### 2. Troubleshooting

#### 2.1Trouble 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)Fault codes indicated by wired remote controller (see figure below)

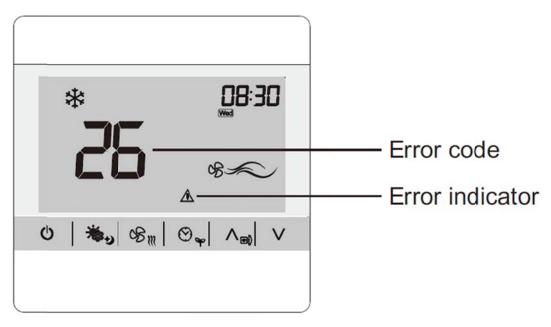


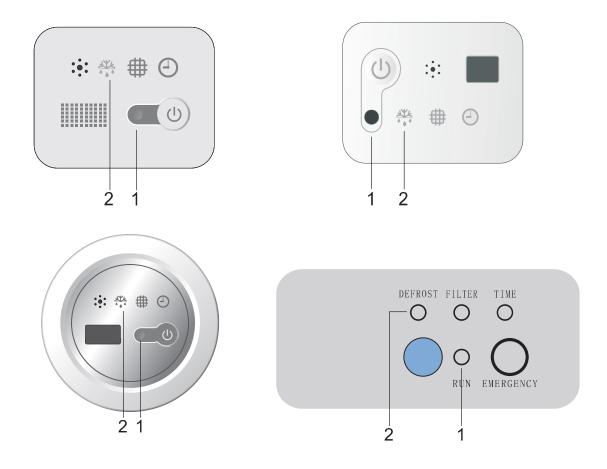
FIG.1 FAULT CODE DISPLAY ON WIRE REMOT CONTROLLER

(2)Fault codes indicated by LED lamps on display panel

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.

### Display panel



- 1 Run indicator (Red)
- Indicates the fault code ten digital number.
- 2 Defrost indicator (Green) Indicates the fault code singal digital number.

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

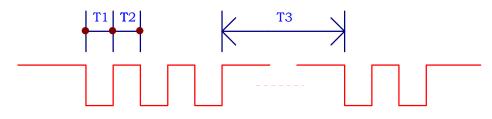


Fig.2 LED ALSH CONTROL

#### Outdoor Unit

DC-Inverter split airconditoner 1.0/1.5/2.0/3.0Hp(Main control board upside-dowwn)

Fault code displays by LED lamps on outdoor main control board.

There are 3 LED laamps on control board, LEED1, LED2 aand LED3.

LED1 indicate fault code ten digit number, LED2 indicate fault code single digit number and LED3 indicate

outdoor drive control fault .

When LED3 is off, LED1 and LED 2 indicate main control failure code.

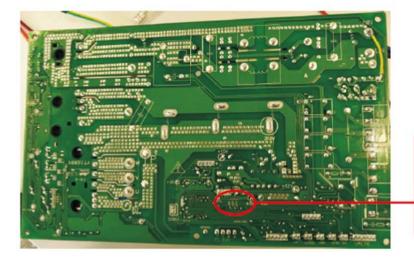
When LED3 is on, LED1 and LED 2 indicate drive control failure code.

When LED3 is flickering and LED1, LED 2 are all off, indicate compressor is preheating .

Failures display with 5s interval .It means LED will off 5s to report next failure code .

System protect codes display method is the same with main control failure  $\operatorname{cod} e$ .

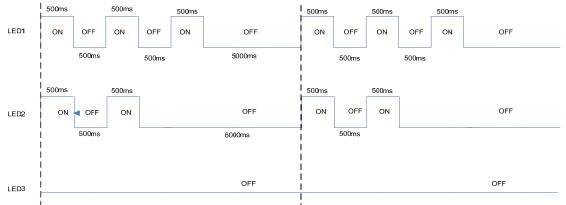
LED lamps will off when there is no failure ,protect or preheating.



