

SOLAR CHARGER CONTROLLER

PWM EPHC Series

with Built-in LED Driver



10A-20A

EPHC10-EC series solar controller is a reliable and economical solar controller. Ideal for Off-Grid solar lighting system that needs light and timer control.

Overview:

- Intelligent System Optimum Control
- 12/24V auto work
- High efficient Series PWM charging with temperature compensation
- Use MOSFET as electronic switch, without any mechanical switch
- Load and battery status indicators
- Electronic protection: over charging, over discharging, overload, and short circuit

Applications:

- Solar street light system
- Solar garden light system
- Solar billboard
- Solar detection equipment at night

Load working mode:

- Dusk to Dawn
- Test ON / OFF
- Light ON + timer

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 it's 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
The default status is ON

Features:

- Intelligent System Optimum Control
- 12/24V Auto work
- High efficient Series PWM charging with temperature compensation
- Use MOSFET as electronic switch, without any mechanical switch
- Detects day and night using the PV array
- Load and battery status indicators
- Electronic protection: over charging, over discharging, overload and short circuit

Technical specifications:

ELECTRICAL PARAMETERS	PWM EPHC
System voltage	12 / 24V DC Auto work
Rated battery current	10A
Rated load current	10A
Charge circuit voltage drop	≤0.26V
Discharge circuit voltage drop	≤0.15V
Self consumption	≤6mA

BATTERY VOLTAGE PARAMETERS (TEMPCO -5MV/°C /2V, 25°C REF)	
Equalize charging voltage	14.6V; X2/24V
Boost charging voltage	14.4V; X2/24V
Float charging voltage	13.6V; X2/24V
Low voltage reconnect charging voltage	12.6V; X2/24V
Under voltage warning voltage	12V; X2/24V
Low voltage disconnect voltage	11.1V; X2/24V
Equalize duration	60 mins
Boost duration	60 mins

ENVIRONMENTAL PARAMETERS	
Working temperature	-35°C to 55°C
Humidity	10% - 90% NC
Enclosure	IP30
Terminal	2.5mm ²
Dimension	140x89x27mm
Net weight	0.23kg