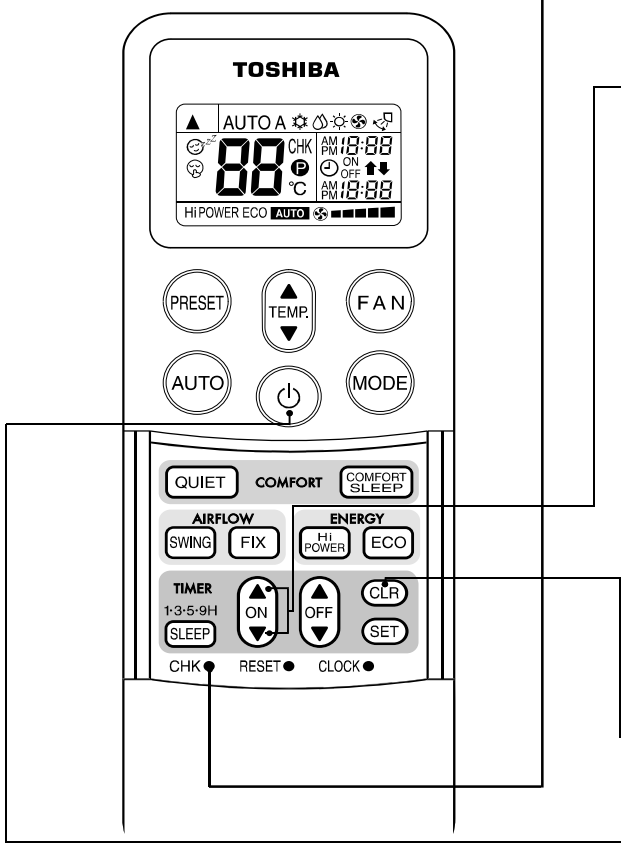
10-4. Self-Diagnosis by Remote Control (Check Code)

(1) If the lamps are indicated as shown B to G in Table 9-3-1, exchanger the self-diagnosis by the remote control.
(2) When the remote control is set to the service mode, the indoor controller diagnoses the operation condition and indicate the information of the self-diagnosis on the display of the remote control with the check codes. If a fault is detected, all lamps on the indoor unit will blink at 5Hz and it will beep for 10 seconds (Pi, Pi, Pi....). The timer lamp usually blinks (5Hz) during the self-diagnosis.

10-4-1. How to use remote control in service mode



(1) Press [CHK] button with a tip of pencil to set the remote control to the service mode.
- "00" is indicated on the display of the remote control.
- The timer lamp on the indoor unit blinks continuously. (5 times per 1 sec.)

(2) Press [TIMER ▲] button.
If there is no fault with a code, the indoor unit will beep once (Pi) and the display of the remote control will change as follows:

→ 00 → 01 → 02 ··· 1d → 1E → 22 →

- Check the unit with all 35 check codes (00 to 22). as shown in Table 9-4-1.
- Press [TIMER ▼] button to change the check code backwards.

If there is a fault, the indoor unit will beep for 10 seconds (Pi, Pi, Pi...).
Note the check code on the display of the remote control.
- 2-digits alphanumeric will be indicated on the display.
- All lamps on the indoor unit will blink. (5 times per 1 sec.)

(3) Press [CLR] button. After service finish for clear service code in memory.
- "7F" is indicated on the display of the remote control.

(4) Press [⏻] button to release the service mode.
- The display of the remote control returns to as it was before service mode was engaged.

- Alphanumeric characters are used for the check code.

5 is 5. 6 is 6.
A is A. b is B.
C is C. d is D.

* This illustration in only for Heat pump model.
For Cooling only model, there is not the (☼) symbol.

10-4-2. Caution at servicing

(1) After servicing, push the START/STOP button to return to the normal mode.
(2) After servicing by the check code, turn off breaker of the power supply, and turn on breaker of the power supply again so that memory in the microcomputer returns the initial status. However, the check codes are not deleted even if the power supply is turned off because they are stored in the fixed memory.

Table 10-4-1

Block distinction		Operation of diagnosis function				Judgment and action
Check code	Block	Check code	Cause of operation	Air conditioner status	Remarks	
00	Indoor P.C. board etc.	0C	Short-circuit or disconnection of the room temperature sensor (TA sensor).	Operation continues.	Displayed when error is detected.	1. Check the room temp. sensor. 2. When the room temp. sensor is normal, check P.C. board.
		0d	Being out of place, disconnection, short-circuit, or migration of heat exchanger sensor (TC sensor)	Operation continues.	Displayed when error is detected.	1. Check heat exchanger sensor. 2. When heat exchanger sensor is normal, check P.C. board.
		11	Lock of indoor fan or trouble on the indoor fan circuit	All off	Displayed when error is detected.	1. Check P.C. board. 2. When P.C. board is normal, check the motor.
	Not displayed	12	Trouble on other indoor P.C. boards	Operation continues.	Displayed when error is detected.	Replace P.C. board.
01	Connecting cable and serial signal	04	Return serial signal is not sent to indoor side from operation started. (1) Defective wiring of connecting cable (2) Operation of compressor thermo. Gas shortage Gas leak	Operation continues.	Flashes when trouble is detected on return serial signal, and normal status when signal is reset.	1. When the outdoor unit never operate: (1) Check connecting cable, and correct if defective wiring. (2) Check 25A fuse of inverter P.C. board (3) Check 3.15A of inverter P.C. board. 2. To display [Other] block during operation, check compressor thermo. operation and supply gas (check gas leak also). 3. Unit operates normally during check. If Return serial signal does not stop between ② and ③ of the indoor terminal block, replace inverter P.C. board. If signal stops between indoor terminal block ② and ③, replace indoor P.C. board.
		05	Operation command signal is not sent to outdoor side.	Operation continues.	Flashes when trouble is detected on operation command signal, and normal status when signal is reset.	If return serial signal does not stop between indoor terminal block ② and ③, replace inverter P.C. board. If signal stops between indoor terminal block ② and ③, replace indoor P.C. board.

Block distinction		Operation of diagnosis function				Judgment and action
Check code	Block	Check code	Cause of operation	Air conditioner status	Remarks	
02	Ondoor P.C. board	14	Inverter over-current protective circuit operates. (Short time)	All off	Displayed when error is detected.	Even if trying operation again, all operations stop immediately. : Replace P.C. board.
		16	Position-detect circuit error or short-circuit between windings of compressor	All off	Displayed when error is detected.	1. Even if connecting lead wire of compressor is removed, position-detect circuit error occurred. : Replace P.C. board. 2. Measure resistance between wires of compressor, and perform short circuit. : Replace compressor.
		17	Current-detect circuit error	All off	Displayed when error is detected.	Even if trying operation again, all operations stop immediately. : Replace P.C. board.
		18	Being out of place, disconnection or short-circuit of outdoor temp. sensor	All off	Displayed when error is detected.	1. Check outdoor temp. sensors (TE, TS). 2. Check P.C. board.
		19	Disconnection or short-circuit of discharge temp. sensor	All off	Displayed when error is detected.	1. Check discharge temp. sensor (TD). 2. Check P.C. board.
		1A	Outdoor fan drive system error	All off	Displayed when error is detected.	Position-detect error, over-current protective operation of outdoor fan drive system, fan lock, etc. : Replace P.C. board or fan motor.
	Not displayed	1b	Outdoor heat exchanger temp. sensor error	Operation continues.	——	1. Check outdoor heat exchanger temp. sensor (TE). 2. Check P.C. board.
	Ondoor P.C. board	1C	Compressor drive output error, Compressor error (lock, missing, etc.), Break down	All off	Displayed when error is detected.	When 20 seconds passed after startup, position-detect circuit error occurred. : Replace compressor.
03	Others (including compres-sor)	07	Return serial signal has been sent when operation started, but it is not sent from halfway. (1) Compressor thermo. operation Gas shortage Gas leak (2) Instantaneous power failure	Operation continues.	Flashes when trouble is detected on return serial signal, and normal status when signal is reset.	1. Repeat Start and Stop with interval of approx. 10 to 40 minutes. (Code is not displayed during operation.) Supply gas. (Check also gas leak.) 2. Unit operates normally during check. If return serial signal does not stop between indoor terminal block, ② and ③ replace inverter P.C. board. If signal stops between indoor terminal block, ② and ③ replace indoor P.C. board.
		1d	Compressor does not rotate. (Current protective circuit does not operate when a specified time passed after compressor had been activated.)	All off	Displayed when error is detected.	1. Trouble on compressor 2. Trouble on wiring of compressor (Missed phase)
		1E	Discharge temp. exceeded 117°C	All off	Displayed when error is detected.	1. Check discharge temp. sensor (TD). 2. Degassing 3. Trouble on P.M.V.
		1F	Break down of compressor	All off	Displayed when error is detected.	1. Check power voltage. (220-240 V +10%) 2. Overload operation of refrigeration cycle Check installation condition (Short-circuit of outdoor diffuser.)
		08	Four-way valve inverse error (TC sensor value lowered during heating operation.)	Operation continues.	——	1. Check 4-way valve operation.

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Fault Codes – RAS Series

Do not turn off the power supply before reading the fault codes, doing so will clear the diagnostic memory.
Caution must be taken when removing the access covers, as high voltages are present.
Fault diagnosis is available by pressing the check button on the rear of the remote controller.

