DALY LifePO4 24S 72V 40A

DALY Smart BMS for LiFePO4 Battery Packs (LifePO4 24S 72V 40A+BT Module) - Instruction Manual

Model: LifePO4 24S 72V 40A | Brand: DALY

1. Product Overview

The DALY Smart Battery Management System (BMS) is designed for LiFePO4 battery packs, offering comprehensive protection and monitoring capabilities. This specific model is a 24S 72V 40A unit, equipped with a Bluetooth module for enhanced connectivity and control.

Key Features:

- Overcharge Protection
- Overdischarge Protection
- Overcurrent Protection
- Short Circuit Protection
- Temperature Protection
- Waterproof Design
- Integrated parallel module to prevent large current impacts during parallel battery pack connections.
- High-power pre-charging to avoid false protection triggers from high startup currents.
- 100mA passive balancing for extended lithium battery life.
- Bluetooth module for monitoring and control via mobile application.

2. Setup and Wiring Installation

Proper wiring is crucial for the safe and correct operation of the DALY Smart BMS. Always ensure the battery pack is fully discharged before beginning installation.

2.1. Balance Wire Connection

Connect the balance wires to your battery cells in the correct sequence. The black B0 cable connects to the total negative pole of the battery. Subsequent red cables (B1, B2, etc.) connect to the positive pole of each cell string in ascending order.

Specification

Product:	$LiFePO_4$ 24S 40A common port with balance
Discharge current:	40A
Overdischarge current:	60±1.2A
Charging current:	40A
Overcharge current:	60±1.2A
Overcharge voltage:	3.75V±0.05V (Can be set)
Overdischarge voltage:	2.2V±0.05V (Can be set)
Charge voltage:	87.6V
Model:	R24K(11~24S)
Size:	123*65*14 (mm)/4.84*2.55*0.55(inch)
Output wire:	10AWG/100mm
Cable:	24AWG/450mm
Weight:	170~210g

Image: Detailed diagram showing the connection of balance wires (B0 to B13) to individual battery cells. B0 connects to the total negative, and B1 to B13 connect to the positive terminals of each cell in sequence.

After connecting the balance wires, use a multimeter to measure the voltage between adjacent wires. If the voltage difference between the batteries in each string of wires is less than 1V, the wires are connected correctly.

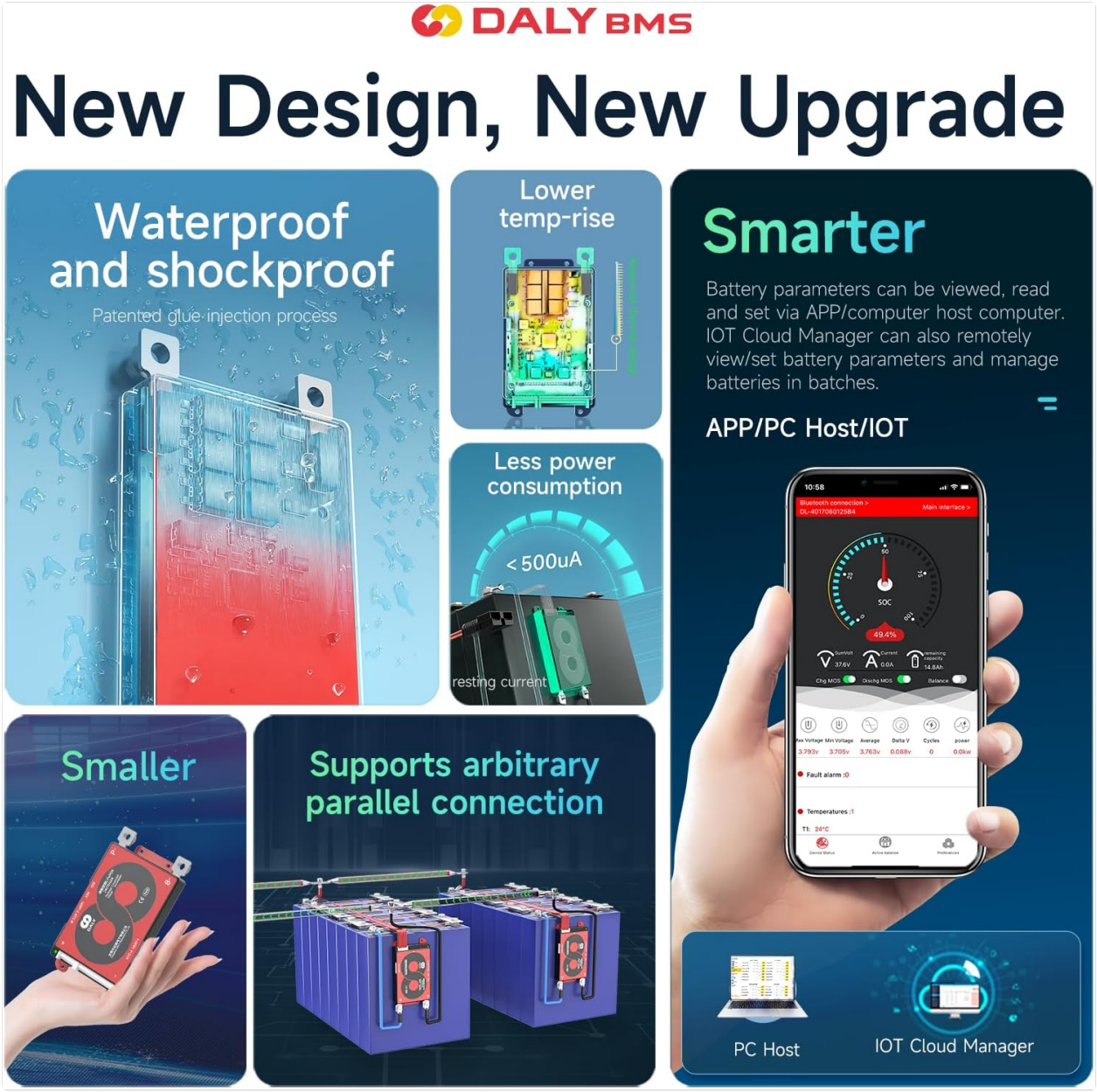

Image: A multimeter is used to verify the voltage between adjacent balance wires, ensuring correct wiring before connecting to the BMS.

2.2. BMS Main Power Cable Connection

Connect the main negative cable (B-) from the battery pack to the B- terminal on the BMS. Connect the main positive cable (P+) from the battery pack to the P+ terminal on the BMS. Ensure all connections are secure.

Image: The BMS is shown connected to a battery pack with main power cables. The B- cable connects to the total negative of the battery, and the P+ cable connects to the total positive.

2.3. Charger Connection

Connect the negative output of the charger to the P- cable port of the BMS. Connect the positive output of the charger to the total positive pole of the battery pack.

2.4. Power Switch Connection

Connect the provided power switch to the designated port on the BMS. Press the switch button to start the BMS after all connections are complete.

Your browser does not support the video tag.

Video: This video demonstrates the detailed wiring process for a JKBMS, including connecting balance wires, main power cables, and the power switch. It also shows how to verify connections using a multimeter.

Your browser does not support the video tag.

Video: An introduction to the 100balance Smart Active Balance BMS, including its features and a general overview of the wiring process for battery packs.

3. Operating Instructions

The DALY Smart BMS can be monitored and configured using a mobile application or PC software.

3.1. Mobile Application (Bluetooth)

The BMS features a built-in Bluetooth module for wireless communication with a mobile application. This allows for real-time monitoring of battery parameters such as voltage, current, temperature, and State of Charge (SOC).

Image: A smartphone screen displaying the DALY Smart BMS mobile application interface, showing various battery parameters and settings.

Your browser does not support the video tag.

Video: This video provides instructions on how to install the JKBMS Android application on a mobile device.

3.2. PC Host Software

For more advanced monitoring and configuration, the BMS can be connected to a PC using a UART cable. The PC host software provides a detailed interface to view battery data, adjust parameters, and perform firmware upgrades.

Your browser does not support the video tag.

Video: This video demonstrates how to connect the 100balance Smart BMS to a PC host and navigate the software interface for monitoring and settings.

4. Maintenance

Regular maintenance ensures the longevity and optimal performance of your battery pack and BMS.

- **Passive Balancing:** The 100mA passive balancing feature helps to equalize cell voltages, extending the overall life of the lithium battery pack.
- **Parameter Monitoring:** Regularly check battery parameters via the mobile app or PC software to identify any anomalies.
- **Firmware Updates:** Keep the BMS firmware updated using the PC host software to benefit from the latest features and improvements.

5. Troubleshooting

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

- **Wiring Check:** Ensure all balance wires and main power cables are securely connected and in the correct sequence. Use a multimeter to verify voltage readings between adjacent balance wires.
- **BMS Not Powering On:** Verify the power switch connection and ensure it is pressed to activate the BMS.
- **Communication Issues:** For mobile app connectivity, ensure Bluetooth is enabled on your device and the BMS. For PC host connection, verify the UART cable is correctly connected and the appropriate drivers are installed.
- **Alarm Indications:** Check the alarm list in the mobile app or PC software for specific error codes or warnings.

6. Specifications

Feature	Specification
Product Dimensions	4.84 x 2.56 x 0.55 inches
Item Weight	6.3 ounces (0.18 Kilograms)
Item Model Number	4S-24S 12V-72V 40A-500A (Specific model: LifePO4 24S 72V 40A)
Input Voltage	72 Volts
Color	Red
Manufacturer	Dongguan Daly Electronics Co., Ltd
Overcharge Protection	Yes
Overdischarge Protection	Yes
Overcurrent Protection	Yes
Short Circuit Protection	Yes
Temperature Protection	Yes
Waterproof Protection	Yes
Passive Balancing Current	100mA

Image: A visual representation of the DALY Smart BMS with its dimensions and a table detailing key specifications like discharge current, overcharge voltage, and model number.

7. Warranty and Support

DALY provides comprehensive customer service and technical support for its products.

- **Customer Service:** 24-hour one-on-one customer service is available for any questions or assistance.
- **Technical Support:** Dedicated technical support is provided to help with installation, operation, and troubleshooting.
- **Certifications:** The product is ISO/FCC/RoHS/PSE/CE APPROVED, ensuring quality and safety standards.

For further assistance, please refer to the contact information provided with your product or visit the official DALY website.