东莞市佳梦新能源科技有限公司

Dongguan JM New Energy Technology Co., Ltd

户用储能电池组规格书

Household energy storage battery pack specifications

电池组型号/Battery Model：

51.2V314Ah



本文件涉及东莞市佳梦新能源科技有限公司核心机密，未经东莞市佳梦新能源科技有限公司允许，任何人不能私自传播或用于商业用途，否则将依法追究法律责任。

This document involves the core secrets of JM New Energy Technology Co., LTD. Without the permission of JM New Energy Technology Co., LTD., no one can spread or use it for commercial purposes, otherwise, legal liability will be pursued.

修订履历 Revision History

No.	版本 Version	修订日期 Revision date	修订内容 Revision Content	修订人 Revisioner
1	V1.0	2026.06.04	初次制定	

目录

1 概述 Overview 1
2 产品特点 Product features 1
3 技术参数 Technical Parameters 2
3.1 电芯参数 Cell parameters 2
3.2 BMS 参数 BMS parameters 3
3.3 电池组参数 Battery pack parameters 5
4 外观及结构 Appearance and structure 7
4.1 电池组外观 Appearance of the battery pack 7
4.2 电池组尺寸 Battery pack size 7
4.3 接口释义 Interface definition 8
5 功能说明 Function Description 11
5.1 可靠性参数 Reliability parameters 11
5.2 复位功能说明 Description of Reset Function 12
5.3 拨码功能说明 Description of DIP Switch Function 12
5.4 WIFI/蓝牙说明 WIFI/Bluetooth Description 13
6 储存与运输 Storage and Transportation 13
6.1 储存 Store 13
6.2 运输 Transportation 14
7 注意事项 Matters needing attention 14

1 概述 Overview

该规格书描述了 51.2V314Ah 电池组的相关参数和使用注意事项等，主要应用于家庭储能场景。针对客户不同的要求佳梦新能源科技有限公司可以提供不同的产品解决方案。

The technical specification document outlines the parameters and usage precautions of 51.2V314Ah battery packs, primarily designed for residential energy storage applications. JM New Energy Technology Co., Ltd. Provides customized product solutions to meet diverse client requirements.

2 产品特点 Product features

*使用磷酸铁锂电芯，更长的寿命，更安全可靠；

* Using lithium iron phosphate cells, longer life, safer and more reliable;

*多种安装方式，减小空间局限性；

*Multiple installation methods to reduce space limitations;

*支持 WIFI\蓝牙功能，实时云端监控电池组使用情况；

*Supports WIFI and Bluetooth functions, with real-time cloud monitoring of the usage status of the battery pack;

*配备 3A 主动均衡，让电池拥有更长寿命；

*Equipped with 3A active equalization technology to extend battery life.

*支持最大 15 台并联使用，满足多样化需求；

*Supports parallel operation of up to 15 units, meeting diverse needs;

*设计电池运行状态灯条，醒目查看电池状态。

*Design a battery operation status light strip for clear viewing of the battery status.

*设计满足 UN38.3\MSDS 等认证。

*Designed to meet certifications such as UN38.3 and MSDS.

