



CMP (30A—45A)

Solar Charge Controller

USER'S MANUAL



Please read the manual carefully before you use our products!

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1. Security

The factors referring to body and property security have been considered during designed the products. But incorrect connection will cause to breakdown. For your security, please do everything according to the following regulation.

- Please contact the local agent before installation, which should be guided by professional
- Prevent any liquid from spattering on controller. Do not clean the controller with wet cloth
- Keep children and incapacity person away from controller
- Keep controller away from electrical heater, warmer and other source of heat; avoid controller under Sun.
- Please check the rated voltage of solar panel, battery, and loads before connection. Their rated voltages all should be 12V (or 24V).
- Pay more attention to connect the positive and negative pole among Solar panels, Battery and Loads correctly..
- The diameter of connecting cable could not be smaller, which should be suited to loads.
- The total rated current of solar panel and loads are kept lower than controller's rated current.
- Tight and good connection among components.
- Connecting wired battery positive and negative poles directly is prohibited.

2. Feature

CMP (30A-45A) solar charge controller is controlled by CPU, According to the voltage of battery , controller will adjust the charge current and decide if to supply the loads electricity.

The following is the detailed performance:

- Generally keep the battery on full voltage condition.
- Prevent the battery from over-charging and over-discharging.
- Prevent supplying electricity from the battery to solar panels during nights.
- Reverse Polarity Protection for Battery
- Reverse Polarity Protection for Solar panels
- When the current of load exceeds the rated one of controller, the controller will turn into the self-protection state and is automatically locked up, the screen shows “Overload”.
- Short Circuit happens; the Controller will turn into the self-protection state and is locked up, the screen show “Short circuit”.
- Low voltage happens to battery, the controller will automatically separate loads from system. When the voltage of battery goes up, the loads will automatically restart to work.
- Protection from the lightning strike
- When Controller is normally working, the LCD Screen will show New Charging Current (a dash“-”before the numeral), Discharging Current and Voltage of battery every 5 seconds.
- Controller is always counting Charging Current Hours and Discharging Current Hours of the Battery
- When controller start up, according to the voltage level of battery, Controller will self-setup the Charging-off voltage, the Load-off voltage, the Load-on voltage. These datum is tacitly approved

under the standard environment temperature 25°C.

·According to varies system temperature, the controller will automatically compensate the temperature of the charging voltage.

·Users could setup the Charge-on or off voltage, the load-off voltage, the Load-on voltage, etc, according to their requirements.

·To prevent battery from over discharging, Controller will automatically control the lowest Load-off voltage of the load, which is no less than 10V (as per 12V battery) or 20V (as per 24V battery) or 40V (as per 48V battery) . If voltage of the battery is less than 10V (or 20V,40V), the button “-” will stop working.

·To recover its defaults, please keep pressing down the button “Menu” for over 5 seconds.

3. Connection

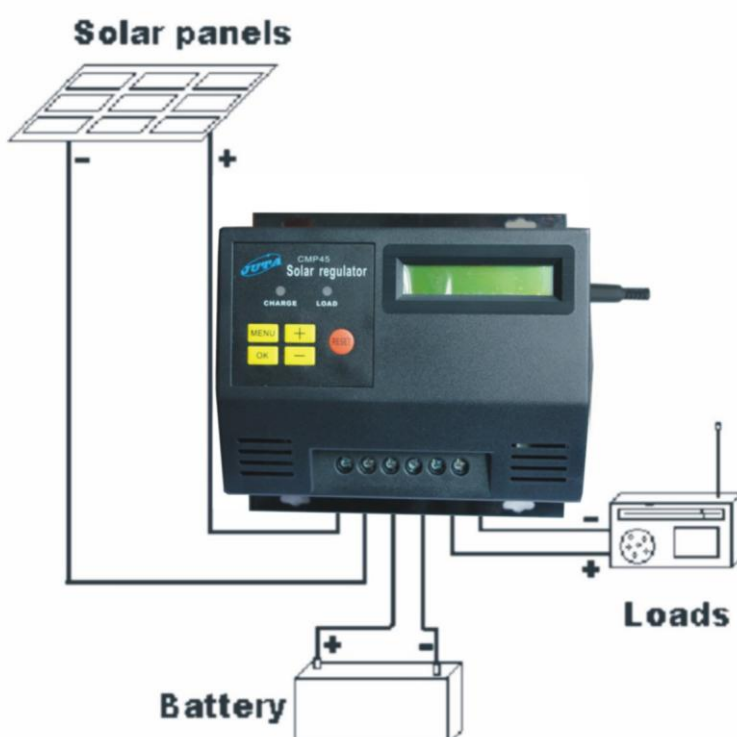
As form

- Connect “+” and “-” poles of battery with the correct ports on the controller (the third and fourth ports from the left).
- Connect “+” and “-” poles of solar panel with the correct ports on the controller (the first and second ports from the left).
- Connect “+” and “-” poles of load with the correct ports on the controller (the fifth and sixth ports from the left).

