产 品 规 格 书

Product Specification

产品名称 Product Name	**76V40Ah 电池组**
产品型号 Product Type	HC00-H12L6
产品代码 Product code	
制作日期 Date	2025/03/26

编制 Formation	**审核 Auditing**	**批准 Approval**

客户确认栏 Customer Approval	**签名 Signature**	**日期 Date**
	公司名称 Company Name	
	公司盖章 Company Stamp	

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变更履历表

Version updates sheet

版本 Version	变更内容 Change contents	日期 Date	编制 Formation
V01	新版发行	2025/03/25	李小琴

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术语与定义

Terms and definitions

术语 Terms	定义 Definitions
产品 Product	本规格书中的“产品”是指汇创新能源生产的可充电磷酸铁锂体系电池模组。 The “Product” in this specification refers to the rechargeable lithium iron phosphate battery module produced by Huichuang New Energy
客户 Customer	《汇创新能源产品销售合同》重点买方。 The key buyer of Huichuang New Energy Products Sales Contract
汇创新能源 Huichuang New Energy	广东汇创新能源有限公司。 Guangdong huichuang New Energy Co.,LTD.
模组 Modules	将一个及一个以上单体电芯按照串联、并联或串并联方式组合，且只有一对正负极端子，并作为电源使用的组合体。 A combination of one or more individual cells in series, parallel or series parallel with only a pair of positive and negative extremes and used as a power source.
电池包 Battery pack	通常包括电池模组、电池管理模块、电池箱及相应附件，具有从外部获得电能并可对外输出电能的单元。 It usually includes a battery module, a battery management module, a battery box and corresponding accessories, and has a unit that obtains electric energy from the outside and can output electric energy.
标称容量 Nominal capacity	由制造厂商宣称的蓄电池模组或系统的放电容量值。 The discharge capacity of battery module or system as claimed by the manufacturer.
可用电量 Available capacity	在规定条件下测得的蓄电池模组或电池包的实际放电电量值。 The actual discharge quantity of a battery module or battery pack measured under specified conditions.
充电倍率 Charge ratio	充电电流与电池模组或系统标称容量的比值。 The ratio of the charging current to the nominal capacity of the battery module or system.
标准充电 Standard charging	本规格书所述的充电模式。 The charging mode described in this specification.
标准放电 Standard discharge	本规格书所述的放电模式。 The discharge mode described in this specification.
电池管理系统（BMS） Battery Management System(BMS)	客户用于监测和记录产品在整个服务期限内的运行参数的一种有效的追踪和控制系统。其追踪和记录的参数包括但不限于电压、电流、温度等，以控制产品的运行并确保产品运行环境及运行条件符合。 An effective tracking and control system used by the customer to monitor and record the operating parameters of the product throughout the service life. The tracking and recording parameters include but are not limited to voltage, current, temperature, etc., to control the operation of the product and ensure that the product operating environment and operating conditions meet.
电芯温度 Cell temperature	由接入电池的温度传感器测量的电芯大面温度。 The large surface temperature of the cell measured by the temperature sensor connected to the battery.
循环 Circulation	电池按规定的充放标准充放一次为一个循环。充电可以由一些部分充电组合在一起形成。放电可以由一些部分放电组合在一起形成。 The battery is charged and discharged once in one cycle according to the specified charge and discharge standard. A charge can be made by combining a number of partial charges together. A discharge can be formed by a number of partial discharges grouped together.
生产日期 Date of production	电池的制造日期。每个相关的电池的顶端贴纸上标示的明确的日期代码为制造日期。 The date of the battery was manufactured. The specific date code indicated on the sticker at the top of each relevant battery is the date of manufacture.
开路电压 Open circuit voltage	没有接入任何负载和电路时测得的电池的电压。 The voltage of the battery measured when no load or circuit is connected.

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充电状态 State of charge	在无负载的情况下，以安培小时或者以瓦特小时为单位计量的电池充电容量状态的所有的线性关系。如：若将电芯满充至 3.65V 视为 100%SOC，电芯满放至 2.5V 视为 0%SOC。 All linear relationships of the state of the battery's charge capacity, measured in ampere-hours or watt-hours, without load. For example, if the cell is fully charged to 3.65V, it is considered as 100%SOC, and if the cell is fully charged to 2.5V, it is considered as 0%SOC.
温度上升 Temperature	在本技术协议规定的条件如充电过程或者放电过程中电芯温度低的升高。 A low rise in the temperature of the cell during charging or discharging under the conditions specified in this technical agreement
寿命终止(EOL) End of Life(EOL)	指达到额定容量寿命终止，用%表示 Refers to the end of life at rated capacity, expressed as %
放电深度（DOD）Depth of discharging	从电池充放电电量占额定容量的百分比，用%表示 The percentage of charge and discharge from the battery to the rated capacity, expressed as %
测量单位 Unit of measure	"V"（Volt）伏特（V） "A"（Ampere）安培（A） "Ah"（Ampere-Hour）安培-小时（Ah） "Wh"（Watt-Hour）瓦特-小时（Wh） "Ω"（Ohm）欧姆（Ω） "mΩ"（Milliohm）毫欧姆（mΩ） "℃"（degree Celsius）摄氏度（℃） "mm"（millimeter）毫米（mm） "s"（second）秒（s） "Hz"（Hertz）赫兹（Hz）

