

DALY 200A+WIFI+5A Balancer

DALY BMS 12V 4S 200A Smart WiFi Bluetooth BMS with 5A Active Balancer Instruction Manual

Model: 200A+WIFI+5A Balancer

1. PRODUCT OVERVIEW

The DALY BMS (Battery Management System) is designed to provide comprehensive protection and management for 4S 12V LiFePO4 battery systems. This smart BMS includes features such as low voltage cutoff, high voltage cutoff, short circuit protection, and temperature protection to enhance battery performance and extend its lifespan. It integrates a 5A active cell balancer for efficient cell equalization, reducing heat generation and improving energy efficiency.

The system includes a 2-in-1 Bluetooth/Wi-Fi dongle for local and remote battery monitoring via a dedicated mobile application, offering real-time system alerts and customizable parameters. It also supports multiple parallel systems, allowing for scalable capacity by connecting more battery packs.



Image 1.1: The DALY BMS unit with the active balancer module and the Bluetooth/Wi-Fi dongle.

2. SAFETY PROTECTIONS

The DALY BMS incorporates five critical safety protections to ensure the safe operation and longevity of your battery pack:

- **Overcharging Protection:** Prevents cells from being charged beyond their safe voltage limit.
- **Overdischarging Protection:** Protects cells from being discharged below their safe voltage limit.
- **Overcurrent Protection:** Safeguards against excessive current flow during charge and discharge cycles.
- **Short Circuit Protection:** Automatically disconnects the battery in case of a short circuit.
- **Extreme Temperature Protection:** Monitors battery temperature and initiates protective measures if temperatures exceed safe operating ranges.

**DALY
BMS**

5 SAFETY PROTECTIONS

*Note: The shows the 16S 500A S series BMS as an example.

