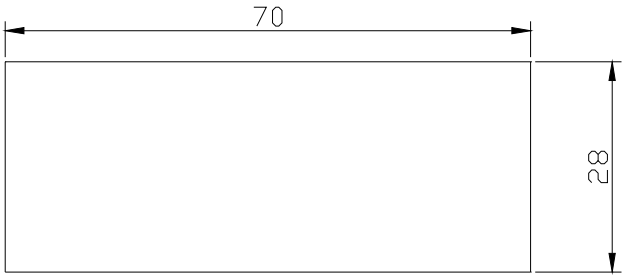
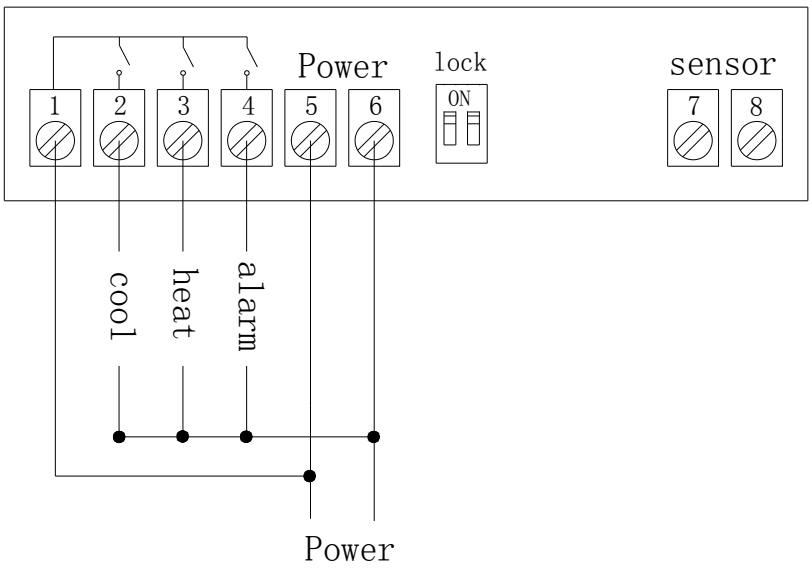
WH7016H Thermostat Product Manual

Shenzhen Willhi Electronics Co., Ltd.
Tel :86-755 -29539385 Fax :86-755 -2953 9395
Technical support: Engineer Tian

① Installation opening size:



② Wiring diagram：



Terminals 1 and 2: Connect the cooler
Terminals 1 and 3: Connect heat
Terminals 1 and 4: Connect alarm
Terminals 5 and 6: Connect the power
Terminals 7 and 8: Connect temperature sensor
Lock switch: If the 1 or 2 is switched to the ON position, can lock the settled control parameters.

◆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.

◆minimum temperature limit control setting：

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

◆maximum temperature limit control setting：

In the Standby mode, press the SET key once to enter the maximum temperature control 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.

◆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 Selections:

Symbol	Instruction	Units
HD	Heating Hysteresis	
CD	Cooling Hysteresis	
LS	Lower Limit	
HS	Higher Limit	
CA	Temperature Calibration	
PT	Start Delay	Minutes
AH	High Temperature Alarm	
AL	low temperature alarm settings	

◆ interval thermostatically controlled:

1: When measuring the temperature values ≥maximum temperature control setting, start the cooling output, cooling relay together; When measuring temperature ≤maximum temperature control setting -CD settings, turn off the cooling output ， cooling relay disconnected.
2: When the measurement of the temperature value < minimum temperature control setting, the start of the heating output, heating relay together; When measuring the temperature ≥minimum temperature control setting + HD setting to turn off heating output，heating relay off.

◆ Hysteresis function:

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

◆ Hysteresis 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. "HD" said heating hysteresis, "CD" said cooling hysteresis

◆ 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 set value + hysteresis value, 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 maximum temperature contro the set range
The setting of LS minimum temperature control the set range

◆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.

For example: the upper and lower limits are used to limit the range of control temperature that can be set, such as: LS is 10, HS 20, then press the SET key to adjust the temperature control, it can only be varied between 10 and 20.

◆High temperature alarm:

If the measured temperature≥ maximum set 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 ＜minimum set 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:

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 ,

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 ± 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.