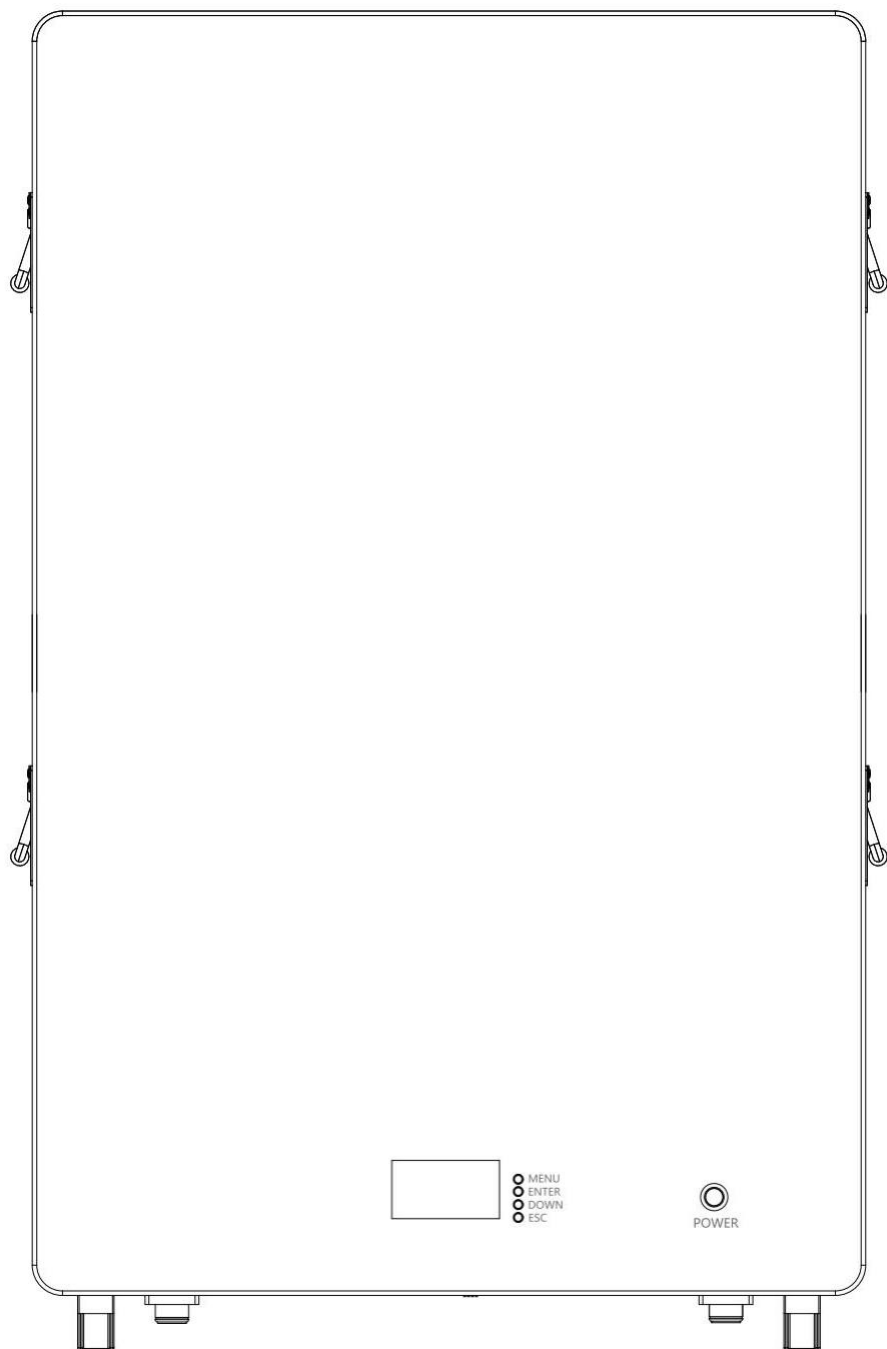




J02 电池操作手册

J02 Battery Operating Manual



修订记录

Revision Page

生效日期 Effective Date	版本 Version	编制 Prepared By	修订 Change
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1. Safety Precautions 安全防范措施

1.1 Safety Warning安全警告

- ◆ Connection Safety: Ensure all power and communication cables are securely and correctly connected to prevent damage or fire hazards. Improper connections may deactivate the system.
- ◆ 连接安全：确保所有电源和通信电缆均已安全且正确地连接，以防止损坏或火灾危险。不正确的连接可能会导致系统停用。
- ◆ Environmental Considerations: Avoid installing the system in enclosed areas, direct sunlight, or close proximity to heaters to prevent fire or equipment damage. Additionally, keep the system away from areas with excessive oil, smoke, steam, moisture, or dust to minimize the risk of fire or electric shock.
- ◆ 环境注意事项：避免将系统安装在封闭区域、阳光直射处或靠近加热器的地方，以防止火灾或设备损坏。此外，请将系统远离油污、烟雾、蒸汽、潮湿或灰尘过多的区域，以最大程度地降低火灾或触电风险。
- ◆ Personal Protective Equipment: Always wear insulating gloves and protective eyewear during installation to safeguard against electric shock or injury.
- ◆ 个人防护设备：安装过程中务必佩戴绝缘手套和防护眼镜，以防止触电或受伤。
- ◆ Water and Foreign Objects: Prevent water and foreign objects from entering the module to avoid fire or electric shock. If infiltration occurs, immediately turn off the power supply.
- ◆ 水及异物：防止水及异物进入模块，以免引起火灾或触电。如发生渗入，请立即关闭电源。
- ◆ Disassembly Prohibition: Do not disassemble the unit as this increases the risk of fire or electric shock. There are no serviceable parts inside the unit. Access will void the warranty.
- ◆ 禁止拆卸：请勿拆卸设备，因为这会增加火灾或触电的风险。设备内部没有可维修的部件。拆卸将使保修失效。
- ◆ Ventilation and Placement: Ensure adequate ventilation for the system and avoid covering any ventilation openings. Install the system on a stable, level surface and refrain from placing it on unstable surfaces or covering vents.

