Introduction

This is a <u>solar charge controller 20A \sim 30A</u> that have automatic max. power point tracking function with high

efficiency that almost 30%~60% higher than traditional charge controller. It also features the functions of system

voltage auto recognition, wide rang of PV input ,charge for all kinds of battery,automatic discharge control,RS

232 / LAN communication function and so on. It is very high-end product for solar market with its best partner \underline{I} -

P-TPI2 model Inverter/Charger/UPS.

Application

1. Industrial, commercial, household off grid solar energy generation system

- 2. Movable off grid solar energy generation system
- 3. Communication base stations
- 4. New energy education business
- 5. Solar Monitoring System
- 6. Solar Street Lighting System

Reasons to choose

1. 30%-60% solar panels saved

1) Conversion efficiency 95%-99%, take most from solar panels

2) Charge for all kinds of batteries, 3 charge stage to protect battery.

Reduce consumption, cost saved.

2. Data monitor and set. Parameters from solar panels like charge current/voltage and IP gate address, total

generation power, etc can be showed. 4 kinds DC load control, automaticly save ernergy both from human and

solar.

- 3. Lan commucation and RS232 port.
- 4. Software to monitor 100pcs equipments at the same time on one screen on a computer.

Features

- 1. <u>MPPT charge</u> mode, conversion efficiency upto 99%
- 2. 12V/24V/48V system auto recognize;
- 3. Wide range of PV input with max. is DC150V .
- 4. Unlimited parallel connection

5. Journal function , Save function set ,Date ,time ,Generating capacity and so on .

6.Charge mode: three stages (fast charge ,constant charge ,floating charge) .lt prolongs service life of the

batteries .

7.Discharge mode: ON/OFF mode, double time control mode,PV voltage control mode ,PV voltage+time delay

mode and so on .

8.Recommended battery types: sealed lead acid, vented, gel, NiCd battery. Other types of the batteries can also

be defined.

9.Most information could be provide by LCD and LED like: model no.,PV input voltage,battery type,battery

voltage, charging current, charging power, working status and so on. Also customer's information like company

name, website and logo can be added into Solar Eagle software.

10.RS232 and LAN communication port. IP and Gate address could be user define it satisfy global area.And

communication protocol can be provided to help customer manage all information .

11. The upper computer software is displayed in 11 languages, it could show work status and set parameters of

the discharge system.

12. With intelligent design, the device can be upgraded online lifelong.

13. Adopting the well-known brand components, the devices can suffer the temperature not less than 105°C. The

service life is designed to use for 10 years in theory.

14.Compliance with the 2002/95/EC environment protecting demand, doesn't include the Cadmium, hydride and

fluoride etc material

15.Equipment integrity: controller + CD-ROM(microcomputer software) + communication wire + temperature

sensing wire+Anderson terminals;

16.CE,ROHS certifications approved.

Parameter

I di difictei				
MODEL:I-P-SMART2 SERIES	-20A/25A/30A -	20A	25A	30A
Charge Mode		Maximum Power	r Point Tracking	
Discharge Mode		Intelligent contro		
System Type		<u> </u>	omatic recognition	on
Soft Start Time		≤10S		
Dynamic Response Time	Recovery	500us		
Conversion Efficien	су	≥96.5%,≤99%		
PV Modules Utilizati	on Rate	≥99%		
INPUT CHARACTERI	STICS			
MPPT Working	12V system	DC18V~DC150V		
Voltage and Range	24V system	DC34~DC150V		
voltage and hange	48V system	DC65~DC150V		
Low Voltage Input	12V system	DC16V		
Protection Point	24V system	DC30V		
	48V system	DC60V		
Low Voltage Input	12V system	DC22V		
Recovery Point	24V system	DC34V		
	48V system	DC65V		
Max. DC Voltage		DC160V		
Input Overvoltage F				
Input Overvoltage F		DC145V		
	12V system	286W	357W	429W
Max. PV Power	24V system	572W	715W	858W
	48V system	1144W	1430W	1716W
CHARGE CHARACTE	RISTICS			
Selectable Battery	Types	hattory(Dofault t	, vented, Gel, NiC ype is GEL batter	(v
Other types of Batt	erv Setting	Constant charge	User-defined con charge voltage r	unge between
	cry Secting	Floating charge	DC10V~DC15(比 12V battery)	based on 1 pcs

