

SMPPT series

(10-30 A)



Features:

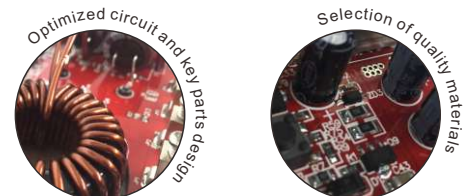
- DSP processors architecture ensure high speed and performance
- MPPT efficiency > 99%, Peak conversion efficiency > 98%
- 12V/24V/36V/48V auto work
- PV input: 75V or 125V max
- Four-stages charging mode
- USB output (only 10A)
- LCD display

Electronic protections:

- Over charge protection
- Over discharge protection
- Over temperature and over load protection
- Automatic electronic fuse
- Short circuit protection of load and PV
- Input over voltage protection
- Reverse current protection at night
- Reverse connection protection of PV, load, and battery
- Overheat protection and short circuit protection of USB output

Displays:

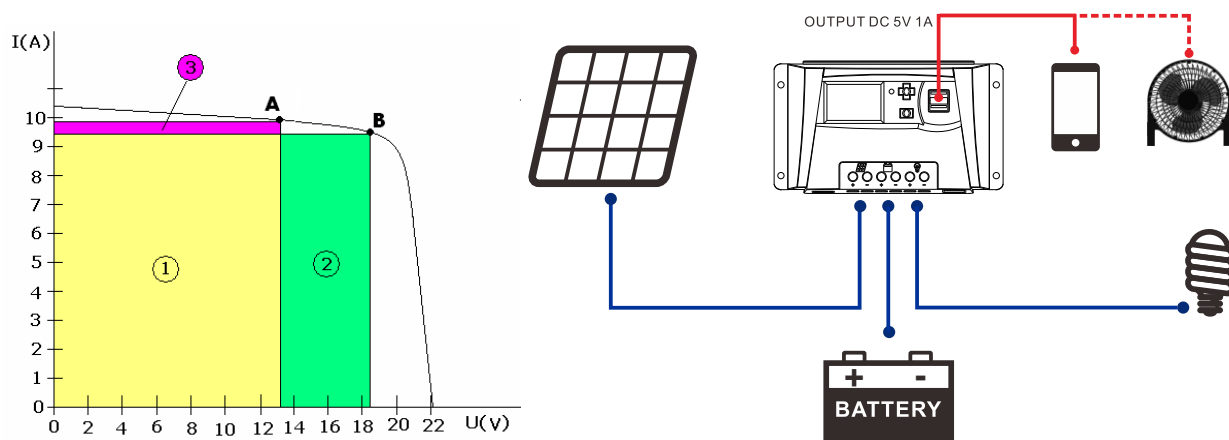
- Vivid LCD graphic symbols
---presents working status and related parameters explicitly



MPPT introduction

MPPT means maximum power point tracking. MPPT technology is the technology to track the maximum power point of the solar panels.

Under a certain condition of temperature and light, the I-V curve of the solar panels is as the right chart. The output power of solar panel is product of I and V, which means rectangular area of the points on I-V curve for solar panels. See the right chart, when the solar panels work at point A, the output power is $P_a=1+3$; when solar panels work at point B, the output power is $P_b=1+2$. Obviously, we can see $P_b > P_a$. The purpose of MPPT technology is to keep the solar panels always working at point B when the outer conditions change.



Technical Data

Model	SMPPT10D		SMPPT20D		SMPPT30D	
Default Battery System Voltage	12V/24V DC (adjustable)				12V/24V/36V/48V DC (adjustable)	
CONTROLLER INPUT						
PV Open Circuit Voltage	75V		125V	75V	125V	
Max PV Input Power(12V)	150W	300W	450W	600W	600W	800W
Max PV Input Power(24V)	300W		600W	1200W	1200W	1600W
Max PV Input Power(36V)	—		—		1800W	2400W
Max PV Input Power(48V)	—		—		2400W	3200W
BATTERY						
Absorption Voltage	14.6VDC/29.2VDC				14.6VDC/29.2VDC/43.8VDC/58.4VDC	
Refolat Voltage	14.4VDC/28.8VDC				14.4VDC/28.8VDC/43.2VDC/57.6VDC	
Float Voltage	13.8VDC/27.6VDC				13.8VDC/27.6VDC/41.4VDC/55.2VDC	
Low Voltage Protection Point	10.5VDC/21.0VDC				10.5VDC/21.0VDC/31.5VDC/42.0VDC	
DC OUTPUT						
Output Voltage	11.0~14.3VDC/22.0~28.6VDC				11.0-14.3VDC/22.0-28.6VDC/33-42.9VDC/44-57.4VDC	
Max Charging Current	10A	20A	30A	40A	50A	60A
Peak Conversion Efficiency	98%(MPPT Efficiency 99%)					
Low Voltage Alarm	11.5VDC/23.0VDC				11.5VDC/23.0VDC/34.5VDC/46.0VDC	
Low Voltage Cutoff	10.5VDC/21.0VDC				10.5VDC/21.0VDC/31.5VDC/42.0VDC	
Low Voltage Recovery	12.6VDC/25.2VDC				11.5VDC/23.0VDC/34.5VDC/46.0VDC	
Charge Mode	MPPT,PWM,constant current-constant voltage,function of automatic protection for storage battery					
Radiating Mode	Automatic cooling					
Working Mode	Four stage:Absorption CC,Absorption CV,Float CC,Float CV					
DISPLAY & PROTECTION						
LCD Display	Charge voltage,Charge current,Battery voltage,Battery capacity,Output current					