



9. Troubleshooting

9.1 Flashing LED of Indoor/Outdoor Unit and Primary Judgement

| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|---|-------------------------------|---|--------------------------|--------------------------------|-------------------|---------------------------|------------|--|--|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | | | Red Indicator |
| 1 | High pressure protection of system | E1 | OFF 3s and blink once | | | | | | During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, the complete unit stops. | Possible reasons: 1. Refrigerant was superabundant; 2. Poor heat exchange (including filth blockage of heat exchanger and bad radiating environment); Ambient temperature is too high. |
| 2 | Antifreezing protection | E2 | OFF 3S and blink twice | | | | OFF 1S and blink 3 times | | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. | 1. Poor air-return in indoor unit; 2. Fan speed is abnormal; 3. Evaporator is dirty. |
| 3 | In defect of refrigerant | F0 | | | | | OFF 1S and blink 9 times | | The Dual-8 Code Display will show F0 and the complete unit stops. | 1.In defect of refrigerant; 2.Indoor evaporator temperature sensor works abnormally; 3.The unit has been plugged up somewhere. |
| 4 | High discharge temperature protection of compressor | E4 | OFF 3S and blink 4 times | | | | OFF 1S and blink 7 times | | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop. | Please refer to the malfunction analysis (discharge protection, overload). |
| 5 | Overcurrent protection | E5 | OFF 3S and blink 5 times | | | | OFF 1S and blink 5 times | | During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop. | 1. Supply voltage is unstable; 2. Supply voltage is too low and load is too high; 3. Evaporator is dirty. |
| 6 | Communication Malfunction | E6 | OFF 3S and blink 6 times | | | | Always ON | | During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops. | Refer to the corresponding malfunction analysis. |
| 7 | High temperature resistant protection | E8 | OFF 3S and blink 8 times | | | | OFF 1S and blink 6 times | | During cooling operation: compressor will stop while indoor fan will operate. During heating operation, the complete unit stops. | Refer to the malfunction analysis (overload, high temperature resistant). |
| 8 | EEPROM malfunction | EE | | | OFF 3S and blink 15 times | | OFF 1S and blink 11 times | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop | Replace outdoor control panel AP1 |
| 9 | Limit/ decrease frequency due to high temperature of module | EU | | OFF 3S and blink 6 times | OFF 3S and blink 6 times | | | | All loads operate normally, while operation frequency for compressor is decreased | Discharging after the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1. |
| 10 | Malfunction protection of jumper cap | C5 | OFF 3S and blink 15 times | | | | | | Wireless remote receiver and button are effective, but can not dispose the related command | 1. No jumper cap insert on mainboard. 2. Incorrect insert of jumper cap. 3. Jumper cap damaged. 4. Abnormal detecting circuit of mainboard. |








| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|--|-------------------------------|---|------------------------------|--------------------------------|---|--------------------------|---|---|-----------------|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | | | Green Indicator |
| 11 | Gathering refrigerant | Fo | OFF 3S and blink 1 times | OFF 3S and blink 1 times | | OFF 1S and blink 17 times | | When the outdoor unit receive signal of Gathering refrigerant ,the system will be forced to run under cooling mode for gathering refrigerant | Nominal cooling mode | |
| 12 | Indoor ambient temperature sensor is open/short circuited | F1 | | OFF 3S and blink once | | | | During cooling and drying operation, indoor unit operates while other loads will stop; during heating operation, the complete unit will stop operation. | 1. Loosening or bad contact of indoor ambient temp. sensor and mainboard terminal. 2. Components in mainboard fell down leads short circuit. 3. Indoor ambient temp. sensor damaged.(check with sensor resistance value chart) 4. Mainboard damaged. | |
| 13 | Indoor evaporator temperature sensor is open/short circuited | F2 | | OFF 3S and blink twice | | | | AC stops operation once reaches the setting temperature. Cooling, drying: internal fan motor stops operation while other loads stop operation; heating: AC stop operation | 1. Loosening or bad contact of Indoor evaporator temp. sensor and mainboard terminal. 2. Components on the mainboard fall down leads short circuit. 3. Indoor evaporator temp. sensor damaged.(check temp. sensor value chart for testing) 4. Mainboard damaged. | |
| 14 | Outdoor ambient temperature sensor is open/short circuited | F3 | | OFF 3S and blink 3 times | | | OFF 1S and blink 6 times | During cooling and drying operating, compressor stops while indoor fan operates; During heating operation, the complete unit will stop operation | Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) | |
| 15 | Outdoor condenser temperature sensor is open/short circuited | F4 | | OFF 3S and blink 4 times | | | OFF 1S and blink 5 times | During cooling and drying operation, compressor stops while indoor fan will operate; During heating operation, the complete unit will stop operation. | Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) | |
| 16 | Outdoor discharge temperature sensor is open/short circuited | F5 | | OFF 3S and blink 5 times | | | OFF 1S and blink 7 times | During cooling and drying operation, compressor will sop after operating for about 3 mins, while indoor fan will operate; During heating operation, the complete unit will stop after operating for about 3 mins. | 1.Outdoor temperature sensor hasnt been connected well or is damaged. Please check it by referring to the resistance table for temperature sensor) 2.The head of temperature sensor hasnt been inserted into the copper tube | |
| 17 | Limit/ decrease frequency due to overload | F6 | | OFF 3S and blink for 6 times | | | OFF 1S and blink 3 times | All loads operate normally, while operation frequency for compressor is decreased | Refer to the malfunction analysis (overload, high temperature resistant) | |
| 18 | Decrease frequency due to overcurrent | F8 | | OFF 3S and blink 8 times | | | OFF 1S and blink once | All loads operate normally, while operation frequency for compressor is decreased | The input supply voltage is too low; System pressure is too high and overload | |








| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|---|-------------------------------|---|---|---|--|---|---------------------------|--|--|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | | | Green Indicator |
| 19 | Decrease frequency due to high air discharge | F9 | | OFF 3S and blink 9 times | | | | OFF 1S and blink twice | All loads operate normally, while operation frequency for compressor is decreased | Overload or temperature is too high; Refrigerant is insufficient; Malfunction of electric expansion valve (EKV) |
| 20 | Limit/ decrease frequency due to antifreezing | FH | | OFF 3S and blink 2 times | OFF 3S and blink 2 times | |  | OFF 1S and blink 4 times | All loads operate normally, while operation frequency for compressor is decreased | Poor air-return in indoor unit or fan speed is too low |
| 21 | Voltage for DC bus-bar is too high | PH | | OFF 3S and blink 11 times | |  | | OFF 1S and blink 13 times | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | 1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 265VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1) |
| 22 | Voltage of DC bus-bar is too low | PL | | | OFF 3S and blink 21 times | | | OFF 1S and blink 12 times | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop | 1. Measure the voltage of position L and N on wiring board (XT), if the voltage is higher than 150VAC, turn on the unit after the supply voltage is increased to the normal range. 2.If the AC input is normal, measure the voltage of electrolytic capacitor C on control panel (AP1), if its normal, theres malfunction for the circuit, please replace the control panel (AP1) |
| 23 | Compressor Min frequency in test state | P0 | | (during blinking, ON 0.25s and OFF 0.25s) | (during blinking, ON 0.25s and OFF 0.25s) | | | | | Showing during min. cooling or min. heating test |
| 24 | Compressor rated frequency in test state | P1 | | (during blinking, ON 0.25s and OFF 0.25s) | (during blinking, ON 0.25s and OFF 0.25s) | | | |  | Showing during nominal cooling or nominal heating test |
| 25 | Compressor maximum frequency in test state | P2 | | (during blinking, ON 0.25s and OFF 0.25s) | (during blinking, ON 0.25s and OFF 0.25s) | | | | | Showing during max. cooling or max. heating test |





| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes |
|-----|---|-------------------------------|---|---|---|--------------------------|---|-----------------|---|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | Green Indicator | |
| 26 | Compressor intermediate frequency in test state | P3 | | (during blinking, ON 0.25s and OFF 0.25s) | (during blinking, ON 0.25s and OFF 0.25s) | | | |  @tamirkarane20 Showing during middle cooling or middle heating test |
| 27 | Overcurrent protection of phase current for compressor | P5 | | OFF 3S and blink 15 times | | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor). |
| 28 | Charging malfunction of capacitor | PU | | | OFF 3S and blink 17 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop Refer to the part three—charging malfunction analysis of capacitor |
| 29 | Malfunction of module temperature sensor circuit | P7 | | | OFF 3S and blink 18 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop Replace outdoor control panel AP1 |
| 30 | Module high temperature protection | P8 | | | OFF 3S and blink 19 times | |  | | After the complete unit is de-energized for 20mins, check whether the thermal grease on IPM Module of outdoor control panel AP1 is sufficient and whether the radiator is inserted tightly. If its no use, please replace control panel AP1. |
| 31 | Decrease frequency due to high temperature resistant during heating operation | H0 | | | OFF 3S and blink 10 times | | | | All loads operate normally, while operation frequency for compressor is decreased Refer to the malfunction analysis (overload, high temperature resistant) |
| 32 | Static dedusting protection | H2 | | | OFF 3S and blink twice | | | |  @tamirkarane20 |
| 33 | Overload protection for compressor | H3 | | | OFF 3S and blink 3 times | OFF 1S and blink 8 times | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. 1. Wiring terminal OVC-COMP is loosened. In normal state, the resistance for this terminal should be less than 1ohm. 2.Refer to the malfunction analysis (discharge protection, overload) |





| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|--|-------------------------------|---|----------------|--------------------------------|---|---|--|---|--|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | | | Green Indicator |
| 34 | System is abnormal | H4 | | | OFF 3S and blink 4 times | OFF 1S and blink 6 times | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (overload, high temperature resistant) |
| 35 | IPM protection | H5 | | | OFF 3S and blink 5 times | OFF 1S and blink 4 times | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor. |
| 36 | Module temperature is too high | H5 | | | OFF 3S and blink 5 times | OFF 1S and blink 10 times | |  @tamirkarane20 | | |
| 37 | Internal motor (fan motor) do not operate | H6 | OFF 3S and blink 11 times | | | | | | Internal fan motor, external fan motor, compressor and electric heater stop operation,guide louver stops at present location. | 1. Bad contact of DC motor feedback terminal. 2. Bad contact of DC motor control end. 3. Fan motor is stalling. 4. Motor malfunction. 5. Malfunction of mainboard rev detecting circuit. |
| 38 | Desynchronizing of compressor | H7 | | | OFF 3S and blink 7 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis (IPM protection, loss of synchronism protection and overcurrent protection of phase current for compressor. |
| 39 | PFC protection | HC | | | OFF 3S and blink 6 times | OFF 1S and blink 14 times | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis |
| 40 | Outdoor DC fan motor malfunction | L3 | OFF 3S and blink 23 times | | | | OFF 1S and blink 14 times | | Outdoor DC fan motor malfunction lead to compressor stop operation, | DC fan motor malfunction or system blocked or the connector loosed |
| 41 | power protection | L9 | OFF 3S and blink 20 times | | | OFF 1S and blink 9 times |  | | compressor stop operation and Outdoor fan motor will stop 30s latter , 3 minutes latter fan motor and compressor will restart | To protect the electrical components when detect high power |
| 42 | Indoor unit and outdoor unit doesn't match | LP | OFF 3S and blink 19 times | | | OFF 1S and blink 16 times | | | compressor and Outdoor fan motor can't work | Indoor unit and outdoor unit doesn't match |
| 43 | Failure start-up | LC | | | OFF 3S and blink 11 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop operation. | Refer to the malfunction analysis |





| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|---|-------------------------------|---|----------------|--------------------------------|---|---------------------------|------------|---|--|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | | | Green Indicator |
| 44 | Malfunction of phase current detection circuit for compressor | U1 | | | OFF 3S and blink 13 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop | Replace outdoor control panel AP1 |
| 45 | Malfunction of voltage dropping for DC bus-bar | U3 | | | OFF 3S and blink 20 times | | | | During cooling and drying operation, compressor will stop while indoor fan will operate; During heating operation, the complete unit will stop | Supply voltage is unstable |
| 46 | Malfunction of complete units current detection | U5 | | | OFF 3S and blink 13 times | | | | During cooling and drying operation, the compressor will stop while indoor fan will operate; During heating operating, the complete unit will stop operation. | Theres circuit malfunction on outdoor units control panel AP1, please replace the outdoor units control panel AP1. |
| 47 | The four-way valve is abnormal | U7 | | | OFF 3S and blink 20 times | | | | If this malfunction occurs during heating operation, the complete unit will stop operation. | 1.Supply voltage is lower than AC175V; 2.Wiring terminal 4V is loosened or broken; 3.4V is damaged, please replace 4V. |
| 48 | Zero-crossing malfunction of outdoor unit | U9 | OFF 3S and blink 18 times | | | | | | During cooling operation, compressor will stop while indoor fan will operate; during heating,the complete unit will stop operation. | Replace outdoor control panel AP1 |
| 49 | Frequency limiting (power) | | | | | | OFF 1S and blink 13 times | | | |
| 50 | Compressor running | | | | | | OFF 1S and blink once | | | |
| 51 | The temperature for turning on the unit is reached | | | | | | OFF 1S and blink 8 times | | | |
| 52 | Frequency limiting (module temperature) | | | | | | OFF 1S and blink 11 times | | | |


@tamirkarane20

@tamirkarane20

@tamirkarane20





| NO. | Malfunction Name | Display Method of Indoor Unit | | | Display Method of Outdoor Unit | | | A/C status | Possible Causes | |
|-----|----------------------|-------------------------------|---|----------------|--|---|---------------|-------------------------|--|----------------------|
| | | Dual-8 Code Display | Indicator Display (during blinking, ON 0.5s and OFF 0.5s) | | | Indicator has 3 kinds of display status and during blinking, ON 0.5s and OFF 0.5s | | | | |
| | | | Operation Indicator | Cool Indicator | Heating Indicator | Yellow Indicator | Red Indicator | Green Indicator | | |
| 53 | Normal communication | | | | | | | OFF 0.5S and blink once |  @tamirkarane20 <small>کانال تلگرام</small> | |
| 54 | Defrosting | | | | OFF 3S and blink once (during blinking, ON 10s and OFF 0.5s) | OFF 1S and blink twice | | | Defrosting will occur in heating mode. Compressor will operate while indoor fan will stop operation. | Its the normal state |

