

# STC - 9200 INSTRUCTIONS

## Main functions and features:

- Multi-control mode among refrigeration, defrost, fan, etc.
- 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.
- Differential control mode, and the resolution of temperature display is 0.1
- Multi-protection and alarm mode optional
- COPYKEY function.

## Main technical parameters:

- Temperature measuring and controlling range:  $-50\sim 50^{\circ}\text{C}$
- Power supply: 220VAC
- Relay capacity of Compressor :8A/220VAC
- Relay capacity of fan and defrost : 8A/220VAC
- Digital display : Three-digit LED + Minus digit + Status indicator light (set; refrigeration; defrost; fan)

## Indicator light:

Indicator light	Status	Function
Refrigeration	OFF	Compressor stop
	FLASH	Compressor delay
	ON	Compressor work
	QUICK FLASH	Enforced refrigeration
Defrost	OFF	Defrost stop
	FLASH	Defrost draining
	ON	Defrost work
	QUICK FLASH	Enforced to defrost
Fan	OFF	Fan stop
	FLASH	Fan delay
	ON	Fan work
Set	OFF	Normal work mode
	ON	Under setting mode

## Keystroke function and set mode:

Keystroke operation	Function 1(normal status)	Function 2 (menu status)	Function 3 (parameters setting status)	Remark
SET				
SET.....3S	Enter into user set	Enter into parameters set	Save the parameters and return to set interface	
SET+▼ .....10S	Enter into administrator set	Quit from set mode	Quit from set mode	Press SET and hold on ,then press ▼key
▼	Check the defrost temperature	Check the menu items	Modify the parameters	
▼ .....3S	Check the defrost temperature	Promptly go forward the menu items	Modify the parameters promptly	
▲	Check the defrost temperature	Check the menu items	Modify the parameters	
▲ .....3S	Enter into forcible refrigeration	Promptly go backward the menu items	Modify the parameters promptly	
⊗ .....3S	Enter into forcible defrost			
▲ +▼ .....10S	Switch keyboard-lock status			

## 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 $^{\circ}\text{C}$	Tem. Set parameter
	HY	1 $^{\circ}\text{C}\sim 25^{\circ}\text{C}$	2 $^{\circ}\text{C}$	Return difference setting
Administrator menu	US	SEt $\sim 50^{\circ}\text{C}$	+20	Max.temp. set value
	LS	-50 $^{\circ}\text{C}\sim$ SEt	-20	Min. temp. set value
	AC	0 $\sim 50$ min	3	Compressor protection delay
	ldF	0 $\sim 120$ Hr.	6	Defrost cycle
	MdF	0 $\sim 255$ min	30	Defrost time
	dtE	-50 $^{\circ}\text{C}\sim 50^{\circ}\text{C}$	10 $^{\circ}\text{C}$	Defrost termination temp.
	Fdt	0 $\sim 100$ min	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. displayIt: defrost start-up temp.	Rt	Display mode when defrost
	FnC	Ctrl: to be controlled O-N: continuous operation, OFF when defrost C-N: start/stop with compressor, ON when defrost	Ctrl	Fan operation mode
	F0T	-50 $^{\circ}\text{C}\sim$ fan termination temp.	-10 $^{\circ}\text{C}$	Fan start-up temp.
	F0d	-255S $\sim 255$ S	60S	Fan start-up delay
	FST	Fan start-up temp. $\sim 50^{\circ}\text{C}$	-5 $^{\circ}\text{C}$	Fan's termination temp.
	ALU	ALL $\sim 50^{\circ}\text{C}$	50 $^{\circ}\text{C}$	Alarm value of exceed upper limit
	ALL	-50 $^{\circ}\text{C}\sim$ ALU	-50 $^{\circ}\text{C}$	Alarm value of exceed lower limit
	ALd	0 $\sim 99$ min	15	Temp. alarm delay
ot	-10 $^{\circ}\text{C}\sim +10.0^{\circ}\text{C}$	0 $^{\circ}\text{C}$	Temp. calibration	

## Function description:

### 1、Compressor

A、under electric-heating defrost, the set values of fan are positive:

Activation condition: Relay of the compressor connects when it meets both a)、b) or both a)、c).

a) compressor delay time exceeds the set delay time

b) the storage temperature is above the set temperature, and the forcible refrigeration has begun.

c) Under the non-defrost status , the storage temperature is above the sum of the set temperature and differential set value.

