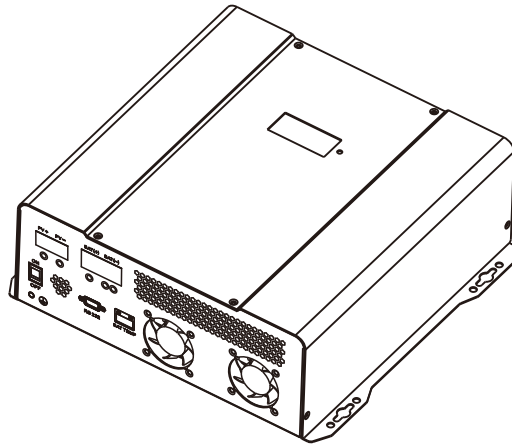


# SC-M-120V MPPT SOLAR CONTROLLER USER'S MANUAL

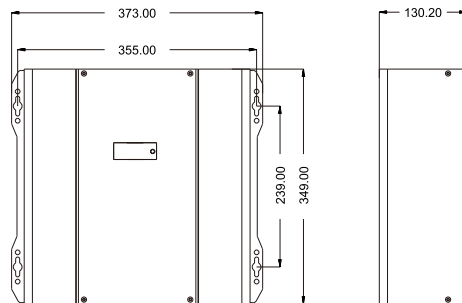


## I. Main function

1. Full Multi-function LCD Display, easier to check
2. Rich operation information shows that PV voltage, current and cumulative power generation
3. Battery charging voltage are adjustable
4. Parameter setting power-down save function, automatic memory once setup is complete, easy and fast to use.
5. Various status indications.
6. With the Over-charge,Over-load,Short Circuit, and Anti-reverse protection.

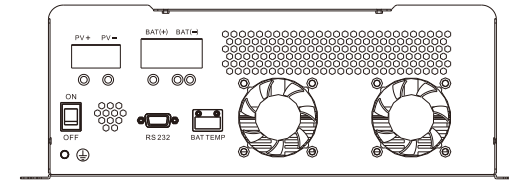
## II. Install

Install the controller safely, dimensions as follow:



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## III. Wiring



### Warning !

Batteries and solar modules are stored a lot of energy, we strongly urge the user to input the battery and solar module inputs are each connected in series breaker. Before installing the controller, be sure to confirm that the first cut off the input source to prevent electrical shock; live working very dangerous, and in any case must not let battery short circuit, violation of operation may cause an accident.

1. Before connect wiring carefully check the rating information of controller, and battery parameters, plate parameters currently in use, should be consistent, rated information, see the functions of the controller on the right side of the parameter label.
2. Before wiring the controller "ON / OFF" switch is in the OFF state;
3. Connect the terminals of the battery temperature sensor to the "BAT TEMP" controller, the other end of the metal probe is placed inside the battery box.(Standard cable length 1.5m,if the battery boxed placed farther, extend the length of the test line; if there is no detection of the battery temperature, battery temperature sensor may not be used.)
4. The solar modules access to the controller "PV + PV-", pay attention to distinguish between positive and negative polarity.
5. The battery pack access to controller "BAT + BAT-", pay attention to distinguish between positive and negative polarity.

## IV. ON/OFF

### 1. ON:

Closed solar modules and battery assembly switch (Products External), introducing energy to controller; Products outside the controller "ON / OFF" switch in the ON state, when the solar input, the controller will run automatically;

The controller does not require daily operation; no solar input, the controller will automatically standby, not consume battery power; solar energy input, the controller will automatically operate to charge the battery pack.

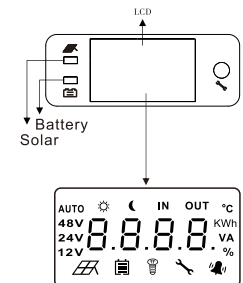
### 2. OFF

Determined not to charge the battery using the controller or controller failure, the controller "ON / OFF" switch is in the OFF state, the controller will stop working.

