产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : V1.0

SHEET: <u>1</u> of <u>33</u>

ECN NO:

Product Specification Confirmation Sheet

产品规格书

PermittedTerritory/适用区域: America

System Configuration/系统结构: All-in-one cabinet

Prepared by Approved by PD PM		Approved by PD	Approved by QA
Lin Jijun Zhao Pengzhen		Cheng Sheng	Zhou Xiaohua

	Authorized	d Signatory	Date
	Signature		
Customer Confirmation	Company Name Of Customer:		
	Company Stamp Of Customer:		

Confidential: () Level 3 Private confidential () Level 2 High confidential (V) Level 1 Low confidential

产品规格书

DOCNO: PS-GB-RD5SPSFOT001_-01

REV. : <u>V1.0</u>

SHEET: <u>2</u> of <u>33</u>

AMENDMENT RECORDS/变更记录

Revision/版本	Description/描述	Date/日期
V1.0	Initial Version/首次发布	2023-05- 11

产品规格书

DOC NO. PS<u>-GB-RD5SPSFOT001</u>-01

REV.: V1.0

SHEET: <u>3</u> of <u>33</u>

Contents/目 录

1 Applicable Scope /适用范围	4
2 Standard Environmental Test Conditions /标准环境测试条件	4
3 System/系统	
3.1 System Introduction/系统介绍	4
3.2 System Appearance and Ports/系统外观及接口	6
3.2.1 System Appearance and Components / 系统外观与组成	6
3.2.2 Terminals and Ports of Cabinet /机柜对外接口	8
3.2.3 Terminals and Ports of HV BOX /高压盒接口	9
3.2.4 Terminals and Ports ofModule/ 模组接口	10
3.2.5 Terminals and Ports of DCAC module/ PCS 接口	11
3.2.6 Detailed Specifications/详细规格	11
3.3 Module/模组	13
3.3.1 Model/型号: C-M 51200ESA1	13
3.3.2 Detailed Specifications/详细规格	13
3.3.3 Module Appearance/模组外观	15
3.4 HV Box高压盒	16
3.4.1 Model/型号: C-H1500100SA1	16
3.4.2 Detailed Specifications /详细规格	16
3.4.3 HV BOX Appearance/高压盒外观	16
3.5 DCAC module/PCS 模块	17
3.5.1 Model/型号: PWS2-30P-NA	17
3.5.2 Detailed Specifications /详细规格	17
3.5.3 DCAC module Appearance/PCS 模块外观	18
3.6 Battery Cabinet/电池柜	18
3.6.1 Cabinet/型号: SES-90K	18
3.6.2 Detailed Specifications/详细规格	18
3.6.3 Cabinet Appearance/电池柜外观	19
3.6.4 Heat Dissipation Design/散热设计	20
3.6.5 FFS design/消防设计	21
4 Product packing list/产品包装清单	22
5 Warranty period/保质期	23
6 Protection strategy of Battery/电池部分保护策略	24
7 Package, transportation and storage/包装、运输和存储	25
7.1 Transportation/运输	25
7.2 Storage/存储	25
8 Appendix Handling Precautions and Guidelines for Product/附录: 产品操作注意事	项28
9 Disclaimer/免责声明	30
9.1 Customer Responsibility/客户责任	30
10 Miscellaneous/其他	33

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : V1.0

SHEET: <u>4</u> of <u>33</u>

1 Applicable Scope /适用范围

The purpose of this product specification ("Document") is to specify the specifications of the all-in-one battery cabinet system (System or Product) to be supplied by EVLITHIUM to Customer based on customer requirements. The product is composed of HV Boxe s, modules, PCS, cables, heating ventilation and air conditionings and fire-fighting system. For the avoidance of doubt, the specifications specified herein only apply to ESS product. /本规格书 (下称"本文件"或"本规格书") 描述了 EVLITHIUM 依据客户需求定制的 All-in-one 电池柜系统("产品"或"电池")的产品技术指标。产品包含高压盒、模组、 PCS、线束、 暖通空调和消防系统,为避免疑问, 本规格书仅适用于 ESS 产品。

2 Standard Environmental Test Conditions /标准环境测试条件

Unless otherwise specified, all tests stated in this Document are conducted at below conditions/除非特别指定,本规格书的测试遵循如下条件:

- Temperature/温度:25 ± 2° C ("Temperature Condition" /温度条件)
- Humidity/湿度: 40% -80% RH ("Humidity Condition"/湿度条件)

Throughout this Document, numeric criteria annotated by "*" means such criteria are only applicable to fresh unused Product within 90 days from EVLITHIUM manufacturing date. Products either have been used or stored for a period longer than 90 days by Customer and/or its customer may exhibit an inferior numeric parameter than such criteria. Customer agrees that such occ urrence does not constitute non -conformance of specification/本规格书中,所有标有"*"的项目是指仅适用于"未使用的且从 EVLITHIUM 制造日 起 90 天内的产品"。如果产品已被客户使用或存储时间超过 90 天,可能表现出低于标准规格,客户同意并接受产品不构成不 符合规格。

3 System/系统

3.1 System Introduction/系统介绍

This product is an all-in-one outdoor cabinet system containing bi-directional energy storage inverter module, DCDC PV op timizer module, ST S intelligent switching module, battery system, transformer, fire protection system, air conditioning system, auxil iary source power supply and other energy storage batteries. /本产品是由双向储能逆变模块、 DCDC 光伏优化器模块、 ST S 智能切换模块、电池系统、变压器、消防系统、空调系统、辅助源电源等储能电池组成的一体化户外机柜系统。

The two -way energy storage converter can charge and discharge the built -in battery system, the DCDC PV optimizer module can access the PV system to store PV power to the battery or power the load through the energy storage converter, and the ST S intelligent switching module can realize fast and intelligent automatic switching to and from the grid. /双向储能变换器可对内置电池系统进行充放电, D CDC 光伏优化器可用于光伏接入,将光伏电能存储到电池中或通过储能变换器为负载供电, ST S 智能切换模块可实现实时充电。

The DCDC PV optimizer module and ST S intelligent switching module are optional accessories, customer can decide whether configure it or not, not configured by default . / DCD C 光伏优化模块和 ST S 智能交换模块为可选配件,客户自行决定是否配置,默认未配。

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: <u>V1.0</u>

SHEET: <u>5</u> of <u>33</u>

Battery DCAC modules X STS X Grid

DCDC modules Aux. power unit SP D

PV Load

Figure Topology diagram of the integrated energy storage cabinet

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

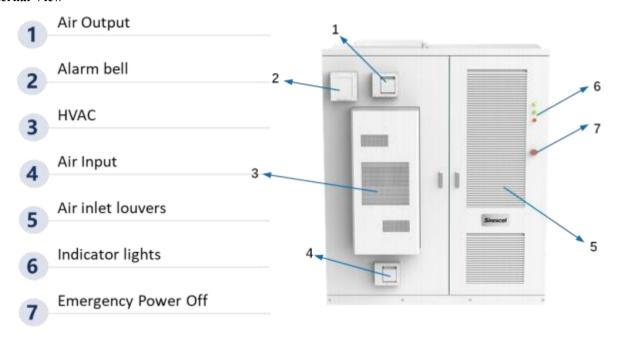
REV.: <u>V1.0</u>

SHEET: <u>6</u> of <u>33</u>

3.2 System Appearance and Ports/系统外观及接口

3.2.1 SystemAppearance and Components / 系统外观与组成

External View



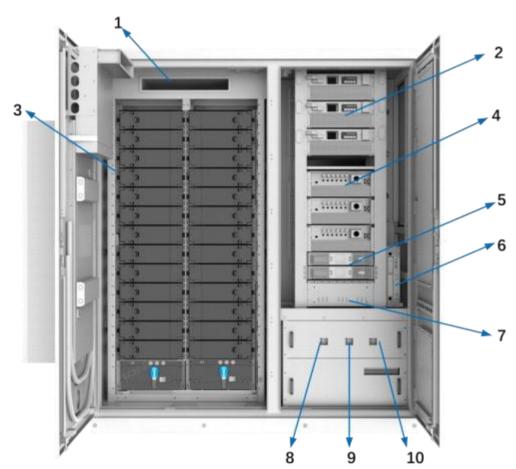
产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: V1.0

SHEET: <u>7</u> of <u>33</u>

Internal View



- Air conditioning air inlet
- PCS module (PWS2-30P/M)
- Battery Room
- DCDC module (PDS1-45M)
- 5 UPS and supporting batteries

- EMS with Switches
- ATS module(PWD-100K)
- Grid side circuit breaker
- Q Load side circuit breaker
- 10 PCS side circuit breaker

