

Lithium Ion Battery System Specification Confirmation

Customer: _____

Product name: LiFePO4 Battery systemModel: ZTR-HV-336-100 336V100Ah

Author	Checked by	Approved by

Customer confirmation	
Customer company:	
Signature	Company signature
Date:	Date:

Battery Pack Specification

1. Overview

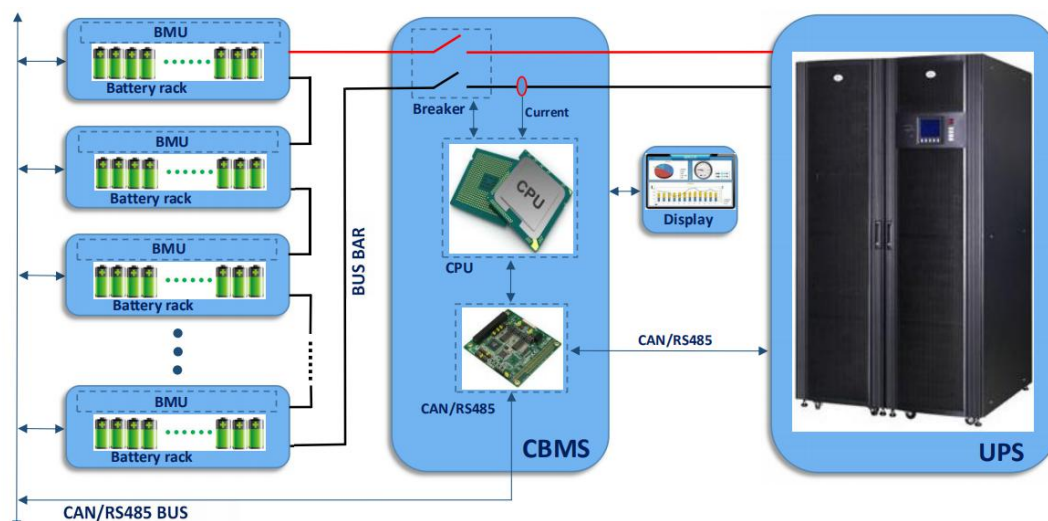
ZTR-HV series is Lithium iron phosphate battery system which designed for high voltage UPS system application, suitable for 100V to 800V UPS system which backup time is over 10min. This battery system consists of battery racks and CBMS, every battery rack integrates with intelligent BMU inside. And this system has big advantages on safety, cycle life, energy density, fast charging, temperature range and environmental protection.

2. Advantages

The battery module consists of battery racks and CBMS.

- Packed with high performance LFP single cell, long life, safety and wide temperature range
- High energy density, small size, light weight, no pollution;
- Use CBMS-BMU design, protect voltage, current, temperature in whole process
- Integrated communication interface, CAN2.0 and RS485 communicate with UPS or PC
- Integrated LED indicator, display the SOC and operating status
- Balance between cells, balance between racks
- LCD display the battery system information(customized)
- Packed in 19 inches standard container, easily for installation and capacity expansion
- can customize the battery system with neutral line
- 15 years design life, Stable performance, maintenance-free

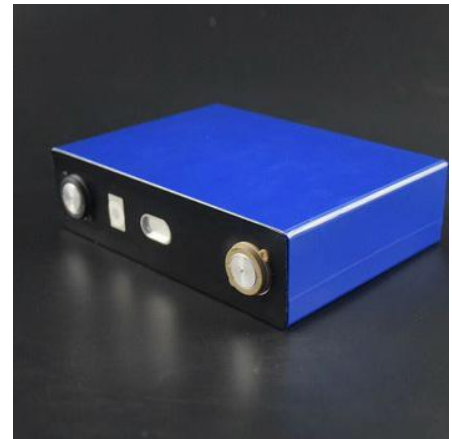
3. System Block Diagram



4. Battery module

Single Cell

Item	Parameter	Remarks
Type	LiFePO4	
Shell	Prismatic, Aluminum shell	
Cell Voltage	3.2V	
Rated capacity	100Ah	
Operating voltage range	2.5V~3.6V	
Dimension (T*W*H)	48*174*132	
Weight	~2.0kg	
Charging current rate	1.0C	
Discharging current rate	1.0C	
Impedance(1kHz)	<0.3mΩ	
Cycle life	>4000 次	@25°C
Operating temperature range	Charge: 0~45°C Discharge: -20~55°C	



