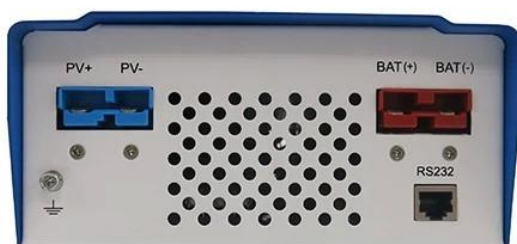


China factory [12V/24V/48V](#) Automatic [MPPT solar charge controller](#) 60a





## Core properties of mppt charger [controller](#)

1. Conversion efficiency 95%-99%, take most from solar panels
2. Charge for all kinds of batteries, 3 charge stage to protect battery.
3. All kinds of battery are available .
4. commucation port :RS232.
5. Software to monitor 100pcs equipments at the same time on one screen on a computer.



## Parameter of [mppt charger controller](#)

Model: I-P-SMART1 -DC12V/24V/48V-series		40A	50A	60A	
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		
Soft Start Time	12V/24V/48Vsystem		≤10S		
Dynamic Response Recovery Time	12V/24V/48Vsystem		500us		
Conversion Efficiency	12V/24V/48Vsystem		≥96.5%,≤99%		
PV Modules Utilization Rate	12V/24V/48Vsystem		≥99%		
Input Characteristics					
MPPT Working Voltage and Range	12V system		DC18V~DC150V		
	24V system		DC34~DC150V		
	48V system		DC65~DC150V		
Low Voltage Input Protection Point	12V system		DC16V		
	24V system		DC30V		
	48V system		DC60V		
Low Voltage Input Recovery Point	12V system		DC22V		
	24V system		DC34V		
	48V system		DC65V		
Max DC Voltage	12V/24V/48V system		DC160V		
Input Overvoltage Protection Point	12V/24V/48V system		DC150		
Input Overvoltage Recovery Point	12V/24V/48V system		DC145V		
Max. PV Power	12V system		570W	700W	900W
	24V system		1130W	1400W	1700W
	48V system		2270W	2800W	3400W
Output Characteristics					
Selectable Battery Types (Default type is GEL battery)	12V/24V/48Vsystem		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		14.6V		
Over Charge Protection Voltage	12V system		29.2V		
	24V system		58.4V		
	48V system				
Rated Output Current	12V/24V/48V system		40A	50A	60A
Current-limiting Protection	12V/24V/48V system		44A	55A	66A
Temperature Factor	12V/24V/48V system		±0.02%/°C		
Temperature Compensation	12V/24V/48V system		14.2V-(The highest temperature-25°C)*0.3		
Output Ripples(peak)	12V/24V/48V system		200mV		
Output Voltage Stability Precision	12V/24V/48V system		≤±1.5%		
Display					
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)		
Protection					
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℃		

Temperature protection	Above 85°C,decrease the output power,decrease 3A per degree.
Other Parameters	
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 and toxic substances.
Environment Protection	Meet the 2002/95/EC,no cadmium hydride and fluoride
Physical	
Measurement DxWxH(mm)	270*185*90
N.G(kg)	3
G.N(kg)	3.6
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

Note: OEM and ODM service are provided. The 36V/72V/96V model also can be custom made for you  
Product Parts

NO.	Quantity	Description
1	1 unit	Charge controller
2	2 pc	Terminals
3	2 pc	Gallow pulley (For install the controller on the wall )
4	4 set	Screw (For install the controller on the wall )
5	1 pc	232 turn to RJ45 communication cable
6	1 pc	User manual
7	1 pc	Temperature sensing wire
8	2 pc	Fuse wire