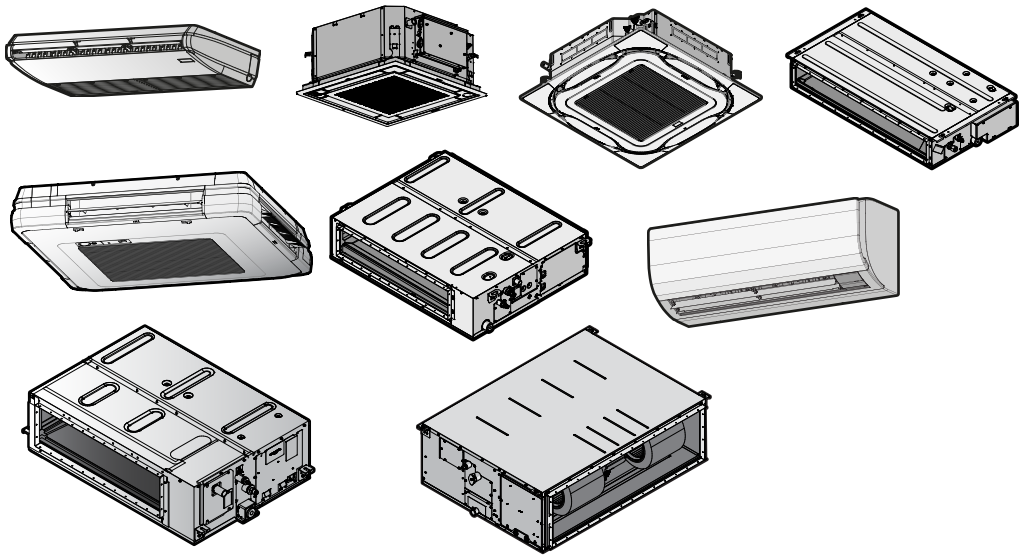
Service manual

VRV R32 indoor units



FXDA10~63A2VEB

FXSA15~140A2VEB

FXZA15~50A2VEB

FXFA20~125A2VEB

FXAA15~63AUV1B

FXHA32~100AVEB

FXUA50~100AVEB

FXMA50~125A5VEB

FXMA200+250AXVMB

Disclaimer

The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V.. Daikin Europe N.V. has compiled the content of this publication to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication.

Version log

Version code	Description	Date
ESIE21-15	Document release	September 2022

Table of Contents

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

If a fault exists that could compromise safety, Do NOT connect electrical supply to the circuit until it is satisfactorily dealt with. If the fault CANNOT be corrected immediately but it is necessary to continue operation, an adequate temporary solution MUST be used. This MUST be reported to the owner of the equipment so all parties are advised.

Initial safety checks MUST include that:

- capacitors are discharged: this MUST be done in a safe manner to avoid possibility of sparking,
- NO live electrical components and wiring are exposed while charging, recovering or purging the system.

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 SHALL 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 appropriate service ports.
- If applicable for your unit, use the appropriate recovery mode or field setting to smoothly recover the refrigerant.
- 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 indoor R32 units can be connected to:

- VRV 5-S (Mini-VRV) R32 model RXYSA4~6
- VRV 5 Heat-recovery R32 model REYA8~48A. In this case optional branch selector box BS4A~12A14A is required.

For outdoor unit refer to the service manual of the related outdoor unit:

- ESIE20-07 for VRV 5-S R32
- ESIE21-13 for VRV 5 Heat-recovery R32

Indoor units

Minimum room surface is to be checked, refer to installation manual of indoor units.

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

Field piping MUST be thermally insulated copper piping.

Different type of indoor units CAN be combined. To split the refrigerant circuit from outdoor to the indoor units, use the optional accessory refnets. In case of:

- VRV 5-S R32 outdoor, refnets start reference with KHRQ22M…
- VRV 5 Heat-recovery:
  - between outdoor and branch selector box, refnet starts with reference KHRQ23
  - between branch selector box and indoor units, refnet starts with reference KHRQ22

Indoor connection ratio CAN vary from 50% to maximum 130% of outdoor index.

Following indoor unit types are currently available:

Model name	Model type	Range
FXFA+BYCQ140A	Round flow cassette unit	20~125
FXZA+BYCF60B/C	Fully flat cassette unit	15~50
FXUA	4-way blow ceiling suspended unit	50~100
FXHA	Ceiling suspended unit	32~100
FXDA	Slim concealed ceiling unit	10~63
FXSA	Concealed ceiling unit with medium ESP	15~140
FXMA	Concealed ceiling unit with high ESP	50~250
FXAA	Wall mounted unit	15~63

Indoor unit is equipped with:

- Air thermistor for thermostat control,
- Coil and gas thermistor for expansion valve control,
- Fan motor, inverter driven, to control air flow rate,
- Swing motor(s) for air distribution control: FXFA, FXZA, FXHA, FXUA, FXAA,
- Drain lift-up pump operating in cooling mode,
- R32 leak sensor. When R32 leak is detected, system will enter safety system.
  - In case of heat-pump system: outdoor performs refrigerant recovery cycle and at the end closes the gas and liquid safety shut-off valves in the outdoor. Outdoor unit operation is disabled until reset setting at the indoor user interface and outdoor unit are completed. Before reset, leak needs to be located and repaired and R32 leak sensor at indoor MUST be replaced.
  - In case of heat-recovery system: related circuit in branch selector box unit will close gas and liquid safety shut-off valves while other circuits to branch selector box are still operational.

3 Troubleshooting

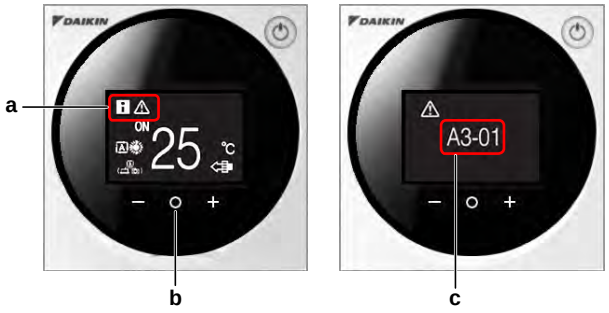
3.1 To retrieve error codes and check error history

3.1.1 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

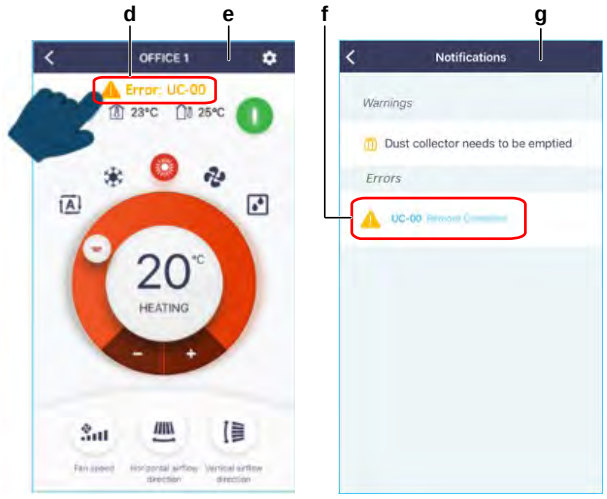
1. Press the middle button to enter the main menu from the home screen.

   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.



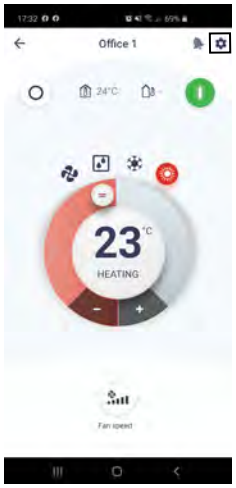
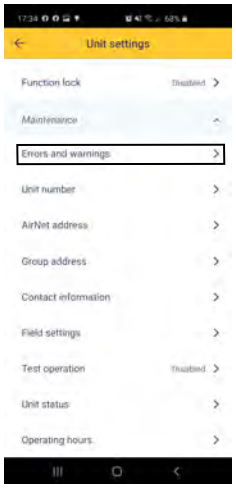
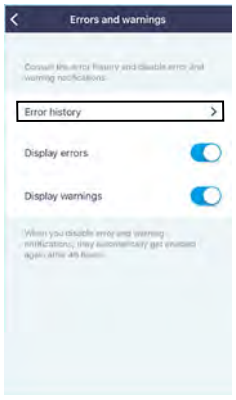
d Active error
e Home screen
f Error(s) details
g Notifications screen

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.
2	Tap Errors and warnings.		The Errors and warnings screen is displayed.
3	Tap Error history.		 The Error history screen is displayed.

3.1.2 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

3.2 Error based troubleshooting

3.2.1 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

Error code	Description
CE-04	High value floor temperature sensor
CH-01	R32 leak detection sensor failure or disconnected
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
U4-01	Transmission error between indoor units and outdoor unit
U5-04	Communication abnormality between indoor unit main PCB and remote controller
U5-06	1 Supervisor remote controller not connected/not set
U9-01	Other indoor unit has error
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-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

3.2.2 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 "7.7 Field settings" [▸ 440]. 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" [▸ 359].

   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" [▸ 338].

   Possible cause: External source may cause interference.
5. Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.3 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 "5.2 Refrigerant circuit" [▸ 337].
- 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 "4.11 R32 leak detection sensor" [▸ 241].

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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.4 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 "5.2 Refrigerant circuit" [▸ 337].
   - 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 "4.11 R32 leak detection sensor" [▸ 241].

   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 "4.8 Indoor unit main PCB" [▸ 176].

   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.

3.2.5 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" [▸ 338].

Possible cause: External source may cause interference.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.6 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" [▸ 333].

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 "4.3 Float switch" [▸ 82].

Possible cause: Faulty float switch.

4 Perform a check of the drain pump. See "4.1 Drain pump" [▸ 67].

Possible cause: Faulty drain pump.

5 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.7 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" [▸ 333].

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 "4.5 Indoor unit fan motor" [▸ 91].

Possible cause: Faulty indoor unit fan motor.

For FXSA and FXMA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.6 Indoor unit fan PCB" [▸ 142].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.8 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" [▸ 333].

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 "4.5 Indoor unit fan motor" [▸ 91].

Possible cause: Faulty indoor unit fan motor.

For FXSA and FXMA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.6 Indoor unit fan PCB" [▸ 142].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.9 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" [▸ 333].

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 "4.5 Indoor unit fan motor" [▸ 91].

Possible cause: Faulty indoor unit fan motor.

For FXSA and FXMA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.6 Indoor unit fan PCB" [▸ 142].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.10 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" [▸ 333].

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

For FXSA and FXMA indoor units

1 Perform a check of the indoor unit fan PCB. See "4.6 Indoor unit fan PCB" [▸ 142].

Possible cause: Faulty indoor unit fan PCB.

For all other indoor units

1 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

Possible cause: Faulty indoor unit main PCB.

For all indoor units

2 Perform a check of the indoor unit fan motor. See "4.5 Indoor unit fan motor" [▸ 91].

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.

3.2.11 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" [▶ 333].

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" [▶ 338].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit expansion valve. See "4.2 Expansion valve" [▶ 72].

Possible cause: Faulty expansion valve.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▶ 176].

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.

3.2.12 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" [▶ 333].

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" [▸ 338].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit refrigerant gas thermistor. See "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

4 Perform a check of the indoor unit refrigerant liquid thermistor. See "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant liquid thermistor.

5 Perform a check of the indoor unit expansion valve. See "4.2 Expansion valve" [▸ 72].

Possible cause: Faulty expansion valve.

6 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.13 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 "4.3 Float switch" [▸ 82].

Possible cause: Faulty float switch.

3 Perform a check of the drain pump. See "4.1 Drain pump" [▸ 67].

Possible cause: Faulty drain pump.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.14 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 "4.14.6 Main PCB" [▸ 291].

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

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.15 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 "4.14.4 Dust sensor unit" [▸ 279].

Possible cause: Faulty dust sensor unit.

2 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.14.6 Main PCB" [▸ 291].

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

3 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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" [▸ 338].

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.

3.2.16 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 "4.14.4 Dust sensor unit" [▸ 279].

Possible cause: Faulty dust sensor unit.

3 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.14.6 Main PCB" [▸ 291].

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 "4.14.2 Brush motor" [▸ 268].

Possible cause: Faulty brush motor.

6 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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" [▸ 338].

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.

3.2.17 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 "4.14.5 Limit switch" [▸ 284].

Possible cause: Faulty limit switch.

3 Perform a check of the air filter motor of the self-cleaning decoration panel. See "4.14.1 Air filter motor" [▸ 263].

Possible cause: Faulty air filter motor.

4 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.14.6 Main PCB" [▸ 291].

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

5 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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" [▸ 338].

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.

3.2.18 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 "4.14.5 Limit switch" [▸ 284].

Possible cause: Faulty limit switch.

3 Perform a check of the damper motor of the self-cleaning decoration panel. See "4.14.3 Damper motor" [▸ 273].

Possible cause: Faulty damper motor.

4 Perform a check of the main PCB of the self-cleaning decoration panel. See "4.14.6 Main PCB" [▸ 291].

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

5 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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" [▸ 338].

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.

3.2.19 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 "7.7 Field settings" [▸ 440].

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" [▸ 338].

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.

3.2.20 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 "7.7 Field settings" [▸ 440].

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" [▸ 338].

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.

3.2.21 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" [▸ 333].

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" [▸ 338].

Possible cause: External source may cause interference.

3 Check if the correct spare part is installed for the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176]. 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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.22 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" [▸ 333].

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" [▸ 338].

Possible cause: External source may cause interference.

3 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.23 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" [▸ 359].

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 "4.6 Indoor unit fan PCB" [▸ 142].
  Possible cause: Faulty indoor unit fan PCB.
  Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].
  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.

3.2.24 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" [▸ 359].

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 "4.8 Indoor unit main PCB" [▸ 176].
  Possible cause: Faulty indoor unit main PCB.
  Perform a check of the option PCB ERP01A50/51. See "5.3 Manufacturer components" [▸ 338].
  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.

3.2.25 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant liquid thermistor.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.26 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant liquid thermistor.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.27 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.28 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty refrigerant gas thermistor or connector fault.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.29 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 "4.8 Indoor unit main PCB" [▸ 176].

Possible cause: Incorrect spare part PCB.

2 Check if the correct spare part is installed for the indoor unit fan PCB. See "4.6 Indoor unit fan PCB" [▸ 142].

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 "4.8 Indoor unit main PCB" [▸ 176].
  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.

3.2.30 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty indoor unit air thermistor.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.31 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 "4.16 Thermistors" [▸ 323].

Possible cause: Faulty indoor unit air thermistor.

2 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.32 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" [▸ 359].

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 "4.10 Presence sensor PCB" [▸ 237].
  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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.33 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" [▸ 359].

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 "4.4 Floor temperature sensor PCB" [▸ 86].
  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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.34 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" [▸ 359].

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 "4.4 Floor temperature sensor PCB" [▸ 86].
  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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.35 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" [▸ 359].

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 "4.4 Floor temperature sensor PCB" [▸ 86].
  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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.36 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" [▸ 359].

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" [▸ 17]. 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 "7.7 Field settings" [▸ 440].

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 "4.11 R32 leak detection sensor" [▸ 241].

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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.37 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 2-47 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" [▸ 17]. 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 "4.11 R32 leak detection sensor" [▸ 241].

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 "4.11 R32 leak detection sensor" [▸ 241].

Possible cause: Faulty R32 leak detection sensor.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.38 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" [▸ 17]. 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 "4.11 R32 leak detection sensor" [▸ 241].

Possible cause: Faulty R32 leak detection sensor.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.39 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 2-47 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" [▸ 359].

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" [▸ 17]. 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 "7.7 Field settings" [▸ 440].

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 "4.11 R32 leak detection sensor" [▸ 241].

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 "4.8 Indoor unit main PCB" [▸ 176].

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.

3.2.40 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 "4.13 Remote controller user interface" [▸ 261].

INFORMATION

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

3.2.41 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 "4.13 Remote controller user interface" [▸ 261].

INFORMATION

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

3.2.42 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 to the outdoor unit is compliant with the regulations. See outdoor unit service manual.

   Possible cause:
   - Faulty or disturbance of the power supply (power supply MUST be within range of nominal operating voltage ±4%),
   - Power drop,
   - Short circuit.

2 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 333].

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 outdoor unit service manual. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 333]) or malfunctioning PCB (see "4.8 Indoor unit main PCB" [▸ 176]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

4 Perform a check of the main PCB A1P. See outdoor unit service manual.

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" [▸ 338].

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 outdoor unit service manual. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 333]) or malfunctioning PCB (see "4.8 Indoor unit main PCB" [▸ 176]).

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.

3.2.43 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 "4.13 Remote controller user interface" [▸ 261].

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 "4.13 Remote controller user interface" [▸ 261].
  Possible cause: Faulty remote controller.
- If error is still present on the indoor unit, Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].
  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.

3.2.44 U5-06 – 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

INFORMATION

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

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 outdoor unit service manual.

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 "4.13 Remote controller user interface" [▸ 261].

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 "4.13 Remote controller user interface" [▸ 261].

Possible cause: Faulty communication wiring between remote controller and indoor unit.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▸ 176].

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" [▸ 333].

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

6 Perform a check of the main PCB A1P. See outdoor unit service manual.

Possible cause: Faulty main PCB.

INFORMATION

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

3.2.45 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 "3.2 Error based troubleshooting" [▸ 20] 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 outdoor unit service manual. If less indoor units detected than it should be, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 333]) or malfunctioning PCB (see "4.8 Indoor unit main PCB" [▸ 176]).

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 outdoor unit service manual. If any of these indoor units is NOT operating, check the indoor unit(s) that have power black-out (see "5.1 Electrical circuit" [▸ 333]) or malfunctioning PCB (see "4.8 Indoor unit main PCB" [▸ 176]).

Possible cause: Power black-out or malfunctioning PCB on indoor unit(s).

5 Perform a check of the main PCB A1P. See outdoor unit service manual.

Possible cause: Faulty main PCB.

6 Check the F1-F2 transmission line between the indoor units and outdoor unit. See "5.1 Electrical circuit" [▸ 333].

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.

3.2.46 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.

3.2.47 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 "4.8 Indoor unit main PCB" [▸ 176].

Possible cause: Incorrect spare part PCB.

3 Check if the correct spare part is installed for the main PCB. See outdoor unit service manual.

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.

3.2.48 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 "4.8 Indoor unit main PCB" [▸ 176].

Possible cause: Incorrect spare part PCB.

3 Check if the correct spare part is installed for the main PCB. See outdoor unit service manual.

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.

3.2.49 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 "3.2 Error based troubleshooting" [▸ 20] to solve the error code(s).

2 Reset the outdoor lock function. Set the field setting 2-47=1 on the outdoor unit. See outdoor unit service manual.

Possible cause: Outdoor lock function active.

3 Perform a check of the main PCB. See outdoor unit service manual.

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" [▸ 333].

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 "4.8 Indoor unit main PCB" [▸ 176].

Possible cause: Faulty indoor unit main PCB.

6 Perform a check of the following expansion valves. See outdoor unit service manual:

- 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.

3.2.50 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 outdoor unit service manual.

Possible cause: Faulty back-up PCB.

2 Perform a check of the Sub PCB. See outdoor unit service manual.

Possible cause: Faulty Sub PCB.

3 Perform a check of the main PCB. See outdoor unit service manual.

Possible cause: Faulty main PCB or wrong capacity setting.

4 Check the wiring between the PCB's. See Wiring diagram in outdoor unit service manual.

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.

3.2.51 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" [▶ 338].

Possible cause: Faulty mechanical ventilation.

2 Check the mechanical ventilation error input signal. See outdoor unit service manual.

Possible cause: Faulty mechanical ventilation error input signal.

3 Perform a check of the main PCB. See outdoor unit service manual.

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.

3.2.52 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 Field settings in the outdoor unit service manual.

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 "4.13 Remote controller user interface" [▶ 261].

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 "4.13 Remote controller user interface" [▶ 261].

Possible cause: Faulty communication wiring between remote controller and indoor unit.

4 Perform a check of the indoor unit main PCB. See "4.8 Indoor unit main PCB" [▶ 176].

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" [▶ 333].

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

6 Perform a check of the main PCB A1P. See outdoor unit service manual.

Possible cause: Faulty main PCB.

INFORMATION

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

3.2.53 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" [▸ 333].

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" [▸ 333].

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

If ONLY 1 indoor unit displays error UE-00

1 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.

2 Perform a power reset on the central controller and check if error is resolved.

3 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 Symptom based troubleshooting

3.3.1 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.
- The system does not start immediately after the power supply is turned on. Wait one minute until the micro computer is prepared for operation.

3.3.2 Symptom: The fan speed does not correspond to the setting

ONLY for FXFA, FXZA, FXHA, FXUA 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.

3.3.3 Symptom: The fan direction does not correspond to the setting

ONLY for FXFA, FXZA, FXHA, FXUA and FXAA units:

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.

3.3.4 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, FXHA, FXUA 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.

3.3.5 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.

3.3.6 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. A power reset may help to remove this error.

3.3.7 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.

3.3.8 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.

3.3.9 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.

3.3.10 Symptom: The units can give off odours

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

3.3.11 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 outdoor unit service manual.
		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" [▶ 334]. Perform transmission re-initialization
			Check transmission wiring
			Check indoor unit PCBs
			Check outdoor unit main PCB, see outdoor unit service manual.
Operation sometimes stops	Power failure	A power failure consecutively more than 2 cycles may stop the air conditioner operation	Restore power supply. See outdoor unit service manual.

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 Field settings in outdoor unit service manual. Refer to error code found for further troubleshooting.
Unit operates but does not cool or does not heat	Piping or wiring mismatch	Transmission or piping problem	Correct piping, wiring
	Abnormal refrigerant amount	Outdoor unit may be overcharged or lacking refrigerant	Check refrigerant amount. See outdoor unit service manual.
	Incorrect thermistor values	Thermistors not in their location, miswiring or faulty thermistor	Check thermistors, see "4.16 Thermistors" [▸ 323] for indoor unit thermistors and see outdoor unit service manual for outdoor unit thermistors.
	Incorrect expansion valve operation	Expansion valve not operating correctly	Check expansion valves. See "4.2 Expansion valve" [▸ 72] for indoor unit valves and see outdoor unit service manual for outdoor unit valves.
	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 outdoor unit service manual. Restore the power supply in conform with the requirements. Check inverter circuit on main PCB and check compressor(s), see outdoor unit service manual.
	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. Check for refrigerant overcharge, see outdoor unit service manual. 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

3.3.12 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

Mode: Heating	Low pressure	High pressure	Running current
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 Drain pump

4.1.1 Checking procedures

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

To perform an electrical check of the drain pump

FXZA + FXSA + FXDA + FXMA50~125

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

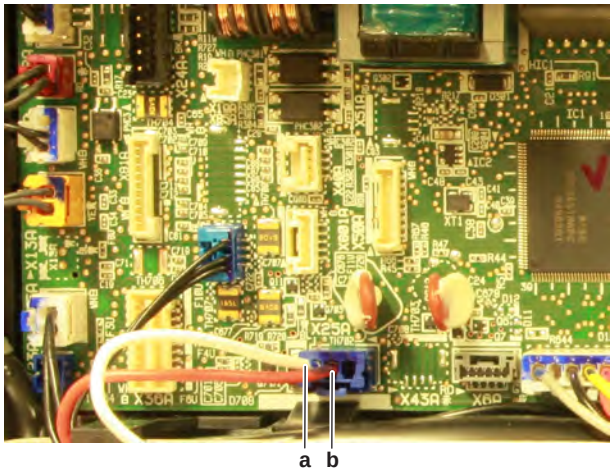
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the drain pump connector X25A from the indoor unit main PCB.

3 Using a multimeter in diode check, measure in reference with the image and the table below.



a White wire
b Red wire

VDC	COM	REF
a	b	0.9~1.1 V
b	a	0.495~0.605 V

Measured values are correct?	Action
Yes	Continue with the next step.
No	Replace the drain pump, see "4.1.2 Repair procedures" [▸ 70].

4 Connect the drain pump connector to the indoor unit main PCB.

5 Turn ON the power using the respective circuit breaker.

6 Start the unit operation via the user interface.

7 Activate Cooling operation via the user interface.

8 The drain pump is operational on a timer basis (ONLY when Cooling operation is active). Check that the drain pump is operating on a regular time basis.

Drain pump is operating correctly?	Action
Yes	Drain pump is OK. Return to troubleshooting of the specific error code and continue with the next procedure.
No	Continue with the next step.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

9 Measure the power supply voltage between the white and red wire of the drain pump connector X25A on the indoor unit main PCB.

Result: When the PCB commands the drain pump to run, 13 V DC MUST be measured.

Is the measured voltage correct?	Action
Yes	Replace the drain pump, see "4.1.2 Repair procedures" [▸ 70].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

FXFA + FXUA

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

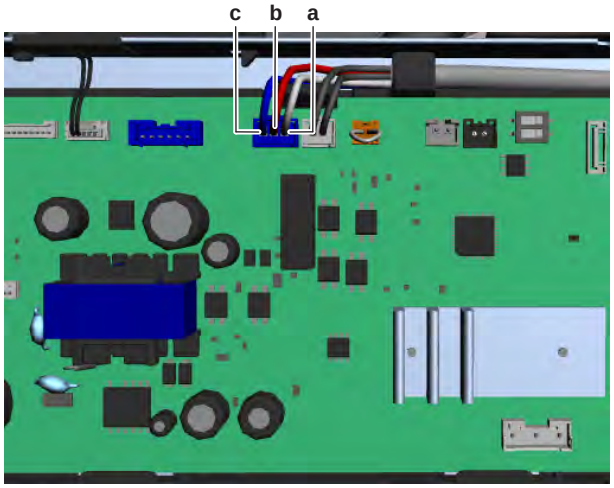
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the drain pump connector X25A from the indoor unit main PCB.

3 Using a multimeter in diode check, measure in reference with the image and the table below.



a White wire
b Red wire
c Blue wire

VDC	COM	REF	VDC	COM	REF
a	b	0.9~1.1 V	b	a	0.495~0.605 V
a	c	OL	c	a	1.485~1.815 V
b	c	OL	c	b	1.8~2.2 V

Measured values are correct?	Action
Yes	Continue with the next step.
No	Replace the drain pump, see "4.1.2 Repair procedures" [▶ 70].

4 Connect the drain pump connector to the indoor unit main PCB.

5 Turn ON the power using the respective circuit breaker.

6 Start the unit operation via the user interface.

7 Activate Cooling operation via the user interface.

8 The drain pump is operational on a timer basis (ONLY when Cooling operation is active). Check that the drain pump is operating on a regular time basis.

Drain pump is operating correctly?	Action
Yes	Drain pump is OK. Return to troubleshooting of the specific error code and continue with the next procedure.
No	Continue with the next step.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

9 Measure the power supply voltage between pins the white and red wire of the drain pump connector X25A on the indoor unit main PCB.

Result: When the PCB commands the drain pump to run, 13 V DC MUST be measured.

10 Measure the rotation signal voltage between pins the white and blue wire of the drain pump connector X25A on the indoor unit main PCB.

Result: When the PCB commands the drain pump to run, 2~3 V DC MUST be measured.

Is the measured voltage correct?	Action
Yes	Replace the drain pump, see "4.1.2 Repair procedures" [▸ 70].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

4.1.2 Repair procedures

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

To remove the drain pump

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the drain pan, see "4.9 Plate work" [▸ 192].

2 Disconnect the drain pump connector from the indoor unit main PCB.

INFORMATION

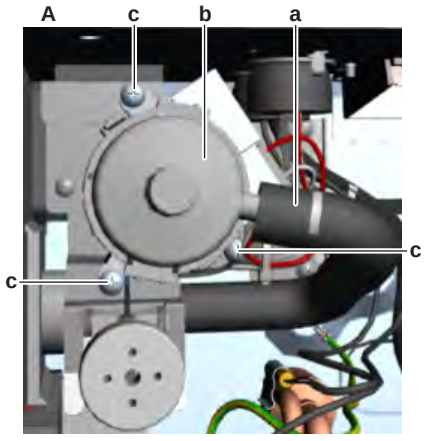
ALSO disconnect ALL connectors (from the indoor unit main PCB) of any other wiring harness that is wrapped in the same insulation as the drain pump wiring harness.

3 Route the disconnected wiring harness(es) out of the switch box and route them away (through any holes if applicable) until they are completely free.

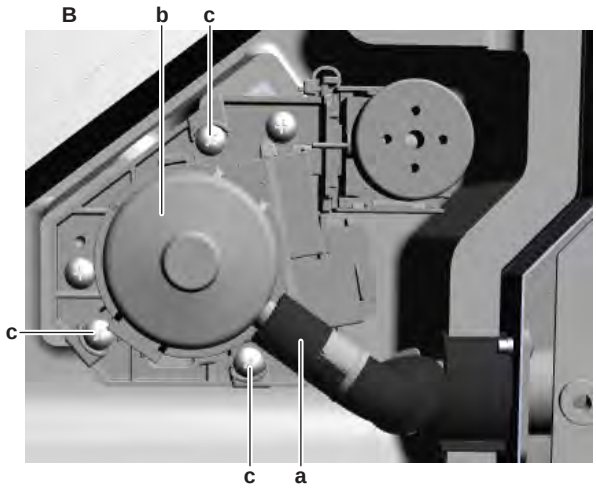
4 Cut all tie straps that fix the wiring harness(es).

5 Remove insulation from the wiring harness(es) if needed.

6 Remove the drain outlet pipe from the drain pump.



A FXDA unit
a Drain outlet pipe
b Drain pump
c Screw



B FXUA unit
a Drain outlet pipe
b Drain pump
c Screw

7 Remove the 3 screws from the drain pump.

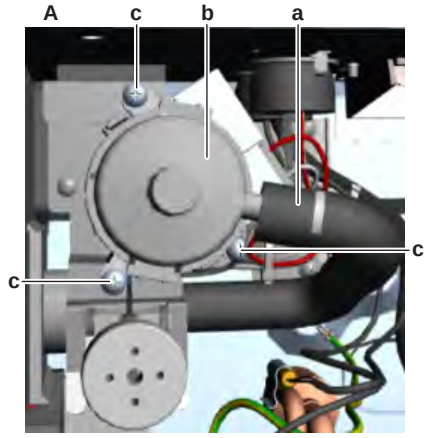
8 Remove the drain pump from the indoor unit.

9 To install the drain pump, see "4.1.2 Repair procedures" [▸ 70].

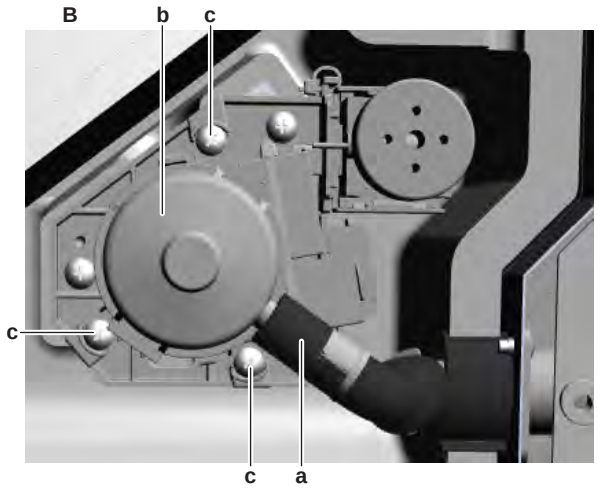
To install the drain pump

1 Install the drain pump in the correct location on the indoor unit.

2 Install and tighten the 3 screws to fix the drain pump.



A FXDA unit
a Drain outlet pipe
b Drain pump
c Screw



B FXUA unit
a Drain outlet pipe
b Drain pump
c Screw

3 Install the drain outlet pipe on the drain pump.

4 Install new insulation on the wiring harness(es) if needed.

5 Route the wiring harness(es) through the holes (if applicable) towards the indoor unit main PCB.

6 Connect the drain pump connector (and if applicable all other disconnected connectors) to the indoor unit main PCB.

7 Install new tie straps to fix the wiring harness(es).

INFORMATION

Replace all cable ties that were cut during removal.

8 Install the drain pan, see "4.9 Plate work" [▸ 192].

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 Expansion valve

4.2.1 Checking procedures

INFORMATION

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

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 "4.2.1 Checking procedures" [▸ 72].

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the expansion valve insulation (if applicable) 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 "4.2.2 Repair procedures" [▸ 76].

2 Remove the expansion valve coil from the expansion valve body, see "4.2.2 Repair procedures" [▸ 76].

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. Listen to check if the valve is closing/opening and manually close the valve when check is done.

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 correctly installed on 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 "4.2.1 Checking procedures" [▸ 72].
No	Replace the expansion valve body, see "4.2.2 Repair procedures" [▸ 76].

To perform an electrical check of the expansion valve

1 First perform a mechanical check of the expansion valve, see "4.2.1 Checking procedures" [▸ 72].

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.

FXZA + FXUA + FXSA + FXFA + FXDA and FXMA

Name	Symbol	Location (PCB)	Connector	Winding resistance
Main expansion valve	Y1E	Indoor unit main PCB	X7A	46±3 Ω

FXAA + FXHA

Name	Symbol	Location (PCB)	Connector	Winding resistance
Main expansion valve	Y1E	Indoor unit main PCB	X7A	150±15 Ω

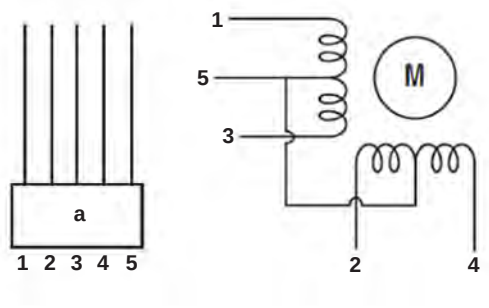
INFORMATION

For FXAA ONLY: Make sure that the wiring between the expansion valve connector and the connector on the PCB is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▸ 359].

INFORMATION

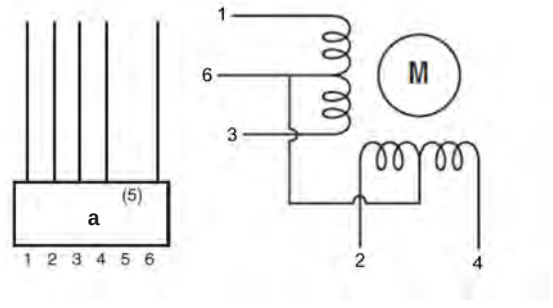
Below are shown examples of the resistance measurements in which the common wire is connected to pin 5 or to pin 6 of the expansion valve coil connector. Connections may differ according to the type of expansion valve.

- Connector pin 1-5,
- Connector pin 2-5,
- Connector pin 3-5,
- Connector pin 4-5.



a Connector

- Connector pin 1-6,
- Connector pin 2-6,
- Connector pin 3-6,
- Connector pin 4-6.



a Connector

3 Check the insulation resistance of the coil by measuring the resistance between the pins of each phase (1, 2, 3, 4) and GND on the unit.

Result: None of the measurements should be short-circuit.

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.

Is the measured resistance correct?	Action
Yes	Perform an operation check of the expansion valve, see "4.2.1 Checking procedures" [▸ 72].
No	Replace the expansion valve coil, "4.2.2 Repair procedures" [▸ 76].

To perform an operation check of the expansion valve

Prerequisite: First perform an electrical check of the expansion valve, see "4.2.1 Checking procedures" [▸ 72].

1 Turn ON the power of the unit.

INFORMATION

When power is switched ON, PCB checks all expansion valve coil windings by current check. If winding is short or open, expansion valve error is triggered.

2 Start the unit operation via the user interface.

3 With the unit operating, connect the service monitoring tool to the unit.

4 When the expansion valve is closed according to the service monitoring tool, check the inlet and outlet of the valve with a contact thermometer or use an expansion valve stethoscope to see if refrigerant flows through the expansion valve. Check that the valve is NOT bleeding.

Result: There MUST be NO flow through the expansion valve.

5 When the expansion valve is open according to the service monitoring tool, check the inlet and outlet of the valve with a contact thermometer or use an expansion valve stethoscope to see if refrigerant flows through the expansion valve.

Result: Refrigerant MUST flow through the expansion valve.

6 Wait for the PCB to command the expansion valve to open (when closed) or to close (when open) (pulse output to expansion valve visible on service monitoring tool).

INFORMATION

If the PCB does NOT command the expansion valve to open or close (when it is supposed to), perform a check of the appropriate thermistors and pressure sensors (as their measurements control the operation of the expansion valve(s)).

7 While in opening or closing sequence each expansion valve winding (Φ1, 2, 3, 4) is supplied with 12 V DC from the PCB. You will need a good multimeter, where its range is set to about 20 V DC, and during opening or closing sequence you may be able to measure the supply voltage for a short time. If you set the multimeter range to Auto, then most likely you may NOT read a value between switching ranges. The best way to check is to feel the movement of the valve by touching, rather than trying to measure the driving voltage.

8 When the expansion valve was commanded to close, check the inlet and outlet of the valve with a contact thermometer or use an expansion valve stethoscope to see if refrigerant flows through the expansion valve. Check that the valve is NOT bleeding.

Result: There MUST be NO flow through the expansion valve.

9 When the expansion valve was commanded to open, check the inlet and outlet of the valve with a contact thermometer or use an expansion valve stethoscope to see if refrigerant flows through the expansion valve.

Result: Refrigerant MUST flow through the expansion valve.

Is the flow through the expansion valve correct?	Action
Yes	Component is OK. Return to the troubleshooting of the specific error and continue with the next step.
No	Replace the expansion valve, see "4.2.2 Repair procedures" [▸ 76].

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

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

To remove the expansion valve coil

FXZA + FXUA + FXSA + FXHA + FXFA + FXDA + FXMA

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

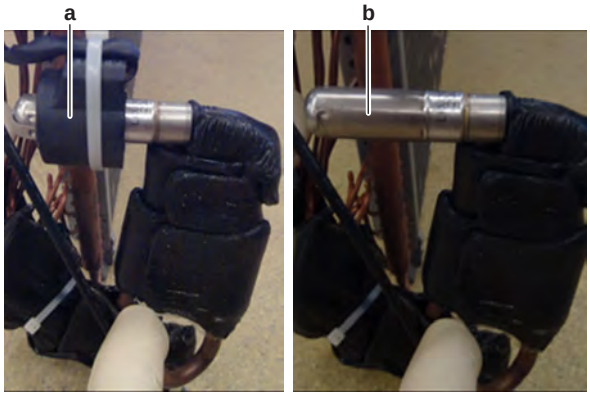
1 If needed, remove any parts or insulation to create more space for the removal.

2 Cut the tie strap that fixes the expansion valve coil and wiring harness.

3 Pull up the expansion valve coil to remove it from the expansion valve body.

INFORMATION

It may be needed to turn the expansion valve coil 1/8 turn counter clockwise to unlock it. Make sure to note the correct orientation (position) of the expansion valve coil before removal.



a Expansion valve coil
b Expansion valve body

4 Cut all tie straps that fix the expansion valve coil wiring harness.

5 Disconnect the expansion valve coil connector from the indoor unit main PCB.

6 Route the expansion valve wiring harness out of the appropriate harness retainers.

7 Remove the expansion valve coil (and harness) from the unit.

8 To install the expansion valve coil, see "4.2.2 Repair procedures" [▸ 76].

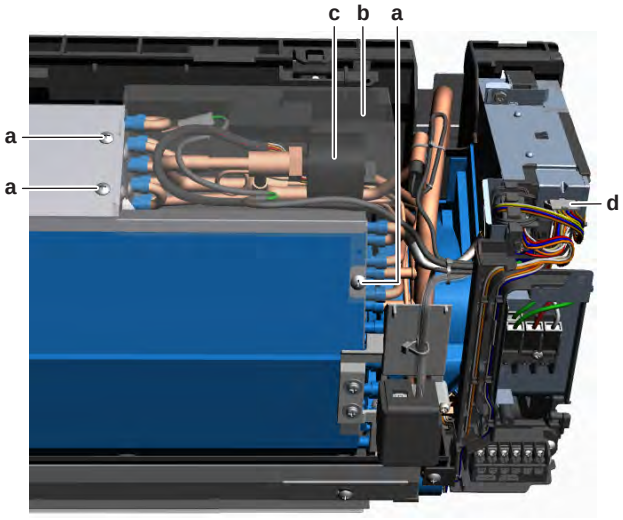
FXAA

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the 3 screws and remove the cover of the expansion valve assembly.



a Screw (expansion valve assy cover)
b Cover (expansion valve assy)
c Expansion valve coil
d Expansion valve coil connector

DANGER

Wait for at least 30 minutes after the system has been turned OFF (indoor and outdoor unit operation stopped), to be sure the pressure in the system has been equalized. Do NOT remove the expansion valve coil from the body when the pressure is too high (>3.5 MPa). This MAY result in cracks in the expansion valve body and leakage of the coolant (which is mildly flammable).

2 Using 2 spanners, loosen the nut of the expansion valve coil and remove the expansion valve coil from the expansion valve body.

3 Cut all tie straps that fix the expansion valve coil wiring harness.

4 Disconnect the expansion valve coil connector from the switch box.

5 Route the expansion valve wiring harness out of the appropriate harness retainers.

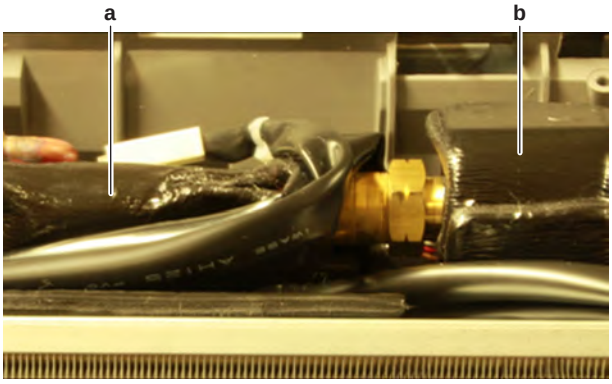
6 Remove the expansion valve coil (and harness) from the unit.

7 To install the expansion valve coil, see "4.2.2 Repair procedures" [▸ 76].

To remove the expansion valve body

1 Remove the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

2 For FXAA ONLY: Using 2 spanners, loosen the nut of the expansion valve coil and remove the expansion valve coil from the expansion valve body.



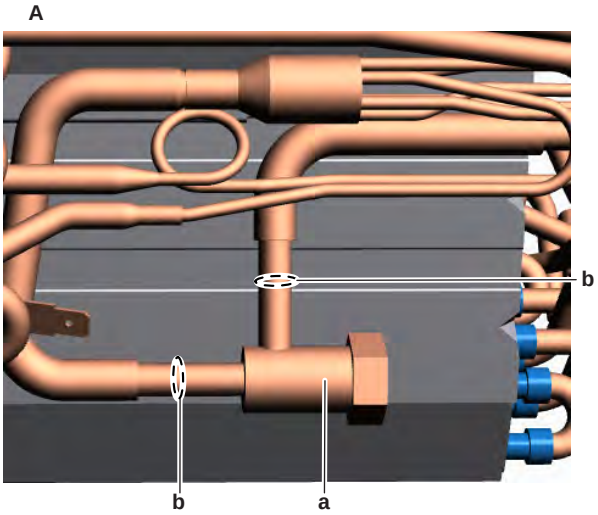
a Putty
b Expansion valve coil

3 Remove the putty (if applicable). Keep for re-use.

4 Using a valve magnet, open the expansion valve.

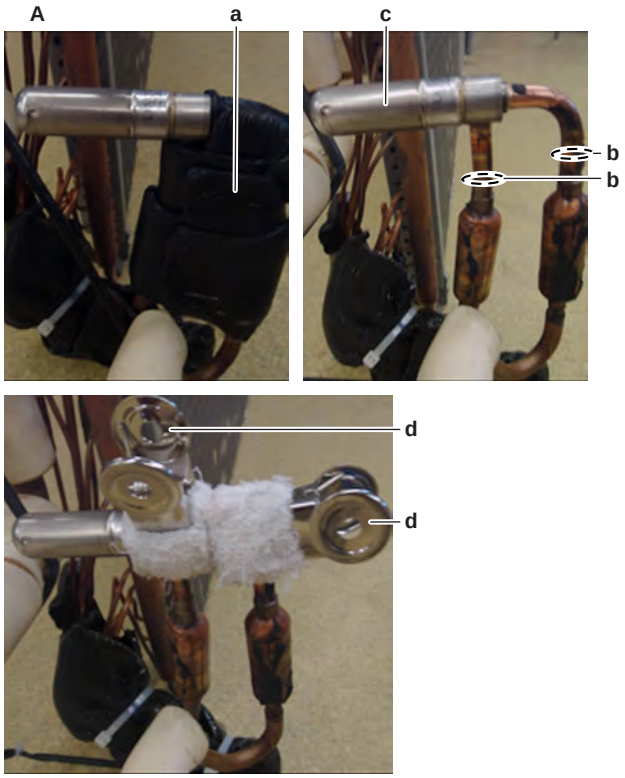
5 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

6 Wrap a wet rag around the components near the expansion valve pipes and/or use (local purchased) cooling-clamps. Heat the brazing points of the expansion valve pipes using an oxygen acetylene torch and remove the expansion valve pipes from the refrigerant pipes using pliers.