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1. 适用范围 Applicable Scope

本规格书详细描述了汇创新能源生产的 1P24S 76V40Ah 可充电磷酸铁锂电池系统的性能指标、设计参数、产品使用条件及风险警示。

This specification describes in detail the performance indicators, design parameters, product usage conditions and risk warning of the 1P24S 76V40Ah rechargeable lithium iron phosphate battery system produced by Huichuang New Energy.

2.产品指标 Product specifications

2.1 电池系统电气性能参数 Battery system electrical performance parameters

序号 NO.	参数 Parameter	产品规格 Specification	条件 Condition/Note
2.1.1	电池组串并联方式 Connection	1P24S	
2.1.2	标称电压 Nominal voltage	76.8V	3.2V*24S
2.1.3	标称容量 Nominal capacity	40Ah	0.33C放电电流 At a 0.33C discharge current(25±2°C)
2.1.4	额定能量（wh） Rated energy(wh)	3072	
2.1.5	最高工作电压 Max operating voltage	87.6V	3.65V*24
2.1.6	最低工作电压 Minimum operating voltage	60V	2.5V*24
2.1.7	充电方式（软件） Charge Method(software)	CAN 协议充电 CAN protocol charging	
2.1.8	正常工作温度范围（充电） Temperature range(Charging)	0~55° C	
2.1.9	正常工作温度范围（放电） Temperature range(Discharging)	-20~60° C	
2.1.10	标准充电电流 Standard charge current	20A	
2.1.11	标准放电电流 Standard discharge current	40A	
2.1.12	最大可持续放电电流 Max discharge current (continuous)	80A	
2.1.13	峰值放电电流 Max sustainable discharge current	100A/30S	20~55℃，≥50%SOC
2.1.14	电池交流内阻 AC impedence	≤60mΩ	SOC=50% At25℃ 1KHz
2.1.15	系统出货静态压差 Static pressure difference during system shipment	≤30mV	50%~60%SOC（仓储模式） 50% to 60%SOC(storage mode)
2.1.16	自放电 Self-discharge	≤3.5%/月 ≤3.5%/month	出货三个月以后的电芯，标准充电到40%SOC，25±2° C储存Fresh cell after 3 months, 40%SOC, 25±2° C storage
2.1.17	工作环境湿度	65%±20%	

	Working ambient humidity			
	存储温度 Optimum storage temperature	1个月 One month	-30° C-45° C	SOC:25%~40%SOC 存储环境湿度≤ 85%ROH ，无凝露 Storage ambient humidity < 85% ROH, no condensation
1.1.18		6个月 Six months	-20° C-35° C	
2.1.19	海拔要求 Altitude requirement	≤2000m		
2.1.20	出货 SOC Shipping SOC	20～30% SOC		
2.1.21	循环寿命 Cycle life	≥2000 次	25℃±2℃，0.5C 充电,0.5C 放电，每次放出电池组80%实测基准容量，充/放电后各静置 1h，EOL80%。 25℃±2℃, 0.5C charge, 0.5C discharge, discharge 80% of the measured reference capacity of the battery pack each time, after charging / discharging, each stand for 1h, EOL80%.	
2.1.22	短路保护 Short Circuit	短路后自动断开负载 Automatically disconnects the load after short circuit	用 0.1Ω的电阻短接电池的输出正、负极。 Short-circuit the battery's output positive and negative terminals with a 0.1Ω resistor.	
2.1.23	电池组激活功耗 activation power consumption	≤40mA	/	
2.1.24	电池组休眠功耗 Hibernation power consumption	100uA	/	
2.1.25	低电量存储 Low power storage	搁置时间≥30 天 Shelf time ≥30days		

2.2 系统物理性能参数 System physical performance parameters

序号 NO.	类别 Category	产品规格 Specification	备注 Remarks
2.2.1	系统重量 Net Weight	≤25Kg	参照值 Reference value
2.2.2	系统尺寸 Dimensions	225*169.5*324.5(mm)	/
2.2.3	系统安装尺寸 System mounting Dimensions	/	/
2.2.4	防护等级 Class protection	IP67	出厂标准执行 GB/T4208-2017 Factory standard execution GB/T4208-2017
2.2.5	正负极柱螺栓规格 Positive and negative post bolt specifications	/	N.A
2.2.6	采样线安装工艺 Sampling line installation process	/	N.A

