Product Description

MPPT solar controller (also known as intelligent solar charge controller, solar charge controller, PV controller) can intelligently regulate the working voltage of solar panels, letting the solar panels always work at Maximum Power Point of V-A curve. Compared with ordinary solar controller, this MPPT controller can increase the efficiency of PV modules by 30%-60%. This is a smart maximum power point tracking (MPPT) solar charge controller,which has a system to automatically identify, PV Wide input voltage range, for a variety of storage Battery charge, is a high-end off-grid solar charge controller.

Remarks:DC12V/24V/48V battery system automatic recognised.

Hot sales features

1.MPPT charge mode,conversion efficiency up to 99%,can save 30%~60% of the power than traditional controller.
2.With high efficient MPPT operation scheme and adopting TI28035 chip,make the Solar panels utilization rate up to 99%.
3.Intelligent design,the device can be upgraded online,customers enjoy the lifelong upgrade service.
4.Compliance with the 2002/95/EC environment protecting demand, doesn't include the Cadmium, hydride and fluoride

5.Adopting the well-known brand components,the devices can suffer the temperature not less than 105°C.The service life is designed to extend to 10 years in theory.

6.Charge mode: three stages (fast charge,constant charge,floating charge)

7.12V/24V/48V system auto recognize for easy control.

8.Nominal maximum solar input is DC 150V

9.Connected Battery Type choosing: Sealed lead acid, vented, Gel, NiCd battery. Other types of the batteries can also be defined.

10.Communication Port.RS232 communication can provide communication protocol, This make the unified and integrated management more convenient to customers.

11.With providing a Microsoft by connecting with PC that can show the working state and all parameters in 7 languages.

Product technical parameters

MPPT solar controller modes： I-P-e-SMART-12V/24V/48V-series		15A	20A	25A	30A	40A
Charge mode	MPPT(maximum power point tracking)					
Charge method	Three 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 time	12V/24V/48V system	500us				
MPPT efficiency	12V/24V/48V system	≥96.5%,≤99%				
INPUT CHARACTERISTICS						
MPPT working voltage range	12V system	DC14V~DC100V				
	24V system	DC30~DC100V				
	48V system	DC60~DC100V				
Low input voltage protection point	12V system	DC14V				
	24V system	DC30V				
	48V system	DC60V				
Low input voltage Recovery point	12V system	DC18V				
	24V system	DC34V				
	48V system	DC65V				
High input voltage protection point	12V/24V/48V system	DC110				
High input voltage recovery point	12V/24V/48V system	DC100V				
Maximum PV power	12V system (W)	213	284	355	426	568
	24V system (W)	426	568	710	852	1136
	48V system (W)	852	1136	1420	1704	2272
CHARGE CHRECTRESTICS						
Selectable Battery Types (Default Gel battery)	12V/24V/48V system	Sealed lead acid, Vented, Gel, NiCd battery (Other types of the batteries also can be defined)，				
Constant Voltage	12V/24V/48V system	Please check the charge voltage according to the battery type form.				
Floating Charge Voltage	12V/24V/48V system					
Rated Input Current	12V/24V/48V system	15A	20A	25A	30A	40A
Current-limit Protection	12V/24V/48V system	20A	25A	30A	35A	45A

Temperature Factor	12V/24V/48V system	±0.02%/℃
Temperature Compensation	12V/24V/48V system	14.2V-(The highest temperature-25℃)*0.3
Output Ripples(peak)	12V/24V/48V system	200mV
Output Voltage Stability Precision	12V/24V/48V system	≤±1.5%

Output Discharge Characteristics	
Output voltage	Base on battery voltage
Low voltage output Protection point	Default 10.5V; Recovery 11V; It can be adjustable.
Rated output Current	30A
The output control	On mode, Off mode, PV voltage control mode
Output control set mode	Controller button or PC software

Display	
LED digital tube display	Battery voltage, Charge current
LED light display	Charging indicator light, LOAD indicator light
PC（communication port）	RS232

Protection	
Low input voltage protection	Check the input characteristics
High input voltage protection	Check the input characteristics
Charge overpower protection	yes
Discharge low voltage protection	yes
Discharge high current protection	yes
Temperature protection	yes

Other Parameters		
Noise	≤40dB	
Thermal heat-dissipating method	Itself cooling	Fan cooling
Components	Imported material With EU standards.	
Certification	CE\FCC\RoHS	

Physical	
Measurement D x W x H(mm)	205*168*60
package size D x W x H(mm)	265*196*110
N.G(KG)	1.8kg
G.N(KG)	2kg
Mechanical Protection	IP25

Environment	
Humidity	0~90%RH (no condense)
Altitude	0~3000m
Operating Temperature	-20℃ ~ +50℃
Storage Temperature	-40℃ ~ +75℃
Atmospheric Pressure	70~106kPa

Remarks
The specification is only for reference. Subject to change without prior notice

We provide OEM and ODM service. The 36V/72V/96V model also can be customized for you.
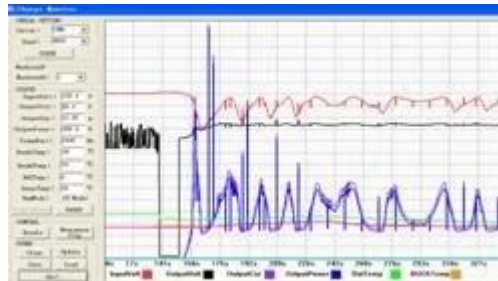

Products Package

Number	quantity	Items included
1	1 pc	Controller color (blue or green is optional OEM ODM order is highly welcome)
2	2 pc	Hangers (used for controller hanging on the wall)
3	4 set	Screw
4	1 pc	RJ45 to RS232 cable
5	1 pc	Battery temperature sensor wire
6	2 pc	Fuse（DC output）
7	1 pc	User instruction（manual）
8	1 pc	CD

Controller PC upper software and testing software

1.Controller PC upper software and testing software can display information. Users can set parameters via PC upper software.

Graphical: PC upper software   Graphical: testing software

1.1 The first picture show solar controller working status(charge and discharge), PV voltage, charge voltage, charge current etc. Users can choose the type of the batteries, DC-load output control method.
1.2 We provide PC upper software. Testing software is not including. (user's PC has software development platform, if needed, please apply for it)

2. Information display and parameter setting.

Figure 2.1   Figure 2.2

2.1 ENTER1 button: press left ENTER1 show 2 digital battery voltage（if it is charging, then shows 2 digital charge voltage), for example,the battery voltage or charge voltage is 13.5V, it shows13,please see Figure 2.1;Press ENTER1 a little bit longer, users can set battery types.

2.2 ENTER2 button: press right ENTER2 show 2 digital battery current (if it is not charging, then it display 00, if the charge current is 22.5A, then it shows 22,please see Figure 2.2); press ENTER2 button a little bit longer, DC load control can be set (On mode, Off mode, PV voltage control mode) Please see more details in the user manual.

Other detailed parameters
Please see the outline of the design, technical documents, user manuals etc.
Research and development department made 2th version on May 5, 2014.