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48V 100Ah
LiFePO4 BATTERY
LITHIUM IRON PHOSPHATE BATTERY

1. Product Description

This battery product adopts lithium iron phosphate battery (LiFePO4), which is characterized by high reliability, high safety, long cycle life, etc. The battery is equipped with an intelligent BMS lithium battery management system, which has the functions of overcharge protection, over discharge protection, temperature protection, over-current protection, etc, And comprehensively monitor the key parameters of the battery.

2. Battery Technical Specification

The following is the parameter range to ensure the reliable operation of the battery. Please use within the following parameter range.

Battery Pack	15S1P
Energy	5kwh
Rated Capacity	100Ah@25°C 0.3C
Minimal Capacity	95Ah@25°C 0.3C
Rated Voltage	48V
Charge Voltage	52.5V
Discharge Cut Off Voltage	39V
Rated Charge Current	≤30A @25°C
Max Charge Current	100A @25°C
Max.discharge Current	100A @25°C
Self Discharge Rate	<3% Per Month
Internal Resistance	≤30mΩ @ 50% SOC 1KHz
Working Temperature	Charge: 32˚ F to 113˚ F Discharge: -4˚ F to 122˚ F Storage: -4˚ F to 122˚ F
Cycle Life	≥4000 cycles @ 25°C 0.2C/0.2C 80% DOD
Protection Class	IP21
Safety Certificate	UN38.3/MSDS
Dimensions (L X W X H)	483*450*133 mm/19.0*17.7*5.2in
Weight	42Kg/92.6lb
Case Material	Sheet Metal Shell
Communication Mode	RS485/RS232/CAN
Display Function	LCD Display
Circuit Breaker	YES/With DC Circuit Breaker
Start Switch	YES
Inverter Compatible	Support Multiple Protocol Options

3. BMS Specification

The following BMS protection parameters are set according to the working requirements of the battery. When the parameters of the battery reach the protection threshold, the BMS will automatically open the protection to protect the battery by disconnecting the circuit.

Item	Test Item	Specifications			Units
		Min Value	Typical Value	Max Value	
Voltage Protection	Over Charge Detection Voltage	3.65	3.70	3.75	V
	Over Charge Protection Delay Time	500	1000	2000	mS
	Over Charge Detection Release Voltage	3.40	3.45	3.50	V
	Over Discharge Detection Voltage	2.450	2.500	2.550	V
	Over Discharge Protection Delay Time	500	1000	2000	mS
	Over Discharge Detection Release Voltage	2.650	2.700	2.750	V
	Over Discharge Current Detection	110	120	130	A
Current Protection	Over Discharge Protection Delay Time	800	1000	1500	mS
	Short-circuit Protection Delay Time	200	330	800	uS
Short Protection	Short Circuit Protection Recovery	Disconnect load	Disconnect load	Disconnect load	-
	Equilibrium Voltage	3.425	3.45	3.475	V
Equilibrium Function	Equalizing Current	30	30	30	mA
	Charging High Temperature Protection	63	65	67	°C
Temperature	Charging Low Temperature Protection	-2	0	2	°C
Protection	Discharge High Temperature Protection	68	70	72	°C
	Discharge Low Temperature Protection	-22	-20	-18	°C

4. Warning & User Instructions

In order to prevent possible battery leakage, overheating, and expansion, please keep the following in mind.

- ⚠ Do not throw the battery into water or fire.
- ⚠ Do not immerse the battery in seawater or water. When the battery is not in use, please store it in a dry environment.
- ⚠ It is forbidden to use in strong static electricity and strong magnetic field, otherwise the protection board will be easily damaged.
- ⚠ Do not place the battery alone near high temperature sources such as open flames, heat sources, etc.
- ⚠ Do not directly short-circuit the battery with metal substances.
- ⚠ Do not touch, drop or pressurize the battery again.
- ⚠ It is forbidden to directly weld the battery and use other sharp tools such as nails to punch holes in the battery.
- ⚠ If the battery smells, heats up, deforms or appears other abnormalities, please remove the battery immediately or stop using the charger.
- ⚠ If the battery leaks and the electrolyte enters the eyes, please do not rub them, and immediately rinse the eyes with clean water and seek medical treatment, otherwise it may damage the eyes.
- ⚠ When the battery is in long-term storage or loaded into the host, it is recommended to charge and discharge it every 3 months, and then charge it to a half-charged state.