Note:

- ✓ 4- DCDC module is optional accessory;
- ✓ 6-Customer's EMS;
- 7- ATS module is optional accessory;

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: V1.0

SHEET: <u>8</u> of <u>33</u>

3.2.2 Terminals and Ports of Cabinet /机柜对外接口

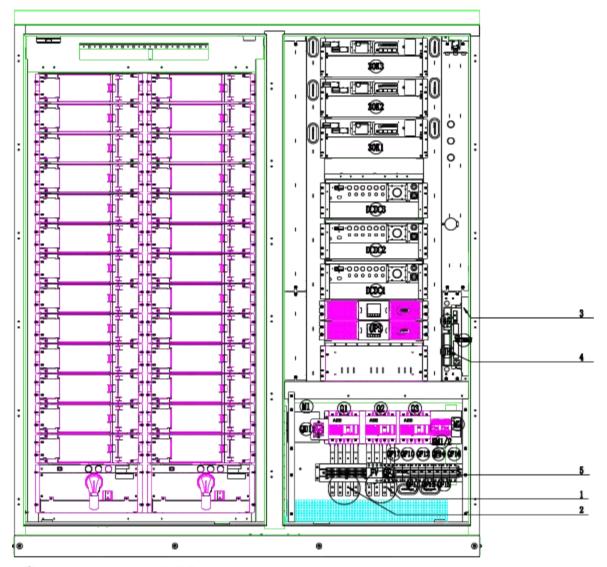


Table /表 3-1 Ports of cabine t/柜体接口

No./序号 Name /名称 1 Grid port/Q 1		De scription/描述 Port for grid conne ction /电网连接端口	
3	EMS installation position	Position for EMS installation/EMS 安装位置(EMS will be powered by M2 &M1)	
4	Ethernet Switch	Ethernet switch/以太网交换机 (Connect with BMS, Gateway and EMS)	
5	External Aux . power port	Port for external aux . power connection/外部辅助用电连接端口 (this product is default self-power mode, this aux . port is reserved, generally not used)	

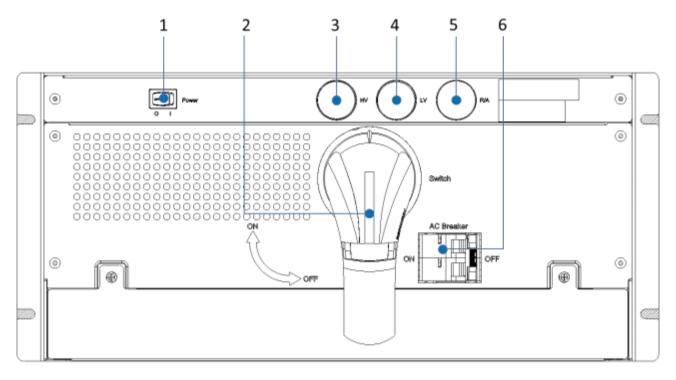
产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: V1.0

SHEET: <u>9</u> of <u>33</u>

3.2.3 Terminals and Ports of HV BOX /高压盒接口



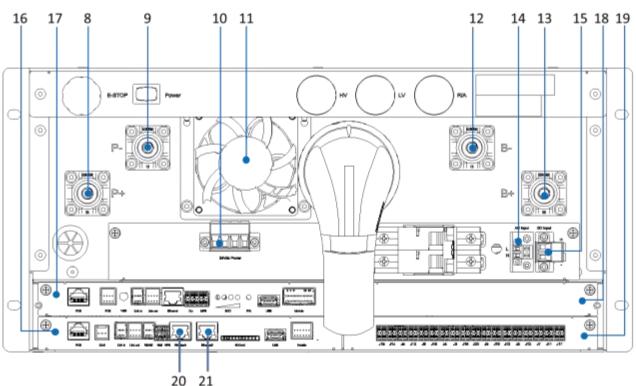


Table 表 3-2 Ports of HVB/高压盒接口

140107	11000/2002	
No./序号	Name /名称	De scription/描述
1	Power/QF2	24V power switch/24V 电源开关
2	ISO Switch/QS1	Switch- disconnector /隔离开关
3	HV	High voltage indicator/高压指示
4	LV	Low voltage indicator/低压指示
5	R/A	Run/Alarm indicator/运行/故障指示灯

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: <u>V1.0</u>

SHEET: <u>10</u> of <u>33</u>

6	AC breaker/QF1	Breaker for AC power supply /交流辅助电源开关	
7	24V output	24VDC control contactor/24V 外部控制接点	
8	P+	Positive output port between battery system and PCS/电池系统与 PCS 正极接口	
9	P_	Negative output port between battery system and PCS/电池系统与 PCS 负极接口	
10	24Vdc Power/JX1	24VDC transfer power supply/24V 直流转接电源	
11	/	Fan/风扇	
12	B ₋	Negative input port/Module/负极输入接口	
13	B+	Positive input port/Module 正极输入接口	
14	AC Input/JX3	AC input/交流输入	
15	DC input/JX2	24VDC input/24V 直流输入	
16	BAMS Board	Battery array management system 电池阵列管理系统	
17	BCU Board	Battery control unit 电池簇管理系统	
18	IVU Board	Main circuit current and voltage acquisition board/主回路电压电流采集板	
19	ESU Board	Environment supervision unit 环境监控单元	
20	Ethe rne t 1	C omm . Port connect with EMS or PC S	
21	Ethe rne t 2	Re se rve d C omm. Port connect with EMS or PC S	



Table 表 3-3 RAC K LED Indicator light Status De scription/电池族指示灯

HV/高压指示灯	LV/低压指示灯	R/A/运行/故障指示灯
LED6 (Red)	LED7 (Green)	LED8 (Red)
Primary circuit status 主回路状态	Secondary circuit status 二次回路状态	Operating status 运行状态
T he red LED turns on when the battery	T he green LED turns on when the secondary	T he red LED indicator turns on when the
system DC primary circuit works.	circuit is powered on .	system is faulty.
主回路闭合后亮红灯	辅电回路上电后亮绿灯	系统故障后亮红灯

3.2.4 Terminals and Ports of Module/ 模组接口

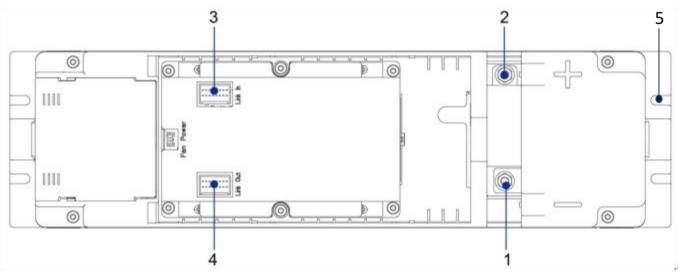


Table /表 3-1 Module port/模组接口

No.	Name	De scription	
1	-	Negative output of module/负极	

产品规格书

DOC NO. PS	-GB-RD5SPSFOT001	-0

REV.: <u>V1.0</u>

SHEET: <u>11</u> of <u>33</u>

2	+	Positive output of module/正极端口
3	Link In	Communication port with an upper module/通信端口
4	Link Out	Communication port with a down module/通信端口
5	GND	Grounding via sprayed protection areas/喷涂保护接地区域

3.2.5 Terminals and Ports of DCAC module/ PCS 接口

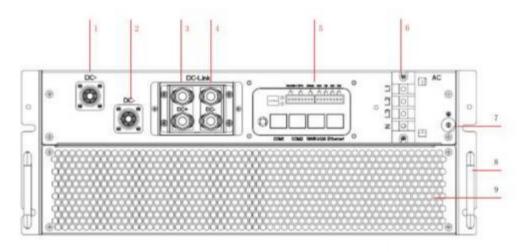


Table 表 3-5 Module port/模组接口

No.	Name	De scription	
1	Positive DC port	To connect positive power cables to the battery cabinet	
2	Negative DC port	To connect negative power cables to the battery cabinet	
3	DC bus positive	MC4 terminal*2	
4	DC bus negative	MC4 terminal*2	
5	Signal interface area	External communication interface	
6	AC terminal	AC wiring	
7	Ground terminal	Grounding protection wire fixed point	
8	Handle	Extraction module, not for load-bearing	
9	Vent	Fan cover and air duct vents	

3.2.6 Detailed Specifications/详细规格

Basic Parameters/基本参数规格

Model All-in-one Outdoor Cabinet BESS	
Battery Side	EVLITHIUM Module + HVB
*Total /Rated capacity	400 /3921Ah

¹ "Measure method:

¹⁾ Resting battery module at 25° C ambient temperature to stabilize the cell temperature at 25° C $\pm 2^{\circ}$ C; 2) 0.5CP (constant power=266.2kW) charge to 3.55V as cell (max), rest 5min, 0.05CP(constant power=26.6 kW) charge to 3.55V as cell (Max), rest 30min; Then 0.5CP (constant power=5. 12 kW) discharge to 2. 8V, rest 30min, $25\pm 2^{\circ}$ C. 3) Repeat step 1)2) for 3 times and take the average value.

