

HL116 Series Thermostat User Manual



HL116 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.

HL116 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 “▲” and “▼”; switch: Power On/Off, and Select fan speed (high, medium or low).



MODEL DENOMINATIONS

HL116

DA/DA2: Control Motorized Valve (DA: Control 2-wire N.C. FCU valve; DA2: Control 3-wire FCU valve) and 3-speed fan; When the temperature reaches the set-point, it will close the Motorized Valve with the fan still running.

(A)FCV2: Control 4 pipe fan coil units, Control two Motorized Valves and 3-speed fan, when the temperature reaches the set-point, it will close the Motorized Valves with the fan still running.

P: Control 3-wire FCU valve (Floating Arithmetic) and 3-speed fan; when the temperature reaches the set-point, it will close the Motorized Valve with the fan still running.

BASIC FEATURES

- ☞ Room temperature setting
- ☞ Manual 3-speed changeover
- ☞ Defrost (low temperature protection)
- ☞ Blue Backlight

STATUS DISPLAY

- ☞ Working Status: Cool ❄️, Heat 🔥, Auto ⚙️ and Ventilation 🌀
- ☞ Room temperature display
- ☞ Temperature setting display

SPECIFICATIONS

- | | |
|---|--|
| ☞ Sensing element: NTC | ☞ Rated Power: < 2 W |
| ☞ Accuracy : ± 1°C | ☞ Wires: Screw-in terminals, each terminal capable of accepting 2 x 1.5 mm ² or 1 x 2.5 mm ² wires |
| ☞ Set-point range: 5°C to 35°C | ☞ Housing: ABS + PC Flame Retardant |
| ☞ Display range: 0~50°C | ☞ Dimensions: 86 x 86 x 23.5 mm (W x H x D) |
| ☞ Operation environment: 0~45°C | ☞ Hole pitch: 60 mm (Standard) |
| ☞ Operating Humidity: 5~95%RH (non-condensing) | ☞ Protection Class: IP30 |
| ☞ Power supply: AC 220V ± 10%, 50/60Hz | ☞ Display: LCD |
| ☞ Switch current rating: Resistive: 2A, Inductive: 1A | |

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 “▼” to reduce set-point, press “▲” to raise set-point, and 1°C changed once.

☞ Mode Selection:

HL116DA/DA2/P: When turn on, Press “M” to change system working in cooling ❄️, heating 🔥 or ventilation ⚙️ mode, the related icon will flash, and continuous switch can be performed among three models hereinbefore while “M” key is pressed without release.

HL116(A)FCV2: When turn on, Press “M” to change system working in cooling ❄️, heating 🔥, Auto ⚙️ or ventilation 🌀 mode in turn, the related icon will flash, and continuous switch can be performed among four models hereinbefore while “M” key is pressed without release. Thermostat auto switch to cooling or heating mode in accordance with result set point compared to environment temperature under AUTO ⚙️ mode (This mode is called AFCV2 mode).

☞ 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 (HL116DA/DA2/P) : 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.

☞ Control cooling-heating FCU Valve under 4-pipe configuration (HL116FCV2): 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

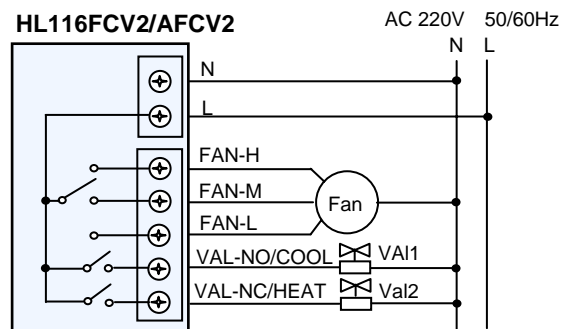
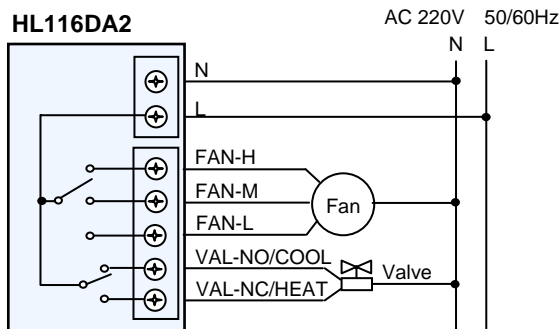
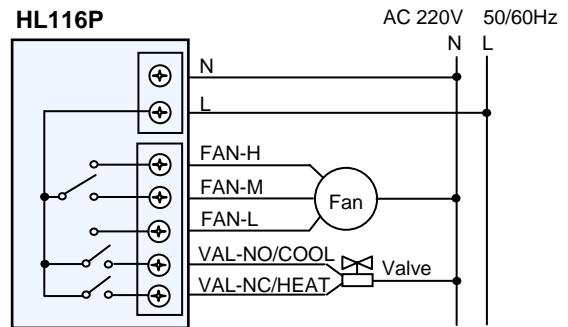
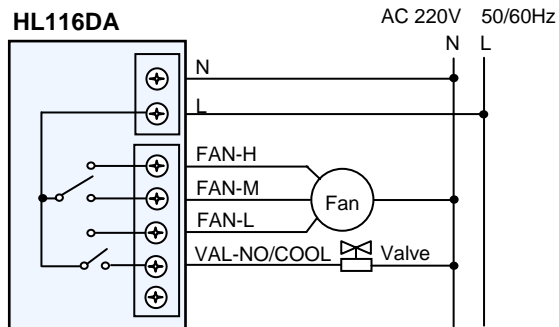
☞ If thermostat is at shut state, and when room temperature is lower than 5°C, thermostat will start valve for heating, HL116DA/DA2/P for electric motorized valve and HL116FCV2 for heating water valve respectively, when temperature returns to 7°C or above, it will close valve.

SET LOW TEMPERATURE PROTECTION

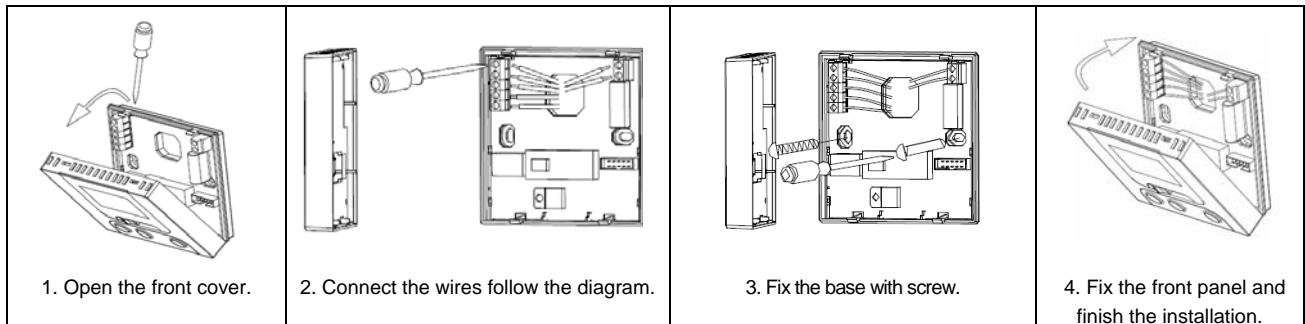
☞ Turn off the thermostat, press “M” until backlight is on and parameter setting is displayed with icon “C” and “00”, “01”, press “▲” or “▼” key to adjust. “00” indicates low temperature protection is invalid, “01” indicates low temperature protection function valid. The default is “00”.

Caution: test Mode modification is prohibited while “F” is displayed in the middle of the LCD screen.

WIRING DIAGRAMS



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!