

Digital Heating Thermostat User Manual

Many thanks for your selection of our products and services, and also for your trust and support to us.

About Your Thermostats

HY311 series range has been developed to control electric underfloor, water heating or water/gas boiler systems, all design have backlight function

Features

Appearance

- (1) Standard total Size is 86*86mm
- (2) Touch buttons to make simple operation
- (3) The visible thickness above the wall is only 15mm
- (4) 86mm hidden box and 60mm European box
- (5) Flat mounting, it is easy to install
- (6) Display size : 64*64mm
- (7) Color: white, black

Functions

- (A) Including built-in sensor and external sensor
- (B) 0.5°C accuracy keeps temperature within the level you set.
- (C) Children lock to prevent misoperation by children
- (D) Data memory when power is off.
- (E) Holiday mode make you enjoy more comfortable temperature in holiday
- (F) The temperature of external sensor can be checked

Product Specifications

- ☆ Power: 90-240Vac 50/60HZ
- ☆ Display accuracy: 0.5°C
- ☆ Probe sensor: NTC(10k)1%
- ☆ Contact capacity: 3A/250V(WW); 16A/250V(WE)
- ☆ Working environment temperature: -10-60°C
- ☆ Range of temperature adjustment: 5~35°C
- ☆ LCD Range of temperature display: 0~70°C
- ☆ Insulating condition: Normal environment
- ☆ Running program: Set per 1 week as a cycle
- ☆ Output: Switch relay
- ☆ Installation: Wall mounted
- ☆ Size(mm): 86*86*27

Before wiring and installing

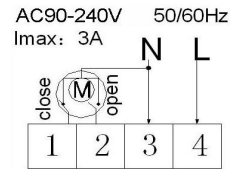
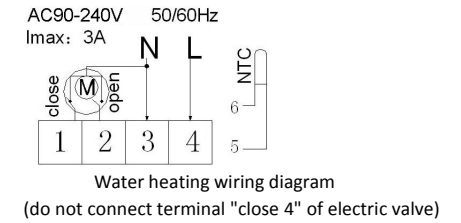
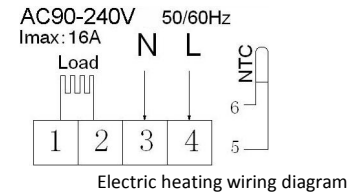
1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the produce is suitable for your application.
3. Installer must be a trained experienced service technician.
4. After installation is complete, check out produce operation as provided in these instructions

CAUTION

Electrical shock or equipment Damage Hazard. or short equipment circuitry.

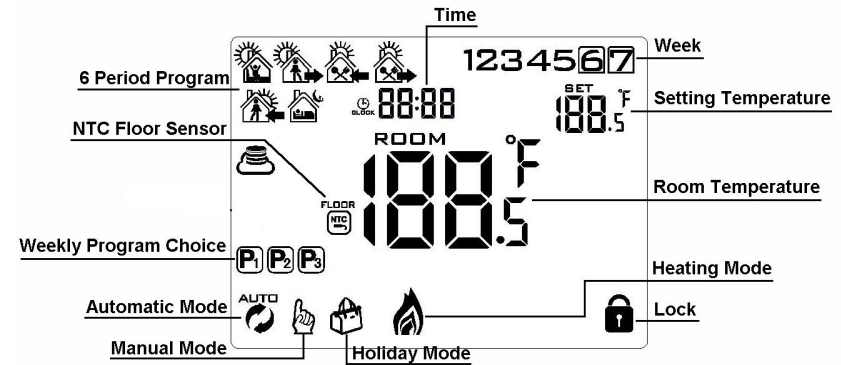
Disconnect power supply before installation

Wiring Diagram



Water heating and gas wall-hung boiler heating, no contact wiring diagram, (disconnection when electric valve close)
Note: 3 & 4 connect with power, 5 & 6 connect with gas boiler, 1 & 2 connect with thermal actuator, please do not connect 1 & 2 to gas boiler, if you connect it wrongly, there will be Short circuit, our gas boiler board will be damaged.

