

# A640 Microcomputer temperature controller specification

## The main function

According to the temperature set value and refrigeration return difference in temperature control; Temperature correction; Refrigeration control output protection delay; Controller according to defrost cycle or manual operation start defrost; Fan operation mode; Temperature super range and sensor fault alarm functions.

## Size

- ◇ Machine size: 75 x 34.5 x 85 (unit: mm)
- ◇ Mounting hole size: 71 x 29 (unit: mm)
- ◇ Import NTC sensor: line length 2 meters

## Technical parameters

- ◇ Measuring range: - 50℃~ 90℃
- ◇ Temperature resolution: 0.1℃
- ◇ Temperature measurement precision: - 40℃~ 50℃ is± 1℃, 50℃~ 90℃ is± 2℃
- ◇ Maximum temperature control range: - 50℃~85℃
- ◇ Power supply voltage: 220±10% (VAC)
- ◇ Relay output capacity compressor: 10A/250VAC; Frost: 10A/250VAC; Fan: 10A/250VAC
- ◇ Machine power consumption: < 3W
- ◇ Work environment temperature: 0℃~55℃
- ◇ Storage temperature: -25℃~75℃
- ◇ Relative humidity: 20% ~ 85% (no condensation)

## Key and display panel shows

Show that: the three digital tube + three mode lamp (❄️、❄️、❄️、) + setting lamp (SET)Key note: "SET" button: SET key, "▲" button: raise key; "▼" key: cut key; "❄️" button: the return key.

## Light statements declare

Indicator light	Sign	State	Significance
Setup instructions	SET	Bright	Enter setup
		Drown	State of measurement and control
Refrigeration instructions	❄️	Bright	Refrigeration start
		Drown	Refrigeration stop
		Flicker	Refrigeration delay
Defrost instructions	❄️	Bright	Defrost start
		Drown	Defrost stop
Fan instructions	❄️	Bright	Fan start
		Drown	Fan stop
		Flicker	Fan delay

## Key operating instructions

### 1. The key name and function

Key name	Function
Set (SET)	Enter the parameter setting state
	Switching menu and parameters
Up (▲)	Adjust the menu and parameters
Down (▼)	Adjust the menu and parameters
Return (❄️)	Save preferences and exit parameter setting state
	Check defrosting temperature sensor
	For 3 seconds is forced to enable/disable defrost

## **2. Parameter setting**

**2.1 Controller is energized by setting key for 3 seconds, the display F1 code, press set again that F1 parameter value, right now but through the operation raised/cut key modification temperature control point.**

**2.2 In the display F2 code, click the raised key, then display Pro code, press set at that, right now but through the increase/cut input controller management menu password, the user not to modify the password.**

**2.3 Press set again confirm password input end, controller automatic verify password correctness, when the password to verify through the Pro code, can be raised/cut into management menu items in an other parameters to view or Settings.**

**2.4 In arbitrary parameter setting state, press the return key exit parameter Settings and autosave parameter value, or in any parameter condition, no action after 30 seconds parameters automatically save.**

**2.5 Management menu password single effective, press return key exit parameter Settings, next time again changes must be input the correct password.**

**2.6 In the controller in normal measurement control state, press the return key, according to defrost sensor measurements, continuous press return key 3 seconds can be forced to enable/disable defrost.**

### **Operation instructions**

#### **1.The compressor control**

**1.1 Compressor startup conditions (at the same time satisfy the following conditions)**

**a)Compressor startup delay finished;**

**b)The frost, the frost drip state library temperature  $\geq$  temperature setting value + return difference value or hot gasification when frost.**

**Note: library temperature sensor failure, according to the proportion of compressor key function set operation.**

**1.2 Compressor shut down conditions (meet any of the following conditions)**

**a) Library temperature  $\leq$  temperature setting value ;**

**b) Electric thermalization cream start;**

**c) Thermal gasification at the end of the frost.**

#### **2. Defrosting control**

**2.1 Frost startup conditions (at the same time satisfy the following conditions)**

**a) Frost period Settings are not zero;**

**b) Frost period set time to, or forced frost began.**

**c) Frost sensor temperature less than set frost stop temperature;**

**Note: in electric thermalization cream mode, frost delay time can be set to zero; In the thermal gasification cream mode need to start frost time delay.**

**2.2 Frost end conditions (meet any of the following conditions)**

**a) Frost period is set to zero;**

**b) Frost running time end;**

**c) Frost temperature higher than frost stop temperature;      d) Frost in the "forced frost" key frost.**

#### **3. Fan operation mode**

**Fan operation mode is set to 0: fan and refrigeration with stop, refrigeration after start-up time delay, frost and frost drip when shut;**

**Fan operation mode is set to 1: air blower continues to move, frost and frost drip close.**

#### **4. Library WenChao temperature alarm control output**

**Library temperature  $\geq$  library WenChao limit alarm value or library temperature  $\leq$  library WenChao lower limit alarm, library temperature transfinite alarm delay and live for the first time after the library temperature transfinite alarm delay after the operation, the controller display corresponding alarm code until the library temperature alarm remove.**