3 技术参数 Technical Parameters

3.1 电芯参数 Cell parameters

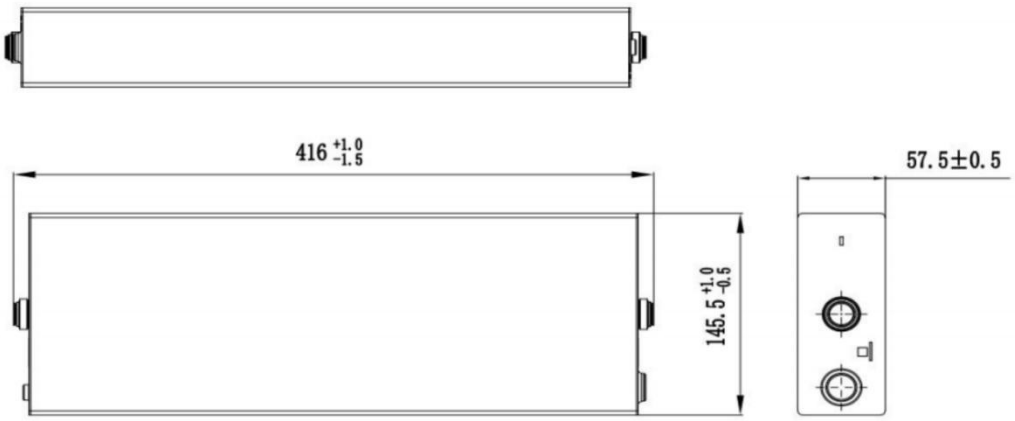
表 1 电芯参数表

Table 1 Technical Parameter Table of Battery Cells

No.	项目 project	规格 specification	备注 Remark
1	品牌 brand	/	
2	额定电压 rated voltage	3.2V	
3	额定容量 Rated capacity	314Ah	0.5C,25℃±2℃,2.5V~3.65V
4	额定能量 Rated energy	1004.8Wh	
5	工作电压范围 Operating voltage range	2.5V~3.65V	T≥0℃
6	尺寸 size	416*145.5*57.5mm	
7	重量 weight	6.68±0.2kg	

图一 电芯外形图

Figure 1 Cell shape diagram



3.2 BMS 参数 BMS parameters

表 2 BMS 参数表

Table 2 BMS Parameter Table

	项目(Project)	规格(Specification)			单位(Unit)	是否可设(Set or not)
		最小值(MIN)	典型值(TYP)	最大值(MAX)		
过充保护(Overcharge protection)	过充保护警告电压(Overcharge protection alarm voltage)	3.560	3.600	3.640	V	可设 Y
	过充保护电压(Overcharge protection voltage)	3.610	3.650	3.690	V	可设 Y
	过充保护延时(Overcharge protection delay)	0.5	1	2	S	可设 Y
	过充保护释放(Overcharge protection release)	3.310	3.350	3.390	V	可设 Y
	总体过充告警电压(Overall overcharge alarm voltage)	3.560*S	3.600*S	3.640*S	V	可设 Y
	总体过充保护电压(Overall overcharge alarm voltage)	3.610*S	3.650*S	3.690*S	V	可设 Y
	总体过充保护延时(Overall overcharge protection delay)	0.5	1	2	S	可设 Y
	总体过充保护解除电压(Overall overcharge protection release voltage)	3.310*S	3.350*S	3.390*S	V	可设 Y
	放电解除(Discharge release)	放电电流 Discharge current > 2A				
过放保护(Over-discharge protection)	过放保护警告电压(Over-discharge alarm voltage)	2.760	2.800	2.840	V	可设 Y
	过放保护电压(Over-discharge protection voltage)	2.460	2.500	2.540	V	可设 Y
	过放保护延时(Over-discharge protection delay)	0.5	1	2	S	可设 Y
	过放保护释放(Over-discharge protection release)	2.910	2.950	2.990	V	可设 Y
	总体过放告警电压(Overall over-discharge alarm voltage)	2.760*S	2.800*S	2.840*S	V	可设 Y
	总体过放保护电压(Overall over-discharge protection voltage)	2.460*S	2.500*S	2.540*S	V	可设 Y
	总体过放保护延时(Overall over-discharge protection delay)	0.5	1	2	S	可设 Y
	总体过放保护解除电压(Overall over-discharge protection released voltage)	2.910*S	2.950*S	2.990*S	V	可设 Y
	有充电时解除(Release when charging)	接入充电器可激活 Can be activated by plugging in a charger				
过流保护(Over-current protection)	充电过流释放条件 (Over-current charge release conditions)	放电电流 Discharge current > 5A				
	过放保护释放条件 (Over-discharge protection release conditions)	接入充电器可激活 Can be activated by plugging in a charger				
	充电过流保护值 (Charge over-current protection value)	210±10A				可设 Y
	充电过流延时 (Charge over-current delay)	0.5	1	1.5	S	可设 Y
	一级放电过流保护值 (1th discharge over-current value)	210±10A				可设 Y
	一级放电过流保护延迟 (1th discharge over-current delay)	9	10	12	S	可设 Y
	二级放电过流保护电流值 (2th discharge over-current value)	250±10A)				可设 Y
	二级放电过流 2 保护延迟 (2th discharge over-current 2 protection delay)	0.7	1	2	S	可设 Y
	放电过流保护恢复条件 (Discharge over-current protection recovery conditions)	延时 60S 后自动恢复 (Automatic recover after a delay of 60S)				
短路保护(Short circuit protection)	短路保护电流 (Short circuit protection current value)	≥2000A				
	短路保护延迟时间 (Short circuit protection delay time)			350	uS	
	短路保护恢复 (Short circuit protection recovery)	有充电时，短路保护解除 Short circuit protection release while charging 负载移除后，将自动解除 After the load is removed, it automatically release.				

