

## TROUBLE SHOOTING

### Trouble guide

When the air conditioner failure occurs, the fault code will displays on control board , wire remote controller or display panel.

#### HOW TO CHECK FAULT CODES

##### INDOOR UNIT

###### 1.WALL MOUNTED TYPE

###### For Free-match series

Run the air-conditioner by wireless remote controller , continue pressing "SLEEP "button for 4 times, fault codes will flashing rapidly on the LCD . If no fault , display "00".

"ER"shows indoor display panel communication fault with indoor unit control board .

###### For VRF series

Fault codes flash rapidly on the LCD.

###### 2.FLOOR STANDING TYPE

###### L5B (indoor box code)series

In the case of no button-locked,continue pressing "CLOCK"button for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

Continue pressing "SLEEP"button of wireless remote controller for 8 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

"ER"shows indoor display panel Communication fault with indoor unit control board

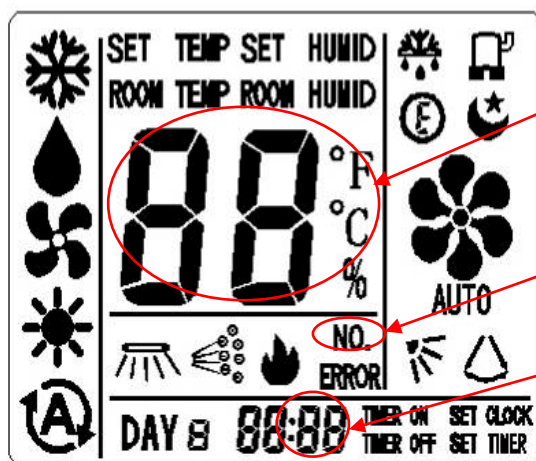
###### L5C(indoor box code) series

Continue pressing "SLEEP"button of wireless remote controller for4 times ,fault codes will display on the LCD for 10 seconds,automatically disappears after 10seconds.

###### 3.DUCT , CASSETTE,CEILING&FLOOR TYPE

#### (1) ERROR CODES INDICATED BY WIRE REMOTE CONTROLLER(see fig. below)

MOEDL:YXC-A01U(E)



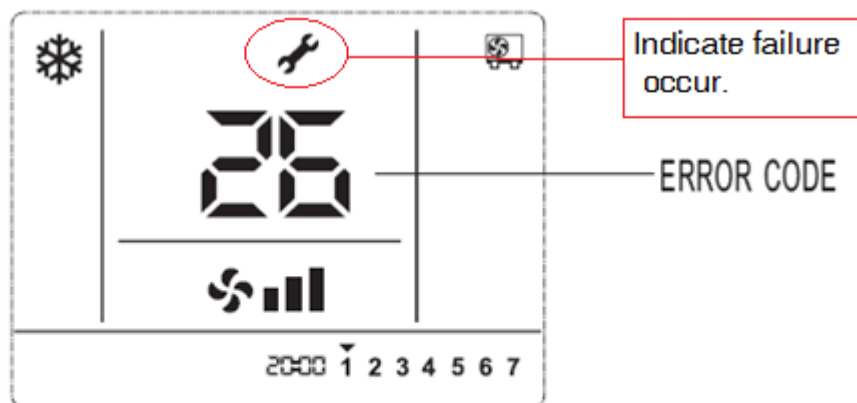
When display "FE" ,shows that the wire controller can't receive the signals of

When failure occurs, this lamp light ON.

This number shows ERROR CODE.

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MOEDL:YXE-C01U




When the airconditioner is malfunction,  will display on the LCD, and error codes will appear and blink.

FIG.2 ERROR CODE DISPLAY ON WIRE REMOT CONTROLLER

### (2) CHECK ERROR CODES BY DISPLAY PANEL(CASSETTE type and CEILING & FLOOR type)

#### Display by lamp indicator

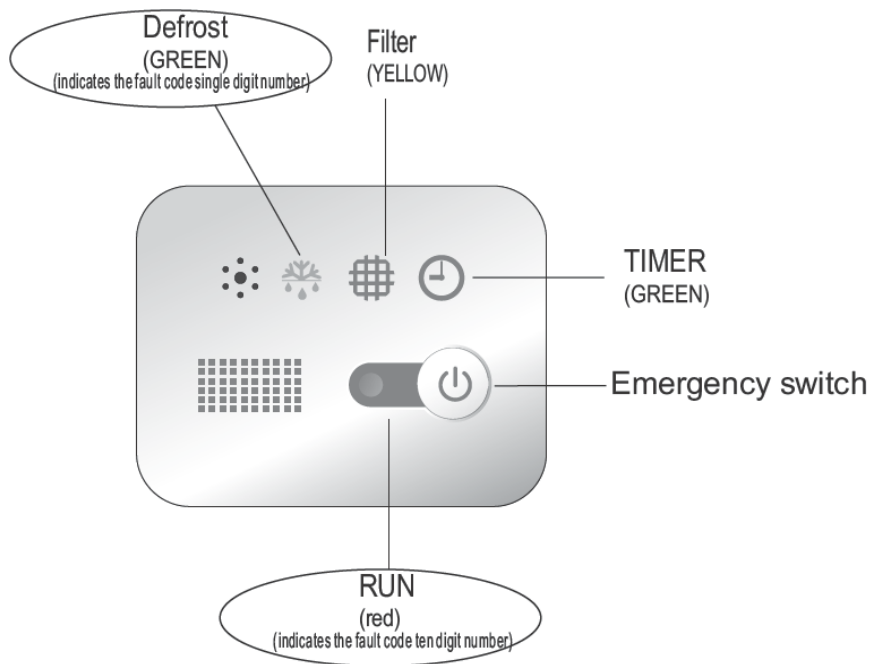
Lamp RUN(LED2 ,red) and Lamp DEFROST (LED5 ,green) flashing, Lamp RUN display fault code ten digit number, lamp DEFROST display fault code single digit number (as shown fig. below).

For example, fault code 36: led RUN & defrost flash 3 times at the same time, and led DEFROST continue flash 3 times, reports No. 36 fault.

