Introduction

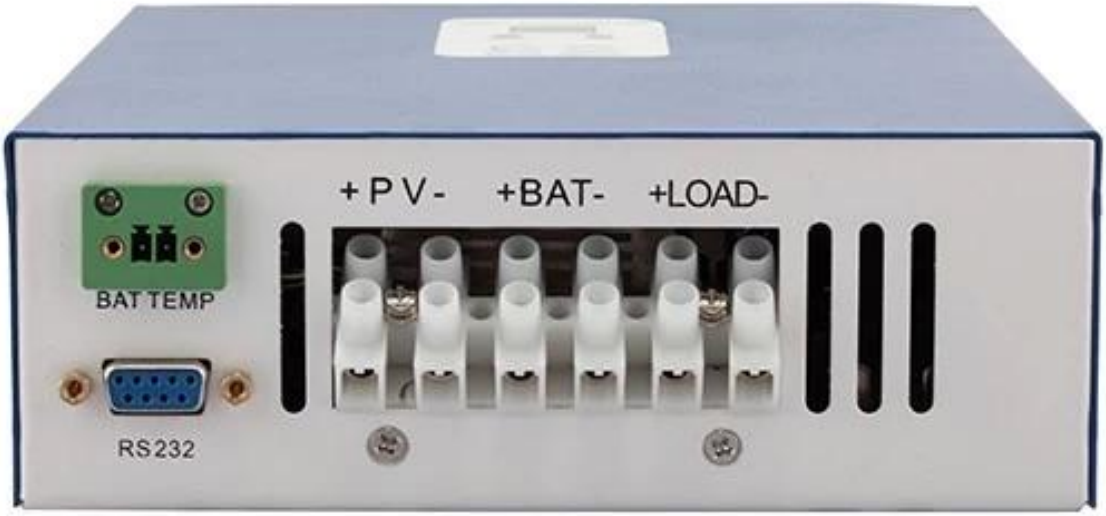
This is a MPPT (maximum Power Point Tracking) smart solar controller, with charging and discharging function, increasing 30%~60% efficiency than traditional PWM controller. It has automatic recognition function, three Stages charging function, also supports many kinds of battery charging and discharging,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

Features

1. **MPPT charging mode, peak efficiency up to 99%**, saving 30%~60% solar panel than traditional PWM controller.
2. **DC12V/24V/48V battery system automatic recognition**, users would like to use in different system conveniently.
3. DC12V/24V/48V system, **maximum PV input voltage up to DC100V**.
4. Charge type: **three stages charge** fast charge(MPPT), constant voltage,
floating charge, protected our battery, lead to a long use age.
5. Discharge type owns always on pattern and always off pattern, it also has PV voltage solar controlling switch pattern.
6. Clients can **auto select any one in the 4 kinds of commonly used batteries**, Sealed lead acid, vented, Gel, NiCd and custom other batteries.
7. **Digital tube display** controller battery voltage and charging current,upper computer display various parameters, such as model, PV input voltage, battery types, battery voltage, charging current, charging power, working condition etc.
8. **RS232 communication**, and that providing communication protocol, it's convenient for customer's integration management.
9. This controller could be **paralleled infinitely.**
10. **CE, RoHS FCC Certifications approved**; cooperating with clients through the other certifications.
11. **2 years warranty**; 3~10 years extended technical service.

