

Introduction

This is a solar charge controller 40A ~60A 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 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) Peak efficiency 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, automatically save ernergy both from human and solar. Sit beside your PC to monitor your power system.
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) .It 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

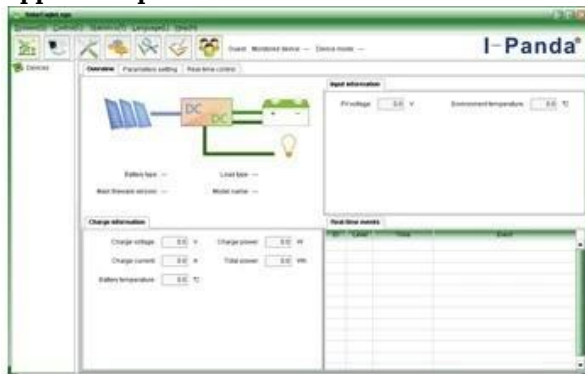
| Model:I-P-SMART2-40A/50A/60A -series | | 40A | 50A | 60A |
|--|---|---|-------|-------|
| Charge Mode | Maximum Power Point Tracking | | | |
| Method | 3 stages: fast charge(MPPT),constant voltage, floating charge | | | |
| System Type | DC12V/24V/48V | Automatic recognition | | |
| System Voltage | 12V system | DC9V~DC15V | | |
| | 24V system | DC18V~DC30V | | |
| | 48Vsystem | DC36V~DC60V | | |
| Soft Start Time | 12V/24V/48Vsystem | ≤10S | | |
| Dynamic Response | 12V/24V/48Vsystem | 500us | | |
| Recovery Time | | | | |
| 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/48V system | 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 | | | |
| Over Charge Protection Voltage | 12V system | 14.6V | | |
| | 24V system | 29.2V | | |
| | 48V system | 58.4V | | |
| Rated Output Current | 12V/24V/48V system | 40A | 50A | 60A |
| Current-limiting Protection | 12V/24V/48V system | 44A | 55A | 66A |
| Rate charge current | 12V/24V/48V System | 40A | 50A | 60A |
| Temperature Factor | 12V/24V/48V system | ±0.02%/°C | | |
| Temperature Compensation | 12V/24V/48V system | 14.2V-(The highest temperature-25℃)*0.3 | | |
| Output Ripples(peak) | 12V/24V/48V system | 200mV | | |
| Output Voltage Stability Precision | 12V/24V/48V system | ≤±1.5% | | |
| Charge voltage Peak-Peak Ripple | 12V/24V/48V System | 200mV | | |
| Charger voltage accuracy | 12V/24V/48V System | ≤±1.5% | | |

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

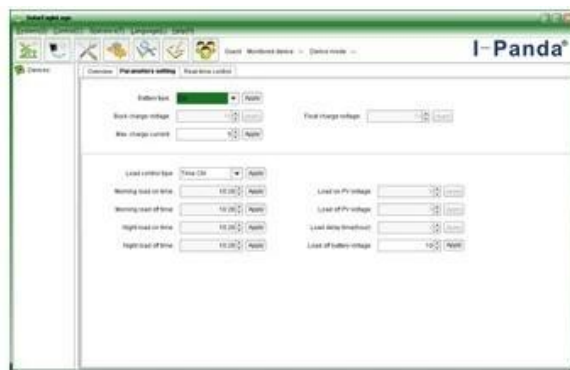
Product Parts

| 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 |

Upper Computer Software and Test Software



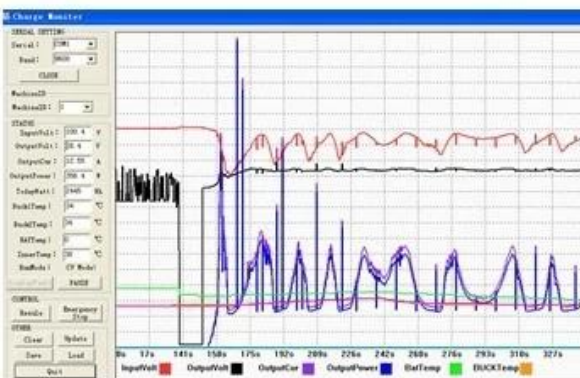
The interface of upper computer software working state



