



Product Specifications

Power Base Pool

High-Voltage LiFePO4 Battery System

Version	Prepare	Check	Approve	Date
V1.0	ZJM			2020-06-10



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1. Introduction

The Power Base Pool product is a high-voltage lithium iron phosphate battery storage system independently developed in-house by Zhongrui Green Energy Technology (Shenzhen) Co., Ltd. The rated voltage of the system is 460.8V, and the maximum which meets the requirements of 100kW power supply. Parallel of multi systems is supported.

2. Features

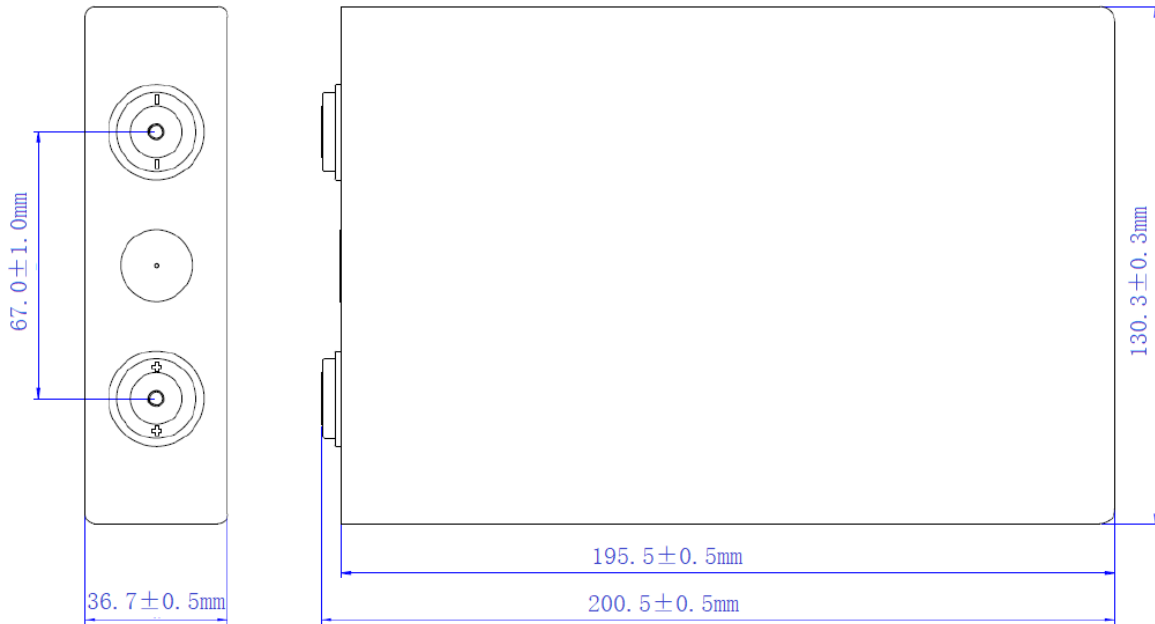
- Adopt high safety, long life, excellent performance LiFePO4 prismatic cells;
- Support up to 1C continuous discharge;
- Over 3500 times of cycle life;
- Intelligent BMS to ensure a safe reliable operation;
- Parallel on cabinet level available;
- Multiple communications including RS485, CAN;
- Modular rack design for easier installation and smaller landscape.





3. Specifications

3.1. Cell Parameters



No.	Items	Parameters	
1	Cell Type	LiFePO4 Prismatic	
2	Nominal Capacity	105Ah	
3	Nominal Voltage	3.2V	
4	Maximum Charge Current	Continuous	1C
5		Peak for 30s	1C
6	Maximum Discharge Current	Continuous	1C
		Peak for 30s	3C
7	Temperature Range	Charging	0°C ~ 55°C
		Discharging	-20°C-55°C
		Recommended Working	15°C ~ 35°C
8	Weight	1980±100g	