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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL	Battery Type Setting	12V/24V/48V SYS	Controller and up	oper monitor
Current-limiting Protection 25A 30A 35A Temperature Factor ±0.02%/°C Temperature-25°C)*0.3 Output Ripples(peak) 200mV 200mV Output Voltage Stability Precision <= ±1.5%		SYS	charge/Constant charge	charge/Floating
Temperature Factor ±0.02%/*C Temperature Compensation 14.2V-(The highest temperature-25°C)*0.3 Output Ripples(peak) 200mV Output Ripples(peak) 200mV Charge voltage Peak-Peak Ripple 200mV Charge voltage accuracy ≤±1.5% DISCHARGE CHARACTERISTICS Setting Control Max discharge current 30A Max discharge power 420W Pouble-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,PV voltage off RS232 Communication Chose COM communication RS232 Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication RAN Convoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Protection Above 85°C,decrease the output power, decrease 3A per degree. OTHER PARAMETERS Forced air cooling, fan speed rate regu	Rated Output Current	20A	25A	
Temperature Compensation 14.2V-(The highest temperature-25°C)*0.3 Output Ripples(peak) 200mV Output Voltage Stability Precision ≤±1.5% Charge voltage Peak-Peak Ripple 200mV Charger voltage accuracy ≤±1.5% DISCHARGE CHARACTERISTICS Setting Control Max discharge ourrent 30A Max discharge power 420W Juble-time control On in morning off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,time delay off PV voltage control PV voltage on,time delay off PV voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT Chose COM communication RS232 Communication Chose COM communication Input Low Voltage Protection Input Noervoltage Protection Input Polarity Reversal Protection Check the in/output characteristics Output Polarity Reversal Protection Input Polarity Reversal Protection Notr-circuit Protection S°C Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARA	Current-limiting Protection	25A	30A	35A
Output Ripples(peak) 200mV Output Voltage Stability Precision ≤±1.5% Charge voltage Ack-Peak Ripple 200mV Charge voltage accuracy ≤±1.5% DISCHARGE CHARACTERISTICS Setting Control Max discharge current 30A Max discharge power 420W 840W 1680W Discharge protection fuse 40A*2 On in morning ,off in morning / On in night ,off in night ON / OFF On / OFF PV voltage on,time delay off PV voltage / time delay control PV voltage on,time delay off PV voltage protection Chose COM communication Set IP and Gate address for controller and solar eagle ; Then chose TCP communication Set IP and Gate address for controller and solar eagle ; Then chose TCP communication Set IP and Gate address for controller and solar eagle ; Then chose TCP communication RAN Communication Set IP and Gate address for controller and solar eagle ; Then chose TCP communication PROTECTIONS Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit fault, no proble	Temperature Factor	±0.02%/°C		
Output Voltage Stability Precision ≤±1.5% Charge voltage Peak-Peak Ripple 200mV Charger voltage accuracy ≤±1.5% DISCHARCE CHARACTERISTICS Setting Control Max discharge current 30A Max discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication Chose COM communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication Input Low Voltage Protection Input Overvoltage Protection Input Devirolage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Short-circuit Protection Se°C Input Devirolage Protection Se°C Noise ≤40dB Forced air cooling, fan speed rate regulated by temperature protection Short-circuit Protection	Temperature Compensation	14.2V-(The highe	est temperature-2	25℃)*0.3
Charge voltage Peak-Peak Ripple 200mV Charger voltage accuracy ≤±1.5% DISCHARGE CHARACTERISTICS Setting Control Max discharge current 30A Max discharge power 420W [840W] Discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,PV voltage off PV voltage rotection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT Chose COM communication RS232 Communication Chose COM communication RAN communication Set IP and Gate address for controller and solar eagle; Then chose TCP communication PROTECTIONS Nother protection Input Low Voltage Protection Check the in/output characteristics Output Polarity Reversal Protection Short-circuit Protection 95°C Temperature protection 95	Output Ripples(peak)	200mV		
Charger voltage accuracy ≤±1.5% DISCHARGE CHARACTERISTICS Setting Control Controller or LAN Max discharge current 30A Max discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication Chock COM communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Low Voltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics OUtput Polarity Reversal Protection 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. OTHER PARAMETERS	Output Voltage Stability Precision	≤±1.5%		
DISCHARGE CHARACTERISTICS Setting Control Controll Controller or LAN Max discharge current 30A Max discharge prover 420W Discharge protection Control Controll Contro	Charge voltage Peak-Peak Ripple	200mV		
Setting Control Controller or LAN Max discharge current 30A Max discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,Itme delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT Communication RS232 Communication Choese COM communication Input Low Voltage Protection Set IP and Gate address for controller and solar eagle ;Then chose TCP communication Input Low Voltage Protection Check the in/output characteristics Nutput Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Short-circuit Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Temperature protection 95 °C Temperature protection 95 °C Temperature protection Short colling, 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.	Charger voltage accuracy	≤±1.5%		
