

[3] Self-diagnosis and Countermeasures Depending on the Check Code Displayed

(1) Mechanical

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
0403	Serial transmission abnormality	If serial transmission cannot be established between the MAIN and INV boards.	1) Wiring is defective.	Check 1, the connections, 2, contact at the connectors and 3, for broken wires in the following wiring. CNRS2 - CNRS3 CNAC2 - TB1B
			2) Switches are set wrong on the INV board.	SW1-4 on the INV board should be OFF.
			3) A fuse (F01) on the INV board is defective.	If the fuse is melted, (if the resistance between the both ends of fuse is ∞), replace the fuse.
			4) The circuit board is defective.	If none of the items in 1) to 3) is applicable, and if the trouble reappears even after the power is switched on again, replace the circuit board by the following procedure (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. securely). ① If serial transmission is restored after the INV board only is replaced, then the INV board is defective. ② If serial transmission is not restored, reinstall the INV board and replace the MAIN board. If serial transmission is restored, the MAIN board is defective. ③ If serial transmission is not restored by ① and ② above, replace both boards.

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
1102	Discharge temperature abnormality (Outdoor unit)	1) Gas leak, gas shortage.	See Refrigerant amount check .
		2) Overload operations.	Check operating conditions and operation status of indoor/outdoor units.
		3) Poor operations of indoor LEV. 4) Poor operations of OC controller LEV: Cooling : LEV1 5) Poor operations of BC controller LEV: Cooling-only : LEV3 Cooling-main : LEV1, 3 Heating-only, Heating-main: LEV3 Defronst : LEV3	Check operation status by actually performing cooling or heating operations. Cooling : Indoor LEV (Cooling-only) LEV1 (PUHY) LEV1, 3 (BC) SVM (BC) SVA (BC) Heating : Indoor LEV (Heating-only) LEV3 (BC) SVB (BC) SV3 ~ 6 (PURY)
		6) Poor operations of BC controller SVM: Cooling-only, defrost 7) Poor operations of BC controller SVA: Cooling-only, Cooling-main 8) Poor operations of BC controller SVB: Heating-only, Heating-main 9) Poor operations of solenoid valves. SV (3 ~ 6) (PURY)→ Heating-only, Heating-main	See Trouble check of LEV and solenoid valve .
		10) Setting error of connection address (PURY).	Check address setting of indoor unit connection.
		11) Poor operations of ball valve.	Confirm that ball valve is fully opened.
		12) Outdoor unit fan block, motor trouble, poor operations of fan controller→Heating (Heating-only, Heating-main). [3 ~ 12) : Rise in discharge temp. by low pressure drawing.]	Check outdoor fan. See Trouble check of outdoor fan .
		13) Gas leak between low and high pressures. [4-way valve trouble, compressor trouble, solenoid valve SV1 trouble.]	Check operation status of cooling-only or heating-only.
		14) Poor operations of solenoid valve SV2. [Bypass valve SV2 can not control rise in discharge temp.]	See Trouble check of solenoid valve .
		15) Thermistor trouble.	Check resistance of thermistor.
		16) Thermistor input circuit trouble on control circuit board.	Check inlet temperature of sensor with LED monitor.

* There are not LEV2 and LEV4 on CMB-P-V-E.

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
1111	Low pressure saturation temperature sensor abnormality (TH2)	<p>1. When saturation temperature sensor (TH2) or liquid level detecting temperature sensors (TH3, TH4) detects -40°C or less (the first time) during operations, outdoor unit stops once, mode is changed to restart mode after 3 minutes, then the outdoor unit restarts.</p> <p>2. When -40°C or less temp. is detected again (the second time) within 30 minutes after stop of outdoor unit, error stop is observed with code Nos. "1111," "1112," or "1113" displayed.</p> <p>3. When -40°C or less temperature is detected 30 or more minutes after stop of outdoor unit, the stop is regarded as the first time and the process shown in 1. is observed.</p>	<p>1) Gas leak, Gas shortage.</p> <p>2) Insufficient load operations.</p>	<p>See Refrigerant amount check.</p> <p>Check operating conditions and operation status of outdoor unit.</p>
			<p>3) Poor operations of indoor LEV.</p> <p>4) Poor operations of OC controller LEV: Cooling : LEV1</p> <p>5) Poor operations of BC controller LEV: Cooling-only : LEV3 Cooling-main : LEV1, 3 Heating-only, Heating-main: LEV3</p> <p>6) Poor operations of BC controller SVM: Cooling-only, Defrost</p> <p>7) Poor operations of BC controller SVM: Cooling-only, Cooling-main</p> <p>8) Poor operations of BC controller SVB: Heating-only, Heating-main</p> <p>9) Solenoid valve trouble (SV3 ~ 6) (PURY). PUHY-P (SV3 ~ 4) Heating-only, Heating-main</p>	<p>Check operation status by actually performing cooling-only or heating-only operations.</p> <p>Cooling-only : indoor LEV LEV1 (PUHY) LEV1, 3 (BC) SVM (BC) SVA (BC)</p> <p>Heating-only : indoor LEV LEV3 (PURY) (BC) SVB (BC) SV3~6 (PURY) SV3~4 (PUHY-P)</p>
1112	Liquid level detecting temperature sensor abnormality (TH4)	<p>4. 30 minutes after stop of outdoor unit is intermittent fault check period with LED displayed.</p> <p>Note: 1. Low press. saturation temperature trouble is not detected for 3 minutes after compressor start, and finish of defrosting operations, and during defrosting operations.</p> <p>2. In the case of short/open of TH2~TH4 sensors before starting of compressor or within 10 minutes after starting of compressor, "1111," "1112," or "1113" is displayed too.</p>	<p>10) Setting error of connection address.</p> <p>11) Poor operations of ball valve.</p> <p>12) Short cycle of indoor unit.</p> <p>13) Clogging of indoor unit filter.</p> <p>14) Fall in air volume caused by dust on indoor unit fan.</p> <p>15) Dust on indoor unit heat exchanger.</p> <p>16) Indoor unit block, Motor trouble.</p>	<p>See Trouble check of LEV and solenoid valve.</p> <p>Check address setting of indoor unit connector.</p> <p>Confirm that ball valve is fully opened.</p> <p>Check indoor unit, and take measures to trouble.</p>
			<p>[10)~15) : Fall in low pressure caused by evaporating capacity in cooling-only cooling-principal operation.]</p>	
1113	Low pressure saturation temperature trouble		<p>17) Short cycle of outdoor unit.</p> <p>18) Dust on outdoor heat exchanger.</p>	<p>Check outdoor unit, and take measures to trouble.</p>
			<p>19) Indoor unit fan block, motor trouble, and poor operations of fan controller.</p> <p>[16)~18) : Fall in low press. caused by lowered evaporating capacity in heating-only heating-principal operation.]</p>	<p>Check outdoor unit fan.</p> <p>See Trouble check of outdoor unit fan.</p>
			<p>20) Poor operations of solenoid valve SV2.</p> <p>[Bypass valve (SV2) can not control low pressure drop.]</p>	<p>See Trouble check of solenoid valve.</p>
			<p>21) Thermistor trouble (TH2~TH10).</p>	<p>Check resistance of thermistor.</p>
			<p>22) Pressure sensor abnormality.</p>	<p>See Trouble check of pressure sensor.</p>
			<p>23) Control circuit board thermistor abnormality and pressure sensor input circuit abnormality.</p>	<p>Check inlet temp. and press. of sensor by LED monitor.</p>
			<p>24) Poor mounting of thermistor (TH2~TH10).</p>	

