



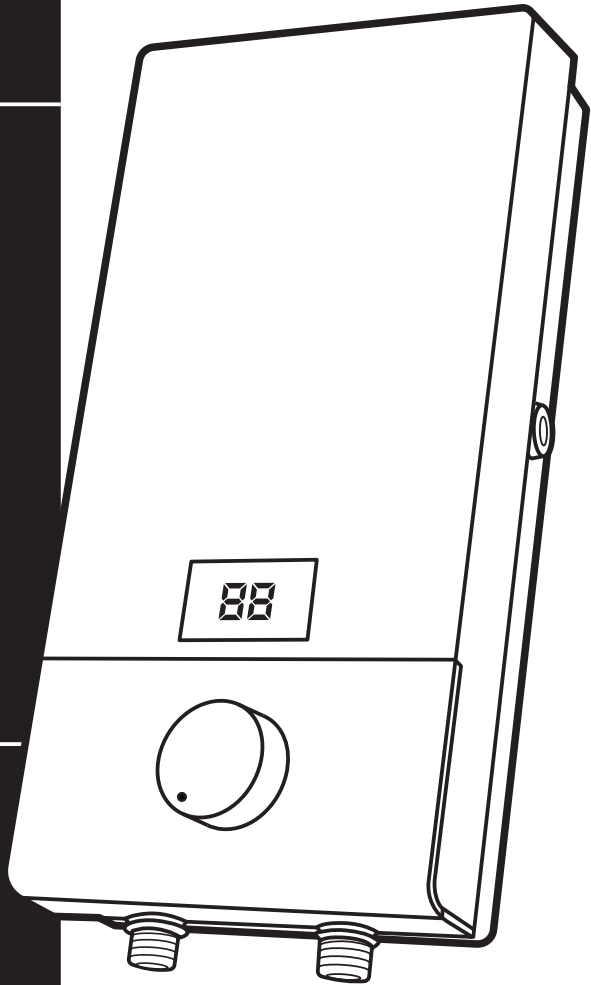
## USER'S MANUAL

### Water Heater ECOHEAT SERIES

**Rated Voltage: 230V**  
**Rated Power: 3800W**  
**Frequency: 60Hz**  
**Weight: 1.95/2.25kg**  
**Dimensions (WxHxD):**  
**200x400x95mm**

Warning notices: Before using this product, please read this manual carefully and keep it for future reference.

The design and specifications are subject to change without prior notice for product improvement. Consult with your dealer or manufacturer for details.



FP-67WTR380WMTM-W1

FP-67WTR380WMTH-B1

ph.midea.com

version 000

Sincerely, thank you for selecting our electric water heater. Please read this manual carefully before use; correctly grasp the methods for installation and use of this electrical water heater, to make full use of its superior performance. Please do preserve the instruction manual, for future reference.

## TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
1.Caution .....	(2)
2.Product introduction .....	(3)
3.Unit installation .....	(7)
4.Usage .....	(10)
5.Maintenance .....	(11)
6.Troubleshooting .....	(12)

## 1. CAUTION

To prevent personal injury, injury to others and property damage, the instructions below must be followed. Incorrect operation due to failure to follow instructions will cause harm or damage.