Max discharge current 30A Max discharge power 420W [840W] [1680W] Discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF PV voltage control PV voltage on,FW voltage off PV voltage / time delay control PV voltage on,FW edlay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5 .(Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication Chose COM communication RAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Voervoltage Protection Input Voervoltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Temperature Protection 95°C Temperature protection 95°C Noise \$400B 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. Norid brand raw ma	DISCHARGE CHARACTERISTICS	•		
Max discharge power 420W [840W [1680W Discharge protection fuse 40A*2 Double-time control On in morning ,off in morning / On in night ,off in night ON / OFF mode ON / OFF PV voltage control PV voltage on,time delay off PV voltage protection Output off when it under setting voltage; Factory set is 10.5 . (Note : set based on 1 battery) COMMUNICATION PORT Chose COM communication S232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle; Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Low Voltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Overvoltage Protection Problem for long term Short-circuit fault, no problem for long term Short-circuit Temperature protection 95°C Temperature protection S40dB Noise \$40dB 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. Noise \$40dB Environment Protection World brand raw mat	Setting Control	Controller or LAN		
Discharge protection fuse 40A*2 Double-time control On in morning, off in morning / On in night , off in night ON / OFF mode ON / OFF PV voltage control PV voltage on, PV voltage off PV voltage protection PV voltage on, time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5 . (Note : set based on 1 battery) COMMUNICATION PORT Chose COM communication S232 Communication Chose COM communication PROTECTIONS Set IP and Gate address for controller and solar eagle; Then chose TCP communication Input Low Voltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Overvoltage Protection Problem for long term Short-circuit fault, no problem for long term Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS Set04B Noise \$40dB 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. World	Max discharge current	30A		
Discharge protection fuse 40A*2 Double-time control On in morning, off in morning / On in night , off in night ON / OFF mode ON / OFF PV voltage control PV voltage on, PV voltage off PV voltage protection PV voltage on, time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5 . (Note : set based on 1 battery) COMMUNICATION PORT Chose COM communication S232 Communication Chose COM communication PROTECTIONS Set IP and Gate address for controller and solar eagle; Then chose TCP communication Input Low Voltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Overvoltage Protection Problem for long term Short-circuit fault, no problem for long term Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS Set04B Noise \$40dB 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. World	Max discharge power	420W	840W	1680W
Double-Unite Control night ON / OFF mode ON / OFF PV voltage control PV voltage on, PV voltage off PV voltage / time delay control PV voltage on, time delay off Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Dovervoltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Check the in/output characteristics Short-circuit Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 35 °C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrol		fuse 40A*2		
ON / OFF ON / OFF PV voltage control PV voltage on, Even delay off PV voltage / time delay control PV voltage on, time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Devervoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Check the in/output characteristics Output Polarity Reversal Protection Check the in/output characteristics Short-circuit Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 34 per degree. OTHER PARAMETERS Solar ender ende ende	Double-time control	_	ff in morning / Or	n in night ,off in
PV voltage control PV voltage on,PV voltage off PV voltage / time delay control PV voltage on,time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5. (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Low Voltage Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Output Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 95°C OTHER PARAMETERS Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C <td>ON / OFF mode</td> <td></td> <td></td> <td></td>	ON / OFF mode			
PV voltage / time delay control PV voltage on,time delay off Discharge voltage protection Output off when it under setting voltage; Factory set is 10.5 . (Note : set based on 1 battery) COMMUNICATION PORT RS232 Communication RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection 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. OTHER PARAMETERS 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. World brand raw materials. Complianc			voltage off	
Discharge voltage protectionOutput off when it under setting voltage; Factory set is 10.5 .(Note : set based on 1 battery)COMMUNICATION PORTRS232 CommunicationChose COM communicationLAN CommunicationSet IP and Gate address for controller and solar eagle ;Then chose TCP communicationPROTECTIONSInput Low Voltage ProtectionInput Overvoltage ProtectionOutput Polarity Reversal ProtectionOutput Polarity ReversalProtectionShort-circuit ProtectionShort-circuit ProtectionSter Beradure protectionSter Beradure ProtectionShort-circuit ProtectionSter Beradure ProtectionSter Ber			-	
COMMUNICATION PORT RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Overvoltage Protection Input Overvoltage Protection Output Polarity Reversal Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Check the in/output characteristics Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 95°C OTHER PARAMETERS Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL Environment Protection		Output off when	it under setting v	
