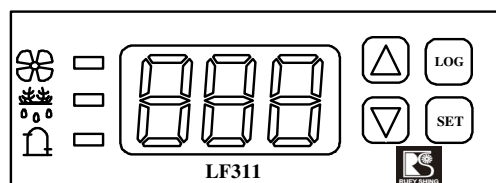


Panel :



Technical data :

- Power supply : 12V/AC/DC/50~60HZ
- Display : Seven segment LED
- Mounting : Snap-in
- Fit-in size : 70*28*64mm³
- Maximum output rating : (1) Compressor 30A/250V (2)Heater 8A/250V (3)Fan 8A/250V (Resistance load)
- Temperature range : -50°C~+80.0°C
- Working temperature : -15°C~+70°C
- Accuracy : ±1°C
- Resolution : 0.1°C

System parameter table :

No.	Symbol	Description	Range	Default
1.	tS	Set compressor stop temperature	-50°C ~ +80.0°C	-20°C
2.	td	Define differential temperature	+0.1°C ~ +15.0°C	+4.0°C
3.	Sd	Compressor start time delay after stop	0 ~ 15 Min.	2 Min.
4.	dt	Defrost type 『EL』 or 『HS』	EL/HS	EL
5.	di	Defrost interval time	0 ~ 24 Hour	4Hour
6.	dd	Defrost duration time	0 ~ 60 Min.	20 Min.
7.	dS	Defrost stop temperature	0.0°C ~ +80.0°C	+25°C
8.	dF	Set defrost dropping water time	0 ~ 60 Min.	5 Min.
9.	FS	Fan start temperature	-50°C ~ +30.0°C	0.0°C
10.	Fd	Fan delay after defrost	0 ~ 60 Min.	10 Min.
11.	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 upper temperature limit	tS ~ +80.0°C	+50.0°C
3.	tL	The lower temperature limit	-50°C ~ tS	-50°C
4.	AH	High temperature alarm	ts~+80.0°C	+50.0°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.	60 Min.
8.	tC	Defrost interval time type	ti/CP	ti
9.	FL	Fan working type	y : stop/ n : run	y
10.	OF	Fan stopping time (available only when FL=y)	0~60 Min	3 Min.
11.	On	Fan running time (available only when FL=y)	0~60 Sec	15 Sec.
12.	FF	Defrost condition selection (by temperature or time)	tP(temperature)/tn(time)	tn
13.	HP	High pressure detect	y (detect)/ n (no detect)	n

Note : (1). After choosed 『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, On the contrary, if 『n』 is selected, then all system parameters can be modified.

(2).The evaporator fan start is determined by any one of the two set point by fan start temperature 『FS』 or fan time delay 『Fd』, (first reach first on).

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
E2H	Evaporator sensor shorted or temperature higher than +80.0°C
E2L	Evaporator sensor opened or temperature lower than -50°C
AH	High temperature alarm
AL	Low temperature alarm
EHP	High pressure suspension

Operation :

A. System parameter setting :

1.Press 【SET】 key, the display flashes pattern 『SET』 for three times, then shows the symbol of the first system parameter 『tS』, this means the controller entering the parameter modifying phase, can press 【▲】 or 【▼】 key to choose the parameter that is going to be

adjust , Press **【SET】** key , the display shows set value , can push **【▲】** or **【▼】** key to increase or decrease the value by one unit , press the **【SET】** key , the controller goes to modify the next parameter , when finish setting procedure , Press **【SET】** key , the display shows 『god』 system recover.

2. If there is no any key was pushed during thirty 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. Press **【▲】** key , the display flashes Evaporator sensor temperature.
5. Press **【Log】** key , the displays flashes 『def』 , the controller go into defrost immediately.
6. When sensor shorted or broken , the display shows error code until system recover.
7. The total compressor running time can be showed on display by showing three sets of digits through press **【▲】** and **【▼】** keys , simultaneously. For example , “tot , 001 , 123” means the total compressor running time is 1 , 123 hours.




B. Lock system parameter setting :

1. Press **【SET】** key for three seconds , the display begins flashing pattern 『SET』 . 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 , Press **【SET】** key , the display flashes 『god』 and shows the room temperature.
3. If there is no any key was pressed during thirty seconds , the controller automatically finish system setting procedure.




**Remark : defrost type 『dt』 , there are two different defrost selection as below

- (1) heater defrost 『EL』 : while compressor and fan stop running , defrost relay on.
- (2) hot-gas defrost 『HS』 : while fan stop running , however , compressor keep running then defrost relay on.

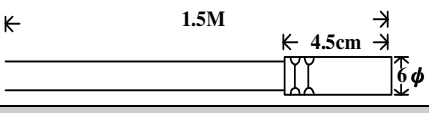
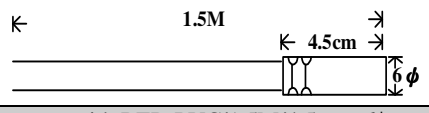
• Function keys :

Symbol	Name	Function description
	Increase/decrease	To increase or decrease one unit value
	Set	Request for setting the parameter
	Manual defrost	Push this key to do manual defrost

• LED Indicators :

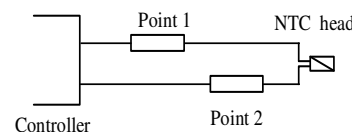
Symbol	Color	Description
	Green	Lamp flash , compressor time delay Lamp on , compressor running
	Red	Lamp on , system defrosting Lamp flash , defrost temperature is reached , but waiting defrost time due.
	Yellow	Lamp on , fan is running Lamp flash , fan is ready , but waiting to run

Sensor description :

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



Note : (1) .When sensor 2 (evaporator sensor) error , system run continuously but can't do defrost.

(2) .When sensor 1 error , system stop.

(3) .When the room temperature is continuing higher than 『AH』 , (you can adjust between tS to 50°C) after 『Ht』 minutes , the buzzer start to buzz , until the room temperature down lower than 『AH』 . The buzzer would start again when the same condition occurred , and this condition would not influence system operations.

Wiring diagram :

★Room Sensor 【black wire】 need to connect to PIN 3 for ground purpose.