Note: Fault diagnosis for these systems is only possible when using infrared remote controller type WC-C2YE or WH-C2YE (which may be ordered under part number 43069666)

Code		Code	Fault	System Status	Check
00	Indoor Fault	0C	TA Sensor open circuit	No cooling operation (Heating operation continuously – heat pumps)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
			TA Sensor short circuit	No heating operation – heat pumps (Cooling operation continuously)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
		0d	TC Sensor open circuit	No cooling operation (Heating operation continuously – heat pumps)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
			TC Sensor short circuit	No heating operation – heat pumps (Cooling operation continuously)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
		11	Fan Motor	System Stop	Seized motor Thermal fuse open circuit
		12	PCB Fault	System Stop	Replace PCB
01	Inter. Cable	04	Inter. Cable	System Stop	Cable / CT termination and thermal fuse
03	Outdoor Fault	09	No change in temp. of indoor unit	Indoor unit operates	Compressor running not pumping / Klixon tripped. For cross wiring.
			Frost Condition	Indoor fan low speed, no outdoor unit operation	Gas charge / pipe blockage. Indoor air flow TC Sensor For cross wiring
		1d	Compressor	System Stop	Compressor windings. Current consumption.

The LED's on the indoor unit will also flash depending on the type of fault: -

Operation display flashing at 1Hz	Restoration of power after a power cut	N/A
Operation display flashing at 5Hz	TA Sensor fault	0C
Operation display flashing at 5Hz	TC Sensor fault	0d
Operation display flashing at 5Hz	Fan motor fault	11
Operation display flashing at 5Hz	PCB fault	12
Operation and timer display flashing at 5Hz	Interconnecting cable	04
Operation, timer and pre-heat display flashing at 5Hz	No temp change or frost condition	09
Operation, timer and pre-heat display flashing at 5Hz	Compressor	1d

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Fault Codes – RAV Series

Do not turn off the power supply before reading the fault codes, doing so may clear the diagnostic memory.
Caution must be taken when removing the access covers, as high voltages are present.
Fault diagnosis is available by pressing the check button on the remote controller.

Note: The first number displayed is a code for the number of compressor starts the indoor unit has requested. This number is displayed using the hexadecimal format.

Numbers displayed after the start number are fault codes.

Code	Fault	System Status	Check
0C	TA Sensor open circuit	No cooling operation (Heating operation continuously – heat pumps)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
	TA Sensor short circuit	No heating operation – heat pumps (Cooling operation continuously)	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
0d	TC Sensor open circuit	Indoor fan stays off in the heating mode	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
	TC Sensor short circuit	Outdoor unit simulates high temperature release continually	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
04	No communication Outdoor to Indoor	Indoor unit operates – outdoor unit does not	Interconnecting cables / isolator Outdoor transformer (240/12vac) Printed Circuit Board
08	Reverse change temp.	Cooling o/p in Heat mode or Heating o/p in Cool mode	Operation of 4 way valve, energized for heating / TC sensor
09	No change in temp. of indoor unit	Indoor unit operates	Compressor running not pumping / Klixon tripped. / For cross wiring.
	Frost Condition	Indoor fan low speed, no outdoor unit operation	Gas charge / pipe blockage. Indoor air flow TC Sensor / For cross wiring
0b	Indoor water level	Indoor unit operates – outdoor unit does not	Lift pump operation. Condense drain for blockage. Floats switch operation – break on rise.
99	No communication Indoor to Rem. Con.	System stops.	Interconnecting cables. Indoor is set up as a master. Only one master in a group.
18	TE Sensor open circuit	System stops.	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
	TE Sensor short circuit	System stops.	Sensor Resistance 20°C = 12.5kΩ, 25°C = 10kΩ
19	TL or TD Sensor open circuit	System stops.	Sensor Resistance TL 20°C = 12.5kΩ, 25°C = 10kΩ TD 23°C = 53kΩ
	TL or TD Sensor short circuit	System stops.	Sensor Resistance TL 20°C = 12.5kΩ, 25°C = 10kΩ TD 23°C = 53kΩ
21	High Pressure Trip	System stops.	Gas Charge – quantity & quality Pipe blockages Air flows
1E	High Discharge Temperature	System stops.	Gas Charge – quantity & quality TE sensor Indoor unit air flow

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Fault Codes – 2 Pipe Super Multi

Do not turn off the power supply before reading the fault codes, doing so will clear the diagnostic memory.
Caution must be taken when removing the access covers, as high voltages are present.
Fault diagnosis is available at three locations within the Air Conditioning system. : -

1. Remote Controller - press the check button
2. Multi Controller - rotate the display switch to position 1
3. Outdoor Unit - see following chart

Remote Controller press check			**Multi Controller** switch position 1			**Outdoor Unit** Switch position 0	
04	No Communication Interface to Inverter	→	04	No Communication Interface to Inverter	→	LED 5 off LED 6 on	No Communication Interface to Inverter
04	No Communication Multi C. to Outdoor	→	04	No communication Multi C. to Outdoor			
04	No Communication Indoor to Multi C.						
0b	ID water level						
0C	TA Sensor Fault		88	M/C doesn't recognize outdoor capacity		**Display Switch set to 8** (If lit….)	
0d	TC Sensor Fault		80	Th(A) Sensor Fault	←	LED 1	Th(A) Sensor Fault
08	Reverse change temp		81	Th(B) Sensor Fault	←	LED 2	Th(B) Sensor Fault
09	Frost or no temp change		82	Th(C) Sensor Fault	←	LED 3	Th(C) Sensor Fault
99	No Communication Indoor to Rem Con		83	Th(D) Sensor Fault	←	LED 4	Th(D) Sensor Fault
			84	Th(X) Sensor Fault	←	LED 5	Th(X) Sensor Fault
15	Refer to Multi Con	↗	0b	M/C water level	←		M/C water level
	Preheat/Defrost Flash	→	89	ID codes set too high	←	LED 6	ID codes set too high
				ID codes set to zero		LED 7	M/C 1 Sensor Fault
						LED 8	M/C 2 Sensor Fault
						Display Switch set to 3 (If lit….)	
1C	Refer to Outdoor	→	1C	Refer to Outdoor	→	LED 1	ThD1 Sensor Fault
						LED 2	ThD2 Sensor Fault
						LED 3	ThS Sensor Fault
						LED 4	HP Trip, by sensor
						LED 5	Pd Sensor Fault
						LED 6	Discharge Pipe >130°C
						LED 7	Suction Pipe > 40°C
						LED 8	Low Pressure Trip
						Inv. PCB SW01 set to Off/Off	
14	Refer to Outdoor	→	14	Refer to Outdoor	→	✹○○○	Low Inverter Voltage
1d	Refer to Outdoor	→	1d	Refer to Outdoor	→	○✹○○	High Inverter dc Current
1F	Refer to Outdoor	→	1F	Refer to Outdoor	→	○○✹○	High Inverter ac Current
18	Refer to Outdoor	→	18	Refer to Outdoor	→		ThE Sensor Fault
21	Refer to Outdoor	→	21	Refer to Outdoor	→	○○○✹	Inverter HP Trip Inv. Comp. overheat
					↘		Phase Rotation / DOL HP Trip / Overload Trip / DOL Comp. overheat

✹=LED Flashing ○=LED Lit

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Fault Codes – 3 Pipe Super Multi

Do not turn off the power supply before reading the fault codes, doing so will clear the diagnostic memory.
Caution must be taken when removing the access covers, as high voltages are present.
Fault diagnosis is available at three locations within the Air Conditioning system. : -

1. Remote Controller - press the check button
2. Multi Controller - rotate the display switch to position 1
3. Outdoor Unit - see following chart

Remote Controller press check			**Multi Controller** switch position 1			**Outdoor Unit** Switch positions 2 & 0	
04	No Communication Interface to Inverter	→	04	No Communication Interface to Inverter	→	04	No Communication Interface to Inverter
04	No Communication Multi C. to Outdoor	→	04	No communication Multi C. to Outdoor			
04	No Communication Indoor to Multi C.						
0b	ID water level						
0C	TA Sensor Fault		88	M/C doesn't recognize outdoor capacity			
0d	TC Sensor Fault		80	Th(A) Sensor Fault	←	80	Th(A) Sensor Fault
08	Reverse change temp		81	Th(B) Sensor Fault	←	81	Th(B) Sensor Fault
09	Frost or no temp change		82	Th(C) Sensor Fault	←	82	Th(C) Sensor Fault
99	No Communication Indoor to Rem Con		83	Th(D) Sensor Fault	←	83	Th(D) Sensor Fault
			84	Th(X) Sensor Fault	←	84	Th(X) Sensor Fault
15	Refer to Multi Con	↗	0b	M/C water level	←	0b	M/C water level
	Preheat/Defrost Flash	→	89	ID codes set too high	←	89	ID codes set too high
				ID codes set to zero			
1C	Refer to Outdoor	→	1C	Refer to Outdoor	→	A0	ThD1 Sensor Fault
					→	A1	ThD2 Sensor Fault
					→	A2	ThS Sensor Fault
					→	A3	ThO Sensor Fault
					→	A5	ThE Sensor Fault
					→	A6	Discharge Pipe >130°C
					→	A7	Suction Pipe > 40°C
					→	AA	Pressure Sensor Fault
					→	AE	Low Pressure Trip
14	Refer to Outdoor	→	14	Refer to Outdoor	→	14	Low Inverter Voltage
1d	Refer to Outdoor	→	1d	Refer to Outdoor	→	1d	High Inverter dc Current
1F	Refer to Outdoor	→	1F	Refer to Outdoor	→	1F	High Inverter ac Current
21	Refer to Outdoor	→	21	Refer to Outdoor	→	21	Inverter HP Trip Inv. Comp. overheat
					↘	Ad	Phase Rotation / DOL HP Trip / Overload Trip / DOL Comp. overheat

9-3. Troubleshooting by Check Display on Remote Controller

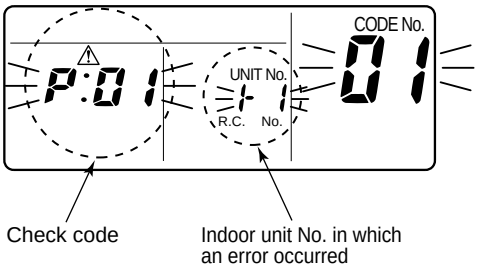
In case of main remote controller (RBC-AMT21E)

1. Confirmation and check

When a trouble occurred on the air conditioner, the check code and the indoor unit No. are displayed on the display section of the remote controller.