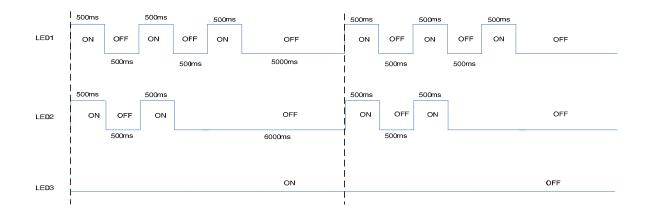


LED1:Ten digit number LED2:Single digit number LED3:Drive failure indicator

For example, outdoor main control fault 32:



For example, outdoor drive fault 32:

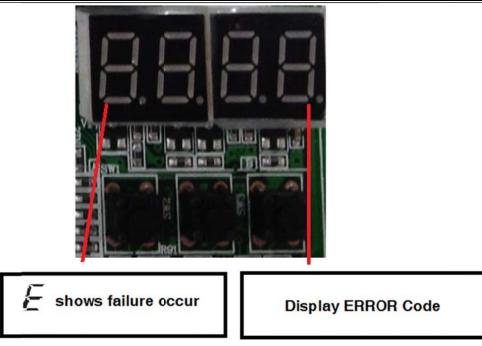


#### (2) INVERTER SPLIT AIR CONDITIONER(4.0/5.0/6.0/6.5HP):

 Outdoor Control Board

 Digital Tube

Fault code will display on digital tube board.



## 2.2 Fault codes

The following is the fault code table of outdoor.

Sheet 1 Outdoor Fault co	)de
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Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	Remarks
1	Outdoor ambient temperature sensor fault	<ol> <li>The outdoor ambient temperature sensor connect loose;</li> <li>The outdoor ambient temperature sensor is failure;</li> <li>The sampling circuit is failure</li> </ol>	<ol> <li>Reconnect the outdoor ambient temperature sensor;</li> <li>Replace the outdoor ambient temperature sensor omponents;</li> <li>Replace the outdoor control board components.</li> </ol>	
2	Outdoor coil temperature sensor fault	<ol> <li>The outdoor coil temperature sensor connect loose;</li> <li>The outdoor coil temperature sensor is failure;</li> <li>The sampling circuit is failure</li> </ol>	<ol> <li>Reconnect the outdoor coil temperature sensor;</li> <li>Replace the outdoor coil temperature sensor components;</li> <li>Replace the outdoor control board components.</li> </ol>	
3	The unit over-current turn off fault	<ol> <li>Control board current sampling circuit is failure;</li> <li>The current is over high because of the supply voltage is too low;</li> <li>The compressor is blocked;</li> <li>Overload in cooling mode;</li> <li>Overload in heating mode.</li> </ol>	<ol> <li>Replace the electrical control board components;</li> <li>Normally protection;</li> <li>Replace the compressor;</li> <li>Please see the Note 3;</li> <li>Please see the Note 4.</li> </ol>	
4	EEprom Data error	<ul><li>1.EE components is failure; 2.EE</li><li>components control circuit failure;</li><li>3.EE components insert incorrect</li></ul>	<ol> <li>Replace the EE components;</li> <li>Replace the outdoor control board components;</li> <li>Reassembly the EE components.</li> </ol>	
5	Cooling freezing protection(the indoor coil temperature is too low) or heating overload(indoor coil temperature is too high)	<ol> <li>The indoor unit can not blow air normally;</li> <li>The room temperature is too low in cooling mode or the room temperature is too high in heating;</li> <li>The filter is dirty;</li> <li>The duct resistance is too high to result in low air flow;</li> <li>The setting fan speed is too low;</li> <li>The indoor unit is not standard installed, air inlet is too near with air outlet .</li> </ol>	<ol> <li>Check the indoor fan, indoor fan motor and evaporator whether normally;</li> <li>Normally protection;</li> <li>Clean the filter;</li> <li>Check the volume control valve,duct length etc;</li> <li>Set the speed with high speed;</li> <li>Reinstall the indoor unit refer to the user manual to change the distance between the indoor unit and the wall or ceiling.</li> </ol>	