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure	
1301	Low pressure abnormality	<p>When starting from the stop mode for the first time, (if at the start of bind power transmission, the end of bind power transmission, and in the mode when the thermostat goes OFF immediately after the remote control goes ON, the following compressor start time is included), if the low pressure sensor before starting is at 1.0 kg/cm²G (0.098MPa), operation stops immediately.</p>	<ol style="list-style-type: none"> 1) Internal pressure is dropping due to a gas leak. 2) The low pressure sensor is defective. 3) Insulation is torn. 4) A pin is missing in the connector, or there is faulty contact. 5) A wire is disconnected. 6) The control board's low pressure sensor input circuit is defective. 	Refer to the item on judging low pressure sensor failure.
1302	High pressure abnormality 1 (Outdoor unit)	<ol style="list-style-type: none"> 1. When press. sensor detects 28kg/cm²G (2.47MPa) or more during operations (the first time), outdoor unit stops once, mode is changed to restart mode after 3 minutes, then the outdoor unit restarts. 2. When 30kg/cm²G (2.94MPa) or more pressure is detected again (the second time) within 30 minutes after stop of outdoor unit, error stop is observed with code No. "1302" displayed. 3. When 28kg/cm²G (2.47MPa) or more pressure is detected 30 or more minutes after stop of outdoor unit, the detection is regarded as the first time and the process shown in 1 is observed. 4. 30 minutes after stop of outdoor unit is intermittent fault check period with LED displayed. 5. Error stop is observed immediately when press. switch (30⁺⁰_{-1.5} kg/cm²G (2.94⁺⁰_{-1.5} MPa)) operates in addition to pressure sensor. 	<ol style="list-style-type: none"> 1) Poor operations of indoor LEV. 2) Poor operations of outdoor LEV1 (PUHY). 3) Poor operations of BC controller LEV: Heating-only, heating-principal: LEV3 Defrost: LEV3 4) Poor operations of BC controller SVM: Cooling-only, defrost 5) Poor operations of BC controller SVA: Cooling-only, cooling-main 6) Poor operations of BC controller SVB: Heating-only, heating-main 7) Solenoid valve SV (3 ~ 6) trouble (PURY). SV3 ~ 4 (PUHY-P) Cooling-only, cooling-main 8) Setting error of connection address. 9) Poor operations of ball valve. 10) Short cycle of indoor unit. 11) Clogging of indoor unit filter. 12) Fall in air volume caused by dust on indoor unit fan. 13) Dust on indoor unit heat exchanger. 14) Indoor unit fan block, motor trouble. [9~14) : Rise in high pressure caused by lowered condensing capacity in heating-only and heating-principal operation.] 15) Short cycle of outdoor unit. 16) Dust on outdoor unit heat exchanger. 17) Outdoor unit fan block, motor trouble, poor operations of fan controller. [15~17): Rise in high press. caused by lowered condensing capacity in cooling-only and cooling-principal operation.] 18) Poor operations of solenoid valves SV1, 2 (Bypass valves (SV1, 2) can not control rise in high pressure). 19) Thermistor trouble (TH2, TH5, TH6). 20) Pressure sensor trouble. 21) Control circuit board thermistor trouble, press. sensor input circuit trouble. 	<p>Check operations status by actually performing cooling or heating operations.</p> <p>Cooling : Indoor LEV LEV1 (PUHY) LEV1, 3 (BC) SVM SVA (BC) SV3~6 (PURY) SV3~4 (PUHY-P)</p> <p>Heating : Indoor LEV LEV3 (BC) SVB (BC)</p> <p>See Trouble check of LEV and solenoid valve.</p> <p>Check address setting of indoor unit connector.</p> <p>Confirm that ball valve is fully open-ed.</p> <p>Check indoor unit and take measures to trouble.</p> <p>Check outdoor unit and take measures to trouble.</p> <p>Check outdoor unit fan See Trouble check of outdoor unit fan.</p> <p>See Trouble check of solenoid valve.</p> <p>Check resistance of thermistor.</p> <p>Check Trouble check of pressure sensor.</p> <p>Check inlet temperature and press. of sensor with LED monitor.</p>

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
1302	High pressure abnormality 2 (Outdoor unit)	When press. sensor detects 1kg/cm ² G (0.098MPa) or less just before starting of operation, error stop is observed with code No. "1302" displayed.	<ol style="list-style-type: none"> 1) Fall in internal press. caused by gas leak. 2) Press. sensor trouble. 3) Film breakage. 4) Coming off of pin in connector portion, poor contact. 5) Broken wire. 6) Press. sensor input circuit trouble on control circuit board. 	See Trouble check of pressure sensor.
1368	Liquid side High pressure abnormality (BC controller)	When liquid side press, sensor, gas side pressure sensor, or intermediate pressure sensor detects 30kg/cm ² G (2.94MPa) or more, error stop is observed with code No. "1368", or "1370" displayed.	<ol style="list-style-type: none"> 1) Poor operations of indoor LEV. 2) Poor operations of BC controller LEV: Heating-only, heating-principal: LEV3 Defrost: LEV3 3) Poor operations of BC controller SVM: Cooling-only, defrost 4) Poor operations of BC controller SVA: Cooling-only, cooling-principal 5) Poor operations of BC controller SVB: Heating-only, heating-principal 6) Solenoid valve SV (3 ~ 6) trouble. Cooling-only, cooling-principal 	<p>Check operations status by actually performing cooling or heating operations.</p> <p>Cooling : Indoor LEV LEV1, 3 SVM SVA SV3~6</p> <p>Heating : Indoor LEV LEV3 SVB</p> <p>See Trouble check of LEV and solenoid valve.</p>
			7) Setting error of connection address.	Check address setting of indoor unit connector.
			8) Poor operations of ball valve.	Confirm that ball valve is fully opened.
			<ol style="list-style-type: none"> 9) Short cycle of indoor unit. 10) Clogging of indoor unit filter. 11) Fall in air volume caused by dust on indoor unit fan. 12) Dust on indoor unit heat exchanger. 13) Indoor unit fan block, motor trouble. <p>[9)~13) : Rise in high pressure caused by lowered condensing capacity in heating-only and heating-principal operation.]</p>	Check indoor unit and take measures to trouble.
			<ol style="list-style-type: none"> 14) Short cycle of outdoor unit. 15) Dust on outdoor unit heat exchanger. 	Check outdoor unit and take measures to trouble.
			<ol style="list-style-type: none"> 16) Outdoor unit fan block, motor trouble, poor operations of fan controller. <p>[14)~16) : Rise in high press. caused by lowered condensing capacity in cooling-only and cooling-principal operation.]</p>	Check outdoor unit fan. See Trouble check of outdoor unit fan.
			17) Poor operations of solenoid valves SV1, 2. (Bypass valves (SV1, 2) can not control rise in high pressure.)	See Trouble check of solenoid valve.
			18) Thermistor trouble (TH2, TH5, TH6).	Check resistance of thermistor.
			19) Pressure sensor trouble.	Check Trouble check of pressure sensor.
			20) Control circuit board thermistor trouble, press. sensor input circuit trouble.	Check inlet temperature and press. of sensor with LED monitor.
21) Poor mounting of thermistor. (TH2, TH5, H6)				
1370	Intermediate side			

