

1. Product Features:

This series is PWM Solar Charge Controller, with built-in LED and USB. It adopts the most advanced digital technology and runs automatically. It can be widely used in various off-grid systems.

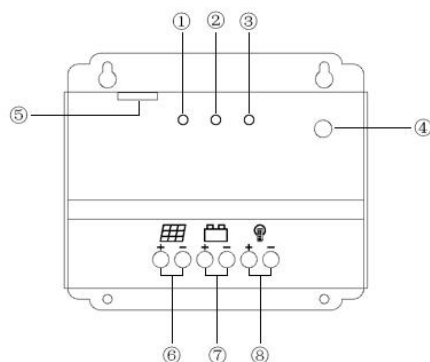
- Overall metal casing;
- LED indicator lights and operations with button;
- 3-stage PWM charging;
- Automatic identification of system voltage;
- Adjustable working modes;
- USB output 5V/2A;
- Perfect electric protections.

2. Installment:

- 1) Please install the controller vertically.
- 2) Please leave at least 10cm at the top and the bottom of the controller for heat-dissipation space.
- 3) Install order: Battery, Solar Panel and Load. Please follow the order to avoid accident. Disconnecting order is reversed.
- 4) If inverter or load with big start current is necessary in the system, please connect it directly with battery, not solar controller.

3. Product Introduction:

1) Structure:



①	Solar panel indicator	⑤	USB output
②	Battery indicator	⑥	Terminals of solar panel
③	Load indicator	⑦	Terminals of battery
④	Load control button	⑧	Terminals of DC load

2) Load Working Modes:

Working mode 1	24H: Load on for 24 hours
Working mode 2	Light control: Load on since sunset, load off after sunrise

Button Operation: long press load control button for 5s to change working modes setting.

***Note:** In light control mode, load can not be turned on or off by user.

3) Indicator Light Introduction:

Solar panel indicator	Red	Charging
	Off	No charging
Battery indicator	Red	Boost charging
	Green	Float charging
	Orange	Absorption charging
	Off	Battery disconnected or low voltage
Load indicator	Green	Load working
	Off	No output

4. Trouble Shooting:

Indication	Cause	Solutions
Solar panel indicator flashing	Solar panel short-circuit or over voltage or over current	Please check solar panel connection or replace it.
Battery indicator flashing	Battery low voltage	Please charge the battery or replace it.
Load indicator flashing	Load short-circuit or over voltage or over current	Please check load connection or replace it.

5. Technical Parameters:

Max Current	10A	20A
Battery Voltage	12V/24V Auto	
Max Voltage of Solar Panel	100V	
Float Voltage	13.8V/27.6V	
Low Voltage Disconnection	10.7V/21.4V	
Low Voltage Re-connection	12.6V/25.2V	
Absorption Voltage (2 Hours)	14.4V/28.8V	
Self-consumption	≤15mA	
Loop Voltage Drop	≤0.2V	
USB Output	5V/2A*1	
Temperature Compensation	-4mV/°C/2V (25°C)	
Working Temperature	-20°C~+50°C	
Humidity	≤95%, N.C	
Protection Category	IP32	
Terminals	8AWG/10mm ²	
Mounting Hole Size	70*92mm -Φ5	
Dimension	110*103*33mm	
Weight	0.3kg	

*Any changes will be without prior notice!

TC10-V1.0-EN