### Special Caution

- This water heater is for household use only and it can be installed indoors where hot water is needed.
- A plug is not used for this water heater; this water heater must be connected directly to a circuit breaker with current leakage protection.
- Please distinguish live line (red/brown), neutral line (blue) and earth line (green/yellow) during installation.
- Do check whether the ampere rating of the household wiring is sufficient before installation, and a dedicated circuit must be used when installing.
- Before installing this water heater, check and confirm if the earth electrode in the socket is reliably earthed and has no current flowing. If there is no ground electrode or incorrect ground connection is done, the water heater will not work.
- The hot water from the water heater may cause scalding; please test and check the temperature of the hot water before use.
- The distance between water heater installed and water output should be as near as possible to avoid loss of heat.
- The electric water heater may be damaged if the water hardness is too high. To ensure longer product lifespan, please install and put it into use where the local water hardness is less than 450mg/L  $\text{CaCO}_3$ .
- In times of lightning/thunder, switch "Off" the circuit breaker ahead of time, to protect the water heater against possible damage.
- Inspect the built-in ELCB (once a month) to avoid hazards to users such as damage to property serious injury or death.
- Do not cut off power supply before maintenance. Any maintenance or adjustment of product by a non-professional is highly prohibited.
- The damaged power cord must be replaced by good one provided by the manufacturer, and the replacement should be done by qualified technician or engineer or professionals of similar products.
- In order to avoid hazard due to inadvertent resetting of the Earth Leakage Circuit Breaker (ELCB), this appliance must not be supplied through an external switching device, such as timer or connected to a circuit that is regularly switched "On" and "Off" by the utility.
- This water heater is equipped with adjustable flow capacity safety valve. For safety use, please do not change its installation location and do not block its water outlet.
- This shower head must be descaled regularly.
- For any improper installation and incorrect operation of this product, our company will not be liable for any responsibility.
- This water heater can be used for other purpose, e.g., washing hands, dishes or food, and so on. (Multi-directional water supply is not available).
- When the shower is used by children, elderly, sick or physically-handicapped persons, they are requested to be attentive to and check the water temperature by hand, from time to time.



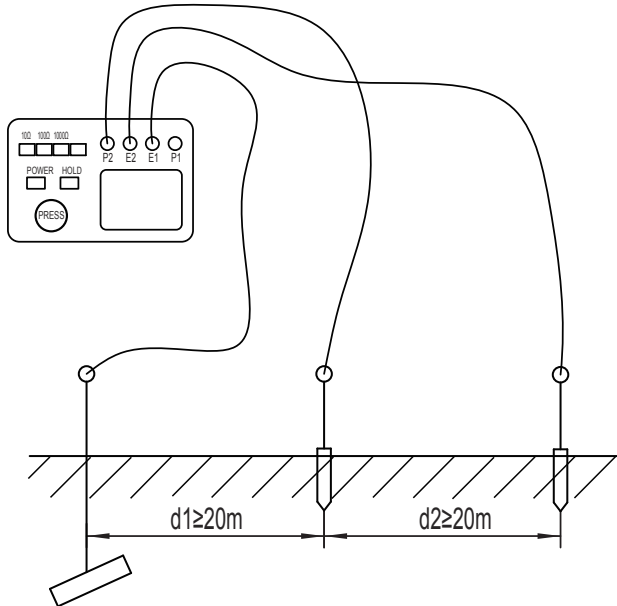
## WARNING

The water heater should be earthed before use. Please ensure that the resistance of household earth wire is  $<4\Omega$ . Otherwise you may receive an electric shock. Using the water heater without earthing is highly prohibited.



## Ground resistance measurement method:

- Connect the wire of measuring instrument according to the manual. Please check the diagram below.
- Connect E1 to the ground wire, and connect E2, P2 to the auxiliary electrode of steel bar in the soil or ground. The distance of E1, E2, P2 and steel bar should be greater than 20m. A requirement is that the measurement site should avoid strong electric fields, in order to reduce the measurement error.
- There are 4 terminals E1, E2, P1, P2 on grounding resistance measuring instrument. E1 and P1 are usually connected for convenience. You only need to connect the E1 to the ground terminal and E2, P2 to the auxiliary electrode steel bar in the soil/ground.
- If there is no soil to drill the steel bar in, you can connect P2, E2 to the neutral terminal fire hoses or floors, which can be considered as the ground resistance.
- Then press the POWER button, select the appropriate test range (if not clear about the scope of the resistance, choose the biggest range, and then choose the smallest range.), press the PRESS key. The screen display number is the resistance value of grounding resistance of the house.

