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1 Safety precautions

The precautions described in this document cover very important topics, follow them carefully.

All activities described in the service manual must be performed by an authorized person.

If you are NOT sure how to install, operate or service the unit, contact your dealer.

In accordance with the applicable legislation, it might be necessary to provide a logbook with the product containing at least:

information on maintenance, repair work, results of tests, stand-by periods, …

Also, at least, following information must be provided at an accessible place at the product:

- Instructions for shutting down the system in case of an emergency
- Name and address of fire department, police and hospital
- Name, address and day and night telephone numbers for obtaining service

In Europe, EN378 provides the necessary guidance for this logbook.

1.1 Meaning of warnings and symbols

DANGER

Indicates a situation that results in death or serious injury.

DANGER: RISK OF ELECTROCUTION

Indicates a situation that could result in electrocution.

DANGER: RISK OF BURNING/SCALDING

Indicates a situation that could result in burning/scalding because of extreme hot or cold temperatures.

DANGER: RISK OF EXPLOSION

Indicates a situation that could result in explosion.

WARNING

Indicates a situation that could result in death or serious injury.

WARNING: FLAMMABLE MATERIAL

CAUTION

Indicates a situation that could result in minor or moderate injury.

NOTICE

Indicates a situation that could result in equipment or property damage.

INFORMATION

Indicates useful tips or additional information.

1.2 Dangers

DANGER: RISK OF BURNING/SCALDING

- Do NOT touch the refrigerant piping, water piping or internal parts during and immediately after operation. It could be too hot or too cold. Give it time to return to normal temperature. If you MUST touch it, wear protective gloves.
- Do NOT touch any accidental leaking refrigerant.

DANGER: RISK OF ELECTROCUTION

- Turn OFF all power supply before removing the switch box cover, connecting electrical wiring or touching electrical parts.
- Where applicable, stop the equipment's operation first and allow (refrigerant) pressure to equalize, before turning OFF the power.
- Disconnect the power supply for more than 10 minutes, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage MUST be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram. If the measured voltage is still higher than 50 V DC, discharge the capacitors in a safe manner by using a dedicated capacitor discharge pen to avoid possibility of sparking.
- Do NOT touch electrical components with wet hands.
- Do NOT leave the unit unattended when the service cover is removed.
- Protect electric componennts from getting wet while the service cover is opened.

1.3 Warnings

WARNING

Improper installation or attachment of equipment or accessories could result in electrical shock, short-circuit, leaks, fire or other damage to the equipment. ONLY use accessories, optional equipment and spare parts made or approved by Daikin.

WARNING

Do NOT apply any permanent inductive or capacitance loads to the circuit without ensuring that this will NOT exceed the permissible voltage and current permitted for the equipment in use.

WARNING

Make sure that the refrigerating piping and components are installed in a position where they are unlikely to be exposed to any corroding substance.

WARNING

Make sure installation, testing and applied materials comply with applicable legislation (on top of the instructions described in the Daikin documentation).

WARNING

Make sure the work site environment is clean and safe to work in. Beware of spilled fluids, like water, oil or other substances.

Protect bystanders from injury and property from possible damage cause by service works.

WARNING

If any work is to be conducted on the refrigerating equipment or any associated parts which involves brazing, an appropriate dry powder or CO_2 fire extinguisher MUST be present.

When charging the unit, an appropriate dry powder or CO_2 fire extinguisher MUST be present.

WARNING

No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, MUST be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs MUST be displayed.

WARNING

Tear apart and throw away plastic packaging bags so that nobody, especially children, can play with them. Possible risk: suffocation.

WARNING

During tests, NEVER pressurise the product with a pressure higher than the maximum allowable pressure (as indicated on the nameplate of the unit).

WARNING

Make sure the total refrigerant charge is in accordance with the room size in which the unit is installed: please consult the detailed instructions on charging and allowed room sizes in the installation manual.

WARNING

- NEVER mix different refrigerants or allow air to enter the refrigerant system.
- NEVER charge recovered refrigerant from another unit. Use recovered refrigerant only on the same unit where it was recovered from, or have it recycled at a certified facility.

WARNING

When reconnecting a connector to the PCB, make sure to connect it on the correct location and do NOT apply force, as this may damage the connector or connector pins of the PCB.

WARNING

ALWAYS recover the refrigerant. Do NOT release them directly into the environment. Use a vacuum pump to evacuate the installation.

WARNING

Removal of refrigerant MUST be according to the following:

When breaking into the refrigerant circuit to make repairs, be sure to remove the refrigerant from the system first. The refrigerant charge MUST be recovered into the correct recovery cylinders.

WARNING

Take sufficient precautions in case of refrigerant leakage. If refrigerant gas leaks, ventilate the area immediately. Possible risks:

- Excessive refrigerant concentrations in a closed room can lead to oxygen deficiency.
- Toxic gas might be produced if refrigerant gas comes into contact with fire.

WARNING

- Under no circumstances, potential sources of ignition MUST be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) MUST NOT be used.
- Ensure that the detector is NOT a potential source of ignition and is suitable for the detection of R32.
- If a leak is suspected, all naked flames MUST be removed or extinguished.
- Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine MUST be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
- If a leakage of refrigerant is found which requires brazing, all of the refrigerant MUST be recovered from the system, or isolated (by means of shut-off valves) in a part of the system remote from the leak.
- Only use the electronic leak tester for R32. The old flame leak tester CANNOT be used on a system with HFC refrigerant because there is no chlorine component in the refrigerant. In case of R32 (HFC) refrigerant, any flame in contact with (leaking) refrigerant is extremely dangerous.

WARNING

- In order to prevent oxygen deficiency and R32 combustion, keep the room well-ventilated for a healthy work environment. Do NOT work in a confined space. If a refrigerant leak is detected in a confined room or an inadequately ventilated location, do NOT start the work until the area has been ventilated appropriately.
- If the work area is NOT located in the open air, make sure the work area is adequately ventilated before breaking into the system or conducting any brazing. The ventilation MUST continue to operate during the period that the work is carried out to prevent accumulation of refrigerant in the work area. The ventilation should safely disperse any released refrigerant and preferably ventilate to the open air.

WARNING

Ensure that no external live wiring is exposed while charging, recovering or purging the system. Sparks created when live wiring is short-circuited might ignite the refrigerant if it is leaked into the room while charging, recovering or purging the system.

WARNING

Ensure that the unit is properly earthed prior to conducting maintenance or service or charging the system with refrigerant. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earthing may cause electrical shock.

WARNING

- ONLY use copper wires.
- Make sure the field wiring complies with the applicable legislation.
- All field wiring MUST be performed in accordance with the wiring diagram supplied with the product.
- NEVER squeeze bundled cables and make sure they do NOT come in contact with the piping and sharp edges. Make sure no external pressure is applied to the terminal connections.
- Make sure to install earth wiring. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earth may cause electrical shock.
- Make sure to use a dedicated power circuit. NEVER use a power supply shared by another appliance.
- Make sure to install the required fuses or circuit breakers.
- Make sure to install an earth leakage protector. Failure to do so may cause electrical shock or fire.
- When installing the earth leakage protector, make sure it is compatible with the inverter (resistant to high frequency electric noise) to avoid unnecessary opening of the earth leakage protector.

WARNING

Make sure the markings on the unit remain visible and legible after inspection or repair work. Markings and signs that are illegible shall be corrected.

WARNING

- After finishing the electrical work, confirm that each electrical component and terminal inside the electrical components box is connected securely.
- Make sure all covers are closed before starting up the unit.

WARNING

- The area MUST be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres.
- Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.
- Prior to and during work, the area MUST be checked with an appropriate refrigerant detector capable of detecting R32 refrigerant, to ensure a work environment free of refrigerant.

WARNING

- Equipment MUST be labelled stating that it has been de-commissioned and emptied of refrigerant.
- The label MUST be dated and signed.
- For appliances containing flammable refrigerants, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

WARNING

Before carrying out refrigerant recovery procedure, it is essential that the technician is completely familiar with the equipment and all its details. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample MUST be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

- Become familiar with the equipment and its operation.
- Isolate system electrically.
- Ensure that mechanical handling equipment is available, if required, for handling refrigerant cylinders.
- Ensure that all personal protective equipment is available and is used correctly.
- Ensure that the recovery process is supervised at all times by a competent person.
- Ensure that recovery equipment and cylinders are conform to the appropriate standards.
- If a vacuum is NOT possible, make a manifold so that refrigerant can be removed from various parts of the system.
- Make sure that cylinder is situated on the scales before recovery takes place.
- Start the recovery machine and operate in accordance with instructions.
- Do NOT overfill cylinders (no more than 60% volume liquid charge).
- Do NOT exceed the maximum working pressure of the cylinder, NOT even temporarily.
- When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed.
- Recovered refrigerant MUST NOT be charged into another refrigerating system unless it has been cleaned and checked.

WARNING

All maintenance staff and others working in the local area MUST be instructed on the nature of work being carried out.

WARNING

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.

WARNING

Prior to start working on systems containing flammable refrigerant, safety checks are necessary to ensure that the risk of ignition is minimised. Therefore, some instructions should be followed.

Please refer to the service manual for more information.

WARNING

- In case refrigerant recovery is required, use the service ports at both stop valves.
- In case refrigerant recovery is required prior to repair a refrigerant leak detected by indoor unit, also use the internal service port of the outdoor unit heat exchanger.
- To remove refrigerant smoothly, prior to start the refrigerant recovery, set outdoor unit to mode 2-21, set 1 + 2 x BS3 (Return): outdoor display shows "t01", and all interfaces show "centralised lock (3 arrows to center) + operation indication ON (fan stays OFF!).
- ONLY use leak free hoses, couplings and manifolds in good working condition.
- ONLY use recovery cylinders designated and labelled to recover R32. Note that thread connection to the cylinder is counter clock.
- Always use a calibrated scale in good condition prior and during the refrigerant recovery process to determine the weight of the recovered refrigerant into the external refrigerant cylinder.
- Read the operation instructions of the recovery unit prior to connecting the recovery unit. Verify the recovery unit is suited for R32 refrigerant, check that it is in good working condition, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.
- Do NOT overfill the refrigerant cylinder, confirm with the supplier of the refrigerant cylinder about maximum filling ratio if NOT mentioned on the refrigerant cylinder itself. Generally the maximum filling amount should be limited to 60% of the maximum volume of the cylinder.
- Do NOT exceed the maximum working pressure of the refrigerant cylinder, NOT even temporarily.
- When the cylinders have been filled correctly, and the refrigerant recovery process is completed, make sure that the cylinders and the equipment are removed from site promptly and all stop valves on the equipment are (kept) closed.
- The recovered refrigerant MUST be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do NOT mix refrigerants in recovery units and especially NOT in cylinders.
- Recovered refrigerant MUST NOT be charged into another refrigerant system unless it has been cleaned and checked.

WARNING

If compressor is to be removed, ensure that the compressor has been evacuated to an acceptable level to make sure that flammable refrigerant does NOT remain within the lubricant. The evacuation process MUST be carried out prior to returning the compressor to the supplier. During the refrigerant recovery, confirm that the crankcase heater of the compressor body is energized to accelerate this process. When oil is drained from a system, it MUST be carried out safely.

1.4 Cautions

CAUTION

Wear adequate personal protective equipment (protective gloves, safety glasses,...) when installing, maintaining or servicing the system.

CAUTION

To avoid injury, do NOT touch the air inlet or aluminium fins of the unit.

CAUTION

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

1.5 Notices

NOTICE

- Make sure water quality complies with EU directive 2020/2184.
- Check the system for leaks after each repair/modification of the water side.
- Check drainage system(s) after repairs.
- Be careful when tilting units as water may leak.

NOTICE

Make sure refrigerant piping installation complies with applicable legislation. In Europe, EN378 is the applicable standard.

NOTICE

Make sure the field piping and connections are NOT subjected to stress.

NOTICE

- Before replacing any component in the refrigerant circuit, or at time of de-commissioning (except if after R32 leak detection indoor), please perform procedure "**refrigerant recovery when repair refrigerant component**".
- When R32 leak detection occurred, prior to start repair of the source of refrigerant leak, please perform "**refrigerant recovery prior to repair refrigerant leak indoor**".

2 General operation

VRV 5-S R32 Mini-VRV Heat-Pump system consists of:

- Outdoor unit(s)
- Indoor units
- Piping

Outdoor units

VRV 5-S R32 Mini-VRV Heat-Pump system has ONLY one type of outdoor unit casing.

TBM casing (4/5/6 HP)

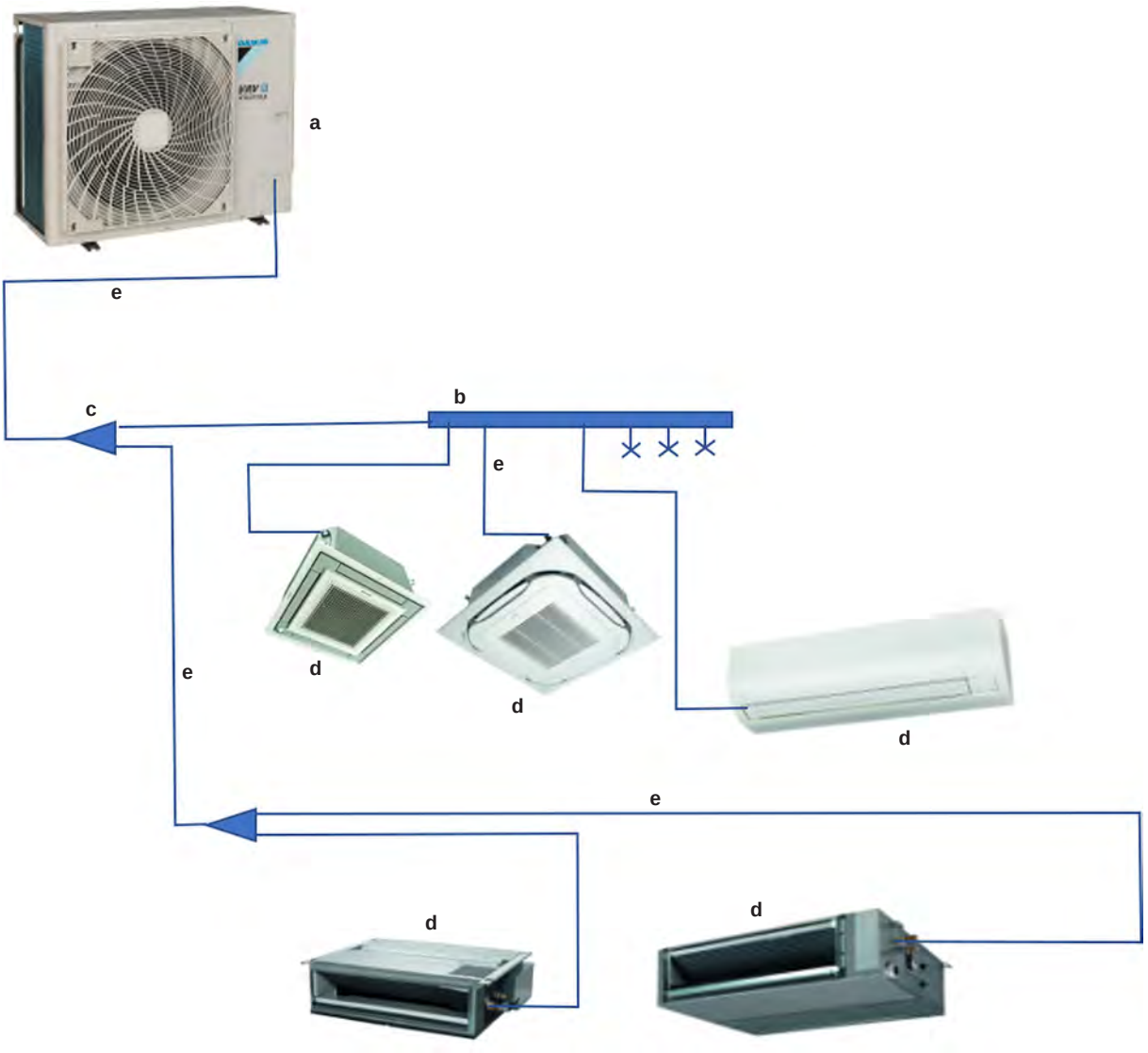

VRV 5-S R32 Mini-VRV Heat-Pump RXYSA4~6 units can ONLY be used in single combination.

RXYSA4~6 units CANNOT be used as multi units. This will result in compatibility error.

CAUTION

There is NO compatibility between R32 and R410A type refrigerant units.

- Field piping MUST be thermally insulated copper piping.
- Single branch selector unit offers ONLY 1 refrigerant circuit.
- One or more indoor units can be connected. To split the refrigerant circuit from the outdoor unit to the different indoor units, optional accessory refnets (KHRQ22M) MUST be used.
- Minimum 50% and maximum 130% of outdoor index MUST be connected to the outdoor unit.
- Outdoor unit heat exchanger is controlled via an expansion valve.
- In cooling mode, outdoor heat exchanger is set as condenser (4-way valve coil de-energized).
- In heating mode, outdoor heat exchanger is set as evaporator (4-way valve coil energized 230 V AC).



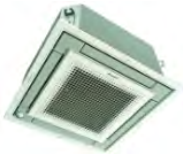
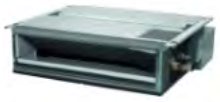
a VRV 5-S R32 Mini-VRV Heat-Pump outdoor unit
b Refnet header (KHRQ22M29H)
c Refnet joint (KHRQ22M20T)
d VRV Indoor unit for R32 refrigerant
e Refrigerant pipes (gas + liquid)

INFORMATION

Above illustration does NOT reflect allowed combination or compatibility. Intention is to give an overview on piping installation for different type of units.

Indoor units

VRV systems have combination limits for different types of indoor units and also limits for piping length and connection ratio for each indoor unit combination pattern. Refer to the Engineering Databook.
The list below is only for reference of compatible units. Always refer to Engineering Databook for compatibility.

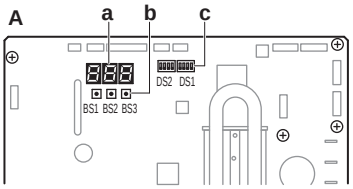
Round flow cassette FXFA		Concealed ceiling with medium ESP - FXSA	
Fully flat cassette FXZA		Wall mounted FXAA	
Concealed ceiling FXDA			

3 Troubleshooting

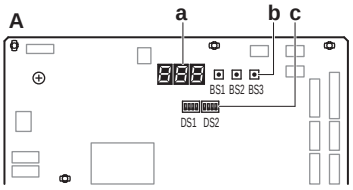
3.1 To access push buttons and 7-segment display

1 Open the outdoor unit, see "4.18 Plate work" [▸ 260].

Result: The push buttons and 7-segment display are located on A1P.



A RXYSA4~6A7V1B main PCB
a 7-segment display
b Push buttons
c DIP switches



A RXYSA4~6A7Y1B main PCB
a 7-segment display
b Push buttons
c DIP switches

2 Active error code is highlighted on the 7-segment display.

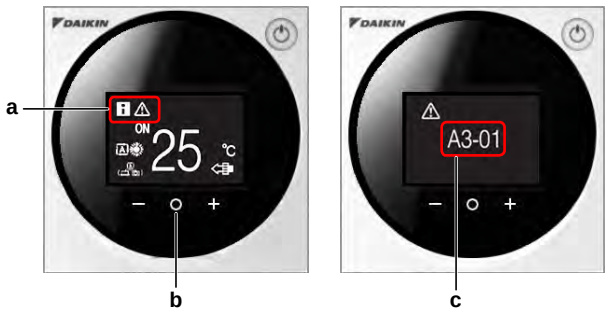
3.2 To retrieve error codes and check error history

3.2.1 Via the indoor unit remote controller BRC1H

> **INFORMATION**
>
> Images are in English and for reference ONLY. For more details on the Madoka Assistant please refer to the BRC1H training course material which is available on the Daikin Business Portal.

To retrieve the error code

To indicate a system error, the controller displays ⚠ on the messages zone of the home screen.



a Messages zone
b Middle button ○

c Error screen

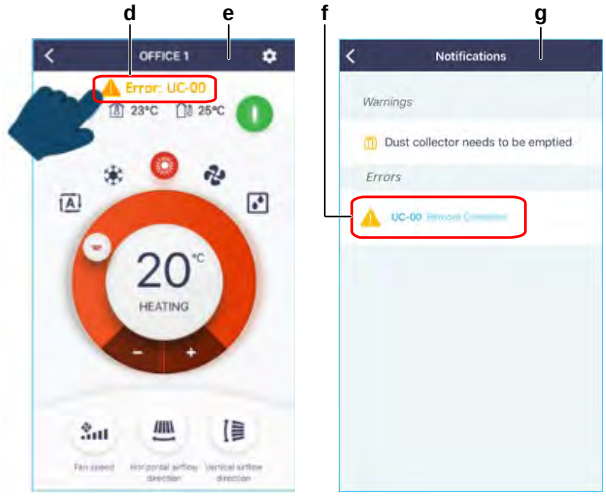
1 Press the middle button ◯ to enter the main menu from the home screen.

Result: An error screen is displayed.

2 Press the middle button ◯ to return to the home screen.

Active error codes are also accessible through the Madoka Assistant for BRC1H.

The active error is shown on the home screen.



d Active error
e Home screen
f Error(s) details
g Notifications screen

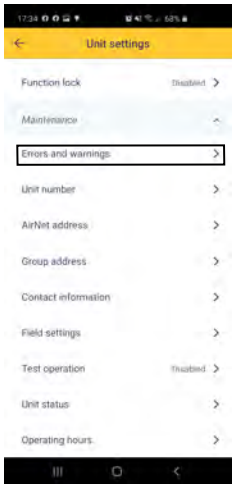
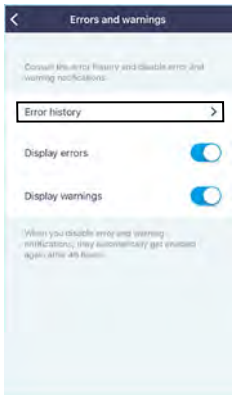
3 Tap the active error.

Result: The detail(s) of the error(s) are shown on the Notifications screen.

To check the error history

To check the error history with the Madoka Assistant for BRC1H:

#	Action	Image for reference	Result
1	Tap the settings icon.		The Unit settings screen is displayed.

#	Action	Image for reference	Result
2	Tap Errors and warnings.		The Errors and warnings screen is displayed.
3	Tap Error history.		 The Error history screen is displayed.

3.2.2 Via the outdoor unit

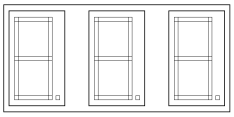
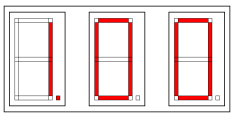
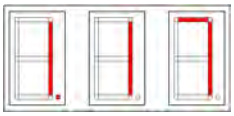
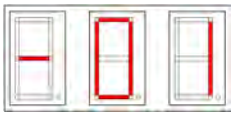
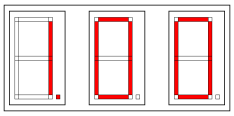
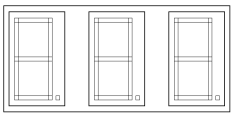
Error codes and/or retry descriptions are accessible on “Mode 1: Monitor Mode”.

The table below shows which setting shows the error codes that led to an outdoor unit forced stop and/or retry.

- When an error is generated, the unit performs a forced off until the error is retrieved.
- On retry, the system attempts to stay in operation. Depending on the type of root cause, after a certain amount of retry attempts, the unit generates an error. Retry cause is also visible as an item on the service monitoring tool.

Mode	Setting	Description
Mode 1: Monitor mode	17	Error code last forced off
	18	Error code 2nd last forced off
	19	Error code 3rd last forced off
	23	Error code last retry
	24	Error code 2nd last retry
	25	Error code 3rd last retry

Please follow the procedure described below to access the regarding error code for outdoor unit forced stop and/or retry description:

Action	Result	Display
Make sure the 7-segment display indication is as during normal operation.		
To enter “Mode 1”, push the (BS1) button one time	Mode 1 is accessed.	
Push the (BS2) button as many times as the setting you want to go to.	The setting is accessed (e.g. 17, Error code last forced off)	
Press the RETURN (BS3) Button.	Malfunction/Retry item will appear on display.	
Press the SET (BS2) Button.	Detailed Malfunction/ Retry sub-code will appear on display.	
Press SET (BS2) once again to return to main Malfunction/Retry display.	Main Malfunction/Retry item will appear on display.	
Press the RETURN (BS3) Button to return to Home Screen for “Monitoring Mode”.	Home Screen for “Monitoring Mode” will appear on display.	
Press the MODE (BS1) Button to return to “Normal Mode”.	Back in normal mode.	

3.2.3 Via service monitoring tool

With the service monitoring tool, it is possible to monitor not only error codes but also some common retries and stepping down controls:

- Unit error
- Error code
- High pressure retry
- Low pressure retry
- Discharge pipe retry
- Inverter retry
- High pressure stepping down control
- Low pressure stepping down control
- Over current stepping down control
- Fin temperature stepping down control
- Compressor discharging stepping down control

3.3 Error based troubleshooting

3.3.1 A0-00 – External protection device activated

Trigger	Effect	Reset
T1-T2 input is ON and field setting 22-1=3.	Unit will stop operating	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the field setting 22-1 is correctly set according to the following wiring situations on T1-T2 of X1M terminal of the indoor unit. See "7.9 Field settings" [▸ 396]. Correct as needed.