2.3 常用螺栓参考扭矩表 Reference torque table for common bolts

螺栓规格 Bolt Specifications	螺栓强度等级 Bolt strength rating						
	4.6	5.6	6.8	8.8	9.8	10.9	12.9
	N.m	N.m	N.m	N.m	N.m	N.m	N.m
M3	0.51	0.63	1.01	1.35	1.52	1.9	2.27
M4	0.95	1.19	1.91	2.54	2.86	3.57	4.29
M5	2.28	2.85	4.56	6.09	6.85	8.56	10.3
M6	3.92	4.91	7.85	10.5	11.8	14.7	17.7
M8	9.48	11.9	19	25.3	28.4	35.4	42.7
M10	19.1	23.8	38.1	50.8	57.2	71.5	85.8

2.4 充电 Map (Charging Map)

Temp.（℃）	SOC: 0%	SOC: 10%	SOC: 20%	SOC: 30%	SOC: 40%	SOC: 50%	SOC: 60%	SOC: 70%	SOC: 80%	SOC: 90%	SOC: 95%	SOC: 100%
[0~7）	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.05	0
[7~15）	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.25	0.20	0.15	0.10	0
[15~25）	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.40	0.30	0.20	0.15	0
[25~35）	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.80	0.70	0.50	0.30	0
[35~45）	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.80	0.70	0.50	0.30	0
[45~50）	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.70	0.50	0.30	0.20	0
[50~55）	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.45	0.30	0.20	0.15	0
[55~60）	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.45	0.30	0.20	0.15	0

注：“[”代表不包含所示温度；“）”代表包含所示温度。

2.5 放电 Map (Discharging Map)

Temp.（℃）	SOC: 0%	SOC: 10%	SOC: 20%	SOC: 30%	SOC: 40%	SOC: 50%	SOC: 60%	SOC: 70%	SOC: 80%	SOC: 90%	SOC: 100%
[-20~-10)	0	0.06	0.20	0.40	0.40	0.60	0.60	0.60	0.60	0.60	0.60
[-10~0)	0	0.20	0.60	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
[0~7)	0	0.30	1.00	1.2	1.40	1.60	1.60	1.60	1.60	1.60	1.60
[7~15)	0	0.40	1.20	1.40	1.6	1.80	1.80	1.80	1.80	1.80	1.80
[15~25)	0	0.60	1.40	1.60	1.80	2.00	2.00	2.00	2.00	2.00	2.00
[25~35)	0	0.60	1.40	1.60	1.80	2.00	2.00	2.00	2.00	2.00	2.00
[35~45)	0	0.60	1.40	1.60	1.80	2.00	2.00	2.00	2.00	2.00	2.00
[45~50)	0	0.40	1.00	1.20	1.40	1.60	1.60	1.60	1.60	1.60	1.60
[50~55)	0	0.10	0.30	0.50	0.60	0.60	0.60	0.60	0.60	0.60	0.60
[55~60）	0	0.10	0.30	0.50	0.60	0.60	0.60	0.60	0.60	0.60	0.60
[60~65）	0	0.06	0.20	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50

注：“[”代表不包含所示温度；“）”代表包含所示温度。

3.供货范围 Scope of supply

单个系统供货范围如下表：The scope of supply for a single system is as followings:

序号 NO.	名称 Name	参数规格 Specification	系统用量 Dosage	配件 parts
1	1P24S-40Ah 电池组	76V/40Ah	1	/

4.应用条件、产品认证、质保售后 Application conditions,product certification,after-sales

4.1 应用条件 Application conditions

4.1.1 客户必须按规格书要求配对使用，不可串并联混用，包装标示卡等识别码；

The customer must be paired according to the requirements of the specification, can not be mixed in series and parallel, packaging marking card and other identification code;

4.1.2 客户应配置电池管理系统，严密监控，管理并保护每一个电池，按照汇创新能源的电芯规格书参考设置保护参数，并且与汇创新能源确认保护参数。

The customer shall configure the battery management system, closely monitor, manage and protect each battery, set the protection parameters according to the cell specification of Huichuang New Energy reference, and confirm the protection parameters with Huichuang New Energy.

4.1.3 客户应向汇创新能源提供电池管理系统详细的设计方案，系统特点、框架、系统数据、格式等相关信息， 以供汇创新能源对该系统进行设计评估，并建立电池管理档案。

The customer shall provide the detailed design scheme of the battery management system, system characteristics, framework, system data, format and other relevant information to the battery management system for the design evaluation of the system and the establishment of the battery management file.