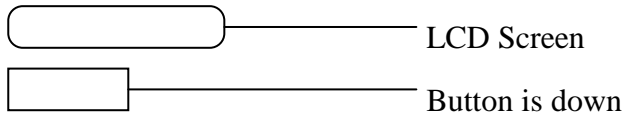
Attention!

- Correctly connect the electrodes of battery , solar panels, and loads!
- Choose the proper cable according to the current of the loads; the diameter could not be smaller. The cable 6m m² minimum is suggested!

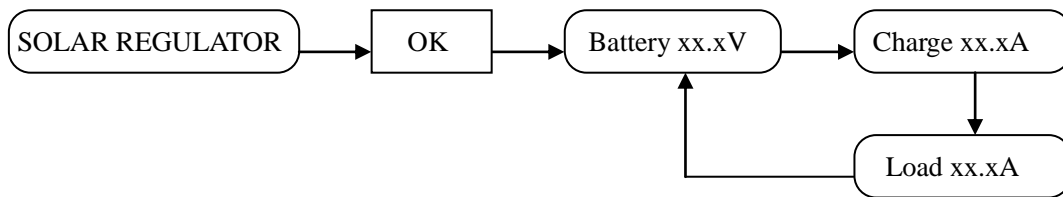
Sketch of Connection



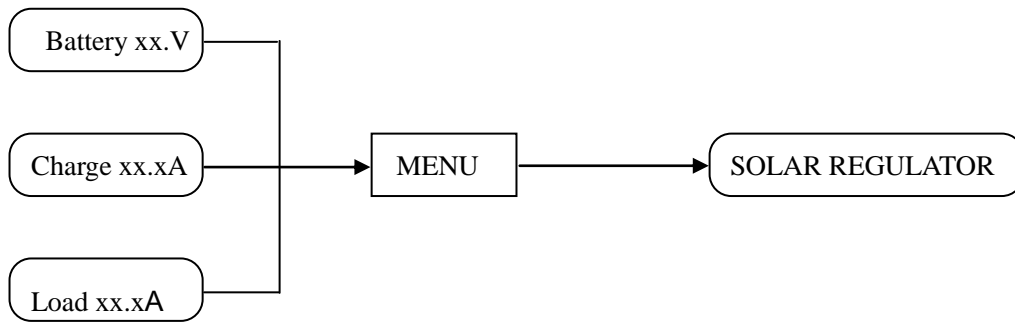
4. Operation



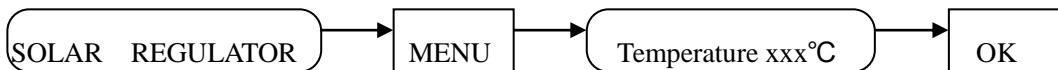
·Startup



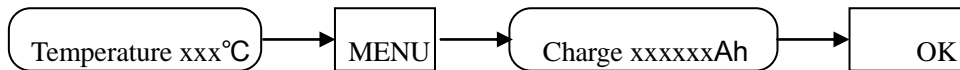
·Menu



·Check the system temperature



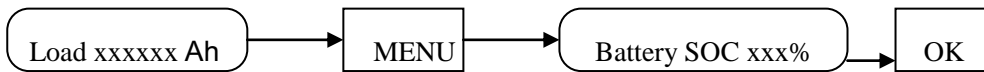
·Check the charging current



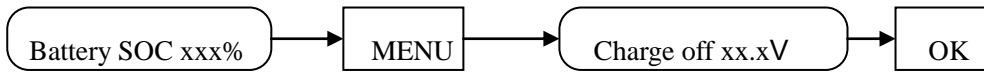
·Check the discharging current



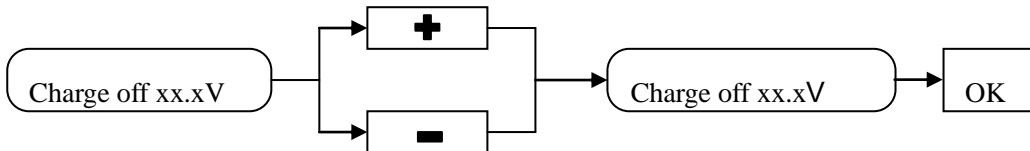
·Check the battery capacitance



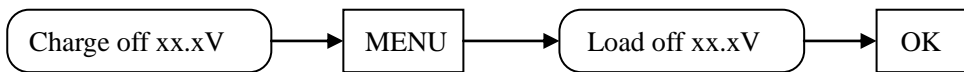
·Check the charge-off voltage of battery