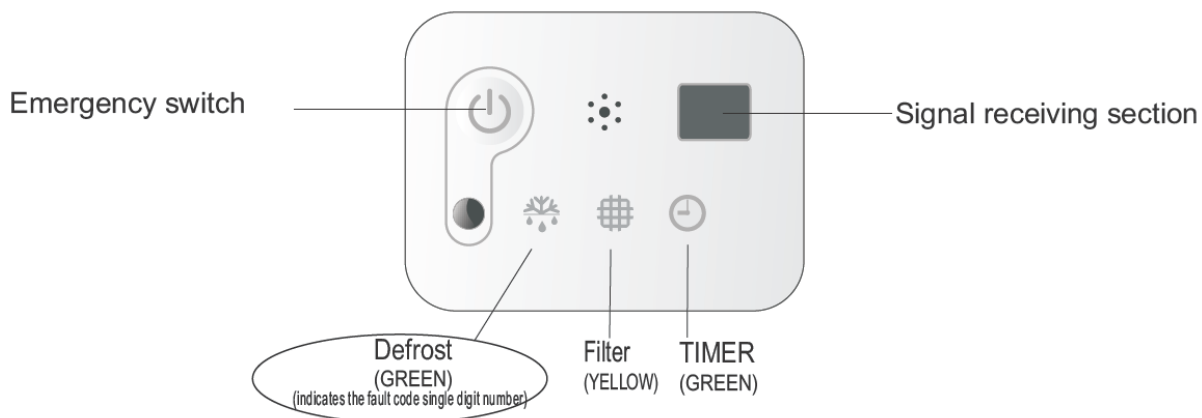
## TROUBLE SHOOTING

### CASSETTE TYPE

#### Display Panel-12K,18K



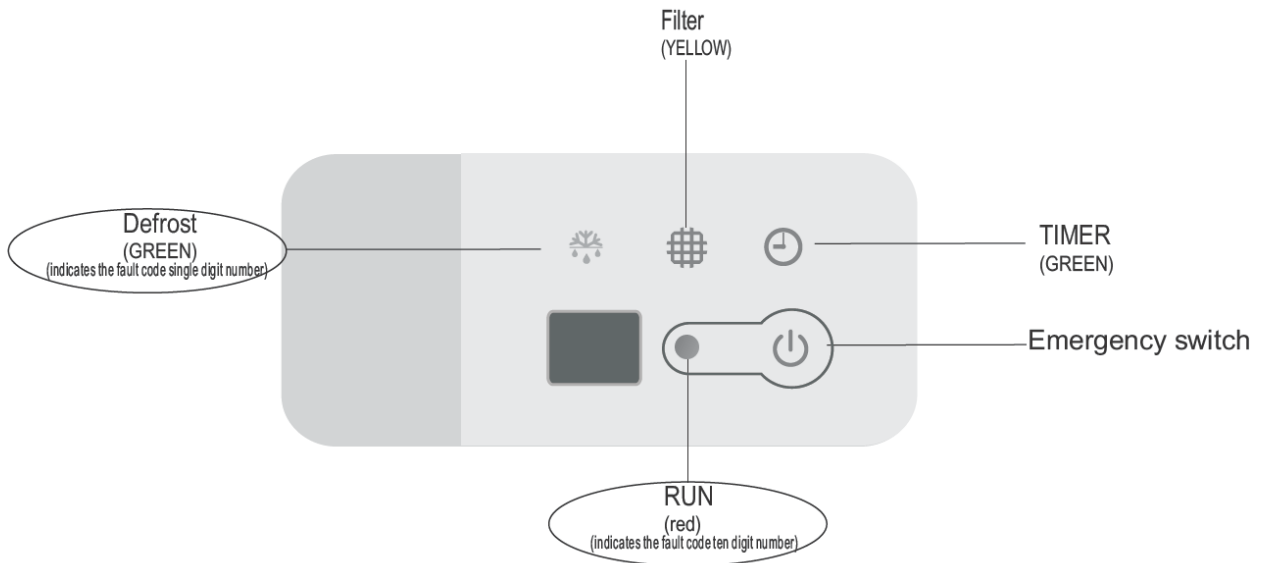
#### Display Panel-24K,36K,48K



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### CEILING & FLOOR TYPE

#### Display Panel



LED FLASH CONTROL: flash 300mS(T1), off 300mS(T2), after 2000mS(T3) fault code repeat displays. (as shown below)

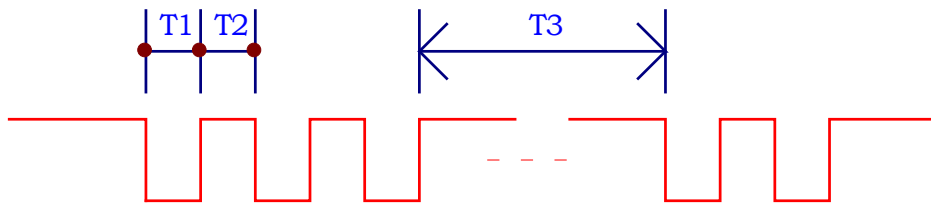
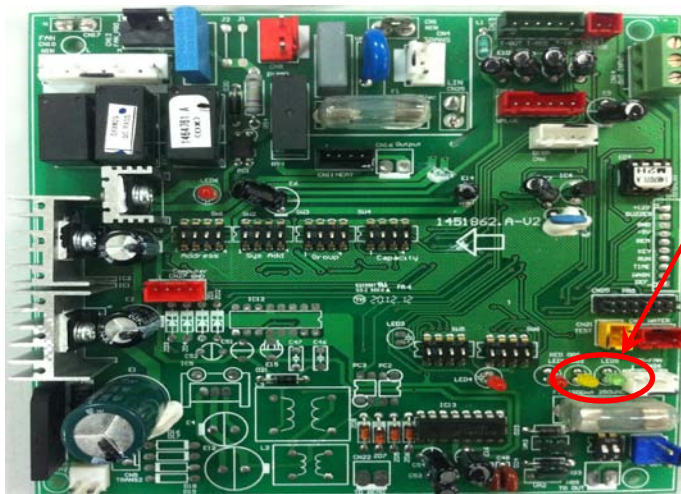


Fig.2 LED FLASH CONTROL

### 3.Duct type indoor units of VRF---FAULT CODE DISPLAY BY INDOOR BOARD



LED2 and LED5 are failure indicate lamps,  
LED2 (RED) indicate fault code ten digit number, LED5 (GREEN) indicate single digit number code

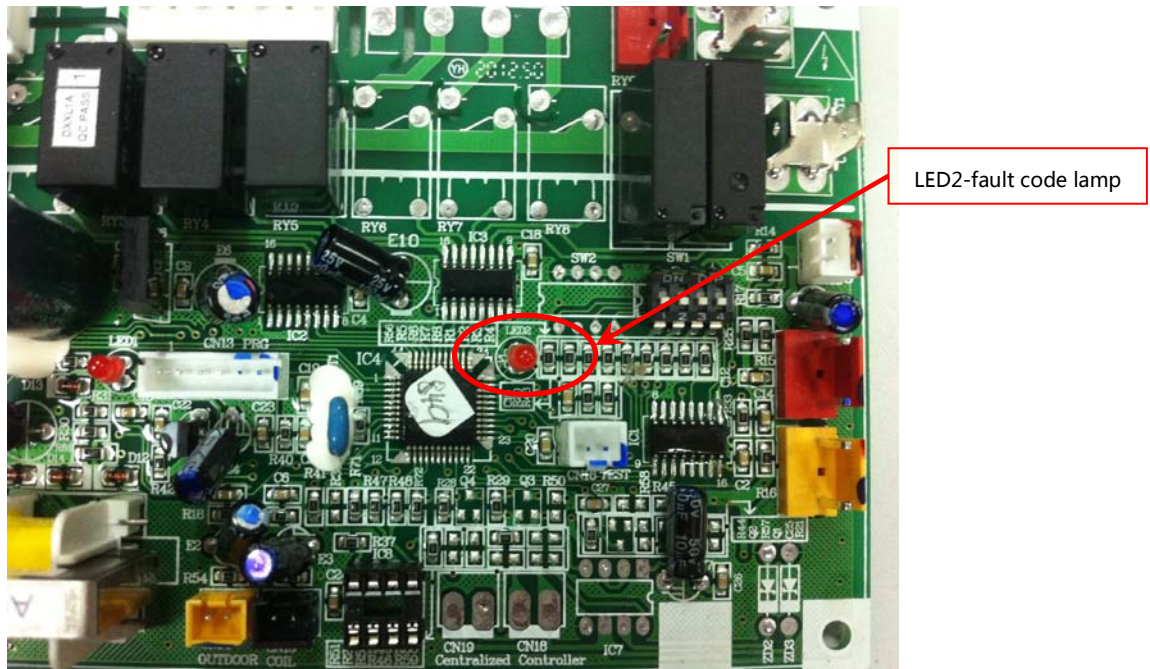
## TROUBLE SHOOTING

### 2.OUTDOOR UNIT FAULT CODE DISPLAY

#### (1) ON/OFF UNITARY TYPE (with outdoor control box)

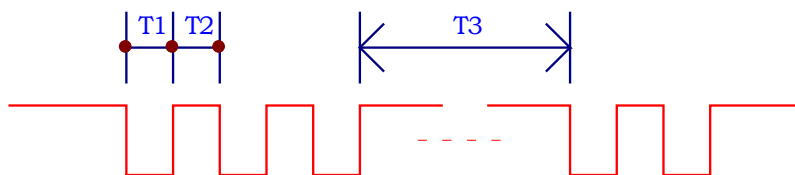
Fault code display by indicate lamps of outdoor control board flash.

The times that the lamp flashes equal to fault code.



LED FLASH CONTROL: flash 300mS(T1), off 300mS(T2), after 900mS(T3)fault code repeat displays.

