

MeBoost User Guide

WeiWiz Technologies Co., Ltd.

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CATALOG

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Thank you for purchasing the MeBoost. Before use, please read these instructions carefully. These instructions provide information on the installation, operation. Please keep this booklet safe for future reference.

The MeBoost is designed to be used in conjunction with solar PV. By monitoring the amount of energy being exported to the National Grid, the MeBoost will divert energy into an immersion heater when energy generated exceeds the amount of energy consumed within the property. The MeBoost can reduce house energy bill.

The MeBoost consists of two parts: MeBoost Controller and SP-CT. MeBoost Controller controls heating the water tank, SP-CT monitors the current of grid.

1. Product Description

1.1. Technical Specifications

- **MeBoost**

| | |
|---------------------------|---|
| AC Supply Voltage Range | 196~250V |
| AC Frequency Range | 50~60HZ |
| Rated Power | 3000W |
| Operating Temperature | -20~50°C |
| Operating Radio Frequency | 433MHZ |
| Radio Range | ≤30m |
| Dimension (W/H/D) | 215*150*60mm |
| Shell Material | Metal |
| Weight | 1.5KG |
| Supported Tank Model | Resistive load hot water tank (max two immersion heaters) |
| Safety Standard | CE |

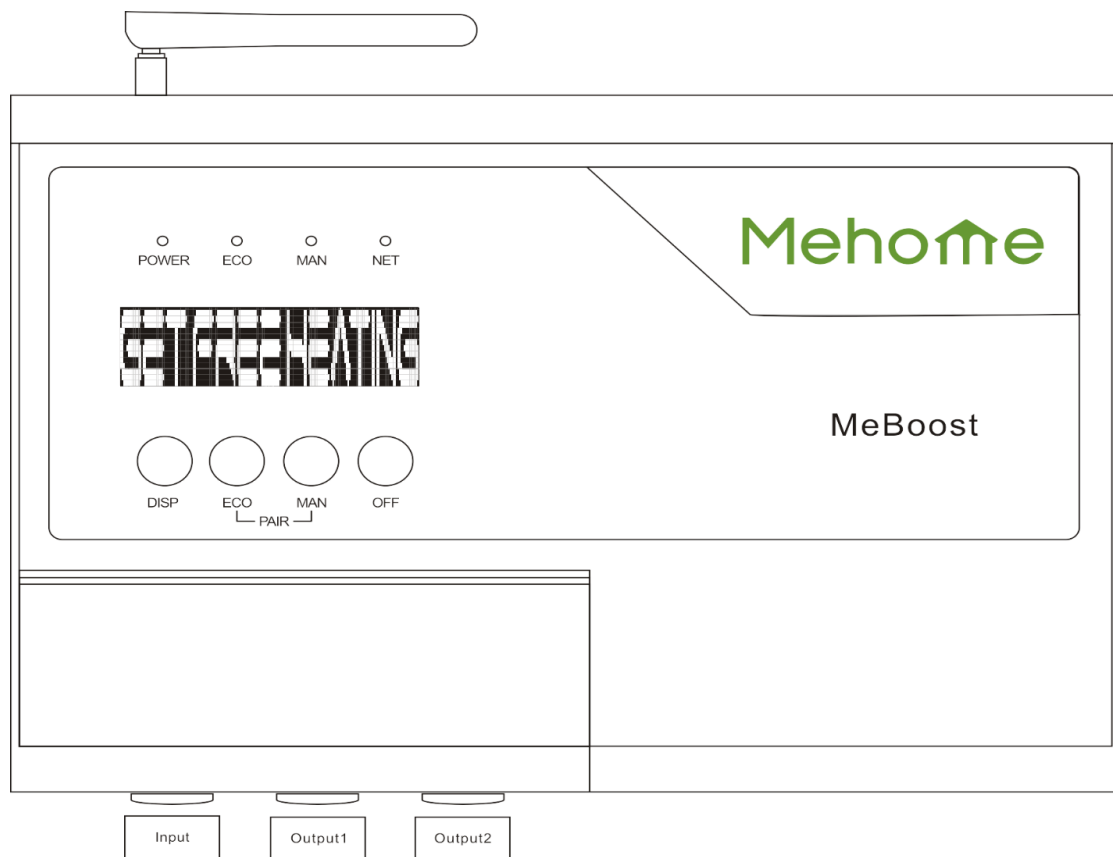
- **SP-CT**

| | |
|-------------------------|--------------|
| AC Supply Voltage Range | 196 ~ 264Vac |
| AC Frequency Range | 50Hz ~ 60Hz |
| MAX Power Consume | 5W |
| Max Input Current | 30mA |