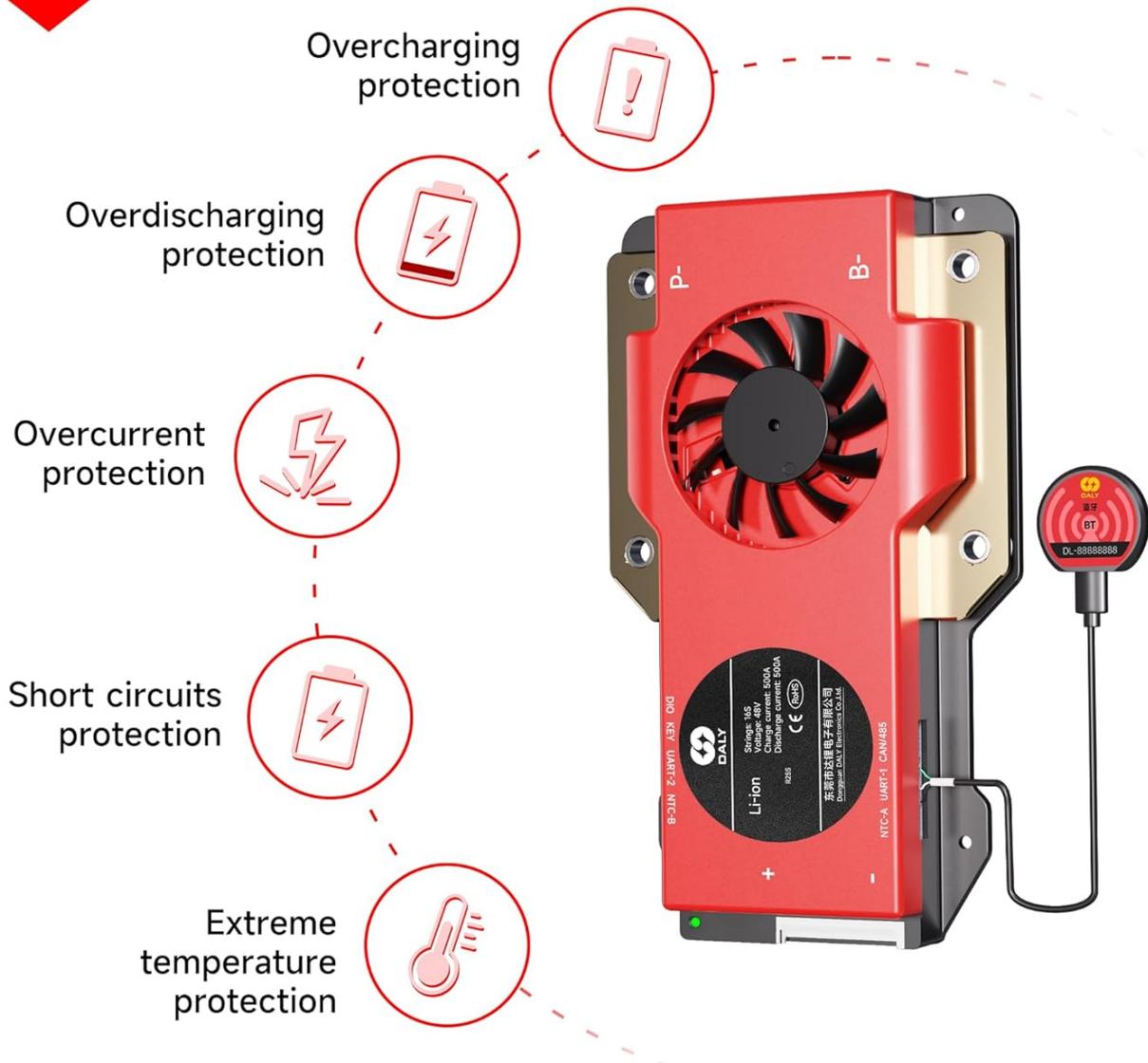


Image 2.1: Diagram illustrating the five safety protections provided by the DALY BMS.

3. PACKING LIST

Please verify that all items are present in the package:

- 4S 12V 200 Amps Smart BMS (1 unit)
- 5A 4S Active Balancer (1 unit)
- B-P-Output line (1 unit)
- 2-in-1 BT/WiFi dongle (1 unit)
- Sampling cable (1 unit)
- NTC (1 unit)
- Instruction Manual (1 unit)
- Screws
- CAN/485 5pin cable (if applicable to your model)

Built-in current limiting module, Support multiple parallel systems to increase the battery pack capacity

