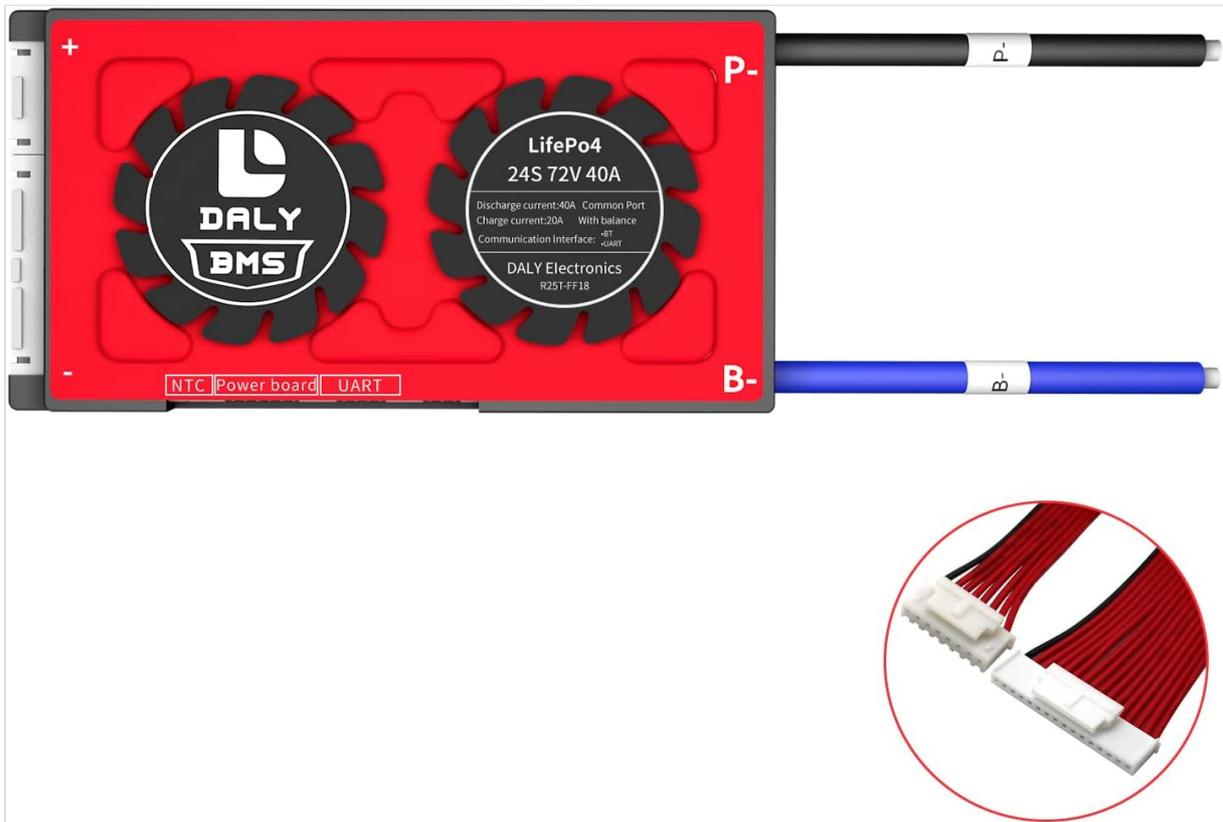


Figure 4.1: Top view of the DALY Smart BMS, highlighting main connections and communication interfaces.