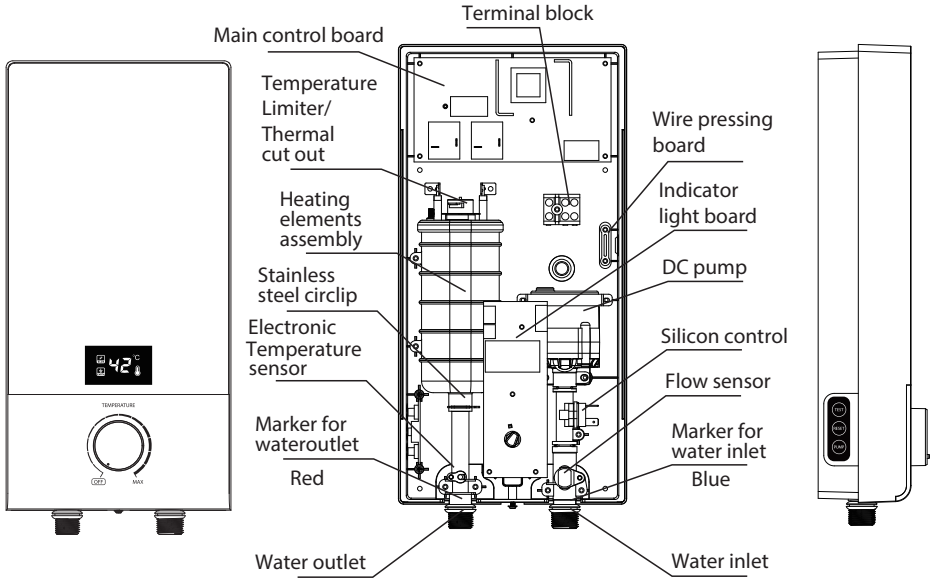


## 2. PRODUCT INTRODUCTION

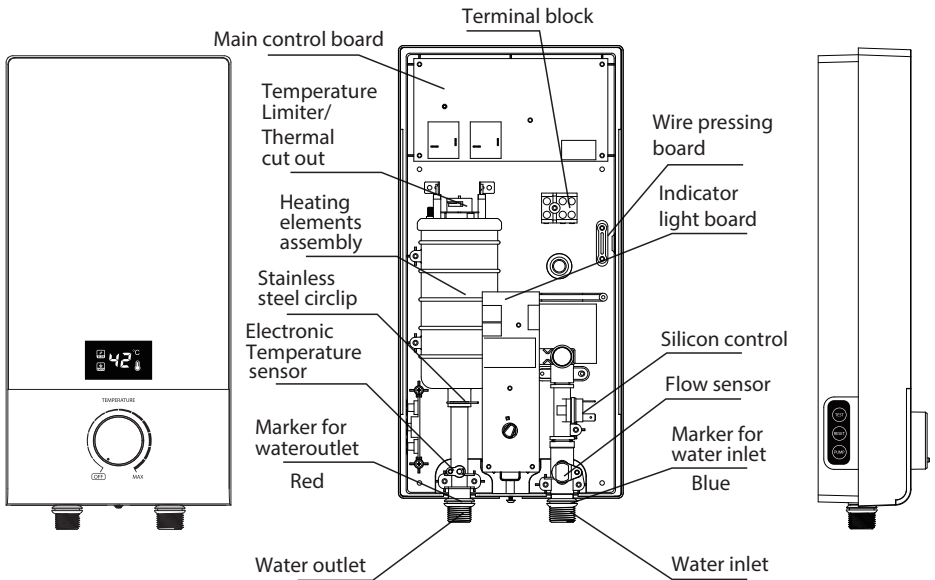
### 2.1 Technical Performance Parameters

Model	FP-67WTR380WMTM-W1	FP-67WTR380WMTM-B1
Rated Voltage	230V~	
Rated Frequency	60 Hz	
Rated Power	3800W	3800W
Rated Current	0 ~ 17A	0 ~ 17A
Dia. Of Wire Cord	4mm <sup>2</sup>	4mm <sup>2</sup>
Circuit Breaker	≥20A	≥20A
Rated Pressure	0 MPa	
Minimum Flow Rate	1.2 Liters/minute	
Minimum Pressure	0.03 MPa (4.4 psi)	
Maximum Pressure	0.3 MPa (43.5 psi)	
Protection Class	I	
Waterproof Class	IP 25	
Product Size ( WxHxD)	200x400x95 mm	
Knob Quantity	1	