The check code is displayed while the air conditioner operates.

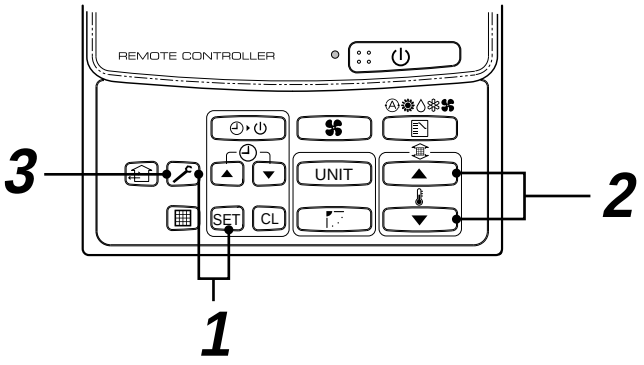
If the display disappeared, operate the air conditioner and check the error based upon the following “Confirmation of error history”.

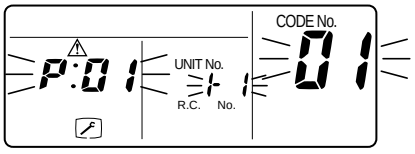


2. Confirmation of error history

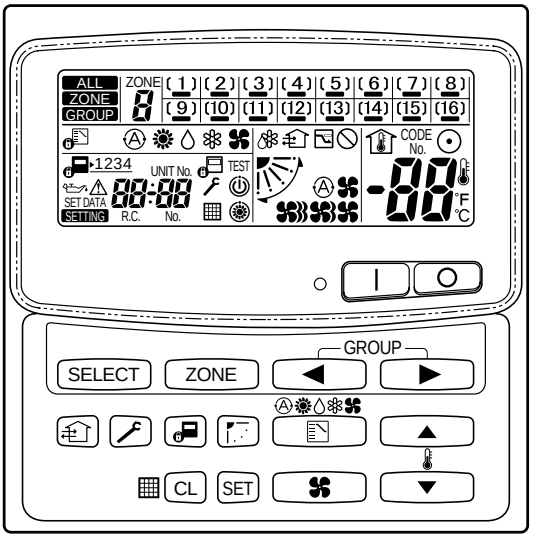
When a trouble occurred on the air conditioner, the error history can be confirmed with the following procedure.
(Up to 4 error histories are stored in memory.)

This history can be confirmed from either operating status or stop status.



Procedure	Description
1	When pushing [SET] and [🔧] buttons simultaneously for 4 seconds or more, the below display appears. If [Service Check] is displayed, the mode enters in the error history mode. • [01: Error history order] is displayed in code number window. • [Check Code] is displayed in check code window. • [Indoor unit address with error] is displayed in UNIT No. 
2	Every pushing temp. set [▲] / [▼] buttons, the error histories stored in the memory are displayed in order. The numbers in item code indicates item code [01] (Latest) to [04] (Oldest). **CAUTION** Do not push [CL] button because all the error histories of the indoor unit will be deleted.
3	After confirmation, push [🔧] button to return to the usual display.

In case of TCC-LINK central control remote controller (TCB-SC642TLE)

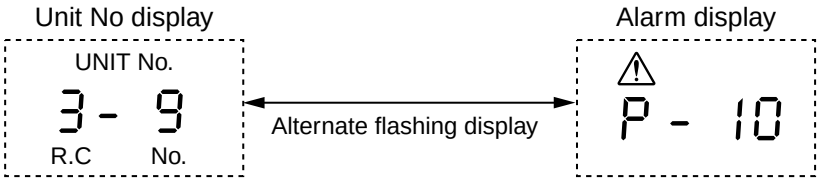


1. Confirmation and check

When a trouble occurred on the air conditioner, the check code and the indoor unit No. are displayed on the display section of the remote controller.

The check code is displayed while the air conditioner operates.

If the display disappeared, operate the air conditioner and check the error based upon the following “Confirmation of error history”.

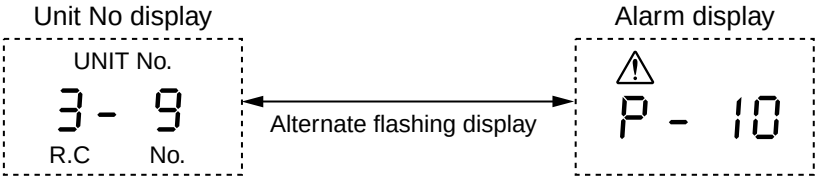


2. Confirmation of error history

When a trouble occurred on the air conditioner, the error history can be confirmed with the following procedure. (Up to 4 error histories are stored in memory.)

This history can be confirmed from either operating or stop.

1) Push [🔧] and [SET] buttons in succession for 4 seconds or more.
2) SERVICE CHECK [🔧] goes on and Item code 01 goes on.
3) When selecting (flash) the group number if there is the alarm history, the UNIT number and the latest alarm history are displayed alternately.
   * In this time, the temperature cannot be set up.
4) To confirm the alarm history other than the latest one, push temp. set [▲] / [▼] to select Item code (01 to 04).
5) To confirm the alarm in the other group, push [ZONE] and [GROUP ◀ ▶] to select the group number
   Do not push [CL] button because all the alarm histories of the currently selected group are deleted.
6) To finish the service check, push [🔧] button.



10-2. Check Code List

Error mode detected by indoor and outdoor units

◎: Flash, ○: Go on, ●: Go off

Wireless sensor lamp display			Wired remote controller	Diagnostic function			Judgment and measures
				Cause of operation	Status of air conditioner	Condition	
Operation	Timer	Ready	Check code				
◎	●	●	E03	No communication from remote controller (including wireless) and communication adapters	Stop (Automatic reset)	Displayed when error is detected	1. Check cables of remote controller and communication adapters. • Handy remote controller LCD display OFF (Disconnection) • Central remote controller [97] check code
●	●	◎	E04	The serial signal is not output from outdoor unit to indoor unit. • Miscabling of inter-unit cables • Defective serial sensing circuit on outdoor P.C. board • Defective serial receiving circuit on indoor P.C. board	S top (Automatic reset)	Displayed when error is detected	1. Outdoor unit does not completely operate. • Inter-unit cable check, correction of miscabling, case thermo operation • Outdoor P.C. board check, P.C. board cables check 2. In normal operation P.C. board (Indoor receiving/Outdoor sending) check
◎	●	●	E08	Duplicated indoor unit addresses	Stop	Displayed when error is detected	1. Check whether there is modification of remote controller connection (Group/Individual) or not after power has been turned on (finish of group configuration/address check). * If group configuration and address are not normal when the power has been turned on, the mode automatically shifts to address setup mode. (Resetting of address)
◎	●	●	E10	Communication error between indoor MCU • Communication error between fan driving MCU and main MCU	Stop (Automatic reset)	Displayed when error is detected	1. Check cables of remote controller. 2. Check power cables of indoor unit. 3. Check indoor P.C. board.
◎	●	●	E18	Regular communication error between master and sub indoor units or between main and sub indoor units	Stop (Automatic reset)	Displayed when error is detected	1. Check cables of remote controller. 2. Check indoor power cable. 3. Check indoor P.C. board.
◎	◎	●	F01	Coming-off, disconnection or short of indoor heat exchanger sensor (TCJ)	Stop (Automatic reset)	Displayed when error is detected	1. Check indoor heat exchanger temperature sensor (TCJ). 2. Check indoor P.C. board.
◎	◎	●	F02	Coming-off, disconnection or short of indoor heat exchanger sensor (TC)	Stop (Automatic reset)	Displayed when error is detected	1. Check indoor heat exchanger temperature sensor (TC). 2. Check indoor P.C. board.
◎	◎	○	F04	Coming-off, disconnection or short of outdoor temperature sensor (TD)	Stop	Displayed when error is detected	1. Check outdoor temperature sensor (TD). 2. Check outdoor CDB P.C. board.
◎	◎	○	F06	Coming-off, disconnection or short of outdoor temperature sensor (TE/TS)	Stop	Displayed when error is detected	1. Check outdoor temperature sensor (TE/TS). 2. Check outdoor CDB P.C. board.
◎	◎	○	F08	Coming-off, disconnection or short of outdoor temperature sensor (TO)	Operation continues.	Displayed when error is detected	1. Check outdoor temperature sensor (TO). 2. Check outdoor CDB P.C. board.
◎	◎	●	F10	Coming-off, disconnection or short of indoor heat exchanger sensor (TA)	Stop (Automatic reset)	Displayed when error is detected	1. Check indoor heat exchanger temperature sensor (TA). 2. Check indoor P.C. board.
◎	◎	●	F29	Indoor EEPROM error • EEPROM access error	Stop (Automatic reset)	Displayed when error is detected	1. Check indoor EEPROM. (including socket insertion) 2. Check indoor P.C. board.
◎	●	●	H01	Breakdown of compressor • Displayed when error is detected	Stop	Displayed when error is detected	1. Check power voltage. AC200V ±20V 2. Overload operation of refrigerating cycle 3. Check current detection circuit at AC side.
●	◎	●	H02	Compressor does not rotate. • Over-current protective circuit operates after specified time passed when compressor had been activated.	Stop	Displayed when error is detected	1. Trouble of compressor (Compressor lock, etc.) : Replace compressor. 2. Defective cabling of compressor (Phase missing) 3. Phase-missing operation of power supply (3-phase model)
●	◎	●	H03	Current detection circuit error • Current value at AC side is high even during compressor-OFF. • Phase of power supply is missed.	Stop	Displayed when error is detected	1. Compressor immediately stops even if restarted. : Check IPDU. 2. Phase-missing operation of power supply Check 3-phase power voltage and cables.
◎	●	◎	L03	Duplicated indoor master units	Stop	Displayed when error is detected	1. Check whether there is modification of remote controller connection (Group/Individual) or not after power has been turned on (finish of group configuration/address check). * If group configuration and address are not normal when the power has been turned on, the mode automatically shifts to address setup mode. (Resetting of address)
◎	●	◎	L07	There is group line in individual indoor units.	Stop	Displayed when error is detected	
◎	●	◎	L08	Unsetting of indoor group address	Stop	Displayed when error is detected	