- No wiring connected: Field setting 22-1=1
- Wiring connected to a window or door contact: Field setting 22-1=1
- Wiring connected to a remote operation switch: Field setting 22-1=2
- Wiring connected to an external protection device (fire alarm, R32 leak detection sensor,...): Field setting 22-1=3
  Possible cause: Incorrect field setting.

2 If wiring connected to T1-T2 of X1M terminal of the indoor unit, check correct connection and continuity of the wiring. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between T1-T2 of X1M terminal of the indoor unit and external device.

3 If wiring is connected, measure on T1-T2 of X1M terminal of the indoor unit to check for the correct functioning of the external device:

- Wiring connected to a window or door contact: Open circuit (unit continues previous operation, remote controller enabled) when window / door is closed, short-circuit (forced stop, remote controller buttons disabled) when window / door is open. Replace window / door contact if incorrect measurement.
  Possible cause: Faulty window / door contact.
- Wiring connected to a remote operation switch: Open circuit when OFF command to the unit, short-circuit when ON command to the unit. Replace remote operation switch if incorrect measurement.
  Possible cause: Faulty remote operation switch.
- Wiring connected to an external protection device (fire alarm, R32 leak detection sensor,...): Short-circuit when normal operation, open circuit (forced stop with error code A0-00) when external protection device is active. If open circuit is detected, check and eliminate the root cause why the protection device is activated. Do NOT try to run the unit until the root cause is eliminated. If NO root cause was found, protection device may be faulty. Replace as needed.
  Possible cause: Root cause of external protection device activation or faulty external protection device.

4 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.2 A0-11 – R32 leakage detection

Trigger	Effect	Reset
The R32 sensor indoor unit detected a refrigerant leak while fan of indoor unit is switched ON.	Indoor unit will stop operating after end of automatic refrigerant recovery to the outdoor unit.	▪ Power reset of the indoor unit. ▪ Set field setting 25-14-01 to 02 on the remote controller of the faulty indoor unit. ▪ Outdoor unit shows error “UA-55”. Set field setting 2-47 to 1 on the outdoor unit.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Check the field piping for refrigerant leak. Check saturation pressure of the field piping via the liquid service port and gas stop valve.

2 If saturation pressure (gas and/or liquid) <outdoor ambient temperature, refrigerant leak is present. Perform as follows to repair the refrigerant leak:

- Recover the refrigerant, see "To recuperate the refrigerant" [▸ 320].
- Repair the field piping.
- Perform a pressure test of the field piping.
- Replace the R32 leak detection sensor of the indoor unit with error code A0-11. After replacement, indoor unit will display error code CH-10.
- Recharge the refrigerant at the outdoor unit. Consult amount sticker. See installation manual of the outdoor unit for correct refrigerant charge procedure.
- Fill in the logbook.

  Possible cause: Refrigerant leak at indoor unit side.

3 If saturation pressure (gas and/or liquid) = outdoor ambient temperature, NO refrigerant leak is present. Perform as described below.

4 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

5 Check if any external (foreign) vapor substance influenced the functioning of the R32 leak detection sensor. Repair as needed.

Possible cause: External (foreign) vapor substance reacted with R32 leak detection sensor.

6 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.3 A0-13 – False R32 leakage detection

Trigger	Effect	Reset
The R32 sensor indoor unit detected a refrigerant leak while fan of indoor unit is switched OFF.	Indoor unit will start forced fan operation to check R32 leak detection.	Automatic reset if NO R32 leak detected during forced fan operation.
		A0-11 error will be displayed when R32 leak detected during forced fan operation.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the field piping for refrigerant leak. Check saturation pressure of the field piping via the liquid service port and gas stop valve.

2 If saturation pressure (gas and/or liquid) <outdoor ambient temperature, refrigerant leak is present. Perform as follows to repair the refrigerant leak:

- Recover the refrigerant, see "To recuperate the refrigerant" [▸ 320].
- Repair the field piping.
- Perform a pressure test of the field piping.
- Replace the R32 leak detection sensor of the indoor unit with error code A0-11. After replacement, indoor unit will display error code CH-10.
- Recharge the refrigerant at the outdoor unit. Consult amount sticker. See installation manual of the outdoor unit for correct refrigerant charge procedure.
- Fill in the logbook.

  Possible cause: Refrigerant leak at indoor unit side.

3 If saturation pressure (gas and/or liquid) = outdoor ambient temperature, NO refrigerant leak is present. Perform as described below.

4 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

5 Check if any external (foreign) vapor substance influenced the functioning of the R32 leak detection sensor. Repair as needed.

Possible cause: External (foreign) vapor substance reacted with R32 leak detection sensor.

6 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.4 A1-00 – Main PCB abnormality

Trigger	Effect	Reset
Data read error from EEPROM.	Unit will stop operating.	Power reset of indoor unit.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.5 A3-00 – Drain water level abnormality

Trigger	Effect	Reset
Float switch is open circuit during normal operation.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Remote controller reset.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Check for excess water level in the drain pan. Empty the drain pan and correct installation of drain piping as needed. See indoor unit installation manual for more detailed information.

Possible cause: Excess water in the drain pan and/or incorrect installation of drain piping.

3 Perform a check of the float switch. See "4.9 Float switch" [▸ 208].

Possible cause: Faulty float switch.

4 Perform a check of the drain pump. See "4.7 Drain pump" [▸ 199].

Possible cause: Faulty drain pump.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.6 A6-01 – Fan motor abnormality - motor lock

Trigger	Effect	Reset
Fan speed does NOT rise when PCB command fan ON.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all other indoor units and outdoor unit will continue operating for indoor units without error.	Remote controller reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

For FXSA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.7 A6-10 – Fan motor abnormality - overcurrent or IPM protection

Trigger	Effect	Reset
PCB detects too high current.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all other indoor units and outdoor unit will continue operating for indoor units without error.	Remote controller reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

For FXSA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.8 A6-11 – Fan motor abnormality - position detection error

Trigger	Effect	Reset
While unit is running: actual rotation speed by Hall IC sensor on fan motor <fan step command by PCB or no position signal from Hall IC sensor.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all other indoor units and outdoor unit will continue operating for indoor units without error.	Remote controller reset.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

For FXSA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.9 A8-01 – Fan motor abnormality - power supply abnormality

Trigger	Effect	Reset
Input voltage detected by PCB too low or too high.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all other indoor units and outdoor unit will continue operating for indoor units without error.	Remote controller reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

For FXSA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

For all indoor units

2 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.10 A9-01 – Y1E Expansion valve coil abnormality

Trigger	Effect	Reset
Upon power reset, Y1E expansion valve coil is NOT detected.	Unit will stop operating.	Power reset of indoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▶ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▶ 326].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit expansion valve. See "4.8 Expansion valve" [▶ 199].

Possible cause: Faulty expansion valve.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▶ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.11 A9-02 – Y1E Expansion valve body abnormality

Trigger	Effect	Reset
Difference between gas temperature and liquid temperature too high or liquid temperature too low during cooling operation, thermostat OFF.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Power reset of indoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▶ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit refrigerant gas thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

4 Perform a check of the indoor unit refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant liquid thermistor.

5 Perform a check of the indoor unit expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

6 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.12 AF-00 – Drain back flow

Trigger	Effect	Reset
During drain pump OFF, float switch opens, drain pump recovery operation starts for 10 minutes. When drain pump recovery restarted 5 times, error code AF-00 is displayed.	Unit will stop thermostat during drain pump recovery operation.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for excess water level in the drain pan. Check drain connector to the common drain pipe, and make sure minimum height is respected. Empty the drain pan and correct installation of drain piping as needed. See indoor unit installation manual for more detailed information.

Possible cause: Excess water in the drain pan and/or incorrect installation of drain piping. Drain water from other operating indoor unit may run into the indoor unit with non-operating drain pump.

2 Perform a check of the float switch. See "4.9 Float switch" [▸ 208].

Possible cause: Faulty float switch.

3 Perform a check of the drain pump. See "4.7 Drain pump" [▸ 199].

Possible cause: Faulty drain pump.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.13 AH-03 – Communication error between main PCB and self cleaning panel PCB

Trigger	Effect	Reset
NO communication between the indoor unit main PCB and the self-cleaning decoration panel PCB.	Unit will stop operating.	Auto reset.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.24.6 Main PCB" [▸ 288].

Possible cause: Faulty main PCB of the self-cleaning decoration panel.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.14 AH-04 – Dust detection sensor error

Trigger	Effect	Reset
Dust sensor faulty PCB.	Unit will stop operating.	Auto reset when dust sensor PCB normal input.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Perform a check of the dust sensor unit. See "4.24.4 Dust sensor unit" [▸ 288].

Possible cause: Faulty dust sensor unit.

2 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.24.6 Main PCB" [▸ 288].

Possible cause: Faulty main PCB of the self-cleaning decoration panel.

3 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

4 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.15 AH-05 – Dust detection error

Trigger	Effect	Reset
Dust collection sensor deeetects abnormality in dust collector tube.	Unit will stop operating.	Auto reset when dust sensor PCB normal input.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for the presence of a blockage in the dust collector tube. Remove the blockage and/or empty the dust collector tank as needed.

Possible cause:
- Dust remaining in the dust collector tube,
- Dust collector tank full,
- Air passage blocking plate of the drain pan was NOT removed during installation.

2 Perform a check of the dust sensor unit. See "4.24.4 Dust sensor unit" [▸ 288].

Possible cause: Faulty dust sensor unit.

3 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.24.6 Main PCB" [▸ 288].

Possible cause: Faulty main PCB of the self-cleaning decoration panel.

4 Check the correct installation of the gears between the damper and damper motor. Check the status and correct installation of the damper.

Possible cause:
- Faulty gears between damper and damper motor,
- Incorrectly installed or broken damper.

5 Perform a check of the brush motor of the self-cleaning decoration panel. See "4.24.2 Brush motor" [▸ 288].

Possible cause: Faulty brush motor.

6 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.16 AH-06 – Air filter rotation error

Trigger	Effect	Reset
Status of limit switch S1C NOT changing while air filter motor is energized (minimum 10 cycles open/close when energized ±60 seconds).	Unit will stop operating.	Auto reset when limit switch functions correctly.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the air filter is correctly installed. Perform “manual clean” (press and hold the BS1 button of the self-cleaning panel main PCB until self-cleaning operation starts).

Possible cause: Blocked air filter.

2 Perform a check of the limit switch S1C of the self-cleaning decoration panel. See "4.24.5 Limit switch" [▸ 288].

Possible cause: Faulty limit switch.

3 Perform a check of the air filter motor of the self-cleaning decoration panel. See "4.24.1 Air filter motor" [▸ 288].

Possible cause: Faulty air filter motor.

4 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.24.6 Main PCB" [▸ 288].

Possible cause: Faulty main PCB of the self-cleaning decoration panel.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

6 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.17 AH-07 – Damper rotation error

Trigger	Effect	Reset
Status of limit switch S2C NOT changing while damper motor is energized (minimum 10 cycles open/close when energized ±60 seconds).	Unit will stop operating.	Auto reset when limit switch functions correctly.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the damper is correctly installed. Perform “manual clean” (press and hold the BS1 button of the self-cleaning panel main PCB until self-cleaning operation starts).

Possible cause: Blocked damper.

2 Perform a check of the limit switch S2C of the self-cleaning decoration panel. See "4.24.5 Limit switch" [▸ 288].

Possible cause: Faulty limit switch.

3 Perform a check of the damper motor of the self-cleaning decoration panel. See "4.24.3 Damper motor" [▸ 288].

Possible cause: Faulty damper motor.

4 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.24.6 Main PCB" [▸ 288].

Possible cause: Faulty main PCB of the self-cleaning decoration panel.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

6 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.18 AH-08 – Filter clean time error

Trigger	Effect	Reset
Auto filter cleaning scheduled during (continuous) operation of indoor unit. Self-cleaning ONLY possible when indoor unit is switched OFF.	Unit will stop operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the settings for self-cleaning. If chosen for schedules cleaning, verify date and time for self-cleaning operation is set correctly (outside the operation period of the indoor unit). See "7.9 Field settings" [▸ 396].

Possible cause:
- Automatic self-cleaning is scheduled during operation period of indoor unit,
- Wrong date and time setting.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

3 Perform “manual clean” (press and hold the BS1 button of the self-cleaning panel main PCB until self-cleaning operation starts) while indoor unit is OFF.

Possible cause: Continuous operation of the indoor unit disables the automatic self-cleaning function.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.19 AH-09 – Auto self-cleaning disabled

Trigger	Effect	Reset
Auto filter cleaning automatic starting method during (continuous) operation of indoor unit. Self-cleaning ONLY possible when indoor unit is switched OFF.	Unit will stop operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the settings for self-cleaning. If NO scheduled cleaning (NO date and time set for self-cleaning operation), automatic starting self-cleaning MUST be possible. Make sure that automatic starting self-cleaning is enabled. See "7.9 Field settings" [▸ 396].

Possible cause: Automatic starting self-cleaning is disabled, possibly by continuous operation of indoor unit.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

3 Perform “manual clean” (press and hold the BS1 button of the self-cleaning panel main PCB until self-cleaning operation starts) while indoor unit is OFF.

Possible cause: Continuous operation of the indoor unit disables the automatic self-cleaning function.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.20 AJ-01 – A1P Capacity setting error

Trigger	Effect	Reset
Capacity class CANNOT be read by indoor unit main PCB.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all other indoor units and outdoor unit will continue operating for indoor units without error.	Power reset of indoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

3 Check if the correct spare part is installed for the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212]. Check that the correct capacity setting adapter is connected to X23A of the PCB.

Possible cause: Incorrect spare part PCB or incorrect capacity setting adapter.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.21 AJ-02 – A1P Setting error for Y1E expansion valve

Trigger	Effect	Reset
Y1E expansion valve type CANNOT be read by PCB A1P.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Power reset of indoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the power supply to the indoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance),
- Phase missing,
- Power drop,
- Short circuit.

2 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.22 C1-01 – Communication abnormality between main PCB and fan PCB

Trigger	Effect	Reset
Communication abnormality between indoor unit main PCB and indoor unit fan PCB.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check communication wiring (insertion and continuity) on connector X3A on the indoor unit fan PCB and connector X70A on the indoor unit main PCB. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged communication wiring between indoor unit fan PCB and indoor unit main PCB.

2 Perform power reset. If error is NOT resolved:

- Perform a check of the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].
  Possible cause: Faulty indoor unit fan PCB.
  Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].
  Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.23 C1-02 – Communication abnormality between main PCB and option PCB

Trigger	Effect	Reset
Communication abnormality between indoor unit main PCB and option PCB ERP01A50/51.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check communication wiring (insertion and continuity) on connector X40A on the indoor unit main PCB and connector X5A on the option PCB ERP01A50/51. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged communication wiring between indoor unit main PCB and option PCB.

2 Perform power reset. If error is NOT resolved:

- Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].
  Possible cause: Faulty indoor unit main PCB.
  Perform a check of the option PCB ERP01A50/51. See "5.3 Manufacturer components" [▸ 325].
  Possible cause: Faulty option PCB ERP01A50/51.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.24 C4-02 – Liquid thermistor short circuit

Trigger	Effect	Reset
Indoor unit liquid thermistor detected short-circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant liquid thermistor.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.25 C4-03 – Liquid thermistor open circuit

Trigger	Effect	Reset
Indoor unit liquid thermistor detected open circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant liquid thermistor.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.26 C5-02 – Gas thermistor short circuit

Trigger	Effect	Reset
Indoor unit gas thermistor detected short-circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit refrigerant gas thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.27 C5-03 – Gas thermistor open circuit

Trigger	Effect	Reset
Indoor unit gas thermistor detected open circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit refrigerant gas thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.28 C6-01 – Compatibility error between main PCB and fan PCB

Trigger	Effect	Reset
Indoor unit main PCB detected incompatible type indoor unit fan PCB.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all the other indoor units and outdoor unit will continue operating for indoor units without error.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the correct spare part is installed for the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Incorrect spare part PCB.

2 Check if the correct spare part is installed for the indoor unit fan PCB. See "4.13 Indoor unit fan PCB" [▸ 211].

Possible cause: Incorrect spare part PCB.

3 Perform power reset. If error is NOT resolved:

- Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].
  Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.29 C9-02 – Air thermistor short circuit

Trigger	Effect	Reset
Indoor unit air thermistor detected short-circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.30 C9-03 – Air thermistor open circuit

Trigger	Effect	Reset
Indoor unit air thermistor detected open circuit.	The indoor unit with this error will stop refrigerant flow (expansion valve OFF) and will resume fan operation (fan ON). All other indoor units and outdoor unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.31 CE-01 – No signal presence sensor

Trigger	Effect	Reset
Presence sensor connector on indoor unit main PCB interrupts data after power connected.	Unit continues operating using air return or interface sensor without control from presence sensor (without auto flap control, without energy saving options).	Auto reset when connection restored.
Indoor unit main PCB does NOT detect signal from presence sensor of the optional kit BRYQ60/140B*.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform power reset of the indoor unit (minimum 10 seconds OFF).

Possible cause: Optional kit BRYQ60/140B* is connected without indoor unit power reset.

2 Check wiring (insertion and continuity) on connector X81A on the indoor unit main PCB and connector CN on the presence sensor PCB A4P of the optional kit BRYQ60/140B*. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and presence sensor PCB.

3 Connect the remote controller BRC1E52,53A* instead of BRC1H52*. In the "Maintenance menu" - "Addressed sensor display", check code 22~25 (4 quadrants). See operation manual of the remote controller for more information.

- If "10": Presence sensor connector is loose. Properly connect the connector.
- If "15": Presence sensor (optional kit BRYQ60/140B*) is connected without indoor unit power reset. Perform power reset of the indoor unit (minimum 10 seconds OFF).
- If "0": No movement detected. Wave your hand around the presence sensor, value MUST change >0 for ±2 seconds. If NOT, perform a check of the presence sensor PCB of the optional kit BRYQ60/140B*. See "4.19 Presence sensor PCB" [▸ 277].
  Possible cause: Presence sensor (optional kit BRYQ60/140B*) NOT properly connected or faulty presence sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.32 CE-02 – No signal floor temperature sensor

Trigger	Effect	Reset
Indoor unit main PCB does NOT detect signal from floor temperature sensor of the optional kit BRYQ60/140B*.	Unit continues operating using air return or interface sensor without connection.	Auto reset when signal detection restored.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform power reset of the indoor unit (minimum 10 seconds OFF).

Possible cause: Optional kit BRYQ60/140B* is connected without indoor unit power reset.

2 Check wiring (insertion and continuity) on connector X81A on the indoor unit main PCB and connector CN on the floor temperature sensor PCB A3P of the optional kit BRYQ60/140B*. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and floor temperature sensor PCB.

3 Connect the remote controller BRC1E** instead of BRC1H52*. In the "Maintenance menu" - "Addressed sensor display", check code 26 (floor temperature [°C]). See operation manual of the remote controller for more information.

- If "- -": Floor temperature sensor connector is loose after power connection. Properly connect the connector.
- If "00": Floor temperature sensor connector is loose prior to power connection. Properly connect the connector and perform power reset of the indoor unit (minimum 10 seconds OFF).
- If "± the same as air return thermistor" (See "Maintenance menu" - "Addressed sensor display", code 01): Normal operation. If NO normal operation, perform a check of the floor temperature sensor PCB of the optional kit BRYQ60/140B*. See "4.10 Floor temperature sensor PCB" [▸ 208].
  Possible cause: Floor temperature sensor (optional kit BRYQ60/140B*) NOT properly connected or faulty floor temperature sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.33 CE-03 – Fault floor temperature sensor

Trigger	Effect	Reset
Floor temperature sensor of the optional kit BRYQ60/140B* detected short-circuit.	Unit continues operating using air return or interface sensor without connection.	Auto reset when correct signal detection restored.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform power reset of the indoor unit (minimum 10 seconds OFF).

Possible cause: Optional kit BRYQ60/140B* is connected without indoor unit power reset.

2 Check wiring (insertion and continuity) on connector X81A on the indoor unit main PCB and connector CN on the floor temperature sensor PCB A3P of the optional kit BRYQ60/140B*. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and floor temperature sensor PCB.

3 Connect the remote controller BRC1E** instead of BRC1H52*. In the "Maintenance menu" - "Addressed sensor display", check code 26 (floor temperature [°C]). See operation manual of the remote controller for more information.

- If "- -": Floor temperature sensor connector is loose after power connection. Properly connect the connector.
- If "00": Floor temperature sensor connector is loose prior to power connection. Properly connect the connector and perform power reset of the indoor unit (minimum 10 seconds OFF).
- If "± the same as air return thermistor" (See "Maintenance menu" - "Addressed sensor display", code 01): Normal operation. If NO normal operation, perform a check of the floor temperature sensor PCB of the optional kit BRYQ60/140B*. See "4.10 Floor temperature sensor PCB" [▸ 208].
  Possible cause: Floor temperature sensor (optional kit BRYQ60/140B*) NOT properly connected or faulty floor temperature sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.34 CE-04 – High value floor temperature sensor

Trigger	Effect	Reset
From floor temperature sensor of the optional kit BRYQ60/140B* detected open circuit.	Unit continues operating using air return or interface sensor without connection.	Auto reset when correct signal detection restored.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform power reset of the indoor unit (minimum 10 seconds OFF).

Possible cause: Optional kit BRYQ60/140B* is connected without indoor unit power reset.

2 Check wiring (insertion and continuity) on connector X81A on the indoor unit main PCB and connector CN on the floor temperature sensor PCB A3P of the optional kit BRYQ60/140B*. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and floor temperature sensor PCB.

3 Connect the remote controller BRC1E** instead of BRC1H52*. In the "Maintenance menu" - "Addressed sensor display", check code 26 (floor temperature [°C]). See operation manual of the remote controller for more information.

- If "- -": Floor temperature sensor connector is loose after power connection. Properly connect the connector.
- If "00": Floor temperature sensor connector is loose prior to power connection. Properly connect the connector and perform power reset of the indoor unit (minimum 10 seconds OFF).
- If "± the same as air return thermistor" (See "Maintenance menu" - "Addressed sensor display", code 01): Normal operation. If NO normal operation, perform a check of the floor temperature sensor PCB of the optional kit BRYQ60/140B*. See "4.10 Floor temperature sensor PCB" [▸ 208].
  Possible cause: Floor temperature sensor (optional kit BRYQ60/140B*) NOT properly connected or faulty floor temperature sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.35 CH-01 – R32 leak detection sensor failure or disconnected

Trigger	Effect	Reset
The R32 sensor NOT connected to indoor unit main PCB.	Indoor unit will stop operating while other indoor units show error U9-02. Outdoor unit forced stop (without automatic refrigerant recovery operation).	Set field setting 25-14-01 to 02 on the remote controller of the faulty indoor unit.
R32 sensor PCB failure		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check wiring (insertion and continuity) on connector X41A on the indoor unit main PCB and connector CN1 on the PCB of the R32 leak detection sensor. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and R32 leak detection sensor.

2 Check the error history for error code A0-11, see "3 Troubleshooting" [▸ 20]. If A0-11 is found, R32 leak detection sensor was replaced after this error and power reconnected. Check if field setting 25-14=02. Correct if needed, see "7.9 Field settings" [▸ 396].

Possible cause: R32 leak detection sensor was replaced without adjusting field setting 25-14.

3 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

4 Check if any external (foreign) vapor substance influenced the functioning of the R32 leak detection sensor. Repair as needed.

Possible cause: External (foreign) vapor substance reacted with R32 leak detection sensor.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.36 CH-02 – R32 leak detection sensor life time is exceeded

Trigger	Effect	Reset
The R32 sensor detected operation of 10 years or more.	Indoor unit will stop operating. Other indoor units and outdoor unit will continue operating.	▪ Power reset of the indoor unit. ▪ Set field setting 25-14-01 to 02 on the remote controller of the faulty indoor unit. ▪ Outdoor unit shows error “UA-55”. Set field setting 2-14 to 0 on the outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the error history to see if R32 leak detection sensor was replaced, see "3 Troubleshooting" [▸ 20]. If replaced, check if timer was reset during sensor replacement. Reset as needed.

Possible cause: R32 leak detection sensor was replaced without timer reset.

2 Check the operation time of the R32 leak detection sensor of the faulty indoor unit. If operation time is 10 years, replace the R32 leak detection sensor. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: R32 leak detection sensor operation time reached maximum value (10 years).

3 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.37 CH-05 – R32 leak detection sensor life time <6 months

Trigger	Effect	Reset
The R32 sensor detected operation of 9.5 years or more.	Unit will continue operating.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the error history to see if R32 leak detection sensor was replaced, see "3 Troubleshooting" [▸ 20]. If replaced, check if timer was reset during sensor replacement. Reset as needed.

Possible cause: R32 leak detection sensor was replaced without timer reset.

2 Check the operation time of the R32 leak detection sensor of the faulty indoor unit. If operation time approaches 10 years, order a new R32 leak detection sensor and replace at the next maintenance interval.

