Solar Controller Instruction Manual

Introduction: Our product is a new generation of intelligent solar charge and discharge controller, with reliable stability and extremely long service life.This series is 12V/24V automatic recognition.They have automatic battery voltage detection function, compatible with **lead-acid batteries**, **ternary lithium, lithium iron phosphate and other battery types.**The controller uses **PWM** mode to charge.

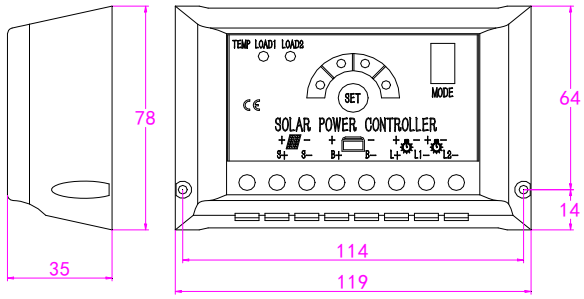
Funcation：

1.Our controller has the design of household type and street lamp type in one.
2.Our controller takes the 12V, 24V automatic recognition design.
3,Our controller has light control and time control (street lamp type).
4.Our controller has protective measures such as over charge, over discharge, over current, short circuit and reverse connection。
5.The controller has power loss protection (that is, after the key adjustment, the data of the last adjustment).
6.The controller is compatible with lead-acid battery, ternary lithium, lithium iron phosphate and other battery types.

Product Installation Size and Wiring Sequence：

1.Installation environment： Install in a dry and ventilated place.
2.Installation size (As shown in the figure below)**Attention:**Fixed screw specifications:M3*10
3.Wiring method： All wiring ensures a power-off connection
A.Connect the battery first (positive pole to the left) correctly,The digital tube appears "1" or "2" ("1" means the 12V system and "2" means the 24V system). After a few seconds, the LOAD light is on and the power display light is on.(Street lamp type daytime LOAD long out, undervoltage, overvoltage LOAD long out). Otherwise, check the wiring.
B.Then the panel (positive pole is left) is connected correctly, and the power display light starts to race and enters the charging state. Otherwise check the line。
C.Finally, the load (the bulb and the positive pole on the left) is connected correctly, and the bulb is light (street lamp type is long out during the day, under pressure, over pressure and long out). Otherwise, check the wiring.

Note: The A.B.C. must be connected in order, otherwise the controller will be damaged.



LED	Pilot	Conditio	Function
Load	Green LED	Long out	The load has output
		Long out	No load output (optical control, undervoltage, overvoltage)
Battery	Red LED (4)	Part of Moving	Battery power charged state

*TEMP:Represents the temperature sensor, and automatically adjust each voltage point according to the different temperature。

Indicator lamp status：

1. **Battery type and string number judgment:**After the machine power supply is normal, the parameters of the controller are lead acid battery, lithium iron phosphate battery or ternary lithium battery by the digital tube display; if the digital tube displays "0" once every 5S, the parameters of the machine operation is lead acid colloid battery mode, and the 12V / 24V voltage automatic recognition; if "3", the parameters of the machine are lithium iron phosphate battery 3 series; "3." the parameters of the machine are ternary lithium battery 3 string, compare the meaning of the digital tube
2. **Failure judgment：**The digital tube displays "F" and every 3S to indicate the machine DC load overload, short circuit protection; the digital tube displays "d" and every 3S to indicate the machine undervoltage protection; the digital tube displays "E" and every 3S to indicate the machine overvoltage protection, according to the table below；

Digital tube display control table:

AGM	Lithium iron phosphate						Lithium iron phosphate						Overload short	Under voltage	Over voltage
	3	4	5	6	7	8	3	4	5	6	7	8			
	strings						strings								
0	3	4	5	6	7	8	3	4	5	6	7	8	F	D	E

SET key press function：

Long the SET will appear in turn:H→L→U→Y；

1.Long press the SET key (about 5 seconds), the digital tube shows the capital "**H**",and it Represents the

entry time control setting, without interval continuous press increase by 1 hour,0 to F represent 0 to 15 hours, show the button to stop and save automatically when the digital tube is extinguished;

2.Long press the SET button (about 10 seconds), the digital tube display capital "L". It represents into the battery type setting, without interval continuous press each time, display 0 3 4 5 6 7 8 3. 4. 5. 6. 7. 8., representing the battery type and series number, display the key needed to stop, automatically save when the digital tube is extinguished, see the reference digital tube display meaning control table.

Note: After changing the battery type and string setting are saved, the machine must be power off and restart;

3. Long press the SET key (about 15 seconds), the digital tube display capital "U", enter the mode setting, "1" represents the household mode, "2" represents the street lamp mode;

4. Press the SET key (about 20 seconds) and the digital tube displays "Y", representing the controller resumes factory settings.

Security recommendations:

1.The controller has reverse protection, but it is still strictly prohibited, and the reverse load is a certain damage。

2.If the battery is found that the controller does not work normally or even does not work, the line must be checked in time, and it is not allowed to connect the panel when you chack it (the panel and the battery are connected at the same time, the controller will damage).

3.The battery has a lot of energy, at any time to avoid the battery accidental short circuit.

The following is the basic parameters of the controller lead acid colloid, lithium iron phosphate, ternary lithium consulting customer service.(This is for your reference only）

Digital tube display control table:

Rated voltage	12V/24V automatic recognition
Strong charging voltage	14.8V/29.6V
Balanced charge	14.5V/29.0V
Floating charge voltage	13.7V/27.4V
Undervoltage protection	10.8V/21.6
Overpressure recovery	13.0V/26.0V
Maximum charging current	5A/ 10A/15A /20A
Maximum load current	5A/ 10A/15A /20A
Controller protection	Overload, backconnection, overdischarge, overcharge, short circuit, etc
Charging method	The PWM regulation mode
Working temperature	-40-60℃
Weight (Gross weight)	0. 15KG
Size (length, width and height）	120*78*35mm
level of protection	IP56