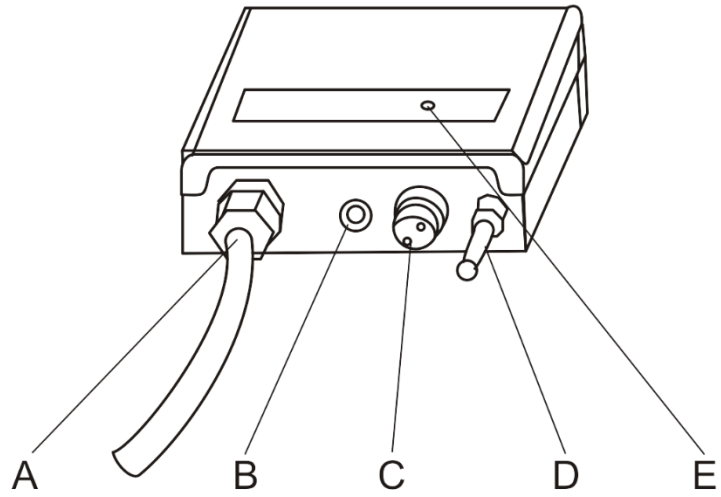
| | |
|---------------------------|------------------------------|
| Sampling Precision | ≤3% (power larger than 100W) |
| Operating Temperature | -25°C ~ +60°C |
| Noise Emission (typical) | ≤25dB |
| Relative Humidity | 0 ~ 95% |
| Protection Degree | IP65 |
| Display | LED |
| Operating Radio Frequency | 433MHZ |
| Radio Range | ≤30m |
| Dimensions (W/H/D) | 113mm*113mm*38 |
| Safety & EMC standard | CE RCM |

1.2. Product Diagram

MeBoost



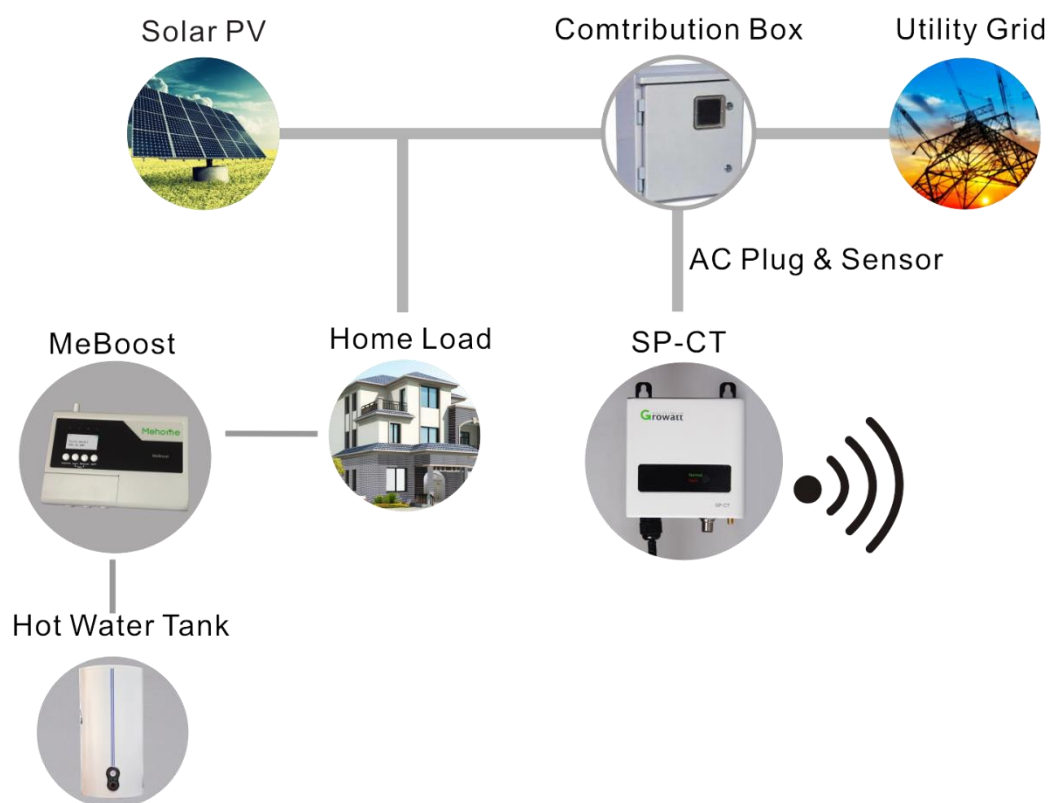
SP-CT



| Position | Description |
|----------|-----------------------|
| A | AC input terminal |
| B | Button for pairing |
| C | Sensor input terminal |
| D | Antenna |
| E | LED indicator |