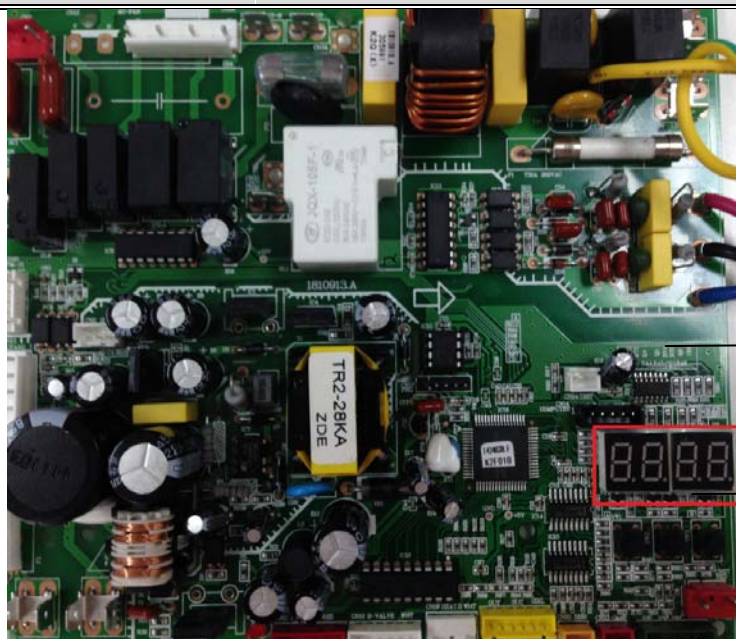
(as shown below)



#### (2) INVERTER UNITARY AIR CONDITONER , MULTI-SPLIT TYPE AIR CONDITONER&VRF:

Fault code will display on digital tube board.

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Outdoor Control Board

Digital Tube

FOR INVERTER UNITARY AIR CONDITONER&VRF



**E** shows failure occur

Display ERROR Code

\* VRF:

Indoor unit can indicate both indoor failure and outdoor failure ,but outdoor only indicate outdoor's.

FOR MULTI-SPLIT TYPE

Error code display on digital tube board directly.

## **TROUBLE SHOOTING**

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### 3. Fault code display ( Driver Board )

The lamp of driver board flash shows failure occur.

Or, fault code can be check on digital tube board .

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The following is the fault code table of outdoor.

sheet 1 Outdoor Error Code

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
1	Outdoor ambient temperature sensor fault	1.The outdoor ambient temperature sensor connect loose; 2.The outdoor ambient temperature sensor is failure; 3.The sampling circuit is failure	1.Reconnect the outdoor ambient temperature sensor; 2.Replace the outdoor ambient temperature sensor components; 3.Replace the outdoor control board components.	
2	Outdoor coil temperature sensor fault	1.The outdoor ambient temperature sensor connect loose; 2.The outdoor ambient temperature sensor is failure; 3.The sampling circuit is failure	1.Reconnect the outdoor ambient temperature sensor; 2.Replace the outdoor ambient temperature sensor components; 3.Replace the outdoor control board components.	
3	The unit over-current turn off fault	1.Control board current sampling circuit is failure; 2.The current is over high because of the supply voltage is too low 3.The on-off compressor is blocked 4. Overload in cooling mode 5.Overload in heating mode	1. Replace the electrical control board components; 2. Normally protection 3. Replace the compressor 4. Please see the Note 3 5. Please see the Note 4	
4	EEPROM Data error	1.EE components is failure; 2.EE components control circuit failure; 3.EE components insert incorrect	1.Replace the EE components; 2.Replace the outdoor control board components; 3.Reassembly the EE components.	
5	Cooling freezing protection(the indoor coil temperature is too low) or heating overload(indoor coil temperature is too high)	1.The indoor unit can not blow air normally; 2.The room temperature is too low in cooling mode or the room temperature is too high in heating; 3.The filter is dirty; 4.The duct resistance of the duct 5.The setting fan speed is too low 6. The indoor unit has been installed without standard	1.Check the indoor fan, indoor fan motor and evaporator whether normally; 2. Normally protection 3.Clean the filter; 4.Check the volume control valve, duct length etc; 5.Set the speed with high speed; 6.Reinstall the indoor unit refer to the user manual to change the distance between the indoor unit and the wall or ceiling.	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
6	Motor blockage protection	1.Outdoor ambient temperature sensor fault ; 2. Outdoor coil temperature sensor fault ; 3.Outdoor control board fault.	1.Replace outdoor ambient temperature sensor ; 2.Replace outdoor coil temperature sensor ; 3.Replace Outdoor control board.	Applied to ON/OFF air-conditioners with 2 control boards
7	The communication fault between the indoor unit and outdoor unit	1.The connection cable connect wrong between the indoor unit and outdoor unit; 2.The communication cable connect loose; 3.The communication cable is fault; 4.The indoor control board is fault; 5.The outdoor control board is fault; 6.Communication circuit fuse open; 7.The specification of communication cable is incorrect.	1.Reconnect the connection cable refer to the wiring diagram; 2.Reconnect the communication cable; 3.Replace the communication cable; 4.Replace the indoor control board; 5.Replace the outdoor control board; 6.Check the communication circuit, adjust the DIP switch and the short-circuit fuse. 7.Choose suitable communication cable refer to the user manual	
8	Phase current imbalance	1.The supply voltage fluctuates more than 4%; 2.The compressor power cord connect loose; 3.The AC contactor is fault; 4.The compressor motor fault.	1.Normally protection; 2.Reconnect the wire refer to the wiring diagram; 3.Replace the AC contactor; 4.Replace the compressor.	Application of three-phase power supply models
9	U phase current fault	1.Compressor U phase power cord is fault or connect wrong; 2.Outdoor control board is fault; 3.The Compressor is fault	1.Replace the U phase power cord or reconnect the U phase power cord refer to the wiring diagram; 2.Replace the outdoor control board; 3.Replace the compressor.	Application of three-phase power supply models
10	V phase current fault	1.Compressor V phase power cord is fault or connect wrong; 2.The outdoor control board is fault; 3.The compressor is fault	1.Replace the V phase power cord or reconnect the V phase power cord refer to the wiring diagram; 2.Replace the outdoor control board; 3.Replace the compressor.	Application of three-phase power supply models
11	phase wrong failure	1.Three-phase power is abnormal; 2.The outdoor wiring connect wrong; 3. The outdoor control board is failure	1.Normally protection, please check the supply power 2.Check the wiring connection refer to the wiring diagram;	Application of three-phase power

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
			3. Replace the outdoor control board	supply models
12	voltage absent phase	1. Three-phase power is abnormal; 2. The outdoor wiring connect wrong; 3. The outdoor control board is failure.	1. Normally protection 2. Check the wiring connection refer to the wiring diagram; 3. Replace the outdoor control board	Application of three-phase power supply models
13	Compressor overheat protector device	1. The wiring of the overload protector connect loose. 2. The overload protector is failure . 3. The refrigerant is not enough; 4. The installation pipe is too long than normal, but not add the enough refrigerant; 5. The expansion valve is failure; 6. The outdoor control board is failure	1. Reconnect the wiring of the overload protector; 2. Replace the overload protector; 3. Check the welding point of the unit to confirm whether it is leakage, and then recharge the refrigerant; 4. Add the refrigerant; 5. Replace expansion valve; 6. Replace the outdoor control board.	
14	the high pressure switch operate or the unit turn off for high pressure protection	1. The wiring of the high pressure protector connect loose; 2. The high pressure protector is failure; 3. The outdoor control board is abnormal; 4. Overload in cooling; 5. Overload in heating.	1. Reconnect the wiring the high pressure protector; 2. Replace the high pressure protector; 3. Replace the outdoor control board; 4. Please refer to the Note 3; 5. Please refer to the Note 4.	Applied to models with high pressure switch or pressure sensor
15	the low pressure switch protection or the unit turn off for low pressure protection	1. The low pressure switch is failure; 2. The wiring of the low pressure switch connect loose; 3. The refrigerant is not enough; 4. The expansion valve failure in heating mode; 5. The outdoor control board is abnormal.	1. Reconnect the wiring of the low pressure switch; 2. Replace the low pressure switch; 3. Check the welding point to confirm whether the unit is leakage, and then add some refrigerant; 4. Replace the expansion valve; 5. Replace the outdoor control board.	Applied to models with low pressure switch or pressure sensor
16	overload protection in cooling mode	System overload	Please refer to the Note 3.	
17	Discharge temperature sensor fault	1. The wiring of the discharge temperature sensor connect loose; 2. The discharge temperature sensor is failure; 3. The sampling circuit is abnormal.	1. Reconnect the wiring of the discharge temperature sensor; 2. Replace the discharge temperature sensor; 3. Replace the outdoor control board.	
18	AC voltage is abnormal	1. The AC voltage > 275V or < 160V. 2. The AC voltage of sampling circuit on the driver board is abnormally	1. Normally protection, please check the supply power; 2. Replace the driver board.	MUTI-SPLIT TYPE ONLY