(when the fan's delay time is minus, the compressor relay connects if it meets other start-up conditions and the fan has operated the absolute value of the delay numerical value.)

Stop condition: Relay of compressor disconnects when meet any of the ff. conditions.

a) Storage temperature is lower than the set temperature.

b) At start-up of defrost.

c) Forcible refrigeration stops.

## 2. Defrost function

Relay of defrost connects when meets all of the ff. conditions:

- Defrost delay time meets the set time of the defrost delay
- Defrost temperature is lower than the termination temperature of defrost
- Defrost cycle is over or forcible defrost is beginning

Relay of defrost disconnects when meet any of the ff. conditions:

- Defrost operation time is over.
- Defrost temperature is higher than the termination temperature of defrost

## 3. Fan function

When the delay time of fan start-up is minus, and need the compressor to start, compressor starts up until the fan starts firstly and runs out of the set delay time completely. The compressor stops, and the fan also stops simultaneously.

When the delay time of fan start-up is nonnegative, and fan's operation is under "Continuous operation, OFF when defrost" mode, the fan starts up under defrost-OFF status, and stops when defrost starts up.

When the delay time of fan start-up is nonnegative, and fan's operation is under "start/stop with compressor, OFF when defrost" mode, the fan starts up after compressor starting up for the delay time of fan, and stops when compressor stops or defrost begins.

## 4. Alarm function

LED blinkingly displays and buzzer alarms when storage temperature exceeds the temperature upper limit or lower limit and it runs out of the set delay time.

LED blinkingly displays "HHH" and buzzer alarms when storage temperature exceeds the measuring temperature upper limit or the sensor short-circuit. LED blinkingly displays "LLL" and buzzer alarms when storage temperature exceeds the measuring temperature lower limit or the sensor open-circuit.

Press any key can cancel the buzzer's alarm but can't change the display status.

## 5. Operation of COPYKEY

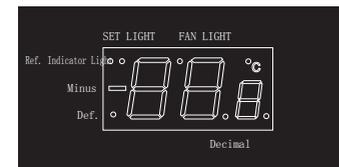
The controller must be under operating status when it needs to upload the parameters to COPYKEY in order to saving them. Plug into COPYKEY and press ▲ key to display "UPL", at this time, press SET key to upload the parameters to COPYKEY. And it is over when LED displays "END", then turn off the controller and take away the COPYKEY. LED will blinkingly display "err" if there is error during uploading. Under the controller's power-off mode, plug into the COPYKEY and turn on the controller, at this time, the COPYKEY will automatically detect the COPYKEY and download parameters from it, then LED displays "DOL" and start normal operation after downloading. At the moment, turn off the controller and take away the COPYKEY. Next, restart the controller. The machine displays "err" if parameter error or controller model error.

6. Keyboard lock function: Under normal mode, press ▲ and ▼ for 10s to open or close the keyboard lock, and display the status of button switch. Loosen the keystroke to display the normal temperature.

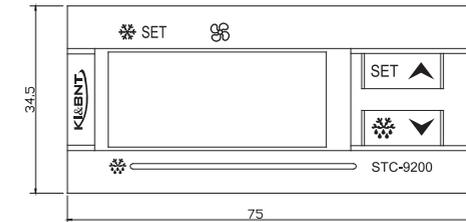
Under the keyboard lock mode, the parameter can be checked but cannot be modified.

7. The modification of part parameters may take into effectiveness during the next working cycle. If it is necessary operating currently, turn of the controller and then restart.

### Indicator light:



### Wiring diagram:



### Front panel:

