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5. Main specifications 主要技术参数

5.1 Cell Battery specifications (电芯技术参数)

No	Item (项目)	General Parameter 常规参数		Remark (备注)
1	Rated Capacity (额定容量)	Typical	100Ah	Standard discharge after Standard charge, we recommend 0.2C charge and 0.5C discharge 标准充电后标准放电, 推荐 0.2C 充 0.5C 放。
2	Nominal Voltage 标称电压	3.2V		Platform Voltage 平台电压
3	Internal Impedance (内阻)	$\leq 0.45m\Omega$		Under $20\pm5^{\circ}\text{C}$ Environment Temperature, the Usage Frequency of Fully Charge (1KHz), Use AC Internal Impedance test machine to test $20\pm5^{\circ}\text{C}$ 环境温度下, 完全充电后使用频率为 (1kHz) 的交流内阻测试仪测量。
4	Standard charge 标准充电	Constant Current 0.5C ₅ A, Constant Voltage 3.6V, 0.02C ₅ A cut-off		
5	Rapid Charge 快速充电	Constant Current 1C ₅ A, Constant Voltage 3.6V, 0.02C ₅ A cut-off		
6	Standard Charge Cut-off Voltage 标准充电截止电压	3.65V		Limited Voltage in charge 按电芯充电达到满电时限制电压值
7	Standard Discharge Cut-off Voltage 标准放电截止电压	2.5V		Voltage of the battery when the discharge is stopped 按电芯平台放电达到放电截止的电压值
8	Standard discharge (标准放电)	Constant current 0.5C ₅ A end voltage 2.5 V		50A
9	Maximum discharge current 最大放电持续电流	Constant current: 1C ₅ A end voltage: 2.5 V		100A@ $\cong 0^{\circ}\text{C}$
10	Dimension (尺寸)	Thickness/厚度: $49\pm 0.5\text{mm}$		
		Width/宽度: $131\pm 1\text{mm}$		
		Height/高度: $173\pm 1\text{mm}$		
11	Weight (重量)	2050g $\pm 0.1\text{kg}$		
12	Operating Temperature Range 工作温度范围	Temperature: $-20\sim 55^{\circ}\text{C}$, Humidity: $\leq 60\pm 25\%RH$		
13	Storage Temperature Range 储存温度范围	Recommend ($25\pm 3^{\circ}\text{C}$); $\leq 60\pm 25\%RH$ storage moisture range. 推荐储存湿度范围 $\leq 60\pm 25\%RH$		

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5.2 System composition parameters 系统组成参数			
No	Item (项目)	General Parameter	Remark (备注)
1	Combination method (组合方式)	PACK16S* 5(80S)	
2	Rated Capacity (额定容量)	100AH	Standard discharge after Standard charge (package) (标准充电后标准放电 (针对电池组))
3	Rated voltage (额定电压)	256V	
4	Factory Voltage (出厂电压)	256V-264 V	Mean Operation Voltage (即工作电压)
5	Voltage at end of Discharge	≤224V	Discharge Cut-off Voltage (放电截止电压)
6	Charging Voltage	288V	按 3.6V/cell 来算
7	Internal Impedance (内阻)	≤80mΩ	Internal resistance measured at AC 1KHz after 50% charge (半电态下用交流法 测量内阻)
8	Standard charge (标准充电)	50A	
9	Standard discharge (标准放电)	50A	
10	Maximum Continuous Charge Current	100A	
11	Maximum Continuous Discharge Current	100A	
12	Operation Temperature Range (工作温度范围)	Charge: 0~55℃	
13		Discharge: -20~60℃	
14	Storage Temperature Range (储存温度范围)	-20℃~25℃	
15	Single module size (单模块尺寸)	L480*W442*H132mm /48Kg	
16	Main control box size (主控箱尺寸)	L400*W442*H177mm /16Kg	
17	System size (系统尺寸)	600*600*1200MM (24U)	
18	System weight (系统重量)	333KG	

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5.3.1 Battery Management System 电池管理系统规范

A: BMS function introduction (BMS 功能介绍)

- 1) :The BMS is designed for 80 series lithium battery.
- 2) : The BMS have all functions which are : (该 BMS 系统具有以下一些功能)
 - .1 overcharge detection function (过充电保护功能)
 - .2 over discharge detection function (过放电保护功能)
 - .3 over current detection function (过电流保护功能)
 - .4 short detection function (短路保护功能)
 - .5 Temperature detection function 温度保护功能
 - .6 balance function (均衡功能)
 - .7 communicate function (通讯功能)
 - .8 Alarm function (告警功能, 电量板显示)
 - .9 Total capacity function (总容量功能)
 - .10 Storage history function (存储历史记录功能)

