

CASSETTE SPLIT UNITS

15/16	INVERTER CASSETTE SPLIT – CGIF / GCIF		G
Fault	Error Display	Error Description	
Compressor High Pressure Protection	E1	High pressure switch	When outdoor unit detects the high pressure switch is cut off for 3s successively, high pressure protection will occur. All the loads (except the 4-way valve in heating mode) will be switched off. In this case, all the buttons and remote control signals except ON/OFF button will be disabled and cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.
Indoor anti-freezing Protection	E2	Indoor evaporator temperature sensor	If detecting that the evaporator temperature is lower than protective temp. value after the unit has been running for a period of time under cooling or dry mode, the unit will report this fault, in which case the compressor and outdoor fan motor will be stopped. The unit will not run until evaporator temperature is higher than the protective temp. value and the compressor is stopped for 3min.
Compressor low pressure protection, refrigerant lacking protection, refrigerant recycling mode	E3	Low pressure switch	If it is detected within 30s successively that the low-pressure switch is cut off under ON or standby state, the unit will report low pressure protection. If the fault occurs successively 3 times within 30min, the unit cannot be recovered automatically.
		Refrigerant lacking protection	If the unit reports system refrigerant lacking within 10min after turning on the unit, the unit will stop operation. If the fault occurs successively 3 times, the unit cannot be recovered automatically.
		Refrigerant recycling mode	If enter refrigerant recycling mode through special operation, E3 will be displayed. After exiting refrigerant recycling mode, the code will disappear.
Compressor High Temperature Discharge Protection	E4	Compressor discharge temperature is high	If outdoor unit detects that the discharge temperature is higher than protective temp. value, the unit will report high discharge temperature protection. If the protection occurs over 6 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.
Communications Failure	E6	Communication between indoor and outdoor main board	If the outdoor unit does not receive data from indoor unit, communication malfunction will be reported. If there is communication abnormality between display board and indoor unit, communication malfunction will be reported too.
Indoor Fan Protection / Malfunction of indoor fan motor	E8	Indoor fan motor	If the indoor unit does not receive signal from indoor fan motor for 30s successively when the fan motor is operating, indoor fan motor malfunction will be reported. In this case, the unit can automatically resume operation after stopping. If the malfunction occurs 6 times within one hour, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.
Water-full (Over flow) Protection	E9	Water level switch	If cut-off of water level switch is detected for 8s successively once energized, the system will enter full water protection. In this case, switch off the unit and then switch it on to eliminate this malfunction.
Air inlet indoor ambient temp. sensor malfunction	F0	Indoor ambient temperature sensor	If the indoor ambient temperature sensor is detected of open circuit or short circuit for 5s successively, indoor ambient temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If indoor ambient temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.

Evaporative Temp. Sensor malfunction	F1	Evaporator temperature sensor	If the indoor evaporator temperature sensor is detected of open circuit or short circuit for 5s successively, evaporator temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If evaporator temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.
Condenser Temp. Sensor malfunction	F2	Condenser temperature sensor	If the outdoor condenser temperature sensor is detected of open circuit or short circuit for 5s successively, condenser temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If condenser temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.
Outdoor Ambient Temp. Sensor malfunction	F3	Outdoor ambient temperature sensor	If the outdoor ambient temperature sensor is detected of open circuit or short circuit for 5s successively, outdoor ambient temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears. If outdoor ambient temperature sensor malfunction occurs in fan mode, only the error code is displayed and the indoor unit can work normally.
Discharge ambient Temp. Sensor malfunction	F4	Discharge temperature sensor	If the outdoor discharge temperature sensor is detected of open circuit or short circuit for 5s successively after the compressor has been operating for 3min, outdoor discharge temperature sensor malfunction will be reported. The unit can automatically resume operation after the malfunction disappears.
Ambient temp. sensor malfunction On the Wired Controller	F5	Wired controller	If the wired controller detects open circuit or short circuit of its temperature sensor for 5s successively, wired controller temperature sensor malfunction will be reported.
Malfunction of outdoor drive memory chip	CC	Outdoor drive board	If the memory chip of outdoor drive board is broken, the unit cannot be started. The unit cannot be recovered automatically. If the malfunction cannot be eliminated after switching off the unit and then energizing the unit for several times, please replace the outdoor drive board.
Compressor overload protection	H3	Compressor overload switch	If it is detected within 3s successively that the overload switch is cut off under ON or standby state, the unit will report overload protection. If the fault occurs successively 3 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.
Overload protection	H4	Evaporator temperature condenser temperature	If outdoor unit detects that the tube temperature is higher than protective temp. value, the unit will report overload protection. The unit will not restart operation until tube temperature is lower than the protective temp. value and the compressor is stopped for 3min. If the protection occurs over 6 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this protection.
Malfunction of outdoor fan motor	H6	Outdoor fan motor	If the outdoor unit does not receive signal from outdoor fan motor for 30s successively when the fan motor is operating, outdoor fan motor malfunction will be reported. In this case, the unit can automatically resume operation after stopping. If the malfunction occurs 6 times within one hour, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.