◆通风和放置：确保系统通风良好，避免遮盖任何通风口。将系统安装在稳定、水平的表面上，不要将其放置在不稳定的表面上或遮盖通风口。

◆Transportation Safety: Utilize designated packaging materials and follow installation instructions carefully to prevent injuries during transportation.

◆运输安全：使用指定的包装材料并仔细遵循安装说明，以防止运输过程中造成伤害。

◆ Rack Stability: Secure all racks firmly to the floor to prevent injuries caused by falling equipment.

◆ 机架稳定性：将所有机架牢固地固定在地板上，以防止设备掉落造成的伤害。

◆ Accessory Installation: Ensure proper installation of any additional equipment or accessories to prevent falls and potential injuries.

◆ 配件安装：确保正确安装任何附加设备或配件，以防止跌倒和潜在的伤害。

◆ Cable Management: Organize and secure all cables appropriately to prevent tripping hazards or equipment falls.

◆ 电缆管理：适当整理和固定所有电缆，以防止绊倒危险或设备掉落。

◆ Malfunction Response: In the event of a malfunction, turn off the power supply immediately to prevent further issues.

◆ 故障响应：发生故障时，请立即关闭电源，以防止进一步的问题。

◆ Prohibited Use: Do not stand on or place objects on the unit or use it as a stool or table.

◆ 禁止使用：请勿站在设备上或在设备上放置物品，或将其用作凳子或桌子。

◆ Safe Disposal, Dispose of the unit properly according to relevant regulations.

◆ 安全处置，请按照相关规定妥善处置该装置。

◆ Liquid Leakage: If liquid leaks from the module, take precautions to avoid skin or eye contact. Seek medical attention if necessary and contact customer service.

◆ 液体泄漏：若模块发生液体泄漏，请采取预防措施，避免皮肤或眼睛接触。必要时请就医并联系客服。

1.2 Usage Precautions使用事项

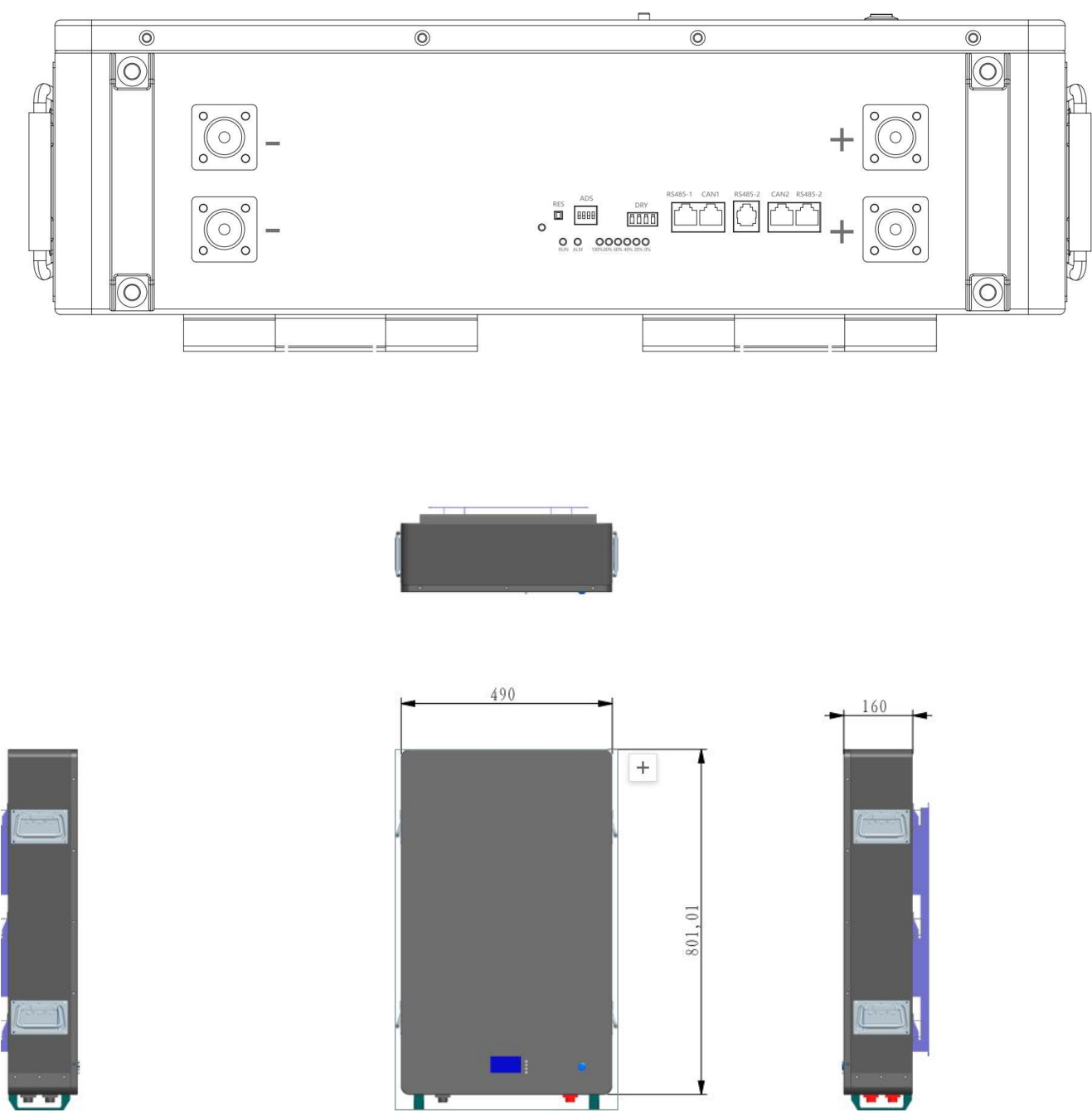
- ◆ In case of any abnormalities such as unusual sounds, odors, smoke, water ingress, physical damage, or a drop, promptly turn off the system and contact customer service.
- ◆ 如果出现任何异常情况，如异常声音、气味、烟雾、进水、物理损坏或掉落，请立即关闭系统并联系客服。
- ◆ Operate the product according to controller signals, and refrain from puncturing it.
- ◆ 根据控制器信号操作产品，避免刺穿产品。
- ◆ Call customer services if the module experiences a significantly faster than normal discharge rate at room temperature, even when fully charged.
- ◆ 如果模块在室温下的放电速度明显快于正常情况，即使充满电，也请致电客户服务。