[/]测量方法: 1) 将样品放置在 25℃环境下静置, 使电芯温度稳定在 25℃±2℃; 2) 0.5CP (0.5CP=266.2 kW) 恒功率充电至电芯最大电压 3.55V 跳转,静置 5min,再 0.05CP (0.05CP=26.6kW)恒功率充电至电芯最大电压 3.55V,然后静置 30 分钟, 用 0.5CP (0.5CP=266.2 kW)放电至 2.8V 截止放电, 25±2℃。3)重复测试 3 次,取平均值。

产品规格书

DOC NO. PS<u>-GB-RD5SPSFOT001</u>-01

REV.: <u>V1.0</u>

SHEET: <u>12</u> of <u>33</u>

*Total /Rated energy	266.2 /260.91 kWh
*Nominal voltage	665.6V
Operating voltage range	582.4~748.8V
Max . charge/discharge pow er	133.1kW
Max . charge/discharge current	228A
*Room_temperature_calendar life(25°C±2°C)	>10 years
Battery configuration	26 battery modules + 2HVBs
DC Side of PCS	20 battery modules 1 2110B0
Charging and Discharging voltage range	150V-750V (350V-750V @full load)
Rated Power	30kW*n (1~3)
Maximum Charging and Discharging	30KW II (1 3)
Current	90A*n (1~3)
AC Side of PCS	
Rated Output Power	30kVA*n (1~3)
Maximum Apparent Power	33kVA*n (1~3)
Maximum Active Power	30kW*n (1~3)
AC Voltage Grid-tied	400V(-15%~15%)3P4W+PE/480V(-15%~15%)3P3W+PE
AC Voltage Off-grid	400V(-20%~20%)3P3W+PE/480V(-5%~5%)3P3W+PE
AC Frequency	50Hz/60Hz(-2.5Hz~2.5Hz)
THDi	<3%
General Specification	
Dimension(W*H*D)	2100*1300*2450mm
Cooling	Forced air cooling for power electronics
Cooling	5kW Air-conditioned for battery system (pre-installed)
Enclosure	NEMA 3R/IP54
Weight	3950kg
Operation Altitude	3000m (>2000m derating)
Operation Temperature	-20C~55C (De-rating over 45°C)
Operation Humidity	0-95% (No condensing)
Noise	70dB
Power Converter Compatibility	
Model	Sinexcel PWS2-30M-EX
Wodel	PWS2-30P-EX/NA
Max PCS units	3
AC power range	30kW (400 Or 800Vac & 350-750Vdc) *n units (n=1,2,3) 15kW (400 Or 480Vac & 150-350Vdc) *n units (n=1,2,3)
DCDC Charger Compatibility (Optional)	
Model	Sinexcel PDS1-45K
Max DCDC units	3
PV Input Power	45kW*n units (n=1,2,3)
PV Input Voltage Range	200V-810V
Maximum Input Current	65A*n (1~3)
Auto-switching Compatibility (Optional)	

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: V1.0

SHEET: <u>13</u> of <u>33</u>

Model PWD-100K	
Switching Time	Active Switching: Seamless
Switching Time	Passive Switching: 30ms
Communication	
Communication Port	CAN/RS485/Ethernet
Communication Protocol	Modbus TCP/RTU,IEC104
BMS Access	Support
Optional Components	
Fire Fighting System	Sensor tube, with the agent of NOVEC 1230 or FM200
File Fighting System	or water
Built-in transformer	400V/400Vac or 480V/480Vac, 100kVA
Built-in gateway	For Peak-shaving, demand charge management or back-up power supply .
Aux power	220V single phase built-in, up to 5kw transformer
	120V built-in, up to 3kW
Salt spray prevention	Optional Salt spray prevention version
	with special coating and filter
Compliance	UL9540

3.3 Module/模组

Model/型号: C-M51200ESA1 3.3.1

3.3.2 Detailed Specifications/详细规格

Throughout this Document, numeric criteria annotated by "*" means such criteria are only applicable to fresh unused Product within 90 days from EVLITHIUM manufacturing date. Products either have been used or stored for a period longer than 90 days by Customer and/or its customer may exhibit an inferior numeric parameter than such criteria. Customer agrees that such occurrence does not constitute nonconformance of specification/本规格书中,所有标有"*"的项目是指仅适用于"未使用的且从EVLITHIUM制造日起90天内的产品 "。 如果产品已被客户使用或存储时间超过90天, 可能表现出低于标准规格,客户同意并接受产品不构成不符合规格。

No./序号	Ite ms/项目	Spe cifications/参数
1 *Total capacity/ Energy 总容量/能量		200Ah/10 .24kWh
2	*Rated capacity/ Energy 额定容量/能量	196Ah/10.03kWh2
3	*Nominal voltage/标称电压	51 .2V
4	Output voltage range /输出电压范围	44 .8~57 .6V

² " Measure method:

/测量方法: 1) 将样品放置在 25℃环境下静置使电芯温度稳定在 25℃±2℃; 2) 0.5CP (0.5CP=5.1kW)恒功率充电至电芯最大电压 3.55V 跳转, 静置 5min, 再 0.05CP (0.05CP=0.5kW)恒功率充电至电芯最大电压 3.55V, 然后静置 30分钟, 用 0.5CP(0.5CP=5.1kW)放电至 2.8V 截止放电; 3)重 复第 1) 2)步骤 3次,取平均值。

¹⁾ Resting battery module at 25°C ambient temperature to stabilize the cell temperature at 25°C ±2°C; 2)0.5CP (constant power=5. 1kW) charge to 3.55V as cell (max), rest 5min, 0.05CP(constant power=0.5kW) charge to 3.55V as cell (Max), rest 30min; Then 0.5CP (constant power=5. 1kW) discharge to 2. 8V, rest 30min; 3) Repeat step 1) 2) three times and take the average value.

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: V1.0

SHEET: <u>14</u> of <u>33</u>

5	Max . charge/discharge power /最大充/放电功率(@25℃)	5.1kW	
6	Peak charge/discharge power /峰值充/放电功率(@25℃)	6.0kW/5s	
7	Module safety certification/模组安规认证	IEC62619 /UL1973/GBT 36276/CE EMC /FCC/UL9540A	
8	Cell safety certification/电芯安规认证	IEC62619/UL1973/GBT 36276/UL9540A	
9	UN transportation standard/UN 运输测试标准	UN38 .3	
10	Ingress protection/防护等级	IP20	
11	Operating ambient temperature/使用环境温度	- 10℃~50℃	
12	Optimal operating temperature/最佳工作温度	15℃~30℃	
13	Operating ambient humidity/使用环境湿度	5%~95%	
14	Storage conditions/存储条件	存储温度 (30% SOC₃): 7days @ (-30~-20℃) @ (45~60℃) 5%~95RH; 6 months @ -20~45℃, 5%~95RH;	
15	Dimensions/尺寸	W445*D913.2*H129mm (without bracket/不带挂耳)	
16	Altitude/海拔高度	≤3000m	
17	Weight/重量	80kg(for reference/仅供参考)	
18	Serial connect ion/串联功能	Serial connect voltage difference among modules $\triangle V$ $\leq 1V$ /串联压差 $\triangle V$ $\leq 1V$	
19	Connection/电芯串并数量	2 parallel 16 series (2P16S)	
20	Installation/安装方式	Rack-mounted installation/机架式安装	
21	Shipment capacity/出货容量	30% SOC	

³ SOC: State of Charge (SOC) - the available capacity in a battery expressed as a percentage of rated capacity./电池可用容量占额定容量的百分数。

