

Microcomputer Temperature Controller User Manual

Model: RC-114M

Product Introduction

The product adopts the latest electronic technique with LED display, which learn from the advantages and experience of stand-alone edition temperature controllers domestically and overseas. It is the most economical product with simple operation, stable performance, small size and intelligent control, cool and heat shift functions, which applies to various refrigeration and heating places and equipments.

Product Picture



Parameters

Temperature measure and control range: -30~300℃

Resolution: 0.1/1

Accuracy: ±1℃

Power supply: 220VAC±15%, optional: 110VAC±15%, 12V, 50/60HZ

Input: one NTC sensor (teflon wire)

Output: one relay 10A/250VAC

Ambient requirements: temperature: -10~60℃; humidity: 20~85% (No condensate)

Cut-out size: 71mm×29mm

Consumption: ≤3W

Relay 10A: resistive load MAX 1100W; inductive load MAX 275W; incandescent bulb MAX 220W

Operation Instruction

Key: SET; RST; ▲ UP; ▼ DOWN.

RST: in the setting mode, press once to save and exit; when the controller is in on status, press RST for 5 seconds, turn off the controller; then press RST once, turn on the controller; when the controller is power on, default status is on.

1. Stop temperature setting:

In normal working status, press SET, display the current setting temperature value, use UP or DOWN button to adjust the ideal temperature you want. Tips: press on UP or DOWN can enter into rapid adjustment. After adjustment, press RST to save and return to normal working status, or without any operation for 15 seconds, the controller will return to normal working status and save the adjustments.

2. Maintain Parameters Setting:

In normal working status, press on SET for 3 seconds, set indicator is on, and enter into maintain menu. When display HC, use UP or DOWN button to swift between the parameters in the function menu. If you want to change the value of HC, when displaying HC, press SET key, then shows the current value of HC, then use UP and DOWN key to adjust the value, then press SET key to return to the upper menu. Other parameters can be set by the same method. Tips: press on UP or DOWN can enter into rapid adjustment. When finishing, press RST or without any operation for 15 seconds, the controller will return to normal working status and save the adjustments.

Function Menu

Code	Function	Setting Range	Default	Unit
HC	mode	[: cool H : heat	[	/
d	differential	1~80	5	C
LS	low temp.	-30~setting temp.	-30	C
HS	high temp.	setting temp.~300	300	C
CA	calibration	-7.0~7.0	0.0	C
PE	delay time	0~7	1	Min.

Function Description

1. Temperature Calibration

When there is difference between the measuring temp. and the standard temp., this function can keep the measuring temp. same as the standard temp.

Temp. after calibration =Temp. before calibration.+adjusted value

2. Cool and Heat Function:

In cool mode:

A. Cooling systems works in below situation:

The measuring temperature $\geq$ the stop temperature + the temperature differential

B. Cooling systems stop working in below situation:

The measuring temperature $\leq$ the stop temperature

In heat mode:

A. Heating systems works in below situation:

The measuring temperature $\leq$ the stop temperature - the temperature difference;

B. Heating systems stop working in below situation:

The measuring temperature $\geq$ the stop temperature

3. Delay Time:

When power on for the first time, if The measuring temperature $\geq$ the stop temperature + the temperature differential or The measuring temperature $\leq$ the stop temperature - the temperature difference, the output will not be activated immediately, and will be activated after the delay time.

If the time period between the previous stop and this starts is longer than the delay time, the output will be activated immediately; if it is shorter than the delay time, the output will be activated after the delay time. The delay time is calculated from the previous output stop.

4. High and low limit of the stop temperature:

HS and LS can set the high and low limit of the stop temperature:

For example: HS is +15, LS is -10, the stop temperature only can be set between -10~+15

°C; so if you want to set a value beyond this range, please reset the HS and LS firstly.

Error Code

Code	Fault Reason	Solution
EE1	The sensor fault	Test the sensor and repair specifically.
HH1	High temp. alarm	Find out the real reasons of High temp. exceeding.
LL1	Low temp. alarm	Find out the real reasons of low temp. exceeding.

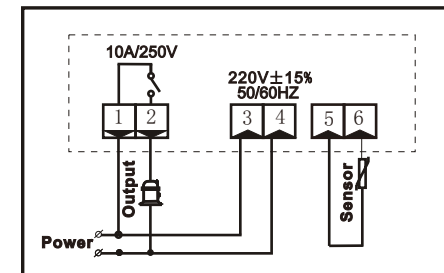
Indicator lamp Explain:

Indicator lamp	Status	Explain
	ON	Refrigeration work
	OFF	Refrigeration stop
	FLASH	Refrigeration delay
	ON	heating work
	OFF	heating stop
	FLASH	heating delay
SET	ON	Setting status
	OFF	Normal work status

Accessory

One sensor wire/two plastic supports/one user manual

Wiring Diagram



Attention please:

- 1.Before use, please carefully read the user manual, must distinguish the functions of the different contact points. The connected load power should not exceed the capacity of contact point (if exceeding, please connect AC contactor). Each connecting wire should be connected to the terminals firmly.
- 2.Please install the device firmly in a stable place, avoid crash. The device cannot be placed with dripping or water, and keep away from the electromagnetic interference of the electrical apparatus.
- 3.In order to prevent the interference of high frequency, the sensors and low voltage lines cannot parallel and be bundled up with high voltage line. The diameter of the high voltage wire must be between 0.75 mm and 1.5mm.
- 4.If the device is disturbed, please cut off the power, and restart. This software belongs to class A, which is not applicable to safety protection control.
- 5.Do not privately disassemble the device. If faults occur or have questions of the usage, please contact our company.
- 6.Please avoid overload, load short circuit or misuse, which is not covered by the warranty.



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