



PWM SOLAR CHARGE CONTROLLER

Sohigh PCB

For solar off-grid system

**SOHIGH
SOLAR**



Full-range electronic protection functions



Self-timing



Various control mode for load



High voltage disconnect on, high voltage recovery



Parameters can be set



Low voltage disconnect on, low voltage recovery



LCD display



Overload protection shout circuit protection

SOHIGH PWM SOLAR CHARGE CONTROLLER **TECHNICAL DATA**

Model: Sohigh PCB

USB output	5V/1A
System Voltage	12/24V Auto Recognized; 48V(Optional)
Max. Input Voltage of solar panel	55V/100V
Self-consumption	≤12mA
Max. charge current	30A 40A 50A 60A
Max. discharge current	30A 40A 50A 60A
LVD	11.0V ADJ 9 V... 12V ; ×2 24V ×4 48V
LVR	12.6V ADJ 11 V...13.5V ; ×2 24V ×4 48V
Float Voltage	13.8V ADJ 13 V...15V ; ×2 24V ×4 48V
Boost charging	14.4V; ×2 24V ×4 48V Battery Voltage less than 12V start boost charging 2hours
Battery Over Voltage Protection	16.5V; ×2 24V ×4 48V
Reverse Connection Protection	Yes
Load Over Current Protection	Yes, each two minutes restart once
Charge Type	PWM
Temperature Compensation	-24 m V / °C for 12V system; ×2 24V ×4 48V
Working Temperature	-20°C ---+55°C (to run at full rated current continuously)
Terminal Scale	28 ----10AWG
Waterproof grade	IP32

Rated Charge Current	20A	30A	40A	50A	60A
System Rated Voltage	12V/24V			12/24/48V	
Charging mode*	PWM Multi-stage(bulk,float,absorption,equalized)				
Load working mode	Regular control mode; Light control with switch-off point at night and switch-on point before dawn Light control mode				
*Product specifications are subject to change without further notice					



Major Functions

The features are listed below:

- Automatic identification System Voltage, 12V 24V 48V auto recognition.
- Humanized LCD displaying and double button operation of man-machine interface.
- Completed technical data for setup and modify.
- High efficiency intelligent PWM 3 stage charging
The load control mode can be selected, the timer function can be reset for street light at night.
- Reliable over voltage protection
.Short circuit protection. Over load protection . Overcharge protection. Over-discharge protection
- Accurate temperature compensation, correcting the charging and discharging voltage automatically, improving the battery lifetime.
- Roundly reverse connected protection.
- Solar Panels, Battery, Solar Charge Controller positive poles are all connected together, adopting negative MOSFET in series control circuit.