Possible cause: R32 leak detection sensor operation time approaches maximum value (10 years).

3 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.38 CH-10 – R32 leak detection sensor replacement to confirm

Trigger	Effect	Reset
The R32 sensor detected disconnection between indoor unit main PCB and R32 sensor.	Indoor unit will stop operating. Other indoor units and outdoor unit will continue operating.	▪ Set field setting 25-14-01 to 02 on the remote controller of the faulty indoor unit. ▪ Outdoor unit shows error “UA-55”. Set field setting 2-14 to 0 on the outdoor unit.
R32 sensor replaced and power reset after error A0-11		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check wiring (insertion and continuity) on connector X41A on the indoor unit main PCB and connector CN1 on the PCB of the R32 leak detection sensor. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty or damaged wiring between indoor unit main PCB and R32 leak detection sensor.

2 Check the error history for error code A0-11, see "3 Troubleshooting" [▸ 20]. If A0-11 is found, R32 leak detection sensor was replaced after this error and power reconnected. Check if field setting 25-14=02. Correct if needed, see "7.9 Field settings" [▸ 396].

Possible cause: R32 leak detection sensor was replaced without adjusting field setting 25-14.

3 Perform a check of the R32 leak detection sensor of the faulty indoor unit. See "4.20 R32 leak detection sensor" [▸ 277].

Possible cause: Faulty R32 leak detection sensor.

4 Check if any external (foreign) vapor substance influenced the functioning of the R32 leak detection sensor. Repair as needed.

Possible cause: External (foreign) vapor substance reacted with R32 leak detection sensor.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.39 CJ-02 – Remote controller air thermistor short circuit

Trigger	Effect	Reset
Remote controller air thermistor detected short-circuit.	Indoor unit will continue operating, using indoor unit air thermistor as input.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Clear the error history of the remote controller. See operation manual of the remote controller for detailed information.

2 If error is still active, replace the remote controller. See "4.23 Remote controller user interface" [▸ 286].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.40 CJ-03 – Remote controller air thermistor open circuit

Trigger	Effect	Reset
Remote controller air thermistor detected open circuit.	Indoor unit will continue operating, using indoor unit air thermistor as input.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Clear the error history of the remote controller. See operation manual of the remote controller for detailed information.

2 If error is still active, replace the remote controller. See "4.23 Remote controller user interface" [▸ 286].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.41 E1-01 – Outdoor unit main PCB A1P error

Trigger	Effect	Reset
Main PCB fails reading/ writing memory (EEPROM error).	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

3 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

4 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.42 E1-02 – Outdoor unit main PCB A1P error

Trigger	Effect	Reset
Defected main PCB.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.43 E1-11 – Outdoor unit sub PCB A2P error

Trigger	Effect	Reset
Defected sub PCB.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

1 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.44 E3-01 – Actuation of high pressure switch

Trigger	Effect	Reset
High pressure switch opens due to high pressure >safety value, "7.6 Safety devices" [▶ 388].	Unit will stop operating.	If field setting 2-15=1 (default): When pressure drops below the reset value, via the indoor unit remote controller, cycle OFF & ON.
		If field setting 2-15=0: When pressure drops below the reset value, press BS3 on main PCB on outdoor unit, and then via indoor unit remote controller, cycle OFF & ON.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▶ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

3 Clean the outdoor heat exchanger. See "6 Maintenance" [▶ 328].

Possible cause: Dirty outdoor heat exchanger.

4 Perform a check of the high pressure switch. See "4.11 High pressure switch" [▶ 208].

Possible cause: Faulty high pressure switch.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Refrigerant overcharge.

6 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Clogged refrigerant circuit.

8 Perform a check of the condenser side expansion valve. See "4.8 Expansion valve" [▶ 199].

Possible cause: Faulty condenser side expansion valve.

9 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.45 E3-02 – High pressure error

Trigger	Effect	Reset
High pressure control (by sensor) active due to pressure >safety value certain times within certain minutes, see "7.6 Safety devices" [▶ 388].	Unit will stop operating.	If field setting 2-15=1 (default): Via the indoor unit remote controller, cycle OFF & ON.
		If field setting 2-15=0: Press BS3 on main PCB on outdoor unit, and then via indoor unit remote controller, cycle OFF & ON.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▶ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

3 Clean the outdoor heat exchanger. See "6 Maintenance" [▶ 328].

Possible cause: Dirty outdoor heat exchanger.

4 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▶ 277].

Possible cause: Faulty refrigerant high pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Refrigerant overcharge.

6 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Clogged refrigerant circuit.

8 Perform a check of the condenser side expansion valve. See "4.8 Expansion valve" [▶ 199].

Possible cause: Faulty condenser side expansion valve.

9 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.46 E3-07 – High pressure switch reset error

Trigger	Effect	Reset
High pressure switch did not reset and it stays activated.	Unit will stop operating.	If field setting 2-15=1 (default): Via the indoor unit remote controller, cycle OFF & ON.
		If field setting 2-15=0: Press BS3 on main PCB on outdoor unit, and then via indoor unit remote controller, cycle OFF & ON.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of the high pressure switch. See "4.11 High pressure switch" [▸ 208].

Possible cause: Faulty high pressure switch.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.47 E3-13 – Liquid stop valve check error

Trigger	Effect	Reset
Pressure builds up quickly on test run operation.	Unit will stop test run.	Eliminate the cause, repeat test operation procedure.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

3 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

4 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

5 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

6 Perform a check of the condenser side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty condenser side expansion valve.

7 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.48 E3-18 – Actuation of high pressure switch during test run

Trigger	Effect	Reset
High pressure switch is activated during test run.	Unit will stop test run.	If field setting 2-15=1 (default): Via the indoor unit remote controller, cycle OFF & ON.
		If field setting 2-15=0: Press BS3 on main PCB on outdoor unit, and then via indoor unit remote controller, cycle OFF & ON.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of the high pressure switch. See "4.11 High pressure switch" [▸ 208].

Possible cause: Faulty high pressure switch.

3 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

4 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

5 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

6 Perform a check of the condenser side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty condenser side expansion valve.

7 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.49 E3-20 – High pressure switch (manual reset) activated (open contact)

Trigger	Effect	Reset
High pressure switch (manual reset) opens due to high pressure >safety value, see "7.6 Safety devices" [▸ 388].	Unit will stop operating.	Manual reset via the high pressure switch (in outdoor unit).

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▸ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

3 Clean the outdoor heat exchanger. See "6 Maintenance" [▸ 328].

Possible cause: Dirty outdoor heat exchanger.

4 Perform a check of the high pressure switch (manual reset). See "4.11 High pressure switch" [▸ 208].

Possible cause: Faulty high pressure switch (manual reset).

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

8 Perform a check of the condenser side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty condenser side expansion valve.

9 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.50 E4-01 – Low pressure error

Trigger	Effect	Reset
Low pressure control (by sensor) active due to <safety value certain times within certain minutes, see "7.6 Safety devices" [▸ 388].	Unit will stop operating.	Manual reset via user interface.
		Automatic Reset when Low Pressure >reset value, see "7.6 Safety devices" [▸ 388].

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a cross-wiring check of the F1-F2 transmission wiring between the indoor units and outdoor unit. Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any other indoor unit (that should be connected to a different outdoor unit) is operating, this indoor unit is connected to the wrong outdoor unit (cross-wired). Correct the wiring between the indoor unit(s) and outdoor unit.

Possible cause: F1-F2 transmission wiring is cross-wired with another outdoor unit system.

3 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

4 Check for the presence of humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Humidity in the refrigerant circuit.

5 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Clogged refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▶ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▶ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

8 Clean the outdoor heat exchanger. See "6 Maintenance" [▶ 328].

Possible cause: Dirty outdoor heat exchanger.

9 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▶ 282]

Possible cause: Faulty refrigerant low pressure sensor.

10 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

11 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▶ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.51 E5-01 – Compressor overload/Motor Lock Error (M1C)

Trigger	Effect	Reset
Compressor overload is detected for M1C.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Clogged refrigerant circuit.

3 Check if there are oil traps in the field piping. See installation manual for piping rules.

Possible cause: Compressor running without oil will draw higher current and get locked.

4 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

5 Check liquid back issue. Check expansion valve operation. See "4.8 Expansion valve" [▸ 199].

Possible cause: Expansion valve CANNOT keep minimum superheat of 3 K while running as evaporator.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

7 Perform a check of the 4-way valve. See "4.1 4-way valve" [▸ 165].

Possible cause: Faulty 4-way valve.

8 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

9 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.52 E6-17 – Inverter overcurrent error

Trigger	Effect	Reset
Overcurrent on Inverter circuit of main PCB for Compressor M1C.	Unit will stop operating.	Manual reset via user interface.
Actual current value of the compressor is abnormally high compared to nominal current of the compressor for at least 30 minutes.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

2 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

3 Connect a pressure gauge to both high and low pressure service ports and read the high and low refrigerant pressure. Connect the service monitoring tool to the unit and compare the pressure values to the pressure read on the pressure gauges. In case the service monitoring tool read-out does NOT correspond with the pressures read through the pressure gauges, the main PCB needs to be replaced, see "4.15 Main PCB" [▸ 212].

4 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

5 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.53 E7-01 – Outdoor unit fan motor M1F error

Trigger	Effect	Reset
Malfunction of rotation detection for M1F. Careful, there is no rpm detection. Fan judgement is based on logic by current drawn.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

2 Check if power supply cable to fan motor is NOT loose. Check connector X106A on main PCB. See "To check the wiring of the main PCB" "4.15 Main PCB" [▸ 212]. Check wire to fan motor M1F.

Possible cause: Faulty power supply cable to fan motor M1F.

3 Perform a check of the outdoor unit fan motor M1F. See "4.17 Outdoor unit fan motor" [▸ 253].

Possible cause: Faulty outdoor unit fan motor M1F.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.54 E7-05 – Outdoor unit fan motor M1F overcurrent error

Trigger	Effect	Reset
Overcurrent detected on outdoor unit fan motor M1F.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

2 Perform a check of the outdoor unit fan motor M1F. See "4.17 Outdoor unit fan motor" [▸ 253].

Possible cause: Faulty outdoor unit fan motor M1F.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.55 E7-09 – Fan inverter circuit (integrated power module) overheated

Trigger	Effect	Reset
Fan inverter circuit on main PCB is overheated.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

2 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▸ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

3 Clean the outdoor heat exchanger. See "6 Maintenance" [▸ 328].

Possible cause: Dirty outdoor heat exchanger.

4 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.56 E9-01 – Electronic expansion valve Y1E malfunction

Trigger	Effect	Reset
Main expansion valve Y1E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the main expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty main expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.57 E9-03 – Electronic expansion valve Y2E malfunction

Trigger	Effect	Reset
Subcool expansion valve Y2E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the subcool expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty subcool expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.58 E9-04 – Electronic expansion valve Y3E abnormality

Trigger	Effect	Reset
Inverter cooling expansion valve Y3E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.59 E9-20 – Electronic Expansion Valve (Y1E) failure

Trigger	Effect	Reset
Main expansion valve Y1E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the main expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty main expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.60 E9-23 – Electronic expansion valve (Y2E) failure

Trigger	Effect	Reset
Subcool expansion valve Y2E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the subcool expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty subcool expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.61 E9-26 – Electronic expansion valve (Y4E) malfunction

Trigger	Effect	Reset
Liquid injection expansion valve Y4E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the liquid injection expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.62 E9-29 – Electronic expansion valve (Y5E) malfunction

Trigger	Effect	Reset
Liquid shut-off expansion valve Y5E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of the liquid shut-off expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty liquid shut-off expansion valve.

4 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

5 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

7 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

8 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

9 Check all indoor units for error code A0-11 – Detection of refrigerant leak. See "3.3 Error based troubleshooting" [▸ 24].

Possible cause: Expansion valve closed after pump down completed because of indoor refrigerant leak detection.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.63 E9-30 – Electronic expansion valve (Y6E) malfunction

Trigger	Effect	Reset
Gas shut-off expansion valve Y6E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of the gas shut-off expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty gas shut-off expansion valve.

4 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

5 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

7 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

8 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

9 Check all indoor units for error code A0-11 – Detection of refrigerant leak. See "3.3 Error based troubleshooting" [▸ 24].

Possible cause: Expansion valve closed after pump down completed because of indoor refrigerant leak detection.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.64 E9-44 – Electronic expansion valve (Y3E) failure

Trigger	Effect	Reset
Inverter cooling expansion valve Y3E malfunction.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

> **INFORMATION**
> When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.65 E9-48 – Electronic expansion valve (Y1E~Y4E) overcurrent error

Trigger	Effect	Reset
Expansion valve overcurrent.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the following expansion valves. See "4.8 Expansion valve" [▸ 199]:

- Main expansion valve
- Subcool expansion valve
- Inverter cooling expansion valve
- Liquid injection expansion valve

Possible cause: Faulty expansion valve.

3 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

4 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

5 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

6 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:

- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

7 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.66 E9-51 – Electronic expansion valve thermal cutting error

Trigger	Effect	Reset
Expansion valve thermal cutting error.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

4 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

5 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

7 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

8 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.67 E9-54 – Electronic expansion valve defective circuit

Trigger	Effect	Reset
Expansion valve defective circuit.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

4 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

5 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

7 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

8 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.68 E9-57 – Electronic expansion valve (Y5E~Y6E) overcurrent error

Trigger	Effect	Reset
Expansion valve overcurrent.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

When the power is switched ON, the outdoor unit main PCB checks all expansion valve coil windings by current check.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of the following expansion valves. See "4.8 Expansion valve" [▸ 199]:

- Liquid shut-off expansion valve
- Gas shut-off expansion valve

Possible cause: Faulty expansion valve.

4 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

5 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

7 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:

- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

8 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.69 F3-01 – Compressor discharge temperature too high

Trigger	Effect	Reset
Discharge temperature >safety value certain times within certain minutes, see "7.6 Safety devices" [▸ 388].	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when discharge temperature <reset value, see "7.6 Safety devices" [▸ 388].

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

5 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

6 Perform a check of the following expansion valves. See "4.8 Expansion valve" [▸ 199]:

- Main expansion valve
- Subcool expansion valve
- Liquid injection expansion valve
- Liquid shut-off expansion valve
- Gas shut-off expansion valve

Possible cause: Faulty expansion valve.

7 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

8 Perform a check of the expansion valve(s) of the indoor unit(s). See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty indoor unit expansion valve.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.70 F3-23 – Compressor overload abnormality

Trigger	Effect	Reset
Compressor overload is detected.	Unit will stop operating.	Automatic reset if the unit runs for 60 seconds without error.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

The outdoor unit main PCB ALWAYS checks the status of the compressor thermal protector for closed condition.

1 Perform a check of the compressor thermal protection. See "4.5.1 Checking procedures" [▸ 192].

Possible cause: Faulty compressor thermal protection.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

3 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

4 Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

5 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

6 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

7 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

8 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

9 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.71 F4-01 – Wet operation caution

Trigger	Effect	Reset
Discharge superheat <10˚C ($SH_{Discharge}=T_{Discharge} - T_{condensation}$).	Unit keeps running.	Automatic reset when discharge superheat >10˚C.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1. Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

   Possible cause: Refrigerant overcharge.

2. Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

   Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

3. Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

   Possible cause: Faulty evaporator side expansion valve.

4. Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

   Possible cause: Airflow of the indoor unit is blocked.

5. Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

   Possible cause: Faulty or dirty air filter.

6. Adjust external static pressure setting for ducted type indoor units, if necessary.

7. Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

   Possible cause: Faulty indoor unit fan motor.

8. Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

   Possible cause: Faulty discharge pipe thermistor or connector fault.

9. Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

   Possible cause: Faulty refrigerant high pressure sensor.

10. Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

    Possible cause: Faulty indoor unit air thermistor.

11 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.72 F4-02 – Wet alarm for compressor M1C

Trigger	Effect	Reset
Discharge superheat <10˚C for 90 minutes ($SH_{Discharge}=T_{Discharge} - T_{condensation}$).	Unit will stop.	Manual reset via user interface.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty suction pipe thermistor or connector fault.

2 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

3 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

5 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

Possible cause: Airflow of the indoor unit is blocked.

8 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

9 Adjust external static pressure setting for ducted type indoor units, if necessary.

10 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

11 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

12 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.73 F4-08 – Wet operation error for compressor M1C

Trigger	Effect	Reset
Discharge superheat <10˚C for 90 minutes ($SH_{Discharge}=T_{Discharge} - T_{condensation}$).	Unit will stop.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty suction pipe thermistor or connector fault.

2 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

3 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

5 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

Possible cause: Airflow of the indoor unit is blocked.

8 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

9 Adjust external static pressure setting for ducted type indoor units, if necessary.

10 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

11 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

12 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.74 F4-14 – Indoor unit wet operation alarm

Trigger	Effect	Reset
In cooling mode on indoor Unit: (($T_{Gas\ Pipe}$ – ($T_{Liquid\ Pipe}$) < 2,5 °C while Indoor Expansion Valve opening < 300 pulse AND Outdoor Unit Discharge Superheat = ($T_{Discharge}$ - $T_{condensation}$) < 10 °C for more than 45 minutes	Unit stops Operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

2 Use Service Checker to find the indoor units where difference between gas pipe thermistor and liquid pipe thermistor meets the trigger condition and indoor unit expansion valve opening is lower than 300 pulses.

3 Stop these indoor units while some other indoor units are still in operation and system is in Cooling Operation. Check if the liquid pipe temperature read-out is close to evaporation temperature. Or use an expansion valve stethoscope to determine the refrigerant flow on expansion valve while expansion valve is closed.

Possible cause: If liquid pipe temperature is close to evaporation temperature or flow is detected by expansion valve stethoscope then indoor unit expansion valve is bleeding while closed. Faulty indoor unit expansion valve.

4 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

5 Perform a check of the indoor unit air and pipe thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty thermistor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.75 F6-01 – Refrigerant overcharge detection by high pressure sensor S1NPH

Trigger	Effect	Reset
Discharge superheat <10˚C ($SH_{Discharge}=T_{Discharge} - T_{condensation}$) during test run.	Unit will stop running.	Manual reset via user interface.
Excessive subcool is detected from comparison of ambient thermistor, liquid thermistor, de-icer thermistor to saturated temperature derived from high pressure sensor S1NPH.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty ambient air thermistor.

2 Perform a check of the main refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty main refrigerant liquid thermistor or connector fault.

3 Perform a check of the de–icer thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty de–icer thermistor or connector fault.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

5 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

Possible cause: Airflow of the indoor unit is blocked.

8 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

9 Adjust external static pressure setting for ducted type indoor units, if necessary.

10 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

11 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

12 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

13 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

14 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.76 F6-02 – Refrigerant overcharge detection during test-run

Trigger	Effect	Reset
Discharge superheat <10˚C ($SH_{Discharge}=T_{Discharge} - T_{condensation}$) during test run.	Unit will stop test run.	Push BS3 (return) button once.
Excessive subcool is detected from comparison of ambient thermistor, liquid thermistor, de-icer thermistor to saturated temperature derived from high pressure sensor S1NPH.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty ambient air thermistor.

2 Perform a check of the main refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty main refrigerant liquid thermistor or connector fault.

3 Perform a check of the de–icer thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty de–icer thermistor or connector fault.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

5 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

Possible cause: Airflow of the indoor unit is blocked.

8 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

9 Adjust external static pressure setting for ducted type indoor units, if necessary.

10 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

11 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

12 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

13 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

14 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.77 F6-03 – Refrigerant overcharge detection by high subcool value

Trigger	Effect	Reset
Discharge superheat <10˚C ($SH_{Discharge}$=$T_{Discharge}$ – $T_{condensation}$) during test run.	Unit will stop running.	Manual reset via user interface.
Excessive subcool is detected from comparison of ambient thermistor, liquid thermistor, de-icer thermistor to saturated temperature derived from high pressure sensor S1NPH.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty ambient air thermistor.

2 Perform a check of the main refrigerant liquid thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty main refrigerant liquid thermistor or connector fault.

3 Perform a check of the de–icer thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty de–icer thermistor or connector fault.

4 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant overcharge.

5 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

6 Perform a check of the evaporator side expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty evaporator side expansion valve.

7 Check for objects near the indoor unit that may block the airflow. See "5.4 External factors" [▸ 326].

Possible cause: Airflow of the indoor unit is blocked.

8 Clean the air filter of the indoor unit(s). See "6 Maintenance" [▸ 328].

Possible cause: Faulty or dirty air filter.

9 Adjust external static pressure setting for ducted type indoor units, if necessary.

10 Perform a check of the indoor unit fan motor. See "4.12 Indoor unit fan motor" [▸ 211].

Possible cause: Faulty indoor unit fan motor.

11 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

12 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

13 Perform a check of the indoor unit air thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit air thermistor.

14 Check all indoor units operation in heating mode. Check for room temperatures below 20°C. Check if caution disappears once rooms heat-up. If NOT, continue checking the cause of the wet operation.

Possible cause: Indoor room temperature too low when in heating mode. Too cold rooms might create more subcool resulting in wet operation.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.78 H3-02 – High pressure abnormality

Trigger	Effect	Reset
High pressure switch actuation.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the high pressure switch. See "4.11 High pressure switch" [▸ 208].

Possible cause: Faulty high pressure switch.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.79 H5-01 – Compressor overload failure

Trigger	Effect	Reset
Compressor overload is detected.	Unit will stop operating.	Automatic reset if the unit runs for 60 seconds without error.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

The outdoor unit main PCB ALWAYS checks the status of the compressor thermal protector for closed condition.

1 Perform a check of the compressor thermal protection. See "4.5.1 Checking procedures" [▸ 192].

Possible cause: Faulty compressor thermal protection.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

3 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

4 Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

5 Perform a check of all refrigerant side thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty refrigerant side thermistor(s).

6 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

7 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

8 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

9 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.80 H7-01 – Defective fan inverter circuit

Trigger	Effect	Reset
Abnormal current form detected by fan inverter circuit of main PCB during start-up of fan motor.	Unit will stop operating.	Power reset at outdoor unit.

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor unit fan motor M1F. See "4.17 Outdoor unit fan motor" [▸ 253].

Possible cause: Faulty outdoor unit fan motor M1F.

2 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.81 H7-21 – Defective fan inverter circuit

Trigger	Effect	Reset
Abnormal current form detected by fan inverter circuit of main PCB during start-up of fan motor.	Unit will stop operating.	Power reset at outdoor unit.

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor unit fan motor M1F. See "4.17 Outdoor unit fan motor" [▸ 253].

Possible cause: Faulty outdoor unit fan motor M1F.

2 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.82 H7-22 – Defective fan inverter circuit

Trigger	Effect	Reset
Abnormal current form detected by fan inverter circuit of main PCB during start-up of fan motor.	Unit will stop operating.	Power reset at outdoor unit.

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor unit fan motor M1F. See "4.17 Outdoor unit fan motor" [▸ 253].

Possible cause: Faulty outdoor unit fan motor M1F.

2 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.83 H9-01 – Ambient temperature thermistor R1T abnormality

Trigger	Effect	Reset
Ambient temperature thermistor R1T read-out is out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the outdoor air thermistor. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty ambient air thermistor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.84 HA-01 – Defrost fail alarm

Trigger	Effect	Reset
When outdoor unit judges defrost is not completed.	Unit keeps running.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▶ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

2 Clean the outdoor heat exchanger. See "6 Maintenance" [▶ 328].

Possible cause: Dirty outdoor heat exchanger.

3 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Refrigerant shortage.

4 Perform a check of the de–icer thermistor. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty de–icer thermistor or connector fault.

5 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▶ 277].

Possible cause: Faulty refrigerant high pressure sensor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.85 J3-16 – Discharge thermistor R21T open circuit

Trigger	Effect	Reset
Compressor (M1C) discharge thermistor R21T open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.86 J3-17 – Discharge thermistor R21T short circuit

Trigger	Effect	Reset
Compressor (M1C) discharge thermistor R21T short circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.87 J3-56 – High discharge temperature

Trigger	Effect	Reset
Compressor discharge temperature (R21T) too high.	Unit keeps running.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

2 Perform a check of the following expansion valves. See "4.8 Expansion valve" [▸ 199]:

- Main expansion valve
- Subcool expansion valve
- Liquid injection expansion valve
- Liquid shut-off expansion valve
- Gas shut-off expansion valve

Possible cause: Faulty expansion valve.

3 Perform a check of the expansion valve(s) of the indoor unit(s). See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty indoor unit expansion valve.