◎: Flash, ○: Go on, ●: Go off

Wireless sensor lamp display			Wired remote controller	Diagnostic function			Judgment and measures
				Cause of operation	Status of air conditioner	Condition	
Operation	Timer	Ready	Check code				
◎	●	◎	L09	Unset indoor capacity	Stop	Displayed when error is detected	1. Set the indoor capacity. (DN=I1)
●	◎	●	L29	Outdoor unit and other errors • Communication error between CDB and IPDU (Coming-off of connector) • Heat sink temperature error (Detection of temperature over specified value)	Stop	Displayed when error is detected	1. Check cables of CDB and IPDU. 2. Abnormal overload operation of refrigerating cycle
◎	○	◎	L30	Abnormal outside interlock input	Stop	Displayed when error is detected	1. Check outside devices. 2. Check indoor P.C. board.
◎	○	◎	L31	Phase detection protective circuit operates. (Normal models)	Operation continues. (Compressor stops.)	Displayed when error is detected	1. Check power phase order (Reversed phase)/phase missing. 2. Check outdoor P.C. board.
No check code is displayed.				Fan motor thermal protection	Stop	Displayed when error is detected	1. Check thermal relay of fan motor. 2. Check indoor P.C. board.
◎	●	◎	P03	Discharge temperature error • Discharge temperature over specified value was detected.	Stop	Displayed when error is detected	1. Check refrigerating cycle. (Gas leak) 2. Trouble of PMV 3. Check Td sensor.
◎	●	◎	P04	High-pressure protection error by TE sensor (Temperature over specified value was detected.)	Stop	Displayed when error is detected	1. Overload operation of refrigerating cycle 2. Check outdoor temperature sensor (TE). 3. Check outdoor CDB P.C. board.
●	◎	◎	P10	Float switch operation • Disconnection, coming-off, defective float switch contactor of float circuit	Stop	Displayed when error is detected	1. Defect of drain pump 2. Clogging of drain pump 3. Check float switch. 4. Check indoor P.C. board.
●	◎	◎	P12	Indoor DC fan error	Stop	Displayed when error is detected	1. Defective detection of position 2. Over-current protective circuit of indoor fan driving unit operates. 3. Lock of indoor fan 4. Check indoor P.C. board.
◎	●	◎	P19	Error in 4-way valve system • Indoor heat exchanger temperature lowered after start of heating operation.	Stop (Automatic reset)	Displayed when error is detected	1. Check 4-way valve. 2. Check indoor heat exchanger (TC/TCJ) sensor. 3. Check indoor P.C. board.
◎	●	◎	P22	Outdoor DC fan error	Stop	Displayed when error is detected	1. Defective detection of position 2. Over-current protective circuit of outdoor fan driving unit operates. 3. Lock of outdoor fan 4. Check outdoor CDB P.C. board.
◎	●	◎	P26	Inverter over-current protective circuit operates. (For a short time) Short voltage of main circuit operates.	Stop	Displayed when error is detected	1. Inverter immediately stops even if restarted. : Compressor motor rare short 2. Check IPDU. : Cabling error
◎	●	◎	P29	IPDU position detection circuit error	Stop	Displayed when error is detected	1. Position detection circuit operates even if operating compressor by removing 3P connector. : Replace IPDU.
◎	●	◎	P31	Own unit stops while warning is output to other indoor units.	Stop (Sub unit) (Automatic reset)	Displayed when error is detected	1. Judge sub unit while master unit is in [E03], [L03], [L07], [L08]. 2. Check indoor P.C. board.

For an error mode detected in outdoor unit, the fan operates because sub unit of a group operation does not communicate with the outdoor unit.

Error mode detected by remote controller

◎: Flash, ○: Go on, ●: Go off

Wireless sensor lamp display			Wired remote controller	Diagnostic function			Judgment and measures
				Cause of operation	Status of air conditioner	Condition	
Operation	Timer	Ready	Check code				
—	—	—	No check code is displayed. (Remote controller does not operate.)	No communication with master indoor unit • Remote controller cable is not correctly connected. • Power of indoor unit is not turned on. • Automatic address cannot be completed.	Stop	—	Remote controller power error, Defective indoor EEPROM 1. Check remote controller inter-unit cables. 2. Check remote controller. 3. Check indoor power cables. 4. Check indoor P.C. board. 5. Check indoor EEPROM. (including socket insertion) : Phenomenon of automatic address repetition occurred.
◎	●	●	E01*2	No communication with indoor master unit • Disconnection of inter-unit cable between remote controller and master indoor unit (Detected at remote controller side)	Stop (Automatic restart) * When there is center, operation continues.	Displayed when error is detected	Signal receiving of remote controller is defective. 1. Check remote controller inter-unit cables. 2. Check remote controller. 3. Check indoor power cables. 4. Check indoor P.C. board.
◎	●	●	E02	Signal sending error to indoor unit (Detected at remote controller side)	Stop (Automatic restart) * When there is center, operation continues.	Displayed when error is detected	Signal sending of remote controller is defective. 1. Check sending circuit inside of remote controller. : Replace remote controller.
◎	●	●	E09	Multiple master remote controllers are recognized. (Detected at remote controller side)	Stop (Sub unit continues operation.)	Displayed when error is detected	1. Check there are multiple master units for 2 remote controllers (including wireless). : Master unit is one and others are sub units.
◎	○	◎	L20	Duplicated indoor central addresses on communication of central control system (Detected by central controller side)	Stop (Automatic restart)	Displayed when error is detected	1. Check address setup of central control system network. (DN = 03)

Error mode detected by central remote controller

◎: Flash, ○: Go on, ●: Go off

Wireless sensor lamp display			Wired remote controller	Diagnostic function			Judgment and measures
				Cause of operation	Status of air conditioner	Condition	
Operation	Timer	Ready	Check code				
—	—	—	C05	Sending error central remote controller	Operation continues	Displayed when error is detected	1. Check communication line/miscabling/ Check power of indoor unit. 2. Check communication. (U3, U4 terminals) 3. Check network adapter P.C. board. 4. Check central controller (such as central control remote controller, etc.). 5. Terminal resistance check (connection interface SW01)
—	—	—	C06	Receiving error in central remote controller	Operation continues	Displayed when error is detected	
—	—	—	P30	Differs according to error contents of unit with occurrence of alarm.	Continuation/Stop (Based on a case)	Displayed when error is detected	Check the check code of corresponding unit by remote controller

10-3. Error Mode Detected by LED on Outdoor P.C. Board

RAV-SM562AT-E, RAV-SM802AT-E, RAV-SM1102AT-E, RAV-SM1402AT-E
RAV-SP562AT-E, RAV-SP802AT-E, RAV-SP1102AT-E, RAV-SP1402AT-E

<SW801: LED display in bit 1, bit 2 OFF>

- When multiple errors are detected, the latest error is displayed.
- When LED display is ○ (Go on), there is the main cause of trouble on the objective part of control at CDB side and the unit stops.
- When LED display is ◎ (Flash), there is the main cause of trouble on the objective part of control at IPDU side and the unit stops.
- When case thermostat operates, the communication is interrupted on the serial circuit. If continuing the case thermostat operation, a serial communication error occurs because serial sending to the indoor unit is interrupted.

	No.	Item	Check code		LED display			
			Type A	Type B	D800 (Red)	D801 (Yellow)	D802 (Yellow)	D803 (Yellow)
CDB side	1	TE sensor error	F06	18	○	●	●	●
	2	TD sensor error	F04	19	○	○	●	●
	3	TS sensor error	F06	18	●	●	○	●
	4	TO sensor error	F08	1B	●	○	●	●
	5	Discharge temp. error	P03	1E	●	○	○	●
	6	DC outdoor fan error	P22	1A	○	○	○	●
	7	Communication error between IPDU (Abnormal stop)	L29	1C	○	●	●	○
	8	High-pressure release operation	P04	21	●	○	●	○
				—				
	9	EEPROM error	—	—	○	○	●	○
	10	Communication error between IPDU (No abnormal stop)	—	—	●	●	○	○
IPDU side	11	IGBT short-circuit protection	P26	14	◎	●	●	●
	12	Detection circuit error	P29	16	●	◎	●	●
	13	Current sensor error	H03	17	◎	◎	●	●
	14	Comp. lock error	H02	1D	●	●	◎	●
	15	Comp. breakdown	H01	1F	◎	●	◎	●

○ : Go on ● : Go off ◎ : Flash (5Hz)

<<Check code>>

The check codes are classified into Type A and Type B according to the used remote controller.
Be sure to check the remote controller which you use.

