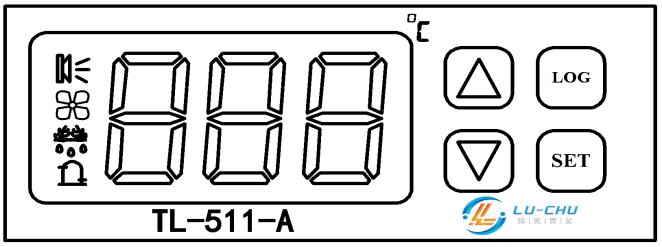
TL-511-A

Micro-processor temperature controller

Panel:



Notice:

1. Before installing, please turn off the power to avoid fatal electrical injuries
2. Please install on dry place and avoid damp.
3. In order to prevent from leaking and dangerous, waterproofing measures must be taken.
4. Please check the wiring and input power before power transmission.
5. Please follow the installed rules for your safety, especially wiring diagram and electric current requirement.
6. **Please do not tie sensor, connecting line of panel and rear, power lines and lines of load (e.g. fan) together.**

Technical data:

·**Input voltage**: 12V/AC/DC/50~60HZ
·**Display**: Seven segment LED
·**Mounting**: Snap-in
·**Fit-it size**: 70*28*64mm³
·**Temperature range**: -50℃~+80.0℃
·**Working temperature**: -15℃~+70℃
·**Accuracy**: ±1℃
·**Resolution**: 0.1℃
Maximum output rating: (1) Compressor 10A/250V (2)Alarm 10A/240V Resistance load

System parameter table:

No.	Symbol	Description	Range	Default
1.	**tS**	Set compressor stop temperature	tL～tH	+2.0°C
2.	**td**	Define differential temperature	+0.1°C ~ +15.0°C	+4.0°C
3.	**Sd1**	Compressor start-up delay time	0 ~ 15 Min.	1 Min.
4.	**Sd2**	Compressor start-up delay time (Compressor stop the second time)	0 ~ 15 Min.	1 Min.
5.	**di**	Defrost interval time	0 ~ 24 Hour	4 Hr
7.	**dd**	Defrost duration time	0 ~ 60 Min.	20 Min.
8.	**tA**	Sensor calibration adjustment	-10°C ~ +10.0°C	0.0°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 high temperature limit	tS ~ +80.0°C	+12.0°C
3.	**tL**	The low temperature limit	-50°C ~ tS	0.0°C
4.	**AH**	High temperature alarm	ts~+80.0°C	+30.0°C
5.	**Ht**	Temperature reach『AH』, after『Ht』value , alarm start working	0~180Min.	90Min.
6.	**AL**	Low temperature alarm	-50°C~ts	-30°C
7.	**Lt**	Temperature reach『AL』, after『Lt』value , alarm start working	0~180 Min.	10 Min.
8.	**do**	Defrost, the display shows state	1= temperature before defrost 2= show DEF 3= room temperature	1

Note: **(1).** After choosing『y』with the symbol『LO』, display will show『tS』only, no other system parameters can be adjusted .

Self test function:

Error code	Description
E1H	Sensor shorted or temperature higher than +80.0°C
E1L	Sensor opened or temperature lower than -50°C
AH	High temperature alarm (as temperature reach『AH』, alarm working after『Ht』value
AL	Low temperature alarm (as temperature reach『AL』, alarm working after『Lt』value

System parameter setting:

1. Press【SET】, the display flashes『888』to enter『tS』setting; press【SET】again to adjust its parameter by pressing【▲】or【▼】while display 『+2.0℃』
2. If any other parameters need to be adjusted, please follow the same way as above by pressing【SET】to flash『888』, then use【

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▲】【▼】to select the parameters to be adjusted and press【SET】to show the current values, then press 【▲】【▼】to readjust them.

3. After power『ON』, the compressor is delaying for protection. When you press【▼】, display shows『Fon』and the compressor will start up immediately.
4. When sensor shorted or open, the display shows error code until system is recovered.
5. Press【Log】key, the display shows『dEF』, system goes into defrost immediately.

Lock system parameter setting:

1. Press【SET】, the display flashes『888』, then pres both【▲】and【▼】together to enter lock system setting『LO』. To unlock all the parameters setting, press【SET】, when the display shows『y』, press【▲】【▼】and select『n』.
2. If any other lock parameters need to be adjusted, please follow the same way as above by pressing【SET】to flash『888』, then use【▲】【▼】to select lock the parameters to be adjusted and press【SET】to show the values, then press【▲】【▼】to set the values.

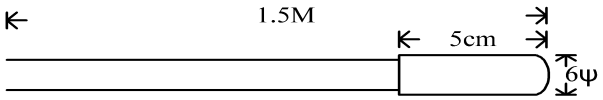
˙Function keys:

Symbol	Name	Function description
△ ▽	Increase/decrease	To increase or decrease value
SET	Set	Parameter setting
Log	Manual defrost	Manual defrost forcibly

˙LED Indicators:

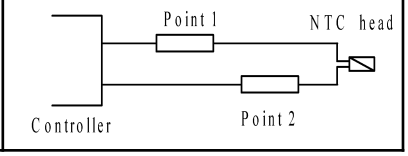
Symbol	Color	Description
	Red	Lamp flash, system defrosting.
	Green	Lamp on, cool control running
	Red	Lamp on, temperature alarm or sensor abnormality

Sensor description :



Isolation wire NTC sensor with BLACK VC/1.5M/5cm, 6φ metal head

※**Lengthen your NTC sensor probe**, **Please pay attention as below**:
(1).Off the system power.
(2).To avoid short circuit, the connection points should be interleaved, as shown right.



Note: (1) When sensor errors, the system stops.
(2) When the room temperature is higher than『AH』continuously after『Ht』, the buzzer start to buzz, until the room temperature gets lower than『AH』. The buzzer would start again when the same condition occurred, and this condition would not influence system operations.
(3) Room sensor「black wire」needs to be connect to PIN 3 for ground purpose.

Wiring diagram: