8. Error Codes and How to Deal with it

When an error has occurred, a red LED on the operation panel turns on and an error code is displayed on the LED display. The panel does not revert to the display sleep mode while the error code is shown.



Error Code example

After a component is replaced or the inspection is completed, turn the breaker OFF for a period of 3 minutes before restarting to confirm the error does not re-occur.

Below is the list of the error codes. If the corrective action does not solve the error problem,

a malfunction of the PCB is highly likely.

	Error		Chec	k Points	l., d., 0
Error Code		Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods
		When the hot wate	Error Detection er temperature th	-	°C or more
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>	
		- Check dust being stuck on HP connector			- Remove dust if any
		- Bends or blockings on HP connection pipes			-Correct piping and remove bends and blockings
	HP water	- freeze on pipes			- Melt the freeze if any and apply insulation
		- Water valve is closed			- Open water valve
E001	outlet over temperature 1	- Stopper valve is closed			- Open stopper valve
		- confirm tank is filled			- fill tank with water if it is not
		- Water circulation pump malfunction			- if Water circulation pump do not start operating even after turning it on, on the operation panel, it is a malfunction of the Water circulation pump.

_			Chec	k Points	1.1	
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods	
			Error Detection Outlet water temp			
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>		
		- Check dust being stuck on HP connector			- Remove dust if any	
		- Bends or blockings on HP connection pipes			-Correct piping and remove bends and blockings	
E002	HP water outlet over	- freeze on pipes			- Melt the freeze if any and apply insulation	
L002	temperature 2	- Water valve is closed			- Open water valve	
		- Stopper valve is closed			- Open stopper valve	
		- confirm tank is filled			- fill tank with water if it is not	
		- Water circulation pump malfunction			- if Water circulation pump do not start operating even after turning it on, on the operation panel, it is a malfunction of the Water circulation pump.	
	HP outlet temperature thermistor detection error	【Error Detection Condition 】 When the hot water temperature thermistor didn't detect 30 °C or more during 30 minutes after the compressor operation start				
E003			<check ite<="" td=""><td>ems></td><td></td></check>	ems>		
		- Check if the hot water thermistor is fallen out			- Put the hot water thermistor back into the pocket on pipe if it is out.	
		【Error Detection Condition 】 When the discharge temperature thermistor detect 130 °C or more				
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>		
		- malfunction of discharge temperature thermistor	CN500	White	- Replace discharge temperature thermistor	
E004	HP discharge	- Check if expansion valve connector is fallen out or not connected properly	CN504	White	- Put it back on properly if it is not in right position	
	temperature 1	- Check resistance between 2			- Abnormal: Valve coil replacement required (together with PC board)	
		phases on expansion valve coil (see table)			- Normal: Heat pump unit replacement required	
		- Blockage in refrigerant pipes			- Heat pump unit replacement required	

_			Chec	k Points	1		
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods		
			【Error Detection Discharge tempe				
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
		- malfunction of discharge temperature thermistor	CN500	White	- Replace discharge temperature thermistor		
		- Check if expansion valve connector is fallen out or not connected properly	CN504	White	- Put it back on properly if it is not in right position		
E005	HP discharge over temperature 2	- Check resistance between 2			- Abnormal: Valve coil replacement required (together with PC board)		
		phases on expansion valve coil (see table)			- Normal: Heat pump unit replacement required		
		- Blockage in refrigerant pipes			- Heat pump unit replacement required		
		【Error Detection Condition】 When the discharge temperature thermistor didn't detect 45 °C or more during 30 minutes after the compressor operation start					
			<check ite<="" td=""><td>ems></td><td>·</td></check>	ems>	·		
		- Check if the discharge temperature thermistor is fallen out	CN500	White	- Put the dischrage temperature thermistor back into the pocket on pipe if it is out.		
E006	HP discharge temperature Thermistor detection	- Check if expansion valve connector is fallen out or not connected properly	CN504	White	- Put it back on properly if it is not in right position		
	error	- Check resistance between 2 phases on expansion valve coil			- Abnormal: Valve coil replacement required (together with PC board)		
		(see table)			- Normal: Heat pump unit replacement required		
		- leakage on refrigerant pipes			- Heat pump unit replacement required		

