



# **PSC SOLAR (UK)**

## **TECHNICAL SPECIFICATIONS & MANUAL**

### **SMART CHARGERS**



# Smart Chargers

24V/100A

48V/100A

# PSC SOLAR(UK)



## Smart Charger System Instructions



**Model: 24V100A**

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This manual will guide you to install and use this intelligent charging unit and contains manual operation and installation of the important security instructions. If you have any questions, please refer to this manual before contact the dealers.

### **1. Important security alerts**

- Warning: Avoid direct sunlight, rain or damp place.
- When the battery run, please do not open the case or move the power input and output line, in case of electric shock or other safety accident caused.
- The input and output line of the charging set must be assigned properly to prevent the treadle rub and electrical accident.
- Charging machine must be grounded, ungrounded line running of the electric shock or body injuries responsible by the user.
- The ground wire of charging machine can't pick on the heating pipes, water supply pipes, the gas pipes and other public facilities, so as not to infringe any third party rights or causing harm.
- Should periodically to check the input and output line of the charger, to avoid loose or off, and thus to the normal operation and safety for using electricity.
- Nonprofessional personnel please do not open to charger and maintenance.

### **2. Products Introduction**

The charging machine adopts micro-computer control, thus achieve automatic charging and no need staff watching, the product characteristics as follows:

- (1) Automatically identify load, the access to recharge automatically.
- (2) Automatically identify the charging status, average charging and float charging can changeover automatically.
- (3) With automatic shutdown when recharging is completed, thus to perform unattended.
- (4) With a stream, overheating, overvoltage, multiple protect circuit.

### **3. Technical Specifications**

Apply to battery type : plumbic acid battery

Maximum output current : 100A ( applies to100Ah ~ 400Ah battery )

Work temperature : -5 temperature ? ~ 75 ?

Source rate ( 180V ~ 250V )

Load rate ( 0% ~ 100 ) : = ± by 0.5%

Temperature index : 150ppm/?

spike of voltage : vpp = 100mv wave

Switch frequency voltage :  $v_{pp} = 60\text{mv}$  wave

Wave frequency voltage :  $v_{pp} = 10\text{mv}$

Output voltage protection point : 31.5V

Output over protection point: 102A

Output whether allow to a short circuit: Yes

Power conversion efficiency : = 86%

Startup output voltage establish time ; = 3s

Safety and pressurization, Input to main case, input to output: DC2500V one minute no puncture.

Safety and pressurization, Output to main case: DC500V one minute no puncture.

#### **4. Installation**

**4.1** To place the charger in good ventilation.

**4.2** Ensure the charger's back board panel is shut off, the switch is at (OFF) position;

**4.3** The board will enter into power supply cord, socket. please pay attention to the input voltage must be accord with the rated working voltage, the exchange of input for 220v ,please make sure the socket can load the switch power rating power;

**4.4** Turn the back board switch to ON state, the power light lights, proved functioning charger.

**4.5** Turn the switch to OFF state, put the direct current output line connect the charging equipment or batteries corresponding positive and negative poles, red line meets positive pole and black line meets negative pole.

**4.6** Open on the switch board, the charger can identify the charging automatically and recharging the batteries, will shut off the power automatically and enter working state when charging completes.

#### **5. Using Help**

**5.1** The structure of the case

**5.1.1** Main switch: ON/OFF input power

**5.1.2** LED: To display the charger's running status.

**5.1.2** Charging LED: To display the charging status.

**5.1.2** Automatic & Hand switch: Automatic operation and manually operation switch.

**5.1.3** Voltage display, current display: show the output voltage, current value.

**5.1.4** Output (+) , output (-) : red posts for (+) , black, posts for (-)

**5.1.5** Input : input must be earthed and make sure that the input port can bear the greatest power of the machine.

#### **5.2 Operation Instructions**

**5.2.1** Switch: Press this button, the machine output, and entering standby; press again, out of the stand-by status.

**5.2.2** Power light": When the switch open, power supplied and the lamp lights.

**5.2.3** Fault light": The machine is too hot or has a failure, the lamp lights.

**5.2.4** "The constant-current" lamp: When the working current is equal to setting current, it lights; Note: If the voltage drops at this time is a normal phenomenon.

