



Product Specifications

Power Base Mate LV Series Home Energy Storage System

Version	Prepare	Check	Approve	Date
V1.0				2020-06-12
V2.0				2020-12-26
V2.1				2021-02-24
V2.2				2021-05-10
V2.3				2021-11-01



Content

1.	Introduction.....	1
2.	Features	1
3.	Specifications	2
3.1.	Cell Parameters	2
3.2.	Battery Module Parameters.....	3
3.3.	Main Control Module Parameters.....	3
3.4.	System Parameters	4
4.	Electrical Schematic.....	6
5.	Product Application.....	7



1. Introduction

The Power Base Mate LV series product is a 51.2V 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 48V, and the maximum which meets the requirements of 12kW power supply. Parallel of multi systems is supported.

2. Features

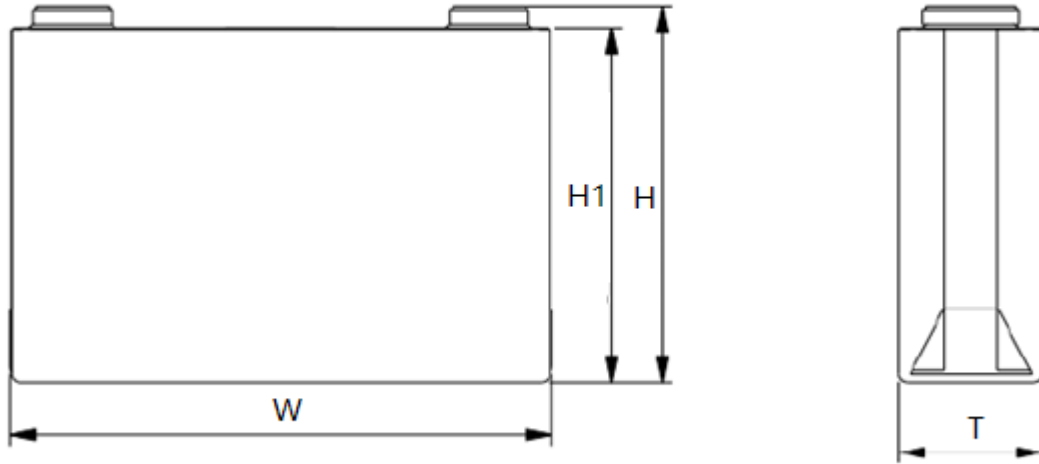
- Adopt high safety, long life, excellent performance LiFePO4 prismatic cells;
- Over 8000 times of cycle life;
- Intelligent BMS to ensure a safe reliable operation;
- Parallel on cabinet level available;
- Multiple communications including RS485, CAN,RS232;
- Modular rack design for easier installation and smaller landscape.





3. Specifications

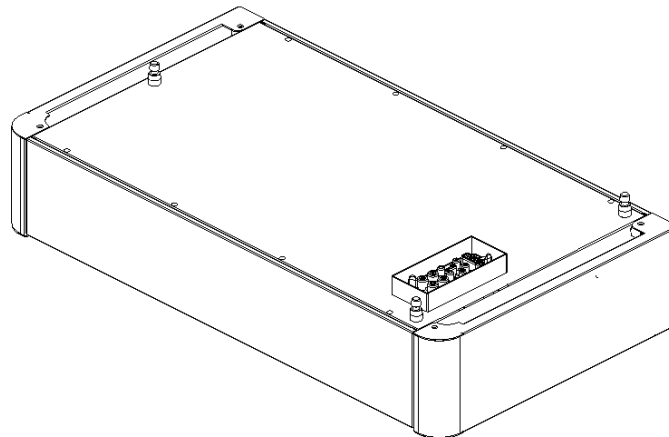
3.1. Cell Parameters



No.	Items		Parameters	
1	Cell Type		LiFePO4 Prismatic	
2	Nominal Voltage		3.2V	
3	Nominal Capacity		50Ah	100Ah
4	Maximum Charge Current	Continuous	50A	100A
5		Peak for 10s	100A	200A
6	Maximum Discharge Current	Continuous	50A	100A
		Peak for 30s	150A	300A
7	Dimensions (T*W*H)		39*148*101mm	27*174*207mm
8	Weight		1.18±0.05kg	2.18±0.05kg
9	Temperature Range	Charging	0°C ~ 55°C	
		Discharging	-20°C-55°C	
		Recommended Working	15°C ~ 35°C	

