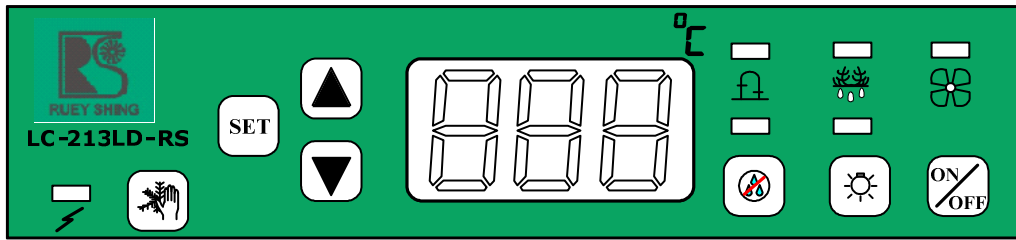




LC-213LD-RS-HP

Refrigeration system controller

Panel :



Technical data :

- Power supply : 110V/220V /AC/50~60Hz
- Temperature range : -50°C~+80.0°C
- Display : Seven segment LED
- Working temperature : -15°C~+70°C
- Mounting : Snap-in (Panel)
- Accuracy : ±1°C
- Fit-in size : 137*28*32mm³(Panel)
- Resolution : 0.1°C
- Fit-in size : 171*141*39mm³(Rear box)
- Maximum output rating : (1)Compressor 30A/250V (2)Lamp 8A/250V
(3)Defog 8A/250V (4)Fan 8A/250V (Resistance load)

System parameter table :

No.	Symbol	Description	Range	Default
1.	tS	Set compressor stop temperature	-50°C ~ +80.0°C	+4.0°C
2.	td	Define differential temperature	+0.1°C ~ +15.0°C	+2.0°C
3.	Sd	Compressor start time delay after stop	0 ~ 15 Min.	2 Min.
4.	di	Defrost interval time	0 ~ 24 Hour	4 Hour
5.	dd	Defrost duration time	0 ~ 60 Min.	20 Min.
6.	CL	condenser cleaning time interval	0 ~250day	0day
7.	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+td) ~ +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 ~ 180Min.	60Min.

Note : (1) 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.

(2) 『tC』 means defrost time count type . ti means hour's unit 『CP』 means compressor running time , use quarter unit.

(3) The controller do not have a defrost relay to control an outside defrost device it just stops the compressor and keeps the fan running when the time to defrost.

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
AL	Low temperature alarm
CLn	Condenser need to be clean
EHP	High pressure Alarm

Operation :

A. System parameter setting:

- 1.After sent city power to controller , push 【ON/OFF】 key to Power-on 『Pon』 or Power-off 『POF』 .
- 2.Press 【SET】 key , the display flashes pattern 『888』 for 3 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 scroll up/down 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. Press 【SET】 key , the display shows 『888』 , then display cabinet-room temperature mean that



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Refrigeration system controller

you finish parameters setting.

3.If there is no key was pushed within 30 seconds , the controller jump back normal temperature display.

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 scroll-move to the next parameter.
- 3.If there is no any key was pressed within 30 seconds , the controller automatically finish system setting procedure ,

Press (exit key) you can jump back normal operation mode.

C. Other operations:

- 1.After power 『ON』 , the compressor is delaying for protecting. If you want to bypass the delay time and start immediately running the compressor , then you can push**【▼】**key until display shows 『Fon』 . The controller then forces compressor to start up immediately. This special function is only effective on the power on stage.
- 2.When the room temperature is continuing higher than 『AH』 , (you can adjust between 『tS』 to 50℃) after 『Ht』 minutes , the buzzer start to buzz when the room temperature down lower than 『AH』 , the buzzer stop then 『HT』 count again.
- 3.**Total operation hours (tot)** : The total compressor running time can be showed on display by showing three sets digits through push Press **【▲】** button and **【▼】** button simultaneously. For example if the total running time is 12345 hours , 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』 .** While CLn is flashing , press **【▼】** to cancel 『CLn』 parameter setting.**

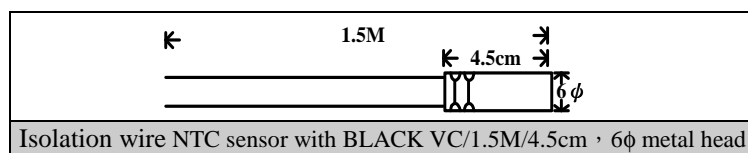
Function keys :

Symbol	Name	Function description
	Power on/off	The controller power supply key
	Increase/Decrease	To increase or decrease one unit value
	Set	Request for setting the parameter
	Manual defrost	Push this key to do manual defrost
	Door heater	To on/off the door heater for clarify the showcase door
	Light on/off	To on/off the indoor light appliance

LED Indicators :

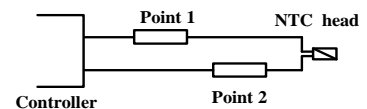
Symbol	Color	Description
	Yellow	Lamp on , power supply
	Green	Lamp flash , compressor start up delay Lamp on , compressor running
	Red	Lamp on , system defrosting
	Yellow	Lamp on , fan is running
	Yellow	Lamp on , door heater is on
	Yellow	Lamp on , indoor light appliance is on

Sensor description :



※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 :

