Temperature Sensor Resistance Readings

Malfunction Code of Outdoor unit

Display Malfunction or Protection

E1 Phase sequence error

E2 Communication malfunction between indoor/outdoor units

E3 T3 temperature sensor malfunction

E4 T4 temperature sensor malfunction

E5 T5 temperature sensor malfunction

E6 Water-level alarm malfunction

P High pressure protection

P Low pressure protection

P Compressor current protection

P Compressor discharge temperature protection

P Condenser high temperature protection

Temperature = 0C

K Ohms = 35K

Temperature = 10C

K Ohms = 20K

Temperature = 20C

K Ohms = 13K

Temperature = 30C

K Ohms = 8K

Fault Codes for RAHC, YKHC & YUHC Models

Indoor lights

Operation = Flash

Timer = Flash

Defrost = Flash

Faults = Outdoor Problem

Operation =

Timer =

Defrost = Flash

Faults = ID Air Sensor Fail

Operation = Flash

Timer =

Defrost =

Faults = ID Pipe Sensor Fail

Operation =

Timer =

Defrost = Flash

Faults = OD Pipe Sensor Fail

Operation = Flash

Timer = Flash

Defrost =

Faults = PCB Fail

Outdoor LEDS 3ph models only

LED 1 = Flash

LED 2 = Off

LED 3 = Off

Faults = Phase Error

LED 1 = Flash

LED 2 = Flash

LED 3 = Off

Faults = Pressure Switch

LED 1 = Off

LED 2 = Off

LED 3 = Flash

Faults = Overcurrent

LED 1 = Off

LED 2 = Flash

LED 3 = Flash

Faults = OD Pipe Sensor

LED 1 = Off

LED 2 = Flash

LED 3 = Off

Faults = OD Air Sensor

LED 1 = Flash

LED 2 = Flash

LED 3 = Flash

HVHC Inverter Fault Codes

Indoor Display = E0

ID PCB Fail

Outdoor LCDs

1 = On

2 Red = Off

3 Green = Off

4 Yellow = Off

Connected to Power
Indoor Display = E1

Comms Fail

Outdoor LCDs

1 = Off

2 Red = Off

3 Green = Off

4 Yellow = Off

Power or OD PCB Fail

Indoor Display = E3

Power Abnormal

Outdoor LCDs

1 = On

2 Red = On

3 Green = Off

4 Yellow = Off

Comms Fail

Indoor Display = E4

OD Sensor Fail

Outdoor LCDs

1 = On

2 Red = Off

3 Green = Off

4 Yellow = On

Compressor Overcurrent

Indoor Display = E5

ID Sensor Fail

Outdoor LCDs

1 = On

2 Red = Off

3 Green = Flash

4 Yellow = Flash

OD Air Sensor Fail E5

Indoor Display = E6

Inverter Module

Outdoor LCDs

1 = On

2 Red = Flash

3 Green = Off

4 Yellow = Flash

OD Pipe Sensor Fail E5

Indoor Display = PO

IPM Protection

Outdoor LCDs

1 = On

2 Red = On

3 Green = Flash

4 Yellow = On

OD Power Supply P1

Indoor Display = P1

OD Power Supply

Outdoor LCDs

1 = On

2 Red = Off

3 Green = On

4 Yellow = Off

IPM Protection P0

Indoor Display = P2

Compressor Hi Temp

Outdoor LCDs

1 = On

2 Red = Off

3 Green = On

4 Yellow = On

Compressor Temp P2

Indoor Display = P3

Outdoor Low Temp

Outdoor LCDs

1 = On

2 Red = On

3 Green = Off

4 Yellow = Off

Comms E1

Indoor Display = P4

Inverter/Compressor Fail

Outdoor LCDs

1 = On

2 Red = On

3 Green = Flash

4 Yellow = Flash

Inv / Comp Fail P4

Model SM-YJCC-YJHC

Items to be checked first

1. Is the voltage of the power correct? The input voltage shall be rating voltage 10%. Theair conditioner may not operate properly if the voltage is out of this range.

