Alarm codes on electronic controller

If any alarm occurs, search its cause and repair it referring to the following table.
Be sure to check the connectors in the electronic controller as the poor contact of them may cause the controller alarm codes.

Alarm code	Content	Possible cause/checkpoint
F101	The high-pressure switch (HPS) contact is open	HPS circuit check · Broken lead wire · Faulty contact · Blown fuse Fu1
	The HPS activates within 20 seconds after the compressor starts	Condenser fan motor operation check
		Discharge piping refrigerant circuit check · Discharge stop valve · Discharge filter · Discharge check valve · Discharge pressure regulating valve
	The fuse Fu1 is blown	Fuse Fu1 circuit check
	Faulty controller	Faulty controller
F109	The LPT is decreased to -85 KPA or less within 2 seconds after the compressor starts	Refrigerant circuit check · Suction stop valve · SMV (Suction modulating valve) · EV (Electronic expansion valve) · LSV (Liquid solenoid valve) · Dryer · Clogged EV, LSV inlet filter
		Low pressure transducer LPT circuit check · Fu3, LPT fault, broken lead wire disconnection, short circuit
		Shortage of refrigerant
		Faulty controller
F111	The high pressure switch does not activate at set value	Disconnection of high pressure switch
		Disconnection of high pressure transducer
F301	Temperature setting request	Set temperature has not been set up yet (Set up the temperature when the controller is replaced)
		Faulty controller (SRAM fault)
F401 F403	Supply air temperature sensor SS fault Return air temperature sensor RS fault	Faulty SS and RS · Broken or short-circuited lead wire · Faulty wiring (incomplete connection of connector) · Faulty sensor
		Faulty sensor (faulty CPU PCB)
F603	Faulty operation of suction modulating valve	Faulty SMV body · Broken coil
		Faulty driving circuit · Disconnection of connector · blown Fu7, 4 · Faulty PCB for suction modulating valve (EC6)
	Wrong controller model setting	Decos III c or d for LXE10E Decos III b for LXE10D
F701	Abnormal power supply voltage	Abnormal power supply voltage · 530 V or more
		Faulty voltage detection · Faulty PT of PC/CT board (other than disconnection and short-circuit) · Faulty contact of connector · S phase is open phase
F705	S phase is open phase	Abnormal power supply voltage · S phase is open phase · Faulty contact of power supply facility
		Faulty power supply equipment · Faulty contact of power plug · Faulty contact of power cable
		· Faulty PT/CT board (EC5)

Alarm code	Content	Possible cause/checkpoint
F803	If any of the following conditions are applicable 1) E107 is generated twice due to EV opening error. 2) Errors are identified in the 2 evaporator fans.(Refer to E205.) 3) The contacts of magnetic switch for the compressor is welded. 4) 2 of the HPT sensor,LPT sensor and DCHS sensor are abnormal.	Find the cause of the alarm for each of the issued alarm codes
E101	High-pressure switch (HPS) activates during operation	Refer to the The inside temperature does not decrease and The high pressure is excessively high in 6.Troubleshooting
E103 (Electronic type OC)	Operating current of the compressor is great	Single phase operation due to faulty contact · Magnetic contactor for compressor · Compressor cable · Compressor terminal
		Malfunctioned equipment · Compressor lock · Actuation of thermal protector CTP for compressor · Faulty PT/CT board (EC5) · Faulty controller (CPU, I/O board)
		Wrong initial setup of PT/CT board (jumper wire) (Single or Dual power supply, 10HP or 5HP)
E105 (Micro-computer type OC)	Operating current of the compressor is high	Single phase operation due to incomplete contact · Magnetic contactor for compressor · Compressor cable · Compressor terminal
		Malfunctioned equipment · Compressor lock · Faulty CT of PT/CT board · Abnormal controller (CPU board)
		Wrong initial setup of controller (Single or Dual power supply, 10HP or 5HP)
E107	The discharge gas temperature is excessively high	Clogged refrigerant system · Dryer · Filter
		Shortage of rafrigerant
		Malfunctioned equipment · Faulty operation of ISV · Clogged capillary at ESV outlet
	Shortage of refrigerant is detected	Clogged refrigerant system · Dryer · Filter
		Shortage of rafrigerant
E109	Low pressure is decreased during operation	Refer to the Unit operates but soon stops and Low pressure is excessively low in 6. Troubleshooting
		Malfunctioned equipment · Faulty low pressure transducer LPT · Faulty controller (CPU board) · Blown fuse Fu3
E201	Pumpdown is not completed within 120 seconds	The solenoid valve cannot be closed (dusts caught in) · LSV (liquid solenoid valve) · HSV (hot gas solenoid valve) · DSV (defrost solenoid valve) · BSV (discharge gas bypass solenoid valve)
		Faulty operation of compressor
		Malfunctioned equipment · Controller · Low pressure transducer LPT
E203	Overcooling prevention (control sensor<=SP-3.0) continues for three minutes or longer in the chilled or partial frozen mode	Refer to the Control is unstable and Temperature continues to decrease in 6. Troubleshooting
E205	The inside fan motor stops	Faulty operation of evaporator fan motor · Motor lock · Burned-out motor coil · Operation of thermal protector CTP for compressor · Disconnection on the secondary side of electromagnetic contactor for evaporator fan
		Faulty evaporator fan propeller · Propeller ice lock · Foreign matters caught in propeller

