






MR2022 Series Touch Screen Thermostat User Manual

MR2022 series touch screen thermostat are designed to control the room temperature of air-conditioner fan coil unites or dust pipe channel system, through the comparison between room temperature and setting temperature to control the turn-on or turn-off of fan coil units, motorized valve, ball valves or damper.

MR2022 series thermostats are with microprocessor and big LCD display. It shows the following items: working states (cooling, heating or ventilation), fan speed, room temperature, set-point temperature etc. Keys include turn on/off (),mode (**M**), clock (), fan speed () and temperature adjustment ( ).



MODEL DESCRIPTION





Y: Control damper or draught
A2: Control Motorized Valve (A: Control 2-wire valve; DA2: Control 3-wire valve) and 3-speed fan; When the temperature reaches the set-point, it will close the valve with the fan still running.
B2: Control Motorized Valve (B: Control 2-wire valve; DB2: Control 3-wire valve) and 3-speed fan; When the temperature reaches the set-point, it will close both the valve and fan.
V2: Control 4 pipe fan coil units, Control heating and cooling valve valves and 3-speed fan, when the temperature reaches the set-point, it will close the valves with the fan still running

T: Clock and timing on/off. Blank is invalid.
T7: 7 days programming. Blank is invalid
R: IR remote function. Blank is invalid.
(*Remote controller should be ordered additionally*)
L: Blue backlight. Blank is invalid.

E: Auto Restart(Restart the working status of last 6 seconds before power off). Blank is invalid.

FEATURES



STATUS DISPLAY



- ☞ Room temperature setting
- ☞ Manual or auto 3-speed changeover
- ☞ Defrost (low temperature protection)
- ☞ Clock, Timer (-T, Option)
- ☞ 7 days programmable (-T74, Option)
- ☞ Infrared Remote Control (-R, Option)
- ☞ Blue back light (-L, Option)
- ☞ Auto Restart (Option)
- ☞ Keypad Lock (-E, Option)
- ☞ Working Status: (Cooling ❄ Heating ☀, Ventilation 🌀)
- ☞ Fan Speed s:  High,  Med,  low, **AUTO** auto
- ☞ FCU valve 
- ☞ Room temperature display
- ☞ Temperature setting display
- ☞ Clock week display




SPECIFICATIONS


- ☞ Sensing element: NTC
- ☞ Accuracy: $\pm 1^{\circ}\text{C}$
- ☞ Set-point range: 5°C to 35°C
- ☞ Display range: $0\sim 55^{\circ}\text{C}$
- ☞ Operation environment: $0\sim 45^{\circ}\text{C}$
- ☞ Operating Humidity: $5\sim 95\%\text{RH}$ (non-condensing)
- ☞ Key: Touch screen keyboard
- ☞ Rated Power: $< 1\text{W}$
- ☞ Power supply: AC $85\sim 260\text{V}$, 50/60Hz
- ☞ Wirings: Accepting: $2 \times 1.5 \text{ mm}^2$ or $1 \times 2.5 \text{ mm}^2$ wires
- ☞ Switch current rating: Resistive: 2 A, Inductive: 1 A
- ☞ Housing: PC + ABS Flame Retardant
- ☞ Dimensions: $86 \times 86 \times 14 \text{ mm}$ (W \times H \times D)
- ☞ Hole pitch: 60 mm (Standard)
- ☞ Protection Class: IP30

OPERATION

☞ On/Off: Press “” to turn on, press “” again to turn off thermostat and the output.

☞ Setting temperature: When power on, press “” to reduce set-point, press “” to rise set-point. (0.5°C changed each press)

☞ Mode Selection: Press “**M**” to change system working in cooling “”, heating “” or ventilation “” mode. The ventilation function is invalid for HR2022Y/YE.

☞ Fan Speed Selection (HR2022DA/DAE/DB/DBE/DA2/DA2E/DB2/DB2E/FCV2/FCV2E): Press “” to change fan speed among “**HIGH**”, “**MED**”, “**LOW**” or “**AUTO**”.

In mode “**AUTO**”, the fan-speed changed automatically. Auto LOW-speed When the difference between room-temperature and setting-temperature exceed 1°C , Auto MED-speed When exceed 2°C , Auto HI-speed When exceed 3°C .

☞ Control Damper (Y/YE): The damper will be open when (1) room temperature is higher than set-point under cooling; (2) room temperature is lower than set-point under heating, Otherwise the damper will be closed.

☞ Control Motorized Valve under 2-pipe configuration (MR2022DA/DAE/DB/DBE/DA2/DA2E/DB2/DB2E): If the difference between room temperature and set-point exceed 1°C , FCU valve will be open; if room temperature and set-point are equal, MR2022DA/DAE/DA2/DA2E will close the FCU valve with the fan still running, MR2022DB/DBE/DB2/DB2E will close the FCU valve and Fan both.

