## Introduction

This is a <u>MPPT (maximum Power Point Tracking) smart solar controller</u>, With charging and discharging function, increasing 30% ~ 60% efficiency than traditional PWM controller. It has automatic recognition function, three Stages charging function, also supports many kinds of battery charging and discharging, RS232 communication etc, It's our company's <u>MPPT solar controller</u> e-SMART series.

## **Features**

- 1. MPPT charging mode, peaek efficincy up to 99%;
- 2. DC12V / 24V / 48V battery system automatic recognition;
- 3. Maximum PV input voltage up to DC100V;
- 4. Three stages charge: fast charge (MPPT), constant voltage charge, floating charge;
- 5. Three option of discharge: on mode and off mode and PV voltage (solar) control mode.
- 6. Users can choose 4 kinds of commonly standard batteries (Sealed lead acid, Vented, Gel, NiCd);
- 7. Digital tube can display battery voltage and charging current;
- 8. RS232 communication, we can offer communication protocol also;
- 9. This controller can be paralleled infinitely.
- 10. CE, RoHS and FCC Certifications are approved.
- 11. 2 years warranty; 3 ~ 10 years extended technical service.

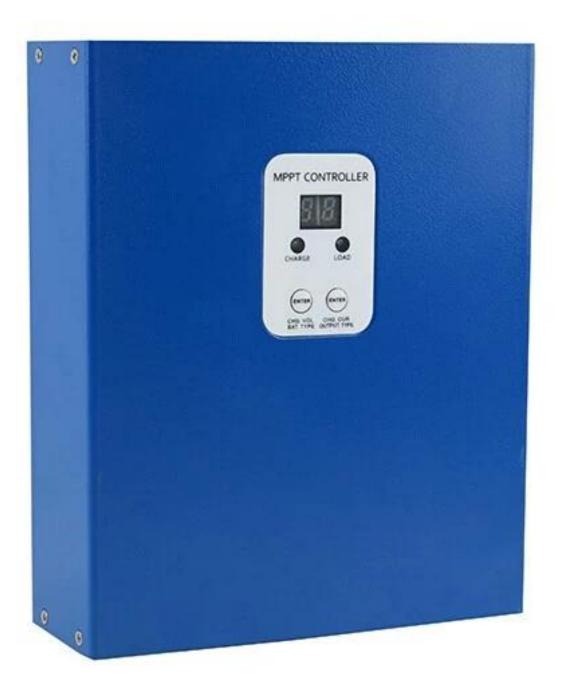
## Parameter

MPPT solar controller modes: I-P-e-SMART-12V / 24V / 48V-series		40A	
Charge mode	MPPT (maximum po	IPPT (maximum power point tracking)	
Charge method	Three stages: consta	hree stages: constant current (MPPT), constant voltage, floating charge	
System type	DC12V / 24V / 48V	Automatic recognition	
System voltage	12V system	DC9V ~ DC15V	
	24V system	DC18V ~ DC30V	
	48V system	DC36V ~ DC60V	
Soft start time	12V / 24V / 48V system	≤3S	
Dynamic response recovery and range	12V / 24V / 48V system	500us	
MPPT efficiency	12V / 24V / 48V system	≥96.5%, ≤99%	
INPUT CHARACTERIS	TICS		
MPPT working voltage and Range	12V system	DC14V ~ DC100V	
	24V system	DC30 ~ DC100V	
	48V system	DC60 ~ DC100V	
Low voltage input Protection point	12V system	DC14V	
	24V system	DC30V	
	48V system	DC60V	

I	101/	DC10//	
Low voltage input	12V system	DC18V	
Pocovory point 24V system		DC34V	
48V system		DC65V	
nput over voltage 12V / 24V / 48V		DC110V	
protection point	system		
Input over voltage	12V / 24V / 48V	DC100V	
recovery point	system	F C O	
	12V system (W)	568	
Maximum PV power	24V system (W)	1136	
	48V system (W)	2270	
CHARGE CHRECTRES	TICS		
Selectable Battery			
Types	12V / 24V / 48V	Sealed lead acid, vented, Gel, NiCd battery	
(Default type is GEL		(Other types of the batteries also can be defined))	
battery)	-		
Constant Voltage	12V / 24V / 48V	Please check the charge voltage according to the battery	
_	system	type form.	
Floating Charge	12V / 24V / 48V	Please check the charge voltage according to the battery	
Voltage	system	type form.	
Rated Input Current	12V / 24V / 48V	40A	
· · · · · · ·	system		
Current-limiting	12V / 24V / 48V	45A	
Protection	system	45A	
	12V / 24V / 48V		
Temperature Factor	system	± 0.02% / ℃	
Temperature	12V / 24V / 48V		
Compensation	system	14.2V- (The highest temperature-25 °C) $*$ 0.3	
Output Ripples	12V / 24V / 48V		
(peak)	system	200mV	
····	System		
Output Voltage	12V / 24V / 48V	1 50/	
Stability	system	≤ ± 1.5%	
Precision			
Output Discharge Ch	aracteristics		
	aracteristics	Base on battery voltage	
Output Discharge Ch	aracteristics		
<mark>Output Discharge Ch</mark> Output voltage	aracteristics	Base on battery voltage Default 10.5V; recovery 11V; custom available;	
Output Discharge Ch Output voltage Low voltage output Protection point		Default 10.5V; recovery 11V; custom available;	
Output Discharge Ch Output voltage Low voltage output Protection point Rated output Current		Default 10.5V; recovery 11V; custom available; 30A	
Output Discharge Ch Output voltage Low voltage output Protection point Rated output Current The output control		Default 10.5V; recovery 11V; custom available; 30A Always on, always off, PV voltage control switch	
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Environment	
Humidity	0 ~ 90% RH (no condense)
Altitude	0 ~ 3000m
Operating Temperature	-20 °C ~ + 50 °C
Storage Temperature	-40 °C ~ + 75 °C
Atmospheric Pressure	70 ~ 106kPa

# **Products** photos

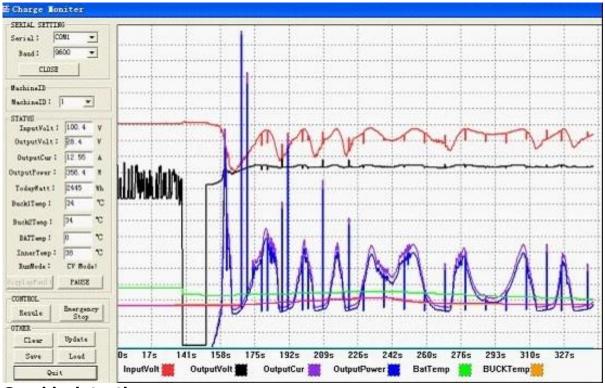




Upper software and test software display information and set parameters

SolarEagle						
System(S) Control(C) Statistics(T) Language(L) Help(H)						
x 🔊 🗶 🍬	Guest Monitored device: Device mode:					
🥵 Devices	Overview Parameters setting Real-time control					
		Input information				
		PV voltage: 0.0 V Environment temperature: 0.0 °C				
	Battery type: Load type:					
	Main fireware version: Model name:					
	Charge information	Real-time events				
	Charge voltage: 0.0 V Charge power: 0.0 W Charge current: 0.0 A Total power: 0.0 Wh Battery temperature: 0.0 °C	ID Level Time Event				

#### Graphical: upper software



Graphical: testing ware

# Certificate

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## Company







