

Shine05 Li series

Solar Charge Controller

12V, 5A



User Manual

Solar charge controller Shine05 User Manual

Dear Clients,

Thanks for selecting the **Shine** series solar controller. Please take the time to read this user manual, this will help you to make full use of many advantages the controller can provide your solar system.

This manual gives important recommendations for installing and using and so on. Read it carefully in your own interest please.

1. Description of Function

Shine series solar controller is especially for solar home system, with better cost-effective.

It comes with a number of outstanding features, such as:

- Low cost and high reliability design
- 12V system voltage
- Clear readable display of charge/discharge and error description
- Full automatic electronic protect function

2. Safety instructions and waiver of liability

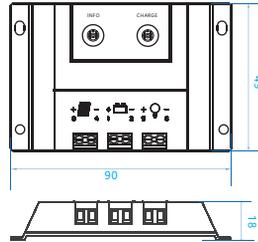
2.1 Safety

- ① The solar charge controller may only be used in PV systems in accordance with this user manual and the specifications of other modules manufacturers. No energy source other than a solar generator may be connected to the solar charge controller.
- ② Batteries store a large amount of energy. We strongly recommend connecting a fuse directly to the battery to protect any short circuit at the battery wiring.
- ③ Batteries can produce flammable gases. Avoid making sparks, using fire or any naked flame. Make sure that the battery room is ventilated.
- ④ Avoid touching or short circuiting wires or terminals. Be aware that the voltages on special terminals or wires can be as much as twice the battery voltage. Use isolated tools, stand on dry ground, and keep your hands dry.
- ⑤ Keep children away from batteries and the charge controller.

2.2 Liability Exclusion

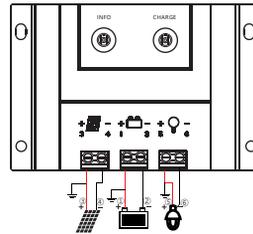
The manufacturer shall not be liable for damages, especially on the battery, caused by use other than as intended or as mentioned in this manual or if the recommendations of the battery manufacturer are neglected. The manufacturer shall not be liable if there has been service or repair carried out by any unauthorized person, unusual use, wrong installation, or bad system design.

3. Dimensions



4. Installation

The following diagrams provide an overview of the connections and the proper order.



- To avoid any voltage on the wires, first connect the wire to the controller, then to the battery, panel or load.
- Make sure the wire length between battery and controller is as short as possible.
- Recommended minimum wire size: 1.5 mm².
- Be aware that the positive terminal of Shine are connected together and therefore have the same electrical potential. If any grounding is required, always do this on the positive wires.
- Connecting capacitive load may trigger short circuit protection.

5. Starting up the controller

5.1 Self Test

As soon as the controller is supplied with battery, it starts a self test routine. Then the display changes to normal operation.

5.2 Battery Type

The controller applies to Lithium battery.

Solar charge controller Shine05 User Manual

6.LED indications



LED	Status	Function
Green	Slow flash(1s/1s)	Stop charging
	Fast flash(0.1s/0.1s)	Charging
	On	Battery connected, night detected
Red	Off	No faults detected
	On	Short circuit or Over current protection
	Slow flash(1s/1s)	Low voltage protection
	Flash(0.5s/0.5s)	Over temperature protection
	Fast flash(0.1s/0.1s)	Over voltage protection
Red Green	Off	No battery connected
	Lighted together (1second)	Controller start-up

7.Safety Features

	Solar terminal	Battery terminal	Load terminal
Reverse polarity	Protected	Protected	Protected *1
Short circuit	Protected	Protected *2	Switches off immediately
Over current	—	—	Switches off with delay
Reverse Current	Protected	—	—
Over voltage	Max.25V *3	Max. 20V	—
Under voltage	—	—	Switches off
Over temp.	switches off the load if the temperature reaches the set value.		

*1.Controller can protect itself, but loads might be damaged.

*2.Battery must be protected by fuse, or battery will be permanently damaged.

*3.The solar panel voltage should not exceed this limit for a long time as voltage protection is done by a varistor.



Warning: The combination of different error conditions may cause damage to the controller. Always remove the error before you continue connecting the controller.

8.Technical Data

Model	Shine05 Li
System voltage	12V
Max solar/Load current	5A
Over Charge voltage	14.4V
Over Charge release voltage	14.0V
Load disconnect voltage	10.8V
Load reconnect voltage	11.5V
Day/Night threshold	5.0V
Battery type	Lithium
Max solar voltage	25V
Max battery voltage	20V
Over voltage protection	15.5V
Dimensions	90 * 49 * 18 mm
Weight	36g
Own consumption	5mA
Ambient temperature	-40 ~ +60 °C