OM-800-1 Extra Large Digital Display Thermostat Instruction Manual (Version 2024)

Main functions

●Single temperature display (twice the display area of a normal digital tube)
●Single temperature control ●Power switch ●Setting Memory
●Self-Diagnosis ●Light

Technical Parameters

Power supply	220VAC±10% 50/60Hz
Temperature Sensing Probe	NTC, 1 strip, 1.5 meters long (no positive or negative)
Temperature display range	-40～+80℃ (Accuracy: ±1℃)
Control temperature range	-40～+45°C
Refrigeration control factory value	5°C
Refrigeration control factory value	-15°C
Appearance size (mm)	148×43.6×45.5
Opening size (mm)	137.5×33.5
Working Ambient Temperature	-10~60℃
Relative humidity	20%~90% (no condensation)
Relay contact capacity	Compressor 16A/250VAC Lighting 10A/250VAC

Operating Instructions

Freezing control temperature adjustment: Press the freezing ▲ key or ▼ key flashes to display the freezing control temperature, then press the ▲ key or ▼ key to change the value and memorize it. If you do not press any key, ten seconds later to restore the display of the measured temperature; (control temperature adjustment range: E1 ~ E2)

Refrigeration indicator: Refrigeration light is on during refrigeration; Refrigeration light is off in constant temperature; Refrigeration light flashes during time delay.

Forced defrosting: press and hold down the refrigeration ⏻ key and ▲ key at the same time for six seconds to start or stop the defrosting of the refrigeration module;

Refrigeration power switch: press the refrigeration ⏻ key, the refrigeration module starts to work; then press and hold the refrigeration ⏻ key for ten seconds, the refrigeration window displays "---", disconnecting the compressor control output of the refrigeration module.

Internal parameter setting: Press and hold the ▲ key of the corresponding control module for more than 6 seconds to access other parameter settings. Display E1, press ▲▼ key can select the parameter item, press and hold the ⏻ key can enter the value of the parameter, adjust the ▲▼ key can change the size of the parameter, and press the ⏻ key again to return to the parameter item. After modification, 10 seconds without operating the parameter to save and exit. (Only one module parameter can be set each time)

Restore the factory value: press the ▲ key and ▼ key of refrigerating or freezing at the same time for six seconds, blinking display "888", restore the factory settings.

Lock internal parameters: Long press ▼ key for six seconds, lock internal parameters (display 0FF) or unlock internal parameters (display 0n), internal parameters can only be viewed after locking can not be changed, except the control temperature.

Light key: Normal display interface, click the ☼ key to switch the light.

Internal parameters for freezing / refrigeration

Parameters	Functions	Setting range	Factory value
E1	Lower control temperature limit	-45°C ~ Control Temperature	-20°C(Refrigerated -5°C)
E2	Control temperature upper limit	Control Temperature~ 45°C	30°C
E3	Temperature Return Difference	01~10°C	04°C
E4	Delayed start time	00~10 minutes	3 minutes
E5	Cabinet temperature probe calibration	-20~20°C	00°C
F1	Frost time	01~90 minutes	20 minutes
F2	Frost interval	00~24 hours	0 hours
F3	Exhaust temperature	0~99°C	58°C
F4	Display when defrosting	00=Normal display 01=Locked display	01
C1	Cabinet temperature high temperature alarm	C2-45°C	45°C
C2	Cabinet temperature low temperature alarm	-45°C-C1	-40°C
C3	Alarm Return Differential	1-20°C	2°C
C4	Alarm delay	0-90 minutes	30 minutes
C5	Displayed during normal operation	00=Normal display of cabinet temperature 01=Display set temperature	00
C6	Probe failure press downtime	0-60 minutes	10 minutes.
C7	Probe failure press start-up time	0-60 minutes	30 minutes
C8	Standby	0	0
C9	Standby	0	0
H1	Forced probe failure	0=Normal operation 1=Forced probe fault alarm	0 (for 1, the compressor stop time is parameterized by C6, the start time is parameterized by C7, and the cycle is run)
H2	Display delay	0-30	0 (when 0, cancel the delay function for 1, the temperature 1S rise 1 degree and so on)

Functional Description

Temperature control

After the first power on, you can directly press the ▼ key to start the corresponding compressor directly, the compressor after a delay, when the cabinet temperature is greater than or equal to (control temperature + temperature difference), the compressor starts.

When the cabinet temperature is less than or equal to the control temperature, the compressor stops. In order to protect the compressor, each time the compressor stops, the compressor must exceed the delay time (E4 parameter) before it can be restarted.

