

C1206-H MANUAL

1. Warning

1.1 Please read before using this manual

This manual is part of the product and should be kept near the instrument for easy and quick reference. The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.

Check the application limits before proceeding.

1.2 SAFETY PRECAUTIONS

1. Check the supply voltage is correct before connecting the instrument.
2. Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation
3. Warning: disconnect all electrical connections before any kind of maintenance.
4. Fit the probe where it is not accessible by the End User. The instrument must not be opened.
5. Consider the maximum current which can be applied to each relay (see Technical Data).
6. Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.
7. In case of applications in industrial environments, the use of mains filters parallel with inductive loads could be useful.

2. GENERAL DESCRIPTION

Model C1206-H, format, is a microprocessor based controllers suitable for applications on medium or normal temperature refrigerating units. It's provided with 1 relay outputs to control compressor. It's also provided with 1 NTC probe input for temperature control.

3. CONTROLLING LOADS

3.1 THE TEMPERATURE CONTROL:

F7 = 1 :When the real temperature of sensor is higher than the total value of the control temperature and temperature difference (F0), the compressor time delay (F4) starts, the compressor starts and KI is on. when it is lower than the value that the control temperature minus the temperature difference (F0), the compressor stops and KI is off.

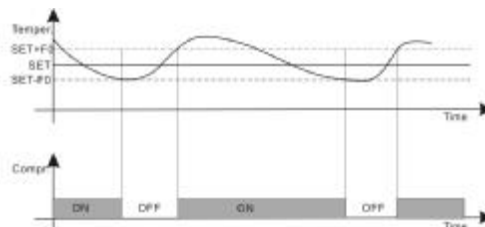


Fig.1

F7= 2 :when it is lower than the value that the control temperature minus the temperature difference (F0) , the time delay (F4) starts,k1 is on. When the real temperature of sensor is higher than the total value of the control temperature and temperature difference (F0), KI is off.

F7= 3 : After working for a whole defrosting cycle (F5), it automatically enters the defrosting state, the compressor stops, and the cooling indicator goes out. And when the defrosting time reaches F6, the compressor starts.

3.2 SPECIAL WORKING MODE:

When the sensor temperature surpasses the highest working temperature (F2) or the sensor shot-circuit shows "HH1" (HH2), or when the sensor temperature is below the lowest working temperature (F1) or the opening circuit of the sensor shows "LL1" (LL2), it enters the fixed time working mode. The compressor operates for 45 minutes and stops for 15 minutes.

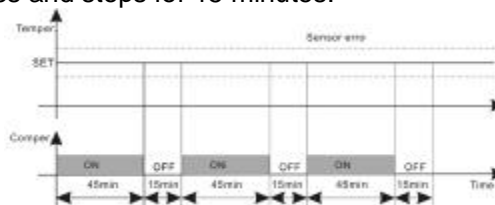


Fig.3

4. 1 FRONT PANEL



SET: in programming mode it selects a parameter or confirm an operation.
By holding it pressed for 3s , display target set point;.

▲ (UP): in programming mode it browses the parameter codes or increases the displayed value.

▼ (DOWN): in programming mode it browses the parameter codes or decreases the displayed value.

KEY COMBINATIONS:

▲ +▼ To lock & unlock the keyboard.

SET +▲ To enter in programming mode.

4.2 USE OF LEDS

Each LED function is described in the following table.

LED	MODE	FUNCTION
*	ON	Compressor
*	Flash	Compressor enabled delay
SET	ON	Setup

4.3 HOW TO SEE THE SET POINT AND MODIFY THE SET POINT

1. Push and immediately release the **SET** key 3 second: the display will show the Set point value;
2. The SET LED start lighting;
3. Return the Set key push the **SET** or n arrows within 10s.
4. To memorise the new set point value push the **SET** key again.