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
19	Suction temperature sensor fault	1.The wiring of the suction temperature sensor connect loose; 2. The suction temperature sensor is failure; 3. The sampling circuit is abnormally	1.Reconnect the wiring of the suction temperature sensor; 2.Replace the suction temperature sensor; 3.Replace the outdoor control board.	
20	The temperature sensor for the inlet tube of the condenser fault	1.The wiring of the temperature sensor for the inlet tube connect loose; 2.The temperature sensor for the inlet tube is failure; 3.The sampling circuit is abnormally	1.Reconnect the wiring of the temperature sensor for the inlet tube of the condenser; 2.Replace the temperature sensor for the inlet tube of the condenser; 3.Replace the outdoor control board.	
21	The outlet tube of the condenser temperature sensor fault	1.The wiring of the temperature sensor for the outlet tube connect loose; 2.The temperature sensor for the outlet tube is failure; 3.The sampling circuit is abnormally	1. Reconnect the wiring of the temperature sensor for the outlet tube of the condenser. 2.Replace the temperature sensor for the outlet tube of the condenser; 3.Replace the outdoor control board.	
22	The defrosting sensor fault	1.The wiring of the defrosting sensor connect loose; 2.The defrosting sensor is failure; 3.The sampling circuit is abnormally	1. Reconnect the wiring of the defrosting sensor; 2. Replace the defrosting sensor; 3. Replace the outdoor control board.	
23	Expansion valve A tube(thin) sensor fault	1. The wiring of the sensor for the expansion valve A(thin tube) connect loose; 2.The sensor for the expansion A(thin tube) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve A(thin tube); 2. Replace the sensor for the expansion valve A(thin tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT &Inverter unitary types
24	Expansion valve B (thin)tube sensor fault	1. The wiring of the sensor for the expansion valve B ( thin tube ) connect loose; 2.The sensor for the expansion valve B(thin tube) is failure; 3.The sampling circuit is abnormally	1.Reconnect the wiring of the sensor for the expansion valve B(thin tube); 2.Replace the sensor for the expansion valve B(thin tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
25	Expansion valve C (thin)tube sensor fault	1. The wiring of the sensor for the expansion valve C(thin tube) connect loose; 2.The sensor of the expansion valve C ( thin tube ) is failure; 3.The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve C(thin tube); 2. Replace the sensor for the expansion valve C(thin tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
26	Expansion valve D (thin)tube sensor fault	1.The wiring of the sensor for the expansion valve D(thin tube) connect loose; 2.The sensor of the expansion valve D ( thin tube ) is failure; 3.The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve D(thin tube); 2. Replace the sensor for the expansion valve D(thin tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
27	Expansion valve A ( thick tube ) sensor fault	1. The wiring of the sensor for the expansion valve A(thick tube) connect loose;	1. Reconnect the wiring of the sensor for the expansion valve A(thick tube);	FOR MUTI-SPLIT

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		2.The sensor of the expansion valve A ( thick tube ) is failure; 3.The sampling circuit is abnormally	2. Replace the sensor for the expansion valve A(thick tube); 3. Replace the outdoor control board.	&inverter unitary types
28	Expansion valve B ( thick tube ) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve B ( thick tube ) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve B(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
29	Expansion valve C ( thick tube ) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve C ( thick tube ) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve C(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
30	Expansion valve D ( thick tube ) sensor fault	1. The wiring of the sensor for the expansion valve B(thick tube) connect loose; 2.The sensor of the expansion valve D ( thick tube ) is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor for the expansion valve B(thick tube); 2. Replace the sensor for the expansion valve D(thick tube); 3. Replace the outdoor control board.	FOR MUTI-SPLIT outdoor
31	The discharge pressure is too high	1. Overload in cooling; 2. Overload in heating	1. Overload in cooling; 2. Overload in heating	VRF outdoor
32	The suction pressure is too low fault	1.The refrigerate is not enough for the unit; 2.The expansion valve is failure in heating mode; 3.The outdoor ambient temperature is too low in heating mode	1.Check the welding point to confirm whether it exist the leakage point, and then add some refrigerate; 2. Replace the expansion valve; 3.The unit should operate within allowable temperature range.	VRF outdoor
40	high pressure and low pressure imbalance before compressor start	1.The wiring of the high/low pressure sensor connect loose; 2.The wiring of the bypass valve connect loose; 3. High/low pressure sensor is failure; 4.Bypass coil is failure. 5.Bypass valve is failure. 6.The capillary that connect with bypass valve blockage 7.The outdoor control board is fault;	1.Reconnect the wiring of high/low pressure sensor . 2..Reconnect the wiring of the bypass valve ; 3.Replace pressure sensor. 4.Replace bypass valve coil. 5.Replace bypass coil. 6.Check whether blockage occur. 7.Replace outdoor control board.	VRF outdoor
42	the voltage sensor fault	1.The wiring of the voltage sensor connect wrong or loose; 2. The voltage sensor is failure; 3. The sampling circuit of the voltage sensor is failure.	1. Reconnect the wiring of the current sensor; 2. Replace the voltage sensor; 3. Replace the outdoor control board.	
43	High Pressure sensor fault	1.The wiring of the high-pressure pressure sensor connect loose;	1.Reconnect the wiring of the high-pressure pressure sensor;	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		2.The high-pressure pressure sensor is failure 3.The sampling circuit of the high-pressure pressure sensor is failure	2.Replace the high-pressure pressure sensor; 3.Replace the outdoor control board.	
44	Low Pressure sensor fault	1.The wiring of the low-pressure pressure sensor connect loose; 2.The low-pressure pressure sensor is failure 3.The sampling circuit of the low-pressure pressure sensor is failure.	1.Reconnect the wiring of the low-pressure pressure sensor; 2.Replace the low-pressure pressure sensor; 3.Replace the outdoor control board.	
45	IPM fault	There are many reasons for this failure, If you need further analysis, fault code of the driver board is needed by watching the driver board fault led. Analysis can be further to know why and how to operate. Specific see table 5, table 6.	See attached "analysis of the driving board fault".	Applied for INVERTER type
46	IPM and control board communication fault	1.The cable between the control board and the driver board connect loose; 2.The cable between the control board and the driver board is failure; 3.The driver board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the driver board; 2.Replace the communication cable between the control board and the driver board; 3.Replace the driver board; 4.Replace the control board.	Applied for Inverter Unitary type&Free-Match
46-1	IPM and control board communication fault	1.The cable between the control board and the driver board connect loose; 2.The cable between the control board and the driver board is failure; 3.The driver board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the driver board; 2.Replace the communication cable between the control board and the driver board; 3.Replace the driver board; 4.Replace the control board.	Applied for VRF
46-2	Replenish gas board and control board communication fault	1.The cable between the control board and replenish gas board connect loose; 2.The cable between the control board and replenish gas board is failure; 3.The replenish gas board is failure 4.The control board is failure	1.Reconnect the cable between the control board and the replenish gas board; 2.Replace the communication cable between the control board and the replenish gas board; 3.Replace the replenish gas board ; 4.Replace the control board.	Applied for VRF
47	Discharge temperature too high fault	1. The refrigerant of the unit is not enough; 2.The refrigerant of the unit is not enough due to add the length of the installation pipe 3.Throttling service is failure; 4.The outdoor ambient temperature is too high	1.Check the welding point to confirm whether the unit has exist leakage point, and then add some refrigerant. 2.Add some refrigerant refer to the installation user manual; 3.Replace the throttling service(such	

