A More Sustainable Future

Introduction

This is a MPPT (maximum Power Point Tracking) smart solar controller, with charging and discharging function, increasing 30%~60% efficiency than traditional PWM controller. It has automatic recognition function, three Stages charging function, also supports many kinds of battery charging and discharging, RS232 communication etc, It's our company's MPPT solar controller e-SMART series.

Features

1. MPPT charging mode, peak efficiency up to 99%, saving 30%~60% solar panel than traditional PWM controller.

2. DC12V/24V/48V battery system automatic recognition, users would like to use in different system conveniently.

3. DC12V/24V/48V system, maximum PV input voltage up to DC100V.

4. Charge type: three stages charge fast charge(MPPT), constant voltage,

floating charge, protected our battery, lead to a long use age.

5. Discharge type owns always on pattern and always off pattern, it also has PV voltage solar controlling switch pattern.

6. Clients can auto select any one in the 4 kinds of commonly used batteries, Sealed lead acid, vented, Gel, NiCd and custom other batteries.

7. Digital tube display controller battery voltage and charging current,upper computer display various parameters, such as model, PV input voltage, battery types, battery voltage, charging current, charging power, working condition etc.

8. **RS232 communication**, and that providing communication protocol, it's convenient for customer's integration management.

9. This controller could be paralleled infinitely.

10. CE, RoHS Certifications approved; cooperating with clients through the other certifications.

11. 2 years warranty; 3~10 years extended technical service.

