I.Fault Codes

(If the error code indicated on display PCB is not in the below list, the display PCB may be broken.)

Digital LED display	Indoor Function Indicator (flash)	Fault Type	Quick solutions (Please try the tips one by one, not all at the same time.)
E0/E5	RUN & TIMER: Blink/ RUN-5/8 sec.	Indoor/outdoor communication fault (The most frequent fault means possible problems in the indoor/outdoor communication from indoor PCB, through connecting wires and to/among outdoor PCBs).	1.Check the wire connection from indoor to outdoor, and among outdoor PCBs. 2.Check if the LED indication light on outdoor power source board is on. If the light is not on, replace outdoor intelligent board when outdoor voltage is 220V, and replace indoor main PCB when outdoor voltage is not 220V. If the light is on, and E0 is showed on display PCB before compressor running, replace the indoor main PCB, and then the outdoor PCB boards, and then indoor/outdoor connecting wires. If the light is on, and E0 is showed on display PCB after compressor running several minutes, replace the indoor/outdoor connecting wires, then indoor/outdoor PCBs.
EC	RUN & TIMER: Blink	Outdoor PCB's communication fault	1.Check the wire connections among all outdoor PCB boards. 2.Replace intelligent power module board. 3.Replace power source board.
E1	RUN-1/8 sec.	Indoor room temperature sensor (IRT)	1.Check the wire connection of indoor temperature sensor assembly. 2.Replace indoor temperature sensor assembly. 3.Replace indoor main PCB.
E2	RUN-2/8 sec.	Indoor pipe (coil) temperature sensor (IPT)	1.Check the wire connection of indoor temperature sensor assembly. 2.Replace indoor temperature sensor assembly. 3.Replace indoor main PCB.
E3	RUN-3/8 sec.	Outdoor pipe (coil) temperature sensor (OPT)	1.Check the wire connections of outdoor temperature sensor assembly. 2.Replace outdoor temperature sensor assembly. 3.Replace outdoor power source board.
E4	RUN-4/8 sec.	System abnormal	1.Check if high pressure value and low pressure valve open 2.Check if refrigerant is in short, and then recharge. 3.Check if temperature sensor on outdoor condenser loose or broken. 4. Replace the indoor main PCB.
E6	RUN-6/8 sec.	Indoor fan motor fault	1. Check if indoor cross fan runs normally. 2. Check if wires of indoor fan motor connect indoor main PCB well. 3. Replace indoor main PCB. 4. Replace indoor fan motor.
E7	RUN-7/8 sec.	Outdoor temperature sensor	1.Check the wire connections of outdoor temperature sensor assembly . 2.Replace outdoor temperature sensor assembly. 3.Replace outdoor power source board.
E8	RUN-8/8 sec.	Exhaust temperature sensor	1.Check the wire connections of outdoor temperature sensor assembly. 2.Replace outdoor temperature sensor assembly. 3.Replace outdoor power source board.
E9	RUN-9/8 sec.	Intelligent power module of drive and module fault	Replace intelligent power module board.
EF	RUN-10/8 sec.	Outdoor fan motor fault (DC Motor)	Outdoor fan motor fault (DC Motor).
EA	RUN-11/8 sec.	Current sensor fault	1.Find the leakage point and recharge the refrigerant. 2.Replace power source board.
EE	RUN-12/8 sec.	EEPROM fault	1.Check if the EEPROM on indoor main PCB or outdoor power source board installed well. 2.Replace indoor main PCB. 3.Replace outdoor power source board.
EP	RUN-13/8 sec.	Temperature switch fault (on top of the compressor)	1.Check if wires of compressor connect outdoor power source board well. 2.Replace outdoor power source board.
EU	RUN-14/8 sec.	Voltage sensor fault	1.Check the wire connections between power source board and intelligent power module. 2.Replace power source board.
EH	RUN-15/8 sec.	Outdoor intake temperature sensor	1.Check the wire connections of outdoor temperature sensor assembly. 2.Replace outdoor temperature sensor assembly. 3.Replace outdoor power source board.

II. Protection Codes

(Protection codes mean protection from the machine automatically. The machine usually can recover by itself; otherwise it will change to fault codes. Protection codes have little possibility to occur, so we do not list the quick solutions as below.)