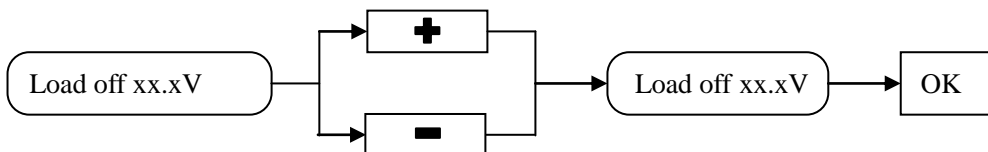
·Setup the Charge off voltage of battery



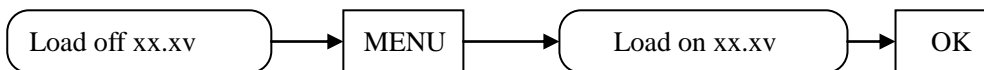
·Check the load-off voltage of loads



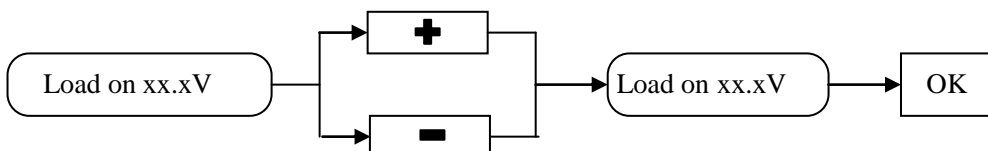
·Setup the Load-off Voltage of loads




·Check the load-on voltage of loads



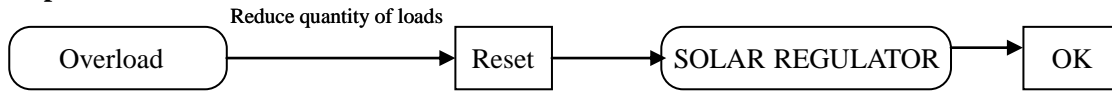
·Setup the load-on voltage of loads



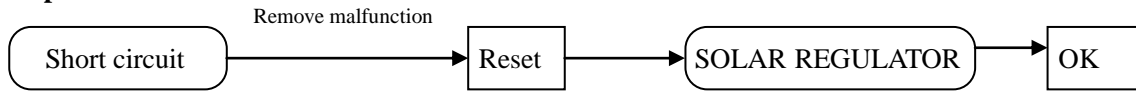
·Adjust Charge-off voltage of Battery, Load-off Voltage of loads and Load-on Voltage of loads into the defaults

Press down  for more than 5 seconds

·Startup for over-loads



·Startup for short circuit



5. Fix the breakdown

·**phenomenon** : Green light goes out, the loads stops working, and LCD Screen shows

Battery low

Reason : Low voltage of battery

Solution : Charge up the battery or change the battery

·**phenomenon** : Green light goes out, the loads stops working, and LCD shows

Over load

Reason : Overload

Solution : Reduce the quantity of loads and then press Button

Reset

·**Phenomenon** : Green light goes out, the loads stops working, and LCD Screen shows

Short circuit

Reason : Short circuit is happening to loads.

Solution : Disconnecting the malfunction and then press the button

Reset

·**Phenomenon** : Green LED is light

Loads are normally working

·**Phenomenon** : Red LED is light

Battery is charged up rapidly

·**Reason** : Red LED is flickering

Battery is in constant voltage (or floating) charged up

·**Phenomenon** : Red LED goes out

Reason : Charge-off of battery

Solution : This is the common phenomenon during nights. If it is so during days, please carefully check the connection among Solar panels, Controller and Battery.

6. Accessory Installation

•**Component** : near-distance thermoscope

Installation : Plug the thermoscope into the socket (right side) of controller before running of controller, and then connect batter with the controller. The thermoscope will normally work after one minute. (According to the fourth Chapter-Operation, the environmental temperature of controller will be available).

•**Component** : Long-distance thermoscope

Such thermoscope is suitable to the following condition—the location of battery is far away from the Controller. (please show us the length of cable between battery and controller for ordering the proper thermoscope)

Installation : Plug the thermoscope into the socket (right side) of controller before running of controller, and then connect batter with the controller. The thermoscope will normally work after one minute. (According to the fourth Chapter-Operation, the environmental temperature of controller will be available).

7. Technical datum

Model	CMP45
Rated Voltage	12V、24VAutomatic distinguish Voltage or 48V
Loading current Max	30A——45A
Full charge cut	13.7V/12V ; ×2/24V ; ×4/48V Recognize tacitly、 rest
Low voltage cut	10.5V/12V ; ×2/24V ; ×4/48V Recognize tacitly、 rest
Reconnected voltage	12.6V/12V ; ×2/24V ; ×4/48V
Temperature compensation	-3mv/cell.°C Recognize tacitly、 rest
No load loss	≤45mA
Wire area Min	16mm ²

Voltage drop	< 270mv
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