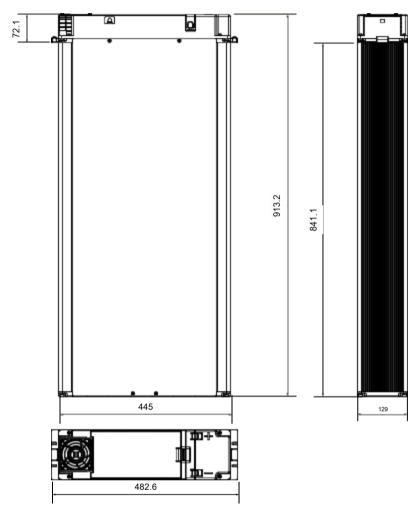
产品规格书

DOC NO. PS<u>-GB-RD5SPSFOT001</u> -01

REV.: V1.0

SHEET: <u>15</u> of <u>33</u>

3.3.3 Module Appearance/模组外观



Unit: mm

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: <u>V1.0</u>

SHEET: <u>16</u> of <u>33</u>

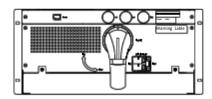
3.4 HV Box 高压盒

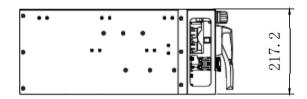
3.4.1 Model/型号: C-H1500100SA1

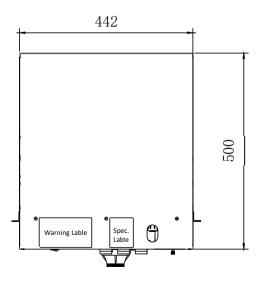
3.4.2 Detailed Specifications /详细规格

No./序号	Ite ms/项目	Spe cifications/参数	
1	Max . Operating Voltage Range/最大工作电压范围	Max . 1500V DC	
2	Rated input /output current/最大输入/输出电流	120A	
3	Optimal operating temperature/最佳工作温度	15℃~30℃	
4	Environment temperature range/使用环境温度	- 10°C~50°C	
5	Communication Port between HV-BOX and Module/ 通讯接口(HV BOX与模组通信)	CAN	
6	Communication Port between HV-BOX and PCS or DC/DC/ 通信接口(HV-BOX 与 PCS 或 DC/DC 通信)	CAN & RS485 & Ethernet (three ports/3个接口)	
7	Max . Module Serial Connect/最大模组串联数量	26S	
8	Dimensions/尺寸	W442*D500*H217 .2 mm(不带挂耳)	
9	Weight/重量	26kg (for reference)	
10	Ingress Protection/防护等级	IP20	

3.4.3 HV BOX Appearance/高压盒外观







Unit: mm

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -0) [
-------------------------------	-----

REV.: V1.0

SHEET: <u>17</u> of <u>33</u>

3.5 DCAC module/PCS 模块

3.5.1 Model/型号: PWS2-30P-NA

3.5.2 Detailed Specifications /详细规格

No./序号	Ite ms/项目	Spe cifications/参数			
	DC Port				
1	Rated allowable power	30kW			
2 Battery charge/ discharge voltage range 150V-		150V-750V (350 ~ 750V full load)			
3	Maximum charge/discharge current of battery	90A			
	AC GRID-TIE PARAME	CTER			
4	Rated output power	30kW			
5	Maximum apparent power	33kVA			
6	Maximum active power	33kW			
7	Rated grid voltage	3W3P+PE, 480 (±15%) Vac			
8	Rated frequency	60 (±2 .5) Hz			
9	Power Factor	Listed: 0 .8~1 leading or lagging Actual:0 . 1~1 leading or lagging			
10	T HDi	<3%			
	AC O ff-grid O utpu	t			
11	Rated Output Power	30kW			
12	Maximum Apparent Power	33kVA			
13	Maximum Active Power	33kW			
14 Rated Grid Voltage 3W3		3W3P+PE, 480 (±5% configurable) Vac			
15	Rated frequency	60 (±5 configurable) Hz			
16	Power Factor	Listed: 0 .8~1 leading or lagging Actual:0 . 1~1 leading or lagging			
17	Overload Capacity	110%~120%, 10 min 120%~150%, 200 ms			
	Efficie ncy				
18	Peak Efficiency	97 .3%			
19	CEC measured Efficiency	96 .5%			
	C ommunication				
20	Communication Port	CAN/RS485/Ethernet/WIFI			
	Ge ne ral Specification	n			
21	Dimension (W*H*D)	440*173*596mm			
22	Cooling	Forced air cooling			
23	Weight	33kg			
24	Topology	Non- isolation			

产品规格书

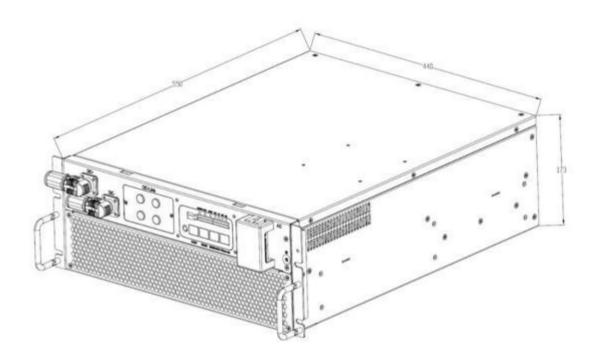
DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: <u>V1.0</u>

SHEET: <u>18</u> of <u>33</u>

25 Operation Altitude 3000m (>3000m (>3000m derating)		3000m (>3000m derating)	
26 Temperature & Humidity		-30°C~60°C (>45°C derating) & 0-95%	
27 IP rating		IP20	
C e rtification			
28 Grid-tied Standard		IEEE1547; UL1741SA; RULE 21	
29	Safety Certification	UL1741; UL9540	
30	EMC Standard	FCC	

3.5.3 DCAC module Appearance/PCS 模块外观



3.6 Battery Cabinet/电池柜

3.6.1 Cabinet/型号: SES-90K

3.6.2 Detailed Specifications/详细规格

Please refer to Section 3.2.5

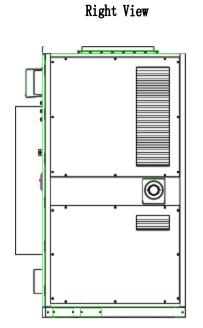
产品规格书

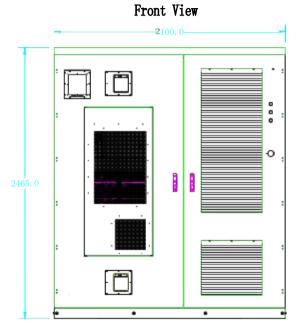
DOC NO. PS-GB-RD5SPSFOT001 -01

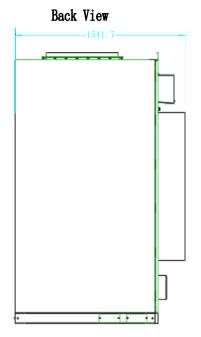
REV.: V1.0

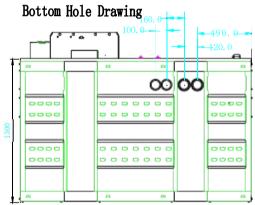
SHEET: <u>19</u> of <u>33</u>

3.6.3 Cabinet Appearance/电池柜外观









Unit: mm

产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

REV.: <u>V1.0</u>

SHEET: <u>20</u> of <u>33</u>

3.6.4 Heat Dissipation Design/散热设计

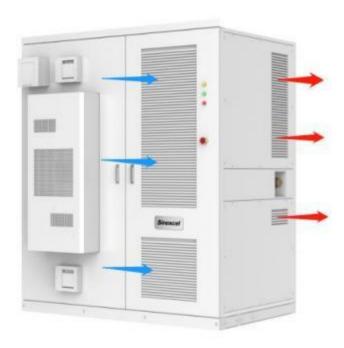


Figure Ventilation design of energy storage outdoor cabinet

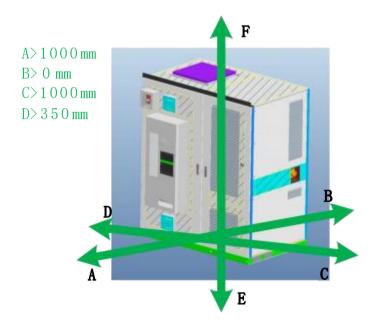


Figure Space requirements

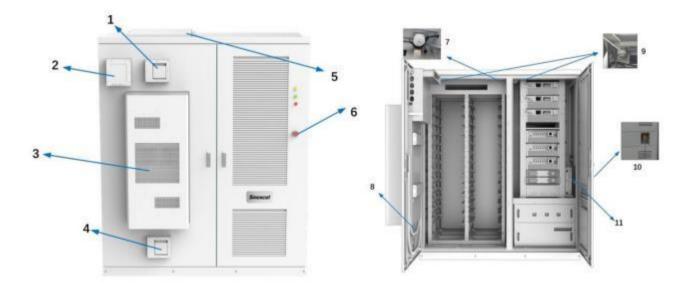
产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -01