Products photos

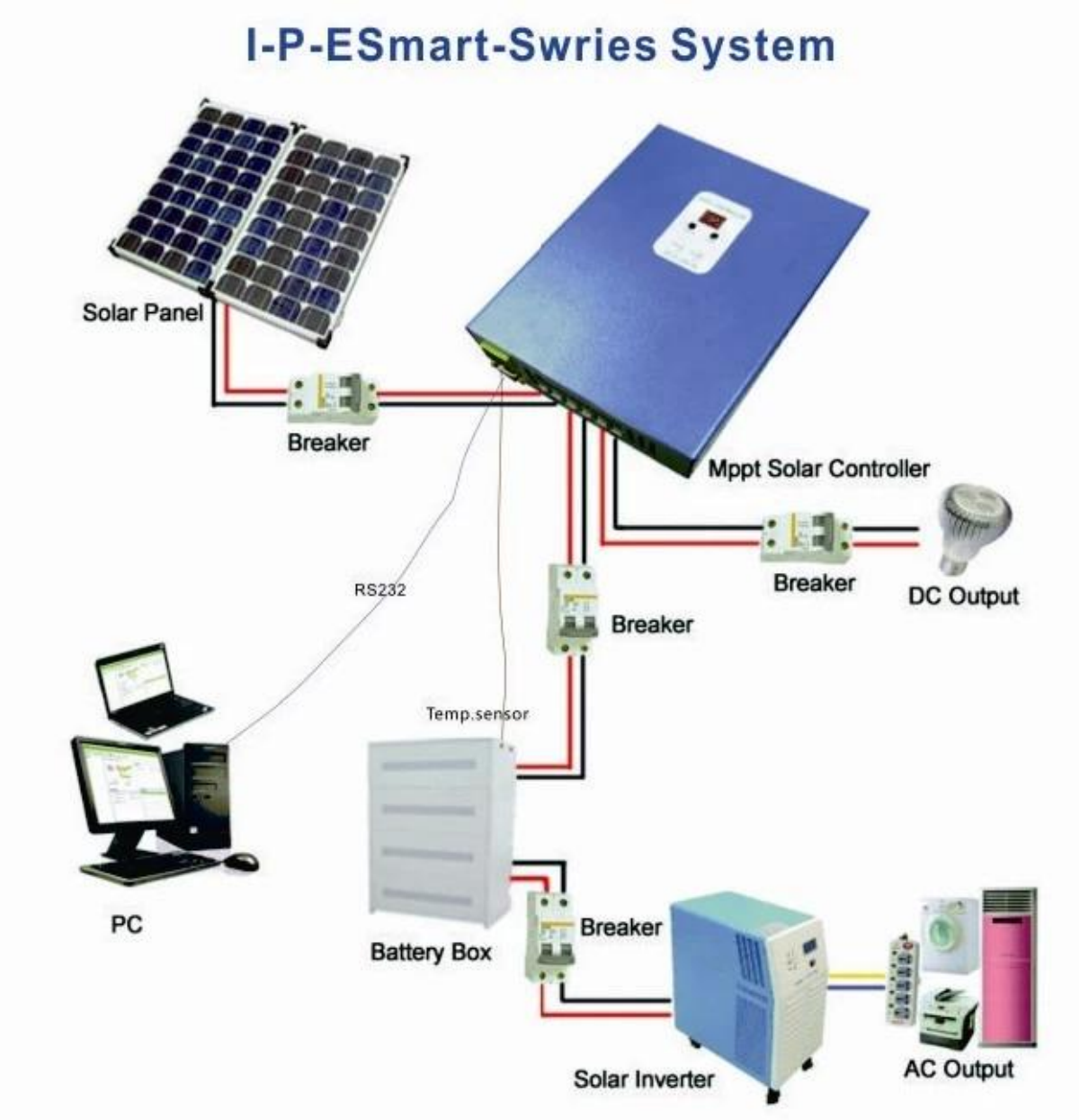
+PV-
+BAT-
+LOAD-
BAT TEMP
RS232

Parameters

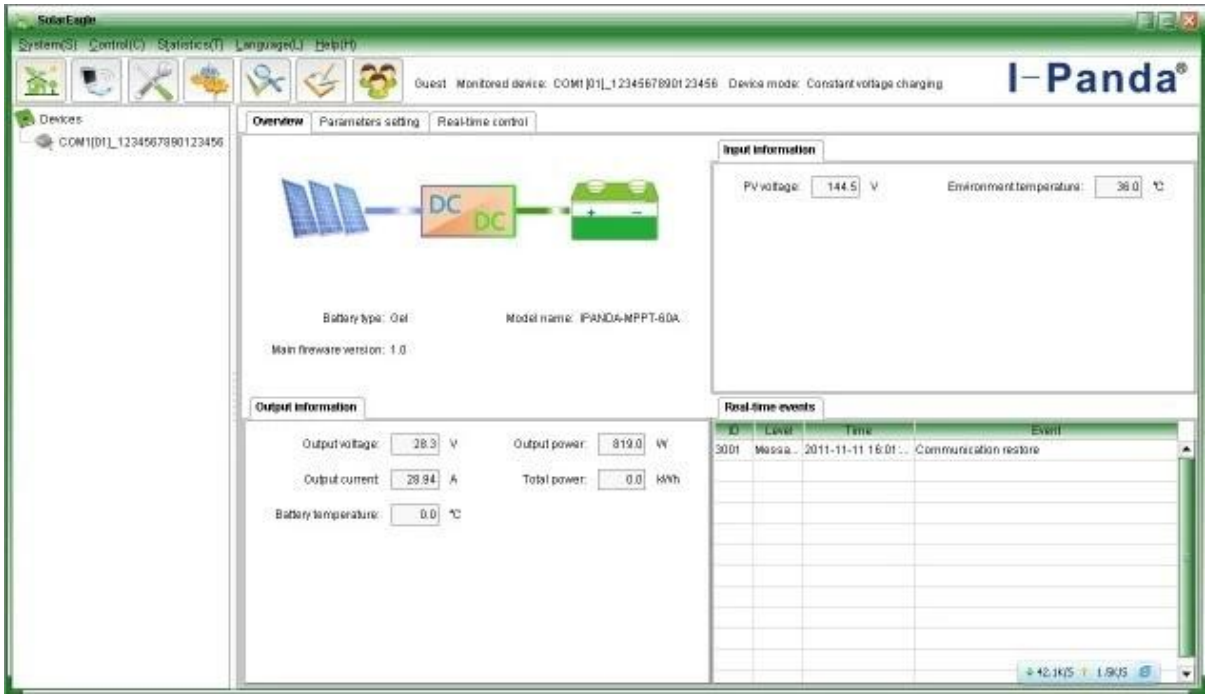
MPPT solar charge controller modes I-P-e-SMART-12V/24V/48V-series		40A
Charge mode	MPPT(maximum power point tracking)	
Charge method	Three stages: constant current(MPPT),constant voltage,floating charge	
System type	DC12V/24V/48V	Automatic recognition
System voltage	12V system	DC9V~DC15V
	24V system	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 Recovery point	12V system	DC18V
	24V system	DC34V
	48V system	DC65V
Input over voltage protection point	12V/24V/48V system	DC110V
Input over voltage recovery point	12V/24V/48V system	DC100V
Maximum PV power	12V system (W)	568
	24V system (W)	1136
	48V system (W)	2272