## 2.3 Parts Identification

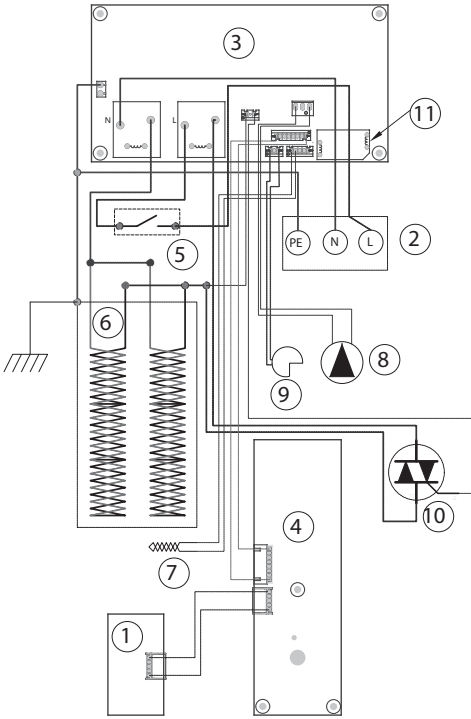


↑ FOR FP-67WTR380WMTH-B1



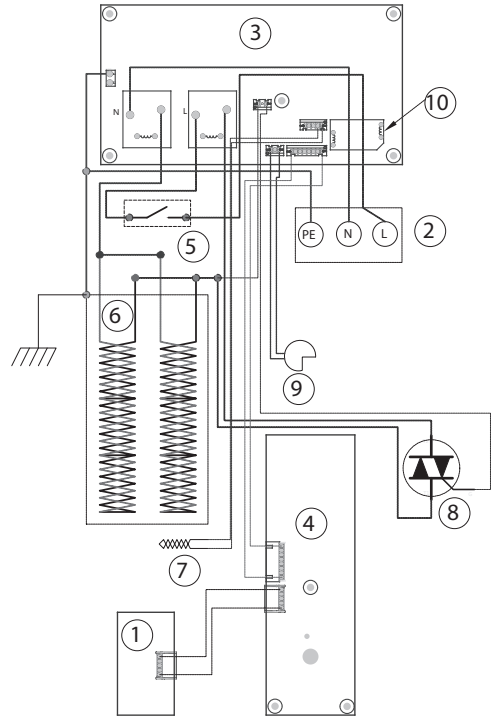
↑ FOR FP-67WTR380WMTM-W1

## 2.4 Internal Wire Diagram



WIRING DIAGRAM FOR FP-67WTR380WMTM-B1

- ① : Key board
- ② : Terminal Block
- ③ : Main Control Board
- ④ : Indicator Light
- ⑤ : Thermal Cut Out
- ⑥ : Heating Elements
- ⑦ : Temperature Sensor
- ⑧ : DC Pump
- ⑨ : Flow Sensor
- ⑩ : Silicon Control
- ⑪ : Mutual inductor



WIRING DIAGRAM FOR FP-67WTR380WMTM-W1

- ① : Key board
- ② : Terminal Block
- ③ : Main Control Board
- ④ : Indicator Light
- ⑤ : Thermal Cut Out
- ⑥ : Heating Elements
- ⑦ : Temperature Sensor
- ⑧ : Silicon Control
- ⑨ : Flow Sensor
- ⑩ : Mutual inductor

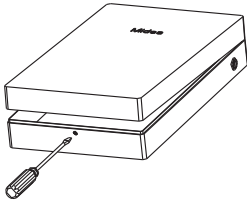
### 3. UNIT INSTALLATION

#### 3.1 Installation Instruction

- ① Check the capacity of power circuit (circuit breaker, wires, etc.)
- ② Power cord installation;
- ③ Water heater installation;
- ④ Plumbing connection;
- ⑤ Power supply connection;
- ⑥ Water Supply.