Digital LED display	Indoor function Indicator (flash)	Protection Type
P1	RUN: Blink; TIMER: 1 blink /8 sec	Overvoltage / undervoltage protection
P2	RUN: Blink; TIMER: 2 blink /8 sec	Overcurrent protection
P4	RUN: Blink; TIMER: 4 blink /8 sec	Exhaust overtemperature protection
P5	RUN: Bright; TIMER: 5 blink /8 sec	Subcooling protection under cooling mode
P6	RUN: Bright; TIMER: 6 blink /8 sec	Overheating protection under cooling mode
P7	RUN: Bright; TIMER: 7 blink /8 sec	Overheating protection under heating mode
P8	RUN: Bright; TIMER: 8 blink /8 sec	Outdoor overtemperature/ undertemperature protection
P9	RUN: Blink; TIMER: 9 blink /8 sec	Intelligent Power Module protection (software control)
P0	RUN: Blink; TIMER: 10 blink /8 sec	Intelligent Power Module protection (hardware control)

Troubleshooting (According to the fault code)

Symptom	Cause	Inspections	How to Solve
Display E1 or E2	Indoor temperature sensor assembly	Check the connection of indoor room temperature sensor assembly to CN6（RT、IPT) on indoor main PCB.	Insert again if loose.
		Measure the resistance on the two ends of indoor temperature sensor: (25℃/ 5KΩ). For other resistance, please refer to the temperature resistance Sheet (Appendix 1).	Replace the temperature sensor if the resistance is not in standard level.
		If the above testing is normal.	Replace the indoor main PCB.
Display E6	Indoor fan motor fault	Check the indoor cross fan blade.	If the fan does not run, adjust the fan position until it can run smoothly.
		Check the connection of indoor fan motor to Cn3, Cn4 on indoor main PCB.	Insert again if loose.
		The above inspections are normal.	Replace the indoor main PCB.
Display E3, E7, E8	Outdoor temperature sensor assembly fault	Check the connection of outdoor temperature sensor to CN1, CN2 on outdoor power source board.	Insert again if loose.
		Measure the resistance on the two ends of outdoor temperature sensor: Resistance of CN1 terminal sensor (25℃/ 5KΩ). For other resistance, please refer to the Temperature Resistance Sheet. Resistance of CN2 terminal sensor (25℃/ 20KΩ). For other resistance, please refer to the Temperature Resistance Sheet.	Replace the temperature sensor assembly if the resistance is not in standard level.
		If the above testing is normal.	Replace outdoor power source board.
Display E4	System abnormal: Let the compressor run for 5 minutes. If the indoor coil temperature cannot be 2℃ lower than that before the compressor is started (2℃ higher for heating mode), it can be judged as the system is abnormal.	Check the high-pressure and low-pressure valves.	If not open, open again to ensure the system circulation is smooth.
		Check refrigerant volume. If no obvious temperature change after running 5 minutes in cooling mode, the system is in shortage of refrigerant.	Check the leakage point and recharge the refrigerant.
		Check the indoor evaporator pipe coil temperature sensor (25℃/ 5KΩ). For other resistance, please refer to the Temperature Resistance Sheet.	Replace the temperature sensor if the resistance is not in standard level.
		If the above inspections are normal.	Replace the indoor main PCB.
Display EC	Outdoor communication fault between power source board and intelligent power module.	Check the contact of communication wire (CN5) between power source board and intelligent power module.	Insert again if loose.
		If the above inspections are normal.	Replace intelligent power module. If still not solved, replace outdoor power source board.