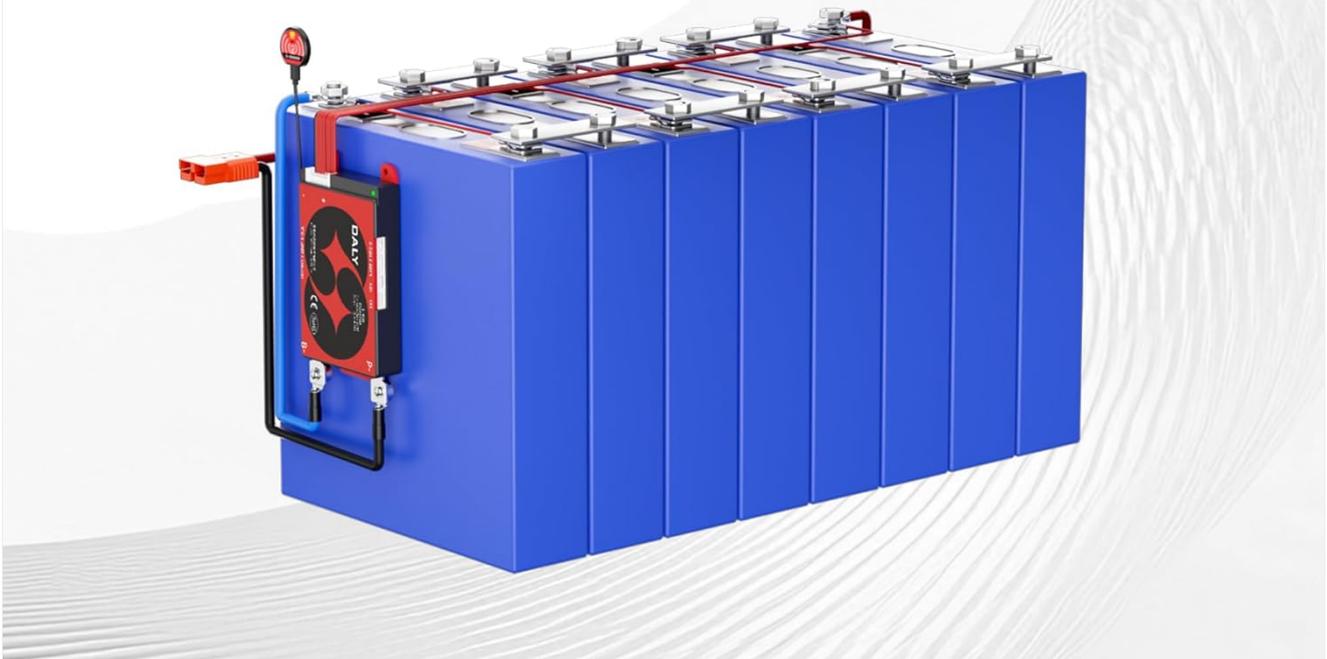
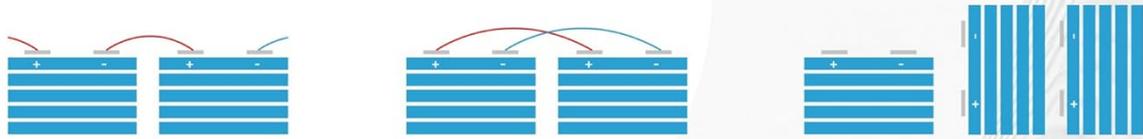


Image 3.1: Visual representation of the components included in the DALY BMS package.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your DALY BMS. This section provides general guidance. Always refer to the detailed wiring diagrams and safety precautions specific to your battery configuration.

4.1. Battery Cell Type and Series Connection

Ensure your battery pack consists of 4S (4 cells in series) LiFePO4 cells. The BMS is specifically designed for this configuration.

4.2. Current Rating Selection

The BMS current rating should match or exceed your controller's maximum operating current. For a 200A BMS, ensure your application's maximum continuous current draw does not exceed 200A.

4.3. Wiring Connections

Connect the BMS to your battery pack according to the provided wiring diagram. Ensure all connections are secure and

correctly polarized. The sampling cable must be connected to each cell's positive terminal in sequence, starting from B0 (negative terminal of the first cell) up to B4 (positive terminal of the fourth cell).

4.4. Active Balancer Connection

Connect the 5A active balancer module to the BMS and battery cells as per the instructions. The active balancer helps maintain voltage equilibrium across cells, which is vital for battery health and performance.

4.5. Parallel System Support

This DALY BMS supports multiple parallel systems, allowing you to increase overall battery capacity. When connecting multiple battery packs in parallel, ensure each pack has its own DALY BMS and that the parallel connections are made correctly to avoid current imbalances. The built-in current limiting module facilitates this expansion.

What BMS is suitable for my battery?

Q1. Could you please check What kind of battery cell type (Li-ion/LiFePO4/LTO) and how many cells are connected in series (Strings)?

Q2. How many ampere need? 