Type A :
Neutral 2-cores type wired remote controller such as RBC-AMT31E, RBC-AS21E, and wireless remote controller kit such as TCB-AX21U (W)-E2

Type B :
Polarized 3-cores type wired remote controller such as RBC-SR1-PE, RBC-SR2-PE, and central control remote controller such as RBC-CR64-PE

9-3. Troubleshooting by Check Display on Remote Controller

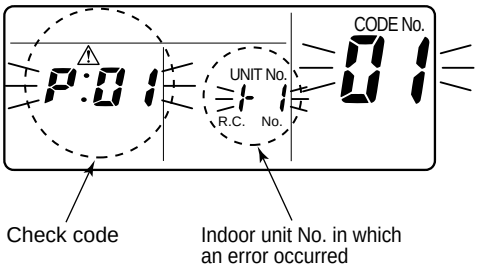
In case of main remote controller (RBC-AMT21E)

1. Confirmation and check

When a trouble occurred on the air conditioner, the check code and the indoor unit No. are displayed on the display section of the remote controller.

The check code is displayed while the air conditioner operates.

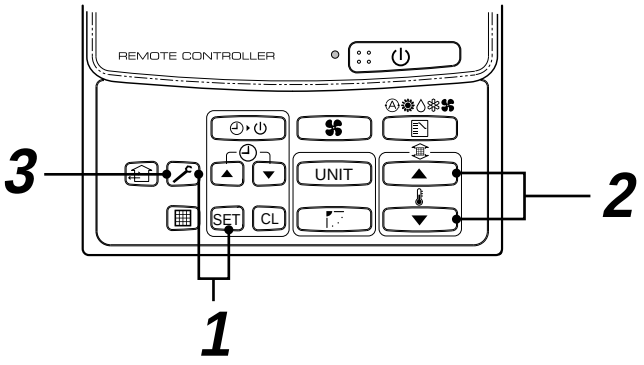
If the display disappeared, operate the air conditioner and check the error based upon the following “Confirmation of error history”.

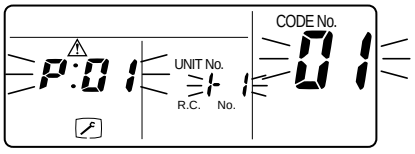


2. Confirmation of error history

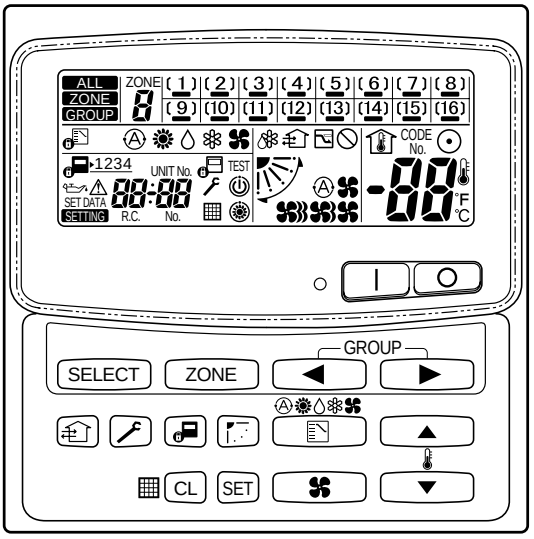
When a trouble occurred on the air conditioner, the error history can be confirmed with the following procedure.
(Up to 4 error histories are stored in memory.)

This history can be confirmed from either operating status or stop status.



Procedure	Description
1	When pushing [SET] and [🔧] buttons simultaneously for 4 seconds or more, the below display appears. If [Service Check] is displayed, the mode enters in the error history mode. • [01: Error history order] is displayed in code number window. • [Check Code] is displayed in check code window. • [Indoor unit address with error] is displayed in UNIT No. 
2	Every pushing temp. set [▲] / [▼] buttons, the error histories stored in the memory are displayed in order. The numbers in item code indicates item code [01] (Latest) to [04] (Oldest). **CAUTION** Do not push [CL] button because all the error histories of the indoor unit will be deleted.
3	After confirmation, push [🔧] button to return to the usual display.

In case of TCC-LINK central control remote controller (TCB-SC642TLE)

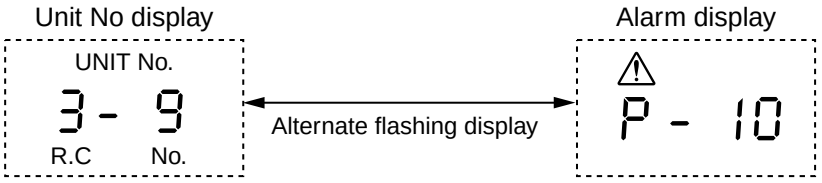


1. Confirmation and check

When a trouble occurred on the air conditioner, the check code and the indoor unit No. are displayed on the display section of the remote controller.

The check code is displayed while the air conditioner operates.

If the display disappeared, operate the air conditioner and check the error based upon the following “Confirmation of error history”.

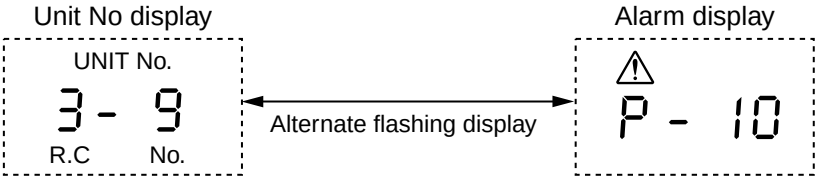


2. Confirmation of error history

When a trouble occurred on the air conditioner, the error history can be confirmed with the following procedure. (Up to 4 error histories are stored in memory.)

This history can be confirmed from either operating or stop.

1) Push [🔧] and [SET] buttons in succession for 4 seconds or more.
2) SERVICE CHECK [🔧] goes on and Item code 01 goes on.
3) When selecting (flash) the group number if there is the alarm history, the UNIT number and the latest alarm history are displayed alternately.
   * In this time, the temperature cannot be set up.
4) To confirm the alarm history other than the latest one, push temp. set [▲] / [▼] to select Item code (01 to 04).
5) To confirm the alarm in the other group, push [ZONE] and [GROUP ◀ ▶] to select the group number
   Do not push [CL] button because all the alarm histories of the currently selected group are deleted.
6) To finish the service check, push [🔧] button.



9-4. Check Code and Check Position Displayed on the Remote Controller and Outdoor Unit (7-Segment Display of Interface)

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
E01	—	—	—	Remote controller	Communication error between indoor and remote controller (Detected at remote controller side)	Corresponding unit only stops.	Communication interrupted between indoor P.C. board and remote controller.	• Check remote controller inter-unit cable (A/B). • Check disconnection, connector contact error. • Check indoor power supply. • Check indoor P.C. board error. • Check remote controller address setup. (When two remote controllers operate) • Check remote controller P.C. board.
E02	—	—	—	Remote controller	Remote controller sending error	Corresponding unit only stops.	Signal could not be sent from remote controller to indoor unit.	• Check the communication wire of remote controller: Exchange remote controller.
E03	—	—	97	Indoor unit	Communication error between indoor and remote controller (Detected at indoor side)	Corresponding unit only stops.	No communication from remote controller (including wireless) and communication adaptor.	• Check remote controller and communication adaptor wiring.
E04	—	—	4	Indoor unit	Indoor/outdoor communication circuit error (Detected at indoor side)	Corresponding unit only stops.	Indoor unit does not receive communication from outdoor unit.	• Check power-ON order of indoor/outdoor. • Check indoor address setup. • Check inter-unit cabling between indoor and outdoor. • Check outdoor end terminal resistance setup (SW30-2).
E06	E06	No. of indoor units which received signal normally	4	I/F	Decreased number of indoor units	All stop	When signal is not sent for a certain period from the indoor unit which has been used to send signals, [E06] is normally displayed.	• Check the power supply of indoor unit. (Power-ON) • Check connection of communication line between indoor and outdoor. • Check connector connection for communication in indoor P.C. board. • Check connector connection for communication in outdoor P.C. board. • Check indoor P.C. board failure. • Check outdoor P.C. board (I/F) failure.
—	E07	—	—	I/F	Indoor/outdoor communication circuit error (Detected at outdoor side)	All stop	Transmission from outdoor to indoor cannot continue for 30 seconds.	• Check outdoor end terminal resistance setup (SW30-2). • Check the communication connection between indoor and outdoor.
E08	E08	Duplicated indoor addresses	96	Indoor I/F	Duplicated indoor addresses	All stop	Multiple indoor unit address setup are duplicated.	• Check indoor address. • Check the change of remote controller connection (Group / individual) after setup of indoor address.
E09	—	—	99	Remote controller	Duplicated master remote controllers	Corresponding unit only stops.	In 2-remote controller control (including wireless), both are setup as master (Header indoor unit stops and other indoor unit is operating.)	• Check remote controller setup. • Check remote controller P.C. board.
E10	—	—	**CF**	Indoor unit	Communication error between indoor P.C. board assembly	Corresponding unit only stops.	There is any trouble in power line.	• Indoor P.C. board failure

