



NEO WAVE<sup>®</sup>

## Touch Screen Room Thermostat



**TRM-900**

## ► Technical Specifications

| Spec                   | Value         |
|------------------------|---------------|
| Sensor Type            | NTC(10k)1%    |
| Voltage                | AC90~240V     |
| Output                 | 0-10V valve   |
| Accuracy               | ±0.5°C        |
| Temp. Range            | 5°C – 35°C    |
| Ambient Temp.          | -10~60°C      |
| Storage Temp.          | 0°C – 55°C    |
| Power Supply           | 110 – 240V AC |
| Frequency              | 50 – 60 Hz    |
| Current Load           | 3A            |
| Communication Protocol | Modbus RTU    |
| Timing Error           | 1%            |
| Dimensions             | 86 * 86mm     |

## ► Button

| Icon                                                                                | Description                                                                                                                                   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|    | Increase key: short press to adjust data, long press to check external sensor temperature (When the sensor type is N3 in the advanced option) |
|  | Mode switching key: short press to switch between manual mode and programming mode, long press to set special function parameters             |
|  | Decrease key: short press to adjust data, long press to lock/unlock                                                                           |
|  | Fan speed selection key: short press to set fan speed (confirm key when setting parameters), long press to enter sleep function setting       |
|  | Power key                                                                                                                                     |

## ► Operation

### Turn on/off

- Press  to turn on thermostat, press it again to turn off, meanwhile close fan and valve.

### Set temp

- Turn on state, short press  to decrease temp, short press  to increase temp. per time by 0.5°C.

### Fan Speed

- Turn on state, press "  " to choose fan speed (high  ), (mid  ), (low  ), (Auto  animation).

### Setting time

1. Turn on state, Long press "  " 3-5s to enter setting interface.
2. Short press  , chose 02.
3. Then press "  " to set time:
  - Minute "mm" flashing, press "  " or "  " to adjust, press "  " to next setting. as same method to set hour and week.
4. Finally press  or wait 10S to exit.

## Working mode

1. Turn on state, long press "⋮" 3-5S.
2. Short press "⋮" to choose 01.
3. Next press "⋮" to choose mode:
  - "❄️" is mean cooling mode.
  - "🔥" is mean heating mode.
  - "🌀" is mean ventilation mode.
  - "🏠" is mean auto mode.

## Manual/program mode

- Turn on state, short press "⋮" to choose manual mode/ program mode.

### Control valve

- When cooling mode(heating mode), indoor temperature more (lower) 1°C than setting temperature, open valve; after equal, closed valve, fan is still running.
- Ventilation mode, valve was closed as default.

## Lock function

- Long press "🔒" to lock/unlock.

## Alarm

- E1 : inner sensor alarm
- E2 : external sensor alarm
- Temp more than 55C, display "HI"
- Temp low than 0C, display "LO"

## Sleep mode

- Turn on state, long press "⋮", "🌙" is flashing, short press "⏏" to run it, short press "🔒" to cancel.
- **Remark: Sleep mode is not available when run ventilate mode or auto mode.**

## ► **Set Programmable**

Thermostat support set different time and different temperature; Compatible with 5+2,6+1,7days Programmable

Long press "⋮" 3-5S, next short press "⋮" to choose 🏠, then short press "⋮" to set programmable, use "⏏" and "🔽" to adjust value. After short press "⋮" to set next time section setting

| Time section     |   | Icon | Time (default) | Temperature(default) |
|------------------|---|------|----------------|----------------------|
| Monday to Sunday | 1 | 🕒    | 06:00          | 20° C                |
|                  | 2 | 🕒    | 08:00          | 15° C                |
|                  | 3 | 🕒    | 17:30          | 22° C                |
|                  | 4 | 🕒    | 22:00          | 15° C                |

## ► Advance setting A

Turn off thermostat ,long press  5S to enter advance setting options, Short press  to set next item, press " "or " " to set item data

