Introduction:

This is a smart solar charge controller which has advanced MPPT technology .<u>Solar charge controller</u> is one of the important parts in the off-grid solar system. For having the advanced MPPT technology, the controller can trace the peak power with 99% conversion efficiency. MPPT microprocessor, inside the controller[making 30% more charge current with significantly less power than tradition. In addition to this, easier installing and supporting to expand volume are other advantages. It can also store energy to different kinds of batteries. We provide battery choice(Vented[]Sealed[]Gel[]NiCd).

Feature:

1.MPPT charge mode, conversion efficiency upto 99%, can save 30% \sim 60% of the power than traditional controller.

2.With high efficient MPPT operation scheme and adopting TI28035 chip,make the Solar panels utilization rate upto 99%.

Intelligent design, the device can be upgraded online, customers enjoy the lifelong upgrade service.

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

5.Adopting the well-known brand components,the devices can suffer the temperature not less than 105°C.The service life is designed to extend to 10 years in theory.

6.Charge mode: three stages (fast charge, constant charge, floating charge)

7.12V/24V/48V system auto recognize for easy control.

8.Nominal maximum solar input is DC 150V

9.Connected Battery Type choosing: Sealed lead acid, vented, Gel, NiCd battery. Other types of the batteries can also be defined.

10. LCD and LEDs show all kinds of parameter like products model, PV input voltage,battery voltage,charge current,charge power,work condition,and also can add customers' company name and website.

11. Communication Port.RS232 communication can provide communication protocol, This make the unified and integrated management more convenient to customers.

12. With providing a Microsoft by connecting with PC that can show the working state and all parameters in 7 languages.

13. Extensible LAN remote control.

14.Equipment integrity: controller+CD-ROM(microcomputer software) + communication wire+Anderson terminals;

15.CE,ROHS,FCC,PSE certifications approved. The device also can support to pass the other certifications.

16. 2 years warranty. And 3~10 years extended warranty service also can be provided.



Parameters:

| MPPT solar controller I-P-e-SMART-12V/24V/ | | 30A | | | |
|---|-----------------------|---|--|--|--|
| Charge mode | MPPT(maximum powe | er point tracking) | | | |
| Charge method | Three stages: constar | nt current(MPPT),constant voltage,floating charge | | | |
| System type | DC12V/24V/48V | Automatic recognition | | | |
| System voltage | 12V system | DC9V~DC15V | | | |
| | 24V system | DC18V~DC30V | | | |
| | 48V system | DC36V~DC60V | | | |
| Soft start time | 12V/24V/48V system | ≤3S | | | |
| Dynamic response recovery and range | 12V/24V/48V system | 500us | | | |
| MPPT efficiency | 12V/24V/48V system | ≥96.5%,≤99% | | | |
| INPUT CHARACTERISTICS | | | | | |
| MPPT working voltage and Range | 12V system | DC14V~DC100V | | | |
| | 24V system | DC30~DC100V | | | |
| | 48V system | DC60~DC100V | | | |
| Low voltage input Protection point | 12V system | DC14V | | | |
| | 24V system | DC30V | | | |
| | 48V system | DC60V | | | |