Checking code		Meaning, detecting method	Cause	Checking method
1500	Overcharged refrigerant abnormality	<p>1. When discharge superheat ≤ 10 deg is keeping for 10 minutes or discharge superheat ≤ 20 deg for 15 minutes, outdoor unit stops once, and after 3 minutes, the unit restarts. For 60 minutes after unit stopped is intermittent fault check period.</p> <p>2. When discharge superheat ≤ 10 deg is keeping for 10 minutes or discharge superheat ≤ 20 deg for 15 minutes again (second time), the unit stops and error code 1500 is displayed.</p> <p>3. In case of SW2-6 ON, the detection for the second time is followed by the first time.</p>	1) Excessive refrigerant charge.	Check refrigerant amount.
			2) Thermistor trouble (TH1).	Check resistance of thermistor.
			3) Pressure sensor trouble (63HS).	See trouble shooting of pressure sensor.
			4) Control circuit board trouble.	Check temperature and pressure sensor with LED monitor.
1501	Lacked refrigerant abnormality	<p>1. When the unit condition is as follows, the compressor is stopped (1st detection) and after 3 minutes, the compressor is restarted automatically.</p> <p>PUHY-P200-250YMF-C</p> <p>① F<60Hz and TH10>85°C continuously for 60 minutes.</p> <p>② F<60Hz and TH10>95°C continuously for 15 minutes.</p> <p>③ F \geq 60Hz and TH10>100°C continuously for 60 minutes.</p> <p>④ F \geq 60Hz and TH10>110°C continuously for 15 minutes.</p> <p>PURY-P200-250YMF-C</p> <p>① F<60Hz and TH10>85°C continuously for 60 minutes.</p> <p>② F<60Hz and TH10>95°C continuously for 15 minutes.</p> <p>③ F \geq 60Hz and TH10>100°C continuously for 60 minutes.</p> <p>④ F \geq 60Hz and TH10>110°C continuously for 15 minutes.</p> <p>2. If the temperature rises again as above within 2 hours after the outdoor unit is stopped (2nd detection), an error stop is performed, and the check code 1501 is displayed.</p> <p>3. If the temperature rises again as above within 2 hours after the outdoor unit is stopped, it becomes the first detection again, and operation is the same as in 1 above.</p> <p>4. The 2 hour period after the outdoor unit stops is the abnormal delay period, and LED display is carried out during the abnormal stop delay.</p>	1) Gas leakage, insufficient gas.	Refer to the item on judging the refrigerant volume.
			2) Overload operation.	Check the indoor and outdoor unit operating conditions.
			3) Indoor unit LEV operation is faulty.	Actually run the equipment in cooling or heating mode and check the operating condition.
			4) Outdoor unit LEV1 operation is faulty.	
			5) Outdoor unit SLEV operation is faulty.	Cooling : Indoor unit LEV LEV1 (PUHY) SLEV Heating : Indoor unit LEV SLEV
			6) Ball valve operation is faulty.	Refer to the item concerning judging LEV failure.
			7) The thermistor is faulty.	Check with the ball valve fully open.
			8) The control board's thermistor input circuit is faulty.	Check the thermistor's resistance.
		Check the sensor's temperature reading by the LED monitor.		
Insufficient refrigerant abnormality				

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
1505	<p>Suction pressure abnormality</p> <p><PUHY-200-250YMF-C> 1. Judging the state when the suction pressure reaches near 0kg/cm²G (0MPa) during compressor operation by the low pressure saturation temperature, error stop will be commenced displaying "1505". 2. The outdoor unit once stops entering into the 3-minutes restart mode if the state of 1 continues for 3 minutes, and restarts after 3 minutes. 3. After restarting, if the same state as 1 continues within 30 minutes from the stopping of 2, error stop will be commenced displaying "1505". 4. Ineffective if the compressor operating time (integrated) exceeds 60-minutes not detecting trouble.</p> <p><PUHY-P200-250YMF-C> <PURY-(P)200-250YMF-C> 1. Judging that the state when the suction pressure reaches 0kg/cm²G (0MPa) during compressor operation indicates high pressure by the discharge temperature and low pressure saturation temperature, the back-up control by gas bypassing will be conducted.</p>	<ul style="list-style-type: none"> • Operation while neglecting to open ball valve. Especially for the ball valve at low pressure side. At cooling : Gas side ball valve At heating : Liquid side ball valve • When plural systems are existing, the low pressure abruptly drop at indoor stopping by the erroneous wiring of transmission line (different connection of transmission line and refrigerant piping). • Temporary vacuum condition due to refrigerant distribution unbalance (insufficient refrigerant of low pressure line) immediately after charging refrigerant. 	<p>Once vacuum operation protection is commenced, do not attempt to restart until taking the measures below.</p> <p><Checking method></p> <ul style="list-style-type: none"> • Check ball valve for neglecting to open. • Check extended piping for clogging when ball valve is opened. • Check transmission line for erroneous wiring. (Confirm the correct wiring and piping connection between indoor and outdoor units by operating indoor unit one by one.) <p><Countermeasure></p> <ul style="list-style-type: none"> • After checking with the above method, make error reset by power source reset. • Then operate for 10~15-minutes under the operation mode reverse to that when the vacuum operation protection occurred (Heating if error occurred in cooling, while cooling if it occurred in heating), and then enter into the ordinary operation state.
2500	<p>Leakage (water) abnormality</p> <p>When drain sensor detects flooding during drain pump OFF.</p>	<p>1) Water leak due to humidifier or the like in trouble.</p>	<p>Check water leaking of humidifier and clogging of drain pan.</p>
2502	<p>Drain pump abnormality</p> <p>When indirect heater of drain sensor is turned on, rise in temperature is 20 deg. or less (in water) for 40 seconds, compared with the temperature detected before turning on the indirect heater.</p>	<p>1) Drain sensor sinks in water because drain water level rises due to drain water lifting-up mechanism trouble.</p> <p>2) Broken wire of indirect heater of drain sensor.</p> <p>3) Detecting circuit (circuit board) trouble.</p>	<p>Check operations of drain pump.</p> <p>Measure resistance of indirect heater of drain sensor. (Normal: Approx. 82Ω between 1-3 of CN50)</p> <p>Indoor board trouble if no other problems is detected.</p>
2503	<p>Drain sensor abnormality</p> <p>Short/open is detected during drain pump operations. (Not detected when drain pump is not operating.) Short : 90°C or more detected Open : -40°C or less detected</p>	<p>1) Thermistor trouble. 2) Poor contact of connector. (insufficient insertion) 3) Full-broken of half-broken thermistor wire.</p> <p>4) Indoor unit circuit board (detecting circuit) trouble.</p>	<p>Check resistance of thermistor. 0°C : 15kΩ 10°C : 9.7kΩ 20°C : 6.4kΩ 30°C : 4.3kΩ</p> <p>Check contact of connector. Indoor port trouble if no other problem is detected.</p>
	<p>Operation of float switch</p> <p>When float switch operates (point of contact : OFF), error stop is observed with code No. "2503" displayed.</p>	<p>1) Drain up input trouble. 2) Poor contact of float switch circuit. 3) Float switch trouble.</p>	<p>Check drain pump operations. Check connect contact. Check float switch operations.</p>

