

Aoleaby BD6A17S8P

Aoleaby JK Smart BMS Active Balance Protection Board BD6A17S8P User Manual

Model: BD6A17S8P

Brand: Aoleaby

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the Aoleaby JK Smart BMS Active Balance Protection Board, model BD6A17S8P. This device is designed to manage and protect LiFePo4 and Li-ion battery systems ranging from 4S to 24S, ensuring optimal performance and extended battery life through active balancing and comprehensive protection features.

2. SAFETY INFORMATION

Read all instructions carefully before installation and operation. Failure to follow safety guidelines can result in damage to the device, battery, or personal injury.

- Ensure all connections are correct and secure before applying power.
- Do not short-circuit the battery terminals.
- Work in a well-ventilated area.
- Use appropriate personal protective equipment (PPE).
- Consult a qualified professional if you are unsure about any installation steps.
- This device is intended for use with LiFePo4 and Li-ion battery types only.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- JK Smart BMS Active Balance Protection Board (BD6A17S8P)
- Sampling Cable (Balance Wires)
- Temperature Sensor
- RS485 Communication Cable (if included)
- LCD Display Cable (if included)
- User Manual (this document)

ITEM	Product Specifications											
	BD4A17S4P	BD4A20S4P	BD4A24S4P	BD6A17S6P	BD6A20S6P	BD6A24S6P	BD6A17S8P	BD6A20S8P	BD6A24S8P	BD6A20S10P	BD6A24S10P	B1A17S12P
Li-ion String supported	7-17S	7-20S	7-24S	7-17S	7-20S	7-24S	7-17S	7-20S	7-24S	7-20S	7-24S	7-17S
LiFePo4 String supported	8-17S	8-20S	8-24S	8-17S	8-20S	8-24S	8-17S	8-20S	8-24S	8-20S	8-24S	8-17S
LTO String supported	12-17S	12-20S	12-24S	12-17S	12-20S	12-24S	12-17S	12-20S	12-24S	12-20S	12-24S	12-17S
Balance method	Active balancer (Full State On)											
Active balanced current	0.4A			0.6A								1A
Inner resistance of mainchip	2.8mΩ	2.8mΩ	2.8mΩ	1.53mΩ	1.53mΩ	1.53mΩ	1.2mΩ	1.2mΩ	1.2mΩ	1mΩ	1mΩ	0.65mΩ
Continuous charge current	40A			60A			80A			100A	100A	120A
Continuous discharge current	40A			60A			80A			100A	100A	120A
MAX discharge current(2X)	60A			100A			150A			200A	200A	250A
Overcharge current limit (A/DJ)	10-40A			10-60A			10-80A			10-100A	10-100A	10-100A
Other Interface (Default)	RS485											
Other Interface (Customized)	CANBUS/HEAT											
Dimension (L*W*H MM)	110*73*18		116*83*18		133*81*18						162*102*20	
Wiring diagram	Common Port											
ITEM	Product Specifications											
	B1A20S12P	B1A20S15P	B1A24S15P	B2A24S15P	B2A20S20P	B2A24S20P	BD4A8S4P	B1A8S10P	B1A8S20P	B2A8S20P	B2A25SRP	B5A25S60P
Li-ion String supported	7-20S	7-20S	7-24S	7-24S	7-20S	7-24S	3-8S	3-8S	3-8S	3-8S	8-25S	8-25S
LiFePo4 String supported	8-20S	8-20S	8-24S	8-24S	8-20S	8-24S	4-8S	4-8S	4-8S	4-8S	8-25S	8-25S
LTO String supported	12-20S	12-20S	12-24S	12-24S	12-20S	12-24S	6-8S	6-8S	6-8S	6-8S	12-25S	12-25S
Balance method	Active balancer (Full State On)											
Active balanced current	1A			2A			0.4A	1A		2A	2A	5A
Inner resistance of mainchip	0.65mΩ			0.47mΩ			2.8mΩ	0.3mΩ			/	/
Continuous charge current	120A	150A			200A		40A	100A	200A		1000A	500A
Continuous discharge current	120A	150A			200A		40A	100A	200A		1000A	500A
MAX discharge current(2X)	250A	300A			350A		60A	200A	350A		/	/
Overcharge current limit (A/DJ)	10-100A	10-150A			10-200A		10-40A	10-100A	10-200A		10-1000A	10-600A
Other Interface (Default)	RS485										RS485 CANBUS	RS485 CANBUS
Other Interface (Customized)	CANBUS/HEAT										/	/
Dimension (L*W*H MM)	162*102*20						110*73*18	153*136*18			189*94*24	234*134*32
Wiring diagram	Common Port										Split Port	
Single cells voltage supported	1-5V											
Voltage acquisition accuracy	±5mV											
Overcharge protection voltage	1.2-4.35V Adjustable											
Overcharge release voltage	1.2-4.35V Adjustable											
Overcurrent release delay time	2-120S Adjustable											
Overdischarge protection voltage	1.2-4.35V Adjustable											
Overdischarge release voltage	1.2-4.35V Adjustable											
Temperature sensor	3pcs											
Temperature protection	YES											
Short circuit protection	YES											
Coulometer	YES											
Bluetooth supported	IOS / Android											

Image: Contents of the JK Smart BMS package, including the main board, red and black wiring harnesses, and a small brown box.