The interface of upper computer software parameter setting state

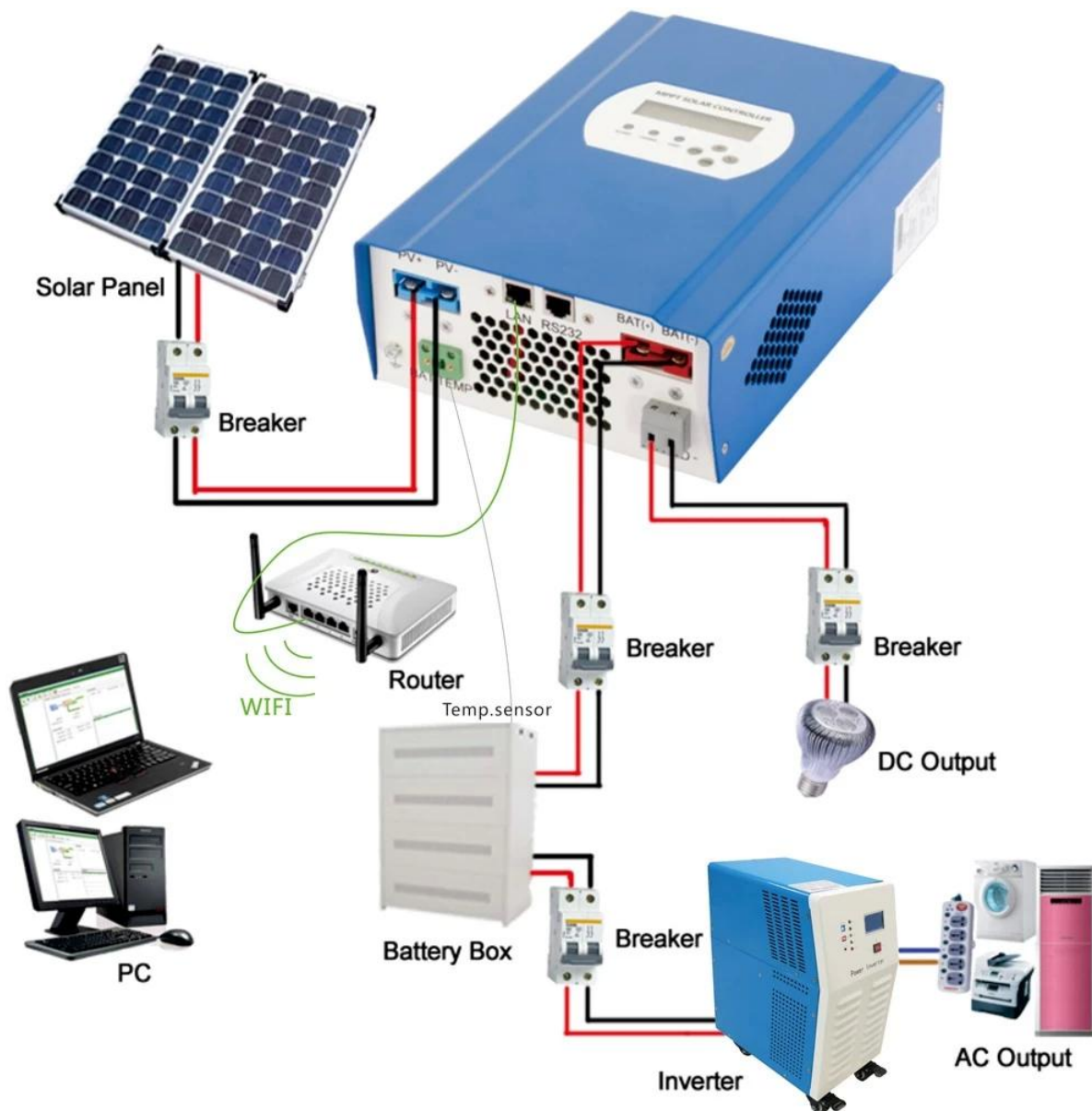


Upper computer software on/off interface and generating capacity record clean interface



The interface of test software working state

MPPT Connection



Certificates

[ISO2008](#)

[ISO2004](#)

[CE](#)

FCC

ROHS

Service and Contact

1. [OEM and ODM](#) orders are provided.
2. Power solution consult available based on technical group
3. 24 months warranty; 3 to 10 years extended
4. Free technical study and discussion