Products photos


MPPT CONTROLLER

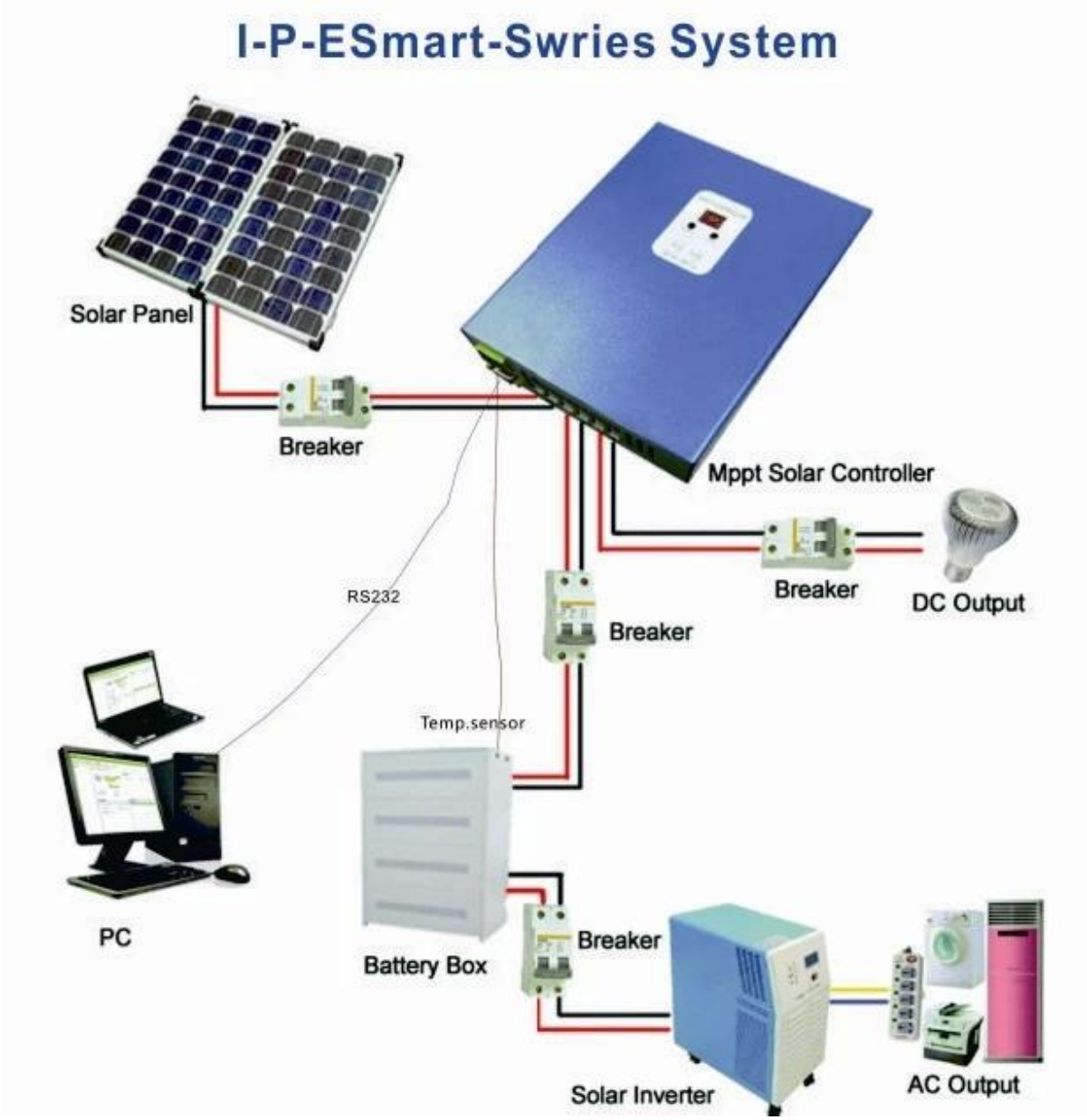

+PV-
+BAT-
+LOAD-
BAT TEMP
RS232

Parameters

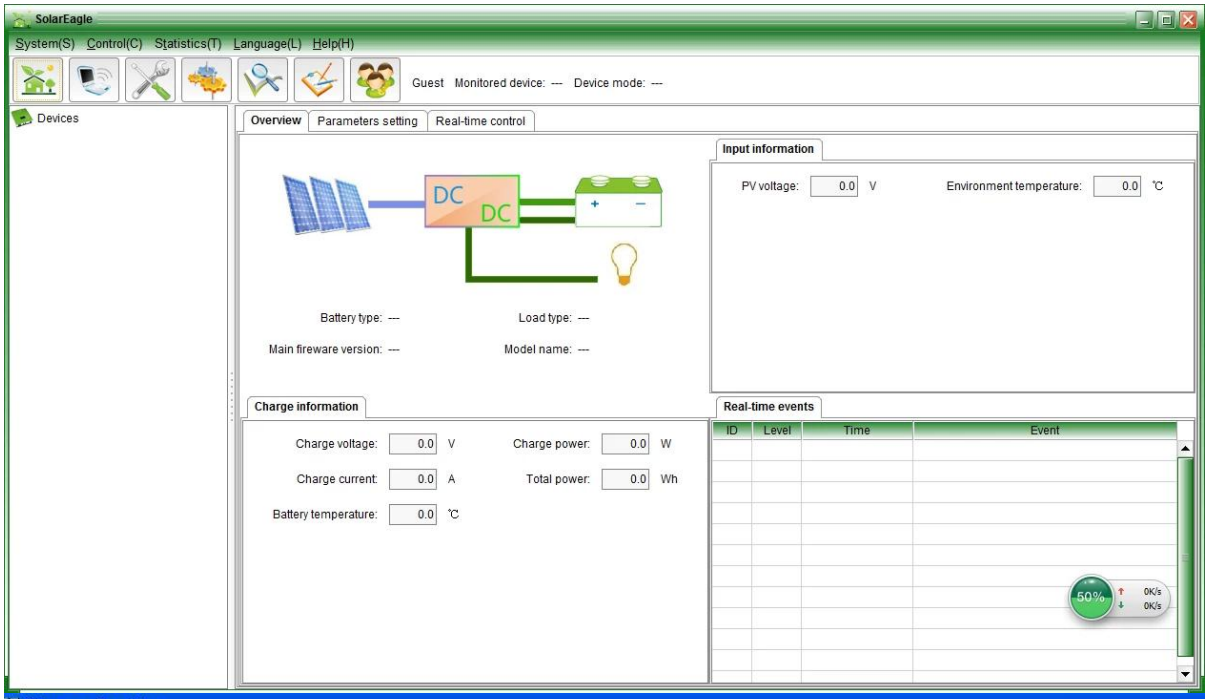
MPPT solar controller modes I-P-e-SMART-12V/24V/48V-series		**15A**	**20A**	**25A**	**30A**	**40A**
Charge mode	MPPT(maximum power point tracking)					
Charge method	Three stages: constant current(MPPT),constant voltage,floating charge					
System type	DC12V/24V/48V	Automatic recognition				
System voltage	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				

