

1. Self-Diagnostics Function Table

Self-Diagnostics Function Table

- Causes and corrections in instances when automatic address setting cannot be started

Trouble	Cause and correction
The power LED (D515) on the outdoor unit control PCB does not turn ON.	Check for any errors in the power wiring to the outdoor unit, and check for a missing phase.
LED 1 and 2 on the outdoor unit control PCB do not turn OFF when the outdoor unit power is turned ON, and automatic address setting cannot be started.	Check the “Alarm Display” table and correct the problem. (See page 3-2 to 3-4.)
An alarm appears immediately when automatic address setting is started from the wired remote controller.	
Nothing happens when the operator attempts to start automatic address setting from the wired remote controller.	Check that the wired remote controller wiring and the inter-unit control wiring are connected correctly. Check that the indoor unit power is ON.

- Causes and corrections in instances when automatic address setting starts, but cannot be completed successfully

Trouble	Cause and correction
An alarm appears on the wired remote controller sometime from several seconds to several minutes after automatic address setting is started.	Check the “Alarm Display” table and correct the problem. (See page 3-2 to 3-4.) Check the alarm details on the “Outdoor Unit Control PCB LED 1 and 2 Alarms” , then correct the problem.
LED 1 and 2 on the outdoor unit control PCB indicate that automatic address setting is in progress (the LEDs blink alternately) for several minutes after automatic address setting is started (the compressors may also start and stop several times), however LED 1 and 2 never indicate that automatic address setting is completed (turn OFF).	

- If alarm E15, E16, or E20 appears after automatic address setting is started, check the following items.

Alarm display	Alarm description
E15	The number of indoor units detected during automatic address setting was smaller than the number of indoor units which was set with switch S004 and S005 on the outdoor unit PCB.
E16	The number of indoor units detected during automatic address setting was larger than the number of indoor units which was set with switch S004 and S005 on the outdoor unit PCB.
E20	The outdoor unit received no serial signals from indoor units within 90 seconds after automatic address setting was started.

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Check items	E15	E16	E20
Check that the indoor unit power is turned ON.	○		○
Check that the inter-unit control wiring is connected correctly. (Check that there are no open circuits, short circuits, terminal plugs, incorrect wiring to the remote controller terminals, or similar problems.)	○	○	○
Check that the remote controller wiring is connected correctly. (Check that there are no open circuits, short circuits, incorrect wiring to the inter-unit control wiring terminals, group control crossover wiring, or similar problems.)	○		○
Check that the number of indoor units has been set correctly using switch S004 and S005 on the outdoor unit control PCB.	○	○	
Check that the amount of additional refrigerant charge is correct when performing Auto Address Setting Case 3A or Case 3B in the flow chart described on page 1-2.	○		
Check that the refrigerant tubing connections are correct when performing Auto Address Setting Case 3A or Case 3B in the flow chart described on page 1-2.	○	○	
Check that there are no problems with indoor unit sensors E1 and E3 when performing Auto Address Setting Case 3A or Case 3B in the flow chart described on page 1-2.	○		
Check that there are no indoor units where the system address was already incorrectly set by manual or automatic address setting.		○	

- When automatic address setting is started from the outdoor unit control PCB or from the remote controller, **SETTING** (SETTING) appears on the remote controller at units where the inter-unit control wiring and remote controller wiring are connected correctly. LED 1 and 2 on the outdoor unit control PCB blink alternately.
- In the case of indoor unit group control, if there is a mistake in the group-control wiring, addresses may not be set even if **SETTING** (SETTING) appears.
- Even if alarm E15 or E16 appears, addresses are set at those indoor units which could be verified. The set addresses can be checked using the wired remote controller.
- If one of the below alarms appears when the remote controller is operated after automatic address setting was completed (LED 1 and 2 on the outdoor unit control PCB are turned OFF), follow the instructions in the table below and correct the problem location.

Remote controller display	Cause
Nothing is displayed.	The remote controller is not connected correctly (power trouble). The indoor unit power was cut off after automatic address setting was completed.
E01	The remote controller is not connected correctly (remote controller receiving trouble). The remote controller of an indoor unit where the indoor unit address is not set is inadvertently operated. (Communications with the outdoor unit are not possible.)
E02	The remote controller is not connected correctly (trouble with sending of the signal from the remote controller to the indoor unit).
P09	The indoor unit ceiling panel connector is not connected correctly.

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- The outdoor unit maintenance remote controller can be used to check the alarm display.
The number of times that LED 1 and 2 blink on the outdoor unit control PCB can be used to check the alarm display.
(Refer to “Checking the LED 1 and 2 Alarm Display on the Outdoor Unit Control PCB.”)

Alarm code	Alarm meaning
E06	Outdoor unit failed to receive serial communication signals from indoor unit.
E12	Automatic address setting start is prohibited.
E15	Automatic address setting alarm (too few units)
E16	Automatic address setting alarm (too many units)
E20	No indoor units at automatic address setting.
E24	Outdoor unit failed to receive communications from another outdoor unit.
E25	Outdoor unit address setting failure (duplication)
E26	Mismatch in outdoor unit quantity
E29	Outdoor unit failed to receive communication from another outdoor unit.
E30	Outdoor unit serial communications failure
E31	Communication error between the microcomputers
F04	Compressor 1 discharge temperature sensor trouble (DISCH1)
F05	Compressor 2 discharge temperature sensor trouble (DISCH2)
F06	Gas temperature sensor trouble at outdoor heat exchanger 1 (EXG1)
F07	Liquid temperature sensor trouble at outdoor heat exchanger 1 (EXL1)
F08	Outdoor air temperature sensor trouble (AIR TEMP)
F12	Compressor intake temperature sensor trouble (SCT)
F16	High-pressure sensor trouble (HPS)
F17	Low-pressure sensor trouble (LPS)
F22	Compressor 3 discharge temperature sensor trouble (DISCH3)
F23	Gas temperature sensor trouble at outdoor heat exchanger 2 (EXG2)
F24	Liquid temperature sensor trouble at outdoor heat exchanger 2 (EXL2)
F31	Outdoor unit non-volatile memory (EEPROM) trouble
H03	Compressor 1 CT sensor disconnected or short-circuit
H05	Compressor 1 discharge temperature sensor disconnected
H06	Low-pressure trouble
H08	Compressor 1 oil detection sensor (connection) trouble
H11	Constant speed compressor 2 overcurrent alarm
H12	Constant speed compressor 2 lock current alarm
H13	Compressor 2 CT sensor disconnected or short-circuit
H15	Compressor 2 discharge temperature sensor disconnected
H21	Compressor 3 overcurrent alarm
H22	Compressor 3 lock current alarm
H23	Compressor 3 CT sensor disconnected or short-circuit
H25	Compressor 3 discharge temperature sensor disconnected
H27	Compressor 2 lock current alarm
H28	Compressor 3 lock current alarm
H31	HIC trouble alarm
L04	Outdoor unit address duplication
L10	Outdoor unit capacity not set
L17	Outdoor unit model mismatch
L18	4-way valve operation failure.
P02	Compressor thermal protector is activated.(trip only and no alarm)
P03	Compressor 1 discharge temperature trouble
P04	High-pressure switch activated
P05	Reverse phase (or missing phase) detected, capacity mismatch
P14	O ₂ sensor is activated.
P16	Compressor 1 overcurrent
P17	Compressor 2 discharge temp trouble
P18	Compressor 3 discharge temp trouble
P20	High load alarm
P22	Fan motor trouble
P29	Inverter compressor missing phase or lock alarm