| Low voltage input | 12V system | DC18V | | |
|---|--------------------|---|--|--|
| Recovery point 24V system 48V system | | DC34V DC65V | | |
| Input over voltage protection point | 12V/24V/48V system | DC110V | | |
| Input over voltage recovery point | 12V/24V/48V system | DC100V | | |
| 12V system (W) | | 450 850 1700 | | |
| CHARGE CHRECTREST | | 1,00 | | |
| Selectable Battery | | | | |
| Types (Default type is GEL battery) | | 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 | Please check the charge voltage according to the battery type form. | | |
| Rated Input Current | 12V/24V/48V system | 30A | | |
| Current-limiting Protection | 12V/24V/48V system | 35A | | |
| | 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) Output Voltage | 12V/24V/48V system | 200mV | | |
| Stability Precision | 12V/24V/48V system | ≤±1.5% | | |
| Output Discharge Cha | racteristics | | | |
| Output voltage | | Base on battery voltage | | |
| Low voltage output Protection point | | Default 10.5V; recovery 11V; custom available ; | | |
| Rated output Current | | 30A | | |
| The output control | | Always on, always off, PV voltage control switch | | |
| Output control set mo Display | de | Controller button or upper computer | | |
| LED digital tube display | | Battery voltage, charge current | | |
| LED light display | | Charging indicator light, LOAD indicator light | | |
| PC]]communication po Protection | ort[] | RS232 | | |
| Input Low Voltage Pro | tection | Check the input characteristics | | |
| Input Overvoltage Pro | tection | Check the input characteristics | | |
| Charge over voltage p | ower Protection | yes | | |
| Low Voltage output Protection | | yes | | |
| Rated output Current protection | | yes | | |
| Temperature Protectic Other Parameters | on | yes | | |
| Noise | | ≤40dB | | |
| Thermal heat-dissipat | ing method | Itself cooling fan cooling | | |
| Components | | Imported material, with EU standards. | | |
| Certification Physical | | CE\FCC\ROHS | | |
| Measurement D x W x | H(mm) | 205*168*60 | | |
| package size D x W x H(mm) | | 265*196*110 | | |
| N.G(KG) G.N(KG) | | 1.8kg 2kg | | |
| Type of Mechanical Pr | otection | 2kg IP25 | | |
| Environment | | | | |
| Humidity Altitude | | 0~90%RH (no condense) | | |
| Operating Temperatur | re | 0~3000m -20℃ ~ +50℃ | | |
| Storage Temperature | | -40°C ~ +75°C | | |
| Atmospheric Pressure | | 70~106kPa | | |

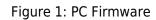
Pictures:





The Figures of the PC Firmware and Testing Software

| System(S) Control(C) Statutes(f) Language() Height) Note: A set Monitored device: COM1[01]_1234567890123458 Device mode: Constantivotage charging Perform COM1[01]_1234567890123458 Battery type: Cel Model name: IPANDA-MPPT-60A Main freware version: 1.0 Codput information Codput formation Codput formation Codpu | Sulai Eagle | | | | | | | |
|--|------------------------------------|--|--|--|--|--|--|--|
| Devices Overview Parameters setting Real-time control Image: COMI[01]_1234567890123456 Image: Communication PV voltage: 105.1 V Environment temperature: 38.0 °C Battery type: Oel Model name: IPANDA-MPPT-60A Model name: IPANDA-MPPT-60A Image: Communication restore Main fireware version: 1.0 Image: Communication restore Image: Communication restore Image: Communication restore Output voltage: 27.1 V Output power: 0.0 W Output voltage: 27.1 V Output power: 0.0 W Output voltage: 27.1 V Output power: 0.0 W Image: 27.1 V Output power: 0.0 W Output voltage: 27.1 V Output power: 0.0 W Image: 27.1 V Output power: 0.0 W Image: 27.1 V Output power: 0.0 W Image: 27.1 V Output power: 0.0 W Image: 27.1 V Output power: 0.0 W Image: 27.1 V Image: 27.1 V Image: 27.1 V Output power: 0.0 W Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Communication restore Image: 2011-11-05 15:20 Comm | System(S) Control(C) Statistics(T) | Language(L) Help(H) | | | | | | |
| COMI[01]_1234567890123456 Imput information Battery type: Gel Model name: IPANDA-MPPT-60A. Main freeware version: 1.0 Output information Real-time events Output information ID Level Time Output voltage: 27.1 Output power: 0.0 Output current: 0.0 A Total power: 39 KWh Battery temperature: 0.0 | 法 💽 🔀 🌞 | Guest Monitored device: COM1[01]_1234567880123456 Device mode: Constant voltage charging | I-Panda [®] | | | | | |
| Battery type: Gel Model name: IPANDA-MPPT-60A. Main fireware version: 1.0 Model name: IPANDA-MPPT-60A. Output information Real-time events Output voltage: 27.1 Output quorent 0.0 A Total power: 39.1 Writh Battery temperature: 0.0 V Output current: 0.0 Total power: 39.1 Writh Battery temperature: 0.0 V Output current: 0.0 Total power: 39.1 Writh Battery temperature: 0.0 V U U Level U Lo | 🕵 Devices | Overview Parameters setting Real-time control | | | | | | |
| Battery type: Oel Model name: IPANDA-MPPT-60A Main fireware version: 1.0 Real-time events Output information Real-time events Output voltage: 27.1 V Output power: 0.0 W Output current: 0.0 A Total power: 3.9 W/h Battery temperature: 0.0 °C Image: 10.11-11-05 15:20 Communication restore | | Input information | _ Input information | | | | | |
| Main fireware version: 1.0 Real-time events Output information Real-time events Output voltage: 27.1 V Output over: 0.0 W Output current: 0.0 A Total power: 3.9 KWh Battery temperature: 0.0 °C Battery temperature: 0.0 °C °C Communication restore Communication restore | | PV voltage: 105.1 V Env | PV voltage: 105.1 V Environment temperature: 38.0 °C | | | | | |
| Output voltage: 27.1 V Output power: 0.0 W Output current: 0.0 A Total power: 3.9 KWh Battery temperature: 0.0 °C °C Solo Messa 2011-11-05 15:20 Communication restore ID Level Time Event 3001 Messa 2011-11-05 15:20 Communication restore 3001 Messa 2011-11-05 15:20 Communication restore ID Level III IIII IIII IIIIII ID Level IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | | | | | | | | |
| Output voitage: 27.1 V Output power: 0.0 W 3001 Messa 2011-11-05 15:20 Communication restore Output current: 0.0 A Total power: 3.9 KWh Battery temperature: 0.0 C C Solo Messa 2011-11-05 15:20 Communication restore Image: Solo C Image: Solo C Image: Solo Image: Solo Communication restore | | Output information Real-time events | Real-time events | | | | | |
| Output current 0.0 A Total power: 3.9 KWh Battery temperature: 0.0 V | | | Event | | | | | |
| Output current: 0.0 A Total power: 3.9 Wh Battery temperature: 0.0 C C Communication restore | | Output voltage: 27.1 V Output power: 0.0 W 3001 Messa 2011-11-05 15:20: Communi | ication restore | | | | | |
| Battery temperature: 0.0 °C | | Output current 0.0 A Total power 3.9 W//b 3002 Messa 2011-11-05 15:20: Communi | ication lost | | | | | |
| | | 3001 Messa 2011-11-05 15:20: Communi | ication restore | | | | | |
| | | Battery temperature: 0.0 °C | | | | | | |
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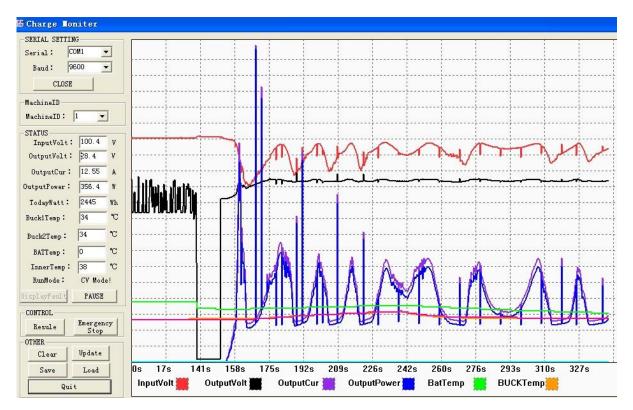


Figure: Testing Software

Welcome to order I-Panda MPPT Solar Charge Controller Smart1 48V 40A~60A

Company