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
			as capillary, expansion valve) 4. Normally protection.	
48	the outdoor DC fan motor fault (upper fan motor)	1.The wiring of the up DC fan motor connect loose; 2. The cord of the up DC fan motor is failure; 3.The up DC fan motor is failure; 4. The drive circuit of the up DC fan motor is failure; 5. The outdoor fan has been blocked.	1.Reconnect the wiring of the up DC fan motor; 2.Replace the up DC fan motor; 3. Replace the up DC fan motor; 4.Replace the driver board of the fan motor; 5. Check the outdoor fan and ensure the outdoor fan can run normally.	
48-1	the outdoor upper DC fan motor Locked rotor fault	1.The fan motor motor rotation blockage; 2. The fan motor is failure; 3.The outdoor control board is failure; 4. The driver board is failure;	1. Remove the fan motor locked-rotor sundry, recover motor operating conditions; 2. Replace the upper DC fan motor; 3. Replace the outdoor control board ; 4 .Replace the driver board .	VRF
48-2	the outdoor upper DC fan motor stall fault	1. The fan motor is failure; 2.The outdoor control board is failure; 3. The driver board is failure;	1. Replace the upper fan motor; 2. Replace the outdoor control board ; 3 .Replace the driver board .	VRF
49	the outdoor DC fan motor fault (down fan motor)	1.The wiring of the down DC fan motor connect loose; 2.The cord of the down DC fan motor is failure; 3. The down DC fan motor is failure; 4. The drive circuit of the down DCfan motor is failure; 5. The outdoor fan has been blocked.	1. Reconnect the wiring of the down DC fan motor; 2. Replace the down DC fan motor; 3.Replace the down DC fan motor; 4.Replace the driver board of the fan motor; 5. Check the outdoor fan and ensurethe outdoor fan can run normally.	
49-1	the outdoor lower DC fan motor Locked rotor fault	1.The fan motor motor rotation blockage; 2. The fan motor is failure; 3.The outdoor control board is failure; 4. The driver board is failure;	1. Remove the fan motor locked-rotor sundry, recover motor operating conditions; 2. Replace the lower DC fan motor; 3. Replace the outdoor control board ; 4 .Replace the driver board .	VRF
49-2	he outdoor lower DC fan motor stall fault	1. The fan motor is failure; 2.The outdoor control board is failure; 3. The driver board is failure;	1. Replace thelower fan motor; 2. Replace the outdoor control board ; 3 .Replace the driver board .	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
50	Expansion valve E temperature sensor fault	1. The wiring of the sensor connect loose; 2. The sensor of the expansion valve is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor; 2. Replace the sensor for the expansion valve E; 3. Replace the outdoor control board.	FOR Branch Box
63	Current sensor fault	1. The wiring of the current sensor connect loose; 2. The current sensor is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring of the sensor; 2. Replace the current sensor; 3. Replace the outdoor control board.	Application of three-phase power supply ON/OFF unitary models
66	Radiator temperature sensor fault	1. The sensor connect is loose; 2. The current sensor is failure; 3. The sampling circuit is abnormally	1. Reconnect the wiring ; 2. Replace the temperature sensor; 3. Replace the outdoor control board.	
67	Radiator temperature protect			
91	The unit turn off due to the IPM board over heating fault	1. The outdoor ambient is too high; 2. The speed of the out fan motor is too low if the fan motor is AC fan motor; 3. The outdoor unit has been installed without standard; 4. The supply power is too low.	1. Normally protection; 2. Check the fan capacitor, and replace the fan capacitor if it is failure; 3. Reinstalled the outdoor unit refer to the installation user manual; 4. Normally protection.	
92	the ratio of the discharge pressure than the suction pressure is too large	1. The filter of the expansion valve is dirty; 2. The difference between the indoor room temperature and the outdoor ambient temperature is too large; 3. The refrigerant of the unit is not enough; 4. The expansion is failure or the capillary is failure 5. The outdoor ambient temperature is too low in heating mode	1. Replace the expansion valve; 2. Normally protection; 3. Check the welding point of the unit to confirm whether it exist leakage point, and then add some refrigerant; 4. Replace the expansion valve or the capillary; 5. Please let the unit operates within the allowable temperature range.	VRF
93-1	The quantity of the indoor unit is more than the set.	1. Indoor unit quantity set is incorrect ; 2. New indoor unit is added in the system.	<b>Reset the number of the indoor units.</b>	VRF
93-2	The quantity of the indoor unit is less than the set.	1. Not all of the indoor units are power on; 2. The set quantity of the indoor unit is incorrect; 3. Add or remove some indoor units	1. Put all the indoor units power on; 2. Reset the quantity of the indoor units; 3. Reset the quantity of the indoor units	VRF
94	outdoor address conflict	1. Put all the indoor units power on; 2. Reset the quantity of the indoor units; 3. Reset the quantity of the indoor units	Change the setting address of the outdoor unit	VRF
95	the refrigerant of the unit is excessive fault	The refrigerant of the unit is excessive	Discharge the refrigerant and charge the refrigerant refer to the rating label	VRF

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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
96	the refrigerant of the unit is not enough fault	The refrigerant of the unit is not enough	Discharge the refrigerant and charge the refrigerant refer to the rating label	VRF
97	4-way valve commutation failure fault	1.The wiring of the 4-way valve coil connect loose; 2.The 4-way valve coil is failure; 3.The 4-way valve is failure; 4.The driver board of the 4-way valve is failure	1. Reconnect the wiring of the 4-way valve; 2. Replace the 4-way valve coil; 3. Replace the 4-way valve; 4.Replace the driver board of the 4-way valve.	FOR VRF&inverter unitary types

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The following is the fault code table of indoor.

**Sheet 2 Indoor Error Code List**

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
31	The buttons of the front panel AD fault	<ol style="list-style-type: none"> <li>1. The buttons are failure;</li> <li>2. The cable of the display board is failure;</li> <li>3. The display board is failure;</li> <li>4. The indoor control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the display board;</li> <li>2. Replace the cable of the display board;</li> <li>3. Replace the display board;</li> <li>4. Replace the indoor control board.</li> </ol>	Only for MUTI-SPLIT
32	The front panel fault is not in place	<ol style="list-style-type: none"> <li>1. The front panel has been blocked;</li> <li>2. The connection cable of the switch and the motor connect loose;</li> <li>3. The switch is failure;</li> <li>4. The motor of the front panel is failure;</li> <li>5. The indoor control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reassembly the front panel;</li> <li>2. Reconnect the cable of the switch and panel motor.</li> <li>3. Replace the switch;</li> <li>4. Replace the motor of the front panel;</li> <li>5. Replace the indoor control board.</li> </ol>	Only for MUTI-SPLIT
33	Room temperature sensor fault	<ol style="list-style-type: none"> <li>1. The cable of the indoor room temperature sensor connect loose;</li> <li>2. The indoor room temperature sensor is failure;</li> <li>3. The sampling circuit is abnormal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reconnect the cable of the indoor room temperature sensor;</li> <li>2. Replace the indoor room temperature sensor;</li> <li>3. Replace the indoor control board.</li> </ol>	Only for MUTI-SPLIT
34	Coil temperature sensor fault	<ol style="list-style-type: none"> <li>1. The cable of the indoor coil temperature sensor connect loose;</li> <li>2. The indoor coil temperature sensor is failure;</li> <li>3. The sampling circuit is abnormal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reconnect the cable of the indoor room temperature sensor;</li> <li>2. Replace the indoor room temperature sensor;</li> <li>3. Replace the indoor control board.</li> </ol>	Only for MUTI-SPLIT
35	Panel drive fault (two upper and lower panel position detection switch is not in accordance with the reservation timing action)	<ol style="list-style-type: none"> <li>1. The front panel has been blocked;</li> <li>2. The connection cable of the switch and the motor connect loose;</li> <li>3. The switch is failure;</li> <li>4. The motor of the front panel is failure;</li> <li>5. The indoor control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reassembly the front panel;</li> <li>2. Reconnect the cable of the switch and panel motor.</li> <li>3. Replace the switch;</li> <li>4. Replace the motor of the front panel;</li> <li>5. Replace the indoor control board.</li> </ol>	Only for MUTI-SPLIT

