

TROUBLESHOOTING

Diagnostic Codes

Outdoor Unit

When the unit has the following trouble and the compressor stops running, The LED of outdoor control board will show the error sequence automatically:

Diag Code	Outdoor Failure Description	LED1	LED2	LED3	the root cause may be one of the following
Mark description: the lights flash every second for the following faults					
	Outdoor coil temperature sensor faulted	ON	OFF	ON	a.the outdoor coil sensor connect loose. b.the outdoor coil temperature sensor failed. c.the outdoor control board failed.
	Compressor exhaust temperature sensor faulted	ON	OFF	OFF	a.the compressor exhaust temperature sensor connect loose. b.the compressor exhaust temperature sensor failed. c.the outdoor control board failed.
	Communication failure between the indoor unit and outdoor unit	OFF	OFF	BLINKS	a.the communication cable connect loose. b.the communication cable failed. c.the connection between the filter board and the outdoor control board is incorrect or loose. d.the connection between the filter board and the terminal is incorrect or loose. e.the indoor control board failed. f.the PFC board failed. g.the power board failed. h.the outdoor control board failed.
	Current overload protection	ON	BLINKS	OFF	a.the fan motor run abnormally. b.the condenser and evaporator is dirty. c.the air inlet and outlet is abnormal.
	Maximum current protection	ON	BLINKS	ON	a.the outdoor control board is short circuited. b.the drive board is short circuited. c.the other components are short circuited.
	Communication trouble between outdoor unit and driver	OFF	ON	ON	a. the connection wires are loose. b.the outdoor board or drive board failed.
	Outdoor EEPROM faulted	ON	ON	ON	a.the EEPROM chip is loose. b.the EEPROM chip inserted in wrong direction. c. The EEPROM chip failed.
	Compressor exhaust temperature too high protection	OFF	BLINKS	ON	a.the compressor exhaust temperature sensor failed. b.the refrigerant of the unit is low.
	Outdoor ambient temperature sensor faulted	ON	ON	OFF	a.the outdoor ambient temperature sensor connector loose. b.the outdoor ambient temperature sensor failed. c.the outdoor control board failed.
	Compressor shell temperature too high protection	OFF	ON	BLINKS	a.the compressor exhaust temperature sensor connector loose. b.the refrigerant of the unit is low.
	Anti-freeze protection with cooling or overload protection with heating in indoor unit	OFF	BLINKS	BLINKS	a.the indoor coil temperature sensor connector loose. b.the indoor coil temperature sensor failed. c.the indoor control board failed. d. the refrigerant system is abnormal.

TROUBLESHOOTING

Diagnostic Codes

Diag Code	Outdoor Failure Description	LED1	LED2	LED3	the root cause may be one of the following
	Compressor drive faulted	BLINKS	OFF	BLINKS	a.the outdoor drive board failed. b.the compressor failed. c. the c. outdoor control board failed.
	Outdoor fan motor locked rotor protection	BLINKS	BLINKS	ON	a.the connection of the outdoor fan motor is loose. b.there is something blocking the outdoor fan. c.the fan motor failed. d.the outdoor control board failed.
	Outdoor coil anti-overload protection with cooling	OFF	ON	OFF	a.There is too much refrigerant. b.the outdoor fan motor failed. c.the outdoor fan is broken. d.the condenser is dirty. e.the air inlet and air outlet of the indoor unit and the outdoor unit is not normal.
	IPM module protection	OFF	BLINKS	OFF	a.The IPM board failed. b.The outdoor fan is broken. c.The outdoor fan motor failed. d.The outdoor fan has been blocked. e.The condenser is dirty. f.The outdoor unit has been installed without standard.
	PFC protection	BLINKS	OFF	OFF	a.the PFC failed. b.the outdoor drive board failed.
	Compressor pre heating process	BLINKS	ON	BLINKS	it is normal mode in cold weather
	Chip in outdoor board faulted	ON	OFF	BLINKS	a. Using the wrong drive board. b. Using the wrong compressor.
	AC voltage higher or lower protection	ON	ON	BLINKS	a.the supply voltage is higher or lower than normal. b.the inner supply voltage of the unit is higher or lower than normal.
	DC compressor start failure	BLINKS	BLINKS	OFF	a.the outdoor drive board failed. b.the compressor failed.
	Outdoor ambient temperature too low protection	BLINKS	OFF	OFF	a Outdoor ambient temperature too low.
Mark description: the lights flash every two seconds for the following faults					
	Protection against overheated outdoor radiator	BLINKS	OFF	OFF	a. Radiator sensors failed. b. Detection circuit of the sensor on the control panel fails
	Protection of the system against too high pressure	BLINKS	BLINKS	OFF	a. The pressure switch fails b. The pressure detection switch on the control panel failed. c. The measured value of the system pressure exceeds the limit.