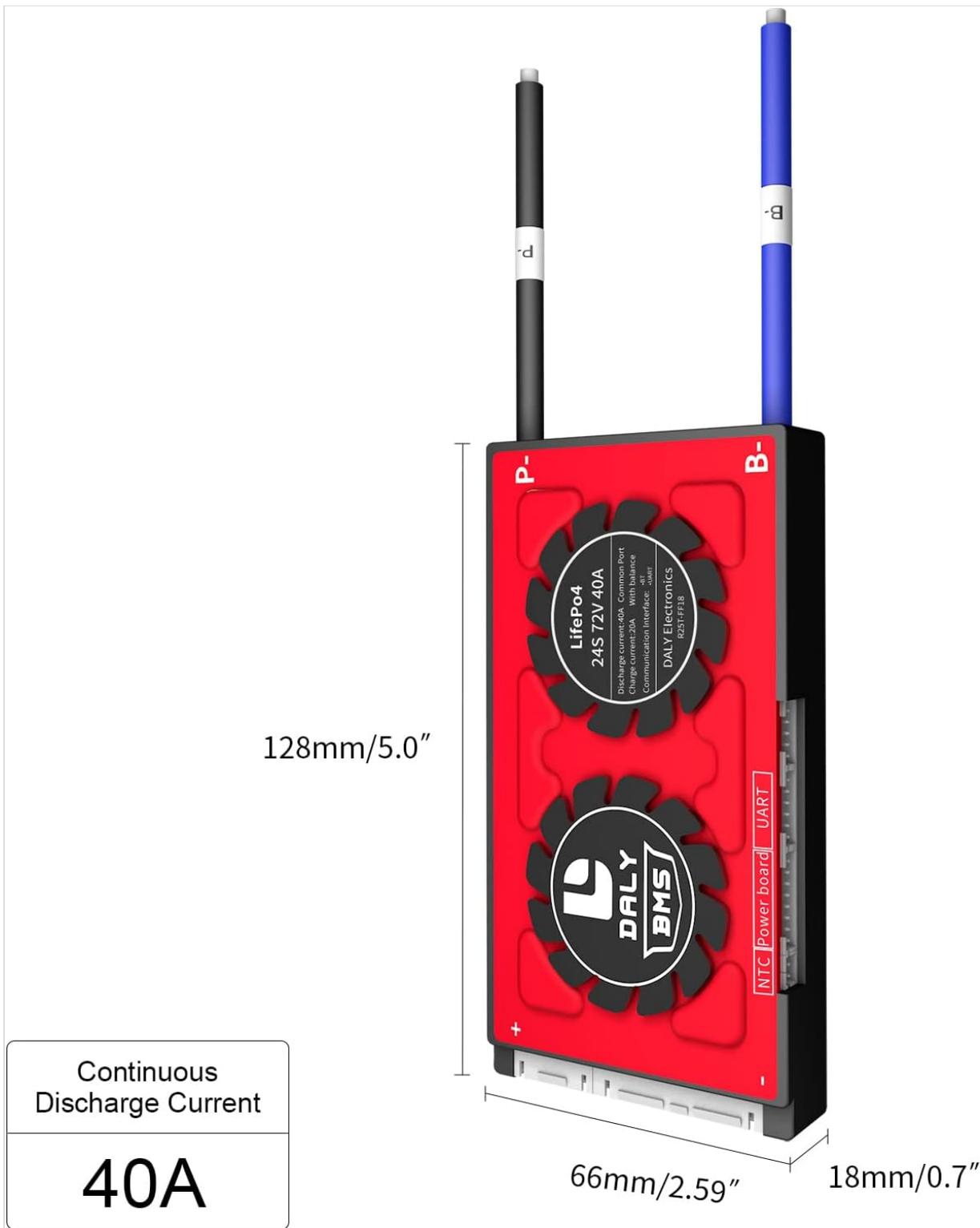


Figure 4.2: Dimensions and continuous discharge current rating of the DALY Smart BMS.

5. SETUP AND INSTALLATION

Careful installation is crucial for the proper functioning of the BMS. Follow these steps precisely:

1. **Prepare the Battery Pack:** Ensure your LiFePo4 battery pack consists of 24 cells in series, with each cell rated at 3.2V.
2. **Connect Balance Wires:**
 - Before connecting the balance wires to the BMS, ensure all balance wires are correctly welded to their respective battery cell terminals.
 - Connect the balance wire harness to the BMS balance port. Ensure the B- wire (total negative

pole) is connected first, followed by B1, B2, and so on, up to B24 (total positive pole).

- Verify the voltage of each cell and the total voltage using a multimeter before proceeding.

3. Connect Main Power Wires:

- Connect the main negative wire from the battery pack to the B- terminal on the BMS.
- Connect the main negative wire for the load/charger to the P- terminal on the BMS.