	F		Chec	ck Points	h. d 0		
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods		
		[Error Detection Condition] When high pressure switch open is detected					
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
		- Check on HP connector			- Remove dust if any		
		- Bends or blockings on HP connection pipes			-Correct piping and remove bends and blockings		
		- freeze on pipes			Check temperature on pipe cover that is exposed to ambient temperature		
		- Water valve is closed			- Open water valve		
		- Stopper valve is closed			- Open stopper valve		
		- confirm tank is filled			- fill tank with water if it is not		
	High massage	- Water circulation pump malfunction	CN201	Red	If Water circulation pump do not start operating even after turning it on on the operation panel, it is a malfunction of the Water circulation pump.		
E007	High pressure side error	- Check if air exists in water			If noise of air being released can be heard when water drain plug or PTR valve is loosened, remove air.		
		- Check if the inlet water temperature thermistor is fallen out	CN500	White	- Put the inlet water temperature thermistor back to the right position if it is out		
		- Check if the outlet water temperature thermistor is fallen out	CN500	White	- Put the outlet temperature thermistor back to the right position if it is out		
		- Check if the discharge temperature thermistor is fallen out	CN500	White	- Put the discharge temperature thermistor back to the right position if it is out		
		- Check if expansion valve connector is fallen out or not connected properly	CN504	White	- Put it back on properly if it is not in right position		
		Check resistance between 2 phases on expansion valve coil			- Abnormal: Valve coil replacement required (together with PC board)		
		(see table)			- Normal: Heat pump unit replacement required		
		Defrost drive conducted while	Error Detection ambient temper		etected 20°C or more		
			<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
E008	High ambient temperature defrost drive error	- Trouble in air absorption due to foreign object blocking air path through evaporator			- Remove foreign object from evaporator		
		- Ambient temperature thermistor malfunction	CN500	White	- Replace ambient temperatrue thermistor		
		- defrost temperature thermistor malfunction	CN500	White	- Replace defrost temperatrue thermistor		

			Chec	k Points			
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods		
		When the defrost temperature th		_			
	HP defrost		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
E009	thermistor detection error	- Check if the defrost temperature thermistor is fallen out from evaporator	CN500	White	- Put the defrost temperature thermistor back into the pocket on evaporator if it is out.		
		- malfunction of the defrost temperature thermistor	CN500	White	- Replace the defrost temperature thermistor		
	HP inlet	When the inlet wa	Error Detection ter temperature to		80°C or less		
E011	temperature		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	thermistor wire break	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-1 in p.g.17)		
	HP outlet		【Error Detection Condition】 When the outlet water temperature thermistor detect -30°C or less				
E012	temperature thermistor wire break	<check items=""></check>					
		Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-1 in p.g.17)		
	HP discharge	【Error Detection Condition 】 When the discharge temperature thermistor detect -31°C or less					
E013	temperature		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	thermistor wire break	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-3 in p.g.17)		
	HP defrost	【Error Detection Condition 】 When the defrost temperature thermistor detect -50°C or less					
E014	temperature thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	wire break	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-4 in p.g.17)		
	HP ambient		Error Detection at temperature the	Condition 】 ermistor detect -5	0°C or less		
E015	temperature		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	thermistor wire break	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-2 in p.g.17)		
			Error Detection Tank thermistor	Condition] detect -30°C or le	SS		
E016	Tank thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	wire break	Refer to Thermistor diagnostic	CN506	White	Check to see if it is broken.		
<u> </u>		i	I	l .	1		