A FXAA

a Expansion valve body
b Expansion valve pipe



A FXDA
a Putty
b Expansion valve pipe
c Expansion valve body
d Cooling-clamps

7 Stop the nitrogen supply when the piping has cooled down.

8 Remove the expansion valve body.

> **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.

9 Install plugs or caps on the open pipe ends of the refrigerant piping to avoid dirt or impurities from entering the piping.

10 To install the expansion valve body, see "4.2.2 Repair procedures" [▸ 76].

To install the expansion valve body

1 Remove the plugs or caps from the refrigerant piping and make sure they are clean.

2 Remove the expansion valve coil from the spare part expansion valve body.

3 Install the expansion valve body in the correct location and correctly oriented. Insert the pipe ends in the pipe expansions.

4 Open the expansion valve using a valve magnet.

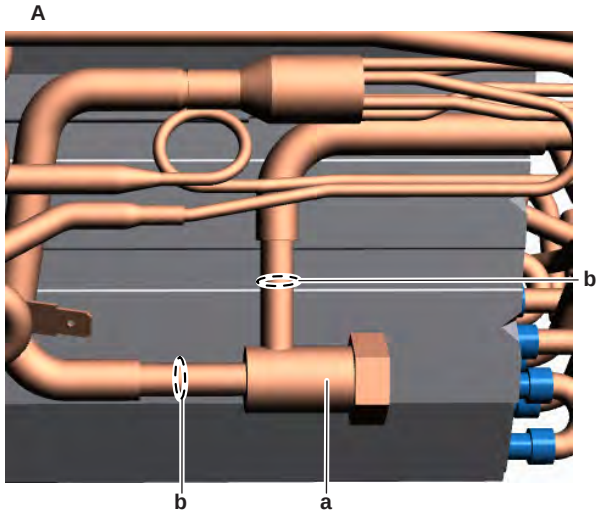
5 Supply nitrogen to the refrigerant circuit. The nitrogen pressure MUST NOT exceed 0.02 MPa.

6 Wrap a wet rag around the expansion valve body and any other components near the expansion valve and/or use (local purchased) cooling-clamps and solder the expansion valve pipes to the refrigerant pipes.

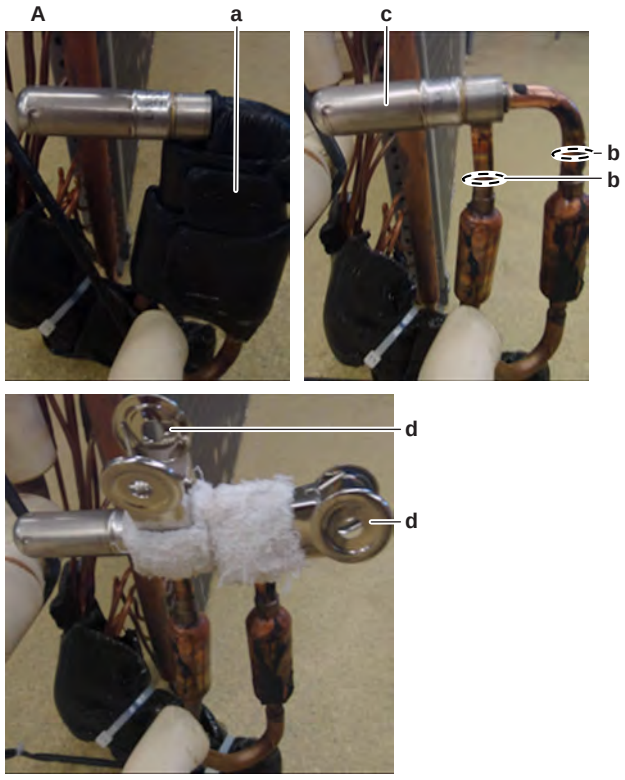
CAUTION

Overheating the valve will damage or destroy it.

7 After soldering is done, stop the nitrogen supply after the component has cooled-down.



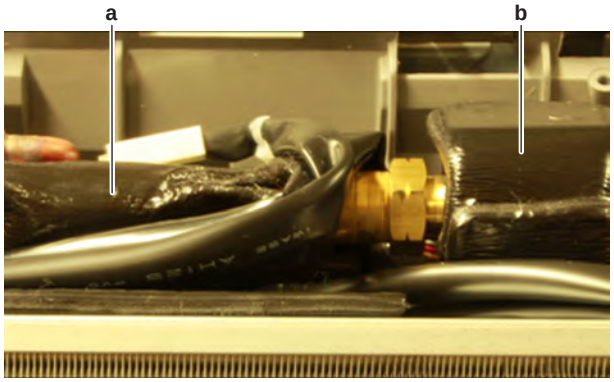
A FXAA
a Expansion valve body
b Expansion valve pipe



A FXDA
a Putty
b Expansion valve pipe
c Expansion valve body
d Cooling-clamps

8 Reinstall the putty (if applicable).

9 For FXAA ONLY: Correctly install the expansion valve coil on the expansion valve body. Using 2 spanners tighten the nut to fix the expansion valve coil.



a Putty
b Expansion valve coil

10 Perform a pressure test, see "5.2.1 Checking procedures" [▸ 337].

11 Install the indoor unit heat exchanger in the unit, see "4.7.2 Repair procedures" [▸ 157].

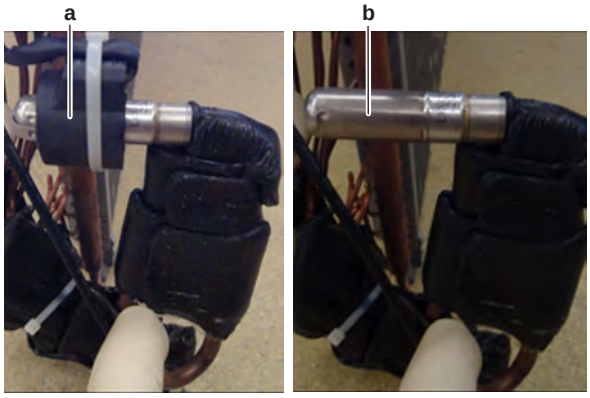
12 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.2.1 Checking procedures" [▸ 72] of the expansion valve and continue with the next procedure.

To install the expansion valve coil

FXZA + FXUA + FXSA + FXHA + FXFA + FXDA + FXMA

1 Correctly install the expansion valve coil on the expansion valve body.



a Expansion valve coil
b Expansion valve body

2 Route the expansion valve coil wiring harness through the appropriate harness retainers towards the indoor unit main PCB.

3 Connect the expansion valve coil 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.

4 Fix the expansion valve coil wiring harness using new tie straps.

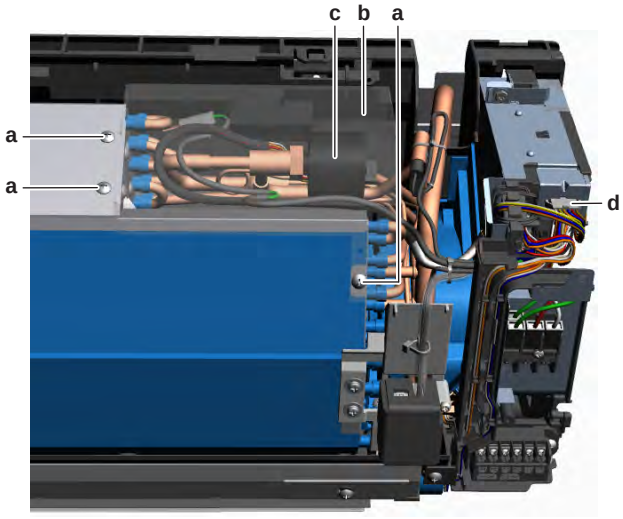
5 Install a new tie strap to fix the expansion valve coil and wiring harness.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.2.1 Checking procedures" [▸ 72] of the expansion valve and continue with the next procedure.

FXAA

1 Correctly install the expansion valve coil on the expansion valve body.

2 Using 2 spanners tighten the nut to fix the expansion valve coil.



a Screw (expansion valve assy cover)
b Cover (expansion valve assy)
c Expansion valve coil
d Expansion valve coil connector

3 Route the expansion valve coil wiring harness through the appropriate harness retainers towards the switch box.

4 Connect the expansion valve coil connector to the side of the switch box.

5 Fix the expansion valve coil wiring harness using new tie straps.

6 Install the cover of the expansion valve assembly in the correct location.

7 Install and tighten the 3 screws to fix the cover.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.2.1 Checking procedures" [▸ 72] of the expansion valve and continue with the next procedure.

4.3 Float switch

4.3.1 Checking procedures

To perform an electrical check of the float switch

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the float switch connector X15A from the indoor unit main PCB.

3 Turn ON the power using the respective circuit breaker.

4 Measure the voltage on connector X15A on the indoor unit main PCB.

Result: The measured voltage MUST be 5 V DC.

Is the measured voltage correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

5 Turn OFF the respective circuit breaker.

6 Check that the float switch freely moves up and down and is NOT blocked.

7 Slide the float switch to the upwards (activated) position and measure the resistance between pins 1-2 of the float switch connector.

Result: The measurement MUST be open circuit.

8 Slide the float switch back to the downwards (default = NOT activated) position and measure the resistance between pins 1-2 of the float switch connector.

Result: The measurement MUST be short circuit.

Does the float switch function correctly?	Action
Yes	Return to troubleshooting of the specific error code and continue with the next procedure.
No	Replace the float switch, see "4.3.2 Repair procedures" [▸ 83].

4.3.2 Repair procedures

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

To remove the float switch

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the drain pan, see "4.9 Plate work" [▸ 192].

2 Disconnect the float switch connector from the indoor unit main PCB.

> **INFORMATION**
>
> ALSO disconnect ALL connectors (from the indoor unit main PCB) of any other wiring harness that is wrapped in the same insulation as the float switch wiring harness.

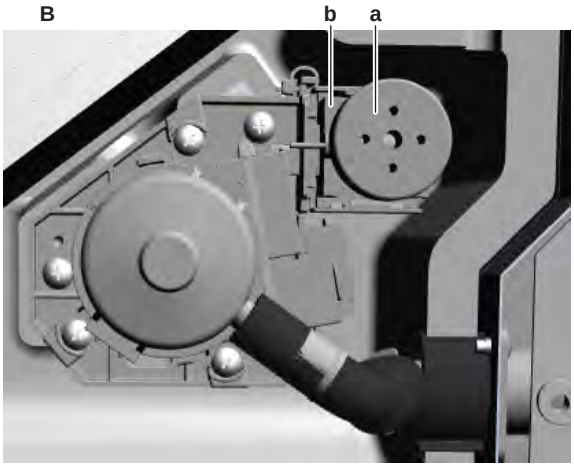
3 Route the disconnected wiring harness(es) out of the switch box and route them away (through any holes if applicable) until they are completely free.

4 Cut all tie straps that fix the wiring harness(es).

5 Remove insulation from the wiring harness(es) if needed.

6 Carefully pull the sides of the support bracket to the outside and pull the float switch upwards to remove it from the support bracket.

A FXDA unit
a Float switch
b Support bracket



B FXUA unit
a Float switch
b Support bracket

7 Remove the float switch from the indoor unit.

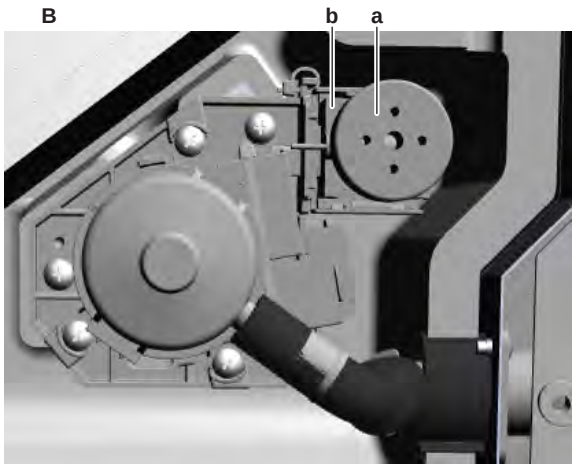
8 To install the float switch, see "4.3.2 Repair procedures" [▸ 83].

To install the float switch

1 Install the float switch in the correct location on the indoor unit.

2 Click the float switch on the support bracket.

A FXDA unit
a Float switch
b Support bracket



B FXUA unit
a Float switch
b Support bracket

3 Install new insulation on the wiring harness(es) if needed.

4 Route the wiring harness(es) through the holes (if applicable) towards the indoor unit main PCB.

5 Connect the float switch connector (and if applicable all other disconnected connectors) to the indoor unit main PCB.

6 Install new tie straps to fix the wiring harness(es).

INFORMATION

Replace all cable ties that were cut during removal.

7 Install the drain pan, see "4.9 Plate work" [▸ 192].

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.

4.4 Floor temperature sensor PCB

4.4.1 Checking procedures

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

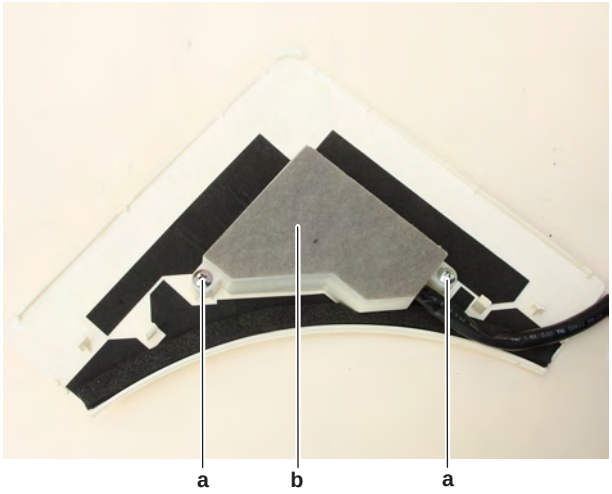
To perform a power check of the floor temperature sensor PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1. Remove the presence sensor frame from the decoration panel.
2. Remove the 2 screws and remove the cover from the back of the presence sensor frame.

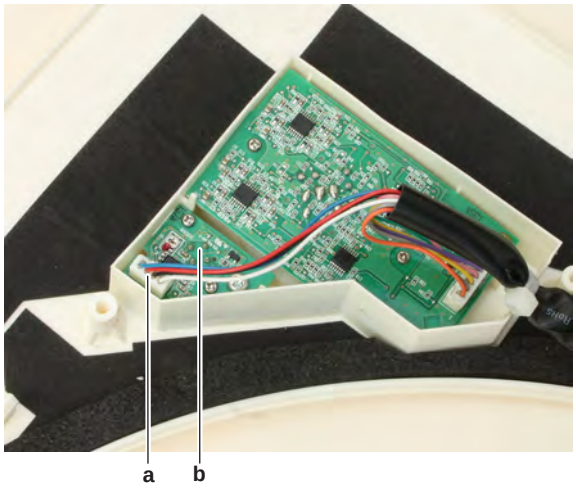


a Screw
b Cover

> **INFORMATION**
>
> Measure the continuity of all wiring between the floor temperature sensor PCB and the indoor unit main PCB. If NO continuity is measured, replace the complete presence sensor kit (BRYQ60/140B*).

3. Turn ON the power of the unit.
4. Measure the power supply voltage between the wires Red-Black on the floor temperature sensor PCB connector CN.

   Result: The measured voltage MUST be 4.50~5.50 V DC.



a Connector CN
b Floor temperature sensor PCB

Is the power supply voltage to the floor temperature sensor PCB correct?	Action
Yes	Perform an electrical check of the floor temperature sensor PCB, see "4.4.1 Checking procedures" [▸ 86].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

To perform an electrical check of the floor temperature sensor PCB

1 First perform a power check of the floor temperature sensor PCB, see "4.4.1 Checking procedures" [▸ 86].

2 Turn OFF the respective circuit breaker.

3 Disconnect the floor temperature sensor connector X81A from the indoor unit main PCB.

4 On the disconnected connector, measure the resistance in reference with the table below.

Result: The measured resistances MUST be:

+	–	Ref	+	–	Ref
Blue	Red	450~550 kΩ	Black	Blue	2.43~2.97 MΩ
Blue	Black	OL	Black	Red	2.16~2.64 MΩ
Blue	White	423~517 kΩ	Black	White	2.16~2.64 MΩ
Red	Blue	450~550 kΩ	White	Blue	298.8~365.2 kΩ
Red	Black	OL	White	Red	60.3~73.7 kΩ
Red	White	60.3~73.7 kΩ	White	Black	OL

Are the measured resistance values correct?	Action
Yes	Proceed with the next step.
No	Replace the floor temperature sensor PCB, see "4.4.2 Repair procedures" [▸ 88].

5 Connect the floor temperature sensor connector X81A to the indoor unit main PCB.

6 Turn ON the power of the unit.

7 Leave the floor temperature sensor free (contact with air).

8 On the connector X81A on the indoor unit main PCB, measure the output voltages in reference with the table below.

Result: The measured voltages MUST be:

VDC	COMM	REF
Blue	Red	2.25~2.75 V DC
White	Red	1.26~1.54 V DC

9 Touch the outside of the floor temperature sensor with your finger (to warm the temperature sensor).

10 On the connector X81A on the indoor unit main PCB, again measure the output voltages in reference with the table below.

Result: The measured voltages MUST be:

VDC	COMM	REF
Blue	Red	≥3.0 V DC
White	Red	≥1.7 V DC

Are the measured voltages correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the floor temperature sensor PCB, "4.4.2 Repair procedures" [▸ 88].

4.4.2 Repair procedures

To remove the floor temperature sensor PCB

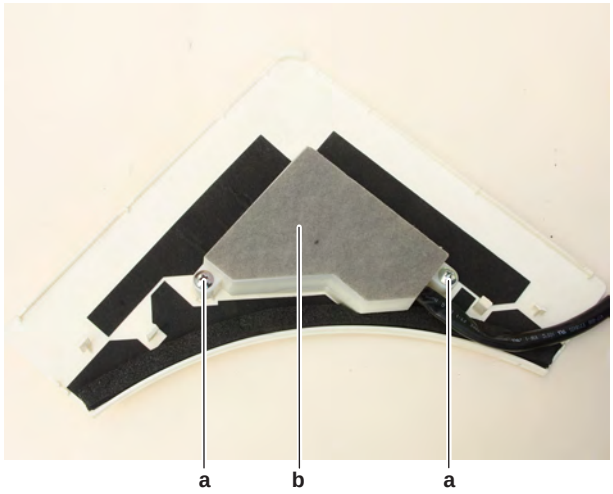
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

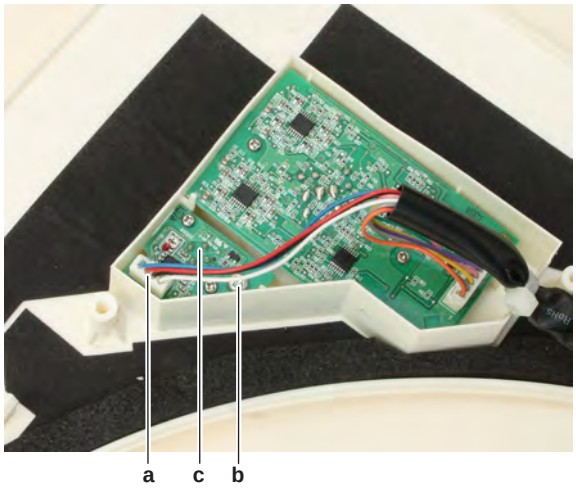
1 Remove the presence sensor frame from the decoration panel.

2 Remove the 2 screws and remove the cover from the back of the presence sensor frame.



a Screw
b Cover

3 Disconnect the connector from the floor temperature sensor PCB.



a Connector
b Screw
c Floor temperature sensor PCB

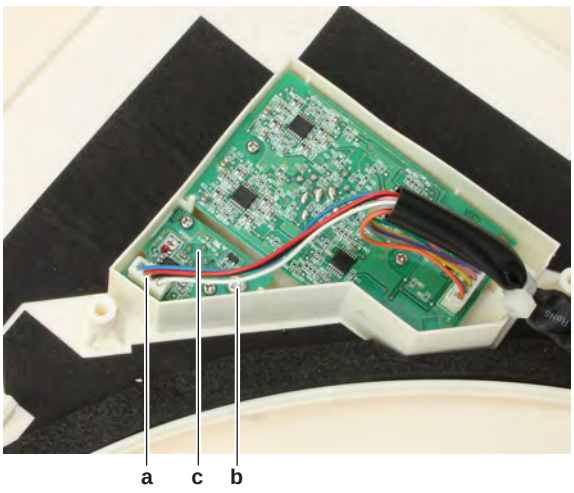
4 Remove the screw and remove the floor temperature sensor PCB from the presence sensor frame.

5 To install the floor temperature sensor PCB, see "4.4.2 Repair procedures" [▸ 88].

To install the floor temperature sensor PCB

1 Install the floor temperature sensor PCB in the correct location on the presence sensor frame.

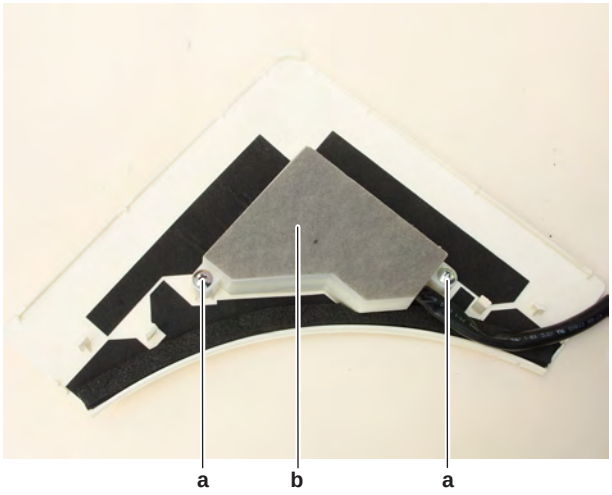
2 Install and tighten the screw to fix the floor temperature sensor PCB.



a Connector
b Screw
c Floor temperature sensor PCB

3 Connect the presence sensor kit wiring harness connector to the floor temperature sensor PCB.

4 Install the cover on the back of the presence sensor frame.



a Screw
b Cover

5 Install and tighten the 2 screws to fix the cover.

6 Install the presence sensor frame in the correct location on the decoration panel.

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.

4.5 Indoor unit fan motor

4.5.1 Wall mounted indoor units

Checking procedures

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

To perform a mechanical check of the DC fan motor assembly

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1. Check the fan for damage, deformations and cracks. Replace the fan as needed.
2. Check that the fan is correctly installed on the DC fan motor. Correct as needed.
3. Manually rotate the fan and check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Perform an electrical check of the DC fan motor assembly, see "Checking procedures" [▸ 91].
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 93].

To perform an electrical check of the DC fan motor assembly

1. First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 91].

> **INFORMATION**
> Check the DC fan motor power supply (voltage) circuit on the PCB.

> **INFORMATION**
> The DC fan motor connector MUST be plugged into the appropriate PCB.

2. Turn ON the power of the unit.
3. Activate Fan ONLY via the user interface.
4. Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5. Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Disconnect the DC fan motor connector X20A from the indoor unit main PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	1.93~3.58 V
Red	Brown	OL	Brown	White	OL
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	OL
Blue	Red	0.63~1.17 V	Orange	Brown	OL
Blue	Brown	0.36~0.68 V	Orange	White	OL
Blue	Orange	1.16~2.15 V	White	Red	OL
Blue	White	1.72~3.19 V	White	Blue	OL
Brown	Red	1.58~2.93 V	White	Brown	OL
Brown	Blue	1.23~2.28 V	White	Orange	OL

INFORMATION

For Class 15~32 units: Measure the continuity of all wiring between the DC fan motor connector and the connector on the indoor unit main PCB. If NO continuity is measured, repair as needed, see "7.2 Wiring diagram" [▸ 359].

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 93].

8 Connect the DC fan motor connector X20A to the indoor unit main PCB.

9 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

10 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit main PCB.

Result: The voltage MUST be 288~352 V DC.

11 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit main PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

12 Operate the indoor unit in Fan ONLY mode.

13 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit main PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Continue with the next step.

14 Turn OFF the respective circuit breaker.

15 Remove the indoor unit fan motor, see "Repair procedures" [▸ 93]. Make sure to keep the power supply wiring connected when removing the switch box.

16 Connect the DC fan motor connector X20A to the indoor unit main PCB.

17 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Make sure unit operation is OFF. The unit MUST be kept powered.

18 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during fan motor shaft rotation?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 93].

Repair procedures

To remove the DC fan motor assembly

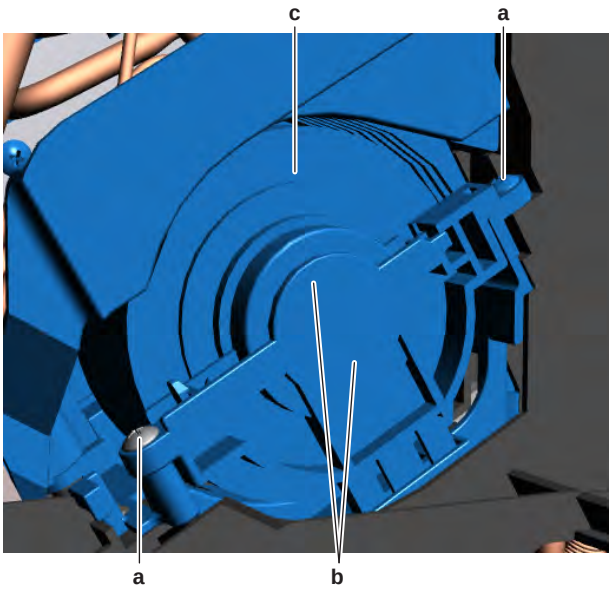
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the switch box, see "4.9 Plate work" [▸ 192].

2 Remove the 2 screws and click out the brackets.



a Screw
b Bracket
c Indoor unit fan motor

3 Manually open the swing flaps.

4 Loosen the screw that fixes the cross flow fan assembly to the fan motor shaft.

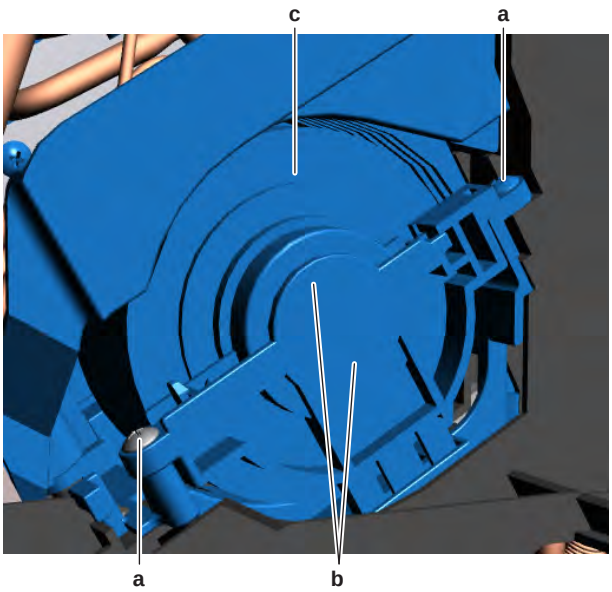
5 Slide the indoor unit fan motor out of the indoor unit.

6 To install the indoor unit fan motor, see "Repair procedures" [▸ 93].

To install the DC fan motor assembly

1 Install the indoor unit fan motor in its correct location on the cross flow fan assembly. Make sure the fan motor shaft is correctly inserted in the cross flow fan assembly.

2 Install and tighten the screw to fix the cross flow fan assembly to the fan motor shaft.



a Screw
b Bracket
c Indoor unit fan motor

3 Install (click) the brackets in the correct location.

4 Install and tighten the 2 screws to fix the brackets.

5 Install the switch box, see "4.9 Plate work" [▸ 192].

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.

4.5.2 Duct indoor units

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

Depending on the type and size of the unit, the number of fans and the way they are mounted may differ:

- FXSA15~50: 1 fan mounted directly on the fan motor shaft.
- FXSA63~80, FXDA10~32, FXMA50~80 and FXMA200+250: 2 fans mounted directly on the fan motor shaft, each fan on one side of the fan motor.
- FXSA100+125, FXDA40~63 and FXMA100+125: 3 fans. 1 fan directly mounted on the fan motor shaft and 2 fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling.
- FXSA140: 4 fans. 1 fan directly mounted on the fan motor shaft and 3 fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling.

Checking procedures

INFORMATION

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

To perform a mechanical check of the fan assembly

Prerequisite: Stop the unit operation via the user interface.

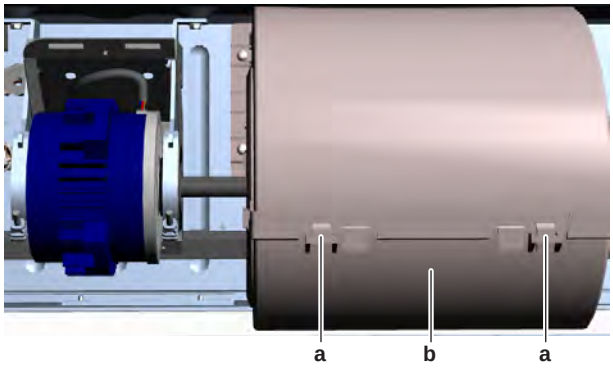
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the air filter(s).

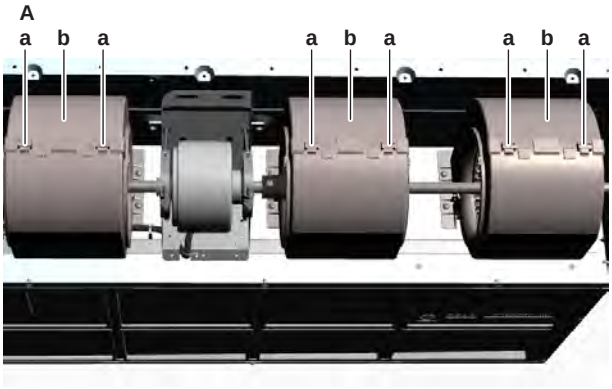
2 Unplug the plastic clips holding the fan cover(s). Remove the fan cover(s) by slowly pulling it (them) out of the unit. NOT possible for FXMA200+250 units.

A

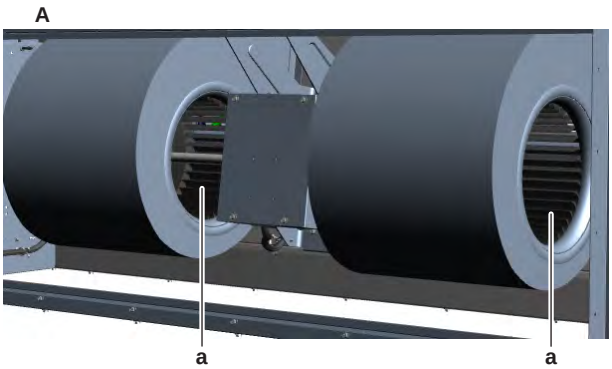


A FXSA15~50
a Plastic clip

b Fan cover



A FXDA40~63
a Plastic clip
b Fan cover



A FXMA200+250
a Fan

3 Check for the presence of foreign material around the fan assembly. Remove if found.

4 Check if the fan motor is correctly mounted on its base, see "Repair procedures" [▸ 108].

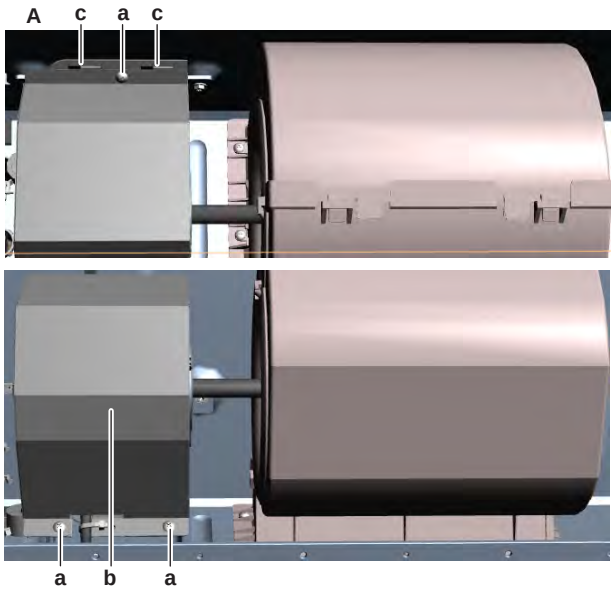
5 Check the state of the fan assembly for damage, deformations and cracks.

Is the fan assembly damaged?	Action
Yes	Replace the fan assembly, see "Repair procedures" [▸ 108].
No	Perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 95].

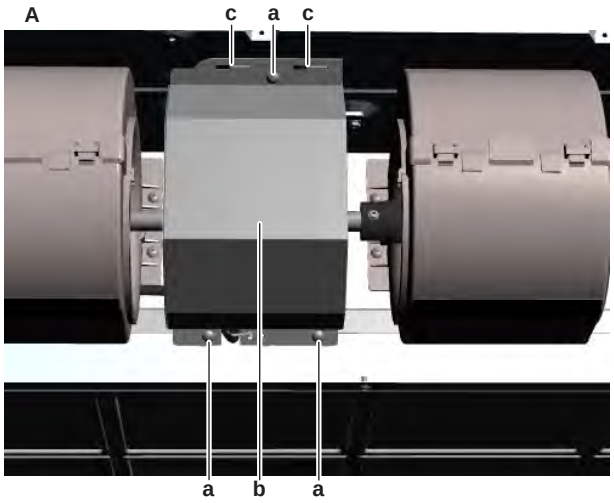
To perform a mechanical check of the indoor unit fan motor

Prerequisite: First perform a mechanical check of the fan assembly, see "Checking procedures" [▸ 95].

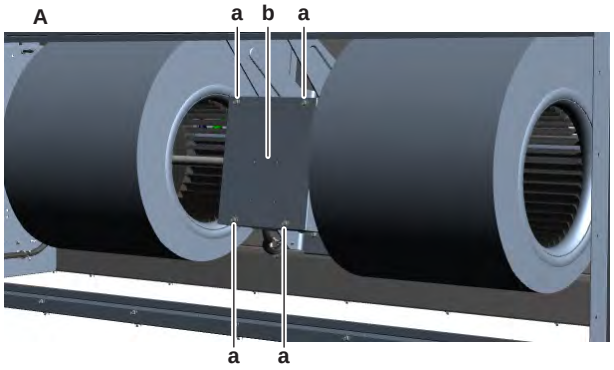
1 Remove the screws from the fan motor cover.



A FXSA15~50
a Screw
b Fan motor cover
c Hook



A FXDA40~63
a Screw
b Fan motor cover
c Hook



A FXMA200+250
a Screw
b Fan motor cover

2 Slightly pull fan motor cover to the left to release it from the hooks at the top. NOT needed for FXMA200+250 units.

3 Remove the fan motor cover.

4 Visually check the fan motor for any damage or burnt-out components. If any damage is found, replace the fan motor, see "Repair procedures" [▸ 108].

5 Slowly rotate the fan assembly. Check that it rotates smoothly.

6 Check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Perform an electrical check of the DC fan motor assembly, see "Checking procedures" [▸ 95].
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 108].

To perform an electrical check of the indoor unit fan motor

FXDA

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 95].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Disconnect the DC fan motor connector X20A from the indoor unit main PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	1.93~3.58 V
Red	Brown	OL	Brown	White	OL

VDC	Comm	Ref	VDC	Comm	Ref
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	1.93~3.58 V
Blue	Red	0.63~1.17 V	Orange	Brown	1.51~2.80 V
Blue	Brown	0.36~0.68 V	Orange	White	OL
Blue	Orange	1.16~2.15 V	White	Red	OL
Blue	White	1.72~3.19 V	White	Blue	OL
Brown	Red	1.58~2.93 V	White	Brown	OL
Brown	Blue	1.23~2.28 V	White	Orange	OL

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

8 Connect the DC fan motor connector X20A to the indoor unit main PCB.

9 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

10 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit main PCB.

Result: The voltage MUST be 288~352 V DC.

11 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit main PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

12 Operate the indoor unit in Fan ONLY mode.

13 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit main PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

Is the measured voltage 0 V DC?	Action
No	Continue with the next step.

14 Stop the unit operation via the user interface.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

15 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Replace the DC fan motor, see "Repair procedures" [▸ 108].

FXSA15~125

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 95].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Disconnect the DC fan motor connector X8A from the indoor unit fan PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	1.93~3.58 V
Red	Brown	OL	Brown	White	1.93~3.58 V
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	OL
Blue	Red	0.63~1.17 V	Orange	Brown	OL
Blue	Brown	0.36~0.68 V	Orange	White	OL
Blue	Orange	1.16~2.15 V	White	Red	OL
Blue	White	1.72~3.19 V	White	Blue	OL
Brown	Red	1.58~2.93 V	White	Brown	OL
Brown	Blue	1.23~2.28 V	White	Orange	OL

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

8 Connect the DC fan motor connector X8A to the indoor unit fan PCB.

9 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

10 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit fan PCB.

Result: The voltage MUST be 288~352 V DC.

11 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit fan PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

12 Operate the indoor unit in Fan ONLY mode.

13 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit fan PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].
No	Continue with the next step.

14 Stop the unit operation via the user interface.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

15 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].
No	Replace the DC fan motor, see "Repair procedures" [▶ 108].

FXSA140

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▶ 95].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Disconnect the DC fan motor connector X1A from the indoor unit fan PCB and measure the resistance between the connector wires Red-White, Red-Black and White-Black.

Result: ALL measurements MUST be 42 Ω ± 10%.

8 Disconnect the DC fan motor connector X2A from the indoor unit fan PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Pink	Grey	0.50~0.94 V	Orange	Blue	1.35~2.51 V
Pink	Orange	0.95~1.76 V	Orange	Yellow	1.35~2.51 V
Pink	Blue	0.95~1.76 V	Blue	Pink	0.97~1.79 V
Pink	Yellow	0.95~1.76 V	Blue	Grey	0.86~1.60 V
Grey	Pink	0.41~0.75 V	Blue	Orange	1.35~2.51 V
Grey	Orange	0.81~1.51 V	Blue	Yellow	1.35~2.51 V
Grey	Blue	0.81~1.51 V	Yellow	Pink	0.97~1.79 V
Grey	Yellow	0.81~1.51 V	Yellow	Grey	0.86~1.60 V
Orange	Pink	0.97~1.79 V	Yellow	Orange	1.35~2.51 V
Orange	Grey	0.86~1.60 V	Yellow	Blue	1.35~2.51 V

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

9 Connect the DC fan motor connectors X1A and X2A to the indoor unit fan PCB.

10 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

11 On connector X1A, measure the voltage between the connector wires Red-White, Red-Black and White-Black (= fan motor power supply) on the indoor unit fan PCB.

Result: ALL measured voltages MUST be 50~120 V DC.

12 On connector X2A, measure the voltage between the connector wires Pink-Grey (= fan motor control) on the indoor unit fan PCB.

Result: The voltage MUST be 15±10% V DC.

Are the measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

13 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and on connector X2A, measure the voltage between the DC fan motor connector wires Orange-Grey, Blue-Grey and Yellow-Grey.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].
No	Replace the DC fan motor, see "Repair procedures" [▸ 108].

FXMA50~125

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 95].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Disconnect the DC fan motor connector X1A from the indoor unit fan PCB and measure the resistance between the connector wires Red-White, Red-Black and White-Black.

Result: ALL measurements MUST be 3.5 Ω ± 10%.

8 Disconnect the DC fan motor connector X2A from the indoor unit fan PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Grey	Pink	0.41~0.77 V	Orange	Blue	1.57~2.91 V
Grey	Orange	1.11~2.07 V	Orange	Yellow	1.57~2.91 V
Grey	Blue	0.97~1.81 V	Blue	Grey	1.17~2.17 V
Grey	Yellow	0.97~1.81 V	Blue	Pink	1.04~1.92 V
Pink	Grey	0.61~2.43 V	Blue	Orange	1.23~2.29 V
Pink	Orange	1.16~2.15 V	Blue	Yellow	1.58~2.94 V
Pink	Blue	1.16~2.15 V	Yellow	Grey	1.17~2.17 V
Pink	Yellow	1.16~2.15 V	Yellow	Pink	1.04~1.92 V
Orange	Grey	1.17~2.17 V	Yellow	Orange	1.58~2.94 V
Orange	Pink	1.04~1.92 V	Yellow	Blue	1.58~2.94 V

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

9 Connect the DC fan motor connectors X1A and X2A to the indoor unit fan PCB.

10 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

11 On connector X1A, measure the voltage between the connector wires Red-White, Red-Black and White-Black (= fan motor power supply) on the indoor unit fan PCB.

Result: ALL measured voltages MUST be 50~120 V DC.

12 On connector X2A, measure the voltage between the connector wires Pink-Grey (= fan motor control) on the indoor unit fan PCB.

Result: The voltage MUST be 15±10% V DC.

Are the measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

13 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and on connector X2A, measure the voltage between the DC fan motor connector wires Orange-Grey, Blue-Grey and Yellow-Grey.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].
No	Replace the DC fan motor, see "Repair procedures" [▶ 108].

FXMA200+250

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▶ 95].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan …	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

INFORMATION

Make sure that the wiring between the DC fan motor connector and the connector on the PCB is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▶ 359].

7 Disconnect the DC fan motor connector X1A from the indoor unit fan PCB and measure the resistance between the connector wires Red-White, Red-Black and White-Black.

Result: ALL measurements MUST be:

Unit	Measured resistance
FXMA200	2.5 Ω ± 10%.
FXMA250	0.6 Ω ± 10%.

8 Disconnect the DC fan motor connector X2A from the indoor unit fan PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Grey	Pink	0.44~0.82 V	Orange	Blue	2.02~3.74 V
Grey	Orange	1.16~2.15 V	Orange	Yellow	2.02~3.74 V
Grey	Blue	1.16~2.15 V	Blue	Grey	1.98~3.68 V
Grey	Yellow	1.16~2.15 V	Blue	Pink	1.21~2.25 V
Pink	Grey	1.27~2.37 V	Blue	Orange	2.02~3.74 V
Pink	Orange	1.72~3.20 V	Blue	Yellow	2.02~3.74 V
Pink	Blue	1.72~3.20 V	Yellow	Grey	1.98~3.68 V
Pink	Yellow	1.72~3.20 V	Yellow	Pink	1.21~2.25 V
Orange	Grey	1.98~3.68 V	Yellow	Orange	2.02~3.74 V
Orange	Pink	1.21~2.25 V	Yellow	Blue	2.02~3.74 V

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

9 Connect the DC fan motor connectors X1A and X2A to the indoor unit fan PCB.

10 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

11 On connector X1A, measure the voltage between the connector wires Red-White, Red-Black and White-Black (= fan motor power supply) on the indoor unit fan PCB.