To ensure proper compatibility and protection, the BMS's rated current should match or exceed your controller's maximum operating current.
For example, if your controller peaks at 60A, choose a BMS rated for 60A or higher.
If you don't know how many your controller's maximum operating current?our solution as below:

For Li-ion cell :
Load Power ÷ (number of cell x 2.7) x Ratio
For LiFePO4 cell :
Load Power ÷ (number of cell x 2.2) x Ratio

For example:
For 400W e-bike with 13S Li-ion battery, like
 $400W \div (13 \times 2.7V) \times 1.5 = 17.08A$, because the current of BMS have to match or exceed 17.08A, then use 20A BMS

Ratio List for Applications:
E-Bike: 1.5 SOLAR LIGHTING: 1.1
E-Trike: 3 Home Energy Storage: 1.2
Trolling Motor: 2 FISH FINDERS & FLASHERS: 2

Warning: Using a mismatched BMS could damage your battery and BMS — or even cause them to burn out.

Q3. Do you need Monitor or Customize settings all important data?



If yes: We recommend Daly Smart BMS with Bluetooth Dongle easy for Monitor or setting via APP or PC software.

If no: Daly standard BMS is affordable, but it can't tell us any battery status or important data — need multimeter to check it manually.

Q4. Do your battery cells last more than 1 year or 1,000-charge cycle lifespan?

If yes: We recommend our Battery Active Balancer (1A or 5A) to maximize service life if you are utilizing series-connected batteries — One bad cell or one bad battery can destroy a large, expensive battery bank.



If no: Means your cells or batteries are brand-new, Our standard non-balancing BMS is a good choice — an active balancer can actually reduce their lifecycles .

* We now have a basic BMS solution available, for example:

Li-ion 13s 20A BMS (no Bluetooth APP or active balancing, hardware-only design, affordable price).



OR

LiFePo4 16s 300A Smart BMS with Bluetooth APP and need 1A active balancer.



>>> Would you like to know more?		>>> >>> Send us Amazon Message, 24-hour response!		
<p>Q: Worried about freezing temperatures damaging your batteries?</p>	<p>Q: Does your battery pack connect to the inverter via CAN or 485?</p>	<p>Q: Tired of checking battery status via your phone app and Prefer a direct screen view?</p>	<p>Q: Need to parallel multiple battery banks?</p>	<p>Q: Can I remotely monitor my batteries from the office?</p>
				
<p>A: Our heating modules protect your batteries in extreme cold! Contact us today — we'll help you choose the right heating film and respond within 24 hours.</p>	<p>A: Yes, Daly Smart BMS with CAN OR RS485 works with many inverters (if your BMS without CAN OR RS485, then need additional interface board) — Contact us today for a customized solution!</p>	<p>A: Dedicated display is perfect for you! We offer options like 4.3 inch touch screens, 3 inch LCD displays, 2.5 inch LCD displays, and LED display modules — Not sure which? Contact us today — 24-hour response!</p>	<p>A: Daly parallel modules limit charging current with rated capacities (1A, 5A, 15A) for safe multi-bank charging — protecting your Smart BMS and batteries from high-current damage.</p>	<p>A:Yes! Using Daly Wi-Fi module and IoT technology enable real-time monitoring of battery voltage, current, temperature, and internal resistance — data transmits to a remote server or device for easy management.</p>

Image 4.1: Illustration of how the DALY BMS supports multiple parallel battery systems to increase capacity.

5. OPERATING INSTRUCTIONS

5.1. Bluetooth/Wi-Fi Dongle Connection

The included 2-in-1 Bluetooth/Wi-Fi dongle enables smart monitoring of your battery system. Plug the dongle into the designated port on the BMS.

5.2. Mobile App Monitoring

Download the 'Smart BMS' mobile application from your device's app store. Follow the app's instructions to connect to your DALY BMS via Bluetooth or Wi-Fi. The app provides real-time data on battery voltage, current, temperature, state of charge (SOC), and individual cell voltages. You can also customize various parameters and receive system alerts.



Image 5.1: Screenshot of the DALY Smart BMS mobile application displaying real-time battery data and connection status.

5.3. Active Balancing Function

The 5A active balancer continuously works to equalize the voltage across all cells in your battery pack. This process is automatic and helps prevent cell degradation due to imbalance, leading to a longer battery lifespan and higher energy efficiency.