Battery Module

Item	Parameter	Remarks
Module Voltage	48V	
Rated capacity	100Ah	
Pack	1P-15S	
BMU inside	1	
Dimension (W*D*H)	442*435*155	3.5U
Weight	~40kg	
Cell Type	3.2V100Ah	Prismatic
Power Terminal	M8 Screw	
Communication interface	Plug-in type	



5. CBMS Parameters

The HV Series BMS products are battery management systems developed for large-scale high-voltage battery energy storage and UPS systems. It adopts distributed architecture, modular design concept, high configurability, easy assembly, debugging and maintenance. It is suitable for various battery energy storage systems with DC voltage below 1000V. This product can be configured as a secondary architecture (BMU+CBMS) for 10KWh-100KWh. Cooperate with industrial computer and battery stack management software to form a three-level architecture (BMU+CBMS+GBMS) for 50KWh-2MWh applications. In conjunction with the server and plant battery management system software, it can form a four-level architecture (BMU+CBMS+GBMS+BBMS) for applications from 2MWh to 1000MWh to meet different project requirements.

The product has a complete and reliable operation and protection strategy to effectively extend the life of the battery pack. It comes with a variety of communication interfaces and can be directly or indirectly connected to third-party energy management systems.

For this project, we choose the CBMS+BMU for UPS system.

Item		Parameter
Battery Series Support		15S x 7
Rated voltage		336V
Rated current		100A
Number of BMU management		7
Two level protection		Relay & MCB
LCD Screen integrated		Touch screen
LED indicator		RUN & ALM
Balance between battery modules		Passive, integrated
Balance between cells		Passive, integrated
BMU temperature sensor	No. of sensor	8
	Accuracy	±2°C
BMU cell voltage	Accuracy	±5mV
Current sensor	Range	-150~ +150A
	Accuracy	FSC±1%
SOC calculate error		≤5%
Power consumption	Switch off	0
	Operating	< 20W
Dimension (W*D*H) mm		442*480*134.5 mm
Weight		17kg
Communication		CAN, RS485, Ethernet
Dry contact integrated		3



