

MPPT Solar Charge Controller up to 48 v and up to 60 A Charging Current

Main Features

- MPPT 48V 60A Solar Charge Controller
- Automatic Battery Voltage (12/24/36/48v)
- Multi-Peak Maximum Power Tracking
- Temperature Compensated Smart Battery Charging
- MPPT Tracking Efficiency up to 99.9%
- Energy Conversion Efficiency as high as 98%
- Charging Programs for Gel, AGM, VRLA batteries
- Customizable Charging Program
- Instant Large Startup Current for Capacitive Loads
- Standard Modbus Protocol for Communications
- TVS Lighting Protection



System Description

Built-in maximum power point tracking algorithm significantly improves the energy utilization efficiency of photovoltaic system. It raises the charging efficiency by 15% to 20% compared with the conventional PWM method.

With the advanced dual-peak or multi-peak tracking technology, when the solar panel is shadowed or part of the panel fails resulting in multiple peaks on the I-V curve, the controller is still able to accurately track the maximum power point.

A combination of multiple tracking algorithms enables accurate tracking of the optimum working point on the I-V curve in an extremely short time.

The controller features a limited current charging mode. When the solar panel power exceeds a certain level and the charging current is larger than the rated current, the controller will automatically lower the charging power and bring the charging current to the rated level. This feature is critical for installations hot and sunny environment.

LED fault indicators and an LCD screen which can display abnormality information help users to quickly identify system faults.

Historical data storage function is available, and data can be stored for up to a year.



The controller is equipped with an LCD screen with which users can not only check device operating data and statuses, but also modify controller parameters.

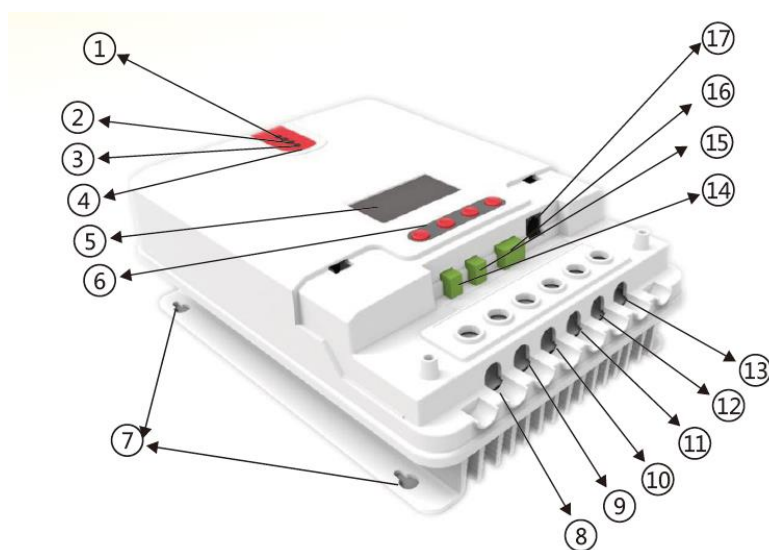
All communications are electrically isolated, so users can rest assured in usage.

The controller employs a built-in over-temperature protection mechanism. When temperature surpasses the set value, the charging current will decline in linear proportion to the temperature and discharging will be halted so as to the controller temperature, effectively keeping the controller from being damaged by overheat.

With the help of an external battery voltage sampling function, battery voltage sampling is exempted from the effect of line loss, making control more precise.

Featuring a temperature compensation function, the controller can automatically adjust charging and discharging parameters in order to extend the battery's service life.

The controller also features a battery over-temperature protection function, and when the external battery temperature exceeds the set value, charging and discharging will be shut off so as to protect components from being damaged by overheat.



1	Charging indicator	10	Battery "-" interface
2	Battery indicator	11	Load "-" interface
3	Load indicator	12	Battery "+" interface
4	Abnormality indicator	13	Load "+" interface
5	LCD screen	14	External temperature sampling interface
6	Operating keys	15	Battery voltage compensation interface
7	Installation hole	16	RS485 communication interface
8	Solar panel "+" interface	17	RS232 communication interface
9	Solar panel "-" interface		

Specifications

System Voltage	12V/24V/36V/48V Auto
Solar Input Voltage	Up to 150V (25° C), 145V (-25° C)
Solar Input Current	60A Maximum
Controller Efficiency	98% (68VDC Input, 10A Load, 25C)
MPPT Tracking Efficiency	>99%
MPPT Tracking Frequency	19 times/sec or 19 Hz
Battery Voltage	9 to 70 VDC
Battery Current	20A Maximum
Battery Type	GEL, AGM, VRLA, Customizable
Maximum Solar Input Power	800W (12v), 1600W (24v), 2400W (36v), 3200W (48v)
Maximum Output Power	240W (12v), 480W (24v), 720W (36v), 960W (48v)
Indicator LED's	Charge, Battery, Load, Fault LCS screen with details
Temp. Compensation Factor	-3mv/° C/2V (default)
Power Consumption (idle)	0.7 W to 1.2W
Accessibility/Communication	RS232 RS485
Operating Temperature	-35° C to +55° C (-31F to 131F)
Environmental (Water Proof)	IP32
Humidity (RH)	0% - 90%
Dimensions (L x W x Depth)	285mm x 205mm x 93mm
Weight	3.6kg (7.9lbs)
MTBF	>100,000 Hrs
Warranty	2 Years