



产品特点 Product Characteristics

散热设计 Heatink Design

- 合理结构位置
Strategically located
- 独特被动冷却结构
Unique passive cooling
- 防止关键部件过热结构设计
Prevents over- heating of critical components

独特BMS设计 Unique BMS Design

- 基于微控制器设计
Microcontroller-based design
- 开放式软件设计
Intuitive software
- 高精度计算
High-resolution internal measurements
- 超低自放电
Ultra-low self-consumption
- 数据稳定可靠
Non-volatile historical data
- 提供荷电状态
Provides State of Charge (SOC)

电池参数表 BATTERY DATA SHEET

产品名称型号 Name & Model

产品名称 Name	LiFePO4 Battery
型号 Model	VG-51110

参数规格 PARAMETER SPECIFICATIONS

额定电压 Rated Voltage	51.2V
电池类型 Battery Type	LiFePO4
电芯结构 Cell Type	Prismatic
安培小时容量 Ampere-hour Capacity	110AH
瓦特小时容量 Watt Hour Capacity	5632WH
能量密度 Capacity Density	138
充电效率 Charge Efficiency	>93%
内阻值 Impedance (50% SOC, 1kHz)	<100mΩ
循环寿命 Cycles @ 80% DOD	>2500

结构规格 MECHANICAL SPECIFICATIONS

尺寸 Dimensions (L×W×H)	430*340*160mm
重量 Weight	37kg
外壳材料 Case Material	Steel
极柱端子 Stud Terminal	M8 Thread
手柄 Handle	Handle
防护等级 IP	IP54

放电规格 DISCHARGE SPECIFICATIONS

连续放电电流 Continuous Discharge Current	110A
峰值放电电流 Peak Discharge Current	220A - 10sec
短路保护 Short Circuit Protection	500A-1.5us
保护恢复 Protection Recover	Automatic
低压保护 Low Voltage Disconnect	40V - 5 sec (2.5vpc)
低压保护恢复 Low Voltage Reconnect	Automatic
自放电 Self-Discharge per Month @ 25°C in OFF Mode	2.50%

充电规格 CHARGE SPECIFICATIONS

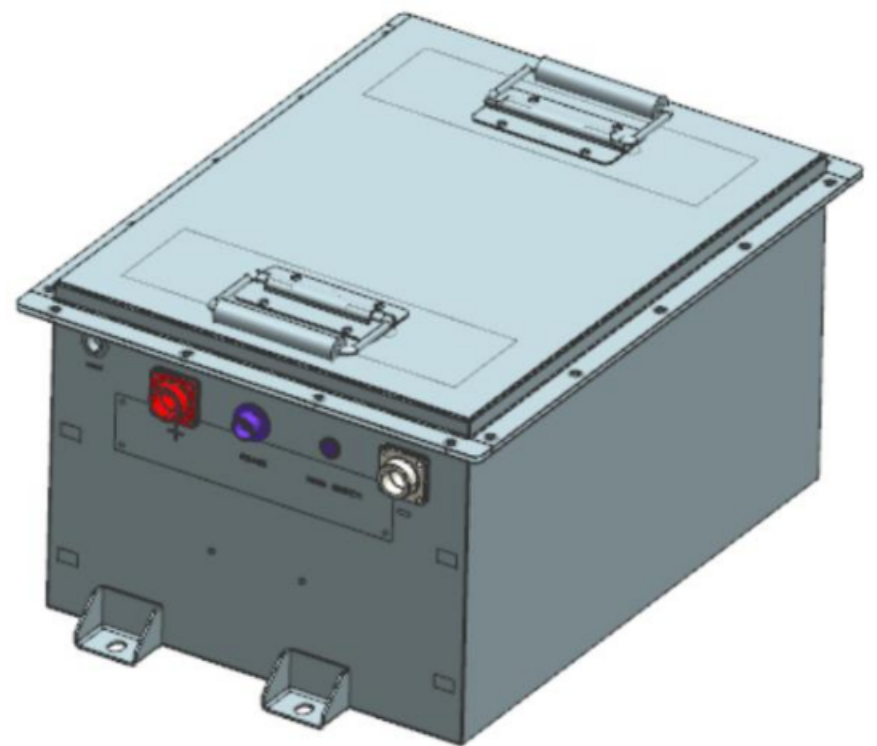
持续充电电流 Continuous Charge Current	≤ 110A
断开充电电流 Disconnect Charge Current	150A - 5 sec
建议充电电压 Recommended Charge Voltage	58.4V
高压断路 High Voltage Disconnect	58.4V
高压断路恢复 High Voltage Reconnect	Automatic

环境规范 ENVIRONMENTAL SPECIFICATIONS

充电温度 Charge Temperature	(0°C to 55°C)
放电温度 Discharge Temperature	(-20°C to 65°C)
工作湿度 Operating Humidity	<90% RH
储存温度 Storage Temperature	(-20°C to 35°C)
储存湿度 Storage Humidity	25 to 85% RH

