

HY312 Series Touch Screen Programmable Heating Thermostat Manual



Product Summary

This new design heating thermostat aims at market demand, it has large LCD display. Easy operation, complete functions. It can be control motorized ball valve, motorized valve, thermal valve, solenoid valve, heater, electric heating film, electric heating carbon crystal. It is used for floor heating.

Technical Data

- ❖ Power Supply: AC200-240V, 50/60HZ (can customize 110V,24V,12V)
- ❖ Load Current: 3A(Water Heating); 16A(Electric Heating)
- ❖ Accuracy: $\pm 1^{\circ}\text{C}$
- ❖ Set-point Temperature Range: $5^{\circ}\text{C} - 35^{\circ}\text{C}$
- ❖ Limit Temperature Range: $5-99^{\circ}\text{C}$
- ❖ Consumption: $<1.0\text{W}$
- ❖ Temperature Sensor: NTC

Features

- ❖ Large LCD touch screen with blue backlight display and double temperature display mode
- ❖ Time display (minutes, hours, weeks)
- ❖ 6 period programmable controlling temperature setting
- ❖ Internal and external temperature sensor for choice
- ❖ Room temperature display precision is 0.5, inner precision is 0.1
- ❖ Setting temperature meet user's demand of room temperature
- ❖ Memory function when power failure, protect your setting from power failure
- ❖ Room temperature automatically calibration function

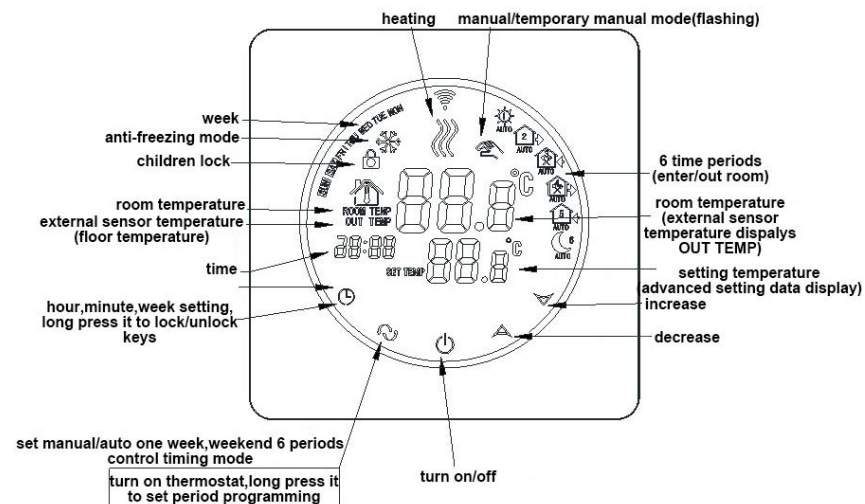
Button description

NO.	signal	Description
1		on / off
2		Mode key: switch over auto/manual time interval control and temporary manual, long press to enter into time interval setting
3		Time setting: hours, minutes, weeks setting, long press it to lock/unlock
4		Increase temperature, press it together with or to plus programming data
5		Decrease temperature, press it together with or to reduce programming data

Function and display

- “” manual control(temporary manual control when flashing, auto control when no this sign display);
- “” it is heating;
- “” get up in morning, the first time interval; “” go out in morning, the second time interval;
- “” back home at noon, the third time interval; “” go out at noon, the fourth time interval;
- “” back home at night, the fifth time interval; “” sleep at night, the sixth time interval;

Operation diagram



Time and time interval setting

1)Time setting

Press time key“”, time zone display minute, hour, week, press key“”or“”to adjust time.

2)Time interval temperature auto control setting

First step, select time interval first, press “” screen display “Loop” (cycle control), then press “”, screen display “12345” (Monday to Friday control mode); press “” for 2 times, screen display “123456” (Monday to Saturday control mode); press “” for 3 times, screen display “1234567” (Monday to Sunday control mode);

Second step, time interval time and temperature setting, when screen display “12345” or “123456” or “1234567”, press “” enter into time interval temperature setting, press “” enter into time interval time setting, press “” or “” to adjust and save automatically.

Note: when auto control “” will disappear, if need re-set temperature when auto control, can press “” or “” to adjust.