Frost control (stop frost)

When the working time exceeds the frosting interval (F2), the corresponding window enters the frosting state, and the frosting indicator lights up during frosting and stops the compressor: the frosting duration exceeds the frosting time (F1), and exits the frosting;.

When the frost display (F4) is 0, the temperature is displayed normally during frost, when it is 1, the corresponding window displays the temperature at the beginning of frost, and locks the display for 20 minutes after the end of frost (or the corresponding cabinet temperature is less than its own control temperature), ending cabinet temperature locking ahead of time, the corresponding frost indicator light flashes during the time-delay process.

When the frost interval (F2) is 0, the corresponding automatic frost function is canceled.

Abnormal operating mode

The corresponding cabinet temperature probe short-circuit or open-circuit flashing display E01, the cabinet temperature is greater than the high-temperature alarm value C1 continues to be greater than the alarm delay time C4 display "HHH", when the cabinet temperature is less than C1-C3 after the end of the high-temperature alarm state;

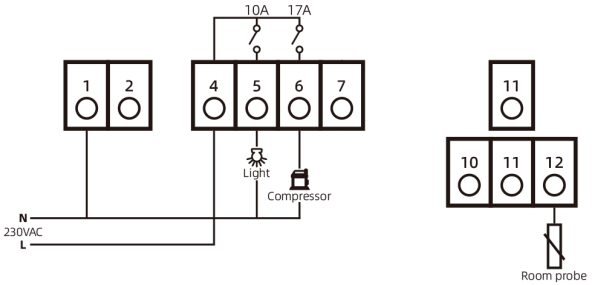
When the cabinet temperature is less than the low-temperature alarm value C2 continues to be greater than the alarm delay C4 display "LLL" when the cabinet temperature is greater than C2 + C3 after the end of the low-temperature alarm state;

When the cabinet temperature probe fault E1 at this time into the timer mode, the compressor runs for 30 minutes, stop 10 minutes, and so on.

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Wiring diagram (based on actual wiring diagram)

CAUTION: Disconnect electrical connections before performing any type of maintenance! Do not perform maintenance in standby mode to avoid electric shock!

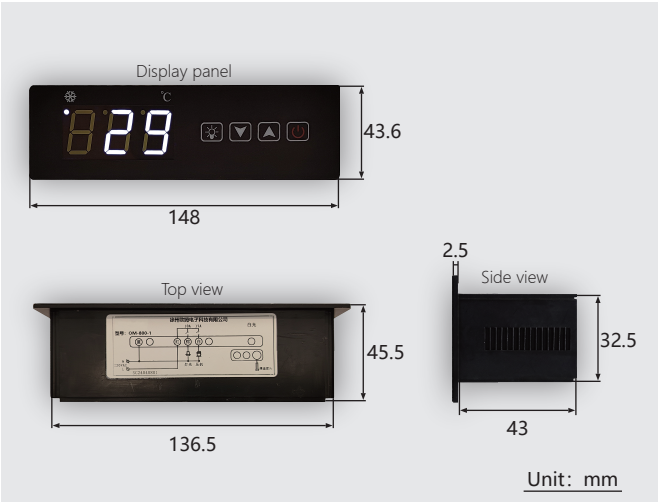


Precautions for installation and use

- To prevent high-frequency interference, probe wires must not be bundled and wired in parallel with power or control wires, but must be wired separately.
- The 12V low voltage line cannot be wired in parallel with the 220V high voltage line.
- The probe should be installed with the head facing up and the wire facing down.
- The thermostat should not be installed where there is dripping water.
- The thermostat should not be installed in corrosive and strong EMP interference places.

Accessories for thermostats

- Temperature sensing probe 1pc
- Mounting bracket 1 set



Fault Code

Code	Code meaning	Alarm activation conditions	Alarm Deactivation Conditions
E01	Cabinet temperature probe malfunction	The corresponding probe is not properly and reliably connected, or the wrong model of probe is used, or the probe is short-circuited, or the probe is open-circuited.	Use the correct model of probe and ensure it is connected correctly and reliably
E02	Need to restore factory settings		
HHH	Cabinet high temperature alarm	Cabinet temperature > C1 and the cabinet temperature alarm delay time continues;	cabinet temperature＜C1
LLL	Cabinet low temperature alarm	Cabinet temperature < C2 and continuous cabinet temperature alarm delay time	cabinet temperature＜C2
888	Restore factory settings successfully	/	/
OFF	Successfully locked internal parameters	/	/
On	Successfully unlocked internal parameters	/	/
Err	Self-check mode (requires power restart to recover)	/	/
CDH	High-temperature probe protection (above 58℃)	Check if the air intake is blocked and if the evaporator motor not running is causing the dryer filter temperature to be too high	