

HTC-002 Series Thermostat User Manual

HTC-002 Series thermostats are available for individual room temperature control in residential, industrial and business premises. Suitable for 2-pipe or 4-pipe Fan Coil configuration.

HTC-002 adopt digital control technology with LCD display, It shows the following items: working states (cool, heat, auto or ventilation), the room temperature, set-point. There are following keys on the panel: Exchange mode (cool, heat, auto or ventilation) "M", set-point temperature "S" and "T"; switch: Power On/Off, and Select fan speed (high, medium or low).



MODEL DENOMINATIONS

HTC-002

DA/ADA: Control Motorized Valve (DA: Control 2-wire N.C. FCU valve; ADA Control 2-wire N.C. FCU valve, with auto changeover mode) When the temperature reaches the set-point, Motorized Valve closed and the fan keeps running

FCV2/AFCV2: Control 4 pipe fan coil units, Control two Motorized Valves and 3-speed fan, when the temperature reaches the set-point, Motorized Valve closed and the fan keeps running. FCV2 is the manual changeover, and AFCV2 is with auto changeover mode.

BASIC FEATURES

- Room temperature setting
- Manual 3-speed changeover
- Defrost (low temperature protection)
- Blue Backlight
- Extern sensor (option)

STATUS DISPLAY

- Working Status: Cool ❄️, Heat 🔥, Auto ⏸️ and Ventilation 🌀
- Room temperature display
- Temperature setting display
- Pipe temperature display (Option)

SPECIFICATIONS

- Sensing element: NTC
- Accuracy: $\pm 1^{\circ}\text{C}$
- Set-point range: 5°C to 35°C
- Display range: $0 \sim 95^{\circ}\text{C}$
- Operation environment: $0 \sim 45^{\circ}\text{C}$
- Operating Humidity: $5 \sim 95\% \text{RH}$ (non-condensing)
- Switch current rating: Resistive: 2A, Inductive: 1A (Fan)
Resistive: 0.5, Inductive: 0.1A (Valve)




- Power: AC 220V $\pm 10\%$, 50/60Hz, $< 2 \text{ W}$
- Wirings: Screw-in terminals, each terminal capable of accepting $2 \times 1.5 \text{ mm}^2$ or $1 \times 2.5 \text{ mm}^2$ wires
- Housing: ABS + PC Flame Retardant
- Dimensions: $86 \times 86 \times 23.5 \text{ mm}$ (W x H x D)
- Hole pitch: 60 mm (Standard)
- Protection Class: IP30
- Display: LCD






OPERATION


** On/Off: Slide the switch to "LOW", "MED" or "HIGH" turn on; Slide the switch to "OFF", to turn off thermostat and its output.

** Setting temperature: Press "T" to reduce set-point, press "S" to raise set-point, and 1°C changed once.

** Mode Selection:

HTC-002DA/FCV2: When turn on, Press "M" to change system working in cooling , heating  or ventilation  mode, the related icon will flash.

HTC-002AFCV2/ADA: When turn on, Press "M" to change system working in cooling , heating , Auto  (for ST CD-002AFCV2/ADA) or ventilation  mode in turn, the related icon will flash. ST CD-002ADA use aquastat sensor only under  mode, Heat/Cool mode will be exchanged based on the coil water temperature, when it is under cooling mode,

HTC-002AFCV2 Thermostat auto switch to cooling or heating mode in accordance with result set point compared to environment temperature under AUTO  mode.

** when the thermostat is on, press "M" for 3 seconds to check the coil temperature (only for ADA) SEE TABLE 3.

** Fan speed selection: If the switch on panel is slipped to position LOW、MED or HIGH, namely, corresponding Fan speed of representation LOW, MED, HIGH symbol is selected.

** Control of motorized-valve (HTC-002DA/ADA): If the difference between room temperature and set-point exceed (or under) 1°C, FCU valve will be open; if room temperature are equal to set-point, the FCU valve will close with the fan still running.


** HTC-002DA / ADA is using two sensors, when the pipe temperature is higher than the overheat protection temperature, the thermostat will close the valve till the coil temperature is 5°C below the overheat protection temperature, when the coil temperature is lower than the defrost protection temperature, the thermostat will close the valve till the coil temperature is 3°C higher than the defrost protection temperature.

** Control cooling-heating FCU Valve under 4-pipe configuration (HTC-002FCV2/AFCV2): In cooling Mode, 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 In heating, in heating Mode 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.

LOW TEMPERATURE PROTECTION

** If thermostat is at shut state, and when room temperature is lower than 5°C, thermostat will start valve for heating, HTC-002DA/ADA for electric motorized valve and HTC-002FCV2/AFCV2 for heating water valve respectively, when temperature returns to 7°C or above, it will close valve.