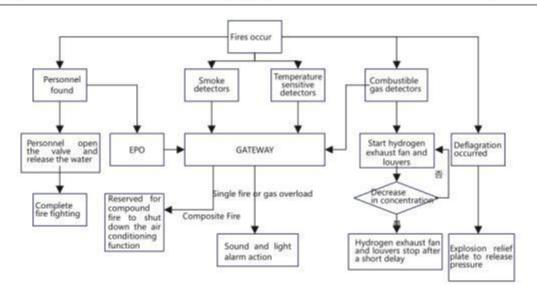
REV.: <u>V1.0</u>

SHEET: <u>21</u> of <u>33</u>

3.6.5 FFS design/消防设计



No.	Name	PCS
1	Hydrogen exhaust air outlet	1
2	Fire alarm	1
3	Air conditioning cooling system	1
4	Hydrogen exhaust air inlet	1
5	Explosion relief plate	1
6	EPO stop button	1
7	Temperature sensor detector, combustible gas detector	1
8	Flexible suppression tube	2
9	Smoke detectors	2
10	Water fire fighting system	1
11	Gateway	1



产品规格书

DOC NO. PS-GB-RD5SPSFOT001 -0) [
-------------------------------	-----

REV.: <u>V1.0</u>

SHEET: <u>22</u> of <u>33</u>

4 Product packing list/产品包装清单

Serial number	Name	Quantity
4	SES-90K energy storage outdoor cabinet (including cabinet door key and	
1	related accessories)	1 set
2	SES-90K series user manual	1 сору
3	Equipment wiring diagram	1 сору
4	Product Certificate of Conformity	1 сору
5	Inspection report	1 сору
6	Warranty card	1 сору

产品规格书

REV.: V1.0

SHEET: <u>23</u> of <u>33</u>

5 Warranty period/保质期

The warranty period provided by EVLITHIUM as well as the conditions and exceptions to the limited warranty shall be prescribed in a separate limited warranty document mutually agreed and signed by the Parties and such limited warranty

document shall take precedence over this Document with regard to the subject matter. In the event that no such limited warranty document is entered between the Parties, the warranty period for the [Products/System] shall be the Shelf Life plus the Calendar life, defined as follows (1)Shelf Life is for the period of 3 months from the time the battery is shipped from EVLITHIUM factory or, from the time the battery is shipped from EVLITHIUM factory until the installation and commissioning, whichever occurs first, (2) Calendar Life occurs when the battery reaches 60% of the rated capacity after 10 years or the accumulated throughput completes according to the warraty, whichever occurs first ./EVLITHIUM 提供的产 品质保期、质保条件以及排除质保的情形, 应依照双方所另行签订的质保协议书所约定内容执行, 该质保协议书 有关质保内容并应优先适用于本文件。如双方间并未签署该项质保协议书的,则EVLITHIUM 提供的产品质保期应 包含货架期和日历寿命两部分,分别定义如下: 1)货架期为自产品出货之目起 3 个月或自产品出货之日起到产品 安装服役止,哪一个条件先达到以哪一个条件为准; 2)产品的日历寿命为自货架期满之日起的 10 年时间或累积 吞吐量达到质保协议约定值,以两者中先实现者为产品日历寿命保证期。乙方向甲方提供的产品, 在质保期间内 的产品容量需要在可用容量的 60%以上。

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : <u>V1.0</u>

SHEET: <u>24</u> of <u>33</u>

6 Protection strategy ofBattery/电池部分保护策略

No.	Ite m/项目	Le vell Warning /一级警告	Le ve 12 Prote ction	Le ve 13 Prote ction /三级保护	Re store from Prote ction/保护恢复	Pe rmanent failure /永久失效
1	Overvoltage of cell/单体电压过高	3.6V	3 .65V	3 .7V	3 .4V	4.0V
2	Under voltage of cell/单体电压过低	2.9V	2.85V	2.8V	3.00V	2V
3	Overvoltage of pack/总电压过高	1497.6V	1518.4V	1539.2V	1414.4V	
4	Under voltage of pack/总电压过低	1206.4V	1185.6V	1164.8V	1248V	
5	Over-temperature charging of cell/充电单体温度过高	50℃	55℃	56℃	45℃	/
6	Over-temperature discharging of cell/放电单体温度过高	50℃	55℃	56℃	45℃	70℃
7	Under-temperature charging of cell/充电单体温度过低	- 10℃	- 12℃	- 14°C	-5 °C	
8	Under-temperature discharging of cell/放电单体温度过低	- 10℃	- 12℃	- 14℃	-5℃	
9	Over-charge power of cluster/簇充电功率过大	145.6kW	150 .8kW	156 .0kW	132.6kW	
10	Over-discharge power of cluster/簇放电功率过大	145 .6kW	150 .8kW	156 .0kW	132.6kW	
11	Protection delay for Items 1 - 10/项目 1- 10 的保护延时	3s	4s	5s		
12	Under SOC/SOC 过低	4%	2%	0%	9%	
13	Over SOC/SOC 过高	100%	/	/	<99%或≤3 .25V	
14	Under SOH/SOH 过低	65%	63%	60	/	60%
15	SOC/SOH Protection delay/SOC/SOH 保护延时	3s	3s	3s	/	3s
16	Large voltage difference between cells/模组内电芯间压差过大	600 mV	800mV	1000mV	200mV	/
17	Large temperature difference between cells/模组内电芯间温差过大	15℃	20℃	25℃	10℃	/
18	Voltage/Temperature difference protection delay/压差温差保护延时	10s	10s	10s	/	/

Note: Please refer to the PCS specification for protection strategy of PCS.

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : <u>V1.0</u>

SHEET: <u>25</u> of <u>33</u>

7 Package, transportation and storage/包装、运输和存储

Customer shall ensure that the Products are handled, operated, used and maintained by professionals qualified for such Produc ts and that such professionals shall handle the Products in accordance with the Product User Manual ("User Manual") provided by EVLITHIUM as well as in accordance with local laws and regulations. Customer shall alert its customers, contract manufacturers, agents, distributors, service providers and end users of the risks of the products given and are provided with adequate instructions as per such User Manual; Customer shall also ensure that Customer's obligations as specified in the Document as well as the User Manual are, through a printed label on host device, or through Customer's user manual, or a help file or Customer's Internet website, contractually imposed on Customer's own customers and distributors, and by them further down to the end users so that the entire chain is committed to the above obligations and so that the products are properly handled, operated, transported, used and maintained. 客户应确保本产品由专业人员进行处理、操作、使用、维护并按照 EVLITHIUM 提供的产品用户手册("用户手册")及当地法规执行安装、使用、存储、运输、操作产品等事项。客户并有责任通过主机标签、用户手册、帮助文档、客户网站等适当的途径和手段将本条义务告知 并以合同方式施加于其客户、外包商、供货商、代理商及终端用户等,使其知晓用户手册的相关使用操作规范,并确保所有 经手本产品之主体于各商业环节均对产品进行适当的处理、操作、运输、使用和维护。

7.1 Transportation/运输

Battery cabinet has cleared UN3480 and SN/T 0370.3 -2012. The battery cabinet is classified as c lass 9 dangerous goods, and is subject to land and water transportation . / 电池柜符合 UN3480 和 SN/T 0370.3-2012(出口危险货物包装检验规程 第 3 部分:使用鉴定)。电池柜被归类为 9 类危险品,需要陆路和水路运输。

- Use van-type vehicle including container and metallic van -type vehicle. Platform vehicles and convertibles are prohibited/必须厢式车辆运输,包括集装箱或者金属厢式车辆,禁止平板车、敞篷车运输。
- In order to protect battery cabinets from moving, falling or crashing, bandage s and bubble bags shall be a dopted during transportation. Specifically, banda ges apply to both long and short distance transports. 为防止运输过程中电池柜发生倾倒,移位,或碰撞, 需采用 捆绑带(飞机带)和气泡填充袋。其中,无论长途还是短途运输, 均需要绑飞机带。;
- Vehicle in the middle of unloading should berth near dock. Vehicles waiting to be unloaded should keep a safe distance of 6 m from warehouse. The vehicle prohibits debris stacking and should stay away from other vehicles/正在卸货要靠近装卸码头, 非卸货等待的 运输车辆停放区域距离仓库有 6m 安全距离,无杂物堆放,尽量远离其他车辆。
- Prohibit mixing up with explosive, inflammable or toxic objects/不得和易燃易爆物品,有毒物品等混装运输。
- Prohibit piling up with other objects/禁止堆垛上再堆叠货物。
- Maintain original packaging and keep labels complete and recognizable/维持原包装状态,保持原来标识完整。
- Prevent from direct exposure to condensation and mechanical damage/禁止冷凝水、装卸机械损伤。
- Maintain temperature between -20℃ and 45℃, and keep humidity within 5%-95%RH during the storage./运输过程中需将温度控制在-20℃至 45℃,并将湿度控制在 5%-95%RH 间。
- Carriers should be e quipped with extinguishers designed specifically for lithium battery, which are used together with fire protection water and sand/运输工具必须配置锂电池专用灭火器,并连同消防水、消防沙一并使用。
- A damage d box or rattles during transport may indicate rough handling. Describe the damages on the delivery receipt before signing. If an obvious damage such as package hole or serious impact is found, please contact EVLITHIUM/包装盒在运输过程中可能出现损坏。请 签收前在交付单上对损坏情况做描述性的标注。如发现包装破洞或严重的撞击等明显损坏请反馈给 EVLITHIUM。