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	Remarks
7	The communication fault between the indoor unit and outdoor unit	<ol> <li>The connection cable connect wrong between the indoor unit and outdoor unit;</li> <li>The communication cable connect loose;</li> <li>The communication cable is fault;</li> <li>The indoor control board is fault;</li> <li>The outdoor control board is fault;</li> <li>Communication circuit fuse open;</li> <li>The specification of communication cable is incorrect.</li> </ol>	<ol> <li>Reconnect the connection cable refer to the wiring diagram;</li> <li>Reconnect the communication cable;</li> <li>Replace the communication cable;</li> <li>Replace the indoor control board;</li> <li>Replace the outdoor control board;</li> <li>Check the communication circuit, adjust the DIP switch and the short-circuit fuse.</li> <li>Choose suitable communication cable refer to the user manual</li> </ol>	
12	voltage absent phase	<ol> <li>Three-phase power is abnormal;</li> <li>The outdoor wiring connect wrong;</li> <li>The outdoor control board is failure.</li> </ol>	<ol> <li>Normally protection</li> <li>Check the wiring connection refer to the wiring diagram;</li> <li>Replace the outdoor control board</li> </ol>	Application of three-phase power supply models
13	Compressor overheat protector device	<ol> <li>The wiring of the overload protector connect loose.</li> <li>The overload protector is failure .</li> <li>The refrigerant is not enough;</li> <li>The installation pipe is too long than normal, but not add the enough refrigerant;</li> <li>The expansion valve is failure;</li> <li>The outdoor control board is failure</li> </ol>	<ol> <li>Reconnect the wiring of the overload protector;</li> <li>Replace the overload protector;</li> <li>Check the welding point of the unit to confirm whether it is leakage, and then recharge the refrigerant;</li> <li>Add the refrigerant;</li> <li>Replace expansion valve;</li> <li>Replace the outdoor control board.</li> </ol>	
14	the high pressure switch operate or the unit turn off for high pressure protection	<ol> <li>The wiring of the high pressure protector connect loose;</li> <li>The high pressure protector is failure;</li> <li>The outdoor control board is abnormal;</li> <li>Overload in cooling;</li> <li>Overload in heating.</li> </ol>	<ol> <li>Reconnect the wiring the high pressure protector;</li> <li>Replace the high pressure protector;</li> <li>Replace the outdoor control board;</li> <li>Please refer to the Note 3;</li> <li>Please refer to the Note 4.</li> </ol>	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	<ol> <li>The wiring of the low pressure switch connect loose ;</li> <li>The low pressure switch is failure;</li> <li>The refrigerant is not enough;</li> <li>The expansion valve failure in heating mode;</li> <li>The outdoor control board is abnormal.</li> </ol>	<ol> <li>Reconnect the wiring of the low pressure switch;</li> <li>Replace the low pressure switch;</li> <li>Check the welding point to confirm whether the unit is leakage, and then add some refrigerant;</li> <li>Replace the expansion valve;</li> <li>Replace the outdoor control board.</li> </ol>	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	<ol> <li>The wiring of the discharge temperature sensor connect loose;</li> <li>The discharge temperature sensor is failure;</li> <li>The sampling circuit is abnormal.</li> </ol>	<ol> <li>Reconnect the wiring of the discharge temperature sensor;</li> <li>Replace the discharge temperature sensor;</li> <li>Replace the outdoor control board.</li> </ol>	

