

Product Overview

ECB-5060S is specially designed for refrigerating units of low and medium temperature cold storage. It adopts Elitech home-made temperature controller MTC-5060. It features good user friendly interface with double screens displaying current temperature and set-point visually. Simple to operate and much more intelligent, it can be used with no need of referring the manual. With stable and reliable property, it is a multi-functional electric control box with high cost performance.

Technical Parameters

Power supply: three-phase-five-wire (or three-phase-four-wire) 380VAC±10%/50Hz

- ◆ Temperature measuring range: -50℃~50℃
- ◆ Temperature accuracy: ±1℃
- ◆ Compressor delay protection time: 1~120 min adjustable
- ◆ The maximum continuous output current of compressor loop: 14A(5P), 21A(10P), 28A(15P), 35A(20P), 44A(25P), 56A(30P)
- ◆ The maximum continuous output current of defrost loop: 14A(5P), 21A(10P), 28A(15P), 35A(20P), 44A(25P), 56A(30P)

Functions & Features

- ◆ It adopts electromotor protector CP-6000 featuring inverse time lag protection①.
- ◆ Phase loss protection, phase-sequence protection and three-phase imbalance protection.
- ◆ Two menus for management: user menu and system menu.
- ◆ Two channels of sensors control temperature of compressor and defroster respectively, much safer and energy-saving.
- ◆ Sensor fault and out-of-temperature alarm
- ◆ Adjustable compressor delay time.

Note: ① Inverse time lag protection means protection time shortens automatically with overcurrent increase so as to truly protect the safety of whole refrigerating units. The stronger the overcurrent, the shorter the protection time. Therefore, when compressor is running the protector can adjust protection time in real-time manner and cut down power supply of the compressor according to the size of overcurrent, thus protecting the compressor in real sense.

Switch Status

ON: Rotate the knob switch on the ECB door to “ON”, compressor and defroster will automatically run per the controller’s command.
OFF: Rotate the knob switch to “Off”, the ECB shuts down, but the controller still runs normally without controlling compressor, defroster or fan.

Operating Steps

- 1) Connect the power cord, load lines and protection control line, and tighten all the wiring terminals according to the wiring diagram.
- 2) Set and adjust parameters
 Rotate the knob switch to “OFF”, switch on the circuit breaker in the case.
 Refer to MTC-5060 user manual for parameter settings of temperature controller.
 Refer to CP-6000 user manual for parameter settings of electromotor protector.
 Before the product running, make sure the value of “compressor overcurrent F1” of CP-6000 is set properly based on the actual situation.
- 3) Phase sequence detection: start each load and then observe whether the loads rotate in the correct direction; if not, adjust the wiring of power cord and load lines.
- 4) Close the ECB door, rotate the switch to “ON”, and the product will run automatically per parameter set-points.

Safety Precautions

Danger!

- ◆ Make sure the ECB case grounds well!
- ◆ The power of the matched units for the product should not exceed the maximum load that is allowed!
- ◆ Please fasten tightly all the wiring terminals before the product is powered!

Warning!

- ◆ The product should be debugged and installed by professionals.

- ◆ Universal procedures for installing mechanical and electrical equipment must be complied with.
- ◆ Connect the related circuit in strict accordance with the wiring diagram.
- ◆ Before using the product, adjust the set current value of the synthetic protector to the corresponding value as per actual loads.
- ◆ Rotate the knob switch on the ECB door to “OFF” quickly in emergency fault.

Notice

- ◆ The product should be placed in cool ventilated dry environment.
- ◆ The product should maintain a proper distance with condenser and other heat sources.
- ◆ The case can be fixed by expansion bolts.
- ◆ Wire the sensors separately and maintain a proper distance with other strong current to avoid disturbance.

Technical Parameters

Warranty period: one year from the date of purchase for the controller; three months for other accessories.

We will not have any liability or obligation under this limited warranty, in case of

- 1) Misuse or abuse of the product.
- 2) Improper maintenance of the product.
- 3) Unauthorized modification, misuse or artificial damage of the product.
- 4) Without payment voucher and invoice of the product.

- ◆ The product is a control device rather than a protection device for the unit. Please install extra protection device if your system, equipment and device have higher safety requirement.
- ◆ If you use our product on occasions closely related to personal and property safety, please adopt special redundancy design to ensure safety.
- ◆ We will not assume the responsibility for special, indirect and other relative loss caused by our product.

Electrical Schematic Diagram