4.4 HOW TO CHANGE THE PARAMETER VALUE

1. Push the **SET+▲** key enter the Programming mode.
2. Select the required parameter with **▲** or **▼**.
3. Press the **SET** key to display its value (and **SET** LED starts lighting).
4. Use **▲** or **▼** to change its value.
5. Press **SET** key to store the new value and move to the following parameter.
6. Select End or wait 10s without pressing a key.

4.5 HOW TO LOCK THE KEYBOARD

1. Keep the **▲** and **▼** keys pressed together for more than 3 s the **▲** and **▼** keys.
2. TO UNLOCK THE KEYBOARD
Keep the **▲** and **▼** keys pressed together for more than 3s.

5. PARAMETER LIST

Mark: **F0**—the difference between the set temperature 1 and the control point temperature. The range: 0~15°C (0-27F), and the default is 2°C (3.6F)

Mark: **F1**—set the lowest working control temperature, -40-99.9C (-40-211F), and the default is -35°C (-31F) . (the lowest working temperature point)

Mark: **F2**—set the highest working control temperature, -39.9~+100°C (-39.9~212F), and the default is 100°C (212F) (the highest working temperature point)

Mark: **F3**—the calibration of PR temperature , and the range is -5°C--5°C (-9~9F) . The default is 0.

Mark: **F4**— (compressor) after the relay gets the power, it delays the time of both the opening and closing. The range: 0~+9minutes, and the default is 2 minutes.

Mark: **F5**—defrosting intervals. The range: 0-24hours. The default is 6 hours.

Mark: **F6**—defrosting duration The range: 1-60minutes. The default is 20 minutes.

Mark: **F7**—Output control mode F4=1 Output cooling instrument control, F4=2 output heating instrument control, F4 =3 output defrosting instrument control,and the default is 1.

Mark: **F8**—C/F change F8=1 unit is C F8=2 unit is F The default is 1.

Mark: **F9**—select"1", back to the state out of factory. select "2" Parameter is unchanged.

Mark: **End** exit the program parameter setting

The customers can make relative adjustments of the above parameters according to their demands.

6.. INSTALLATION AND MOUNTING

Instruments shall be mounted on vertical panel, in a 71x29 mm hole, and fixed using the special bracket supplied. To obtain an IP54 protection grade use the front panel rubber gasket (mod. RG-C) as shown in fig.3.

The temperature range allowed for correct operation is 0–60 °C. Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let air circulate by the cooling holes.

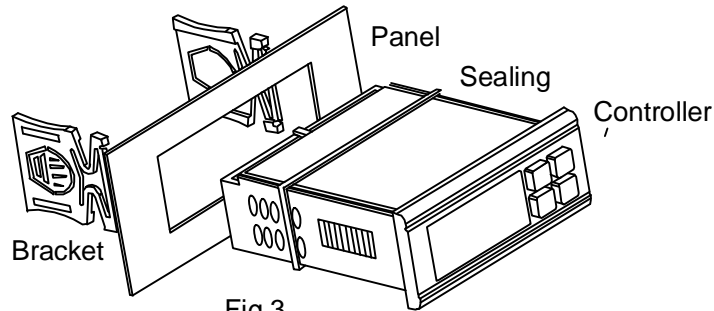


Fig.3

7. Technical Data:

Case Material :	Fire resistance black ABS
Case Size:	75×38×70
Mounting:	Mounting size 71×29.5
Protective classification:	Front, IP54
Connection:	Screw terminal
Working Condition:	-10°C~55°C, RH<85%, no condensing
Storage Condition:	-10°C~70°C, RH<85%, no condensing
Measure Range:	-40°C~100°C / -40-212F
Resolution:	0.1 °C / F
Power Supply:	220VAC, ±10%, 50~60Hz
Power Consumption:	no more than 2W
External Fuse:	0.5A
Shockproof:	qualified to the demands of I and II instruments
Heat Insulation and Fire Resistance:	D
Relay Connection:	250VAC, 16A
Input :	1 NTC , three keys
Output:	normal opened contact
Display:	three- bit LED nixie tube display of the integer temperature between -40and 100°C / -40 and 212 F

Connection Fig.