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	Remarks
18	AC voltage is abnormal	<ol> <li>The AC voltage&gt;275V or &lt;160V.</li> <li>The AC voltage of sampling circuit on the driver board is abnormally</li> </ol>	<ol> <li>Normally protection, please check the supply power;</li> <li>Replace the driver board.</li> </ol>	
19	Suction temperature sensor fault	<ol> <li>The wiring of the suction temperature sensor connect loose;</li> <li>The suction temperature sensor is failure;</li> <li>The sampling circuit is abnormally.</li> </ol>	<ol> <li>Reconnect the wiring of the suction temperature sensor;</li> <li>Replace the suction temperature sensor;</li> <li>Replace the outdoor control board.</li> </ol>	
22	The defrosting sensor fault	<ol> <li>The wiring of the defrosting sensor connect loose;</li> <li>The defrosting sensor is failure;</li> <li>The sampling circuit is abnormally</li> </ol>	<ol> <li>Reconnect the wiring of the defrosting sensor;</li> <li>Replace the defrosting sensor;</li> <li>Replace the outdoor control board.</li> </ol>	
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".	
46	IPM and control board communication fault	<ol> <li>The cable between the control board and the driver board connect loose;</li> <li>The cable between the control board and the driver board is failure;</li> <li>The driver board is failure</li> <li>The control board is failure</li> </ol>	<ol> <li>Reconnect the cable between the control board and the driver board;</li> <li>Replace the communication cable between the control board and the driver board;</li> <li>Replace the driver board;</li> <li>Replace the control board.</li> </ol>	
47	Discharge temperature too high fault	<ol> <li>The refrigerant of the unit is not enough;</li> <li>The refrigerant of the unit is not enough due to add the length of the installation pipe</li> <li>Throttling service is failure;</li> <li>The outdoor ambient temperature is too high.</li> </ol>	<ol> <li>Check the welding point to confirm whether the unit has exist leakage point, and then add some refrigerant.</li> <li>Add some refrigerant refer to the installation user manual;</li> <li>Replace the throttling service(such as capillary, expansion valve)</li> <li>Normally protection.</li> </ol>	
48	the outdoor DC fan motor fault (upper fan motor)	<ol> <li>The wiring of the up DC fan motor connect loose;</li> <li>The cord of the up DC fan motor is failure;</li> <li>The up DC fan motor is failure;</li> <li>The drive circuit of the up DC fan motor is failure;</li> <li>The outdoor fan has been blocked.</li> </ol>	<ol> <li>Reconnect the wiring of the up DC fan motor;</li> <li>Replace the up DC fan motor;</li> <li>Replace the up DC fan motor;</li> <li>Replace the driver board of the fan motor;</li> <li>Check the outdoor fan and ensure the outdoor fan can run normally.</li> </ol>	
49	the outdoor DC fan motor fault (down fan motor)	<ol> <li>The wiring of the down DC fan motor connect loose;</li> <li>The cord of the down DC fan motor is failure;</li> <li>The down DC fan motor is failure;</li> <li>The drive circuit of the down DC fan motor is failure;</li> <li>The outdoor fan has been blocked.</li> </ol>	<ol> <li>Reconnect the wiring of the down DC fan motor;</li> <li>Replace the down DC fan motor;</li> <li>Replace the down DC fan motor;</li> <li>Replace the driver board of the fan motor;</li> <li>Check the outdoor fan and ensure the outdoor fan can run normally.</li> </ol>	
91	The unit turn off due to the IPM board over heating fault	<ol> <li>The outdoor ambient is too high;</li> <li>The speed of the out fan motor is too low if the fan motor is AC fan motor;</li> <li>The outdoor unit has been installed without standard;</li> <li>The supply power is too low.</li> </ol>	<ol> <li>Normally protection;</li> <li>Check the fan capacitor, and replace the fan capacitor if it is failure;</li> <li>Reinstalled the outdoor unit refer to the installation user manual;</li> <li>Normally protection.</li> </ol>	

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	
97	4-way valve commutation failure fault	<ol> <li>The wiring of the 4-way valve coil connect loose;</li> <li>The 4-way valve coil is failure;</li> <li>The 4-way valve is failure;</li> <li>The driver board of the 4-way valve is failure</li> </ol>	<ol> <li>Reconnect the wiring of the 4-way valve;</li> <li>Replace the 4-way valve coil;</li> <li>Replace the 4-way valve;</li> <li>Replace the driver board of the 4-way valve.</li> </ol>	

The following is the fault code table of indoor.