4 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

5 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

6 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.88 J5-01 – Compressor suction thermistor R3T malfunction

Trigger	Effect	Reset
Thermistor read-out is out of range	Unit will stop operating.	Auto-reset when thermistor read-out is within range

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty suction pipe thermistor or connector fault.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.89 J6-01 – De–icer thermistor R7T abnormality

Trigger	Effect	Reset
De-icer temperature thermistor short/open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the de–icer thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty de–icer thermistor or connector fault.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.90 J7-06 – Liquid thermistor R5T abnormality

Trigger	Effect	Reset
Refrigerant liquid thermistor after subcool heat exchanger short/ open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant liquid thermistor of the subcool heat exchanger. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty refrigerant liquid thermistor of the subcool heat exchanger or connector fault.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.91 J8-01 – Heat exchanger liquid temperature thermistor R4T abnormality

Trigger	Effect	Reset
Refrigerant liquid thermistor R4T short/ open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant liquid thermistor. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty refrigerant liquid thermistor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.92 J9-01 – Superheat thermistor R6T abnormality

Trigger	Effect	Reset
Superheat thermistor after subcool heat exchanger short/open circuit.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the superheat thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty superheat thermistor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.93 J9-08 – Superheat thermistor R6T abnormality

Trigger	Effect	Reset
Superheat thermistor after subcool heat exchanger is out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when thermistor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the superheat thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty superheat thermistor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.94 JA-06 – High pressure sensor S1NPH abnormality

Trigger	Effect	Reset
High pressure sensor S1NPH read-out open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when sensor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.95 JA-07 – High pressure sensor S1NPH malfunction

Trigger	Effect	Reset
High pressure sensor S1NPH read-out short circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when sensor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.96 JC-06 – Low pressure sensor S1NPL abnormality

Trigger	Effect	Reset
Low pressure sensor S1NPL read-out open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when sensor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.97 JC-07 – Low pressure sensor S1NPL malfunction

Trigger	Effect	Reset
Low pressure sensor S1NPL read-out open circuit or out of range.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when sensor read-out is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.98 L1-01 – Inverter circuit abnormality

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.99 L1-02 – Inverter circuit current detection primary circuit

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.100 L1-03 – Inverter circuit current detection secondary circuit

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.101 L1-04 – Power transistor error on inverter circuit

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.102 L1-05 – Inverter circuit hardware fault

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.103 L1-28 – Fan inverter circuit Eeprom error

Trigger	Effect	Reset
Fan inverter circuit on main PCB fails reading/ writing memory (EEPROM error).	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.104 L1-36 – Inverter circuit Eeprom error

Trigger	Effect	Reset
Inverter circuit on main PCB fails reading/writing memory (EEPROM error).	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.105 L1-47 – Inverter circuit 16 V DC abnormal

Trigger	Effect	Reset
Main PCB detects voltage/ current errors on output waveform or current read-out.	Unit will stop operating.	Manual reset via user interface.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

3 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.106 L2-01 – Power supply abnormality during test run

Trigger	Effect	Reset
Main PCB detects 50 Hz zero-crossing error.	Unit stops and retries after guard timer (3 minutes) - infinite cycle.	Automatic reset when within zero-crossing interval range.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

Main PCB checks L1-N on connector X1A for sinus waveform each time crossing the zero-line. Interval between each zero-crossing is 10 miliseconds when the power supply is 50 Hz.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.107 L2-04 – Power supply abnormality during normal operation

Trigger	Effect	Reset
Main PCB detects 50 Hz zero-crossing error.	Unit stops and retries after guard timer (3 minutes) - infinite cycle.	Automatic reset when within zero-crossing interval range.
		Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

Main PCB checks L1-N on connector X1A for sinus waveform each time crossing the zero-line. Interval between each zero-crossing is 10 miliseconds when the power supply is 50 Hz.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.108 L4-01 – Inverter circuit high fin temperature

Trigger	Effect	Reset
Thermistor located inside the power module of the inverter circuit for compressor detects a temperature higher than a certain value.	Unit will stop operating.	Manual reset via remote controller. Outdoor unit power reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Check that the thermal interface grease is applied properly on the (PCB or refrigerant piping) contact surface of the heat sink. Adjust if needed.

Possible cause: Thermal interface grease NOT applied properly on the heat sink.

3 Check if heat sink plate is correctly fixed with screws.

Possible cause: Heat sink plate not correctly installed.

4 Check (by touching) if refrigerant is flowing through the radiant cooling refrigerant circuit. The radiant cooling refrigerant circuit should be warm if refrigerant is flowing. If no refrigerant flow, perform a check of the inverter cooling expansion valve, see "4.8 Expansion valve" [▸ 199].

Possible cause: No refrigerant flow through the radiant cooling refrigerant circuit.

5 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

6 Check ambient temperature. Check if outdoor unit location temperature differs drastically.

7 Check if there is discharge air by-pass on installation location.

Possible cause: External noise. Check further on how to eliminate external factors.

8 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.109 L4-06 – Fan inverter circuit high fin temperature

Trigger	Effect	Reset
Thermistor located inside the power module of the fan inverter circuit detects a temperature higher than a certain value.	Unit will stop operating.	Manual reset via remote controller. Outdoor unit power reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Check that the thermal interface grease is applied properly on the (PCB or refrigerant piping) contact surface of the heat sink. Adjust if needed.

Possible cause: Thermal interface grease NOT applied properly on the heat sink.

3 Check if heat sink plate is correctly fixed with screws.

Possible cause: Heat sink plate not correctly installed.

4 Check (by touching) if refrigerant is flowing through the radiant cooling refrigerant circuit. The radiant cooling refrigerant circuit should be warm if refrigerant is flowing. If no refrigerant flow, perform a check of the inverter cooling expansion valve, see "4.8 Expansion valve" [▸ 199].

Possible cause: No refrigerant flow through the radiant cooling refrigerant circuit.

5 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

6 Check ambient temperature. Check if outdoor unit location temperature differs drastically.

7 Check if there is discharge air by-pass on installation location.

Possible cause: External noise. Check further on how to eliminate external factors.

8 Perform a check of the fan inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty fan inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.110 L5-03 – Output overcurrent detection on inverter circuit

Trigger	Effect	Reset
Inverter circuit on main PCB detects overcurrent to power transistor.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

3 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

4 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

5 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

6 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.111 L8-03 – Overcurrent on inverter circuit except start-up

Trigger	Effect	Reset
Inverter PCB circuit on main PCB detects overcurrent to compressor except on start-up.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

3 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

4 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

5 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

6 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.112 L9-01 – Stall prevention by inverter circuit

Trigger	Effect	Reset
Inverter circuit on main PCB detects overcurrent or no rotation at start-up.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Check if the refrigerant circuit is clogged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Clogged refrigerant circuit.

3 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

4 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.113 L9-13 – Inverter circuit output phase abnormality

Trigger	Effect	Reset
When inverter circuit on main PCB detects phase loss to compressor on U, V, W.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

3 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.114 LC-01 – Transmission abnormality

Trigger	Effect	Reset
No transmission between main control and inverter circuit.	Unit will stop operating.	Automatic reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.115 LC-14 – Transmission abnormality control/inverter circuit

Trigger	Effect	Reset
No transmission between control and inverter circuit on main PCB.	Unit will stop operating.	Automatic reset.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.116 LC-19 – Transmission abnormality main/fan inverter circuit

Trigger	Effect	Reset
No transmission between main and fan inverter circuit	Unit will stop operating.	Automatic reset.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.117 LC-33 – Transmission abnormality main PCB/sub PCB

Trigger	Effect	Reset
No transmission between main PCB and sub PCB.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▶ 289].

Possible cause: Faulty Sub PCB.

3 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▶ 343].

Possible cause: Faulty wiring between PCB's.

4 Check if the correct spare part is installed for all PCB's. See checking procedures of the specific PCB's.

Possible cause: Wrong spare part PCB installed.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.118 LC-37 – Transmission abnormality main PCB/sub PCB

Trigger	Effect	Reset
No transmission between main PCB and sub PCB.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▶ 289].

Possible cause: Faulty Sub PCB.

3 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▶ 343].

Possible cause: Faulty wiring between PCB's.

4 Check if the correct spare part is installed for all PCB's. See checking procedures of the specific PCB's.

Possible cause: Wrong spare part PCB installed.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.119 P1-01 – Open phase or unbalanced power supply detection by inverter circuit

Trigger	Effect	Reset
Inverter circuit on main PCB detects power unbalance >4%.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.120 P4-01 – Fin thermistor abnormality on inverter circuit

Trigger	Effect	Reset
Inverter circuit on main PCB detects open or short circuit or out of range on fin thermistor.	Unit will stop operating.	Manual reset via user interface.
		Automatic reset when fin temperature is within range.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the fin thermistor of the PCB. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty fin thermistor of the PCB.

1 Check the required space around the outdoor unit heat exchanger. See "5.4 External factors" [▸ 326].

Possible cause: Insufficient air flow or air by-pass due to required space specifications not met.

2 Perform a check of the inverter cooling expansion valve. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty inverter cooling expansion valve.

3 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty inverter circuit on main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.121 PJ-04 – Capacity setting mismatch for inverter circuit

Trigger	Effect	Reset
Main PCB detects other type PCB than set in EEPROM or wrong dip switch setting on spare part main PCB.	Unit will stop operating.	Manual reset via user interface. Power reset at outdoor unit.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Check if the correct spare part is installed for the main PCB. See "4.15 Main PCB" [▸ 212]. Check dip switch setting for spare part main PCB.

Possible cause: Incorrect spare part main PCB or incorrect dip switch setting.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.122 PJ-09 – Capacity setting mismatch for fan inverter circuit

Trigger	Effect	Reset
Main PCB detects other type PCB than set in EEPROM or wrong dip switch setting on spare part main PCB.	Unit will stop operating.	Manual reset via user interface. Power reset at outdoor unit.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Check if the correct spare part is installed for the main PCB. See "4.15 Main PCB" [▸ 212]. Check dip switch setting for spare part main PCB.

Possible cause: Incorrect spare part main PCB or incorrect dip switch setting.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.123 U0 – Refrigerant shortage detection (Warning)

Trigger	Effect	Reset
This is not an error but a warning.	Unit keeps running.	Auto reset when trigger is not met.

To solve the error code

1 Refer to U0-05 or U0-06 to proceed.

3.3.124 U0-05 – Refrigerant shortage detection

Trigger	Effect	Reset
Refrigerant shortage detection during cooling.	Unit keeps running.	Auto reset.

To solve the error code

> **INFORMATION**
>
> It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of all expansion valves. See "4.8 Expansion valve" [▶ 199].

Possible cause: Faulty expansion valve.

3 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▶ 282]

Possible cause: Faulty refrigerant low pressure sensor.

4 Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty suction pipe thermistor or connector fault.

5 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

6 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Refrigerant shortage.

8 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

9 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.125 U0-06 – Refrigerant shortage detection

Trigger	Effect	Reset
Refrigerant shortage detection during heating.	Unit keeps running.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

Possible cause: Faulty expansion valve.

3 Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

Possible cause: Faulty refrigerant low pressure sensor.

4 Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty suction pipe thermistor or connector fault.

5 Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty discharge pipe thermistor or connector fault.

6 Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7 Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Refrigerant shortage.

8 Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

Possible cause: Faulty refrigerant high pressure sensor.

9 Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

> **INFORMATION**
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.126 U0-08 – Refrigerant shortage detection by high pressure sensor

Trigger	Effect	Reset
Refrigerant shortage detection.	Unit keeps running.	Auto reset.

To solve the error code

> **INFORMATION**
> It is recommended to perform the checks in the listed order.

1. Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

   Possible cause: Closed stop valve in the refrigerant circuit.

2. Perform a check of all expansion valves. See "4.8 Expansion valve" [▸ 199].

   Possible cause: Faulty expansion valve.

3. Perform a check of the refrigerant low pressure sensor. See "4.22 Refrigerant low pressure sensor" [▸ 282]

   Possible cause: Faulty refrigerant low pressure sensor.

4. Perform a check of the suction pipe thermistor. See "4.26 Thermistors" [▸ 297].

   Possible cause: Faulty suction pipe thermistor or connector fault.

5. Perform a check of the discharge pipe thermistor. See "4.26 Thermistors" [▸ 297].

   Possible cause: Faulty discharge pipe thermistor or connector fault.

6. Check for the presence of non-condensables and/or humidity in the refrigerant circuit. See "5.2 Refrigerant circuit" [▸ 313].

   Possible cause: Non-condensables and/or humidity in the refrigerant circuit.

7. Check if the refrigerant circuit is correctly charged. See "5.2 Refrigerant circuit" [▸ 313].

   Possible cause: Refrigerant shortage.

8. Perform a check of the refrigerant high pressure sensor. See "4.21 Refrigerant high pressure sensor" [▸ 277].

   Possible cause: Faulty refrigerant high pressure sensor.

9. Perform a check of the compressor. See "4.4 Compressor" [▸ 181].

   Possible cause: Faulty compressor or miswiring of the compressor power supply cable.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.127 U1-01 – Reverse phase detection

Trigger	Effect	Reset
Main PCB detects reverse phase between L1 - L3 phases.	Forced stop.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the phase sequence on the mains power supply terminal, see "To check the power supply of the unit" in "5.1 Electrical circuit" [▶ 306]. Correct if needed.

Possible cause: Incorrect phase sequence on mains power supply terminal.

2 Check if any of the phases is missing on the mains power supply terminal, see "To check the power supply of the unit" in "5.1 Electrical circuit" [▶ 306]. Correct if needed.

Possible cause: Missing phase(s) on mains power supply terminal.

3 Check if the phase L3 is present on the power supply connector X1A on the main PCB, see "To perform a power check" in "4.15 Main PCB" [▶ 212]. Correct if needed.

Possible cause: Missing phase L3 on main PCB power supply connector.

4 Perform a check of the fuses of the main PCB, see "4.15 Main PCB" [▶ 212].

Possible cause: Blown fuse(s) on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.128 U1-04 – Reverse phase detection

Trigger	Effect	Reset
Main PCB detects reverse phase between L1 - L3 phases.	Forced stop.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the phase sequence on the mains power supply terminal, see "To check the power supply of the unit" in "5.1 Electrical circuit" [▶ 306]. Correct if needed.

Possible cause: Incorrect phase sequence on mains power supply terminal.

2 Check if any of the phases is missing on the mains power supply terminal, see "To check the power supply of the unit" in "5.1 Electrical circuit" [▶ 306]. Correct if needed.

Possible cause: Missing phase(s) on mains power supply terminal.

3 Check if the phase L3 is present on the power supply connector X1A on the main PCB, see "To perform a power check" in "4.15 Main PCB" [▶ 212]. Correct if needed.

Possible cause: Missing phase L3 on main PCB power supply connector.

4 Perform a check of the fuses of the main PCB, see "4.15 Main PCB" [▶ 212].

Possible cause: Blown fuse(s) on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.129 U1-16 – Open phase detection on Power supply

Trigger	Effect	Reset
Open phase detected by phase detection circuit.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▶ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the noise filter PCB. See "4.16 Noise filter PCB" [▶ 245].

Possible cause: Faulty noise filter PCB.

3 Perform a check of the inverter circuit of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty inverter circuit on main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.130 U1-19 – Hz error detection on Power Supply

Trigger	Effect	Reset
Main PCB does not detect zero-crossing for a certain duration.	Unit will stop operating.	Power reset at outdoor unit.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

Main PCB checks L1-N on connector X1A for sinus waveform each time crossing the zero-line. Interval between each zero-crossing is 10 miliseconds when the power supply is 50 Hz.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

3 Perform a check of the noise filter PCB. See "4.16 Noise filter PCB" [▸ 245].

Possible cause: Faulty noise filter PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.131 U2-01 – Inverter circuit power supply abnormality - abnormal voltage

Trigger	Effect	Reset
Inverter circuit of main PCB detects DC voltage cannot reach or maintain minimum 300 V DC (for single phase units) / 500 V DC (for 3-phase units).	Unit will stop operating.	Power reset at outdoor unit.
No zero cross is detected by main PCB through at least 10 seconds.		
Abnormal voltage drop is detected by DC voltage detection circuit.		
Abnormal voltage rise is detected by over voltage detection circuit.		

To solve the error code for single phase units

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

To solve the error code for three phase units

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the noise filter PCB. See "4.16 Noise filter PCB" [▸ 245].

Possible cause: Faulty noise filter PCB.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

4 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty wiring between PCB's.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.132 U2-02 – Inverter circuit power supply abnormality - phase loss

Trigger	Effect	Reset
Inverter circuit of main PCB detects DC voltage cannot reach or maintain minimum 300 V DC (for single phase units) / 500 V DC (for 3-phase units).	Unit will stop operating.	Power reset at outdoor unit.
No zero cross is detected by main PCB through at least 10 seconds.		
Abnormal voltage drop is detected by DC voltage detection circuit.		
Abnormal voltage rise is detected by over voltage detection circuit.		

To solve the error code for single phase units

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

To solve the error code for three phase units

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the noise filter PCB. See "4.16 Noise filter PCB" [▸ 245].

Possible cause: Faulty noise filter PCB.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

4 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty wiring between PCB's.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.133 U2-03 – Inverter circuit power supply abnormality - DC circuit not charging

Trigger	Effect	Reset
Inverter circuit of main PCB detects DC voltage cannot reach or maintain minimum 300 V DC (for single phase units) / 500 V DC (for 3-phase units).	Unit will stop operating.	Power reset at outdoor unit.
No zero cross is detected by main PCB through at least 10 seconds.		
Abnormal voltage drop is detected by DC voltage detection circuit.		
Abnormal voltage rise is detected by over voltage detection circuit.		

To solve the error code for single phase units

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

To solve the error code for three phase units

1 Check if the power supply wiring is correct. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Incorrect power supply wiring.

2 Perform a check of the noise filter PCB. See "4.16 Noise filter PCB" [▸ 245].

Possible cause: Faulty noise filter PCB.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

4 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty wiring between PCB's.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.134 U3-02 – Test run interrupted manually

Trigger	Effect	Reset
Test run interrupted manually by user on main PCB.	Warning.	Perform test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

   Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2. Perform a test run from the outdoor unit. See installer reference guide for more information.
3. Check the error history, see "3 Troubleshooting" [▸ 20]. Solve the error code(s) using the error based troubleshooting, see "3.3 Error based troubleshooting" [▸ 24].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.135 U3-03 – Test run not performed yet

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

   Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2. Perform a test run from the outdoor unit. See installer reference guide for more information.
3. Check the error history, see "3 Troubleshooting" [▸ 20]. Solve the error code(s) using the error based troubleshooting, see "3.3 Error based troubleshooting" [▸ 24].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.136 U3-04 – Test run ended abnormally

Trigger	Effect	Reset
Test run ended abnormally.	Unit will NOT operate.	Restart test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Check for an indoor unit related error code. To solve the error, see "3.3 Error based troubleshooting" [▸ 24].
2. Check the error history, see "3 Troubleshooting" [▸ 20]. Solve the error code(s) using the error based troubleshooting, see "3.3 Error based troubleshooting" [▸ 24].
3. Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

   Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.
4. Perform a test run from the outdoor unit. See installer reference guide for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.137 U3-05 – Test run aborted on initial transmission

Trigger	Effect	Reset
Test run could NOT start or abort due to transmission issues.	Unit will NOT operate.	Restart test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication

between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Perform a test run from the outdoor unit. See installer reference guide for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.138 U3-06 – Test run aborted on normal transmission

Trigger	Effect	Reset
Test run could NOT start or abort due to transmission issues.	Unit will NOT operate.	Restart test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Perform a test run from the outdoor unit. See installer reference guide for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.139 U3-07 – Transmission abnormality on test run

Trigger	Effect	Reset
Test run could NOT start or abort due to transmission issues.	Unit will NOT operate.	Restart test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Perform a test run from the outdoor unit. See installer reference guide for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.140 U3-08 – Transmission abnormality on test run

Trigger	Effect	Reset
Test run could NOT start or abort due to transmission issues.	Unit will NOT operate.	Restart test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if communication between outdoor unit and indoor units is initialised. Check field setting 1-10 for count of indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units shown than expected, communication between 1 or more indoor unit(s) and outdoor unit is NOT correct. Check the F1-F2 transmission line between the indoor unit and outdoor unit, see "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Perform a test run from the outdoor unit. See installer reference guide for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.141 U4-01 – Transmission error between indoor units and outdoor unit

Trigger	Effect	Reset
Main PCB detects abnormal transmission on F1-F2 transmission line to indoor units.	Unit will stop operating.	Auto reset.
Transmission between indoor units and outdoor unit is interrupted while in initialization.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

5 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▸ 326].

Possible cause: External source may cause interference.

6 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▶ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.142 U4-03 – Transmission error between indoor units and system

Trigger	Effect	Reset
Main PCB detects abnormal transmission on F1-F2 transmission line to indoor units.	Unit will stop operating.	Auto reset.
Transmission between indoor units and outdoor unit is interrupted while in initialization.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▶ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▶ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

3 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▶ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Perform a check of the main PCB. See "4.15 Main PCB" [▶ 212].

Possible cause: Faulty main PCB.

5 Perform a power reset. If the error disappears and is raised again after a while, check for the presence of an external source causing electrical noise. See "5.4 External factors" [▶ 326].

Possible cause: External source may cause interference.

6 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

7 Check indoor units for error. See "3.3 Error based troubleshooting" [▸ 24].

Possible cause: Indoor unit on error.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.143 U4-15 – Unable to start test run

Trigger	Effect	Reset
Main PCB detects malfunction on indoor unit(s).	Test run will NOT start.	Perform test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

2 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.144 U5-04 – Communication abnormality between indoor unit main PCB and remote controller

Trigger	Effect	Reset
Transmission abnormality between indoor unit main PCB and remote controller.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all the other indoor units and outdoor unit will continue operating for indoor units without error.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if multiple remote controllers are wired to the same indoor unit. One remote controller needs to be set to main while all other remote controllers need to be set to sub. Also check that the remote controllers are correctly wired. See installer reference guide of the remote controller for detailed information.

Possible cause: No main remote controller set when multiple units are wired to the same indoor unit.

2 Perform a check of the remote controller. See "4.23 Remote controller user interface" [▸ 286].

Possible cause: Faulty remote controller or faulty transmission wiring between remote controller and indoor unit.

3 If possible, switch the faulty remote controller with a remote controller from another indoor unit.

- If error transfers to the other indoor unit, replace the remote controller. See "4.23 Remote controller user interface" [▸ 286].
  Possible cause: Faulty remote controller.
- If error is still present on the indoor unit, Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].
  Possible cause: Faulty indoor unit main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.145 U5-06 – 1 Supervisor remote controller not connected/not set

Trigger	Effect	Reset
Supervisor remote controller NOT connected or NOT set correctly.	Indoor unit continues FAN ONLY operation while other indoor units show error U9-01. Outdoor unit stops operating.	Operation NOT allowed while abnormality continues.

To solve the error code

1 Check that the field setting is correctly set on the outdoor unit: [2-60=0] when NO supervisor remote controller connected, [2-60=1] when supervisor remote controller connected. See "7.9 Field settings" [▸ 396].

Possible cause: Faulty field setting for supervisor remote controller.

2 Check that the setting [R2-05=02] is correct and that the supervisor remote controller functions correctly. See "4.23 Remote controller user interface" [▸ 286].

Possible cause: Faulty setting or supervisor remote controller.

3 Check the communication wiring between the supervisor remote controller and the indoor unit main PCB. See "4.23 Remote controller user interface" [▸ 286].

Possible cause: Faulty communication wiring between remote controller and indoor unit.

4 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

5 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

6 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.146 U7-01 – Transmission abnormality between systems - DTA104A61,62 error

Trigger	Effect	Reset
Communication problem between systems.	Unit will stop operating.	Auto reset when communication is normal.
Conflict in settings and configuration for DTA104A61,62.	Unit keeps running.	Auto reset when correct settings apply on DTA104A61,62.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

2 Check wiring and configuration of option DTA104A61, 62. See option handbook on Business Portal for more information.

3 Check the F1-F2 OUT transmission line between the outdoor unit main PCB and option PCB DTA104A61, 62. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between outdoor unit and option DTA104A61, 62.

4 Check that ONLY the master outdoor unit has F1-F2 IN connection. If another outdoor unit has F1-F2 IN connection, correct the installation.

5 Check if low noise operation or demand control is active without an optional DTA104A61,62 PCB. Field setting 2-12 CANNOT be set to 1 if DTA104A61,62 is not present, see "7.9 Field settings" [▸ 396].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.147 U7-02 – Transmission abnormality between systems - DTA104A61,62 error

Trigger	Effect	Reset
Transmission error on DTA104A61,62 initialization.	Forced stop.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check if multiple units are wired to the same cool/heat zone without cool/heat master set. One main PCB needs to be set cool/heat master (field setting 2-0 = 1) while all other units need to be set sub (field setting 2-0 = 2). See "7.9 Field settings" [▸ 396].

Possible cause: No cool/heat master set when multiple units are wired to the same cool/heat zone.

2 If unified cool/heat selection is NOT present, set the DTA104A61,62 cool/heat setting to IND.

3 Check wiring and configuration of option DTA104A61, 62. See option handbook on Business Portal for more information.

4 Check if low noise operation or demand control is active without an optional DTA104A61,62 PCB. Field setting 2-12 CANNOT be set to 1 if DTA104A61,62 is not present, see "7.9 Field settings" [▸ 396].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.148 U7-11 – Excess indoor units detected on test run

Trigger	Effect	Reset
Test run detects more than allowed amount of indoor units or indoor unit total index.	Forced stop.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check total index and total count for indoor units. See Data book on Business Portal for more information.

Possible cause: Indoor Unit capacity connected is too high.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

3 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.149 U7-24 – Duplication of address setting on multiple DTA104A61,62 installation

Trigger	Effect	Reset
Bad configuration of option DTA104A61,62 PCB.	Forced stop.	DTA104A61,62 power reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check wiring and configuration of option DTA104A61, 62. See option handbook on Business Portal for more information.

