

Solar Charge Controller User Manual

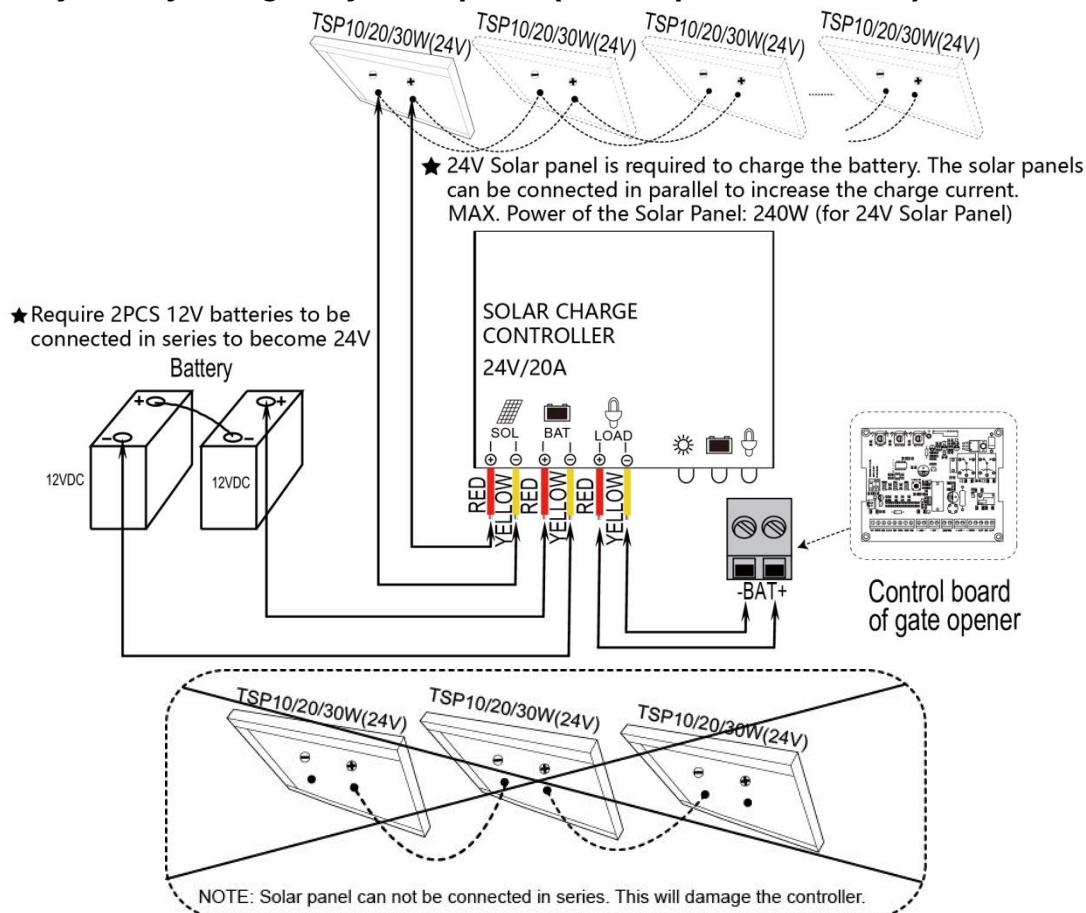
Item No.: TCS3

Thank you for purchasing the solar charge controller TCS3. Please confirm the voltage of the battery and the solar panel is in accordance with the working voltage of the controller (24V) before you use the controller. The TCS3 is specially designed for solar charge controlling and battery discharge controlling in automatic gate opener system. It is integrated with multiple safety protection for battery, such as: over charge protection, over discharge protection, overload protection, short-circuit protection and polarity reverse protection.