4.1.4 未经汇创新新能源同意,客户不可擅自修改或者改变电池管理系统的设计和框架,以免影响电池的使用性能。

Without the consent of Huichuang New Energy, customers forbid to modify or change the design and framework of the battery management system, so as not to affect the performance of the battery.

4.1.5 客户应保存完整的电池运行的监测数据，用作产品质量责任划分的重要参考依据。不具备完整的电池产品使用期限内的监测数据的，汇创新能源不承担产品质量保证。

Customers should keep the battery operation monitoring data complete,as an important reference for product quality responsibility division. If there is no complete monitoring data of the battery product during its service life, Huichuang New Energy does not undertake product quality.

4.1.6 BMS 电池管理系统建议要求（详见 BMS 规格书）：

The recommended requirements of BMS(BMS specification for details):

a）单体电压采样精度误差≤10mv；

The sampling accuracy error of single voltage ≤10mv;

b)SOC 估算误差≤5%；

SOC estimation error ≤ 5%;

c)SOH 精度误差≤5%；

SOH accuracy error ≤ 5%;

d) 电流采样精度≤±（1%FS+0.5%RD）；

Current sampling accuracy≤±（1%FS+0.5%RD）

e)温度采样精度±2℃。BMS 需带温度采样及管理功能，单个模组不能少于 2 路温度检测；

Temperature sampling accuracy ±2℃.BMS should be equipped with temperature sampling and management function,it should not be less than 2 temperature detection for a module;

f)均衡功能。BMS 必须具备均衡功能，起到电芯均衡作用，均衡电流不小于 50mA，不大于 FPC/PCB 的载流能力；

Equalization function BMS must have the balancing function, play the role of cell balancing current is not less than 50mA, not greater than the current carrying capacity of FPC/PCB;

g)BMS 功能与保护参数：

BMS Function Parameters:

序号 NO.	项目 Items	参数 parameters	备注 Remarks

1	电压保护 voltage protection	单体电池充电保护电压(V) Single battery charge protection voltage(V)	3.65	停止充电 Stop charging
2		单体电池充电恢复电压（V） Single battery charge recovery voltage(V)	3.4	恢复充电 Recover charge
3		单体电池放电保护电压(V) Single battery discharge protection voltage(V)	2.5	停止放电 Stop discharge
4		单体电池放电恢复电压（V） Single battery discharge recovery voltage(V)	2.9	恢复放电 Recover discharge
5		系统充电保护电压(V) System charge protection voltage(V)	87.12	停止充电 Stop charging
6		系统放电保护电压(V) System discharge protection voltage(V)	62.4	停止放电 Stop discharge
7	电流保护 Current Protection	充电过流保护阈值 1 Charge over-current protection parameters	30A，延时 30S	停止充电 Stop charging
8		充电过流保护恢复条件 1 Charge over-current protection removal condition	延时 2min	恢复充电 Recover charge
		充电过流保护阈值 2 Charge over-current protection parameters	45A 延时 5S	停止充电 Stop charging
		充电过流保护恢复条件 2 Charge over-current protection removal condition	延时 2min	恢复充电 Recover charge
9		放电过流一级保护阈值 Discharge over-current protection parameters	100A，延时 30S	停止放电 Stop discharge
10		放电过流一级保护恢复条件 Discharge over-current protection removal condition	延时 2min	恢复放电 Recover discharge
11		放电过流二级保护阈值 Discharge over-current protection parameters	120A 延时 2S	停止放电 Stop discharge
12		放电过流二级保护恢复条件 Discharge over-current protection removal condition	延时 2min	恢复放电 Recover discharge
15	温度保护 Temp Protection	电池充电高温保护（℃） Charge protection@high temp	55℃	停止充电 Stop charging
16		充电高温保护恢复（℃） Charge protection removal@high temp	50℃	恢复充电 Recover charge
17		电池放电高温保护（℃） Discharge protection@high temp	60℃	停止放电 Stop discharge
18		池放电高温恢复（℃） Discharge protection removal@high temp	55℃	恢复放电 Recover discharge
19		电池充电低温保护（℃） Charge protection@low temp	0℃	停止充电 Stop charging
20		充电低温保护恢复（℃） Charge protection removal@low temp	5℃	恢复充电 Recover charge
21		电池放电低温保护（℃） Discharge protection@low temp	-20℃	停止放电 Stop discharge
22		放电低温保护恢复（℃） Discharge protection removal@low temp	-15℃	恢复放电 Recover discharge
23		MOS 过温保护（℃） Protection@high MOS temp	85℃	
24		MOS 过温保护恢复（℃） Protection removal@high MOS temp	75℃	
25	短路保护 Short-circuit	放电短路保护 Discharge short circuit protection parameters	480A 延时 400μS	停止放电 Stop discharge