2. Installation

2.1. System Structure Diagram



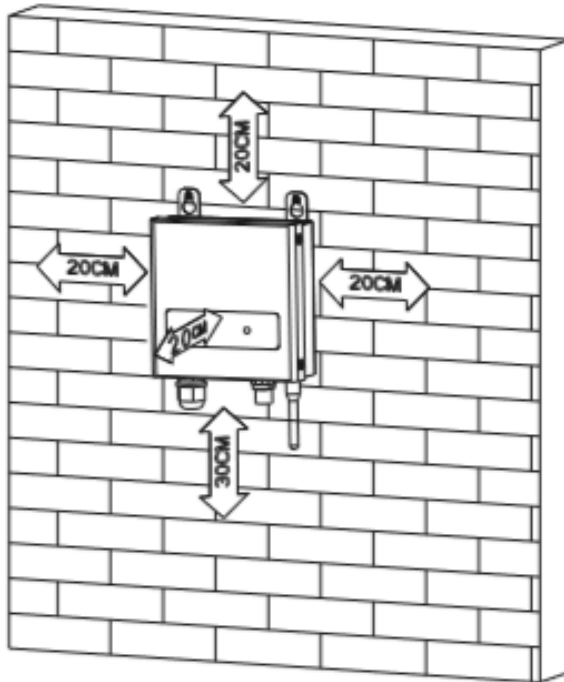
2.2. Installation of SP-CT

- Basic requirements of mounting
 - A. Mount on solid surface and can accommodate weight of SP-CT long time
 - B. Mount on where has enough space for SP-CT
 - C. Do not mount on flammable construction materials.
 - D. Designed with IP65 degree for indoor or outdoor applications.

E. Ambient humidity range: 0~95%. F Ambient temperature range: -25°C ~60 °C.

G. Vertically installation or tilt angle 15-dgress installation is ok.

H. for SP-CT to make sure operate and maintain available the unit, please leave enough space.



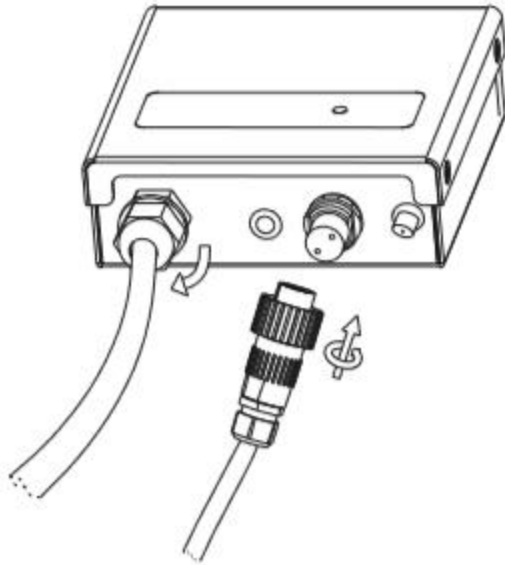
I. Do not install where is near to Radio or machine which has wireless function.

J. Do not install the place where the children can reach.

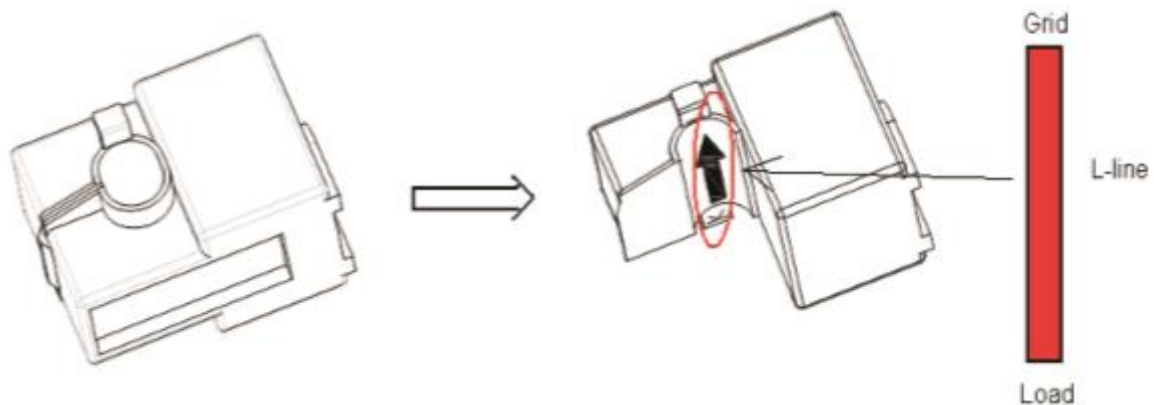
Note: The recommend distance between MeBoost and SP-CT is less than 50 m.

- Installation of sensor

1) Press one side of sensor terminal on the "Sensor input terminal" and make sure fixed firmly.



2) Please strictly follow the instruction steps to install the other side of sensor, Refer to below chart.



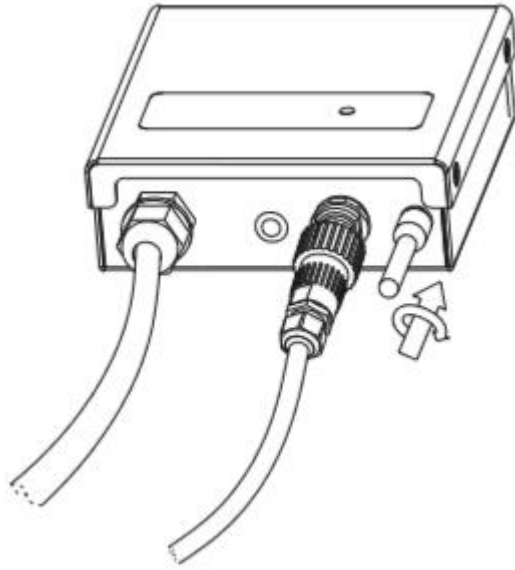
As pictured above, uncover the sensor. Please place the L line on the position with arrow and then fasten it.