7.2 Storage/存储

- Warehouse Management 仓库管理
 - Modules with safety deficiency and normal modules should be stored in separated areas with wall in-between or in different fire protection zones/安全缺陷电池和正常电池分开区域存储,单独隔墙或者不同防火分区。

产品规格书

OOC NO. PS	-GB-R	D5PPE	SS200	<i>)</i> 4-01

REV.: <u>V1.0</u>

SHEET: <u>26</u> of <u>33</u>

2) Prevent electrical fire sources. Electrical tube, switch box and socket should be undamaged. 0.5 meters from floor standing a ir conditioner and dehumidifier should be free from inflammable m aterials. Use cold light source in warehouse. If spotlight is used, at least one meter therefrom should be free from other inflammable materials/管理电气火源, 电气穿管不破损,开关箱、插座不破损;落地的空调、除湿机周围 0.5 米范围内无可燃物;仓库室内使用冷光源照明,如果用射灯在其周边至少 1 米无其他可燃物质。

- 3) Warehouse should be labelled with smoking ban and confirmed without cigarette butts. Smoking points should be reasonably designed with a fire-retardant wall separating warehouse. Wind at exit cannot blow cigarette butt to the ground near warehouse/仓库有禁烟标识,并确认仓库区域无烟头。吸烟点设计合理,和仓库有阻燃墙壁隔开,出口不会有风吹出烟头靠近仓库地面。
- 4) Warehouse should have mice protective measures, like plugging up holes and caves, timer -connected mouse expeller, floor baffler against mouse, sealing door slot with less than 10mm gap/仓库有防鼠措施, 如堵住孔洞、设置有定时器联动的噪声驱鼠器,或门口设有挡鼠板或门缝有可以加密封后间隙不超过 10mm。
- 5) Warehouse canopy must use fire retardant materials. Prohibit inflammable materials like plastic or canvas/ 仓库雨棚只能用阻燃材料,禁止用可燃材料如塑料雨棚、帆布雨棚。
- 6) Warehouse should be equipped with fire detector, watch -keeper, and surveillance video cameras and videos should be kept for at least one month/仓库有火灾探测器,联动值班室,仓库整体有视频监控,视频保存至少 1 个月。
- 7) Keep a dry clean storage place with proper ventilation . Specifically, with a relative humidity of , if ambient temperature ranges from -30℃ to 60℃, storage period lasts for seven days; if ambient temperature ranges from -20℃ to 45℃, storage period lasts for six months/保持存储环境干燥、通风、清洁, 七天内存储温度为-30℃至 60℃,六个月内的存储温度则为-20℃至45℃,相对湿度 5%-95%RH。
- 8) Module performance is vulnerable to chemical corrosion, strong acid, strong base, electrochemical corrosion, salt spray and radiation /化学腐蚀、强酸、强碱、电化学腐蚀、盐雾和射线都会影响电池性能。
- Fire extinguish device/配备灭火装置
 - 1) Battery sites must be equipped with multiple varieties of battery fire extinguishers, including fire sand, blanket and powder extinguisher/现场配置多种多样的锂电池灭火装置,包括:消防沙、防火毯、干粉灭火器等。
 - 2) It is recommended to deploy a micro fire station with firefighter uniforms, helmets, fire protection masks, safety gloves, and at least one set of first aid kit including medical devices and drugs/建议在现场布置微型消防站,多套消防战斗服,头盔,防火面罩;高温手套,至少一套医疗急救箱,外用药品和器械。

Smoke discharge/排烟

- 1) Equip the room with independent fans that run 24 hours/7 days and have failure alert function. Fans should coordinate with smoke detectors or gas concentration detectors/房间宜配置独立风机 24 小时运作有故障报警,或房间有独立风机且风机和烟雾报警器/或浓度报警器联动。
- 2) The ventilation capability should not be less than 12 times per hour and wind speed should exceed 0.5 meter per second/建议配备通风能力不低于 12 次/小时的换气能力或风机作用区域的风速不低于 0.5 米/秒。
- 3) Fan portfolio includes axial flow fan on wall (effective distance less than 5 meters), fan with fixed air hose, and mobile fan with flexible aluminium foil. The combination of wall fan and mobile fan is recommended/建议灵活组合使用风机。包括:墙壁轴流风机(作用距离不超过 5 米),或固定风管的风机,或带伸缩铝箔管道的移动风机, 鼓励建墙壁风机和移动风机组合排烟。

• Fire retardant buildings/建筑耐火

1) Warehouse and plant should use level two fire retardant buildings, like rock wool colour steel plate, plasterboard and iron rain-shed. Inflammable materials like foam and plastics are prohibited/电池的仓库和车间使用二级耐火建筑;不得使用易燃建筑材料如泡沫彩钢板、塑料雨棚,可使用阻燃的岩棉彩钢板、石膏板、铁皮雨棚。

产品规格书

DOC NO. PS-GB-RD5PPESS2004-01

REV.: <u>V1.0</u>

SHEET: <u>27</u> of <u>33</u>

Separate storage/单独存放

- 1) Do NOT store lithium batteries with inflammable or toxic objects/锂离子电池不得和易燃或有毒等危险品一起存放。
- 2) Design various fire protection zones. Store normal modules and modules with safety deficiencies separately/要在不同防火分区,正常的锂离子电池和安全缺陷电池不要混放。

• Recharge/补电

Keep the shipment module SO C **around 30**% and charge the module if it has been stored for more than **six** months /模组出货 SOC 为 **30%**左右,存储超过**六**个月需要对模组进行补电。

- 1) Plan 1: This plan is applicable when SOC of the battery system is low./ 方案一: 当电池系统 SO C 处于低端时,推荐此方案。
 - **Ste p 1** Discharge the battery system to empty (the lowest voltage of cell<2 .8V), then stop discharging, standing for 1 hour. / 将电池系统放空 (电芯最低电压<2.8V) 然后停止放电,静置 1 小时。
 - **Ste p 2** Full charge the battery system (the highest voltage of cell>3 .55V), then stop charging, standing for 1 hour. / 将电池系统充满(电芯最高电压>3 .55V), 然后停止充电,静置 1 小时。
 - Ste p 3 Discharge the battery system to 30% SOC and stop . / 将电池系统放空至 30% SOC 停止
- 2) Plan 2: T his plan isapplicable when SOC of the battery system is high . /方案二 当电池系统 SOC 处于高端时,推荐此方案 Ste p 1 Full charge the battery system (the highest voltage of cell>3 .55V), then stop charging, standing for 1 h our. / 对电池系统 满充电(最高单体电压 >3 .55V),然后停止充电, 静置 1 小时
 - **Ste p 2** Discharge the battery system to empty (the lowest voltage of cell<2 .8V), then stop discharging, standing for 1 hour. / 将电池系统放空 (电芯最低电压<2.8V) 然后停止放电,静置 1 小时。
 - Ste p 3 Charge the battery system to 30% SOC and stop. / 将电池系统充电至 30% SOC 停止。

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : <u>V1.0</u>

SHEET: <u>28</u> of <u>33</u>

8 Appendix Handling Precautions and Guidelines for Product/附录:产品操作注意事项

These Handling Precautions and Guidelines for Rechargeable Battery System ("Handling Precautions and Guidelines") shall only apply to the modules manufactured by EVLITHIUM. Customer shall strictly follow these Handling Precautions and Guidelines, and shall alert its customers, contract manufacturers, agents, distributors, service providers and end users of the risks of the modules and shall ensure that Customer's obligations as specified in the Document as well as the Handling Precautions and Guidelines are, through a printed label on host device, or through Customer's user manual, or a help file or Customer's Internet website, contractually imposed on Customer's own customers and distributors, and by them further down to the end users so that the entire chain is committed to the above obligations and so that the products are properly handled, operated, transported, used and maintained./ 本《锂离子可充电电池系统操作指示及注意事项》仅适用于新能安科技有限公司生产的电池。客户应严格遵守本操作指示及注意事项等义务告知并以合同方式施加于其客户、外包商、供货商、代理商及终端用户等,使其知晓相关使用操作规范,并确保所有经手本产品之主体于各商业环节均对产品进行适当的处理、操作、运输、使用和维护。

State ment(1):

Customer is requested to contact EVLITHIUM in advance, if and when the customer needs other applications or operating conditions than those described in this Document . Additional experimentation may be required to verify performance and safety under such conditions **声明(1)**: 客户若需要将电池用于超出本文件或使用手册规定以外的设备,或在文件规定以外的使用条件下使用电池,应事 先联系"新能安",因为需要进行特定的实验测试以核实电芯在该使用条件下的性能及安全性。

State ment (2):

EVLITHIUM will take no responsibility for any accident or liabilities in the event the Product is used for applications or under condit ions

other than those described in this Document .

