

# WH7016S

## Thermostat Product Manual

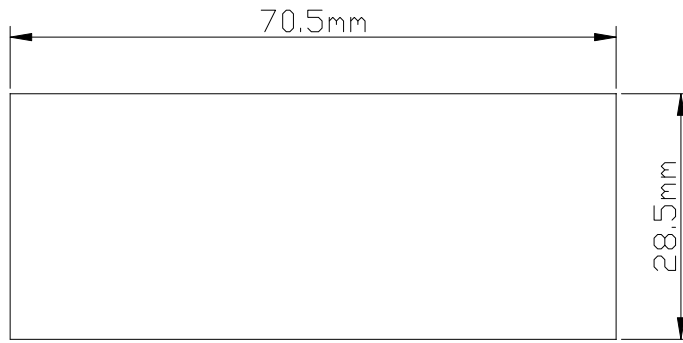


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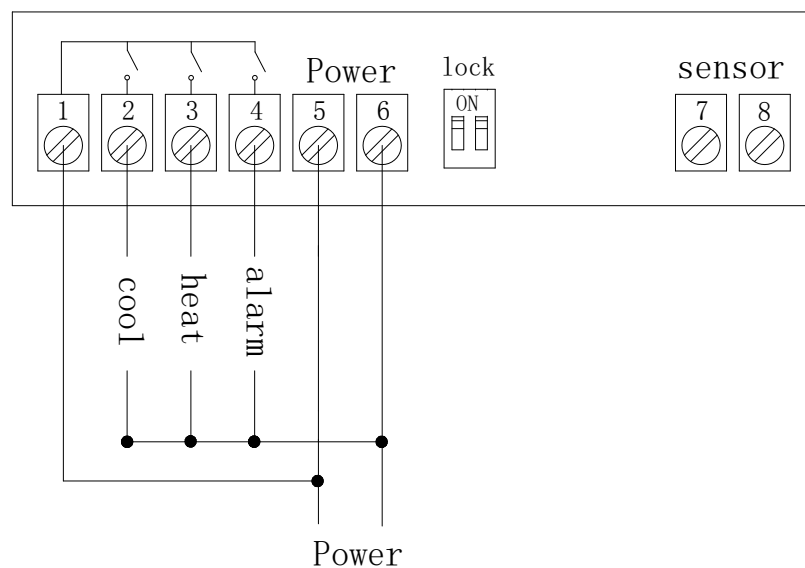
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Technical support: Engineer Tian

## ① Installation opening size:



## ② Wiring diagram:



Terminals 1 and 2: Connect the cooler

Terminals 1 and 3: Connect the heat

Terminals 1 and 4: Connect the alarm

Terminals 5 and 6: Connect the power

Terminals 7 and 8: Connect temperature sensor

Lock switch:

Switch either "1" or "2" to "ON", press "SET" 3 seconds to disable the advance model, user only can change temperature but can't reset the system

### ◆LED Status Description:

The WORK light is used as working indicator lights, flashing is to indicate the delay of cooling or heating, if the LED is always on, it indicates it is on the status of cooling or heating .

The SET light is used as setting indicator lights, if the LED is always on, it indicates it is on the status of setting.

◆**Turn on or off the thermostat:**

When it is wired up, the state of being acquiescent is power on.

Press RST key to switch on and off, press the RST key once on the power-off state to turn it on. On the power-on state, press the RST key and hold on for three seconds, then it will be off.

◆**OFF temperature :**

In the Standby mode, press the SET key once to enter the OFF temperature setting, press ▲ or ▼ button to adjust, press ▲ or ▼ button and hold on for three seconds to enter the fast adjusting mode, press the SET key again and back to the standby mode.

◆**ON temperature :**

Heating ON temperature = OFF temperature- Heating Difference

Cooling ON temperature = OFF temperature+ Cooling Difference

Set The Heating or Cooling Difference in the setting menu.

◆**system menu settings :**

Press SET key and hold on for three seconds to enter the controlled-parameters setting, press the ▲ or ▼ key to select the adjustment menu, press SET key once to enter the appropriate parameter settings, press ▲ or ▼ to adjust the parameters needed to be modified. After being adjusted, press the RST key to exit, or exit as the system delay for 5 seconds.

◆ **Menu code statement:**

Symbol	Details	Remark
HD	Heating Difference	
CD	Cooling Difference	
LS	The lower limit of setting OFF temperature	
HS	The upper limit of setting OFF temperature	
CA	Temperature calibration	
PT	Delay time	Minutes
AH	High temperature alarm settings	
AL	low temperature alarm settings	

1: When measuring the temperature values  $\geq$ OFF temperature + CD, start the cooling output, cooling relay together; When measuring temperature  $\leq$ OFF temperature , turn off the cooling output , cooling relay disconnected.

2: When the measurement of the temperature value  $<$  OFF temperature-HD, the start of the heating output, heating relay together; When measuring the temperature  $\geq$ OFF temperature ; to turn off heating output , heating relay off.

◆**Difference function:**

Difference setting limits the maximum interval between the opening and stopping.