短路说明 ： 短路电流小于最小值或高于最大值可能会造成短路保护失效， 短路电流超过最大值， 不保证有短路保护， 也不建议做短路保护测试。(Short-circuit description: The short-circuit current is less than the minimum value or higher than the maximum value, which may cause the short-circuit protection to fail. And if the short-circuit current exceeds maximum value, short-circuit protection is not guaranteed, and short-circuit protection testing is not recommended.)						
温度保护 (Temperature protection)	充电高温保护警告值(Charge high temperature protection alarm value)	45	50	55	℃	可设 Y
	充电高温保护值(Charge high temperature protection value)	50	55	60	℃	可设 Y
	充电高温保护释放值(Charge high temperature protection release value)	45	50	55	℃	可设 Y
	充电低温保护警告值(Charge low temperature protection value)	-5	0	5	℃	可设 Y
	充电低温保护值(Charge low temperature protection value)	-10	-5	0	℃	可设 Y
	充电低温保护释放值(Charge low temperature protection release value)	-5	0	5	℃	可设 Y
	放电高温保护警告值(Discharge high temperature protection value)	50	55	60	℃	可设 Y
	放电高温保护值(Discharge high temperature protection value)	55	60	65	℃	可设 Y
	放电高温保护释放值(Discharge high temperature protection release value)	50	55	60	℃	可设 Y
	放电低温保护警告值(Discharge low temperature protection alarm value)	-20	-15	-10	℃	可设 Y
	放电低温保护值(Discharge low temperature protection value)	-25	-20	-15	℃	可设 Y
	放电低温保护释放值(Discharge low temperature protection release value)	-20	-15	-10	℃	可设 Y
	环境低温保护警告值(Environment low temperature protection alarm value)	-20	-15	-10	℃	可设 Y
	环境低温保护值(Environment low temperature protection value)	-25	-20	-15	℃	可设 Y
	环境低温保护释放值(Environment low temperature protection release value)	-20	-15	-10	℃	可设 Y
	环境高温保护警告值(Environment high temperature protection alarm value)	60	65	70	℃	可设 Y
	环境高温保护值(Environment high temperature protection value)	65	70	75	℃	可设 Y
	环境高温保护释放值(Environment high temperature protection release value)	60	65	70	℃	可设 Y
	MOS高温警告值(MOS high temperature alarm value)	85	90	95	℃	可设 Y
	MOS高温保护值(MOS high temperature protection value)	90	95	100	℃	可设 Y
	MOS 高温保护释放值(MOS high temperature protection release value)	80	85	90	℃	可设 Y
均衡功能 (Balance Function)	均衡开启压差(Balance opening voltage difference on)	13	15	17	mV	可设 Y
	均衡停止压差(Balance closing voltage difference on)	4	5	6	mV	可设 Y
	均衡电流(Balance current)	-	3	-	A	可设 Y
限流 (current limit)	被动限流(Passive current-limiting)	与过流警告一致 Consistent with the over-current alarm				不可设 N
	主动限流(Active current-limiting)	与过流警告一致 Consistent with the over-current alarm				可设 Y
	低压限流(Current-limiting of low voltage)	与总压欠压保护值一致 Consistent with the total voltage under-voltage protection value				可设 Y