4. **Connect NTC Temperature Sensor:** Plug the NTC sensor into the designated port on the BMS. Position the sensor appropriately on the battery pack to monitor temperature.

5. Connect Communication Modules (Optional):

- For Bluetooth connectivity, plug the Bluetooth module into the UART port.
- For PC communication, connect the UART cable to the UART port and then to a USB-UART converter (if needed) to your computer.

6. **Activate the BMS:** After all connections are secure, activate the BMS by pressing the activation button on the power board or by connecting the charger to the battery pack.

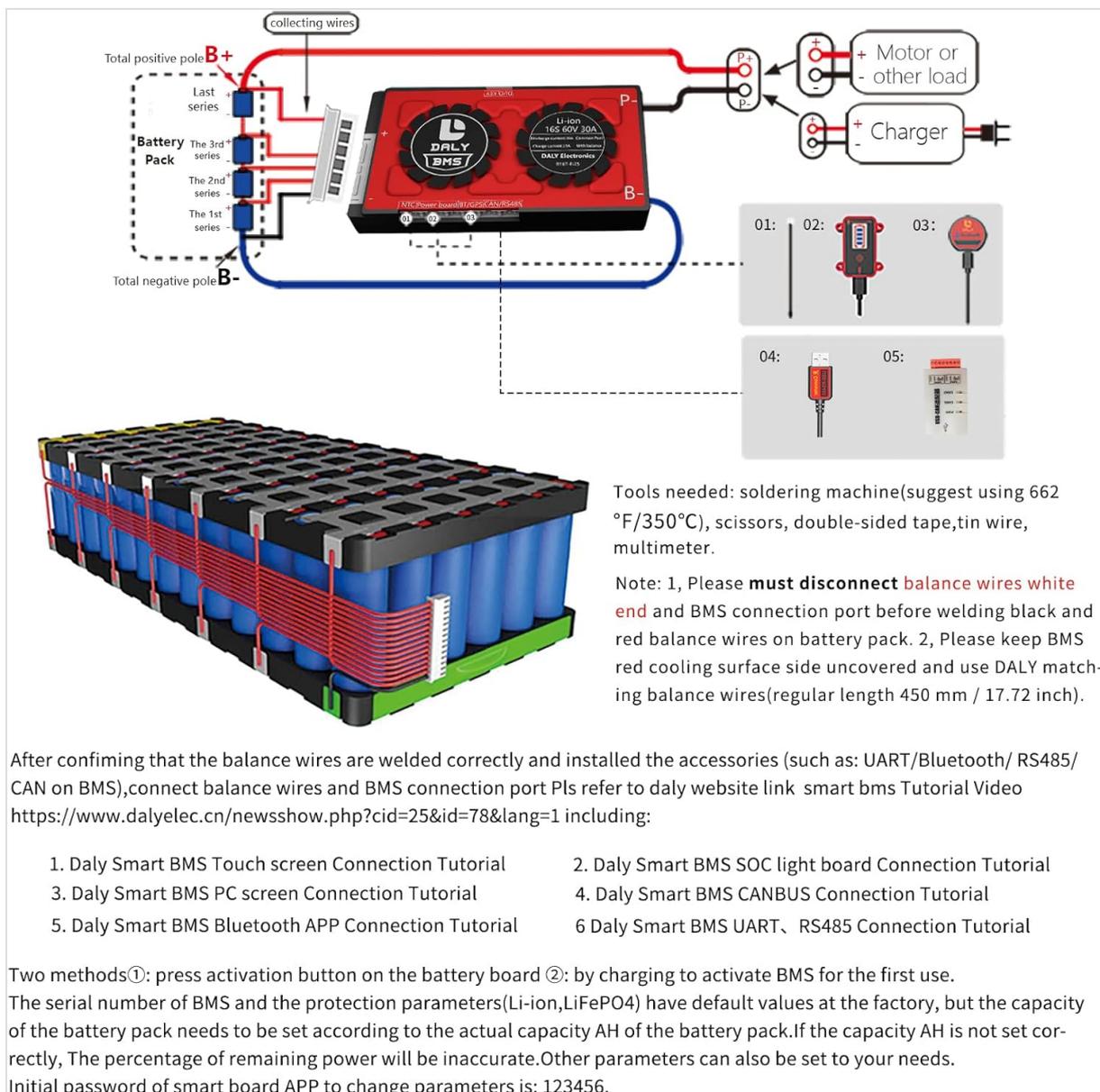


Figure 5.1: Wiring diagram for the DALY Smart BMS. Ensure all connections are made correctly.