CHARGE CHRECTRESTICS		
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	
Rated Input Current	12V/24V/48V system	40A
Current-limiting Protection	12V/24V/48V system	45A
Temperature Factor	12V/24V/48V system	±0.02%/℃
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%
Output Discharge Characteristics		
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 mode		Controller button or upper computer
Display		
LED digital tube display		Battery voltage, charge current
LED light display		Charging indicator light, LOAD indicator light
PC communication port		RS232
Protection		
Input Low Voltage Protection		Check the input characteristics
Input Overvoltage Protection		Check the input characteristics
Charge over voltage power Protection		yes
Low Voltage output Protection		yes
Rated output Current protection		yes
Temperature Protection		yes
Other Parameters		
Noise		≤40dB
Thermal heat-dissipating method		Itself cooling fan cooling
Components		Imported material, with EU standards.
Certification		CE\FCC\ROHS
Physical		
Measurement D x W x H(mm)		205*168*60
package size D x W x H(mm)		265*196*110
N.G(KG)		1.8kg
G.N(KG)		2kg
Type of Mechanical Protection		IP25
Environment		
Humidity		0~90%RH (no condense)
Altitude		0~3000m
Operating Temperature		-20℃ ~ +50℃
Storage Temperature		-40℃ ~ +75℃
Atmospheric Pressure		70~106kPa