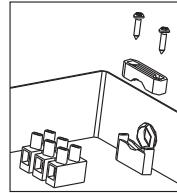
#### 3.2 Power Cord Installation

##### Step 1



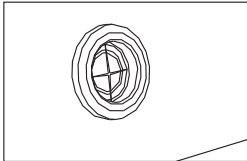
Remove the screws at the bottom of the unit. Lift the Main Switch Knob and Power Knob to make it free. Remove the front plate gently.

##### Step 2



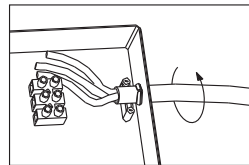
Remove the power cord wire pressing plate and keep the screws.

##### Step 3



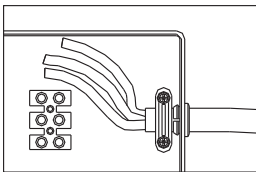
Gash the middle of the film of the power cord jacket with a sharp knife in order to put into power lines.

##### Step 4



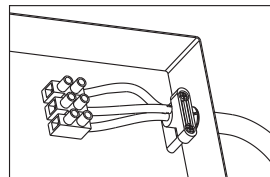
Insert by turning the power cord into the jacket for installation of wire pressing plate.

##### Step 5



Tighten the wire-pressing plate with screws to primary position, ensure that the power cord not be pulled out more than 60N.

##### Step 6



Connect the power cord to wiring terminals; the method is as shown in picture.



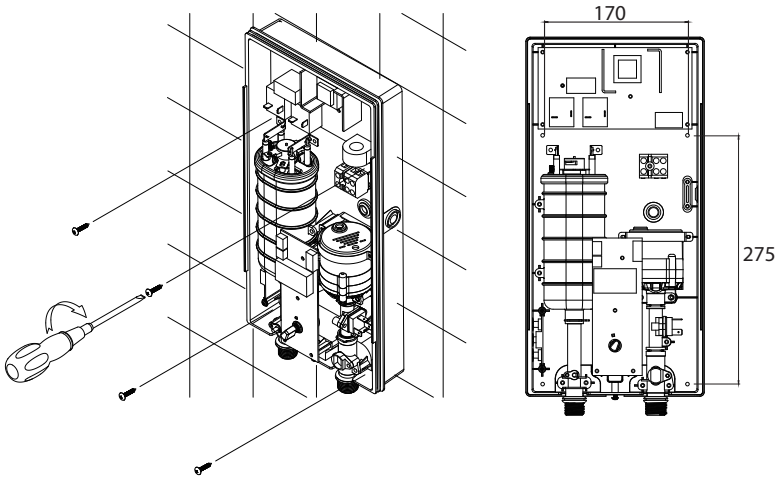


## NOTE

The installation position of neutral line (blue), live line (brown/red) and earth line (green/yellow) should be corresponding to the other end of the wiring terminals.

### 3.3 Water Heater Installation

- ① Determine installation position of the unit according to length of power cord / position of circuit breaker (Distance between bottom and floor should be  $\geq 1.6\text{m}$ ).
- ② Make sure the distance between the unit and surrounding wall is not less than 300mm, to have enough space for maintenance purposes.
- ③ Determine the position of four fixing screws (attached with the unit), make four holes with corresponding depth in the wall by means of a drill and drive a wall plug into the hole.
- ④ Drive in the screws on the top and ensure certain distance between screw head and wall (See Fig.1)
- ⑤ Mount the unit on the wall and tighten with two screws at bottom, connect the wires and install top cover with the screws.



(Fig.1)

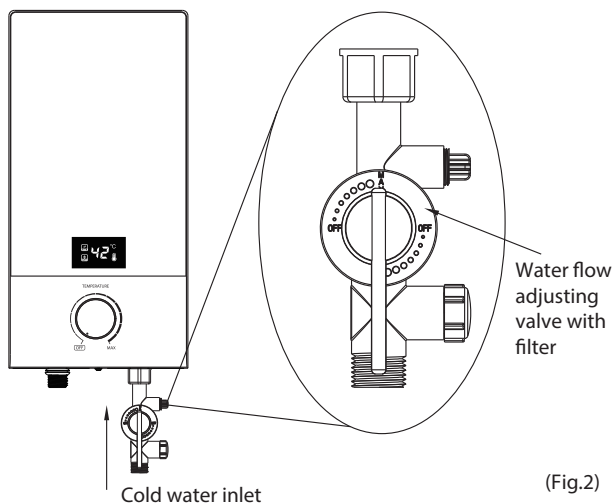
### 3.4 Plumbing Connection

- ① Water valve with filter should be installed at water inlet of the unit, sealing ring with filter should be used at end face. (See Fig.2).
- ② A flexible shower hose should be connected to the water outlet and shower head. The attached sealing ring should be used at end face.



## WARNING

Metallic / chromed hose and conductive control valve shall not be used.



## NOTE

Water flow adjusting valve with filter must be used when installing the unit. Blue marker stands for water inlet, red marker stands for water outlet. Do not apply excessive torque/force to avoid damaging the water heater.

### 3.5 Power Supply Connection

- ① Adjust power selection knob to "OFF";
- ② Choose a circuit breaker with leakage protection according to power of water heater;
- ③ When connecting the water heater to electric circuit, please pay attention to connect live line (red/brown), neutral line (blue) and earth line (yellow/green) with corresponding line in electric circuit.



## NOTE




A dedicated power cord should be used for this unit. After connecting to electric circuit, please check the earth condition and make sure the earth resistance is  $<4\Omega$ .

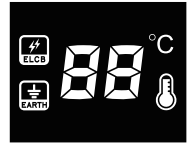
### 3.6 Water Supply

After all the plumbing connections are finished, open water inlet valve of the product and supply water to the unit to drain away air inside until there is stable water flow coming out of the shower head. If there are leaks, check if the connection points are securely fastened. Tighten the connections then try again.

## 4. USAGE

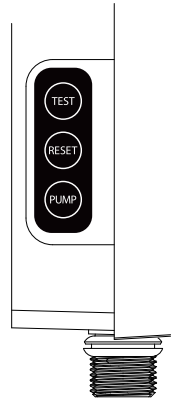
### 4.1 Operating the unit

Switch on the power supply and the LED will light up. If the heater is not working, the light in both the **88** and  icons will turn off after 15 seconds. Rotate the knob clockwise to switch on the unit and the **88** will display the set temperature. When the temperature is between 30° and 37°C, the light in the  icon will be green; orange if between 38° and 44°C; and red if more than 45°C. If the EARTH orange indicator light is off, there is an abnormality in the grounding. If the light in the  icon flickers, it means that the heater is working at its maximum power but the outlet water temperature is still below the set temperature.



### 4.2 Leakage Testing

When the water heater is working normally, press TEST button. If the leakage test circuit has no problem, the ELCB green indicator light will be off, and the unit will not heat. Press RESET, testing will be canceled, and the ELCB green indicator light will be on. The unit will then be back to the working state set before. If the circuit leaks, pressing the RESET button won't cancel leakage testing. The ELCB & POWER indicator lights will flicker, meaning the water heater has problems and cannot be used. All buttons won't work, there will be no heating and the pump will not function.



### 4.3 To Adjust Water Flow

Rotate the handle of water flow adjusting valve.

### 4.4 Electricity Leakage Protection

When the electricity leakage testing circuit is working normally and if the leakage current is bigger than a value between 7.5mA and 15mA, the red POWER and green ELCB indicator light will be off with no heating; it can only be used after the failure is solved.

### 4.5 To Adjust Water Temperature

Rotate the handle of water flow adjusting valve to adjust to proper water flow. Adjust power by rotating the knob clockwise or counter clockwise and the water temperature will increase or decrease accordingly.

### 4.6 To Activate Pump Function (FP-67WTR380WMTH-B1)

The pump will be on as the default setting when the product is used the first time and can be turned off by pressing the PUMP button which turns this function on and off.