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
4103	Reverse phase abnormality	Reverse phase (or open phase) in the power system is being detected, so operation cannot be started.	1) The phases of the power supply (L1, L2, L3) have been reversed.	If there is reverse phase before the breaker, after the breaker or at the power supply terminal blocks TB1A, reconnect the wiring.
			2) Open phase has occurred in the power supply (L1, L2, L3, N).	Check before the breaker, after the breaker or at the power supply terminal blocks TB1A, and if there is an open phase, correct the connections. a) Check if a wire is disconnected. b) Check the voltage between each of the wires.
			3) The wiring is faulty.	Check 1 the connections, 2, the contact at the connector, 3, the tightening torque at screw tightening locations and 4 for wiring disconnections. TB1A~NF~TB1B~CNTR1~F3~T01~CNTR Refer to the circuit number and the wiring diagram plate.
			4) The fuse is faulty.	If F1 on the MAIN board, or F3 is melted, (Resistance between both ends of the fuse is ∞), replace the fuses.
			5) T01 is faulty.	To judge failure of the T01, go to "Individual Parts Failure Judgment Methods."
			6) The circuit board is faulty.	If none of the items in 1) to 5) is applicable, and if the trouble reappears even after the power is switched on again, replace the MAIN board (when replacing the circuit board, be sure to connect all the connectors, etc. securely).
4115	Power supply sync signal abnormality	The frequency cannot be determined when the power is switched on. (The power supply's frequency cannot be detected. The outdoor fan cannot be controlled by phase control.)	1) There is an open phase in the power supply (L1, L2, L3, N).	Check before the breaker, after the breaker or at the power supply terminal blocks TB1A, and if there is an open phase, correct the connections.
			2) The power supply voltage is distorted.	If the power supply voltage waveform is distorted from a sine wave, improve the power supply environment.
			3) A fuse is defective.	If F1 on the MAIN board, or F3 is melted, (Resistance between both ends of the fuse is ∞), replace the fuses.
			4) T01 is defective.	To judge failure of the T01, go to "Individual Parts Failure Judgment Methods."
			5) The circuit board is defective.	If none of the items in 1) to 4) is applicable, and if the trouble reappears even after the power is switched on again, replace the MAIN board (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. securely).

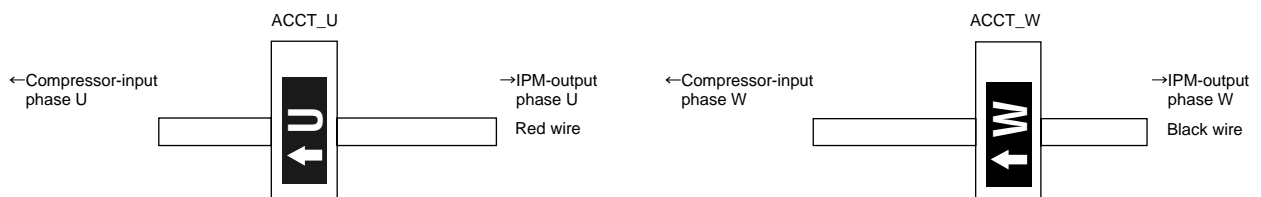
Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
4116	Fan speed abnormality (motor abnormality)	(Detects only for PKFY-VAM) 1. Detecting fan speed below 180rpm or over 2000rpm during fan operation at indoor unit (first detection) enters into the 3-minute restart prevention mode to stop fan for 30 seconds. 2. When detecting fan speed below 180rpm or over 2000rpm again at fan returning after 30 seconds from fan stopping, error stop (fan also stops) will be commenced displaying 4116.	1) Slipping off of fan speed detecting connector (CN33) of indoor controller board.	<ul style="list-style-type: none"> Confirm slipping off of connector (CN33) on indoor controller board.
			2) Slipping off of fan output connector (FAN1) of indoor power board.	<ul style="list-style-type: none"> Confirm slipping off of connector (FAN1) on indoor power board.
			3) Disconnection of fan speed detecting connector (CN33) of indoor controller board, or that of fan output connector (FAN1) of indoor power board.	<ul style="list-style-type: none"> Check wiring for disconnection.
			4) Filter clogging.	<ul style="list-style-type: none"> Check filter.
			5) Trouble of indoor fan motor.	<ul style="list-style-type: none"> Check indoor fan motor.
			6) Faulty fan speed detecting circuit of indoor controller board, or faulty fan output circuit of indoor power board.	<ul style="list-style-type: none"> When above have no trouble. 1) For trouble after operating fan. Replace indoor controller board. If not remedied, replace indoor power board. 2) For trouble without operating fan. Replace indoor power board.
4200	VDC sensor/circuit abnormality	1 If $VDC \leq 304 V$ is detected just before the inverter starts. 2 If $VDC \geq 750 V$ is detected just before starting of and during operation of the inverter.	1) Power supply voltage is abnormal.	<ul style="list-style-type: none"> Check if an instantaneous power failure or power failure, etc. has occurred. Check if the voltage is the rated voltage value.
			2) The wiring is defective.	<p>Check 1, the connections, 2, contact at the connectors, 3 tightening torque at screw tightened portions, 4, wiring polarities, 5, for broken wires, and 6, for grounding in the following wiring.</p> <p>TB1A~NF~TB1B, TB1B~DS~[52C, R1, R5]~[C2, C3]~IPM Wiring CNDC1 (G / A) ~ CNVDC (INV) Wiring</p> <p>* Check if the wiring polarities are as shown on the wiring diagram plate.</p>
			3) The rush current prevention resistors (R1, 5) are defective.	To judge failure of R1 and R5, go to "Individual Parts Failure Judgment Methods."
			4) The electromagnetic contactor (52C) is defective.	To judge failure of the 52C, go to "Individual Parts Failure Judgment Methods."
			5) The diode stack (DS) is defective.	To judge failure of the DS, go to "Individual Parts Failure Judgment Methods."
			6) The reactor (DCL) is defective.	To judge failure of the DCL, go to "Individual Parts Failure Judgment Methods."
			7) The INV board is defective.	If none of the items in 1) to 6) is applicable, and if the trouble reappears even after the power is switched on again, replace the INV board (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. securely).

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure	
4220	Bus voltage abnormality	① If $VDC \leq 400$ V is detected during inverter operation.	1) The power supply voltage is abnormal.	<ul style="list-style-type: none"> Check if an instantaneous stop or power failure, etc. has occurred. Check if the voltage is the rated voltage value.
			2) The wiring is defective.	Check 1, the connections, 2, contact at the connectors, 3 tightening torque at screw tightened portions, 4, wiring polarities, 5, for broken wires, and 6, for grounding in the following wiring. TB1A~NF~TB1B, TB1B~DS~[52C, R1, R5]~[C2, C3]~IPM Wiring CNDC1 (G / A) ~ CNVDC (INV) Wiring * Check if the wiring polarities are as shown on the wiring diagram plate.
			3) The rush current prevention resistors (R1, 5) are defective.	To judge failure of R1 and R5, go to "Individual Parts Failure Judgment Methods."
			4) The electromagnetic contactor (52C) is defective.	To judge failure of the 52 C, go to "Individual Parts Failure Judgment Methods."
			5) The diode stack (DS) is defective.	To judge failure of the DS, go to "Individual Parts Failure Judgment Methods."
			6) The reactor (DCL) is defective.	To judge failure of the DCL, go to "Individual Parts Failure Judgment Methods."
			7) The inverter output is grounded.	<ul style="list-style-type: none"> Check the wiring between the IPM and the compressor. Check the compressor's insulation resistance.
			8) The IPM is defective.	Check the IPM. Judge that the IPM is faulty, (Go to "Individual Parts Failure Judgment Methods.")
			9) The circuit board is defective.	If none of the items in 1) to 8) is applicable, and if the trouble reappears even after the power is switched on again, replace the circuit board by following procedure (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. security) ① If the problem is solved after the G/A board only is replaced, then the G/A board is defective. ② If the problem is not solved, reinstall the G/A board and replace the INV board. If the problem is solved, the INV board is defective. ③ If the problem is not solved by ① and ② above, replace both boards.
4230	Radiator panel overheat protection	If the cooling fan stays ON for 5 minutes or longer during inverter operation, and if $THHS \geq 100^{\circ}\text{C}$ is detected.	1) The wiring is defective.	Check 1 connections, 2 contact at the connectors and 3 for broken wires in the following wiring. MF1~CNFAN
			2) The INV board's fuse (F01) is defective.	If the fuse is defective, replace the fuse.
			3) The cooling fan (MF1) is defective.	To judge failure of the MF1, go to "Individual Parts Failure Judgment Methods."
			4) The THHS sensor is defective.	To judge failure of the THHS, go to error code "5110".
			5) The air passage is clogged.	If the air passage of the heat sink is clogged, clear the air passage.
			6) The IPM is defective.	Check the IPM. Judge that the IPM is faulty, (Go to "Individual Parts Failure Judgment Methods.")
			7) The circuit board is defective.	If none of the items in 1) to 6) is applicable, and if the trouble reappears even after the power is switched on again, replace the circuit board by following procedure (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. security) ① If the problem is solved after the G/A board only is replaced, then the G/A board is defective. ② If the problem is not solved, reinstall the G/A board and replace the INV board. If the problem is solved, the INV board is defective. ③ If the problem is not solved by ① and ② above, replace both boards.

