C18 Programming Heating Thermostat
User Manual

[General]

- Heating Thermostat with weekly programming adopts the latest single-chip computer control technology.
- It has the high reliability and powerful anti-jamming. It can realization energy-saving and comfortable living environment
- The application is the electric heating equipment and water heating system of electric heating or actuator control. According to the preset temperature, the thermostat will automatically start and stop the controlled object (valve, floor heating, the heating wall, electric heater etc).
- Multiple time modes: 5+2/6+1/7days, the heating equipment supports different temperature setting accordingly with 6 time-modes daily. Users are free to choose manual mode or full automatic mode for different purposes.
- Using flame resistance material, the heating equipment is safe and reliable. Its appearance is stylish and its mirror screen would be very easy to clean. Curved surface,one face design. Anti scratch the surface.
- The clock would continue to run even if power was cut off and it will not affect the period setting value.
- Keypad locking function is designed to prevent the children from misusing.
- Mobile phone remote control (OPTIONS)

[Technical parameters]

- Power Supply: 85-250VAC 50/60 Hz (24V optional)
- Internal sensor measurement range: 0 - 40℃. Setting range: 5 - 35℃ (factory settings: 25℃)
- Inside sensor: NTC B=3380 10k @ 25℃
- Display resolution: 0.1℃ Setting Unit: 0.5℃/step
- The maximum switch power: 3A/16A
- External sensor measurement range: 0 - 99℃. Setting range: 5 - 95℃ (factory settings: 50℃)
- Extra sensor: NTC B=3380 10k @ 25℃ length=3 meters (optional)

auto mode flag
week value
stage value
week flag
Ring(adjust value)
heatting flag
measure value
Switch **button**
Wifi flag
setting value

Operation Guide

Press **button** 5 times restore factory setting

double click button to view floor temperature value
double click button to back

Press **button** for 2 seconds

thermostat off

On work

click button into setting menu, CON flash
double click button to back

[Children Lock]
Press **button** 3 times , the controller keypad would be locked.
Press **button** 3 times , under the locked status,
keypad would be unlocked.

click button to auto/manual setting, double click button to back.

[Automatic mode]
System would control temperature according to the preset temperature values in different time. The icon ⏱ will lit, **1-7** is systematic reuse. When screen shows **WEEK**, 1-7 would display the values of the week, else is **STAGE** .

rotary ring

[System time]
CLO flash, Click button and modify time you want to revise (week / hour / minute), rotary ring to modify the current setting.double click button to back.

SCH flash, Click button and set periods you want to revise, rotary ring to modify the current setting.
double click button to back.

rotary ring

[Manual mode]
System will control temperature under the set value without any change. double click button to back.

[Setting the periods of time modes]
The periods setting effective under the Automatic mode.

[Setting the periods of time modes]

When you enter the period setting, Press button to select the object you want to modify (the period start time: hours, minutes and set temperature), rotary ring to modify the current setting. Once setting up, the values could be saved and reused in the thermostat forever.The thermostat can save three kinds of schedules (5+2 / 6+1 / 7) in 6 periods; One week for a cycle. Each data is saved as the start time (hours: minutes) and the temperature degree of this period. The end time of the period would be saved as the start time of next period. You can also shut down a certain period according to your actual needs.

For example: in the 5+2 mode, the period setting sequence：

click to schedule data setting
double click back previous menu
Press **button**, the week area will blinking 1-5,
display P1 and blinking hr 06
rotary ring to modify the current setting.
Flash minutes for set then the temperature

P1:hr>min>setting value-> P2:hr>min>setting value-> P3:hr>min>setting value->…-> P6:hr>min>setting value
The week area will auto change 6-7 and blinking.
P1:hr>min>setting value-> P2:hr>min>setting value-> P3:hr>min>setting value->…-> P6:hr>min>setting value
Total setting value is 12 sets (<5>P1-P6,<2>P1-P6), you will setting 12X3 values. If you want skip the setting item you can press **button**, You can double click the button to back to the previous setting.
The automatic default mode of the machine factory is 5+2 mode. Time specific data see the following table. You can modify when you enter the programming interface:

5+2 mode	ID	P1	P2	P3	P4	P5	P6
Monday to Friday	Start time	06:00	08:00	11:30	12:30	17:00	22:00
	Set value	22℃	15℃	15℃	15℃	22℃	15℃
Saturday to Sunday	Start time	06:00	08:00	11:30	12:30	17:00	22:00
	Set value	22℃	15℃	15℃	15℃	22℃	15℃

When the system time is Friday 08:20 under automatic mode, display would show as: **STAGE 2** and the setting temperature value would be 15 degrees.
The thermostat can't quit when you set the periods, it will automatically exit when all setting is finished.

[Temperature control mode]

According to the sensor setting of thermostat, there are three different control modes, enter the advance function to set.

Internal control (IN): Only enable built-in sensor temperature measurement, the temperature control is based on the built-in temperature sensor. It is suitable for the detection of air temperature or the room temperature.

External control (OUT): Only enable external sensor to temperature measurement, the temperature control is based on the external sensor. It is suitable for the detection of the heating body temperature.

Dual temperature control (ALL): Temperature control is based on the built-in temperature sensor and an external temperature sensor (over-temperature protection). It is suitable for the detection of room temperature and heating body whether over temperature monitoring. If the external sensor is over temperature, thermostat will shuts down the heater.

[Dimension in mm]

Φ50
Φ80
86
86
21
33

[System setting]

<u>Warning: System setting is used to set some important parameters of the system, that's only for professionals. Do not make any improper modification. The item already been debugged and tested by professionals, there is no need to reset.</u>

25.0℃ **OFF**
rotary ring

double click button to enter the system setting.
rotary hand ring to modify the current setting.
double click button to back

Ad J 25.0℃
rotary ring

temperature correction   **Adjustment range** 5℃ ~ 5℃   **The default value** -2.5℃

Used to correct the sensor value, screen would show the value needed to be revised when adjusting; the revised value will be displayed after 3 seconds.

Pr G
rotary ring

The period-time mode   **Adjustment range** 5+2 / 6+1 / 7   **The default value** 5+2

5+2：Monday to Friday is set as the same; Saturday to Sunday is set as the same.
6+1：Monday to Saturday is set as the same. Sunday is individually controlled.
7：Monday to Sunday is set as the same.

LtP On
rotary ring

Antifreeze   **Adjustment range** On: Enable   / OFF: Disable   **The default value** OFF

Low temperature protection, what is suitable for the water system
To prevent the pipe from freezing at low temperature.

SEN In
rotary ring

Sensor or temperature control mode   **Adjustment range** IN / OUT / ALL **The default value** IN

IN：internal control, room sensor   Out：external control, floor sensor   ALL：double temperature double control, the internal room temperature sensor, external sensor overheating protecting

tOP 50.0℃
rotary ring

External temperature sensor limit   **Adjustment range** 40-80℃   **The default value** 50℃

The sensor is set to ALL, the temperature limit external sensor value

dt 0 1.0℃
rotary ring

Internal sensor hysteresis   **Adjustment range** 0.5-4℃   **The default value** 1℃

Built-in temperature sensor hysteresis

dt 1 3.0℃
rotary ring

External sensor hysteresis   **Adjustment range** 0.5-5℃   **The default value** 3℃

External temperature sensor hysteresis

bL OFF
rotary ring

Backlighting status   **Adjustment range** On: Always on   OFF：Auto turn off after 5sec   **The default value** OFF

Backlight lighting mode, can be set according to personal preference

SAt On
rotary ring

Status at re-power   **Adjustment range** OFF: off status at every time   On: the same as previous,   **The default value** OFF

Used to control the power state of the boot

dEF

Restore factory settings

[The error and solution of common system]

1. Fault phenomenon :   There is no display
   Reason & solution:
   1、Power supply system is having problems or power is supplied incorrectly, please check if the inlet wire is normal.
   2、If the connection is not right, please wired up as the wiring diagram on the back side.
   3、Actual temperature is too low, please note the thermostat temperature range. If the temperature is lower than -5 ℃, the unit cannot normally display.
   4、Power supply box and the motherboard Coupling is not connected correctly, please connect correctly.
   5、Power supply box and the motherboard Coupling are opposite inserted, please mind the direction
   6、Power supply box and the motherboard Coupling is broken, please don't overexert. Coupling length is 6cm, the installation must be careful. If damaged, no warranty and replacement

2. Fault phenomenon :   Display rupture
   Reason solution: Display encounters hard objects or sudden force, no replacement and warranty

3. Fault phenomenon :   Display a black screen
   Reason solution: If the display surface temperature is too high, please note whether there is heater nearby,   if so please remove.

4. Fault phenomenon :   Display ER0 or ER1
   Reason solution:
   ER0：If built-in sensor is abnormal, please pay attention to whether the small black dot in temperature sensing window was damaged during removal
   ER1：The system is set in the dual temperature control (ALL) mode, or it is not connected with an external sensor, or the external sensor is abnormal.

5. Fault phenomenon :   No pen on LCD
   Reason solution: Please check whether the iron plate is deformation when installation. If it is deformation, please correct

6. Fault phenomenon :   No backlight
   Reason solution: Please check whether backlight lamp connection is broken when removing in the panel.

7. Fault phenomenon :   Backlight always bright
   Reason solution: 1、The ON is set in the system menu bL   2、If it is damaged, please replace it.

8. Fault phenomenon :   Large deviation of measurement temperature and the actual temperature
   Reason solution: 1、The thermostat should be installed at ventilated place. It can not be installed at the place in direct sunshine or nearby the heater   2、Back connection screw is not locked, causing terminal serious fever

9. Fault phenomenon :   Display 0 degrees
   Reason solution: It is normal if thermostat display 0 degrees when the actual environment is below 0 degrees.

The above is some of the most common errors, if you can't solve, please contact the local dealer!

[Installation guide]

C18 thermostat   split   Control panel   +   power supply   +   Mounting plate

Please in strict accordance with the connecting cable wiring diagram

Fixed to the wall, with 4x25mm screws

Align four bayonet, plus control board, installation is complete.