

Bolisila JK-B2A25SRP

Bolisila JK BMS Battery Equalizer JK-B2A25SRP User Manual

Model: JK-B2A25SRP | Brand: Bolisila

1. INTRODUCTION

This manual provides detailed instructions for the Bolisila JK BMS Battery Equalizer, model JK-B2A25SRP. This device is designed to protect and manage various battery configurations, including Li-ion, LiFePO4, and LTO battery systems, ensuring optimal performance and extended lifespan through active balancing and comprehensive protection features.

2. KEY FEATURES

- **Active Balance Technology:** Real-time energy transfer equalization using a supercapacitor, ensuring battery cell consistency and improving overall battery efficiency up to 99%.
- **Comprehensive Protection:** Safeguards against over-charge, over-discharge, over-current, short circuit, and includes low-temperature charging cutoff.
- **Wide Compatibility:** Supports 8S to 25S battery strings for Li-ion, LiFePO4, and LTO battery types, with a single voltage range of 1V-5V.
- **High Balancing Current:** Achieves 2A continuous balanced current for effective cell equalization.
- **Smart Monitoring & Control:** Features a dedicated mobile application (APP) for real-time battery status display, parameter settings, and communication via Bluetooth, RS485, or CAN.
- **Scalable Design:** Supports balanced cascading for systems with more than 24 battery packs.
- **High Current Handling:** Supports up to 500A continuous charge/discharge current.

3. PRODUCT SPECIFICATIONS

General Specifications

Feature	Specification
Model Number	JK-B2A25SRP
Active Balance Current	2A
Battery String Support	8S-25S (Li-ion, LiFePO4, LTO)
Single Cell Voltage Range	1V-5V
Equalization Accuracy	±5mV
Continuous Charge/Discharge Current	Up to 500A (with appropriate relay for split port)
Communication Interfaces	Bluetooth, RS485, CAN
Package Dimensions	1.18 x 0.79 x 0.39 inches
Item Weight	1.1 pounds

Product Diagram and Details

锂电池保护板

型号:JK-B2A25S-RP
(30228)

电池种类:三元、铁锂
均衡方式:主动均衡
均衡电流:2A
持续电流:500A
瞬时电流:1000A
电池串数:8-25

扫码下载手机APP



Figure 3.1: Front view of the Bolisila JK BMS Battery Equalizer JK-B2A25SRP. This image displays the main unit, which is a black

rectangular module with connection points and a QR code for app download.



Figure 3.2: Bolisila JK BMS Battery Equalizer JK-B2A25SRP highlighting key features such as BT/RS485/CAN function, 2A balance current, 8S-25S battery strings support, 1000A charge/discharge, dimensions (188.6*94*23.5), and compatibility with Li-ion/Lifepo4/LTO battery types. It also notes that a split port BMS requires a relay. The QR code for app download is visible: <http://qr17.cn/BApbC0>