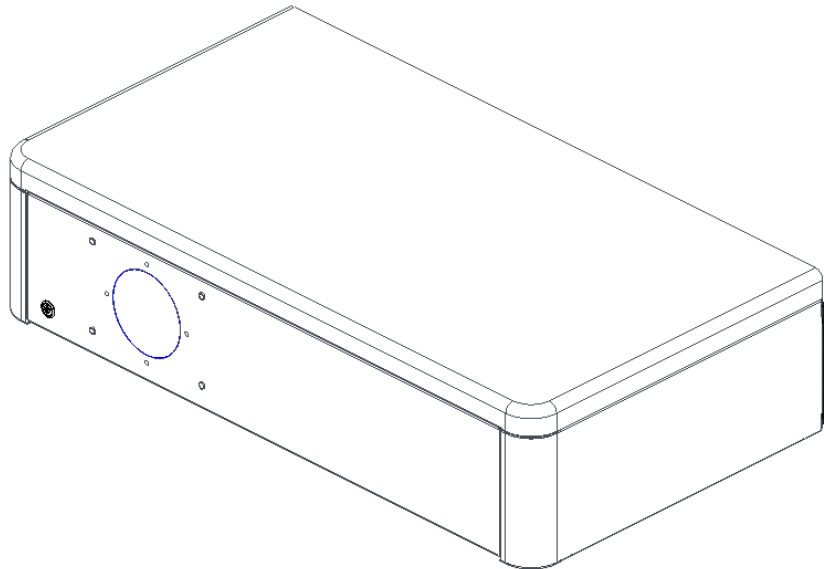


3.2. Battery Module Parameters



No.	Items	Parameters	
1	Model	ZR-FS4850-16OSJ1	ZR-FS48100-16OSJ1
2	Cell Configuration	16S1P	16S1P
3	Nominal Capacity	50Ah	100Ah
4	Nominal Energy	2560Wh	5120Wh
5	Weight (Approx.)	34kg	51.5kg
6	Dimensions (W*D*H)	635*350*160±2mm	735*400*175±2mm

3.3. Main Control Module Parameters



No.	Items	Parameters	
1	Model	ZR-MC100-200M1	ZR-MC100-200M2
2	Operation Voltage Range	33.6V~62.4V	
3	Maximum Operation Current	≤300A	
4	Communication	CAN、RS485、RS232	
5	Weight(Approx.)	18kg	
6	Dimensions (W*D*H)	635*350*150±2mm	735*400*150±2mm



3.4. System Parameters



General Specifications

No.	Items		Parameters							
1	Model		Mate LV_50 Series				LV-Mate_100 Series			
2	Main Control Module		ZR-MC100-200M1				ZR-MC100-200M2			
3	Battery Module Type		ZR-FS4850-16OSJ1				ZR-FS48100-16OSJ1			
4	Battery Module Chemistry		LiFePO4							
5	Battery Module QTY		2	3	4	5	2	3	4	5
6	Nominal Capacity(Ah)		100	150	200	250	200	300	400	500
7	Nominal Energy(kWh)		5.12	7.68	10.24	12.8	10.24	15.36	20.48	25.6
8	Voltage	Nominal(V)	51.2							
		Recommend Charging(V)	56.8							
		Max. Charging(V)	58.4							
		Recommend Discharge Cut-off(V)	46.8							
9	Current	Max. Charging(A)	90	135	180	225	180	270	300	300
		Max. Discharging(A)	90	135	180	225	180	270	300	300
		Peak for 10s(A)	130	195	260	325	300	300	500	500
10	Weight (Approx.)		203kg @12.8 kWh				291kg @25.6 kWh			
11	Dimensions (L*H*W))		635 x 965 x 350 mm @12.8 kWh				735*1040 *400mm @25.6 kWh			
12	Communication		RS485, CAN							

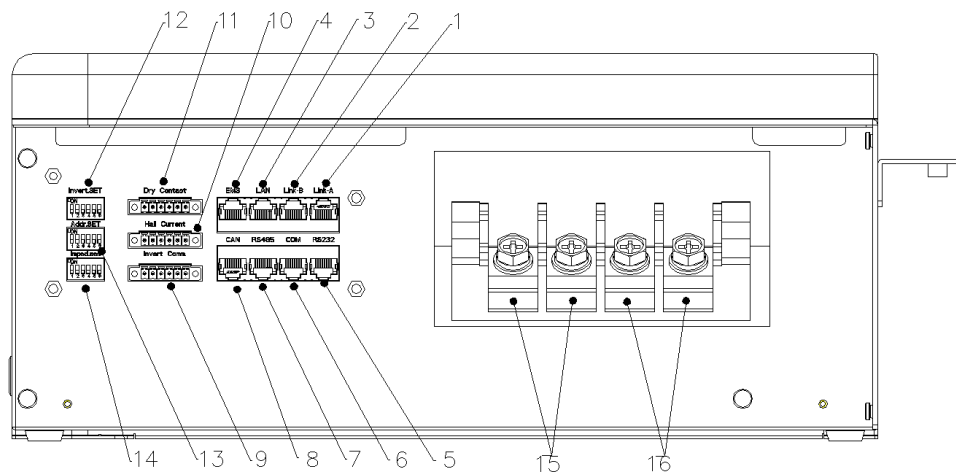


13	Cycle Life	8000 times@25°C
14	Designed Calendar Life	≥10 years
15	Safety Function	Over-charge, Over-discharge, Over-current, Low/High-temperature, Low-voltage, Short-circuit Protections
16	Parallel Capability	Maximum 15 units (Recommended 6 units)