TROUBLESHOOTING

Diagnostic Codes

THE FLASH IS 1 SECOND				
No.	LED1	LED2	LED3	Reasons for the current operating frequency of the compressor is limited
1	BLINK	BLINK	BLINK	Normal frequency rising and decreasing, no limitation
2	OFF	OFF	ON	Frequency decreasing or prohibition of frequency rising caused by over-current
3	OFF	ON	ON	Frequency decreasing or prohibition of frequency rising caused by anti-freezing of refrigeration or anti-overload in heating
4	ON	OFF	ON	Frequency decreasing or prohibition of frequency rising caused by too high compressor discharge temperature
5				Limit to the max operating frequency caused by too low power voltage
6	ON	ON	ON	Operation at fixed frequency (in the case of capability measuring or compulsory operation at fixed frequency)
7	BLINK	OFF	OFF	Protective frequency decreasing against outdoor overload (overpower, over frequency conversion rate, over torque, detection of DC under-voltage)
8	ON	OFF	OFF	Frequency decreasing caused by indoor and outdoor communication fault
9	OFF	ON	BLINK	Frequency decreasing or prohibition of frequency rising protection against overload of outdoor coiled pipe
10	OFF	ON	OFF	Frequency decreasing or prohibition of frequency rising for power-saving when it is being used simultaneously with other appliances

TROUBLESHOOTING

Diagnostic Codes

Indoor Unit

The the indoor display board will show the error code automatically when the unit has the following trouble:

Error Code	Power 1	Timer 2	Running 3	Sleep 4	Content	The root cause is may be one of the following
EA					the error code will display when the communication between display board and control board is interrupted	a. The connection between the display board and control board is loose. b. The indoor control board failed. c.The wiring of the display board failed

When the unit has the following trouble and the compressor stops running, press the sleep button on the remote controller for 10 times in ten seconds and the 7-segment tube of the display board will show the error code as the following, if two malfunction happened at the same time, it need press the sleep button for 10 times again, the LED will show the other error code.

Refer to the remote controller which the sleep key can set into 4 different combination ways , when using to check the error codes only takes effect for pressing the sleep key 10 times in ten seconds instead of 4 times.

NOTE: If the troubleshooting inquiry display by 7-segment tube, then the error code will be displayed, otherwise only the LED of the display board can show.

Error Code	Power 1	Timer 2	Running 3	Sleep 4	Content	The root cause is may be one of the following
0					Normal	
1	OFF	BLINK	OFF	OFF	The failure for temperature sensor of outdoor coil	a. The outdoor temperature sensor loose b. The outdoor temperature sensor failed. c. The indoor control board failed.
2	OFF	BLINK	ON	OFF	Compressor exhaust temperature sensor in trouble	a. the compressor exhaust temperature sensor connector loose. b.the compressor exhaust temperature sensor failed. c.the outdoor control board failed.
5	ON	BLINK	OFF	OFF	IPM module protection	a.The IPM board failed. b.The outdoor fan is broken. c.The outdoor fan motor failed. d.The outdoor fan has been blocked. e.The condenser is dirty.
6	ON	BLINK	OFF	ON	AC voltage higher or lower protection	a. the supply voltage is higher or lower than normal. b.the inner supply voltage of the unit is higher or lower than normal.
7	ON	BLINK	ON	OFF	Communication failure between the indoor unit and outdoor unit	a.the communication cable connect loose. b. the connection between the filter board and the terminal is incorrect or loose c.the communication cable failed. d.the connection between the filter board and the outdoor control board is incorrect or loose. e.the indoor control board failed. f.the PFC board failed. g.the power board failed. h.the outdoor control board failed.
8	ON	BLINK	ON	ON	Current overload protection	a.the fan motor runs abnormally. b.the condensor and evaporator is dirty. c.the air inlet and outlet are abnormal.