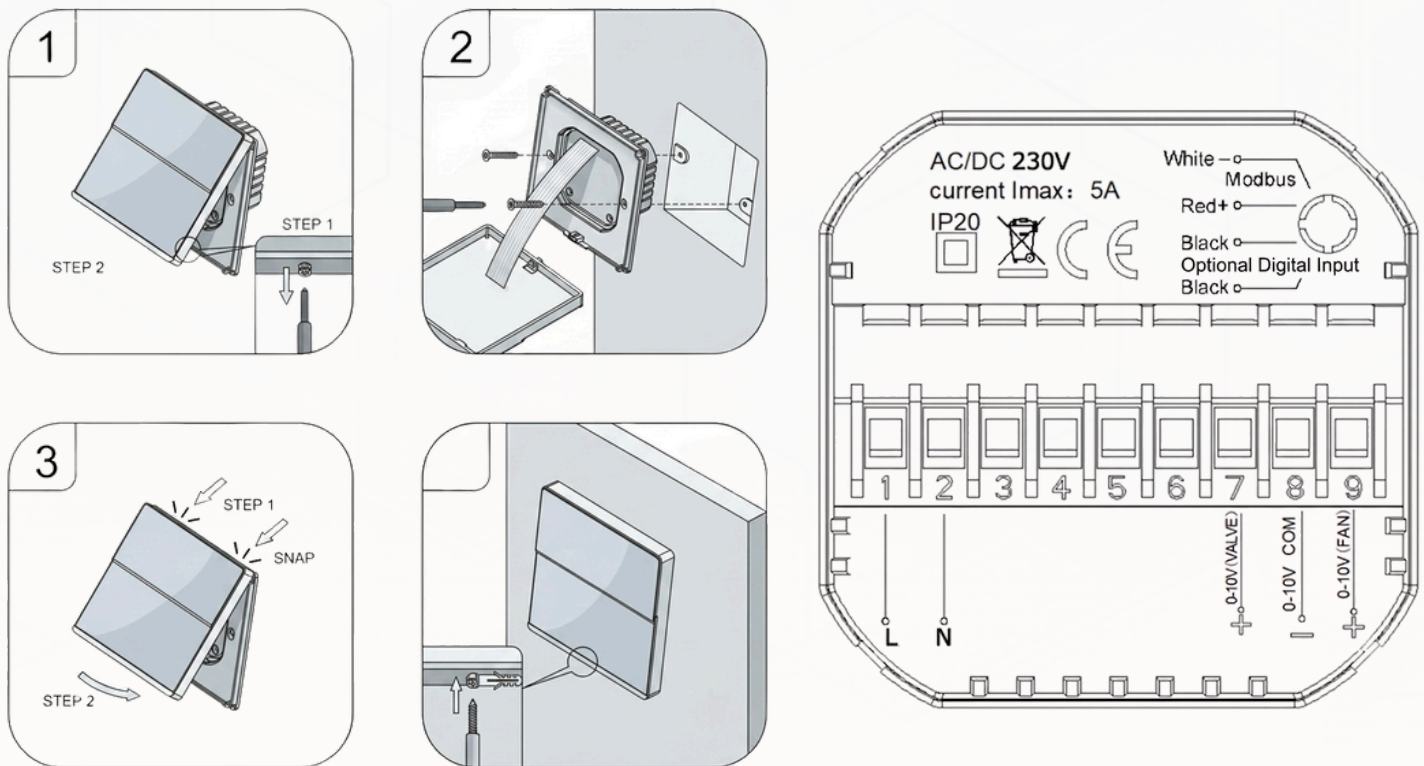
| Symbol | Item                                  | Parameter                                                                                                                                                                                                                                                                                     | Default |
|--------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| A1     | Temperature Calibration               | -9~+9°C                                                                                                                                                                                                                                                                                       | -1°C    |
| A2     | Children Lock                         | 0: half lock<br>1: full lock                                                                                                                                                                                                                                                                  | 0       |
| A3     | Setting the lowest limit temperature  | 5-15°C                                                                                                                                                                                                                                                                                        | 5°C     |
| A4     | Setting the highest limit temperature | 16-50°C                                                                                                                                                                                                                                                                                       | 35°C    |
| A5     | Fan energy saving control             | 0: valve off, fan off<br>1: valve off, fan always on                                                                                                                                                                                                                                          | 0       |
| A6     | Programmable                          | 0=5+2<br>1=6+1<br>2=7(everyday all the same)<br>3=non programmable                                                                                                                                                                                                                            | 0       |
| A7     | Choose sensor                         | 1:inner sensor<br>2:inner sensor with optional DI<br>3:Double sensor .In the heating state, normally only valve is opened , and the fan is turned on when the external temperature is detected to be ≥X°C. When the temperature is detected to be lower than (X-2) °C, the fan is turned off. |         |
| A8     | Set temperature for external sensor   | 20-60°C                                                                                                                                                                                                                                                                                       | 38°C    |
| A9     | Standby bright                        | 0: off<br>1: weak bright<br>2: brighter                                                                                                                                                                                                                                                       | 2       |
| AA     | Logo display                          | 0:non display 1:display                                                                                                                                                                                                                                                                       | 1       |
| AB     | Reset                                 | Display Ao,press  until whole show                                                                                                                                                                         |         |
| B2     | 10V output voltage equally divided    | 10:Ten equal parts<br>8:Eight equal parts<br>6:Six equal parts 4:Four equal parts                                                                                                                                                                                                             | 10      |
| B3     | Output start time                     | 5-60s                                                                                                                                                                                                                                                                                         | 5       |
| B4     | Low gear fan speed                    | 10%-30%                                                                                                                                                                                                                                                                                       | 10%     |
| B5     | Mid gear fan speed                    | 35%-75%                                                                                                                                                                                                                                                                                       | 50%     |
| B6     | High gear fan speed                   | 80%-100%(due to display limit, only show 99%,can't show 100%)                                                                                                                                                                                                                                 | 99%     |