3.4.1. Environment Specifications

No.	Items	Parameters
1	Charging Temperature Range	0°C~55°C
2	Discharging Temperature Range	-20°C~55°C
3	Best Operating Temperature Range	15°C~35°C
4	Storage Temperature Range	-20°C~60°C
6	Humidity	10%RH~90%RH
7	Altitude	0~2000m

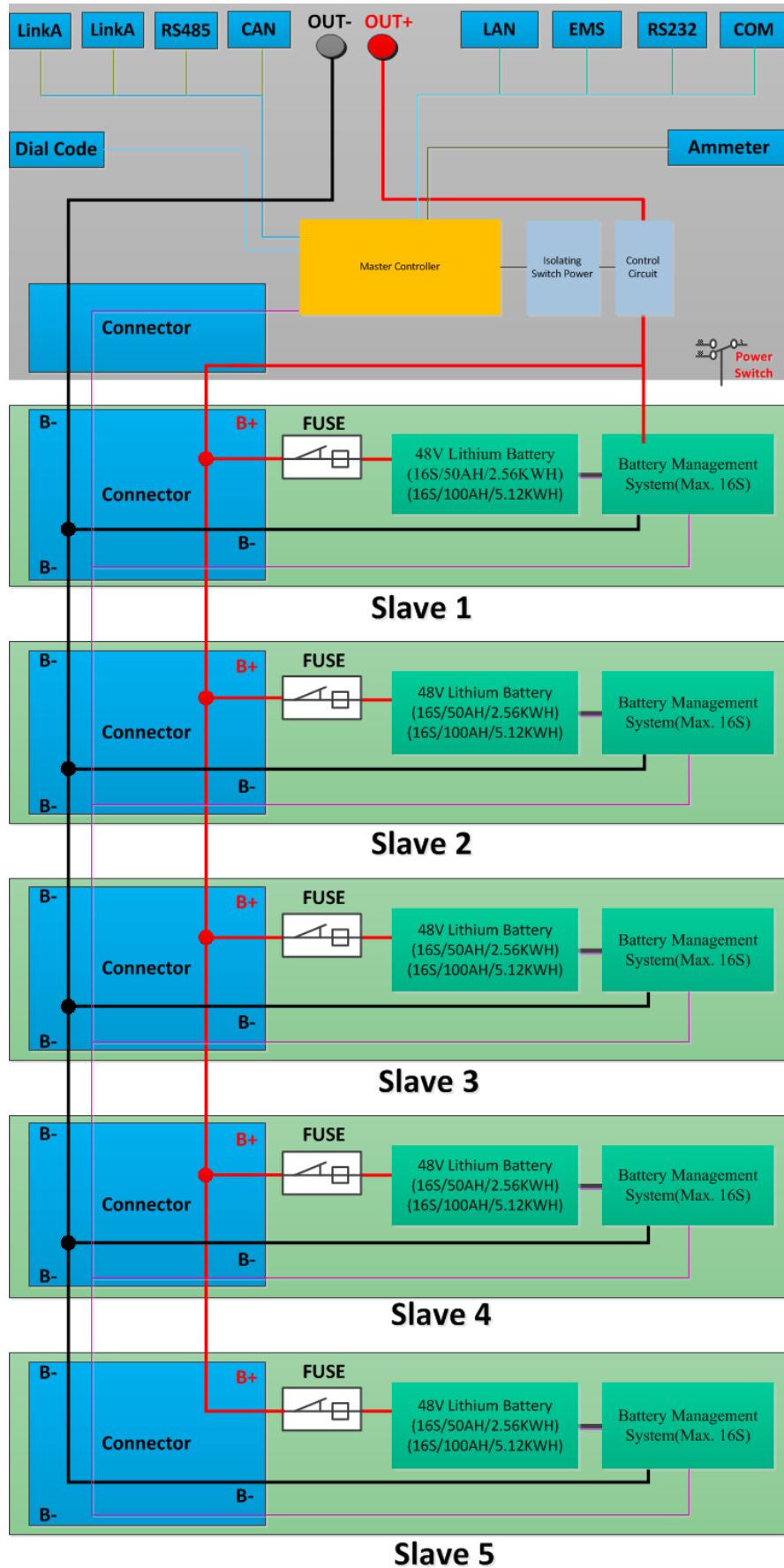
3.4.2. Interface View



No.	Items	Instructions
1	Link-A	Multi-device parallel port
2	Link-B	Multi-device parallel port
3	LAN	Reserved
4	EMS	Reserved
5	RS232	RS232 communication port
6	COM	Upper computer communication port
7	RS485	Inverter RS485 communication port
8	CAN	Inverter CAN communication port
9	Invert Comm.	Inverter CAN /RS485 communication port
10	Hall Current	Reserved
11	Dry Contact	Reserved
12	Invert SET	Inverter protocol dialing switch
13	Addr. SET	Address Dial Switch
14	Imped. set	Reserved
	-	Power cathode*2
	+	Power anode*2



4. Electrical Schematic





5. Product Application