Load Capacity: 20 Amps

1. Wire connection

1.1 The battery is only charged by solar panel (the adapter is not used)



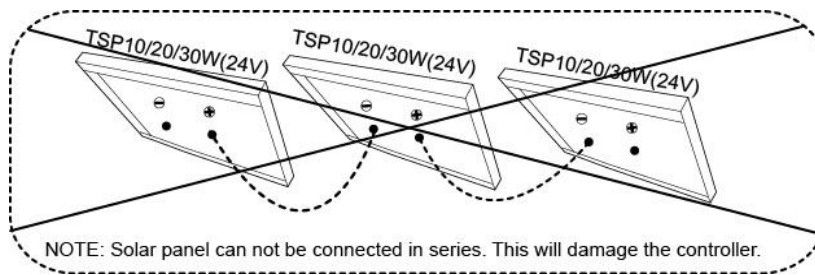
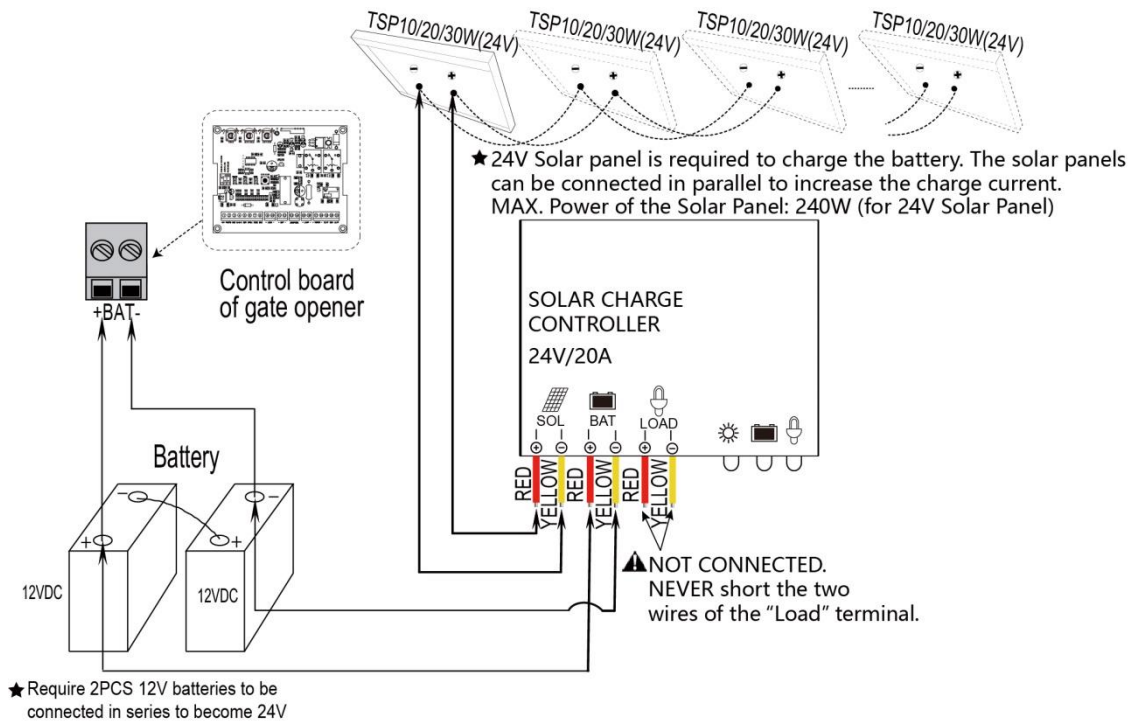
Firstly connect the battery to the controller and then connect the “BAT” terminal of Control Board of gate opener to the “LOAD” output on the controller by the extension cord as wiring diagram above. Finally connect the solar panel to the “SOL” output on the controller. Don’t use the cord which is smaller than 14 AWG when the length is longer than the 75’ (23 m). The 10 AWG or 8 AWG is strongly recommended for 100’ (30 m) or 150’ (46 m) extension distance if the load current is 20A.

NOTE: Maximum current of the load or the solar panel should not exceed 20A.

NOTE: Solar panel can not be connected in series. It will damage the controller.

1.2 The battery is charged by solar panel and the adapter at the same time

Firstly connect the battery to the controller and then connect the solar panel to the “SOL” terminal of the controller. Connect the “BAT” terminal of Control Board of gate opener to the battery as wiring diagram below. The 2 wires of “LOAD” terminal of the controller are not used. Never short the two wires of the “LOAD” terminal. Don’t use the cord which is smaller than 14 AWG when the length is longer than the 75’ (23 m). The 10 AWG or 8 AWG is strongly recommended for 100’ (30 m) or 150’ (46 m) extension distance if the load current is 20A.



NOTE: Maximum current of the load or the solar panel should not exceed 20A.

NOTE: Solar panel can not be connected in series. It will damage the controller.

2. Indicators



: ①Off: Solar panel not connected or output voltage low. ②Flash once per second: PWM 100% charge. ③Flash once per 3 seconds: PWM 50% charge. ④Flash once per 5 seconds: Trickle charge. ⑤Constant on: Fully charged.



: ①Green on: High Battery. ②Blue on: Medium Battery. ③Red on: Low Battery. ④Red light flashes fast: Battery Faulty(<18V).



: ①Constant on: Output normal. ②Flash fast: Short-circuit. ③Flash slowly: Over-load. ④Off: No output(Over-Discharge).



TOPENS Website

www.topens.com

Any question, please do not hesitate to contact us:

E-mail: support@topens.com

Kindly include your Product Model, Purchasing Date & Site, Order #, and your contact information. All your concerns will be replied within 24 hours.

Tel: +1 (888) 750 9899 (Toll Free USA & Canada)