3.3 电池组参数 Battery pack parameters

表 3 电池组参数表

Table 3 Parameter Table of Battery Packs

NO.	项目 project	规格 Specification	备注 Note
1	串并连方式 Series-parallel connection method	16S1P	
2	额定容量 Rated capacity	314Ah	充放电流：0.5C 25±2℃ Charge/discharge current: 0.5C 25±2℃
3	标称电压 Nominal voltage	51.2V	
4	标称电量 Nominal capacity	16.04kWh	
5	工作电压范围 Operating voltage range	40V~58.4V	
6	充电限流 Charging current limiting	10A	
7	标准充电电流 Standard charging current	75A	
8	最大充电电流 Maximum charging current	200A	触发充电过流保护后会限流至 10A. After triggering the charging overcurrent protection, the current will be limited to 10A.
9	最大持续放电电流 Maximum continuous discharge current	200A	
10	电池内阻 Internal resistance of the battery	30m Ω	45%SOC,AC 1kHz

11	充电工作温度范围 Charging operating temperature range	5℃~50℃	
12	放电工作温度范围 Discharge operating temperature range	-15℃~65℃	
13	通讯类型 Communication type	CAN/RS485/WIFI Bluetooth	
14	主动均衡电流 Active Balance Current	3A	
15	防护等级 Protection level	IP20	
16	尺寸 Size	490*320*782mm	±2mm
17	重量 Weight	147.5 Kg	±1kg
18	安装方式 Installation method	落地安装 Floor-standing installation	
19	出货状态 Shipping status	SOC 45%±5%	
20	放电容量效率 Discharge capacity efficiency	≥97%	
21	适用海拔 Applicable altitude	≤3000m	

4 外观及结构 Appearance and structure

4.1 电池组外观 Appearance of the battery pack

图 2 电池组外观图

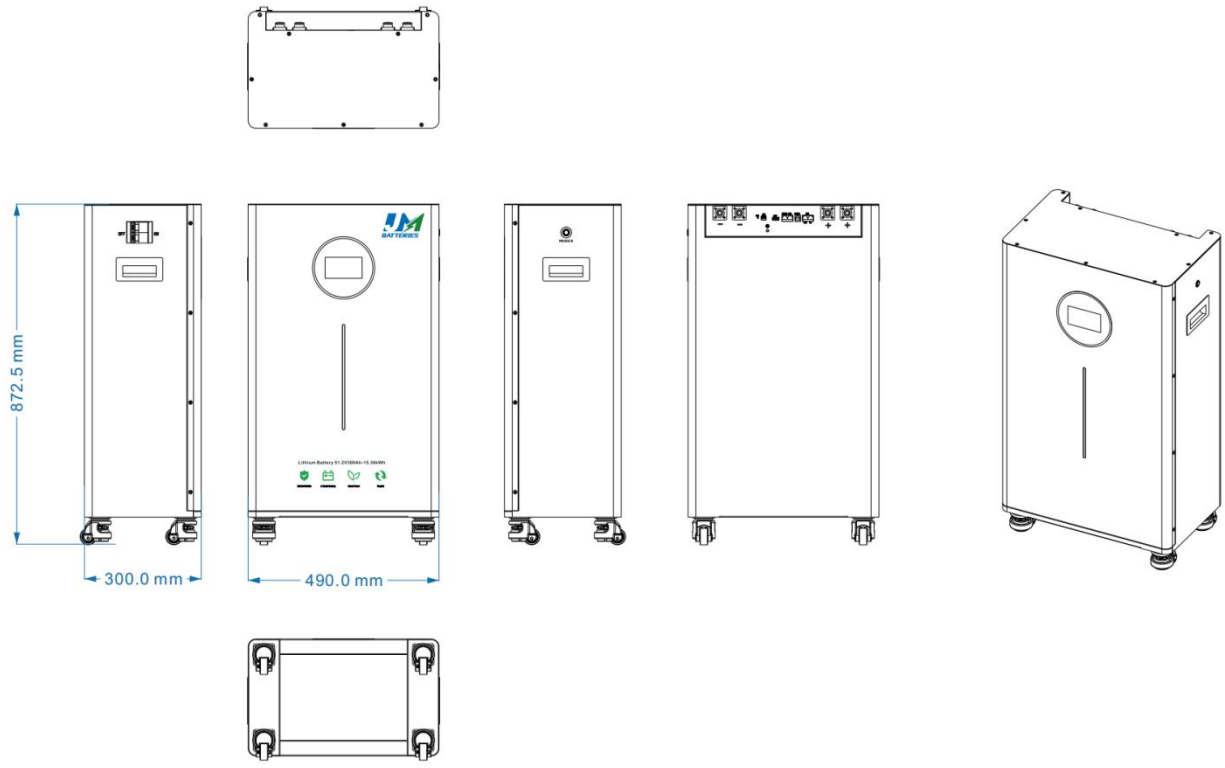
Figure 2 Appearance diagram of the battery pack