Result: ALL measured voltages MUST be 50~120 V DC.

12 On connector X2A, measure the voltage between the connector wires Pink-Grey (= fan motor control) on the indoor unit fan PCB.

Result: The voltage MUST be 15±10% V DC.

Are the measured voltages correct?	Action
Yes	Continue with the next step.

Are the measured voltages correct?	Action
No	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

13 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and on connector X2A, measure the voltage between the DC fan motor connector wires Orange-Grey, Blue-Grey and Yellow-Grey.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].
No	Replace the DC fan motor, see "Repair procedures" [▸ 108].

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.

Repair procedures

To remove the indoor unit fan motor and fan assembly

FXSA + FXDA + FXMA50~125

INFORMATION

Below procedure describes how to remove the fan motor and fans. It is possible to replace ONLY fan motor or fans. Keep other part for reuse.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

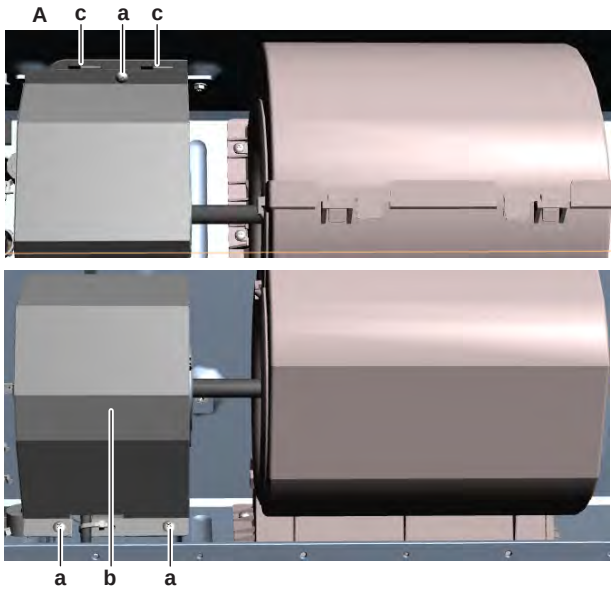
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

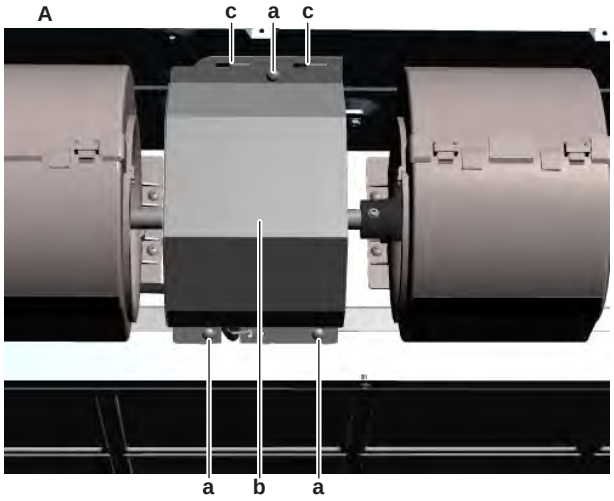
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the air filters.

3 Remove the 3 screws from the fan motor cover.



A FXSA15~50
a Screw
b Fan motor cover
c Hook

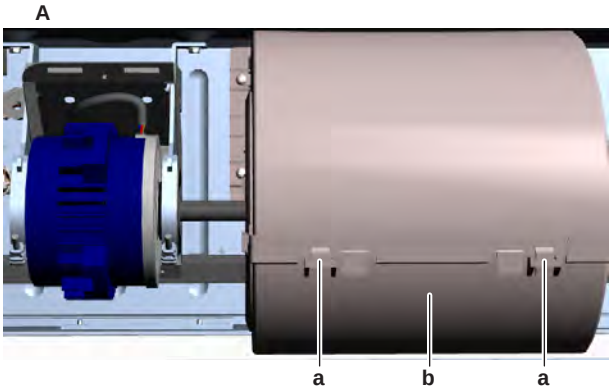


A FXDA40~63
a Screw
b Fan motor cover
c Hook

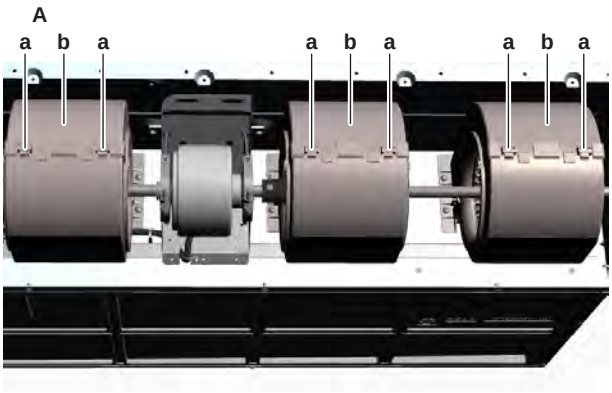
4 Slightly pull fan motor cover to the left to release it from the hooks at the top.

5 Remove the fan motor cover.

6 Unplug the plastic clips holding the fan covers. Remove the fan covers by slowly pulling them out of the unit.



A FXSA15~50
a Plastic clip
b Fan cover



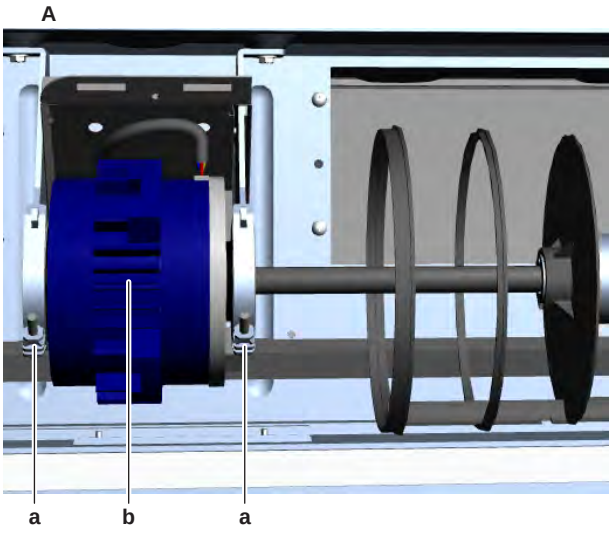
A FXDA40~63
a Plastic clip
b Fan cover

7 Disconnect the fan motor connector from the appropriate PCB.

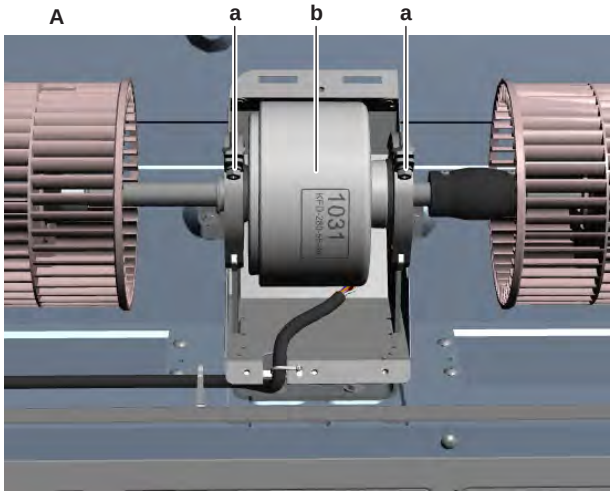
8 Cut all tie straps that fix the fan motor wiring harness.

9 Route the fan motor wiring harness (through the appropriate holes) out of the switch box and inside the fan motor compartment.

10 Remove the 2 screws from the fan motor fixing clamps while supporting the fan motor by hand.



A FXSA15~50
a Screw
b Fan motor



A FXDA40~63
a Screw
b Fan motor

11 Remove the complete assembly (fan motor + fans) from the indoor unit.

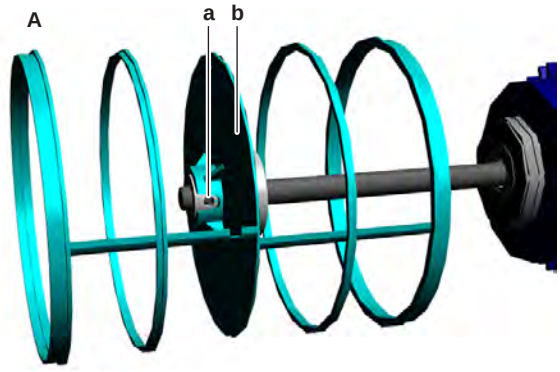
INFORMATION

Depending on the type and size of your unit, the number of fans and the way they are mounted may differ.

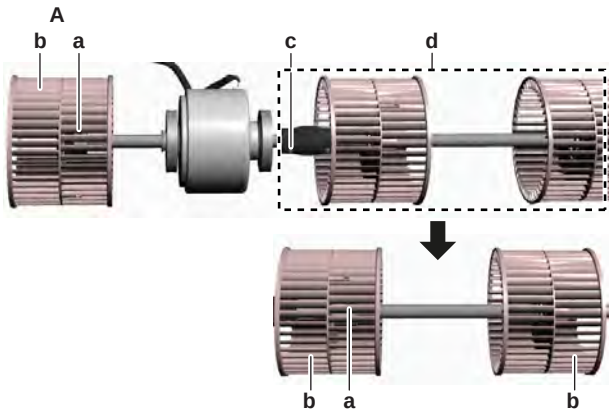
12 For fans mounted directly on the fan motor shaft: Remove the set screw and remove the fan from the fan motor. Keep the set screws for reuse.

13 For fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling:

- Remove the screw from the fan shaft coupling and remove the shaft with fans from the fan motor.
- If needed, it is ALSO possible to remove the fans from the shaft: Remove the set screws and remove the fans from the shaft. Keep the set screws for reuse.



A FXSA15~50
a Set screw
b Fan



A FXDA40~63
a Set screw
b Fan
c Screw (fan shaft coupling)
d Shaft with fans

14 To install the indoor unit fan motor and fan assembly, see "Repair procedures" [▸ 108].

FXMA200+250

INFORMATION

Below procedure describes how to remove the fan motor and fans. It is possible to replace ONLY fan motor or fans. Keep other part for reuse.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

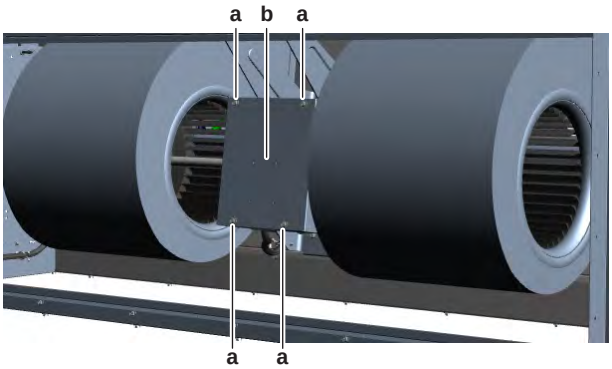
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the air filters.

3 Remove the 4 screws from the fan motor cover.



a Screw
b Fan motor cover

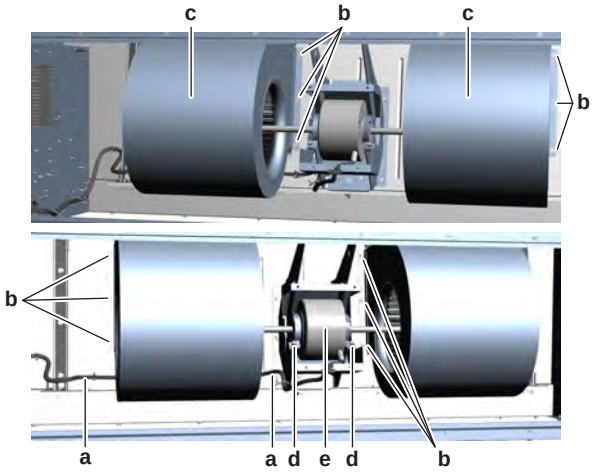
4 Remove the fan motor cover.

5 Disconnect the fan motor connector from the intermediate connector.

6 Cut all tie straps that fix the fan motor wiring harness.

7 Route the fan motor wiring harness (through the appropriate holes) out of the switch box and inside the fan motor compartment and remove the harness from all harness retainers.

8 Remove the screws from the fan housings.

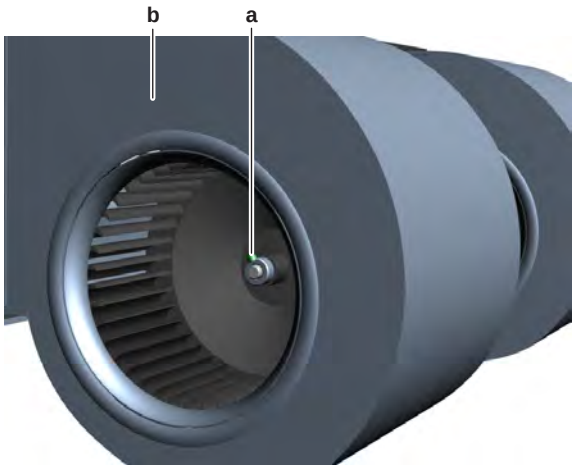


a Fan motor wiring harness
b Screw (fan housing)
c Fan housing
d Screw (fixing clamp)
e Fan motor

9 Remove the 2 screws from the fan motor fixing clamps while supporting the fan motor by hand.

10 Remove the complete assembly (fan motor + fans) from the indoor unit.

11 Remove the set screw and remove the fan assembly from the fan motor. Keep the set screw for reuse.



a Set screw
b Fan assembly

12 To install the indoor unit fan motor and fan assembly, see "Repair procedures" [▸ 108].

To install the indoor unit fan motor and fan assembly

FXSA + FXDA + FXMA50~125

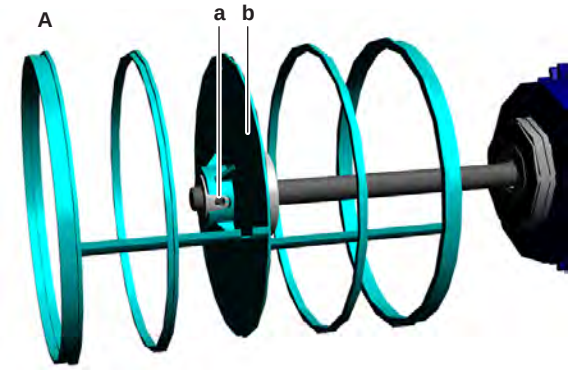
> **INFORMATION**
>
> Depending on the type and size of your unit, the number of fans and the way they are mounted may differ.

1 For fans mounted directly on the fan motor shaft:

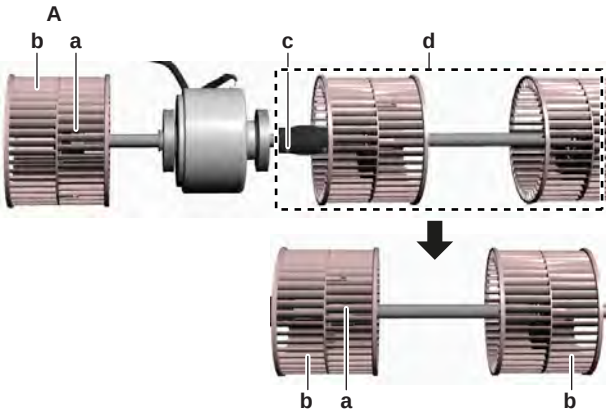
- Install the fans in the correct location on the fan motor shaft.
- Install and tighten the set screws to fix the fans.

2 For fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling:

- If needed, install the fans in the correct location on the shaft.
- Install and tighten the set screws to fix the fans to the shaft.
- Correctly install the shaft with fans and the fan shaft coupling on the fan motor.
- Install and tighten the screw to fix the shaft with fans and fan shaft coupling to the fan motor.



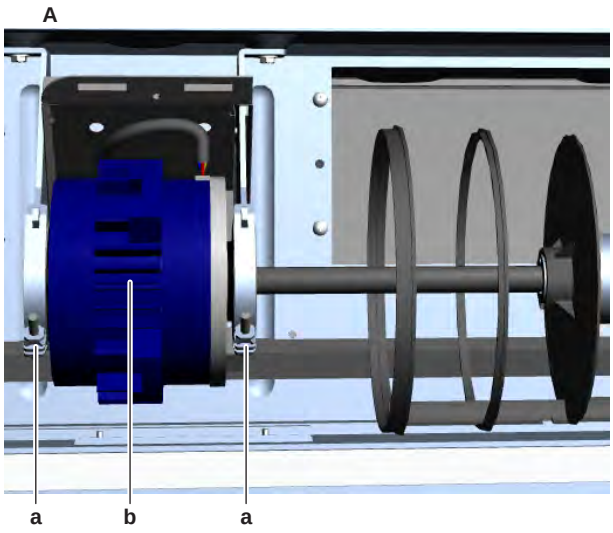
A FXSA15~50
a Set screw
b Fan



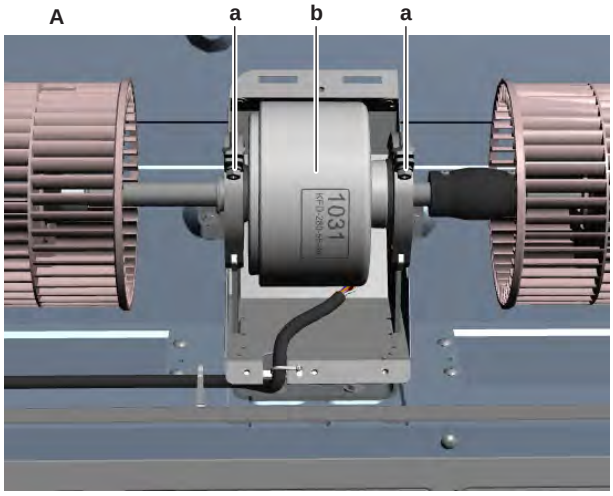
A FXDA40~63
a Set screw
b Fan
c Screw (fan shaft coupling)
d Shaft with fans

3 Install the fan motor and fans assembly in the correct location on the bearing holder. If applicable, make sure the end of the shaft is correctly inserted in the bearing at the side of the unit.

4 Install fixing clamps on the fan motor and fans assembly. Install and tighten the 2 screws to fix the fixing clamps.



A FXSA15~50
a Screw
b Fan motor



A FXDA40~63
a Screw
b Fan motor

5 Route the fan motor wiring harness (through the appropriate holes) inside the switch box and towards the appropriate PCB.

6 Connect the fan motor connector to the appropriate PCB.

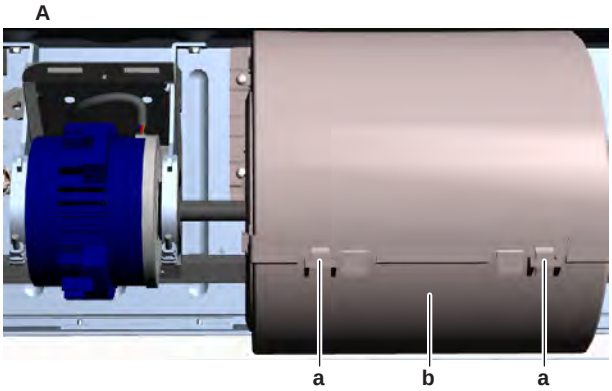
7 Install new tie straps to fix the fan motor wiring harness.

INFORMATION

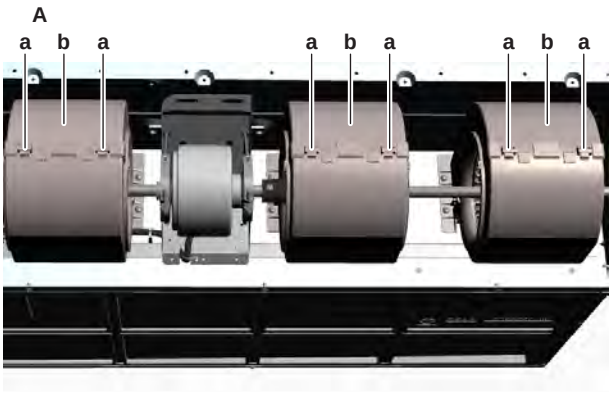
Replace all cable ties that were cut during removal.

8 Install the fan covers in the correct location. First install the bottom part.

9 Insert the plastic clips to fix the fan covers.



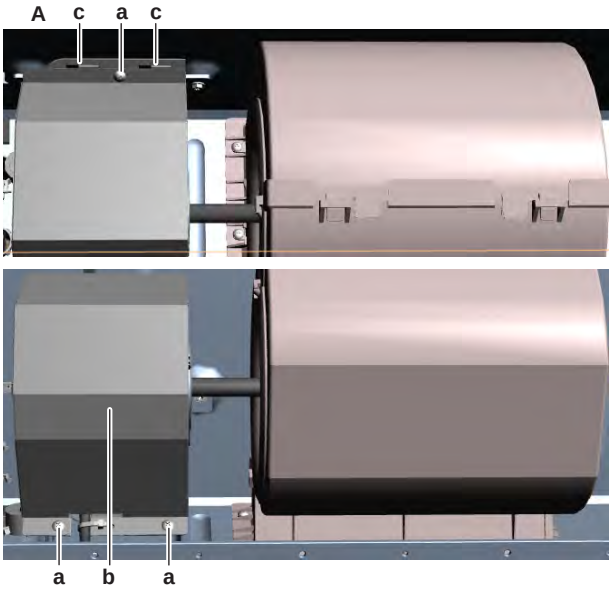
A FXSA15~50
a Plastic clip
b Fan cover



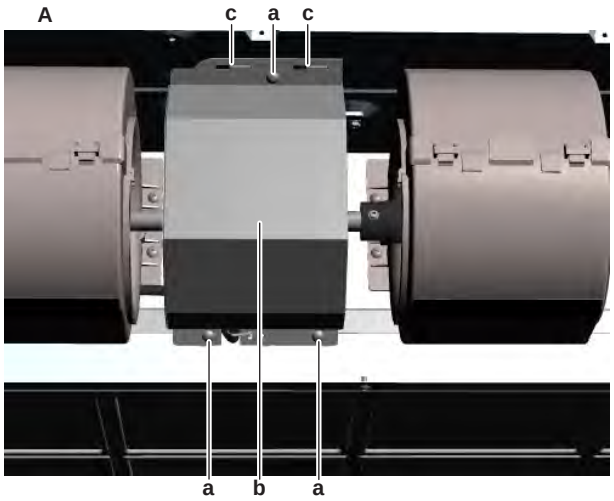
A FXDA40~63
a Plastic clip
b Fan cover

10 Install the fan motor cover in the correct location. Make sure to correctly install it on the hooks at the top.

11 Install and tighten the 3 screws to fix the fan motor cover.



A FXSA15~50
a Screw
b Fan motor cover
c Hook

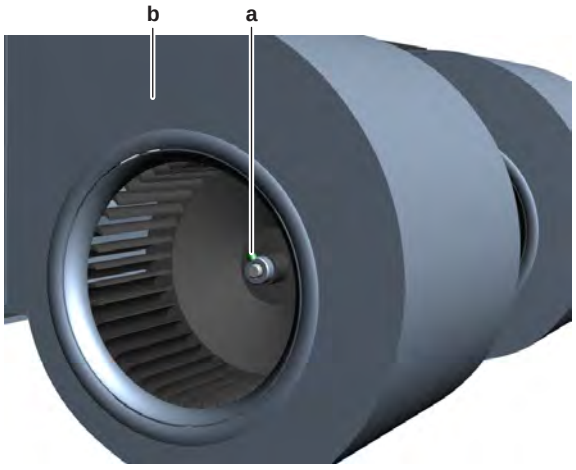


A FXDA40~63
a Screw
b Fan motor cover
c Hook

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "Checking procedures" [▸ 95] of the DC fan motor and continue with the next procedure.

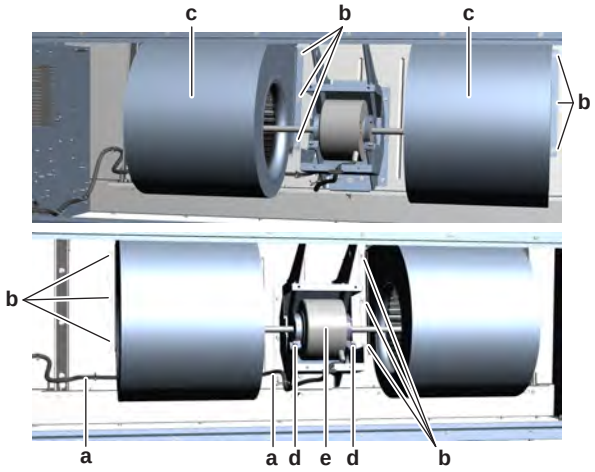
FXMA200+250

1. Install the fan assembly in the correct location on the fan motor shaft.
2. Install and tighten the set screw to fix the fan assembly.



a Set screw
b Fan assembly

3. Install the fan motor and fans assembly in the correct location on the bearing holder. If applicable, make sure the end of the shaft is correctly inserted in the bearing at the side of the unit.
4. Install fixing clamps on the fan motor and fans assembly. Install and tighten the 2 screws to fix the fixing clamps.



a Fan motor wiring harness
b Screw (fan housing)
c Fan housing
d Screw (fixing clamp)
e Fan motor

5 Install and tighten the screws to fix the fan motor housings.

6 Route the fan motor wiring harness (through the appropriate harness retainers and through the appropriate holes) inside the switch box.

7 Connect the fan motor connector to the intermediate connector.

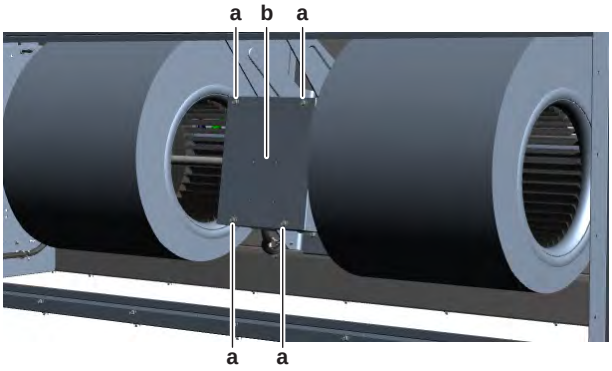
8 Install new tie straps to fix the fan motor wiring harness.

INFORMATION

Replace all cable ties that were cut during removal.

9 Install the fan motor cover in the correct location.

10 Install and tighten the 4 screws to fix the fan motor cover.



a Screw
b Fan motor cover

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "Checking procedures" [▶ 95] of the DC fan motor and continue with the next procedure.

4.5.3 Sensing cassette indoor units

Checking procedures

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

To perform a mechanical check of the fan rotor assembly

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the air filter, see "6.2.5 To clean the air filters" [▸ 344].

1. Check for the presence of foreign material around the fan rotor assembly. Remove if found.
2. Slowly rotate the fan rotor assembly.
3. If the fan rotor assembly touches the bell mouth, check if the fan motor is correctly mounted on its base, see "Repair procedures" [▸ 124].
4. Check the state of the fan rotor assembly for damage, deformations and cracks.

Is the fan rotor assembly damaged?	Action
Yes	Replace the fan rotor assembly, see "Repair procedures" [▸ 124].
No	Perform an electrical check of the DC fan motor assembly, see "Checking procedures" [▸ 119].

To perform an electrical check of the indoor unit fan motor

FXFA

1. First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 119].

> **INFORMATION**
> Check the DC fan motor power supply (voltage) circuit on the PCB.

> **INFORMATION**
> The DC fan motor connector MUST be plugged into the appropriate PCB.

2. Turn ON the power of the unit.
3. Activate Fan ONLY operation via the user interface.
4. Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

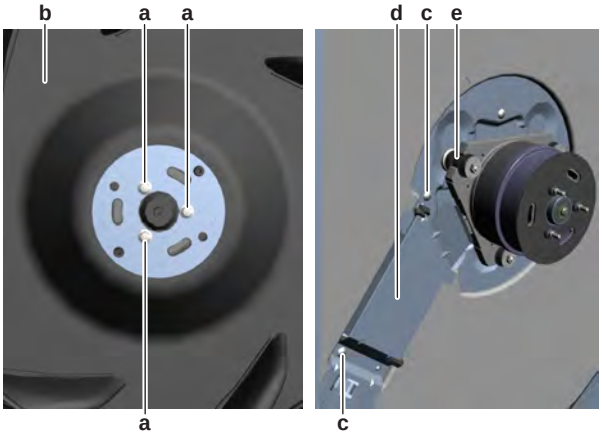
6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Remove the drain pan, see "4.9 Plate work" [▸ 192]. Make sure to keep the power supply wiring connected when removing the switch box.

8 Remove the 3 nuts from the fan rotor assembly.



a Nut (fan rotor assy)
b Fan rotor assembly
c Screw
d Fan motor wiring cover
e Fan motor damper

9 Carefully pull the fan rotor assembly downwards and remove it from the DC fan motor assembly.

10 Remove the 2 screws and remove the fan motor wiring cover.

11 Visually check the fan motor for any damage or burnt-out components. If any damage is found, replace the fan motor, see "Repair procedures" [▸ 124].

12 Visually check the fan motor dampers for any damage. If any damage is found, replace the fan motor dampers, see "Repair procedures" [▸ 124].

13 Slowly rotate the DC fan motor shaft. Check that it rotates smoothly.

14 Check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Continue with the next step.
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 124].

INFORMATION

Make sure that the wiring between the DC fan motor connector and the connector on the PCB is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▸ 359].

15 On the DC fan motor connector (disconnected from the PCB), measure the resistance between the wires Red-White, Red-Black, and White-Black.

Result: ALL measured resistances MUST be:

Unit	Measured resistance
FXFA20~FXFA63	112.5~137.5 Ω
FXFA80~FXFA125	37.8~46.2 Ω

16 Set the Megger voltage to 500 V DC or 1000 V DC.

17 Measure the insulation resistance for the motor terminals.

Result: Measurements between each phase and fan motor body (e.g. axle) MUST be >1000 MΩ.

Are the measured resistance values correct?	Action
Yes	Continue with the next step.
No	Replace the DC fan motor, see "Repair procedures" [▸ 124].

18 Connect the DC fan motor connector to the indoor unit main PCB.

19 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

20 On the DC fan motor connector, measure the voltage between the wires Red-White, Red-Black, and White-Black (= fan motor power supply) on the indoor unit main PCB.

Result: ALL measured voltages MUST be 80~180 V DC.

Are the measured voltages correct?	Action
Yes	Replace the DC fan motor, see "Repair procedures" [▸ 124].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

FXZA

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 119].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan …	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

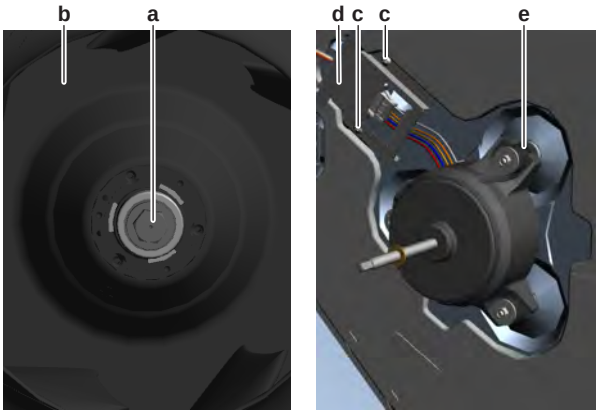
6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Remove the drain pan, see "4.9 Plate work" [▸ 192].

8 Remove the nut from the fan rotor assembly.



a Nut (fan rotor assy)
b Fan rotor assembly
c Screw
d Fan motor wiring cover
e Fan motor damper

9 Carefully pull the fan rotor assembly downwards and remove it from the DC fan motor assembly.

10 Remove the 2 screws and remove the fan motor wiring cover.

11 Visually check the fan motor for any damage or burnt-out components. If any damage is found, replace the fan motor, see "Repair procedures" [▸ 124].

12 Visually check the fan motor dampers for any damage. If any damage is found, replace the fan motor dampers, see "Repair procedures" [▸ 124].

13 Slowly rotate the DC fan motor shaft. Check that it rotates smoothly.

14 Check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Continue with the next step.
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 124].

15 Disconnect the DC fan motor connector X20A from the indoor unit main PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	1.93~3.58 V
Red	Brown	OL	Brown	White	1.93~3.58 V
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	OL
Blue	Red	0.63~1.17 V	Orange	Brown	OL
Blue	Brown	0.36~0.68 V	Orange	White	OL
Blue	Orange	1.16~2.15 V	White	Red	OL
Blue	White	1.72~3.19 V	White	Blue	OL
Brown	Red	1.58~2.93 V	White	Brown	OL
Brown	Blue	1.23~2.28 V	White	Orange	OL

INFORMATION

Measure the continuity of all wiring between the DC fan motor connector and the connector on the indoor unit main PCB. If NO continuity is measured, repair as needed, see "7.2 Wiring diagram" [▸ 359].

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 124].

16 Connect the DC fan motor connector X20A to the indoor unit main PCB.

17 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

18 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit main PCB.

Result: The voltage MUST be 288~352 V DC.

19 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit main PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "Checking procedures" [▸ 119].

20 Operate the indoor unit in Fan ONLY mode.

21 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit main PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit main PCB, see "Checking procedures" [▶ 119].
No	Continue with the next step.

22 Stop the unit operation via the user interface.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

23 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▶ 176].
No	Replace the DC fan motor, see "Repair procedures" [▶ 124].

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.

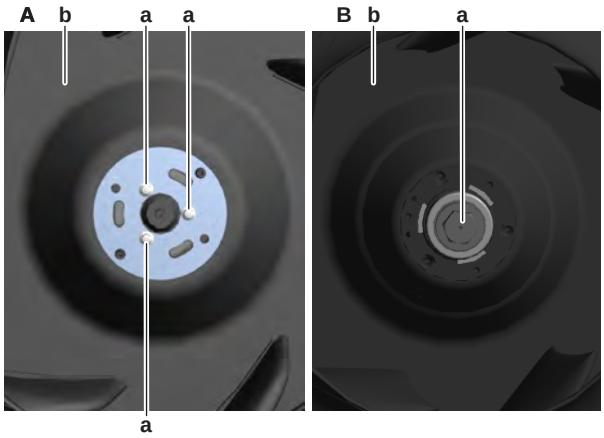
Repair procedures

To remove the fan rotor assembly

1 Remove the drain pan, see "4.9 Plate work" [▶ 192].

2 For FXFA: Remove the 3 nuts from the fan rotor assembly.

3 For FXZA: Remove the nut from the fan rotor assembly.



A FXFA
B FXZA
a Nut (fan rotor assy)
b Fan rotor assembly

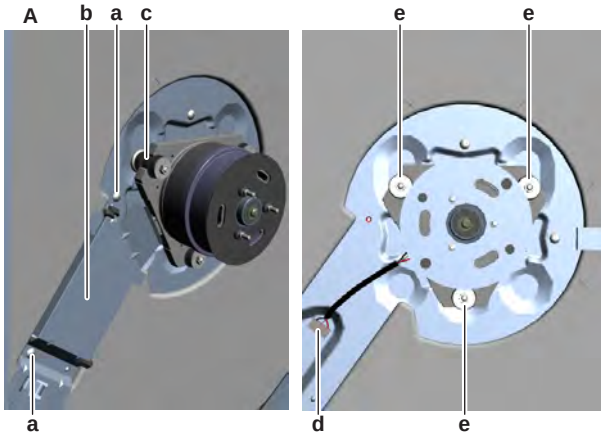
4 Carefully pull the fan rotor assembly downwards and remove it from the DC fan motor assembly.

5 To install the fan rotor assembly, see "Repair procedures" [▸ 124].

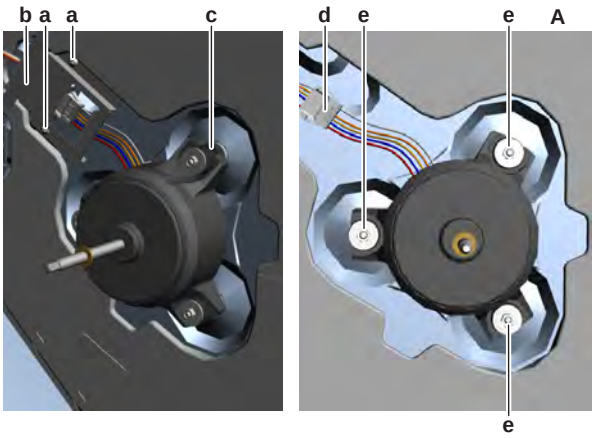
To remove the DC fan motor assembly

Prerequisite: Remove the fan rotor assembly from the DC fan motor assembly, see "Repair procedures" [▸ 124].

1 Remove the 2 screws and remove the fan motor wiring cover.



A FXFA
a Screw
b Fan motor wiring cover
c Fan motor damper
d DC fan motor connector
e Nut (DC fan motor assy)



A FXZA
a Screw
b Fan motor wiring cover
c Fan motor damper
d DC fan motor connector
e Nut (DC fan motor assy)

2 Disconnect the DC fan motor connector.

3 Remove the 3 nuts from the DC fan motor assembly.

4 Remove the DC fan motor assembly from the indoor unit.

INFORMATION

The fan motor dampers CAN be replaced separately.

5 To install the DC fan motor assembly, see "Repair procedures" [▸ 124].

To install the DC fan motor assembly

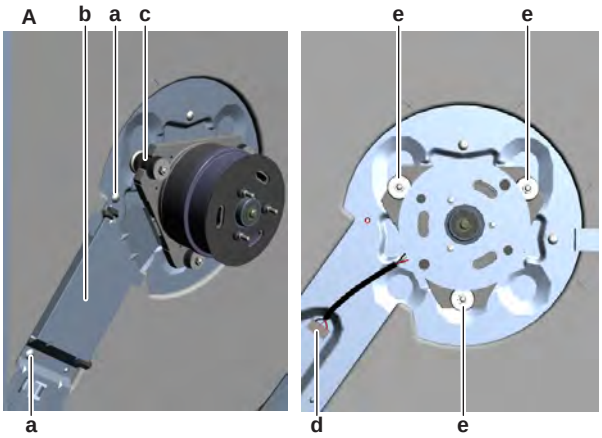
1 Install the dampers in the correct location on the indoor unit. Make sure the dampers are correctly installed and replace if damaged.

INFORMATION

The fan motor dampers CAN be replaced separately.

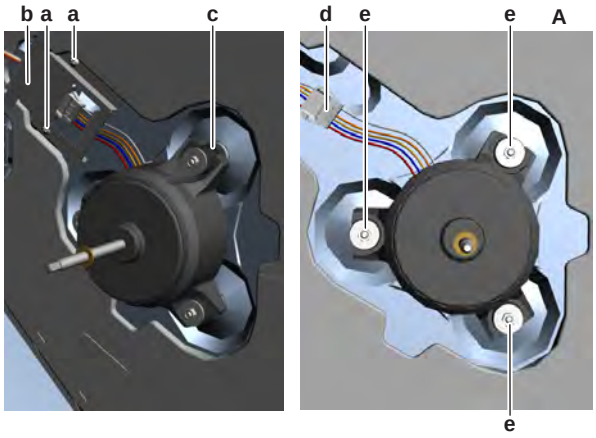
2 Install the DC fan motor assembly in the correct location on the dampers.

3 Install and tighten the 3 nuts to fix the DC fan motor assembly on the dampers.



A FXFA
a Screw
b Fan motor wiring cover
c Fan motor damper

d DC fan motor connector
e Nut (DC fan motor assy)



A FXZA
a Screw
b Fan motor wiring cover
c Fan motor damper
d DC fan motor connector
e Nut (DC fan motor assy)

4 Connect the DC fan motor connector to the wiring harness.

5 Install the fan motor wiring harness cover in the correct location.

6 Install and tighten the 2 screws to fix the wiring cover.

7 Install the fan rotor assembly, see "Repair procedures" [▸ 124].

To install the fan rotor assembly

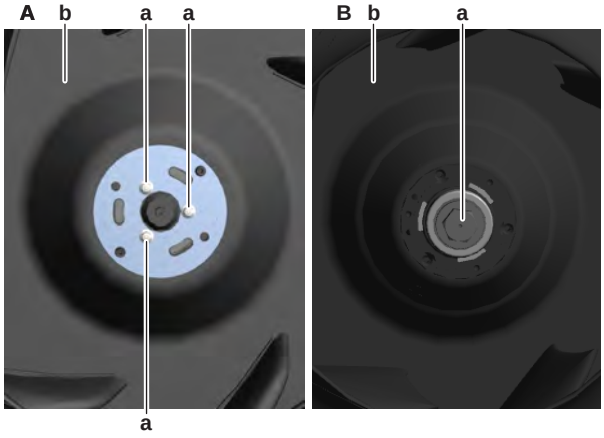
1 Install the fan rotor assembly on the DC fan motor assembly.

CAUTION

Do NOT install a damaged fan rotor assembly.

2 For FXFA: Install and tighten the 3 nuts to fix the fan rotor assembly.

3 For FXZA: Install and tighten the nut to fix the fan rotor assembly.



A FXFA
B FXZA
a Nut (fan rotor assy)
b Fan rotor assembly

4 Install the drain pan, see "4.9 Plate work" [▸ 192].

Is the problem solved?	Action
Yes	No further actions required.

Is the problem solved?	Action
No	Return to "Checking procedures" [▸ 119] of the indoor unit fan motor and continue with the next procedure.

4.5.4 Suspend (1-way) indoor units

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

Depending on the type and size of the unit, the number of fans and the way they are mounted may differ:

- FXHA32: 2 fans mounted directly on the fan motor shaft, each fan on one side of the fan motor.
- FXHA50+63: 3 fans. 1 fan directly mounted on the fan motor shaft and 2 fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling.
- FXHA100: 4 fans. 2 times 2 fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling, each shaft on one side of the fan motor.

Checking procedures

INFORMATION

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

To perform a mechanical check of the fan assembly

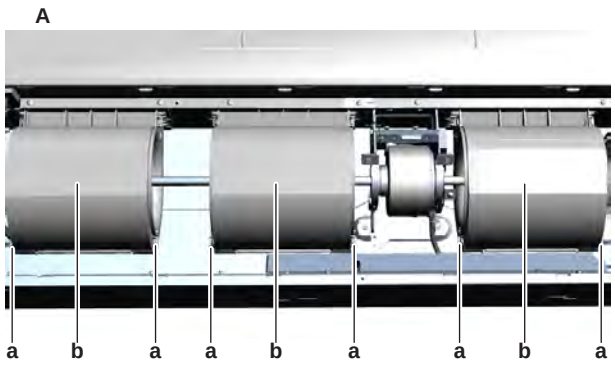
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the air filters.

2 Unplug the plastic clips holding the fan covers. Remove the upper fan covers from the fans.



A FXHA50
a Plastic clip
b Fan cover

3 Check for the presence of foreign material around the fan assembly. Remove if found.

4 Check if the fan motor is correctly mounted on its base, see "Repair procedures" [▸ 132].

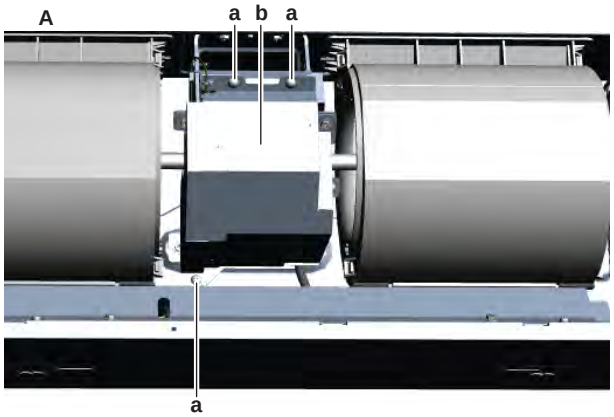
5 Check the state of the fan assembly for damage, deformations and cracks.