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
36	Communication between Indoor and outdoor fault	1. The connection cable between the indoor unit and the outdoor unit connect wrong; 2. The communication cable between the indoor unit and the outdoor unit connect loose or the cable between the indoor control board to terminal connect loose or the cable between the outdoor control board to the terminal connect loose; 3. The indoor control board is failure; 4. The outdoor control board is failure;	1. Reconnect the connection cable refer to the indoor and outdoor wiring diagram; 2. Reconnect the communication cable refer to the indoor and outdoor wiring diagram; 3. Replace the communication cable refer to the indoor and outdoor wiring diagram; 4. Replace the indoor control board; 5. Replace the outdoor control board.	Only for MUTI-SPLIT
37	Humidity sensor failure	1. The cable of the humidity sensor connect loose; 2. The humidity sensor is failure; 3. The indoor control board is failure.	1. Reconnect the cable of the humidity sensor; 2. Replace the humidity sensor; 3. Replace the indoor control board.	Only for MUTI-SPLIT
38	EEPROM Data error	1. EE components is failure; 2. The EE control circuit of the control board is failure; 3. The EE components has been inserted with opposite direction.	1. Replace the EE components; 2. Replace the control board; 3. Reinsert the EE components.	Only for MUTI-SPLIT
39	The indoor DC fan motor fault	1. The cable of the DC fan motor connect loose; 2. The indoor control board is failure; 3. The indoor fan motor is failure.	1. The cable of the DC fan motor connect loose; 2. The indoor control board is failure; 3. The indoor fan motor is failure.	Only for MUTI-SPLIT
40	The grill protection	1. The grill has not been installed in right place; 2. The protection switch is failure; 3. The indoor control board is failure.	1. Adjust the grill and put it in right place; 2. Replace the switch components; 3. Replace the indoor control board.	Only for MUTI-SPLIT
41	Zero check fault	Control board is failure.	Replace the indoor control board.	PG motor

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
51	Drainage protection	<ol style="list-style-type: none"> <li>1. The water level of the drain pan exceed safe level;</li> <li>2. The cable of the water level switch connect loose;</li> <li>3. The water level switch is failure;</li> <li>4. The control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check whether there are something to block the drain hose or the height of the drain hose is too high;</li> <li>1.2 Check the water pump and replace the water pump if the water pump is failure;</li> <li>2. Reconnect the cable of the water level switch refer to the wiring diagram;</li> <li>3. Replace the water level switch;</li> <li>4. Replace the control board.</li> </ol>	
52	The grill protection	<ol style="list-style-type: none"> <li>1. The grill has not been installed in right place;</li> <li>2. The protection switch is failure;</li> <li>3. The control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the grill and put it in right place;</li> <li>2. Replace the switch components;</li> <li>3. Replace the indoor control board.</li> </ol>	
53	The upper panel is not in place to protection	<ol style="list-style-type: none"> <li>1. The front panel has been blocked;</li> <li>2. The cable of the switch and the motor connect loose;</li> <li>3. The switch is failure;</li> <li>4. The panel motor is failure;</li> <li>5. The indoor control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reassembly the front panel;</li> <li>2. Reconnect the cable of the switch and the panel motor;</li> <li>3. Replace the switch components;</li> <li>4. Replace the panel motor;</li> <li>5. Replace the indoor control board.</li> </ol>	
54	The lower panel is not in place to protection	<ol style="list-style-type: none"> <li>1. The front panel has been blocked;</li> <li>2. The cable of the switch and the motor connect loose;</li> <li>3. The switch is failure;</li> <li>4. The panel motor is failure;</li> <li>5. The indoor control board is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reassembly the front panel;</li> <li>2. Reconnect the cable of the switch and the panel motor;</li> <li>3. Replace the switch components;</li> <li>4. Replace the panel motor;</li> <li>5. Replace the indoor control board.</li> </ol>	
55	Mode Conflict Fault	The user set the conflicting mode for more than two indoor units	Reset the operate mode for the indoor unit, for the one outdoor unit, the user should avoid to set the conflicting operate mode with the indoor units	ONLY FOR MUTI-SPLIT & VRF TYPES
56	Water tank water temperature sensor 1 fault	<ol style="list-style-type: none"> <li>1. The cable of the water tank water temperature sensor 1 connect loose;</li> <li>2. The cable of the water tank water temperature sensor 1 circuit is abnormal;</li> <li>3. The cable of the water tank water temperature sensor 1 is failure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reconnect the cable of the water temperature sensor 1;</li> <li>2. Change the cable .</li> <li>3. Replace the water temperature sensor 1 .</li> <li>4. Repalce indoor control board .</li> </ol>	Only for heat pump water heater

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		4.Indoor control board is failure.		
57	Water tank water temperature sensor 2fault	1. The cable of the water tank water temperature sensor 2 connect loose; 2. The cable of the water tank water temperature sensor 2 circuit is abnormal; 3. The cable of the water tank water temperature sensor 2 is failure. 4.Indoor control board is failure.	1. Reconnect the cable of the water temperature sensor 2; 2. Change the cable . 3. Replace the water temperature sensor 2 . 4.Repalce indoor control board .	Only for heat pump water heater
58	Coil temperature sensor (liquid tube)fault	1.The coil temperature sensor (liquid tube)connect loose; 2.The coil temperature sensor(liquid tube) is failure; 3.The control board is failure	1.Reconnect the coil temperature sensor; 2.Replace the coil temperature sensor components; 3.Replace the control board components.	Only for heat pump water heater
59	Liquid tube temperature protect	1.The resistance of temperature sensor is abnormal. 2.Control board circuit is abnormal. 3.Water temperature in tank is too high(over 70°C) ; 4.No water in tank.	1.Change temperature sensor. 2.Change Control board . 3.Normally protection,should lower water temperature ; 4.Open fill pump to supply water;Check whether there is leakage occur.	Only for heat pump water heater
60	water shortage protect	1.Water shortage in tank; 2.Water temperature sensor in tank is abnormal. 3.Control board is abnormal.	1.Open fill pump to supply water;Check whether there is leakage occur. 2.Change temperature sensor. 3.Change Control board .	Only for heat pump water heater
61	Indoor address repeat fault	Two or more two indoor units has set with the same address	Reset the address of the indoor unit and it should avoid the address repeat.	For VRF
62	Remote address repeat fault	When the same indoor unit with more than one wiring controller, a number of the address of the wiring controller is same	Reset the address of the wiring controller and avoid the address of the wiring controller repeat.	For VRF
64	Communication between Indoor & Outdoor unit Fault	1. The connection cable between the indoor unit and the outdoor unit connect wrong; 2.The communication cableconnect loose; 3.The communication cable between the	1. Reconnect the connection cable refer to the indoor and outdoor wiring diagram; 2. Reconnect the communication cable refer to the indoor and outdoor wiring diagram; 3. Replace the communication cable refer to the indoor and outdoor	

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
		indoor unit and the outdoor unit is failure or the cable between the indoor control board to terminal is failure or the cable between the outdoor control board to the terminal is failure; 4. The indoor control board is failure; 5. The outdoor control board is failure.	wiring diagram; 4. Replace the indoor control board; 5. Replace the outdoor control board.	
65	The indoor unit can not receive the sign of the wiring controller	1.The cable of the wiring controller connect loose; 2.The cable of the wiring controller is failure; 3.The wiring controller is failure; 4. The indoor control board is failure.	1.Reconnect the cable of the wiring controller; 2. Replace the cable of the wiring controller; 3. Replace the wiring controller; 4. Replace the indoor control board.	For VRF
72	Indoor fan motor fault	1. The cable of the indoor fan motor connect loose; 2. The cable of the indoor fan motor is failure; 3.The indoor fan motor is failure; 4. The indoor control board is failure	1. Reconnect the cable of the fan motor; 2. Replace the cable of the fan motor; 3. Replace the fan motor; 4. Replace the indoor control board; 5. Check the indoor fan and ensure the indoor fan can run normally.	
73	Indoor EEPROM Data 1 fault	1.Indoor EE components is failure; 2.The control circuit of the EE components is failure; 3.The EE components has been inserted with opposite direction	1. Replace the EE components; 2. Replace the indoor control board; 3. Reassembly the EE components of the indoor control board	
74	IndoorEEPROM Data 2 error	EE in MCU is failure,the unit can run ,but the function user has set is eneffective.	Replace EE data in MCU.	
80	Panel key fault	1. The button is failure; 2. The cable of the display board is failure; 3. The display board is failure; 4. The indoor control board is failure	1. Replace the display board; 2. Replace the cable of the display board; 3. Replace the display board; 4. Replace the indoor control board.	