### 4.7 Use After Overheating Protection

If the water flow is low and power is high while using the unit, outlet water temperature will be high and the unit will stop heating automatically. At this time, please lower the power and increase the water flow in order to avoid inconsistency of water temperature.



## NOTE

For first time use, ensure that the power is turned on only after the unit is filled fully with water and there is stable water flow coming out of the shower head. The electric water heater may be damaged if the water hardness is too high. To guarantee the normal service life, please install where water hardness is less than 450mg/L (CaCO<sub>3</sub>).

## 5. MAINTENANCE

- This electric water heater should be installed in a place without direct sunshine or where rainwater will not hit the unit. Please cut off power supply if the unit will not be used for a long period of time.
- Please run the water for about 10 seconds to drain away the impurities in the pipe before connecting the water source to the electric water heater, to avoid clogging.
- If the unit has not been used for a long time, check it first before using it again. Turn on the unit only after water constantly flows out of the shower head.
- Do not spray water to the circuit breaker or heater body directly, to avoid moisture formation.
- Please cut off the power during inclement weather to avoid damaging the water heater.
- If the unit will not be used for a long period of time, turn off the water supply to the water heater, to prolong its life.
- Check the power cord connecting terminals frequently to make sure that these are well and reliably contacted, no occurrence of overheating phenomenon, and grounding is good.
- Disassemble the shower head and sealing ring with filter, for periodic cleaning.

**DECLARATION:** this water heater can only be maintained by authorized service personnel. Incorrect installation and use may cause serious injury or loss of property.



## WARNING

Do cut off power supply before maintenance, to avoid danger such as electric shock.

## 6. TROUBLESHOOTING

SYMPTOMS	REASONS	SUGGESTIONS
Switch on the power supply, ELCB indicator light is off.	<ol style="list-style-type: none"> <li>1. Power supply error,</li> <li>2. PCB error;</li> <li>3. Occurrence of leakage current</li> <li>4. There is no ground electrode or incorrect ground connection</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether power is cut</li> <li>2. Contact authorized service personnel for repair.</li> <li>3. Make sure the grounding is reliable.</li> </ol>
The heating indicator light is off and the outlet water is cold.	<ol style="list-style-type: none"> <li>1. The "TEMP" knob is off;</li> <li>2. PCB error;</li> <li>3. The water flow is below 1.2L/min;</li> <li>4. Impurities clogging the flow sensor of the rotor</li> </ol>	<ol style="list-style-type: none"> <li>1. Rotate "TEMP" knob</li> <li>2. Repair or replacement of the PCB</li> <li>3. Adjust water flow</li> <li>4. Change the flow sensor</li> <li>5. Open the flow sensor and clean the rotor</li> </ol>
The heating indicator light is on and the outlet water is cold.	<ol style="list-style-type: none"> <li>1. The thermal sensor cut off the circuit</li> <li>2. Heating element is broken</li> </ol>	<ol style="list-style-type: none"> <li>1. Press the reset handle of the thermal sensor after checking and troubleshooting</li> <li>2. Change the heating element</li> </ol>
No water flows out of the shower head.	<ol style="list-style-type: none"> <li>1. The running water supply is cut off;</li> <li>2. The inlet valve of running water is not open.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wait for restoration of running water supply;</li> <li>2. Open the inlet valve of running water.</li> </ol>
Outlet water temperature is sometimes hot or cold	<ol style="list-style-type: none"> <li>1. Water pressure is not stable.</li> <li>2. Outlet water temperature is too high, overheating protection activates repeatedly</li> </ol>	Lower the heating power and increase the water flow.
"EARTH"、"ELCB" and "POWER" indicator lights flicker at the same time	Occurrence of electrical current leakage.	Contact authorized service personnel for repair.
Pressure can't be increased.	PUMP malfunction.	Contact authorized service personnel for repair.
"POWER" indicator light flickers	Temperature sensor is broken	Change the temperature sensor



make yourself at home

The product is subject to change without notice.  
Please keep this manual properly.

A quality product of



CONCEPCION MIDEA INC.



For more information, please visit our website [www.midea.com.ph](http://www.midea.com.ph)