4. PRODUCT OVERVIEW

The JK Smart BMS BD6A17S8P is an advanced battery management system designed for optimal battery health and safety. It features active balancing, over-charge/discharge protection, over-current protection, short-circuit protection, and

low-temperature charging cutoff.



Image: Front view of the JK Smart BMS board, displaying the "JIKONG" logo, a QR code for APP download, and labels for P- and B- terminals.

For APP download and further information, scan the QR code or visit: <http://qr17.cn/BApbC0>

BD6A17S8P

Function: BT/RS485

Balance Current:0.6A

Battery Strings:8S-17S

Charge/Discharge:80A

131*81*18mm

Battery Type: Li-ion/Lifepo4/LTO



Image: Detailed view of the JK Smart BMS BD6A17S8P, outlining its functions: Bluetooth/RS485 communication, 0.6A balance current, support for 8S-17S battery strings, 80A charge/discharge current, dimensions (131*81*18mm), and compatibility with Li-ion/LiFePo4/LTO battery types.

For APP download and further information, scan the QR code or visit: <http://qr17.cn/BApbC0>

JK-BD6A17S6P/BD6A20S6P/BD6A24S6P
JK-BD6A17S8P/BD6A20S8P/BD6A24S8P

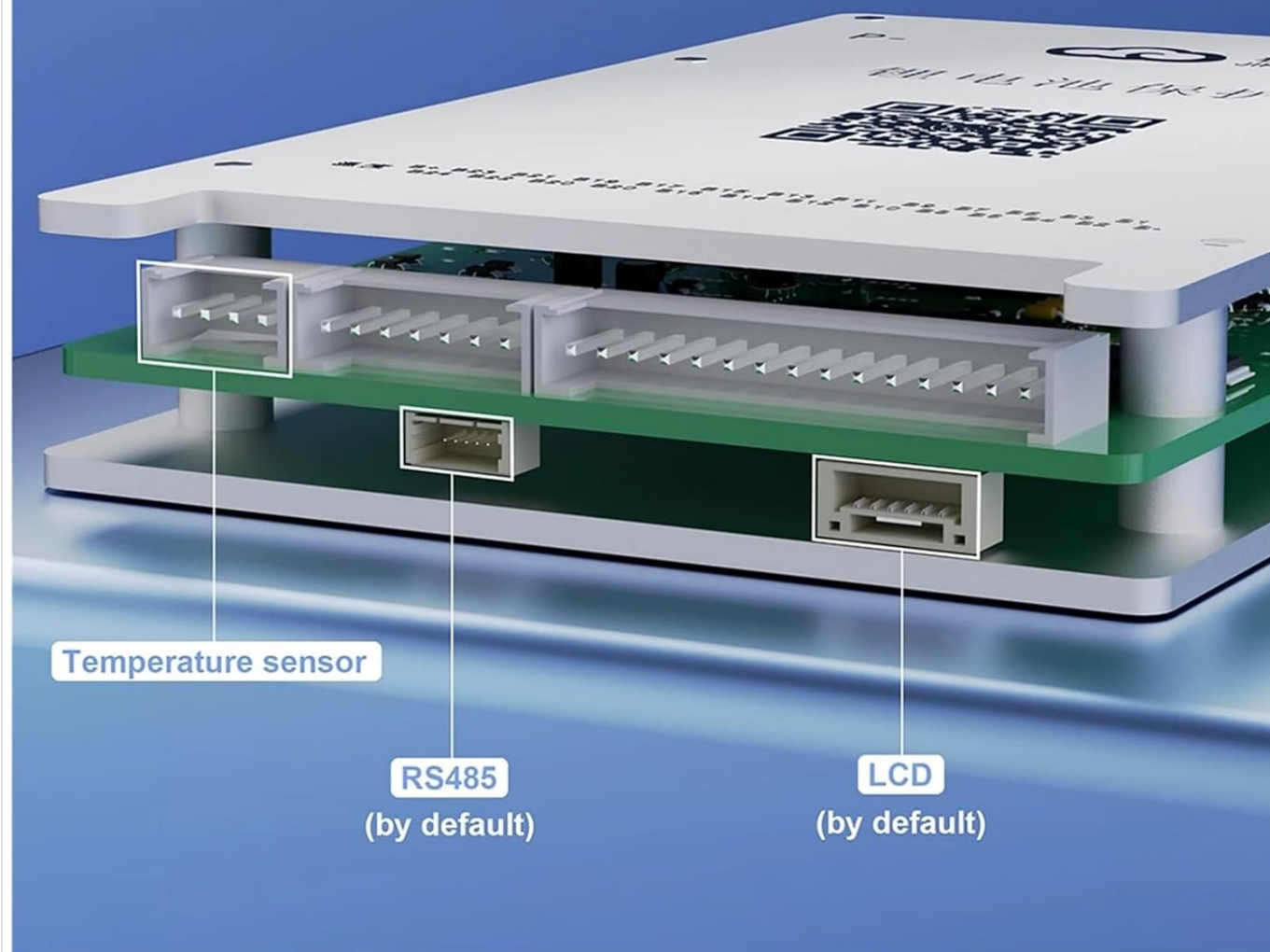


Image: Close-up view of the JK Smart BMS board, indicating connection ports for the Temperature sensor, RS485 communication (by default), and an optional LCD display (by default).



Image: Another view of the JK Smart BMS board, highlighting its robust construction and various connection points.
For APP download and further information, scan the QR code or visit: <http://qr17.cn/BApbC0>

5. SETUP AND WIRING

Proper wiring is crucial for the safe and correct operation of the BMS. Follow the diagram carefully.

1. Connect the main negative terminal of the battery pack to the **B-** terminal on the BMS.
2. Connect the main positive terminal of the battery pack to the **P+** terminal (if applicable, or directly to load/charger positive).
3. Connect the sampling cable (balance wires) to each cell's positive terminal, starting from the first cell (B1) up to the last cell (B17 for this model). Ensure the order is correct.
4. Connect the load and charger to the **P-** and **P+** terminals as shown in the diagram.
5. Connect the temperature sensor to the designated port on the BMS.
6. If using RS485 communication or an LCD, connect the respective cables to their ports.