2 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.150 U9-01 – Other indoor unit has error

Trigger	Effect	Reset
System mismatch, non-compatible indoor units.	Forced stop.	Auto reset.
At least one other indoor unit on same F1-F2 wiring has an error.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Check the indoor units for error codes other than U9-01. See "3.3 Error based troubleshooting" [▸ 24] to solve the error code(s).
2. Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.
3. Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

   Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).
4. Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

   Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).
5. Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

   Possible cause: Faulty main PCB.
6. Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

   Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.151 U9-02 – Other system R32 leakage confirmed

Trigger	Effect	Reset
At least one other indoor unit on same F1-F2 wiring detects refrigerant leak.	Forced stop.	Automatic reset when indoor unit leak detection was reset (field setting 25-14=2).

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check the indoor units for error codes other than U9-02. See "3.3 Error based troubleshooting" [▸ 24] to solve the error code(s).

2 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

3 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

4 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.152 UA-00 – Combination abnormality

Trigger	Effect	Reset
Combination abnormality.	Forced stop.	Power reset and only allowed combination.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Change the installation with ONLY R32 type indoor units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.153 UA-03 – Combination abnormality - Mix of R22, R407C R410A and R32 type units detected

Trigger	Effect	Reset
Mix of R22, R407C, R410A, R32 type units detected.	Forced stop.	Power reset and only allowed combination.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Change the installation with ONLY R32 type indoor units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.154 UA-13 – Combination abnormality - Indoor unit not compatible with outdoor unit (refrigerant type)

Trigger	Effect	Reset
R32 indoor unit detects outdoor unit operating on other refrigerant than R32.	Unit will stop operating. All other indoor units show error U9-01.	Automatic reset after re-initialization detects compatible units.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type (R32) units.

2 Check if the correct spare part is installed for the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Incorrect spare part PCB.

3 Check if the correct spare part is installed for the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Incorrect spare part main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.155 UA-15 – Combination abnormality - Outdoor unit not compatible with indoor unit (with self-cleaning panel)

Trigger	Effect	Reset
Outdoor unit NOT compatible with this indoor unit with current mounted self-cleaning decoration panel.	Unit will stop operating. All other indoor units show error U9-01.	Automatic reset after re-initialization detects compatible self-cleaning decoration panel.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of self-cleaning decoration panel and indoor unit. Change the indoor unit with compatible self-cleaning decoration panel.

Possible cause: Non-compatible self-cleaning decoration panel.

2 Check if the correct spare part is installed for the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Incorrect spare part PCB.

3 Check if the correct spare part is installed for the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Incorrect spare part main PCB.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.156 UA-16 – Combination abnormality - More than 18 indoor units detected on same system

Trigger	Effect	Reset
Main PCB on outdoor unit detects more than 18 indoor units on same system.	Forced stop.	Automatic reset after re-initialization detects less than 18 compatible indoor units.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Change the installation to include a maximum of 18 indoor units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.157 UA-17 – Combination abnormality - Local setting abnormality

Trigger	Effect	Reset
Main PCB on outdoor unit detects compatibility issues.	Forced stop.	Automatic reset after re-initialization detects compatible units and normal field settings.
Main PCB detects field setting abnormality.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

2 Check and verify the outdoor unit field settings with the default settings. See "7.9 Field settings" [▸ 396].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.158 UA-18 – Combination abnormality - Outdoor unit not compatible with indoor units (refrigerant type)

Trigger	Effect	Reset
Main PCB on outdoor unit detects compatibility issues.	Forced stop.	Automatic reset after re-initialization detects compatible units.
Outdoor unit NOT compatible with indoor units (refrigerant type).		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.159 UA-19 – Combination abnormality - Local set alarm

Trigger	Effect	Reset
Main PCB on outdoor unit detects compatibility issues.	Forced stop.	Automatic reset after re-initialization detects compatible units and normal field settings.
Main PCB detects field setting abnormality, local set alarm.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

2 Check and verify the outdoor unit field settings with the default settings. See "7.9 Field settings" [▸ 396].

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.160 UA-20 – Combination abnormality - Non-compatible outdoor unit in multi-combination

Trigger	Effect	Reset
Main PCB on outdoor unit detects compatibility issues.	Forced stop.	Automatic reset after re-initialization detects compatible units.
Outdoor unit NOT compatible with multi combination.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. ONLY single module configuration is possible (NO Q1-Q2 loop possible between outdoor units).

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.161 UA-21 – Combination abnormality - BPMK units detected

Trigger	Effect	Reset
Main PCB detects BPMK unit(s) on F1/F2 wiring.	Forced stop.	Automatic reset after re-initialization detects compatible units.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

2 Change the installation without BPMK units.

3.3.162 UA-38 – Combination abnormality - Altherma hydro unit detected

Trigger	Effect	Reset
Main PCB on main outdoor unit detects Altherma hydrobox on F1-F2 IN wiring.	Forced stop.	Automatic reset after re-initialization detects compatible units.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 NO Hydrobox unit is allowed in the installation. See the Databook for more information.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.163 UA-39 – Combination abnormality - Incorrect combination

Trigger	Effect	Reset
Main PCB on outdoor unit detects compatibility issues.	Forced stop.	Automatic reset after re-initialization detects compatible units.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.164 UA-50 – Combination abnormality detected

Trigger	Effect	Reset
Outdoor uint NOT compatible with BPMK or Hydrobox units.	Forced stop.	Power reset at outdoor unit.

To solve the error code

1 Hydrobox or BPMK units are not allowed in the installation. Change the installation as needed.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.165 UA-51 – Combination abnormality - hydrobox units detected

Trigger	Effect	Reset
Outdoor unit detects hydro units connected.	Forced stop.	Power reset at outdoor unit.

To solve the error code

1 Hydrobox or BPMK units are not allowed in the installation. Change the installation as needed.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.166 UA-55 – R32 pump down locked state (outdoor unit setting required)

Trigger	Effect	Reset
When an indoor unit detects refrigerant leak, it shows error code A0-11. After reset of indoor unit (field setting 25-14=2), also the outdoor unit needs to be reset.	Forced stop.	Automatic reset when outdoor lock function was reset at outdoor main PCB (field setting 2-47=1).

To solve the error code

1 Check the indoor units for error code A0-11. See "3.3 Error based troubleshooting" [▸ 24] to solve the error code(s).

2 Reset the outdoor lock function. Set the field setting 2-47=1 on the outdoor unit. See "7.9 Field settings" [▸ 396].

Possible cause: Outdoor lock function active.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

4 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

5 Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

Possible cause: Faulty indoor unit main PCB.

6 Perform a check of the following expansion valves. See "4.8 Expansion valve" [▸ 199]:

- Liquid shut-off expansion valve
- Gas shut-off expansion valve

Possible cause: Faulty expansion valve.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.167 UA-56 – Back-up PCB not connected/abnormality

Trigger	Effect	Reset
Power back-up PCB failure/NOT connected.	Forced stop.	Automatic reset when back-up PCB operates normally.

To solve the error code

1 Perform a check of the back-up PCB. See "4.3 Back-up PCB" [▸ 176].

Possible cause: Faulty back-up PCB.

2 Perform a check of the Sub PCB. See "4.25 Sub PCB" [▸ 289].

Possible cause: Faulty Sub PCB.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

4 Check the wiring between the PCB's. See "7.2 Wiring diagram" [▸ 343].

Possible cause: Faulty wiring between PCB's.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.168 UA-57 – Mechanical ventilation abnormality (external input is closed)

Trigger	Effect	Reset
Mechanical ventilation abnormality (external input on X2M is closed).	Forced stop.	Operation NOT allowed while abnormality continues.

To solve the error code

1 Check if the mechanical ventilation functions correctly and repair as needed. See "5.3 Manufacturer components" [▸ 325].

Possible cause: Faulty mechanical ventilation.

2 Check the mechanical ventilation error input signal. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty mechanical ventilation error input signal.

3 Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

Possible cause: Faulty main PCB or wrong capacity setting.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.169 UA-58 – Supervisor remote controller not connected/not set

Trigger	Effect	Reset
Supervisor remote controller NOT connected.	Indoor unit conitnues FAN ONLY operation while other indoor units show error U9-01. Outdoor unit stops operating.	Operation NOT allowed while abnormality continues.

To solve the error code

1. Check that the field setting is correctly set on the outdoor unit: [2-60=0] when NO supervisor remote controller connected, [2-60=1] when supervisor remote controller connected. See "7.9 Field settings" [▸ 396].

   Possible cause: Faulty field setting for supervisor remote controller.

2. Check that the setting [R2-05=02] is correct and that the supervisor remote controller functions correctly. See "4.23 Remote controller user interface" [▸ 286].

   Possible cause: Faulty setting or supervisor remote controller.

3. Check the communication wiring between the supervisor remote controller and the indoor unit main PCB. See "4.23 Remote controller user interface" [▸ 286].

   Possible cause: Faulty communication wiring between remote controller and indoor unit.

4. Perform a check of the indoor unit main PCB. See "4.14 Indoor unit main PCB" [▸ 212].

   Possible cause: Faulty indoor unit main PCB.

5. Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

   Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

6. Perform a check of the main PCB. See "4.15 Main PCB" [▸ 212].

   Possible cause: Faulty main PCB or wrong capacity setting.

> **INFORMATION**
>
> If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.170 UE-00 – Communication abnormality with central controller

Trigger	Effect	Reset
Transmission abnormality with central controller.	The indoor unit that has the error will stop operating (fan OFF, expansion valve OFF) while all the other indoor units and outdoor unit will continue operating for indoor units without error.	Auto reset.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

If all indoor units display error UE-00

1 Check the F1-F2 transmission line between the central controller and terminal X1M of the outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between central controller and outdoor unit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

If ONLY 1 indoor unit displays error UE-00

3 Check if the indoor unit has an assigned group address. Set a group address as needed. See installation manual of the remote controller for procedure to set group address.

Possible cause: No group address assigned to indoor unit.

4 Perform a power reset on the central controller and check if error is resolved.

5 Using the service monitoring tools, check the communication registers.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.171 UF-01 – Wiring and piping mismatch - Auto address inconsistency on F1-F2 transmission

Trigger	Effect	Reset
Minimum 1 indoor unit fails to perform cross pipe check during test run.	Forced stop.	Perform test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check that the refrigerant circuit piping and wiring connections of the system are correctly installed.

Possible cause: Refrigerant piping and/or wiring mismatch.

3 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the

indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▶ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

5 Perform a check of the indoor unit pipe thermistors. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty indoor unit pipe thermistor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.172 UF-05 – Wiring and piping mismatch - Stop valves closed or incorrect

Trigger	Effect	Reset
Minimum 1 indoor unit fails to perform cross pipe check during test run.	Forced stop.	Perform test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▶ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check that the refrigerant circuit piping and wiring connections of the system are correctly installed.

Possible cause: Refrigerant piping and/or wiring mismatch.

3 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▶ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▶ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▶ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▶ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

5 Perform a check of the indoor unit pipe thermistors. See "4.26 Thermistors" [▶ 297].

Possible cause: Faulty indoor unit pipe thermistor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.173 UF-11 – Wiring and piping mismatch - Excess connection ratio

Trigger	Effect	Reset
Minimum 1 indoor unit fails to perform cross pipe check during test run.	Forced stop.	Perform test run.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Check that all stop valves of the refrigerant circuit are open. See "5.2 Refrigerant circuit" [▸ 313].

Possible cause: Closed stop valve in the refrigerant circuit.

2 Check that the refrigerant circuit piping and wiring connections of the system are correctly installed.

Possible cause: Refrigerant piping and/or wiring mismatch.

3 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

5 Perform a check of the indoor unit pipe thermistors. See "4.26 Thermistors" [▸ 297].

Possible cause: Faulty indoor unit pipe thermistor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.174 UH-01 – Auto-address failure

Trigger	Effect	Reset
Main PCB detects improper combination at indoor unit side.	Forced stop.	Reset communication from main PCB.
Missing auto address of indoor unit(s) after initialization.		

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

2 Perform a communication reset of the F1-F2 transmission, see "5.1 Electrical circuit" [▸ 306].

3 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

5 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

6 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.175 UH-02 – Auto-address failure

Trigger	Effect	Reset
Main PCB detects improper combination at indoor unit side.	Forced stop.	Reset communication from main PCB.
Missing auto address of indoor unit(s) after initialization.		

To solve the error code

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1 Set field setting 2-5 of the outdoor unit to 1 to start the indoor units connected to that outdoor unit on forced fan operation, see "7.9 Field settings" [▸ 396]. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

2 Perform a communication reset of the F1-F2 transmission, see "5.1 Electrical circuit" [▸ 306].

3 Check field setting 1-10 to count the indoor units, see "7.9 Field settings" [▸ 396]. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 306]) or malfunctioning PCB (see "4.14 Indoor unit main PCB" [▸ 212]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Check if the power supply is conform with the regulations. See "5.1 Electrical circuit" [▸ 306].

Possible cause:
- Faulty or disturbance of the power supply (imbalance >4%),
- Power drop,
- Short circuit.

5 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 306].

Possible cause: Faulty or interruption in transmission line between indoor units and outdoor unit.

6 Check for improper combination of units. See the combination table in the Databook for more information. Change the installation with ONLY compatible type units.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

3.3.176 Overview of error codes

Error code	Description
A0-00	External protection device activated
A0-11	R32 leakage detection
A0-13	False R32 leakage detection
A1-00	Main PCB abnormality
A3-00	Drain water level abnormality
A6-01	Fan motor abnormality - motor lock
A6-10	Fan motor abnormality - overcurrent or IPM protection
A6-11	Fan motor abnormality - position detection error
A8-01	Fan motor abnormality - power supply abnormality
A9-01	Y1E Expansion valve coil abnormality
A9-02	Y1E Expansion valve body abnormality
AF-00	Drain back flow
AH-03	Communication error between main PCB and self cleaning panel PCB
AH-04	Dust detection sensor error
AH-05	Dust detection error
AH-06	Air filter rotation error
AH-07	Damper rotation error
AH-08	Filter clean time error
AH-09	Auto self-cleaning disabled
AJ-01	A1P Capacity setting error
AJ-02	A1P Setting error for Y1E expansion valve
C1-01	Communication abnormality between main PCB and fan PCB
C1-02	Communication abnormality between main PCB and option PCB
C4-02	Liquid thermistor short circuit
C4-03	Liquid thermistor open circuit
C5-02	Gas thermistor short circuit
C5-03	Gas thermistor open circuit
C6-01	Compatibility error between main PCB and fan PCB
C9-02	Air thermistor short circuit
C9-03	Air thermistor open circuit
CE-01	No signal presence sensor
CE-02	No signal floor temperature sensor
CE-03	Fault floor temperature sensor
CE-04	High value floor temperature sensor
CH-01	R32 leak detection sensor failure or disconnected

Error code	Description
CH-02	R32 leak detection sensor life time is exceeded
CH-05	R32 leak detection sensor life time <6months
CH-10	R32 leak detection sensor replacement to confirm
CJ-02	Remote controller air thermistor short circuit
CJ-03	Remote controller air thermistor open circuit
E1-01	Outdoor unit main PCB A1P error
E1-02	Outdoor unit main PCB A1P error
E1-11	Outdoor unit sub PCB A2P error
E3-01	Actuation of high pressure switch
E3-02	High pressure error
E3-07	High pressure switch reset error
E3-13	Liquid stop valve check error
E3-18	Actuation of high pressure switch during test run
E3-20	High pressure switch (manual reset) activated (open contact)
E4-01	Low pressure error
E5-01	Compressor overload/Motor Lock Error (M1C)
E6-17	Inverter overcurrent error
E7-01	Outdoor unit fan motor M1F error
E7-05	Outdoor unit fan motor M1F overcurrent error
E7-09	Fan inverter circuit (integrated power module) overheated
E9-01	Electronic expansion valve Y1E malfunction
E9-03	Electronic expansion valve Y2E malfunction
E9-04	Electronic expansion valve Y3E abnormality
E9-20	Electronic Expansion Valve (Y1E) failure
E9-23	Electronic expansion valve (Y2E) failure
E9-26	Electronic expansion valve (Y4E) malfunction
E9-29	Electronic expansion valve (Y5E) malfunction
E9-30	Electronic expansion valve (Y6E) malfunction
E9-44	Electronic expansion valve (Y3E) failure
E9-48	Electronic expansion valve (Y1E~Y4E) overcurrent error
E9-51	Electronic expansion valve thermal cutting error
E9-54	Electronic expansion valve defective circuit
E9-57	Electronic expansion valve (Y5E~Y6E) overcurrent error
F3-01	Compressor discharge temperature too high
F3-23	Compressor overload abnormality
F4-01	Wet operation caution
F4-02	Wet alarm for compressor M1C

Error code	Description
F4-08	Wet operation error for compressor M1C
F4-14	Indoor unit wet operation alarm
F6-01	Refrigerant overcharge detection by high pressure sensor S1NPH
F6-02	Refrigerant overcharge detection during test-run
F6-03	Refrigerant overcharge detection by high subcool value
H3-02	High pressure abnormality
H5-01	Compressor overload failure
H7-01	Defective fan inverter circuit
H7-21	Defective fan inverter circuit
H7-22	Defective fan inverter circuit
H9-01	Ambient temperature thermistor R1T abnormality
HA-01	Defrost fail alarm
J3-16	Discharge thermistor R21T open circuit
J3-17	Discharge thermistor R21T short circuit
J3-56	High discharge temperature
J5-01	Compressor suction thermistor R3T malfunction
J6-01	De–icer thermistor R7T abnormality
J7-06	Liquid thermistor R5T abnormality
J8-01	Heat exchanger liquid temperature thermistor R4T abnormality
J9-01	Superheat thermistor R6T abnormality
J9-08	Superheat thermistor R6T abnormality
JA-06	High pressure sensor S1NPH abnormality
JA-07	High pressure sensor S1NPH malfunction
JC-06	Low pressure sensor S1NPL abnormality
JC-07	Low pressure sensor S1NPL malfunction
L1-01	Inverter circuit abnormality
L1-02	Inverter circuit current detection primary circuit
L1-03	Inverter circuit current detection secondary circuit
L1-04	Power transistor error on inverter circuit
L1-05	Inverter circuit hardware fault
L1-28	Fan inverter circuit EEPROM error
L1-36	Inverter circuit EEPROM error
L1-47	Inverter circuit 16 V DC abnormal
L2-01	Power supply abnormality during test run
L2-04	Power supply abnormality during normal operation
L4-01	Inverter circuit high fin temperature

Error code	Description
L4-06	Fan inverter circuit high fin temperature
L5-03	Output overcurrent detection on inverter circuit
L8-03	Overcurrent on inverter circuit except start-up
L9-01	Stall prevention by inverter circuit
L9-13	Inverter circuit output phase abnormality
LC-01	Transmission abnormality
LC-14	Transmission abnormality control/inverter circuit
LC-19	Transmission abnormality main/fan inverter circuit
LC-33	Transmission abnormality main PCB/sub PCB
LC-37	Transmission abnormality main PCB/sub PCB
P1-01	Open phase or unbalanced power supply detection by inverter circuit
P4-01	Fin thermistor abnormality on inverter circuit
PJ-04	Capacity setting mismatch for inverter circuit
PJ-09	Capacity setting mismatch for fan inverter circuit
U0	Refrigerant shortage detection (Warning)
U0-05	Refrigerant shortage detection
U0-06	Refrigerant shortage detection
U0-08	Refrigerant shortage detection by high pressure sensor
U1-01	Reverse phase detection
U1-04	Reverse phase detection
U1-16	Open phase detection on Power supply
U1-19	Hz error detection on Power Supply
U2-01	Inverter circuit power supply abnormality - abnormal voltage
U2-02	Inverter circuit power supply abnormality - phase loss
U2-03	Inverter circuit power supply abnormality - DC circuit not charging
U3-02	Test run interrupted manually
U3-03	Test run not performed yet
U3-04	Test run ended abnormally
U3-05	Test run aborted on initial transmission
U3-06	Test run aborted on normal transmission
U3-07	Transmission abnormality on test run
U3-08	Transmission abnormality on test run
U4-01	Transmission error between indoor units and outdoor unit
U4-03	Transmission error between indoor units and system
U4-15	Unable to start test run

Error code	Description
U5-04	Communication abnormality between indoor unit main PCB and remote controller
U5-06	1 Supervisor remote controller not connected/not set
U7-01	Transmission abnormality between systems - DTA104A61,62 error
U7-02	Transmission abnormality between systems - DTA104A61,62 error
U7-11	Excess indoor units detected on test run
U7-24	Duplication of address setting on multiple DTA104A61,62 installation
U9-01	Other indoor unit has error
U9-02	Other system R32 leakage confirmed
UA-00	Combination abnormality
UA-03	Combination abnormality - Mix of R22, R407C, R410A and R32 type units detected
UA-13	Combination abnormality - Indoor unit not compatible with outdoor unit (refrigerant type)
UA-15	Combination abnormality - Outdoor unit not compatible with indoor unit (with self-cleaning panel)
UA-16	Combination abnormality - More than 18 indoor units detected on same system
UA-17	Combination abnormality - Local setting abnormality
UA-18	Combination abnormality - Outdoor unit not compatible with indoor units (refrigerant type)
UA-19	Combination abnormality - Local set alarm
UA-20	Combination abnormality - Non-compatible outdoor unit in multi-combination
UA-21	Combination abnormality - BPMK units detected
UA-38	Combination abnormality - Altherma hydro unit detected
UA-39	Combination abnormality - Incorrect combination
UA-50	Combination abnormality detected
UA-51	Combination abnormality - hydrobox units detected
UA-55	R32 pump down locked state (outdoor unit setting required)
UA-56	Back-up PCB not connected/abnormality
UA-57	Mechanical ventilation abnormality (external input is closed)
UA-58	Supervisor remote controller not connected/not set
UE-00	Communication abnormality with central controller
UF-01	Wiring and piping mismatch - Auto address inconsistency on F1-F2 transmission
UF-05	Wiring and piping mismatch - Stop valves closed or incorrect
UF-11	Wiring and piping mismatch - Excess connection ratio

Error code	Description
UH-01	Auto-address failure
UH-02	Auto-address failure

3.4 Symptom based troubleshooting

3.4.1 Normal operating conditions

Below items are a guideline on how to check normal operating conditions of the unit. Still, values are for reference ONLY and working conditions outside of this range do NOT necessarily address abnormalities and errors. Operating conditions are a result of several items to check together.

Item	Description	Normal value
Discharge superheat	Discharge pipe temperature – condensation temperature	25 K to 45 K

Discharge superheat = discharge pipe temperature – condensation temperature

- Discharge pipe temperature: Read out from discharge pipe thermistor R21T.
- Condensation temperature: Calculated by main PCB from the pressure read-out of the high pressure sensor.

Higher discharge superheat may result from refrigerant shortage or compressor internal by-pass.

Lower discharge superheat may result from low suction superheat which is caused by wet operation.

Item	Description	Normal value
Suction superheat	Suction temperature – evaporation temperature	5 K

Suction superheat = suction temperature – evaporation temperature

- Suction temperature: Read out from suction thermistor R3T
- Evaporation temperature: Calculated by main PCB from the pressure read-out of the low pressure sensor.

Suction superheat may be high if difference between [indoor set temperature – indoor air temperature] is too high and will result in high discharge superheat.

Suction superheat may be low if:

- Difference between [indoor set temperature – indoor air temperature] is too low
- Discharge superheat is too low (<20 K)
- Outdoor unit judges wet operation

3.4.2 Symptom: The system does not operate

- The air conditioner does not start immediately after the ON/OFF button on the user interface is pressed. If the operation lamp lights, the system is in normal condition. To prevent overloading of the compressor motor, the air conditioner starts 5 minutes after it is turned ON again in case it was turned OFF just before. The same starting delay occurs after the operation mode selector button was used.
- If "Under Centralized Control" is displayed on the user interface, pressing the operation button causes the display to blink for a few seconds. The blinking display indicates that the user interface cannot be used.
- The system does not start immediately after the power supply is turned on. Wait one minute until the micro computer is prepared for operation.

3.4.3 Symptom: Cool/Heat cannot be changed over

- When the display shows (change-over under centralized control), it shows that this is a slave user interface.
- When the cool/heat changeover remote control switch is installed and the display shows (change-over under centralized control), this is because cool/heat changeover is controlled by the cool/ heat changeover remote control switch. Ask your dealer where the remote control switch is installed.

3.4.4 Symptom: Fan operation is possible, but cooling and heating do not work

Immediately after the power is turned on. The micro computer is getting ready to operate and is performing a communication check with all indoor units. Please wait 12 minutes maximally until this process is finished.

3.4.5 Symptom: The fan speed does not correspond to the setting

ONLY for FXFA, FXZA and FXAA units:

The fan speed does not change even if the fan speed adjustment button is pressed. During heating operation, when the room temperature reaches the set temperature, the outdoor unit goes off and the indoor unit changes to whisper fan speed. This is to prevent cold air blowing directly on occupants of the room. The fan speed will not change even when another indoor unit is in heating operation, if the button is pressed.

3.4.6 Symptom: The fan direction does not correspond to the setting

The fan direction does not correspond with the user interface display. The fan direction does not swing. This is because the unit is being controlled by the micro computer.