Direction changing malfunction of 4-way valve 4	U7	4-way valve	After the compressor starts operation in heating mode, if the outdoor unit detects the difference between evaporator temperature and indoor ambient temperature is lower than the protective value for 10min successively, direction changing malfunction of 4-way valve will be reported and the outdoor unit will stop operation. malfunctions. If the malfunction occurs 3 times, the unit cannot be recovered automatically. Switch off the unit or re-energize the unit after cutting off power to eliminate this malfunction.
Communication malfunction between main control and drive	P6	Communication between main control board and drive board	If the outdoor main control board does not receive data from drive board, communication malfunction between main control and drive will be reported. This malfunction can be eliminated automatically.
Malfunction of outdoor main control memory chip	EE	Outdoor main control board	If the memory chip of outdoor main control board is broken, the unit cannot be started. The unit cannot be recovered automatically. If the malfunction cannot be eliminated after switching off the unit and then energizing the unit for several times, please replace the outdoor main control board.

Fault	Code	Red LED	Yellow LED	Green LED	Main Control Display	Description
Input voltage abnormal	PP	Flash	Flash	On	AC input voltage abnormal Program status: 137	After energizing for 50mins, PFC detects that the voltage of input ST line exceeds 294-484V
Bus high voltage protection	PH	Flash	Flash	Off	DC bus voltage is too high Program status: 130	After the PFC starts, the voltage of DC bus is too high (800V)
Bus low voltage protection	PL	On	Flash	Off	DC bus voltage is too low or DC bus voltage dropping malfunction Program status: 131	After the PFC operates, the actual bus voltage is lower than the given voltage value minus 50V
Line voltage unbalance protection	PP	On	Off	On	AC input voltage abnormal Program status: 132	Line voltage unbalance exceeds 76V
PFC module protection	Hc	Flash	Off	Flash	PFC abnormal	IPM abnormal, FO outputs low level
Over current protection of input current	PA	Flash	Flash	Flash	AC current protection (input side)	It is detected consecutively for 3 times that each input phase current is bigger than the instantaneous current value 32A
PFC over-temperature protection	P8	On	Flash	On	The temperature of radiator or IPM module or PFC module is too high Program status: 133	Module temperature is higher than 100-120 °C after energizing
PFC temperature sensor malfunction	P7	Off	Flash	On	Radiator or IPM module or PFC module temperature sensor is abnormal Program status: 134	Module temperature is higher than 120°C after energizing or it is lower than -19°C after the PFC operates for 5s
PFC-PMSM communication malfunction	P6	Off	Flash	Flash	Communication malfunction Program status: 135	No data is received for 15s continuously or the data received does not meet the requirement of communication protocol
Normal		Flash	Off	Off		