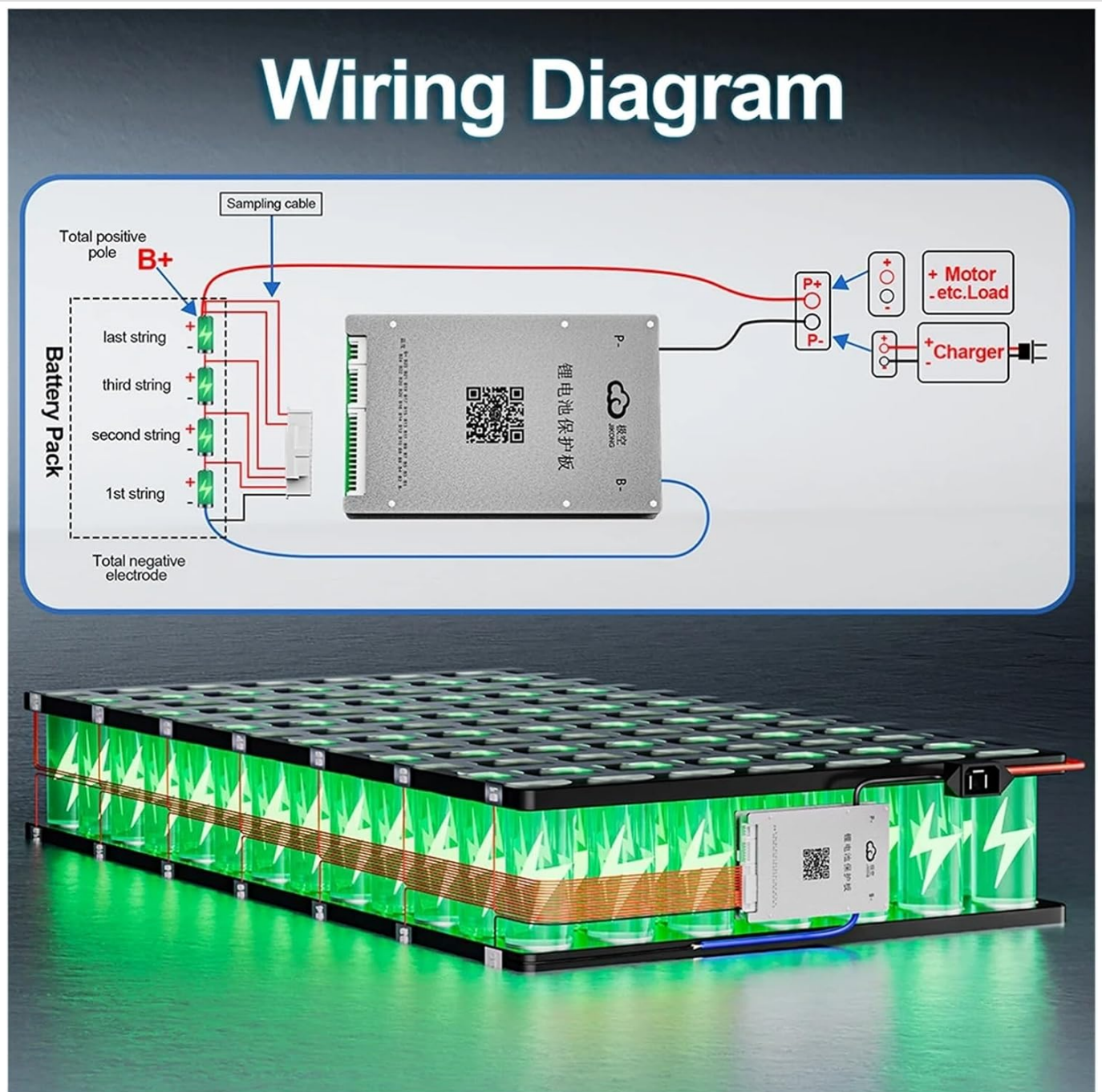


Image: Comprehensive wiring diagram illustrating how to connect the JK Smart BMS to a multi-cell battery pack, including connections for the total positive (B+) and negative (P-) terminals, sampling cables for individual cells, and outputs for motor, load, and charger.

For detailed wiring instructions and APP download, scan the QR code or visit: <http://qr17.cn/BApbC0>

6. OPERATING INSTRUCTIONS

6.1 Bluetooth APP Control

The JK Smart BMS features a dedicated mobile application for monitoring and configuring battery parameters.

1. Download the "JK BMS" APP by scanning the QR code on the product or visiting the provided link:
<http://qr17.cn/BApbC0>
2. Enable Bluetooth on your smartphone.
3. Open the JK BMS APP and search for available devices.
4. Select your BMS from the list to connect.
5. Once connected, you can view real-time battery status, individual cell voltages, temperature, charge/discharge current, and adjust various protection parameters.



Image: The JK Smart BMS board displayed next to a smartphone screen showing the active balance and monitoring features of the associated mobile application.

For APP download and further information, scan the QR code or visit: <http://qr17.cn/BApbC0>

6.2 RS485 Communication

The RS485 port allows for wired communication with external devices, such as computers or other monitoring systems, for advanced data logging and control. Refer to the technical documentation for the RS485 communication protocol.

7. MAINTENANCE

The JK Smart BMS is designed for reliable operation with minimal maintenance.

- Regularly check all wiring connections for tightness and corrosion.
- Keep the BMS clean and free from dust and moisture.
- Monitor battery cell voltages via the APP to ensure active balancing is functioning correctly.
- Avoid exposing the BMS to extreme temperatures or direct sunlight.

8. TROUBLESHOOTING

If you encounter issues, refer to the following common problems and solutions:

- **BMS not powering on:** Check main battery connections (B-, P+). Ensure the battery pack voltage is within the supported range.