Note:

1. This arrow indicates direction of sensor.
2. The direction of the arrow (from K to L) denotes to the direction from the Load to the grid.

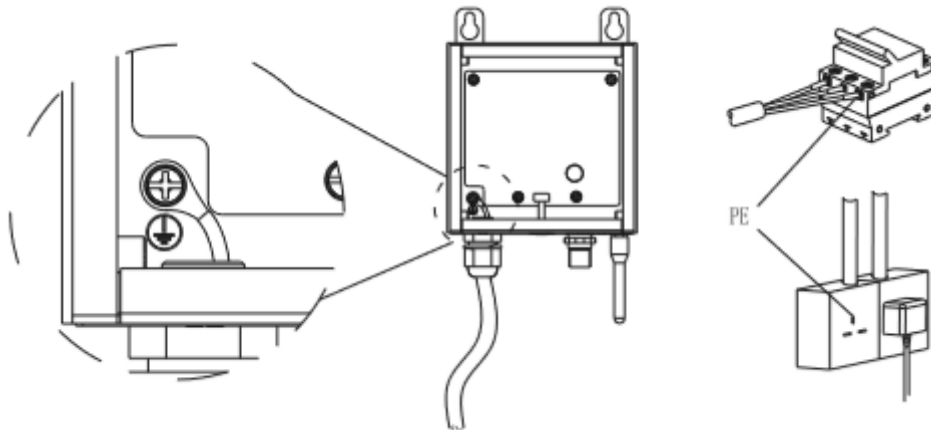
- Install antenna of SP-CT

Screw the Antenna tightly to antenna terminal of SP-CT as shown below.



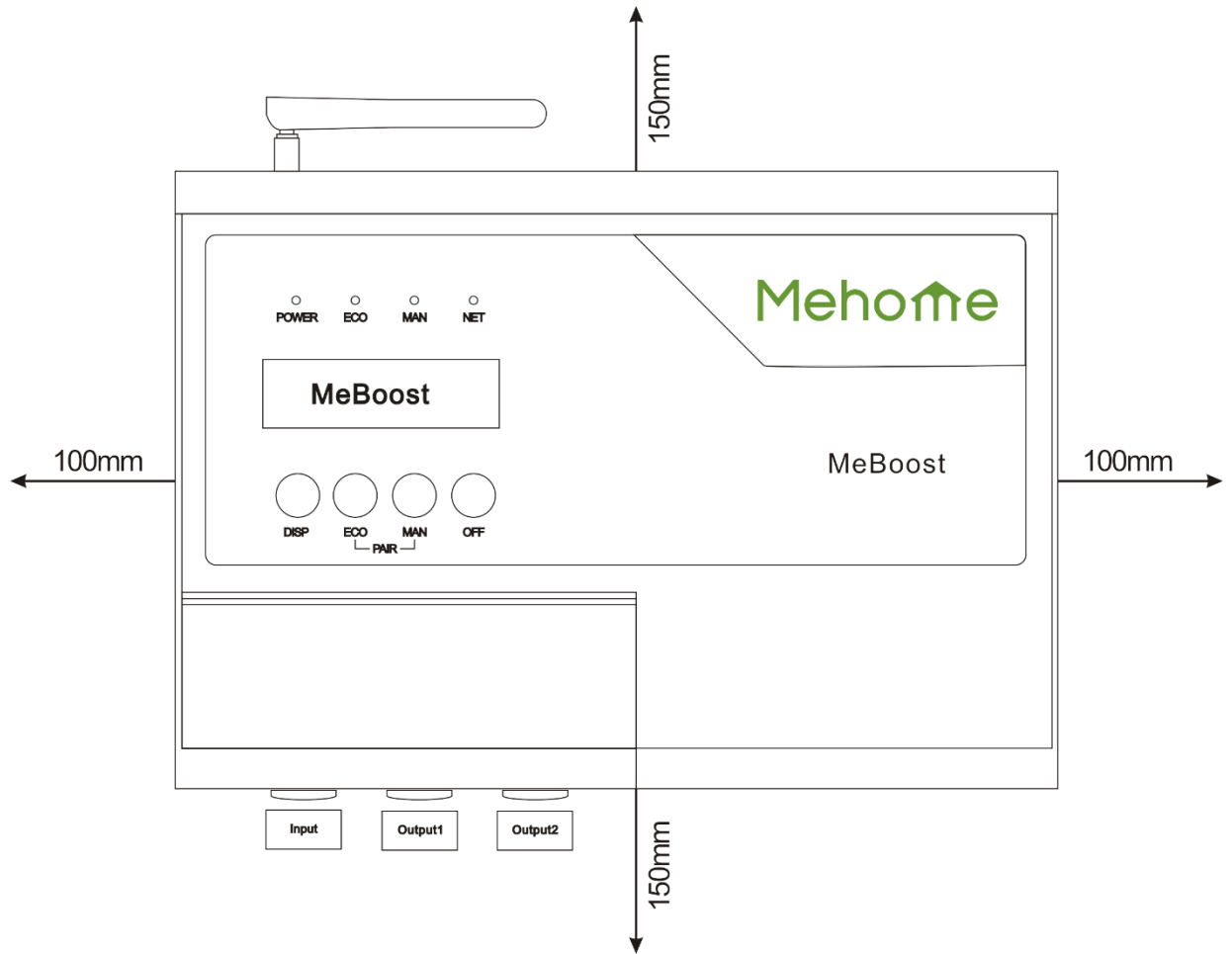
- Ground

SP-CT should be grounded reliably. The ground wire of SP-CT is connected to its shell so make sure the AC terminal (L /N /GND) connected firmly (L/N/GND).