3.4.7 Symptom: White mist comes out of a unit (Indoor unit)

- When humidity is high during cooling operation (for FXSA and FXDA: in oily and dusty places). If the interior of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the interior of the indoor unit. Ask your dealer for details on cleaning the unit. This operation requires a qualified service person.
- For FXFA, FXZA and FXAA: Immediately after the cooling operation stops and if the room temperature and humidity are low. This is because warm refrigerant gas flows back into the indoor unit and generates steam.
- For FXSA and FXDA: When the air conditioner is changed over to heating operation after defrost operation. Moisture generated by defrost becomes steam and exits.

3.4.8 Symptom: White mist comes out of a unit (Indoor unit, outdoor unit)

When the system is changed over to heating operation after defrost operation. Moisture generated by defrost becomes steam and is exhausted.

3.4.9 Symptom: The user interface reads "U4" or "U5" and stops, but then restarts after a few minutes

This is because the user interface is intercepting noise from electric appliances other than the air conditioner. The noise prevents communication between the units, causing them to stop. Operation automatically restarts when the noise ceases.

3.4.10 Symptom: Noise of air conditioners (Indoor unit)

- A "zeen" sound is heard immediately after the power supply is turned on. The electronic expansion valve inside an indoor unit starts working and makes the noise. Its volume will reduce in about one minute.
- A continuous low "shah" sound is heard when the system is in cooling operation or at a stop. When the drain pump (NOT available on wall mounted IU) is in operation, this noise is heard.
- A "pishi-pishi" squeaking sound is heard when the system stops after heating operation. Expansion and contraction of plastic parts caused by temperature change make this noise.
- A low "sah", "choro-choro" sound is heard while the indoor unit is stopped. When another indoor unit is in operation, this noise is heard. In order to prevent oil and refrigerant from remaining in the system, a small amount of refrigerant is kept flowing.

3.4.11 Symptom: Noise of air conditioners (Indoor unit, outdoor unit)

- A continuous low hissing sound is heard when the system is in cooling or defrost operation. This is the sound of refrigerant gas flowing through both indoor and outdoor units.
- A hissing sound which is heard at the start or immediately after stopping operation or defrost operation. This is the noise of refrigerant caused by flow stop or flow change.

3.4.12 Symptom: Noise of air conditioners (Outdoor unit)

When the tone of operating noise changes. This noise is caused by the change of frequency.

3.4.13 Symptom: Dust comes out of the unit

When the unit is used for the first time in a long time. This is because dust has gotten into the unit.

3.4.14 Symptom: The units can give off odours

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

3.4.15 Symptom: The outdoor unit fan does not spin

During operation. The speed of the fan is controlled in order to optimise product operation.

3.4.16 Symptom: The compressor in the outdoor unit does not stop after a short heating operation

This is to prevent refrigerant from remaining in the compressor. The unit will stop after 5 to 10 minutes.

3.4.17 Symptom: The inside of an outdoor unit is warm even when the unit has stopped

This is because the crankcase heater is warming the compressor so that the compressor can start smoothly.

3.4.18 Symptom: Hot air can be felt when the indoor unit is stopped

Several different indoor units are being run on the same system. When another unit is running, some refrigerant will still flow through the unit.

3.4.19 Symptom: Unit operation problems

Symptom	Possible failure	Root cause	Repair
Unit(s) do not operate	Unit(s) do not operate	Missing or abnormal power supply (reverse phase, missing phase, abnormal voltage...) to the outdoor unit	Check Power Supply. See "5.1 Electrical circuit" [▶ 306]
		Indoor unit(s) do not receive power supply	Check power supply to the indoor unit(s), check if HAP Led blinks, check fuse(s) on indoor unit board. Also check BPMKs in case indoor unit is of RA type.
		Mismatch of combination of outdoor unit and indoor unit	Check error codes. Check compatibility
		Out of operation range	Check operation range on databook
	All indoor units show icon blinking continuously	No Cool/Heat master is set	Select Cool/Heat Master by pressing Operating Mode button on the desired unit. The symbol will fade-away for Cool/Heat Master and will be fixed (not blinking) for the remaining indoor units
	Indoor unit(s) show icon blinking temporarily when ON button is pressed	The unit(s) are either under Centralized Control and prohibited to operate or under Forced OFF operation by T1/T2 input	Release prohibitions from central controller or check T1/T2 contact status or check indoor unit field setting for forced off
	Indoor units show fan-only mode	Transmission initialization not completed	See "To check F1-F2 transmission" [▶ 308]. Perform transmission re-initialization
			Check transmission wiring
			Check indoor unit PCBs
			Check outdoor unit main PCB, see "4.15 Main PCB" [▶ 212]
Operation sometimes stops	Power failure	A power failure consecutively more than 2 cycles may stop the air conditioner operation	Restore power supply. See "5.1 Electrical circuit" [▶ 306]

Symptom	Possible failure	Root cause	Repair
Operation stops and then restarts after 3 minutes.	Outdoor unit performing 'retry' operation	Retry mode triggered by an error	Check field setting 1-23, 1-24, 1-25 for latest retry content. See "7.9 Field settings" [▸ 396]. Refer to error code found for further troubleshooting.
Unit operates but does not cool or does not heat	Piping or wiring mismatch	Tranmission or piping problem	Correct piping, wiring
	Abnormal refrigerant amount	Outdoor unit may be overcharged or lacking refrigerant	Check refrigerant amount. See "5.2 Refrigerant circuit" [▸ 313]
	Incorrect thermistor values	Thermistors not in their location, miswiring or faulty thermistor	Check thermistors, see "4.26 Thermistors" [▸ 297]
	Incorrect expansion valve operation	Expansion valve not operating correctly	Check expansion valves. See "4.8 Expansion valve" [▸ 199]
	Cross piping/wiring among different outdoor unit systems	Indoor unit transmission line and piping is not connected to the same outdoor unit system	Correct piping, wiring

Symptom	Possible failure	Root cause	Repair
Disturbing operation noise and vibration	Faulty Inverter circuit output on main PCB	Instable output voltage from inverter circuit (on main PCB) to compressor(s)	Check Power Supply, see "5.1 Electrical circuit" [▶ 306]. Restore the power supply in conform with the requirements. Check inverter circuit on main PCB, see "4.15 Main PCB" [▶ 212]. Check compressor(s), see "4.4 Compressor" [▶ 181]
	Installation faults	Unit not installed according to installation manual	Check installation manual. Correct necessary items. Leave required space to outdoor unit for operation
	Wet operation	Liquid compression	Check thermistors. See "4.26 Thermistors" [▶ 297]. Check for refrigerant overcharge, see "5.2 Refrigerant circuit" [▶ 313]. Check expansion valves for heat exchanger that run as evaporator. Check superheat. Recover refrigerant and weigh. Charge refrigerant to the correct amount
	Flash gas on liquid piping	Expansion valve fault of refrigerant shortage	Check expansion valves for heat exchangers that run as evaporator. Check superheat. Recover refrigerant and weigh. Charge refrigerant to the correct amount

3.4.20 Other symptoms

Mode: Cooling	Low pressure	High pressure	Running current
Dirty air filters	Lower than normal	Lower than normal	Lower than normal
Air by-pass between air inlet/outlet @indoor unit	Lower than normal	Lower than normal	Lower than normal
Non condensables (i.e air) in refrigerant	Higher than normal	Higher than normal	Higher than normal
Moisture in refrigerant *1	Lower than normal	Lower than normal	Lower than normal
Impurities (dust, burr, ...) in refrigerant *2	Lower than normal	Lower than normal	Lower than normal
Refrigerant shortage	Lower than normal	Lower than normal	Lower than normal
Insufficient compression *3	Higher than normal	Lower than normal	Lower than normal

Mode: Heating	Low pressure	High pressure	Running current
Dirty air filters	Higher than normal	Higher than normal	Higher than normal
Air by-pass between air inlet/outlet @indoor unit	Higher than normal	Higher than normal	Higher than normal
Non condensables (i.e air) in refrigerant	Higher than normal	Higher than normal	Higher than normal
Moisture in refrigerant *1	Lower than normal	Lower than normal	Lower than normal
Impurities (dust, burr, …) in refrigerant *2	Lower than normal	Lower than normal	Lower than normal
Refrigerant shortage	Lower than normal	Lower than normal	Lower than normal
Insufficient compression *3	Higher than normal	Lower than normal	Lower than normal

*1 Water in the refrigerant freezes inside the electronic expansion valve and is basically the same phenomenon as pump-down.

*2 Dust, burr in refrigerant clogs refrigerant filters and results with symptoms of pump-down operation.

*3 Pressure difference between high and low pressure decreases.

4 Components

CAUTION

When replacing a component ALWAYS make sure the correct spare part for your unit is installed.

4.1 4-way valve

4.1.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

To perform a mechanical check of the 4-way valve

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.18 Plate work" [▸ 260].

DANGER: RISK OF BURNING/SCALDING

The coil gets hot while energized. Wait for it to cool down.

2 Verify that the screw is firmly fixing the coil to the valve body.

3 Check if any damage or burst is present.

Is the 4-way valve coil firmly fixed and not visually damaged?	Action
Yes	Perform an electrical check of the 4-way valve, see "4.1.1 Checking procedures" [▸ 165].
No	Fix or replace the 4-way valve coil, see "4.1.2 Repair procedures" [▸ 168].

To perform an electrical check of the 4-way valve

1 First perform a mechanical check of the 4-way valve, see "4.1.1 Checking procedures" [▸ 165].

2 Unplug the 4-way valve connector from the appropriate PCB.

3 Measure the resistance of the 4-way valve coil between the pins of the 4-way valve connector.

Result: The measured value must be 1737~1743 Ω.

Is the measured value correct?	Action
Yes	Continue with the next step.
No	Replace the 4-way valve coil, see "4.1.2 Repair procedures" [▸ 168].

When outdoor temperature is mild and unit can switch between heating and cooling

INFORMATION

This procedure is ONLY possible when the outdoor temperature is within the temperature range for both **Heating** and **Cooling** operation mode. See the databook on Business Portal for the temperature range of the operation modes.

1. Connect the 4-way valve connector to the appropriate PCB.
2. Turn ON the power using the respective circuit breaker.
3. Activate **Heating** operation via the user interface.
4. With the 4-way valve connector connected to the PCB, measure the voltage on the 4-way valve connection of the PCB.

   Result: The measured voltage MUST be 230 V AC.
5. De-activate **Heating** and activate **Cooling** operation via the user interface.
6. Measure the voltage on the 4-way valve connection on the PCB.

   Result: The measured voltage MUST be 0 V AC.

Are the measured voltages correct?	Action
Yes	Perform a position check of the 4-way valve, see "4.1.1 Checking procedures" [▸ 165].
No	Perform a check the main PCB, see "4.15 Main PCB" [▸ 212].

When outdoor temperature does not allow the unit to run in cooling or heating mode

INFORMATION

Follow this procedure when the outdoor temperature is outside the temperature range for one of the operation modes (**Heating** or **Cooling**). The unit CANNOT operate in the mode for which the outdoor temperature is outside its temperature range. See the databook on Business Portal for the temperature range of the operation modes.

1. Connect the 4-way valve connector to the appropriate PCB.
2. Turn ON the power using the respective circuit breaker.
3. With the unit operating, connect the service monitoring tool to the unit and check whether the unit is operating in **Heating** or **Cooling** mode.
4. With the 4-way valve connector connected to the PCB, measure the voltage on the 4-way valve connection of the PCB. The measured voltage MUST be:
   - 230 V AC when operating in **Heating** mode
   - 0 V AC when operating in **Cooling** mode

Is the measured voltage correct?	Action
Yes	Perform a position check of the 4-way valve, see "4.1.1 Checking procedures" [▸ 165].
No	Perform a check the main PCB, see "4.15 Main PCB" [▸ 212].

To perform a position check of the 4-way valve

1 First perform an electrical check of the 4-way valve, see "4.1.1 Checking procedures" [▶ 165].

When outdoor temperature is mild and unit can switch between heating and cooling

INFORMATION

This procedure is ONLY possible when the outdoor temperature is within the temperature range for both **Heating** and **Cooling** operation mode. See the databook on Business Portal for the temperature range of the operation modes.

1 Activate **Heating** operation via the user interface.

INFORMATION

It is recommended to connect the service monitoring tool to the unit and verify the operation mode of the 4-way valve.

2 Check with a contact thermometer (or by touching) if the flow through the 4-way valve corresponds with the flow shown in the flow diagram. (See "7.3 Piping diagram" [▶ 367]).

Is the flow correct?	Action
Yes	Skip the next step of this procedure.
No	Perform the next step of this procedure.

3 Connect a manifold to one of the service ports of the refrigerant circuit and check the pressure (suction, discharge). Compare with normal operation conditions of the unit.

Refrigerant pressure correct?	Action
Yes	Replace the body of the 4-way valve, see "4.1.2 Repair procedures" [▶ 168].
No	Leaks may be found in the refrigerant circuit. Perform a pressure test of the refrigerant circuit, see "5.2.1 Checking procedures" [▶ 313].

4 De-activate **Heating** and activate **Cooling** operation via the user interface.

5 Check with a contact thermometer (or by touching) if the flow through the 4-way valve corresponds with the flow shown in the flow diagram. (See "7.3 Piping diagram" [▶ 367]).

Is the flow correct?	Action
Yes	4-way valve is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the body of the 4-way valve, see "4.1.2 Repair procedures" [▶ 168].

When outdoor temperature does not allow the unit to run in cooling or heating mode

INFORMATION

Follow this procedure when the outdoor temperature is outside the temperature range for one of the operation modes (`Heating` or `Cooling`). The unit CANNOT operate in the mode for which the outdoor temperature is outside its temperature range. See the databook on Business Portal for the temperature range of the operation modes.

1 With the unit operating, connect the service monitoring tool to the unit and check whether the unit is operating in `Heating` or `Cooling` mode.

2 Check with a contact thermometer (or by touching) if the flow through the 4-way valve corresponds with the flow shown in the flow diagram of the specific operation mode. (See "7.3 Piping diagram" [▸ 367]).

Is the flow correct?	Action
Yes	4-way valve is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Perform the next step of this procedure.

3 Connect a manifold to one of the service ports of the refrigerant circuit and check the pressure (suction, discharge). Compare with normal operation conditions of the unit.

Refrigerant pressure correct?	Action
Yes	Replace the body of the 4-way valve, see "4.1.2 Repair procedures" [▸ 168].
No	Leaks may be found in the refrigerant circuit. Perform a pressure test of the refrigerant circuit, see "5.2.1 Checking procedures" [▸ 313].

4.1.2 Repair procedures

To remove the 4-way valve coil

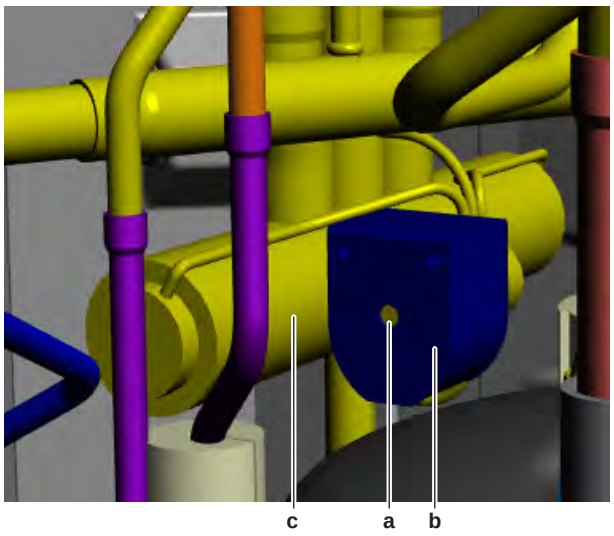
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

Prerequisite: If needed, remove any parts to create more space for the removal of the 4-way valve coil.

1 Remove the screw and remove the 4-way valve coil from the 4-way valve body.



a Screw
b 4-way valve coil
c 4-way valve body

2 Cut all tie straps that fix the 4-way valve coil harness.

3 Unplug the 4-way valve connector from the appropriate PCB.

4 To install the 4-way valve coil, see "4.1.2 Repair procedures" [▸ 168].

To remove the 4-way valve body

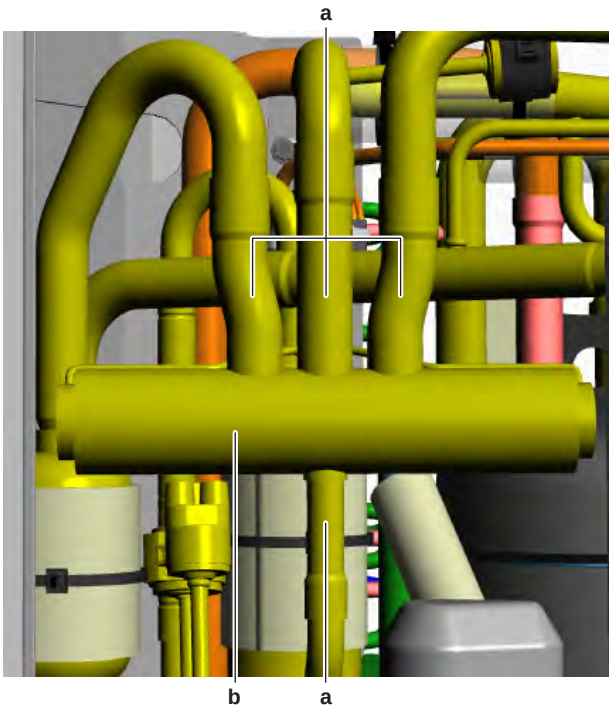
Prerequisite: Recuperate the refrigerant from the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 318].

1 Remove the 4-way valve coil from the 4-way valve body, see "4.1.2 Repair procedures" [▸ 168].

2 Remove and keep the putty (if installed) and the insulation (if installed) for re-use.

3 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

4 Wrap a wet rag around the components near the 4-way valve pipes. Heat the brazing points of the 4-way valve pipes using an oxygen acetylene torch and remove the 4-way valve pipes from the refrigerant pipes using pliers.



a 4-way valve pipe
b 4-way valve

5 Stop the nitrogen supply when the piping has cooled down.

6 Remove the 4-way valve.

> **INFORMATION**
>
> It is ALSO possible to cut the component pipe(s) using a pipe cutter. Make sure to remove the remaining component pipe end(s) from the refrigerant pipes by heating the brazing point(s) of the component pipe(s) using an oxygen acetylene torch.

7 Install plugs or caps on the open pipe ends of the refrigerant piping to avoid dirt or impurities from entering the piping.

8 To install the 4-way valve body, see "4.1.2 Repair procedures" [▸ 168].

To install the 4-way valve body

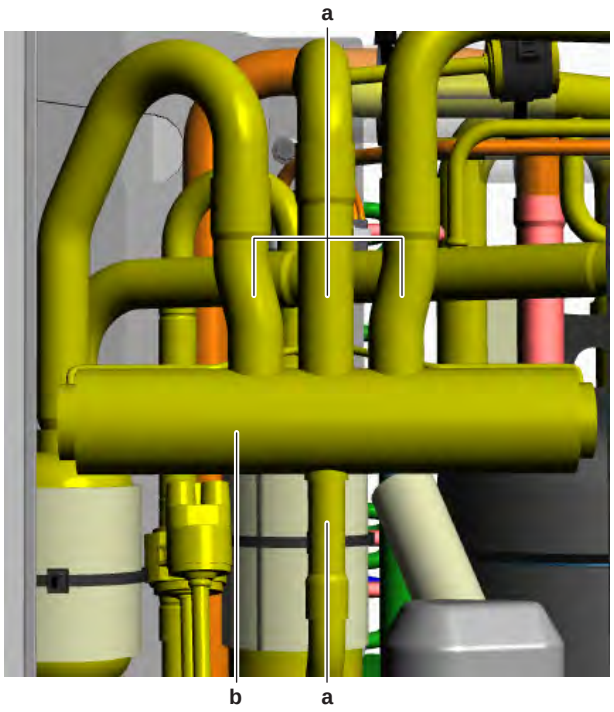
1 Remove the plugs or caps from the refrigerant piping and make sure they are clean.

2 Remove the 4-way valve coil from the spare part 4-way valve body.

3 Install the 4-way valve body in the correct location and correctly oriented. Insert the pipe ends in the pipe expansions.

4 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

5 Wrap a wet rag around the 4-way valve body and any other components near the 4-way valve and solder the 4-way valve pipes to the refrigerant pipes.



a 4-way valve pipe
b 4-way valve

CAUTION

Overheating the valve will damage or destroy it.

6 After soldering is done, stop the nitrogen supply after the component has cooled-down.

7 Install the putty (if available) and the insulation (if available) in their original location.

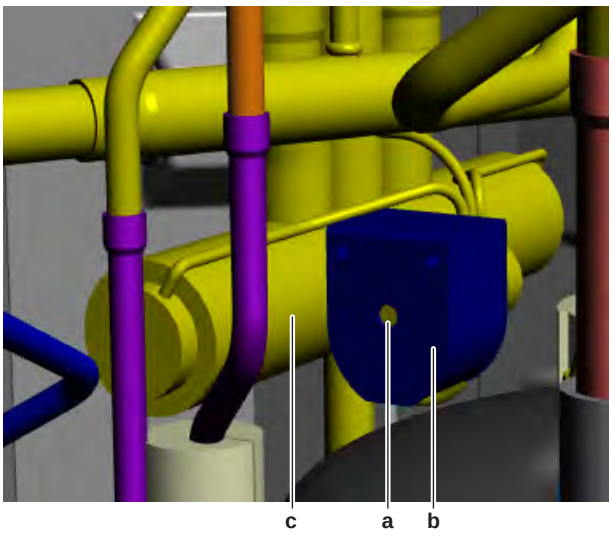
8 Install the 4-way valve coil on the 4-way valve body, see "4.1.2 Repair procedures" [▸ 168].

9 Perform a pressure test, see "5.2.1 Checking procedures" [▸ 313].

10 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 318].

To install the 4-way valve coil

1 Install the 4-way valve coil on the 4-way valve body.



a Screw
b 4-way valve coil
c 4-way valve body

2 Install and tighten the screw to fix the 4-way valve coil.

3 Route the 4-way valve coil harness towards the appropriate PCB.

4 Connect the 4-way valve connector to the appropriate PCB.

WARNING

When reconnecting a connector to the PCB, make sure to connect it on the correct location and do NOT apply force, as this may damage the connector or connector pins of the PCB.

5 Fix the 4-way valve coil harness using new tie straps.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.2 ABC I/P PCB

4.2.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

To perform a power check of the ABC I/P PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

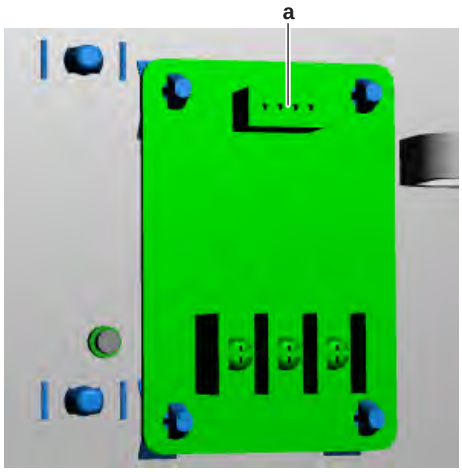
1 Access the back side of the switch box, see "4.18 Plate work" [▸ 260].

2 Visually check the PCB for damage and burnt-out components. If any damage found, replace the PCB, see "4.2.2 Repair procedures" [▸ 175].

3 Turn ON the power of the unit.

4 Measure the voltage on pins 1-4 of connector X1A when connected to the ABC I/P PCB.

Result: The measured voltage MUST be 14.5 V DC ± 10%.



a Connector X1A

Is the measured voltage correct?	Action
Yes	Return to "4.2.1 Checking procedures" [▸ 172] of the ABC I/P PCB and continue with the next procedure.
No	Continue with the next step.

5 Measure the output voltage on pins 1-5 of connector X66A of the main PCB.

Result: The measured voltage MUST be 14.5 V DC ± 10%.

Is the measured output voltage correct?	Action
Yes	Correct the wiring between the main PCB and ABC I/P PCB, see "5.1.2 Repair procedures" [▸ 311].
No	Perform a check of main PCB, see "4.15 Main PCB" [▸ 212].

To check the wiring of the ABC I/P PCB

Prerequisite: First check the power supply to the ABC I/P PCB, see "4.2.1 Checking procedures" [▸ 172].

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Check that all wires are properly connected and that all connectors are fully plugged-in.

2 Check that no connectors or wires are damaged.

3 Check that the wiring corresponds with the wiring diagram, see "7.2 Wiring diagram" [▸ 343].

INFORMATION

Correct the wiring as needed.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.2.1 Checking procedures" [▸ 172] of the ABC I/P PCB and continue with the next procedure.

To perform an operation check of the ABC I/P PCB

Prerequisite: First perform all earlier checks of the ABC I/P PCB, see "4.2.1 Checking procedures" [▸ 172].

1. Disconnect all wiring from the input wiring terminal (field wiring side) X3M.
2. Turn ON the power using the respective circuit breaker.
3. Wait until initialization is completed (7-segment display on outdoor unit is OFF).
4. Set the DIP switch DS1-1 on the outdoor unit main PCB to ON position to activate the Cool/Heat selector switch input.