RS232 Communication Chose COM communication LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Polarity Reversal Protection Check the in/output characteristics Output Polarity Reversal Protection Check the in/output characteristics Output Polarity Reversal Check the in/output characteristics Protection Check the in/output characteristics Short-circuit Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Temperature Protection 95°C Temperature protection 95°C OTHER PARAMETERS Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C		Set 15 10.5 .(1000		L Dattery /
LAN Communication Set IP and Gate address for controller and solar eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Overvoltage Protection Input Polarity Reversal Protection Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Check the in/output characteristics Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature Protection 95°C OTHER PARAMETERS Above 85°C,decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL		Chose COM com	munication	
LAN Communication eagle ;Then chose TCP communication PROTECTIONS Input Low Voltage Protection Input Overvoltage Protection Input Polarity Reversal Protection Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Check the in/output characteristics Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 95°C OTHER PARAMETERS Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C				oller and solar
Input Low Voltage Protection Input Overvoltage Protection Output Overvoltage Protection Output Overvoltage Protection Output Polarity Reversal Protection Short-circuit Protection Short-circuit Protection Properature Protection Short-circuit Protection Protection Short-circuit Protection Protection Short-circuit Protection 95°C Temperature protection OTHER PARAMETERS Noise ≤40dB 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. World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL				
Input Overvoltage ProtectionInput Polarity Reversal ProtectionOutput Overvoltage ProtectionOutput Polarity ReversalProtectionShort-circuit ProtectionShort-circuit Protection95°CTemperature Protection95°CTemperature protectionOTHER PARAMETERSNoiseShort- and methodsForced 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.Environment ProtectionWorld brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C		1		
Input Polarity Reversal Protection Check the in/output characteristics Output Overvoltage Protection Check the in/output characteristics Output Polarity Reversal Protection Short-circuit Protection Recover after eliminating the Short-circuit fault, not problem for long term Short-circuit Temperature Protection 95 °C Temperature protection 95 °C OTHER PARAMETERS Above 85 °C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS \$40dB 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105 °C PHYSICAL Environment Protection	· · ·	-		
Output Overvoltage ProtectionCheck the in/output characteristicsOutput Polarity ReversalProtectionProtectionRecover after eliminating the Short-circuit fault, no problem for long term Short-circuitShort-circuit Protection95°CTemperature protection95°CTemperature protectionAbove 85°C, decrease the output power, decrease 3A per degree.OTHER PARAMETERS<40dB		-		
Output Overvoitage ProtectionOutput Polarity ReversalProtectionShort-circuit ProtectionShort-circuit ProtectionTemperature Protection95°CTemperature protectionOTHER PARAMETERSNoiseAbove 85°C, decrease the output power, decrease 3A per degree.OTHER PARAMETERSNoiseShort-circuit methodsForced air cooling, fan speed rate regulated by temperature, when inner temperature is too low, fan ran slowly or stop; when controller stop 		Check the in/out	out characteristic	S
Protection Recover after eliminating the Short-circuit fault, no problem for long term Short-circuit Short-circuit Protection 95°C Temperature protection 95°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL Environment Protection				-
Short-circuit ProtectionRecover after eliminating the Short-circuit fault, no problem for long term Short-circuitTemperature Protection95°CTemperature protectionAbove 85°C, decrease the output power, decrease 3A per degree.OTHER PARAMETERSNoise≤40dBThermal methodsForced 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.Environment ProtectionWorld brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°CPHYSICAL				
Short-circuit Protection problem for long term Short-circuit Temperature Protection 95°C Temperature protection Above 85°C, decrease the output power, decrease 3A per degree. OTHER PARAMETERS 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL	Protection	Deserver often of	este stie esthe Cha	
Temperature protectionAbove 85°C, decrease the output power, decrease 3A per degree.OTHER PARAMETERSNoise≤40dBThermal methodsForced 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.Environment ProtectionWorld brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°CPHYSICAL		problem for long		
Temperature protection 3A per degree. OTHER PARAMETERS Second Secon	Temperature Protection			
Noise ≤40dB 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. Environment Protection World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL	Temperature protection		ease the output p	oower, decrease
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.Environment ProtectionWorld brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C	OTHER PARAMETERS			
Thermal methodstemperature, when inner temperature is too low, fan ran slowly or stop; when controller stop working, fan also stop ran.Environment ProtectionWorld brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°CPHYSICAL	Noise	≤40dB		
World brand raw materials. Compliance with EU standards. Meet the 2002/95/EC without cadmium hydride, fluoride, peculiar smell and toxic substances.All rated temperature of electrolytic capacitors not less than 105°C PHYSICAL	Thermal methods	temperature, wh fan ran slowly or	en inner tempera stop; when contr	ture is too low,
	Environment Protection	World brand raw standards. Meet hydride, fluoride substances.All ra	materials. Comp the 2002/95/EC v , peculiar smell a ted temperature	vithout cadmium nd toxic
Measurement DxWxH (mm) 270*185*90	PHYSICAL			
	Measurement DxWxH (mm)	270*185*90		