**5.2.5** "average charging" lamp: When charger is in average charging state, this light lights, and the charging speed is faster. Charger into all filling state, this light, when charging fast

**5.2.6** "Float charging" lamp: When the charger is in float charging state, this light lights, at this time the battery charger is complementing electricity.

**5.2.7** "Full" lamp: battery charging completed the lamp lights.

**5.2.8** Automatic & manual switching: switch between charging automatic control and manual control.

**5.2.9** "To adjust current: manual control battery charging electric current clockwise adjustment, the maximum current of output increase, counterclockwise adjustment, the maximum current of output decrease.

Note: only in manual operation, this knob is effective. Adjust current adjust for output current limit value. Such as: the user adjusts to 10A position, output current is not more than 10A, when the output current didn't arrive 10A, the machine will not be restrictions to output current, only in the load more than 10A, the output current will remain output 10A unchanged. Then output voltage decreases as the load increases continuously, so as to control the output power, to avoid damage equipment. **To adjust the current at the lowest (counterclockwise to end), the charger will consider the batteries full filling, please note.**

### **5.3 Instructions**

**5.3.1** Boot: after opening board master switch, machine self-inspection starting, fan startup, buzzer rang once,

Check whether access batteries, if access, start charging.

**5.3.2** Standby: press former board power key, enter standby state, at this time the machine without output, digital tube no display, in standby status, until press power key next time to return to working state.

**5.3.3** Shutdown: press former board switch, waiting for soft shutdown, closed backboard main switch.

## 6. Product Specifications

Model		24V100A
input	voltage	AC 180V~250V DC 230V~300V
	Frequency	50 or 60Hz +/- 10%
output	Maximum output power	3000W
	Maximum output voltage	30V
	Maximum output current	100A
Protection	overtemperature protection	Environment stable over 75 °C automatic shutdown
	Constant current protection	Current exceeds the set value, current unchanged, voltage drops, limiting output power and protect the equipment.
	Over-voltage protection	Voltage output voltage is higher than the highest 1.5 V, into hiccups state, output voltage go down until the voltage is back to normal
Appearance size	Net weight Kg	8.5
	Gross weight Kg	9.5
	size(mm)W×D×H	430x350x88
environment	Operating environment	degrees Celsius, highest altitude 3,500 meters. 0-95 percent humidity (non condensate)
	Operating noise (db)	< 40 decibels (from charging machine surface 1 meter)
	Storage conditions	Below an altitude of 15,000 meters.

## 7. Abnormal Status Elimination

phenomenon	possible reasons	handling method
Digital tube no display or display insufficiency	interfered by electromagnetic Serious	Eliminate electromagnetic wave, adjust the direction of the machine position.
	Into standby state	Press the power switch of former board again.
	The input power cord loose, switch of backboard is not open	Connected to the power supply cord, switch open.
	PC board failure	Contact the dealer or manufacturer
Failure lamp lights up, machine stop working	airinlet abnormal objects obstruction	Eliminate airinlet abnormal objects.
	Environmental temperature over 50 °C	Improve the environment temperature
	Fan fault	Contact the dealer or manufacturer
	PC board failure	Contact the dealer or manufacturer
☒ Current can not be adjusted	Automatic&manual switch in automatic-shift	Check switch state
	PC board failure	Contact the dealer or manufacturer

## 8. Guarantee clause

This series product in one year guarantee period of normal use condition, nature damages our company repairs by free.

This machine maintenance way: the customer sends for maintenance.