TROUBLESHOOTING

Diagnostic Codes

Error Code	Power	Timer	Running	Sleep	Content	The root cause is may be one of the following
	1	2	3	4		
9	OFF	OFF	BLINK	OFF	Maximum current protection	a.the outdoor control board is short circuited. b.the drive board is short circuited. c. other components are short circuited.
10	OFF	OFF	BLINK	ON	Communication trouble between outdoor unit and driver	a. the connection wires loose. b.the outdoor board or drive board failed.
11	OFF	ON	BLINK	OFF	Outdoor EEPROM in trouble	a.the EEPROM chip is loose. b.the EEPROM chip inserted incorrectly. c.the EEPROM chip failed.
12	OFF	ON	BLINK	ON	Outdoor ambient temperature too low protection	Outdoor ambient temperature too low.
13	ON	OFF	BLINK	OFF	Compressor exhaust temperature too high protection	a.the compressor exhaust temperature sensor failed. b.the unit refrigerant charge is low
14	ON	OFF	BLINK	ON	Outdoor ambient temperature sensor in trouble	a.the outdoor ambient temperature sensor connect loose b.the outdoor ambient temperature sensor failed.; c.the outdoor control board failed.
15	ON	ON	BLINK	OFF	Compressor shell temperature too high protection	a.the compressor exhaust temperature sensor connect loose b.the unit refrigerant charge is low
16					Anti-freeze protection with cooling or overload protection with heating in	a.the indoor coil temperature sensor connector loose; b.the indoor coil temperature sensor failed.. c.the indoor control board failed.. d. the refrigerant system is abnormal
17					PFC protection	a.the PFC failed.; b.the outdoor drive board failed.
18					DC compressor start failure	a.the outdoor drive board failed.; b.the compressor failed.
19	OFF	OFF	OFF	BLINK	Compressor drive in trouble	a.the outdoor drive board failed.; b.the compressor failed. c. the outdoor control board failed.
20	ON	OFF	OFF	BLINK	Outdoor fan motor locked rotor protection	a.the connection of the outdoor fan motor is loose. b.there is something block the outdoor fan. c.the fan motor failed. d.the outdoor control board failed.
21					Outdoor coil anti-overload protection with cooling	a.the unit refrigerant charge is excessive. b.the outdoor fan motor failed. c.the outdoor fan is broken. d.the condensor is dirty. e.the air inlet and air outlet of the indoor unit and the outdoor unit is not normally
22					Compressor pre heating process	it is normal mode in cold weather
24					Chip in outdoor board in trouble	a.Using the wrong drive board; b.Using the wrong compressor

TROUBLESHOOTING

Diagnostic Codes

Error Code	Power	Timer	Running	Sleep	Content	The root cause is may be one of the following
	1	2	3	4		
26					Overheated outdoor radiator	a. Radiator sensor fails. b. Detection circuit of the sensor on the control panel fails.
27					Protection against too high system pressure	a. The pressure switch fails. b. The pressure detection switch on the control panel fails. c. The measured value of system pressure exceeds the limit.
33	BLINK	OFF	OFF	ON	The failure for temperature sensor of indoor room	a. The indoor room temperature sensor loose. b. The indoor room temperature sensor failed. c. The indoor control board failed.
34	BLINK	OFF	ON	OFF	The failure for temperature sensor of indoor coil temperature	a. The indoor coil temperature sensor loose. b. The indoor coil temperature sensor failed. c. The indoor control board failed.
36	BLINK	ON	OFF	ON	Communication failure between the indoor unit and outdoor unit	a. the communication cable connect loose. b. the connection between the filter board and the terminal is incorrect or loose. c. the communication cable failed. d. the connection between the filter board and the outdoor control board is incorrect or loose. e. the indoor control board failed. f. the PFC board failed. g. the power board failed. h. the outdoor control board failed.
38	BLINK	ON	ON	ON	Indoor EEPROM failure	a. The EEPROM chip loose; b. The indoor control board failed.
39	BLINK	OFF	ON	ON	Indoor fan motor run abnormally	a. There are something block the indoor fan motor. b. The fan motor cord connect loose. c. The fan motor failed. d. The indoor control board failed.
41	ON	ON	BLINK	ON	The failure for Indoor grounding protective	The indoor control board failed.