1.3 Prohibited Actions禁止行为

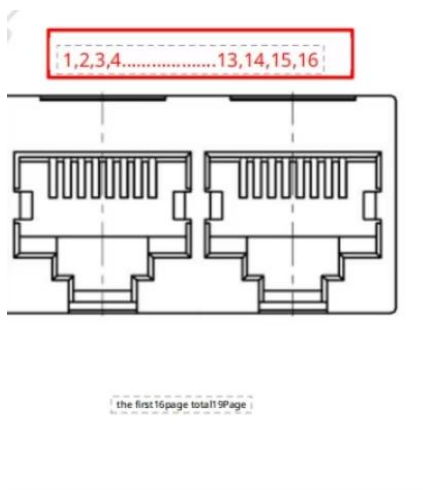
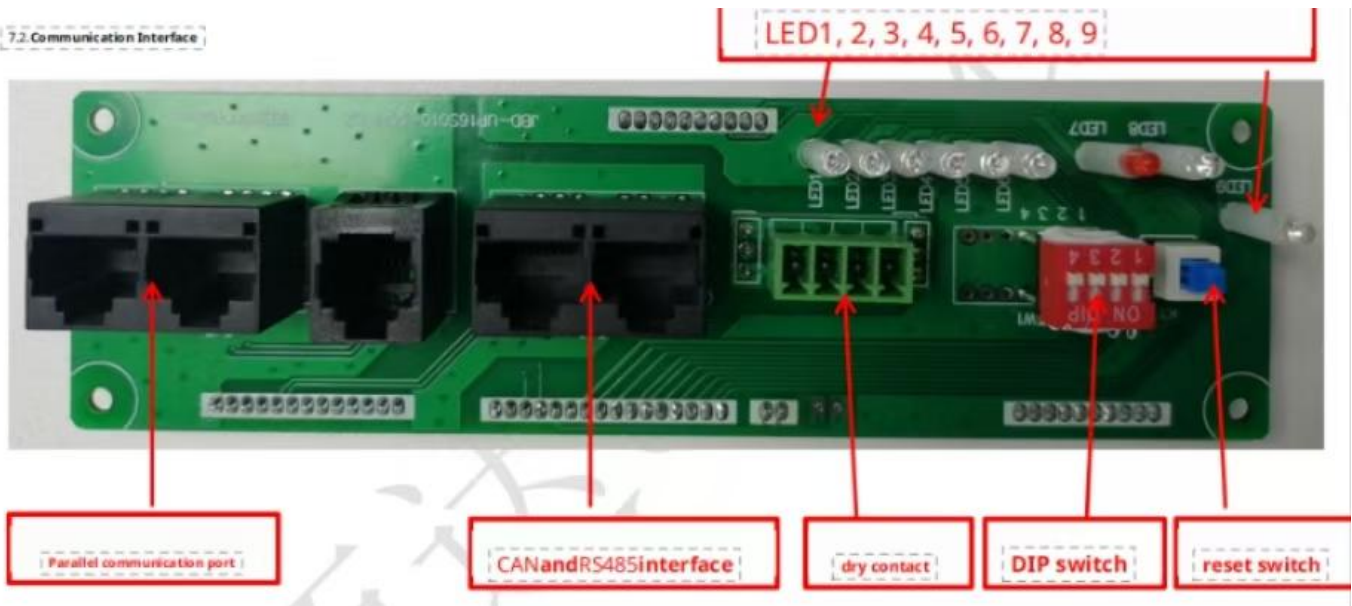
- ◆ Disassembling or modifying the product is strictly prohibited, as it may compromise internal protective functions and lead to abnormal operation, heat generation, gas emission, or fire and will void the warranty.
- ◆ 严禁拆卸或改造产品，否则，可能会损害内部保护功能，导致操作异常、发热、气体排放或火灾，并会使保修失效。
- ◆ Do not touch the output terminal except for installation purposes.
- ◆ 除安装目的外，请勿触摸输出端子。
- ◆ Exposing the system to fire, heat, open flames, or submerging it in liquid is strictly forbidden.
- ◆ 严禁将系统暴露在火中、热中、明火中或浸入液体中。
- ◆ Avoid applying strong shocks, crushing, or dropping the product.
- ◆ 避免对产品施加强烈冲击、挤压或掉落。
- ◆ This system is not intended for medical purposes, and foreign objects must not be inserted into it.
- ◆ 本系统不适用于医疗用途，不得将异物插入其中。
- ◆ Do not connect devices exceeding the specified operating voltage and current range.
- ◆ 请勿连接超出规定工作电压和电流范围的设备。