3)Modify interval time control setting

Press “” first, then press “” switch to the time option to modify time of time interval.

Time interval programming

Press menu key“”, can enter into time interval setting, then press time key“” can enter into interval time setting.

Period	Icon	Default Period Time	Default Period Temperature
Working Day	1	06:00	20°C
	2	08:00	15°C
	3	11:30	15°C
	4	12:30	15°C

	5		17:30	22℃
	6		22:00	15℃
Weekend	1		08:00	22℃
	2		23:00	15℃

1,The factory default temperature value of time interval 3 and 4 are the same as period 2,please modify default temperature when it's necessary.

2,Setting temperature is "00", this time interval is shutdown.

3,View out temperature value (floor temperature)

(1)Touch screen version: when internal control temperature and external limit temperature(high temperature protection),under power on state, press time key not move first, then press on/off key together to switch and view external temperature (this time measure temperature display zone displays OUT TEMP temperature value),press time key to display room temperature;

Advanced Setting(suggestion: operated by technician)

Turn off thermostat, first press not move, then press together enter into advanced setting, it will save after backlight is out, press to set next data

No.	Symbols	Setting Item	Parameter Setting Function	Factory Default
1	SEN	Sensor control option	0:internal sensor 1:external sensor 2:internal control temperature, external limit temperature	0:internal sensor
2	OSV	Limit temperature value of external sensor	5-99℃	42℃
3	dIF	Return difference of limit temperature value of external sensor	1-9℃	2℃
4	SVH	Set upper limit temperature value	5-99℃	35℃
5	SVL	Set lower limit temperature value	5-99℃	5℃
6	AdJ	Measure temperature calibration	-5-5℃	0.5℃ precision Calibration
7	FrE	Anti-freezing function (only for water heating)	00:anti-freezing function close 01:anti-freezing function open	00:anti-freezing function shut down
8	POn	Power on memory	00:Power on no need memory 01:Power on need memory	00:Power on no need memory
9	ADD	Communication address	001-255	01:Allow mobile phone to remote control thermostat (wifi version) other:Not allowed control on the phone
10	FAC	Factory default	08:just display, no other meaning 00:Restore factory default(after adjust to 00,press press)	08

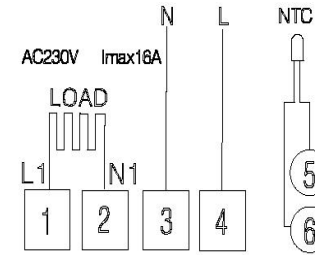
Note: hysteresis (return temperature) description: the factory default of external sensor limit temperature(OSV) set as 42℃, external sensor limit temperature hysteresis(dIF) set as 2,when temperature up to 44℃,relay stop output, when temperature drops to 40℃,relay output again and heating.(operation when room temperature lower than setting temperature)

Sensor fault hint

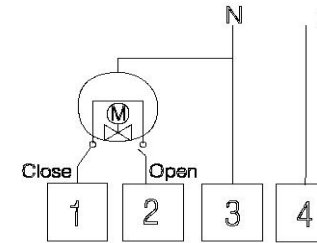
Please select internal, external sensor working mode correctly. If it is choose wrong or sensor is fault (breakdown),LCD interface will display "Err",temperature controller stops heating until fault is eliminated. Special Hint :installation cable

Please select: water heating selects 1.5-2.5mm2 rigid line; electric heating select above 2.5mm2 rigid line.

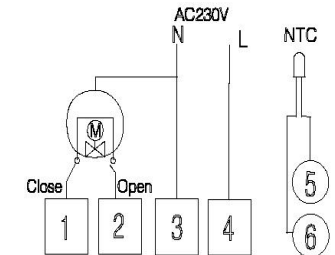
Power wiring diagram



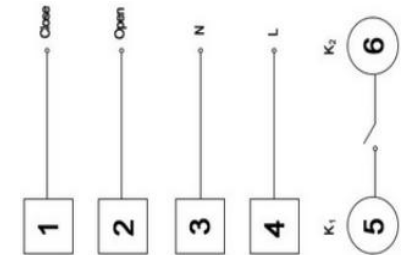
Electric heating wiring diagram



Water heating no external sensor wiring diagram
(disconnection when electric valve close)



Water heating wiring diagram
(disconnection when electric valve close)



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,