OUTDOOR UNIT ELECTRONIC CONTROL BOX INDICATIONS - 9000BTU - 60000BTU

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Fault	Indoor Unit Display	Outdoor Unit
DC bus-bar over-voltage protection	PH	PH
PM or PFC over-temperature protection	P8	P8
Current sense circuit error	Pc	Pc
IPM or PFC temperature sensor error	P7	P7
Compressor current protection	P5	P5
DC bus-bar under-voltage protection	PL	PL
Compressor startup failure	Lc	Lc
Drive module reset	P0	P0
Compressor motor desynchronizing	H7	H7
Phase loss	Ld	Ld
Drive-to-main-control communication error	P6	P6
IPM protection	H5	H5
Compressor overload protection	H3	H3
AC current protection (input side)	PA	PA
Charging circuit error	PU	PU
PFC protection	Hc (48K Only)	Hc (48K Only)
DC fan error	H6	H6
Input AC voltage abnormality	PP	PP
Driving board memory chip error	ee (09-42)	ee (09-42)

Differentiation and judgment of drive malfunction

The following content is only for three-phase drive controller. Drive malfunction display can be judged from three aspects:

- (1).Malfunction displayed on the main control DISPLAY;
- (2).Malfunction light display of the drive;
- (3).Program status on the monitoring software. As some IPM malfunctions codes are the same as PFC malfunction codes (that is the malfunction code displayed on the main control board is identical but the actual drive malfunction is different), please obey the following 4 rules in order to differentiate the drive malfunction:
 - 1).If the malfunction codes displayed on main control contain IPM malfunction and PFC malfunction, you can make the judgment according to the Sheet of PFC Malfunction Light Display. If the display way of malfunction light on the PFC drive is identical with one of the display in the sheet, it is PFC malfunction. When the PFC malfunction is eliminated, the malfunction of complete unit is eliminated at the same time.
 - 2).If the malfunction codes displayed on main control contain IPM malfunction and PFC malfunction, you can make the judgment according to the Sheet of PFC Malfunction Light Display. If the display way of malfunction light on the PFC drive is identical with none of the display in the sheet, it is IPM malfunction.
 - 3).If the malfunction codes displayed on main control contain IPM malfunction and PFC malfunction, you can make the judgment according to the Sheet of PFC Malfunction Light Display. If the display way of malfunction light on the PFC drive is identical with one of the display in the sheet, but after the PFC malfunction is eliminated, the main control malfunction still exists. Only when IPM malfunction is eliminated at the same time, you can judge that PFC and IPM malfunction occur simultaneously.
 - 4).PFC malfunction can also be judged from the program status on monitoring software. The malfunction corresponding to program status can be found out in the Sheet of PFC Malfunction Light Display.