## V. Panel explanation:

### 1. LED Light explanation:

LED light	Indicator detail	State	Function
	Solar indicator light	ON	Battery is full
		OFF	Solar module undervoltage
		Slow flash	Charging
	Battery indicator	ON	Battery working
		Quick flash	Battery under/over voltage



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2. “ ”: Setting/ Query button

Set Function Description see chapter VI

Query Function Description see chapter VII

3. LCD Display: Coordinate “ ” Display Parameters

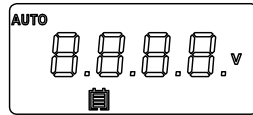
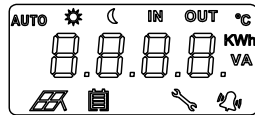
## VI. Setting function

Press “ ” button, Enter the setting mode, after enter the setting mode, the charge voltage, charge current setting; touch to turn the page, press (or 30 seconds without operation) setting information to save and exit.

## VII. Query function

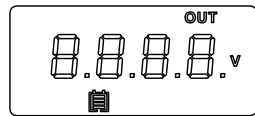
1.After the controller starts, the following screen appears:

Power-on self-test page displayed 1second      Rated voltage of the battery power displayed 3seconds

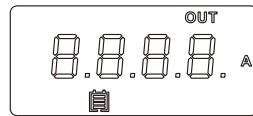


2. Cycle Press “ ” button, Recyclable display real-time information, specifically shown below:

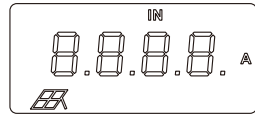
1).Charging voltage



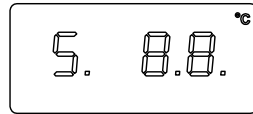
2). Charge current



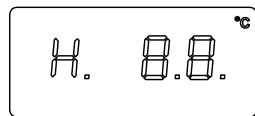
3). Solar current



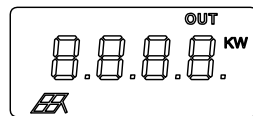
4).System temperature



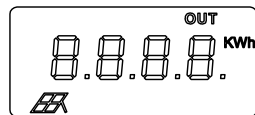
5).Working temperature



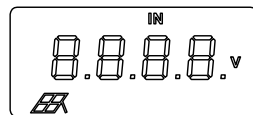
6). Power generation



7).Cumulative power generation



8).Solar voltage



## VIII. Recommendations

1. Please make sure that all cable connections reliable, to avoid poor contact caused by fever caused an accident.
2. The controller will heat during operation, it is recommended to install in a ventilation environment.
3. Between the controller to the battery pack wire should not be more than 3 meters, to avoid excessive wear and tear on the line, the controller generates misjudgment.
4. Select sufficient capacity cable connections to avoid excessive wear and tear on the line, the controller generates misjudgment.
5. The battery is often filled with is very important, at least once a month to be filled, otherwise the battery will suffer permanent damage. Only when energy into the battery more then load energy use, the battery can be filled. When configuring the system, keep in mind this.

## IX. Technical Parameter

Model	SC-M-120V	50A	80A	100A
System specification	Charging mode MPPT	Auto tracking main first power		
	Three stage charge mode	Constant current(MPPT), constant voltage, float charge		
	Rated charge voltage	120V		
	Soft start time	≤20S		
	PV efficiency	≥99%		
PV input character	MPPT working voltage	150~450VDC		
	Maximum PV Array Power	6KW	9.6KW	12KW
	PV series connection numbers	18V 10PCS series connection		
		30V 6PCS series connection		
		36V 5PCS series connection		
Charge character	Rated charge voltage	Singel battery 13.8V~15 settable(default 13.8V)		
	Rated charge current	50A	80A	100A
	Over charge protection	150V		
	Overcharge recovery	136.5V		
	Temperature Coefficient	±0.02%/℃		
	Charge voltage accuracy	≤±1%		
Others	PV Reverse/Battery Reverse/Over temperature protection	Yes		
	Noise(dB)	≤30dB	≤40dB	≤60dB
	Cooling mode	Forced air cooling		
	Protection type	IP 20		
	Environment requirements	Humidity 0~90%RH (non condensing)		
	Net Weight(KG)	9.8KG		
	Dimension	373x344x130.2mm		