2. Is the link cable connecting the indoor unit and the outdoor unit linked properly? Please refer to the "wiring diagram" Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.

3. When a problem occurs due to the contents illustrated in the table below, it is symptomnot related to themalfunction of the air conditioner.
Operation of air conditioner = In COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the indoor fan should operate.In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.

Explanation = It happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on.As a phenomenon that the compressor is reoperated after adelay of 3 minutes, the indoor fan is adjusted automatically withreference to a temperature of the air blow.
Operation of air conditioner = Fan speed setting is not allowed in AUTO or DRY mode

Explanation = The speed of the indoor fan is set to low in DRY mode.Fan speed of 3 steps is selected automatically in AUTO mode.
Operation of air conditioner = Compressor stops operation intermittently in DRY mode.

Explanation = Compressor operation is automatically controlled in DRY modedepending on the room temperature and humidity.
Operation of air conditioner = Compressor of the outdoor unit is operating although it is turned off in HEAT mode.

Explanation = When the unit is turned off while de-ice is activated, thecompressor continues operation for up to 10 minutes(maximum)until the deice is completed.
Operation of air conditioner = Timer indicator lamp lights up and the air conditioner doesnot operate.

Explanation = Timer is being activated and the unit is in ready mode.The unit operates normally if the timer operation is cancelled
Operation of air conditioner = The compressor and indoor fan stop intermittently in HEATmode.

Explanation = The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protectthe compressor from overheated air in HEAT mode
Operation of air conditioner = Indoor fan and outdoor fan stop intermittently in HEAT mode.

Explanation = The compressor operates in a reverse cycle to remove exteriorice in HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heat operation
Operation of air conditioner = The compressor stops intermittently in COOL mode or DRYmode, and fan speed of the indoor unit decreases

Explanation = The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozendepending on the inside/outside air temperature.

SELF DIAGNOSIS FUNCTION

Our company provides the end-users with thoughtful services by installing various diagnostic systems to indicate the following irregular performances

Checkcode = FAULT F6

Diagnosis of malfunction = PG motor faults

Checkcode = FAULT F7

Diagnosis of malfunction = Indoor TEMP sensor faults

Checkcode = FAULT F8

Diagnosisofmalfunction = Indoor coil pipe TEMP sensor faults

Checkcode = FAULT F9

Diagnosisofmalfunction = Outdoor coil pipe TEMP sensor faults

York A/C Fault Code

Temperature Sensor Resistance Readings

Temperature 0C 10C 20C 30C

K Ohms 35K 20K 13K 8K

Fault Codes for RAHC, YKHC & YUHC Models

Indoor lights

Operation Timer Defrost

Flash Flash Flash Outdoor Problem

Flash ID Air Sensor Fail

Flash ID Pipe Sensor Fail

Flash OD Pipe Sensor Fail

Outdoor LEDS 3ph models only

LED1 LED2 LED3

Flash Off Off Phase Error

Flash Flash Off Pressure Switch

Off Off Flash Overcurrent

Off Flash Flash OD Pipe Sensor

Off Flash Off OD Air Sensor

Flash Flash Flash Hi Temp Protection

HVHC Inverter Fault Codes

Outdoor LCDs

Indoor Display 1 2 Red 3 Green 4 Yellow

E0 ID PCB Fail On Off Off Off Connected to Power

E1 Comms Fail Off Off Off Off Power or OD PCB Fail

E2 Power Abnormal On On Off Off Comms Fail

E3 ID Fan Fail On On On On Standby

E4 OD Sensor Fail On Off Off On Compressor Overcurrent

E5 ID Sensor Fail On Off Flash Flash OD Air Sensor Fail E5

E6 Inverter Module On Flash Off Flash OD Pipe Sensor Fail E5

P0 IPM Protection On On Flash On OD Power Supply P1

P1 OD Power Supply On Off On Off IPM Protection P0

P2 Compressor Hi Temp On Off On On Compressor Temp P2

P3 Outdoor Low Temp On On Off Off Comms E1

P4 Inverter/Compressor Fail On On Flash Flash Inv / Comp Fail P4

7 Trouble-shooting

7.1) The air-conditioner does not run after pressing ON/OFF button.