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
E12	E12	01: Indoor/outdoor communication 02: Between outdoors communication	42	I/F	Automatic address start error	All stop	• When indoor automatic address started, other refrigerant circuit system was setting automatic address. • When outdoor automatic address started, indoor automatic address was executed.	• Setup the address again after disconnecting communication connection with other refrigerant circuit system.
E15	E15	—	42	I/F	No corresponding indoor unit during automatic address	All stop	Indoor unit is not found when indoor automatic address start was set up.	• Check the communication line connection between indoor and outdoor. • Check the electric power line error in indoor. • Check the noise of surrounding devices. • Power failure • Check indoor P.C. board error.
E16	E16	00: Capacity over 01 to: No. of connected units	89	I/F	No. of connected indoor units / Capacity over	All stop	• Total capacity of indoor units exceeded 135% of total outdoor capacity. • No. of connected indoor units are more than 48 units. **[Note]** If this code appears after backup setup of outdoor unit trouble, set up “No capacity-over detection”. **<Setup method of “No capacity-over detection”>** Turn on SW09/Bit 2 on I/F P.C. board of outdoor header unit.	• Check the connection capacity of indoor unit. • Check the HP capacity of indoor unit. • Check the indoor/outdoor capacity setup • Check the No. of connected indoor units. • Check the outdoor I/F P.C. board error
E18	—	—	97, 99	Indoor unit	Communication error between indoor header and follower units	Corresponding unit only stops.	Regular communication between indoor header and follower units .	• Check cable of the remote controller. • Check power cabling of indoor. • Check P.C. board of indoor.
E19	E19	00: No header unit 02: Two or more header units	96	I/F	Outdoor header unit quantity error	All stop	• There are multiple outdoor header units in 1 line. • There is none of outdoor header unit in 1 line.	The outdoor unit connected with communication cable between indoor and outdoor (U1.U2) is the outdoor header unit. • Check connection of communication line between indoor and outdoor. • Check outdoor P.C. board(I/F) error.
E20	E20	01: Connection of outdoor of other line 02: Connection of indoor of other line	42	I/F	Other line unit connected during automatic address	All stop	Unit of other line was connected when indoor automatic address started.	Separate the cable between lines according to automatic address setup method in “Address setup”.
E23	E23	—	15	I/F	Communication sending error between outdoor units	All stop	Transmission of other outdoor unit was unavailable for 30 seconds or more.	• Check the power of outdoor unit. (Is the power turned on?) • Check connection of communication wire or disconnection between outdoor units. • Check the connector for communication on outdoor P.C. board. • Check outdoor P.C. board (I/F) error. • Check the end terminal resistance setup for communication between outdoor units.

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
E25	E25	—	15	I/F	Duplicated outdoor follower address setup	All stop	Outdoor addresses manually set up are duplicated.	**Note)** Do not set up the outdoor address manually.
E26	E26	No. of normally received outdoor units	15	I/F	Decreased number of connected outdoor units	All stop	The signal was not returned for constant from the outdoor unit which was receiving signal.	• Outdoor is performing backup. • Check the power of outdoor unit. (Is the power turned on?) • Check connection of inter-unit wire or disconnection between outdoor units. • Check the connector connection for communication on outdoor P.C. board. • Check outdoor P.C. board (I/F) error.
E28	E28	No. of detected outdoor units	d2	I/F	Outdoor follower unit error	All stop	Outdoor header unit received error code from outdoor follower unit.	• Check the check code of outdoor follower unit. **<Convenient functions>** When pushing SW04 for 1 second or more under condition that [E28] is displayed on 7-segment display of outdoor header unit, the fan of outdoor unit which stopped abnormally starts rotating. If pushing SW04 and SW05 simultaneously, the fan of normal outdoor unit operates. When pushing SW05 singly, the operation of fan is cleared.
E31	E31	01: IPDU1 error 02: IPDU2 error 03: IPDU1, 2 errors 04: Fan IPDU error 05: IPDU1 + Fan IPDU error 06: IPDU2 + Fan IPDU error 07: All IPDU error or communication error between IPDU and I/F P.C. board or outdoor I/F P.C. board error	CF	I/F	IPDU communication error	All stop	Communication of each IPDU (P.C. board) in inverter box interrupted.	• Check connection of communication connector and disconnection between IPDU and I/F P.C. board. • Check outdoor P.C. board (I/F, IPDU, Fan IPDU) error. • Check external noise. • Check power supply P.C. board for fan error.
F01	—	—	OF	Indoor unit	Indoor TCJ sensor error	Corresponding unit only stops.	• Resistance value of sensor is infinite or zero. (Open/Short)	• Check connection/cabling of TCJ sensor connector. • Check characteristics of TCJ sensor resistance value. • Check indoor P.C. board error.
F02	—	—	Od	Indoor unit	Indoor TC2 sensor error	Corresponding unit only stops.	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection/cabling of TC2 sensor connector. • Check characteristics of TC2 sensor resistance value. • Check indoor P.C. board error.
F03	—	—	93	Indoor unit	Indoor TC1 sensor error	Corresponding unit only stops.	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection/cabling of TC1 sensor connector. • Check characteristics of TC1 sensor resistance value. • Check indoor P.C. board error.
F04	F04	—	19	I/F	TD1 sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TD1 sensor connector. • Check characteristics of TD1 sensor resistance value. • Check outdoor P.C. board (I/F) error.
F05	F05	—	A1	I/F	TD2 sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TD2 sensor connector. • Check characteristics of TD2 sensor resistance value. • Check outdoor P.C. board (I/F) error.
F06	F06	—	18	I/F	TE1 sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TE1 sensor connector. • Check characteristics of TE1 sensor resistance value. • Check outdoor P.C. board (I/F) error.

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
F07	F07	—	18	I/F	TL sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TL sensor connector. • Check characteristics of TL sensor resistance value. • Check outdoor P.C. board (I/F) error.
F08	F08	—	1b	I/F	TO sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TO sensor connector. • Check characteristics of TO sensor resistance value. • Check outdoor P.C. board (I/F) error.
F10	—	—	OC	Indoor	Indoor TA sensor error	Corresponding unit only stops.	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection/cabling of TA sensor connector. • Check characteristics of TA sensor resistance value. • Check indoor P.C. board error.
F12	F12	—	A2	I/F	TS1 sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• Check connection of TS1 sensor connector. • Check characteristics of TS1 sensor resistance value. • Check outdoor P.C. board (I/F) error.
F13	F13	01: Compressor 1 side 02: Compressor 2 side	43	IPDU	TH sensor error	All stop	• Resistance value of sensor is infinite or zero (Open/Short).	• IGBT built-in temp sensor error → Exchange IPDU P.C. board.
F15	F15	—	18	I/F	Outdoor temp sensor miscabling (TE1, TL)	All stop	During operation of compressor in HEAT mode, the TE1 detection temp was higher than that of TL by the specified value continued for 3 minutes or more.	• Check installation of TE1 sensor and TL sensor. • Check characteristics of TE1 and TL sensor resistance value. • Check outdoor P.C. board (I/F) error.
F16	F16	—	43	I/F	Outdoor pressure sensor miscabling (Pd, Ps)	All stop	High-pressure Pd sensor and low-pressure Ps sensor were exchanged, or output voltages of both sensors are zero.	• Check connection of high-pressure Pd sensor connector. • Check connection of low-pressure Ps sensor connector. • Check pressure sensors Pd and Ps error. • Check outdoor P.C. board (I/F) error. • Check compression error of compressor.
F23	F23	—	43	I/F	Ps sensor error	All stop	Output voltage of Ps sensor was zero.	• Misconnection of Ps sensor and Pd sensor connectors • Check connection of Ps sensor connector. • Check Ps sensor error. • Check compression error of compressor. • Check 4-way valve error. • Check outdoor P.C. board (I/F) error. • Check SV4 circuit error.
F24	F24	—	43	I/F	Pd sensor error	All stop	Output voltage of Pd sensor was zero. (Sensor Open) Pd > 4.15MPa during stop of compressor	• Check connection of Pd sensor connector. • Check Pd sensor error. • Check outdoor P.C. board (I/F) error.
F29	—	—	12	Indoor	Indoor other error	Corresponding unit only stops.	Indoor P.C. board did not operate normally.	• Check indoor P.C. board error (EEPROM error).
F31	F31	—	1C	I/F	Outdoor EEPROM error	All stop (∗1)	Outdoor P.C. board (I/F) did not operate normally.	• Check power voltage. • Check power noise. • Check outdoor P.C. board (I/F) error.
H01	H01	01: Compressor 1 side 02: Compressor 2 side	1F	IPDU	Compressor breakdown	All stop	Inverter current detection circuit detected over-current and stopped.	• Check power voltage. (AC220–240V ± 10%). • Check compressor error. • Check cause of abnormal overload operation. • Check outdoor P.C. board (IPDU) error.

(∗1) All stop only in case of the header unit The follower unit continues operation.