INFORMATION

Make sure that the wiring between the ABC I/P PCB and the input wiring terminal (field wiring side) is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▸ 343].

5. Create the following situations on the input wiring terminal X3M and measure the output voltage between the appropriate pins of connector X1A on the ABC I/P PCB. Use a short transmission cable to simulate short-circuit on the input wiring terminal X3M (field wiring side):

Input wiring terminal	Input situation	Meassuring points on connector X1A	Output voltage
X3M	1-3: Open circuit	Pin 2-4	0 V DC
	1-3: Short-circuit	Pin 2-4	5 V DC
	2-3: Open circuit	Pin 3-4	0 V DC
	2-3: Short-circuit	Pin 3-4	5 V DC

Are the measured voltages correct?	Action
Yes	Return to "4.2.1 Checking procedures" [▸ 172] of the ABC I/P PCB and continue with the next procedure.
No	Replace the ABC I/P PCB, see "4.2.2 Repair procedures" [▸ 175].

To check if the correct spare part is installed

Prerequisite: First perform all earlier checks of the ABC I/P PCB, see "4.2.1 Checking procedures" [▸ 172].

1. Visit your local spare parts webbank.
2. Enter the model name of your unit and check if the installed spare part number corresponds with the spare part number indicated in the webbank.

Is the correct spare part for the ABC I/P PCB installed?	Action
Yes	Return to "4.2.1 Checking procedures" [▸ 172] of the ABC I/P PCB and continue with the next procedure.
No	Replace the ABC I/P PCB, see "4.2.2 Repair procedures" [▸ 175].

Problem solved?

After all checking procedures listed above have been performed:

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.2.2 Repair procedures

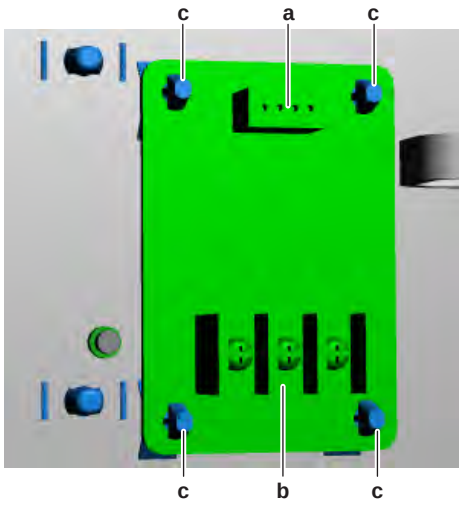
To remove the ABC I/P PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1. Remove the switch box from the unit, see "4.18 Plate work" [▸ 260].
2. Disconnect the connector X1A from the ABC I/P PCB.



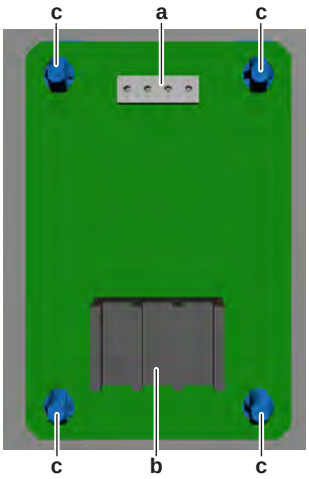
a Connector X1A
b Wiring terminal X1M
c PCB support

3. Loosen the screws and disconnect the wiring from the wiring terminal X1M on the ABC I/P PBC.
4. Carefully pull the ABC I/P PCB and unlatch the PCB supports one by one using a small pair of pliers.
5. Remove the ABC I/P PCB from the PCB mounting plate.
6. To install the ABC I/P PCB, see "4.2.2 Repair procedures" [▸ 175].

To install the ABC I/P PCB

1 Install the ABC I/P PCB in the correct location in the switch box.

2 Attach the ABC I/P PCB to the PCB supports.



a Connector X1A
b Wiring terminal X1M
c PCB support

3 Connect the wiring to the wiring terminal X1M on the ABC I/P PCB. Fix using the screws.

4 Connect the connector X1A to the ABC I/P PCB.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.2.1 Checking procedures" [▸ 172] of the ABC I/P PCB and continue with the next procedure.

4.3 Back-up PCB

4.3.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

To perform a power check of the back-up PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

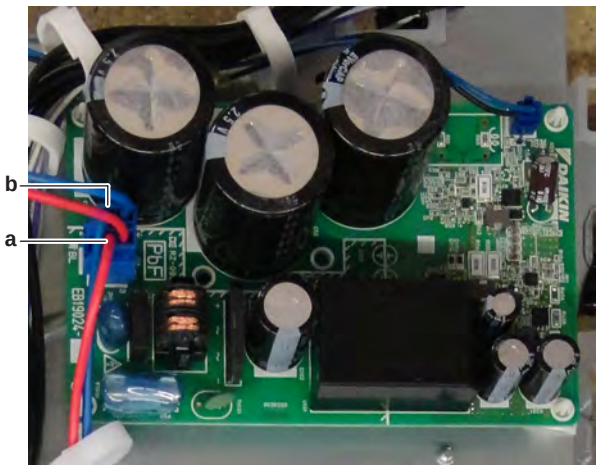
Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1 Access the back side of the switch box, see "4.18 Plate work" [▸ 260].

2 Turn ON the power of the unit.

3 Measure the voltage between pins 1-2 of connector X1A of the back-up PCB.

Result: The measured voltage MUST be 200~240 V AC.



a Connector X1A pin 1
b Connector X1A pin 2

Is the measured voltage on the back-up PCB correct?	Action
Yes	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.
No	Continue with the next step.

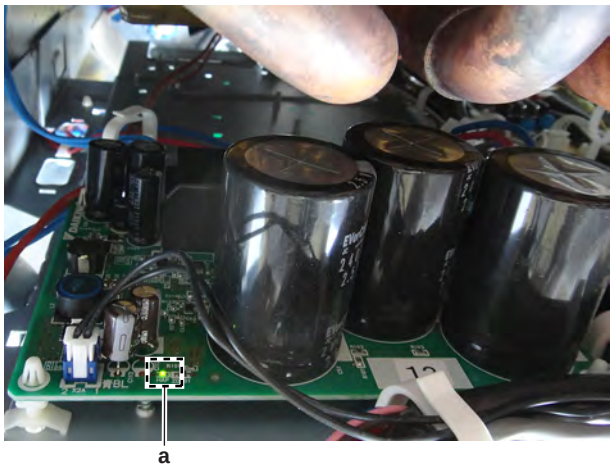
4 Check the power supply to the unit, see "5.1.1 Checking procedures" [▸ 306].

Does the unit receive power?	Action
Yes	Correct the wiring from the main power supply terminal to the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].
No	Adjust the power supply to the unit, see "5.1.2 Repair procedures" [▸ 311].

To check the HAP LED of the back-up PCB

Prerequisite: First perform a power check of the back-up PCB, see "4.3.1 Checking procedures" [▸ 176].

1 Locate the HAP LED on the back-up PCB.



a HAP LED

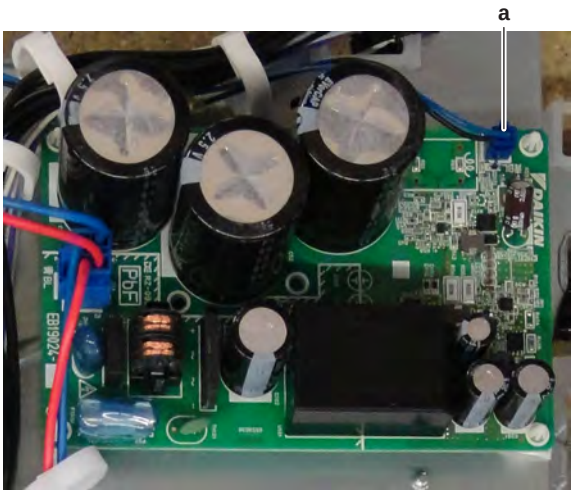
Does the HAP LED burn continuously?	Action
Yes	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.
No	Replace the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].

To perform an electrical check of the back-up PCB

Prerequisite: First perform all earlier checks of the back-up PCB, see "4.3.1 Checking procedures" [▸ 176].

1 Measure the voltage on connector X2A of the back-up PCB.

Result: The measurement MUST be 13.8 V DC ± 10%.



a Connector X2A

Is the measured voltage correct?	Action
Yes	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.
No	Replace the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].

To check if the correct spare part is installed

Prerequisite: First perform all earlier checks of the back-up PCB, see "4.3.1 Checking procedures" [▸ 176].

1 Visit your local spare parts webbank.

2 Enter the model name of your unit and check if the installed spare part number corresponds with the spare part number indicated in the webbank.

Is the correct spare part for the back-up PCB installed?	Action
Yes	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.
No	Replace the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].

To check the wiring of the back-up PCB

Prerequisite: First perform all earlier checks of the back-up PCB, see "4.3.1 Checking procedures" [▸ 176].

Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 20 minutes after the circuit breaker has been turned OFF, to be sure NO residual voltage is present on the back-up PCB. HAP LED MUST be OFF, see "To prevent electrical hazards" [▸ 307].

2 Check that all wires are properly connected and that all connectors are fully plugged-in.

3 Check that no connectors or wires are damaged.

4 Check that the wiring corresponds with the wiring diagram, see "7.2 Wiring diagram" [▸ 343].

INFORMATION

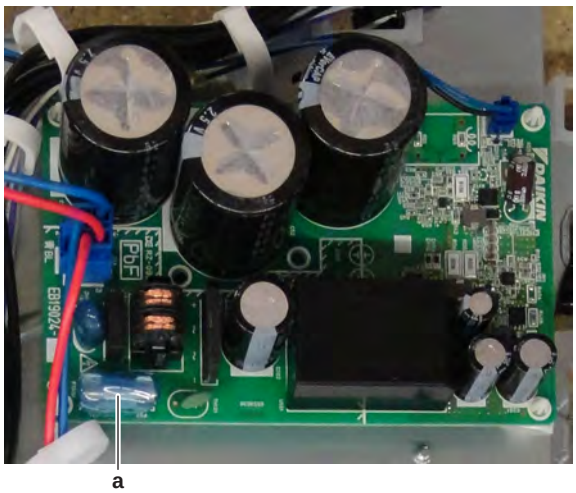
Correct the wiring as needed.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.

To check the fuse of the back-up PCB

Prerequisite: First perform all earlier checks of the back-up PCB, see "4.3.1 Checking procedures" [▸ 176].

1 Measure the continuity of the fuse. If no continuity is measured, the fuse has blown.



a Fuse F101U

Blown fuse on the back-up PCB?	Action
Yes	Replace the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].

Blown fuse on the back-up PCB?	Action
No	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.

Problem solved?

After all checking procedures listed above have been performed:

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.3.2 Repair procedures

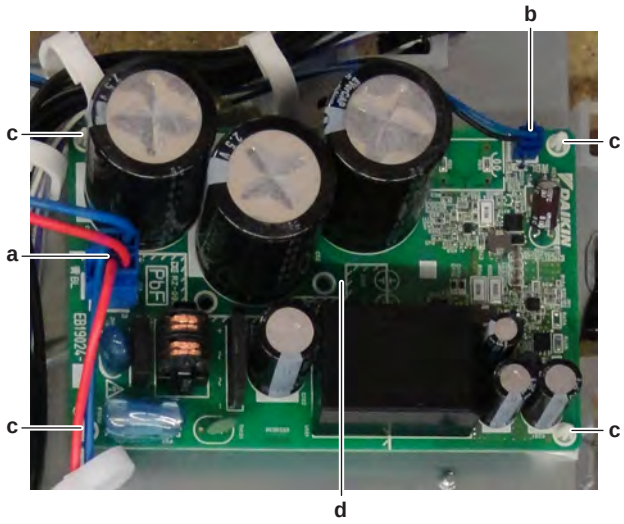
To remove the back-up PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1. Remove the switch box from the unit, see "4.18 Plate work" [▸ 260].
2. Disconnect the connectors X1A and X2A from the back-up PCB.

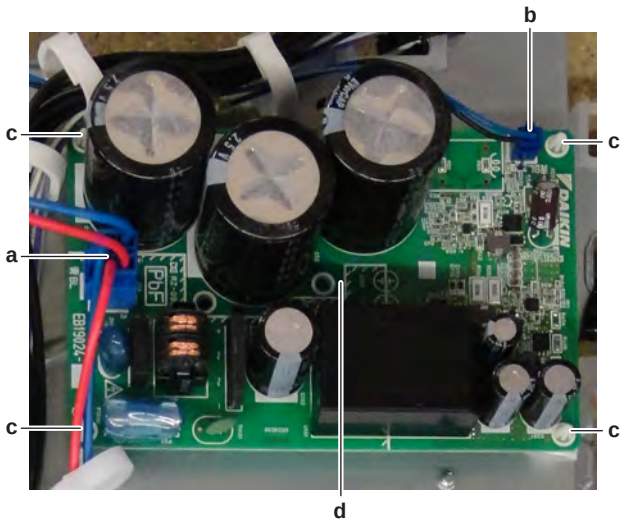


a Connector X1A
b Connector X2A
c PCB support
d Back-up PCB

3. Carefully pull the back-up PCB and unlatch the PCB supports one by one using a small pair of pliers.
4. Remove the back-up PCB from the PCB mounting plate.
5. To install the back-up PCB, see "4.3.2 Repair procedures" [▸ 180].

To install the back-up PCB

1. Install the back-up PCB in the correct location in the switch box.
2. Attach the back-up PCB to the PCB supports.



a Connector X1A
b Connector X2A
c PCB support
d Back-up PCB

3 Connect the connectors X1A and X2A to the back-up PCB.

4 Install the switch box in the unit, see "4.18 Plate work" [▸ 260].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.3.1 Checking procedures" [▸ 176] of the back-up PCB and continue with the next procedure.

4.4 Compressor

4.4.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

To perform an auditive check of the compressor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1 Open the compressor insulation.

2 Turn ON the power using the respective circuit breaker.

3 Start the unit operation via the user interface.

4 Wait for - or create condition to operate the compressor.

5 Listen to the compressor when it tries to operate. Judge if a mechanical lock is present.

INFORMATION

If you have a multimeter with data logging functionality, record the current in 1 of the U-V-W wires at compressor start-up. If mechanical lock is present, logged current will drastically increase to a peak value and the unit will trigger an error.

INFORMATION

If a mechanical lock is present, also check and eliminate the root cause. Mechanical lock is most likely caused by lack of lubrication (which might be related to overheat or wet operation), failing crankcase heater (if available), impurities in the refrigerant, ...

A mechanical lock is present on the compressor?	Action
Yes	Replace the compressor, see "4.4.2 Repair procedures" [▸ 187].
No	Perform an mechanical check of the compressor, see "4.4.1 Checking procedures" [▸ 181].

To perform a mechanical check of the compressor

Prerequisite: First perform an auditive check of the compressor, see "4.4.1 Checking procedures" [▸ 181].

Prerequisite: Stop the unit operation via the user interface.

1. Turn OFF the respective circuit breaker.
2. Visually check:
   - For oil drops around the compressor. Locate and fix as needed.
   - Pipes for signs of damage. Replace pipes as needed.
3. Check that the compressor bolts are correctly fixed. Fix as needed.
4. Check that the compressor wire terminals cover is correctly installed and fixed. Correct as needed.
5. Check the compressor dampers for any damage.

a Damper

INFORMATION

The compressor dampers may look different.

Compressor dampers are in a good condition?	Action
Yes	Perform an electrical check of the compressor, see "4.4.1 Checking procedures" [▸ 181].
No	Replace the compressor and/or damaged dampers, see "4.4.2 Repair procedures" [▸ 187].

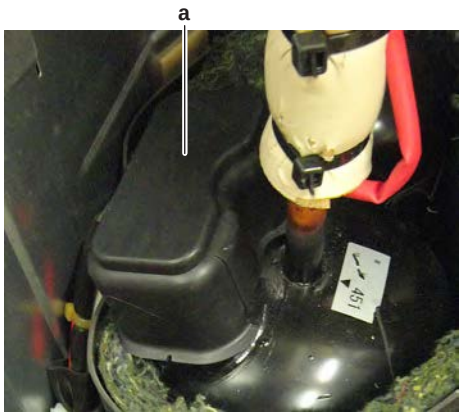
To perform an electrical check of the compressor

1 First perform a mechanical check of the compressor, see "4.4.1 Checking procedures" [▸ 181].

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Remove the cover of the compressor wire terminals.

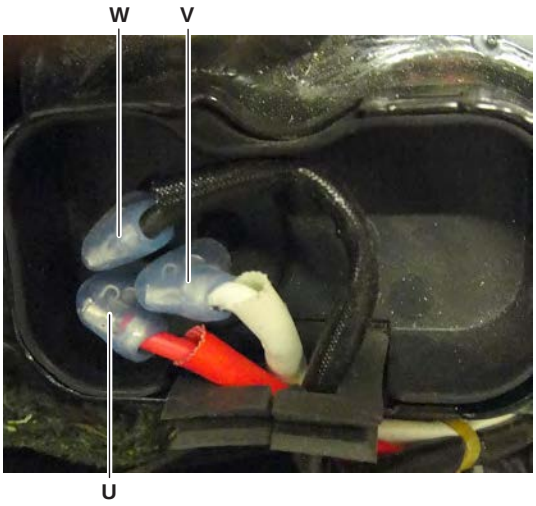


a Compressor wire terminals cover

3 Disconnect the Faston connectors from the compressor wire terminals U, V and W.

INFORMATION

Note the position of the Faston connectors on the compressor wire terminals to allow correct connection during installation.



c Wire terminal U
V Wire terminal V
W Wire terminal W

CAUTION

Before measuring the compressor motor windings resistance, measure the resistance of the multimeter probes by holding the probes against each other. If the measured resistance is NOT 0 Ω, this value MUST be substracted from the measured winding resistance.

4 Measure the resistance between the compressor motor windings U-V, V-W and U-W.

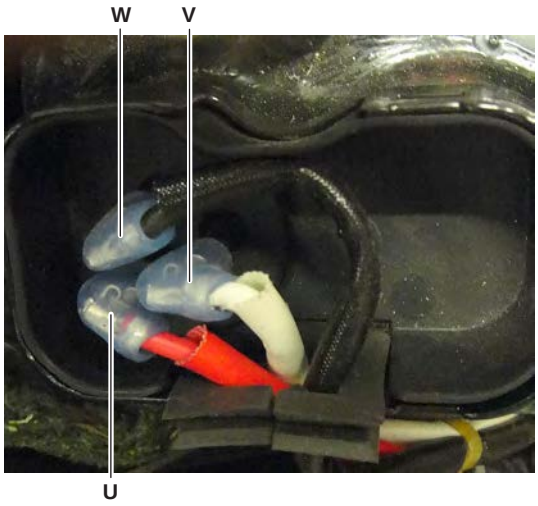
Result: All measurements MUST be approximately the same.

Unit	Compressor	Winding resistance value (at temperature of 20°C)
RXYSA4~6A7V1B	M1C	0.343 Ω ± 5%
RXYSA4~6A7Y1B	M1C	1.16 Ω ± 5%

Compressor motor winding measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the compressor, see "4.4.2 Repair procedures" [▸ 187].

5 Measure the continuity of the U, V and W wires between the compressor and the PCB. If no continuity, correct as needed, see "7.2 Wiring diagram" [▸ 343].

6 Connect the Faston connectors to the compressor wire terminals U, V and W



c Wire terminal U
V Wire terminal V
W Wire terminal W

7 Install the compressor insulation.

8 Turn ON the power using the respective circuit breaker.

9 Start the unit operation via the user interface.

10 Wait for – or create condition to operate the compressor.

11 Once the compressor operates, measure the U-V-W inverter voltages. All measurements MUST be the same.

Inverter voltage measurements are correct?	Action
Yes	Continue with the next step.
No	Perform a check of the appropriate PCB, see "4 Components" [▸ 165].

12 Measure the current in each phase U, V and W while compressor is operating. All measurements MUST be the same.

Compressor motor winding current measurements are correct?	Action
Yes	Perform an insulation check of the compressor, see "4.4.1 Checking procedures" [▸ 181].
No	Preventively replace the compressor, see "4.4.2 Repair procedures" [▸ 187].

To perform an insulation check of the compressor

Prerequisite: First perform an electrical check of the compressor, see "4.4.1 Checking procedures" [▸ 181].

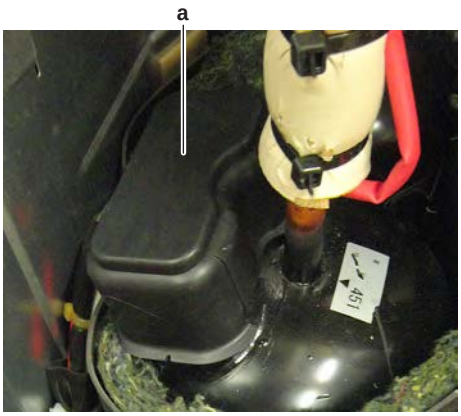
Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

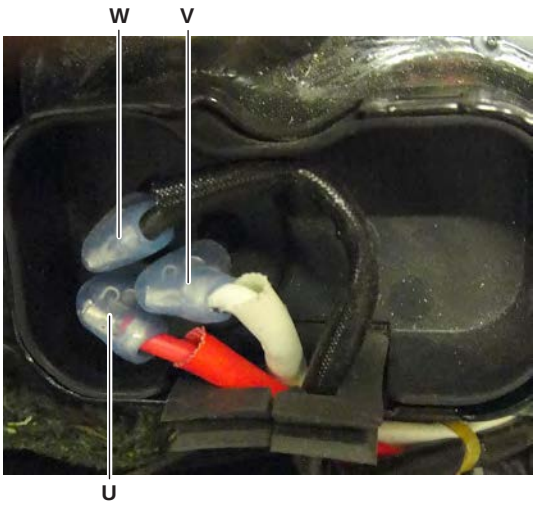
2 Remove the cover of the compressor wire terminals.



a Compressor wire terminals cover

3 Disconnect the Faston connectors from the compressor wire terminals U, V and W.

> **INFORMATION**
>
> Note the position of the Faston connectors on the compressor wire terminals to allow correct connection during installation.



c Wire terminal U
V Wire terminal V
W Wire terminal W

4 Set the Megger voltage to 500 V DC or 1000 V DC.

5 Measure the insulation resistance between the following terminals. The measured insulation resistance MUST be >3 MΩ.

- U–ground,
- V–ground,
- W–ground.

Compressor insulation measurements are correct?	Action
Yes	Compressor is OK. Return to troubleshooting of the specific error and continue with the next procedure.
No	Replace the compressor, see "4.4.2 Repair procedures" [▶ 187].

4.4.2 Repair procedures

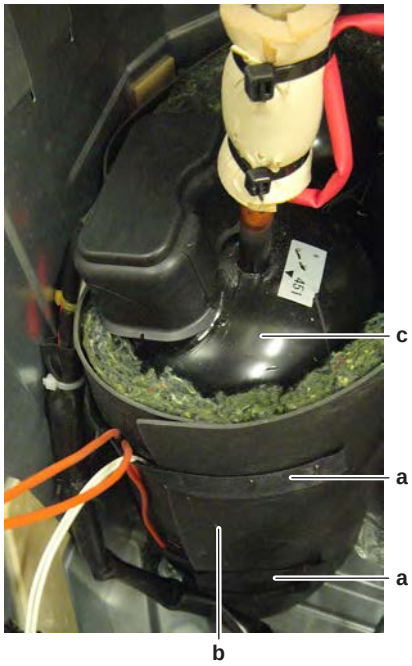
To remove the compressor insulation

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1 Detach all the strips.



a Strip
b Compressor insulation
c Compressor

2 Remove the compressor insulation from the compressor.

3 To install the compressor insulation, see "4.4.2 Repair procedures" [▸ 187].

To remove the compressor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

Prerequisite: Remove the compressor insulation.

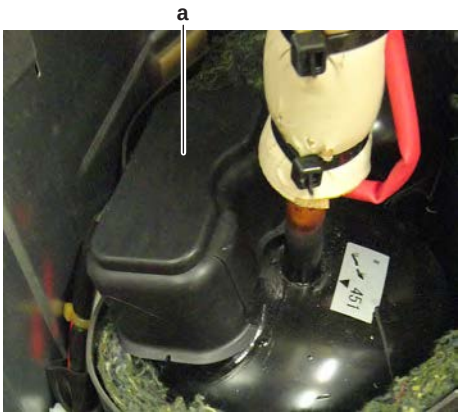
Prerequisite: Recuperate the refrigerant from the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 318].

1 If needed, remove any parts to create more space for the removal of the compressor.

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

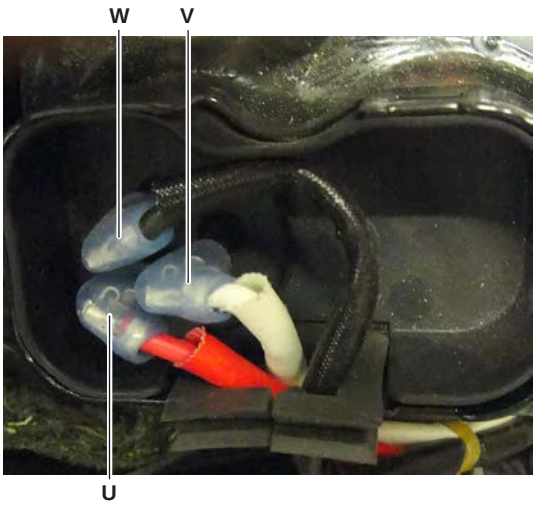
2 Remove the cover of the compressor wire terminals.



a Compressor wire terminals cover

3 Disconnect the Faston connectors from the compressor wire terminals U, V and W.

> **INFORMATION**
>
> Note the position of the Faston connectors on the compressor wire terminals to allow correct connection during installation.



