

# ECB-20 Instructions

## General descriptions:

ECB-20 is a new optimizing product especially designed for refrigerant units. Double-sensor control, proper and complete protection functions. Easy-to-operate, stable and reliable performance. ECB-20 is an Electric Control Box with multi-functions and rather high performance versus price ratio

## Main functions and parameters:

◆Power supply: Three-phase five-wire (or three-phase four-wire), 380 VAC  $\pm$  10%, 50Hz

◆Technical parameters:

◇Temperature measuring and controlling range: -50~50℃

◇Accuracy:  $\pm$  1℃

◇Compressor start-up delay protection time: 0~50 minutes (Adjustable)

◇Max. capacity of controlling the compressor and fan: 5.5 11 15

◇Max. capacity of controlling the defroster: 5.5 7.5

◆Functions and features:

◇Double-menu management mode: user's menu and manager's menu setting. Common user only need to set the temperature and return difference

◇Double temperature measuring sensors to independently control the temperature of compressor and defroster, more safe and economic

◇Single-point temperature calibration, return difference for temperature controlling, easier-to-operate

◇Comprehensive protection function of compressor

◇Auto and manual control function

◇Sensor error alarm and alarm when exceeding the temperature limits functions

◇Compressor start-up delay adjustable

## Process of operation:

◆Connect the power supply wire, load wire and pressure control wire according to the wiring diagram

◆Inspection of phase sequence: Manually start up the compressor or the fan to observe whether the rotating directs of them are correct or not; Adjust the power input wire or the load connecting wire if the directions are incorrect

◆Parameter setting and adjusting:

◇Place the alternation switch on the Electric Control Box's door under "stop" status, then close the switches both inside and outside the box

◇Set up parameter of Temperature Controller (See STC-9100 Instructions)

◇Adjustment of integrated protector of Electric machine

1. Manual control of compressor and fan. The LED's of three-phase indicator all light on with the same lightness after the Electric machine normally works

2. According to the load status, adjust the left current to a needed value

◆Place the alternation switch on the Electric Control Box's door under "auto" or "manual" status after all the steps have been done. The apparatus will work as set.

◆Auto working status: Set the upper switch on the Electric Control Box's door on 'Auto' place and the down switch on "Stop" place.

◆Manually working status: Set the upper switch on the Electric Control Box's door on 'Manual' place, manually control of compressor, fan and defroster with the down switch. Under manually working status, the temperature controller will display the current temperature of the cold storage, but unavailable to take part in function controlling.

◆Place the alternation switch on the Electric Control Box's door under "auto" or "manual" status after all the steps have been done. The apparatus will work according to the set values.

◆Auto working status: Set the upper switch on the Electric Control Box's door on 'Auto' place and the down switch on the underside on "Manual" place.

◆Manually working status: Set the upper switch on the Electric Control Box's door on 'Manual' place, manually control of compressor, fan and defroster with the switch on the underside. Under manually working status, the temperature will display the current temperature of the cold storage, but unavailable to take part in function controlling.

## Regulations of safety:

◆Dangers

◇Keep the case of Electric Control Box earthing well.

◇The watt of configured Units of the Electric Control Box can't be over the Max. load

◆Warnings

◇Electric Control Box should be installed by professionals

◇Strictly abide to the universal electronics installing regulations; Inflatable bolt can be adopted to fix the case

◇Correlative wires should be connected strictly according to the terminal wiring diagram

◇Adjust the setting current of electric machine's integrated protector to corresponding value as per the practical load capacity before use

◇Promptly place the switch under "stop" status when emergent error occurs

◆Notices

◇Electric Control Box should be installed in the environment of ventilating, dry and no direct sunshine places

◇Prohibit to get close to condenser or other heat fountains

◇Should avoid high magnetic field and other interfering fountains

◇Sensors should be connected separately and kept distances from other heavy current wires

## Warranty and technical services:

◆Warranty time: Temperature Controller is free for repair within one year from purchasing day; other units for 3 months

◆Warranty unavailable: under any one of the situations below

A: Operations not according to instruction

B: Not correctly repair

C: Man-made damage or wrong use or make bold to modify

D: Without the buying certificates of this product such as invoice

◆Our professional engineers will offer you professional, high efficient and prompt services in whole process of sale including before-sale, sales-on and after-sale

## Enclosed wiring diagram:

