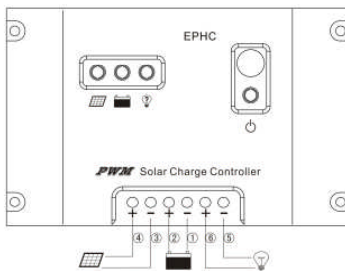


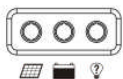
# INSTRUCTIONA MANUAL

-----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 ON when the output is on.  
Red slowly flashing when its over load  
(the load amps is 1.25 times of rated current for 60 seconds, or the load  
amps is 1.5 times of rated current for 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:

the output will cut off once there is over load or short circuit. **While short circuit for 1st time, the controller will resume to work automatically after 30 seconds. Check the load, press the switch to start when it happened again.**

1. 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

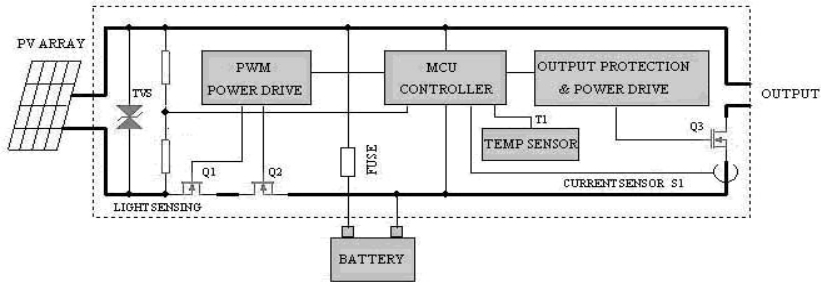
EPHC-10                  170Watts or 10 Amps for Solar and Load

**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 4mm<sup>2</sup>
  - Weights                                  250g
  - Dimension                                140\*90.5mm
  - Self-consumption                      6mA maximum
  - Temperature                            -35°C to 55°C
  - Enclosure                                IP22
  - Warranty                                 3 years
  - Compliance                              CE

## **SYSTEM MAIN CIRCUIT DIAGRAM**



## MECHANICAL DRAWING