#### Sheet 2 Indoor fault code

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	Remarks
51	Drainage protection	<ol> <li>The water level of the drain pan exceed safe level;</li> <li>The cable of the water level switch connect loose;</li> <li>The water level switch is failure;</li> <li>The control board is failure.</li> </ol>	<ol> <li>1.1 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>	
64	Communication between Indoor & Outdoor unit Fault	<ol> <li>The connection cable between the indoor unit and the outdoor unit connect wrong;</li> <li>The communication cable connect loose;</li> <li>The communication cable between the 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;</li> <li>The indoor control board is failure;</li> <li>The outdoor control board is failure.</li> </ol>	<ol> <li>Reconnect the connection cable refer to the indoor and outdoor wiring diagram;</li> <li>Reconnect the communication cable refer to the indoor and outdoor wiring diagram;</li> <li>Replace the communication cable refer to the indoor and outdoor wiring diagram;</li> <li>Replace the indoor control board;</li> <li>Replace the outdoor control board.</li> </ol>	
72	Indoor fan motor fault	<ol> <li>The cable of the indoor fan motor connect loose;</li> <li>The cable of the indoor fan motor is failure;</li> <li>The indoor fan motor is failure;</li> <li>The indoor control board is failure.</li> </ol>	<ol> <li>Reconnect the cable of the fan motor;</li> <li>Replace the cable of the fan motor;</li> <li>Replace the fan motor;</li> <li>Replace the indoor control board;</li> <li>Check the indoor fan and ensure the indoor fan can run normally.</li> </ol>	
73	Indoor EEPROM Data 1 fault	<ol> <li>Indoor EE components is failure;</li> <li>The control circuit of the EE components is failure;</li> <li>The EE components has been inserted with opposite direction.</li> </ol>	<ol> <li>Replace the EE components;</li> <li>Replace the indoor control board;</li> <li>Reassembly the EE components of the indoor control board.</li> </ol>	
74	Indoor EEPROM Data 2 error	EE in MCU is failure,the unit can run ,but the function user has set is ineffective.	Replace EE data in MCU.	
81	Indoor ambient Temperature Sensor Fault	<ol> <li>The cable of the room temperature sensor connect loose;</li> <li>The room temperature sensor is failure;</li> <li>The sampling circuit is abnormally.</li> </ol>	<ol> <li>Reconnect the cable of the room temperature sensor;</li> <li>Replace the room temperature sensor;</li> <li>Replace the indoor control board.</li> </ol>	

Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	Remarks
83	Evaporator Middle Temperature Sensor Fault	<ol> <li>The cable of the coil temperature sensor of the evaporator is failure;</li> <li>The coil temperature sensor of the evaporator is failure;</li> <li>The sampling circuit is abnormally</li> </ol>	<ol> <li>Reconnect the cable of the coil temperature sensor of the evaporator;</li> <li>Replace the coil temperature sensor of the evaporator;</li> <li>Replace the indoor control board.</li> </ol>	
FE (254)	Communication between main control board &Wiring remote controller Fault ( display on wiring remote controller )	<ol> <li>The wiring between the wiring controller to the indoor control board connect loose;</li> <li>The sequence of the wiring between the wiring controller to the indoor control board is wrong;</li> <li>The wiring between the wiring controller to the indoor control board is failure;</li> <li>The wiring controller is failure;</li> <li>The indoor control board is abnormally</li> </ol>	<ol> <li>Reconnect the wiring between the wiring controller to the indoor control board;</li> <li>Replace the wiring between the wiring controller to the indoor control board;</li> <li>Replace the wiring between the wiring controller to the indoor control board;</li> <li>Replace the wiring controller;</li> <li>Replace the wiring controller;</li> <li>Replace the indoor control board</li> </ol>	
ER	Communication between main control board &display board Fault ( displays on display board )	<ol> <li>The wiring between the display board to the indoor control board connect loose;</li> <li>The sequence of the wiring between the display board to the indoor control board is wrong;</li> <li>The wiring between the display board to the indoor control board is failure;</li> <li>The display board is failure;</li> <li>The indoor control board is failure.</li> </ol>	<ol> <li>Reconnect the between the display board to the indoor control board;</li> <li>Replace the wiring between the display board to the indoor control board;</li> <li>Replace the wiring between the display board to the indoor control board;</li> <li>Replace the display board;</li> <li>Replace the display board;</li> <li>Replace the indoor control board.</li> </ol>	

#### 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 fault code, please check the fire and the socket of the control board.

