

# SUN<sup>+</sup>

## Energy Storage System

### LIFEPO4



## Application :

It is widely used in Energy Storage System, Instrument, Medical Equipment, Financial/Commercial Equipment, Security/Electric Power Equipment

## Automotive grade LiFePO4 cell:

high energy density highest-level safety, longest service life

## Professional BMS:

voltage acquisition, temperature collection, balance control status indication

Compatible with mainstream off-grid and on-grid inverters

**Weight: 48KGS**

**Size/mm: 450\*412\*133**



Basic Parameters	SPM48106
Nominal Voltage (V)	51.2
Nominal Capacity (KWH)	5427.2
Usable Capacity (KWH)	4884.4(90% DOD)
Discharge Voltage (V)	40
Charge Voltage (V)	58.4
Recommend Charge/Discharge Current (A)	50
Max. Charge/Discharge Current(A)	100
Peak Charge/Discharge Current(A)	120(15S)
Communication	RS485/RS232/CAN
Compatible Inverter	Goodwe/Victron/Solis/Luxpower/Growat GMDE/Sofar/Voltronice/SMA/Deye
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge
Shelf Temperature	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10 years+
Cycle Life	>6000
Size	450*412*133(3U)
Weight	48KGS



# SPM48106 POWER CABINET



Model	SPM48106 POWER CABINET			
Battery Model	SPM48106			
Battery Module	3	4	5	6
Battery Capacity	318	424	530	636
Nominal Capacity (KWH)	16.28	21.7	27.13	32.56
Usable Capacity (KWH)	14.6	19.5	24.4	29.3
Discharge Voltage (V)	40			
Charge Voltage (V)	58.4			
Recommend Charge/Discharge Current (A)	50			
Communicaiton	RS485/RS232/CAN/DRY CONTRACT			
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge			
Shelf Temperature	-20°C~60°C			
Compatible Inverter	Goodwe/Victron/Solis/Luxpower/Growat GMDE/Sofar/Voltronice/SMA/Deye			
Certification	CE/IEC/UL/UN38.3/MSDS			
Design Life	10 years+			
Cycle Life	>6000(90%DOD)			
Size(MM)	600*600*150*Battery Module			
Weight (KGS)	62*Battery Module			

## Application :

It is widely used in Energy Storage System, Instrument, Medical Equipment, Financial/Commercial Equipment, Security/Electric Power Equipment

## Automotive grade LiFePO4 cell:

high energy density highest-level safety, longest service life

## Professional BMS:

voltage acquisition, temperature collection, balance control status indication

Compatible with mainstream off-grid and on-grid inverters

**Weight: 55KGS**

**Size/mm: 648\*462\*162**



Basic Parameters	SPM48106
Nominal Voltage (V)	51.2
Nominal Capacity (KWH)	5427.2
Usable Capacity (KWH)	4884.4(90% DOD)
Discharge Voltage (V)	40
Charge Voltage (V)	58.4
Recommend Charge/Discharge Current (A)	50
Max. Charge/Discharge Current(A)	100
Peak Charge/Discharge Current(A)	120(15S)
Communication	RS485/RS232/CAN
Compatible Inverter	Goodwe/Victron/Solis/Luxpower/Growat GMDE/Sofar/Voltronice/SMA/Deye
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge
Shelf Temperature	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10 years+
Cycle Life	>6000
Size	648*462*162
Weight	55KGS

## Application :

It is widely used in Energy Storage System, Instrument, Medical Equipment, Financial/Commercial Equipment, Security/Electric Power Equipment

## Automotive grade LiFePO4 cell:

high energy density highest-level safety, longest service life

## Professional BMS:

voltage acquisition, temperature collection, balance control status indication

Compatible with mainstream off-grid and on-grid inverters

**Weight: 98KGS**

**Size/mm: 648\*786\*162**



Basic Parameters	SPM48212
Nominal Voltage (V)	51.2
Nominal Capacity (KWH)	10.8544
Usable Capacity (KWH)	9768.96(90% DOD)
Discharge Voltage (V)	40
Charge Voltage (V)	58.4
Recommend Charge/Discharge Current (A)	50
Max. Charge/Discharge Current(A)	100
Peak Charge/Discharge Current(A)	120(15S)
Communication	RS485/RS232/CAN
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge
Shelf Temperature	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10 years+
Cycle Life	>6000
Size	648*786*162
Weight	98KGS

## Automotive grade LiFePO4 cell:

high energy density highest-level safety, longest service life

## Professional BMS:

voltage acquisition, temperature collection, balance control status indication

Compatible with mainstream off-grid and on-grid inverters

**Weight: 23KGS**

**Size/mm: 450\*412\*177.8**



Basic Parameters	SPMC-1000V-120A	SPMC-1000V-250A
Related Product	1000V 120A	1000V 250A
AC Supply	--	--
System Operation Voltage (Vdc)	0~1000	0~1000
Operation Current (Max.) (A)	120	250
Self-consumption Power (W)	8	8
Dimension (W* D* H, mm)	450*412*177.8	450*412*177.8
Communication	MODBUSRTU/CAN/RS485	MODBUSRTU/CAN/RS485
Protection Class	IP20	IP20
Weight (kg)	20	20
Operation Life	15+	15+
Operation Temperature	-20°C~65°C	-20°C~65°C
Storage Temperature	-40°C - 80°C	-40°C~80°C



## Automotive grade LiFePO4 cell:

high energy density highest-level safety, longest service life

## Professional BMS:

voltage acquisition, temperature collection, balance control status indication

Compatible with mainstream off-grid and on-grid inverters

**Weight: 48KGS**

**Size/mm: 450\*412\*133**

Basic Parameters	SPM48106	SPM24212
Nominal Voltage (V)	51.2	25.6
Nominal Capacity (KWH)	5427.2	5427.2
Usable Capacity (KWH)	4884.4(90% DOD)	4884.4(90% DOD)
Discharge Voltage (V)	40	20
Charge Voltage (V)	58.4	29.2
Recommend Charge/Discharge Current (A)	50	100
Max. Charge/Discharge Current(A)	100	200
Peak Charge/Discharge Current(A)	120(15S)	240(15S)
Communication	RS485/RS232/CAN	RS485/RS232/CAN
Working Temperature	0°C~50°C (Charge) -10°C ~50°C ( Discharge)	0°C~50°C (Charge) -10°C ~50°C ( Discharge)
Shelf Temperature	-20°C~60°C	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS	CE/IEC/UL/UN38.3/MSDS
Design Life	10 years+	10 years+
Cycle Life	>6000(90%DOD)	>6000(90%DOD)
Size	450*412*133	450*412*133
Weight	48KGS	48KGS



## Automotive grade LiFePO4 cell:

High energy density highest-level safety, longest service life

Basic Parameters	SPMH-460.8V-106AH
Nominal Voltage (V)	460.8V
Nominal Capacity (KWH)	48.8
Usable Capacity (KWH)	43.92
Battery Controller Name	SPMC-1000V-120A
Battery Module Name	SPMH48106
Battery Module Quantity	9
Battery Module Capacity(KWH)	5.4272
Battery Module Voltage(V dc)	51.2
Battery Module Capacity (Ah)	106
Battery System Charge Voltage(V dc)	511.2(Cell-3.55V)
Battery System Charge Current(Normal)	50
Battery System Charge Current (Max)	106
Battery System Discharge lower-Voltage(Vdc)	432(Cell-3.0V)
Battery System Discharge Current (Standard)	50
Battery System Discharge Current(Normal)	106
Efficiency	96%
Depth of Discharge	RS485/RS232/CAN
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge
Shelf Temperature	-20°C~60°C
Communicaiton	RS485/CAN
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10 years+
Cycle Life	>6000
Other:Battery Controller Dimensions (W*D*H) Battery Module Dimensions(W*D*H)	450*412*133 450*412*177.8



The bus cabinet is the dc side bus control unit of the energy storage battery system, which is connected with the high voltage box and storage

Intermediate unit capable of converter; The power pool system (stack) is installed in the bus cabinet

Switch off/circuit breaker (optional), three-level BMS (ESMU), and UPS power supply. Confluence ark

The electrical characteristics, heat dissipation performance and safety performance of each component have been fully considered in the design

And operation and maintenance, reasonable space layout, with compact structure, flexible configuration, security.

NO	Item	Para Range	No	Function
1	DC Breaker	630/1000V/ 1250A	1	Main loop protection
2	BMS	ESMU	1	Display communication control
3	Switching power suooly	35w/75W 24V	1	Power Supply
4	Miniature clrcut breaker	S202-C64/20/10	/	Switch
5	Emergency stop switch	LA38-22ZS	1	scram protection
6	Repeaters	CR-MX024DC2L	/	signal control and conversion
7	LED instruction	ED16-22DSR(G/Y/R)	/	status indicator
8	Surge protective devices(spdc)	Ex9UEP 20 3P	1	lightning protection bus
9	Fuse	DC1500V 1000V 200A	1	protection
10	UPS	3KVA/2KVA/1KVA	1	Uninterruptible back up power supply
11	Terminal strip		/	Communication power signal conversion

Full reliability and other characteristics. Three stage BMS module (ESM) in the bus cabinet, with CAN,RS-485, RJ45 Ethernet communication interface, can be realized with high voltage box, PCS/UPS.

The communication function between EMS realizes the data communication and control of the energy storage battery management system and protection.



**THANKS**

Sunplus Optimum CO.,LTD  
Add:Room 320, Building 4, Block B, No. 166, Tangyuan Street,Baitang  
Town, Hanjiang District, Putian City, Fujian Province, China  
Fax:+86 (0594) 2991536 Tel: +86 (0594) 2991536  
E-mail:W.michael@wesunplus.com