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
4240	Over load protection	If IAC \geq 32 Arms is detected continuously for 10 minutes during operation of the inverter after 5 or more seconds have passed since the inverter started.	1) Air passage short cycle.	Is the unit's exhaust short cycling?
			2) The heat exchanger is clogged.	Clean the heat exchanger.
			3) Power supply voltage.	If the power supply voltage is less than 342 V, it is outside specifications.
			4) External air temperature.	If the external air temperature is over 43°C it is outside the specifications.
			5) Capacity setting error.	<ul style="list-style-type: none"> Is the indoor unit capacity total correct? Are the outdoor/indoor unit capacity settings correct?
			6) The solenoid valves (SV1, 2) are defective, or the solenoid valve drive circuit is defective.	To judge failure of the solenoid valve, go to "Individual Parts Failure Judgment Methods" for the "Solenoid Valve."
			7) The wiring is defective.	Check 1 connections, 2 contact at the connectors and 3 for broken wires in the following wiring. TB1A~NF~TB1B TB1B~FANCON board~CN04 CNMF~MF TB1B~CNTR1 CNFC1~CNFC2
			8) Fan motor (MF) operation is defective.	Go to "Treating Fan Motor Related Trouble."
			9) The inverter/compressor is defective.	Go to "Treating Inverter/Compressor Related Trouble."
4250	IPM alarm output / Bus voltage abnormality	<p>① If over current, overheat or undervoltage of drive circuit is detected by IPM during inverter operation. [Inverter error detail : 1]</p> <p>② If VDC \leq 300 or VDC \geq 760V is detected during inverter operation. [Inverter error detail : 1]</p> <p>③ If IAC \geq 39Arms is detected during inverter operation. [Inverter error detail : 11]</p>	1) The power supply voltage is abnormal.	<ul style="list-style-type: none"> Check if an instantaneous stop or power failure, etc. has occurred. Check if the voltage is the rated voltage value.
			2) The wiring is defective.	Check 1, the connections, 2, contact at the connectors, 3 tightening torque at screw tightened portions, 4, wiring polarities, 5, for broken wires, and 6, for grounding in the following wiring. TB1A~NF~TB1B, TB1A~DS~[52C, R1, R5]~[C2, C3]~IPM Wiring CNDC1 (G / A) ~ CNVDC (INV) Wiring * Check if the wiring polarities are as shown on the wiring diagram plate.
			3) The inverter / compressor is defective.	Go to "Treatment of Inverter/Compressor Related Trouble."

Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure																																				
4260	Cooling fan abnormality	If the heat sink temperature (THHS) \geq 100°C for 20 minutes or longer just before the inverter starts.	1) Same as "4230."	Same as "4230."																																				
5101	Thermal sensor abnormality (Outdoor Unit)	<p><Other than THHS></p> <p>① A short in the thermistor or an open circuit was sensed. The outdoor unit switches to the temporary stop mode with re-starting after 3 minutes, then if the temperature detected by the thermistor just before restarting is in the normal range, re-starting takes place.</p> <p>② If a short or open circuit in the thermistor is detected just before restarting, error code "5101", "5102", "5103", "5104", "5105", "5106", "5108", "5109" or "5112" is displayed.</p> <p>③ In the 3 minute restart mode, the abnormal stop delay LED is displayed.</p> <p>④ The above short or open circuit is not detected for 10 minutes after the compressor starts, or for 3 minutes during defrosting or after recovery following defrosting.</p> <p><THHS></p> <p>If a heat sink (THHS) temperature of \leq -40°C is detected just after the inverter starts or during inverter operation.</p> <p>* TH2, TH9, TH10 : P-YMF-B only</p>	1) Thermistor	Check the thermistor's resistance.																																				
5102			2) Lead wires are being pinched.	Check if the lead wires are pinched.																																				
5103			3) Insulation is torn.	Check for tearing of the insulation.																																				
5104			4) A connector pin is missing, or there is faulty contact.	Check if a pin is missing on the connector.																																				
5105			5) A wire is disconnected.	Check if a wire is disconnected.																																				
5106			6) The thermistor input circuit on the MAIN circuit board is faulty. (In the case of the THHS, replace the INV board.)	Check the temperature picked up by the sensor using the LED monitor. If the deviation from the actual temperature is great, replace the MAIN circuit board. (In the case of the THHS, replace the INV board.)																																				
5107			<table border="0"> <thead> <tr> <th></th> <th>Short Circuit Detection</th> <th>Open Circuit Detection</th> </tr> </thead> <tbody> <tr> <td>TH1</td> <td>240°C or higher (0.57 kΩ)</td> <td>15°C or lower (321 kΩ)</td> </tr> <tr> <td>TH2</td> <td>70°C or higher (1.71 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>LD1</td> <td>-</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>LD2</td> <td>-</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>TH5</td> <td>110°C or higher (0.4 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>TH6</td> <td>110°C or higher (0.4 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>TH7</td> <td>110°C or higher (1.14 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>TH8</td> <td>70°C or higher (1.14 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>TH9</td> <td>70°C or higher (1.14 kΩ)</td> <td>-40°C or lower (130 kΩ)</td> </tr> <tr> <td>THHS</td> <td>-</td> <td>-40°C or lower (2.5 MΩ)</td> </tr> <tr> <td>TH10</td> <td>240°C or higher (0.57 kΩ)</td> <td>-15°C or lower (1656 kΩ)</td> </tr> </tbody> </table>			Short Circuit Detection	Open Circuit Detection	TH1	240°C or higher (0.57 kΩ)	15°C or lower (321 kΩ)	TH2	70°C or higher (1.71 kΩ)	-40°C or lower (130 kΩ)	LD1	-	-40°C or lower (130 kΩ)	LD2	-	-40°C or lower (130 kΩ)	TH5	110°C or higher (0.4 kΩ)	-40°C or lower (130 kΩ)	TH6	110°C or higher (0.4 kΩ)	-40°C or lower (130 kΩ)	TH7	110°C or higher (1.14 kΩ)	-40°C or lower (130 kΩ)	TH8	70°C or higher (1.14 kΩ)	-40°C or lower (130 kΩ)	TH9	70°C or higher (1.14 kΩ)	-40°C or lower (130 kΩ)	THHS	-	-40°C or lower (2.5 MΩ)	TH10	240°C or higher (0.57 kΩ)	-15°C or lower (1656 kΩ)
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5109	CS circuit (TH9)																																							
5110	Radiator panel (TH HS)																																							
5112	Compressor shell temperature (TH10)																																							
5111	Thermal sensor abnormality (BC controlled)	<p>1. When short (high temp. inlet) or open (low temperature inlet) of thermistor is detected during operation, error stop will be commenced displaying "5111" or "5112", "5113" or "5114", or "5115" or "5116."</p> <p>2. The above detection is not made during defrosting and 3-minute after changing operation mode.</p>	1) Thermistor trouble.	Check thermistor resistance.																																				
			2) Biting of lead wire.	Check lead wire biting.																																				
			3) Broken cover.	Check broken cover.																																				
			4) Coming off of pin at connector portion, poor contact.	Check coming off of pin at connector.																																				
			5) Broken wire.	Check broken wire.																																				
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Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
5201	Pressure sensor abnormality (outdoor unit)	<p>① When pressure sensor detects 1kg/cm²G (0.098MPa) or less during operation, outdoor unit once stops with 3 minutes restarting mode, and restarts if the detected pressure of pressure sensor exceeds 1kg/cm²G (0.098MPa) immediately before restarting.</p> <p>② If the detected pressure of sensor is less than 1kg/cm²G (0.098MPa) immediately before restarting, error stop is commenced displaying 5201.</p> <p>③ Under 3 minutes restarting mode, LED displays intermittent fault check.</p> <p>④ During 3 minutes after compressor start, defrosting and 3 minutes after defrosting operations, trouble detection is ignored.</p>	<p>1) Pressure sensor trouble.</p> <p>2) Inner pressure drop due to a leakage.</p> <p>3) Broken cover.</p> <p>4) Coming off of pin at connector portion, poor contact.</p> <p>5) Broken wire.</p> <p>6) Faulty thermistor input circuit of MAIN board.</p>	See Troubleshooting of pressure sensor .
5201	Pressure sensor abnormality (BC controller)	When high or intermediate pressure sensor detects 1kg/cm ² G (0.098MPa) or less immediately before starting, error stop is commenced displaying "5201", or "5203".	1) Pressure sensor trouble.	See troubleshooting of pressure sensor .
5203			<p>2) Inner pressure drop due to gas leak.</p> <p>3) Broken cover.</p> <p>4) Coming off of pin at connector portion, poor contact.</p> <p>5) Broken wire.</p> <p>6) Faulty pressure sensor input circuit of control board.</p>	
5301	IAC sensor/circuit abnormality	<p>① If IAC \geq 3 Arms is detected just before the inverter starts, or If IAC \leq 3 Arms is detected during inverter operation after 5 seconds has passed since the inverter started when the INV board's SW1-1 is OFF. [Inverter error detail : 6]</p> <p>② If the current sensor (ACCT) miss-wiring is detected during inverter operation. [Inverter error detail : 13]</p>	1) Contact is faulty.	Check the contacts of CNACCT on the INV board.
			2) The current sensor (ACCT) is connected with wrong polarity.	Check the ACCT_U, W polarity with below drawing.
			3) The wiring is defective	Check 1. connections. 2. contact at the connectors. 3. for broken wires in the following wiring. CNDR2-CNDR1 CN15V2-CN15V1 IPM-MC1
			4) The Ac current sensor (ACCT) is defective.	To judge failure of ACCT, go to "individual Parts Failure Judgment Methods."
			5) The IPM is defective.	Check the IPM. Judge that the IPM is faulty, (Go to "Individual Parts Failure Judgment Methods.")



Checking code		Meaning, detecting method	Cause	Checking method & Countermeasure
5301	IAC sensor/ circuit abnormality	<p>① If IAC \geq 3 Arms is detected just before the inverter starts, or If IAC \leq 3 Arms is detected during inverter operation after 5 seconds has passed since the inverter started when the INV board's SW1-1 is OFF. [Inverter error detail : 6]</p> <p>② If the current sensor (ACCT) miss-wiring is detected during inverter operation. [Inverter error detail : 13]</p>	6) The circuit board is defective.	<p>If none of the items in 1) to 5) is applicable, and if the trouble reappears even after the power is switched on again, replace the circuit board by following procedure (when replacing the circuit board, be sure to connect all the connectors, ground wires, etc. security)</p> <p>① If the problem is solved after the G/A board only is replaced, then the G/A board is defective.</p> <p>② If the problem is not solved, reinstall the INV board and replace the INV board. If the problem is solved, the INV board is defective.</p> <p>③ If the problem is not solved by ① and ② above, replace both boards.</p>
7130	Different indoor model connected abnormality	An exclusive R22 refrigerant indoor unit was connected to a R407C refrigerant outdoor unit.	<p>1) An error was made in the MAIN board of the outdoor unit (replaced with the wrong circuit board).</p> <p>2) An error was made in selecting the indoor unit (installation error).</p> <p>3) An error was made in the indoor unit's circuit board (replaced with the wrong circuit board).</p>	<p>If the model name plate on the outdoor unit says that it is an exclusive R22 model, and if error "7130" has occurred, the MAIN board for the outdoor unit is a R407C model circuit board, so replace it with the MAIN board for the R22 model.</p> <p>If the model name plate for the indoor unit is an exclusive R22 model, install a unit which can also operate with R407C.</p> <p>If the model name plate on the indoor unit indicates that it is also capable of operating with R407C, and error "7130" occurs, the indoor unit's circuit board is for an exclusive R22 model, so replace it with the circuit board for a unit which is also capable of using R407C.</p>

(2) Communication/system

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
6600	<p>Multiple address error</p> <p>Transmission from units with the same address is detected.</p> <div data-bbox="292 416 563 573" style="border: 1px solid black; padding: 5px;"> <p>Note: The address/attribute shown on remote controller indicates the controller which has detected error.</p> </div>	<ol style="list-style-type: none"> 1) Two or more controllers of outdoor unit, indoor unit, remote controller, BC controller, etc. have the same address. 2) In the case that signal has changed due to noise entered into the transmission signal. 	<p>At the generation of 6600 error, release the error by remote controller (with stop key) and start again.</p> <p>a) If the error occurs again within 5 minutes. → Search for the unit which has the same address with that of the source of the trouble.</p> <div data-bbox="1015 443 1437 573" style="border: 1px solid black; padding: 5px;"> <p>When the same address is found, turn off the power source of outdoor unit, BC controller, and indoor unit for 5 minutes or more after modifying the address, and then turn on it again.</p> </div> <p>b) When no trouble is generated even continuing operation over 5 minutes. → The transmission wave shape/noise on the transmission line should be investigated in accordance with <Investigation method of transmission wave shape/noise>.</p>
6602	<p>Transmission processor hardware error</p> <p>Though transmission processor intends to transmit "0", "1" is displayed on transmission line.</p> <div data-bbox="292 920 563 1077" style="border: 1px solid black; padding: 5px;"> <p>Note: The address/attribute shown on remote controller indicates the controller which has detected error.</p> </div>	<ol style="list-style-type: none"> 1) At the collision of mutual transmission data generated during the wiring work or polarity change of the transmission line of indoor or outdoor unit while turning the power source on, the wave shape is changed and the error is detected. 2) 100V power source connection to indoor unit or BC controller. 3) Ground fault of transmission line. 4) Insertion of power supply connector (CN40) of plural outdoor units at the grouping of plural refrigerant systems. 5) Insertion of power supply connector (CN40) of plural outdoor units in the connection system with MELANS. 6) Faulty controller of unit in trouble. 7) Change of transmission data due to the noise in transmission. 8) Connection system with plural refrigerant systems or MELANS for which voltage is not applied on the transmission line for central control. 	

