### **Feature**

- 1. MPPT charging mode, peak efficiency 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.

## **Protection**

Input Low Voltage Protection;

Input Overvoltage Protection;

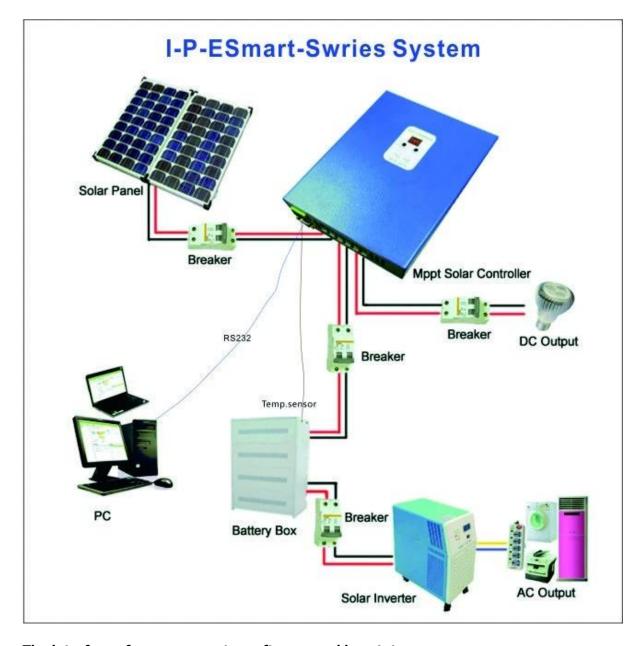
Charge over voltage power Protection;

Low Voltage output Protection;

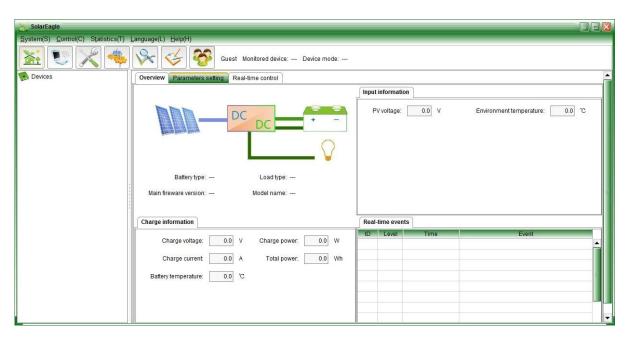
Rated output Current protection;

Temperature Protection.

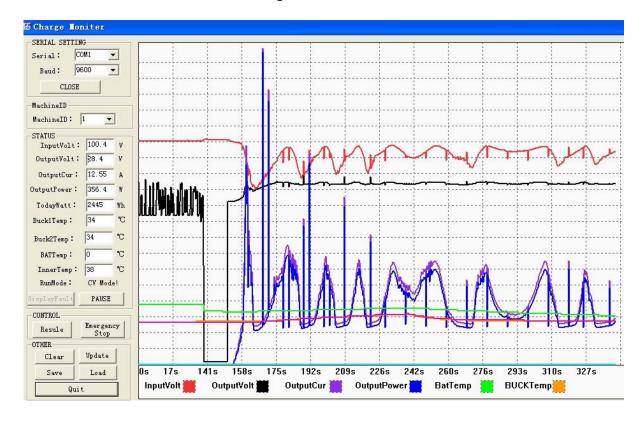
## **Connection diagram**



#### The interface of upper computer software working state



#### The interface of test software working state



### **Parameter**

MPPT solar controller modes  I-P-e-SMART-12V/24V/48V-series		30A
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	<b>≤</b> 3S
Dynamic response recovery and range	12V/24V/48V system	500us
MPPT efficiency	12V/24V/48V system	≥96.5%,≤99%
INPUT CHARACTERISTICS		
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
Low voltage input Recovery point	12V system	DC18V
	24V system	DC34V
	48V system	DC65V
Input over voltage protection point	12V/24V/48V system	DC110V
Input over voltage recovery point	12V/24V/48V system	DC100V

	12V system (W)	426W
Maximum PV power	24V system (W)	852W
Power	48V system (W)	1704W
CHARGE CHRECTRESTICS	TOV System (VV)	170711
Selectable Battery Types		
(Default type is GEL	12V/24V/48V	Sealed lead acid, vented, Gel, NiCd battery
battery)	system	(Other types of the batteries also can be defined)
Constant Voltage	12V/24V/48V	Please check the charge voltage according to the
	system	battery type form.
Floating Charge Voltage	12V/24V/48V	Please check the charge voltage according to the
	system	battery type form.
Rated Input Current	12V/24V/48V	30A
	system	JUA
Current-limiting	12V/24V/48V	35A
Protection	system	33A
Temperature Factor	12V/24V/48V	±0.02%/°C
	system	±0.0270/ C
Temperature Compensation	12V/24V/48V	14.2V-(The highest temperature-25°C)*0.3
	system	The fighest temperature 25 c/ 0.5
Output Ripples(peak)	12V/24V/48V	200mV
	system	200111
Output Voltage Stability	12V/24V/48V	≤±1.5%
Precision	system	
Output Discharge Characte	eristics	
Output voltage		Base on battery voltage
Low voltage output		Default 10.5V; recovery 11V; custom available;
Protection point		
Rated output Current		30A
The output control		Always on, always off, PV voltage control switch
Output control set mode		Controller button or upper computer
Display		
LED digital tube display		Battery voltage, charge current
LED light display		Charging indicator light, LOAD indicator light
PC ☐communication port ☐		RS232
Other Parameters		
Noise		≤40dB
Thermal heat-dissipating method		Itself cooling
Components		Imported material, with EU standards.
Certification Certification		CE\FCC\ROHS
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

# **Packing and shipping**









## Company