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
81	Indoor ambient Temperature Sensor Fault	1. The cable of the room temperature sensor connect loose; 2. The room temperature sensor is failure; 3. The sampling circuit is abnormally	1.Reconnect the cable of the room temperature sensor; 2. Replace the room temperature sensor; 3. Replace the indoor control board.	
82	Evaporator Inlet Temperature Sensor Fault	1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally	1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally	
83	Evaporator Middle Temperature Sensor Fault	1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally	1. Reconnect the cable of the coil temperature sensor of the evaporator; 2. Replace the coil temperature sensor of the evaporator; 3. Replace the indoor control board.	
84	Evaporator outlet Temperature Sensor Fault	1.The cable of the coil temperature sensor of the evaporator is failure; 2. The coil temperature sensor of the evaporator is failure; 3. The sampling circuit is abnormally	1. Reconnect the cable of the coil temperature sensor of the evaporator; 2. Replace the coil temperature sensor of the evaporator; 3. Replace the indoor control board.	
85	Wiring Remote Controller Sensor Fault	1. The temperature sensor of the wiring controller is failure; 2. The sampling circuit of the wiring controller is failure	1. Replace the wiring controller; 2. Replace the wiring controller	
86	Air outlet temperature sensor fault	1. The cable of the temperature sensor of the air outlet connect loose; 2. The temperature sensor of the air outlet is failure; 3. The sampling circuit is abnormally	1.Reconnect the cable of the temperature sensor of the air outlet; 2. Replace the temperature sensor of the air outlet; 3. Replace the indoor control board.	
87	The inlet of water side entrance temperature sensor fault	1. The cable of the temperature sensor of the inlet of water side is failure; 2. The temperature sensor of the inlet of water side is failure; 3.The sampling circuit is abnormally	1. Reconnect the cable of the temperature sensor of the inlet of water side; 2. Replace the temperature sensor of the inlet of water side; 3. Replace the indoor control board.	

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
88	The outlet of water side entrance temperature sensor fault	1. The cable of the temperature sensor of the outlet of water side is failure; 2. The temperature sensor of the outlet of water side is failure; 3.The sampling circuit is abnormally	1. Reconnect the cable of the temperature sensor of the outlet of water side; 2. Replace the temperature sensor of the outlet of water side; 3. Replace the indoor control board.	
89	Humidity sensor failure	1.The humidity sensor is failure; 2. The indoor control board is abnormally	1. Replace the humidity sensor components; 2. Replace the indoor control board.	
98	Water module DIP switch function select fault	1.DIP switch select failure; 2.DIP is abnormal; 3.Control board is abnormal.	1.Repalce DIP switch; 2.Change DIP switch; 3.Change control board.	
F0( 240 )	Wire remote controller EEPROM failure	1.EE of wire remote controller is abnormal; 2.Wire remote controller control board is abnormal.	Change wire remote controller .	
F1( 241 )	Wire remote controller temperature sensor failure	1.Temperature sensor of wire remote controller is abnormal; 2.Wire remote controller control board is abnormal.	Change wire remote controller .	
F2( 242 )	Wire remote controller clock IC failure	Wire remote controller control board is abnormal.	Change wire remote controller .	
F3( 243 )	Wire remote controller humidity sensor failure	1.Temperature /humidity sensor of wire remote controller is abnormal; 2.Wire remote controller control board is abnormal.	Change wire remote controller .	
FE(254)	Communication between main control board &Wiring remote controller Fault ( display on wiring remote controller )	1. The wiring between the wiring controller to the indoor control board connect loose; 2. The sequence of the wiring between the wiring controller to the indoor control board is wrong; 3. The wiring between the wiring controller to the indoor control board is failure; 4.The wiring controller is failure; 5. The indoor control board is abnormally	1.Reconnect the wiring between the wiring controller to the indoor control board; 2.Replace the wiring between the wiring controller to the indoor control board; 3.Replace the wiring between the wiring controller to the indoor control board; 4. Replace the wiring controller; 5. Replace the indoor control board	

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	REMARKS
ER	Communication between main control board & display board Fault ( displays on display board )	1.The wiring between the display board to the indoor control board connect loose; 2.The sequence of the wiring between the display board to the indoor control board is wrong; 3.The wiring between the display board to the indoor control board is failure; 4. The display board is failure; 5. The indoor control board is failure.	1. Reconnect the between the display board to the indoor control board; 2. Replace the wiring between the display board to the indoor control board; 3. Replace the wiring between the display board to the indoor control board; 4. Replace the display board; 5. Replace the indoor control board.	

### NOTE 1:

If the indoor unit can not turn on or the indoor unit turn off itself after 30s, at the same time the unit do not display the error code, please check the fire and the socket of the control board.

### Note 2:

If the indoor unit display the 75,76,77,78 error code after you turn on the unit, please check the TEST seat of the indoor control board or the TEST detection circuit whether exists short circuit.

### Note 3:Overload in cooling mode

overload in cooling mode		
sr.	The root cause	Corrective measure
1	The refrigerant is excessive	Discharge the refrigerant, and recharge the refrigerant refer to the rating label
2	The outdoor ambient temperature is too high	Please use within allowable temperature range
3	The air outlet and air inlet of the outdoor unit is short-circuit	Adjust the installation of the outdoor unit refer to the user manual
4	The outdoor heat exchanger is dirty, such as condenser	Clean the heat exchanger of the outdoor unit, such as condenser
5	The speed of the outdoor fan motor is too low	Check the outdoor fan motor and fan capacitor
6	The outdoor fan is broken or the outdoor fan is blocked	Check the outdoor fan
7	The air inlet and outlet has been blocked	Remove the blocked thing

## TROUBLE SHOOTING

8	The expansion valve or the capillary is failure	Replace the expansion valve or the capillary
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### Note 4:Over load in heating mode

Overload in heating mode		
sr.	The root cause	Corrective measure
1	The refrigerant is excessive	Discharge the refrigerant, and recharge the refrigerant refer to the rating label
2	The indoor ambient temperature is too high	Please use within allowable temperature range
3	The air outlet and air inlet of the indoor unit is short-circuit	Adjust the installation of the indoor unit refer to the user manual
4	The indoor filter is dirty	Clean the indoor filter
5	The speed of the indoor fan motor is too low	Check the indoor fan motor and fan capacitor
6	The indoor fan is broken or the outdoor fan is blocked	Check the indoor fan
7	The air inlet and outlet has been blocked	Remove the blocked thing
8	The expansion valve or the capillary is failure	Replace the expansion valve or the capillary

The following is the fault code table of driver board.

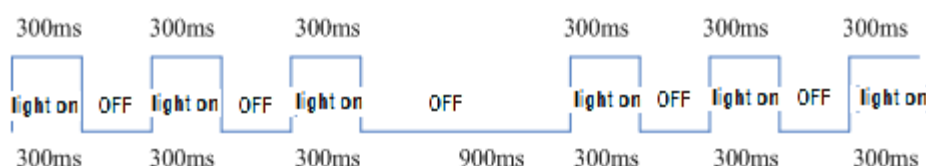
### Analysis of the Driving Board Fault

## TROUBLE SHOOTING

Driver board fault codes trouble shooting ( *Except Free-match 20K&16K DUAL TYPES* ), details see sheet 5.

