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% \sim 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 <u>l-P-TPI2 model Inverter / Charger / UPS</u>.

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. MPPT charge 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, does not 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

MODEL: I-P-SMART2-20A / 25A / 30A - SERIES	20A	25A	30A
Charge Mode	Maximum Power Point Tracking		
Discharge Mode	Intelligent control		
System Type	12V 24V 48V Automatic recognition		
Soft Start Time	≤10S		

Conversion Efficiency PV Modules Utilization Rate NPUT CHARACTERISTICS MPPT Working Voltage and Range MPT Working Voltage 12V system	charge
INPUT CHARACTERISTICS MPPT Working Voltage and Range A8V system DC34 ~ DC150V Low Voltage Input Protection Point Low Voltage Input Protection Point A8V system DC30V Low Voltage Input Protection Point Low Voltage Input A8V system DC60V Low Voltage Input Low Voltage Input A8V system DC60V Low Voltage Input Low Voltage Input A8V system DC60V Low Voltage Input Low Voltage Input A8V system DC60V Low Voltage Input Low Voltage Input A8V system DC65V Max. DC Voltage Input Overvoltage Protection Point Input Overvoltage Recovery Point 12V system DC160V Input Overvoltage Recovery Point DC145V 12V system 12V system A8V system DC145V 12V system Sealed lead acid, vented, Gel, NiCd battery (Default of GEL battery) Constant charge Other types of Battery Setting Other types of Battery Setting Other types Setting Other types Setting A1V System DC145V 12V 24V 48V SYS Controller and upper monitor Three Stages: Fast charge / Concharge / Floating charge Rated Output Current 20A 25A 30A 35A Temperature Factor 14.2V- (The highest temperature-25 °C) * 0.3 20mV Output Voltage Stability Precision Charge voltage Peak-Peak Ripple Constant Charge 200mV Stages 14.5% DC16V DC22V DC2V DC2V DC34V A8V SYS DC16V DC150 DC145V 12V 357W 715W 858W 1430W 1716W 1	charge
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DISCHARGE CHARACTERISTICS	
Setting Control Controller or LAN	
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 nig	nt
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	e; Then
chose ICP communication	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
PROTECTIONS	
Input Low Voltage Protection	
Input Overvoltage Protection	
Input Polarity Reversal Protection Check the in / output characteristics	
Output Overvoltage Protection	
Output Polarity Reversal Protection	
Short-circuit Protection Recover after eliminating the Short-circuit fault, no p	un hila wa
Temperature Protection 95 °C Above 85 °C, decrease the output power, decrease 3	roblem
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.	
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		
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 pc	Charge controller
2	2 pc	Gallow pulley (For install the controller on the wall)
3	4 set	Screw (For install the controller on the wall)
4	1 pc	232 turn to RJ45 communication cable
5	1 pc	User manual
6	1 pc	Temperature sensing wire
7	2 pc	Fuse wire



Upper Computer Software and Test Software



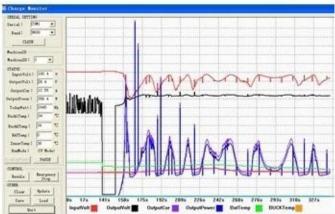


The interface of upper computer software working state

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

- $2.1\ \mbox{The}$ 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.