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
6602	Transmission processor hardware error	Checking method and processing	
6603	Transmission circuit bus-busy error 1 Collision of data transmission: Transmission can not be performed for 4~10 consecutive minutes due to collision of data transmission. 2 Data can not be transmitted on transmission line due to noise for 4~10 consecutive minutes. <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Note: The address/attribute shown on remote controller indicates the controller which has detected error. </div>	1) As the voltage of short frequency like noise is mixed in transmission line continuously, transmission processor can not transmit. 2) Faulty controller of generating unit.	a) Check transmission wave shape/noise on transmission line by following <Investigation method of transmission wave shape/noise>. → No noise indicates faulty controller of generating unit. → Noise if existed, check the noise.

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
6606	<p>Communications with transmission processor error</p> <p>Communication trouble between apparatus processor and transmission processor.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Note: The address/attribute shown on remote controller indicates the controller which has detected error.</p> </div>	<ol style="list-style-type: none"> 1) Data is not properly transmitted due to casual erroneous operation of the generating controller. 2) Faulty generating controller. 	<p>Turn off power sources of indoor unit, BC controller and outdoor unit.</p> <p style="margin-left: 20px;">(When power sources are turned off separately, microcomputer is not reset and normal operations can not be restored.)</p> <p>→ Controller trouble is the source of the trouble when the same trouble is observed again.</p>

Checking code	Meaning, detecting method				
6607	No ACK error		When no ACK signal is detected in 6 continuous times with 30 second interval by transmission side controller, the transmission side detects error.		
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Note: The address/attribute shown on remote controller indicates the controller not providing the answer (ACK). </div>					
System composition	Generating unit address	Display of trouble	Detecting method	Cause	Checking method & countermeasure
(1) Single refrigerant system	① Outdoor unit (OC)	Remote controller (RC)	No reply (ACK) at BC transmission to OC	1) Poor contact of transmission line of OC or BC. 2) Damping of transmission line voltage/signal by acceptable range of transmission wiring exceeded. <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> Farthest : Less than 200m Remote controller wiring : Less than 10m </div> 3) Erroneous sizing of transmission line (Not within the range below). Wire diameter : 1.25mm ² or more 4) Faulty control circuit board of OC.	Shut down OC unit power source, and make it again. It will return to normal state at an accidental case. When normal state can not be re-covered, check for the 1) ~ 4) of the cause.
	② BC controller (BC)	Remote controller (RC)	No reply (ACK) at IC transmission to BC	1) When Fresh Master address is changed or modified during operation. 2) Faulty or slipping off of transmission wiring of BC controller. 3) Slipping off of BC unit connector (CN02). 4) Faulty BC controller circuit board.	Shut down both OC and BC power sources simultaneously for 5 minutes or more, and make them again. It will return to normal state at an accidental case. When normal state can not be re-covered, check for the 1) ~ 4) of the cause.
	③ Indoor unit (IC)	Remote controller (RC)	No reply (ACK) at RC transmission to IC	1) When IC unit address is changed or modified during operation. 2) Faulty or slipping off of transmission wiring of IC. 3) Slipping off of IC unit connector (CN2M). 4) Faulty IC unit controller. 5) Faulty remote controller.	Shut down both OC and BC power sources simultaneously for 5 minutes or more, and make them again. It will return to normal state at an accidental case. When normal state can not be re-covered, check for the 1) ~ 4) of the cause.
	④ Remote controller (RC)	Remote controller (RC)	No reply (ACK) at IC transmission to RC	1) Faulty transmission wiring at IC unit side. 2) Faulty transmission wiring of RC. 3) When remote controller address is changed or modified during operation. 4) Faulty remote controller.	Shut down OC power sources for 5 minutes or more, and make it again. It will return to normal state at an accidental case. When normal state can not be re-covered, check for the 1) ~ 4) of the cause.

Checking code	Meaning, detecting method				
6607 (continued)	No ACK error		When no ACK signal is detected in 6 continuous times with 30 second interval by transmission side controller, the transmission side detects error.		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Note: The address/attribute shown on remote controller indicates the controller not providing the answer (ACK). </div>					
System composition	Generating unit address	Display of trouble	Detecting method	Cause	Checking method & countermeasure
(2) Group operation system using plural refrigerants	① Outdoor unit (OC)	Remote controller (RC)	No reply (ACK) at BC transmission to OC	As same that for single refrigerant system.	Same as measure for single refrigerant system.
	② BC controller (BC)	Remote controller (RC)	No replay (ACK) at IC transmission to BC	As same that for single refrigerant system.	Same as measure for single refrigerant system.
	③ Indoor unit (IC)	Remote controller (RC)	No reply (ACK) at RC transmission to IC	1) Cause of 1) ~ 5) of "Cause for single refrigerant system". 2) Slipping off or short circuit of transmission line of OC terminal block for centralized control (TB7). 3) Shut down of OC unit power source of one re-frigerant system. 4) Neglecting insertion of OC unit power supply connector (CN40). 5) Inserting more than 2 sets of power supply connector (CN40) for centralized control use. For generation after normal operation conducted once, the following causes can be considered. <ul style="list-style-type: none"> • Total capacity error (7100) • Capacity code setting error (7101) • Connecting set number error (7102) • Address setting error (7105) 	a) Shut down the power source of both IC and OC for over 5 minutes simultaneously, and make them again. Normal state will be returned incase of accidental trouble. b) Check for 1) ~ 5) of causes. If cause is found, remedy it. c) Check other remote controller or OC unit LED for troubleshooting for trouble. Trouble → Modify the trouble according to the content of check code. No trouble → Faulty indoor controller
	④ Remote controller (RC)	Remote controller (RC)	No reply (ACK) at IC transmission to RC	1) Cause of 1) ~ 3) of "Cause for single refrigerant system". 2) Slipping off or short circuit of transmission line of OC terminal block for centralized control (TB7). 3) Shut down of OC unit power source of one refrigerant system. 4) Neglecting insertion of OC unit power supply connector (CN40). 5) Inserting more than 2 sets of power supply connector(CN40) for centralized control use. At generation after normal operation conducted once, the following causes can be considered. <ul style="list-style-type: none"> • Total capacity error (7100) • Capacity code setting error (7101) • Connecting set number error (7102) • Address setting error (7105) 	a) Shut down the power source of OC for over 5 minute, and make it again. Normal state will be returned in case of accidental trouble. b) Check for 1) ~ 5) of causes. If cause is found, remedy it. When normal state can not be obtained, check 1) ~ 5) of causes.