Alarm code	Content	Possible cause/checkpoint
E207	Defrost cannot be completed within 90 minutes	Malfunctioned equipment · Faulty sensor (EOS, RS, HPT, LPT, DCHS) · Faulty controller · Faulty operation of HSV, DSV, ISV · Faulty operation of discharge pressure regulating valve
		Abnormal refrigerant system · Sfortage of refrigerant · Heavy frosting
E303 E305 E307 E311 E315	Humidity setting request Defrost timer setting request Calendar setting request Trip start setting request PT/CT board malfunktion	System malfunctioned · Faulty controller
		Faulty operation · Wrong initial setting of controller
		Faulty PT/CT board
E401 E402 E403 E404 E405 E406 E407 E409 E411 E413 E415 E419 E425 E427 E429 E431 E433	Supply air temperature sensor (SS) fault Data recorder supply air temperature sensor (DSS) fault Return air temperature sensor (RS) fault Data recorder return air temperature sensor (DRS) fault Discharge pipe temperature sensor (DCHS) fault Suction gas temperature sensor (SGS) fault Evaporator inlet pipe temperature sensor (EIS) fault Evaporator outlet pipe temperature sensor (EOS) fault Ambient temperature sensor (AMBS) fault Low pressure transducer (LPT) fault High pressure transducer (HPT) fault Voltage sensor (PT2) fault Pulp temperature sensor (USDA1) fault Pulp temperature sensor (USDA2) fault Pulp temperature sensor (USDA3) fault Humidity sensor (Hus) fault Carge temperature sensor (STS) fault	System malfunction · Faulty sensor · Faulty controller · Broken or short-circuited lead wire · Wrong wiring · Disconnection of connector
E417 E421 E423	Voltage sensor (PT1) fault Current sensor (CT1) fault Current sensor (CT2) fault	Malfunctioned equipment · Faulty sensor · Faulty controller · Broken or short-circuited lead wire · Wrong wiring · Disconnection of connector
E603	Disconnection of suction modulating valve (SMV) or faulty driving circuit or wrong setting of controller	Malfunctioned equipment · Faulty controller · Faulty SMV coil · Faulty PCB for SMV · Broken wire of harness (disconnection of connector)
		Faulty operation · Wrong initial setup of controller
E607	Faulty contact point of manual defrost key (sheet key)	Faulty short-circuit of switch
		Faulty short-circuit of CPU
E707	Momentary power failure	The power is not supplied for 40 to 300 mm sec.
E801	Exhausted battery for the CPU board	
E805	Ventilator opening detector error	
	Initial setting FA SEN of the controller is wrong.	Don't set H or L for the unit not equiped ventilator opening detector.
E807	Opened lower ventilator	The lower ventilator is opened during frozen operation

Code	Descriptions	Alarm LED	
		Operation	Auto PTI
FXXX	When fatal damage, which may lead to difficulty of temperature in-range is occurred and unit will stop.	●	●
EXXX	This condition is not serious to maintain temperature in-range.Mostly auto back up operation is activating.	○	●
HXXX	Information code > shows when temp is out of range (instead of partlow chart).	○	
DXXX	Information code > shows when temp is out of range (instead of partlow chart).	○	
JXXX	If Auto PTI judges unit abnormal, J-code is shown.		●
PXXX	This code shows that unit is in "Pull down" condition. "XXX" shows pull down time.	○	

● LED ON   ○ LED OFF