STC-600 INSTRUCTIONS

Main functions and features

1.Multiple control modes: optional among refrigeration, defrost and fan.
2.User menu and administrator menu can be set separately. Not only convenient for user operation, but also left enough space for the adjustment of high-level management.
3.Return difference control mode, and the resolution of temperature display is 0.1.
4.Multi-protection and alarm modes optional.

Main technical parameters

1.Temperature measuring and controlling range: -50~+50℃
2.Power supply: 220VAC 50HZ
3.Power consumption:＜5W
4.Operation temperature: 0℃~60℃
5.Relative humidity:20%-85%(No condensate)
6.Accuracy: ±1℃
7.Product size: 77x35x30(mm)
8.Installing hole size: 71x29(mm)
9.Safety level: IP54
10.Relay capacity of compressor, fan and defrost: 30A/220VAC
11.Digital display: Three-digit LED + Minus digit + Status indicator light (set light; refrigeration light; defrost light; fan light)

Descriptions of Indicator Light:

Indicator Light	Status	Meaning
Refrigeration Indicator Light	Light off	Compressor stops
	Light flashes	Compressor delays
	Light on	Compressor works
	Light flashes quickly	Forcible refrigeration
Defrost Indicator Light	Light off	Defrost stops
	Light flashes	Defrost dripping
	Light on	Defrost works
	Light flashes quickly	Forcible defrost
Fan Indicator Light	Light off	Fan stops
	Light flashes	Fan delays
	Light on	Fan works
Set Indicator Light	Light off	Normal working status
	Light on	Under setting status

Keystroke function and set mode

Key operation	Function 1 (normal status)	Function 2 (setting status)	Function 3 (parameter modified status)	Remark
SET		Enter into parameters set	Save the parameters and return to set interface	
SET……3S	Enter into user set	Quit from set status	Quit from set status	
SET+▼……10S				Press SET, hold on, and then press ▼
▼	Check the defrost temperature	Check the menu items	Modify the parameters	

▼……3S	Check the defrost temperature	Promptly go downward the menu items	Modify the parameters promptly	
▲		Check the menu items	Modify the parameters	
▲……3S	Enter into forcible refrigeration	Promptly go upward the menu items	Modify the parameters promptly	
❄……3S	Enter into forcible defrost			
▲+▼………10S	keyboard-lock status switch			

Parameters items

Menu level	Menu items (character type) (optional)	Parameter range	Default	Remark
User menu	SEt	Temp. min. set value ~ Temp. min. set value	-5℃	Tem. Set parameter
	HY	1℃~25℃	2℃	Return difference setting
Administrator menu	US	SEt~50℃	+20℃	Max.temp. set value
	LS	-50℃~SEt	-20℃	Min. temp. set value
	AC	0~50 min	3	Compressor delay protection
	idF	0~120 Hr.	6	Defrost cycle
	MdF	0~255 min	30	Defrost time
	dtE	-50℃~50℃	10℃	Defrost termination temp.
	Fdt	0~100min	2	Water-dripping time after defrost
	tdF	EL: Electric-heating defrost HtG: Thermal	EL	Defrost mode
	dCt	rt:the interval of defrosting actually CoH:the accumulated time of compressor operation	rt	Count mode of defrost cycle
	dFd	rt:normal temp. display it:defrost start-up temp.	rt	Display mode when defrost
	FnC	Ctr:under control o-n:continuous operation, off when defrost C-n:start/stop with compressor, off when defrost	Ctr	Fan operation mode
	Fot	-50℃~Fan stop temperature	-10℃	Fan start-up temp.
	Fod	-255S~255S	60S	Fan start-up delay
	FSt	Fan start temperature~50℃	-5℃	Fan stop temp.
	ALU	ALL ~50℃	50℃	Alarm value when exceed upper limit
	ALL	-50℃~ALU	-50℃	Alarm value when exceed lower limit
	ALd	0~99min	15min	Temp. alarm delay
	ot	-10℃~+10.0℃	0℃	Temp. calibration

Function description:

1. Compressor
A. under electric-heating defrost status, and fan delay set time is positive:
Activation condition: Relay of the compressor connects when it meets both a) and b) or both a) and c).
a)Compressor delay time exceeds the set delay time.
b)The storage temperature is higher than the set temperature, and the forcible refrigeration starts.
c)Under non-defrost status, the storage temperature is higher than the set temperature+ return difference set value.
(When fan delay time is negative, if it meets the activation conditions and compressor runs out of delay absolute value, relay of compressor connects.)
Stop condition: Relay of compressor disconnects when it meets any of the ff. conditions.
a) Storage temperature is lower than the set temperature.
b) At start-up of defrost.
c) Forcible refrigeration stops.
B. under thermal defrost status:
Activation condition: Relay of the compressor connects when it meets both a) and b),or meet both a) and c) or both a) and d).