Symptom	Cause	Inspections			How to Solve
Display EP	Compressor temperature switch fault (on top of the compressor)	Check the connection of the compressor top temperature switch wires to CN3 on outdoor power source board.			Insert again if loose.
		No switch on compressor top.			Jumper short-circuiting (This function not provided for 9k/12k unit).
		If the compressor temperature is very high, with bad smell.	Check the U, V and W wires of the compressor.		Connect again if incorrect.
			Check the system pressure.		The pressure is low. Add refrigerant to ensure the system pressure is normal.
			Check if anything blocks the outdoor ventilation and radiating.		Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
		If compressor temperature is not high.			Replace the outdoor power source board.
Display EA	Current sensor fault	Check if refrigerant leakage.			Find the leakage point and recharge the refrigerant.
		If still not solved.			Replace the outdoor power source board.
Display EU	Voltage sensor fault	Voltage sensor fault.			Replace the outdoor power source board.
Display E9	Intelligent power module fault	Power off and then, power on, check the protection code on display. Firstly display P0	If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness.		If no insert wrong, replace the intelligent power module.
			"P0" appears when the air conditioner is working	Check if the outdoor module is tightly installed onto the radiating fins and if the silicone is applied evenly.	Fix the screws again if loose.
				Check the system pressure.	Recharge refrigerant if the pressure is low. Discharge some refrigerant if the pressure is too high.
				Check the outdoor ventilation and if there is any obstruction that affects the normal radiating of the air conditioner.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
				The above inspections are normal, but the fault remains unsolved.	Replace the intelligent power module.

Symptom	Cause	Inspections			How to Solve
		Power off and then, power on, check the protection code on display. Firstly display P9.	If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness.		If no insert wrong, replace the intelligent power module.
			P9 appears after the air conditio ner is started and has run for a period of time.	Cooling / heating is normal during run.	Replace the intelligent power module.
				If the cooling / heating is abnormal, check the compressor wiring for correctness.	Insert again if loose.
			When the compressor is restarted immediately after stop, this might also cause P9 protection because the cooling system is not stable.		Try to start the air conditioner again after a longer period of stop.
Display E0、E5	Indoor / outdoor comm- unication fault	Energize and observe for approx. 10 minutes. If E0 is always displayed or changed to E5 after a period of time.	Check if the indoor and outdoor connections are correct. The terminal L and N shall correspond to each other on indoor and outdoor units. Measure the voltage on outdoor terminal L and N (before display of E0 fault). If the voltage is “0”.		Replace the indoor main PCB.
			If the L & N voltage is normal, measure the voltage between the outdoor terminal N and 1. If the voltage change occurs between 0~24V (change pulse voltage).		Replace the indoor main PCB.
			If the L & N voltage is normal, measure the voltage between the outdoor terminal N and 1. If the voltage change occurs between 0~12V(change pulse voltage), but there is no 24V.		Replace the outdoor power source board.
			If the L & N voltage is normal, measure the voltage between the outdoor terminal N and 1. If the voltage has no change.		Firstly replace the indoor main PCB. If the fault remains unsolved, replace the outdoor power source board.
			Indicator on outdoor power source board.	Check if PFC board damaged.	If damaged, replace PFC board.
				If no damage, test the DC voltage between DC+ and DC-. If the voltage is approx 300V.	Replace the power source board.
				If no damage, test the DC voltage between DC+ and DC-. If the voltage is zero.	Replace the PFC board.

Symptom	Cause	Inspections			How to Solve
			If the problem cannot be solved by using the methods above.		Firstly replace the intelligent power module. If the problem remains unsolved, replace the indoor main PCB, power source board, and PFC board.
Display EE	EEPROM fault	Power off and then power on, if the fault remains, it is needed to check if the indoor and outdoor EEPROM installation is loose.			Fix again.
		If the installation is good.			Replace the indoor main PCB.
		If the fault remains unsolved after replacement of the indoor control board.			Replace outdoor power source board.
Display P0	Intelligent Power Module protection	Power off and then power on, check the protection code on display. Firstly display P0.	If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness.		If no insert wrong, replace the intelligent power module.
			“P0” appears when the air conditioner is working.	Check if the outdoor intelligent power module is tightly installed onto the radiating fins and if the silicone is applied evenly.	Fix the radiator again if loose.
				Check the system pressure.	Recharge refrigerant if the pressure is low. Discharge some refrigerant if the pressure is too high.
				Check the outdoor ventilation and if there is any obstruction that affects the normal radiating of the air conditioner.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.is smooth.
				The above inspections are normal, but the fault remains unsolved.	Replace the intelligent power module.
Display P1	Overvoltage / undervoltage protection	Test the supply voltage if it is between 160V ～260V（AC）.			It is normal protection if exceeding this range.
		Test if the voltage between L and N terminal of outdoor unit is within 160V～260V（AC）.			It is normal protection if exceeding this range.
		If the voltage is normal.			Replace the outdoor power source board.
Display P2	Overcurrent protection	Check if the outdoor fan motor is stopped due to overheat protection, or damaged, and if the fan capacitor is damaged.			Replace the damaged capacitor and the damaged outdoor fan motor.
		Intelligent power module damaged.			Replace the intelligent power module.