Product Features

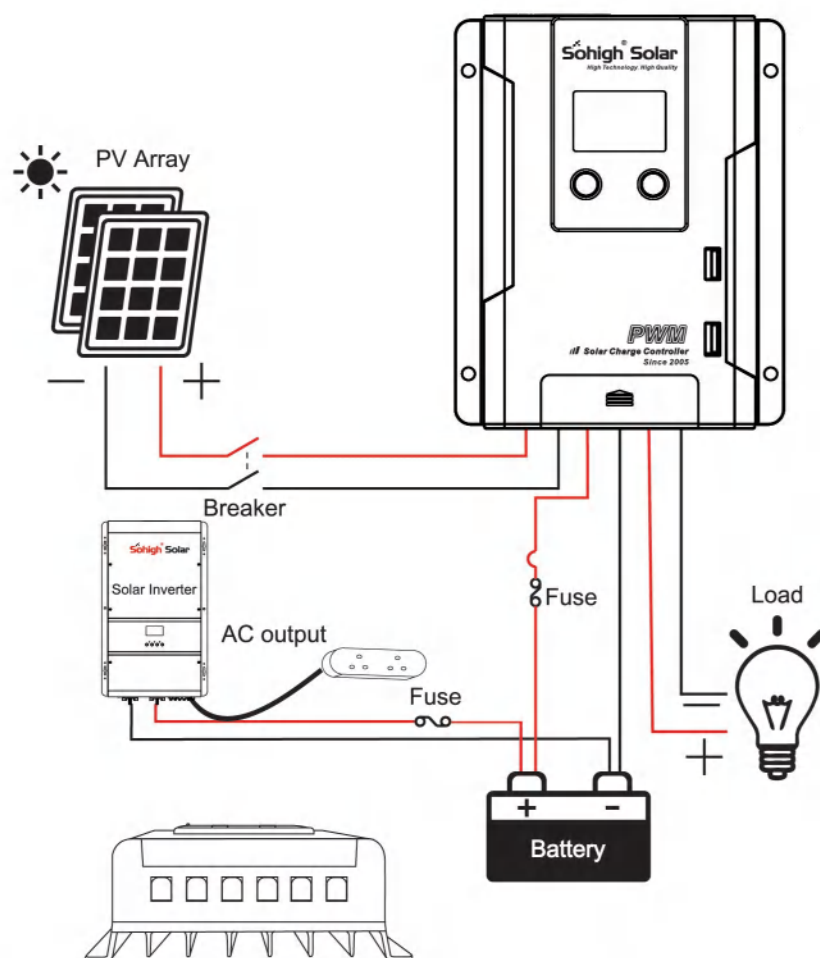
- Multi-stage PWM charging mode
- Preset charging parameters for three different battery types
- Charging and discharging parameters are adjustable
- Temperature compensation is applied
- Various controlling mode for load
- Protection against reverse connected solar panel
- Protection against over-current and of load
- Protection against internal over-heat
- Full digital LED Display



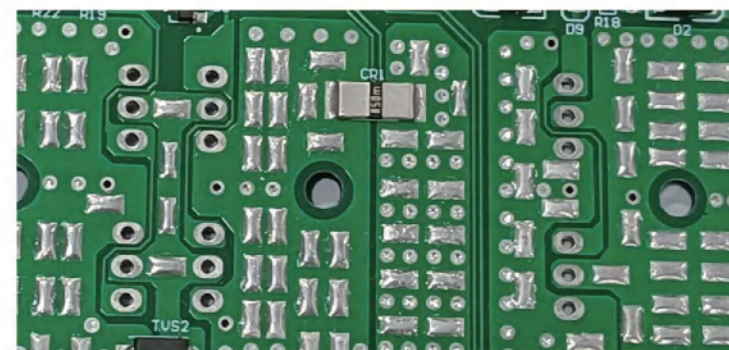
The controller is for off- grid solar system and control the charging and discharging of the battery. Main function is protecting battery. The intelligent charging process has been optimized for long battery life and improved system performance.

The suggestion of using

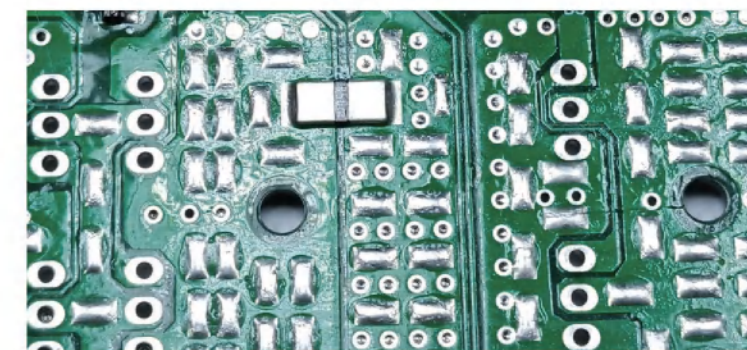
- The controller could detect the temperature of environment to adjust the voltage of charging, so that the controller should be closed to battery as near as possible.
- Recommend system current density of cables less than 3A/mm²
- Try to use multi strand copper wire in order to connecting with the terminal firmly. Loose power connection and/or corroded wires may result in resistive connections that melt wire insulation, burn surrounding materials or even cause fire
- The battery should be full charged each month, Or the battery will be destroyed.



