

# Operation Instruction of Temperature Control Unit

Temperature control unit is used for controlling temperature of inner cabinet mainly with features of high reliability, easy operation. Meanwhile, it has another warning functions such as alarm for reaching max temperature limit, outputting, sensor fault alarm, etc.

## I.The specification and technical parameter

\*Running environment:-5℃~50℃

\*Relative humidity: 20%~85%( dew don't be formed)

\*Main technical parameter:

the voltage of the power :220VAC±10%(110VAC is optional )

\*Measuring Scale: 0℃~50℃ ,

\*Capacity of connective point of relay: 7A/250VAC,

\*Span of control : 0℃~50℃,

\*Precision of controlling and measuring :±1℃

## II.Surface dimension and explanation of each part

1.temperature controller,2.switch,3.power input,

4.sensor tie-in (connect), 5. power output (1),

6. power output (2),7 fan

## III.Connection / wiring

Steps:

1. Connect the temperature sensor to the sensor of temperature controlling unit.

2. Connect the outside power to the power plug of temperature controlling unit with special cable..

## IV.Operation

When complete all the connection steps above and confirm the connection is ok, then turn on the switch on the temperature controller and adjust the control parameter to appropriate temperature.

## V. Operation of the temperature controller

1. Look over and set parameter

(1). Look over parameter. Under the state of non-setting, pressing key ▲ show setting value of temperature . Pressing key ▼ display the different between the present temperature and temperature located, 2 seconds later, the screen will show the present temperature.

(2) set parameter

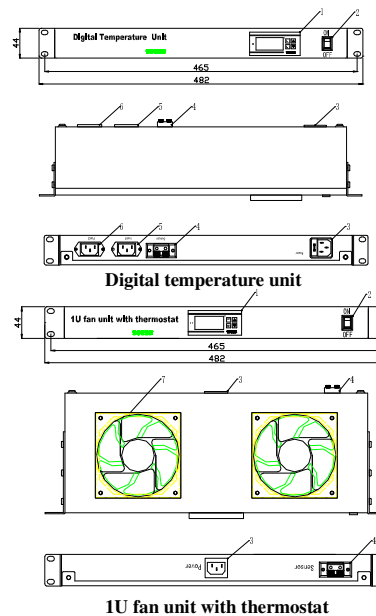
◆method of entering into the state of customer setting: under non-setting state, press " SET " key longer than 5 seconds to enter customer state of setting up, setting indicator to be on and to show the temperature at present.

◆method of temperature setting: under the state of customer setting , press ▲upwards or ▼ downwards to adjust the temperature. Press one time to adjust 1 degree. It will be changed into rapid adjusting after pressing on it over 2 seconds.

◆The method of exit from the state of customer setting: Press SET key over 5 seconds or no any operation within 30 seconds under state of customer setting, system will store current setting value and return to normal working condition.

◆ Method of entering administrator's menu : under state of non-setting , pressing " SET " and ▲ over 5 seconds at the same time to enter administrator's menu . Then setting light will be on to show the item: F1 to setting.

◆ The method of altering setting items and entering into state of parameter setting : Under setting state, press ▲ upward or ▼ downward to adjust setting item from F0 to F1 .If setting item is F0, it would be



invalid to press ▼. To press ▲ is invalid when setting item is F1. Pressing ▲ or ▼ adjust into state of altering parameter of this setting item. Meanwhile, digital tube displays setting practical value this moment.

- ◆ The method of altering parameter and return to state of setting value : Under state of parameter value ,pressing ▲ or ▼ adjust parameter value .pressing ▼ is invalid when parameter value is minimum . When parameter reach max value , pressing ▲ is invalid .
- ◆ The method of memory parameter setting and return to state of setting items. under whatever condition ,press “SET” key over 5 seconds or no operation within 30 seconds under state of customer setting ,system will store current setting value and return to normal working condition

2. Close and disconnection output relay (turn on and turn off fan)

- ◆ If practical temperature is higher than setting temperature, generator of fan would be closed. When practical temperature < (setting temperature minus return difference of temperature) generator of fan is disconnection.
- ◆ When practical temperature is higher than max temperature, alarm relay is closed, monitor displays E2 and buzzer alarm, when practical temperature is lower than max limited temperature, alarm relay disconnected. .

3. The warning function explaining

- ◆ Alarm for sensor fault: when sensor has errors (short circuit or disconnection), LED shows E1 with flash, buzzer does alarm.
- ◆ Alarm for minimum value: when measuring value is lower than 0°C, LED shows LL with flash .Buzzer does alarm.
- ◆ Alarm for max limit of temperature: when practical value is higher than max limit of temperature, LED shows E1 with flash. Buzzer does alarm and alarm relay closed.
- ◆ Eliminated Alarm: Press any key to eliminate alarm sound under alarm condition. But, display and alarm state of relay will not be changed.

4. safety regulation

- Danger ◆ please cut off power when wiring, no working with electricity. ◆no overloading of relay.
- Warning ◆The voltage of up power should be conformed with it marked on the machine ◆Only persons with professional qualification are able to install and adjust the machine .
- Attention ◆No use in the humidity environment. No use neither in the strong disturbance for electromagnetism environment nor strong erosion environment. ◆please keep distance between sensor cable and power cable for avoiding impossible disturbance .
- ◆common user please don't visit administrator 's menu randomly.

5. Appendix

Form 1 form of indicative light state

Cool light	On	Fan works
	Off	Fan stop working
Set light	On	Under state of setting
	Off	Under state of normal working

Form 2 administrator menu

Items of Menu setting	Scope of parameter setting	Original parameter setting	Display contents of menu
Return difference	0-50°C	1°C	F0
Setting of Max limit temperature	0-50°C	45°C	F1