

Introduction:

This is a smart solar charge controller which has advanced MPPT technology .[Solar charge controller](#) 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 up to 99%,can save 30%~60% of the power than traditional controller.
- 2.With high efficient MPPT operation scheme and adopting TI28035 chip,make the Solar panels utilization rate up to 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,floatting charge)
- 7.12V/24V/48V/96V system auto recognize for easy control.
8. 12V/24V/48V system maximum solar input is DC 150V ,96V system maximum solar input is DC 300V ;
- 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.



Parameter:

| Model: I-P-MSC-DC12V/24V/48V/96V-series | | 20A | 30A |
|---|--|-----------------------|-----|
| Charge Mode | Maximum Power Point Tracking | | |
| Method | 3 stages: fast charge(MPPT),constant voltage,floating charge | | |
| System Type | DC12V/24V/48V/96V | Automatic recognition | |
| System Voltage | 12V system | DC9V~DC15V | |
| | 24V system | DC18V~DC30V | |
| | 48Vsystem | DC36V~DC60V | |
| | 96Vsystem | DC72V~DC120V | |
| Soft Start Time | 12V/24V/48V/96V | ≤10S | |
| Dynamic Response | 12V/24V/48V/96V | 500us | |
| Recovery Time | 12V/24V/48V/96V | ≥96.5%, ≤99% | |
| Conversion Efficiency | 12V/24V/48V/96V | ≥96.5%, ≤99% | |
| PV Modules Utilization | 12V/24V/48V/96V | ≥99% | |
| Rate | 12V/24V/48V/96V | ≥99% | |
| Input Characteristics | | | |
| MPPT Working Voltage and Range | 12V system | DC18V~DC150V | |
| | 24V system | DC34~DC150V | |
| | 48V system | DC65~DC150V | |
| | 96Vsystem | DC125~DC300V | |
| Low Voltage Input Protection Point | 12V system | DC16V | |
| | 24V system | DC30V | |
| | 48V system | DC60V | |
| | 96Vsystem | DC120V | |

| | | | |
|--|--|--|-------|
| Low Voltage Input Recovery Point | 12V system | DC22V | |
| | 24V system | DC34V | |
| | 48V system | DC65V | |
| | 96Vsystem | DC125V | |
| Max DC Voltage | 12V/24V/48V system | DC160V | |
| | 96Vsystem | DC300V | |
| Input Overvoltage Protection Point | 12V/24V/48V system | DC150 | |
| | 96Vsystem | DC300V | |
| Input Overvoltage Recovery Point | 12V/24V/48V system | DC145V | |
| | 96Vsystem | DC295V | |
| Max. PV Power | 12V system | 280W | 450W |
| | 24V system | 560W | 850W |
| | 48V system | 1120W | 1700W |
| | 96Vsystem | 2240W | 3400W |
| Output Characteristics | | | |
| Selectable Battery Types (Default type is GEL battery) | 12V/24V/48V/96Vsystem | Sealed lead acid, vented, Gel, NiCd battery (Other types of the batteries also can be defined) | |
| Constant Voltage | 12V/24V/48V/96Vsystem | Please check the charge voltage according to the battery type form. | |
| Floating Charge Voltage | 12V/24V/48V/96Vsystem | battery type form. | |
| | 12V system | 14.6V | |
| | 24V system | 29.2V | |
| | 48V system | 58.4V | |
| Over Charge Protection Voltage | 96V system | 116.8V | |
| | 12V/24V/48V/96Vsystem | 20A | 30A |
| Rated Output Current | 12V/24V/48V/96Vsystem | 25A | 35A |
| Current-limiting Protection | 12V/24V/48V/96Vsystem | ±0.02%/°C | |
| Temperature Factor | 12V/24V/48V/96Vsystem | 14.2V-(The highest temperature-25°C)*0.3 | |
| Temperature Compensation | 12V/24V/48V/96Vsystem | 200mV | |
| Output Ripples(peak) | 12V/24V/48V/96Vsystem | ≤±1.5% | |
| Output Voltage Stability Precision | 12V/24V/48V/96Vsystem | | |
| Display | | | |
| LCD display | Input,output parameter and output power etc (check the LCD display instruction) | | |
| LED display | 3 LEDs indicates:Fault indicate light,charge indicate light, power source indicate light(check the LED instruction) | | |
| Software Control through PC(communication port) | RS232 (matching) or LAN(optional) | | |
| Protection | | | |
| Input Low Voltage Protection | Check the input characteristics | | |
| Input Overvoltage Protection | Check the input characteristics | | |
| Input Polarity Reversal Protection | yes | | |
| Output Overvoltage Protection | Check the output characteristics | | |
| Output Polarity Reversal Protection | yes | | |
| 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. | | |
| Components | World brand raw materials. Compliance with EU standards. | | |
| Smell | All rated temperature of electrolytic capacitors not less than 105°C | | |
| Environment Protection | No peculiar smell and and toxic substances. | | |
| | Meet the 2002/95/EC,no cadmium hydride and fluoride | | |

| Physical | |
|-------------------------------|------------------------|
| Measurement DxWxH(mm) | 270*185*90 |
| N.G(kg) | 3 |
| G.N(kg) | 3.6 |
| 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 |

The specification is only for reference. Subject to change without prior notice.
 We provide OEM and ODM service.The 36V/72V/96V model also can be custom made for you.