1) Communication malfunction between outdoor units (Only valid for 20,30HP)

Display: The outdoor unit digital diode is displaying “E0”

Solutions: (1) Check if communication cable is broken off

(2) Exchange P, Q line if there is no broken circuit

2) Phase sequence error

Display: The outdoor unit digital diode is displaying “E1”

Solutions: (1) Check if the voltage between the power line terminals A, B, C of outdoor units and N is normally 220v. If not please check whether the power lines are well connected.

(2) After checking the voltage without finding any error, please transpose any two of the outdoor units power lines (A, B.C.)

3) Communication trouble between indoor unit and outdoor unit

Display: Outdoor unit digital diode is displaying “E2” and the timer lamp on the display board of the indoor unit, which has the communication trouble blinks.

Solutions: (1) Check if communication cable is broken off

(2) Exchange P, Q line if there is no broken circuit

4) Outdoor unit temperature sensor abnormal

Display: Outdoor unit digital diode is displaying E3, E4, E5, and E7 (Only valid for 20,30HP)

Solutions: (1) Measure T3, T4, T5, T6 electric resistance respectively and replace the broken one if the electric resistance is not correct.

(2) If the electric resistance is normal, please test the outdoor PCB and change a new one if it does not work well.

5) Indoor unit temperature sensor abnormal

5) Indoor unit temperature sensor abnormal

Display: The operation lamp of the indoor unit blinks

Solutions: (1) Measure T1, T2, and T3 electric resistance respectively to see if there is an

open or short circuit

(2)If the electric resistance is normal, please test the indoor PCB and change a

new one if it does not work well.

6) Water-level switch abnormal
Display: Outdoor unit digital diode display “E6” and Indoor unit alarm lamp blinks
Method: Check if the water level switch is closed and replace a new switch if the old one is bad.
7) The address of outdoor unit malfunction (Only valid for 20,30HP)
Display: Outdoor unit digital diode display “E8”
Method: Check the address code of outdoor unit PCB and make sure the address code in the right position.
7.2) After running a while the system stops to perform protection.
1) Water level alarming trouble

Display: Indoor unit alarm lamp blinks
Solutions: (1) Check if water pump runs well
(2) Check if the drainpipe is broken
(3) Check if the water level switch is blocked
(4) If the above situations do not occur please change a new indoor PCB
2) High-pressure protection
Display: The outdoor unit digital diode is displaying:”P1”
Solutions: (1) Check if the high-pressure protection switch is broken or loosen
(2) Test if the discharge temperature of the compressor is too high. If the discharge temperature is too high and the current is lower than the rated current, the system is probably lack of refrigerant and replenishes it.
(3)Test if the pressure (high pressure) is too high or the current is overloaded. If so the possible causes are: the overcharge of refrigerant, the system air leakage, or bad ventilation conditions.
a. Let the surplus refrigerant out if refrigerant is too much
b. Let the entire refrigerant out, re-visualize the system and then replenish the refrigerant if air is penetrating into the system.
c. Improve the ventilation and heat-emission environment for the outdoor unit
3) Low-pressure protection
Display: The outdoor unit digital diode is displaying:”P2”
Solutions: (1) Check if the low pressure protection switch is broken or loosen

(2) Test if the pressure (low pressure) is too low. The probable reasons are:
the overcharge of refrigerant or system blockade.
4) Over current protection
Display: The outdoor unit diode. Is displaying:"P3"
Solutions: (1) Check if the current is overloaded.
(2) The possible reasons for the over current are: the overcharge of
refrigerant, air leakage, and bad ventilation and heat-emission conditions.
5) Compressor discharge temperature protection, Condenser high temperature protection
Display: P4/ P5 is displayed on the outdoor unit diode
Solutions: (1) Test digital discharge temperature, outdoor condenser T3 temperature
(2) Test system pressure
(3)High digital discharge temperature is likely owing to the lack of refrigerant,
air leakage or system blockade. Check the above items respectively to solve the problem.
(4) Condenser high temperature protection owes to the overcharge of
refrigerant, air leakage or bad ventilation and heat-emission conditions.