- ◆ Unplugging the power connector from the POWER CONNECTOR terminal while the power is on is strictly prohibited.
- ◆ 严禁在通电状态下从POWER CONNECTOR端子上拔下电源连接器。

2. Specifications and Functions 规格与功能



7.2. Communication Interface



RS485--采用 8P8C 立式 RJ45 插座		CAN--采用 8P8C 立式 RJ45 插座	
RJ45 引脚	定义说明	RJ45 引脚	定义说明
1、8	RS485-B1	9、10、11、14、 16	NC
2、7	RS485-A1	12	CANL
3、6	GND	13	CANH
4、5	NC	15	GND

CAN和 RS485接口

RS485--采用 8P8C 立式 RJ45 插座		RS485--采用 8P8C 立式 RJ45 插座	
RJ45 引脚	定义说明	RJ45 引脚	定义说明
1、8	RS485-B	9、16	RS485-B
2、7	RS485-A	10、15	RS485-A
3、6	GND	11、14	GND
4、5	NC	12、13	NC

NO. 序号	Key Item 关键项目	Specification 规格	Remarks 备注
1	Battery model 电池型号	LFP106Ah 磷酸铁锂 106 安时	Cathode: Lithium iron Phosphate 阴极：磷酸铁锂 Anode: Graphite 阳极：石墨
2	Module model 模块型号	16S2P Module 16S2P 模块	32 module in series 32 个模块串联
3	Nominal capacity 标称容量	200Ah	
4	Nominal voltage 标称电压	51.2V	Single cell voltage 3.2V 单颗电芯 3.2 伏特
5	Operating voltage range 工作电压范围	43.2~58.4V	
6	Rated energy 额定能量	10.24kWh	Usable 10.24kWh 可用 10.24 千瓦时

7	Available SOC range 可用 SOC 范围	0%~100%	
8	SOC transportation range SOC 运输范围	40%	
9	Operating temperature 操作温度	Charging 充电: 0~55℃ Discharge 放电: -20~55℃	Detailed use conditions need to refer to the charge and discharge window 详细使用情况需参考充放电窗口
10	Storage temperature 存储温度	-20~55℃	Recommended at 25℃ 推荐在 25 度存储
11	Working humidity 工作湿度	20-80% RH 20~80%相对湿度	
12	Standard charging current 标准充电电流	0.5C (100A)	
13	Maximum charging continuous current 最大持续充电电流	1C (200A)	
14	Standard discharge current 标准放电电流	0.5C (100A)	Recommendation value 建议值
15	Maximum discharging continuous current 最大持续放电电流	1C (200A)	
16	Voltage fluctuations 电压波动	$\leq 20\text{mV}$	The voltage fluctuation is less than 20MV within 60 minutes is in a static state, neither charging nor discharging. 在 60 分钟内，电压波动小于 20MV 就属于静止状态，不充不放
17	Weigh 重量	About 88kg 大约 88 公斤	Actual weight requires weighing confirmation 实际重量需称重确认
18	Dimensions 尺寸	Length 长: $801\pm 5\text{mm}$ Width 宽: $490\pm 5\text{mm}$ Height 高: $160\pm 5\text{mm}$	

3. Installation Procedure 安装教程

3.1 DC Cable Requirements 直流电缆要求



DC Cable must be a multi-stranded wire.