12	INVERTER CASSETTE SPLIT – 2CGI / 2GCI		G
Fault	Error Display	Error Description	
Water Pump Failure	E0	If the water-full protection cannot be recovered after 2 hours, it is believed that the water pump is failed, in which case all the loads will be switched off and cannot be recovered automatically.	
High-pressure Switch	E1	When high pressure protection is detected for 3 seconds successively, all the loads (except the heating 4-way valve) will be switched off, in which case all the keys and remote control signals except ON/OFF function will be disabled and cannot be recovered automatically. To eliminate the fault, it is needed to switch off and on the machine or recover from power failure.	
Indoor evaporator temperature sensor	E2	If detecting that the evaporator sensor is lower than protective temp. value after the unit has been running for a period of time under cooling or dry mode, the unit will report this fault, in which case the compressor and outdoor fan will be stopped. The unit will not run until this temperature exits the protective temperature value and the compressor is stopped for 3 minutes.	
Low- Pressure Switch	E3	If it is detected within 30 seconds successively that the low-pressure switch is cut off under ON or standby state (If the compressor is started, the detection will start 3 minutes after the compressor has run), the unit will report this fault. For the first two faults within 30 minutes, the unit can be recovered automatically. If over three times, the unit cannot be recovered automatically.	
Compressor discharge temperature is high	E4	After the compressor is started, if it is detected within 30 seconds successively that the exhaust temperature is 130°C or higher, E4 will be displayed, in which case all the loads (except the 4-way valve of heating) will be stopped. The complete unit can only be recovered until the compressor has stopped for 3 minutes and the exhaust temperature is lower than 90°C. For this protection occurs three times, the complete unit cannot be recovered automatically.	
Compressor	E5	After the unit is energized, if it is detected within 3 seconds successively that the compressor overload switch is cut off, it will be deemed compressor overload protection. In this case, all the loads will be stopped (except the 4-way valve of heating) and E5 will be displayed. If the fault is eliminated, the compressor will be restarted after 3 minutes. If three compressor overload the occurrence of fault, the compressor cannot be recovered automatically and the buzzer will alarm. You shall need to press ON/Off to stop the unit and clear the sound alarm before pressing ON/OFF again. The unit will be restarted if the high pressure protection disappears; otherwise the fault code will be displayed. Besides, "E5" also will also be displayed on the controller in the event of an error of the compressor drive module.	
Communication Between indoor and outdoor main board	E6	If the outdoor unit does not receive data from indoor unit for 30 seconds successively once energized, this indicates indoor communication failure. In this case, the compressor and outdoor fan will be stopped. Under heating mode, the 4-way valve will be stopped if the compressor has been stopped for 2 minutes. If the indoor unit does not receive message from outdoor unit for 1 minute, this indicates communication failure. In this case, the indoor unit will be stopped and the indicator will blink. If the display board does not receive message from outdoor unit in 1 minute, it can be judged that it is communication failure, in which case the fault will be displayed and the machine will not function. After the communication is resumed to normal, the system will run as per the working mode before. This can recover automatically.	
Liquid level switch	E9	If "full water" is detected for 8 seconds successively once energized, the system will enter into full water protection and the indicator will blink (or display E9): Under cooling and dry mode, the outdoor fan and compressor will be stopped, while the indoor fan will be stopped after 1 minute. Under heating mode, the outdoor fan and compressor will be stopped, the 4-way valve will maintain its original state, and the indoor unit will be stopped after 1 minute. Under fan mode, the indoor loads will not be stopped.	
Indoor room sensor	F0	If the indoor sensor is detected of open circuit or short circuit for 5 seconds successively, the indoor room temperature will forcibly set to 24°C. In this case, the system will not perform any treatment, only the indicator will blink or display the fault code. The system can automatically resume after the failure is eliminated. Under fan mode, only the fault will be displayed, but the indoor unit will run normally. The fault disappears after it is eliminated.	

Outdoor evaporator sensor	F1	If the evaporator sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F1. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated.
Outdoor condenser sensor	F2	If the condenser sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F2. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated. For cooling-only unit, the other units except the duct type will not detect the condenser sensor fault.
Outdoor environment sensor	F3	If the outdoor environment sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F3. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated.
Exhaust temperature sensor	F4	If the outdoor temperature sensor is detected of open circuit for 5 seconds successively after the compressor is started: When under cooling and dry mode, all the loads will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F4 and the buzzer will alarm. After the fault is eliminated, the system can automatically resume to operation and clear the fault code. If the outdoor temperature sensor is detected of short circuit: When under cooling and dry mode, all the loads will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F4 and the buzzer will alarm. After the fault is eliminated, the system can automatically resume to operation and clear the fault code.
Wired Controller	F5	If the wired controller is detected of open circuit or short circuit for 5 seconds successively, the indoor room temperature will forcibly set to 24°C. In this case, the system will not perform any treatment, only the indicator will blink or display the fault code. The system can automatically resume to operation after the failure is eliminated. Under fan mode, only the fault will be displayed, but the indoor unit will run normally. The fault disappears after it is eliminated.
System	FF	The air valve on end will be fully closed.
Wired Controller	CC	the units is remotely monitored or controlled by centralized controller and the wire controller's functions are invalidated (not failure)
Wired Controller	EE	keys on wire controller are locked (not failure)
Refrigerant lacking protection		If the unit reports system refrigerant lacking within 10min after turning on the unit, the unit will stop operation. If the fault occurs successively 3 times, the unit cannot be recovered automatically.
Refrigerant recycling mode		If enter refrigerant recycling mode through special operation, E3 will be displayed. After exiting refrigerant recycling mode, the code will disappear.