声明(2):对于在超出文件规定以外的条件下使用本产品而造成的任何意外事故, EVLITHIUM 概不负责。

- Use Product under specified charge/discharge conditions/适用指定的充放电条件。
- Do not immerse in water/禁止投入水中。
- Do not heat/禁止加热。
- Do not attempt to crush, drop or penetrate the module/禁止尝试挤压、跌落、穿刺。
- Do not attempt to have any modification/禁止任何修改。
- Do not place or leave the module and equipment in the reach of children so that they are not able to swallo w or mistreat the product. In case of ingestion, consult with a doctor immediately 请将电池放在幼儿不宜触碰的地方,以免吞食和误处理。 一旦发生请立即就 医。
- Keep leaked electrolyte away from eyes or skin. In case of leakage contact with eyes or skin, immediately clean with water and seek help from a doctor. Serious damages can be cause due to delayed treatment/漏出的电解液远离眼睛和皮肤,万一发生立即清洗干净或就医,假如不能立即处理,可能引起严重伤害。
- Do not put the module into a fire. Do not use it or leave it in a place near fire, heaters, or high temperature sources. The heat can melt module insulator and damage safety vent, result ing in overheat, explosion or fire of the module /不要将电池丢入火中。不要在离火源, 热源或高温源近的地方使用或放置。在这种情况下, 电池中的绝缘保护可能融化,安全阀等结构可能会被毁坏,这样可能会过热,爆炸或起火。
- Do not submerge the product in water, or wet the product. If the protective devices are damaged, abnormal charging current and voltage may cause a chemical reaction within the product, which may result in overheat, explosion and even fire of the module /禁止浸泡或弄湿产品,如果产品保护装置被损坏,可能会因异常电流和电压充电引起产品内化学变化,导致过热, 爆炸或起火。
- Do not connect positive (+) and negative (-) terminals of the module reversely.禁止反接电池正负极,在这种情况下, 电池被异常充

产品规格书

REV.: V1.0

SHEET: <u>29</u> of <u>33</u>

电可能会导致过热,爆炸或起火。

• Do not short circuit. Do not contact the module terminals (+ and -) directly with a wire or any metal (like a metal necklace or a hairpin). Otherwise, the module is short circuited and generates excessive current, which may result in overheat, explosion, or fire of the module /禁止短接,禁止直接用导线或任何金属(比如金属项链或发卡)连接电池正负极。这种情况下, 电池外短路引起过电流,有可能导致过热,爆炸或起火。

- Do not throw or drop the module. Strong impact may damage the protective devices and an abnormal chemical reaction might occur during charge, resulting in overheat, explosion, or fire of the module/禁止抛扔或跌落电池,强的重力冲击可能破坏保护机构,可能引起异常化学反应导致发热,爆炸或起火.
- Do not drive a nail in, hit with a hammer, or stamp on the module. Otherwise, the module may be deformed and short circuited, resulting in overheat, explosion, or fire of the module/禁止针刺, 砸锤或邮戳电池,这种情况下, 电池可能变形和短路, 从而导致 过热,爆炸,起火.
- Do not solder the module directly. Heat applied during soldering may damage the insulator of the safety vent and mechanism, result ing in overheat, explosion, or fire of the module/禁止锡焊电池, 可能破坏安全阀,以及机构的绝缘保护措施,导致过热, 爆炸,起火。
- Do not disassemble or alter the module. The module employs a safety mechanism and a protection device in order to avoid any danger. If they are damaged, the module might overheat, explode or catch a fire /禁止拆解或更换电池,电池安置了安全机构和保护机构避免安全隐患,假如损坏,可能导致过热,爆炸或起火。
- Do not put the module in a microwave oven or a pressure cooker. Sudden heat may damage the sealing of the module and may cause overheat, explosion, or fire of the module/禁止将电池放在微波炉或压力锅内,极速的热可能导致过热,爆炸或起火。
- Do not leave the module in a charger or equipment if it generates an odour and/or heat, changes colour and/or shape, leaks electrolyte, or encounters any other abnormality. In such a case, immediately take the module out of the cabinet and keep it away from fire. Otherwise, the module might overheat, explode, or catch a fire/如果电池已经发出气味或发热, 颜色和/或外形有变化,电解液露出或任何不正常的现象,请不要再将电池放到充电器或设备里。这种情况下,应立刻将电池从电池柜中取出并远离火源, 否则电池可能过热,爆炸或起火。
- Stop charging or using the battery after battery reaches its EOL, otherwise, as the PACK might cause heat generation, explosion, or fire/超过电池的生命周期后请勿继续充电或使用,否则可能导致过热,爆炸或起火。
- Do not use the module beyond specified conditions. Otherwise, the module might encounter overheat, damage, or performance deterioration /禁止在超出规定条件下使用电池,否则可能导致过热,损坏,恶化电池电性能。
- Read the instructions regarding the installation and operation so as to avoid damages due to incorrect operations/阅读产品关于安装和操作手册,避免误操作导致损坏。
- The module may have insufficient power capacity after long storage/电池长期存储不用可能导致电量不足。

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : <u>V1.0</u>

SHEET: <u>30</u> of <u>33</u>

9 Disclaimer/免责声明

9.1 Customer Responsibility/客户责任

• The Customer hereby agrees that it has carefully read and un derstood any and all terms and conditions, safety precautions and measures set forth in this Document, furthermore, the Customer waives claiming any liability against EVLITHIUM and agrees to bear full responsibilities of the risks for any accidents, bodily injuries, or property loss that may occur due to non - compliance with any of the above. 客户在此确认并同意,其已认真阅读并理解本产品规格书中所阐明的条款、所有安全规范及措施,并且对其违反上述 条款、规范及措施等因此可能产生的任何意外事故、人身伤害及财产损失等风险,将完全地承担责任而不会向 EVLITHIUM 主张 任何责任。

- Regarding a particular Product with the properties, the Customer is obligated to verify the fitness for a particular purpose of such Product described in this Document under certain application. The parameters provided in this Document may vary in different applications and performance may vary from time to time. All operating parameters, including typical parameters, must be validated for each customer application by the Customer's technical experts. 客户有责任验证具有本产品规格书中描述的特性的特定产品在特定应用情况下的适用性。本产品规格书中提供的参数在不同的应用中可能会有所不同,并且性能可能随时间而变化。客户的技术专家必须就每次应用对所有操作参数(包括典型参数)进行验证。
- Customer takes full responsibility to verify all requirements (whether voluntary or mandatory) necessary to enter into a cert ain market or territory, including but not limited to technical, environm ental, safety certification or other requirements. Unless expressly provided herein, EVLITHIUM shall in no event be liable for any failure of the Product to fit for a certain application or to meet any requirement necessary to enter into a specific market or territory. The parties agree that the certification items and certification institutions are designated or agreed by Customer. EVLITHIUM will assist the designated certification institutions to conduct testing and issue certificates for the Products by providing all necessary documentations for certification, including specification, product label, application form and samples. The Parties further agree that all expenses and liabilities in connection with or arising from the certification shall be borne

by Customer, and EVLITHIUM shall in no event be liable for any costs or expenses in connection with or resulting from any failure to pass the certification or the non -compliance with any voluntary or mandatory certification requirement in any specific territory. 客户 有责任对市场准入的各项要求(不论自愿或强制)进行确认,包括但不限于技术、环保、安全认证等要求。除本产品规格书 明定外, EVLITHIUM 对本产品是否符合特定应用和市场准入要求不负任何责任。本产品之认证项目及认证机构经客户选定或同 意, EVLITHIUM 配合客户向其指定或同意的认证机构提出安全规格认证所需资料,包含规格书、产品标识、申请表及样品等, 由认证机构进行测试和发证。双方同意, 与本产品认证相关的所有风险及责任(包含未通过认证或未取得销售区域自願或强 制认证所产生之风险及责任),由客户承担, A MPACE 不负任何责任。

