

Instruction manual

(FC-040 series temperature controller)

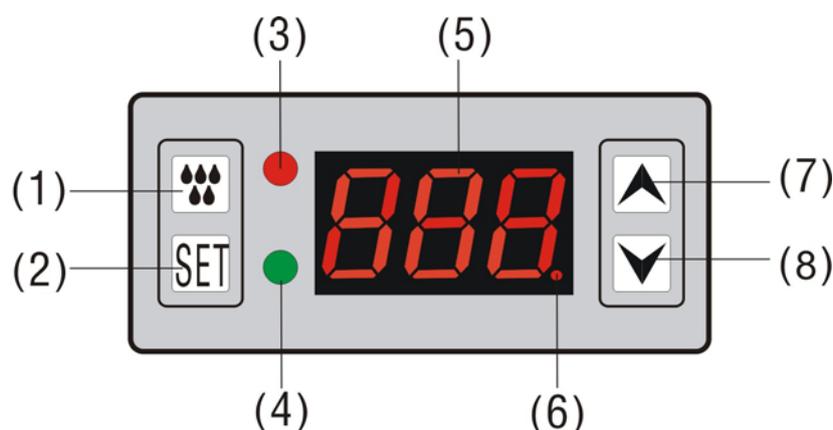
FC-040 series temperature controller is a new mode of system control especially designed for the cold storage, refrigerated counters. The simple operation and full range of functions make the users gain better application.

I、 Technical specification:

- 1、 Input type: NTC5K (-50~99℃)
- 2、 Resolution: 1℃, Accuracy: ±1℃
- 3、 Contact capacity: Cooling control 10A 250VAC;
Defrosting control and Fan control 5A 250VAC
- 4、 External dimensions (mm): 77(W)×35(H)×72(D) hole dimensions: 71(W)×29(H)
- 5、 Working power: AC110V~242V, 50/60HZ, power dissipation is less than 3W
- 6、 Working environment: temperature -20~50℃, relative humidity ≤ 85%RH, without corrode and strong electric radiation.



II、 The panel illustration (consult):



- (1) Open / Close defrosting key : Press the key for 5 seconds can mandatory open or close the defrosting function.
- (2) Function key: a、 Press the key for 5 seconds to enter the menu' parameters;
b、 In the menu parameter, pressing the key is to save and enter the next parameter.
c、 Press and release this key to modify temperature set value.
- (3) Cooling indicator(red): When the cooling relay is closed , the indicator is light.
- (4) Defrosting indicator(green): When the defrosting relay is closed, the indicator is light.
- (5) Measured value display window: Under the conventional state, it displays refrigeration sensor measured temperature value.
- (6) Compressor instruction: When the controller decimal point flashes, it indicates compressor stop state; When the controller decimal point is bright, the compressor is in the working condition.
- (7) Data increasing key: Under the menu parameter modification state, pressing the key to increase the data;
- (8) Data decreasing key: Under the menu parameter modification state, press the key to reduce the data;

III、 The inner parameters

Code	Name	Range	Note	Factory setting
	Setting temperature	-50~90℃	Compressor stops when the temperature reach the setting value.	-5
F0	Temperature difference	1~15℃	Please refer to “5.1 Cooling Output”	3
F1	Defrosting cycle	1~24Hrs	Interval time between the two defrosting.	12
F2	Defrosting time	1~45Min	Working time of defrosting	15
F3	Temperature correction	-15~15℃	To use this function when there is deviation between the actual temperature and displaying temperature	0
F4	Delay time of compressor	1~5 Min	The Min. interval time between stopping and starting of compressor	2
F5	Setting of defrosting temperature	5~35℃		-10

IV、 The operation illustration:

- 4.1、 Sensor description:** The controller use NTC5K sensor to show the temperature of cooling sensor.
- 4.2、 Temperature setting:** Press SET key and release, to display the cooling (compressor) temperature setting value, controller does flashing display; then press ▲ or ▼ key to modify the temperature setting value. after finishing setting, the LED tube flashes 10 times then, save set value automatically and exit the modification state.
- 4.3、 Other parameters setting:** Press SET key for 5 seconds to enter the parameters setting state, the controller will show parameter symbol, press ▲ or ▼ key to display and modify the setting value, after finishing modifying, then press SET key to save and enter the next parameter modifying state. If there is no operation during the setting process , the controller will automatically save and exit the modification state.

V、 Controller Output Description

5.1 Cooling Output:

When the temperature value \geq setting temperature value + F0 , the compressor will work when delay time (F4) is up, the decimal point is light.

When the temperature value \leq set temperature value - F0 , the compressor stops working, the decimal point flashes.

5.2 Defrosting Output: setting defrosting temperature

When temperature < defrosting temperature, defrosting relay has output, while the defrosting indicator is light;

When temperature > defrosting temperature, defrosting relay has not output, at the same time, the defrosting indicator is out.

5.3 Mandatory defrosting function:

Press the Open / Close defrosting key for 5 seconds to enter the mandatory defrosting state, it defrost according to the setting time and temperature. When arriving to the setting defrosting temperature or time , it will exit the defrosting status, or press Open / Close defrosting key again for 5 seconds to mandatory exit the defrosting state.

5.4 Cooling function

Press ▲ key for 5 seconds to start mandatory cooling function, the green indicator(OUT) is light. press ▲ key again, switch from existing mandatory cooling to normal cooling.

VI、 Wiring diagram (consult):