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
H02	H02	01: Compressor 1 side 02: Compressor 2 side	1d	IPDU	Compressor error (lock) MG-SW error OCR operation	All stop	Over-current was detected several seconds after header compressor had started.	• Check compressor error. • Check power voltage. (AC380 –10%, 415V +10%). • Check cable of compressor and phase-missing. • Check connector/terminal connection on IPDU P.C. board. • Check conduction of case heater. (Check activation error due to liquid stagnation in compressor.) • Check outdoor P.C. board (IPDU) error. • Check outdoor MG-SW or OCR.
H03	H03	01: Compressor 1 side 02: Compressor 2 side	17	IPDU	Current detection circuit system error	All stop	While header compressor stopped, current flowed more than the specified current and was detected.	• Check cabling of current detection circuit system. • Check outdoor P.C. board (IPDU) error.
H04	H04	—	44	I/F	Compressor 1 case thermo operation	All stop	Compressor 1 case thermo-stat performed protective operation.	• Check compressor 1 case thermo circuit. (Connector, cable, P.C. board) • Check full opening of service valve. (Gas and liquid side) • Check outdoor PMV clogging. (PMV1, 2) • Check SV41 circuit leakage. • Check miscabling/misinstallation of SV41 and SV42. • Check valve open status of indoor PMV. • Check compressor error. • Check 4-way valve error. • Check refrigerant shortage.
H06	H06	—	20	I/F	Low-pressure protective operation	All stop	Low-pressure Ps detected operation lower than 0.02MPa.	• Check full opening of service valve. (Gas and liquid side) • Check outdoor PMV clogging. (PMV1, 2) • Check SV41 circuit and SV42 circuit error. • Check low-pressure Ps sensor error. • Check indoor air filter clogging. • Check valve open of indoor PMV. • Check refrigerant pipe clogging. • Check outdoor fan operation. (In heating mode) • Check refrigerant shortage.
H07	H07	—	d7	I/F	Protection for oil level drop detection	All stop	The operating compressor detected oil shortage continuously for 2 hours.	**<Check all the outdoor units in the corresponding line.>** • Check full opening of service valve of balance pipe. • Check connection and installation of TK1, TK2, TK3, and TK4 sensors. • Check characteristics of TK1, TK2, TK3, and TK4 resistance values. • Check gas leak and oil leak in the same line. • Check refrigerant stagnation in compressor. • Check error of SV3A, SV3B, SV3C, SV3D, and SV3E valves. • Check clogging of oil separator oil return circuit. • Check clogging of oil-equation circuit.

MG-SW : Magnet Switch
OCR : Over-current Relay

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
H08	H08	01: TK1 sensor error 02: TK2 sensor error 03: TK3 sensor error 04: TK4 sensor error	d4	I/F	Oil level detective temp sensor error	All stop	• Resistance value of sensor is infinite or zero. (Open/Short)	• Check connection of TK1 sensor connector. • Check characteristics of TK1 sensor resistance value. • Check outdoor P.C. board (I/F) error.
						All stop	• Resistance value of sensor is infinite or zero. (Open/Short)	• Check connection of TK2 sensor connector. • Check characteristics of TK2 sensor resistance value. • Check outdoor P.C. board (I/F) error.
						All stop	• Resistance value of sensor is infinite or zero. (Open/Short)	• Check connection of TK3 sensor connector. • Check characteristics of TK3 sensor resistance value. • Check outdoor P.C. board (I/F) error.
						All stop	• Resistance value of sensor is infinite or zero. (Open/Short)	• Check connection of TK4 sensor connector. • Check characteristics of TK4 sensor resistance value. • Check outdoor P.C. board (I/F) error.
H14	H14	—	44	I/F	Compressor 2 case thermo operation	All stop	Compressor 2 case thermostat operated.	• Check compressor 2 case thermo circuit. (Connector, cable, P.C. board) • Check full opening of service valve. (Gas and liquid side) • Check outdoor PMV clogging. (PMV1, 2) • Check SV42 valve leak. • Check miscabling/misinstallation of SV41 and SV42. • Check valve opening of indoor PMV. • Check 4-way valve error. • Check refrigerant shortage. • Check compressor error.
H16	H16	01: TK1 oil circuit system error 02: TK2 oil circuit system error 03: TK3 oil circuit system error 04: TK4 oil circuit system error	d7	I/F	Oil level detective circuit system error MG-SW error OCR operation	All stop	Temperature change of TK1 could not be detected though compressor 1 started the operation.	• Check TK1 sensor coming-off. • Check characteristics of TK1 sensor resistance value. • Check TK1, TK2, TK3, and TK4 misconnection. • Check operation error of SV3E valve. • Check capillary clogging of oil-equation circuit and operation error of stop valve. • Check refrigerant stagnation in compressor. • Check MG-SW or OCR.
							Temperature change of TK2 could not be detected though compressor 2 started the operation.	• Check TK2 sensor coming-off. • Check characteristics of TK2 sensor resistance value. • Check TK1, TK2, TK3, and TK4 misconnection. • Check SV3E valve operation. • Check capillary clogging of oil equalization circuit and check stop valve operation. • Check refrigerant stagnation in compressor shell. • Check MG-SW or OCR.
							Temperature change of TK3 could not be detected though compressor started the operation.	• Check TK3 sensor coming-off. • Check characteristics of TK3 sensor resistance value. • Check TK1, TK2, TK3, and TK4 misconnection. • Check SV3E valve operation. • Check capillary clogging of oil-equalization circuit and check valve operation. • Check refrigerant stagnation in compressor shell. • Check MG-SW or OCR.
							Temperature change of TK4 could not be detected though compressor started the operation, or the difference from other TK sensor changed for a constant time only within the specified range.	• Check TK4 sensor coming-off. • Check characteristics of TK4 sensor resistance value. • Check TK1, TK2, TK3, and TK4 misconnection. • Check SV3E valve operation. • Check capillary clogging of oil-equalization circuit and check valve operation. • Check refrigerant stagnation in compressor shell. • Check MG-SW or OCR.

MG-SW : Magnet Switch
OCR : Over-current Relay

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
L03	—	—	96	Indoor	Duplicated indoor center units	Corresponding unit only stops.	There are multiple center units in a group.	• Check indoor address. • Check the change of remote controller connection (Group/individual) after indoor address setup.
L04	L04	—	96	I/F	Duplicated outdoor line address	All stop	Line address setup is duplicated against the outdoor unit in different refrigerant pipe system.	• Check line address.
L05	—	—	96	I/F	Duplicated indoor units with priority (Displayed on indoor unit with priority)	All stop	Indoor units with priority were duplicated.	• Check display of indoor unit with priority.
L06	L06	No. of indoor units with priority	96	I/F	Duplicated indoor units with priority (Displayed on the unit other than indoor unit with priority)	All stop	Indoor units with priority were duplicated.	• Check display of indoor unit with priority and outdoor unit.
L07	—	—	99	Indoor	Group line in individual indoor unit.	Corresponding unit only stops.	At least one indoor unit connected to a group existed in the individual indoor units.	• Check indoor address.
L08	L08	—	99	Indoor	Indoor group / address unset	Corresponding unit only stops.	Address was not yet set up.	• Check indoor address. **Note)** After installation, this code is displayed when the power is firstly turned on.
L09	—	—	46	Indoor	Indoor capacity unset	Corresponding unit only stops.	Indoor unit capacity was unset.	Set up indoor capacity. (DN=11)
L10	L10	—	88	I/F	Outdoor capacity unset	All stop	On the I/F P.C. board for service, jumper line was not cut according to the model.	Check model setup on outdoor I/F P.C. board A'ssy for service.
L20	—	—	98	AI-NET, Indoor	Duplicated central control addresses	All stop	Duplicated central control addresses	• Check central control address. • Check network adaptor P.C. board. (In case of AI-NET)
L28	L28	—	46	I/F	Quantity over of connected outdoor units	All stop	There were more than four outdoor units.	• Check No. of connected outdoor units. (Max. 4 units per 1 system) • Check communication line between outdoor units. • Check outdoor P.C. board (I/F) error.
L29	L29	01: IPDU1 error 02: IPDU2 error 03: IPDU1, 2 errors 04: Fan IPDU error 05: IPDU1 + Fan IPDU error 06: IPDU2 + Fan IPDU error 07: All IPDU error or communication error between IPDU and I/F P.C. board, or outdoor I/F P.C. board error	CF	I/F	IPDU quantity error	All stop	No. of IPDU units detected when power was turned on were less.	• Check model setup for outdoor I/F service P.C. board. • Check connection of UART communication connector. • Check IPDU, fan IPDU, and I/F P.C. board error. **Note)** UART: Universal Asynchronous Receiver Transmitter

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
L30	L30	Detected indoor address	b6	Indoor	Interlock in indoor unit from outside	Corresponding unit only stops.	• Outside error input terminal Detected signal to (CN80) for more 1 minute	■ Outside device is connected to connector (CN80): 1) Check outside device error. 2) Check indoor P.C. board error. ■ Outside device is not connected to connector (CN80): 1) Check indoor P.C. board error.
—	L31	—	—	I/F	Extended IC (Integrated Circuit) error	Operation continues.	P.C. board (I/F) parts error	Check indoor (I/F) P.C. board.
P01	—	—	11	Indoor	Indoor fan motor error	Corresponding unit only stops.		• Check the lock of fan motor (AC fan). • Check cabling.
P03	P03	—	1E	I/F	Discharge temp TD1 error	All stop	Discharge temp (TD1) exceeded 115°C.	• Check full opening of outdoor service valves (Gas side, Liquid side). • Check clogging of outdoor PMV. (PMV1,2) • Check characteristics of TD1 sensor resistance value. • Check refrigerant shortage. • Check 4-way valve error. • Check leakage of SV41 circuit. • Check SV4 circuit. (Miscabling and misinstallation of SV41 and SV42)
P04	P04	01: Compressor 1 side 02: Compressor 2 side	21	I/F	Actuation of high-pressure SW	All stop	High-pressure SW actuated.	• Check Pd pressure sensor error. • Check full opening of outdoor service valves (Gas side, Liquid side). • Check outdoor fan error. • Check outdoor fan motor error. • Check clogging of outdoor PMV. (PMV1,2) • Check clogging of indoor/outdoor heat exchangers. • Check short-circuiting of outdoor suction/discharge air. • Check clogging of SV2 circuit. • Check outdoor P.C. board (I/F) error. • Check indoor fan system error. (Cause of air volume decrease) • Check opening of indoor PMV. • Check miscabling of communication line between indoor and outdoor. • Check operation error of check valve of discharge pipe. • Check SV4 valve circuit. • Check SV5 valve circuit. • Check refrigerant overcharge.
P05	P05	01: Power supply open phase 02: Power supply negative phase	AF	I/F	Open phase negative phase	All stop	• Open phase was detected when the power turned on. • Negative phase was detected when the power turned on.	• Check outdoor power line. • Check outdoor P.C. board (I/F) error.