- The Product is produced an d supplied to the Customer for Business to Business nature, and is not for direct consumer use. Due to safety and technical reasons, the average lifespan for the Product is [10] years from the [manufacturing date], depending on different user habits and conditions ("Average Lifespan"). The term Average Lifespan shall have different meaning from the term Warran ty Period. Customer hereby acknowledges the Average Lifespan of the Product and agrees to be responsible to handle after sale s service (except for instances where EVLITHIUM's limited warranty applies) and take liability for claims raised by end users and consumers, and EVLITHIUM is only responsible in accordance with this Document to the Customer, and not to end users and/or consumers.本产品是基于企业对企业(B2B)的交易模式所提供及制造,非供终端客户之直接使用。基于安全及技术等方面的原因,本产品的正常寿命周期为自[产品制造]日起算[10]年,惟可能因使用习惯缩减。产品寿命期与保质期不同。客户知悉并了解本产品的正常寿命周期,并同意自行负责(除符合质保约定外的)售后服务,并针对任何终端消费者或使用者的请求及主张自行对该终端消费者 或使用者负担相关责任。 EVLITHIUM 仅就本产品规格书的所载之内容对客户(而非终端消费者或使用者)负有限责任。
- Customer agrees to take full responsibility for recycling the Product in accordance with the local laws and re gulations in the respective Permitted Territory and shall bear the costs arising therefrom . 客户应当按当地法律法规之规定,再循环本产品并自负由此产生的费用和风险。

产品规格书

DOCNO: PS-GB-RD5SPSFOT001 -01

REV. : V1.0

SHEET: <u>30</u> of <u>33</u>

• Products can only be use d and installed within the Permitted Territory as set forth in the cover page of this Document ("Permitted Territory"). The Product warranty is null and void in the event Products are resold, used or installed outside of the Permitt ed Territory.

产品规格书

|--|

REV.: <u>V1.0</u>

SHEET: <u>31</u> of <u>33</u>

本产品仅供使用及安装于本产品规格书首页标明的适用区域 ("适用区域")。若本产品被转售、使用或安装于适用区域以外的地区,则本产品的相关质保规定将全部取消并失效。

● EXCEPT AS EXPRE SSLY SET FORT H IN T HIS DO CUMENT, EVLITHIUM MAKES NO REPRE SENTAT IONS AND GRANT S NO WARRANT IES, WHET HER EXPRESS OR IMPLIED, INCLUDING WIT HOUT LIMITAT ION ANY WARRANT YOF QUALIT Y, ANY IMPLIED WARRANT IES OF MERCHANTABILIT Y, FIT NESS FOR A PART ICULAR U SE OR PURPOSE, AN D NON-INFRIN GEMENT. 除本规格书明定外,EVLITHIUM 不因本协议对提供客户之产品内容(包括品质性能、适销性、特定用 途的使用目的、兼容性、不侵权等)提供任何不论明示或默示的其他保证或承担任何风险。

• The part ies agree that EVLITHIUM shall have no liability or obligation with respect to any infringement, claim or action which is based

upon: 双方同意对于下列的侵权、索赔或诉讼, EVLITHIUM 无须承担任何责任:

- 1) EVLITHIUM's incorporation or use of materials, designs, technology or intellectual property designed, designated or instructed by Customer, its affiliates, contract manufacturers, customers, or end users into the Products; EVLITHIUM 在其产品上结合或使用客户、客户之关联方、分包方、客户或终端用户的设计、指定或指示的材料、设计、技术或知识产权;
- 2) The combination, assembly, operation, or use of the Products with materials, devices, parts, or software not supplied by EVLITHIUM, 客户将 EVLITHIUM 的产品与非 EVLITHIUM 提供的材料、设备、组件或软件进行结合、组装使用/运行;
- Modifications, disassem bly, repair, and rework to the Products by Customer or any third party without the prior written consent of EVLITHIUM; 客户或其他第三人未经 EVLITHIUM 授权而对 EVLITHIUM 的产品进行的修改、拆解、维修或重工;
- EVLITHIUM's modification of the Products in compliance with the design, specification, requirements, or instructions of Customer; EVLITHIUM 依照客户的设计、规格、要求或指示而对其产品进行的修改;
- 5) The claim or action arising from non-compliance with the requirements for use, storage, delivery, assembly, and disposal of the Products designated by EVLITHIUM; 客户或任何第三方未依据EVLITHIUM 指定的产品使用方式对EVLITHIUM 的产品进行使用或 未按照 EVLITHIUM 指定的标准对产品进行安置、贮存、运输、组装或处理而导致的任何侵权或索赔事项;
- 6) Use of the Products beyond the scope of intended use under this Document; 客户或任何第三方未依据本产品规格书中约定的 使用范围对 EVLITHIUM 的产品进行使用;
- 7) Any defect that may exist before the Product enters the market or any defect that is unable to be detected by the existing technology at the time the Product enters market; 引起损害发生的缺陷于 EVLITHIUM 产品投入流通前即已存在或投入流通时 的技术水平尚不能发现缺陷的存在的。
- 8) Knockoff or counterfeit battery; 仿制或虚假产品。
- 9) Any inconsistency between serial number, model number, and product code; 产品型号、序列号和产品编码之间存在不一致。
- 10) Any system/products that be assembled by customer without Over -the-Air Technology, PTL be excluded from the responsibility to cover the any cost related with software upgra ding. 产品/系统需要进行远程软件升级或故障清除时客户端不远程升级功能
- 1 1) For any product liability related claim raised against EVLITHIUM, the Customer bears the burden of proof to evidence that (1) the Customer and its contractors, agents, customers or end users have followed the requirements of this Document, (2) there is a product defect, and (3) the accident, claim or liability is solely and directly caused by such product defect. EVLITHIUM is entitled to reject any claim and be released from any liability in the event of Customers failure to meet the aforesaid burden of proof. 就任 何对 EVLITHIUM 提出的有关产品责任的主张或请求,客户需针对以下事项负举证责任: (1) 客户及客户的代理人、外包商、客户或终端用户已遵守本产品规格书的要求,(2) 产品缺陷存在,(3) 意外事故、主张和责任单独且直接由该产品缺陷所 引起。若客户未能证明上述事项之存在,则 EVLITHIUM 有权拒绝任何因此产生的请求并且据此免责

• EVLITHIUM shall have no liability or obligation with respect to any Products which have been subjected to abuse, misuse, improper use,

C

产品规格书

DOC NO. PS-GB-RD5PPESS2004-01

REV.: V1.0

SHEET: <u>31</u> of <u>33</u>

negligence, accident, alternation, repair or rework performed by any unauthorized persons or entities other than EVLITHIUM . /对于任何 未经授权的个人或非 EVLITHIUM 实体所滥用,不当使用, 疏忽,意外, 改动,修理或返工的产品, EVLITHIUM 概不承担任何责 任或义务。

• Neither party shall be liable for any indirect, special, incidental, punitive or consequential damages of any kind (including lost profits),

产品规格书

DOC NO. PS-GB-RD5PPESS2004-01

REV.: V1.0

SHEET: <u>32</u> of <u>33</u>

regardless of the form of action, whether in contract, tort (including negligence), strict liability or otherwise, even if informed of the possibility of such damages in advance. 即便对方已提前通知一方下述损失发生的可能性,双方同意并确认, 任何一方均不对任何间接的、特别的、附带的、惩罚性的或结果性的损失(包括可得利益损失) 承担赔偿责任,无论是基于何种追诉方式、无论是基于合同或侵权之债(包含过失侵权行为)、无论是否基于严格责任。

• The parties hereby agree that EVLITHIUM's entire liability, if any, in damages, indemnification or otherwise, shall not exceed the Product

price paid by Customer allocable to the specific Product upon which the claim is directly based. 双方同意并确认 EVLITHIUM 所应 承担 的全部损害赔偿、补偿及其他责任,累计总金额不超过客户为引发该索赔请求的具体产品所支付的货款金额。

产品规格书

DOCNO: PS-GB-RD5SPSFOT001_-01

REV. : V1.0

SHEET: <u>33</u> of <u>33</u>

10 Miscellaneous/其他

In the event of any conflict, ambiguity or discrepancy between the Chinese version and English version of this Document, both parties agree that the Chinese version of this Document shall prevail.

本产品规格书之中文文本与英文文本如有任何矛盾,歧义或者不一致之处, 双方同意应以中文文本优先适用。