

MPPT Solar Charge Controller



The maximum power point(MPPT) is mainly affected by the ambient temperature and the intensity of sunshine. The MPPT solar charge controller can intelligently detect the voltage of solar panel, and regulate the solar panel output voltage to make it work at the maximum power point of V-A curve. Compared with PWM solar charge controller, the MPPT controller increase the efficiency of PV modules by about 30%. However, due to many factors, such as the different workmanship in producing solar panels, the changing of sun illuminance, the changing of temperature, and the efficiency of the controller etc., the efficiency actually increase by 10%~30%.

Product Features

- Applicable for all kinds of batteries.
- Step up function enable it to charge when PV voltage as low as 10V/20VDC
- Maximum Power Point Tracking makes efficiency up to 99.9%
- Over Load Protection
- Over Charge Protection
- Over Discharge protection
- Lightning Protection
- Reverse Polarity Protection

Specification



| Model | SOM12/24-15A | SOM12/24-20A | SOM12/24-30A |
|------------------------------|--|--------------|--------------|
| Rated Voltage | 12/24VDC | | |
| PV Voltage | 10~40V/20~65V | | |
| PV Over Voltage Protection | 65 | | |
| Max. Charge Current | 15A | 20A | 30A 40A 60A |
| MPPT Efficiency | >99% | | |
| Battery Types | 12V or 24V rechargeable Lead-acid Battery/AGM, GEL/Lithium Battery | | |
| Self-consumption Standby | <40mA | | |
| Self-consumption with Load | <130mA | | |
| Regular Charge Voltage | 14.6V (14V~15V, Settable)/29.2V (28V~30V, Settable) | | |
| Float Charge Voltage | 13.8V/27.6V | | |
| Over Charge Disconnection | 17V/34V | | |
| Over discharge Disconnection | 11V (10.4V~11.4V Settable), 22V (20.8V~22.8V, Settable) | | |
| Over Discharge Recovery | 12.8V (12.2V~13.2V, Settable)/25.6V (24.4V~26.4V, Settable) | | |
| Environment Temperature | -25 ℃ ~+40 ℃ | | |
| Protection Level | IP20 | | |
| Cross Section of Cable | Max 16mm ² | | |

PWM Solar Charge Controller



The solar charge controller is one of key components of PV off-grid solar power system. Our PWM solar charge controller can be adopted to different charge methods based on different types of batteries and environment. With large LCD screen, buttons and USB output ports. Double solar sources inputs making it much more reliable.

Product Features

- 1.Pulse width modulation technology, which offers the good efficiency of your off-grid solar power system.
- 2.Automatically detect 12/24VDC or 24/48VDC input voltage.
- 3.With a large LCD screen display one main window and seven different sub windows: Battery voltage, PV charge current, Load discharge current, Total PV charge Ah, Total PV discharge AH, Sets of constant voltage charging, Sets of low voltage reconnect.
- 4.The constant voltage charge, low voltage disconnected and reconnect data are setttable by users.
- 5.External temperature sensor
- 6.Full electronic protections (Reverse polarity, Over current, short circuit, Over temperature, Current drawback, Lightning etc.)
- 7.High efficiency
- 8.Positive grounded
- 9.Dual terminals for solar panel inputs
- 10.Battery types can be: GEL, AGM and solar batteries etc.



| Model | SOP12/24-20A | SOP12/24-30A | SOP12/24-40A | SOP12/24-50A | SOP12/24-60A |
|-------------------------------|--|----------------------|-----------------------|-----------------------|-----------------------|
| Normal Voltage | 12V/24V, Recognize Automatically | | | | |
| Normal Battery Charge Current | 20A | 30A | 40A | 50A | 60A |
| Max. PV input power | 300W@12V 600W@24V | 450W@12V 900W@24V | 600W@12V 1200W@24V | 750W@12V 1500W@24V | 900W@12V 1800W@24V |
| Max. PV input voltage | <30V/48V | | | | |
| Min. PV input voltage | >16V/32V | | | | |
| Power Transfer Efficiency | Max. 90% | | | | |
| Standby Power Consumption | <15mA | <15mA | <20mA | <20mA | <20mA |
| Length<1m charge loop drop | <0.25V | | | | |
| Length<1m discharge loop drop | <0.05V | | | | |
| LCD Screen Display | Battery voltage, PV charge current, Load discharge current, Total PV charge Ah, Total PV discharge AH, Sets of constant voltage charging, Sets of low voltage reconnect. | | | | |
| Buttons | Menu, Load(On/Off), Up, Down | | | | |
| Ambient Temperature Range | -40 ℃ ~ 50 ℃ | | | | |
| Case Protection | IP22 | | | | |
| Float Charge | 13.8V/27.6V | | | | |
| Constant Charge | 14.6V(14V~15V Settable)/29.2V(28V~30V Settable) | | | | |
| Low Disconnected Voltage | 11V(10.4V~11.4V Settable)/22V(20.8~22.8 Settable) | | | | |
| Low reconnected Voltage | 12.8V(12.2V~13.2V Settable)/25.6V(24.4V~26.4V) Settable | | | | |
| Grounding | Postive Grounding | | | | |
| Battery Type | GEL, AGM, Solar Battery etc. | | | | |