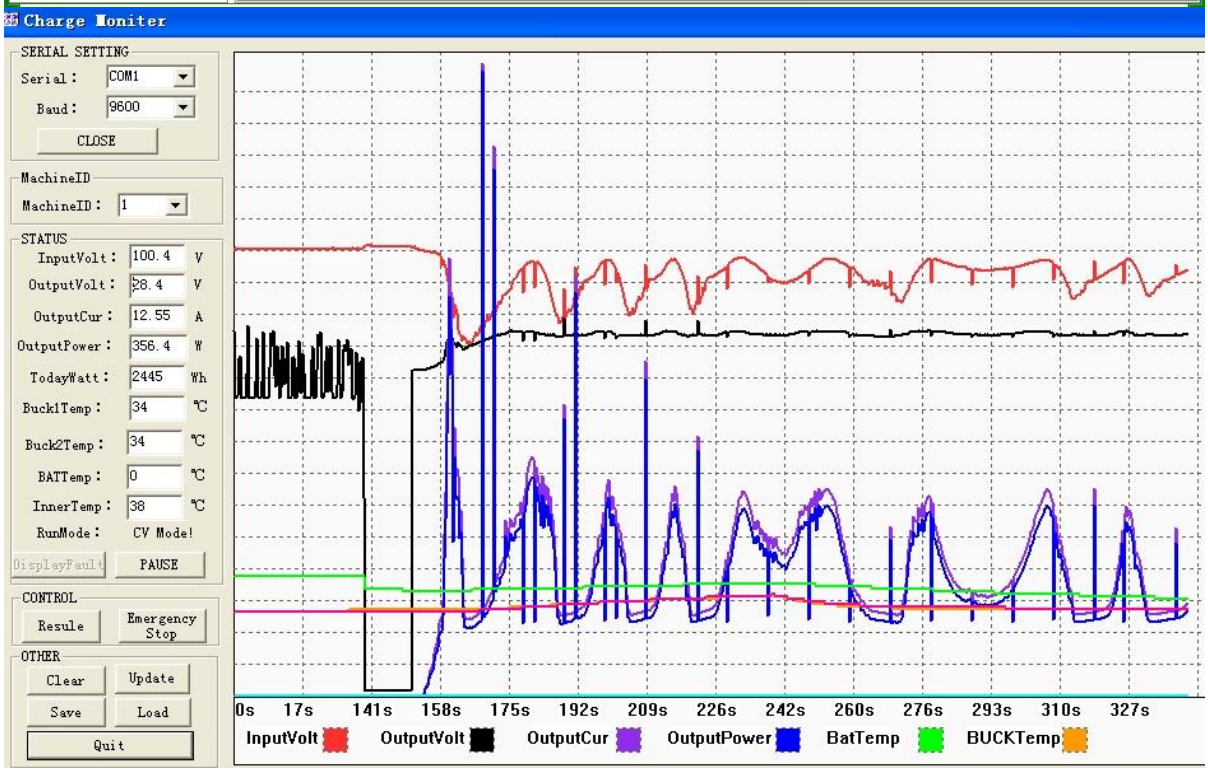
Output Ripples(peak)	12V/24V/48V system	200mV
Output Voltage Stability Precision	12V/24V/48V system	≤±1.5%
Output Discharge Characteristics		
Output voltage		Base on battery voltage
Low voltage output Protection point		Default 10.5V; Recovery 11V; It can be adjustable.
Rated output Current		30A
The output 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

Connection diagram



Upper software





Company photos

2014 Shanghai Exhibition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