7.3) Cooling or heating capacity is not enough.

1) Address setting for the indoor units is wrong
Solutions: Do spot check of the indoor unit address and reset for those repeated ones.
2) Capacity code setting for the indoor units is wrong
Solutions: Do spot check of the indoor unit capacity code and reset for those repeated
ones.
3) Overcharge or lack of refrigerant
4) The system air leakage or alcidine leakage
5) PWM of the digital compressor leakage
Solutions: Please change a new PWM valve
6) 4-way valve leakage / blockade
Solutions: Replace with a new 4-way valve
7) Compressor leakage/ wear and tear
Solutions: Replace with a new compressor
8) Too many indoor units are connected. If all the indoor units are in operation, cooling/heating
effect will be lowered.
Solutions: (1) Avoid all the indoor units running simultaneously.
(2) Reduce the indoor units that connected in the system

7.4)The whole system may run well while a specific indoor unit does not operate quite well

1) Mode conflict
If within one system some indoor units are in cooling mode, while some others are in
heating mode, mode conflict will be displayed on those cooling units LED and as a result those
units will be power off.
2) Indoor sensor electric resistance changing
When the indoor sensor electric resistance changes to a certain extent, under the control
of the PCB, the indoor unit will stop running at the set temperature. Consequently the cooling
effect is weakened
3) Electric throttle kit blockade
Solutions: Use new electric throttle kits
4) EXV trouble of the power off units
If the refrigerant is leaked owing to EXV trouble of the power off units, the refrigerant will
run through that power– off units. As a result the cooling/heating capacity of the operating
units is lowered.

Solutions: Replace all the bad electric throttle kits

Fault Codes for RAHC, YKHC & YUHC Models

Indoor lights

Operation = Flash
Timer = Flash
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Faults = Outdoor Problem

Operation =
Timer =
Defrost = Flash
Faults = ID Air Sensor Fail

Operation = Flash
Timer =
Defrost =
Faults = ID Pipe Sensor Fail

Operation =
Timer =
Defrost = Flash
Faults = OD Pipe Sensor Fail

Operation = Flash
Timer = Flash
Defrost =
Faults = PCB Fail

Outdoor LEDS 3ph models only

LED 1 = Flash
LED 2 = Off
LED 3 = Off
Faults = Phase Error

LED 1 = Flash
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Faults = Pressure Switch

LED 1 = Off
LED 2 = Off
LED 3 = Flash
Faults = Overcurrent

1 = On
2 Red = Off
3 Green = Off
4 Yellow = On
Compressor Overcurrent

Indoor Display = E5
ID Sensor Fail
Outdoor LCDs
1 = On
2 Red = Off
3 Green = Flash
4 Yellow = Flash
OD Air Sensor Fail E5

Indoor Display = E6
Inverter Module
Outdoor LCDs
1 = On
2 Red = Flash
3 Green = Off
4 Yellow = Flash
OD Pipe Sensor Fail E5

Indoor Display = PO
IPM Protection
Outdoor LCDs
1 = On
2 Red = On
3 Green = Flash
4 Yellow = On
OD Power Supply P1

Indoor Display = P1
OD Power Supply
Outdoor LCDs
1 = On
2 Red = Off
3 Green = On
4 Yellow = Off
IPM Protection P0

Indoor Display = P2
Compressor Hi Temp
Outdoor LCDs
1 = On
2 Red = Off
3 Green = On

4 Yellow = On
Compressor Temp P2

Indoor Display = P3
Outdoor Low Temp
Outdoor LCDs
1 = On
2 Red = On
3 Green = Off
4 Yellow = Off
Comms E1

Indoor Display = P4
Inverter/Compressor Fail
Outdoor LCDs
1 = On
2 Red = On
3 Green = Flash
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Inv / Comp Fail P4

Model SM-YJCC-YJHC

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Diagnosisofmalfunction = Outdoor coil pipe TEMP sensor faults