4.2 电池组尺寸 Battery pack size

图 3 电池组轮廓尺寸图

Figure 3 Outline Dimension Diagram of the Battery Pack



4.3 接口释义 Interface definition

图 4 接口定义

Figure 4 Interface Definition



表 4 接口定义

Table 4 Interface Definition

NO.	名称 Name	用途 Purpose
1	断路器 Circuit breaker	控制电池组正极导通或断开 Control the battery pack's positive terminal to connect or disconnect
2	显示屏 Display screen	查看电池组实时信息及设置通讯协议 View real-time battery pack information and configure communication protocols
3	运行状态指示灯 Operation Status Indicator Light	查看电池组实时状态及剩余容量 Check the battery pack's real-time status and remaining capacity
4	开关 Switch	控制 BMS 开机和关机 Control BMS startup and shutdown
5	负极接线端子 Negative binding post	电池组输入、输出负极接口 Battery pack input/output negative terminal interface

6	RES	复位按键，长按 10S 重置 BMS 状态 Reset button: Hold for 10 seconds to reset the BMS status
7	ADD	拨码开关，电池组并机通信时设置通信地址 DIP switch for setting the communication address when battery packs communicate in parallel
8	接地安装 Grounding Installation	地线安装位置 Ground wire installation location
9	DRY	干节点，控制外部设备的无源开关 Dry node: passive switch for controlling external devices
10	RS485	BMS 与逆变器的 RS485 通讯接口 The RS485 communication interface between the BMS and the inverter
11	CAN	BMS 与逆变器的 CAN 通讯接口 The CAN communication interface between the BMS and the inverter
12	RS232	BMS 调试接口 BMS debugging interface
13	BAT IN/OUT	电池组并机使用时电池与电池之间的通信接口 Communication interface between batteries when the battery pack is used in parallel
14	正极接线端子 Positive binding post	电池组输入、输出正极接口 Battery pack input/output positive terminal interface