3.2. Battery Module Parameters



No.	Items	Parameters
1	Model	GR-FE24210-0835R1
2	Cell Configuration	16S1P
3	Nominal Capacity	210Ah
4	Nominal Energy	2688Wh
5	Weight (Approx.)	45kg
6	Dimensions (W*D*H)	440*408*152 mm (Handles and connectors are not included)

3.3. Main Control Module Parameters



No.	Items	Parameters	
1	Model	GR-MC500-150E	
2	Operation Voltage Range	200Vdc – 600Vdc	
3	Maximum Operation Current	≤150A	
4	Communication	BATT COM	CAN, Battery Module Parallel, BMS power supply
		LCD COM	RS485 , Monitoring Devices
		Link A, Link B	Cabinet Parallel, PCS communications
		CAN/RS485	communication interface with PC
5	Weight	10.5kg	
6	Dimensions (W*D*H)	440*408*133 mm (Handles and connectors are not included)	



3.4. System Parameters



3.4.1. General Specifications

No.	Items		Parameters
1	Model		Power Base Pool
2	Main Control Module		GR-MC500-150E
3	Battery Module Type		GR-FE24210-0835R1
4	Battery Module QTY		18
5	Module Configuration		144S1P
6	Nominal Capacity		210Ah
7	Nominal Energy		96.8kWh
8	Chemistry		LiFePO4
9	Voltage	Nominal	460.8V
		Recommend Charging	511V
		Max. Charging	525V

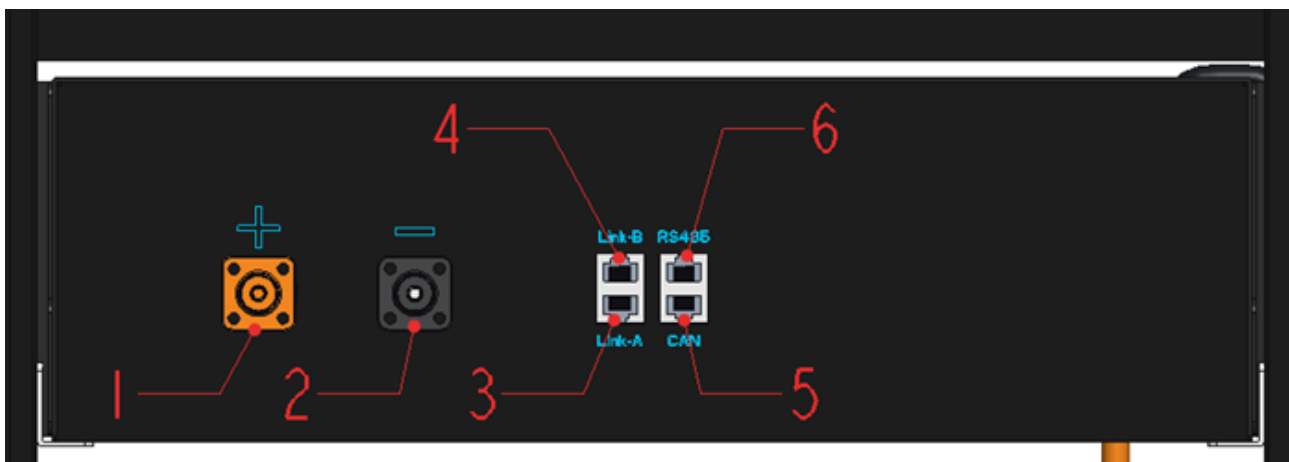


		Discharge Cut-off	390V
10	Current	Max. Charging	120A
		Max. Discharging	120A
		Peak for 30s	150A
		Weight (Approx.)	1.0t
11			
12		Dimensions (W*H*D))	1270*2140 *833mm
13		Communication	RS485, CAN
14		Cycle Life	3500 times@80%DOD
15		Designed Calendar Life	≥10 years
16		Safety Function	Over-charge, Over-discharge, Over-current, Low/High-temperature, Low-voltage, Short-circuit Protections
17		Parallel Capability	Maximum 10 units (Recommended 6 units)