INDOOR CASSETTE UNIT ERROR INDICATIONS

Led	No Error	Flash # times every 2 seconds	Error Description
YELLOW: Timing indicating lamp	It goes on as per the set time, And it flashes when the temperature sensor error occurs	Once	the indoor ambient temperature sensor error
		Twice	the evaporator temperature sensor error
		Three Times	the condenser temperature sensor error
		Four Times	the outdoor ambient temperature sensor error
		Five Times	the discharge air temperature sensor error
GREEN: Compressor indicating lamp	It goes on/off as the compressor is turned on/off. And it flashes when defrosting or the compressor error occurs	Once	the indoor ambient temperature sensor error
		Twice	the evaporator temperature sensor error
		Three Times	the condenser temperature sensor error
		Four Times	the outdoor ambient temperature sensor error
		Five Times	the discharge air temperature sensor error
RED: Running indicating lamp	It goes on/off as the unit is turned on/off, And it flashes when the indoor unit error occurs	Once	Communication error
		Twice	The water overflow protection
		Three Times	The anti-freezing error
		Four Times	Anti-high temperature protection

OUTDOOR UNIT ELECTRONIC CONTROL BOX INDICATIONS - 9000 BTU - 12000BTU

DESCRIPTION	YELLOW LED	RED LED	GREEN LED	DISPLAY
Compressor started	Flash Once			
Defrosting	Flash Twice			
Anti-freezing protection	Flash 3 Times			E2
IPM protection	Flash 4 Times			E5
Over-current protection	Flash 5 Times			E5
Heat exchanger overload protection	Flash 6 Times			
Discharge protection	Flash 7 Times			E4
Compressor overload protection	Flash 8 Times			E5
Power protection	Flash 9 Times			E5
Module overheating protection	Flash 10 Times			E5
EEPROM reading error	Flash 11 Times			E5
Low voltage protection	Flash 12 Times			E5
High voltage protection	Flash 13 Times			E5
PFC over-current protection	Flash 14 Times			E5
Unmatched indoor and outdoor units	Flash 16 Times			
Limited frequency(current)		Flash Once		
Limited frequency (discharge)		Flash Twice		
Limited frequency (overload)		Flash 3 Times		
Reduced frequency (anti-freezing)		Flash 4 Times		
Outdoor ambient temperature sensor error		Flash 6 Times		
Outdoor pipe temperature sensor error		Flash 5 Times		F3
Outdoor discharge temperature sensor error		Flash 7 Times		F2
Up to the start-up temperature		Flash 8 Times		F4
Limited frequency (module temperature)		Flash 11 Times		
Limited frequency (power)		Flash 13 Times		
Communication normal			Flash Continuously	
Communication error			Black Out	E6
Indoor ambient temperature sensor error				F0
Indoor pipe temperature sensor error				F1

OUTDOOR UNIT ELECTRONIC CONTROL BOX INDICATIONS - 18000 BTU - 60000BTU

Fault	Outdoor Unit Display	Indoor Unit Display
DC busbar over-voltage protection	PH	E5
IPM or PFC over-temperature protection	P8	E5
Current sense circuit error	Pc	E5
IPM or PFC temperature sensor error	P7	E5
Compressor current protection	P5	E5
DC bus-bar under-voltage protection	PL	E5
Compressor start-up failure	Lc	E5
PFC protection	Hc	E5
Drive module reset	P0	E5
Compressor motor desynchronizing	H7	E5
Phase loss	Ld	E5
Drive-to-main-control communication error	P6	E5
IPM protection	H5	E5
High-pressure protection	E1	E1
Low-pressure protection	E3	E3
Exhaust protection	E4	E4
Compressor overload protection	H3	E5
Communication malfunction (among indoor unit, outdoor unit and wired controller)	E6	E6
Outdoor ambient temperature sensor malfunction	F3	F3
Coil pipe intermediate temperature sensor malfunction of outdoor unit	F2	F2
Exhaust temperature sensor malfunction	F4	F4
Defrosting (non-malfunction)	8	Defrost
Oil return (non-malfunction)	9	No Display
Mismatch of indoor unit model	LP	No Display
AC current protection (input side)	PA	E5
Input AC voltage abnormality	PP	E5
Charging circuit error	PU	E5
DC fan error	H6	E5

11	INVERTER CASSETTE SPLIT – CGI / GCI		G
Error	Fault	Error	Fault
E0	Water Pump Failure	F0	Air inlet indoor ambient temp. sensor malfunction
E1	Compressor High Pressure Protection	F1	Evaporative Temp. Sensor malfunction
E2	Indoor anti-freezing Protection	F2	Condenser Temp. Sensor malfunction
E3	Compressor Low Pressure Protection	F3	Outdoor Ambient Temp. Sensor malfunction
E4	Compressor High Temperature Exhaust Protection	F4	Exhaust ambient Temp. Sensor malfunction
E5	Compressor Overload Protection	F5	Ambient temp. sensor malfunction in displayer
E6	Communications Failure		
E8	Indoor Fan Protection		
E9	Water-full Protection		

E0	Water Pump Malfunction	Water pump	If the water-full protection cannot be recovered after 2 hours, it is believed that the water pump is failed, in which case all the loads will be switched off and cannot be recovered automatically.
E1	High Pressure Protection of Compressor	High-pressure Switch	When high pressure protection is detected for 3 seconds successively, all the loads (except the heating 4-way valve) will be switched off, in which case all the keys and remote control signals except ON/OFF function will be disabled and cannot be recovered automatically. To eliminate the fault, it is needed to switch off and on the machine or recover from power failure.
E2	Indoor Anti-frozen Protection	Indoor evaporator sensor	If detecting that the evaporator sensor is lower than protective temp. value after the unit has been running for a period of time under cooling or dry mode, the unit will report this fault, in which case the compressor and outdoor fan will be stopped. The unit will not run until this temperature exits the protective temperature value and the compressor is stopped for 3 minutes.
E3	Low Pressure Protection of Compressor	Low-pressure Switch	If it is detected within 30 seconds successively that the low-pressure switch is cut off under ON or standby state (If the compressor is started, the detection will start 3 minutes after the compressor has run), the unit will report this fault. For the first two faults within 30 minutes, the unit can be recovered automatically. If over three times, the unit cannot be recovered automatically.
E4	Air Discharge High-temperature Protection of Compressor	Exhaust Over temperature Protection	After the compressor is started, if it is detected within 30 seconds successively that the exhaust temperature is 130°C or higher, E4 will be displayed, in which case all the loads (except the 4-way valve of heating) will be stopped. The complete unit can only be recovered until the compressor has stopped for 3 minutes and the exhaust temperature is lower than 90°C. For this protection occurs three times, the complete unit cannot be recovered automatically.
E5	Compressor Overload or drive error	Compressor	After the unit is energized, if it is detected within 3 seconds successively that the compressor overload switch is cut off, it will be deemed compressor overload protection. In this case, all the loads will be stopped (except the 4-way valve of heating) and E5 will be displayed. If the fault is eliminated, the compressor will be restarted after 3 minutes. If three compressor overload protections are detected successively in 30 minutes from the first detection to the occurrence of fault, the compressor cannot be recovered automatically and the buzzer will alarm. You shall need to press ON/Off to stop the unit and clear the sound alarm before pressing ON/OFF again. The unit will be restarted if the high pressure protection disappears; otherwise the fault code will be displayed. Besides, "E5" also will also be displayed on the controller in the event of an error of the compressor drive module.
E6	Communications Failure	Communication between indoor and outdoor main board	If the outdoor unit does not receive data from indoor unit for 30 seconds successively once energized, this indicates indoor communication failure. In this case, the compressor and outdoor fan will be stopped. Under heating mode, the 4-way valve will be stopped if the compressor has been stopped for 2 minutes. If the indoor unit does not receive message from outdoor unit for 1 minute, this indicates communication failure. In this case, the indoor unit will be stopped and the indicator will blink. If the display board does not receive message from outdoor unit in 1 minute, it can be judged that it is communication failure, in which case the fault will be displayed and the machine will not function. After the communication is resumed to normal, the system will run as per the working mode before. This can recover automatically.