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26	protection	放电短路保护恢复 Discharge short circuit protection removal condition	解除负载	恢复放电 Recover discharge
29	失效处理功能 Failure handling function	0V 禁止充电 0V No charge	单节电压＜2V Simple link voltage＜2V	
30	其他 Other	其他功能 Other functions	防打火功能 Anti-ignition function	

4.2 电控参数匹配要求 Electronic control parameter matching requirements

序号 NO.	项目 Project	参数 parameters	备注 Remarks
1	充电器/换电柜 Charger/change cabinet	86.4V，≤20A	CAN 协议充电 CAN protocol charging
2	电机额定功率 Rated power of motor	≤2500W	
3	电机尖峰功率 Peak motor power	≤6000W	
4	控制器限流值 Current limit of the controller	≤100A	
5	控制器截止电压 Controller cut-off voltage	62±1V	
6	控制器电容 Controller capacitance	≤5000uF	

4.3 产品认证 Product Certification

本产品如涉及到相关的认证，所产生的认证费用需双方商务另行商定。

If this product involves related certification, the certification fees generated need to be negotiated by the two parties separately.

4.4 售后、质保、验收 After-sales, quality assurance and acceptance

售后、质保及验收条款，以产品质量协议为准。

The terms of after-sales service, quality assurance and acceptance shall be subject to the product quality Agreement.

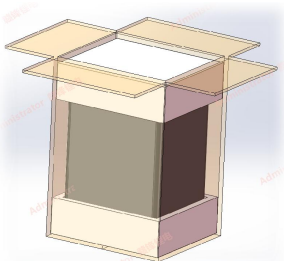
严禁复制

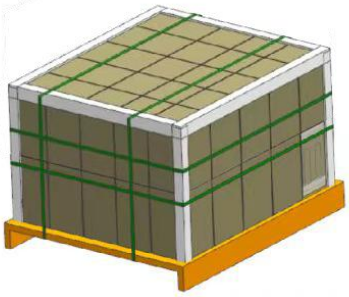
5.包装、贮存、运输 Package, storage and transportation

5.1 包装 Package

量产包装箱材质应符合GB6543中BD-1.5双瓦楞纸箱要求；印刷字迹清晰可辨，无重影、模糊及漏印等现象；纸箱表面需有明确的制造商等信息；纸箱内部采用EPE填充,高度＜1.5米。包装视具体情况而定，以满足运输条件为宜。包装示意图 （仅参考）

The material of the mass production packing box should meet the requirements of BD-1.5 double corrugated box in GB6534; The printing handwriting is clear and legible, without gaping, blurring and printing leakage; Carton surface should have clear manufacturer and other information; the carton is filled with EPE, and the height is ＜ 1.5 meters. The packing depends on the specific situation and it is advisable to meet the transportation conditions. Packing diagram (for reference only)





5.2 贮存 Storage

电池系统超过10天不用时，请断开电池与负载电源的连接，避免耗光电池电量。如需长期贮存，请将电池组充电至50%左右的电量，每一个月建议标准充放电电流循环一次，每三个月需进行小电流（0.1C）活化一次。环境要求：温度（0℃～35℃）、相对湿度（45%~85%）、大气压力（70kPa~106kPa），放置于干燥、通风处，避免与腐蚀性物质接触，远离火源及热源。

If the battery system is not used for more than 10 days, disconnect the battery from the load power supply to prevent battery power consumption.For long-term storage, please charge power of the battery pack to about 50%, it is recommended to cycle the standard charge and discharge current once every month, and it's necessary to activate the small current (0.1C) once every three months. Environmental requirements: Temperature (0℃~35℃), relative humidity (45%~85%), atmospheric pressure (70kPa~106kPa), placed in a dry, ventilated place, avoid contact with corrosive substances, away from fire and heat sources.

5.3 运输 Transportation

电池模组应包装后进行运输，在运输过程中应防止剧烈振动、冲击或挤压，防止日晒雨淋。可使用汽车、火车、轮船、飞机等交通工具进行运输。

The battery module should be packaged for transportation, and should be protected from violent vibration, import or extrusion during transportation to prevent sun and rain. It can be transported by car, train, ship, plane and other means of transportation.

严禁复印

6.安全防范 Safety precautions

6.1 禁止将电池组长时间暴露在高温环境中，否则可能会导致火灾；在任何正常的使用，存储情况下，电池模组温度不能超过 65℃，如果温度超过 65℃，电池管理系统需保护并关闭电池使用，禁止电池模组充放电。

It's forbidden to expose the battery to a high temperature environment for a long time, otherwise it may cause a fire; In any normal use and storage, the temperature of the battery module should not exceed 65℃. If the temperature exceeds 65℃, the battery management system should protect and turn off the battery to prevent charging and discharging of the battery module.