◆**Difference settings:**

Press "SET" key and hold more than 3 seconds to enter the menu display, with "▲" or "▼" key adjusted to the screen, appearing "HD" or "CD" code, press the "SET" key to display the hysteresis set value, press "▲" or "▼" key to adjust the parameters.

◆ **Temperature calibration function:**

When there is deviation between the measuring temperature and standard temperature, use the temperature calibration function, make the machine measurements value consistent with the standard temperature, the after calibration temperature = the before calibration temperature + calibration value (calibration value can be positive number, negative number, and 0) .

◆ **Temperature calibration settings:**

Press "SET" key and hold more than 3 seconds to enter the menu display, with "▲" or "▼" key adjusted to the screen, appearing "CA" code, press the "SET" key to display the temperature calibration settings, press "▲" or "▼" key to adjust the parameters.

**For example:** When we measure the probe temperature was 25 degrees, it displays 25 degrees as the CA is 0, it displays 26 degrees as the CA is 1, it displays 24 degrees as the CA is -1. This function is generally applied when the probe can not measure directly the measured object. For example, we place the probe at the outside of a cup to measure its water temperature, we need to adjust the CA parameters because of the heat loss of the cup, so that the display temperature can be in accordance with the one of the cup.

◆ **Delay Protection Function:**

In the cooling mode, the first power on, when the measured value above the OFF temperature + CD, the machine will not immediately start cooling, it needs to set the delay time, then the machine can run to start cooling; once the interval between two cooling is larger than the delay time, the machine immediately starts cooling, once the interval between two cooling is less than the delay time, the machine must run the remaining delay time to start cooling. The delay time is started to calculate from stopping the machine. The delay time of heating mode is as same as the cooling mode.

**Note:** It is recommended that only the device that use compressor cooling can use the delay start function, the user who don't need delay start function

please set this parameter to 0.

◆ **Delay Protection Setting:**

Press "SET" key and hold more than 3 seconds to enter the menu display, with "▲" or "▼" key adjusted to the screen, appearing "PT" code, press the "SET" key to display the delay setting value, then press the "▲" or "▼" key to adjust the parameters.

◆ **Upper and lower limit functions:**

The setting of HS and LS limit the set range of OFF temperature point, for example: HS is set to +15, LS is set to -10, the OFF temperature can only be adjusted between -10 and +15, when the OFF temperature to -10 then press "▼" key, the display will remain on the status of -10 and not decrease; when the OFF temperature to +15 then press "▲" key, the display will on the status of 15 and not increase. If the set point outside this range, it needs to firstly change the value of HS and LS, then it can be achieved.

◆ **Upper and lower limit settings:**

Press "SET" key and hold more than 3 seconds to enter the menu display, with "▲" or "▼" key adjusted to the screen, appearing "HS" or "LS" code, press the "SET" key to display the upper or lower limit set value, Then press "▲" or "▼" key to adjust the parameters. HS means upper limit. LS means lower limit.

◆ **High temperature alarm:**

If the measured temperature  $\geq$  OFF temperature + AH alarm output relay.

Thermostat alarm will sound, the display alternately shows H and the current temperature. Alarm, press any key to stop the alarm and relay output.

◆ **High temperature alarm settings:**

Press "SET" button and hold more than 3 seconds to enter the menu display, with "▲" or "▼" button transferred to the screen appears "AH" code, press the "SET" key to display the high-temperature alarm settings, press "▲" or "▼" key to adjust the parameters

◆ **Low temperature alarm function:**

If the measured temperature  $<$  OFF temperature -AL when the alarm output relay. Thermostat alarm will sound, the display alternately shows L and the current temperature. Alarm, press any key to stop the alarm and relay output.

◆ **low temperature alarm settings:**

Press "SET" button and hold more than 3 seconds to enter the menu display, with "▲" or "▼" button transferred to the screen appears "AL" code, press the "SET" key to display the low temperature alarm settings, press "▲" or "▼" key to adjust the parameters

**Advanced settings:** ( Only WH7016S+ has the following features )

Press SET and UP key and hold on for three seconds to enter the System Advanced menu settings, press the ▲ or ▼ key to select the adjustment menu, press SET key once to enter the appropriate parameter settings, press ▲ or ▼ to adjust the parameters needed to be modified. After being adjusted, press the RST key to exit,

CODE	Functional Description	RE
C/F	Celsius, Fahrenheit selection	C : Celsius , F : Fahrenheit
ST	Conditioning step	01 : Conditioning step 0.1 Degree 10 : Conditioning step 1 Degree

**⑥ Errors indications:**

- 1) When the sensor disconnected, the screen displays EEE, and close the output
- 2) When the sensor detects the temperature is below the lowest temperature that could be detected, the screen displays LLL.
- 3) When the sensor detects a temperature higher than the Maximum temperature that could be detected, the screen displays HHH.

**⑦ Caution for using:**

- ◆ Please connect the correct operating voltage, the machine normally works under the standard input voltage within range of  $\pm 10\%$ .
- ◆ The load power should not exceed the maximum thermostat control power, when exceeding please connect external AC contactor.
- ◆ Please connect the power load correctly and the sensor, or it will damage the thermostat, when connect the wrong line .
- ◆ Please do not put the sensor lines and power lines in parallel, power line noise affects the accuracy of the measurement.