

## JC series portable solar&grid hybrid controller user manual for assembly type

(this user manual of 12v, 24v solar controller is applied for switching Output electric from Grid Electric )

**Overview:** The product is the new generation of intelligent solar charge and discharge controller, it has strong stability and high service life. Grid Electric is uninterrupted switching to output electric automatically to ensure system continuous work with automatic detection battery voltage function, pwm charging way and comprehensive protection function: overcharge,over-discharge, over-current, short-circuit, reversed etc.

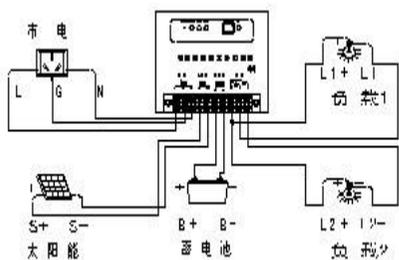
### Installation size and connection:

1.Installation environment: installed in a dry ventilated place.2.Installation size (as below) note: fixed screw specifications M3 \* 10;3.Connection method (as shown in figure)

A. First joint battery (positive on the left), connected correctly,**The load will long off during the day in the streetlight, under voltage and over voltage the LOAD also long off.** Otherwise check line.

B. After joint panels (positive on the left) connected correctly, the LED indicator is red when charging status. electricity display began to run code, into the charging status in the sun. Otherwise check line.C. Liver wire of grid electric is connected to 'L'terminals of solar controller, neutral wire of grid electric is connected to 'N' terminals, ground wire is connected to 'G' terminals, (Be careful to prevent electric shock) D. The last joint load (shown in bulb, positive on the left) connected correctly, lamp luminous. **The load will long off during the day in the streetlight, under voltage and over voltage the LOAD also long off.** Otherwise check line.

**Note:** Above ABCD must pick up in order, otherwise, it will damage the controller.



### Status indication:

\* **TEMP:** on behalf of the temperature sensor, adjusting each point voltage automatically to according to different temperature .

LED Lamp	Indicated Status	Status	Function
Load2	Green Led	Lights is on	Load terminal have output
		Lights is off	Load terminal have output (light control)
Load1	Red Led Green Led	Red indicator is twinkling	Undervoltage of Battery
		Green indicator is	Battery work is okav
charge	Red led	Red indicator is on or twinkling	Charging status or float charge of solar panel

### Digital tube display and key SET:

1.When press the "SET" ,the digital tube display "U" mean that is Menu of choosing street light and household, and press the button, display "1" or "2", "1" mean household,"2" ,mean street lights. The setting is finished after the digital tube is off. press the "SET" to wait 5 seconds, the digital tube display "H" means Time control .(Applied to street light, Not household) and release it, Press the button to set Time Control .0 to F represent 0 to 15 hours. Iwhen press button one time to increased 1 hours. Time Control is start to base on work time of Light Control. Wait the digital tube is off, and the setting is finished.2.Press the SET key lasts 10 seconds, digital tube display "h" representative after light control delay h hours turn on the light. "0 - F" represent 0 to 15 hours, now immediately press the SET key, and then adjustable delay time. Waiting for digital tube is off, the setting is finished .

3.Press the SET key lasts 15 seconds, digital tube display "y" for recovery factory.4. The digital tube display "F" mean Short-circuit, must to restart the controller to remove protection of short-circuit.

### Note:

1 "H" default 6 hours,"h"default is 8 hours ( Light Control start to timing when the lamp is light , duration time of light is 6 hours, after 6 hours , the lights is off, duration time is 8hours, after 8 hours , the lights is on to the dawn) Time Control and Light Control is not applied to household.2. The controller has power-fail protection (mean the adjustment data can be saved even if the electric of controller is cut) Press the key last 15 seconds to recovery factory status .

### Functions:

1.The controller has both household and street lamp.2.The controller has 12 v, 24 v automatic identification3. The controller is applied to Grid Electric is uninterrupted switching to output electric automatically to ensure system continuous work .4.The controller has light control and time control (street lamp type).5.The controller has the overcharge, discharge, over current, short circuit, answer back and protective measures.5.Scientific and renew shape design, and usage of high-grade protection 6.With the Strong charging and equilibrium charging, floating three-step PWM control charging ways.

### Safety advice:

1.The controller has reverse connection protection, it is restricted to reverse connection, or make some damage to the load .2.The controller doesn't work properly or stop working after connecting the battery, need to check the wire from controller to battery, don't be allowed to connect the panels in that time (both panels and batteries are reverse connection, that make controller damage).3.Battery has lots of energy, at any time to avoid battery accidental short circuit.4.Battery will produce some combustable gas after full charging, so far from spark to prevent explosion.5.To comply with the battery manufacturer's safety advice, avoid touching of children, prevent accidents.

### Appendix:

Rated volatge	12V	24V
Strong charging pressure	14.8V	29.6V
Equilibrium charging	14.5V	29.0V
Float charging pressure	13.7V	27.4V
Under Voltage	10.8V	21.6V
Recovery of under voltage	13.0V	26.0V
Voltage of switching	11.0V	22.0V
Maximumcharging current	20A	20A
Maximum load current	10A	10A
Protection of Controller	Over-load,reverse,connection Over-discharging,Over-charging,shor t-circuit etc.	
Charging way	PWM adjusting	
elevation	≤5500m(more than 2000m pls decrease the wattage of controller)	
Working temperature	-40-60℃	
Weight (GW)	200g	
Size of products (L*W*H)	136*92*31mm	
Protection Grade	IP56	

**Remark:** We can produce solar&grid controller as detailed information from the customer , Above is controller basic parameters (only for reference )