TROUBLESHOOTING

Diagnostic Codes

Error Code	Power	Timer	Running	Content	The root cause is may be one of the following
0				Normal	
1	BLINK	ON	ON	The failure for temperature sensor of outdoor coil	a. The outdoor temperature sensor loose. b. The outdoor temperature sensor failed. c. The indoor control board failed
2	BLINK	ON	OFF	Compressor exhaust temperature sensor in trouble	a. the compressor exhaust temperature sensor connect loose. b. the compressor exhaust temperature sensor failed. c. the outdoor control board failed.
5	ON	BLINK	OFF	IPM module protection	a.The IPM board failed. b.The outdoor fan is broken. c.The outdoor fan motor failed d.The outdoor fan has been blocked. e.The condenser is dirty. f.The outdoor unit has been installed below standards.
6	OFF	BLINK	OFF	AC voltage higher or lower protection	a. the supply voltage is higher or lower than normal. b. the inner supply voltage of the unit is higher or lower than normal.
7	ON	ON	OFF	Communication failure between the indoor unit and outdoor unit	a.the communication cable connect loose. b.the communication cable failed. c.the connection between the filter board and the outdoor control board is incorrect or loose. d.the connection between the filter board and the terminal is incorrect or loose. e.the indoor control board failed. f.the PFC board failed. g.the power board failed. h.the outdoor control board failed.
8				Current overload protection	a.the fan motor runs abnormally. b.the condensor and evaporator are dirty. c.the air inlet and outlet is abnormal or obstructed.
9				Maximum current protection	a.the outdoor control board is short circuited. b.the drive board is short circuited. c.ther components are short circuited.
10	ON	OFF	OFF	Communication trouble between outdoor unit and driver	a. the connection wires connector loose. b.the outdoor board or drive board failed.
11	BLINK	OFF	OFF	Outdoor EEPROM in trouble	a.the EEPROM chip is loose; b.the EEPROM chip inserted in the opposite direction. c.the EEPROM chip failed.
12				Outdoor ambient temperature too low protection	Outdoor ambient temperature too low.
13	BLINK	OFF	ON	Compressor exhaust temperature too high protection	a.the compressor exhaust temperature sensor failed b.the refrigerant chage is low.
14	ON	ON	BLINK	Outdoor ambient temperature sensor in trouble	a.the outdoor ambient temperature sensor connector loose b.the outdoor ambient temperature sensor failed. c.the outdoor control board failed.
15	OFF	BLINK	ON	Compressor shell temperature too high protection	a.the compressor exhaust temperature sensor connector loose. b.the refrigerant charge is low.

TROUBLESHOOTING

Diagnostic Codes

Error Code	Power	Timer	Running	Content	The root cause is may be one of the following
	1	2	3		
16	ON	OFF	ON	Anti-freeze protection with cooling or overload protection with heating in	a.the indoor coil temperature sensor connector loose. b.the indoor coil temperature sensor failed. c.the indoor control board failed. d. the refrigerant system is abnormal.
17	OFF	ON	OFF	PFC protection	a.the PFC failed. b.the outdoor drive board failed.
18	OFF	ON	ON	DC compressor start failure	a.the outdoor drive board failed. b.the compressor failed.
19	OFF	ON	BLINK	Compressor drive in trouble	a.the outdoor drive board failed. b.the compressor failed. c. the outdoor control board failed.
20	ON	OFF	BLINK	Outdoor fan motor locked rotor protection	a.the connection of the outdoor fan motor is loose. b.there are something blocking the outdoor fan. c.the fan motor failed. d.the outdoor control board failed.
21	OFF	OFF	BLINK	Outdoor coil anti-overload protection with cooling	a.the refrigerant charge is exccessive. b.the outdoor fan motor failed. c.the outdoor fan is broken. d.the condensor is dirty. e.the air inlet and air outlet of the indoor unit and the outdoor unit are abnormal.
22				Compressor pre heating process	it is normal mode in cold weather
24				Chip in outdoor board in trouble	a.Using the wrong drive board; b.Using the wrong compressor.
26				Overheated outdoor radiator	a. Radiator sensor fails. b. Detection circuit of the sensor on the control panel fails.
27				Protection against too high system pressure	a. The pressure switch fails. b. The pressure detection switch on the control panel fails. c. The measured value of system pressure exceeds the limit.
33	ON	BLINK	BLINK	The failure for temperature sensor of indoor room	a. The indoor room temperature sensor loose; b. The indoor room temperature sensor is failure; c. The indoor control board is failure.
34	OFF	BLINK	BLINK	The failure for temperature sensor of indoor coil temperature	d. The indoor coil temperature sensor loose. e. The indoor coil temperature sensor failed. f. The indoor control board failed.
36	BLINK	ON	BLINK	Communication failure between the indoor unit and outdoor unit	a.the communication cable connector loose. b.the communication cable failed. c.the connection between the filter board and the outdoor control board is incorrect or loose. d.the connection between the filter board and the terminal is incorrect or loose. e.the indoor control board failed. f.the PFC board failed. g.the power board failed. h.the outdoor control board failed.
38	BLINK	BLINK	OFF	Indoor EEPROM failure	a. The EEPROM chip loose; b. The indoor control board failed.
39	BLINK	BLINK	ON	Indoor fan motor run abnormally	a. There is something blocking the indoor fan motor. b. The fan motor cord connector loose. c. The fan motor is failed. d. The indoor control board failed.

TROUBLESHOOTING

Diagnostic Codes

Error Code	Power	Timer	Running	Content	The root cause is may be one of the following
41	OFF	OFF	ON	The failure for Indoor grounding protective	The indoor control board failed.

The failure is detected when the room temperature sensor broken or shorted over 5 sec.

The failure is detected when the temperature sensor of heater exchange broken or shorted over 5 sec.

The failure is detected when each setting data is not match after the EEPPOM self-check two times.

The failure is occur when the grounding signal is not detected after the appliance power ON.