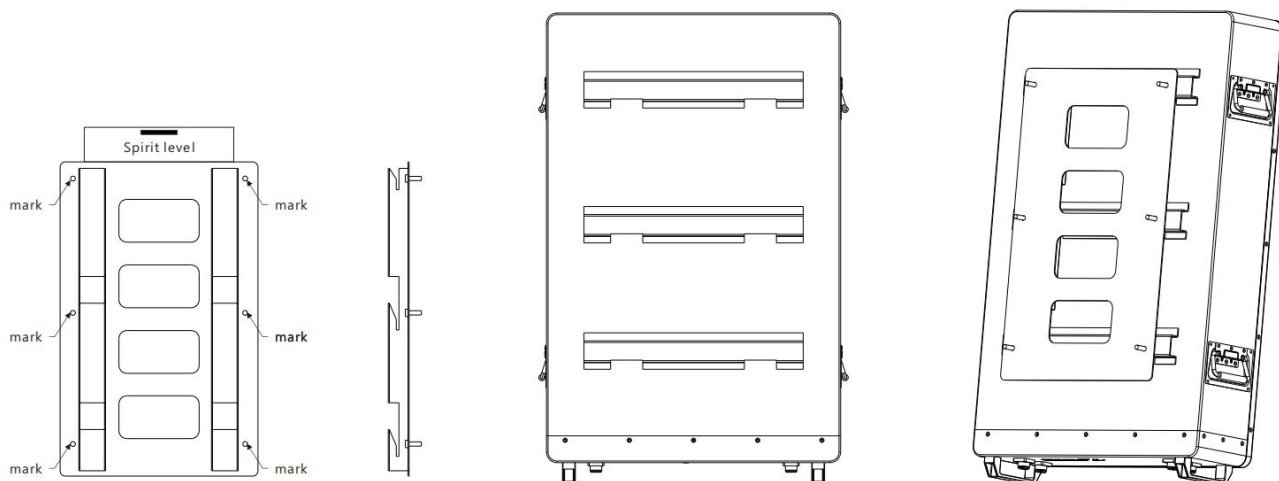
直流电缆必须是多股线。

Turn off the system before making electrical connections.

进行电气连接之前，请关闭系统。

Material 材料	Specifications 规格	Max. Voltage 最大电压	Rated Current 额定电流
Silicone wire 硅胶线	AWG/25mm	1000V	240A

Mounting the Battery on a Wall 壁挂电池安装示意图

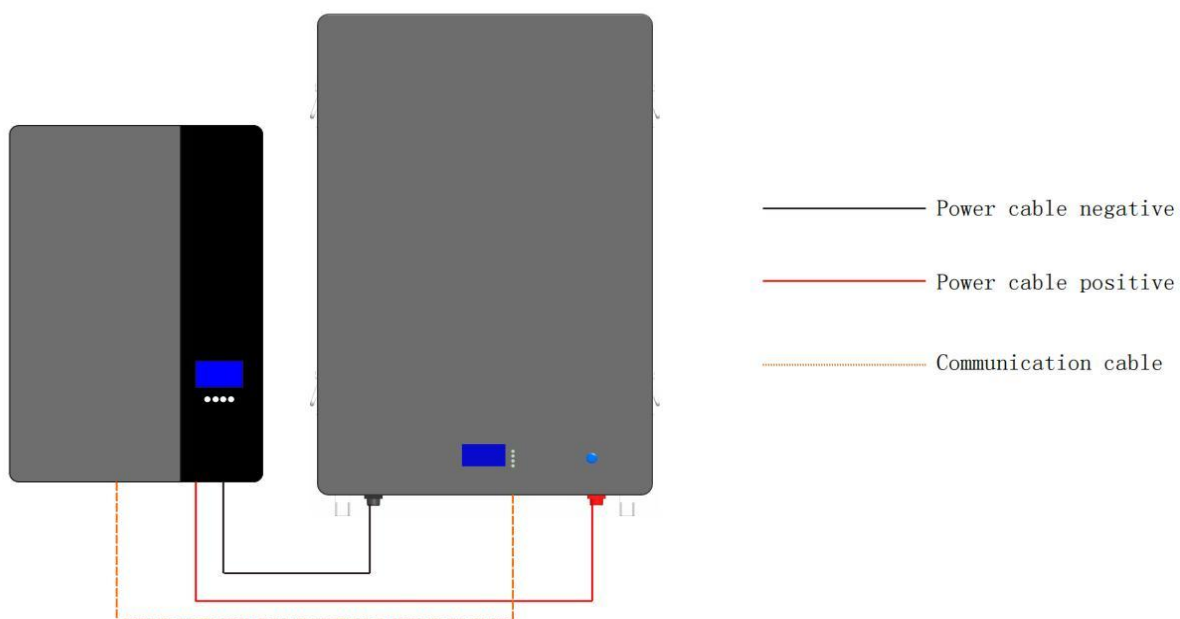


Place the wall mount where it needs to be installed, and mark the screw hole positions on the wall, use the expansion screw set (M8; 6 sets) to lock the mount on the wall, then hang the battery on the wall mount.

