



SOLAR eSTORE

**INSTALLATION AND OPERATOR'S
MANUAL**

Rev1.0

REVISION TABLE

Document	Author	Data	Chang Description
1.0	YHB	2015.04.11	First release



SAVE THESE INSTRUCTIONS!



INPORTANT SAFETY INSTRUCTIONS!

JFY-tech: Reproduction and disclosure of the content of this manual are strictly forbidden without prior authorization of JFY-tech.

General Precautionary Measures

For the safety of you and your equipment, please read and understand the contents of this Manual before installation and use.

Please put the Manual in the place where machine operator can easily find it for reference.

Non-professional technician is not allowed to install and operate this machine.

WARNING:



In order to avoid electric shock, please disconnect the machine and the input and output ends for at least 1 minutes, and then contact the wire part of the input and output ends of the machine.

- The installation of equipment must completely comply with the local safety standard and regulations. Keep away from inflammable and combustible articles to prevent fire disasters.
- There are no spare parts in the package. There should be no equipment shell to avoid electric shock. There are no available spare parts in the internal part. Please consult qualified professionals if maintenance is needed. Please contact the local retailers if you want to know the authorized maintenance center or professional personnel nearby.
- Professional maintenance personnel must know the input voltage source, and each circuit must be disconnected respectively before maintenance.
- In installation and operation of this equipment, please read and understand the instructions of the Manual to be familiar with the safety marks.
- The equipment can only be connected and operated after approval is obtained from the local management department stipulated by the national laws, and the operation must be carried out by qualified professionals.

The machine is equipped with relevant marks, and yellow marks are related with safety. In machine installation, please read and fully understand these marks.



Disposal: Please do not dispose of the machine as unclassified municipal refuse, which must be classified and recovered. Please contact the local government department for relevant details. It may result in hazardous substance leakage into the underground water and food chain to endanger human health and safety if the machine is thrown into refuse dump.

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1 Overview

The equipment is usually used with the power generation equipment of photovoltaic system. The energy will be transmitted to the grid if the electricity power generated by the power generation equipment of the system cannot be fully consumed by the local load. This equipment can start the water heater to heat the water by detecting the current flowing to the grid side, which enables the residual energy to flow into the grid and then be stored in the water heater, so as to serve the purpose of energy storage.

SOLAR eSTORE Feature:

- Support up to 3.6kW heater;
- Support up to 2 water heaters;
- Use the surplus solar energy generated at your roof to heat the water
- Flexibly work with grid, ensure instant hot water supply;
- Can heat water forcibly by timer or by “enhance” button
- Abundant information display, historical energy saving figures and running status
- Easy and fast to deploy, by using existing facility, no wiring between SOLAR eSTORE controller and Emitter.

Important: The equipped water heater must be provided with thermostat to use this equipment. In this way, the water heater will automatically shut off after the water temperature reaches the setting value. Otherwise, danger may be caused when the water heater fails to be disconnected after the setting water temperature is reached.

2 Installation of SOLAR eSOTRE



Warning: The installation shall be implemented according to the local and national safety standards.

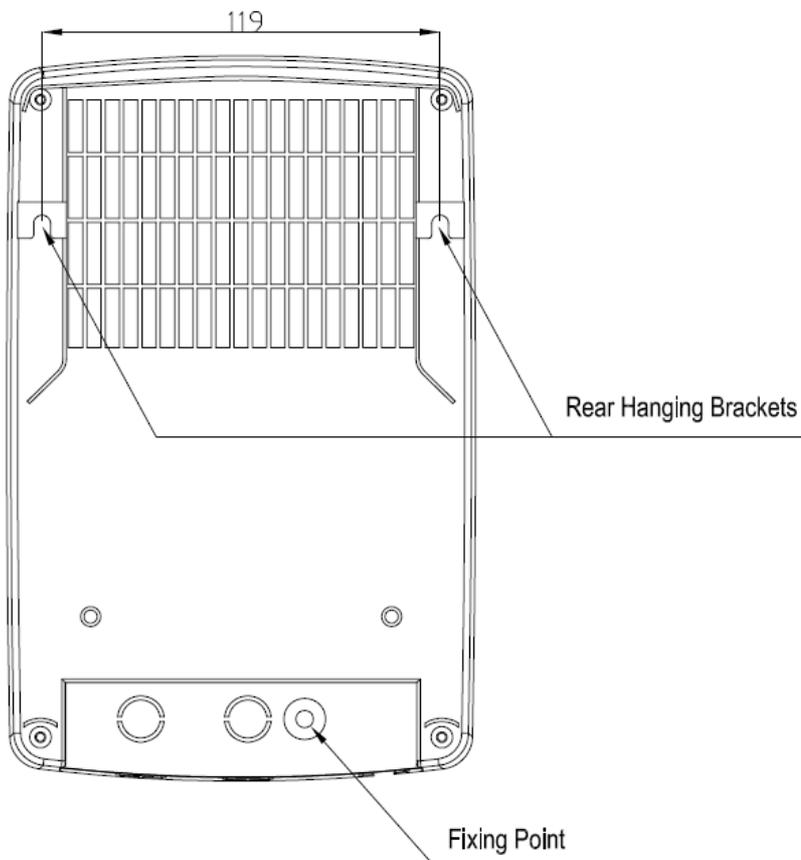
(1) Install SOLAR eSOTRE unit on the wall

