

Feature:

- 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.Journal function , Save function set ,Date ,time ,Generating capacity and so on .
- 5.Charge mode: three stages (fast charge ,constant charge ,floating charge) .It prolongs service life of the batteries .
- 6.Discharge mode: ON mode, OFF mode, double time control mode, PV voltage control mode ,PV voltage plus time delay mode and so on .
- 7.Recommended battery types: sealed lead acid, vented, gel, NiCd battery. Other types of the batteries can also be defined.
- 8.Most information could be provide by LCD and LED like: model number , PV input voltage, battery type , battery voltage , charging current , charging power , working status and so on. Also customer information like company name,website and logo can be added into Solar Eagle software.
- 9.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
- 10.The upper computer software is displayed in 11 languages, it could show work status and set parameters of the discharge system.
- 11.With intelligent design,the device can be upgraded online lifelong.
- 12.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.
- 13.Compliance with the 2002 95 EC environment protecting demand, does not include the Cadmium, hydride and fluoride etc material
- 14.Equipment integrity: controller ,CD-ROM(microcomputer software), communication wire , temperature sensing wire,Anderson terminals
- 15.CE,ROHS certifications approved.
- 16.2 years warranty. And 3~10 years extended warranty service also can be provided.

Technical Specification:

| | | | | |
|------------------------------------|------------|--|-------|-------|
| MODEL☐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 | | |
| Dynamic Response Recovery Time | | 500us | | |
| Conversion Efficiency | | ≥96.5%,≤99% | | |
| PV Modules Utilization Rate | | ≥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 | | DC160V | | |
| Input Overvoltage Protection Point | | DC150 | | |
| Input Overvoltage Recovery Point | | DC145V | | |
| Max. PV Power | 12V system | 286W | 357W | 429W |
| | 24V system | 572W | 715W | 858W |
| | 48V system | 1144W | 1430W | 1716W |
| CHARGE CHARACTERISTICS | | | | |
| Selectable Battery Types | | Sealed lead acid, vented, Gel, NiCd battery(Default type is GEL battery) | | |

| | | | |
|-------------------------------------|--|---|-------|
| Other types of Battery Setting | Constant charge | User-defined constant/floating charge voltage range between DC10V~DC15 (based on 1 pcs 12V battery) | |
| | Floating charge | | |
| Battery Type Setting | 12V/24V/48V SYS | Controller and upper monitor | |
| Charge Type | 12V/24V/48V SYS | Three Stages :Fast charge/Constant charge/Floating charge | |
| Rated Output Current | 20A | 25A | 30A |
| Current-limiting Protection | 25A | 30A | 35A |
| Temperature Factor | ±0.02%/°C | | |
| 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 | 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 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 | Chose COM communication | | |
| LAN Communication | Set IP and Gate address for controller and solar eagle ;Then chose TCP communication | | |
| PROTECTIONS | | | |
| Input Low Voltage Protection | Check the in/output characteristics | | |
| Input Overvoltage Protection | | | |
| Input Polarity Reversal Protection | | | |
| Output Overvoltage Protection | | | |
| 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 | | | |
| 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: We provide OEM and ODM service.The 36V/72V/96V model also can be custom made for you.

Product Parts:



Blue



Green



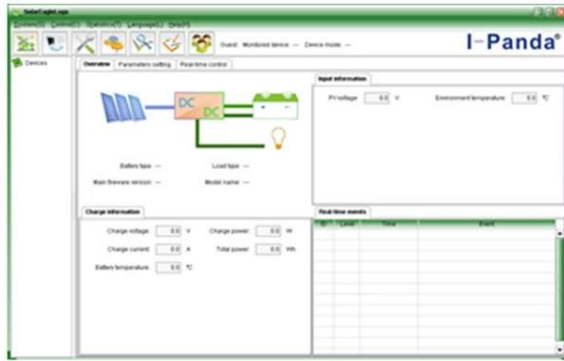
Upper Computer



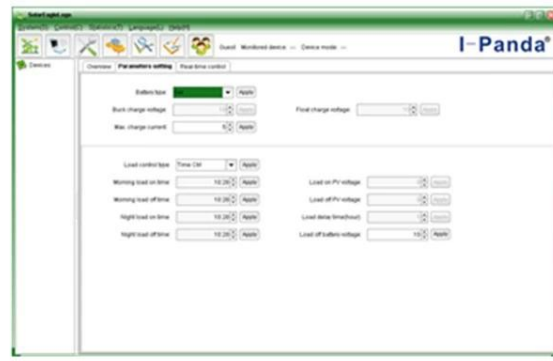
Package

| 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 testing Software:



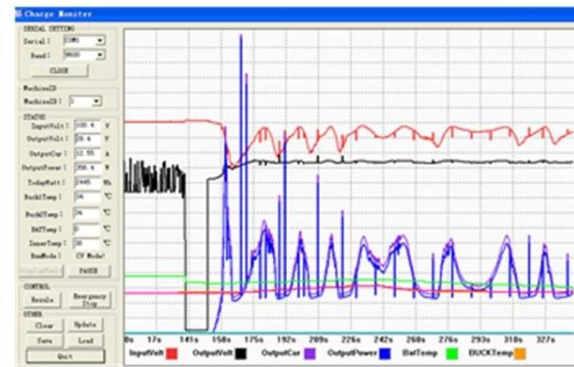
The interface of upper computer software working state



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

Note:

- 1) Attachment is upper computer software which is suitable for all computer systems .
- 2) Trafficker will provide neutral upper computer software and CD,or with customer's logo.
- 3) WIN7,IN8 system user,please log in as administrator.More details please check the manual.

Information on Display and Settable Parameters:



Note:

- 1) All above information is a sample which is the working state of MPPT in sometime. In different working stage the parameters will change like work mode, charge current ,charge mode ,charge power and so on ; In the fault mode it will show fault mode ;
- 2) If all above dates show means this could change;the details please check the manual.

Installation



Note:

- 1) Above is off-grid solar system connection picture ;
- 2) Other ways for PC-communication, please check the manual for details;

Other Parameters ☐

Please check design brief, technical documents, product manual for more details.