Faster cell balancing, Less heat generation, Higher energy efficiency

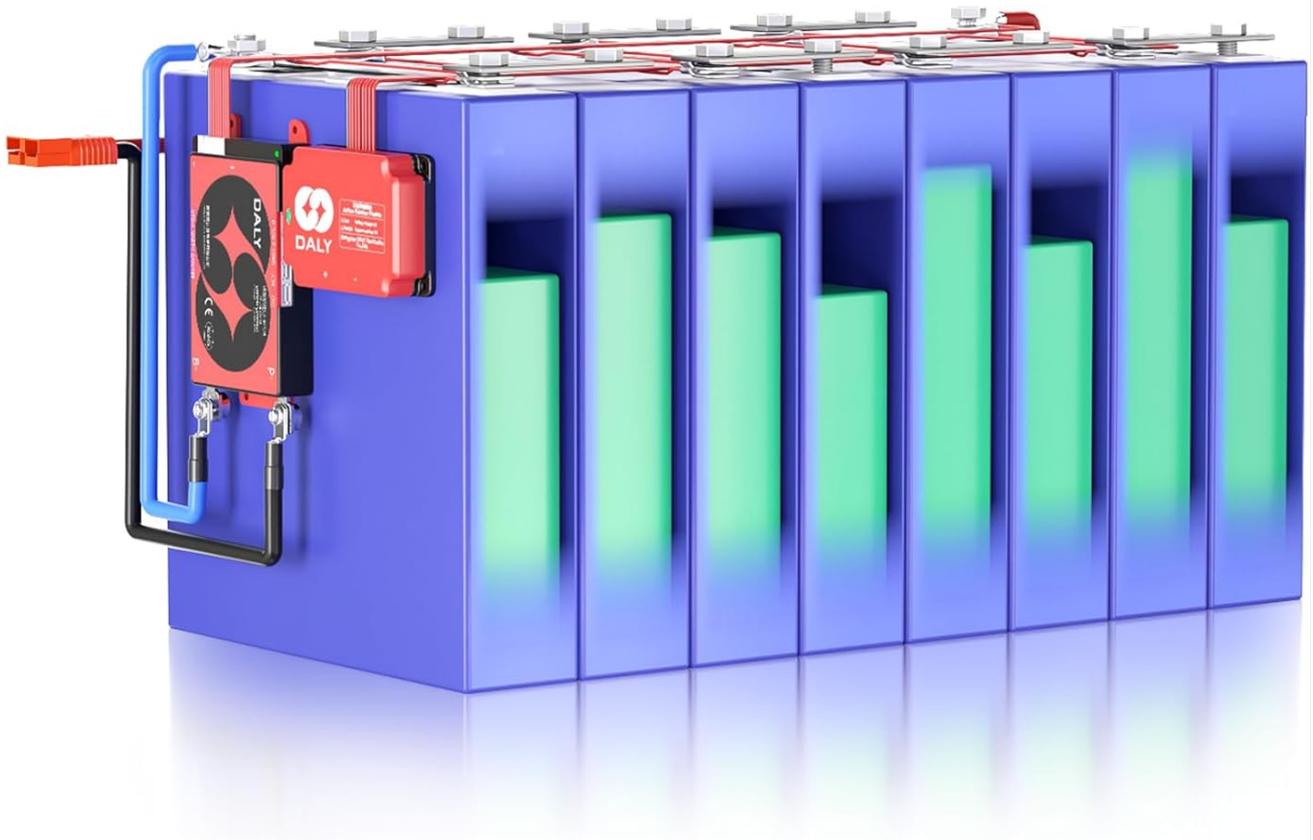


Image 5.2: Illustration demonstrating the effect of active cell balancing, leading to faster balancing and higher energy efficiency.