B: BMS Protect parameter (电池管理系统保护参数) (software set)

Items	Details	Standard
Cell overcharge protection	Overcharge detection voltage	$3.6 \pm 0.1V$
	Overcharge detection delay time	Typical:1.0s
	Overcharge release voltage	$3.4 \pm 0.05V$
Cell over-discharge protection	Over-discharge detection voltage	$2.7 \pm 0.05V$
	Over-discharge detection delay time	Typical:1.0s
	Over-discharge release voltage	$3.1 \pm 0.1V$ or charge
Over-current protection	discharge Over-current protection current1	105A
	discharge Over-current detection delay time 1	5S
	discharge Over-current protection current 2	125A
	discharge Over-current detection delay time 2	$\leq 600m \pm 50ms$
	Charge Over-current protection current	105A
Short protection	Short protection current	$300 \pm 50A$
	Protection condition	Load short
	Detection delay time	$\leq 30ms$
	Protection release condition	Charging release
Temperature (T) protection	Charge high T protection	$55 \pm 3^{\circ}C$
	Charge high T recover	$45 \pm 5^{\circ}C$
	Discharge high T protection	$55 \pm 5^{\circ}C$
	Discharge high T recover	$50 \pm 5^{\circ}C$
	Charge low T protection	$0 \pm 5^{\circ}C$
	Charge low T recover	$5 \pm 5^{\circ}C$
	Discharge low T protection	$-20 \pm 5^{\circ}C$
	Discharge low T recover	$-10 \pm 5^{\circ}C$
Balance	Balance threshold voltage	3.4V

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Communication	It has CAN and RS485 ,RS232 standard communication interface, it real-time monitoring the capacity of battery bank, the voltage, current,environment temperature, and charging/discharging current, RS485,RS232,Baud rate:9600Kb/S, CAN common Baud rate:500K/S,PYLON high volt host protocol 1.16. Master address:CODE 0.host
Alarm	It has over-temperature, over charge, under-voltage, over-current, short circuit alarm Function.

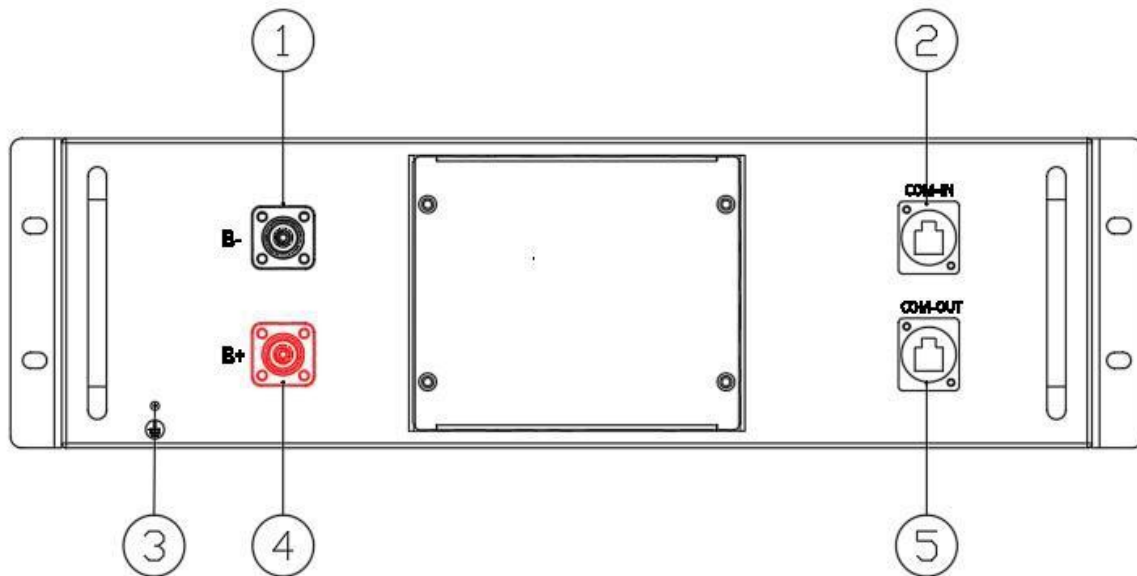
6. Appearance and structural dimensions 外观结构尺寸

There shall be no such defect as scratch, bur and other mechanical scratch, and the connector should be no rust dirt. The structure and dimensions see attached drawing of the product.

