

Specifications

- Supply voltage: 110V/220VAC 50Hz/60Hz
- Display: 7-segment LED
- Size: 137*32*32 mm³ (panel)
- Size: 165*140*53 mm³ (control box)
- Maximum output (Resistive load): Compressor and Defrost 30A/250V, Others 16A/250V
- Temperature range: -50°C~+80.0°C
- Operating Temperature: -15°C~+70°C
- Temperature Accuracy: 1°C
- Temperature resolution: 0.1°C /1°C

Parameters

| # | Code | Description | Range | Default |
|----|------|---|------------------|---------|
| 1. | ES | Compressor stop temperature | -50.0 ~ +80.0 °C | 4.0 |
| 2. | Ed | Temperature differential | +0.1 ~ +15.0 °C | 2.0 |
| 3. | Sd | Compressor time delay | 0 ~ 15 min | 2 |
| 4. | d. | Defrost interval | 0 ~ 24 hour | 4 |
| 5. | dd | Defrost cycle time | 0 ~ 60 min | 15 |
| 6. | EL | Alarm timer for cooling fin clearing Interval | 0 ~ 250 day | 0 |
| 7. | ER | Room sensor (S1) calibration | -10.0 ~ +10.0 °C | 0.0 |

Lock-up Parameters

| # | Code | Description | Range | Default |
|----|------|------------------------------|---|---------|
| 1. | Lo | Lock/unlock parameters | y : lock / n : unlock | y |
| 2. | EH | The upper limit of ES | ES ~ +80.0 °C | +50.0 |
| 3. | EL | The lower limit of ES | -50.0 ~ ES °C | -50.0 |
| 4. | AH | High temperature alarm | ES ~ +80.0 °C | +50.0 |
| 5. | Ht | High temperature alarm delay | 0 ~ 180 min | 90 |
| 6. | AL | Low temperature alarm | -50.0 ~ ES °C | -30.0 |
| 7. | Lt | Low temperature alarm delay | 0 ~ 180 min | 60 |
| 8. | do | Display during defrost | 1=DEF, 2=Last temp before defrost, 3=current temp | 3 |

Note: 1. When parameter 'Lo' = "y", the parameter 'tS' will be the only parameter that can be altered in general parameters.

Alarm codes



| Code | Description | Code | Description |
|------|---|------|---|
| EH | Room sensor is short circuit or its temperature is higher than 80°C | AH | High temperature alarm (S1 temperature is higher than 'AH' over 'Ht' setting time) |
| EL | Room sensor is open circuit or its temperature is lower than -50°C | AL | Low temperature alarm. (S1 temperature is lower than 'AL' over 'Lt' setting time.) |
| DEF | System is in defrost mode (with parameter 'do' = 1) | gd | Parameters are saved successfully |
| ELn | Cooling fin Alarm. The cooling fin needs cleaning | bad | Failed to save parameters |

Parameter Setting:


















- Press the **[SET]** button, the display will start flashing '888'. Press the **[SET]** button again, the display will show the parameter setting value. Use the **[▲]** and **[▼]** buttons to alter the value, or press the **[SET]** button to go to the next parameter.

Lock-up parameter setting:













- Press **[SET]** button, the display will start flashing '888'. While flashing, press both **[▲]** and **[▼]** buttons simultaneously until display shows 'Lo'. Press the **[SET]** button again, the display will show the parameter setting value. Use the **[▲]** and **[▼]** buttons to alter the value, or press the **[SET]** button to go to the next parameter.

- During programming parameters, if none of **[SET]**, **[▲]**, **[▼]** or  buttons are pressed for 30 seconds, the controller will store the new setting and return to normal display.
- During programming parameters, to store all settings and exit the setting mode immediately, press the  button.

Other functions

1. To turn on the controller, press the  button.
2. To turn on the controller, press the  button. During the display is showing , press **[SET]** button in 5 seconds.
3. During compressor time delay, press the **[▼]** button can start the compressor immediately and the display will show  for few seconds
4. Manual defrost: Press the  button for 3 seconds, the display shows  for 2 seconds and then the controller starts manual defrost. (with parameters **dd > 0** and **di > 0**)
5. To check the total running hours, press **[▲]** and **[▼]** buttons simultaneously. e.g. if the total running hours are 1123 hours, the display will show ,  and  in turn.
6. During the room sensor alarms, , the compressor will be “off” for 15 minutes and then “on” for 20 minutes until the alarm is reset.
7. Alarm timer for cooling fins clearing interval: when the alarm timer counts up to the setting value, , the controller will generate an  alarm. To reset the alarm timer, press **[▼]** button firstly, the display will show  for few seconds. And then press the  button to turn off the controller. The alarm timer is reset when the controller is turned on again.
8. To reset parameters to the default setting (not including Lock-up Parameters), press the  button to turn off the controller. Then press the  button for 3 seconds during power off. The display will show  to indicate the reset command is done.
9. When alarms go off, press **[▼]** can pause the alarm buzzer. The alarm will start buzzing after 60 minutes.

Function keys & LED indicators

| | | | | | |
|---|----------------------|---|---|--------|---|
|  | Power | Power On/Off |  | White | Power On/Off |
|  | Inc/Dec Up · Down | 1: To alter parameter value 2: Other functions |  | Green | Led flashing: compressor is in time delay Led on: compressor is on |
|  | Set | Setting parameter value |  | Red | Led on: defrost |
|  | Defrost | Manual defrost |  | Yellow | Fan On/Off indicator |
|  | Defog | Defog On/Off |  | Blue | Defog output On/Off indicator |
|  | Light | Light On/Off |  | Red | Light On/Off indicator |

Wiring Diagram

