SolarFam SX12V200Ah

SOLMAX NEW ENERGY B.V.

Dear Clients，

Thanks for selecting SX12V200Ah lithium battery.

Please take time to read this user manual which will help you to make full use of the battery.

Advantages of SX12V200Ah

· **Standard Size & light weight**：SX12V200Ah has the same standard size (390mm*232mm*260mm) as conventional lead acid batteries and weighs less than half of the capacity-equivalent lead acid battery.

· **BMS protection:** Each of SX12V200Ah has an integrated battery management system which protects the battery from extreme cases. The following chart shows the basic protection functions of the BMS.

Function	Function-on condition	Release condition
High-voltage protection	Bulk voltage>14.6V or Voltage of any bank>3.65V	Bulk voltage<14V or Voltage of every bank<3.5V
Low-voltage protection	Bulk voltage<10.8V or Voltage of any bank<2.7V	Bulk voltage>12V or Voltage of every bank>3V
Over-current protection	Charge/Discharge current >160A for over 5S	Automatically release in 32S after removing loads
Short circuit protection	Current >600A for over 400μS	Automatically release in 32S after removing loads
High temperature protection	>65℃ (while charging) or >70℃ (while discharging)	<55℃ (while charging) or <60℃ (while discharging)
Low temperature protection	>-1℃ (while charging) or >-10℃ (while discharging)	<5℃ (while charging) or <0℃ (while discharging)

· **Automatic voltage balancing:** The BMS can automatically narrow the voltage gap between four banks to achieve a better performance.

· **Safety precautions:** The case is made of fire-retardant material. Besides, each cell is connected with a fuse in series. The fuse will melt and cut off the circuit in case of a constant overcurrent to avoid fire risks.

· **Convenient monitoring & maintenance:** Dedicated smartphone APP for monitoring the status of the battery through Bluetooth . Upper cover is removable, which makes it convenient for battery maintenance.

· **Certifications:** CE, RoHS, UN 38.3, and MSDS.

Technical Specifications

Electrical Characteristics	Nominal voltage	12.8V
	Nominal capacity	200Ah/2560Wh
	Cycle life	>3000 cycles @0.2C 80 DOD
	Self discharge	<3% per month
	Efficiency of charge	>99% @0.5C
	Efficiency of discharge	96%~99% @0.5C
Standard Charge	Charge voltage	14.6±0.2V
	Charge mode	CC/CV: Constant Current/Constant Voltage
	Standard continuous charge current	40A
	Max charge current	150A
	Cut-off voltage	14.6V (bulk) / 3.65V (single bank)
Standard Discharge	Continuous current	≤150A
	Max pulse current	160A(<5s)
	Discharge cut-off voltage	10.8V (bulk) / 2.7V (single bank)
Environment	Charge temperature	0~55℃ （32~131F）@ 60±25 relative humidity
	Discharge temperature	-20~60℃ （-4~140F）@ 60±25 relative humidity
	Storage temperature	-20~45℃ （-4~113F）@ 60±25 relative humidity
	IP protection level	IP65
Application	Installment	Parallel connection only
	Control	Battery management system (BMS) integrated
	Monitoring	Bluetooth monitoring, Smartphone APP
Mechanical	Case material	ABS+PC
	Cell assembly	32650-4S38P
	Dimension	390mm (L) *232mm (W) *260mm (H)
	Weight	28.8KG

Android Application

1st Step: Download & Installment

Search 'Solarfam' in Google Play, find our App and finish the installment.
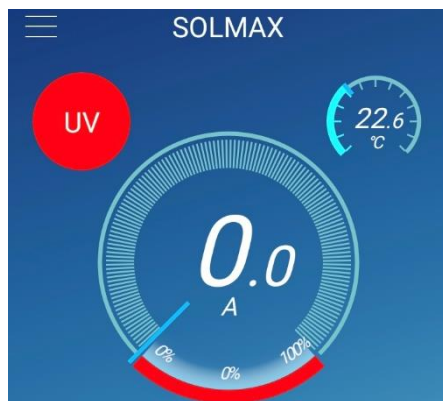
2nd Step: Connect to the battery

Open the Bluetooth of your smartphone, start the APP, find the Bluetooth of the battery and connect.

3rd Step: Battery status monitoring:

When your smartphone and battery are successfully connected, the interface of the APP will turn to the status of the battery automatically.

Lock & Unlock Function： You can lock or unlock the BMS by clicking the lock symbol which is at the bottom of the screen. The battery can not be charged or discharge when the BMS is locked.

Over-voltage Alarm

Alarm Message: When your battery can not work correctly, please open the App to check the alarm message first and contact us for further technical support.

IOS Application

1st Step: Download & Installment

Search 'solarfam' in App Store, find our App and finish the installment.

2nd Step: Connect to the battery

Open the Bluetooth of your smartphone, start the APP, find the Bluetooth of the battery and connect. Or you can click the symbol at the top right of the screen and scan the QR code labelled on the case of the battery for Bluetooth connection.
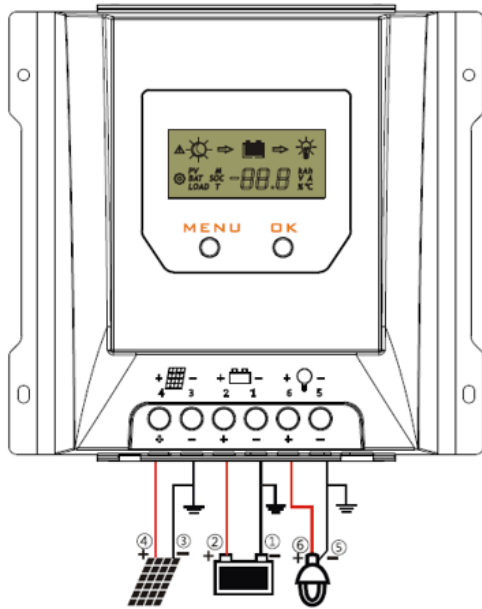
3rd Step: Battery status monitoring:

When your smartphone and battery are successfully connected, the interface of the APP will turn to the status of the battery automatically.

Lock & Unlock Function: You can lock or unlock the BMS by clicking the lock symbol. The battery can not be charged or discharge when the BMS is locked.

APPENDIX

Connect to Solar Controller (SX Li series MPPT Solar Controller)

SX Li series MPPT Solar Controller

1st Step: Connect the battery

Connect the battery connection cable with the correct polarity to the middle pair of terminals on the solar charge controller (with the battery symbol).

2nd Step: Connect the solar module

Ensure that the solar module is protected from incident light. Ensure that the solar module does not exceed the maximum permissible input current. Connect the solar module connection cable to the correct polarity of the left pair of terminals on the solar charge controller (with the solar module symbol).
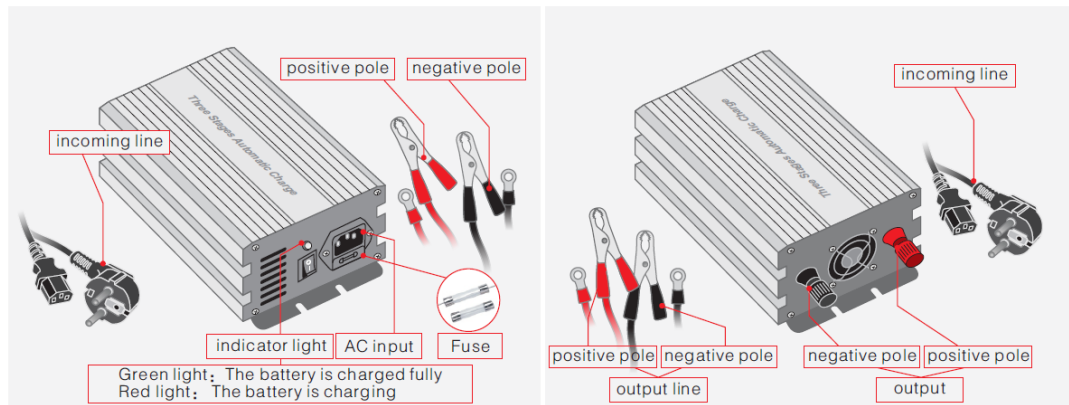
3rd Step: Connect loads

Connect the load cable to the correct polarity of the right pair of terminals on the solar charge controller (with the lamp symbol). To avoid any voltage on the wires, please connect the wire to load before connect to the controller.

4th Step: Final work

Tighten all cables connected to the controller and remove all the debris around the controller (leaving a space of approximate 15cm).

For more details, please check the manual of SX Li series MPPT Solar Controller

Connect to SolarFam Lithium Charger

Please pay attention not to reverse the positive and negative of the charger and battery

For more details, please check the manual of SolarFam Lithium Charger

If you want to use devices of other brands for charging, please make sure that your devices are suitable for lithium batteries before connection.