航运分类 SHIPPING CLASSIFICATIO
UN 38.3 MSDS

应用 APPLICATION
高尔夫车 Golf Cart





功能特性 INTELLIGENT FEATURES

产品特点 Product Features

- 最高效率 > 93% (额定负载) Maximum efficiency over 93%
- 功率因数 > 0.99(50%额定负载以上) The highest power factor exceeds 0.98
- 较强的保护功能 Complete protection function
- 100%满载老化测试 100% full load aging test
- 高抗震等级 High seismic grade

保护特性 Protection Features

- 输入过压保护 Output over voltage protection
- 输入欠压保护 Output reverse protection
- 输出过压保护 Output over current protection
- 输出欠压保护 Charger over temperature protection
- 输出过流保护 Output short-circuit protection
- 过温保护 Over temperature protection
- 短路保护 Short circuit protection
- 电池反接保护 Battery reverse connection protection
- CAN通信功能 (选配) CAN communication function (optional)

常见故障及解决方案 Common failures and Solutions

故障情况及指示 Fault condition and indication

- 电池故障 Battery failure: 电池未接或反接、电池电压过低、电池过热
Unconnected or reversed batteries, low battery voltage, overheated batteries, output short circuit, battery overheating
- 充电机故障 Charger failure: 充电机过热 Charger overheating
- 市电输入异常 Abnormal input of municipal electricity: 交流输入电压错误、输入线细
AC Input Voltage Error, Input Line Fineness

解决方案 Solutions

- 交流输入电压错误 AC Input Voltage Error: 检查输入电压是否符合要求
Check whether the Input Voltage meets the requirements.
- 输入线细 Input Line Fineness: 更换合适规格的输入线
Replace the appropriate size of the input line.
- 输出短路 Output Short Circuit: 检查输出端线路, 排除短路
Check the Output Circuit and eliminate the Short Circuit.
- 电池未接或反接 Battery not connected or reversed: 检查电池连接, 将电池正确连接
Check the battery connection and connect the battery correctly.
- 电池电压过低 Battery voltage is too low: 设法使电池电压达到充电机启动电压
Try to make the battery voltage reach the starting voltage of charger.
- 电池过热 Battery overheating: 注意通风; 若充电机有外置温度传感器, 将其紧贴在电池表面
Pay attention to ventilation; if the charger has an external temperature sensor, stick it to the surface of the battery.
- 充电机过热 Charger overheating: 确保充电机通风口及所处空间保持通畅, 远离发热源. 充电机上严禁覆盖东西

充电器参数表 CHARGER DATA SHEET

产品名称型号 Name & Model

产品名称 Range	Battery Charger
型号 Model	48V20A

参数规格 PARAMETER SPECIFICATIONS

额定电压 Rated Voltage	51.2V
散热方式 Heat dissipation mode	Air cooling
输入电压 Input voltage	AC180-264V
输入频率 Input frequency	50Hz/60Hz
充电效率 Charge Efficiency	>93%

结构规格 MECHANICAL SPECIFICATIONS

尺寸 Dimensions (L×W×H)	282×130×78.5mm
重量 Weight	2.5kg
外壳材料 Housing material	Die-cast Aluminum
交流连接器 AC connector	DJ7031-4.8
直流插入端子 DC Insert Terminal	SC50/M8
手柄 Handles	YES
防护等级 IP	66

充电规格 CHARGE SPECIFICATIONS

持续充电电流 Continuous Charge Current	≤ 20A
建议充电电压 Recommended Charge Voltage	≤ 58.4V

充电过程信息指示 CHARGING PROCESS INFORMATION INDICATOR

电池电量低于90 % Battery SOC <90%	Red indicator flashes every one second
电池电量高于 90% Battery SOC >90%	Green indicator flashes every one second
电池电量等于100 % Battery SOC =100%	Green indicator steady on
无负载 No Load	Red and green indicator flash alternately

故障信息指示 Fault information indication

硬件故障或DC12V故障 Hardware failure or DC12V failure	红、绿、_、_、_、_ Red, Green, _ _ _ _
直流母线电压故障 DC bus voltage fault	红、绿、红、绿、_、_ Red, Green, Red, Green, _ _
交流电压低或高故障 AC voltage low or high protection	红、绿、红、绿、红、_ Red, Green, Red, Green, Red, _
电池未联接故障 Battery disconnected fault	红、绿、红、绿、红、绿。 Red, Green, Red, Green, Red, Green.
电池温度保护 Battery temperature protection	绿、红、_、_、_、_ Green, Red, _ _ _ _
CPU温度或变压器温度保护 CPU temperature or transformer temperature protection	绿、红、绿、_、_、_ Green, Red, Green, _ _ _
输出短路保护 Output short-circuit Protection	绿、红、绿、红、_、_ Green, Red, Green, Red, _ _



环境规范 ENVIRONMENTAL SPECIFICATIONS

充电温度 Charge Temperature	(-20°C to 85°C)
工作湿度 Operating Humidity	<90% RH
储存温度 Storage Temperature	(-40°C to 90°C)
储存湿度 Storage Humidity	25 to 85% RH

证书 CERTIFICATIONS

CE FCC

航运分类 SHIPPING CLASSIFICATION

General Goods

应用 APPLICATIONS

高尔夫车 Golf Cart