图 5 通讯网口定义

Figure 6 Definition of Communication Network Port

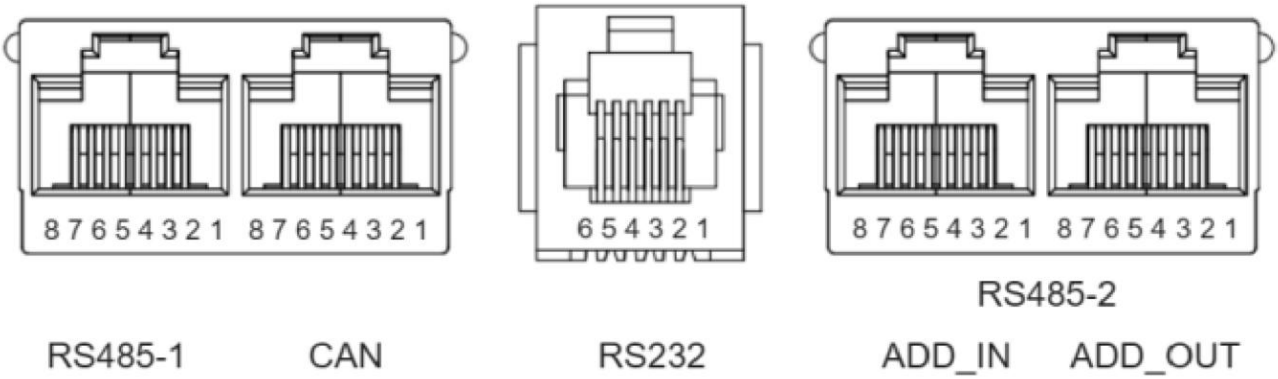


表 5 通讯接口引脚定义

Table 5 Definition of Communication Interface Pins

接口 interface	RS485-1		CAN		RS232		RS4852*2	
功能描述 Functional Description	连接上位机或逆变器 Connected PC or PCS		连接逆变器 Connected PCS		连接上位机 Connected PC		电池并连通讯 Parallel communication	
引脚说明 Pin specification	PIN	Description	PIN	Description	PIN	Description	PIN	Description
	1、8	RS485-B1	1、8	NC	1、2、6	NC	1、8	RS485-B2
	2、7	RS485-A1	2、7	NC	3	TX	2、7	RS485-A2
	4	NC	4	CAN-H	4	RX	4、5	NC
	5	NC	5	CAN-L	5	GND	3	IN/OUT
	3、6	GND	3、6	GND			6	GND

5 功能说明 Function Description

5.1 可靠性参数 Reliability parameters

表 6 可靠性参数

Table 6 Reliability Parameters

NO.	名称 Name	规格 specifications
1	检测精度 Detection accuracy	电流精度：±2% 电芯电压精度：±10Mv 温度精度：±3℃ Current accuracy: ±2% Cell voltage accuracy: ±10Mv Temperature accuracy: ±3℃
2	电流阈值 Current threshold	充电电流：0.8A 放电电流：0.8A Charging current: 0.8A Discharging current: 0.8A
3	失效类型 Failure type	电压检测失效、温度检测失效、充放电 MOS 失效 Voltage detection failure, temperature detection failure, charge-discharge MOS failure
4	历史记录 History	支持存储 500 条历史数据，包含电压、电流、温度、MOS 状态、SOC、SOH 等数据 Supports storing 500 pieces of historical data, including data such as voltage, current, temperature, MOS status, SOC, SOH, etc.
5	开机 Power on	BMS 处于关机状态，闭合自锁开关，BMS 开机，LED 一次点亮 0.5S。 BMS 处于休眠模式，按下复位开关（1S）后松开，BMS 被激活，LED 依次亮起 0.5S。 When the BMS is in the shutdown state, close the self-locking switch, the BMS will power on, and the LED will light up one by one for 0.5 seconds. When the BMS is in sleep mode, press the reset switch (for 1 second) and then release it, the BMS will be activated, and the LED will light up in sequence for 0.5 seconds.
6	关机 Power off	BMS 处于运行状态，断开自锁开关，1S~3S 后，系统关机。 The BMS is in operation. Disconnect the self-locking switch, and the system will shut down after 1S to 3S.