SOHIGH PWM SOLAR CHARGE CONTROLLER **MULTI-PROTECTION**



NO Conformal Coating

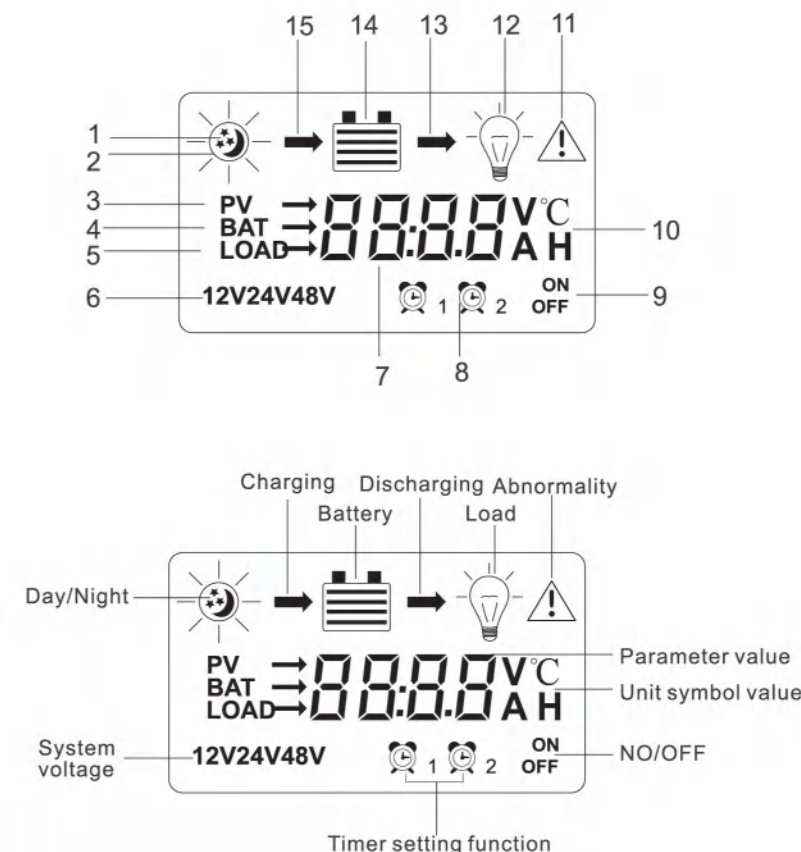


High-quality Conformal Coating

The circuit board inside the controller adopts **high-quality conformal coating** to protect the circuit board from environmental erosion. After curing, it forms a transparent protective film, which has excellent insulation, moisture-proof, anti-leakage, shock-proof, dust-proof, anti-corrosion, anti-aging, corona resistance and other properties.