Screenshot of Bluetooth link part of mobile APP

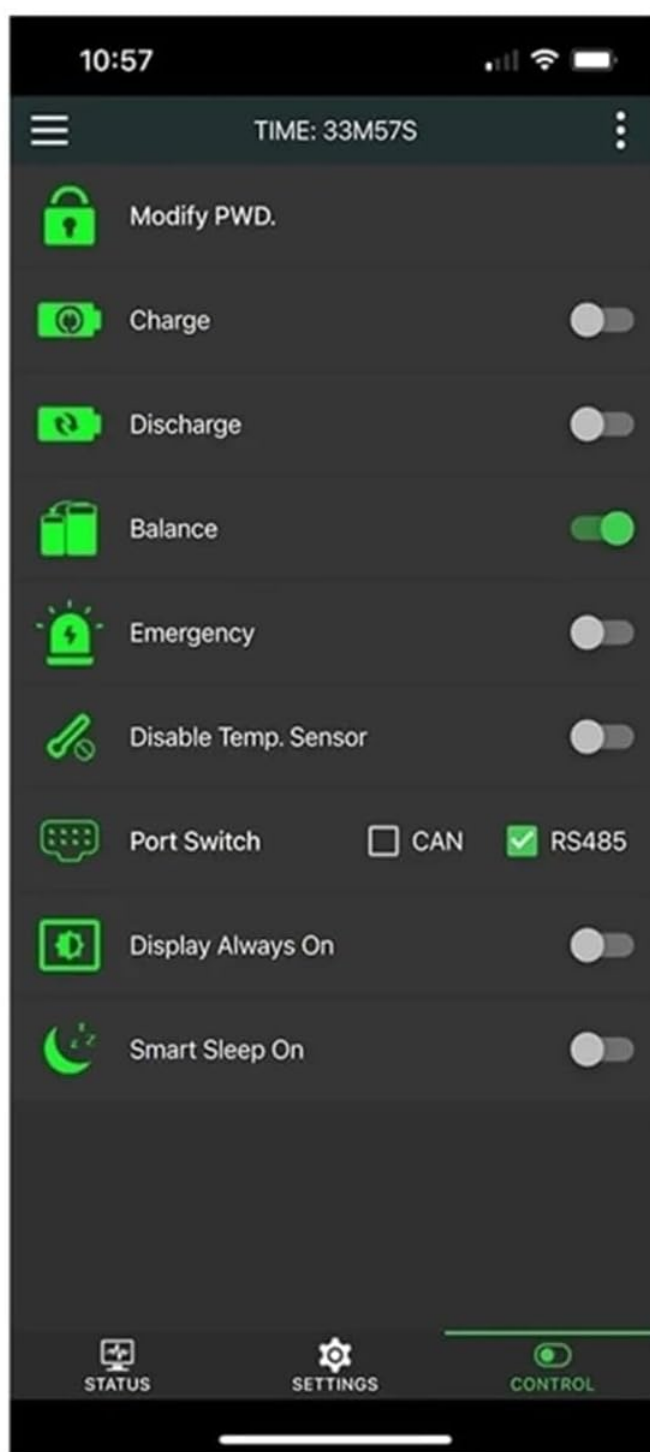


Figure 3.3: Included connection cables and accessories for the Bolisila JK BMS Battery Equalizer JK-B2A25SRP. This image shows the wiring harness and other small components necessary for installation.

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 (ADJ)	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 (ADJ)	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													

Figure 3.4: Detailed product specification table for various JK BMS models, including the JK-B2A25SRP. This table provides information on supported string counts, active balancer current, inner resistance, continuous charge/discharge current, and other interface options like RS485 and CANBUS/HEAT. It also details protection parameters such as overcharge, overdischarge, overcurrent, and short circuit protection.

4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of your BMS. Always ensure the battery pack is disconnected before beginning installation.

1. **Download the APP:** Scan the QR code provided on the product or in Figure 3.2 to download the official mobile application. This app is essential for monitoring and configuring your BMS. <http://qr17.cn/BApbC0>
2. **Wiring Connections:** Connect the balance wires from your battery cells to the BMS according to the wiring diagram provided with your product. Ensure each cell voltage is correctly connected to the corresponding BMS input. Refer to Figure 3.3 for an overview of included cables.
3. **Main Power Connections:** Connect the main positive and negative terminals of your battery pack to the designated power input terminals on the BMS.
4. **Load/Charger Connections:** Connect your load and charger to the appropriate output terminals of the BMS. If using a split port BMS, an external relay may be required for high current applications (as noted in Figure 3.2).
5. **Communication Module (Optional):** If using RS485 or CAN communication, connect the respective modules to the BMS communication ports.
6. **Initial Power-Up:** Once all connections are secure, power on the battery pack. The BMS should initialize.

Warning: Incorrect wiring can damage the BMS, battery pack, or connected equipment. If you are unsure about any step, consult a qualified professional.

5. OPERATING INSTRUCTIONS

The Bolisila JK BMS is primarily operated and monitored via its dedicated mobile application.

5.1 Mobile Application Overview

The mobile application provides a comprehensive interface for monitoring and controlling your BMS. It typically features a main status screen and a settings/control screen.

The status screen displays real-time data such as total voltage, battery power, remaining capacity, individual cell voltages, temperature, and cycle count. It also indicates the current charge, discharge, and balance status of the battery system.