电池的表面应无明显的划痕毛刺及其其它机械划伤，外露的金属端子应无锈蚀污垢。

6.1 Main control box 外观

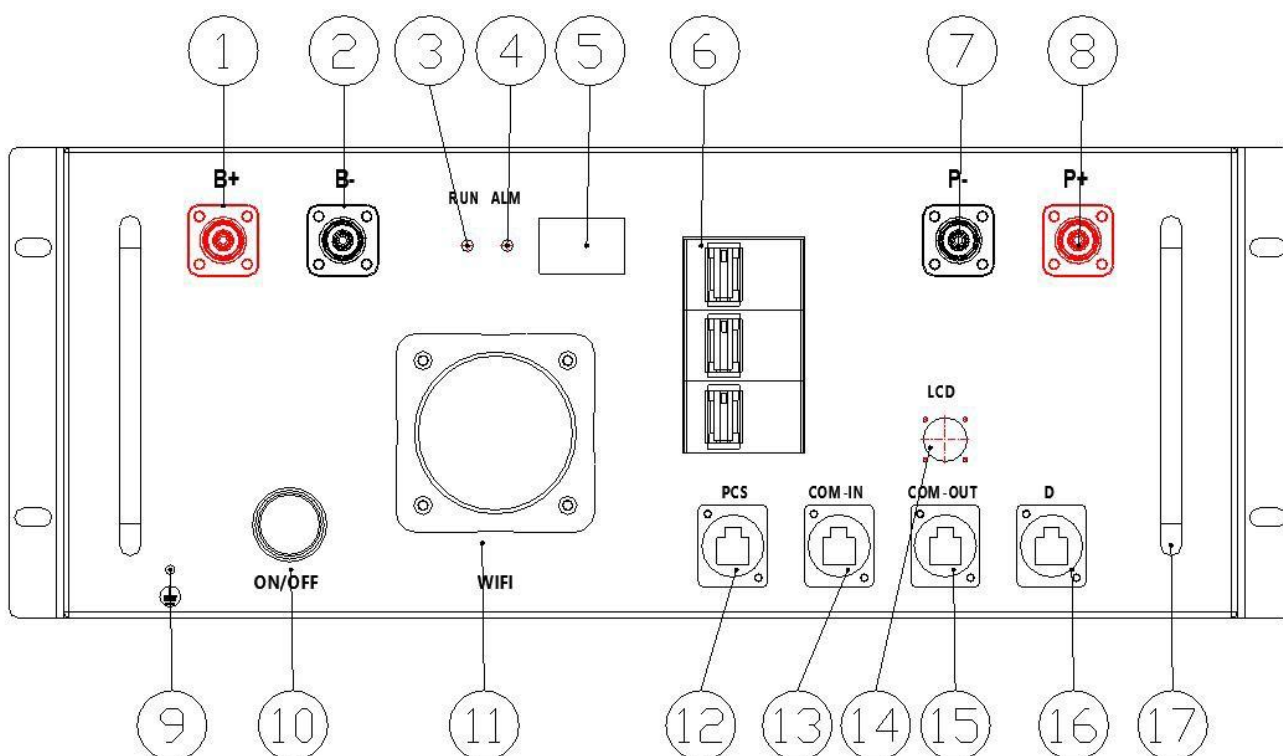
Battery module



No.	Description	Silk-screen	Remark
1	Pack Output terminal	B-	
2	communication	COM-IN	
3	ground		
4	Pack Output terminal	B+	
5	communication	COM-OUT	

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main control box

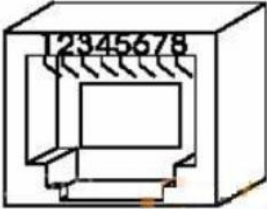


No.	Description	Silk-screen	Remark
1	input terminal	B+	input terminal
2	input terminal	B-	input terminal
3	LED	RUN	Operation indicator
4	LED	ALM	Alarm indicator
5	LED	CAPACITY	quantity of electricity
6	DC switch	DC switch	
7	Output terminal	P-	Output terminal
8	Output terminal	P+	Output terminal
9	ground		
10	Power Switch	ON/OFF	
11	WIFI		
12	communication	PCS	Communication with inverters
13	communication	COM-IN	Parallel communication port
14	LCD communication	LCD	Touch screen external interface
15	communication	COM-OUT	Parallel communication port (matched load resistance)
16	communication	D	Communication with battery module
17	handle		