Displays



Description of icon

- : Auto mode; run preset program
- : Manual mode
- : Holiday mode, Holiday days and temperature can be set to run in countdown mode
- : External NTC sensor
- : Heating, disappears to stop heating
- : Clock
- : Long Press to lock/unlock

Operation key

NO	symbols	represent
A		Turn ON/OFF: Short press to turn on/ turn off
B		1 Short press to switch automatic mode and manual mode 2 Turn on thermostat, long press for 3-5 seconds to enter into programmable setting 3. Turn off thermostat, long press for 3-5 seconds to enter into advanced setting

C		1 Confirm key: use it with key 2 Only short press it to set time 3 Turn on thermostat, long press it for 3-5seconds to holiday mode setting. Appear OFF , press or change to ON, then press to confirm opening holiday mode
B		1 Decrease key 2 Long press to lock /unlock
D		1 Increase key : 2 Long press to inquire external sensor temperature 3 In the Auto model, press or enter to temporary manual mode

Programmable

5+2 (factory default), 6+1 and 7 models 6 times period setting for user choose. In the advanced options choose model of you need, under power on state, long press for 3-5 seconds enter into programming mode setting, then short press choose: hour, minute, time period, and press and to adjust data, finished setting, about 10 seconds will automatic save and exist.

Wake up	Out door	Back home	Out door	Back home	Sleep
6: 00 20°C	8: 00 15°C	11: 30 15°C	13: 30 15°C	17: 00 15°C	22: 00 15°C

The optimum comfort temperature is 18°C-22°C.

Advanced options

Under turn off state, long press for 3-5 seconds to access advanced setting. From A1 to AE, short press to choose the option, and adjust data by , , short press to switch next option. Remain about 5 seconds after finish setting will quit setting.

NO	Setting Options	Data Setting Function	Factory Default
A1	Measure Temperature Calibration	-9-+9°C	0.5°C Accuracy Calibration
A2	Temperature control return difference setting	0.5-5°C	1°C
A3	External sensors limit temperature control return difference	1-9°C	2°C
A4	Options of sensor control	N1:Built-in sensor (high temperature protection close) N2:External sensor (high temperature protection close) N3:Built-in sensor control temperature ,external sensor limit temperature (external sensor detect the	NI

		temperature is higher than highest temperature of external sensor, thermostat will disconnect relay, turn off load)	
A5	Children lock setting	0:half lock 1:full lock	0
A6	Limit value of high temperature for external sensor	1. 35°C-70°C 2. Under 35°C, screen display 【--】 , high temperature protection was cancelled	45°C
A7	Limit value of low temperature for external sensor(anti-freeze protection)	1. 1-10°C 2. Exceed 10°C, screen display 【--】 , Low temperature protection was cancelled.	5°C
A8	Setting temperature lowest limit	1-10°C	5°C
A9	Setting temperature highest Limit	20-70°C	35°C
AA	Descaling function	0:Close descaling function 1:Open descaling function (valve is continuously closed over 100 hours, it will be opened for 3 minutes automatically)	0:Close descaling function
AB	Power with memory function	0:Power with memory function 1:Shutdown power after power off 2:Shutdown power after power on	0:Power with memory function
AC	Weekly programming selection	0: 5+2 1: 6+1 2: 7	0: 5+2
AD	Room Ventilation Function (Heater is off when window is open)	1: 5°C, keep going down will display “--” , it show disable 3. 5-60min	5°C
AE	Restore factory defaults	Display A o, press key whole show	

From B1 to B3, short press to choose the option, and adjust data by , , short press to switch next option. Remain about 5 seconds after finish setting will quit setting.

Remark: B1-B3, this function is RS485 function, this is selectivity function.

NO	Setting Options	Data Setting Function	Factory Default
B1	IP High Address	00-FF	00
B2	IP Low Address	01-FF	01
B3	Baud Rate	1=2400 2=4800 3=9600	1

Return difference : limit valve of external sensor is 45°C for factory default (A6), value of external sensor control return difference (A3) is 2. when temperature rise to 45°C, then relay stop working and will remind high temperature production alarm. If temperature decline to 43°C relay continue to work and heating alarm will be relieved. (it can be operated ,only when indoor temperature is lower than setting temperature)

Sensor fault display: please choose correct working way of built-in and external sensor, if choose wrongly or sensor fault (breakdown), “E1” or “E2” will be displayed on the screen. Thermostat will stop heating until the fault is eliminated service.