N.G(kg)	2.1
G.N(kg)	2.4
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 рс	Charge controller
2	2 рс	Gallow pulley (For install the controller on the wall)
3	4 set	Screw (For install the controller on the wall)
4	1 рс	232 turn to RJ45 communication cable
5	1 рс	User manual
6	1 рс	Temperature sensing wire
7	2 рс	Fuse wire



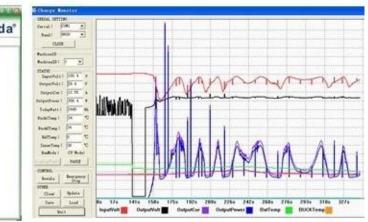
Upper Computer Software and Test Software

Déstas	Constanting Constanting	
		Produce 1
	Retrieve	
	Orege alternation	Para litera mente
	Order without 110 11 <th11< th=""> 11 11</th11<>	THE TOWN THE CAR
	Selds of Content and the	

Extension Image: Control Base: Strapp rolling: 10(1) Base: Strapp rolling: 10(2) Base: Strapp rolling: 10(2)
Back single relation 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1
Land Landword (and
Montrag Statistic States (10.202) (Media) Loss (10.77) (Media)
Montrag Statistic States (10.202) (Media) Loss (10.77) (Media)
Revenues of the second se
mphilosof on the 18.20 (April) (and April Tradition)
Ingenies of the IEEE (New Loss of Selections 10) (Alex

The interface of upper computer software working state

The interface of upper computer software parameter setting state



Upper computer software on/off interface and generating capacity record clean interface

The interface of test software working state

MPPT Connection





Certificates

ISO2008 ISO2004 CE FCC ROHS

Service and Contact

1. Warranty

1.2 years warranty, lifelong technical assistance.

2. Conditions and Terms

2.1 The warranty starts from the delivery date from our factory.

2.2 During the warranty, any defective product will get repaired or replaced for free.

2.3 The warranty is unavailable for those products which are broken by the violence or the carelessness or

repaired or altered without the authorization.

3. Lead Time

- 3.1 Sample orders will be delivered from our factory within 5-7 working days.
- 3.2 General orders will be delivered from our factory within 7-15 working days.

3.3 Big orders will be delivered from our factory within 25 working days at most.

4. Shipment

- 4.1 By EMS, DHL, FedEx or other express.
- 4.2 By our forwarding agent(by air or by sea).
- 4.3 By your own forwarding agent.

5. OEM and ODM

5.1 This page shows basic data, we can provide OEM, ODM service for you.