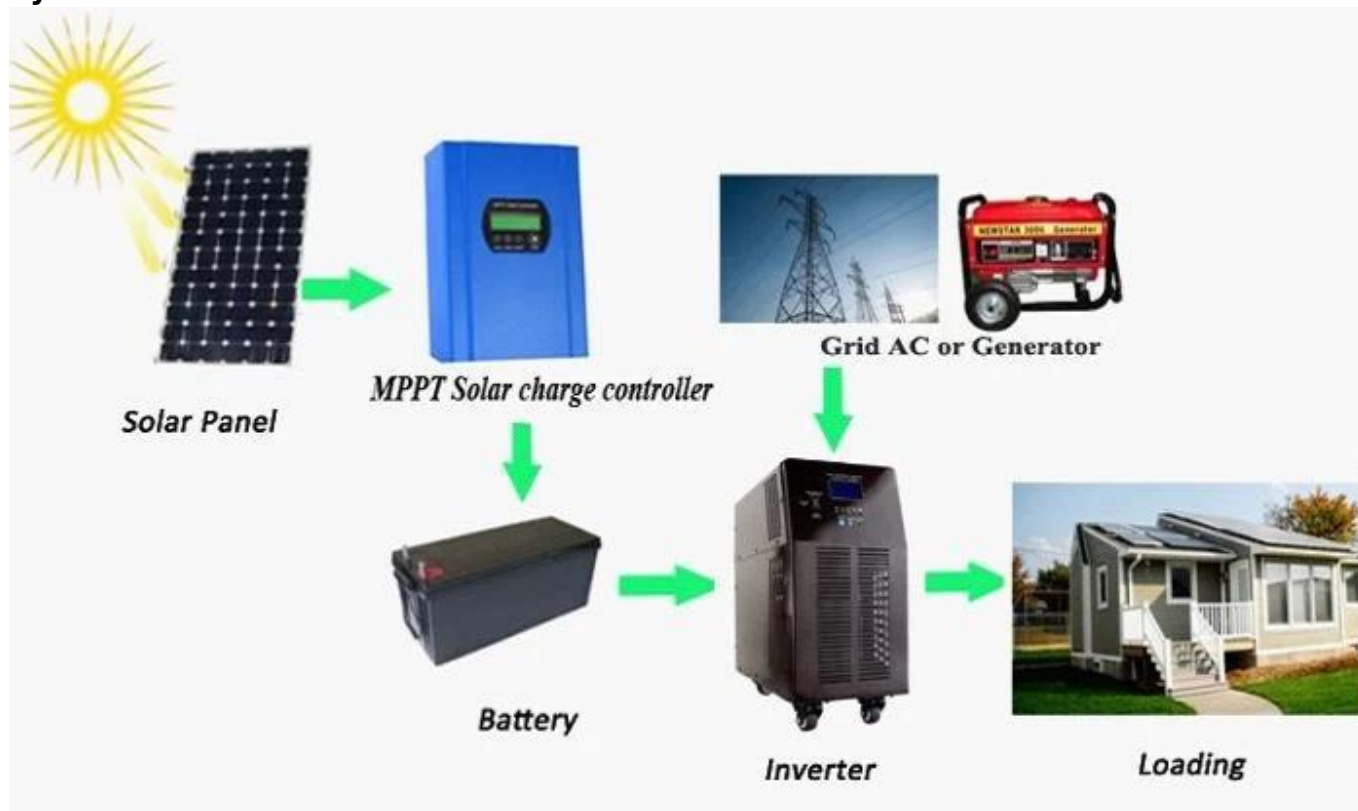


# High Conversion Efficiency Wide Range Input Voltage DC12V/24V/48V/96V System Automatic Identification

I-P- SMART1-DC12V/24V/48V/96V-[30A MPPT Solar Controller](#). With MPPT, it can target the highest output possible from PV panels, make efficiency higher upto 30%~60% than traditional PWM ones. It can store energy to different kinds of batteries(Gel,Vented, Sealed,NiCd)

## System



## Features

1. Peak efficiency upto 99% with [MPPT](#), increasing 30%~60% efficiency than traditional controller.
2. 12v/24v/48v/96V system voltage automatic recognize.
3. Maximum input PV voltage upto DC300V.
4. 105degrees can be suffered by good components.
5. Charge mode: three stages (fast charge, constant charge, floating charge)
6. Support kinds of batteries:Gel,Sealed lead acid,vented,NiCd,etc.
7. LCD and LEDs show parameters and system information,like PV input voltage,battery voltage,charge current,charge power,etc.
8. Port RS232 or connects to PC with upper software to show working state and parameters in 11 languages.
9. CE, RoHS, FCC certifications approved.
10. 2 years warranty;3~10 years extended technical service.