Is the fan assembly damaged?	Action
Yes	Replace the fan assembly, see "Repair procedures" [▸ 132].
No	Perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 128].

To perform a mechanical check of the indoor unit fan motor

Prerequisite: First perform a mechanical check of the fan assembly, see "Checking procedures" [▸ 128].

1 Remove the 3 screws from the fan motor cover.



A FXHA50
a Screw
b Fan motor cover

2 Remove the fan motor cover.

3 Visually check the fan motor for any damage or burnt-out components. If any damage is found, replace the fan motor, see "Repair procedures" [▸ 132].

4 Slowly rotate the fan assembly. Check that it rotates smoothly.

5 Check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Perform an electrical check of the DC fan motor assembly, see "Checking procedures" [▸ 128].
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 132].

To perform an electrical check of the indoor unit fan motor

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 128].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

INFORMATION

For FXHA32~63: Make sure that the wiring between the DC fan motor connector and the connector on the PCB is properly connected and NOT damaged (check continuity), see "7.2 Wiring diagram" [▸ 359].

7 Disconnect the DC fan motor connector X20A from the indoor unit main PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	2.1~3.9 V
Red	Brown	OL	Brown	White	OL
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	1.93~3.58 V
Blue	Red	0.56~1.04 V	Orange	Brown	1.51~2.80 V
Blue	Brown	0.35~0.65 V	Orange	White	OL
Blue	Orange	1.12~2.08 V	White	Red	OL
Blue	White	1.96~3.64 V	White	Blue	OL
Brown	Red	1.89~3.51 V	White	Brown	OL
Brown	Blue	1.4~2.6 V	White	Orange	OL

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 108].

8 Connect the DC fan motor connector X20A to the indoor unit main PCB.

9 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

10 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit main PCB.

Result: The voltage MUST be 288~352 V DC.

11 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit main PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

12 Operate the indoor unit in Fan ONLY mode.

13 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit main PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Continue with the next step.

14 Stop the unit operation via the user interface.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

15 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Replace the DC fan motor, see "Repair procedures" [▸ 132].

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.

Repair procedures

To remove the indoor unit fan motor and fan assembly

INFORMATION

Below procedure describes how to remove the fan motor and fans. It is possible to replace ONLY fan motor or fans. Keep other part for reuse.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

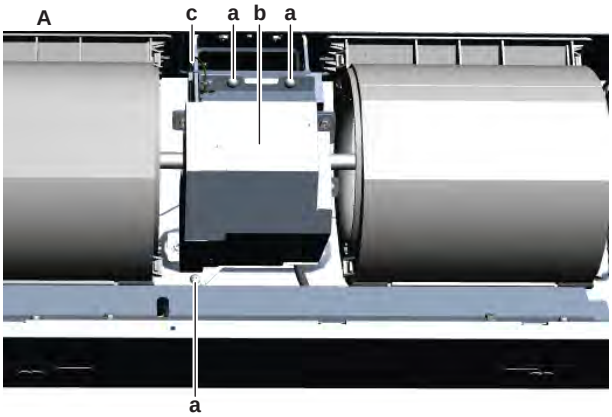
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the air filters.

3 Remove the 3 screws from the fan motor cover.

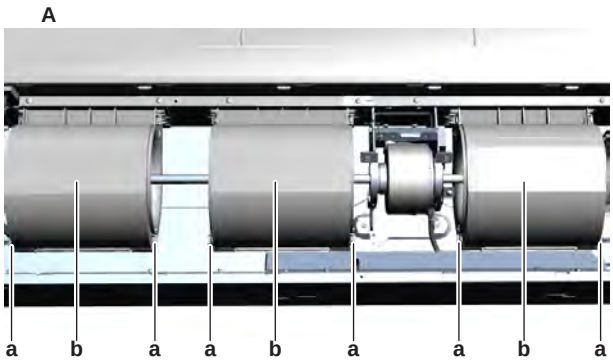


A FXHA50
a Screw
b Fan motor cover
c Screw (ground wire)

4 Remove the fan motor cover.

5 Remove the screw and disconnect the ground wire from the fan motor bracket.

6 Unplug the plastic clips holding the fan covers. Remove the upper fan covers from the fans.



A FXHA50
a Plastic clip
b Fan cover

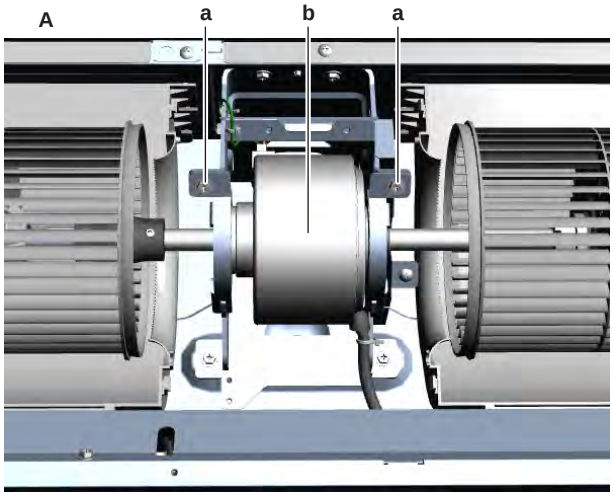
7 For FXHA100: Disconnect the fan motor connector from the appropriate PCB.

8 For FXHA32~63: Disconnect the fan motor connector from the intermediate connector.

9 Cut all tie straps that fix the fan motor wiring harness.

10 Route the fan motor wiring harness (through the appropriate holes) out of the switch box and inside the fan motor compartment.

11 Remove the 2 screws from the fan motor fixing clamps while supporting the fan motor by hand.



A FXHA50
a Screw
b Fan motor

12 Remove the complete assembly (fan motor + fans) from the indoor unit.

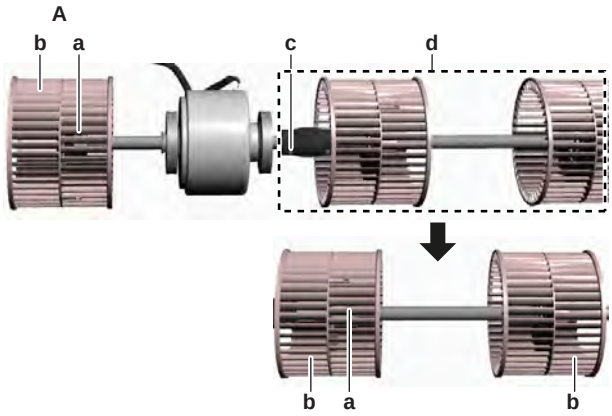
INFORMATION

Depending on the type and size of your unit, the number of fans and the way they are mounted may differ.

13 For fans mounted directly on the fan motor shaft: Remove the set screw and remove the fan from the fan motor. Keep the set screws for reuse.

14 For fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling:

- Remove the screw from the fan shaft coupling and remove the shaft with fans from the fan motor.
- If needed, it is ALSO possible to remove the fans from the shaft: Remove the set screws and remove the fans from the shaft. Keep the set screws for reuse.



A FXHA50
a Set screw
b Fan
c Screw (fan shaft coupling)
d Shaft with fans

15 To install the indoor unit fan motor and fan assembly, see "Repair procedures" [▸ 132].

To install the indoor unit fan motor and fan assembly

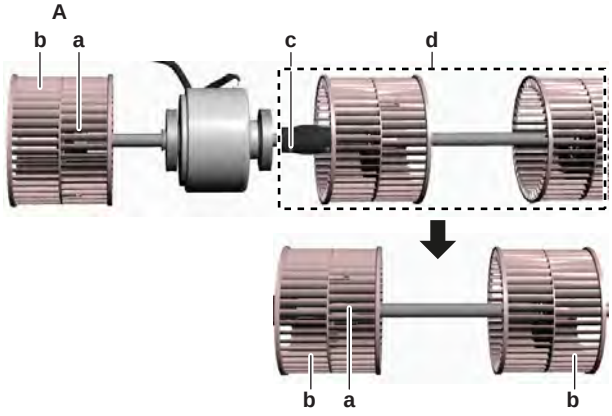
> **INFORMATION**
> Depending on the type and size of your unit, the number of fans and the way they are mounted may differ.

1 For fans mounted directly on the fan motor shaft:

- Install the fans in the correct location on the fan motor shaft.
- Install and tighten the set screws to fix the fans.

2 For fans mounted on a shaft which is connected to the fan motor with a fan shaft coupling:

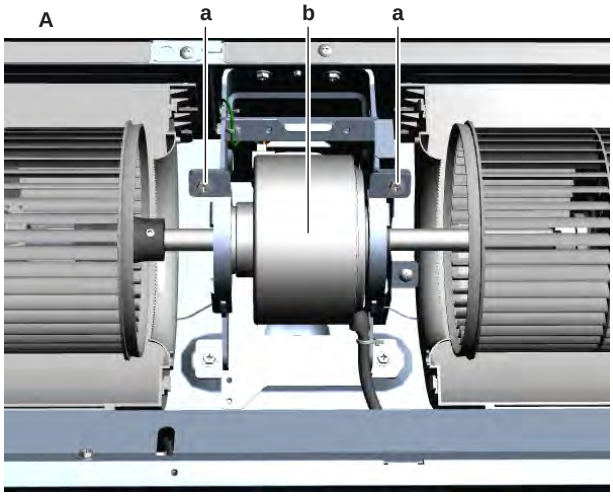
- If needed, install the fans in the correct location on the shaft.
- Install and tighten the set screws to fix the fans to the shaft.
- Correctly install the shaft with fans and the fan shaft coupling on the fan motor.
- Install and tighten the screw to fix the shaft with fans and fan shaft coupling to the fan motor.



A FXHA50
a Set screw
b Fan
c Screw (fan shaft coupling)
d Shaft with fans

3 Install the fan motor and fans assembly in the correct location on the bearing holder. If applicable, make sure the end of the shaft is correctly inserted in the bearing at the side of the unit.

4 Install fixing clamps on the fan motor and fans assembly. Install and tighten the 2 screws to fix the fixing clamps.



A FXHA50
a Screw
b Fan motor

5 Connect the ground wire to the fan motor bracket. Install and tighten the screw to fix the ground wire.

6 Route the fan motor wiring harness (through the appropriate holes) inside the switch box.

7 For FXHA100: Connect the fan motor connector to the appropriate PCB.

8 For FXHA32~63: Connect the fan motor connector to the intermediate connector.

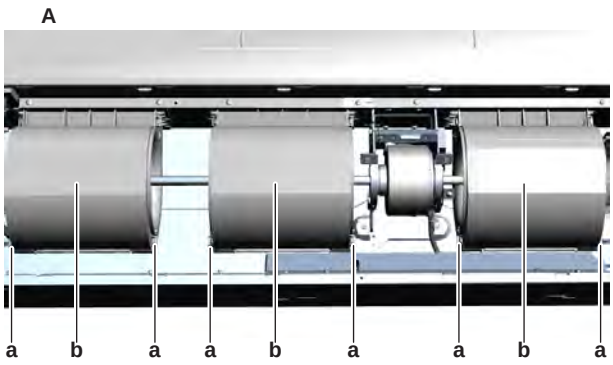
9 Install new tie straps to fix the fan motor wiring harness.

INFORMATION

Replace all cable ties that were cut during removal.

10 Install the upper fan covers in the correct location on the bottom fan covers.

11 Insert the plastic clips to fix the fan covers.

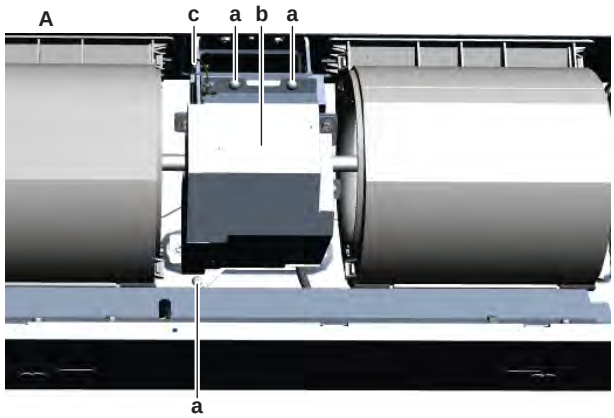


A FXHA50

a Plastic clip
b Fan cover

12 Install the fan motor cover in the correct location.

13 Install and tighten the 3 screws to fix the fan motor cover.



A FXHA50
a Screw
b Fan motor cover
c Screw (ground wire)

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "Checking procedures" [▸ 128] of the DC fan motor and continue with the next procedure.

4.5.5 Suspend (4-way) indoor units

Checking procedures

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

To perform a mechanical check of the fan rotor assembly

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the air filter, see "6.2.5 To clean the air filters" [▸ 344].

1 Check for the presence of foreign material around the fan rotor assembly. Remove if found.

2 Slowly rotate the fan rotor assembly.

3 If the fan rotor assembly touches the bell mouth, check if the fan motor is correctly mounted on its base, see "Repair procedures" [▸ 140].

4 Check the state of the fan rotor assembly for damage, deformations and cracks.

Is the fan rotor assembly damaged?	Action
Yes	Replace the fan rotor assembly, see "Repair procedures" [▸ 140].

Is the fan rotor assembly damaged?	Action
No	Perform an electrical check of the DC fan motor assembly, see "Checking procedures" [▸ 136].

To perform an electrical check of the indoor unit fan motor

1 First perform a mechanical check of the DC fan motor assembly, see "Checking procedures" [▸ 136].

INFORMATION

Check the DC fan motor power supply (voltage) circuit on the PCB.

INFORMATION

The DC fan motor connector MUST be plugged into the appropriate PCB.

2 Turn ON the power of the unit.

3 Activate Fan ONLY operation via the user interface.

4 Check the functioning of the indoor unit fan.

Indoor unit fan ...	Action
Rotates continuously (without interruption)	DC fan motor assembly is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
Does not rotate or rotates for a short time	Continue with the next step.

5 Turn OFF the unit via the user interface.

6 Turn OFF the respective circuit breaker.

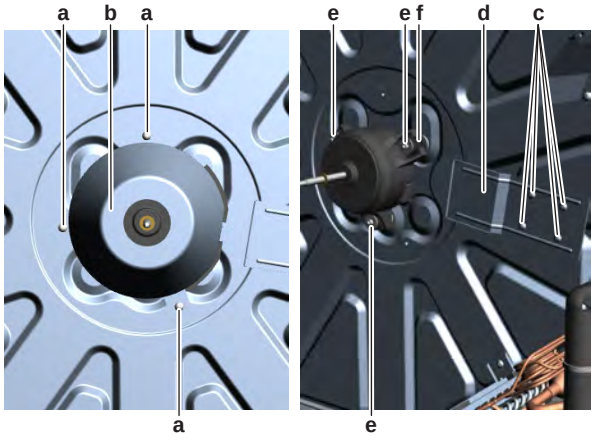
DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

7 Remove the drain pan, see "4.9 Plate work" [▸ 192]. Make sure to keep the power supply wiring connected when removing the switch box.

8 Remove the fan rotor assembly, see "Repair procedures" [▸ 140].

9 Remove the 3 screws and remove the fire shield from the DC fan motor assembly.



a Screw (fire shield)

b Fire shield
c Screw (wiring cover)
d Fan motor wiring cover
e Nut (DC fan motor assy)
f Damper

10 Remove the 4 screws and remove the fan motor wiring cover.

11 Visually check the fan motor for any damage or burnt-out components. If any damage is found, replace the fan motor, see "Repair procedures" [▸ 140].

12 Visually check the fan motor dampers for any damage. If any damage is found, replace the fan motor dampers, see "Repair procedures" [▸ 140].

13 Slowly rotate the DC fan motor shaft. Check that it rotates smoothly.

14 Check the friction of the DC fan motor shaft bearing.

Is the DC fan motor shaft friction normal?	Action
Yes	Continue with the next step.
No	Replace the DC fan motor assembly, see "Repair procedures" [▸ 140].

15 Disconnect the DC fan motor connector X20A from the indoor unit main PCB and perform a diode check between the connector wires shown below.

Result: The measurements MUST be:

VDC	Comm	Ref	VDC	Comm	Ref
Red	Blue	OL	Brown	Orange	0.99~1.83 V
Red	Brown	OL	Brown	White	1.2~2.25 V
Red	Orange	OL	Orange	Red	OL
Red	White	OL	Orange	Blue	OL
Blue	Red	0.63~1.17 V	Orange	Brown	OL
Blue	Brown	0.35~0.65 V	Orange	White	OL
Blue	Orange	1.5~1.95 V	White	Red	OL
Blue	White	1.05~1.95 V	White	Blue	OL
Brown	Red	1.26~2.34 V	White	Brown	OL
Brown	Blue	0.53~0.98 V	White	Orange	OL

DC fan motor measurements are correct?	Action
Yes	Continue with the next step.
No	Replace the indoor unit fan motor, see "Repair procedures" [▸ 140].

16 Connect the DC fan motor connector X20A to the indoor unit main PCB.

17 Turn ON the power of the unit.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

DANGER: RISK OF ELECTROCUTION

Do NOT touch any live parts or PCB's.

18 Measure the voltage between the connector wires Blue-Red (= fan motor power supply) on the indoor unit main PCB.

Result: The voltage MUST be 288~352 V DC.

19 Measure the voltage between the connector wires Blue-Brown (= fan motor control) on the indoor unit main PCB.

Result: The voltage MUST be 15±10% V DC.

Are both measured voltages correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "Checking procedures" [▸ 119].

20 Operate the indoor unit in Fan ONLY mode.

21 Measure the voltage between the connector wires Blue-Orange (= rotation command) on the indoor unit main PCB.

Result: The measured voltage should NOT be 0 V DC. It MUST be 0~4.5 V DC.

Is the measured voltage 0 V DC?	Action
Yes	Perform a check of the indoor unit main PCB, see "Checking procedures" [▸ 119].
No	Continue with the next step.

22 Stop the unit operation via the user interface.

CAUTION

Ensure that the system CANNOT start the fan. Disable all modes (heating, cooling, ...) on the unit. The unit MUST be kept powered.

23 Manually (slowly) rotate the shaft of the indoor unit fan motor 1 turn and measure the voltage between the DC fan motor connector wires Blue-White.

Result: 4 pulses MUST be measured.

Pulses are measured during propeller fan rotation?	Action
Yes	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].
No	Replace the DC fan motor, see "Repair procedures" [▸ 140].

Problem solved?

After all checking procedures listed above have been performed:

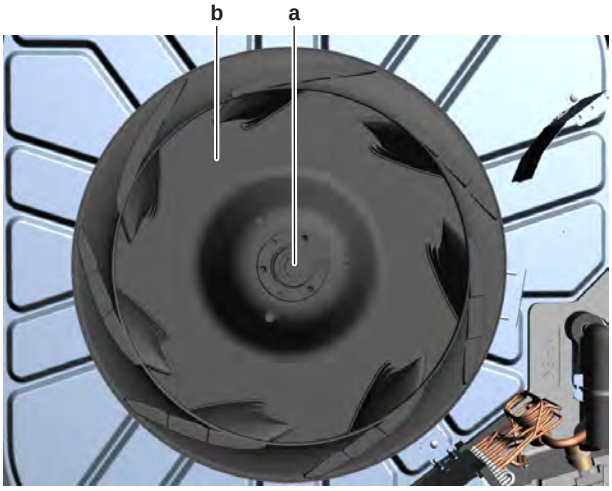
Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

Repair procedures

To remove the fan rotor assembly

1 Remove the drain pan, see "4.9 Plate work" [▸ 192].

2 Remove the nut from the fan rotor assembly.



a Nut (fan rotor assy)
b Fan rotor assembly

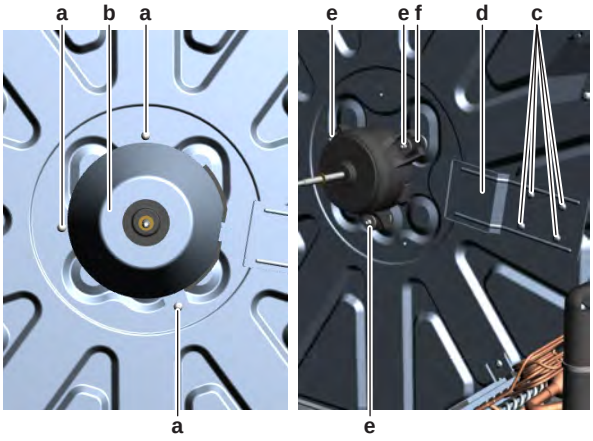
3 Carefully pull the fan rotor assembly downwards and remove it from the DC fan motor assembly.

4 To install the fan rotor assembly, see "Repair procedures" [▸ 124].

To remove the DC fan motor assembly

Prerequisite: Remove the fan rotor assembly from the DC fan motor assembly, see "Repair procedures" [▸ 124].

1 Remove the 3 screws and remove the fire shield from the DC fan motor assembly.



a Screw (fire shield)
b Fire shield
c Screw (wiring cover)
d Fan motor wiring cover
e Nut (DC fan motor assy)
f Damper

2 Remove the 4 screws and remove the fan motor wiring cover.

3 Remove the 3 nuts from the DC fan motor assembly.

4 Remove the DC fan motor assembly from the indoor unit.

INFORMATION

The fan motor dampers CAN be replaced separately.

5 To install the DC fan motor assembly, see "Repair procedures" [▸ 124].

To install the DC fan motor assembly

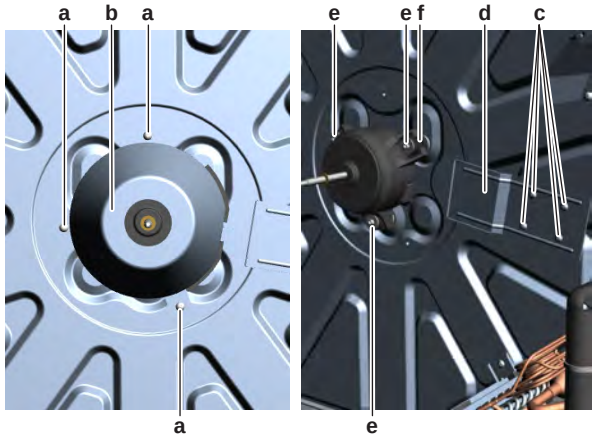
1 Install the dampers in the correct location on the indoor unit. Make sure the dampers are correctly installed and replace if damaged.

INFORMATION

The fan motor dampers CAN be replaced separately.

2 Install the DC fan motor assembly in the correct location on the dampers.

3 Install and tighten the 3 nuts to fix the DC fan motor assembly on the dampers.



a Screw (fire shield)
b Fire shield
c Screw (wiring cover)
d Fan motor wiring cover
e Nut (DC fan motor assy)
f Damper

4 Route the DC fan motor wiring harness to the correct side and install the wiring cover in the correct location.

5 Install and tighten the 4 screws to fix the fan motor wiring cover.

6 Install the fire shield in the correct location on the DC fan motor assembly.

7 Install and tighten the 3 screws to fix the fire shield.

8 Install the fan rotor assembly, see "Repair procedures" [▸ 124].

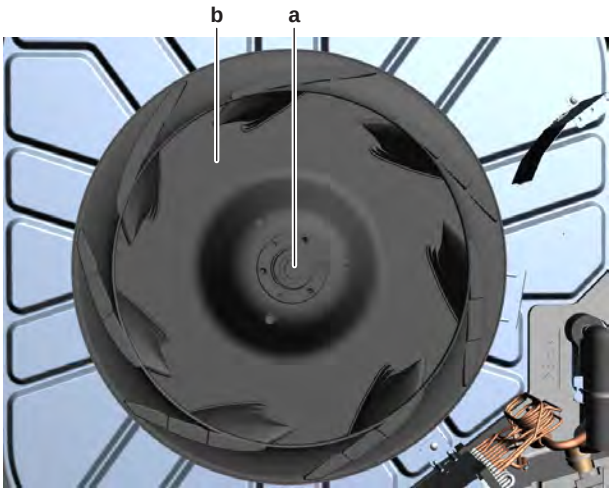
To install the fan rotor assembly

1 Install the fan rotor assembly on the DC fan motor assembly.

CAUTION

Do NOT install a damaged fan rotor assembly.

2 Install and tighten the nut to fix the fan rotor assembly.



a Nut (fan rotor assy)
b Fan rotor assembly

3 Install the drain pan, see "4.9 Plate work" [▸ 192].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "Checking procedures" [▸ 119] of the indoor unit fan motor and continue with the next procedure.

4.6 Indoor unit fan PCB

4.6.1 Checking procedures

INFORMATION

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

To perform a power check of the indoor unit fan PCB

FXSA + FXMA50~125

Prerequisite: Stop the unit operation via the user interface.

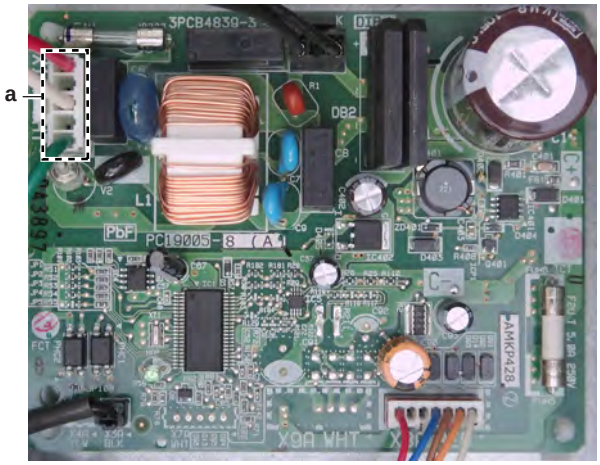
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1. Visually check the PCB for damage and burnt-out components. If any damage found, replace the PCB, see "4.6.2 Repair procedures" [▸ 153].
2. Turn ON the power of the unit.
3. Check that the ground wire is properly connected to the indoor unit fan PCB and the switchbox.
4. Measure the voltage between pins 1-3 of connector X10A of the indoor unit fan PCB.

   Result: The voltage MUST be 230 V AC±10%.

A



A FXSA15~125
a Connector X10A

A

A FXSA140 + FXMA50~125
a Connector X10A

Does the indoor unit fan PCB receive power?	Action
Yes	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Continue with the next step.

5 Check the power supply to the indoor unit, see "5.1.1 Checking procedures" [▸ 333].

Is the power supply to the indoor unit correct?	Action
Yes	Correct the wiring between the power supply terminal of the indoor unit and the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].
No	Adjust the power supply to the unit, see "5.1.2 Repair procedures" [▸ 336].

FXMA200+250

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

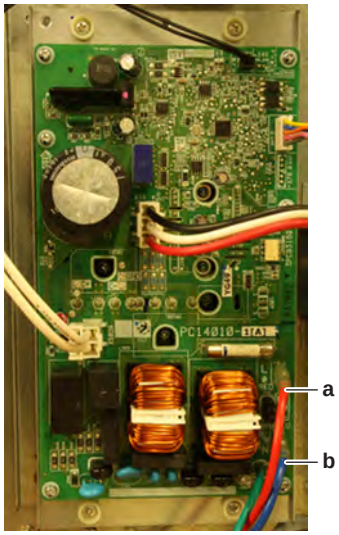
1 Visually check the PCB for damage and burnt-out components. If any damage found, replace the PCB, see "4.6.2 Repair procedures" [▸ 153].

2 Turn ON the power of the unit.

3 Check that the ground wire is properly connected to the indoor unit fan PCB and the switchbox.

4 Measure the voltage between the Faston connectors of the L (red wire) and N (blue wire) on the indoor unit fan PCB.

Result: The voltage MUST be 230 V AC±10%.



a L (red wire)
b N (blue wire)

Does the indoor unit fan PCB receive power?	Action
Yes	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Continue with the next step.

5 Check the power supply to the indoor unit, see "5.1.1 Checking procedures" [▸ 333].

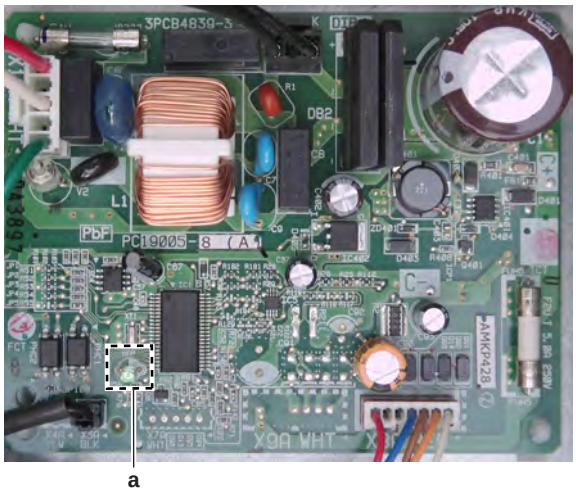
Is the power supply to the indoor unit correct?	Action
Yes	Correct the wiring between the power supply terminal of the indoor unit and the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].
No	Adjust the power supply to the unit, see "5.1.2 Repair procedures" [▸ 336].

To check the HAP LED of the indoor unit fan PCB

Prerequisite: First perform a power check of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

1 Locate the HAP LED on the Sub PCB.

A

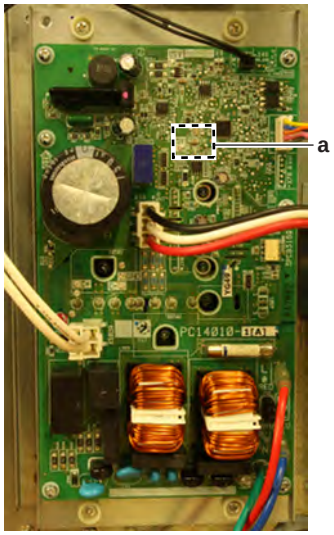


A FXSA15~125
a HAP LED

A

A FXSA140 + FXMA50~125
a HAP LED

A



A FXMA200+250
a HAP LED

Does the HAP LED blink in regular intervals (approximately 1 Hz)?	Action
Yes	Return to "4.6.1 Checking procedures" [▶ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Replace the indoor unit fan PCB, see "4.6.2 Repair procedures" [▶ 153].

To check if the correct spare part is installed

Prerequisite: First perform all earlier checks of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].

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 indoor unit fan PCB installed?	Action
Yes	Return to "4.6.1 Checking procedures" [▶ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Replace the indoor unit fan PCB, see "4.6.2 Repair procedures" [▶ 153].

To check the wiring of the indoor unit fan PCB

Prerequisite: First perform all earlier checks of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].

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" [▶ 359].

INFORMATION

Correct the wiring as needed.

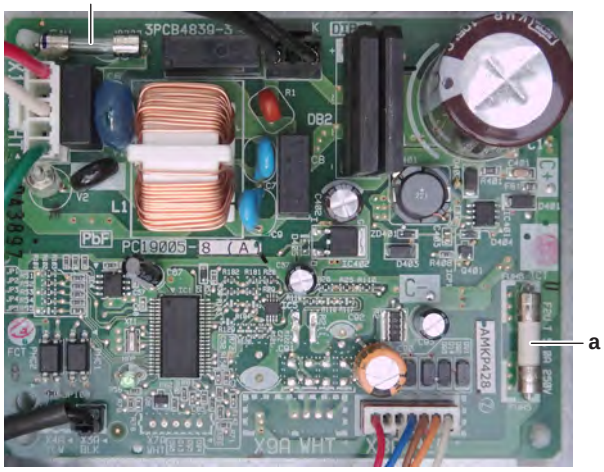
Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.6.1 Checking procedures" [▶ 142] of the indoor unit fan PCB and continue with the next procedure.

To check the fuse of the indoor unit fan PCB

Prerequisite: First perform all earlier checks of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▶ 142].

1 Measure the continuity of the fuse. If no continuity is measured, the fuse has blown.

A b



A FXSA15~125
a Fuse F2U
b Fuse F4U

A a

A FXSA140 + FXMA50~125
a Fuse F3U

A

A FXMA200+250
a Fuse F3U

Blown fuse on the indoor unit fan PCB?	Action
Yes	Replace the indoor unit fan PCB fuse, see "4.6.2 Repair procedures" [▸ 153].
No	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.

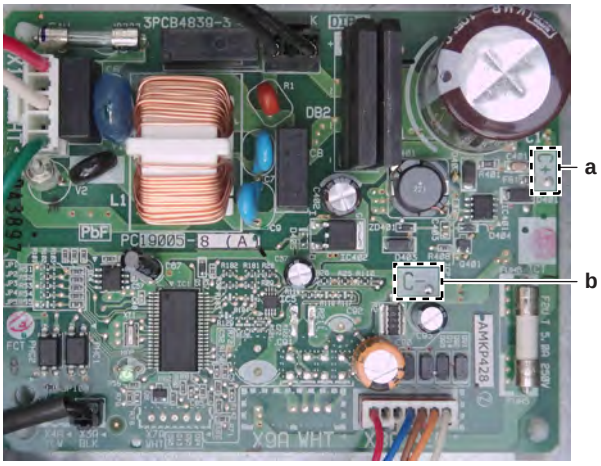
To check the rectifier voltage of the indoor unit fan PCB

Prerequisite: First perform all earlier checks of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

1. Turn ON the power of the unit.
2. Measure the voltage on the rectifier voltage check terminals (C+ and C-) on the indoor unit fan PCB.

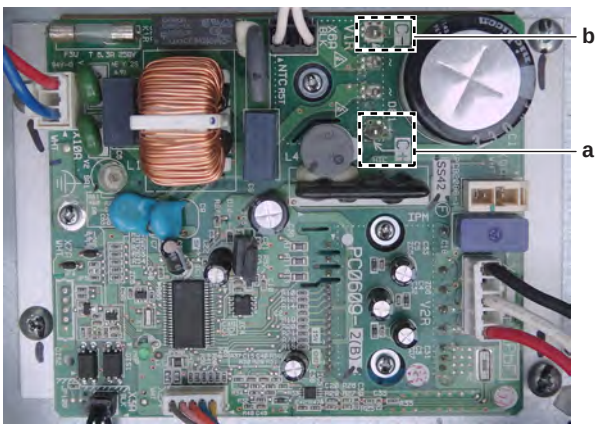
   Result: The measured voltage MUST be approximately 324 V DC.

A

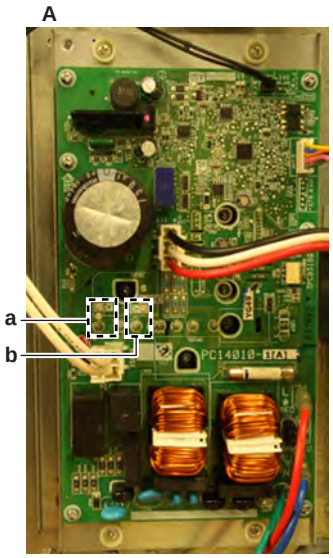


A FXSA15~125
a C+ terminal
b C- terminal

A



A FXSA140 + FXMA50~125
a C+ terminal
b C- terminal



A FXMA200+250
a C+ terminal
b C- terminal

Is the measured rectifier voltage correct?	Action
Yes	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Continue with the next step.

3 Perform a check of the reactor, see "4.12.1 Checking procedures" [▸ 255].

Is the reactor OK?	Action
Yes	Replace the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].
No	Replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

To perform a diode module check

1 First check the rectifier voltage of the indoor unit fan PCB, see "4.6.1 Checking procedures" [▸ 142].

INFORMATION

If the rectifier voltage is OK, the diode module is OK. If rectifier voltage is NOT OK, proceed as described in the rectifier voltage check procedure.

Below procedure describes how to check the diode module itself.

Prerequisite: Stop the unit operation via the user interface.

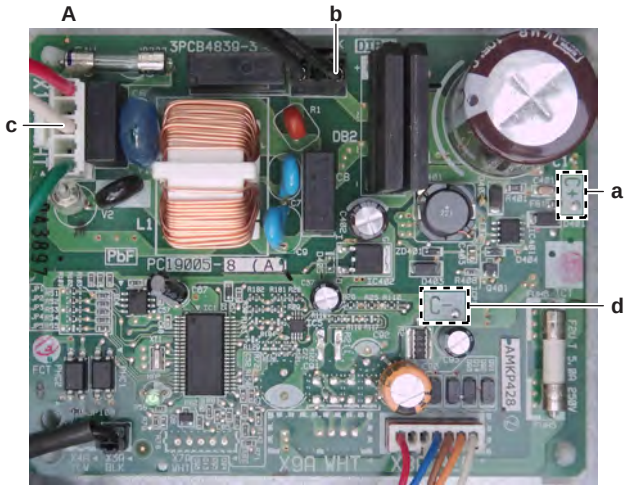
2 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

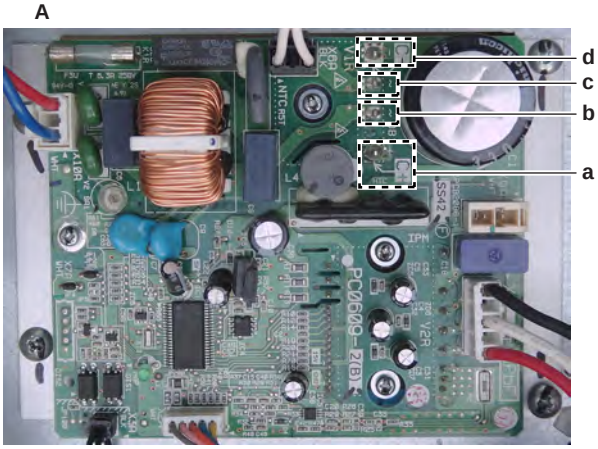
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

3 For FXSA15~125 units ONLY: Disconnect the reactor connector and the power supply connector X10A from the indoor unit fan PCB.

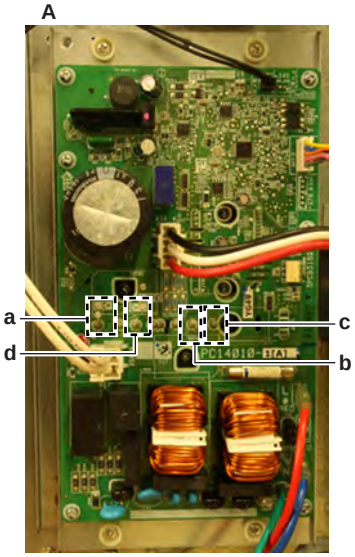
4 Check the diode module in reference with the image and the table below.



A FXSA15~125
a V DC out (+)
b V AC in
c V AC in
d V DC out (–)



A FXSA140 + FXMA50~125
a V DC out (+)
b V AC in
c V AC in
d V DC out (–)



A FXMA200+250
a V DC out (+)

b V AC in
c V AC in
d V DC out (–)

> **INFORMATION**
>
> When measuring on the front of the main PCB, make sure to locally remove the protective varnish with the test leads of the multi meter.

VDC	Com	Ref	VDC	Com	Ref
d	b	0.45~0.55 V	b	d	O.L
b	a	0.45~0.55 V	a	b	O.L
d	c	0.45~0.55 V	c	d	O.L
c	a	0.45~0.55 V	a	c	O.L

5 If the diode module is NOT OK, replace the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].

To perform a power module check

> **INFORMATION**
>
> ONLY for FXSA140 and FXMA units.

Prerequisite: First check the rectifier voltage of the main PCB, see "4.6.1 Checking procedures" [▸ 142].

Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

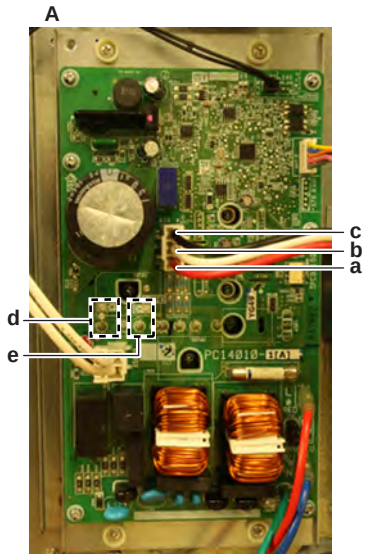
> **DANGER: RISK OF ELECTROCUTION**
>
> Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the fan motor connector X1A from the indoor unit fan PCB.

3 Check the power module V2R in reference with the image and the table below.

A

A FXSA140 + FXMA50~125
a U
b V
c W
d C+
e C-



A FXMA200+250
a U
b V
c W
d C+
e C-

INFORMATION

When measuring on the front of the main PCB, make sure to locally remove the protective varnish with the test leads of the multi meter.

VDC	Com	Ref	VDC	Com	Ref
U	C+	0.405~0.495 V	C+	U	O.L
V	C+	0.405~0.495 V	C+	V	O.L
W	C+	0.405~0.495 V	C+	W	O.L
C-	U	0.405~0.495 V	U	C-	O.L
C-	V	0.405~0.495 V	V	C-	O.L
C-	W	0.405~0.495 V	W	C-	O.L

Are the test results OK?	Action
Yes	Power module is OK. Return to "4.6.1 Checking procedures" [▶ 142] of the indoor unit fan PCB and continue with the next procedure.
No	Replace the indoor unit fan PCB, see "4.6.2 Repair procedures" [▶ 153].

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.

4.6.2 Repair procedures

To correct the wiring from the indoor unit power supply terminal to the indoor unit fan PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Correct the wiring from the indoor unit power supply terminal to the PCB, see "7.2 Wiring diagram" [▸ 359].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.

To remove the indoor unit fan PCB

FXSA15~125

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

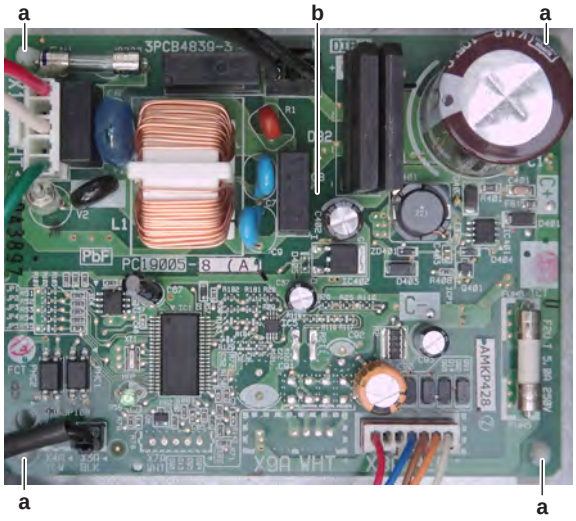
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Unlatch all cable clamps of the connector wires and disconnect all connectors from the indoor unit fan PCB.

3 Carefully pull the indoor unit fan PCB at the side and unlatch the PCB supports one by one using a small pair of pliers.



a PCB support
b Indoor unit fan PCB

4 Remove the indoor unit fan PCB from the switch box.

5 To install the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].

FXSA140 + FXMA

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

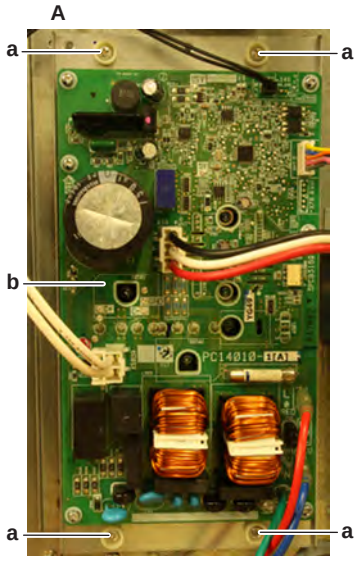
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Loosen the screw and disconnect the ground wire from the switch box.