- **Bluetooth connection issues:** Ensure Bluetooth is enabled on your phone. Restart the APP and try reconnecting. Verify the BMS is powered.
- **Cell voltage imbalance:** The active balancing feature works continuously. Allow time for balancing to occur. If imbalance persists, check individual cell connections and the balance wires.
- **Over-current/Short-circuit protection triggered:** Disconnect the load immediately. Identify and resolve the cause of the over-current or short-circuit. The BMS will typically reset automatically once the fault is cleared.
- **Low-temperature charging cutoff:** This is a safety feature. Charging will resume automatically when the battery temperature rises above the set threshold.

For further assistance, contact Aoleaby customer support.

9. SPECIFICATIONS

The following table details the specifications for the JK Smart BMS BD6A17S8P model.

Feature	Specification
Model	BD6A17S8P
Supported Battery Types	Li-ion, LiFePo4, LTO
Supported String Count	8S-17S
Active Balance Current	0.6A
Charge Current	80A
Discharge Current	80A
Communication	Bluetooth APP, RS485
Protection Features	Over-charge, Over-discharge, Over-current, Short-circuit, Low-temperature charging cutoff
Dimensions	131 x 81 x 18 mm
Item Weight	2.2 pounds (approx. 1 kg)

For a comprehensive list of product specifications across various models, refer to the detailed specification table provided in the product images.



Image: A detailed table outlining product specifications for multiple JK Smart BMS models, including parameters like item number, supported string count, active balance current, continuous charge/discharge current, and other interface options. The BD6A17S8P model is included in this table.

10. WARRANTY AND SUPPORT

For warranty information and technical support, please contact Aoleaby customer service through your purchase platform or refer to the official product website. Keep your purchase receipt as proof of purchase.

Manufacturer: Aoleaby

Item model number: Aoleaby (Note: The specific model for this manual is BD6A17S8P)

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