Please pay attention to the following points for installation of SOLAR eSOTRE unit:

- The equipment should be installed parallel to the wall
- The machine should be installed with appropriate height to the ground surface, so as to make it easy to observe and read the display on the LCD
- It should be installed well-ventilated place, and avoid being installed on humid place.
- Enough space should be reserved at the four sides for heat dissipation

Important:

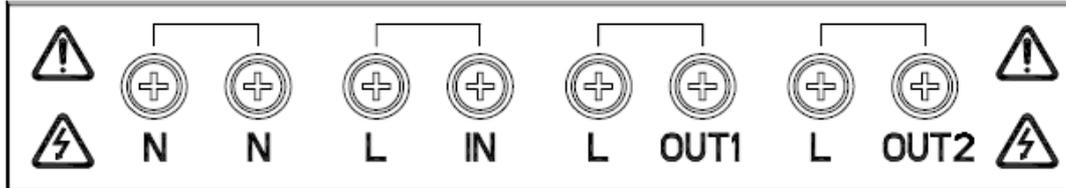
- Try to install it near the water heater, and connect with the miniature circuit breaker or the fuse in the input higher level of the SOLAR eSTORE for protection.
- The operated water heater should be equipped with thermostat to prevent from over- temperature.



(2) Connect with SOLAR eSOTRE UNIT

The following wiring operation must be carried out by qualified professionals. 16A circuit breaker or 13A fuse should be connected at the higher level of the power input terminal.

Port description:

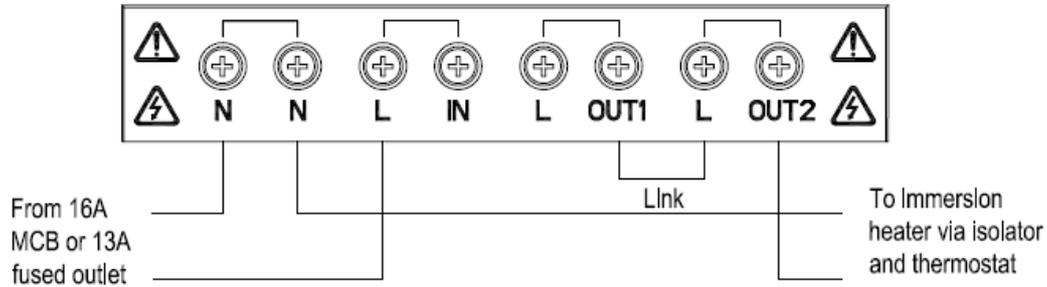


N N	Neutral connection port: all the Neutral lines are connected here.
L IN	Live Input port: these two ports are connected.
L OUT1	Live output port 1: these two ports are connected.
L OUT2	Live output port 2: these two ports are connected.

It should guarantee that the cross sectional area of the copper conductor is above 3.3mm² for the cables connected at the connection port. It must guarantee that the bolts are tightened. Otherwise, it may result in danger due to the heat emitting caused by large contact resistance of the contact part between the terminal and the conductor.

