

7. TROUBLE SHOOTING

1. Indication on the 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:

NOTE: ★: LIGHT O: FLASH x: OFF

	Outdoor Failure Description	LED1	LED2	LED3	the root cause my be one of the following
	Normal	x	x	x	
	Outdoor coil temperature sensor in trouble	★	x	★	a. the outdoor coil sensor connect loose; b. the outdoor coil temperature sensor is failure; c. the outdoor control board is failure
	Compressor exhaust temperature sensor in trouble	★	x	x	a. the compressor exhaust temperature sensor connect loose; b. the compressor exhaust temperature sensor is failure; c. the outdoor control board is failure
	Communication failure between the indoor unit and outdoor unit	x	x	O	a. the communication cable connect loose; b. the communication cable is failure; c. the indoor control board is failure; d. the outdoor control board is failure
	Current overload protection	★	O	x	a. the fan motor run abnormally; b. the condensor and evaporator is dirty; c. the air inlet and outlet is abnormally
	Maximum current protection	★	O	★	a. the outdoor control board is short circuit; b. the drive board is short circuit; c. the other components is short circuit
	Communication trouble between outdoor unit and driver	x	★	★	a. the connection wires connect loose b. the outdoor drive board is failure;
	Outdoor EEPROM in trouble	★	★	★	a. the EEPROM chip is loose; b. the EEPROM chip inserted with opposite direction; c. the EEPROM chip is failure,you should change the outdoor control board.

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Compressor exhaust temperature too high protection	×	○	★	<p>a.the compressor exhaust temperature sensor is failure;</p> <p>b.the refrigerant of the unit is not enough</p>
Outdoor ambient temperature sensor in trouble	★	★	×	<p>a.the outdoor ambient temperature sensor connect loose;</p> <p>b.the outdoor ambient temperature sensor is failure;</p> <p>c.the outdoor control board is failure</p>
Compressor shell temperature too high protection	×	★	○	<p>a.the compressor exhaust temperature sensor connect loose</p> <p>b.the refrigerant of the unit is not enough</p>
Anti-freeze protection with cooling or overload protection with heating in indoor unit	×	○	○	<p>a.the indoor coil temperature sensor is failure;</p> <p>b.the indoor control board is failure</p> <p>c. the refrigerant system is abnormal</p>
Compressor drive in trouble	○	×	○	<p>a.the outdoor drive board is failure;</p> <p>b.the compressor is failure</p> <p>c. the outdoor control board is failure</p>
Outdoor fan motor locked rotor protection	○	○	★	<p>a.the connection of the outdoor fan motor is loose;</p> <p>b.there are something block the outdoor fan;</p> <p>c.the fan motor is failure;</p> <p>d.the outdoor control board is failure</p>
Outdoor coil anti-overload protection with cooling	×	★	×	<p>a.the refrigerant is too much;</p> <p>b.the outdoor fan motor is failure;</p> <p>c.the outdoor fan is broken;</p> <p>d.the condensor is dirty;</p> <p>e.the air inlet and air outlet of the indoor unit and the outdoor unit is not normally</p>
Compressor pre heating process	○	★	○	it is normal mode in cold weather
Chip in outdoor board in trouble	★	×	○	<p>a.the drive board is incorrect;</p> <p>b.the compressor model is incorrect</p>

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2. Indication by the indoor unit:

2.1 The LED of indoor display board will show the error sequence automatically when the unit has the following trouble:

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

Error code	Remark: ★Light o Flash x OFF			description	the root cause is may be one of the following:
	sleep	timer	running		
E4	o	o	★	Indoor fan motor running in trouble	a. the connection of the indoor fan motor is loose; b. there are something block the indoor fan; c. the fan motor is failure; d. the indoor control board is failure
EA	o	o	o	Communication trouble in the indoor unit between the display board and control board	a. the connection between the display board and the control board is loose; b. the control board is failure

2.2. Press the sleep button on the remote controller for 4 times and the LED of the display board will show the error sequence as the following, if two malfunction happened at the same time, it need press the sleep button for 4 times again, the LED will show the other error sequence.