☞ Control FCU Valve under 4-pipe configuration (MR2022FCV2/FCV2E): under cooling, when the room temperature is higher than set-point, the cooling Valve will be opened. Otherwise it will be closed. Heating valve is always closed. Under heating, When the room temperature is lower than set-point, the heating valve will be opened. Otherwise it will be closed. Cooling valve is always closed.

CLOCK CALIBRATION (-T, -T74)

☞ Press “⊕” till to display “hh:mm” and “hh” flash, press “▲” or “▼” to adjust hour, press “⊕”, “mm” flash, press “▲” or “▼” to adjust minute; Press “⊕”, “week” flash, press “▲” or “▼” to adjust Mon to Sun.

TIMER ON/OFF FUNCTION (-T)

☞ Open/Close the thermostat according to the time user set in advance.

☞ Timer on: Press “⊕”, till to display “⊕” with “TIMER ON” and “hh” both flash, press “▲” or “▼” to adjust hour. Press “⊕”, “mm” flash, press “▲” or “▼” to adjust minute.

☞ Timer off: Press “⊕”, till to display “⊕” with “TIMER OFF” and “hh” both flash, press “▲” or “▼” to adjust hour. Press “⊕”, “mm” flash, press “▲” or “▼” to adjust minute.

☞ Canceling timer on: Press “⊕”, till to display “⊕” with “TIMER ON” and “hh” both flash, press “▲” or “▼” to adjust hour to “--:--”. Press “⊕”, “mm” flash, press “▲” or “▼” to adjust minute to “--:--”.

☞ Canceling timer off: Press “⊕”, till to display “⊕” with “TIMER ON” and “hh” both flash, press “▲” or “▼” to adjust hour to “--:--”. Press “⊕” and “mm” flash, press “▲” or “▼” to adjust minute to “--:--”.

SEVEN-DAY FOUR EVENTS PROGRAMMING FUNCTION (-T74)

☞ Divide each day of one week (7 days) into four events, set the temperature respectively to satisfy different room temperature requirements at different time.

☞ Four events each day (1, 2, 3, 4), there is starting time and programming temp. Each event. (chart as below)

Please make good plan of starting time and temp before 7 days programming according to below.

☞ When power on, press “⊕” 3 minutes, till to display “SET”, “1” and “Mon” to programme four events of Mon according to below chart. “hh” flash, press “▲” or “▼” to adjust hour; Press “⊕”, “mm” flash, press “▲” or “▼” to adjust minute. Press “⊕”, programming temperature will flash, press “▲” or “▼” to adjust temperature. Press “⊕”, set 2~4 events of Mon according above steps.

Day	period1		period 2		period 3		period 4	
	Starting T / temp. °C		Starting T / temp. °C		Starting T / temp. °C		Starting T / temp. °C	
Mon	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Tue	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Wed	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Thu	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Fri	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Sat	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C
Sun	7:00	25°C	8:00	25°C	18:00	25°C	21:00	25°C

Repeat above steps to set the programming of Tue, Wed, Thu, Fri, Sat and Sun.

Keyboard Lock Function

☞ Keyboard Lock: the keyboard would be automatically locked in 30 seconds in case that no one uses the thermostat, to avoid other persons operating the thermostat.

☞ Keyboard Unlock: Press “🔑” for 5 seconds to unlock (In case that no one uses the thermostat, keyboard would be automatically locked) .

Low Temperature Protection Function

☞ When the thermostat turns off and the room temperature is lower than 5°C, it would automatically turn on the heating model with “❄️” showing, Under Model MR2022DA/DAE/DB/DBE/DA2/DA2E/DB2/DB2E/FCV2/FCV2E, the fan runs in high speed and the motorized valve is turned on. Model HR2022FCV2/FCV2E turns on the heating valve; Model

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2022 automatically turns on the damper; When the room temperature reaches to 7°C, the thermostat will automatically close the output.

Low Temperature Protection Setting

☞ Turn off the thermostat, press "M" and hold for 3 seconds, it will display "OF" or "ON", press "▲" or "▼" key to adjust. "OF" indicates low temperature protection invalid, "ON" indicates low temperature protection function valid. The default is "OF".