3 Unlatch all cable clamps of the connector wires and disconnect all connectors from the indoor unit fan PCB.

4 Loosen and remove the 4 screws from the indoor unit fan PCB heat sink plate.

A FXSA140 + FXMA50~125
a Screw (heat sink plate)
b Indoor unit fan PCB



A FXMA200+250
a Screw (heat sink plate)
b Indoor unit fan PCB

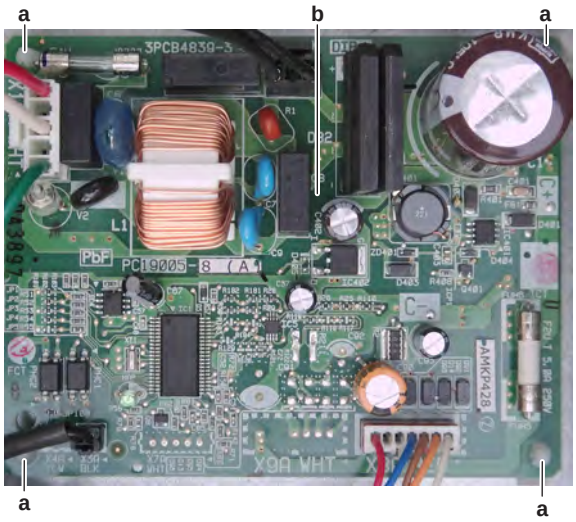
5 Remove the indoor unit fan PCB (including heat sink plate) from the switch box.

6 To install the indoor unit fan PCB, see "4.6.2 Repair procedures" [▸ 153].

To install the indoor unit fan PCB

FXSA15~125

1 Align the indoor unit fan PCB on the PCB supports, firmly latch the PCB supports to fix the sub PCB.



a PCB support
b Indoor unit fan PCB

2 Connect all connectors to the indoor unit fan PCB.

INFORMATION

Use the wiring diagram and connection diagram for correct installation of the connectors, see "7.2 Wiring diagram" [▸ 359].

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.

3 Route the wiring inside the cable clamps to secure the wiring.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.

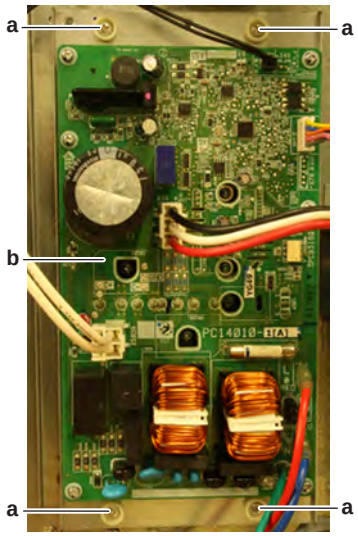
FXSA140 + FXMA

1 Install the indoor unit fan PCB heat sink plate in the correct location on the switch box.

A

A FXSA140 + FXMA50~125
a Screw (heat sink plate)
b Indoor unit fan PCB

A



A FXMA200+250
a Screw (heat sink plate)
b Indoor unit fan PCB

2 Install and tighten the 4 screws to fix the heat sink plate.

3 Connect all connectors to the indoor unit fan PCB.

INFORMATION

Use the wiring diagram and connection diagram for correct installation of the connectors, see "7.2 Wiring diagram" [▸ 359].

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.

4 Route the wiring inside the cable clamps to secure the wiring.

5 Install and tighten the screw to fix the ground wire to the switch box.

Is the problem solved?	Action
Yes	No further actions required.

Is the problem solved?	Action
No	Return to "4.6.1 Checking procedures" [▸ 142] of the indoor unit fan PCB and continue with the next procedure.

4.7 Indoor unit heat exchanger

4.7.1 Checking procedures

To perform a mechanical check of the indoor unit heat exchanger

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Visually check:
   - For any signs of damage or corrosion. Replace the heat exchanger as needed, see "4.7.2 Repair procedures" [▸ 157].
   - For bended hair fins. Straighten as needed.

2 Check the heat exchanger for leaks. Use and electronic leak tester or soap test method.

CAUTION

Do NOT use soap containing Chlorine or Sulfide as this may result in corrosion of the copper piping.

Any leaks found?	Action
Yes	Replace the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].
No	Heat exchanger is OK. Return to the troubleshooting of the specific error and continue with the next step.

4.7.2 Repair procedures

To remove the indoor unit heat exchanger

FXAA

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

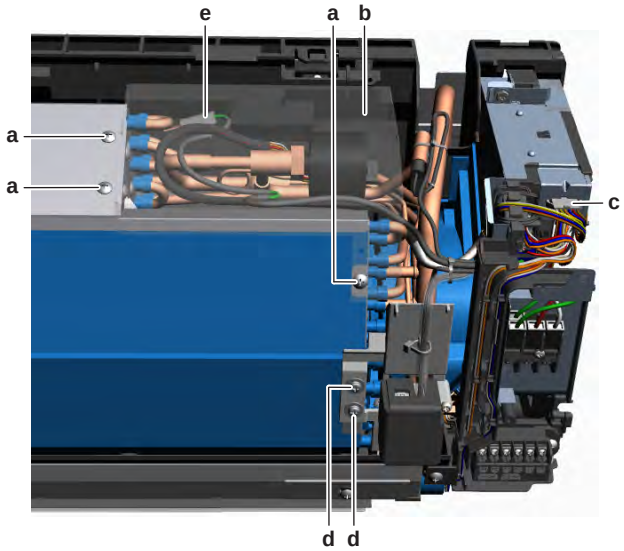
2 Disconnect the wiring from the wiring terminals.

3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

5 Loosen and remove the screw between the unit and the installation plate (mounting plate) and remove the unit from the wall.

6 Remove the 3 screws and remove the cover of the expansion valve assembly.



a Screw (expansion valve assy cover)
b Cover (expansion valve assy)
c Expansion valve connector
d Screw (R32 leak detection sensor assy)
e Ground wire Faston connector

7 Disconnect the expansion valve connector from the switch box.

8 Route the expansion valve wiring harness out of the harness retainers and cut all tie straps that fix the wiring harness.

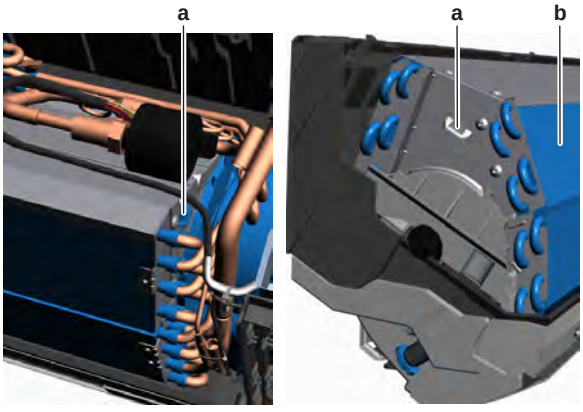
9 Remove the 2 screws and remove the R32 leak detection sensor assembly from the heat exchanger.

10 Remove the refrigerant liquid and gas thermistors from their holder. If needed, remove the insulation.

11 Cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

12 Disconnect the ground wire Faston connector from the heat exchanger.

13 Press both retaining lips and lift the heat exchanger.



a Retaining lip
b Heat exchanger

14 Remove the heat exchanger from the unit.

15 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▶ 157].

FXDA

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

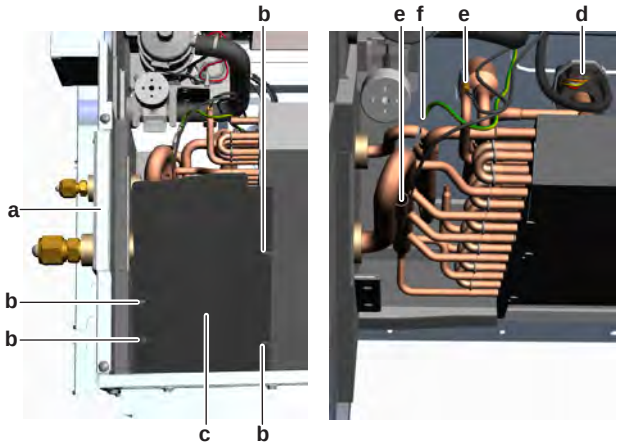
1 Remove the required plate work, see "4.9 Plate work" [▶ 192].

2 Remove the 2 screws and remove the refrigerant pipe hold plate.

3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

5 Remove the 4 screws and remove the blind plate from the unit.



a Refrigerant pipe hold plate
b Screw (blind plate)
c Blind plate
d Expansion valve coil
e Thermistor
f Ground wire

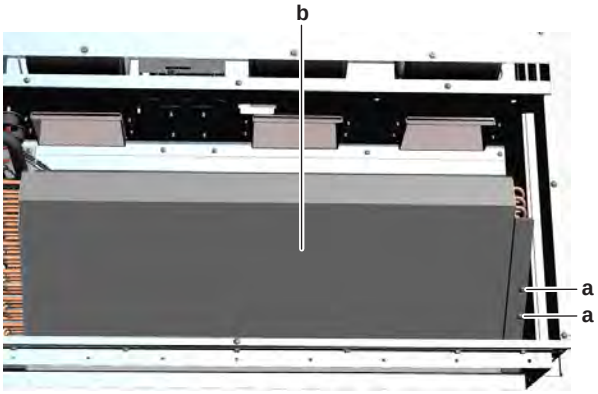
6 Cut the tie strap and remove the expansion valve coil from the expansion valve body.

7 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

8 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

9 Disconnect the ground wire from the heat exchanger.

10 Remove the 2 screws that fix the heat exchanger to the unit.



a Screw
b Heat exchanger

11 Remove the heat exchanger from the unit.

12 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

FXSA

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

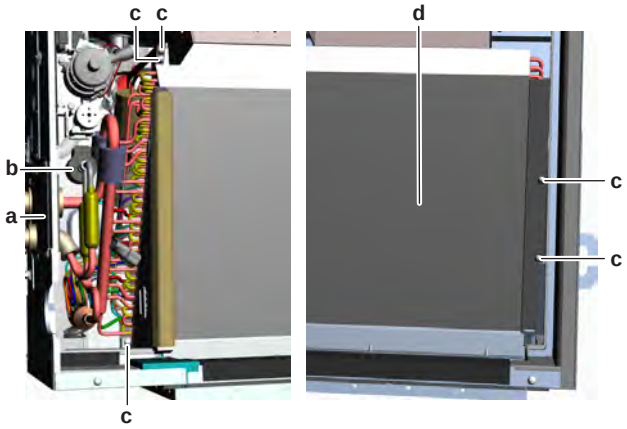
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

2 Remove the 2 screws and remove the refrigerant pipe hold plate.

3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

5 Cut the tie strap and remove the expansion valve coil from the expansion valve body.



a Refrigerant pipe hold plate
b Expansion valve coil
c Screw
d Heat exchanger

6 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

7 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

8 Disconnect the ground wire from the heat exchanger.

9 Remove the 5 screws that fix the heat exchanger to the unit.

10 Remove the heat exchanger from the unit.

11 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

FXUA + FXFA + FXZA

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

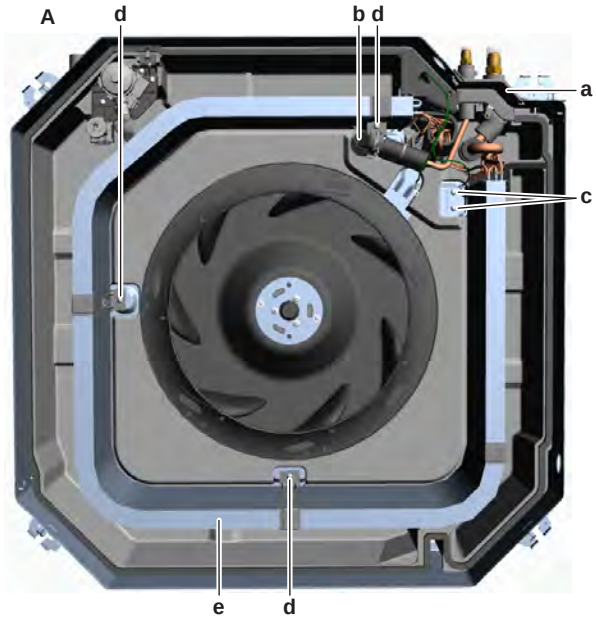
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

2 Remove the 2 screws and remove the refrigerant pipe hold plate.

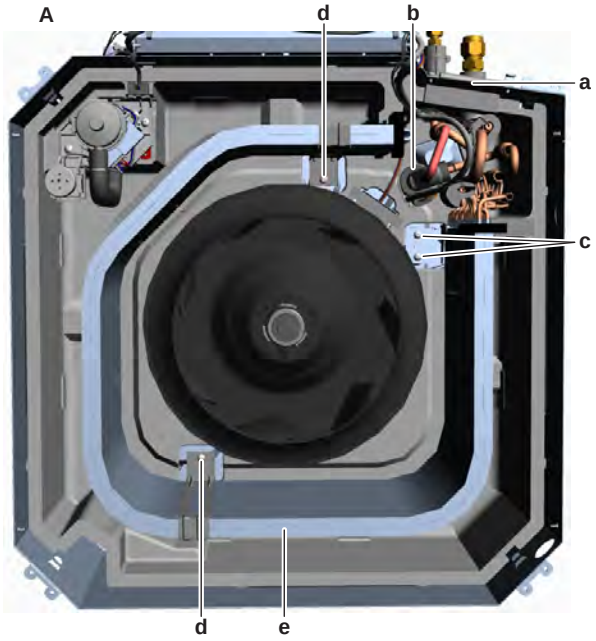
3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

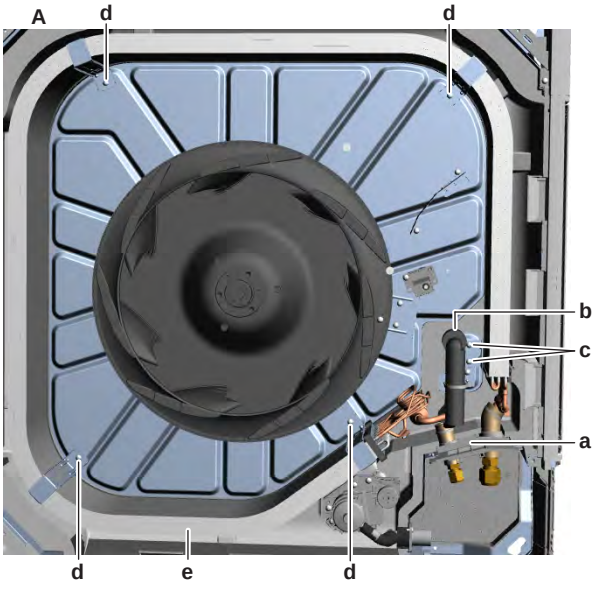
5 Cut the tie strap and remove the expansion valve coil from the expansion valve body.



A FXFA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger



A FXZA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger



A FXUA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger

6 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

7 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

8 Loosen the screw and disconnect the ground wire from the heat exchanger.

9 Remove the 2 screws that fix the heat exchanger to the unit.

10 Remove the screws and remove the heat exchanger fixation brackets.

11 Remove the heat exchanger from the unit.

12 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

FXHA

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

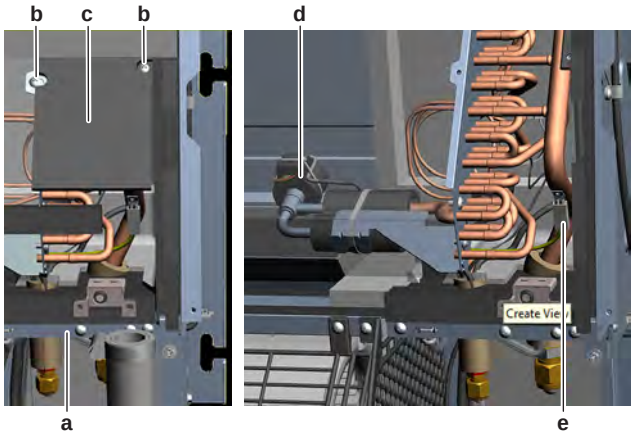
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

2 Remove the 2 screws and remove the refrigerant pipe hold plate.

3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

5 Remove the 2 screws and remove the heat exchanger side plate.



a Refrigerant pipe hold plate
b Screw (side plate)
c Side plate
d Expansion valve coil
e Ground wire Faston connector

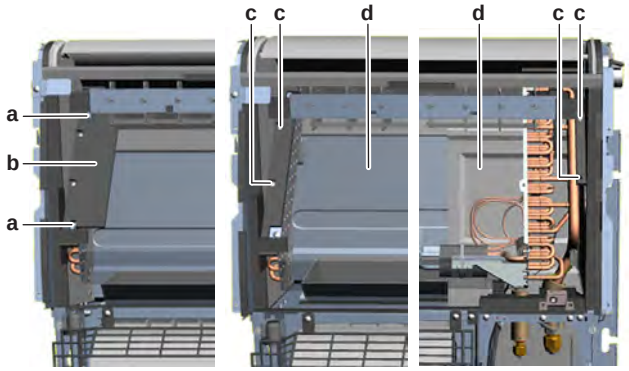
6 Cut the tie strap and remove the expansion valve coil from the expansion valve body.

7 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

8 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

9 Disconnect the ground wire Faston connector from the heat exchanger.

10 Remove the 2 screws and remove the blind plate from the unit.



a Screw (blind plate)
b Blind plate
c Screw (heat exchanger)
d Heat exchanger

11 Remove the 4 screws that fix the heat exchanger to the unit.

12 Manually move the air discharge flap to the closed position.

13 Slide the heat exchanger towards the air outlet side and remove the heat exchanger from the unit.

14 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

FXMA50~125

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

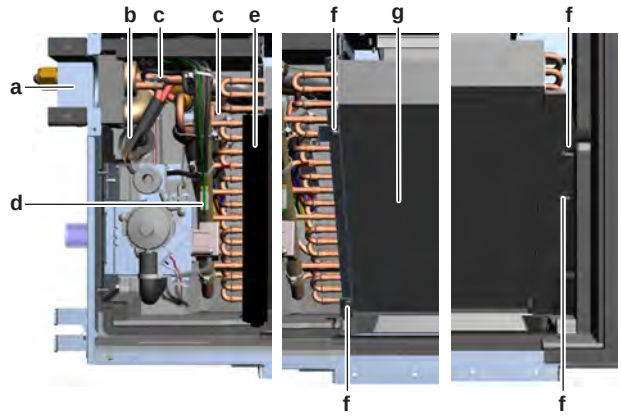
Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

2 Remove the 2 screws and remove the refrigerant pipe hold plate.

3 Remove the insulation from the liquid and gas pipes.

4 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.



a Refrigerant pipe hold plate
b Expansion valve coil
c Thermistor
d Ground wire
e Corner sealing
f Screw
g Heat exchanger

5 Cut the tie strap and remove the expansion valve coil from the expansion valve body.

6 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

7 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

8 Remove the corner sealing from the heat exchanger.

9 Disconnect the ground wire from the heat exchanger.

10 Remove the 4 screws that fix the heat exchanger to the unit.

11 Remove the heat exchanger from the unit.

12 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

FXMA200+250

Prerequisite: First perform pump down operation. Close the refrigerant circuit stop valves when done.

Prerequisite: Recuperate the refrigerant from the refrigerant circuit.

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

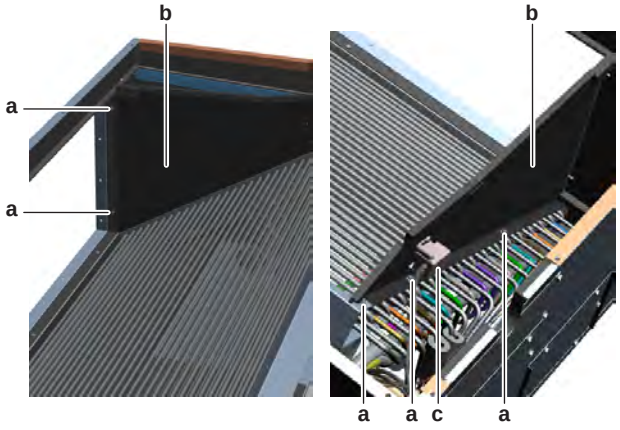
2 Remove the insulation from the liquid and gas pipes.

3 Release the flared joint of the (refrigerant) liquid pipe and the gas pipe. Disconnect the liquid and gas pipes from the refrigerant field piping. Plug the refrigerant field pipes to prevent dirt from entering the pipes.

4 Disconnect the connectors of the expansion valve, refrigerant liquid thermistor, gas thermistor and R32 leak detection sensor from the indoor unit main PCB.

5 Cut all tie straps that fix the disconnected wiring harnesses and route the wiring harnesses out of the switch box inside the heat exchanger compartment.

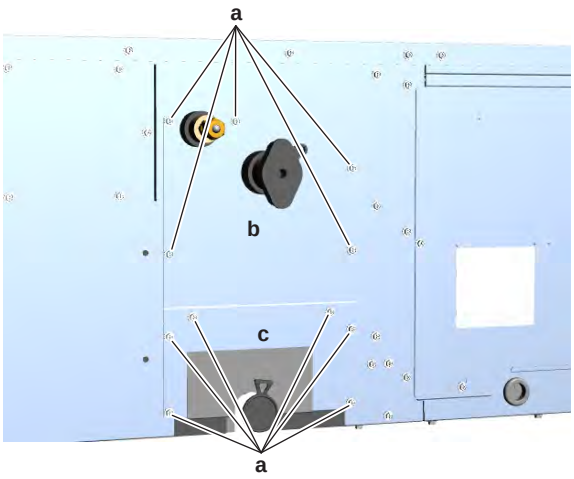
6 Remove the 5 screws from the partition plate.



a Screw
b Partition plate
c R32 leak detection sensor

7 Remove the partition plate (including the R32 leak detection sensor) from the indoor unit.

8 Remove the screws from the refrigerant piping cover and the drain pipe cover.

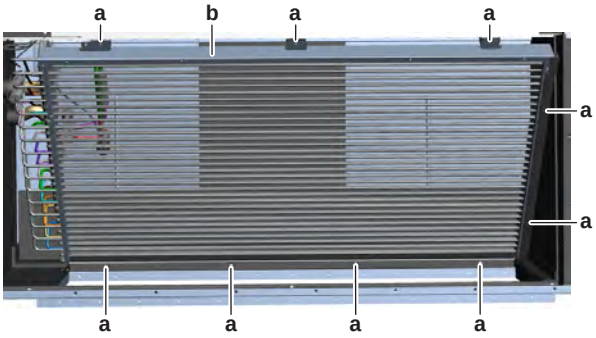


a Screw
b Refrigerant piping cover
c Drain pipe cover

9 Remove the refrigerant piping cover and drain pipe cover from the unit.

10 Remove the screw and disconnect the ground wire from the heat exchanger.

11 Remove the screws that fix the heat exchanger to the unit.



a Screw
b Indoor unit heat exchanger

12 Remove the heat exchanger from the unit.

13 Cut the tie strap and remove the expansion valve coil from the expansion valve body.

14 Remove the refrigerant liquid and gas thermistors from their holder or clip. If needed, remove the insulation.

15 If applicable, cut all tie straps that fix the thermistor wiring harnesses to the heat exchanger.

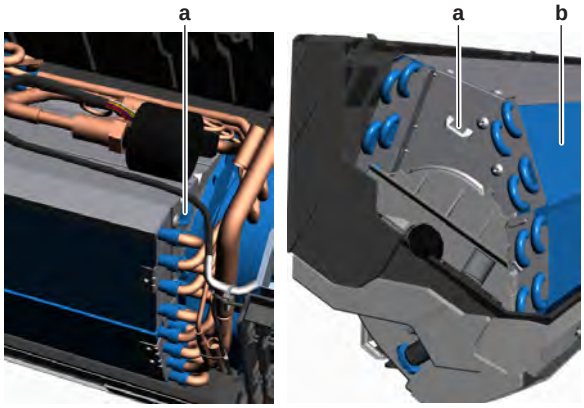
16 To install the indoor unit heat exchanger, see "4.7.2 Repair procedures" [▸ 157].

To install the indoor unit heat exchanger

FXAA

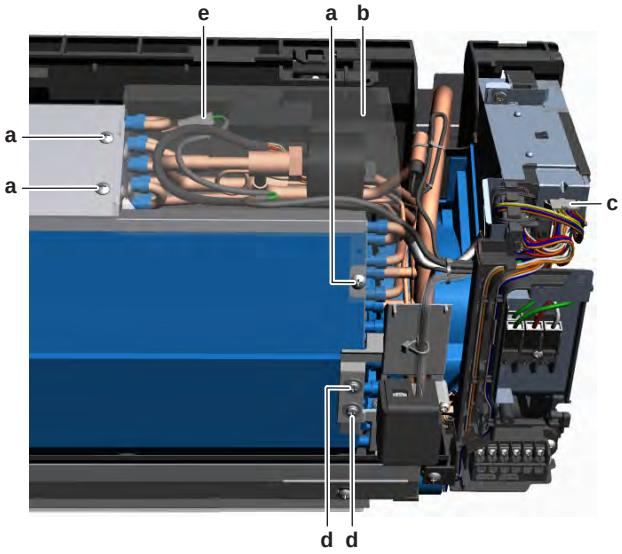
1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Click the heat exchanger on the retaining lips.



a Retaining lip
b Heat exchanger

3 Connect the ground wire Faston connector to the heat exchanger.



a Screw (expansion valve assy cover)
b Cover (expansion valve assy)
c Expansion valve connector
d Screw (R32 leak detection sensor assy)
e Ground wire Faston connector

4 Install the refrigerant liquid and gas thermistors in their holders. Install new insulation as needed.

5 Route the expansion valve wiring harness through the appropriate retainers towards the switch box.

6 Connect the expansion valve connector to the side of the switch box.

7 Install the R32 leak detection sensor assembly in the correct location. Install and tighten the 2 screws to fix the R32 leak detection sensor assembly.

8 Install new tie straps to fix the wiring harnesses.

9 Install the cover of the expansion valve assembly in the correct location.

10 Install and tighten the 3 screws to fix the cover.

11 Install the indoor unit in the correct location on the wall. Install and tighten the screw to fix the indoor unit to the installation plate (mounting plate).

12 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

13 If needed, correctly install the insulation on the liquid and gas pipes.

14 Connect the wiring to the wiring terminals of the indoor unit.

15 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

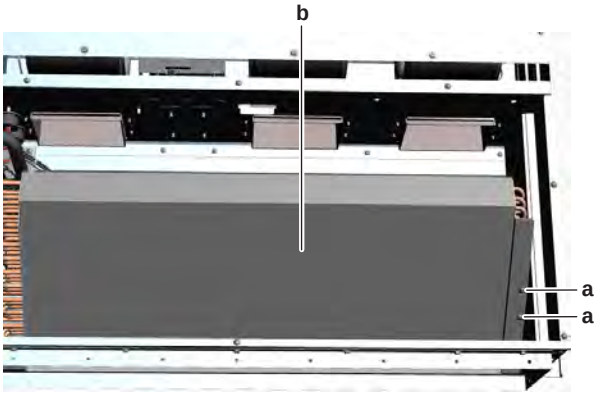
16 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▶ 338].

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.

FXDA

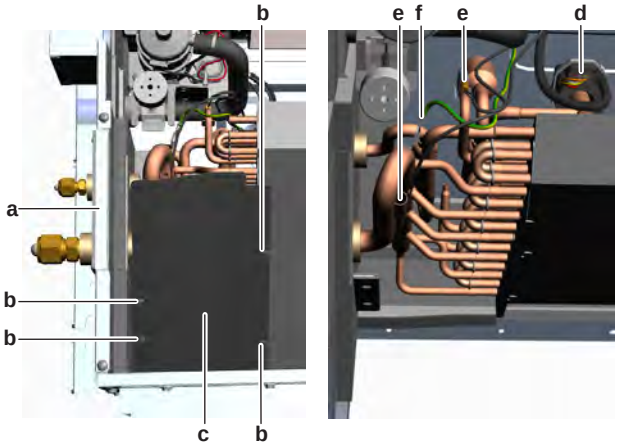
1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Install and tighten the 2 screws to fix the heat exchanger.



a Screw
b Heat exchanger

3 Connect the ground wire to the heat exchanger.



a Refrigerant pipe hold plate
b Screw (blind plate)
c Blind plate
d Expansion valve coil
e Thermistor
f Ground wire

4 Install the refrigerant liquid and gas thermistors in their holder or clip. Install new insulation as needed.

5 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

6 If applicable, install new tie straps to fix the wiring harnesses.

7 Install the blind plate in the correct location on the unit.

8 Install and tighten the 4 screws to fix the blind plate.

9 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

10 If needed, correctly install the insulation on the liquid and gas pipes.

11 Install the refrigerant pipe hold plate in the correct location.

12 Install and tighten the 2 screws to fix the refrigerant pipe hold plate.

13 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

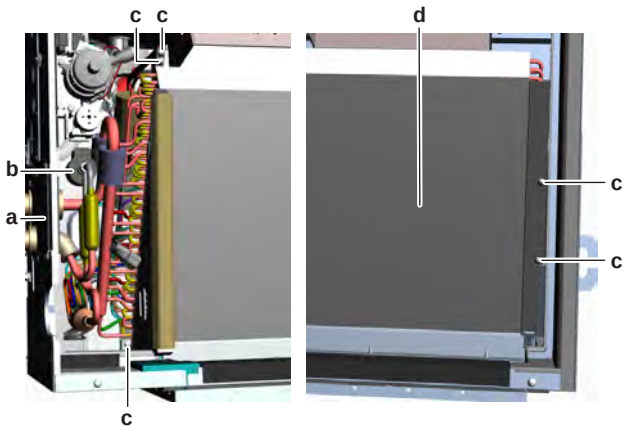
14 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

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.

FXSA

1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Install and tighten the 5 screws to fix the heat exchanger.



a Refrigerant pipe hold plate
b Expansion valve coil
c Screw
d Heat exchanger

3 Connect the ground wire to the heat exchanger.

4 Install the refrigerant liquid and gas thermistors in their holder or clip. Install new insulation as needed.

5 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

6 If applicable, install new tie straps to fix the wiring harnesses.

7 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

8 If needed, correctly install the insulation on the liquid and gas pipes.

9 Install the refrigerant pipe hold plate in the correct location.

10 Install and tighten the 2 screws to fix the refrigerant pipe hold plate.

11 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

12 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

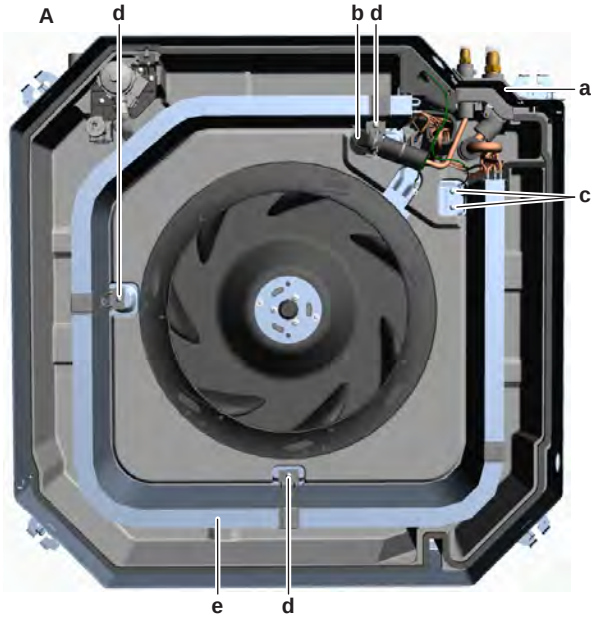
Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

FXUA + FXFA + FXZA

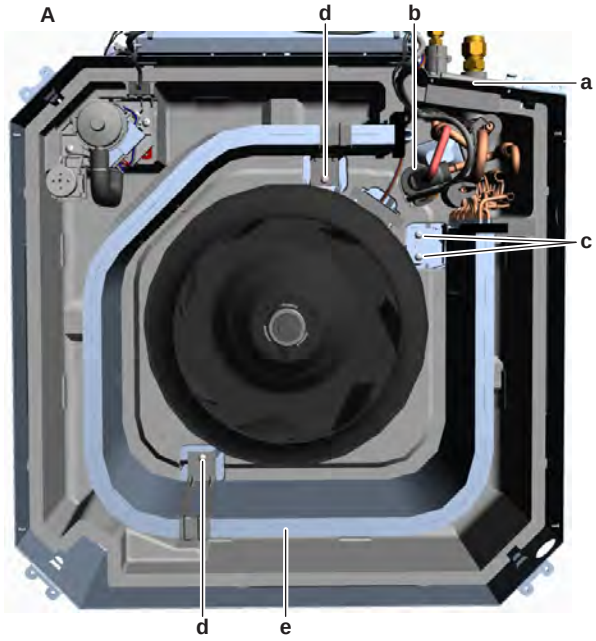
1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Install the fixation brackets in the correct locations on the heat exchanger.

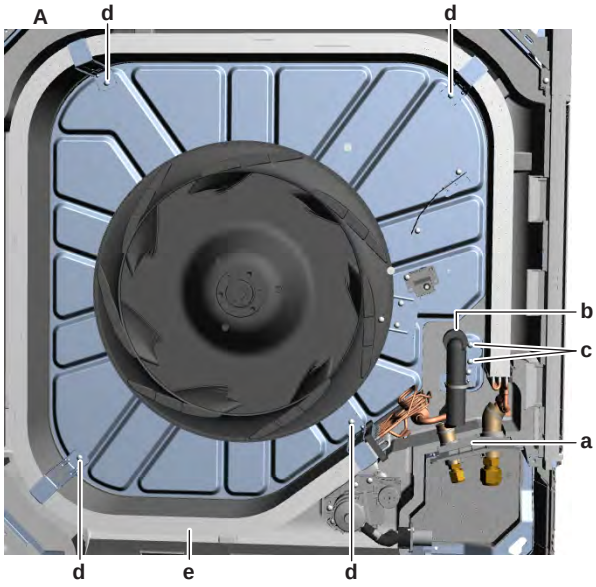
3 Install and tighten the screws to fix the fixation brackets to the unit.



A FXFA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger



A FXZA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger



A FXUA
a Refrigerant pipe hold plate
b Expansion valve coil
c Screw (heat exchanger)
d Screw (heat exchanger bracket)
e Heat exchanger

4 Install and tighten the 2 screws to fix the heat exchanger.

5 Connect the ground wire to the heat exchanger. Install and tighten the screw to fix the ground wire.

6 Install the refrigerant liquid and gas thermistors in their holder or clip. Install new insulation as needed.

7 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

8 If applicable, install new tie straps to fix the wiring harnesses.

9 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

10 If needed, correctly install the insulation on the liquid and gas pipes.

11 Install the refrigerant pipe hold plate in the correct location.

12 Install and tighten the 2 screws to fix the refrigerant pipe hold plate.

13 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

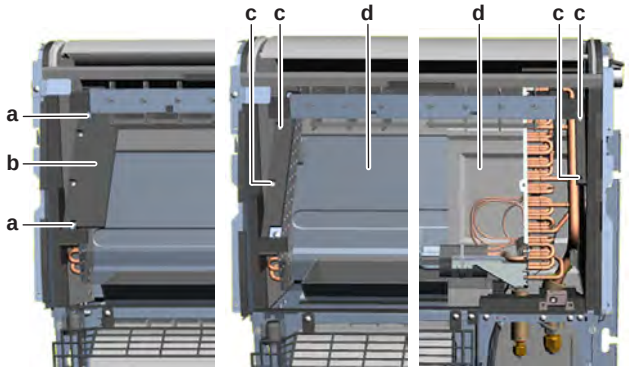
14 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

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.

FXHA

1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Install and tighten the 4 screws to fix the heat exchanger.

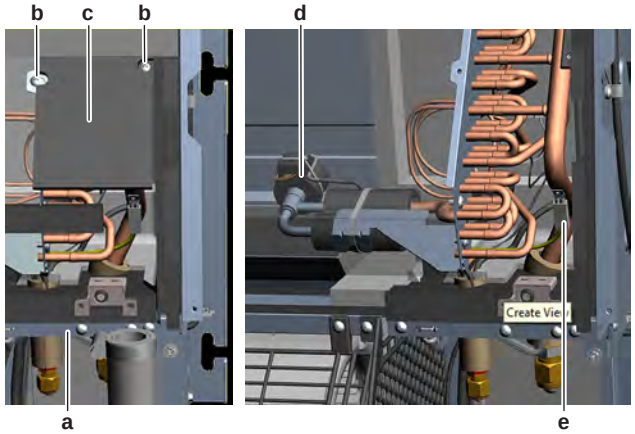


a Screw (blind plate)
b Blind plate
c Screw (heat exchanger)
d Heat exchanger

3 Install the blind plate in the correct location on the unit.

4 Install and tighten the 2 screws to fix the blind plate.

5 Connect the ground wire Faston connector to the heat exchanger.



a Refrigerant pipe hold plate
b Screw (side plate)
c Side plate
d Expansion valve coil
e Ground wire Faston connector

6 Install the refrigerant liquid and gas thermistors in their holder or clip. Install new insulation as needed.

7 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

8 If applicable, install new tie straps to fix the wiring harnesses.

9 Install the side plate in the correct location.

10 Install and tighten the 2 screws to fix the side plate.

11 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

12 If needed, correctly install the insulation on the liquid and gas pipes.

13 Install the refrigerant pipe hold plate in the correct location.

14 Install and tighten the 2 screws to fix the refrigerant pipe hold plate.

15 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

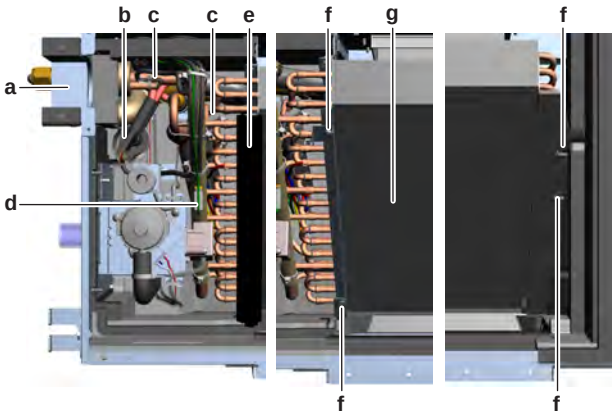
16 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

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.

FXMA50~125

1 Install the indoor unit heat exchanger in the correct location on the indoor unit.

2 Install and tighten the 4 screws to fix the heat exchanger.



a Refrigerant pipe hold plate
b Expansion valve coil
c Thermistor
d Ground wire
e Corner sealing
f Screw
g Heat exchanger

3 Install the corner sealing in the correct location on the heat exchanger.

4 Connect the ground wire to the heat exchanger.

5 Install the refrigerant liquid and gas thermistors in their holder or clip. Install new insulation as needed.

6 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

7 If applicable, install new tie straps to fix the wiring harnesses.

8 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

9 If needed, correctly install the insulation on the liquid and gas pipes.

10 Install the refrigerant pipe hold plate in the correct location.

11 Install and tighten the 2 screws to fix the refrigerant pipe hold plate.

12 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

13 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

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.

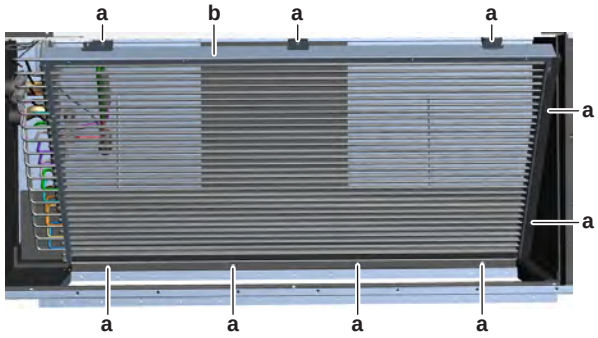
FXMA200+250

1 Install the refrigerant liquid and gas thermistors in their holder or clip on the heat exchanger. Install new insulation as needed.

2 Install the expansion valve coil on the expansion valve body. Install a new tie strap to fix the coil and wiring harness.

3 Install the indoor unit heat exchanger in the correct location on the indoor unit.

4 Install and tighten the screws to fix the heat exchanger.

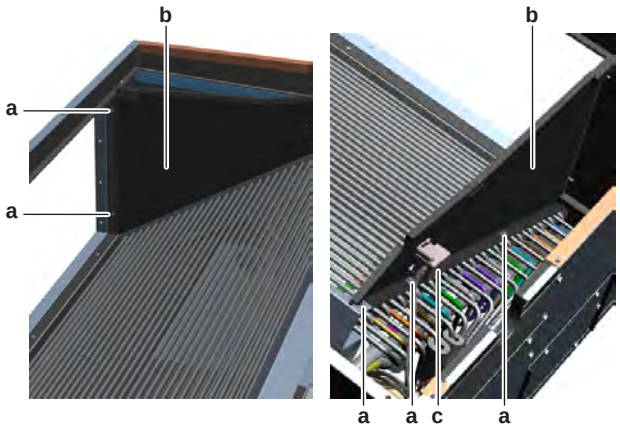


a Screw
b Indoor unit heat exchanger

5 Connect the ground wire to the heat exchanger. Install and tighten the screw to fix the ground wire.

6 Install the partition plate (including the R32 leak detection sensor) in the correct location on the unit.

7 Install and tighten the 5 screws to fix the partition plate.



a Screw
b Partition plate
c R32 leak detection sensor

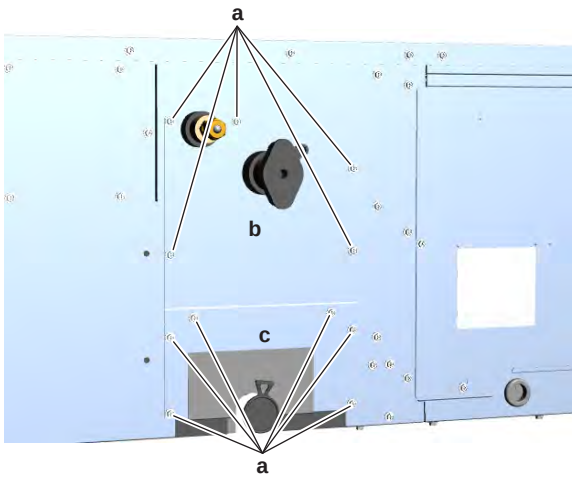
8 Route the wiring harnesses of the expansion valve, refrigerant liquid thermistor, gas thermistor and R32 leak detection sensor inside the switch box.

9 Connect the connectors of the expansion valve, refrigerant liquid thermistor, gas thermistor and R32 leak detection sensor to the indoor unit main PCB.

10 If applicable, install new tie straps to fix the wiring harnesses.

11 Install the drain pipe cover and refrigerant piping cover in the correct location on the unit.

12 Install and tighten the screws to fix the drain pipe cover and refrigerant piping cover.



a Screw
b Refrigerant piping cover
c Drain pipe cover

13 Make sure that the refrigerant field piping connections are clean and not damaged. Remove the caps and properly connect the field piping to the liquid and gas pipes of the indoor unit. Tighten the flared joints.

14 If needed, correctly install the insulation on the liquid and gas pipes.

15 Perform a pressure test on the piping of the indoor unit and vacuüm. Open the stop valves when done.

16 Add refrigerant to the refrigerant circuit, see "5.2.2 Repair procedures" [▸ 338].

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.

4.8 Indoor unit main PCB

INFORMATION

For FXUA and FXDA units, correct PCB is shown, but PCB is rotated 180° when mounted in the unit.

For FXMA200+250 units, correct PCB is shown, but PCB is rotated 90° counterclockwise when mounted in the unit.

4.8.1 Checking procedures

INFORMATION

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

To perform a power check of the indoor unit main PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Visually check the PCB for damage and burnt-out components. If any damage found, replace the PCB, see "4.8.2 Repair procedures" [▸ 186].

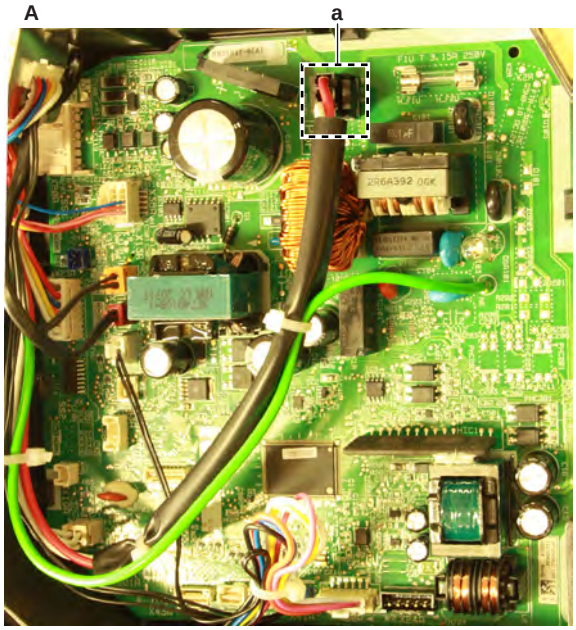
2 Turn ON the power of the unit.