5.2 复位功能说明 Description of Reset Function

BMS 处于休眠状态时，按下按键(1S)后松开，保护板被激活，LED 指示灯从"LED1"开始依次点亮 0.5 秒。

When the BMS is in a dormant state, press the button (for 1 second) and then release it. The protection board will be activated, and the LED indicators will light up in sequence starting from "LED1" for 0.5 seconds each.

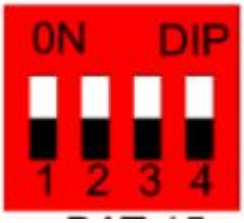
BMS 处于激活状态时，按下按键(3~6S)后,LED 指示灯从最低电量灯开始依次点亮 0.5 秒,松开后,系统进入休眠。

When the BMS is in the activated state, press the button (for 3~6 seconds), and the LED indicator lights will light up in sequence starting from the lowest battery level light for 0.5 seconds each. After releasing the button, the system enters sleep mode.

BMS 处于激活状态时，按下按键(6~10S)后松开，保护板被复位，LED 指示灯依据当前电量显示。

When the BMS is in the activated state, press and hold the button for 6 to 10 seconds, then release it. The protection board will be reset, and the LED indicator will display according to the current power level.

5.3 拨码功能说明 Description of DIP Switch Function

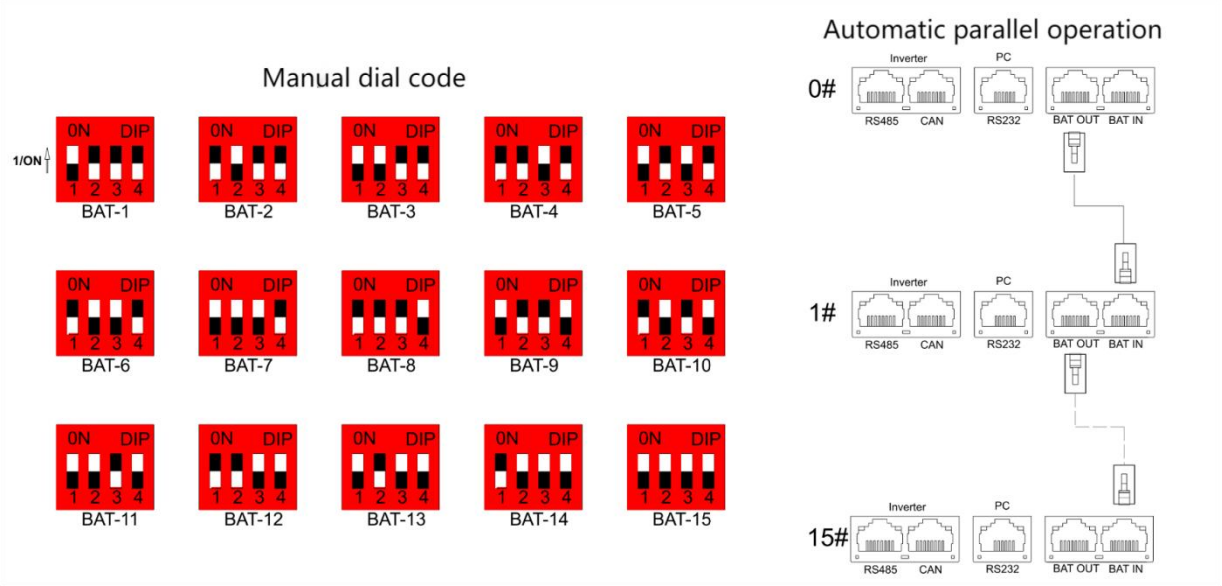


当 PACK 作并联使用时，拨码全部打到 OFF 上时启动手动拨码地址功能，否则使用默认自动寻址功能，通过 BMS 上的拨码开关设置地址区分不同的 PACK，需避免地址设为相同，BMS 拨码开关的定义参照下表,系统最大支持 15 个并机。

When PACKs are used in parallel, setting all the DIP switches to OFF activates the manual DIP switch addressing function; otherwise, the default automatic addressing function is used. The addresses of different PACKs are distinguished through the DIP switch settings on the BMS, and it is necessary to avoid setting the same address. The definition of the BMS DIP switch refers to the table below, and the system supports a maximum of 15 parallel units.