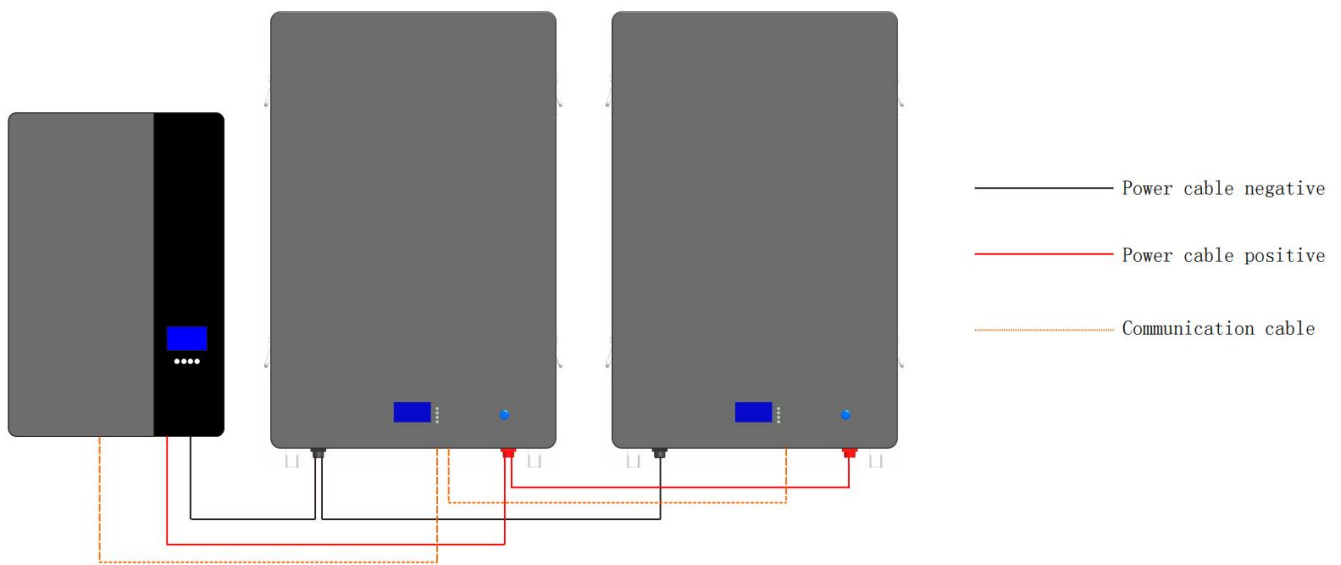
将壁挂支架放置到需要安装的位置，并在墙上标记螺丝孔位置，使用膨胀螺丝组（M8；6套）将壁挂支架锁在墙上，然后将电池挂在壁挂支架上。

3.2 Installation steps 安装步骤

- ◆ Power down the Battery: Locate the battery's power button and press it firmly to turn the battery OFF and turn off its own breaker.
- ◆ 关闭电池：找到电池的电源按钮并用力按下以关闭电池并关闭其自身的断路器。
- ◆ If mounting on a wall, ensure the battery is accessible for the user and qualified personnel.
- ◆ 如果安装在墙上，确保电池便于用户和有资质的人员使用。
- ◆ Connect the Negative Terminal: Using an appropriate power cable, connect the negative terminal of the battery to the negative terminal of the charger or inverter.
- ◆ 连接负极：使用合适的电源线连接负极电池与充电器或逆变器负极的接线端子。
- ◆ Ensure all external-facing (exposed) terminals are covered for safety.
- ◆ 确保所有外露端子都盖好，以确保安全。
- ◆ Connect the Positive Terminal: Using an appropriate power cable, connect the positive terminal of the battery to the positive terminal of the charger or inverter. Double-check that both connections are secure and properly tightened.
- ◆ 连接正极：使用合适的电源线，将电池正极连接到充电器或逆变器的正极上。再次检查两个连接是否安全并正确拧紧。



Single Battery Installation Diagram单块电池安装示意图



Installation Diagram Of Two Batteries 两块电池安装示意图

4. Operation操作

4.1 System Startup启动系统

- ◆ Ensure all installation steps, including DC cable and communication wire connections, have been completed correctly and are that on both battery and inverter.
- ◆ 确保所有安装步骤正确完成，包括直流电缆和通信线的连接，电池和逆变器的连接都是正确的。
- ◆ Press the Power Switch button. The green LED should initially blink and then transition to a steady state, indicating operational mode. (Refer to the table below for LED color interpretations related to system status.)
- ◆ 按下电源开关按钮。绿色LED应该开始闪烁，然后过渡到稳定状态，指示工作模式。（与系统状态相关的LED颜色解释见下表。）

4.2 System Shutdown 关闭系统

- ◆ Important: Verify that the system is off before disconnecting any DC cables.
- ◆ 重要：在断开任何直流电缆之前，请确认系统已关闭。
- ◆ Press the Power Switch button.
- ◆ 按下电源开关按钮。
- ◆ The green LED should initially blink and then turn off, indicating standby mode.
- ◆ 绿色 LED 先闪烁后熄灭，表示待机状态。

- ◆ Important: Reiterate the warning-confirm the system is off before disconnecting any DC cables.
- ◆ 重要事项：重申警告-在断开任何直流电缆之前需要确认系统已关闭。

4.3 Sleep and Wake-up Function 休眠和唤醒功能

NO.	Sleep Condition 休眠状态	Mark 备注
1	The minimum single section voltage of the system is lower than the under voltage protection voltage of-100mV for 60 seconds, and the BMS enters power failure mode with the power consumption level uA. 系统单节最小电压低于欠压保护电压- 100mv 持续 60 秒，保护板进入掉电模式，功耗等级为 uA。	Charge or press the button to exit sleep mode. 充电或按下按钮退出休眠模式。
2	After the user presses the key for 3 to 6s, all the indicators are charged, and then turn off successively. After the key is released, the system enters the sleep mode. 用户长按该键 3 ~ 6s 后，所有指示灯充电后依次关闭。释放密钥后，系统进入休眠模式。	Charging,communication, and pressing buttons activate the system. 正在充电，通讯并且按下按钮将激活系统。
3	After the self-locking switch is turned off for 1 to3s, the system enters the power-off state. 关闭自锁开关 1 ~ 3s 后，系统进入关闭电源状态。	