3 Measure the voltage between the pins 1-3 of the connector X27A on the indoor unit main PCB.

Result: The measured voltage MUST be 230 V AC.

A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Connector X27A

A FXFA
a Connector X27A



A FXAA
a Connector X27A

Is the measured voltage on the indoor unit main PCB correct?	Action
Yes	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.
No	Continue with the next step.

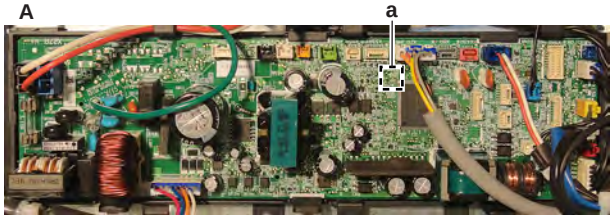
4 Check the power supply to the indoor unit, see "5.1.1 Checking procedures" [▸ 333].

Is the power supply to the indoor unit correct?	Action
Yes	Correct the wiring between the power supply terminal of the indoor unit and the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].
No	Adjust the power supply to the unit, see "5.1.2 Repair procedures" [▸ 336].

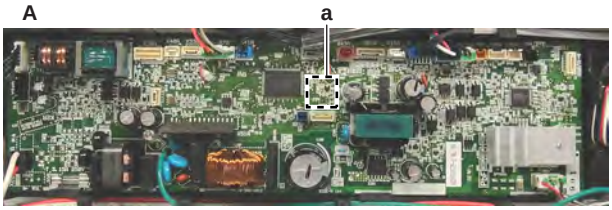
To check the HAP LED of the indoor unit main PCB

Prerequisite: First perform a power check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

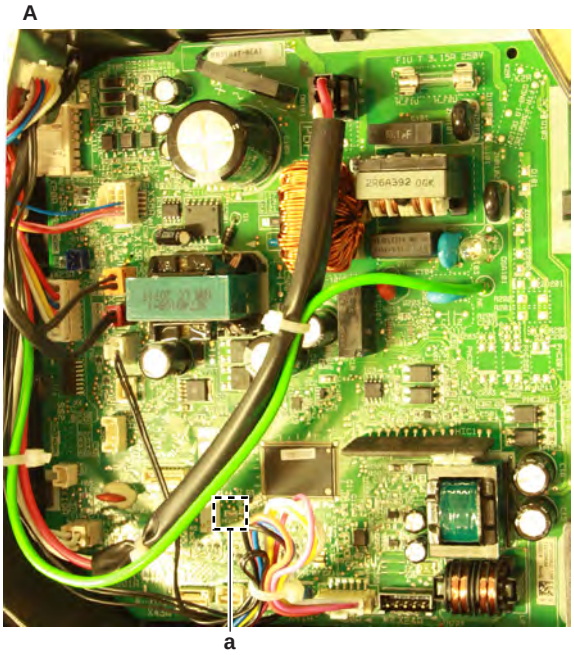
1 Locate the HAP LED on the indoor unit main PCB.



A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a HAP LED



A FXFA
a HAP LED



A FXAA
a HAP LED

INFORMATION

Make sure the correct software is available on the PCB. If NOT, update using the updater tool.

Does the HAP LED blink in regular intervals (1 second ON/1 second OFF)?	Action
Yes	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.
No	Proceed with the next step.

2 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

3 Disconnect all component connectors from the indoor unit main PCB.

4 Turn ON the power using the respective circuit breaker.

5 Again check the HAP LED of the indoor unit main PCB.

Does the HAP LED blink in regular intervals (1 second ON/1 second OFF)?	Action
Yes	Perform a check of all components connected to the indoor unit main PCB, see "4 Components" [▸ 67].
No	Replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].

To check if the correct spare part is installed

Prerequisite: First perform all earlier checks of the indoor unit main PCB, see "4.8.1 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.
3. Check that the correct capacity setting adapter is installed on connector X23A of the spare part indoor unit main PCB.

Indoor unit size	Capacity setting adapter
Type 10	J22
Type 15	
Type 20	
Type 25	J28
Type 32	J36
Type 40	J45
Type 50	J56
Type 63	J71
Type 71	J80
Type 80	J90
Type 100	J112
Type 125	J140
Type 140	J160
Type 200	J224
Type 250	J280

Is the correct spare part for the indoor unit main PCB installed?	Action
Yes	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.
No	Replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].

To check the wiring of the indoor unit main PCB

Prerequisite: First perform all earlier checks of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

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" [▸ 359].

INFORMATION

Correct the wiring as needed.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.

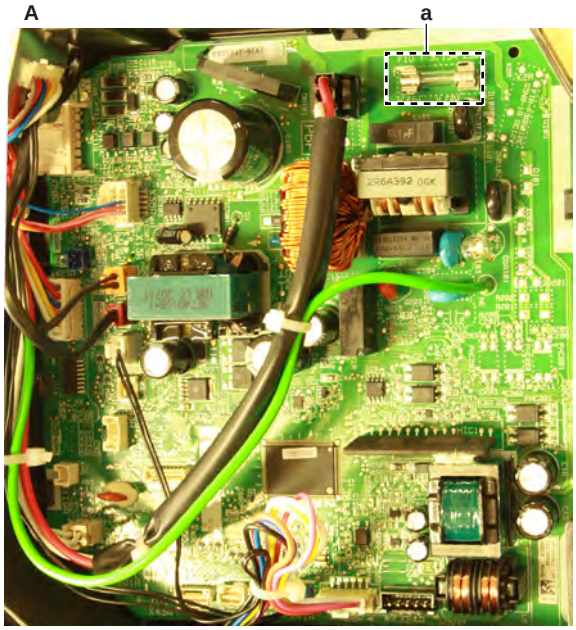
To check the fuse of the indoor unit main PCB

Prerequisite: First perform all earlier checks of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

1 Measure the continuity of the fuse. If no continuity is measured, the fuse has blown.

A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Fuse F1U

A FXFA
a Fuse F1U



A FXAA
a Fuse F1U

Blown fuse on the indoor unit main PCB?	Action
Yes	Replace the blown fuse, see "4.8.2 Repair procedures" [▸ 186].
No	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.

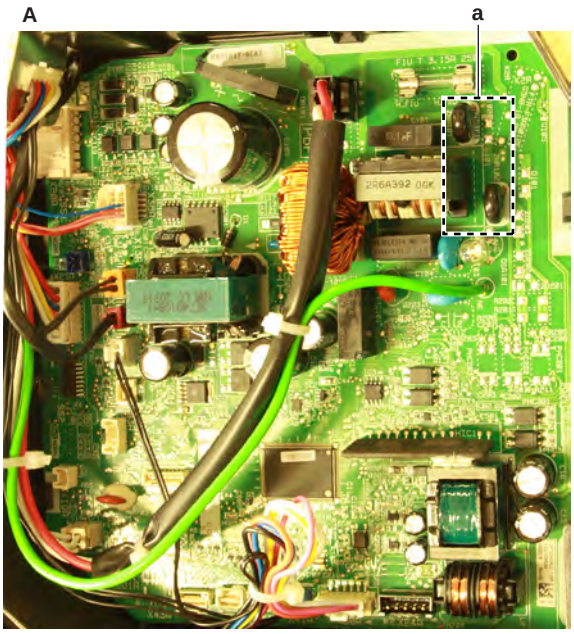
To check the varistors of the indoor unit main PCB

Prerequisite: First perform all earlier checks of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

1 Measure the resistance of the varistor. If the reading is nearly infinite, the varistor is still good.

A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Varistors

A FXFA
a Varistors



A FXAA
a Varistors

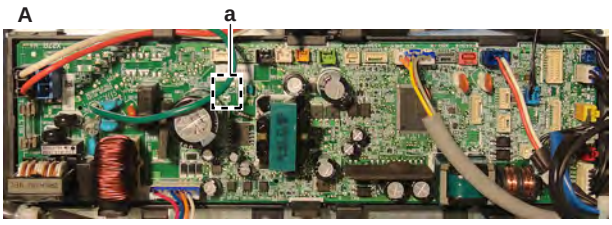
Any broken varistors on the indoor unit main PCB?	Action
Yes	Replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].
No	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.

To check the rectifier voltage of the indoor unit main PCB

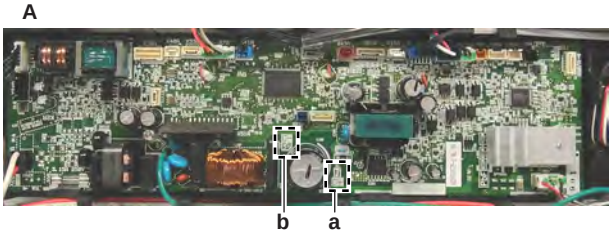
Prerequisite: First perform all earlier checks of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

1. Turn ON the power of the unit.
2. Measure the voltage on the rectifier voltage check terminals (C+ and C-) on the indoor unit main PCB.

   Result: The measured voltage MUST be approximately 324 V DC.

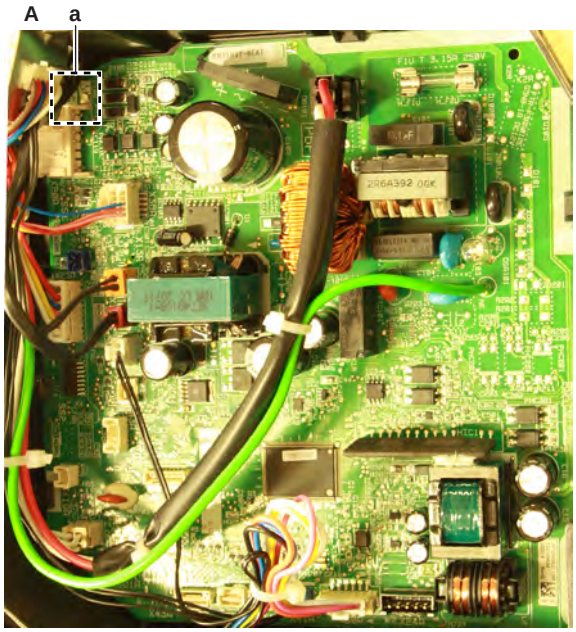


A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a C+ and C- terminal



A FXFA

a C+ terminal
b C- terminal



A FXAA
a C+ and C- terminal

Is the rectifier voltage on the indoor unit main PCB correct?	Action
Yes	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.
No	Replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].

To perform a diode module check

1 First check the rectifier voltage of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

INFORMATION

If the rectifier voltage is OK, the diode module is OK. If rectifier voltage is NOT OK, proceed as described in the rectifier voltage check procedure.

Below procedure describes how to check the diode module itself.

Prerequisite: Stop the unit operation via the user interface.

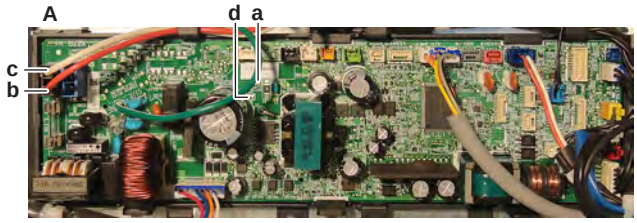
2 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

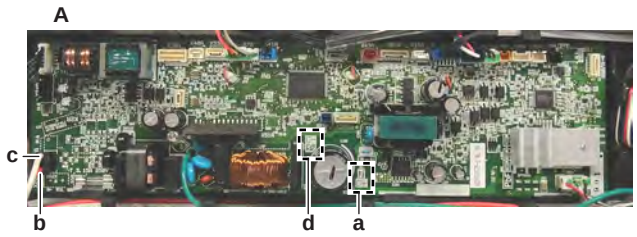
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

3 Disconnect the power connector X27A from the indoor unit main PCB.

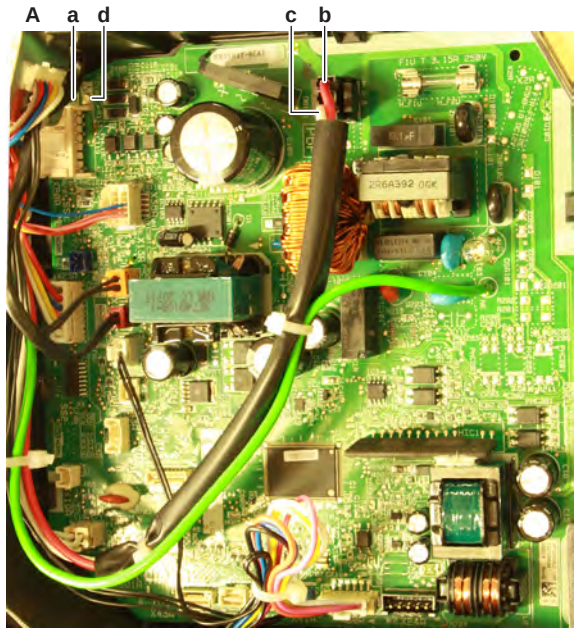
4 Check the diode module in reference with the image and the table below.



A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a V DC out (C+)
b V AC in (X27A - pin 1)
c V AC in (X27A - pin 2)
d V DC out (C-)



A FXFA
a V DC out (C+)
b V AC in (X27A - pin 1)
c V AC in (X27A - pin 2)
d V DC out (C-)



A FXAA
a V DC out (C+)
b V AC in (X27A - pin 1)
c V AC in (X27A - pin 2)
d V DC out (C-)

INFORMATION

When measuring on the front of the main PCB, make sure to locally remove the protective varnish with the test leads of the multi meter.

VDC	Com	Ref	VDC	Com	Ref
d	b	0.58 V	b	d	O.L
b	a	0.58 V	a	b	O.L
d	c	0.50 V	c	d	O.L

VDC	Com	Ref	VDC	Com	Ref
c	a	0.50 V	a	c	O.L

5 If the diode module is NOT OK, replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▸ 186].

To perform a power module check

INFORMATION

ONLY for FXFA units.

Prerequisite: First check the rectifier voltage of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

Prerequisite: Stop the unit operation via the user interface.

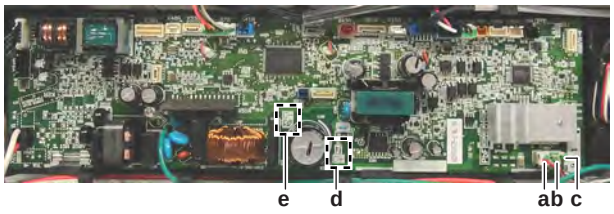
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the fan motor connector from the indoor unit main PCB.

3 Check the power module V2R in reference with the image and the table below.



a U
b V
c W
d C+
e C-

INFORMATION

When measuring on the front of the main PCB, make sure to locally remove the protective varnish with the test leads of the multi meter.

VDC	Com	Ref	VDC	Com	Ref
U	C+	0.47 V	C+	U	O.L
V	C+	0.47 V	C+	V	O.L
W	C+	0.47 V	C+	W	O.L
C-	U	0.47 V	U	C-	O.L
C-	V	0.47 V	V	C-	O.L
C-	W	0.47 V	W	C-	O.L

Are the test results OK?	Action
Yes	Power module is OK. Return to "4.8.1 Checking procedures" [▶ 176] of the indoor unit main PCB and continue with the next procedure.
No	Replace the indoor unit main PCB, see "4.8.2 Repair procedures" [▶ 186].

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.

4.8.2 Repair procedures

To correct the wiring from the indoor unit power supply terminal to the indoor unit main PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▶ 192].

1 Correct the wiring from the indoor unit power supply terminal to the PCB, see "7.2 Wiring diagram" [▶ 359].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.8.1 Checking procedures" [▶ 176] of the indoor unit main PCB and continue with the next procedure.

To remove the indoor unit main PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▶ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Unlatch all cable clamps of the connector wires and disconnect all connectors from the indoor unit main PCB.

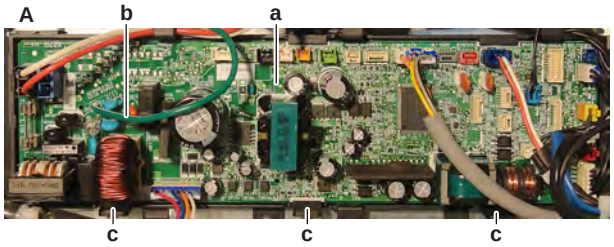
3 For FXAA, FXHA and FXMA200+250 units ONLY: Remove the jumper from the connector X15A of the indoor unit main PCB. Keep for reuse.

4 For FXFA units ONLY: Remove the jumper from the connector X70A of the indoor unit main PCB. Keep for reuse.

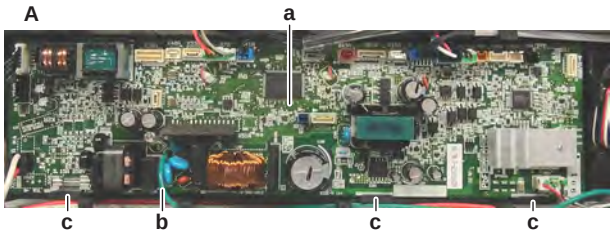
5 For FXAA units: Disconnect the ground wire (Faston connector) from the power supply terminal.

6 For all other units: Remove the screw and disconnect the PCB ground wire from the switch box.

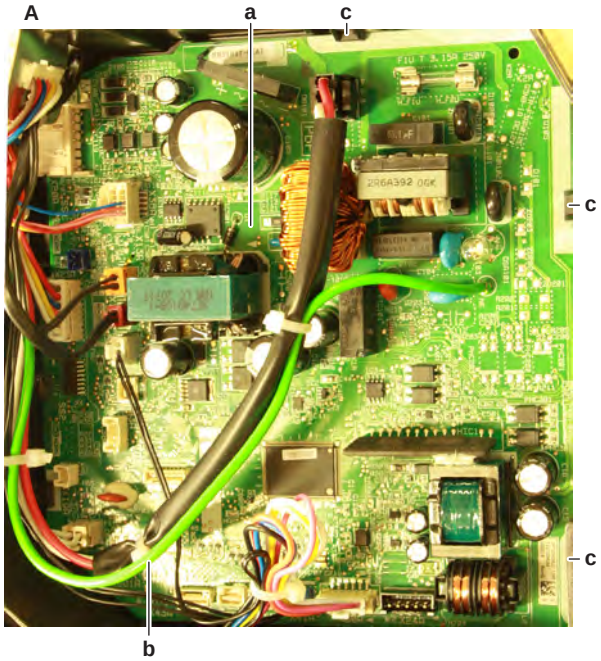
7 Carefully pull the PCB at the side and unlatch the PCB holders one by one.



A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Indoor unit main PCB
b Ground wire
c PCB holder



A FXFA
a Indoor unit main PCB
b Ground wire
c PCB holder



A FXAA
a Indoor unit main PCB
b Ground wire
c PCB holder

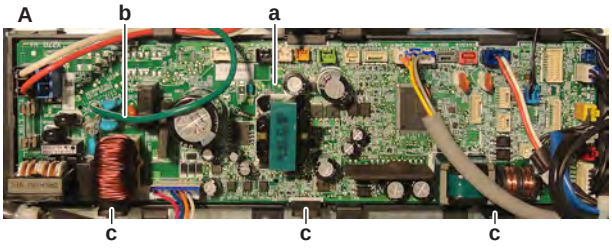
8 Remove the indoor unit main PCB from the indoor unit.

9 To install the indoor unit main PCB, see "4.8.2 Repair procedures" [▶ 186].

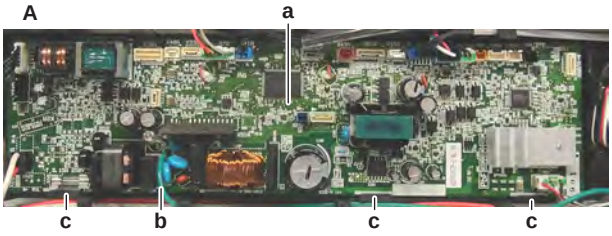
To install the indoor unit main PCB

> **INFORMATION**
>
> When replacing the indoor unit main PCB, R32 leak detection sensor PCB ALSO MUST be replaced. See "4.11.2 Repair procedures" [▶ 243] and replace R32 leak detection sensor.

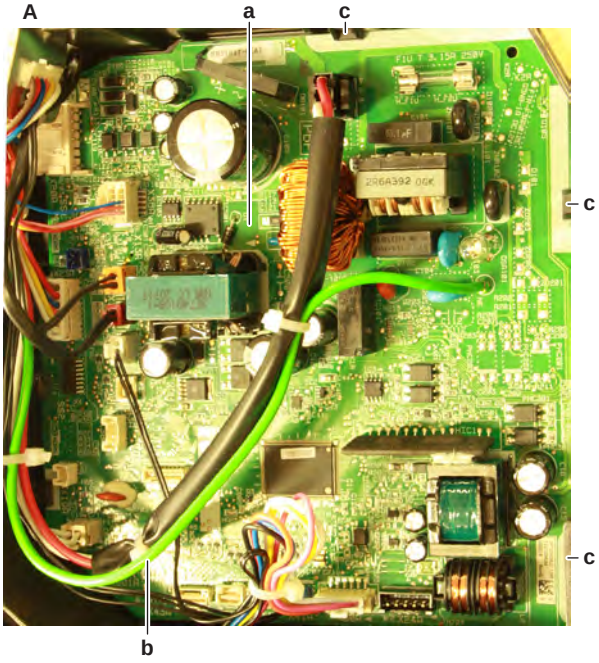
1 Install the indoor unit main PCB in the correct location. Firmly latch the PCB holders to fix the PCB.



A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Indoor unit main PCB
b Ground wire
c PCB holder



A FXFA
a Indoor unit main PCB
b Ground wire
c PCB holder



A FXAA
a Indoor unit main PCB
b Ground wire
c PCB holder

2 For FXAA units: Connect the ground wire (Faston connector) to the power supply terminal.

3 For all other units: Connect the PCB ground wire to the switch box. Install and tighten the screw to fix the ground wire.

4 Connect all connectors to the indoor unit main PCB.

INFORMATION

Use the wiring diagram and connection diagram for correct installation of the connectors, see "7.2 Wiring diagram" [▸ 359].

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 For FXAA, FXHA and FXMA200+250 units ONLY: Install the jumper on the connector X15A of the indoor unit main PCB.

6 For FXFA units ONLY: Install the jumper on the connector X70A of the indoor unit main PCB.

7 Route the wiring inside the cable clamps to secure the wiring.

8 Check that the correct capacity setting adapter is installed on connector X23A of the spare part indoor unit main PCB.

Indoor unit size	Capacity setting adapter
Type 10	J22
Type 15	
Type 20	
Type 25	J28
Type 32	J36
Type 40	J45
Type 50	J56
Type 63	J71
Type 71	J80
Type 80	J90
Type 100	J112
Type 125	J140
Type 140	J160
Type 200	J224
Type 250	J280

9 Locate the DIP switches (if available) on the indoor unit main PCB. Both DIP switches (if available) MUST be set to normal.

10 After indoor unit main PCB replacement, perform F1-F2 communication reset. When NOT done, the newly installed PCB is NOT recognized in the transmission system. See "5.1.2 Repair procedures" [▸ 336].

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.

To remove a fuse of the indoor unit main PCB

Prerequisite: Stop the unit operation via the user interface.

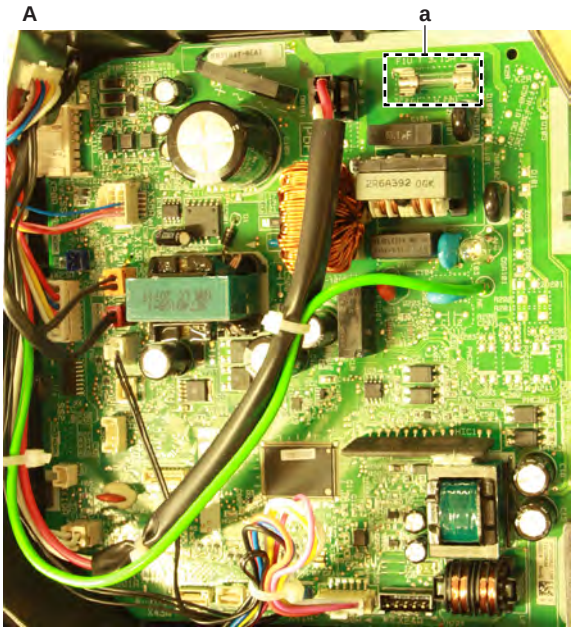
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the fuse from the PCB.

A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Fuse F1U

A FXFA
a Fuse F1U



A FXAA
a Fuse F1U

2 To install a fuse on the indoor unit PCB, see "4.8.2 Repair procedures" [▸ 186].

To install a fuse on the indoor unit main PCB

1 Install the fuse on the correct location on the PCB.

CAUTION

Make sure the fuse is plugged-in correctly (contact with the fuse holder).

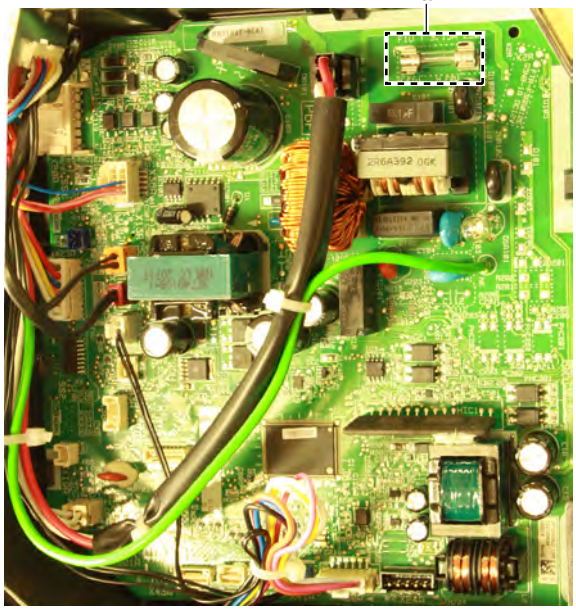
A

A FXZA + FXUA + FXSA + FXHA + FXDA + FXMA
a Fuse F1U

A

A FXFA
a Fuse F1U

A a



A FXAA
a Fuse F1U

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "4.8.1 Checking procedures" [▸ 176] of the indoor unit main PCB and continue with the next procedure.

4.9 Plate work

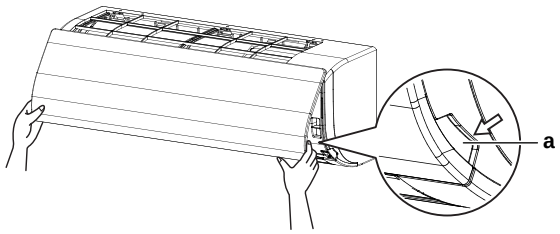
INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

4.9.1 Wall mounted indoor units

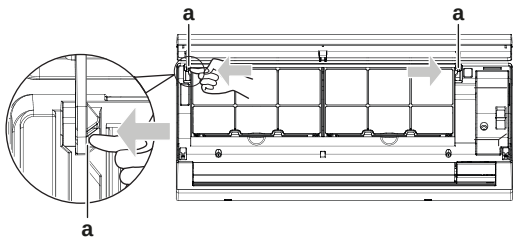
To remove the front panel

1 Open the front panel. Hold the front panel by the panel tabs on both sides and open until the panel stops.



a Panel tabs

2 Remove the front panel by pushing hooks on either side of the front panel towards the side of the unit and remove the panel. Or remove it by sliding the front panel either to the left or right and pulling it forward.



a Panel hook

To remove the front grille

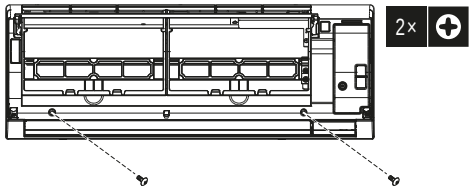
CAUTION

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

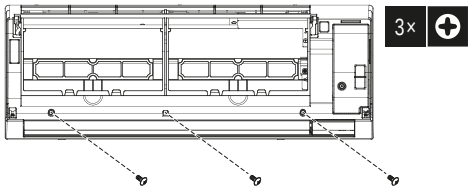
1 Remove the front panel, see "4.9 Plate work" [▸ 192].

2 Remove the screws.

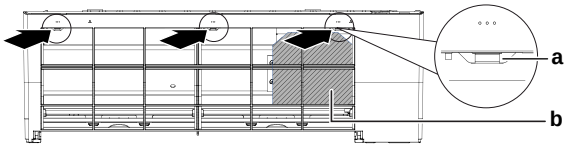
- 2 for FXAA15~32



- 3 for FXAA40~63

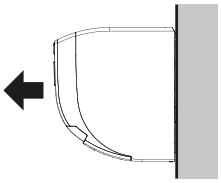


3 Push down the 3 upper hooks marked with a symbol with 3 circles in the direction of the arrows. Remove cardboard between the filter and the heat exchanger.



a Hook
b Cardboard

4 Making sure not to catch the horizontal flaps, remove the front grille by pulling in the direction of the arrow.

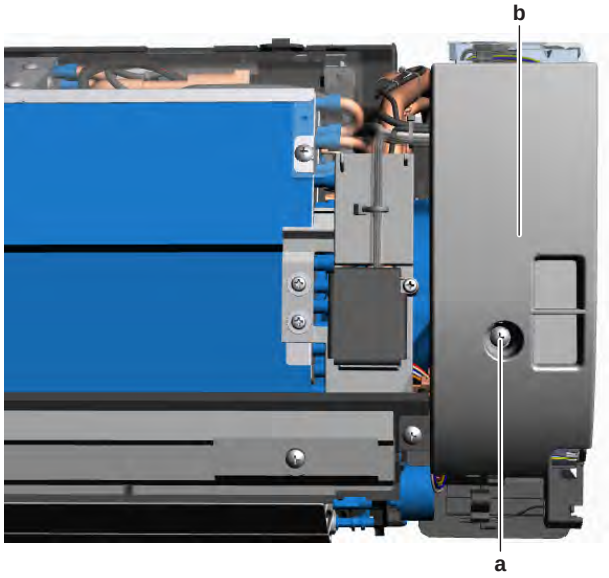


To remove the electrical wiring box cover

TO OPEN THE SERVICE COVER

1 Remove 1 screw from the service cover.

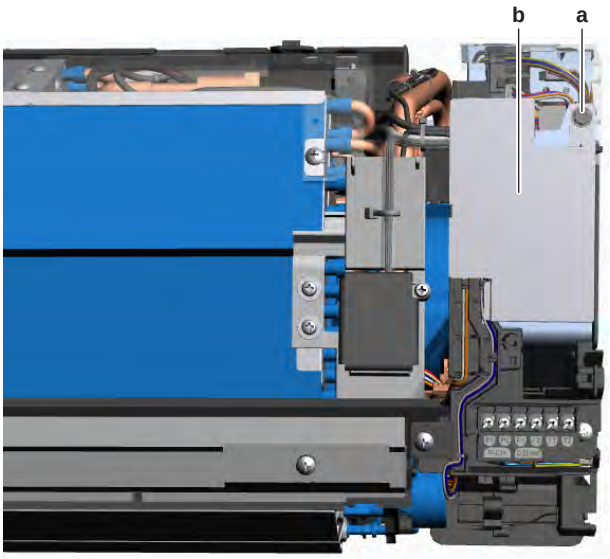
2 Pull out the service cover horizontally away from the unit.



a Service cover screw
b Service cover

3 Remove 1 screw from the shield plate.

4 Pull out the shield plate horizontally away from the unit.



a Shield plate screw
b Shield plate

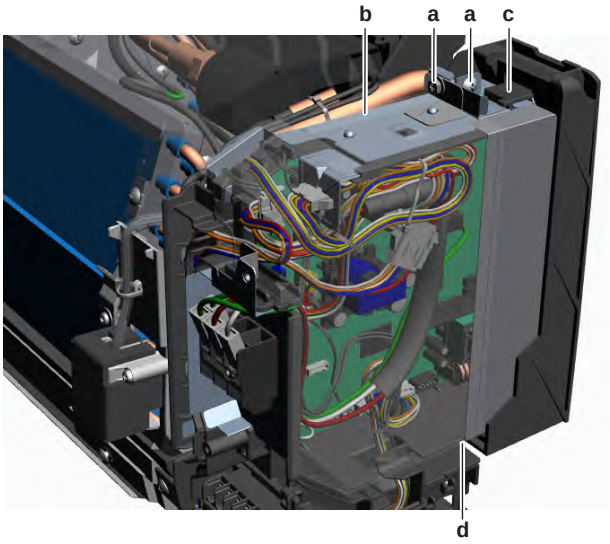
NOTICE

When closing the service cover, make sure that the tightening torque does NOT exceed 1.4 (±0.2) N•m.

TO REMOVE THE ELECTRICAL WIRING BOX COVER

Prerequisite: Remove the front grille.

1. Remove the 2 screws from the electrical wiring box.
2. Open the electrical wiring box cover by pulling the protruding part and pressing the retaining lip on the top of the cover.
3. Unhook the tab(s) on the bottom and remove the electrical wiring box cover.



a Screw
b Protruding part on the top of the cover
c Retaining lip
d Tab

To remove the switch box

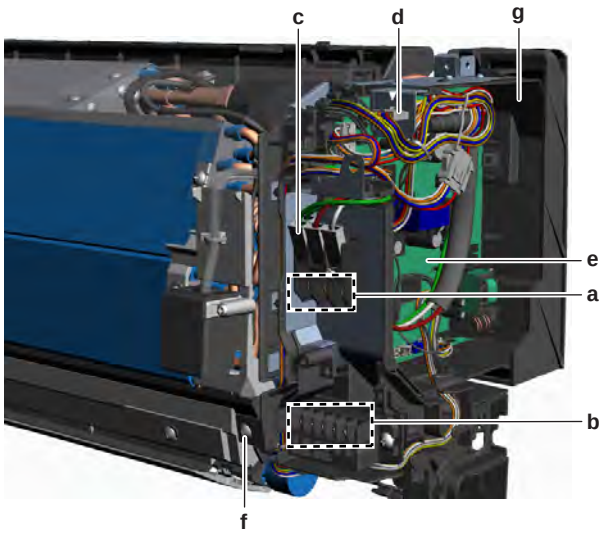
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the power supply wiring from the wiring terminal X2M.

2 Disconnect the transmission wiring from the wiring terminal X1M.



a Wiring terminal X2M
b Wiring terminal X1M
c Faston connector (ground wire)
d Expansion valve wiring harness connector
e Indoor unit main PCB
f Screw (switch box)
g Switch box

3 Cut all tie straps that fix the refrigerant liquid and gas thermistors wiring harnesses.

4 Pull the clip and remove the refrigerant liquid and gas thermistors from their holder.

5 Disconnect the ground wire Faston connector from the wiring terminal X2M.

6 Disconnect the expansion valve wiring harness connector from the side of the switch box.

7 Disconnect the connectors of the indoor unit fan motor, swing flap motor, and R32 leak detection sensor from the indoor unit main PCB.

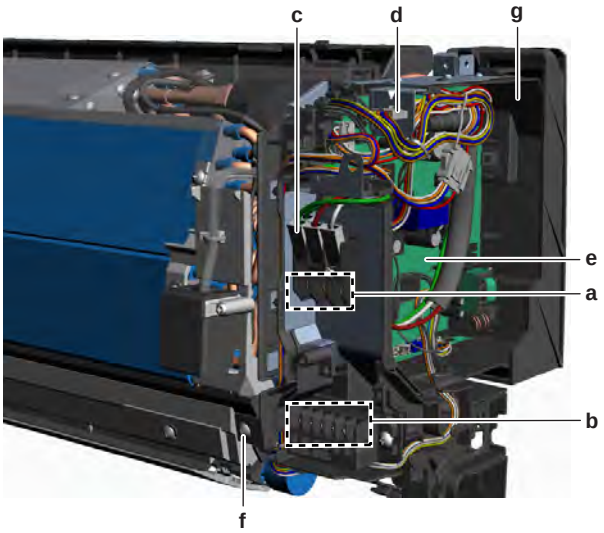
8 Detach all disconnected wiring harnesses from the switch box.

9 Remove the screw and remove the switch box from the indoor unit.

10 To install the switch box, see "4.9 Plate work" [▸ 192].

To install the switch box

1 Install the switch box in the correct location on the indoor unit.



a Wiring terminal X2M
b Wiring terminal X1M
c Faston connector (ground wire)
d Expansion valve wiring harness connector
e Indoor unit main PCB
f Screw (switch box)
g Switch box

2 Route the connectors of the indoor unit fan motor, swing flap motor, and R32 leak detection sensor inside the switch box and connect them to the indoor unit main PCB.

3 Install and tighten the screw to secure the switch box.

4 Connect the ground wire Faston connector to the wiring terminal X2M.

5 Connect the expansion valve wiring harness connector to the side of the switch box.

6 Install the refrigerant liquid and gas thermistor in their holder.

7 Attach all wiring harnesses to the switch box as needed.

8 Install new tie straps to fix the appropriate wiring harnesses.

9 Connect the power supply wiring to the wiring terminal X2M.

10 Connect the transmission wiring to the wiring terminal X1M.

To re-install the front grille

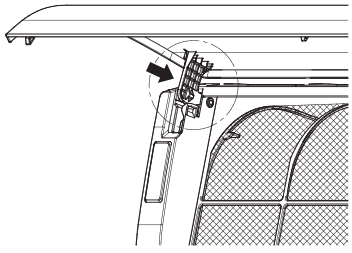
1 Install the front grille and firmly engage the 3 upper hooks.

2 Install the screws back (2 for FXAA15~32 and 3 for FXAA40~63).

3 Re-install front panel, see "4.9 Plate work" [▸ 192].

To re-install the front panel

1 To attach the front panel, align the hooks of the front panel with the slots and push them all the way in.



2 Close the front panel slowly.

4.9.2 Duct indoor units

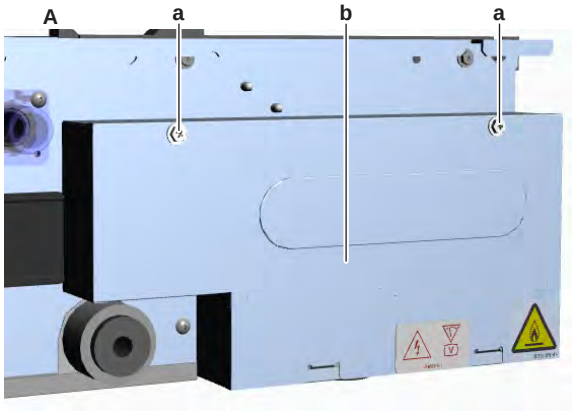
To remove the switch box cover

Prerequisite: Stop the unit operation via the user interface.

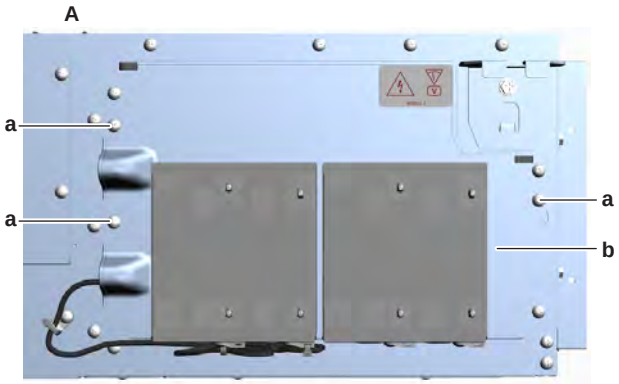
1 Turn OFF the respective circuit breaker.

> **DANGER: RISK OF ELECTROCUTION**
>
> Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

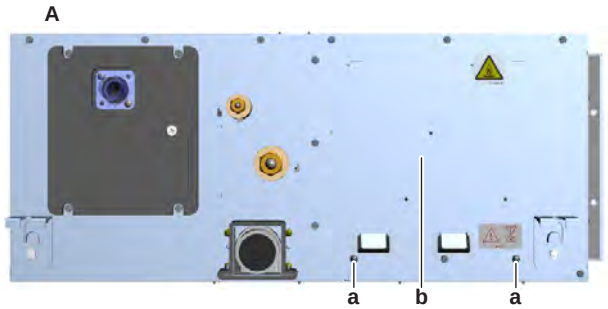
2 Remove the screws from the switch box cover.



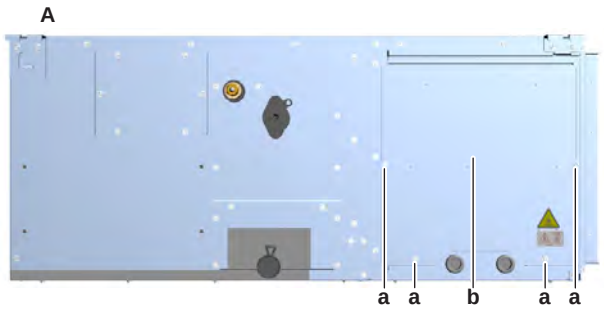
A FXDA
a Screw
b Switch box cover



A FXSA
a Screw
b Switch box cover



A FXMA50~125
a Screw
b Switch box cover



A FXMA200+250
a Screw
b Switch box cover

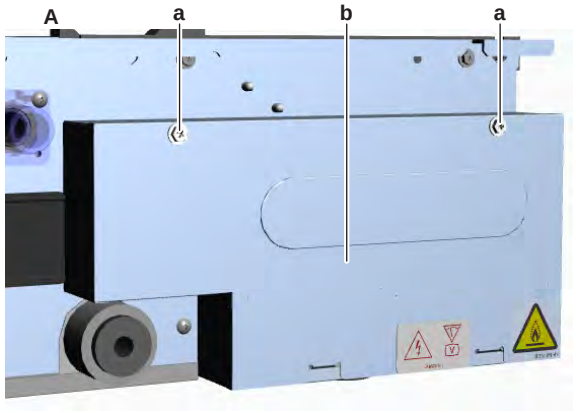
3 Remove the switch box cover from the unit.

4 To install the switch box cover, see "4.9 Plate work" [▸ 192].

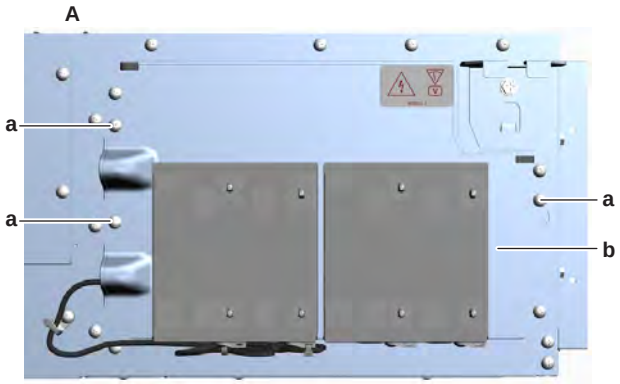
To install the switch box cover

1 Install the switch box cover in the correct location on the unit.

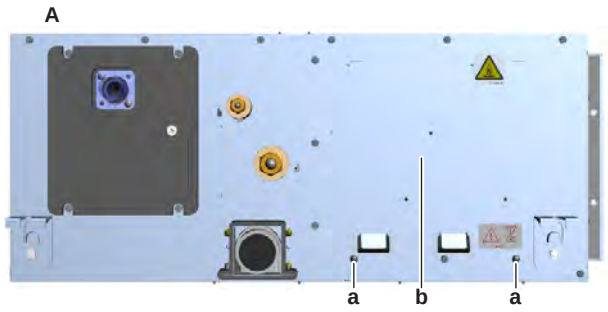
2 Install and tighten the screws to fix the switch box cover.