But if one of following cases does not guarantee:

- Not allowed by the company, amendment or maintenance without authorization, cause damage.
- Incorrect operation or use;
- Not according to user manual to clean or maintenance;
- Environmental conditions anomalies over specifications and cause damage;
- Artificial deliberate sabotage;
- Irresistible natural disasters caused damage.

### 9. Guarantee Registration List

Product name	Automatic intelligent charging machine (user customized)		
model	IC-1-12V100A	Software Numbers	
User's company name	address		
	postal code		
	Tel		
	Contact person		
Maintenance date	Failure causes	Replacement parts	Responsible person
Remarks			

**Kindly Reminder:**

- (1) Please fill in this list in time when it is open, and send to our company.
- (2) This list is only for equipment warranty registration purposes.

The company reserves the right to change the contents of this manual at any time without prior notice.

**PSC SOLAR (UK)**



# **Smart Charger System Instructions**



**Model: 48V100A**

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- Charging machine must be grounded, ungrounded line running of the electric shock or body injuries responsible by the user.
- The ground wire of charging machine can't pick on the heating pipes, water supply pipes, the gas pipes and other public facilities, so as not to infringe any third party rights or causing harm.
- Should periodically to check the input and output line of the charger, to avoid loose or off, and thus to the normal operation and safety for using electricity.
- Nonprofessional personnel please do not open to charger and maintenance.

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### **3. Technical Specifications**

Apply to battery type : plumbic acid battery

Maximum output current : 100A ( applies to100Ah ~ 400Ah battery )

Work temperature : -5 temperature ? ~ 75 ?

Source rate ( 180V ~ 250V )

Load rate ( 0% ~ 100 ) : = ± by 0.5%

Temperature index : 150ppm/?

spike of voltage : vpp = 100mv wave

Switch frequency voltage : vpp = 60mv wave

Wave frequency voltage :  $v_{pp} = 10\text{mv}$

Output voltage protection point : 61.5V

Output over protection point: 102A

Output whether allow to a short circuit: Yes

Power conversion efficiency : = 86%

Startup output voltage establish time ; = 3s

Safety and pressurization, Input to main case, input to output: DC2500V one minute no puncture.

Safety and pressurization, Output to main case: DC500V one minute no puncture.

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**5.3.3** Shutdown: press former board switch, waiting for soft shutdown, closed backboard main switch.

## 6. Product Specifications

Model		48V100A
input	voltage	AC 180V~250V DC 230V~300V
	Frequency	50 or 60Hz +/- 10%
output	Maximum output power	6000W
	Maximum output voltage	60V
	Maximum output current	100A
Protection	overtemperature protection	Environment stable over 75 °C automatic shutdown
	Constant current protection	Current exceeds the set value, current unchanged, voltage drops, limiting output power and protect the equipment.
	Over-voltage protection	Voltage output voltage is higher than the highest 1.5 V, into hiccups state, output voltage go down until the voltage is back to normal
Appearance size	Net weight Kg	8.5
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	size(mm)W×D×H	430x350x88
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	The input power cord loose, switch of backboard is not open	Connected to the power supply cord, switch open.
	PC board failure	Contact the dealer or manufacturer
Failure lamp lights up, machine stop working	air inlet abnormal objects obstruction	Eliminate air inlet abnormal objects.
	Environmental temperature over 50 °C	Improve the environment temperature
	Fan fault	Contact the dealer or manufacturer
	PC board failure	Contact the dealer or manufacturer
<input checked="" type="checkbox"/> Current cannot be adjusted	Automatic & manual switch in automatic-shift	Check switch state
	PC board failure	Contact the dealer or manufacturer

## 8. Guarantee clause

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- Not according to user manual to clean or maintenance;
- Environmental conditions anomalies over specifications and cause damage;
- Artificial deliberate sabotage;
- Irresistible natural disasters caused damage.

### 9. Guarantee Registration List

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User's company name	address		
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	Tel		
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