The settings and control screen allows users to modify various parameters. This includes options to enable/disable charging and discharging, activate balancing, manage emergency settings, disable temperature sensors, switch communication ports (CAN/RS485), enable 'Display Always On', and activate 'Smart Sleep On'.

5.2 Connecting to the APP (Bluetooth)

1. Ensure Bluetooth is enabled on your mobile device.
2. Open the JK BMS application.
3. The app will scan for available BMS devices. Select your BMS from the list to connect.
4. Once connected, the app will display real-time battery data and allow access to settings.

5.3 Monitoring Battery Status

The main screen of the app provides a comprehensive overview of your battery system:

- **Total Voltage:** Overall voltage of the battery pack.
- **Current:** Charge or discharge current.
- **Cell Voltages:** Individual cell voltages, crucial for monitoring balance.
- **Temperature:** Battery temperature readings.
- **State of Charge (SOC):** Remaining battery capacity.
- **Cycle Count:** Number of charge/discharge cycles.

5.4 Adjusting Settings

Navigate to the "Settings" or "Control" section within the app to adjust various parameters:

- **Charge/Discharge Control:** Enable or disable charging and discharging functions.
- **Balance Control:** Manually initiate or disable active balancing. The BMS typically manages this automatically.
- **Protection Parameters:** Adjust thresholds for over-voltage, under-voltage, over-current, and temperature protection. Refer to the detailed product table (Figure 3.4) for default and adjustable ranges.
- **Communication Settings:** Configure RS485 or CAN communication if applicable.
- **Sleep Mode:** Enable Smart Sleep On to conserve power when the battery is inactive.

Caution: Modifying protection parameters incorrectly can lead to battery damage or safety hazards. Only adjust these settings if you fully understand their implications.

6. MAINTENANCE

The Bolisila JK BMS is designed for minimal maintenance. However, regular checks can ensure its longevity and optimal performance:

- **Visual Inspection:** Periodically inspect all wiring and connections for signs of wear, corrosion, or looseness. Ensure all terminals are securely fastened.
- **Software Updates:** Check the mobile application regularly for any available firmware updates for the BMS. Keeping the firmware updated can improve performance and add new features.
- **Environmental Conditions:** Ensure the BMS operates within its specified temperature and humidity ranges. Avoid exposing the unit to excessive moisture or extreme temperatures.
- **Battery Health Monitoring:** Use the mobile app to regularly monitor individual cell voltages and overall battery health. Consistent cell voltage differences may indicate an issue with the battery pack or the balancing function.

7. TROUBLESHOOTING

If you encounter issues with your Bolisila JK BMS, consider the following troubleshooting steps:

- **BMS Not Powering On:**
 - Check all main power connections to ensure they are secure and correctly wired.

- Verify the battery pack voltage is within the operational range of the BMS.

- **App Not Connecting via Bluetooth:**

- Ensure Bluetooth is enabled on your mobile device.
- Confirm the BMS is powered on.
- Try restarting the app and your mobile device.
- Ensure no other device is currently connected to the BMS via Bluetooth.

- **Cell Voltage Imbalance:**

- Verify all balance wires are correctly connected to the BMS and to the battery cells.
- Check the app to see if the active balancing function is enabled.
- Allow sufficient time for the active balancer to equalize cells, especially if the imbalance is significant.

- **Over-Protection Triggered (e.g., Over-Voltage, Under-Voltage, Over-Current):**

- Identify the specific protection triggered via the app.
- Address the root cause (e.g., reduce charge voltage, reduce load current, charge battery).
- The BMS will typically reset automatically once the condition is resolved, or it may require a manual reset via the app or by cycling power.

For further assistance, refer to the manufacturer's support resources or contact customer service.

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your purchase or visit the official Bolisila website. Ensure you have your product model number (JK-B2A25SRP) and purchase details available when contacting support.

Manufacturer: Bolisila

Date First Available: May 15, 2024

© 2024 Bolisila. All rights reserved.

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

Open the live page

<https://manuals.plus/asin/B0D46R52PG>

More documents and user manuals: <https://manuals.plus/>