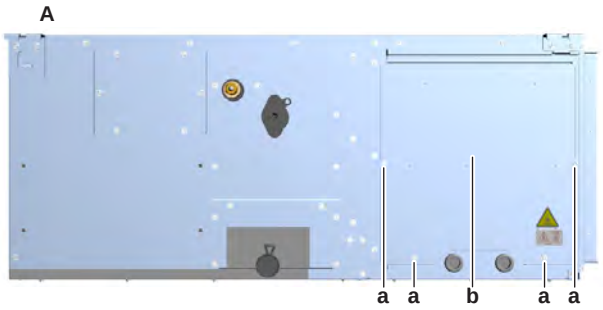
A FXDA
a Screw
b Switch box cover



A FXSA
a Screw
b Switch box cover



A FXMA50~125
a Screw
b Switch box cover



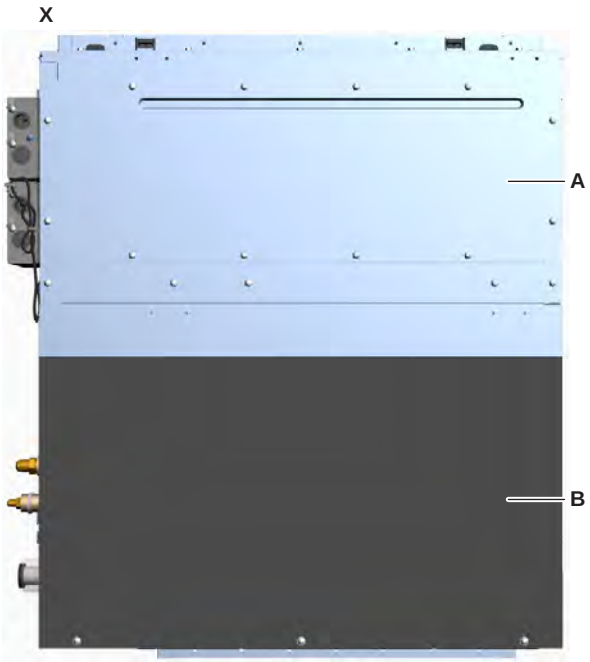
A FXMA200+250
a Screw
b Switch box cover

To remove the bottom plates

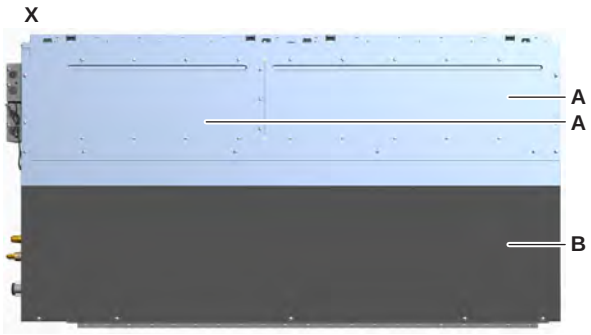
FXSA

The indoor unit has 2 bottom plates:

- Bottom plate A: provides access to the indoor unit fan motor and fans
- Bottom plate B: provides access to the drain pump, limit switch, and refrigerant components



X FXSA40
A Bottom plate A
B Bottom plate B



X FXSA140
A Bottom plate A
B Bottom plate B

- TO REMOVE BOTTOM PLATE A

Prerequisite: Stop the unit operation via the user interface.

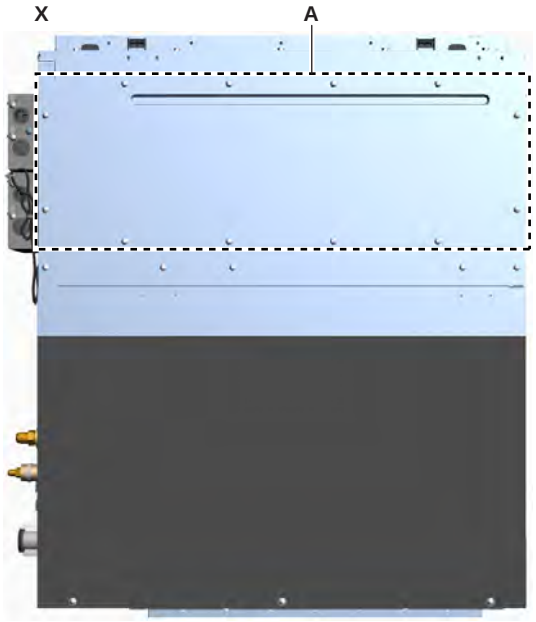
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

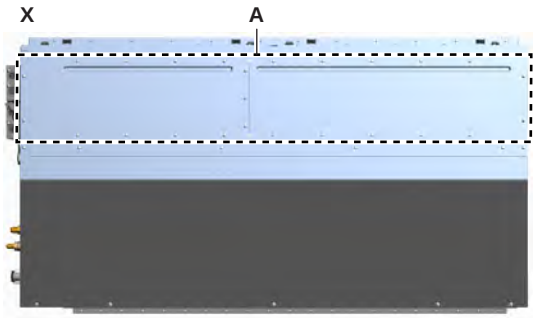
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Empty the drain pan.

3 Remove the screws and remove the bottom plate A.



X FXSA40
A Bottom plate A

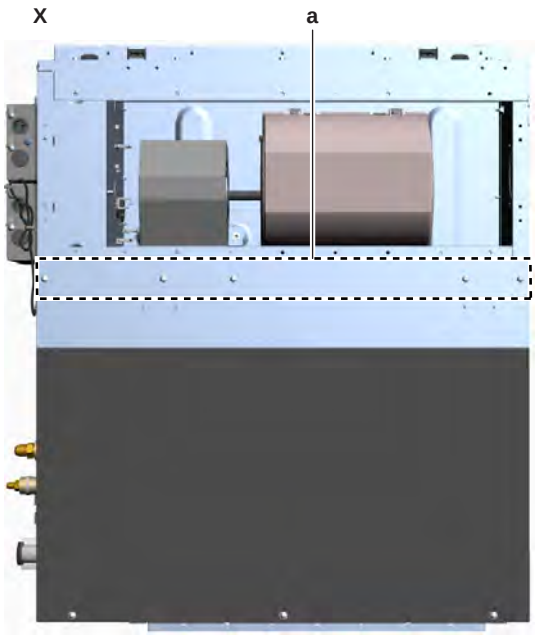


X FXSA140
A Bottom plate A

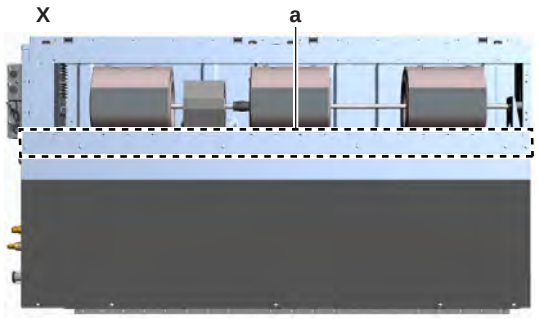
- TO REMOVE BOTTOM PLATE B

Prerequisite: First remove bottom plate A.

1 Remove the screws and remove the middle plate.

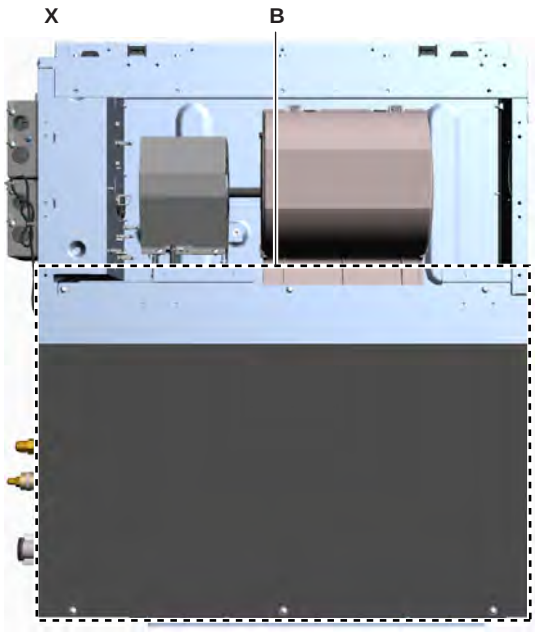


X FXSA40
a Middle plate

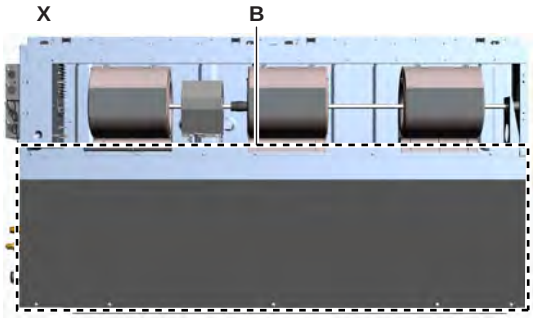


X FXSA140
a Middle plate

2 Remove the screws from the bottom plate B.



X FXSA40
B Bottom plate B



X FXSA140
B Bottom plate B

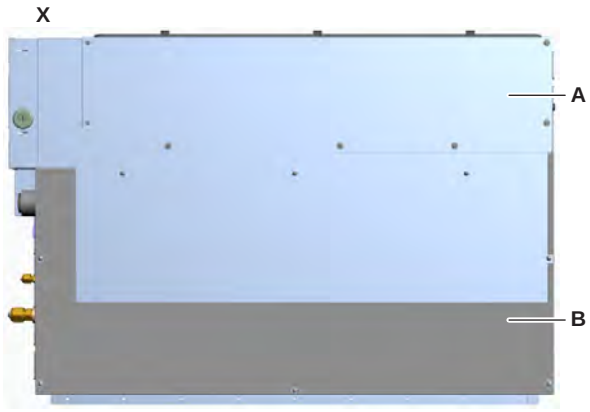
3 Slide the bottom plate B in the direction of the fan motor and remove the plate.

4 To install the bottom plates, see "4.9 Plate work" [▸ 192].

FXDA + FXMA

The indoor unit has 2 bottom plates:

- Bottom plate A: provides access to the indoor unit fan motor and fans
- Bottom plate B: provides access to the drain pump, limit switch, and refrigerant components



X FXDA40
A Bottom plate A
B Bottom plate B

X FXMA50
A Bottom plate A
B Bottom plate B

- TO REMOVE BOTTOM PLATE A

Prerequisite: Stop the unit operation via the user interface.

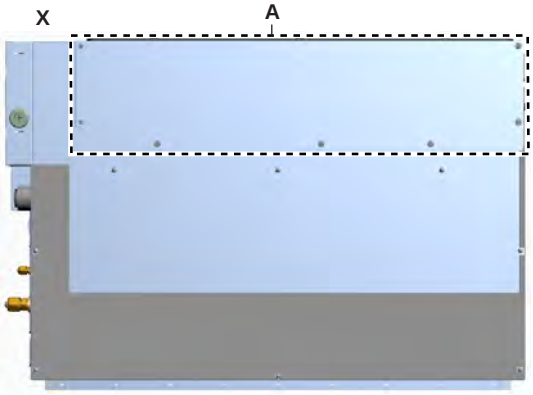
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

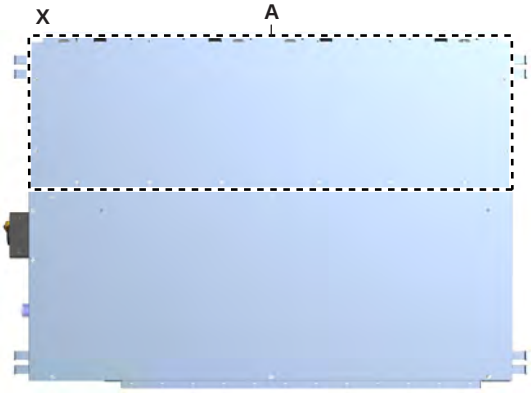
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Empty the drain pan.

3 Remove the screws and remove the bottom plate A.



X FXDA40
A Bottom plate A

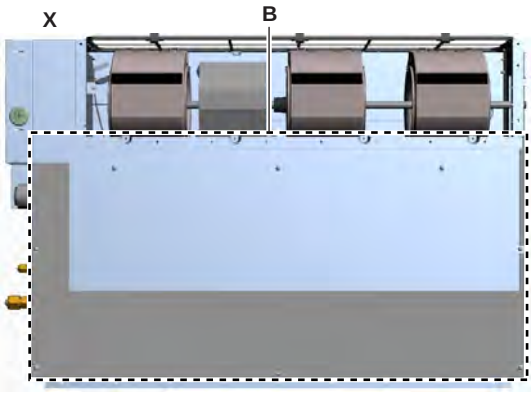


X FXMA50
A Bottom plate A

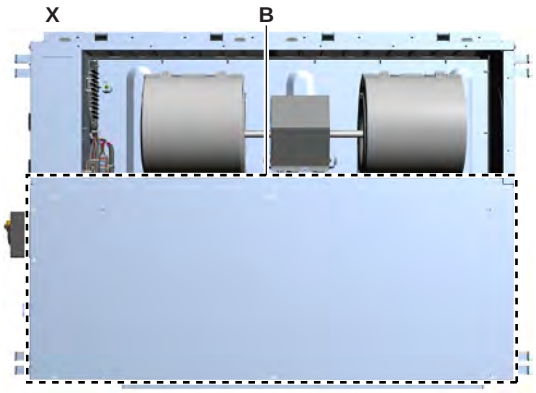
- TO REMOVE BOTTOM PLATE B

Prerequisite: First remove bottom plate A.

1 Remove the screws from the bottom plate B.



X FXDA40
B Bottom plate B



X FXMA50
B Bottom plate B

2 Slide the bottom plate B in the direction of the fan motor and remove the plate.

3 To install the bottom plates, see "4.9 Plate work" [▸ 192].

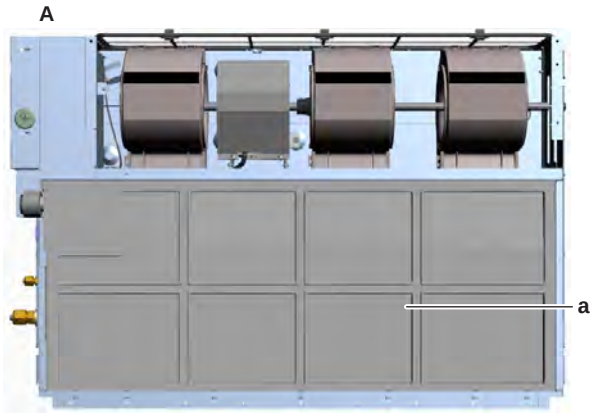
To remove the drain pan

Prerequisite: Remove the bottom plates.

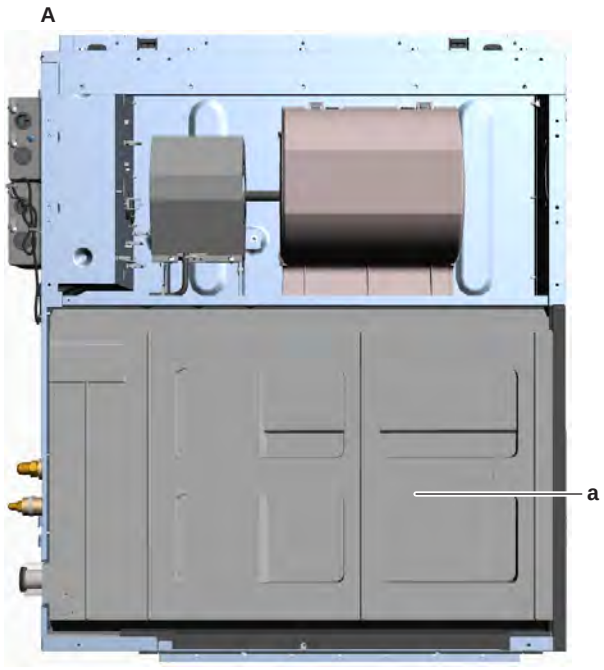
1 For FXMA50~125 units ONLY: Remove the screws and remove the drainage port plate.

2 For FXMA200+250 units ONLY: Remove the screws from the drain pan.

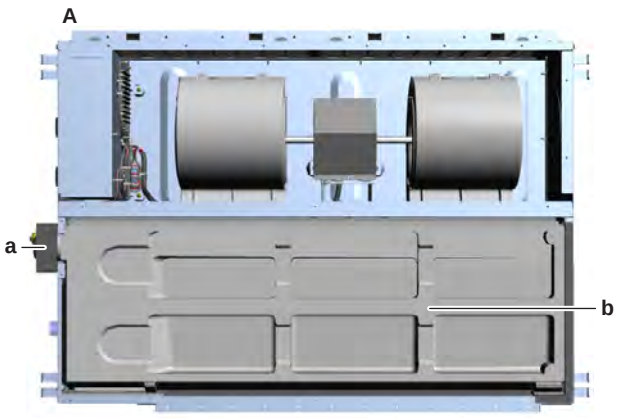
3 Slightly pull the drain pan downwards and remove it from the unit.



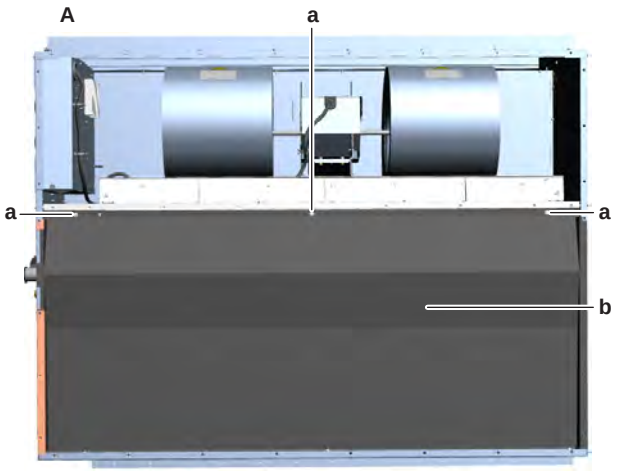
A FXDA40
a Drain pan



A FXSA40
a Drain pan



A FXMA50
a Drainage port plate
b Drain pan



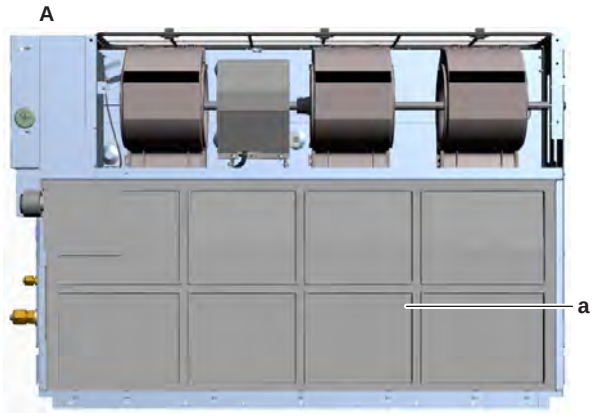
A FXMA200+250
a Screw 'drain pan)
b Drain pan

4 To install the drain pan, see "4.9 Plate work" [▸ 192].

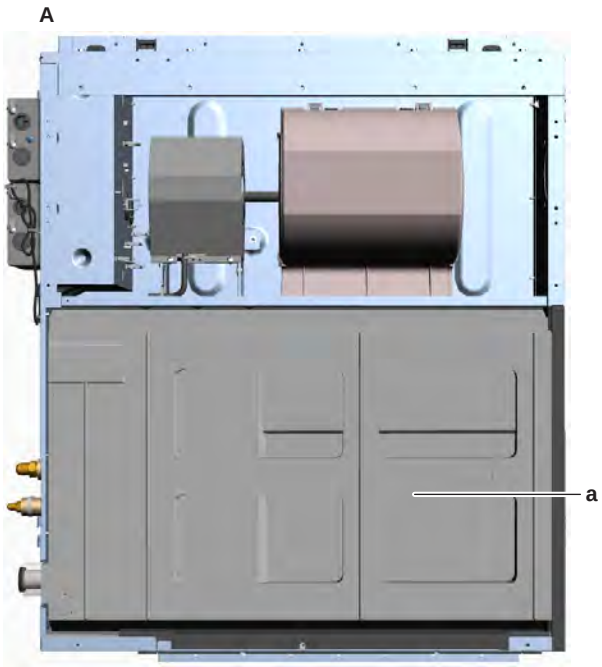
To install the drain pan

1 Install the drain pan in the correct location on the indoor unit.

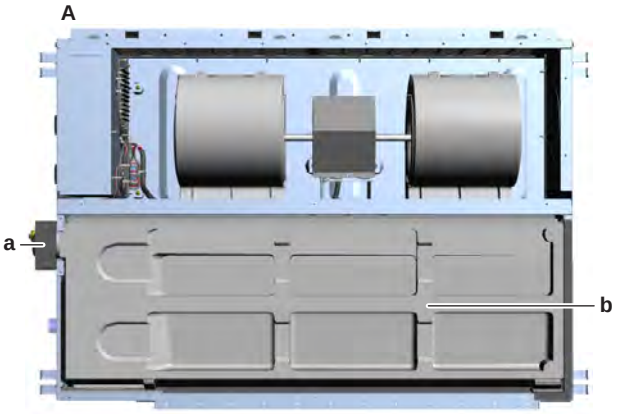
2 Slightly push the drain pan upwards to correctly fix it.



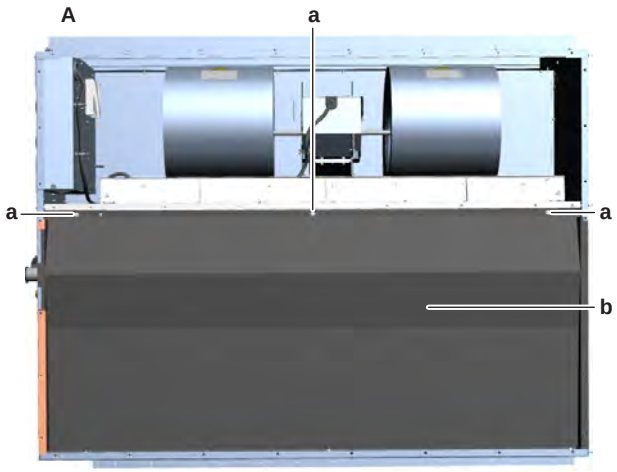
A FXDA40
a Drain pan



A FXSA40
a Drain pan



A FXMA50
a Drainage port plate
b Drain pan



A FXMA200+250
a Screw 'drain pan)
b Drain pan

3 For FXMA50~125 units ONLY: Install the drainage port plate in the correct location. Install and tighten the screws to fix the plate.

4 For FXMA200+250 units ONLY: Install and tighten the screws to fix the drain pan tot he indoor unit.

5 Install the bottom plates, see "4.9 Plate work" [▸ 192].

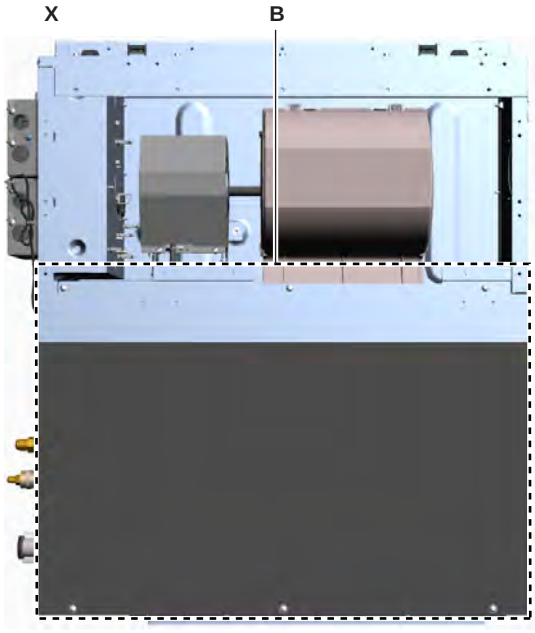
To install the bottom plates

FXSA

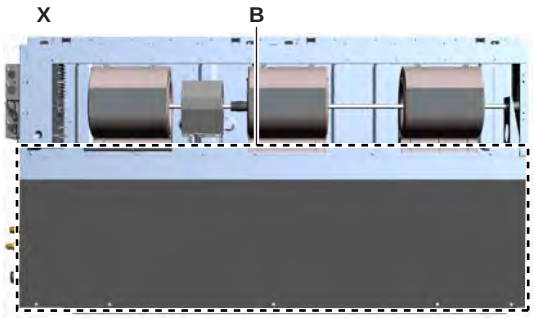
- TO INSTALL BOTTOM PLATE B

1 Slide the bottom plate B in the correct location on the indoor unit.

2 Install and tighten the screws to fix the bottom plate B.



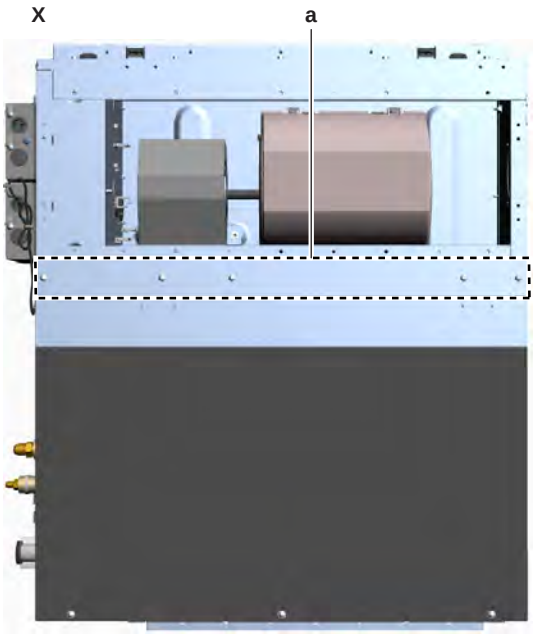
X FXSA40
B Bottom plate B



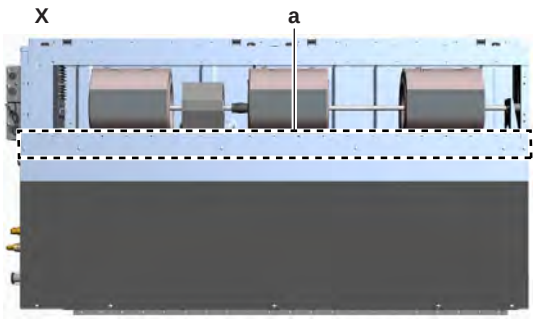
X FXSA140
B Bottom plate B

3 Install the middle plate in the correct location.

4 Install and tighten the screws to fix the middle plate.



X FXSA40
a Middle plate



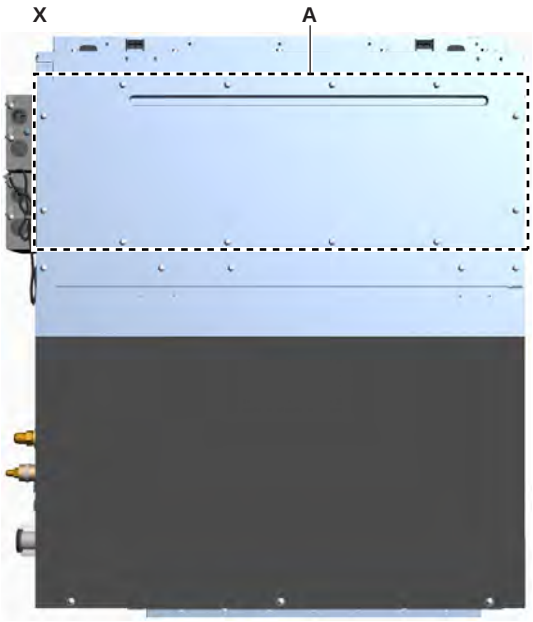
X FXSA140
a Middle plate

- TO INSTALL BOTTOM PLATE A

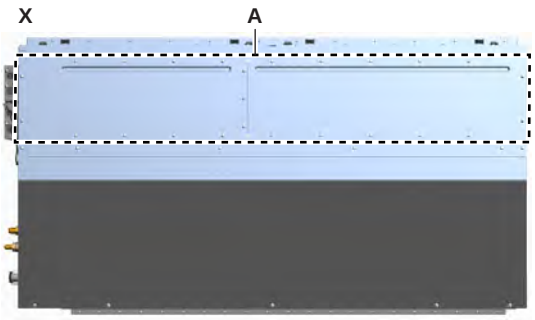
Prerequisite: First install bottom plate B.

1 Install the bottom plate A in the correct location on the indoor unit.

2 Install and tighten the screws to fix the bottom plate A.



X FXSA40
A Bottom plate A

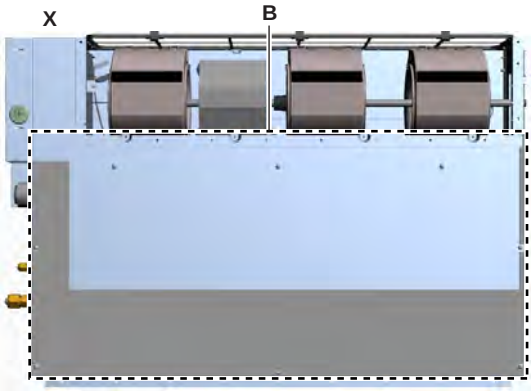


X FXSA140
A Bottom plate A

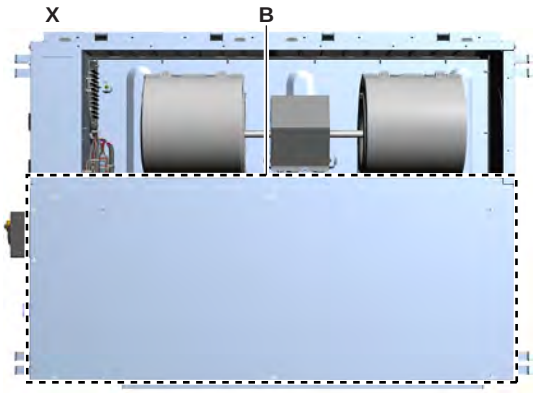
FXDA + FXMA

- TO INSTALL BOTTOM PLATE B

1. Slide the bottom plate B in the correct location on the indoor unit.
2. Install and tighten the screws to fix the bottom plate B.



X FXDA40
B Bottom plate B

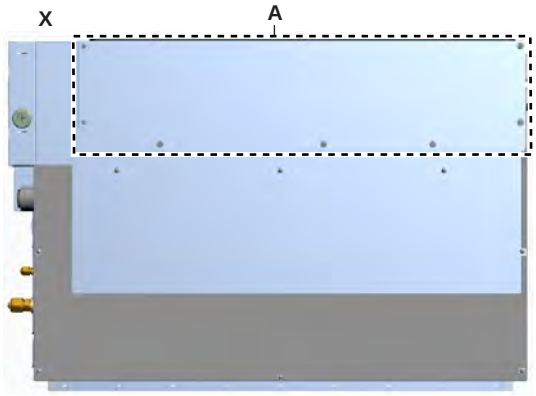


X FXMA50
B Bottom plate B

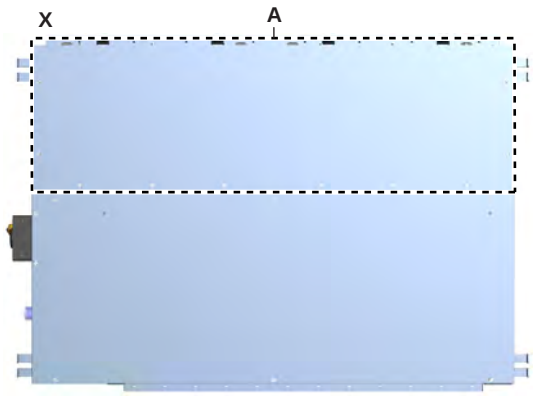
- TO INSTALL BOTTOM PLATE A

Prerequisite: First install bottom plate B.

1. Install the bottom plate A in the correct location on the indoor unit.
2. Install and tighten the screws to fix the bottom plate A.



X FXDA40
A Bottom plate A



X FXMA50
A Bottom plate A

4.9.3 Sensing cassette indoor units

To remove the switch box cover

FXZA + FXFA with standard decoration panel

Prerequisite: Stop the unit operation via the user interface.

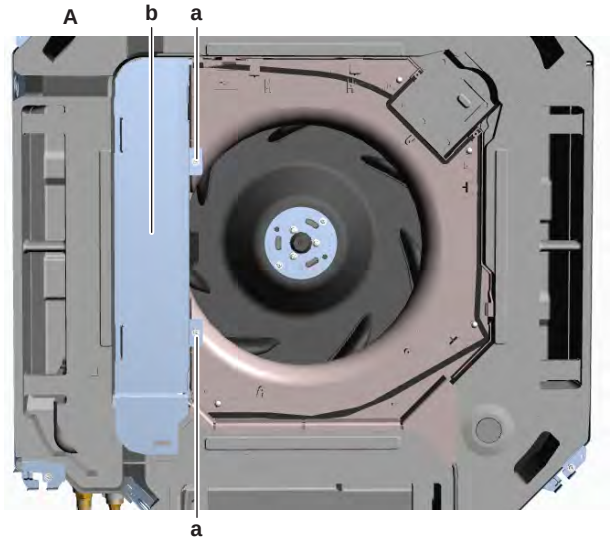
1. Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

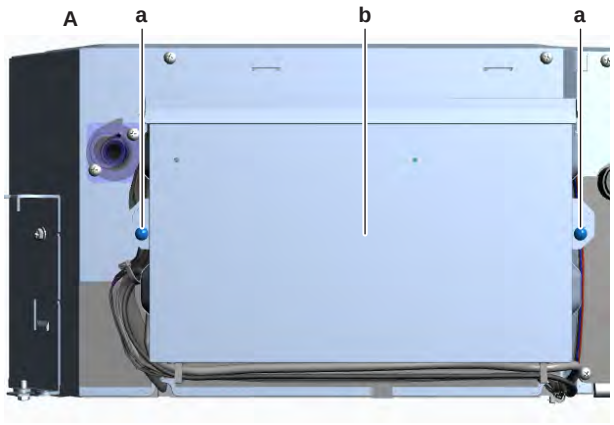
Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 For FXFA units ONLY: Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Remove the 2 screws from the switch box cover.



A FXFA
a Screw
b Switch box cover



A FXZA
a Screw
b Switch box cover

4 Slide the switch box cover downwards and remove it from the unit.

5 To install the switch box cover, see "4.9 Plate work" [▸ 192].

FXFA with self-cleaning decoration panel

Prerequisite: Stop the unit operation via the user interface.

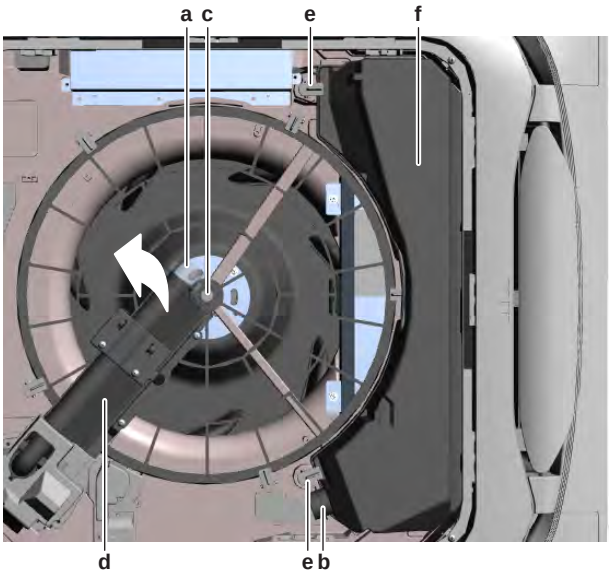
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

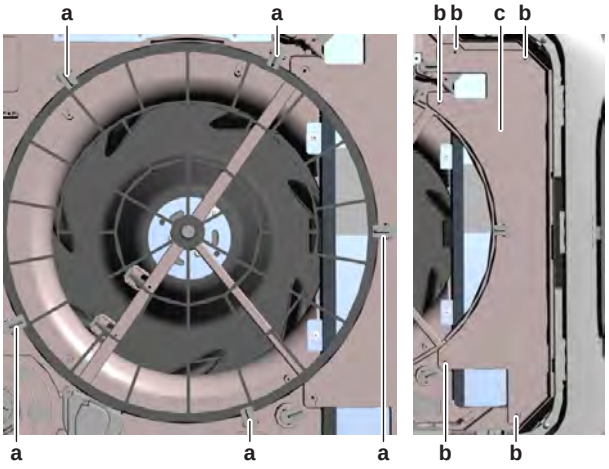


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

4 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

5 Unlock the dust box retainers and remove the dust box from the decoration panel.

6 Unlock the filter retainers and remove the air filter from the decoration panel.

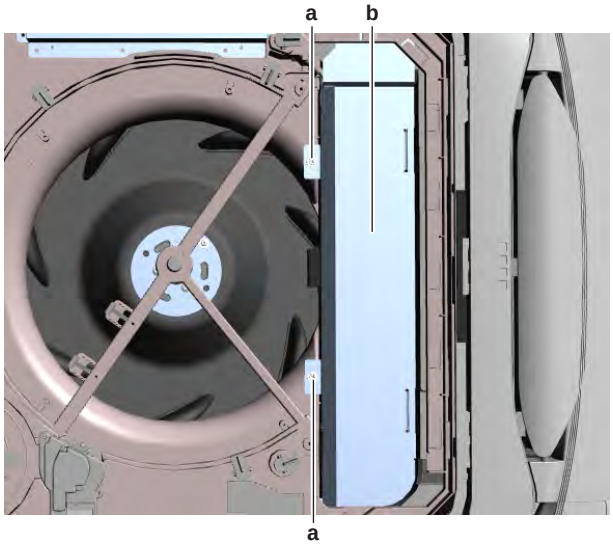


a Retainer (air filter)
b Screw (service cover)
c Service cover

7 Remove the 5 screws from the service cover.

8 Remove the service cover from the decoration panel.

9 Remove the 2 screws from the switch box cover.



a Screw
b Switch box cover

10 Slide the switch box cover downwards and remove it from the unit.

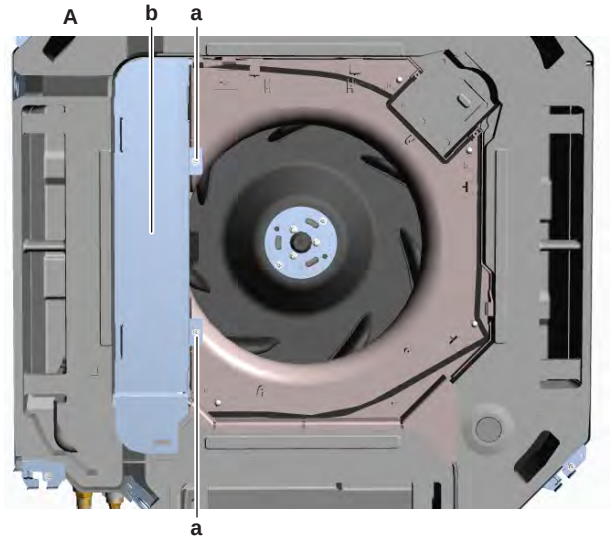
11 To install the switch box cover, see "4.9 Plate work" [▸ 192].

To install the switch box cover

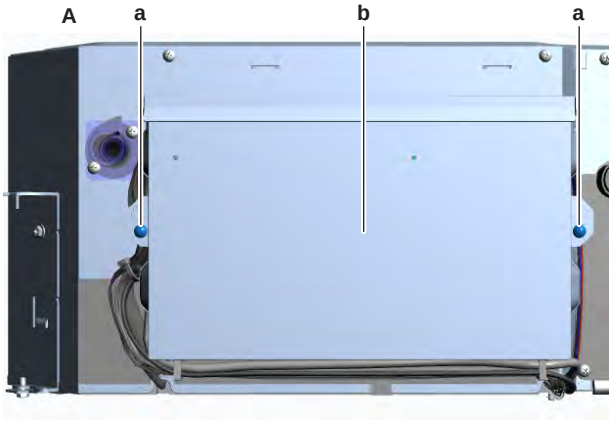
FXZA + FXFA with standard decoration panel

1 Install the switch box cover in the correct location.

2 Install and tighten the 2 screws to fix the switch box cover.



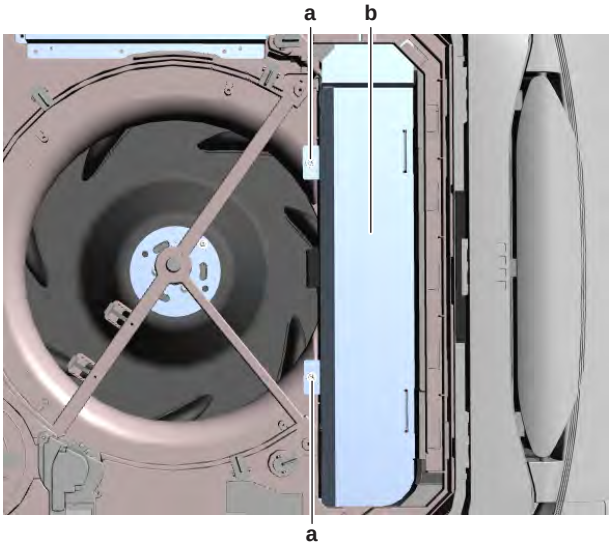
A FXFA
a Screw
b Switch box cover



A FXZA
a Screw
b Switch box cover

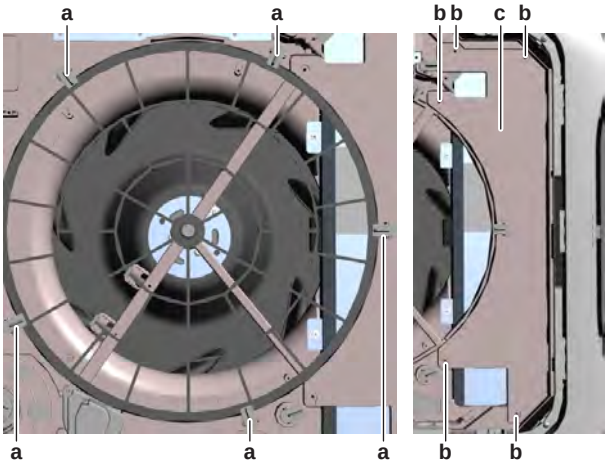
FXFA with self-cleaning decoration panel

1. Install the switch box cover in the correct location.
2. Install and tighten the 2 screws to fix the switch box cover.



a Screw
b Switch box cover

3. Install the service cover in the correct location on the decoration panel.
4. Install and tighten the 5 screws to fix the service cover.



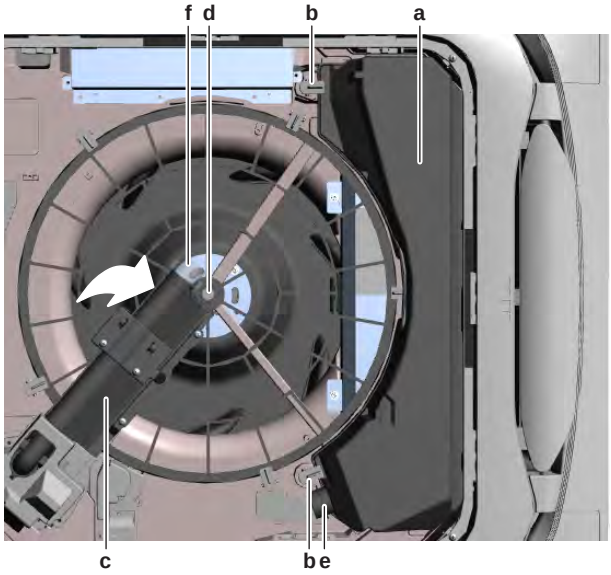
a Retainer (air filter)

b Screw (service cover)
c Service cover

5 Install the air filter in the correct location on the decoration panel. Make sure the air filter is fitted correctly on the air filter motor gear.

6 Lock the air filter retainers to fix the air filter.

7 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box
b Dust box retainer
c Brush assy
d Screw (brush assy)
e Duct connection on dust box
f Duct connection on brush assy

8 Turn the brush assembly clockwise to the correct location on the air filter frame. Install and tighten the screw to fix the brush assembly.