The feature of LCD graphic symbol

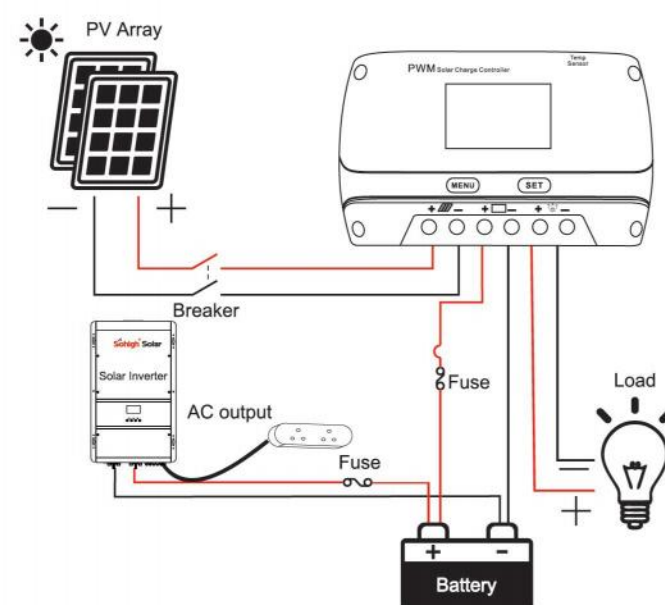


1. The default night display of controller: When the solar panel input voltage have been detected by controller less than sensor identification point voltage, this graphic symbol will be light.
2. The default daytime display of controller: When the solar panel input voltage have been detected by have been detected by this graphic symbol will be light.
3. The indicator of PV array parameter: When the solar panels data was displaying, this graphic symbol will be light. For example the voltage of solar panel.
4. The indicator of battery parameter: When the battery parameter was displaying, this graphic symbol will be light. For example the voltage of battery, temperature of battery.
5. The indicator of load parameter: When the load parameter was displaying, this graphic symbol will be light.
6. System Voltage. When the LCD shows different system voltage, the controller will adjust the technical data automatically.
7. Numerical Display Area
8. Timer Setting Function
9. Switch Graphic Symbol.
10. Unit Symbol Value
11. Warning: When there is fault, this graphic symbol will be light.
12. The indicator of Load status: Load on, Load off.
13. The indicator of Output power: When the load terminal have output, this graphic symbol will be light.
14. The indicator of capacity of battery: When the battery was in different capacity, the strip-type will show.
15. The indicator of charge status: When the controller is charging, the symbol will be light, float charge will be flash, no charging no display.

PWM

Sohigh PCA

SOLAR CHARGE CONTROLLER

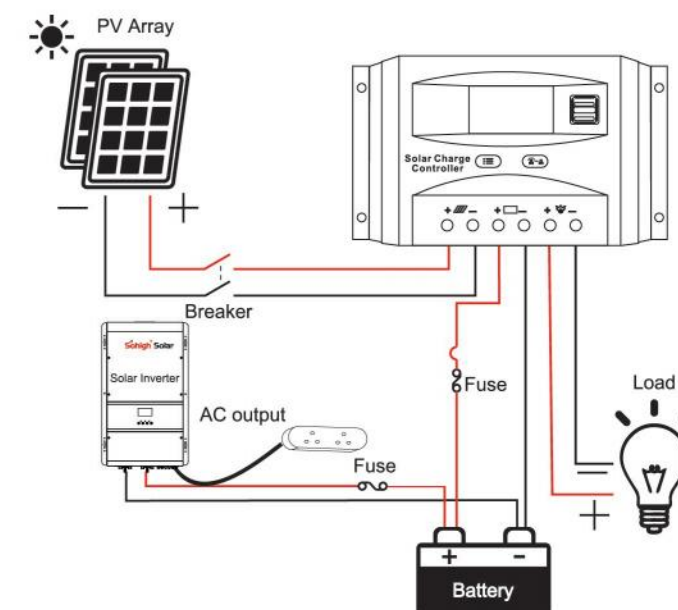


System Voltage	12V/24V
Max. Input Voltage of solar panel	55V
Self-consumption	≤12mA
Max. charge current	10A / 15A / 20A/30A / 40A / 50A / 60A
Max. discharge current	10A / 15A / 20A/30A / 40A / 50A / 60A
LVD	11.0V ADJ 9 V... 12V ; ×2 24V
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Terminal Scale	28 ----10 AWG
Waterproof grade	IP32

PWM

Sohigh PCC

SOLAR CHARGE CONTROLLER



USB output	5V/1A
System Voltage	12V/24V/48V(48V 50A/60A)
Max. Input Voltage of solar panel	55V/100V
Self-consumption	≤12mA
Max. charge current	30A 40A 50A 60A
Max. discharge current	30A 40A 50A 60A
LVD	11.0V ADJ 9 V... 12V ; ×2 24V ×4 48V
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