Symptom	Cause	Inspections	How to Solve
Display P4	Exhaust overtem-perature protection	Check if the air inlet and outlet of outdoor unit is blocked by any obstruction.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
		Check the system for shortage of refrigerant.	Add refrigerant.
		Check if the exhaust temperature sensor is not in standard level (25℃/ 20KΩ). For other resistances, please refer to the Exhaust Temperature Sensor Resistance Sheet.	Replace outdoor temperature sensor assembly.
		Outdoor power source board damaged.	Replace the outdoor power source board.
Display P5	Subcooling protection under cooling mode	Check if the air inlet and outlet of indoor unit is blocked by any obstruction.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
		Check the system for shortage of refrigerant.	Add refrigerant.
		Check if the exhaust temperature sensor is not in standard level. (Measure the resistance of the resistors on two ends of indoor temperature sensor: (25℃/ 5KΩ). For other resistances, please refer to the Temperature Resistance Sheet (Appendix 1).	Replace outdoor temperature sensor assembly.
		Indoor main PCB board damaged.	Replace the indoor main PCB
Display P6	Overheating protection under cooling mode	Check if the air inlet and outlet of outdoor unit is blocked by any obstructions.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
		Check the system for shortage of refrigerant.	Add refrigerant
		Check if the outdoor evaporator coil temperature sensor is drifted, short circuited or open circuited (25℃/ 5KΩ).For other resistance, please refer to the Temperature Resistance Sheet.	Replace the outdoor temperature sensor assembly.
		Outdoor power source board damaged.	Replace the outdoor power source board.
Display P7	Overheating protection under heating mode	Check if the air inlet and outlet of outdoor unit is blocked by any obstruction.	Install to the position as required in the Instruction Manual and ensure the air inlet and outlet of the outdoor unit is smooth.
		Check the system for shortage of refrigerant.	Add refrigerant.

Symptom	Cause	Inspections		How to Solve
		Check if the exhaust temperature sensor is not in standard level. (Measure the resistance of the resistors on two ends of indoor temperature sensor: (25℃/ 5KΩ). For other resistances, please refer to the Temperature Resistance Sheet (Appendix 1).		Replace the indoor temperature sensor assembly.
		Indoor main PCB damaged.		Replace the indoor main PCB board
Display P8	Outdoor over-temperature / under-temperature protection	If the compressor run under cooling mode when the outdoor temperature is lower than -1℃, or run under heating mode when the outdoor temperature is higher than 33℃, the compressor alarms P8 protection.		Normal protection function.
		If the temperature is not within the protective range above, please refer to the Temperature Resistance Sheet (See Appendix). Measure the resistors on the two ends of outdoor intake temperature sensor (CN1) (25℃/ 5KΩ). For other resistance, please refer to the Temperature Resistance Sheet.		Replace outdoor temperature sensor assembly.
		If the fault remains unsolved.		Replace outdoor power source board.
Display P9	Intelligent power module fault	Power off and power on, check the protection code on display. Firstly display P9.	If this code is displayed when the compressor is started for several seconds or even not started, check the compressor connection for correctness.	If no insert wrong, replace the intelligent power module.
			P9 appears after the air conditioner is started and has run for a period of time. — Cooling/heating is normal during run.	Replace the intelligent power module.(Be sure to apply silicone when replacing the intelligent power module).
			P9 appears after the air conditioner is started and has run for a period of time. — If the cooling / heating are abnormal, check the compressor wiring for correctness.	Insert again if loose.
			When the compressor is restarted immediately after stop, this might also cause P9 protection because the cooling system is not stable.	Try starting the air conditioner again after a longer period of stop.