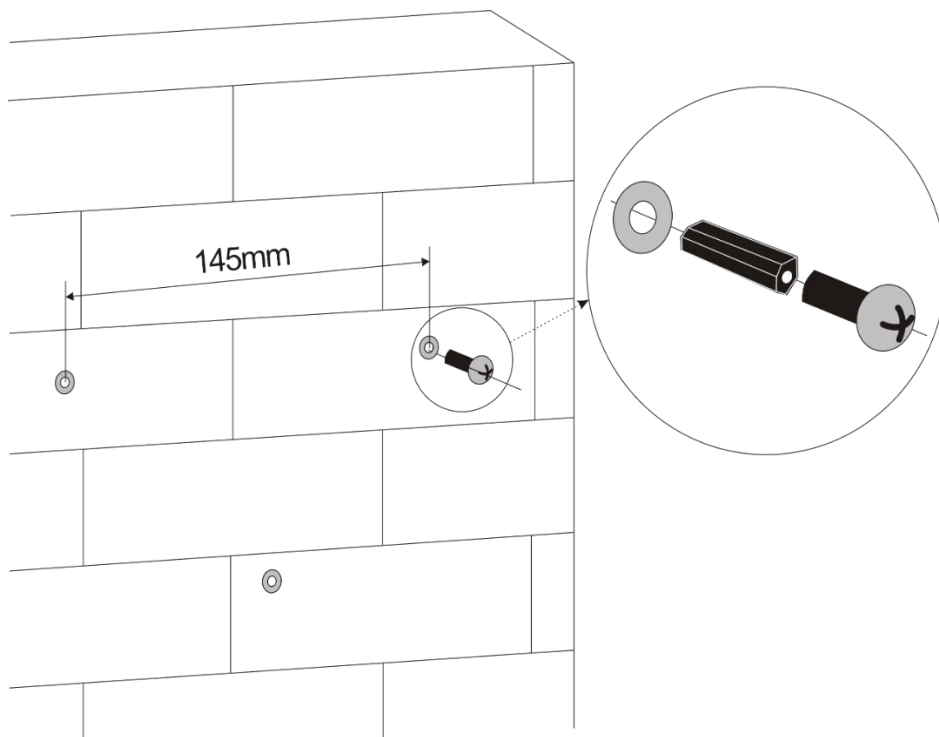
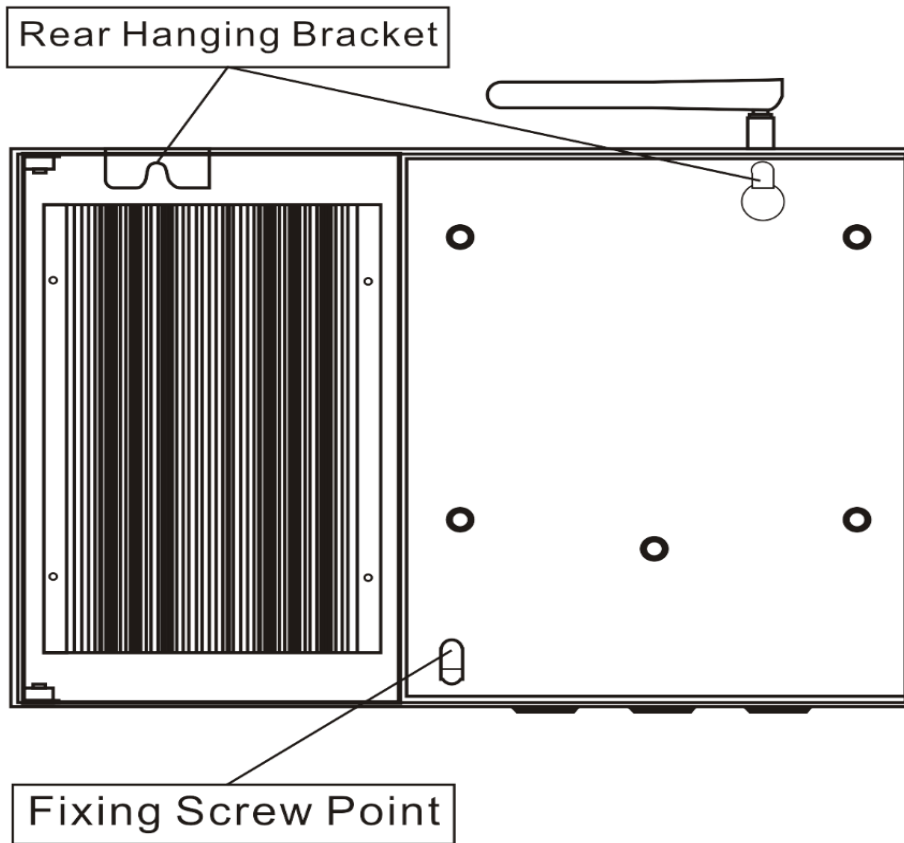


