

## Digital room thermostat user manual

### 1. Description

CHT-1D231 digital room thermostat is easy to operate with a large LCD blue screen to display running status. It is designed with two control modes Room/Out and frost protection function, more safety intelligent control. The thermostat can be widely used in industrial, commercial, residential appliance such as the temperature control system of gas wall-hang boiler, air condition, ventilation, electrical heater etc.

CHT-1D231 Thermostat



LCD Interface



### 2. Main Features:

Frost protection function	Yes
Protection class	IP30
Temperature display	Integer
Temperature control accuracy	0.5°C
Temperature setpoint range	5~35°C
Temperature display range	-9~+50°C
Storage temperature range	-20~+70°C
Operating temperature range	-10~+70°C
Operation humidity range	5~90%RH, no condensation
Case material	PC
Power source	Battery powered, 2x1.5 V AA cells supplied
Battery life	1 year typical
Relay contact point	Always open/closed adjustable (default setting is always open).
Peripheral size	102(L)x90(W)x30.5(H)mm 4.02"x3.54"x1.20"
LCD dimension	60x60mm 2.36"x2.36"
Output switch parameter	
• Port type	Relay SPDT
• Output capacity	3-36V, 1.0A
• Terminal quantity	2pcs, Non-polarized

### 3. Operation description

#### 1) ON/OFF

After install the batteries, press the "ON" button to power on, the screen will display battery power and room temperature. In the ON state, press the "OFF" button to power off, the screen will

display room temperature and "OFF". The frost protection function will be activated when the thermostat is powered off.

#### 2) Select control mode

The thermostat has two control modes Room/Out; press the "Out" button when the user go out, the screen will display "Out" which means enter into OUT mode, the thermostat will run as the temperature set for the OUT mode; Press the "Out" button again can exit the mode and return to the ROOM mode, the icon "Out" will disappear.

#### 3) Set temperature

In the Room/Out mode, use the "Up" "Down" button to regulate the setting temperature, after finishing the setting, it will flash, then save the setting automatically and exit. The setting temperature accuracy is 1°C, setting range is 5-35°C.

#### 4) Running indication

The thermostat has running indication function, when the device is running, the screen will display "Running" icon.

#### 5) Blue backlight display

The thermostat is designed with blue backlight display. When operating the thermostat, the backlight will be lit automatically, the soft light makes the vision more comfortable.

#### 6) Frost protection

After the thermostat powered off, it still supervises the room temperature; When the temperature is too low, it will start heating compulsively in case of damage. When the thermostat is running under the frost protection function, the screen will display "Frost", "OFF" and room temperature; However, the thermostat is still in the OFF state, if you want to set temperature or other functions, it is necessary to press the "ON" button to start the thermostat and operate.

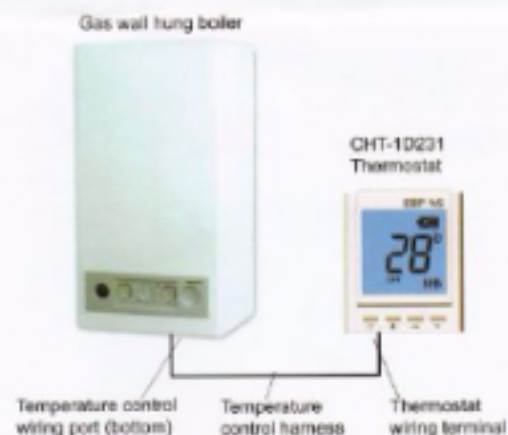
#### 7) Battery

★ Display of icon "Low Battery" means low battery.

★ Flash of icon "Low Battery" means the battery will run out of power in a minute, remind the user replace fresh batteries immediately.

### 4. Connection and installation

1) Thermostat connect with heating device, here take gas wall hung boiler as example.



## Digital room thermostat user manual

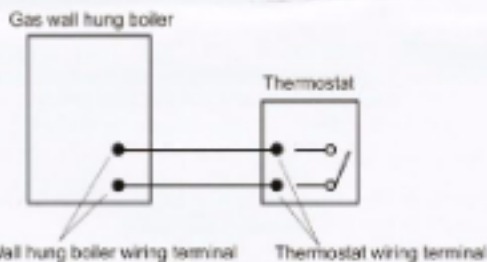
★ Hint:

- Please refer to the device instruction to confirm temperature control wiring location.
- Thermostat wiring has no polarity requirement.
- Temperature control harness has no special requirement.

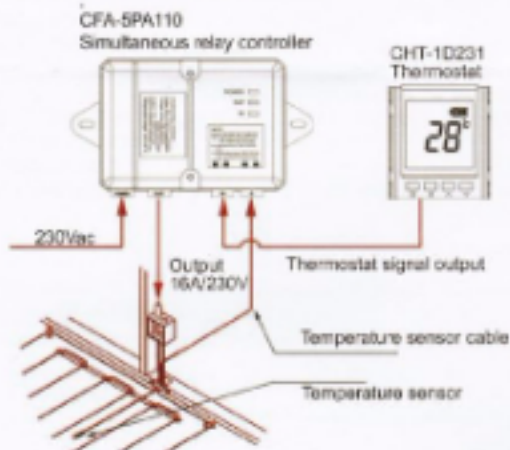
⚠ Warning:

- The thermostat can't be connected directly to 230V power supply.

► Schematic diagram as below:



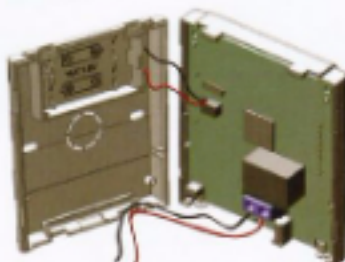
2) If the heating device designed without temperature control wiring port, and the power is high, it is suggested to use our simultaneous relay controller CFA-5PA110, take electric floor heating as example, the wiring as below:



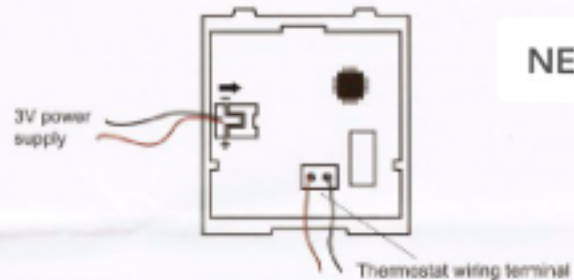
CFA-5PA110 wiring parameter

Power: 220Vac 50/60 Hz  
 Input: One for control signal;  
       One for temperature signal.  
 Output: 220Vac 50/60 Hz  
 Relay: SPST/16A@250V

3) Thermostat output connection

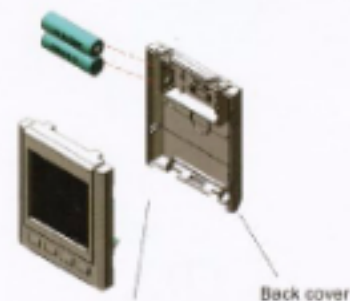


► PCB as below:



NEXT

4) Installation



Remove the back cover, install the batteries to the position shown in the figure.

► When install the thermostat, fix the back cover on the desired position of the wall first. Install batteries for the thermostat and connect it with the heating device, finally, attach the thermostat front to the thermostat back.

► Do not use different models of battery or new and old batteries.

► Attach the thermostat front to the thermostat back shown as below:



Customer Assistance

Any question about installation or operation of the product, please contact our technicians of the aftersales service department.