#### Note 2:

If the indoor unit display the 75,76,77,78 fault 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

#### Sheet 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
8	The expansion valve or the capillary is failure	Replace the expansion valve or the capillary

#### Note 4: Over load in heating mode

#### Sheet 4 Overload 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			

Fault	Fault Description	Possible Reason of Abnormality	How to Deal With
code	Invertor DC veltage everlaged fault		
1	Inverter DC voltage overload fault Inverter DC low voltage fault	<ol> <li>Power supply input too high or too low;</li> </ol>	1.Check power supply
3	Inverter AC current overload fault	2.Driver board fault.	2.Change driver board.
4	Out-of-step detection		
4	Loss phase detection fault (speed	1.Compressor phase lost ;	1.Check compressor wire connect ;
5	pulsation)	2.Bad driver board components ;	2.Change driver board ;
	Loss phase detection fault (current	3.The compressor insulation fault	3.Change compressor.
6	imbalance)	5. The compressor insulation laut	o.onange compressor.
7	Inverter IPM fault (edge)	1.System overload or current	
8	Inverter IPM fault (level)	overload;	1.Check the system .
9	PFC_IPM IPM fault (ledge)	2.Driver board fault.	2.Change driver board;
9		3.Compressor oil shortage, serious	3.Change the compressor;
10	PFC_IPM IPM fault (level)	wear of crankshaft ;	4.Change the compressor.
10		4.The compressor insulation fault	4. Ondrige the compression.
-		1.The power supply is not stable ;	1.Check the power supply.
11	PFC power detection of failure	2.The instantaneous power failure ;	2.Not abnormal.
		3.Driver board failure.	3.Change the driver board.
		1.System overload, current too high;	1.Check the system;
12	PFC overload current detection of	2.Driver board failure ;	2.Change the driver board;
12	failure.	3.PFC failure ;	3.Change the PFC.
13	DC voltage detected abnormal .	1.Input voltage is too high or too low;	1.Check the power supply.
14	PFC LOW voltage detected failure.	2.Driver board failure ;	2.Change the driver board;
15	AD offset abnormal detected failure.		
16	Inverter PWM logic set fault.		
17	Inverter PWM initialization failure		
18	PFC_PWM logic set fault.		
10	PFC_PWM initialization fault.	Driver board failure.	Change the driver board.
20	Temperature abnormal.		
	Shunt resistance unbalance		
21	adjustment fault		
		1.Communication wire connect not	
		well.	1.Check the wiring.
22	Communication failure.	2.Driver board failure.	2.Change the driver board.
		3.Control board failure.	3.Change the control board.
23	Motor parameters setting of failure	Initialization abnormal.	Reset the power supply.
			1.Change EEPROM ;
25	EE data abnormal	Driver board EEPROM abnormal	2.Change driver board.
			1.Check power supply, to provide
26	DC voltage mutation error	1.Power input changes suddenly	stable power supply ;
_	5	2.Driver board failure	2. Change driver board.
		1.System overload, phase current is	1.Check system if normally.
27	D axis current control error	too high;	2.Check stop valve if is open;
		2.Driver board failure	3. Change driver board.
		1.System overload, phase current is	1.Check system if normally.
28	q axis current control error	too high ;	2.Check stop valve if is open;
		2.Driver board failure	3. Change driver board.
		1. System overload suddenly;	
20	Saturation error of d axis current	2. Compressor parameter not	1.Check system if normally.
29	control integral	suitable;	2.Check stop valve if is open;
	-	3. Driver board failure	3. Change driver board.
		1. System overload suddenly;	4 Obeels events if a series if
			1.Check system if normally.
	Saturation error of q axis current	2. Compressor parameter not	O Ohaali atam
30	Saturation error of q axis current control integral	2. Compressor parameter not suitable;	2.Check stop valve if is open; 3. Change driver board.