## Parameter

Model: <a href="#">I-P-SMART1-DC12V/24V/48V/96v series</a>		<a href="#">30A</a>
Charge Mode	Maximum Power Point Tracking	
Method	3 stages: fast charge(MPPT),constant voltage, floating charge	
System Type	DC12V/24V/48V	Automatic recognition
System Voltage	12V system	DC9V~DC15V
	24V system	DC18V~DC30V
	48Vsystem	DC36V~DC60V
	96Vsystem	DC72V~DC120V
Soft Start Time	12V/24V/48V/96v system	≤10S
Dynamic Response Recovery Time	12V/24V/48V/96v system	500us
Conversion Efficiency	12V/24V/48V/96v system	≥96.5%,≤99%

PV Modules Utilization Rate	12V/24V/48V/96v system	≥99%
<b>Input Characteristics</b>		
MPPT Working Voltage and Range	12V system	DC18V~DC150V
	24V system	DC34~DC150V
	48V system	DC65~DC150V
	96V system	DC125~DC300V
Low Voltage Input Protection Point	12V system	DC16V
	24V system	DC30V
	48V system	DC60V
	96V system	DC120V
Low Voltage Input Recovery Point	12V system	DC22V
	24V system	DC34V
	48V system	DC65V
	96V system	DC125V
Max DC Voltage	12V/24V/48V system	DC160V
	96V system	DC300V
Input Overvoltage Protection Point	12V/24V/48V system	DC150
	96V system	DC300V
Input Overvoltage Recovery Point	12V/24V/48V system	DC145V
	96V system	DC295V
Max. PV Power	12V system	450W
	24V system	850W
	48V system	1700W
	96V system	3400W
<b>Output Characteristics</b>		
Selectable Battery Types (Default type is GEL battery)	12V/24V/48V/96Vsystem	Sealed lead acid, vented, Gel, NiCd battery (Other types of the batteries also can be defined)
Constant Voltage	12V/24V/48V/96V system	Please check the charge voltage according to the battery type form.
Floating Charge Voltage	12V/24V/48V/96Vsystem	
Over Charge Protection Voltage	12V system	14.6V
	24V system	29.2V
	48V system	58.4V
	96V system	116.8V
Rated Output Current	12V/24V/48V system	30A
Temperature Factor	12V/24V/48V system	±0.02%/°C
Temperature Compensation	12V/24V/48V/96v system	14.2V-(The highest temperature-25°C)*0.3
Output Ripples(peak)	12V/24V/48V/96v system	200mV
Output Voltage Stability Precision	12V/24V/48V/96v system	≤±1.5%
<b>Display</b>		
LCD display		Input, output parameter and output power etc (check the LCD display instruction)
LED display		3 LEDs indicates: Fault indicate light, charge indicate light, power source indicate light(check the LED instruction)
Software Control through PC(communication port)		RS232 (matching) or LAN(optional)
<b>Protection</b>		
Input Low Voltage Protection		Check the input characteristics
Input Overvoltage Protection		Check the input characteristics
Input Polarity Reversal Protection		yes
Output Overvoltage Protection		Check the output characteristics
Output Polarity Reversal Protection		yes
Short-circuit Protection		Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit
Temperature Protection		95°C
Temperature protection		Above 85°C,decrease the output power, decrease 3A per degree.
<b>Other Parameters</b>		
Noise		≤40dB
Thermal methods		Forced air cooling, fan speed rate regulated by temperature, when inner temperature is too low, fan ran slowly or stop; when controller stop working, fan also stop ran.
Components		World brand raw materials. Compliance with EU standards. All rated temperature of electrolytic capacitors not less than 105°C
Smell		No peculiar smell and toxic substances.
Environment Protection		Meet the 2002/95/EC,no cadmium hydride and fluoride
<b>Physical</b>		
Measurement DxWxH (mm)		270*185*90
N.G(kg)		3
G.N(kg)		4.5
Color		Blue/Green (optional)
Safety		CE, RoHS, PSE,FCC
EMC		EN61000
Type of Mechanical Protection		IP21
Environment		
Humidity		0~90%RH ( no condense)

Altitude	0~3000m
Operating Temperature	-20°C ~ +40°C
Storage Temperature	-40°C ~ +75°C
Atmospheric Pressure	70~106kPa

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 custom made for you

### RS232 Connect way