	Г		Chec	k Points	ludama ant 0		
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods		
	HP inlet	[Error Detection Condition] When the inlet water temperature thermistor detect 100°C or more					
E021	temperature thermistor		<check ite<="" td=""><td>ems></td><td>·</td></check>	ems>	·		
	wire short circuit	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-1 in p.g.17)		
	HP outlet	When the outlet wat	【Error Detection ter temperature the	_	50°C or more		
E022	temperature thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	wire short circuit	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-1 in p.g.17)		
	HP discharge	When the discharg	【Error Detection ge temperature th	-	0°C or more		
E023	temperature thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	wire short circuit	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-3 in p.g.17)		
	HP defrost	【Error Detection Condition 】 When the defrost temperature thermistor detect 100°C or more					
E024	temperature thermistor	<check items=""></check>					
	wire short circuit	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-4 in p.g.17)		
	HP ambient	[Error Detection Condition] When the Ambient temperature thermistor detect 100°C or more					
E025	temperature thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	wire short circuit	Refer to Thermistor diagnostic	CN500	White	-Confirm the resistance: (See Table-2 in p.g.17)		
	Tarris	When the	Error Detection Tank thermistor	Condition 】 detect 120°C or mo	ore		
E026	Tank thermistor		<check ite<="" td=""><td>ems></td><td></td></check>	ems>			
	short circuit	Refer to Thermistor diagnostic	CN506	White	Check to see if it is shorted.		
			Error Detection uous fan motor al	Condition 】 onormal operation.			
			<check ite<="" td=""><td>ems></td><td>·</td></check>	ems>	·		
	Fan motor	- Fan blade rotated with foreign object stuck on it			- Remove foreign object		
E031	locked	- Fan motor locked			- Replace fan motor		
		- Check if connector is fallen out or not connected properly	CN200	White	- Put it back on properly if it is not in right position		
		- Fan motor malfunction	CN200	White	- Replace fan motor		

			Checl	< Points ■	h			
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	- Judgment & Repair Methods			
		【Error Detection Condition 】 Continuous fan motor abnormal operation.						
			<check ite<="" td=""><td>ms></td><td></td></check>	ms>				
E032	Fan motor revolution error	-Fan blade do not rotate			- Put it back on properly if it is not in right position			
		-Fan blade rotates in higher speed than usual	CN200	White	- Replace fan motor			
		- Fan motor malfunction	CN200	White	- Replace fan motor			
		When less than 150rpm of water	【Error Detection of circulation pump records		I for 20 seconds continuity			
			<check ite<="" td=""><td>ms></td><td>-<u>r</u></td></check>	ms>	- <u>r</u>			
		- Check if pump connector is fallen out or not connected properly	CN201	Red	- Put it back on properly if it is not in right position			
E034	Water circulation pump locked	- Water pump malfunction	CN201	Red	- If rotation of water circulation pump do not reach expected number of rotation even after turning it on on the operation panel, it is a malfunction of the water circulation pump.			
		- Check for bends or blockings on HP connection pipes			- Correct piping and remove bends and blockings			
		【Error Detection Condition】 Compressor start error detected in compressor operation control						
			<check ite<="" td=""><td>ms></td><td>·</td></check>	ms>	·			
		Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order			
	INV	- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block			
E041	compressor start error	- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))			
		- PC Board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump			
		- Compressor malfunction			- Heat pump unit replacement required			

			Check	R Points		
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods	
		【Error Detection Condition】 Communication error detected in compressor operation control				
			<check ite<="" td=""><td>ms></td><td></td></check>	ms>		
		- Wiring layout is not following instruction			- Confirm connector connections	
E042	INV communicatio n error	- noise source is near harnesses			- Stop operation of all the surrounding electrical products and reboot Heat Pump	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
			Error Detection (or detected in cor	Condition 】 mpressor operation	n control	
			<check ite<="" td=""><td>ms></td><td>-_F</td></check>	ms>	- _F	
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
		- Check dust being stuck on HP connector			- Remove dust	
	INV transient over-current	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
E50	error on hardware (converter)	- Stopper valve is closed			- Open stopper valve	
		- Air exists in water pipe			- Remove air	
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

Error	Error		Check	Points	Judgment &		
Code	Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Repair Methods		
			【Error Detection Condition 】 Over current error detected in compressor operation control				
			<check iten<="" td=""><td>าร></td><td></td></check>	าร>			
		- Check for HP control PC board connector connection			- Confirm connector connections		
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order		
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block		
		- Check dust being stuck on HP connector			- Remove dust		
	INV transient	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings		
E051	over-current error on hardware	- Stopper valve is closed			- Open stopper valve		
	(inverter)	- Air exists in water pipe			- Remove air		
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump		
		- Power cutoff occurred			- Check Power supply cable wiring layout		
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))		
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump		

			Check	Points	ludens and 0
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods
			Error Detection Cor detected in com	pressor operation	n control
			<check item<="" td=""><td>าร> </td><td></td></check>	าร> 	
		- Check for HP control PC board connector connection			- Confirm connector connections
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block
		- Check dust being stuck on HP connector			- Remove dust
	INV transient	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings
E052	error on software (inverter)	- Stopper valve is closed			- Open stopper valve
		- Air exists in water pipe			- Remove air
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump
		- Power cutoff occurred			- Check Power supply cable wiring layout
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump

Error Error			Check Points		Judgment &			
Code	Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Repair Methods			
		【Error Detection Condition】 Over current error detected in compressor operation control						
			<check iten<="" td=""><td>ns></td><td></td></check>	ns>				
		- Check for HP control PC board connector connection			- Confirm connector connections			
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order			
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block			
		- Check dust being stuck on HP connector			- Remove dust			
E053	INV transient over-current error on	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings			
	software (converter)	- Stopper valve is closed			- Open stopper valve			
		- Air exists in water pipe			- Remove air			
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump			
		- Power cutoff occurred			- Check Power supply cable wiring layout			
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))			
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump			
		(Wire break or short circ	Error Detection C uit detected on th		ontrol PC board			
			<check iten<="" td=""><td>ns></td><td></td></check>	ns>				
F054	INV	- Thermistor wiring error	CN500	White	- Confirm connector connections			
E054	temperature sensor error	- malfunction of thermistor on HP control PC board			- PCB replacement required if same error occurs again after re-run of heat pump			

	_		Check	Points	ludament 8	
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods	
		【Error Detection Condition】 90degC or more detected by thermistor on HP control PC board				
1			<check item<="" td=""><td>18></td><td></td></check>	18>		
		- No fan blade rotation			- Check fan motor rotation	
	INV heatsink	- No fait blade fotation			- Confirm connector connections	
E055	temperature error	- No efficient air absorption			- Check if any damege on propellar fan blade	
		amount			- Remove foreign object from evaporator if any	
		- Fan motor malfunction			- Replace fan motor	
		-	Error Detection Cetected in compres	_	ntrol	
			<check item<="" td=""><td>ns></td><td></td></check>	ns>		
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Compressor wiring error			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm wire connection on terminal block.	
		- Check dust being stuck on HP connector			- Remove foreign object if any	
E056	INV overload detection	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
	error	- Check if stopper valve is open			- Open stopper valve	
		- Air exists in water pipe			- Remove air	
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

Error	Error Contents	Diagnostic	Check Points		Judgment &	
Code			Connector No. or Maintenance Monitor No.	Connector Colour	Repair Methods	
		【Error Detection Condition 】 Power supply voltage drop detected in compressor operation control				
		Tower supply remage	<check iten<="" td=""><td></td><td></td></check>			
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
E057	INV power supply low- voltage error	- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malunction			- PCB replacement required if same error occurs again after re-run of heat pump	
		【Error Detection Condition 】 Over voltage error detected in compressor operation control				
		<check items=""></check>				
	INV Power Supply Over- Voltage Error	- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
		- Check dust being stuck on HP connector			- Remove dust	
E058		- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
		- Stopper valve is closed			- Open stopper valve	
		- Air exists in water pipe			- Remove air	
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

F	Error Contents		Check Points		Judgment &	
Error Code		Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Repair Methods	
		[Error Detection Condition] Error detected on serial communication driver				
			<check item<="" td=""><td>18></td><td></td></check>	18>		
		Error in compressor wiring			- Correct compressor wiring	
E059	INV serial communicatio n error	ommunicatio			- Normal: PC board replacement required	
		phases on compressor			- Abnormal: Heat pump unit replacement required	
		compressor malfunction			- Heat pump unit replacement required	
		_	Error Detection C ror detected inside	_		
F000	INV Inverter Current		<check item<="" td=""><td>18></td><td></td></check>	18>		
E060	Detection Circuit Error	- PC Board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
			Error Detection C		ontrol	
	INV transient power cutoff detection error 1	<check items=""></check>				
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
E061		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

Error	Error		Check	Points	ludament 9	
Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods	
	INV transient power cutoff detection error 2	【Error Detection Condition】 Power cutoff detected in compressor operation control				
		<check items=""></check>				
		- Check for HP control PC board connector connection			- Confirm connector connections	
E062		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
	INV control circuit board power supply error	【Error Detection Condition 】 Error detected inside PC board				
E063			<check iten<="" td=""><td>1S></td><td></td></check>	1 S >		
2000		- PC Board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
	INV transient voltage drop detection error		Error Detection C letected in compre	_	ontrol	
			<check item<="" td=""><td>1S></td><td></td></check>	1 S >		
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			confirm connection of wire terminals to compressor is in the right order	
E064		- Error in connection on power supply terminal block			Confirm cable is connected correctly at terminal block	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