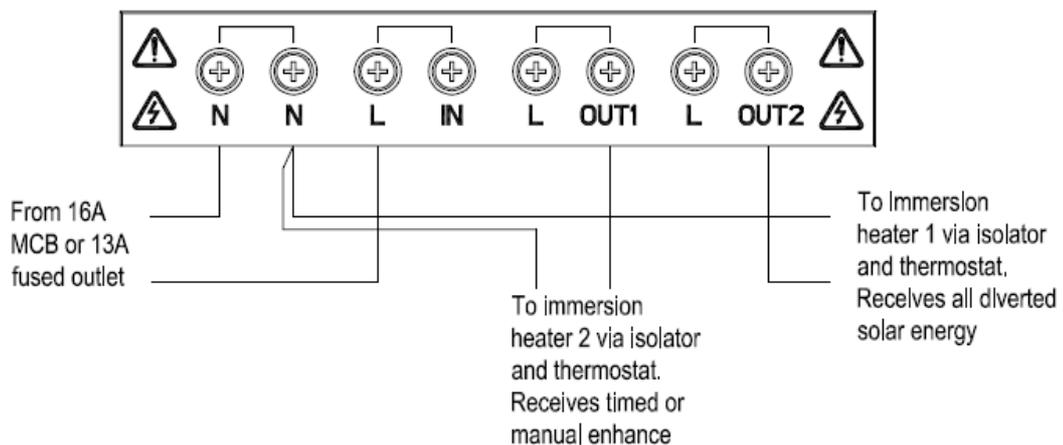
Wiring Schematic Diagram

(1) Wiring of single water heater



When only one water heater is connected, refer to the above diagram, only one port of LOUT2 in N Terminal Junction Box is required to be connected. LOUT1 and LOUT2 have been short connected with wire.

(2) Wiring of two water heaters



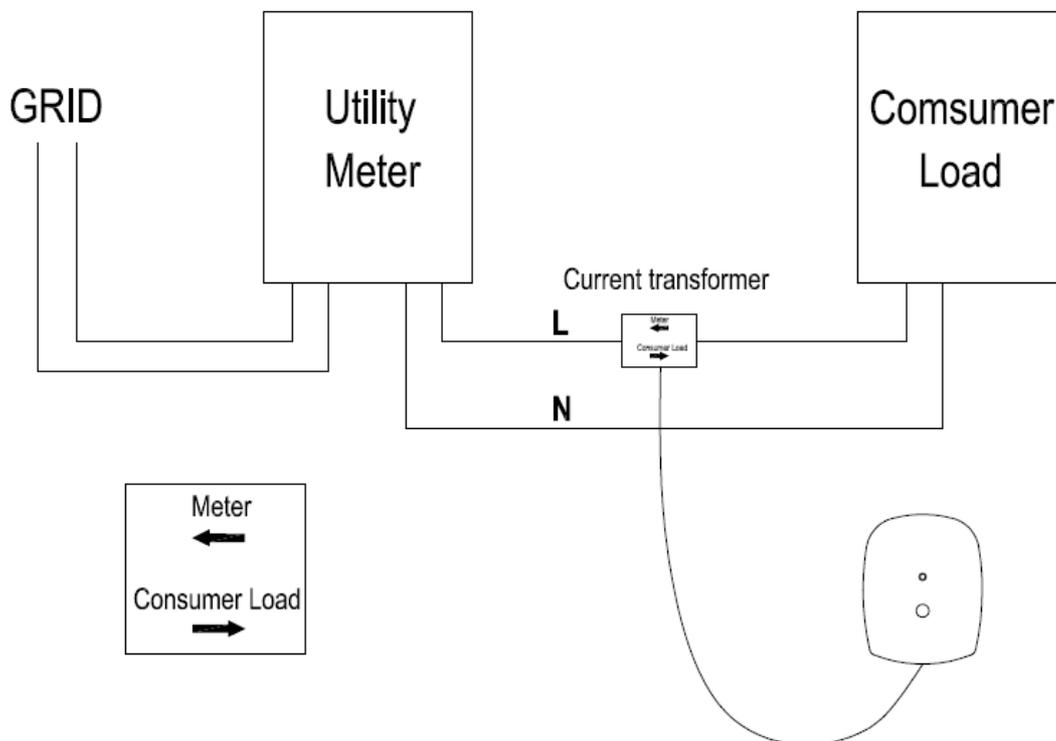
When two water heaters are connected, refer to the above diagram, the zero lines of the two water heaters are required to be connected. As for the other ends of the 2 water heaters, one should be connected with LOUT1, and the other should be connected with LOUT2. Remove the short-link line between LOUT1 and LOUT2. The total loads of the two water heaters should not be more than 3.6kW. Otherwise, esotre will be disconnected due to overload protection.

