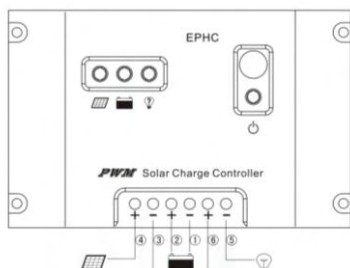


## SOLAR CHARGE CONTROLLERS

# INSTRUCTION MANUAL

-----For solar charge controller,  
-----EPHC series



## INSTALLATION

- ? Connect wires in order indicated 1—6
- ? Use with 12V batteries only
- ? Use with 12V systems only
- ? Do not exceed Solar and Load ratings (5A or 10A), depending on version



### LED indicator



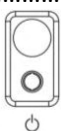
Green ON when solar is charging battery  
Green blink when the system over voltage



Green ON when battery level in the right range  
Green slowly flashing when battery level full  
Yellow ON when battery level low  
Red ON when loads cut off



Red slowly flashing when its over load  
(the load amps is 1.25 times of rated currentf or 60 seconds, or the load  
amps is 1.5 times of rated currentf or 5 seconds)  
Red fast flashing when the load is short-circuit.



Red ON when the switch is ON.  
Red OFF when the switch is OFF.

Please note:

1. the output will cut off once there is over load or short circuit. Press the power switch, the controller will resume to work after 30 seconds.
2. After over discharged, the controller will resume to work when the battery is charged to 13.1V. (for 12V system only, for 24v, use 2X)

After over discharged, the controller will resume to work while you press the power switch, note the battery voltage needs to be over 12.5V.

### **To correct problem**

1. Check wires
2. Reduce amps if needed
3. Reset controller
  - ? Disconnect battery +
  - ? Reconnect battery +

### **RATINGS (12V or 12/24V auto work)**

EPHC-5                    80Watts or 5 Amps for Solar and Load

EPHC-10                170Watts or 10 Amps for Solar and Load

NOTES: For use with solar panels only

### **TECHNICAL INFORMATION**

Regulations point	14.4 Volts
Low voltage Disconnect	11.1V Volts
Low voltage Reconnect	13.1 Volts

Note: all is for 12V system only, use 2x for 24 Volt system

Microcontroller digital accuracy

Type of Charging                    Series PWM & stat of charge(SOC)  
4 Stages: equalization, PWM, Boost and Float,  
temperature compensated charging

Electronic protections            Short circuit and over current-solar and load  
Reverse polarity-solar, load, battery  
Reverse current at night  
Limits high voltage to protect loads  
Lighting protection

Tropicalization                    Conformal coated printed circuit board

Terminals                            For wire sizes to 2.5mm<sup>2</sup>

Weights                                250g

Dimension                            140\*90.5mm

Self-consumption                 6mA maximum

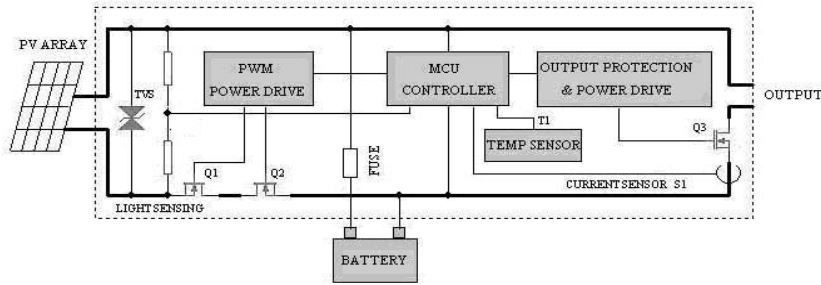
Temperature                        -35? to 55?

Enclosure                            IP22

Warranty                              3 years

Compliance                         CE

### SYSTEM MAIN CIRCUIT DIAGRAM



### MECHANICAL DRAWING

