

## Intelligent temperature controller, Energy-saving and practicality

microcomputer temperature controller

《User manual of MH1210F》

Thank you for choosing Shenzhen "MEIHANG TECHNOLOGY" microcomputer temperature controller. This product gather a wide range of modern heating and cooling technology, small size, simple operation, accurate measurement and anti-interference ability, etc. It suits most users in different environments for automatic intelligent control system of many kinds of refrigeration, heating equipment. Refrigeration and heating mode could be set through the menu, the procedure has been set the power outage permanent memory function.

specifications:

1. working voltage: AC220V $\pm$ 10% 50/60Hz; power consumption:  $\leq$ 3W;
2. measurement range: -58 $^{\circ}$ F ~ 194  $^{\circ}$ F; measurement error:  $\pm$ 1 $^{\circ}$ F;
3. control range: -58 $^{\circ}$ F ~ 194 $^{\circ}$ F; temperature control precision: separation rate: 0.1 $^{\circ}$ F;  
slewing range of temperature: it could be adjusted in the range of 1 ~ 30 $^{\circ}$ F;
4. temperature sensor: NTC 77 $^{\circ}$ F=10K B3435  $\pm$ 1% (1 miter length, no positive or negative);
5. output load: normally open 10A/AC220V;
6. working environment: temperature: -30 $^{\circ}$ F~150 $^{\circ}$ F;  
humidity: 90%RH none moisture condensation;
7. dimension of whole unite: 75 (W)  $\times$  34.5 (H)  $\times$  85 (W) mm;
8. trepanning dimension: 71 (W)  $\times$  29 (H);

### Operation instruction:

Heat indicator light: **This light lit up the said relay work and is in heat mode**

COOL indicator light: **Relay this light illuminates the said work, and in a cooling mode**

Rst function keys: In the setting state less than 3 seconds, press this button to exit set system. Press this button more than 3 seconds system parameters restore to factory Settings

$\Delta$  Key: in the condition of setting parameters can be raised or code, in the normal display status to press this button and then press the del key 6 seconds system restore factory Settings

$\nabla$ Keys: cut parameter in setting state, press this key, or code, and hold this button for 6 seconds in the normal display status shows OFF/ON switch to lock or unlock the parameters. (locked in addition to the set temperature of other parameters can only see can't change the Settings)

Press "set" button for 3s get into the procedure menu code mode, display the code "HC". Press " $\Delta$ " or " $\nabla$ " for cyclical selection of parameter code of "HC-CP-LA-HA-PU-CA". To enter a code, press the "Set" button, press the " $\Delta$ " button or the " $\nabla$ " button to change to the desired data and press "Set" to save and exit;

Control the temperature set: press "Set" button, display blink and it is the default setting. Press " $\Delta$ " or " $\nabla$ " to change the data and save automatically. (press on " $\Delta$ " or " $\nabla$ " for 2s or more to increase the adjusting speed) heating control: when the temperature control mode (code is HC) was H, e.g. the setting control temperature is 28  $^{\circ}$ F, slewing range of temperature is 2  $^{\circ}$ F, when the environment temperature  $\geq$  setting temperature (28  $^{\circ}$ F), the relay will switch off and stop the output load; when the environment temperature  $\leq$  setting temperature (28  $^{\circ}$ F) - slewing range of temperature (2  $^{\circ}$ F) and set "delayed start" before, the reply will switch on and output load again. (if the delayed start function doesn't need, set the delayed start (code PU) to 0)

refrigeration control: when the temperature control mode (code is HC) was C, e.g. the setting control temperature is 28  $^{\circ}$ F, slewing range of temperature is 2  $^{\circ}$ F when the environment temperature  $\leq$  after setting "delayed start" time, the relay will switch on and start output load. (suggest "delayed start" time to the default setting time to protecting the compressor, please set the (code PU) to ) if it doesn't need):

Code	code instruction	setting range	default data	unit
HC	heating/refrigeration	H/C	C	n0
CP	slewing range of temperature	1 ~ 30	2	$^{\circ}$ F
LA	floor level	temperature control	-58	$^{\circ}$ F
HA	up limit	temperature control - 194	194	$^{\circ}$ F
PU	delayed start	0 ~ 10	2	minutes
CA	tem. correction	-10 ~ 10	0	$^{\circ}$ F

Note:

LA floor level and HA the up limit are not the temperature control parameter adjustment, change will reduce the temperature control range.

Back to default setting: press the "Rst" button for 3s and display blink 5 times, all parameters back to default setting;

Parameter lock: press " $\nabla$ " for 3s and blink, display "OFF", means the parameter were locked by the user, this method is the same when display "ON" means the parameter were unlocked by the user. (after parameter locking, user could check but not change, the function of temperature adjust is valid)

Fault tips:

When the sensor short circuit or detect the environment temperature is higher than the upper temperature limit of 110 degrees, delink and display HHH and stop the output load; When the sensor works normal and detect the environment temperature is lower than floor temperature limit of -50 degrees, blink and display LLL and stop the output load.

Note matters:

1. To prevent high-frequency interference, do not install the sensor line bundled with the power line and loaded equipment line, but should be separated wiring;
2. Supply voltage must be consistent with the rated voltage and the deviation is less than  $\pm$  10%. Strict distinction between sensor installation, power line and

Loaded output interface;

3. The temperature control host machine cannot be installed in the place where is dripping water, or the elderly, children could be touched;
4. The wiring should be checked whether the line is correct, to avoid accidentally burn of temperature control host machine and loaded equipment, installed applications supporting protection back cover obscured;

Installation wiring diagram:

Make sure to install the loaded equipment's voltage is identify with temperature control host machine's voltage, otherwise the wire connection cannot according to this figure.