4.4 System Status Instruction 系统状态说明

系统状态 State of system	事件 Event	ON/OFF (LED9)	Run (LED8)	Alarm (LED7)	SOC(LED6~1)						说 明
					LED6	LED5	LED4	LED3	LED2	LED1	
		●	●	●	●	●	●	●	●	●	
关机(Power off)	休眠(Sleep)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	全灭(All LEDs turn off)
待机 static state	正常(Normal)	ON	Flash1	OFF	参考表 4-11-2 Refer to table(4-11-2)						/
	告警(Alarm)	ON	Flash1	Flash3							/
充电 Charging	正常(Normal)	ON	ON	OFF							/
	告警(Alarm)	ON	ON	Flash3							过充告警 ALM 不闪烁 The over-voltage alarm does not flash
	过压保护 (OV protect)	ON	ON	OFF	ON	ON	ON	ON	ON	ON	/
	温度、过流、失效保护 (Temperature, Over-current, fail-safe)	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	/
放电 Discharging	正常(Normal)	ON	Flash 3	OFF	参考表 4-11-2 Refer to table(4-11-2)						
	告警(Alarm)	ON	Flash 3	Flash 3							
	欠压保护 (UV protect)	OFF	Flash2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	/
	过流、短路、温度、失效保护 (Over-current, short circuit, temperature, fail-safe)	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	/

状态(State)		充电(Charging)						放电(Discharging)					
LED		LED6	LED5	LED4	LED3	LED2	LED1	LED6	LED5	LED4	LED3	LED2	LED1
SOC(%)	0~16.6%	OFF	OFF	OFF	OFF	OFF	Flash2	OFF	OFF	OFF	OFF	OFF	ON
	16.6~33.2%	OFF	OFF	OFF	OFF	Flash2	ON	OFF	OFF	OFF	OFF	ON	ON
	33.2~49.8%	OFF	OFF	OFF	Flash2	ON	ON	OFF	OFF	OFF	ON	ON	ON
	49.8~66.4%	OFF	OFF	Flash2	ON	ON	ON	OFF	OFF	ON	ON	ON	ON
	66.4~83.0%	OFF	Flash2	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON
	83.0~100%	Flash2	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
RUN LED ●		ON						Flash 3					

闪烁模式(Flash Mode)		亮(ON)	灭(OFF)
Flash1		0.25S	3.75S
Flash2		0.5S	0.5S
Flash3		0.5S	1.5S

5. Important Safety Instructions 重要安全说明

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS 请保存这些重要的安全说明

This manual contains important instructions for the Power Lite that must be followed during installation and maintenance of the system.

本手册包含有关 J02 电池的重要说明，在系统安装和维护期间必须遵循这些说明。

J02 Battery installation and service require knowledge of high voltage electricity and should only be performed by our company certified installers. Our company assumes no liability for injury or property damage due to repairs attempted by unqualified individuals or a failure to properly follow these instructions. These warnings and cautions must be followed when using J02 Battery.

J02 电池的安装和服务需要高压电方面的知识，并且只能由我司认证的安装人员进行。我司对因不合格人员尝试维修或未正确遵循这些说明而造成的人身伤害或财产损失不承担任何责任。使用 J02 电池时必须遵守这些警告和注意事项。



WARNING: Reading this entire document before installing or using J02 Battery. Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death or can damage J02 Battery, potentially rendering it inoperable.

警告：安装或使用 J02 电池前请阅读整篇文档。未阅读整篇文档或未遵循本文档中的任何说明或警告可能会导致触电、严重伤害或死亡，或损坏 J02 电池，可能导致其无法使用。



WARNING: indicates a hazardous situation which, if not avoided, could result in injury or death.

警告：表示危险情况，如果不避免，可能会导致受伤或死亡。



CAUTION: indicates a hazardous situation which, if not avoided, could result in minor injury or damage to the equipment.

小心：表示危险情况，如果不避免，可能会导致轻伤或设备损坏。

NOTE: indicate an important step or tip that leads to best results, but is not safety or damage related.

注意：表示可获得最佳结果的重要步骤或提示，但与安全或损坏无关。



REFER TO OPERATING INSTRUCTIONS: indicates that user should refer to operating or installation instructions before proceeding.

参考操作说明：表示用户在继续操作之前应参考操作或安装说明。



RISK OF ELECTRIC SHOCK: indicates components that present risk of electrical shock.

触电危险：表示存在触电危险的组件。



BIDIRECTIONAL TERMINIAL: indicates location of combined input/output connector on the equipment.

双向端子：指示设备上组合输入/输出连接器的位置。



PROTECTIVE CONDUCTOR TERMINAL: indicates location of grounding connection on the equipment.

保护导体端子：指示设备上接地连接的位置。



WARNING: A battery can present a risk of electrical shock, fire, or explosion from vented gases. Observe proper precautions.

警告：电池排出的气体可能会造成触电、火灾或爆炸的风险。请遵守适当的预防措施。



WARNING: J02 Battery installation must be carried out only by our company certified installers who have been trained properly.