For visual guidance on wiring and connections, refer to the official DALY website tutorial videos:[DALY BMS Tutorial Videos](#).

6. OPERATING INSTRUCTIONS

The DALY Smart BMS allows monitoring and parameter modification via Bluetooth app or PC software.

6.1. Bluetooth App Operation

Connect the Bluetooth module to the BMS UART port. Download the DALY BMS app from your smartphone's app store. Open the app, search for your BMS, and connect. The initial password for the app is **123456**. Through the app, you can:

- Monitor real-time battery status (voltage, current, temperature).
- View individual cell voltages for balancing.
- Adjust protection parameters (e.g., overcharge/overdischarge voltage, overcurrent limits).
- Check fault alarms and historical data.



Figure 6.1: Monitoring the BMS via the Bluetooth smartphone application.

6.2. PC Software Operation

Connect the BMS to your computer using the UART cable and a USB-UART converter. Install the DALY BMS PC software. The PC software offers more detailed control and data logging capabilities, allowing for advanced parameter configuration and firmware updates.

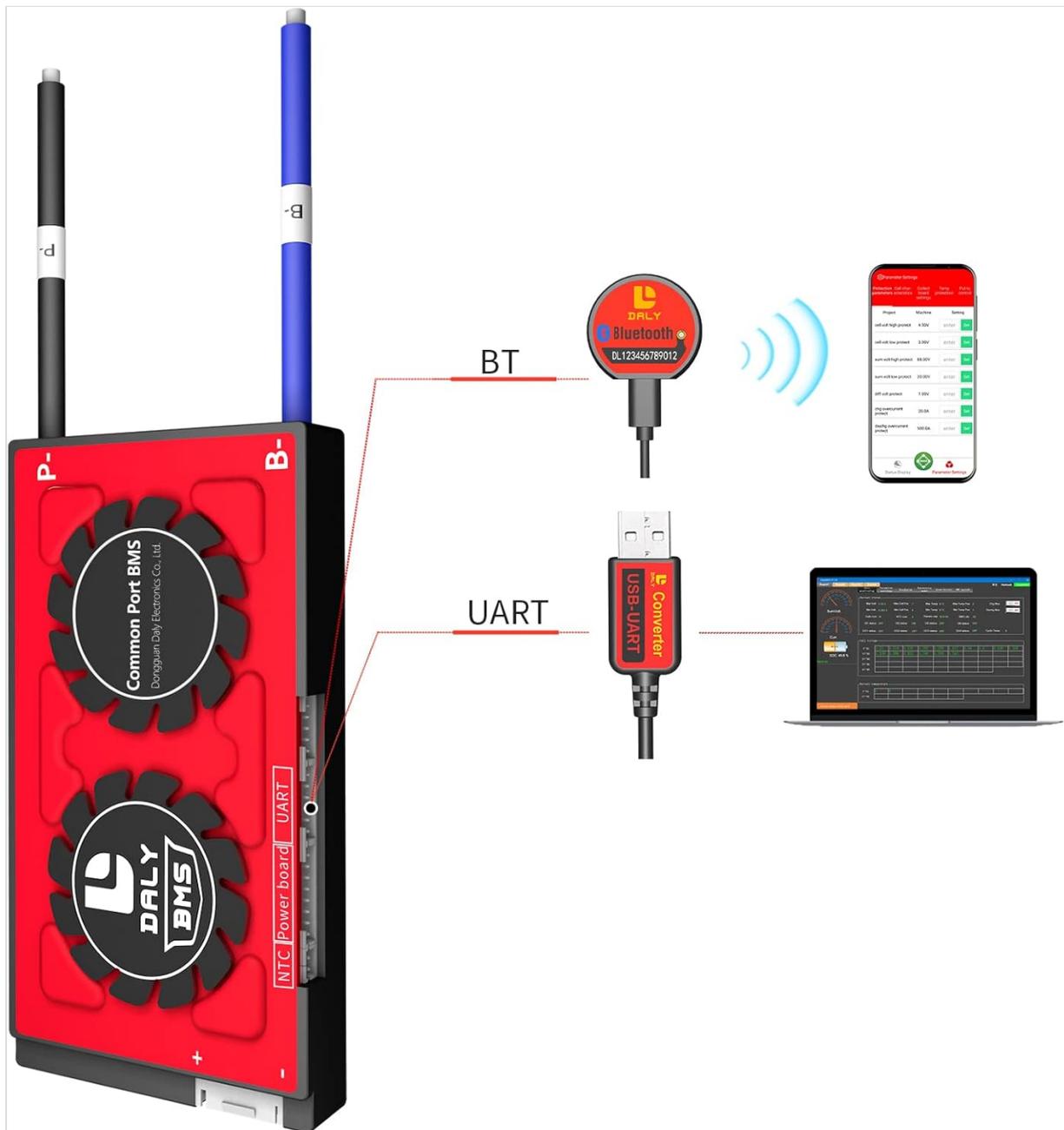


Figure 6.2: Interacting with the BMS using PC software via UART connection.

Important: The factory default parameters are general. It is essential to review and adjust these parameters to match the specific capacity (Ah) of your battery pack. Incorrect parameter settings can lead to inaccurate state-of-charge readings and potentially damage the battery. The percentage of remaining power will be inaccurate if the capacity is not set correctly.

7. MAINTENANCE

To ensure the longevity and optimal performance of your DALY Smart BMS:

- Regularly inspect all wiring for signs of wear, corrosion, or loose connections.
- Keep the BMS clean and free from dust and debris.
- Ensure adequate ventilation around the BMS to prevent overheating.
- Periodically check battery cell voltages through the app or software to confirm proper balancing.
- Avoid exposing the BMS to extreme temperatures or harsh environmental conditions beyond its operating specifications.

8. TROUBLESHOOTING