6.2 禁止电池模组正负极短路，严格按照标示说明连接电池组正负极。

It's forbidden that short-circuit the positive and negative electrodes of the battery module. Connect the positive and negative electrodes of the battery module strictly according to the instructions.

6.3 禁止将电池组浸入水中、置于火中，微波炉中或压力容器中。

It's forbidden to immerse the battery pack in water, fire, microwave oven or pressure vessel.

6.4 当发现电池模组有电解液泄露时，应避免皮肤和眼睛接触电解液。如有接触，应使用大量的清水清洗接触到的区域并向附近医院寻求帮助，禁止人或动物吞食电池的任何部件。

Avoid skin and eye contact with the electrolyte when electrolyte leakage is found in the battery module. If there is contact wash the contact area with plenty of water and seek help from a nearby hospital. It's forbidden to ingest any parts of the battery by humans or animals.

6.5 用户在设计制造电池系统时，应避免电池模组免受机械震动、碰撞及压力冲击，尖锐物体刺穿电池模组内电芯壳体的情况发生，导致电池模组发生电芯内部短路，热失控，火灾和爆炸的安全隐患。

The user should avoid the battery module from mechanical vibration, collision and pressure impact, sharp objects piercing the battery cell shell in the battery module, resulting in the battery module internal short circuit, thermal runaway, fire and explosion safety hazards when designing and manufacturing the battery system,.

6.6 电池模组在充放电过程中可能发生不正确的充放电方式导致终止充放电。如：超出电池允许的充放电电压或充放电温度等，触发电池管理系统保护，当发生该现象时，请及时断开充电机或负载。在没有找到根本原因之前请勿强行对该电池组继续充放电，由此可能会引起电池组过充，过放，热失控，电池组有可能会遭到严重的损坏，甚至发生漏液，火灾事故；用户应联系当地经销商将电池安全运送到专业的维护地点进行维护检查，并且由专业技术人员全面检查，确定原因并彻底解决、修复后才可继续使用。

Incorrect charging and discharging modes may occur during the charging and discharging process of the battery module, resulting in termination of charging and discharging. For example, exceeding the allowable charge and discharge voltage or charge and discharge temperature of the battery will trigger the protection of the battery management system.Please disconnect the charger or load in time when this phenomenon occurs. Before the root cause is not found, do not force the battery pack to continue charging and discharging, which may cause the battery pack to overcharge, over-discharge, thermal control, the battery pack may be seriously damaged, and even leakage, fire accidents; The user should contact the local dealer to safely transport the battery to a professional maintenance site for maintenance inspection, and a comprehensive inspection by professional and technical personnel to determine the cause and thoroughly solve, repair before it can continue to use.

6.7 电池组在使用过程中，如果出现漏液、有异味、异响，请立即停止充放电并与厂家联系，请勿私自拆卸，分解电池模组，私自拆卸、分解后的电池模组，汇创新能源不承担任何产品质量保证。

During the use of the battery , if there is leakage, odor, abnormal noise, please immediately stop charging and discharging and contact the manufacturer, do not disassemble or disassemble the battery module without authorization, after disassembly or decomposition of the battery module without authorization, Huichuang New Energy does not undertake any product quality guarantee.

6.8 报废的电池模组，请勿随意处置，以至于污染当地环境，请联系正规的，有资质的回收机构或厂家专门处理。
Do not dispose of discarded battery modules at will, which may pollute the local environment. Please contact regular and qualified recycling institutions or manufacturers for special treatment.

7.风险警告 Risk warning

7.1 警示声明 Warning Statement

警告

warnings

1. **电池存在潜在的危险，在操作和维护时必须采取适当的防护措施！**
   Batteries are potentially dangerous, and proper precautions must be taken when operating and maintaining them!
2. **不正确地操作维护电池组，可能导致严重的人身伤害和财产损失！**
   Improper operation and maintenance of battery packs can result in serious personal injury and property damage!
3. **维护电池组必须使用专业的工具和防护装备，维护时人必须具有电池专业知识并经过安全培训的人士执行。**
   Battery pack maintenance must be performed with professional tools and protective equipment and by personnel with battery expertise and safety training.
4. **不遵守上述警告可能会造成多种灾难。**
   Failure to comply with the above warnings can result in a variety of disasters.

7.2 不正确的维护，可能会受到化学品、电击或者电弧的伤害。尽管人体对遭受直流电与交流电的反应不同，但是高于 50V 的直流电压与交流电对人体的伤害是同样严重的，因此维护时必须采取保护措施以避免电流的伤害。
Improper maintenance may be in injuries from chemicals, electric shocks, or electric arcs. Although the human body reacts differently to direct current and alternating current, DC voltages aboved 50V are equally harmful to the human body as alternating current. Therefore, protective measures must be taken during maintenance to avoid current damage.