3.4.2. Environment Specifications

No.	Items	Parameters
1	Charging Temperature Range	0°C~45°C
2	Discharging Temperature Range	-10°C~55°C
3	Best Operating Temperature Range	15°C~35°C
4	Storage Temperature Range	0°C~45°C
5	Transport Temperature	-40°C~45°C
6	Humidity	5%RH~95%RH
7	Altitude	0~4000m

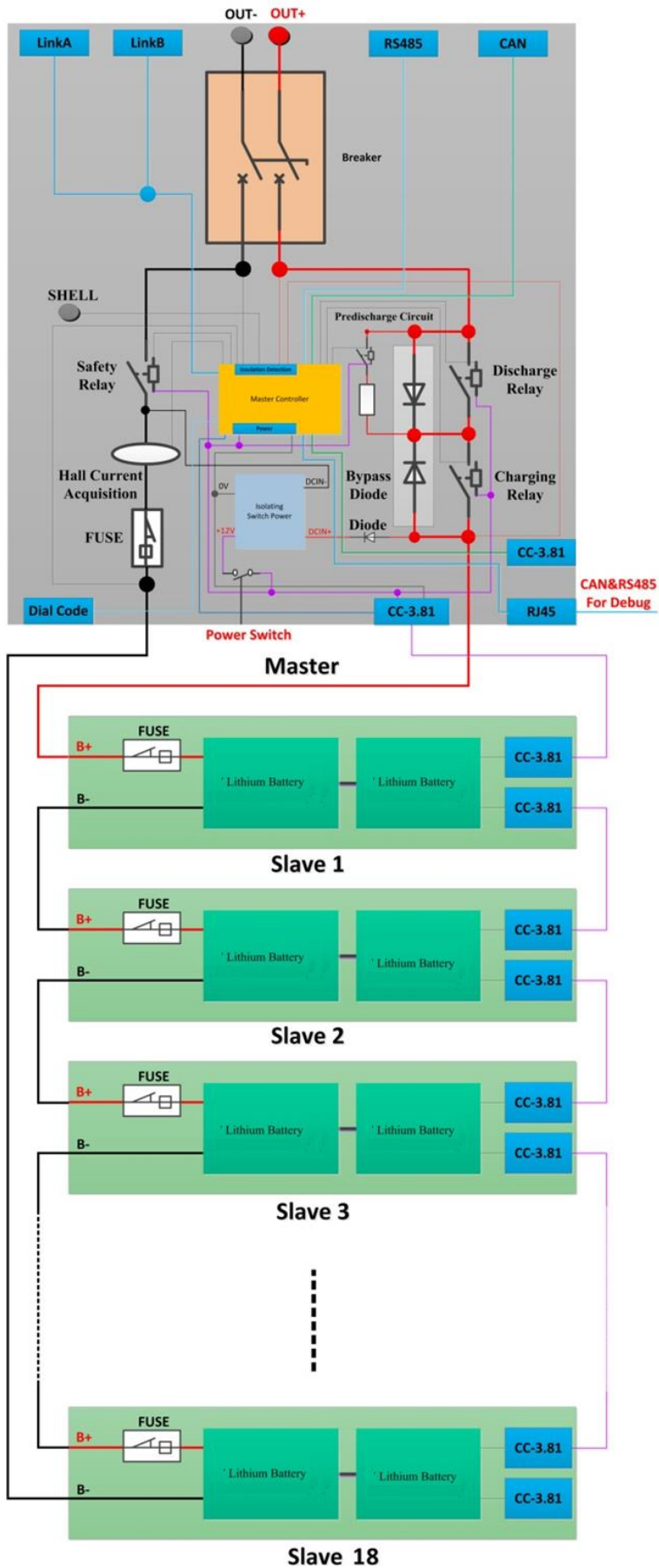
3.4.3. Output definition



No.	Items	Instructions
1	P+	Positive Pole
2	P-	Negative Pole
3	Link-A	Parallel communication
4	Link-B	Parallel communication
5	CAN	Inverter communication
6	RS485	Inverter communication



4. Electrical Schematic





5. Product Application