Pictures:



The Figures of the PC Firmware and Testing Software

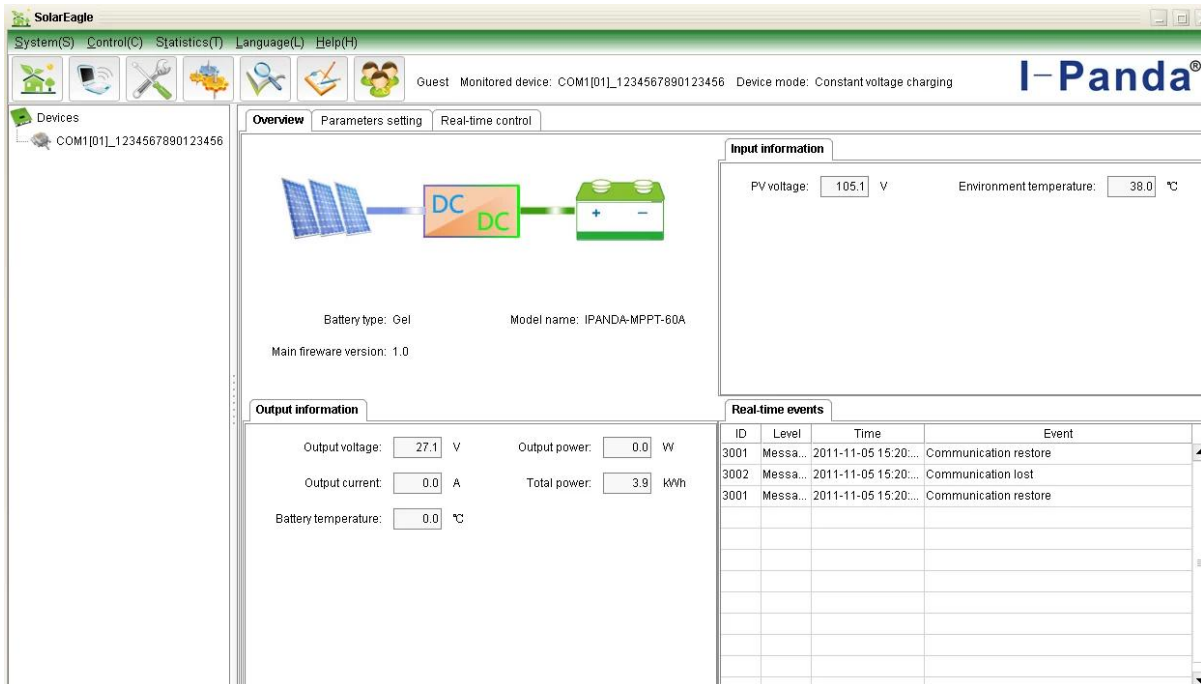


Figure 1: PC Firmware

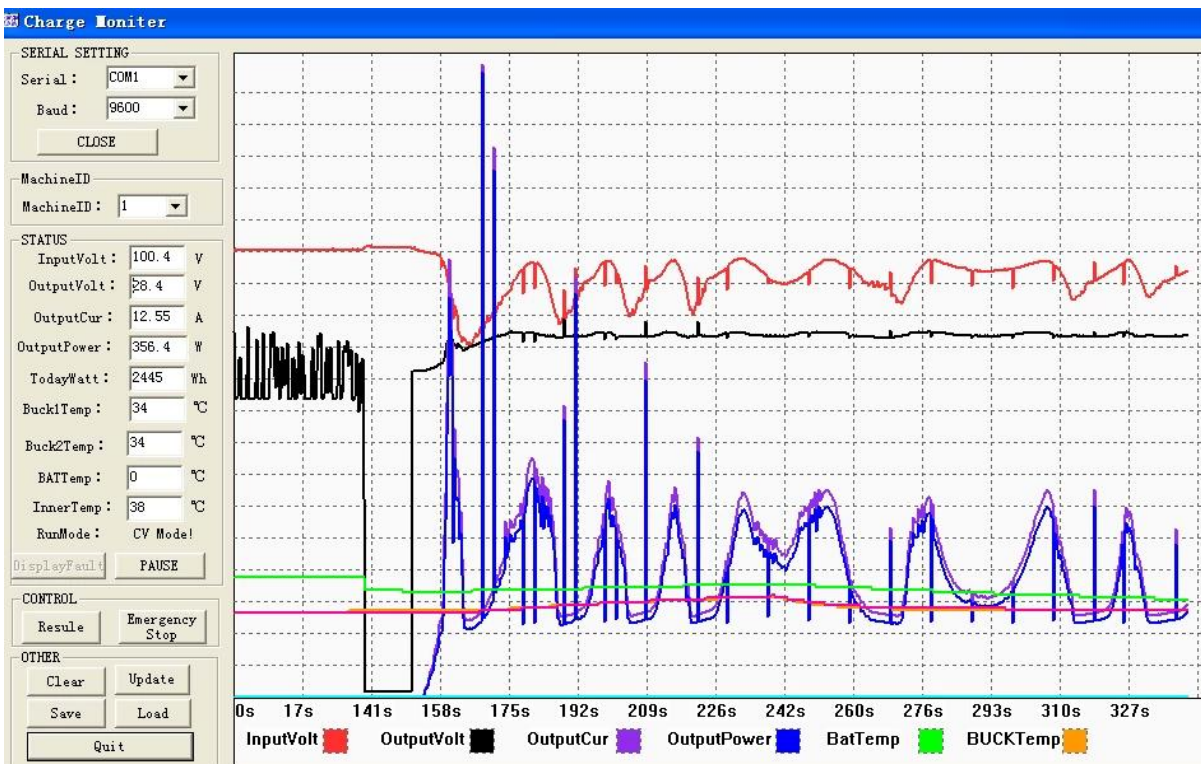


Figure: Testing Software

Applications

1. Industrial, commercial, household off-grid solar power system
2. moveable off-grid solar power system
3. Communication base stations
4. Energy knowledge popularization

Welcome to order I-Panda [MPPT Solar Charge Controller Smart1 48V 40A-60A](#)

Company