3 Installation of Emitter

The emitter should be installed with two AA batteries. Install 2 AA batteries into the emitter, and guarantee the correct directions of positive and negative electrodes are consistent with the marked ones. Fix the batteries, and cover the plastic cover plate.

The emitter is equipped with a current transformer, which should be connected between the electricity meter and the load. The core penetration direction of the current transformer must be correct, refer to the following diagram.

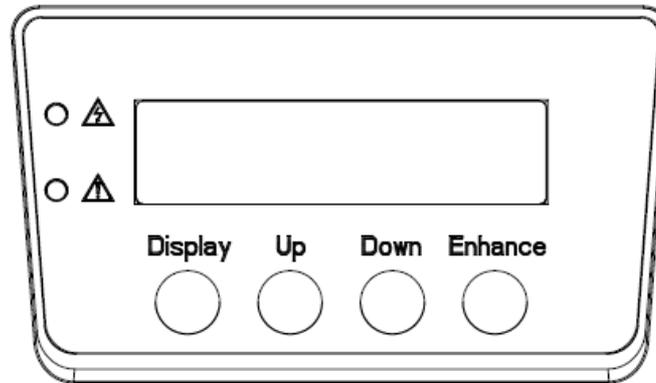
Otherwise, the equipment of the whole system cannot normally operate.



Important: The current transformer should be connected with the Line L, and the core penetration direction must be correct.

After connecting the line, buckle up the current transformer, and plug the other end of the current transformer into the middle socket of the emitter. Fasten the emitter, and the installation of the emitter is finished.

4 User Operation



Descriptions of Buttons

Display	Display the stored electricity quantity information
Up	Display the timing switch information
Down	Revise the timing switch information
Enhance	Manual operation button
LED(green)	Output indicator light
LED(red)	Warning indicator light

Display Contents

Heating by solar xx kW	Shows the value of energy being saved to immersion heater
Water tank hot	When the temperature of the water tank of the water heater reaches the setting value, the thermostat within the water heater will be disconnected, and eSTORE output will detect no load.
Water heating off	eSTORE turns off the output when no residual energy flows into the grid.
Saved Today xx kW	Energy saved today
Saved Yesterday xx kW	Energy saved yesterday
Saved Last 7 days xx kW	Energy saved in the past 7 days
Saved Last 28 days xx kW	Energy saved in the past 28 days
Saved Amount xx kW	Total value of energy saved to the immersion heater since eSTORE was installed
Time HH:MM	Current time in 24hr format

5 Timing Operation

SOLAR eSTORE can provide users with three manual appointment time periods. SOLAR eSTORE will start the maximum energy. At this time, it is possible to get electricity from the grid if the power generation energy of the photovoltaic system is not enough to support the energy required by eSTORE.

Appointment time operation can be set via the buttons of “Up”“Down”. Refer to the following table for the details. Under any circumstances, press “Up” to enter the current setting page to see the current appointment time period, and the display can be circulated among several time periods. During the setting process, the first displayed is “Enhance time 1”, the first number at the first appointment time will flash after pressing “Down”. Press “Down” for selection, and press “Up” for confirmation, and then move to the next number. The rest operation can be done in the same manner.

Display shows	Function
Enhance time 1	Set the timed enhance for period 1.Once programmed the eSTORE will remember it.Set “00:00 to 00:00” to disable
Enhance time 2	Set the timed enhance for period 2.Once programmed the eSTORE will remember it.Set “00:00 to 00:00” to disable
Enhance time 3	Set the timed enhance for period 3.Once programmed the eSTORE will remember it.Set “00:00 to 00:00” to disable
Set time HH:MM	Set the clock time in hours and minutes

6 Emitter Pairing

Wireless communication is carried out between the eSTORE controller and the emitter. When the user uses it for the first time, pairing should be carried out to the emitter and eSTORE controller to guarantee the normal communication between them. After communication, no pairing operation is required any more.

But if a new eSTORE controller or emitter is replaced, pairing operation is required to be carried out again. The operation steps are as follows:

When pairing starts, simultaneously press the buttons of “Display” and “Down” of the eSTORE controller for about 1 second, the LCD will display “pairing....”, and display “Pairing successful” after successful pairing. If it failed, it will display “Pairing Failed. Try again”. Please repeat above operation if the pairing failed. Please check whether the batteries of the emitter are correctly connected if above repeated operation still failed.

Press button Display and Down for 1 second

Display shows

Pairing Pairing....



Press button on sender unit 4 secs

Display shows

Pairing Pairing success

or

Pairing Pairing Failed

7 Manual Operation

User may press button “Enhance” to select different time for heating the water. SOLAR eSTORE will force the opening of the relay. At this time, it will not be controlled by the current information collected by the emitter. For each pressing of button “Enhance”, the timing duration will be increased with 15 minutes as one grade until it reaches 120 minutes, and then “Manual Enhance Turnoff” will directly shut off the timing water heating.

Important: When timing water heating is selected, SOLAR eSTORE will output in maximum energy. At this time, it is possible to get electricity from the grid if the power generation energy of the photovoltaic system is not enough to support the energy required by SOLAR eSTORE.

8 Warnings and Messages

Sender Battery Low	Batteries are low in the emitter unit. Please replace the batteries
Lost Signal to sender	Possible causes: 1.Batteries may have expired 2.eSTORE controller is positioned too far away from emitter
Over Load	The unit must not exceed 3.6kW max.

9 Technical specifications

SOLAR eSTORE

Content	specifications
Operating Voltage	220-240Vac
Maximum Permissible Loads	16A (Max 3.6KW)
Operating Radio Frequency	433MHz
Operating Ambient Temperature	-25 to 50°C
Power Dissipation	1-3W
Dimensions	140.2*216.5*67
weight	800g

Emitter

Content	specifications
Operating Radio Frequency	433MHz
Battery Type	2*AA 1.5V
Battery Life Cycle	1 year
Operating Ambient Temperature	-25 to 50°C
Radio Range	Up to 40m indoors (Outdoors up to 250m)
Current transformer	50A/50mA 0.5
Dimensions	78*96.4*31
weight	100g

10 Warranty

- ✧ SOLAR eSTORE provide 24-month warranty period.
- ✧ **Warranty period starting:** get the goods from JFY dealer's date.
- ✧ **warranty Evidence:** the product serial number and the local dealer delivery invoice
- ✧ **Range:** During the warranty period the occurrence of any damage will be assessed by the dealer and JFY define its scope and responsibilities.
- ✧ **Warranty Policy:** In order to provide better services to all user of JFY. All authorized distributors of our company are required to respond to end users' warranty claim . During the warranty period will be replaced by any authorized dealer in the design and production of defective products and accessories.
- ✧ The following case JFY reserves the right not to be Warranty:
 - (1) Product design changes or modifications or replacement parts has not been the permission of JFY.
 - (2) Modification, changes or attempted repair and the serial number has been rubbed or without technicians' seal of our company.
 - (3) Incorrect installation and commissioning.
 - (4) Failure to comply with the appropriate safety regulations
 - (5) The product has been improperly stored and damaged while being stored by the end user.
 - (6) Transportation damage, painting surface scratches caused by shipping pumping. When unloading there is sufficient evidence should be reported to the insurance company as soon as possible.
 - (7) Fails to comply with user manuals, installation guides, maintenance procedures.
 - (8) Improper use or improper operation.
 - (9) Lack of ventilation equipment.
 - (10) associated with this product or performing maintenance procedures not followed an acceptable standard.
 - (11) Force majeure (such as lightning, overvoltage, storms, fires).

11 Contact us

Add: 1ST,2ND,5TH Floor,12th Block,Nangang Second Industrial Park,Songbai Road,Xili Town,Nanshan District,Shenzhen,P.R.CHINA

Tel: +86-755-26632536

Fax: +86-755-26505986

E-mail: support@jfy-tech.com

Web:<http://www.JFY-tech.com>