a) Compressor delay time exceeds the set delay time.
b) Under non-defrost status, the storage temperature is higher than the set temperature+ return difference set value.
c) The storage temperature is higher than the set temperature, and forcible refrigeration starts.
d) When defrost
(When fan delay time is negative, if it meets the activation conditions and compressor runs out of delay time absolute value, relay of compressor connects.).
Stop condition: Relay of compressor disconnects when it meets any of the following conditions.
a) Storage temperature is lower than the set temperature.
b) When defrost stops.
c) When forcible refrigeration stops.
2. Defrost
Relay of defrost connects when it meets all of the following conditions:
a) Defrost temperature is lower than the temperature of defrost termination.
b) Defrost cycle is over or forcible defrost is beginning.
Relay of defrost disconnects when it meets any of the ff. conditions:
a) Defrost operation time is over.
b) Defrost temperature is higher than the temperature of defrost termination.
3. Fan
◇When fan start-up delay time is negative, if need to start compressor, it will start until fan first starts and runs out of the set delay time. Fan stops when compressor stops.
◇When fan start-up delay is not negative, and operates under control, fan starts when defrost temp. is lower than fan start-up temp.; fan stops when defrost temp. is higher than fan stop temp.
◇When fan start-up delay is not negative, and operates under "stop during continuous defrost" mode, starts when not defrost, and stops when defrost starts.
◇When fan start-up delay is not negative, and operates under "start/stop with compressor, stop when "defrost" mode, fan starts when compressor start-up (under not defrost status) and run out of fan delay time; fan stops when compressor stops or during defrost.
4. Alarm function
◇When storage temperature exceeds the temperature upper limit or lower limit and it runs out of the alarm delay time, buzzer alarms, LED blinks.
◇LED blinkingly displays "HHH" and buzzer alarms when storage temperature is higher than the measuring temperature upper limit or the sensor short-circuit. LED blinkingly displays "LLL" and buzzer alarms when storage temperature is lower than the measuring temperature lower limit or the sensor open-circuit.
◇Press any key to cancel buzzer alarm, but alarm indicator light displays remains.
5. Keyboard lock function：Under normal mode, press▲and▼ simultaneously for 10s to open or close the keyboard lock, and LED displays the status of key switch. Loosen the key to display the normal temperature. Under the keyboard locked status, all parameters can be checked but cannot be modified.
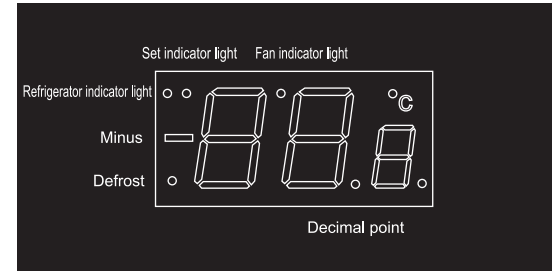6. The modification of part parameters may take into effectiveness during the next working cycle. If it is necessary to operate currently, power off and then restart.
7. When display mode is set as defrost start-up temperature, defrost starts, after defrost is over, LED will display the defrost start-up temperature for 10 minutes.
8. When storage temperature exceeds the measuring temperature limit or the sensor error, compressor works as per the mode of "stop 45 minutes, then operate 15 minutes and by turns".
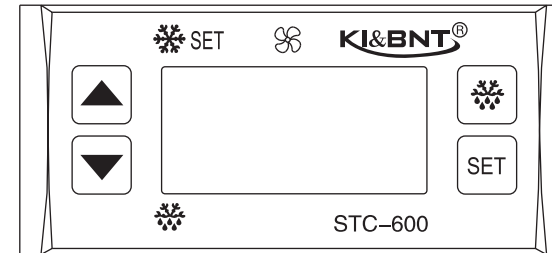
Safety Regulations:
◆Dangers: Prohibit connecting the wire terminals without electricity cut-off.
◆Warning: Prohibit using the machine under the environment of over damp, high temp., strong electromagnetism interference or strong corrosion.
Strictly distinguish the sensor down-lead, power wire and output line of the relay, and prohibit wrong connections or overloading the relay.

◆Notes: The power supply should conform to the voltage value indicated in the instruction. To avoid the interference, the sensor down-lead and power wire should be kept a distance. The sensor should be installed away from the vent hole to ensure the measuring accuracy.

Indicator light diagram:

Front panel:

Wiring diagram: