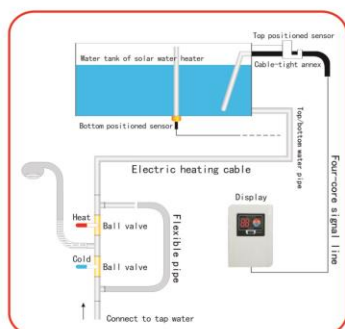


### Installation of intelligent controller

1. Holding the back of controller, push battery cover upwards and open the cover
  2. Link the probe cable's socket of the water temperature & level sensor with the plug in accordance with the red color code; fasten the plugging and place the socket & plug in the groove to fix them, lead the cable from the gap.
  3. Load three pieces of NO.5 batteries, then close the battery cover and self-test.
  4. Mount the bracket in a place where it does not directly suffers trickling water and observation & usage can be accessed easily. Use screws to fix it. On the wall.
- Fix the controller on the bracket and power on self-test.

### Installation of water temperature & level sensor

1. Firstly, screw the cable fastening accessory on the overflow pipe; next, insert the sensor via the overflow pipe; then pull the lead wire with slight force to make it attach to the inlet; lastly, extend the cable inward by 1 centimeter before tightening it with a clamping bar.
  2. Lead the cable indoors and fix the outdoor cable lest it may be damaged due to scraping.
  3. The sensor should in any case be kept from colliding with the electric heating tube or being adjacent to it.
  4. During installation, the socket should never be showed or soaked.
- With installation of underneath sensor, it should be mounted at the water tank's bottom; screw up the fixing but to eliminating water seeping (Refer to the installation schematic diagram).



M-2

## SOLAR WATER HEATER CONTROLLER

### Key Functions

- Power on self-test
- Water level setting
- Water full alarming
- Auto shutting off
- Water temperature indication
- Water level indication
- Water quality setting



### Major Technical Indications

1. Power supply: DC4.5V (Three-piece battery in NO.5)
2. Accuracy of temperature measuring:  $\pm 2^{\circ}\text{C}$
3. Range of temperature measuring: 0-99 $^{\circ}\text{C}$
4. Water level classification: Five classes display
5. Battery life: more than 6 months normally (calculate according to the open power for one hour of water loading per day)

### Key Functions

1. Power on self-test: A beep at start-up indicates the machine stays in a sound condition
2. Preset of water level: 50, 80, 100% water-filling level can be preset
3. Indication of water temperature: Real temperature inside the solar water heater is shown
4. Indication of water level: Water quantity inside the solar water heater is shown
5. Alarm for water overflowing: when water position reaches preset level, the beeper will alarm for 30 times and means stopping watering. (when open the power, water is full, then beeper will alarm for 5 times and don't need to watering at that time)
6. Water refill in shortage: On water level declining and water shortage incurred, the beeper will alarm for 8 times.
7. Water quality setting: the sensor's sensitivity can be degraded as a result of long working, when it can't show "water is full", please open the back cover of core and change the sensitivity to be the high position to test.

### Operation

1. Power on: The controller will power on when press "set" button.
2. Water level setting: Press "set" button, set the water level to your needed level. (you just can set the water level when power supply at turn on)
3. Water level and water temperature: Under the power off state, press "set" button, it will display water temperature and level, the controller will be turned off automatically after one hour if you do nothing operations.
4. Water loading:
  - (1) Press setting button, the controller will power on self-test and five beep sounds
  - (2) Confirming the controller under the normal operation state, then open the upper water valve, it will water loading.
  - (3) When the water level to the preset level, the controller will have 30 times alarm ring to remind the customer to close the check valve and it will turn off automatically after one hour.
  - (4) Press "set" button for 3 seconds to close the controller and the water loading has been finished.

### Maintenance

1. Do not flush directly the controller with water
2. Check if all connecting lines have sound connection

When the screen turned to be fuzzy and can't display correct water temperature and level, do change the battery at once.

### Precautions

1. When open the power, nothing displays, the controller is possible broken and can't watering.
2. When it indicates water is full, then stopping watering and shut-off the valve.
3. The water tank should not be left void of water for a long period in the interest of protecting the solar water heater and the water temperature & level sensor. It is to avoid exposing an empty solar water heater in the sun to ultra-high temperature.
4. To prevent long overflow caused by accidental problems, such as error operation, anomalous power supply and malfunction etc., the solenoid valve and the solar water heater should be in stalled in a room without water leakage or in a place free of accidents due to sprays. With a return pipe and take qualified lightning protection measures against thunder-stroke. While the power should be disconnected to stop the use of solar water heater for the safety of life. It is better to shut down the power if you don't use it

Three guarantees are provided for non man-made damages within one year; maintenance services are available through its entire life cycle.

### Common Faults and Troubleshooting

Symptom	Cause	Solution
Not self-test on power on; no display or anomalous display	Too short plug's pins or unsound connection	Plug off the power and check the voltage; reconnect the power
The water level 100% is displayed but the indicator for water level 100% lights and blinks	Unsound connection of the plug; received plugging; broken line or line damaged due to thunder stroke	Perform secure plugging according to the red color-code; or replace it with a new one; replace the principal machine
The beeper can't alarm	The beeper alarm is broken	Repair or exchange the beeper alarm