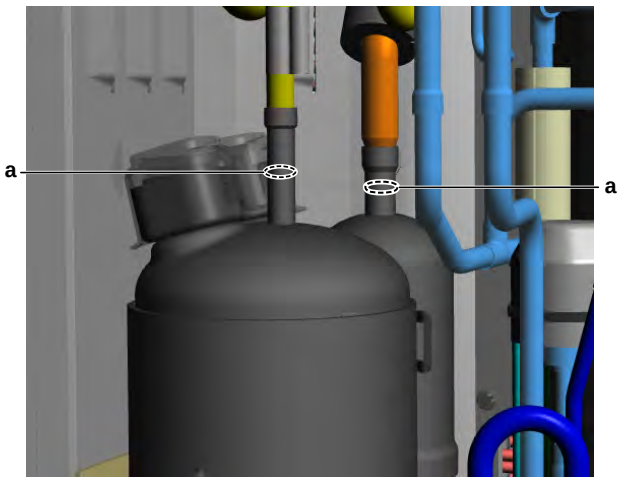
c Wire terminal U
V Wire terminal V
W Wire terminal W

Remove the crankcase heater, see "To remove the crankcase heater" [▸ 198].

4 Remove the compressor thermal protector, see "To remove the compressor thermal protector" [▸ 193].

5 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

6 Wrap a wet rag around the components near the compressor pipes. Heat the brazing points of the compressor pipes using an oxygen acetylene torch and remove the refrigerant pipes from the compressor pipes using pliers.

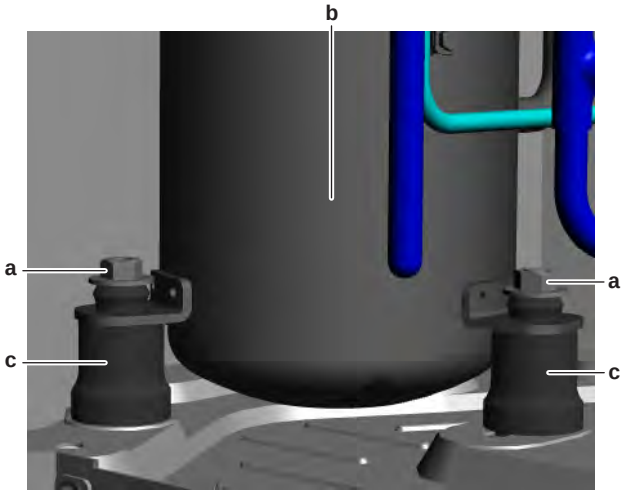


a Compressor pipe

7 Stop the nitrogen supply when the piping has cooled down.

> **INFORMATION**
>
> It is ALSO possible to cut the component pipe(s) using a pipe cutter. Make sure to remove the remaining component pipe end(s) from the refrigerant pipes by heating the brazing point(s) of the component pipe(s) using an oxygen acetylene torch.

8 Remove the nuts and bolts and remove the compressor from the unit.



a Nut
b Compressor
c Damper

9 Remove the 3 dampers from the compressor.

> **INFORMATION**
>
> The compressor dampers may look different.

10 Remove the bushings and keep them for re-use.

11 Install plugs or caps on the open pipe ends of the refrigerant piping to avoid dirt or impurities from entering the piping.

12 To install the compressor, see "4.4.2 Repair procedures" [▸ 187].

To install the compressor

1 Check the state of the dampers. Replace if worn.

2 Install the 3 dampers in the correct location on the unit.

3 Remove the plugs or caps from the refrigerant piping and make sure they are clean.

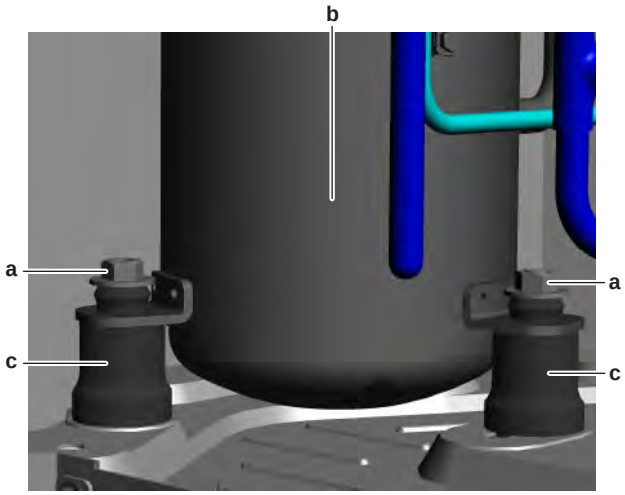
4 Remove the caps from the compressor pipes (of the new compressor).

CAUTION

The oil in the compressor is hygroscopic. Therefore remove the caps from the compressor pipes as late as possible.

5 Install the compressor on the correct location on the dampers. Properly insert the refrigerant pipes in the pipe expansions of the compressor pipes.

6 Install and tighten the bolts and nuts to fix the compressor to the dampers.



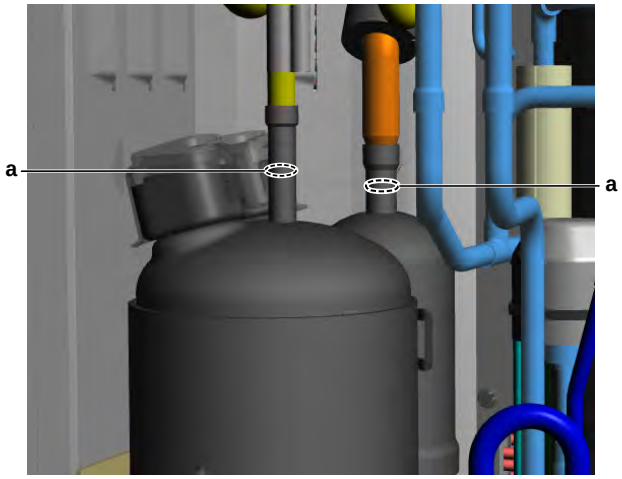
a Nut
b Compressor
c Damper

INFORMATION

The compressor dampers may look different.

7 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

8 Wrap a wet rag around the compressor pipes and any other components near the compressor and solder the compressor pipes to the refrigerant pipes.



a Compressor pipe

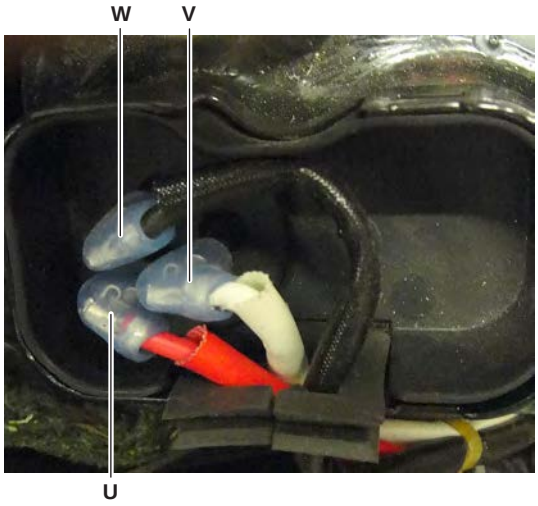
CAUTION

Overheating the compressor pipes (and the oil inside the compressor pipes) will damage or destroy the compressor.

9 After soldering is done, stop the nitrogen supply after the component has cooled-down.

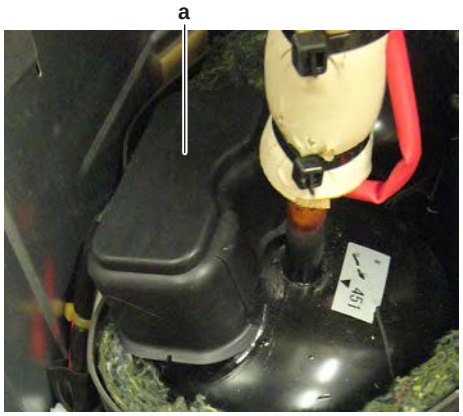
10 Install the compressor thermal protector, see "To install the compressor thermal protector" [▸ 194].

11 Connect the Faston connectors to the compressor wire terminals U, V and W



c Wire terminal U
V Wire terminal V
W Wire terminal W

12 Install the cover of the compressor wire terminals.



a Compressor wire terminals cover

Install the crankcase heater, see "To install the crankcase heater" [▸ 198]

13 Install the compressor insulation, see "4.4.2 Repair procedures" [▸ 187].

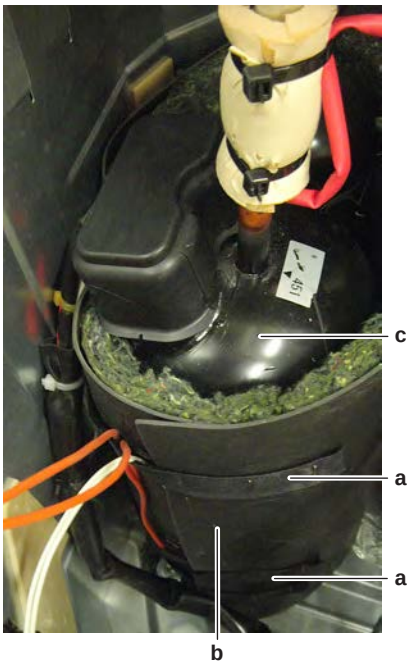
14 Perform a pressure test, see "5.2.1 Checking procedures" [▸ 313].

15 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 318].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

To install the compressor insulation

1 Install the insulation around the compressor.



a Strip
b Compressor insulation
c Compressor

2 Route the compressor thermal protector and crankcase heater wiring out of the compressor insulation.

3 Attach the strips.

INFORMATION

Make sure that the insulation nicely fits around the compressor.

4.5 Compressor thermal protector

4.5.1 Checking procedures

To perform a mechanical check of the compressor thermal protector

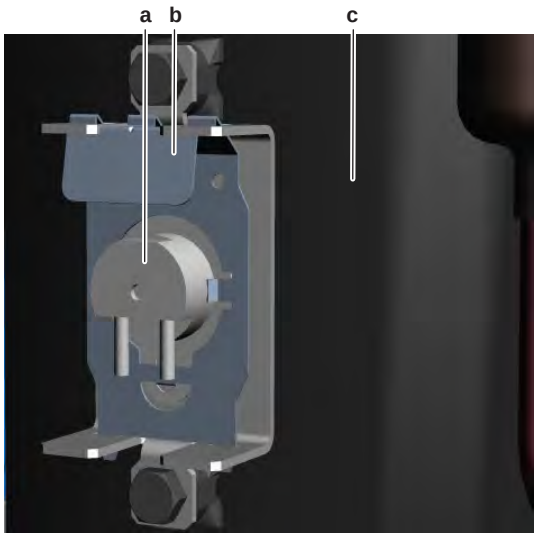
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

Prerequisite: Remove the compressor insulation.

1 Remove the compressor thermal protection with bracket from the compressor.



a Compressor thermal protector
b Bracket
c Compressor

2 If in doubt, measure the temperature of the compressor thermal protection.

Result: The temperature MUST be below 104°C.

3 Using a hot air gun, carefully heat the compressor thermal protection to slightly above 132°C (compressor thermal protection trips at 126~132°C).

INFORMATION

Make sure that the wiring between the compressor thermal protector connector and the connector on the PCB is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▸ 343].

4 Disconnect the compressor thermal protector from the intermediate connector and measure the resistance between pins 1-2.

Result: The contact MUST be open (measured resistance = OL).

5 Let the compressor thermal protection cool down below 104°C (reset temperature is 104~116°C).

6 Again measure the resistance between the pins 1-2 of the connector of the compressor thermal protector.

Result: The contact MUST be closed (measured resistance = 0 Ω).

Does the compressor thermal protector contact open and close at the correct temperature?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the compressor thermal protector, see "4.5.2 Repair procedures" [▸ 193].

4.5.2 Repair procedures

To remove the compressor thermal protector

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

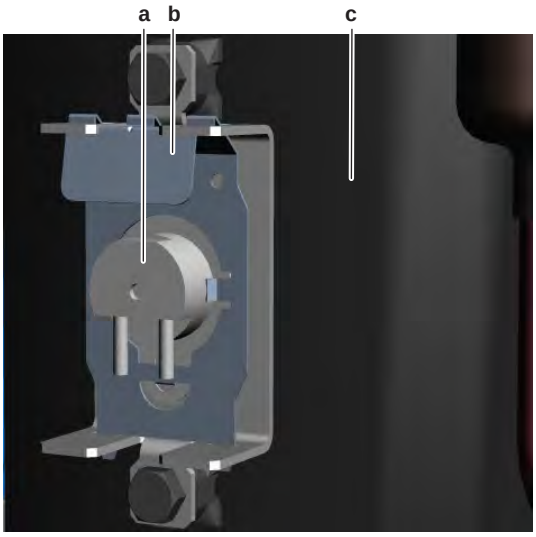
Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

Prerequisite: Remove the compressor insulation.

1 Disconnect the intermediate connector from the compressor thermal protector.

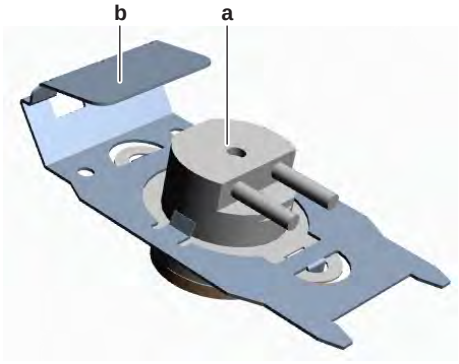
2 Cut all tie straps that fix the compressor thermal protector wiring harness.

3 Remove the compressor thermal protector with bracket from the compressor housing.



a Compressor thermal protector
b Bracket
c Compressor

4 Separate the compressor thermal protector and the compressor thermal protector bracket.

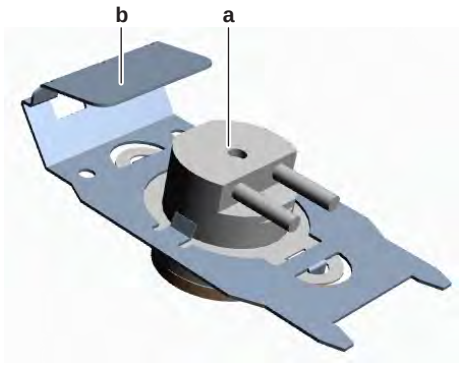


a Compressor thermal protector
b Bracket

5 To install the compressor thermal protector, see "4.4.2 Repair procedures" [▸ 187].

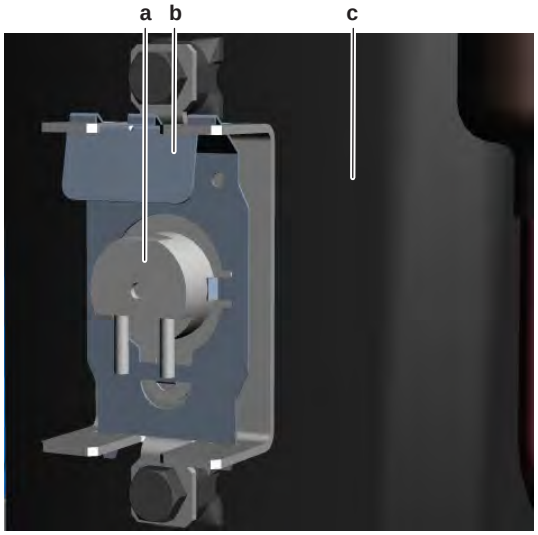
To install the compressor thermal protector

1 Install the compressor thermal protector on the compressor thermal protector bracket.



a Compressor thermal protector
b Bracket

2 Install the compressor thermal protector and bracket on the compressor housing.



a Compressor thermal protector
b Bracket
c Compressor

3 Connect the compressor thermal protector to the intermediate connector.

4 Install new tie straps to fix the compressor thermal protector wiring harness.

5 Install the compressor insulation, see "4.4.2 Repair procedures" [▸ 187].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.6 Crankcase heater

4.6.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

To perform an electrical check of the crankcase heater

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

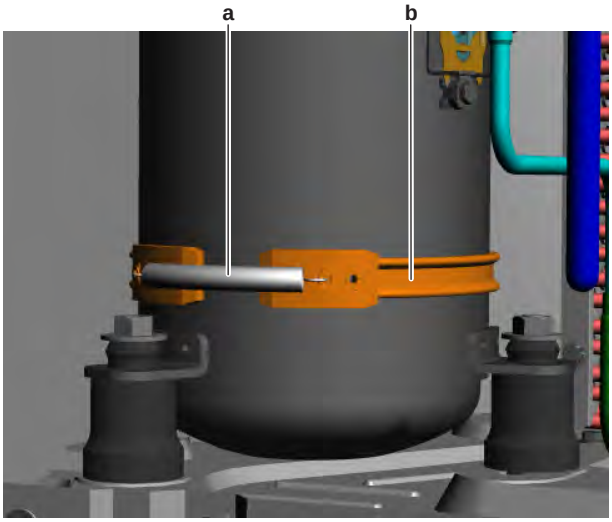
1 Remove the required plate work, see "4.18 Plate work" [▸ 260].

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Open the compressor insulation.

3 Detach the spring that fixes the crankcase heater on the compressor.



a Spring
b Crankcase heater

4 Remove the crankcase heater from the compressor and wait for 5 minutes (until the heater element reaches ambient temperature).

5 Disconnect the crankcase heater connector from the appropriate PCB.

6 Measure the resistance on the crankcase heater connector.

Result: The resistance MUST be 1745 Ω±7%.

Is the measured resistance correct?	Action
Yes	Continue with the next step.
No	Replace the crankcase heater, see "4.6.2 Repair procedures" [▸ 198].

CAUTION

If the crankcase heater is found short-circuit, do NOT connect its connector to the PCB. When the crankcase heater gets energized, it will damage the PCB.

7 Connect the crankcase heater connector to the appropriate PCB and install the crankcase heater on the compressor.

8 Turn ON the power using the respective circuit breaker.

9 Start the unit operation via the user interface.

INFORMATION

Verify that the read-out of the outdoor air thermistor, discharge thermistor and compressor body thermistor (if available) is correct.

- Measure the outdoor temperature. Use a contact thermometer to measure the other thermistor temperatures.
- Compare with the read-out via the service monitoring tool or field settings.

10 With the crankcase heater energised (compressor OFF and discharge temperature <70°C), measure the voltage on the crankcase heater connector on the PCB.

Result: The measured voltage MUST be 230 V AC.

INFORMATION

The compressor body temperature MUST raise at least 5°C before the crankcase heater is deactivated.

Is the measured voltage correct?	Action
Yes	Perform an insulation check of the crankcase heater, see "4.6.1 Checking procedures" [▸ 195].
No	Perform a check of the main PCB, see "4.15 Main PCB" [▸ 212].

To perform an insulation check of the crankcase heater

Prerequisite: First perform an electrical check of the crankcase heater, see "4.6.1 Checking procedures" [▸ 195].

Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Disconnect the crankcase heater connector from the appropriate PCB.

3 Set the Megger voltage to at least 500 V DC.

4 Connect the Megger ground test lead directly to the crankcase heater ground wire.

CAUTION

Do NOT connect the Megger ground test lead to any other ground wire.

5 Measure the insulation resistance between the phase and ground wire. The measured insulation resistance MUST be >1 MΩ.

Is the measured insulation resistance correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.

Is the measured insulation resistance correct?	Action
No	Replace the crankcase heater, see "4.6.2 Repair procedures" [▸ 198].

4.6.2 Repair procedures

To remove the crankcase heater

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

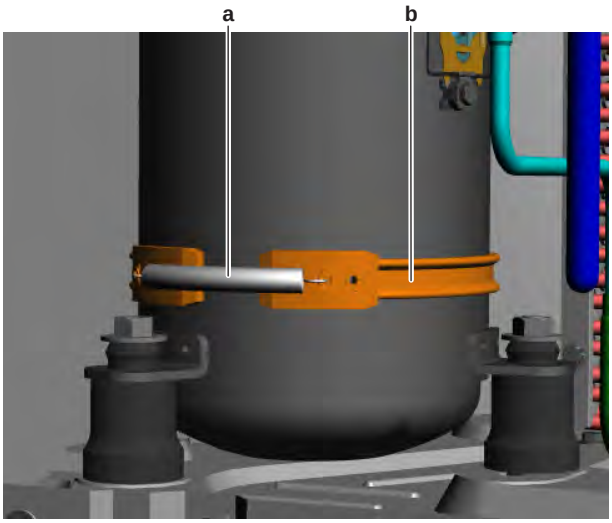
1 Remove the required plate work, see "4.18 Plate work" [▸ 260].

DANGER: RISK OF ELECTROCUTION

Confirm the rectifier voltage is below 10 V DC before proceeding, see "To prevent electrical hazards" [▸ 307].

2 Open the compressor insulation.

3 Detach the spring that fixes the crankcase heater on the compressor.



a Spring
b Crankcase heater

4 Cut all tie straps that fix the crankcase heater harness.

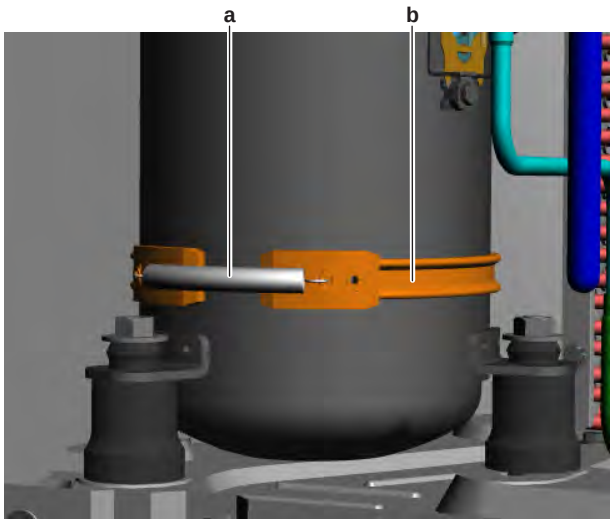
5 Disconnect the crankcase heater connector from the appropriate PCB.

6 To install the crankcase heater, see "4.6.2 Repair procedures" [▸ 198].

To install the crankcase heater

1 Install the crankcase heater on the compressor.

2 Attach the spring to fix the crankcase heater.



a Spring
b Crankcase heater

3 Route the crankcase heater harness towards the switch box.

4 Connect the crankcase heater connector to the appropriate PCB and install the crankcase heater on the compressor.

WARNING

When reconnecting a connector to the PCB, make sure to connect it on the correct location and do NOT apply force, as this may damage the connector or connector pins of the PCB.

5 Fix the crankcase heater harness using new tie straps.

INFORMATION

Replace all cable ties that were cut during removal.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.7 Drain pump

Not available yet

4.8 Expansion valve

Procedures for indoor unit expansion valve not available yet.

4.8.1 Checking procedures

INFORMATION

It is recommended to perform the checks in the listed order.

INFORMATION

As there are many expansion valves, make sure the correct expansion valve is installed (spare part). Correct as needed, see "4.8.2 Repair procedures" [▸ 203].

To perform a mechanical check of the expansion valve

Prerequisite: Power OFF the unit for 3 minutes. Then turn ON the unit and listen to the expansion valve assembly. If the expansion valve does NOT make a latching sound, continue with the electrical check of the expansion valve, see "4.8.1 Checking procedures" [▸ 199].

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.18 Plate work" [▸ 260].

1 Remove the expansion valve insulation and visually check:
   - For oil drops around the expansion valve. Locate and fix as necessary.
   - Pipes for signs of damage. Replace pipes as needed.
   - Coil wires for signs of damage. Replace expansion valve coil as needed. See "4.8.2 Repair procedures" [▸ 203].

2 Remove the expansion valve coil from the expansion valve body, see "4.8.2 Repair procedures" [▸ 203].

3 Slide the expansion valve magnet over the expansion valve body and gently rotate the magnet clockwise/counterclockwise to manually close/open the expansion valve.

INFORMATION

After the check, remove the magnet from the expansion valve body and install the expansion valve coil on the expansion valve body. Make sure that the expansion valve coil is firmly slid onto the expansion valve body.

INFORMATION

It is highly recommended to perform a power reset after checking the valve using a magnet.

Does the expansion valve open?	Action
Yes	Perform an electrical check of the expansion valve, see "4.8.1 Checking procedures" [▸ 199].
No	Replace the expansion valve body, see "4.8.2 Repair procedures" [▸ 203].

To perform an electrical check of the expansion valve

1 First perform a mechanical check of the expansion valve, see "4.8.1 Checking procedures" [▸ 199].

2 Disconnect the electrical connector of the expansion valve coil from the appropriate PCB and measure the resistance of all windings (between the pins of each phase (wire) and the common wire) using a multi meter. All measurements MUST be approximately the same.