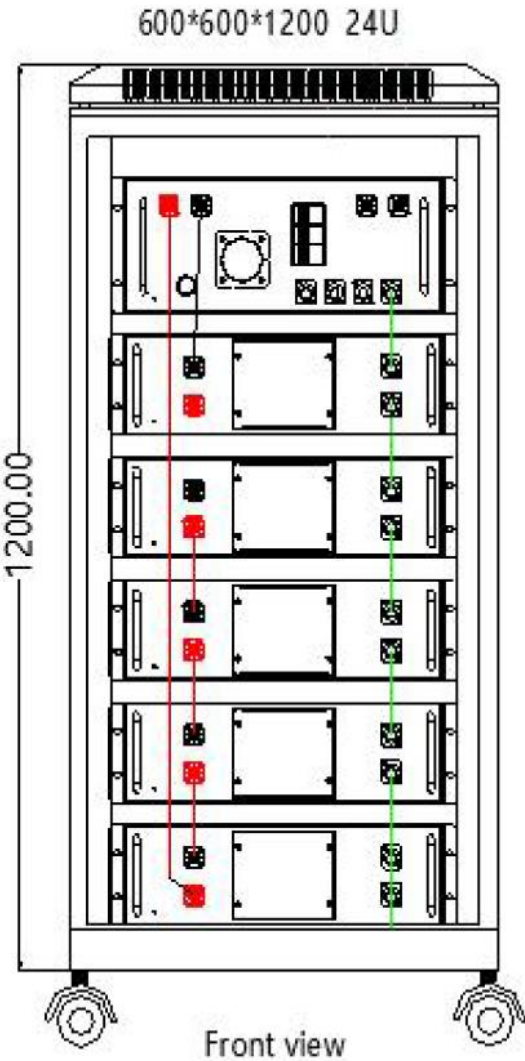
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If there is any change in the pin position of the communication line, the customer shall be notified in writing or provided with supporting communication wire.

通信线脚位如有变，需书面知会客户或提供配套通信线材。

communication 通信		CAN Port foot position definition			
		RJ45 引脚	定义说明	RJ45 引脚	定义说明
		1	NC	5	CANL
		2	NC	6	NC
		3	NC	7	NC
		4	CANH	8	NC

Part of the series of complete product drawings(Physical picture is for reference only)
部分系列完整产品图：（实物图仅为参考）



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- Do not reverse the positive(+) and negative(-) terminals.
- 勿将正负极接反！
- Do not connect the battery directly to wall outlets or car cigarette-lighter sockets.
- 勿将电池直接连接到墙上插座或车载点烟式插座上！
- Do not put the battery into a fire or apply direct heat to it.
- 勿将电池投入火中或给电池加热！
- Do not short-circuit the battery by connecting wires or other metal objects to the positive(+) and negative(-) terminals.
- 禁止用导线或其它金属物体将电池正负极短路，禁止将电池与项链、发夹或其它金属物体一起运输或贮存！
- Do not pierce the battery casing with a nail or other sharp object, break it open with a hammer, or step on it.
- 禁止用钉子或其它尖锐物体刺穿电池壳体，禁止锤击或脚踏电池！
- Do not strike, throw or subject the battery to sever physical shock.
- 禁止撞击、投掷或者使电池受到机械震动
- Do not directly solder the battery terminals.
- 禁止直接焊接电池端子！
- Do not attempt to disassemble or modify the battery in any way.
- 禁止以任何方式分解电池！
- Do not place the battery in a microwave oven or pressurized container.
- 禁止将电池置入微波炉或压力容器中！
- Do not use the battery in combination with primary batteries(such as dry-cell batteries) or batteries of different capacity, type or brand.
- 禁止与一次电池（如干电池）或不同容量、型号、品种电池组合使用！
- Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.
- 如果电池发出异味、发热、变形、变色或出现其它任何异常现象时不得使用；如果电池正在使用或充电，应立即从用电器中或充电器上取出并停止使用！

Caution!注 意！

Do not use or store the battery where is exposed to extremely hot, such as under window of a car in direct sunlight in a hot day. Otherwise, the battery may be overheated. This can also reduce battery performance and/or shorten service life.

不要使用处于极热环境中的电池，如阳光直射或热天的车内。否则，电池会过热，可能着火（点燃），这样就会影响电池的性能、缩短电池的使用寿命。

If the battery leaks and electrolyte gets in your eyes, do not rub them. Instead, rinse them with clean running water and immediately seek medical attention. If left as is, electrolyte can cause eye injury.

如果电池漏液后电解液进入眼睛，不要擦，应用清水冲洗，并立即寻求医疗救助。如不及时处理，眼睛将会受到伤害。