7.3 在维护电池和选择防护装备时，必须考虑到外短路，造成电弧、爆炸或热失控风险，防止发生意外。
When maintaining the battery and selecting protective equipment, you must take into account the external short circuit, which may cause the risk of arc, explosion or the thermal runaway, to prevent accidents.

8.图表 Charts

8.1 产品外观图 （单位：MM）

Product Drawing(Unit：mm)

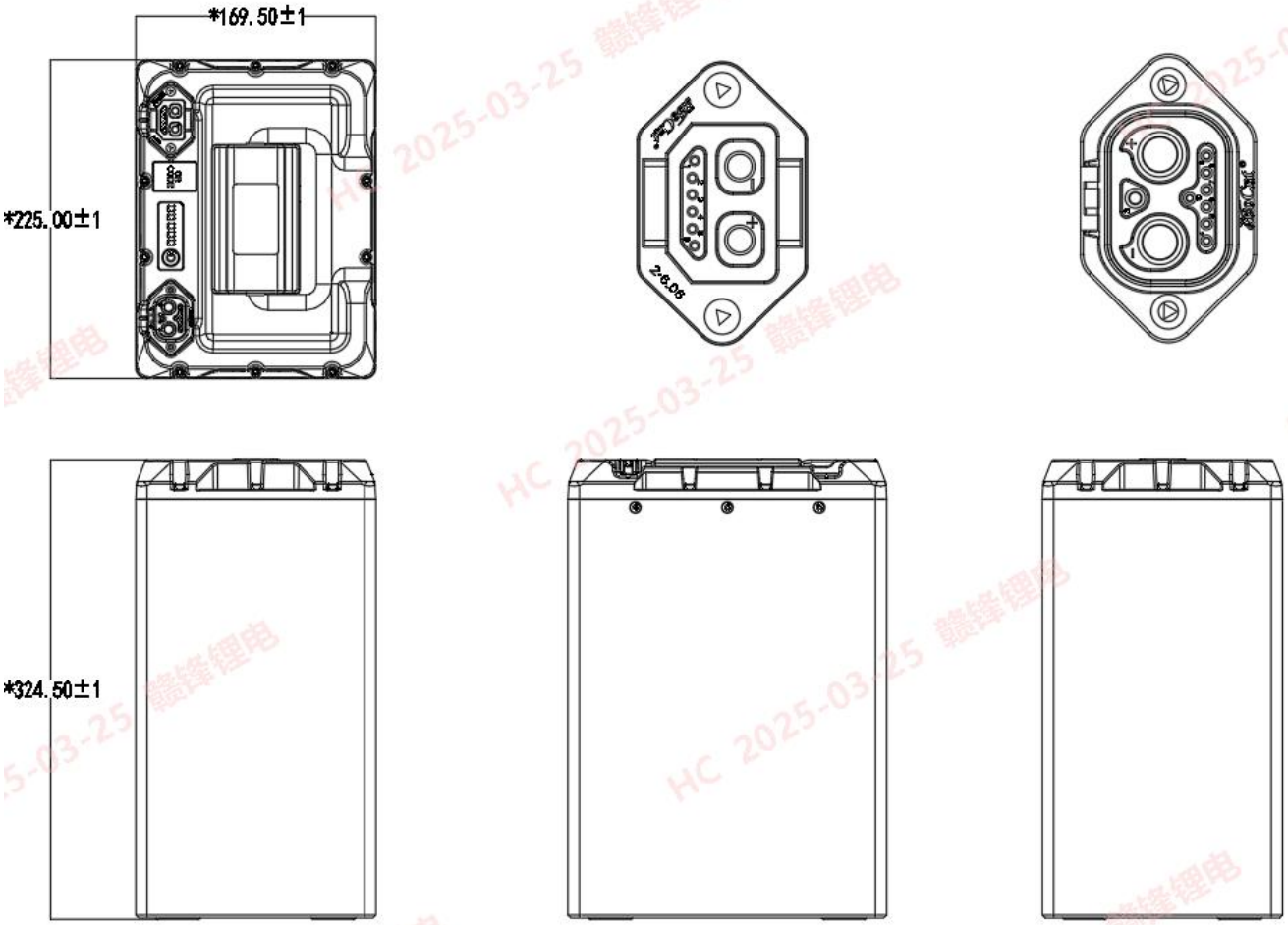


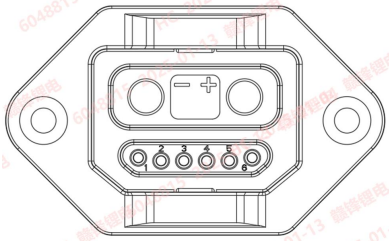
图 1　1P24S-40Ah 系统尺寸图

Figure 1 System dimensions of 1P24S-40Ah

8.2 引脚定义 Pin Definition

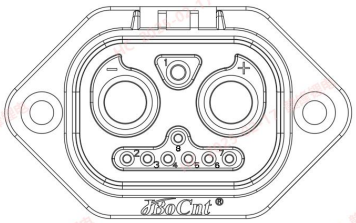
电池组充电放电接口采用下图示意图形式：

The battery pack charging and discharging interface is in the form of the following diagram:



CHARGE

引脚号 Pin number	定义 Definition	备注 Remarks
1	KEY	/
2	H	/
3	H	/
4	L	/
5	L	/
6	GND	/

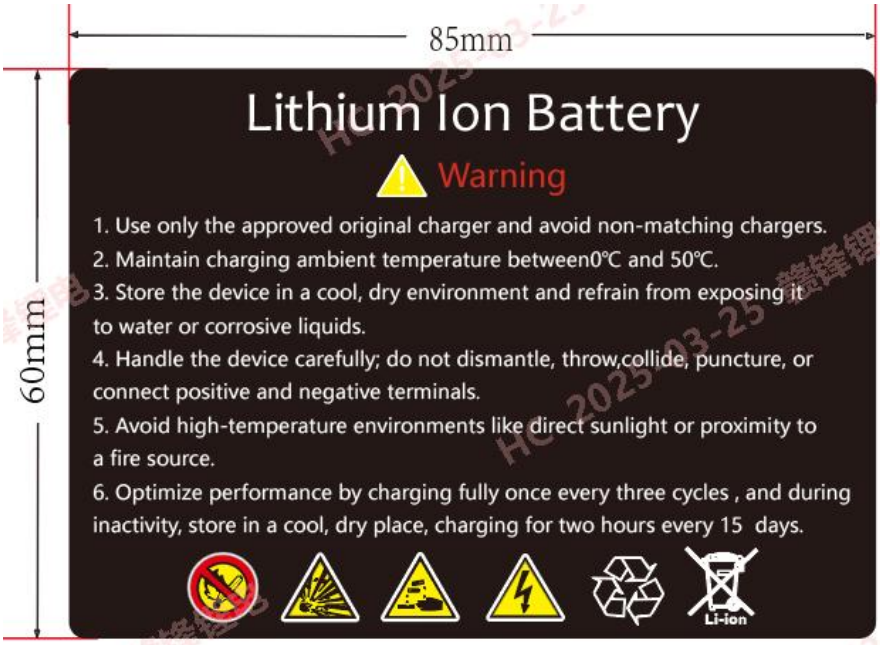


Discharge

引脚号 Pin number	定义 Definition	备注 Remarks
-	电源负	Battery -
+	电源正	Battery +
1	ACC	
2	ACC	
3	H	
4	H	
5	L	
6	L	
7	PLUG-IN	
8	ID	预留

正版资料

8.3 标签 Label


85mm
60mm
Lithium Ion Battery
Warning
1. Use only the approved original charger and avoid non-matching chargers.
2. Maintain charging ambient temperature between0℃ and 50℃.