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

Error code	sleep	timer	running	description	the root cause is may be one of the following:
0				Normally	
1	o	★	★	Outdoor coil temperature sensor in trouble	a. the outdoor coil sensor connect loose; b. the outdoor coil temperature sensor is failure; c. the outdoor control board is failure
2	o	★	x	Compressor exhaust temperature sensor in trouble	a. the compressor exhaust temperature sensor connect loose; b. the compressor exhaust temperature sensor is failure; c. the outdoor control board is failure
5	★	o	x	IPM module protection	a. the IPM module is failure; b. the outdoor drive board is failure

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6	×	○	×	AC voltage lower protection	<p>a.the supply voltage is lower than normal;</p> <p>b.the inner supply voltage of the unit is lower than normal</p>
7	★	★	×	Communication failure between the indoor unit and outdoor unit	<p>a.the communication cable connect loose;</p> <p>b.the communication cable is failure;</p> <p>c.the indoor control board is failure;</p> <p>d.the outdoor control board is failure</p>
10	★	×	×	Communication trouble between outdoor unit and driver	<p>a.the connection between the outdoor control board and the outdoor drive board is incorrect;</p> <p>b.the outdoor control board is failure;</p> <p>c.the outdoor drive board is failure.</p>
11	○	×	×	Outdoor EEPROM in trouble	<p>a.the EEPROM chip loose;</p> <p>b.the EEPROM chip is failure,you should change the outdoor control board.</p>
13	○	×	★	Compressor exhaust temperature too high protection	<p>a.the compressor exhaust temperature sensor connect loose;</p> <p>b.the compressor exhaust temperature sensor is failure;</p> <p>c.the refrigerant of the unit is not enough</p>
14	★	★	○	Outdoor ambient temperature sensor in trouble	<p>a.the outdoor ambient temperature sensor connect loose;</p> <p>b.the outdoor ambient temperature sensor is failure;</p> <p>c.the outdoor control board is failure</p>
15	×	○	★	Compressor shell temperature too high protection	<p>a.the compressor exhaust temperature sensor connect loose</p>
16	★	×	★	Anti-freeze protection with cooling or overload protection with heating in indoor unit	<p>a.the indoor coil temperature sensor connect loose;</p> <p>b.the indoor coil temperature sensor is failure;</p> <p>c.the indoor control board is failure</p>
17	×	★	×	PFC protection	<p>a.the PFC is failure;</p> <p>b.the outdoor drive board is</p>

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					failure
18	×	★	★	DC compressor start failure	a. the outdoor drive board is failure; b. the compressor is failure
19	×	★	○	outdoor unit drive in trouble	a. the outdoor drive board is failure; b. the compressor is failure c. etc
20	★	×	○	Locked rotor protection for outdoor fan motor	a. the connection of the outdoor fan motor is loose; b. there are something block the outdoor fan; c. the fan motor is failure; d. the outdoor control board is failure
21	×	×	○	Outdoor coil anti-overload protection with cooling	a. the refrigerant is too much; b. the outdoor fan motor is failure; 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
33	★	○	○	Indoor ambient temperature sensor in trouble	a. the indoor ambient temperature sensor connect loose; b. the indoor ambient temperature sensor is failure; c. the indoor control board is failure
34	×	○	○	Indoor coil temperature sensor in trouble	a. the indoor ambient temperature sensor connect loose; b. the indoor ambient temperature sensor is failure; c. the indoor control board is failure
36	○	★	○	Communication in trouble between the outdoor unit and indoor unit	a. the communication cable connect loose; b. the communication cable is failure; c. the indoor control board is failure; d. the outdoor control board is failure

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38	0	0	×	Indoor EPROM in trouble	<p>a.the EEPROM chip is loose;</p> <p>b.the EEPROM inserted with opposite direction;</p> <p>c.the EEPROM chip is failure,you should change the indoor control board.</p>
39	0	0	★	Indoor fan motor running in trouble	<p>a.the connection of the indoor fan motor is loose;</p> <p>b.there are something block the indoor fan;</p> <p>c.the fan motor is failure;</p> <p>d.the indoor control board is failure</p>
41	×	×	★	Indoor unit detecting failures by zero-crossing	the indoor control board is failure