#### Sheet 5 Drive Fault code(1.0/1.5/2.0/3.0HP)

Fault	Fault Description	Possible Peason of Abnormality	How to Deal With
code	Fault Description	Possible Reason of Abnormality	How to Deal With
1	Q axis current detection, step out of failure	<ol> <li>compressor wire connect not well;</li> <li>Bad driver board components;</li> <li>Compressor start load is too large;</li> <li>Compressor demagnetization;</li> <li>Compressor oil shortage, serious wear of crankshaft.;</li> <li>The compressor insulation fault</li> </ol>	<ol> <li>Check compressor wire;</li> <li>Change driver board;</li> <li>Turn on the machine after pressure balance again;</li> <li>Change Compressor;</li> <li>Change the Compressor;</li> <li>Change the Compressor.</li> </ol>
2	Phase current detection, out of step	<ol> <li>Compressor voltage default phase;</li> <li>Bad driver board components;</li> <li>The compressor insulation fault</li> </ol>	<ol> <li>Check compressor wire connection;</li> <li>Change the driver board;</li> <li>Change the Compressor.</li> </ol>
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	<ol> <li>System overload or current overload.</li> <li>Driver board fault;</li> <li>Compressor oil shortage,serious wear of crankshaft;</li> <li>The compressor insulation fault.</li> </ol>	<ol> <li>Check the air-conditioner system;</li> <li>Change the driver board;</li> <li>Change the Compressor;</li> <li>Change the Compressor.</li> </ol>
6	Communication between driver board and control board fault	<ol> <li>Communication wire connect not well;</li> <li>Driver board fault;</li> <li>Control board fault;</li> </ol>	<ol> <li>Check compressor wire connect.</li> <li>Change the driver board;</li> <li>Change the control board ;</li> </ol>
7	AC voltage,overload voltage	<ol> <li>Supply voltage input too high or too low;</li> <li>Driver board fault;</li> </ol>	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 PFC current detection circuit fault before compressor is ON	Bad driver board components;	Change the driver board
11	AC voltage supply in outrange	1.Power supply abnormal, power frequency out of range; 2.Driver board fault;	1.Check the system; 2.Change the driver board;
	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.
12	Inverter over current (3-phase power supply air conditioners)	<ol> <li>System overload, current too large;</li> <li>Driver board fault;</li> <li>Compressor oil shortage, serious wear of crankshaft;</li> <li>The compressor insulation fault.</li> </ol>	<ol> <li>1.Check the system;</li> <li>2.Change the driver board;</li> <li>3.Change the Compressor;</li> <li>4.Change the Compressor.</li> </ol>
13	Inverter over current	<ol> <li>System overload, current too large;</li> <li>Driver board fault;</li> <li>Compressor oil shortage,serious wear of crankshaft;</li> <li>The compressor insulation fault.</li> </ol>	<ol> <li>Check the system;</li> <li>Change the driver board;</li> <li>Change the Compressor;</li> <li>Change the Compressor.</li> </ol>
14	PFC over current(single-phase air-conditioner) Phase imbalance or phase lacks or the instantaneous power failure (only for 3-phase power supply air conditioners)	<ol> <li>1.System overload, current too large;</li> <li>2.Driver board fault;</li> <li>3.PFC fault.</li> <li>1.3-Phase voltage imbalance;</li> <li>2.The 3-phase power supply phase lost;</li> <li>3.Power supply wiring wrong;</li> <li>4.Driver board fault.</li> </ol>	<ol> <li>Check the system;</li> <li>Change the driver board;</li> <li>Change PFC.</li> <li>Check the power supply;</li> <li>Check the power supply;</li> <li>Check the power supply wiring connect;</li> <li>Change the driver board.</li> </ol>
15	The instantaneous power failure detection	1.The power supply is not stable ; 2.The instantaneous power failure ; 3.Driver board fault;	<ol> <li>Check the power supply.</li> <li>Not fault.</li> <li>Change the driver board;</li> </ol>

### Sheet 6 Drive Fault code (4.0/5.0/6.0/6.5HP)

<b>2</b>				
Fault code	Fault Description	Possible Reason of Abnormality	How to Deal With	
16	Low DC voltage 200V	1.Voltage input too low ; 2.Driver board fault.	1.Check the power supply. 2.Change the driver board.	
18	Driver board read EE data error	1.EEPROM has no data or data error; 2.EEPROM circuit fault.	1,Change EEPROM component; 2,Change the driver board.	
19	PFC chip receive data fault	Abnormal communication loop	Change the drive board.	
20	PFC soft start abnormal	Abnormal PFC drive loop	Change the drive board.	
21	The compressor drive chip could not receive data from PFC chip.	Communication loop fault.	Change the drive board.	