SET LOW TEMPERATURE PROTECTION

** Turn off the thermostat, press "M" until backlight is on and parameter setting is displayed with icon  and "00", "01", press "S" or "T" key to adjust. "00" indicates low temperature protection is invalid, "01" indicates low temperature protection function valid. The default is "00". See TABLE 1

Caution: test Mode modification is prohibited while "F" is displayed in the middle of the LCD screen. PLEASE PAY ATTENTION TO THE TABLE WHEN YOU CHANGE THE TABLE (1)

WIRING DIAGRAMS

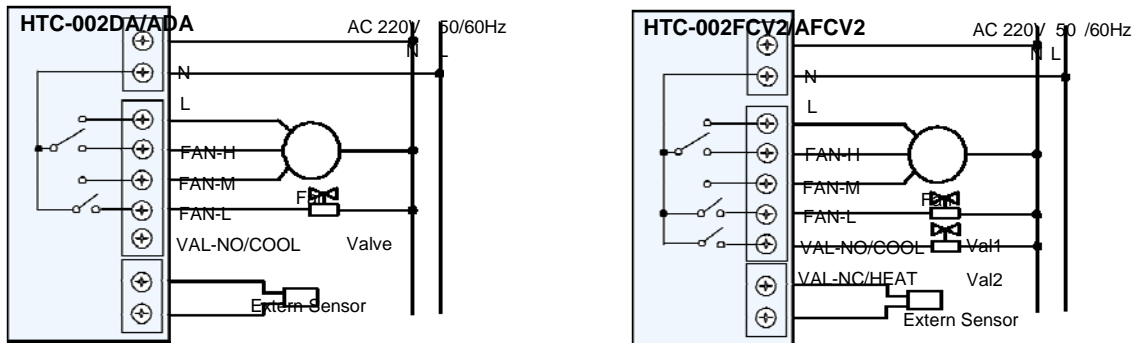


TABLE 1, Under OFF mode, press “M” for 3 seconds

Display symbol	Instruction De	fault Value	Value Range	Function
	Low temperature Protection	0	0-1	0: disable 1: enable
	Mode type	F0	F0-F5	F0: Standard 2-pipe (DA) F1: Reserved F2: 4-pipe w/ changeover (AFCV2) F3: Reserved F4: Standard 4-pipe (FCV2) F5: 2-pipe with changeover (ADA)
	Sensor Specification	0	0-2	0: Internal air sensor in thermostat 1: External air sensor, internal air sensor will be disabled. 2: Internal air sensor and external water pipe sensor for pre-heat, post heat and 2-pipe auto changeover mode.

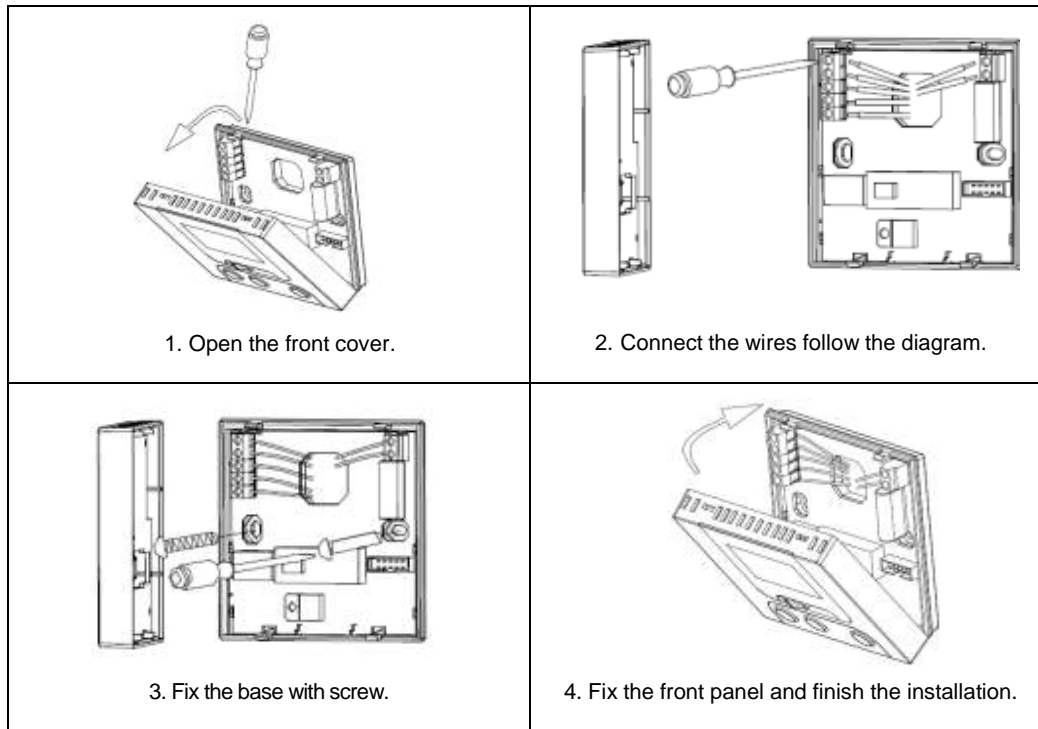
TABLE 2, Under OFF mode, press “M” & ” T ”for 3 seconds

	Heating pipe temperature	22	10-95	°C
	Cooling pipe temperature	18	2-40	°C
	Overheat temperature limit	75	40-95	°C
	Deforst temperature limit	2	2-10	°C
	Mode exchange time delay	1	1-20	Minute
	Valve close delay	3	1-99	seconds

TABLE 3, Under ON mode, press “M” 3 seconds to check.

	External sensor temperature		0-95	°C
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MOUNTING



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!