图 7 拨码示例

Figure 7 Example of DIP Switch Settings



5.4 WIFI/蓝牙说明 WIFI/Bluetooth Description

出厂标配 WIFI/蓝牙监控功能，下载手机 APP 后，可通过蓝牙连接或者 WIFI 配网实现远程监管。（具体使用方法请参考用户手册）

It comes with standard WIFI/Bluetooth monitoring functions. After downloading the mobile APP, remote monitoring can be achieved through Bluetooth connection or WIFI network configuration. (Please refer to the user manual for specific usage methods)

6 储存与运输 Storage and Transportation

6.1 储存 Store

电池组需要长期储存时，应保持电池电量在 50%左右，并每三个月取出检查电量，如电量低，需要将电池补充至 50%后才能再次储存。

When the battery pack needs to be stored for a long time, the battery power should be kept at around 50%, and it should be taken out every three months to check the power. If the power is low, the battery needs to be recharged to 50% before storing it again.

电池组与充电器应贮存在清洁、干燥、通风处，应避免与腐蚀性物质接触，远离火源及热源。

Battery packs and chargers should be stored in a clean, dry, and well-ventilated place. They should be kept away from corrosive substances, fire sources, and heat sources.

6.2 运输 Transportation

电池组属于危险品，批量运输时必须由专业的运输设备和公司进行运输；
Battery packs are classified as dangerous goods. When transported in bulk, they must be transported by professional transportation equipment and companies.
个人使用时，请选择合适的搬运设备进行运输，避免撞击、抖动等情况发生。
When using it personally, please select appropriate handling equipment for transportation to avoid collisions, shaking, and other such situations.

7 注意事项 Matters needing attention

（1）电池组可以单独使用，也可以多个并联使用，电池组不能串联使用，并联使用最大数量 15 台；

(1) The battery pack can be used individually or multiple packs can be used in parallel. The battery pack cannot be used in series, and the maximum number of packs for parallel use is 15 units;

（2）电池组必须在规定的充放电倍率下使用，且充电电压不可超过产品技术要求。

(2) The battery pack must be used within the specified charge and discharge rates, and the charging voltage must not exceed the product's technical requirements.

（3）电池组必须在规定的环境下使用，过高或过低的温度都会影响电池组的性能和安全。

(3) The battery pack must be used in the specified environment. Excessively high or low temperatures will affect the performance and safety of the battery pack.

（4）电池组必须在清洁、通风的环境中使用，避免与腐蚀性物质接触，并远离易燃易爆物体。

(4) The battery pack must be used in a clean and well-ventilated environment, avoid contact with corrosive substances, and keep away from flammable and explosive objects.

（5）不能将电池组与金属导电物体一起放置，避免发生短路；

(5) Do not place the battery pack together with metal conductive objects to avoid short circuits;

（6）不得私自拆解电池组，倘若拆件发生安全事故，我司不予承担任何责任；

(6) Do not disassemble the battery pack without authorization. If a safety accident occurs due to disassembly, our company shall not bear any responsibility.

（7）电池组如出现变形、漏液、散发刺激性气味，请立即停止使用并保证现场通风，并联系专业人员处理；

(7) If the battery pack is deformed, leaking, or emitting a pungent odor, please stop using it immediately, ensure ventilation at the site, and contact professional personnel for handling.

（8）禁止将电池组放置在水中；

(8) It is prohibited to place the battery pack in water;

（9）禁止反接电池组正负极；

(9) It is forbidden to reverse the positive and negative poles of the battery pack;

（10） 电池组使用没电后应立即给电池组充电，避免长时间没电状态导致放；

(10) When the battery pack runs out of power, it should be recharged immediately to avoid over-discharge caused by being in a power-depleted state for a long time.