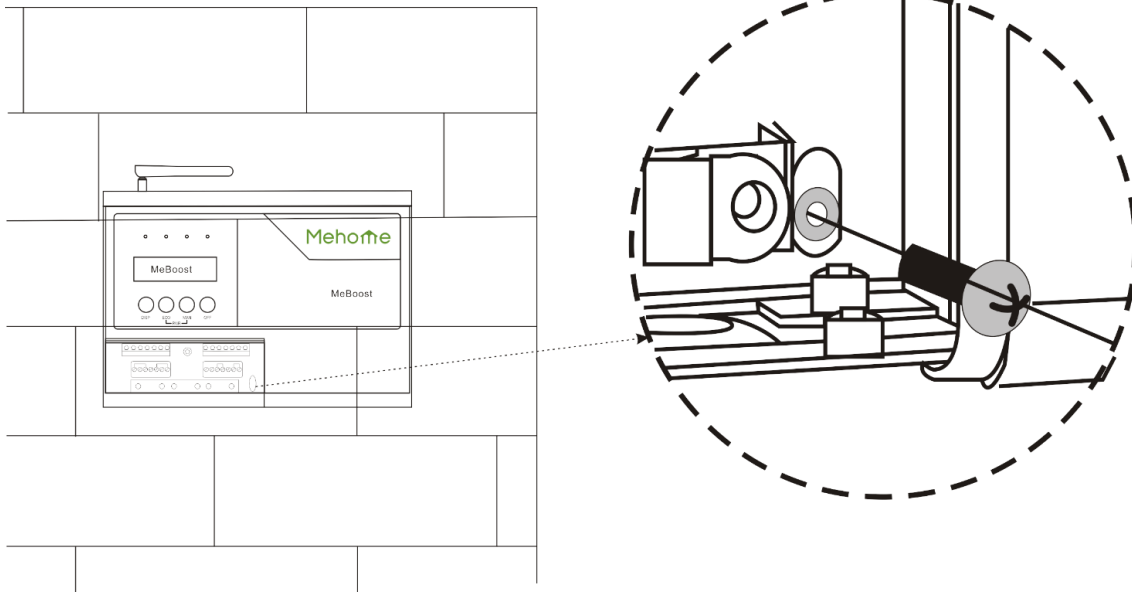
2.3. Installation of MeBoost

Usually installed in a place closed to heating water tank for easy wiring connection between fuse socket or breaker and heating water tank. Leave enough space that more than 100mm between left and right gap, the vertical clearance should be more than 150mm to ensure cooling space without cover.



Solar MeBoost use a hanging bracket and two lower points to fix.





Note:

1. Power input side should be connected with a 16A overcurrent switch or 13A fused outlet.
2. It is not compatible with no thermostat heating water tank.

2.4. Wiring

Please follow the wiring diagram to connect heating water tank and solar MeBoost (in accordance with IEE and local code), turn off power when wiring and maintenance.

↓ Earth (all terminals common)

N Neutral (all terminals common)

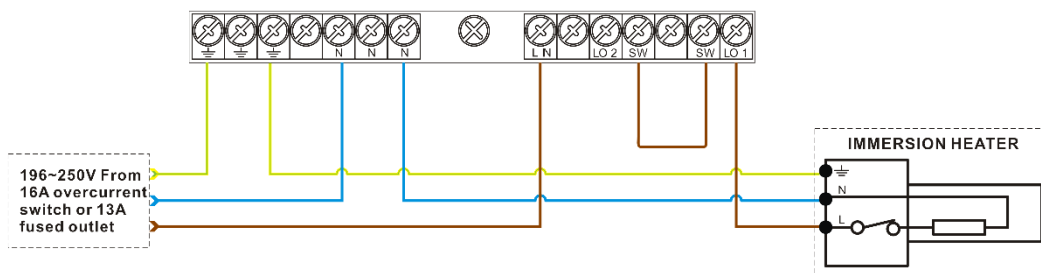
L IN 230V live input-must be protected by 16A MCB or 13A fused outlet