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
P07	P07	01: Compressor 1 side 02: Compressor 2 side	1C	IPDU I/F	Heat sink overheat error	All stop	IGBT built-in temp sensor (TH) was overheated.	• Check power voltage. • Check outdoor fan system error. • Check clogging of heat sink cooling duct. • Check fixation between IGBT and heat sink. (Check screwing and contact.) • Check IPDU error.(IGBT built-in temp sensor (TH) error)
P10	P10	Indoor address with trouble	Ob	Indoor	Indoor overflow error	All stop	• Float switch operated. • Float switch circuit disconnected or the connector came off.	• Check the float switch connector. • Check operation of drain pump unit. • Check the drain pump circuit. • Check clogging of drain pipe. • Check indoor P.C. board error.
P12	—	—	11	Indoor	Indoor fan motor error	Corresponding unit only stops.	• The value of motor speed deviated from target value was detected for certain time. • Over-current protection operated.	• Check connection of fan connector and wiring. • Check fan motor error. • Check indoor P.C. board error. • Check influence of outside air control. • Check indoor type code (DN=10) and the capacity code (DN=11).
P13	P13	—	47	I/F	Outdoor liquid back detection error	All stop	**<In cooling>** While the system is operating in COOL mode, a high pressure value was detected in follower unit in which compressor did not operate. **<In heating>** While the system is operating in HEAT mode, outdoor PMV of which opening degree was 100p or less for a certain time.	• Check full close operation of outdoor PMV (1, 2). • Check Pd and Ps sensor error. • Check clogging of SV2 circuit. • Check clogging of balance pipe. • Check clogging of SV3B circuit. • Check outdoor P.C. board (I/F) error. • Check capillary clogging of oil return circuit from oil separator. • Check leakage of check valve of the main discharge pipe.
P15	P15	01: TS condition	AE	I/F	Gas leak detection (TS1 condition)	All stop	Suction temp exceeded the judgment standard temp for 10 minutes or more. **<TS error judgment standard temperature>** In cooling operation: 60°C or higher In heating operation: 40°C or higher	• Check refrigerant shortage. • Check full open of outdoor service valves (gas side, liquid side). • Check outdoor PMV clogging (PMV1, 2). • Check characteristics of TS1 sensor resistance value. • Check 4-way valve error. • Check leakage of SV4 circuit.
		02: TD condition	AE	I/F	Gas leak detection (TD condition)	All stop	Discharge temperature TD1 or TD2 was continuously 108°C or higher for 10 minutes.	• Check refrigerant shortage. • Check outdoor PMV clogging (PMV1, 2). • Check characteristics of TD1, TD2 sensor resistance value. • Check indoor air filter clogging. • Check pipe clogging. • Check SV4 circuit (Valve leakage, misinstallation)
P17	P17	—	bb	I/F	Discharge temp TD2 error	All stop	Discharge temperature (TD2) exceeded 115°C.	• Check full opening of outdoor service valves (gas side, liquid side). • Check clogging of outdoor PMV (PMV1, 2). • Check characteristics of TD2 sensor resistance value. • Check 4-way valve error. • Check leakage of SV42 circuit. • Check SV4 circuit. (Miscabling and misinstallation of SV41 and SV42)
P19	P19	Detected outdoor unit No.	8	I/F	4-way valve operation error	All stop	When abnormal refrigerating cycle data was detected in heating	• Error of 4-way valve error • Check coil error and connector connection of 4-way valve. • Check characteristics of TS1/TE1 sensor resistance value. • Check characteristics of Pd, Ps pressure sensor output voltage. • Check misconnection of TE1 and TL sensors.

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Main remote controller	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
P20	P20	—	22	I/F	High-pressure protective operation	All stop	Pd sensor detected 3.6MPa or more.	• Check Pd pressure sensor error. • Check full opening of service valves (Gas side, Liquid side). • Check outdoor fan error. • Check outdoor fan motor error. • Check clogging of outdoor PMV. (PMV1,2) • Check clogging of indoor/outdoor heat exchangers. • Check air short-circuiting in outdoor unit. • Check clogging of SV2 circuit. • Check outdoor P.C. board (I/F) error. • Check indoor fan system error. (Cause of air volume decrease) • Check valve opening of indoor PMV. • Check miscabling of communication line between indoor and outdoor. • Check operation error of check valve of discharge pipe. • Check circuit of gas balance SV4 valve. • Check circuit of SV5 valve. • Check refrigerant overcharge.
P22	P22	0: IGBT shortage 1: Position detection circuit error 3: Motor lock error 4: Motor current error detection C: TH sensor temp. error D: TH sensor error E: Vdc error	1A	FAN-IPDU	Outdoor fan IPDU error	All stop	**(Sub-code: 0)** • Short-circuit current was detected at start time. • Short-circuit current was detected when checking IGBT short-circuit before start time.	• Check fan motor. (Interphase short-circuit) • Check fan IPDU error.
						All stop	**(Sub-code: 1)** • The standard value of detection circuit of fan IPDU current fluctuated at start time.	• Check fan IPDU error.
						All stop	**(Sub-code: 3)** • Abnormal current was detected within 30 seconds after start time.	• Check fan motor. (Lock, phase missing) • Check cause of abnormal overload at start time. • Check connection of connector to fan motor.
						All stop	**(Sub-code: 4)** • Short-circuit current was detected when 2 seconds or more passed after start time. • Over-current was detected when 30 seconds or more passed after start time.	• Check power supply voltage. • Check fan IPDU error.
						All stop	**(Sub-code: C)** • Heat sink sensor (TH) of fan IPDU detected 95°C error.	• Check outdoor fan system. • Check fan IPDU error. • Check fixation between fan IPDU and heat sink.
						All stop	**(Sub-code: D)** • Heat sink sensor (TH) of fan IPDU detected short-circuiting or open.	• Check fan IPDU error.
						All stop	**(Sub-code: E)** • nput power supply voltage of the fan IPDU over the setup value was detected. • Input power supply terminal of the fan IPDU was unconnected. • Power supply P.C. board error of the fan IPDU	• Check input power supply voltage of the fan IPDU. • Check power supply P.C. board error of the fan IPDU. • Check error of external electrolytic condenser.

Main remote controller	Check code			Detected position	Check code name	Status	Error detection condition	Check item (position)
	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
P26	P26	01: Compressor 1 side 02: Compressor 2 side	14	IPDU	G-Tr short-circuit protection error	All stop	Instantaneous over-current was detected when compressor started.	• Check connector connection and wiring on IPDU P.C. board. • Check compressor error and defect of compressor coil. • Check outdoor P.C. board (IPDU) error.
P29	P29	01: Compressor 1 side 02: Compressor 2 side	16	IPDU	Compressor position detection circuit error	All stop	Position was not normally detected.	• Check connector connection and wiring. • Check compressor error and defect of compressor coil. • Check P.C. board (IPDU) error.
P31	—	—	47	Indoor	Other indoor error (Group follower unit error)	Corresponding unit only stops.	E07/L07/L03/L08 was detected when other indoor unit in the group was defective.	• Check indoor P.C. board.

Error detected by TCC-LINK central control device

Check code				Detected position	Check code name	Status	Error detection condition	Check item (position)
Display on central control device	Outdoor 7-segment display		AI-NET central control remote controller					
		Sub-code						
C05	—		—	TCC-LINK	TCC-LINK central control device transmission error	Operation continued.	Signal is not transmit from central control device.	• Check central control device error. • Check communication line error of central control device. • Check setup of end terminal resistance.
C06	—		—		TCC-LINK central control device receiving error	Operation continued.	Signal is not received from central control device.	• Check central control device error. • Check communication line error of central control device. • Check setup of end terminal resistance. • Check the power of connecting destination connected device. • Check P.C. board error of the connected device.
C12	—		—	General-purpose device I/F	Interface batch alarm of general-purpose control devices	Operation continued.	Error was input in general-purpose control device control interface.	• Check error input.
P30	Differs according to error contents of the with alarm			TCC-LINK	Follower unit error of group control	Operation continued.	An error occurred in follower unit of the group control. ([P30] is displayed only on the central control remote controller.)	• Check the check code of the unit with alarm.
	(L20 is displayed.)				Duplicated central control address	Operation continued.	Central control addresses were duplicated.	• Check the address setup.

Error detected by AI-NET central control device

Main remote controller	Check code			Detected position	Check code name	Status	Error detection condition	Check item (position)
	Outdoor 7-segment display		AI-NET central control remote controller					
	Check code	Sub-code						
—	—	—	97	AI-NET	AI-NET communication system error	Operation continued.	E07/L07/L03/L08 was detected when other indoor unit in the group was defective.	• Check multiple network adaptors. • Check wire and miscabling of remote controller: Only one network adaptor can be connected to communication line of remote controller.
—	—	—	99	AI-NET	Duplicated network adaptors	Operation continued.	Multiple network adaptors were connected to communication line of remote controller. (Detected at central controller side)	• Check communication line, miscabling, and power of indoor unit. • Check communication. (X, Y terminals) • Check network adaptor P.C. board. • Check the central controller (Central control remote controller, etc.)
—	—	—	b7	AI-NET	Error in indoor group	Operation continued.	Error of follower unit in the group	• Check follower unit in the group.

∗ These errors are concerned to communication of remote controllers (A, B) and central system [AI-NET X, Y], and the main remote controller displays [E01], [E02], [E03], [E09], or [E18] in some cases and displays none in other cases according to the contents.