6. MAINTENANCE

The DALY BMS is designed for minimal maintenance. However, regular checks can help ensure optimal performance:

- **Visual Inspection:** Periodically inspect all wiring and connections for any signs of wear, corrosion, or damage. Ensure all terminals are tight.
- **App Monitoring:** Regularly check the Smart BMS app for any alerts or unusual readings. This can help identify potential issues early.
- **Cleanliness:** Keep the BMS unit clean and free from dust and debris to ensure proper heat dissipation.
- **Temperature:** Ensure the BMS operates within its specified temperature range. Avoid exposing it to extreme heat or cold.

7. TROUBLESHOOTING

This section addresses common questions and potential issues. For complex problems, contact DALY technical support.

7.1. General Questions and Solutions

- **Q: What kind of battery cell type and how many cells are connected in series (Strings)?**

A: This BMS is designed for 4S LiFePO4 battery packs. Ensure your battery configuration matches this requirement.

- **Q: How many amperes do I need?**

A: The BMS current rating (200A for this model) should be equal to or greater than your application's maximum continuous current draw. Using an undersized BMS can damage the battery and the BMS itself.

- **Q: Do I need to monitor or customize settings?**

A: Yes, the DALY Smart BMS with the Bluetooth dongle allows for easy monitoring and setting adjustments via the mobile app or PC software. If you do not require smart features, a basic non-smart BMS might be an alternative, but it won't provide detailed status or data.

- **Q: How can I extend my battery's lifespan?**

A: Utilizing the 5A active balancer helps maximize service life by ensuring cells are balanced. For new cells or brand-new batteries, an active balancer is a good choice to reduce lifecycle degradation.

7.2. Common Issues and Solutions

- **Worried about freezing temperatures damaging your batteries?**

A: DALY offers heating modules to protect batteries in extreme cold. Contact DALY for assistance with heating film solutions.

- **Does your battery pack connect to the inverter via CAN or RS485?**

A: DALY Smart BMS supports CAN or RS485. Additional interface boards may be needed. Contact DALY for customized solutions.

- **Tired of checking battery status via your phone app and prefer a direct screen view?**

A: DALY offers dedicated display units (e.g., 3-inch or 4.3-inch LCD displays) for real-time monitoring.

- **Need to parallel multiple battery banks?**

A: DALY parallel modules limit charging current with rated capacities, protecting Smart BMS and batteries from high-current damage.

- **Can I remotely monitor my batteries from the office?**

A: Yes, using the DALY Wi-Fi module and IoT technology enables real-time monitoring of battery voltage, current, temperature, and internal resistance, transmitting data to a remote server for easy management.



Image 7.1: A detailed guide addressing common questions and troubleshooting scenarios for DALY BMS users.

8. SPECIFICATIONS

Feature	Specification
Model	200A+WIFI+5A Balancer
Battery Type	LiFePO4
Series Configuration	4S (12V)
Continuous Discharge Current	200A
Continuous Charge Current	200A
Active Balance Current	5A
Communication	Bluetooth, Wi-Fi (via dongle), RS485, CAN
Protection Features	Overcharge, Overdischarge, Overcurrent, Short Circuit, Temperature
Parallel System Support	Yes (8+ battery packs)
Input Voltage	12 Volts (DC)
Output Voltage	12 Volts (DC)
Item Weight	1.59 pounds
Package Dimensions	12.24 x 8.46 x 1.81 inches



Image 8.1: Detailed technical specifications table for DALY BMS products, including protection parameters.

9. WARRANTY AND SUPPORT

9.1. Warranty Information

The DALY BMS 12V 4S 200A Smart WiFi Bluetooth BMS with 5A Active Balancer comes with a **5-year warranty**. This warranty covers manufacturing defects and ensures the product meets its specified performance standards under normal use. Please retain your proof of purchase for warranty claims.

9.2. Technical Support

For technical assistance, troubleshooting, or warranty inquiries, please contact DALY customer support. Refer to the contact information provided with your product packaging or visit the official DALY website for support resources.