E9	Full Water Protection	Liquid level switch	If "full water" is detected for 8 seconds successively once energized, the system will enter into full water protection and the indicator will blink (or display E9): Under cooling and dry mode, the outdoor fan and compressor will be stopped, while the indoor fan will be stopped after 1 minute. Under heating mode, the outdoor fan and compressor will be stopped, the 4-way valve will maintain its original state, and the indoor unit will be stopped after 1 minute. Under fan mode, the indoor loads will not be stopped.
F0	Malfunction of Indoor Environment Sensor at Return air Vent	Indoor room sensor	If the indoor sensor is detected of open circuit or short circuit for 5 seconds successively, the indoor room temperature will forcibly set to 24°C. In this case, the system will not perform any treatment, only the indicator will blink or display the fault code. The system can automatically resume after the failure is eliminated. Under fan mode, only the fault will be displayed, but the indoor unit will run normally. The fault disappears after it is eliminated.
F1	Evaporator Temp. Sensor Malfunction	Outdoor evaporator sensor	If the evaporator sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F1. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated.
F2	Condenser Temp. Sensor Malfunction	Outdoor condenser sensor	If the condenser sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F2. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated. For cooling-only unit, the other units except the duct type will not detect the condenser sensor fault.
F3	Outdoor Environment Sensor Malfunction	Outdoor environment sensor	If the outdoor environment sensor is detected of open circuit or short circuit for 5 seconds successively: When under cooling and dry mode, the system will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F3. After the fault is eliminated, the system can automatically resume to operation and clear the fault display. Under fan mode, only the fault will be displayed, and the indoor unit will run normally. The fault disappears after it is eliminated.
F4	Malfunction of Exhaust Temp. Sensor	Exhaust temperature sensor	If the outdoor temperature sensor is detected of open circuit for 5 seconds successively after the compressor is started: When under cooling and dry mode, all the loads will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F4 and the buzzer will alarm. After the fault is eliminated, the system can automatically resume to operation and clear the fault code. If the outdoor temperature sensor is detected of short circuit: When under cooling and dry mode, all the loads will be stopped. When under heating mode, all of the loads except the 4-way valve will be stopped, while the indicator will blink or display the fault code F4 and the buzzer will alarm. After the fault is eliminated, the system can automatically resume to operation and clear the fault code.

F5	Malfunction Of Indoor Environment Sensor at Wire Controller	Wired controller	If the wired controller is detected of open circuit or short circuit for 5 seconds successively, the indoor room temperature will forcibly set to 24°C. In this case, the system will not perform any treatment, only the indicator will blink or display the fault code. The system can automatically resume to operation after the failure is eliminated. Under fan mode, only the fault will be displayed, but the indoor unit will run normally. The fault disappears after it is eliminated.
FF	All of The Terminal Air Valve Closed (not failure)	System	The air valve on end will be fully closed.
CC	Wire Controller (not failure)	wire controller	the units is remotely monitored or controlled by centralized controller and the wire controller's functions are invalidated (not failure)
EE	Keys Locked (not failure)	wire controller	keys on wire controller are locked (not failure)