6. System Specification

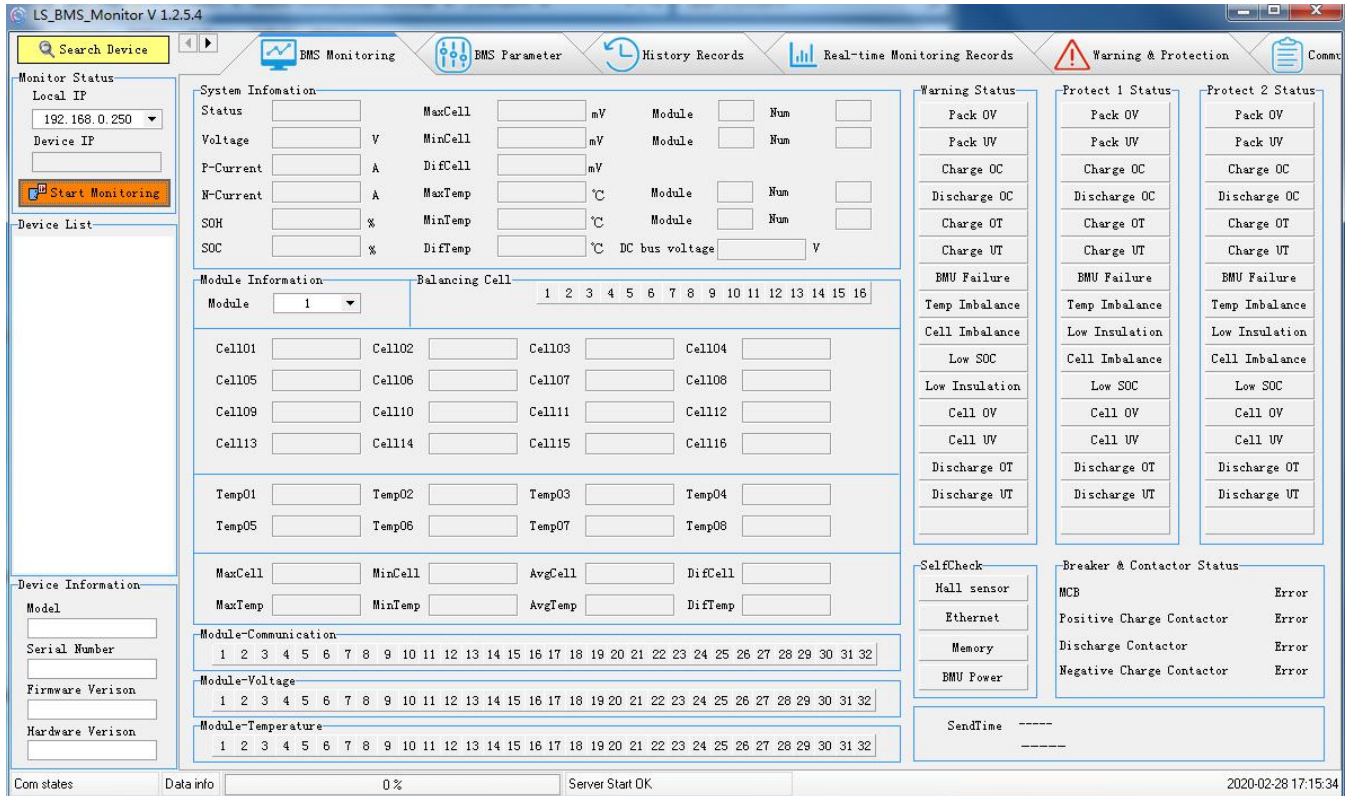


Voltage Range(V)	294~378V
LiFePO4 Single Cell	3.2V100Ah,Prismatic, Aluminum shell
Series & Parallels	1P-105S
Rated Voltage(V)	336
Rated Capacity(Ah)	100
Rated Energy(KWh)	33.6
Maximum Output Power(kW)	30
Maximum Discharge Current(A)	100
Maximum Charge Current(A)	100
Discharge cut-off voltage(V)	273V
Max. Charge voltage(V)	378V
Charge type	CC-CV
Cycle life(@25 °C,0.2C/1C,100%DOD)	> 2000
Dimension(W* D* H)	600*600*1500mm
Total Weight(Kg)	Approx.300
Battery Rack Thermal Management	Natural air cooling
Operating temperature	-5 ~ 55 °C
Operating humidity	5%~95%R.H.
Communication	CAN/RS485
Dry Contact	optional
Max System parallels	15
LCD Screen monitor	Integrated with the CBMS panel Touch screen, check battery data & setup parameters

7. BMS & Module Parameters

BMS parameter		
Charging protection voltage	System voltage >385V OR cell>3.75V	Set up
Discharging protection voltage	System voltage <273V OR cell <2.3V	Set up
Over current protection	Charging current >125A; Discharging current >125A	
Short- circuit protection	>400A	
Balanced current	passive, 150mA	
Temperature protection	Charging: <-5℃ or >65℃ Discharging: <-20℃ or >65℃	
Operating temperature		
Operating humidity	5%~95% Relative Humidity	
Temperature range	Charging -5℃~+55℃	
	Discharging -20℃~+65℃	
Storage temperature	-5℃~55℃	
Design life	>15 years	
Communication		
Module → Module	Cell data acquisition and transmission	CAN
Module → BMS	Module data transmission	CAN
BMS → UPS/GBMS	BMS data transmission	CAN
BMS → PC	Update BMS programs and view data	LAN/RS485

8. PC Software Preview



9. Packing List

No.	Item	Specification	Number	Remarks
1	LiFePO4 battery rack	ZTR-LFP-48-100 48V100Ah battery rack	7	
2	CBMS Module	ZTR15S08D125A Battery system CBMS	1	
3	Power cable	Power cable between battery racks and CBMS	8	
4	Communication cable	Communication cable between battery racks and CBMS	7	
5	Terminal resistance	Terminal resistance of CAN interface	1	
6	User manual	User manual	1	