Checking code	Meaning, detecting method				
6607 (continued)	No ACK error		When no ACK signal is detected in 6 continuous times with 30 second interval by transmission side controller, the transmission side detects error.		
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Note: The address/attribute shown on remote controller indicates the controller not providing the answer (ACK). </div>					
System composition	Generating unit address	Display of trouble	Detecting method	Cause	Checking method & countermeasure
(3) Connecting system with system controller (MELANS)	① Outdoor unit (OC)	Remote controller (RC)	No reply (ACK) at BC transmission to OC	As same that for single refrigerant system.	Same countermeasure as that for single refrigerant system.
	② BC controller (BC)	Remote controller (RC)	No reply (ACK) at RC transmission to IC	Same cause of that for grouping from plural refrigerants.	Same countermeasure as that for IC error in plural refrigerant system.
	③ Indoor unit (IC)	Remote controller (RC)	No reply (ACK) at transmission of SC to IC	Trouble of partial IC units: 1) Same cause as that for single refrigerant system.	→ Same countermeasure as that for single refrigerant system.
				Trouble of all IC in one refrigerant system: 1) Cause of total capacity error. (7100) 2) Cause of capacity code setting error. (7101) 3) Cause of connecting number error. (7102) 4) Cause of address setting error. (7105) 5) Slipping off or short circuit of transmission line of OC unit terminal block for central control (TB7). 6) Power source shut down of OC unit. 7) Trouble of OC unit electrical system.	Confirm OC trouble diagnosis LED. → At trouble generation, check for the content according to check code. Check the content of 5)~7) shown left.
				Trouble of all IC: 1) As same that for single refrigerant system. 2) Insertion of power supply connector (CN40) into OC unit transmission line for centralized control. 3) Slipping off or power source shut down of power supply unit for transmission line. 4) Faulty system controller (MELANS).	Confirm voltage of transmission line for centralized control. • More than 20V → Confirm 1) 2) left. • Less than 20V → Confirm 3) left.
	④ Remote controller (RC)	Remote controller (RC)	No reply (ACK) at transmission of IC to RC	Same cause as that for plural refrigerant system.	Same countermeasure as that for plural refrigerant system.
				Trouble of partial IC units: 1) Same cause of that for single refrigerant system.	→ Same countermeasure as that for single refrigerant system.
				Trouble of all IC in one refrigerant system: 1) Error detected by OC unit. Total capacity error. (7100) Capacity code setting error. (7101) Connecting number error. (7102) Address setting error. (7105) 2) Slipping off or short circuit of transmission line of OC unit terminal block for central control (TB7). 3) Power source shut down of OC unit. 4) Trouble of OC unit electrical system.	Confirm OC trouble diagnosis LED. → At trouble generation, check for the content according to check code. Check the content of 2)~4) shown left.
				Trouble of all IC: 1) As same that for single refrigerant system. 2) Insertion of power supply connector (CN40) into OC unit transmission line for centralized control. 3) Slipping off or power shutdown of power supply unit for transmission line. 4) Faulty MELANS.	Check the causes of 1) ~ 4) left.

Checking code	Meaning, detecting method				
6607 (continued)	No ACK error When no ACK signal is detected in 6 continuous times with 30 second interval by transmission side controller, the transmission side detects error. <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: fit-content;"> Note: The address/attribute shown on remote controller indicates the controller not providing the answer (ACK). </div>				
System composition	Generating unit address	Display of trouble	Detecting method	Cause	Checking method & countermeasure
(3) Connecting system with system controller (MELANS)	⑤ System controller (SC)	Remote controller (RC)	No reply (ACK) at transmission of IC to SC	Trouble of partial remote controller: 1) Faulty wiring of RC transmission line. 2) Slipping off or poor contact of RC transmission connector. 3) Faulty RC.	Check 1) ~ 3) left.
				Trouble of all IC in one refrigerant system. 1) Error detected by OC unit. Total capacity error (7100) Capacity code setting error (7101) Connecting number error (7102) Address setting error (7105) 2) Slipping off or short circuit of transmission line of OC unit terminal block for central control (TB7). 3) Power source shut down of OC unit. 4) Trouble of OC unit electrical system.	Confirm OC trouble diagnosis LED. → At trouble generation, check for the content according to check code. Check the content of 2) ~ 4) shown left.
				Trouble of all RC: 1) As same that for single refrigerant system. 2) Inserting supply power connector (CN40) to OC transmission line for centralized control. 3) Slipping off or power shutdown of power supply unit for transmission line. 4) Faulty MELANS.	Check the causes 1)~4) left.
No relation with system	Address which should not be existed	-	-	1) IC unit is keeping the memory of the original group setting with RC although the RC address was changed later. The same symptom will appear for the registration with SC. 2) IC unit is keeping the memory of the original interlocking registration with Fresh Master with RC although the Fresh Master address was changed later.	As some IC units are keeping the memory of the address not existing, delete the information. Employ one of the deleting method among two below. 1) Deletion by remote controller. Delete unnecessary information by the manual setting function of remote controller. 2) Deletion by connecting information deleting switch of OC unit. <div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: fit-content;"> Be careful that the use of this method will delete all the group information set with RC and all the interlocking information of Fresh Master and IC unit. </div> ① Shut down OC unit power source, and wait for 5 minutes. ② Turn on the dip switch SW2-2 provided on OC unit control circuit board. ③ Make OC unit power source, and wait for 5 minutes. ④ Shut down OC unit power source, and wait for 5 minutes. ⑤ Turn off the dip switch SW2-2 provided on OC unit control circuit board. ⑥ Make OC unit power source.

Checking code	Meaning, detecting method	Cause	Checking method & Countermeasure
7102	Connected unit count over	2) The Outdoor unit address is being set to 51~100 under automatic address mode (Remote controller displays "HO"). 3) Slipping off of transmission wiring at Outdoor unit. 4) Short circuit of transmission line in case of 3) & 4), remote controller displays "HO".	a) Check for the model total (capacity code total) of indoor units connected.
7105	Address setting error <ul style="list-style-type: none"> • Erroneous setting of OC unit address • Erroneous setting of BC controller address <div style="border: 1px solid black; padding: 2px; width: fit-content;">Trouble source : Outdoor unit BC controller</div>	1) Setting error of Outdoor unit address. The address of Outdoor unit is not being set to 51~100. 2) The address of BC controller is not being set within 51~100.	Check that the address of OC unit is being set to 51~100. Reset the address if it stays out of the range, while shutting the power source off. When BC controller is out of the range, reset it while shutting the power source of both OC unit and BC controller off.
7107	Connection No. setting error Can not operate because connection No. of indoor unit wrongly set. <div style="border: 1px solid black; padding: 2px; width: fit-content;">Trouble source : BC controller</div>	1) Indoor unit capacity per connector joint is exceeded as follows: Single connection : 81 or more Two connection joint : 161 or more Three connection joint : 241 or more Four connection joint : 321 or more 2) Four or more indoor units are set for the same connection. 3) The smallest connection No. has not been set when used at joint.	a) Check indoor unit connection No. in refrigerant circuit. ① No four or more indoor units which are set for the same connection No. A? ② Check total capacity of indoor units which are set for the same connections No. Judged as trouble when it applies to Cause 1). ③ Check whether the smallest connection No. is set when used at joint. b) Check whether indoor unit capacity code (SW2) is wrongly set. (Keep factory shipment condition.) For erroneous switch setting, modify it, turn off the power source of outdoor unit, and indoor unit simultaneously for 5 minutes or more, and then turn on.
7111	Remote control sensor error Error not providing the temperature designed to remote controller sensor. <div style="border: 1px solid black; padding: 2px; width: fit-content;">Trouble source : Indoor unit</div>	1) In case when the old type remote controller for M-NET is used and the remote controller sensor is designed on indoor unit. (SW1-1 turned ON)	a) Replace the old remote controller by the new remote controller.
7130	Different Indoor model and BC controller connected error	A indoor unit not for the R407C (model: P•••) is connected.	Use the P••• indoor unit.