If you encounter issues with your DALY Smart BMS, consider the following common troubleshooting steps:

Problem	Possible Cause	Solution
BMS not activating/no power output	Incorrect wiring; BMS not activated; low battery voltage.	Verify all wiring connections (B-, P-, balance wires). Press the activation button or connect the charger to activate. Check battery voltage; if too low, charge the battery.
Bluetooth connection issues	Bluetooth module not properly connected; app issues; interference.	Ensure the Bluetooth module is securely plugged into the UART port. Restart the app and try reconnecting. Check for other Bluetooth devices causing interference. Ensure the app is updated.
Inaccurate State of Charge (SOC)	Battery capacity parameter not set correctly in the app/software.	Access the app or PC software and set the battery pack's actual Ah capacity.
Overcharge/Overdischarge protection tripping prematurely	Protection parameters set too low/high; faulty cell.	Review and adjust overcharge/overdischarge voltage parameters in the app/software to match your battery specifications. Check individual cell voltages for imbalances.

If the problem persists after attempting these steps, please contact DALY customer support for further assistance.

9. SPECIFICATIONS

Feature	Specification
Model Number	LFP24S
Battery Cell Composition	LiFePo4 (Lithium Iron Phosphate)
Series Configuration	24S (24 cells in series)
Nominal Voltage	72V (for 3.2V rated cells)
Continuous Discharge Current	40A
Communication Interface	UART (Bluetooth module included)
Product Dimensions (L x W x H)	5.03 x 2.6 x 0.51 inches (128 x 66 x 18 mm)
Item Weight	13.4 ounces
Manufacturer	Dongguan Daly Electronics Co., Ltd

10. WARRANTY AND SUPPORT

DALY Electronics is committed to providing high-quality products and customer satisfaction. This product comes with lifetime technical support.

- **Technical Support:** For any technical inquiries, installation assistance, or troubleshooting not covered in this manual, please contact DALY customer service. We offer 24-hour one-on-one customer service.
- **Contact Information:** Refer to the official DALY website or your purchase documentation for the most current contact details.