3. Store the device in a cool, dry environment and refrain from exposing it to water or corrosive liquids.
4. Handle the device carefully; do not dismantle, throw,collide, puncture, or connect positive and negative terminals.
5. Avoid high-temperature environments like direct sunlight or proximity to a fire source.
6. Optimize performance by charging fully once every three cycles , and during inactivity, store in a cool, dry place, charging for two hours every 15 days.
Li-ion

48mm
30mm
Serial No.: BT107604012TKR0250325001
Product Model: 76V40Ah
Rated Voltage: 76.8V
Rated Capacity: 40Ah
Nominal Power: 3072Wh
Production Factory: Guangdong Huichuang New Energy Co.,Ltd.
Manufacturer: Guangzhou Tycorun Energy Co.,Ltd.
Address: No.17 Jiaolian Houde Road,Wanjiang Street,Dongguan City, Guangdong,China
IP 67
CAUTION
LITHIUM BATTERY

20mm
30mm
250212001

9.保护板信息 BMS information

9.1BMS 参数

BMS parameters

详见 BMS 规格书

BMS specification

10. 其他 Other

10. 1 客供件范围

项目	型号	数量	备注
无			

11.外箱及出货报告 Outer box and shipment report

包装纸箱中性纸箱。

Packing carton Neutral carton

出货检验报告----每批出货时附报告。

Outgoing inspection report---Each shipment is accompanied by report.

严禁复制