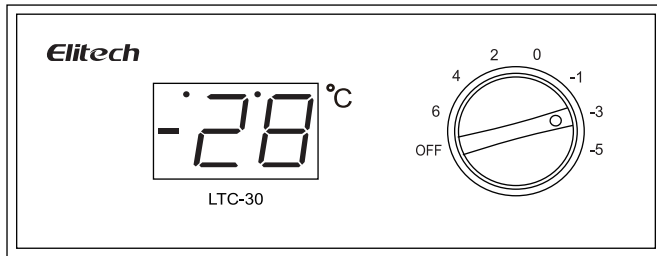


## LTC-3X Instructions

### General Description

A new series of products especially designed for Refrigerant kitchen refrigerator. Refrigerant cabinet, have features as temperature display, control, automatically defrost ,compressor start-up delay protection, code display when sensor error and exceeding temperature limit, etc. Adjust temperature by rotating switch, easy to operate and stable and reliable performance.

### Panel Diagram (figure is LTC-30)



### Specification

1. Product size: 137x56x69(mm)
2. Installing hole size: 112x39(mm)

### Technical parameters

1. Temperature measuring range: -40°C~+90°C
2. Measuring accuracy: ±1°C
3. Resolution: 1°C
4. Sensor: NTC(2 meter long)
5. Refrigerant relay output: 30A/240VAC (max. load is 1.5HP)
6. Compressor start-up delay time: 2 minutes
7. Temperature controlling level: 0~7 level (OFF is to close controller)
8. Defrost way: defrost after shutdown
9. Defrost interval: 6 hours
10. Defrost duration: 25 mins
11. Power consumption: <3W
12. Safe level: IP65
13. Operation ambient temperature: -5°C~+50°C

### Operation Instructions

#### 1. Temperature control

User can set temperature by rotating switch, one end of the switch with a dot pointing to temperature value which is to stop the compressor. The set temperature value ( pointed by the dot on the switch knob) plus the return difference value is the start-up temperature value.

#### 2. Refrigeration

Compressor start-up when actual measuring temperature value is higher than the start-up temperature, and the delay time runs out.

Compressor stop when actual measuring temperature value is lower than the stop temperature.

#### 3. Defrost

Controller starts defrost every time when defrost interval time run out. And controller ban the compressor open until the end of defrost duration time running.

e.g.: Rotate the switch of LTC-30 to level "-3", when the measuring temperature is higher than 1°C, the compressor can start; when the measuring temperature is lower than -3°C, the compressor stops; when the switch is closed, the controller is under "OFF" status, and compressor stop running . When defrost interval time running out, the controller is under defrosting status, and compressor operation banned. When defrost duration time (about 25 mins) running out, the controller exit defrosting status.

### Indicator Light Description

1. Refrigeration indicator light
  - ❄ Indicator light on: compressor under running status;
  - ❄ Indicator light flashes: compressor under start-up delay status;
  - ❄ Indicator light off: compressor under stopping status.
2. Defrost indicator light
  - ❄ Indicator light on: controller under defrosting status;
  - ❄ Indicator light off: controller stops defrosting.

### Error Code

1. Screen displays "EE" when sensor error.
2. Screen displays "-" when temperature adjusting knob error.
3. Screen displays "HH" when temperature measured exceeding the upper limit .
4. Screen displays "LL" when temperature measured exceeding the lower limit.

### Wiring Diagram Description

Please strictly distinguish the wires of power, sensor and load from one another and connect the corresponding wires according to wiring diagram.

### Safety Regulations

- ◆Dangers: Prohibit connecting the wire terminals when electrified.
  - ◆Warning: Prohibit using the machine under the environment of over damp, high temperature, strong electromagnetic interference or strong corrosion.
- Strictly distinguish the sensor down-lead, power wire and relay output line from one another, 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 possible 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.

### Product Naming Regulations

	Digit 1	Digit 2		Annex character 1	Annex character 2
	LTC	Fixed value 3	0	10°C ~ -5°C	Power supply vacancy:220VAC B:110VAC C:12VAC/DC
		1	0°C ~ -10°C		
		2	4°C ~ -15°C		
		3	-2°C ~ -18°C		
		4	-8°C ~ -25°C		
		5	10°C ~ 0°C		
		6	-6°C ~ -16°C		

e.g.: LTC-30: power supply 220VAC, return difference is 4°C, controlling range: 10°C~-5°C, defrost interval: 6 hours, defrost duration:25 mins.

LTC-33AI: power supply 110VAC, return difference is 3°C, controlling range: -2°C~-18°C, defrost interval: 6 hours, defrost duration:25 mins.