L SW 230V live Switched-output from boost relay, max 13A

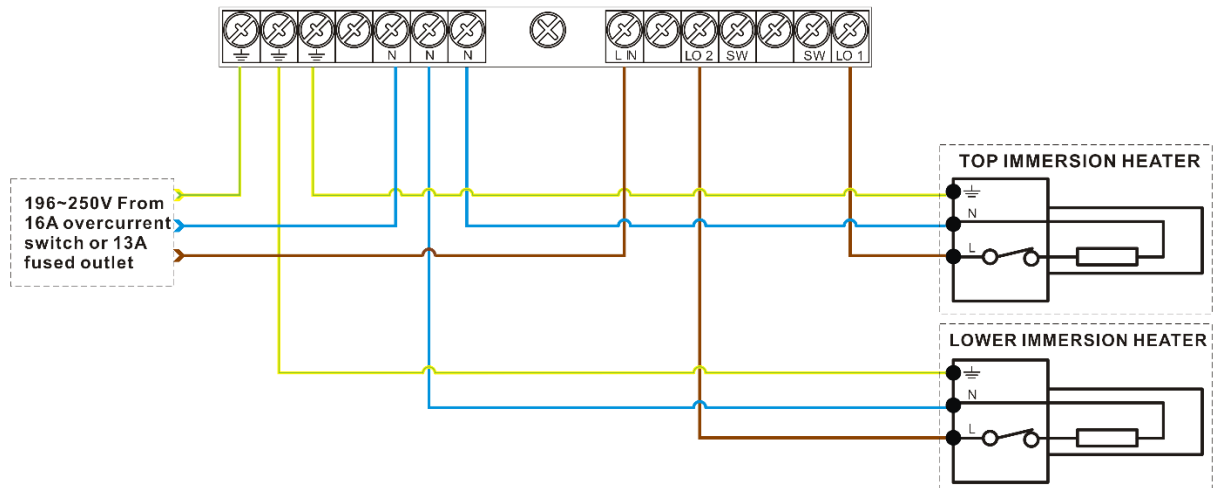
L OUT 230V live Out- controlled output to immersion element, max 13A



Single Immersion Heater



Dual Immersion Heater



In the “MAN” mode, when connecting two immersion heaters, MeBoost heats the top immersion heater until finishing the heating, then switches to heating the lower immersion heater. When finishing the heating (reaches the

setting temperature), MeBoost LCD displays “Heating Finished”, MeBoost keeps in “STANDBY” status. If the water temperature drops, it will heating again.

When the lower immersion heater is working, MeBoost will back to heat the top immersion heater every 15 minutes to maintains the temperature in the upper part of the tank.

In the “ECO” mode, only the top immersion works. When the hot water tank finish heating, the Boost LCD displays “Heating Finished” and the Boost works in “STANDBY” mode. When the water temperature drops, the Boost works in “ECO” mode again.

3. Usage Instruction

The MeBoost controller and RF-CT has been already paired for the first usage. After the installation and power on the MeBoost, MeBoost start to works and the power led indicator (#1,red light), network led indicator(#4,blue light) are on. SP-CT led indicator is on and the color is green. If the network led indicator is abnormal and LCD displays “Heating OFF by Disconnected”, you should keep the distance closer or pair again.

3.1. LCD Status

| NO | DESCRIPTION | LED#1 (RED) POWER | LED#2 (YELLOW) ECO | LED#3 (YELLOW) MAN | LED#4 (BLUE) NET | LCD |
|----|--------------|-------------------------|--------------------------|----------------------------|------------------------|--|
| 1 | PARING | ON | BLINKING | BLINKING | | "Pairing..." "Pair Success!" |
| 2 | MANUAL | ON | | BLINKING | ON | "Heating by MAN for x.xx kWh" |
| 3 | ECO | ON | BLINKING | | ON | "Heating by Solar for x.xx kWh" |
| 4 | MAN STANDBY | ON | | ON | ON | "Heating Finished" |
| 5 | ECO STANDBY | ON | ON | | ON | "Heating Finished" |
| 6 | OFF | ON | | | ON | "Heating OFF" |
| 7 | DISCONNECTED | ON | | | | "Heating OFF by Disconnected!" |
| 8 | EXCEPTION | ON | | | | BLINKING && "Heating OFF by Exception!" |

3.2. Usage

Note:

The first press of any button switches on the backlight only when the LCD OFF.

ECO

- MeBoost works in this mode most time. Press the “ECO” button (MeBoost works in “ECO” mode after first pairing), MeBoost will take the surplus solar energy for heating the hot water tank. When heating in “ECO” mode, “ECO” led indicator flashes slowly (500MS once).
- If there is none surplus solar energy, MeBoost will sleep and the LCD displays “Heating OFF by ECO”. Returns to work when solar energy is surplus.
- When the heating is completed (hot water reached the setting temperature), MeBoost stop heating, working in “STANDBY” mode, LCD display “Heating Finished”. When need heating (such as water temperature is drop), MeBoost will works in “ECO” mode heating again.

MAN (MANUAL)

- When you need quickly heating water, the “MAN” mode can meet your need. Press the “MAN” button, MeBoost works in the “MAN” mode, the “MAN” led indicator flashes slowly (500MS once). In this mode, MeBoost works at full power, whether the solar PV has surplus energy.
- In “MAN” mode, MeBoost will get energy from grid when the solar PV cannot provide enough energy for the consumption.
- When hot water tank finished heating, MeBoost works in “STANDBY” mode, LCD displays “Heating Finished”. When hot water tank need heating, MeBoost will heat in “MAN” mode again.
- You should manually press “ECO” button to switch the working mode to “ECO” after heating in “MAN” mode.

OFF/RESET

- Press the “OFF” button, MeBoost will shut down. If you need to start the MeBoost, press “ECO” (works in “ECO” mode after start up) or “MAN” (works in “MAN” mode after start up).
- When you need to clear the history data or pair again, press “OFF” button for 5 seconds (the whole 4 led indicators are on for 2 seconds and then are off), then LCD displays “Reset parameters, Please Wait.”, MeBoost starts to reset. When reset finished, LCD displays “Reset Success!” .

Warning!

- Resetting MeBoost will clear the history data and paired information!

DISP (DISPLAY)

- Press the “DISP” button to view the recorded energy information, each press will move through as the following sequence:
- 1. “Saved Amount X.XX KW” (the sum of solar energy diverted into immersion heater)
- 2. “Saved Today X.XX KW” (Present days energy diverted into the immersion heater)
- 3. “Saved Yesterday X.XX KW” (Previous days energy diverted into the immersion heater)
- 4. “Saved Last Week X.XX KW” (Total energy diverted into the immersion heater in the past 7 days)
- 5. “Saved Last Month X.XX KW” (Total energy diverted into the immersion heater in the past month)
- 6. “Total Energy X.XX KW” (Total value of energy diverted into the immersion heater since MeBoost was installed(include the energy getting from the grid))

PAIRING

If pairing information lost or the MeBoost components needed to be replaced, you should pairing the SP-CT as the following operation.

1. Power on MeBoost and SP-CT.
2. Press the paired button of SP-CT, the SP-CT begins to initialization (led flashes 100MS once), then keeps in pairing (led flashes 500MS once).
3. Both press "ECO" button and "MAN" button within 2 minutes in MeBoost, MeBoost start to pairing.
4. While MeBoost and SP-CT are pairing, LCD displays "Pairing....., Please Wait".)
5. when the pairing finished, LCD displays "Pairing Sucess"
6. When the Pairing failed, repeat the above steps until successful.

MeBoost and SP-CT should be paired one to one, the new pairing information will overwrite the old existed pairing information.

3.3. Exception

When MeBoost in exception, MeBoost stop working, no output power, LCD displays "Heating OFF by Exception".

Message on the LCD details the specific fault:

- ✓ Lost Signal to Sender
"Heating OFF by Disconnected."

This means MeBoost is no longer receiving messages from SP-CT.

Possible causes:

- 1). MeBoost is positioned too far to the SP-CT, keep the distance closer within 50m.
- 2). pairing info lost, pair again, how to pair please refer to "PAIRING".

✓ Temperature Abnormal

“Heating OFF by High Temperature for +xx.x °C “

“Heating OFF by Low Temperature for -xx.x °C”

This means the internal temperature of MeBoost is exceptional. The normal internal temperature is 0-120°C.

✓ Voltage Abnormal)

“Heating OFF by High Voltage for xx.x V”

this means the voltage of MeBoost is out the range of 196-250v.

✓ Maximum Power Exceeded),

“Heating OFF "by Power Overload for xx.x kW”

This means the overload of MeBoost is more than 3KW.

When the MeBoost in exception, MeBoost will stop working, and need to be processed in time! (MeBoost will return to normal when the exception be cleared).

4. Safety

MeBoost is compliant to the safety standards in most of European countries and regions, CE certified.

Dangerous!

- All installation and wiring work should be performed by professional electrical or mechanical engineer.
- This device cannot be operated by children or any personnel without electrical experience and knowledge.
- Ensure that it is placed out of the reaching of children.

Warning!

- The metal parts of the device may become hot when operating, please pay

attention and prevent burns.

- Please install in ventilated environment without cover and get away from combustibles.
- Power shut-off the MeBoost when you are away for a long time (eg. in vacation).

5. Disposing



Do not dispose MeBoost and SP-CT together with household wastes.

Please accordance with local regulation to dispose it. To some extent, all the accessories can be reused.

6. Warranty

We guarantee that MeBoost and SP-CT will work for a minimum period of 24 months from date of purchase, when failure occurs during the warranty period , AgePower will repair or replace the product with same value.

Conditions

1. Before to repair the defective product, AgePower will require customers to fill out the form indicate the purchase and installation date, fault description and other information
2. After replacement, the defective product should be returned to AgePower.

Liability waiver

When the following occurs, AgePower has the right not to carry out quality assurances:

1. Warranty seal has been removed, erased, defaced, altered, tampered or is illegible.
- 2 Improper installation and operate wrongly.
- 3 Beyond the environment to operate in unintended described in this manual.

4 The loss caused that unauthorized changes, repair, demolition products, or upgrade firmware without AgePower authorization.

5 Unforeseen disaster or majeure accident.

6 The failure products that caused by above conditions need to be serviced, after AgePower check and evaluate, we can provide a paid service.

If you have any technical problem about our products, please contact your installer or WeiWiz. Please provide information as:

1. Communication method
2. Led status of MeBoost and SP-CT
3. LCD information

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