

Product introduction:

This product is composed of high quality lithium iron phosphate core (series-parallel connection) and advanced BMS management system. It adopts master-slave mode, which is convenient for monitoring and controlling the input and output system. The charging and discharging are independent, it can control the charging current of the AC charger and solar controller according to the battery temperature, voltage and SOC to better protect the battery cells from overcharging, overheating and discharging. It has high reliability and long life, products developed for applications such as solar energy storage, industrial and commercial energy storage, household energy storage, charging piles, data room and other applications.

The product adopts integrated design, higher integration, saving installation space; adopts domestic well-known brand high performance lithium iron phosphate cathode material, good core consistency, design service life of more than 10 years; the input and output circuit breakers are equipped with circuit breakers, which are safer and more reliable, front wiring, convenient installation and maintenance, easy operation; various functions, with single over-voltage/under-voltage, primary and secondary alarm protection, charge/discharge overcurrent, high temperature, low temperature, insulation and short circuit protection and recovery functions; strong compatibility, seamless docking with Inverter、solar charge controller, AC/DC charger, charging piles and other major equipment; communication interface forms, CAN2.0 and so on can be customized according to customer needs, convenient system remote monitoring and flexible use. High energy, low power lithium electric equipment, achieve higher energy supply, lower energy consumption, and reduce environmental pollution; adopt all-round, multi-level battery protection strategy and fault isolation measures to ensure the safe operation of the system.

Product pictures:



Product advantages:

- All-in-one design, high integration and space saving installation;
- Using high-performance lithium iron phosphate cells, laser welding, good cell consistency, designed service life of more than 10 years;

- Charging and discharging are controlled separately, which is convenient and reliable to control charging and discharging. The discharge port will not be disconnected when over-charging, and the charging port will not be disconnected when over-discharging, the system has good stability;
- Master-slave mode, passive equalization, can manage the equalization resistance, can set the equalization start voltage difference, and monitor the equalization resistance temperature, more intelligent and safe, and reduce the impact of barrel effect on system energy storage;
- BMS adopts NXP(USA) automotive-grade high-performance chips, with strong anti-interference, good reliability and wide temperature range;
- CAN2.0 communication interface, has the advantages of strong real-time performance, long transmission distance, strong anti-electromagnetic interference ability;
- System parameters can be set through the host computer, such as fan start/stop temperature, charger maximum current setting, charge and discharge current correction, SOC correction, with insulation leakage detection function to prevent oil leakage and short circuit of the cell;
- Integrate Solar charge controller or AC charger optional, BMS communication control, more safe and reliable;
- Cell temperature management, can be automatically controlled with the air conditioner heater according to the cell condition to make the cell works at the most suitable temperature, and can be linked with the fire protection system as needed

Performance characteristics:

- Small size and light weight, Maintenance-free;
- Environmental protection and pollution-free materials, no heavy;
- Accurately estimate the state of charge of the battery pack, that is, the remaining power of the battery, to ensure that the power of the battery pack is maintained within a reasonable range;
- Built-in BMS management system with comprehensive protection and monitoring control functions;
- 5" LCD screen display, easy to operate, can check the temperature, voltage, working status, discharge current, dynamic and static SOC algorithm of a single cell, local display of alarm info, alarm level distinction, accurate positioning of abnormal cells;
- Main control MCU can be centrally controlled and manage peripheral settings (AC charging module, inverter module, solar charging module) to adjust the charging current and voltage of peripheral devices according to the battery charging curve, making the system more reliable;
- BMS battery management system, with SOC automatic calibration and high current passive balance function, combined with perfect operation control and management strategy, to achieve accurate and efficient management;
- EMS energy management system, BMS with solar controller/AC charger, inverter centrally manages charge and discharge, effectively controls the charge and discharge current within the cell usage conditions, protects the cell and extend its service life;

Model	SPVLI-30KWH
Type of cell	LiFePO4 (Lithium iron phosphate)
Battery configuration	3.2V/100AH cell 96PCS
Rated capacity (KWH)	30.7kwh
Nominal capacity (AH)	100AH
Nominal voltage (VDC)	307V
Operating voltage range (VDC)	250-350.4V
Recommended Charge Voltage (VDC)	336V
Recommended discharge cutoff voltage (VDC)	254V
Recommended charge current(A)	50A
Max Charge Current (A)	100A
Recommended discharge current (A)	50A
Max Discharge Current (A)	100A
Charge temp range	1~45°C
Discharge temp range	-10 ~ 45°C
Solar Charge Controller Input	
Maximum. Input voltage of solar array (Vdc)	<600Vdc
Battery system voltage	307VDC
Maximum power of solar array	15KW
Maximum charge current (A)	50A
Equalization charging voltage (Vdc)	340.8V
Equalize charging recovery voltage (Vdc)	324.5V
Over voltage disconnect voltage (Vdc)	350.4V
Over voltage recovery (Vdc)	345.6V
Working temperature	-10~45°C
Protection level	IP20
Communication interface	CAN2.0, BMS
Display	5" LCD, English
Cooling system	Fan cooling
Working Altitude (m)	≤3000m
Reference Weight (Kg)	420Kg
Reference size (W*D*H mm)	600*700*1600mm

LCD display details of BMS:



System Status	Battery Information	Alarm Information	Photovoltaic Controller	Inverter Status	Charging Module	NEXT					
Num	Temp	Num	Temp	Num	Temp	Num	Temp	Num	Temp	Num	Temp
1		11		21		31		41		51	
2		12		22		32		42		52	
3		13		23		33		43		53	
4		14		24		34		44		54	
5		15		25		35		45		55	
6		16		26		36		46		56	
7		17		27		37		47		57	
8		18		28		38		48		58	
9		19		29		39		49		59	
10		20		30		40		50		60	

System Status	Battery Information	Alarm Information	Photovoltaic Controller	Inverter Status	Charging Module
<div> <div>Single Over-Voltage Alarm 1</div> <div>Single Under-Voltage Alarm 1</div> <div>Single Over-Temperature Alarm 1</div> <div>Single Under-Temperature Alarm 1</div> <div>Low-SOC Alarm 1</div> <div>Charging Over-Current Alarm 1</div> <div>Discharging Over-Current Alarm 1</div> <div>Low-Insulation Alarm 1</div> <div>Charging Module Comm Alarm</div> <div>Inverter Module Comm Alarm</div> </div> <div> <div>Single Over-Voltage Alarm 2</div> <div>Single Under-Voltage Alarm 2</div> <div>Single Over-Temperature Alarm 2</div> <div>Single Under-Temperature Alarm 2</div> <div>Low-SOC Alarm 2</div> <div>Charging Over-Current Alarm 2</div> <div>Discharging Over-Current Alarm 2</div> <div>Low-Insulation Alarm 2</div> <div>Charging Module Hardware Fault</div> <div>Inverter Module Hardware Fault</div> </div>					

System Status	Battery Information	Alarm Information	Photovoltaic Controller	Inverter Status	Charging Module
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Start Charge

Fast Charge

Uniform Charge

Floating Charge

End Charge

Electricity Generation		Service Data	
Day	kWh	Voltage	V
Month	kWh	Current	A
Total	kWh	Temperature	° C

Battery Low V

Battery High V

Device Low V


Device High V

Charging Over I

Device High T

Module Fault

Load Over I

System Status	Battery Information	Alarm Information	Photovoltaic Controller	Inverter Status	Charging Module
<div>     </div>					
<div> DC Voltage: <input type="text"/> V A-phase Voltage: <input type="text"/> V B-phase Voltage: <input type="text"/> V C-phase Voltage: <input type="text"/> V </div>					
<div> A-phase Current: <input type="text"/> A B-phase Current: <input type="text"/> A C-phase Current: <input type="text"/> A </div>					
<div> <div> Reservation of Start and Stop Time (24-hour system) : </div> <div> Start Inverter Output: <input type="text"/> hour <input type="text"/> min </div> <div> Stop Inverter Output: <input type="text"/> hour <input type="text"/> min </div> <div> NO Order (0) /Order (1) : <input type="text"/> </div> <div> <input type="button" value="SAVE"/> </div> </div> <div> <div> Life Time: <input type="text"/> </div> <div> Bypass Voltage: <input type="text"/> </div> <div> Capacity: <input type="text"/> </div> <div> Equipment Status: <input type="text"/> </div> <div> <input type="button" value="START"/> </div> <div> <input type="button" value="STOP"/> </div> </div>					

System Status	Battery Information	Alarm Information	Photovoltaic Controller	Inverter Status	Charging Module	
Moudle	Voltage (v)	Current (A)	Temperature (°C)	Status	Fault	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Charging Interface	Parameter Settings	Charging Module	Inverter Status	Fault Logging
<div> <div> Floating V: <input type="text"/> V Floating I: <input type="text"/> A Uniform V: <input type="text"/> V Uniform I: <input type="text"/> A CHN (0) /ENG (1) : <input type="text"/> Manual (0) /Auto (1) : <input type="text"/> Sandi (0) /Bangzhao (1) : <input type="text"/> </div> <div> Reservation of Charging Time (24-hour system) : Start: <input type="text"/> hour <input type="text"/> min END : <input type="text"/> hour <input type="text"/> min </div> <div> <div>RETURN</div> <div>SAVE</div> </div> </div>				
<div> <div></div> <div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>0</div> <div>CLEAR</div> <div>OK</div> </div> </div>				