INDOOR CASSETTE UNIT ERROR INDICATIONS			
LED	No error	Flash times every two seconds	Error description
yellow: Timing indicating lamp	It goes on as per the set time, And it flashes when the temperature sensor error occurs	once	the indoor ambient temperature sensor error
		twice	the evaporator temperature sensor error
		three times	the condenser temperature sensor error
		four times	the outdoor ambient temperature sensor error
		five time	the discharge air temperature sensor error
green: Compressor indicating lamp	It goes on/off as the compressor is turned on/off. And it flashes when defrosting or the compressor error occurs	twice	Defrosting
		three times	high pressure protection
		four times	the low pressure protection
		five times	Overload protection
		six times	Discharge high temperature protection
red: Running indicating lamp	It goes on/off as the unit is turned on/off, And it flashes when the indoor unit error occurs	once	Communication error
		twice	the water overflow protection
		three times	the anti-freezing error
		four times	Anti-high temperature protection

OUTDOOR UNIT ELECTRONIC CONTROL BOX INDICATIONS - 9000 BTU - 12000BTU					
No	Running Status	Yellow Lamp	Red Lamp	Green Lamp	Displayed
1	Compressor started	Flash once			
2	Defrosting	Flash twice			
3	Anti-freezing protection	Flash 3 times			E2
4	IPM protection	Flash 4 times			E5
5	Over-current protection	Flash 5 times			E5
6	Heat exchanger overload protection	Flash 6 times			/
7	Heat exchanger overload protection	Flash 7 times			E4
8	Compressor overload protection	Flash 8 times			E5
9	Power protection	Flash 9 times			E5
10	Module overheating protection	Flash 10 times			E5
11	EEPROM reading error	Flash 11 times			E5
12	Low voltage protection	Flash 12 times			E5
13	High voltage protection	Flash 13 times			E5

14	PFC over-current protection	Flash 14 times			E5
15	Unmatched indoor and outdoor units	Flash 16 times			/
16	Limited frequency(current)		Flash once		/
17	Limited frequency (discharge)		Flash twice		/
18	Limited frequency (overload)		Flash 3 times		/
19	Reduced frequency (anti-freezing)		Flash 4 times		/
20	Outdoor ambient temperature sensor error		Flash 6 times		F3
21	Outdoor pipe temperature sensor error		Flash 5 times		F2
22	Outdoor discharge temperature sensor error		Flash 7 times		F4
23	Up to the startup temperature		Flash 8 times		/
26	Limited frequency (module temperature)		Flash 11 times		/
28	Limited frequency (power)		Flash 13 times		/
31	Communication normal			Flash continuously	/
32	Communication error			Black out	E6
33	Indoor ambient temperature sensor error				F0
34	Indoor pipe temperature sensor error				F1

OUTDOOR UNIT ELECTRONIC CONTROL BOX INDICATIONS - 18000 BTU - 60000BTU

Malfunction Item	Outdoor unit display of dual 8 numeral tube	Indoor Unit Display
DC busbar over-voltage protection	PH	E5
IPM or PFC over-temperature protection	P8	E5
Current sense circuit error	Pc	E5
IPM or PFC temperature sensor error	P7	E5
Compressor current protection	P5	E5
DC busbar under-voltage protection	PL	E5
Compressor startup failure	Lc	E5
PFC protection	Hc	E5
Drive module reset	P0	E5
Compressor motor desynchronizing	H7	E5
Phase loss	Ld	E5
Drive-to-main-control communication error	P6	E5
IPM protection	H5	E5
High-pressure protection	E1	E1
Low-pressure protection	E3	E3
Exhaust protection	E4	E4
Compressor overload protection	H3	E5
Communication malfunction (among indoor unit, outdoor unit and wired controller)	E6	E6
Outdoor ambient temperature sensor malfunction	F3	F3
Coil pipe intermediate temperature sensor malfunction of outdoor unit	F2	F2
Exhaust temperature sensor malfunction	F4	F4
Defrosting (non-malfunction)	08	defrost
Oil return (non-malfunction)	09	no display
Mismatch of indoor unit model	LP	no display
AC current protection (input side)	PA	E5
Input AC voltage abnormality	PP	E5
Charging circuit error	PU	E5
DC fan error H6	H6	E5