Error		Check Points		ludgmont 8	
Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods	
	【Error Detection Condition 】 Compressor rotation error was detected				
	Compre	<check item<="" td=""><td></td><td></td></check>			
	- Check for HP control PC board connector connection			- Confirm connector connections	
	- Trouble in air absorption due to foreign object blocking air path through evaporator			- Remove foreign object from evaporator if any	
	- Check dust being stuck on HP connector			- Remove foreign object if any	
	- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
	- Stopper valve is closed			- Open stopper valve	
INV motor operation detection error	- Air exists in water pipe			- Remove air	
	- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
	- Compressor wiring error			- confirm connection of wire terminals to compressor is in the right order	
	- Power cutoff occurred			- Check Power supply cable wiring layout	
	- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
	- Error in connection on power supply terminal block			- Confirm wire connection on terminal block.	
	- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
INV Converter Current detection Circuit Error	【Error Detection Condition 】 Error detected inside PC board				
		<check item<="" td=""><td>ns></td><td></td></check>	ns>		
	- PC Board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	
Current detection	ı	verter	Check Item	ror	

			Check Points				
Error Code	Error Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods		
		【Error Detection Condition 】 Continuous water pump abnormal operation.					
		<check items=""></check>					
		- Check on HP connector	<u> </u>		- Remove dust if any		
		- Bends or blockings on HP connection pipes			-Correct piping and remove bends and blockings		
		- freeze on pipes			- Check temperature on pipe cover that is exposed to ambient temperature		
		- Water valve is closed			- Open water valve		
		- Stopper valve is closed			- Open stopper valve		
		- confirm tank is filled			- fill tank with water if it is not		
	Outlet water temperture rise error	- Water circulation pump malfunction			- If Water circulation pump do not start operating even after turning it on on the operation panel, it is a malfunction of the water circulation pump.		
E080		- Check if air exists in water			- If noise of air being released can be heard when water drain plug or PTR valve is loosened, remove air.		
		- Check if the inlet water temperature thermistor is fallen out			- Put the inlet water temperature thermistor back to the right position if it is out		
		- Check if the outlet water temperature thermistor is fallen out			- Put the outlet temperature thermistor back to the right position if it is out		
		- Check if the discharge temperature thermistor is fallen out	CN500	White	- Put the discharge temperature thermistor back to the right position if it is out		
		- Check if expansion valve connector is fallen out or not connected properly	CN504	White	- Put it back on properly if it is not in right position		
		- Check resistance between 2 phases on expansion valve coil (see table)			- Abnormal: Valve coil replacement required (together with PC board)		
					- Normal: Heat pump unit replacement required		

	Error		Check Points		ludament 9	
Error Code	Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Judgment & Repair Methods	
		【Error Detection Condition 】 Current error detected in compressor operation control				
			<check item<="" td=""><td>าร></td><td></td></check>	าร>		
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
	Compressor overload protection	- Check dust being stuck on HP connector			- Remove dust	
		- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
E081		- Stopper valve is closed			- Open stopper valve	
		- Air exists in water pipe			- Remove air	
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	

Error	Error		Check Points		- Judgment &	
Code	Contents	Diagnostic	Connector No. or Maintenance Monitor No.	Connector Colour	Repair Methods	
		【Error Detection Condition】 Current error detected in compressor operation control				
		<check items=""></check>				
		- Check for HP control PC board connector connection			- Confirm connector connections	
		- Error in compressor wiring			- confirm connection of wire terminals to compressor is in the right order	
		- Error in connection on power supply terminal block			- Confirm cable is connected correctly at terminal block	
	Compressor low-current protection	- Check dust being stuck on HP connector			- Remove dust	
		- Bends or blockings and freeze on HP connection pipes			-Correct piping and remove bends and blockings	
E082		- Stopper valve is closed			- Open stopper valve	
		- Air exists in water pipe			- Remove air	
		- Water circulation pump malfunction			- Conduct operation check on water circulation pump	
		- Power cutoff occurred			- Check Power supply cable wiring layout	
		- Power supply voltage error			- Confirm power supply voltage (187~254 V (include tolerance))	
		- PC board malfunction			- PCB replacement required if same error occurs again after re-run of heat pump	