## ► Advance Option B

Turn off thermostat, long press  5S to enter advanced setting option B, Short press  to set next item, press  or  to set item data

| Symbol | Item                               | Parameter                                                                         | Default |
|--------|------------------------------------|-----------------------------------------------------------------------------------|---------|
| IP     | IP low                             | 01-FF                                                                             | 01      |
| B1     | Baud Rate                          | 0: 2400 1: 4800 2: 9600                                                           | 2       |
| B2     | 10V output voltage equally divided | 10:Ten equal parts<br>8:Eight equal parts<br>6:Six equal parts 4:Four equal parts | 10      |
| B3     | Output start time                  | 5-60s                                                                             | 5       |
| B4     | Low gear fan speed                 | 10%-30%                                                                           | 10%     |
| B5     | Mid gear fan speed                 | 35%-75%                                                                           | 50%     |
| B6     | High gear fan speed                | 80%-100%(due to display limit, only show 99%,can't show 100%)                     | 99%     |

### ► Installation & Wiring diagram



### Cautions on Installation:

- To prevent the thermostat display from a high fluctuation, special treatment has been made to the program. Therefore, it is normal that the thermostat cannot immediately display the sudden change of temperature.
- The thermostat installed on 1.5m above the ground.
- For the thermostat installed, please take care not to install it to the wall corner, door / window side or behind the door or in such unheated area as exterior wall. Avoid hot / cold air duct, radiator, flue or thermal pipe
- When install the power supply, make sure that the power cable is well insulated.
- Don't open the internal circuit board..
- TRM-Series thermostat design for the standard 75x75x 35mm wall mount box installed. Follow the instructions to open the rear cover base, mount it on the wall and wire it.
- Before installing the thermostat, make sure that the system is disconnected. The maximum voltage of the system shall meet the requirements specified in the Instruction Manual (Max. AC Voltage: 250V).