警告：J02 电池的安装必须仅由经过适当培训的我司认证安装人员进行。



WARNING: Power Lite is heavy. Use of Lift equipment is recommended.

警告：J02 电池比较重，建议使用升降设备。



WARNING: Use J02 Battery only as directed.

警告：请严格按照说明使用 J02 电池。



WARNING: Do not use J02 Battery if it is defective, appears cracked, broken, or otherwise damaged, or fails to operate.

警告：如果 J02 电池有缺陷、出现裂缝、破损、或其他损坏，或者无法运行，请勿使用。



WARNING: Before beginning the wiring portion of the installation, ensure that J02 Battery is switched off, and open any associated circuit breakers and disconnect switches (if applicable for the installation).

警告：在开始安装的接线部分之前，请确保 J02 电池已关闭，并打开所有相关的断路器和断路开关（如果适用于安装）。



WARNING: Do not attempt to open, disassemble, repair, tamper with, or modify J02 Battery. J02 Battery and its components are not user serviceable. Batteries in J02 Battery are replaceable. Contact our company certified installer who installed the system for any repairs.

警告：请勿尝试打开、拆卸、维修、篡改或改装 J02 电池。J02 电池及其组件不可由用户自行维修。J02 电池中的电池可更换。如需维修，请联系由我司认证的安装该系统的安装人员。



WARNING: To protect J02 Battery and its components from damage when transporting, handle with care. Do not impact, Pull, drag, or step on J02 Battery. Do not subject J02 Battery to any strong force. To help Prevent damage, leave J02 Battery in its shipping packaging until it is ready to be installed.

警告：为保护 J02 电池及其组件在运输过程中免受损坏，请小心处理。请勿撞击、拉扯、拖拽或踩踏 J02 电池。请勿让 J02 电池受到任何强力的撞击。为防止损坏，请将 J02 电池留在运输包装中，直到准备安装为止。



WARNING: Do not insert foreign objects into any part of J02 Battery.

警告：请勿将异物插入 J02 电池的任何部分。



WARNING: Do not expose J02 Battery or its components to direct flame.

警告：请勿将 J02 电池或其组件直接暴露在火焰中。



WARNING: Do not install J02 Battery near heating equipment.

警告：请勿将 J02 电池安装在加热设备附近。



WARNING: Do not immerse J02 Battery or its components in water or other fluids.

警告：请勿将 J02 电池或其组件浸入水或其他液体中。



CAUTION: Do not use solvents to clean J02 Battery, or expose J02 Battery to flammable or harsh chemicals or vapors.

注意：请勿使用溶剂清洁 J02 电池，或将 J02 电池暴露于易燃或刺激性化学品或蒸汽中。



CAUTION: Do not use other fluids, parts or accessories not specified in this manual, including using parts or accessories that are not genuine our company, or parts or accessories not purchased directly from our company or a party certified by our company.

注意：请勿使用本手册未指定的其他液体、零件或配件，包括使用非我司正品零件或配件，或不是从我司或由我司认证方直接购买的零件或配件。

6. Temperature Requirements 电池温度要求

J02 Battery is capable of charging and discharging within the full ambient temperature range listed in the Specifications section. At the high and low ends of the temperature range, J02 Battery may limit charge or discharge power based on battery cell temperature to improve battery lifespan.

J02 电池能够在规格部分列出的整个环境温度范围内充电和放电。在温度范围的高端和低端，J02 电池可能会根据电池单元温度限制充电或放电功率，以延长电池寿命。

Installation in full sun raises the temperature inside the enclosure above ambient temperature. This temperature rise is not a safety risk, but may impact battery performance. To optimize performance, avoid installing J02 Battery in locations that are exposed to the sun for extended periods.

在阳光充足的地方安装会导致电池柜内的温度高于环境温度。这种温度升高不会造成安全风险，但可能会影响电池性能。为了优化性能，请避免将 J02 电池安装在长时间暴露在阳光下的位置。

Do not install J02 Battery in locations with sustained high or low temperatures. The average ambient temperature over the system's life should be between 0°C to 30°C.

请勿将 J02 电池安装在持续高温或低温的地方。系统使用寿命期间的平均环境温度应在 0°C 至 30°C 之间。

7. Installation Requirements 电池安装要求

All installations must conform to the laws, regulations, codes, and standards applicable in the jurisdiction of installation.

所有安装必须符合安装所在地适用的法律、法规、规范和标准。

If the PCS protocol is incorrect, adjust the corresponding protocol through the display screen on the panel.

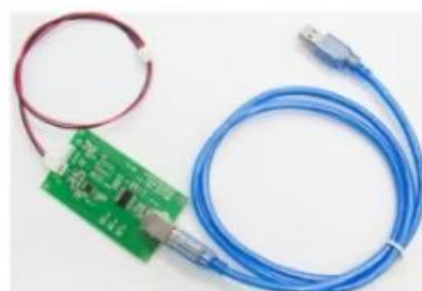
若 PCS 协议不正确，可以通过面板显示屏调整相应的协议。

If it is necessary to adjust the parameters, connect the communication cables and adjust the parameters through BMS tools.

如果需要调整参数，连接通讯线，通过 BMS 工具调整参数。



UART communication box
(UART communication box)



RS485 communication box
(RS485 communication box)