I . Driver fault code display by indicate lamps of driver board flashing. The times that the lamp flashes equal to fault code. Flashing Intervals for a period of time again .Indicator light off when no fault.

For example , fault code 3 : Indicator light flash 3 times and Flashing Intervals for a period of time again, reports No. 3 fault.



**Sheet 5 Driver Error Code**  
-----Except 20K&16 Dual types

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
1	Q axis current detection, step out of failure	1, compressor wire connect not well; 2, Bad driver board components; 3, Compressor start load is too large; 4, Compressor demagnetization; 5, Compressor oil shortage, serious wear of crankshaft; 6. The compressor insulation fault	1, Check compressor wire; 2, Change driver board ; 3, Turn on the machine after pressure balance again; 4, Change Compressor; 5, Change the Compressor; 6, Change the Compressor.
2	Phase current detection, out of step	1. Compressor voltage default phase; 2. Bad driver board components; 3. The compressor insulation fault	1, Check compressor wire connection; 2, Change the driver board; 3, Change the Compressor.
3	Initialization, phase current imbalance	Bad driver board components.	Change driver board .
4	Speed estimation, step out of failure	1, Bad driver board components; 2, Compressor shaft clamping; 3. The compressor insulation fault.	1, Change driver board ; 2, Change the Compressor ; 3, Change the Compressor .
5	IPM FO output fault	1. System overload or current overload. 2, Driver board fault; 3, Compressor oil shortage, serious wear of crankshaft; 4, The compressor insulation fault.	1, Check the air-conditioner system; 2, Change the driver board; 3, Change the Compressor; 4, Change the Compressor.

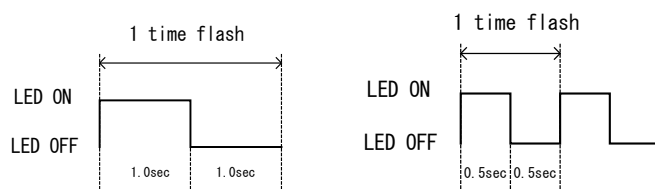
## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
6	Communication between driver board and control board fault	1,Communication wire connect not well; 2,Driver board fault; 3,Control board fault;	1, Check compressor wire connect. 2,Change the driver board; 3,Change the control board ;
7	AC voltage,overload voltage	1,Supply voltage input too high or too low; 2,Driver board fault;	1,Check power supply; 2,Change the driver board;
8	DC voltage,overload voltage	1,Supply voltage input too high ; 2,Driver board fault;	1,Check power supply; 2,Change the driver board;
9	AC voltage imbalance	Driver board fault;	Change the driver board;
10	The current detection circuit fault	Bad driver board components;	Change the driver board
11	AC voltage supply in	1,Power supply abnormal, power frequency out of range; 2,Driver board fault;	1,Check the system; 2,Change the driver board;
12	Products of single-phase PFC over-current, FO output low level	1,System overload, current too large; 2,Driver board fault; 3,PFC fault.	1,Check the system; 2,Change the driver board; 3,Change PFC.
13	Inverter over current (3-phase power supply air conditioners)	1,System overload, current too large; 2,Driver board fault; 3 , Compressor oil shortage, serious wear of crankshaft; 4,The compressor insulation fault.	1,Check the system; 2,Change the driver board; 3, Change the Compressor; 4, Change the Compressor.
14	Inverter over current	1,System overload, current too large; 2,Driver board fault; 3,Compressor oil shortage,serious wear of crankshaft; 4,The compressor insulation fault.	1,Check the system; 2,Change the driver board; 3, Change the Compressor; 4, Change the Compressor.
15	PFC over current(single-phase air-conditioner)	1,System overload, current too large; 2,Driver board fault; 3,PFC fault..	1,Check the system; 2,Change the driver board; 3,Change PFC.
16	Phase imbalance or phase lacks or the instantaneous power failure (only for 3-phase power supply air conditioners)	1,3-Phase voltage imbalance; 2,The 3-phase power supply phase lost; 3,Power supply wiring wrong; 4,Driver board fault.	1,Check the power supply; 2,Check the power supply; 3,Check the power supply wiring connect; 4,Change the driver board.
17	The instantaneous power failure detection	1,The power supply is not stable ; 2.The instantaneous power failure ; 3,Driver board fault;	1,Check the power supply. 2,Not fault. 3,Change the driver board;
18	Low DC voltage 200V	1,Voltage input too low ; 2,Driver board fault.	1,Check the power supply. 2,Change the driver board.

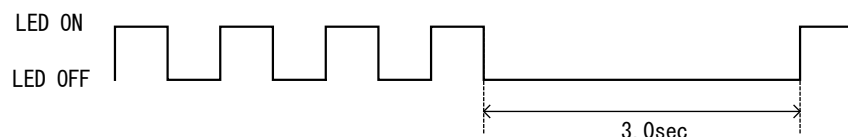
li : Driver board fault codes trouble shooting ( *ONLY FOR 20K&16K DUAL TYPES* ),details see sheet6.

2-seconds long LED flash on/off in means number 5 , 1 -second short LED flash on/off means number 1.

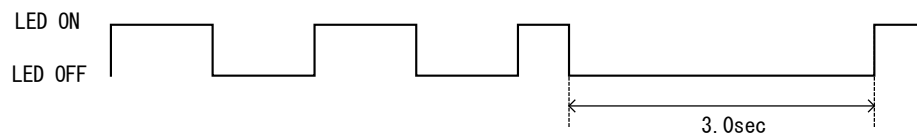
## TROUBLE SHOOTING



For example , fault code 4 : Indicator light flash 4 times 1-second short LED on/off Intervals for a period of time again, reports No. 4 fault.



For example , fault code 11 : Indicator light flash 2 times 2-seconds long LED on/off and 1 time 1-second long LED on/off Intervals for a period of time again, reports No. 11 fault.



### Sheet 6 Driver Error Code

-----Only for 20K&16 Dual types

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
1	Inverter DC voltage overload fault	1、 Power supply input too high or too low; 2、 Driver board fault.	1,Check power supply 2,Change driver board.
2	Inverter DC low voltage fault		
3	Inverter AC current overload fault		
4	Out-of-step detection	1、 Compressor phase lost ; 2、 Bad driver board components ; 3、 The compressor insulation fault	1,Check compressor wire connect ; 2,Change driver board ; 3,Change compressor.
5	Loss phase detection fault (speed pulsation)		
6	Loss phase detection fault (current imbalance)		
7	Inverter IPM fault (edge)	1、 System overload or current overload; 2,Driver board fault. 3,Compressor oil shortage, serious wear of crankshaft 4、 The compressor insulation fault	1、 Check the system . 2、 Change driver board; 3、 Change the compressor; 4、 Change the compressor.
8	Inverter IPM fault (level)		
9	PFC_IPM IPM fault (edge)		
10	PFC_IPM IPM fault (level)		
11	PFC power detection of failure	1、 The power supply is not stable ; 2、 The instantaneous power failure ; 3、 Driver board failure.	1、 Check the power supply. 2、 Not abnormal. 3、 Change the driver board.
12	PFC overload current detection of failure.	1、 System overload, current too high ;	1、 Check the system; 2、 Change the driver

## TROUBLE SHOOTING

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With
		2、 Driver board failure ; 3、 PFC failure ;	board; 3、 Change the PFC.
13	DC voltage detected abnormal .	1、 Input voltage is too high or too low; 2,Driver board failure ;	1,Check the power supply. 2,Change the driver board;
14	PFC LOW voltage detected failure.		
15	AD offset abnormal detected failure.	Driver board failure.	Change the driver board.
16	Inverter PWM logic set fault.		
17	Inverter PWM initialization failure		
18	PFC_PWM logic set fault.		
19	PFC_PWM initialization fault.		
20	Temperature abnormal.		
21	Shunt resistance unbalance adjustment fault		
22	Communication failure.	1、 Communication wire connect not well. 2、 Driver board failure. 3、 Control board failure.	1、 Check the wiring. 2、 Change the driver board. 3、 Change the control board.
23	Motor parameters setting of failure	Initialization abnormal.	Reset the power supply.