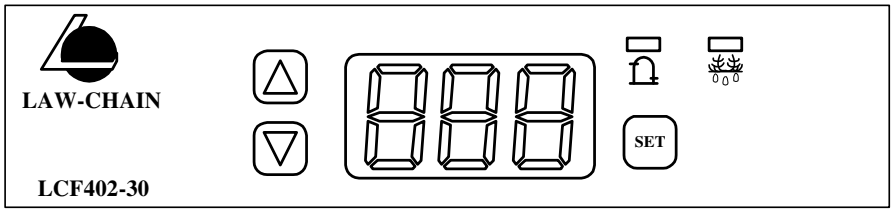
LAW-CHAIN

LCF402-30

Refrigeration system controller

Panel：



Technical data：

- **Power supply**：12V/AC/DC/50~60HZ
- **Display**：Seven segment LED
- **Mounting**：Snap-in
- **Fit-in size**：137*28*32mm^3
- **Temperature range**：-50℃~+95℃
- **Working temperature**：-15℃~+70℃
- **Accuracy**：Within 1% of full scale
- **Resolution**：1℃
- **Maximum output rating**：**Compressor** 30A/250V (Resistance load)

System parameter table：

No.	Symbol	Description	Range	Default
1.	**tS**	Set compressor stop temperature	-50℃～+90℃	+5°C
2.	**td**	Define differential temperature	+1℃～+15℃	+4°C
3.	**Sd**	Compressor start time delay after stop	0～15Min.	1 Min.
4.	**di**	Defrost interval time	0～24Hour	6 Hour
5.	**dd**	Defrost duration time	0～60 Min.	15 Min.
6.	**tA**	Sensor calibration adjustment	-15℃～+15℃	0°C

Lock system parameter table：

No.	Symbol	Description	Range	Default
1.	**LO**	Select system parameters to lock or unlock	y: lock /n: unlock	y
2.	**tH**	The upper temperature limit	tS～+90℃	+50℃
3.	**tL**	The lower temperature limit	-50℃～tS	-50℃

※ **Note:** After choose 『y』 on the first lock system parameter 『LO』; means you select to lock the system parameters, display will show system parameter 『tS』 only, and it can only be adjusted within the highest, 『tH』, and lowest, 『tL』 temperature limit, no other system parameters can be changed, thereafter. On the contrary, if 『n』 is selected, then all system parameters can be modified.

Self test function：

Error code	Description
E1H	Sensor shorted or temperature higher than +95°C
E1L	Sensor opened or temperature lower than -50°C

Operation：

A. System parameter setting：

1. Push【SET】 key for three seconds, the display flashes pattern 『888』 for 5 times, then shows the symbol of the first system parameter 『tS』, this means the controller entering the parameter modify, After that, each time push the【SET】 key, the controller goes to modify mode .You can push either【▲】 or【▼】 keys to modify the value or【SET】 key to move to the next parameter.

2. If there is no any key was pushed during eight seconds, the controller jump into function of setting.

3. After power『ON』, the compressor is delaying for protecting (power on delay『sd』). If you want to bypass the delay time and start immediately, then you can push【▼】key display shows 『Fon』. The controller then forces compressor to start up immediately.

4. Any time, the controller detects a sensor error, and the display will show error code, until problem is solved.

5. When sensor shorted or broken， the display shows error code until system recover.

6. The total compressor running time can be showed on display by showing three sets of digits through push【▲】and【▼】keys, simultaneously. For example, if the total running time is 12345 hours, the after you push 【▲】and【▼】keys simultaneously, the display will show first set "**tot**" (means total running time) then followed by the second digit set "**012**", then the last digit set "**345**".

B. Lock system parameter setting：

1.Press【SET】key for three seconds, the display begins flashing pattern『888』. While flashing, press both【▲】and【▼】keys together until display shows『LO』(which means into parameters lock). Press【SET】again, the modified value would be showed. At this time, press【▲】or【▼】 to lock by choosing『y』or to unlock by choosing『n』.

2.After select system parameters to unlock push【SET】key, the display shows pattern『tH』,can press【▲】or【▼】key to move to the next parameter,. Press 【SET】key, the display flashes pattern set value, can press【▲】or【▼】key to increase or decrease the value by one unit, push the【SET】 key, the controller goes to modify the next parameter, finally; that the setting procedure is finished.

3. If there is no any key was pushed during eight seconds, the controller jump into function of setting.

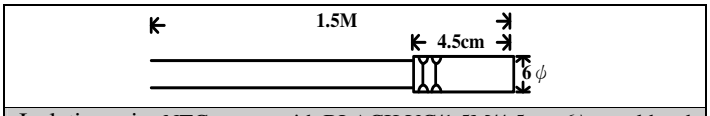
Function keys：

Symbol	Name	Function description
△ ▽	Increase/decrease	To increase or decrease one unit value
SET	Set	Request for setting the parameter

LED Indicators：

Symbol	Color	Description
	Green	Lamp flash, compressor time delay Lamp on, compressor running
	Red	Lamp on, system defrosting

Sensor description ：

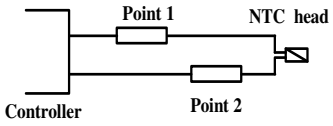


Isolation wire NTC sensor with BLACK VC/1.5M/4.5cm, 6ϕ metal head

※Lengthen your NTC sensor probe, Please pay attention on below：

(1).Off the system power.

(2).To avoid short circuit, the connection points should be interleaved, as shown right.



Wiring diagram：