Temperature Adjustment

In case the user wants the displayed temperature on the thermostat higher or lower than the real temperature ($\pm 5^{\circ}\text{C}$), the following operations could be taken:

☞ Turn off the thermostat, press "M" and "⊕" at the same time for 3 seconds, displaying "XX °C" (not displaying the thermostat model,) press "▲" or "▼" to adjust the temperature value, it will be automatically confirmed after 6 seconds

Alarm

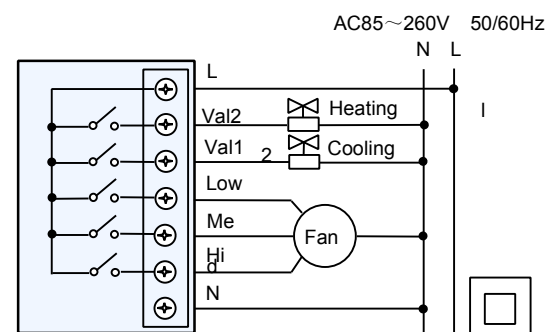
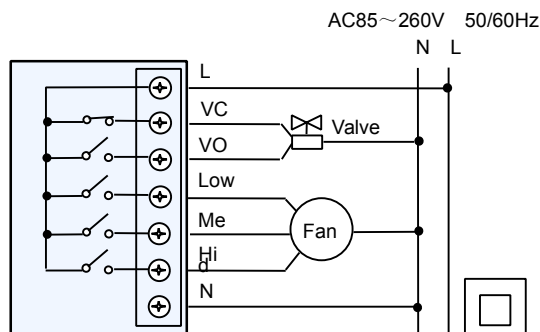
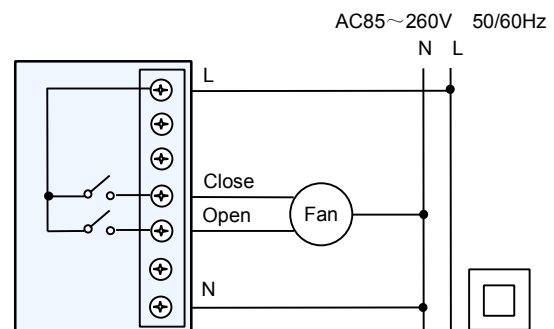
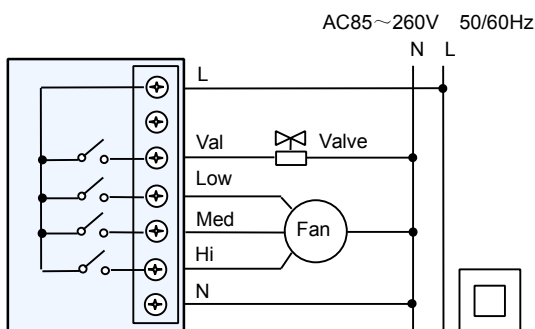
☞ Once the sensor fails, the thermostat will close the fan and valve, displaying "✂", "E1" or "E2".

E1: Sensor in short circuit alarm

E2: Sensor in open circuit alarm

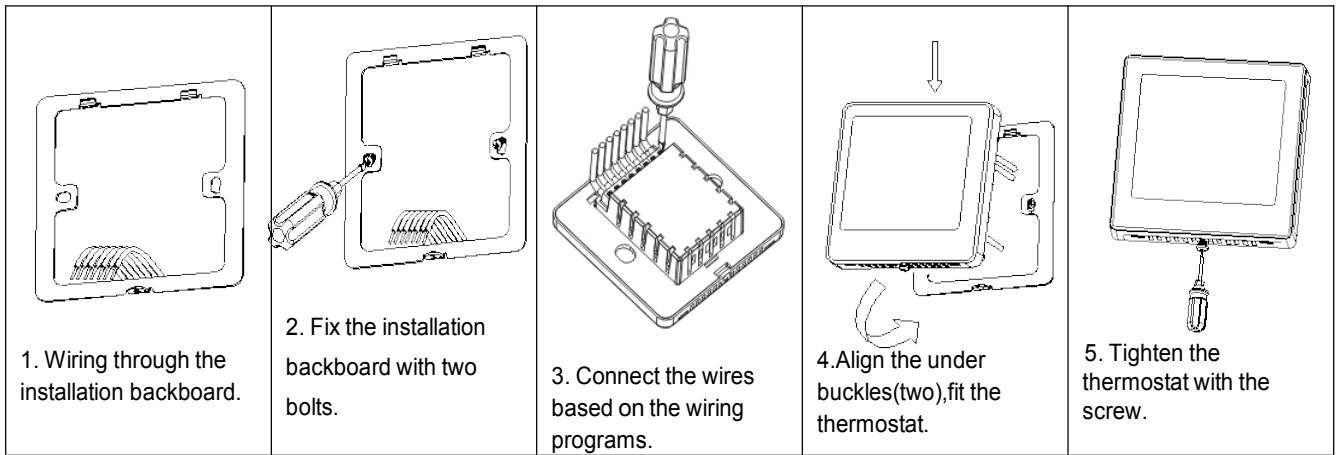
Displaying "HI" when the temperature is higher than 55°C, displaying "LO" when the temperature is lower than 0°C.

Wiring Diagrams



Installation

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Note: Be sure to connect all the wires as per the wiring diagrams and keep it away from water, mud and other material so as to prevent the unit being spoiled!