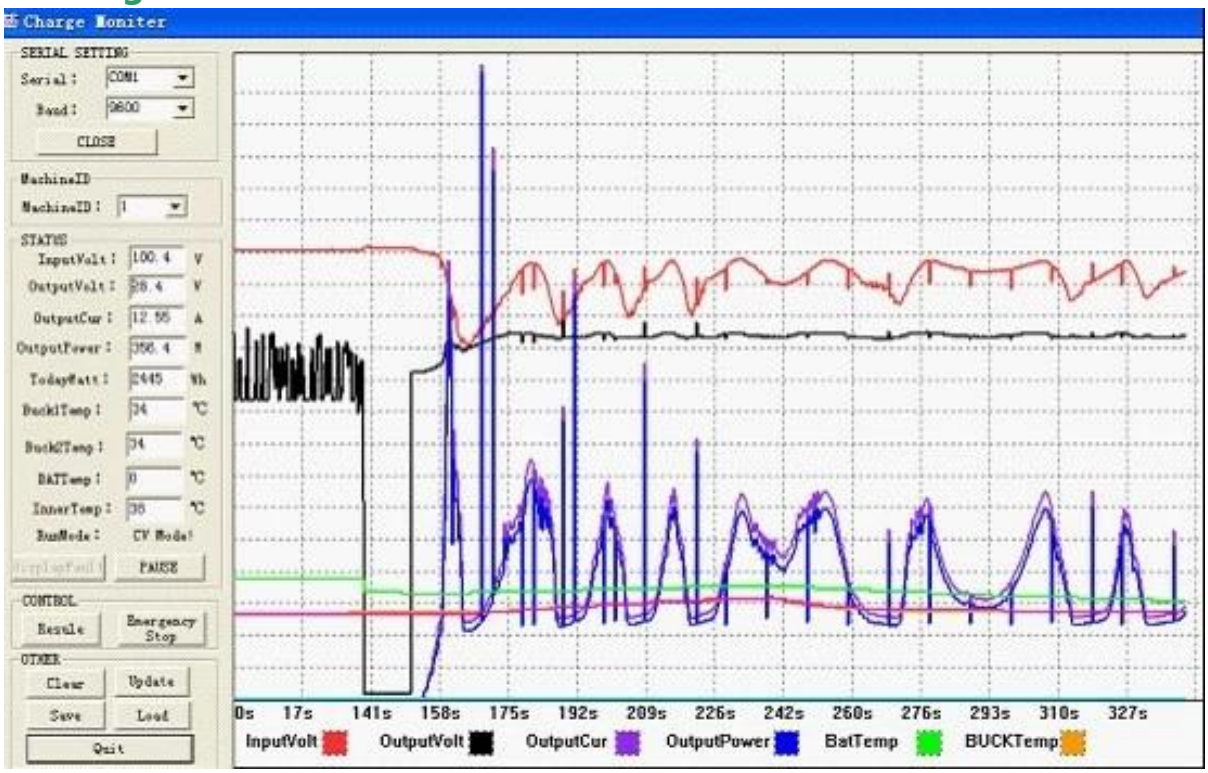
Connection diagram



Upper software



Testing ware



Certification

United testing

Certificate Of Compliance

Certificate Number: UNI201404001EC-1

Applicant : **Shenzhen I-Panda New Energy Technology & Science Co., Ltd.** Bolck H, Juyin Technology Industrial Park, Buji Street, Longgang Distrct, Shenzhen, China.

Manufacturer : **Shenzhen I-Panda New Energy Technology & Science Co., Ltd.** Bolck H, Juyin Technology Industrial Park, Buji Street, Longgang Distrct, Shenzhen, China.

Product : **MPPT SOLAR CHARGER CONTROLLER**

Trade Name : **I-PANDA**

M/N : **SMART 60A, SMART10A, SMART 15A, SMART 20A, SMART 25A, SMART 30A, SMART 40A, SMART 50A**

Test Standard: **EN55022:2010**
EN55024:2010
(EN61000-4-2:2009, EN61000-4-3:2006+A2:2010)

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC Directive 2004/108/EC. It is possible to use CE marking to demonstrate the compliance with EMC Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: UNI201404001ER-1.

2014-04-10
Date of issue

Hofer Lau

United testing technology (Hong Kong) Limited
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United testing

FCC VERIFICATION of CONFORMITY

Certificate Number: UNI201404001FC-1

We herewith confirm the following designated product:

MPPT SOLAR CHARGER CONTROLLER

Trade Name: I-PANDA

MODEL Number:
SMART 60A, SMART10A, SMART 15A, SMART 20A, SMART 25A, SMART 30A, SMART 40A, SMART 50A

(Product Identification)

has been tested and found in compliance with the requirements of 47 CFR PART 15 regulation & ANSI C63.4 for the evaluation of Class A of electromagnetic compatibility. It is only valid in connection with the test report number: UNI201404001FR-1.

This device complies with Part 15 of the FCC rules, operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

(Identification of regulations/standards)

This declaration is the responsibility of the manufacturer/Importer

Shenzhen I-Panda New Energy Technology & Science Co., Ltd. Bolck H, Juyin Technology Industrial Park, Buji Street, Longgang Distrct, Shenzhen, China.
(Name /Address)

MANUFACTURER / IMPORTER

FC

Name

Date

TEST LABORATORY

This is the results of test that was carried out by UNI from the submitted type samples of the product is in conformity with the specification of the respective standards.
The certificate holder has the right to fix the FCC-mark on the product complying with the required rules.

Hofer Lau
2014-04-10
Date of issue

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United testing

Certificate Of Compliance

Certificate Number: UNI201404001RC-1

Applicant : **Shenzhen I-Panda New Energy Technology & Science Co., Ltd.** Bolck H, Juyin Technology Industrial Park, Buji Street, Longgang Distrct, Shenzhen, China.

Manufacturer : **Shenzhen I-Panda New Energy Technology & Science Co., Ltd.** Bolck H, Juyin Technology Industrial Park, Buji Street, Longgang Distrct, Shenzhen, China.

Product : **MPPT SOLAR CHARGER CONTROLLER**

Trade Name : **I-PANDA**

Model Number : **SMART 60A, SMART10A, SMART 15A, SMART 20A, SMART 25A, SMART 30A, SMART 40A, SMART 50A**

Test Standard: **IEC62321:2013**

The EUT described above has been consolidated by us and found in compliance with the council RoHS Directive 2011/65/EU. It is only valid in connection with the test report number: UNI201404001RR-1.

2014-04-10
Date of issue

Hofer Lau

RoHS

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Company photo

Shanghai International Photovoltaic Power Generation Conference & Exhibition

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snecmall.com
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Everlasting Exhibition
在线交流平台
Online Communication Platform