9 Connect the duct to the dust box and to the brush assembly.

10 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

To remove the self-cleaning decoration panel switch box cover

Prerequisite: Stop the unit operation via the user interface.

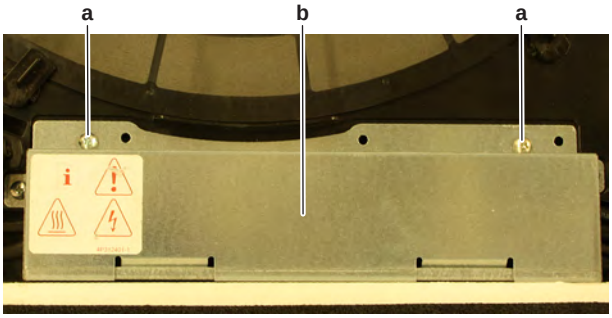
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Remove the 2 screws and remove the cover of the self-cleaning decoration panel switch box.



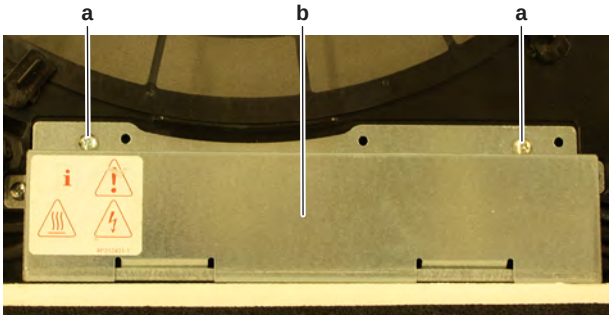
a Screw
b Switch box cover

4 To install the cover of the self-cleaning decoration panel switch box, see "4.9 Plate work" [▸ 192].

To install the self-cleaning decoration panel switch box cover

1 Install the switch box cover in the correct location on the self-cleaning decoration panel.

2 Install and tighten the 2 screws to fix the switch box cover.



a Screw
b Switch box cover

3 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

To remove the decoration panel

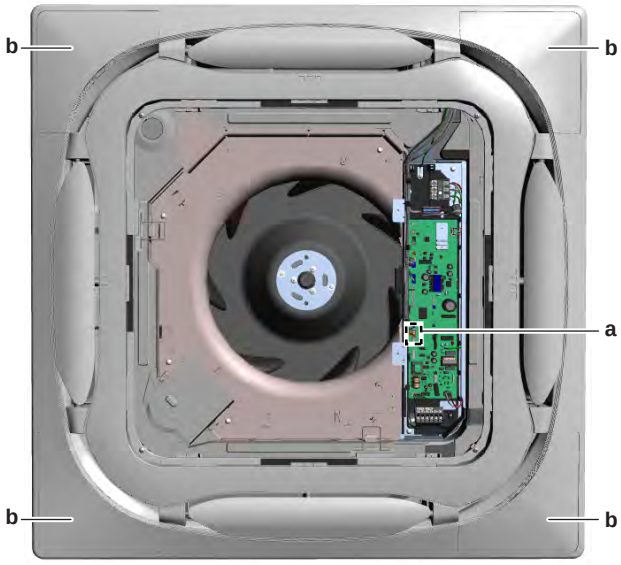
FXFA standard decoration panel

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the switch box cover, see "4.9 Plate work" [▸ 192].

1 Disconnect the decoration panel wiring harness connector X36A from the indoor unit main PCB.



a Connector X36A
b Corner cover

2 If optional presence sensor kit is installed, disconnect the wiring harness connector X81A from the indoor unit main PCB.

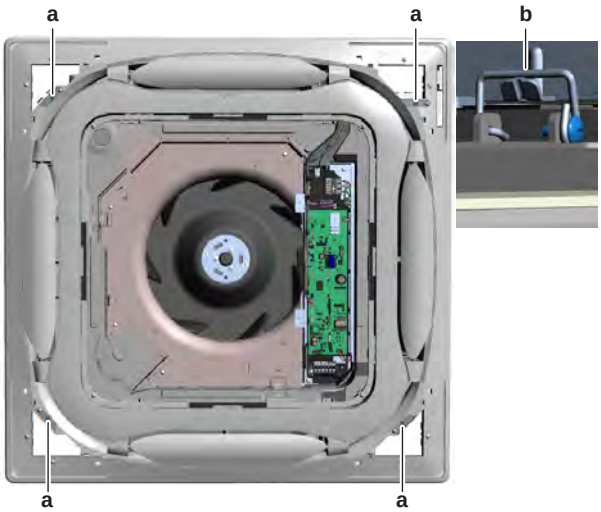
3 If optional Wireless kit is installed, disconnect the wiring harness connector X24A from the indoor unit main PCB.

4 Route the wiring harness(es) out of the retainers and out of the switch box.

5 If needed, cut all tie straps that fix the wiring harness(es).

6 Remove the 4 corner covers from the decoration panel by lifting them from the inner side.

7 Remove the 4 bolts from the decoration panel.



a Bolt
b Fixation bracket

8 While supporting the decoration panel, turn down the 4 fixation brackets.

9 Remove the decoration panel from the unit.

10 To install the decoration panel, see "4.9 Plate work" [▸ 192].

FXFA self-cleaning decoration panel

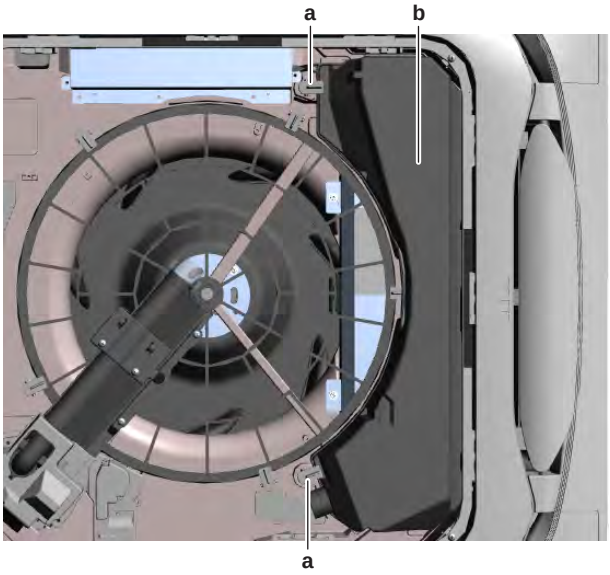
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

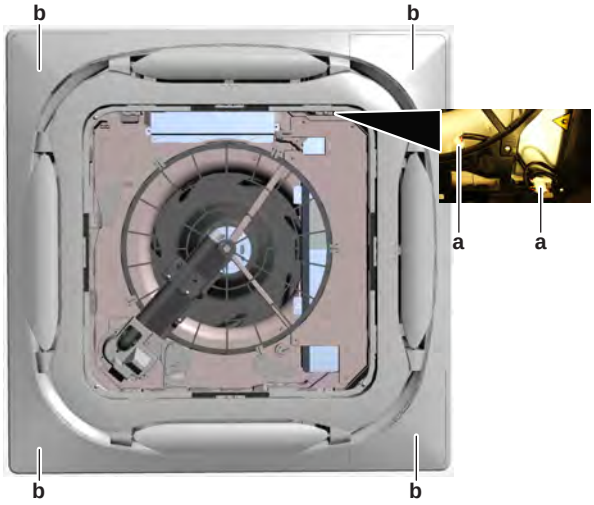
1 Disconnect the duct from the dust box.

2 Unlock the dust box retainers and remove the dust box from the decoration panel.



a Dust box retainer
b Dust box

3 Disconnect the interconnectors of the swing flap motors wiring harness and the decoration panel PCB wiring harness.

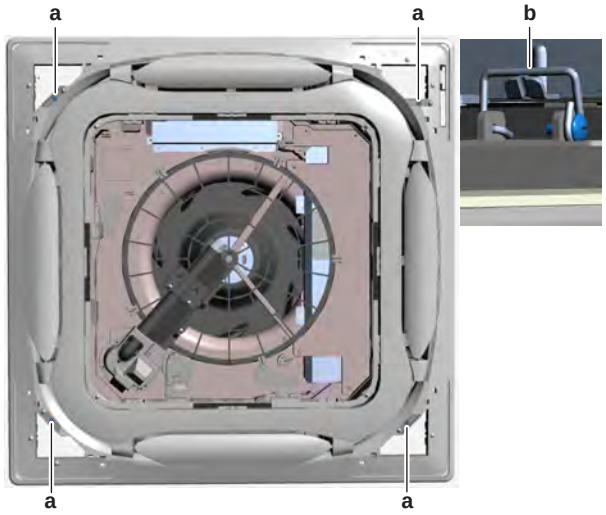


a Interconnector
b Corner cover

4 Remove the 4 corner covers from the decoration panel by lifting them from the inner side.

5 If optional presence sensor kit is installed, remove the 2 screws and remove the cover from the back of the presence sensor frame. Disconnect the connectors from the presence sensor PCB and floor temperature sensor PCB and remove the presence sensor frame from the decoration panel.

6 Remove the 4 bolts from the decoration panel.



a Bolt
b Fixation bracket

7 While supporting the decoration panel, turn down the 4 fixation brackets.

8 Remove the decoration panel from the unit.

9 To install the decoration panel, see "4.9 Plate work" [▸ 192].

FXZA decoration panel

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

1 Disconnect the decoration panel wiring harness connector X36A from the indoor unit main PCB.

2 For decoration panel BYFQ60B ONLY: Disconnect the connector X80A from the indoor unit main PCB.

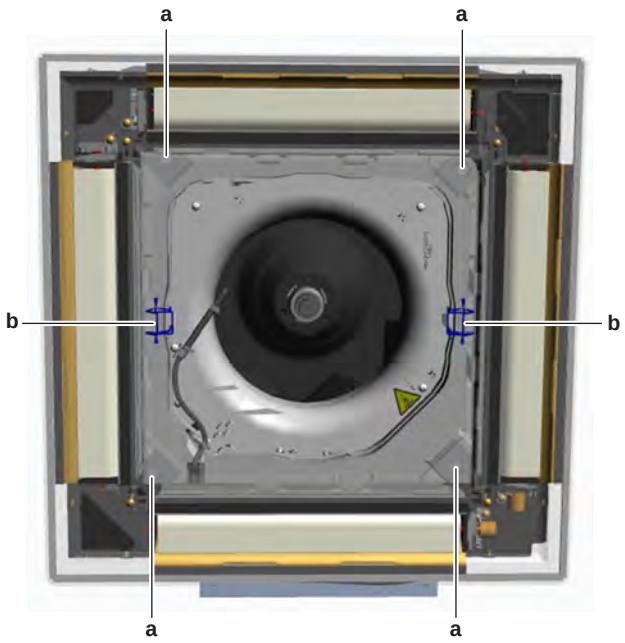
3 For decoration panel BYFQ60C ONLY: If optional presence sensor kit is installed, disconnect the wiring harness connector X81A from the indoor unit main PCB.

4 If optional Wireless kit is installed, disconnect the wiring harness connector X24A from the indoor unit main PCB.

5 Route the wiring harness(es) out of the retainers and out of the switch box.

6 If needed, cut all tie straps that fix the wiring harness(es).

7 Remove the 4 screws from the decoration panel.



a Screw
b Fixation bracket

8 While supporting the decoration panel, turn down the 2 fixation brackets.

9 Remove the decoration panel from the unit.

10 To install the decoration panel, see "4.9 Plate work" [▸ 192].

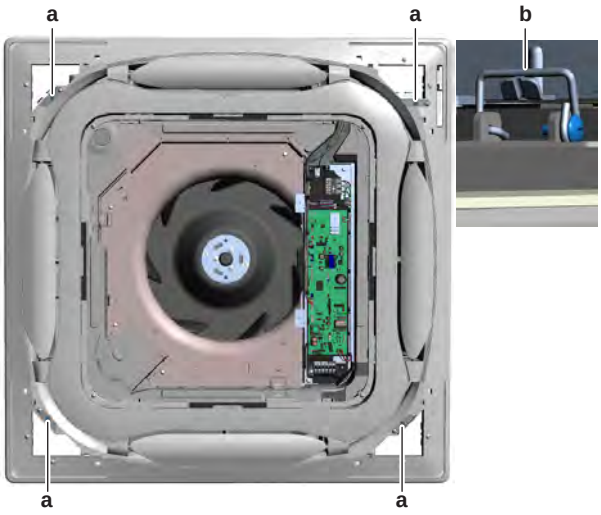
To install the decoration panel

FXFA standard decoration panel

1 Install the decoration panel in the correct location on the unit. Make sure the decoration panel wiring harness is routed in the correct location.

2 If optional presence sensor kit and/or Wireless kit needs to be installed, make sure the wiring harness(es) of the kit is/are already routed in the correct location before installing the decoration panel.

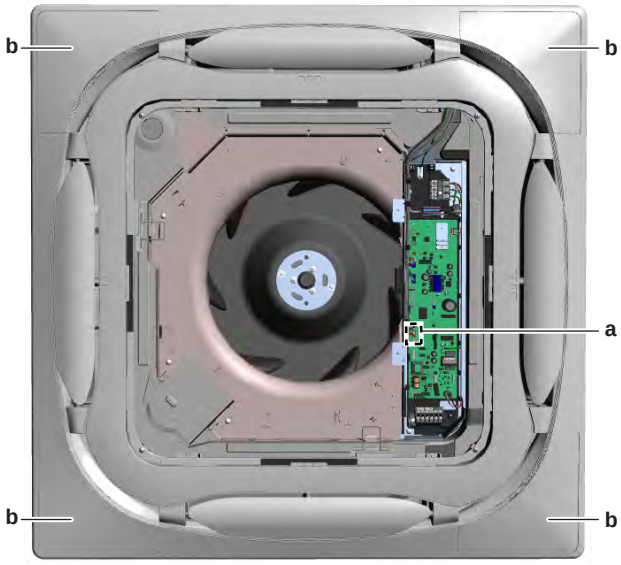
3 Turn the 4 fixation brackets up to fix the decoration panel to the unit.



a Bolt
b Fixation bracket

4 Install and tighten the 4 bolts to fix the decoration panel.

5 Install the 4 corner covers in the correct location on the decoration panel.



a Connector X36A
b Corner cover

6 Route the wiring harness(es) inside the switch box and through the appropriate retainers.

7 Connect the decoration panel wiring harness to the connector X36A on the indoor unit main PCB.

8 If applicable, connect the presence sensor kit wiring harness to the connector X81A on the indoor unit main PCB.

9 If applicable, connect the Wireless kit wiring harness to the connector X24A on the indoor unit main 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.

10 If needed, install new tie straps to fix the wiring harness(es).

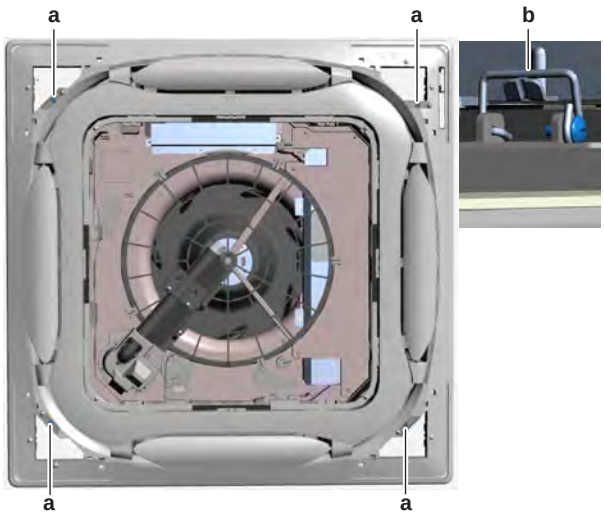
11 Install the switch box cover, see "4.9 Plate work" [▸ 192].

FXFA self-cleaning decoration panel

1 Install the decoration panel in the correct location on the unit. Make sure the decoration panel wiring harness is routed in the correct location.

2 If optional presence sensor kit needs to be installed, make sure the wiring harness of the kit is already routed in the correct location before installing the decoration panel.

3 Turn the 4 fixation brackets up to fix the decoration panel to the unit.

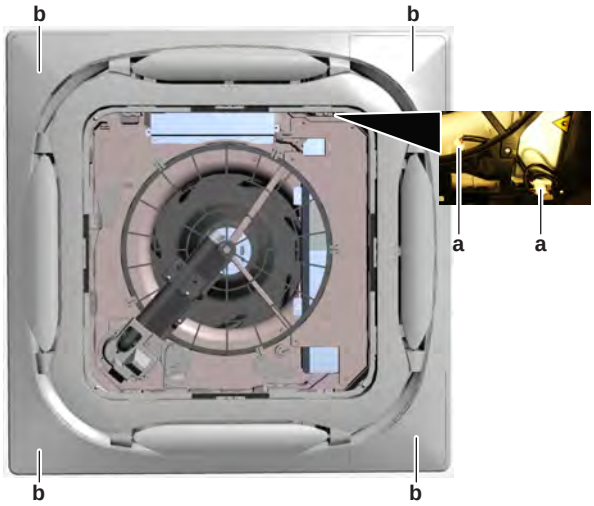


a Bolt
b Fixation bracket

4 Install and tighten the 4 bolts to fix the decoration panel.

5 If optional presence sensor kit needs to be installed, connect the presence sensor kit wiring harness to the presence sensor PCB and floor temperature sensor PCB on the presence sensor frame.

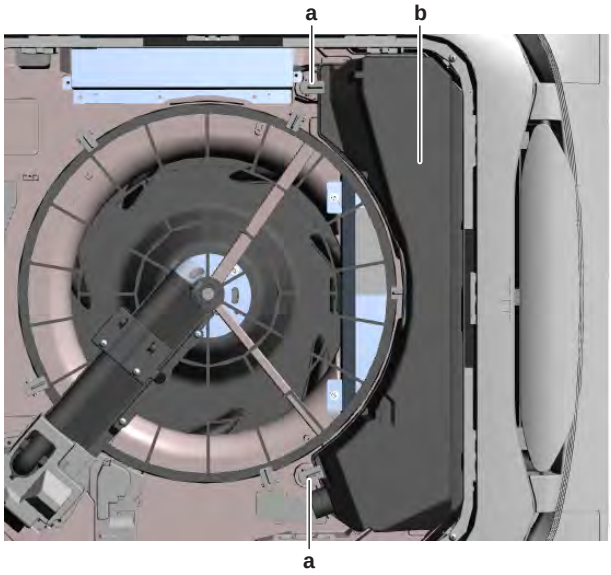
6 Install the 4 corner covers in the correct location on the decoration panel.



a Interconnector
b Corner cover

7 Connect the interconnectors of the swing flap motors wiring harness and the decoration panel PCB wiring harness.

8 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box retainer
b Dust box

9 Connect the duct to the dust box.

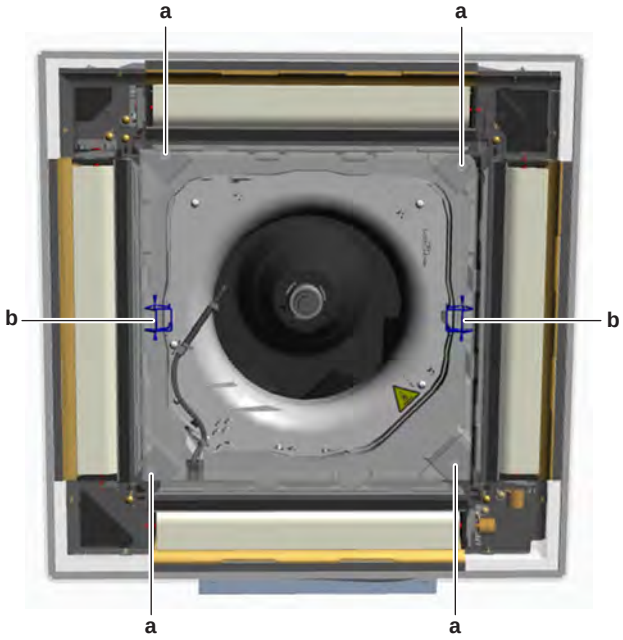
10 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

FXZA decoration panel

1 Install the decoration panel in the correct location on the unit. Make sure the decoration panel wiring harness is routed in the correct location.

2 If optional presence sensor kit and/or Wireless kit needs to be installed, make sure the wiring harness(es) of the kit is/are already routed in the correct location before installing the decoration panel.

3 Turn the 2 fixation brackets up to fix the decoration panel to the unit.



a Screw
b Fixation bracket

4 Install and tighten the 4 screws to fix the decoration panel.

5 Route the wiring harness(es) inside the switch box and through the appropriate retainers.

6 Connect the decoration panel wiring harness to the connector X36A on the indoor unit main PCB.

7 For decoration panel BYFQ60B ONLY: Connect the wiring harness to the connector X80A on the indoor unit main PCB.

8 If applicable, connect the presence sensor kit wiring harness to the connector X81A on the indoor unit main PCB.

9 If applicable, connect the Wireless kit wiring harness to the connector X24A on the indoor unit main 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.

10 If needed, install new tie straps to fix the wiring harness(es).

11 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

To remove the drain pan

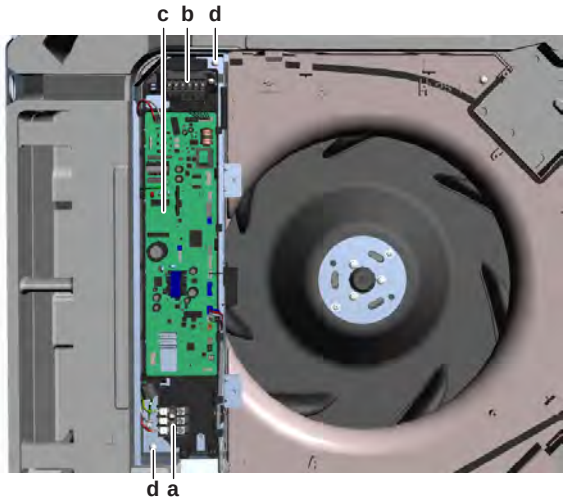
FXFA

Prerequisite: Remove the decoration panel (if installed), see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the switch box cover.

1 Disconnect the power supply wiring from the terminal X2M.

2 Disconnect the communication wiring from the terminal X1M.



a Terminal X2M
b Terminal X1M
c Indoor unit main PCB
d Screw (switch box)

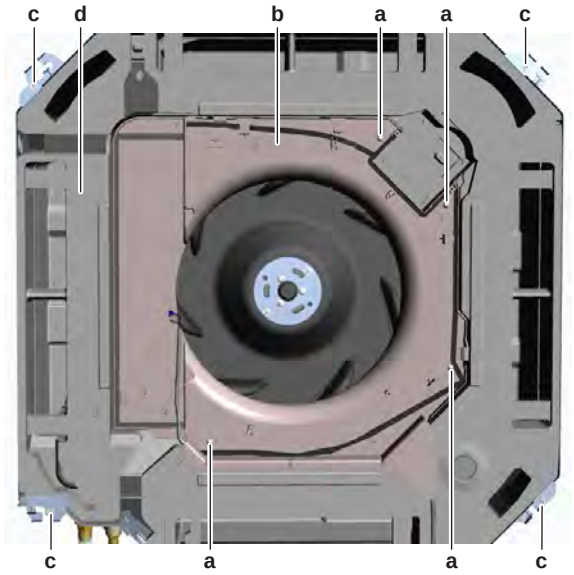
3 For all components located outside the switch box, disconnect the connectors of their wiring harnesses from the indoor unit main PCB.

4 Disconnect the connectors of all field installed accessories from the indoor unit main PCB.

5 Route the disconnected wiring harnesses out of the retainers.

6 Remove the 2 screws and remove the switch box from the unit. While removing the switch box, carefully route the disconnected wiring harnesses out of the switch box.

7 Remove the 4 screws and remove the fan motor bell mouth.



a Screw (bell mouth)
b Bell mouth
c Screw (drain pan)
d Drain pan

8 Route all wiring harnesses away from the drain pan.

9 Remove the 4 screws from the drain pan.

10 Carefully pull down the drain pan and remove it from the unit.

11 To install the drain pan, see "4.9 Plate work" [▸ 192].

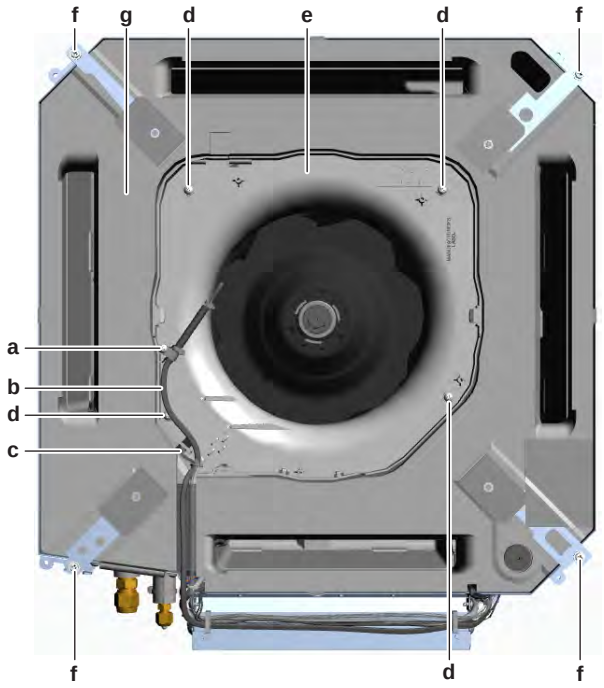
FXZA

Prerequisite: Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

Prerequisite: Remove the decoration panel (if installed), see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the switch box cover.

1 Remove the screw and remove the air thermistor bracket from the bell mouth.



a Screw (air thermistor bracket)
b Air thermistor wiring harness
c R32 leak detection sensor wiring harness
d Screw (bell mouth)
e Bell mouth
f Screw (drain pan)
g Drain pan

2 Cut all tie straps that fix the air thermistor wiring harness and the R32 leak detection sensor wiring harness.

3 Disconnect the R32 leak detection sensor connector from the indoor unit main PCB.

4 Remove the 4 screws and remove the fan motor bell mouth.

5 Route the air thermistor wiring harness away from the drain pan.

6 Remove the 4 screws from the drain pan.

7 Carefully pull down the drain pan and remove it from the unit.

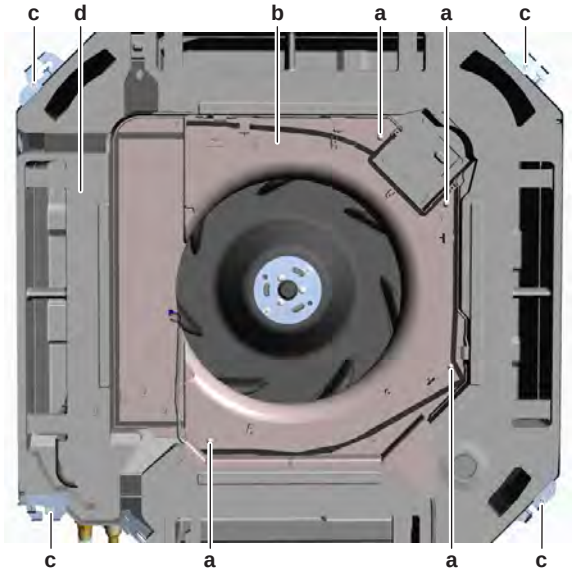
8 To install the drain pan, see "4.9 Plate work" [▸ 192].

To install the drain pan

FXFA

1 Install the drain pan in the correct location on the indoor unit. Make sure the appropriate wiring harnesses are correctly routed on the drain pan and through the appropriate retainers.

2 Install and tighten the 4 screws to fix the drain pan.



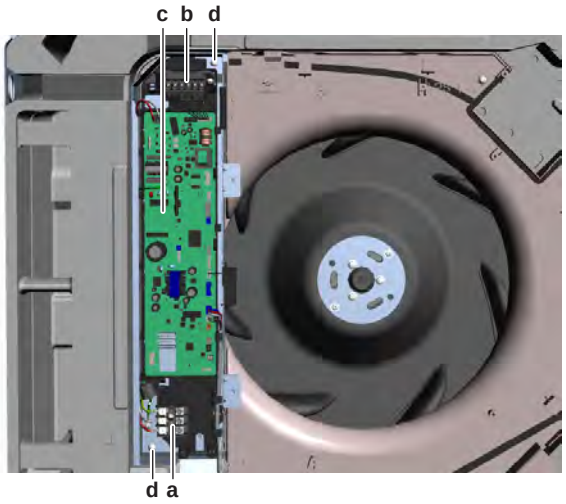
a Screw (bell mouth)
b Bell mouth
c Screw (drain pan)
d Drain pan

3 Install the fan motor bell mouth in the correct location on the indoor unit. Make sure the drain pump and float switch wiring harness is routed in the appropriate location between the drain pan and fan motor bell mouth.

4 Install and tighten the 4 screws to fix the bell mouth.

5 Install the switch box in the correct location in the unit. Make sure to route all disconnected wiring harnesses inside the switch box before fixing.

6 Install and tighten the 2 screws to fix the switch box.



a Terminal X2M
b Terminal X1M
c Indoor unit main PCB
d Screw (switch box)

7 Route all wiring harnesses through the appropriate harness retainers.

8 Connect all connectors to the indoor unit main 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.

9 Connect the communication wiring to the terminal X1M.

10 Connect the power supply wiring to the terminal X2M.

11 Install the switch box cover, see "4.9 Plate work" [▸ 192].

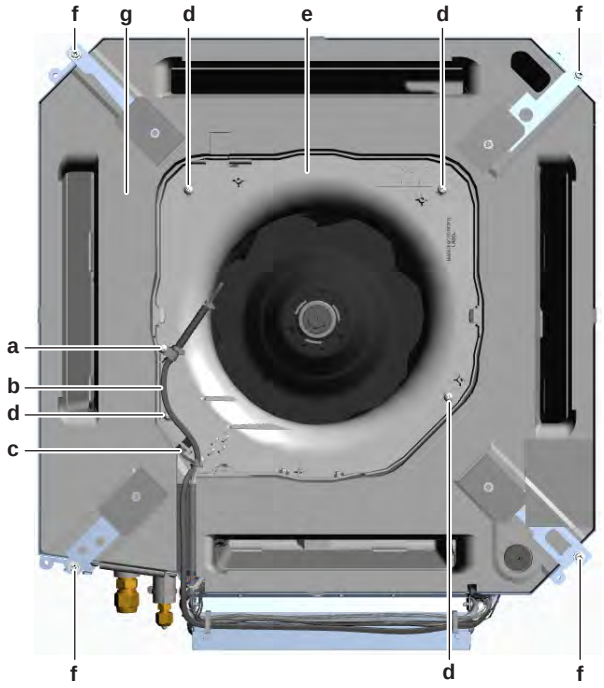
12 Install the decoration panel (if needed), see "4.9 Plate work" [▸ 192].

13 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

FXZA

1 Install the drain pan in the correct location on the indoor unit. Make sure the air thermistor wiring harness is correctly routed on the drain pan and through the appropriate retainers.

2 Install and tighten the 4 screws to fix the drain pan.



a Screw (air thermistor bracket)
b Air thermistor wiring harness
c R32 leak detection sensor wiring harness
d Screw (bell mouth)
e Bell mouth
f Screw (drain pan)
g Drain pan

3 Install the fan motor bell mouth in the correct location on the indoor unit. Make sure the air thermistor wiring harness is routed on the bell mouth.

4 Route the R32 leak detection sensor wiring harness on the drain pan and inside the switch box and connect to the indoor unit main 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 Install and tighten the 4 screws to fix the bell mouth.

6 Install and tighten the screw to fix the air thermistor wiring harness bracket to the bell mouth.

7 Install new tie straps to fix the air thermistor wiring harness and the R32 leak detection sensor wiring harness.

8 Install the switch box cover, see "4.9 Plate work" [▸ 192].

9 Install the decoration panel (if needed), see "4.9 Plate work" [▸ 192].

4.9.4 Suspend (1-way) indoor units

To remove the switch box cover

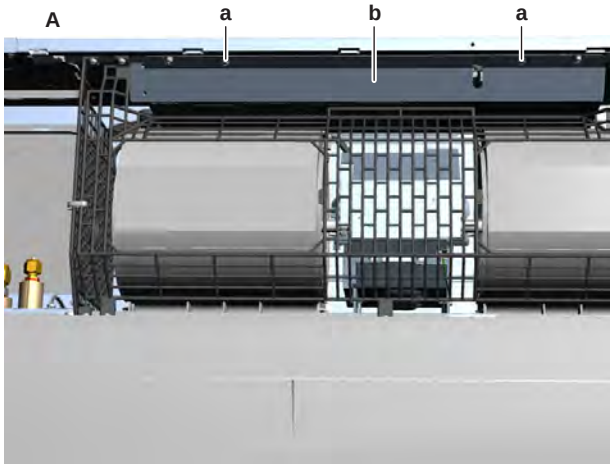
Prerequisite: Stop the unit operation via the user interface.

1 Turn OFF the respective circuit breaker.

> **DANGER: RISK OF ELECTROCUTION**
>
> Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Remove the 2 screws from the switch box cover.



A FXHA50
a Screw
b Switch box cover

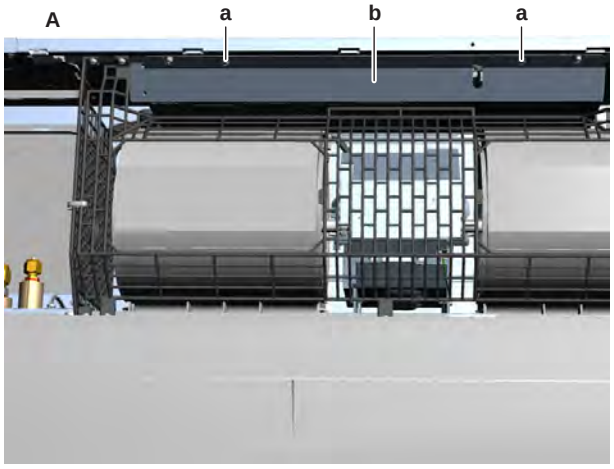
4 Remove the switch box cover from the unit.

5 To install the switch box cover, see "4.9 Plate work" [▸ 192].

To install the switch box cover

1 Install the switch box cover in the correct location on the unit.

2 Install and tighten the 2 screws to fix the switch box cover.



A FXHA50

a Screw
b Switch box cover

To remove the bottom plate

Prerequisite: Stop the unit operation via the user interface.

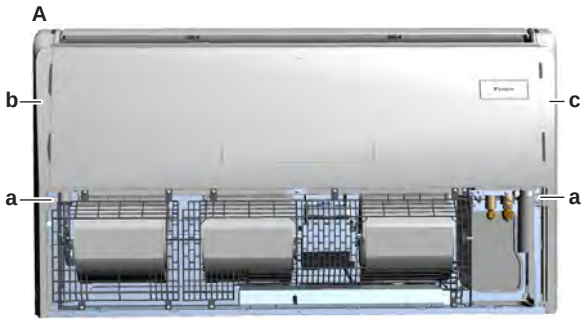
1 Turn OFF the respective circuit breaker.

> **DANGER: RISK OF ELECTROCUTION**
>
> Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Empty the drain pan.

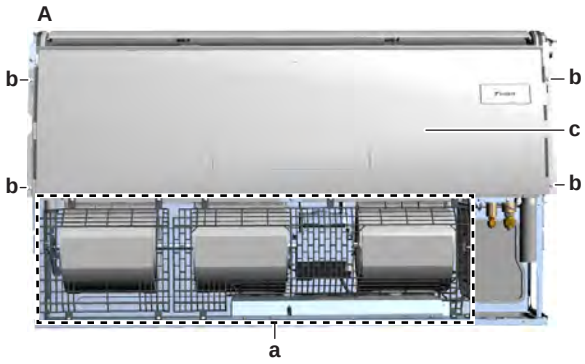
4 Remove the screws from the left and right side panel.



A FXHA50
a Screw
b Left side panel
c Right side panel

5 Slide the left and right side panels to the front and remove them from the unit.

6 Remove the screws from the fan guards and remove the fan guards.



A FXHA50
a Fan guard(s)
b Screw (bottom plate)
c Bottom plate

7 Remove the screws from the bottom plate.

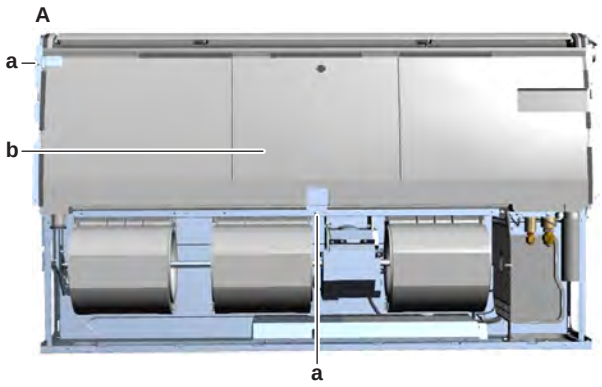
8 Slide the bottom plate downwards and remove it from the unit.

9 To install the bottom plate, see "4.9 Plate work" [▸ 192].

To remove the drain pan

Prerequisite: Remove the bottom plate.

1 Remove the screws and remove the 2 drain pan retainer plates.



A FXHA50
a Screw (retainer plate)
b Drain pan

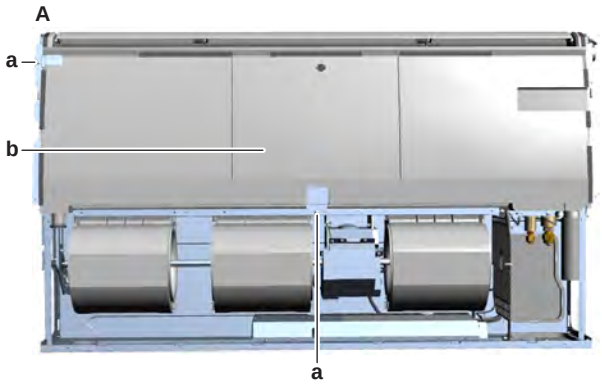
2 Slightly pull the drain pan downwards and remove it from the unit.

3 To install the drain pan, see "4.9 Plate work" [▸ 192].

To install the drain pan

1 Install the drain pan in the correct location on the indoor unit.

2 Slightly push the drain pan upwards to correctly fix it.



A FXHA50
a Screw (retainer plate)
b Drain pan

3 Install the 2 retainer plates in the correct location on the drain pan.

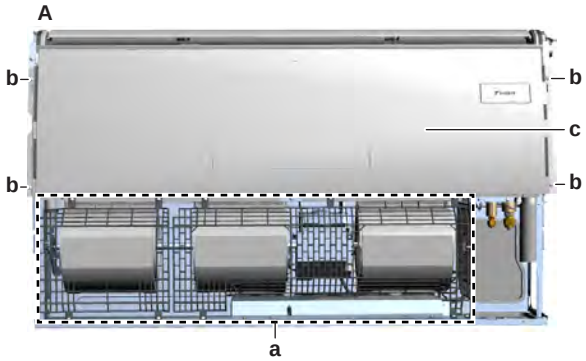
4 Install and tighten the screws to fix the retainer plates.

5 Install the bottom plates, see "4.9 Plate work" [▸ 192].

To install the bottom plate

1 Slide the bottom plate in the correct location on the indoor unit.

2 Install and tighten the screws to fix the bottom plate.

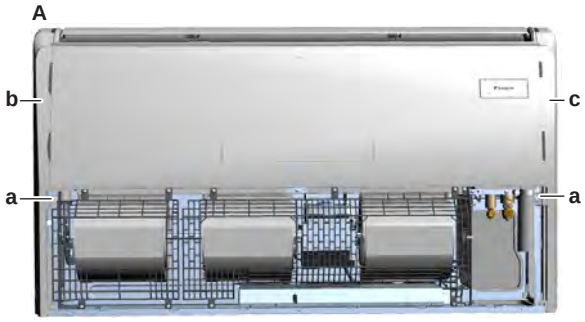


A FXHA50
a Fan guard(s)
b Screw (bottom plate)
c Bottom plate

3 Install the fan guards in the correct location on the unit.

4 Install and tighten the screws to fix the fan guards.

5 Slide the left and right side plates in the correct location on the unit.



A FXHA50
a Screw
b Left side panel
c Right side panel

6 Install and tighten the screws to fix the side plates.

7 Install the suction grille.

4.9.5 Suspend (4-way) indoor units

To remove the switch box cover

Prerequisite: Stop the unit operation via the user interface.

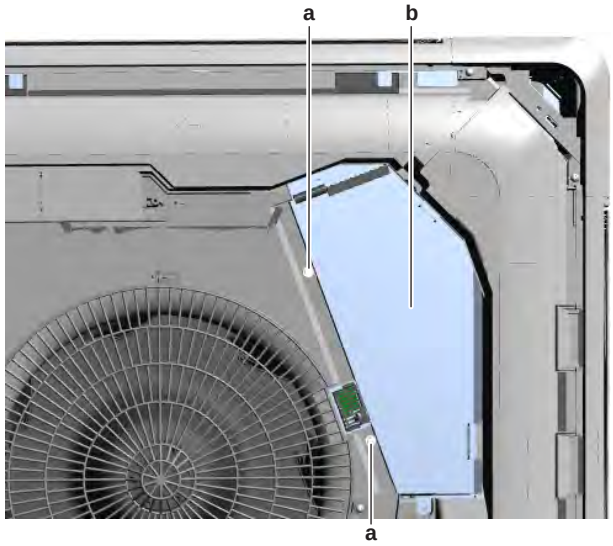
1 Turn OFF the respective circuit breaker.

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Remove the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

3 Remove the 2 screws from the switch box cover.



a Screw
b Switch box cover

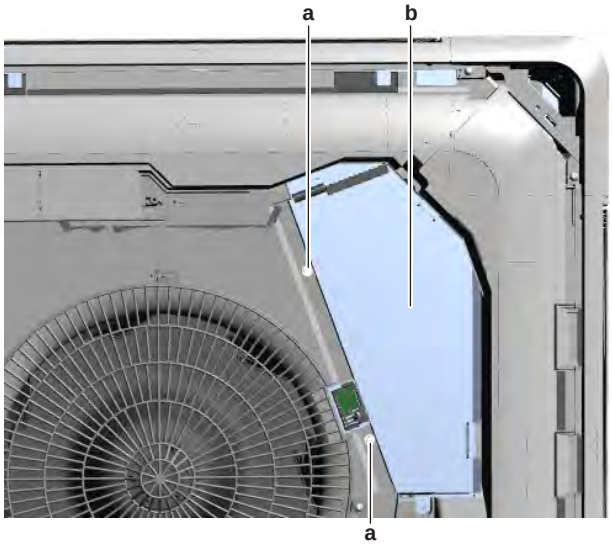
4 Slide the switch box cover downwards and remove it from the unit.

5 To install the switch box cover, see "4.9 Plate work" [▸ 192].

To install the switch box cover

1 Install the switch box cover in the correct location.

2 Install and tighten the 2 screws to fix the switch box cover.



a Screw
b Switch box cover

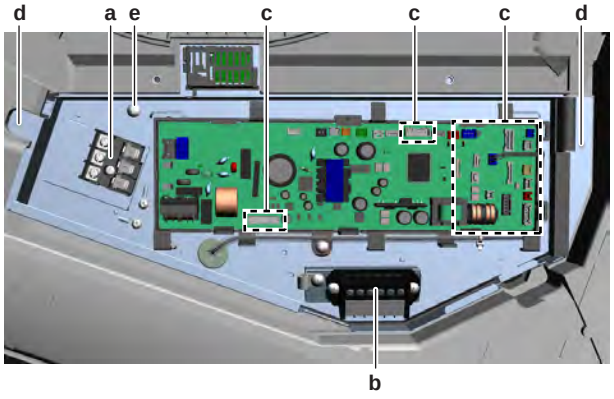
To remove the drain pan

Prerequisite: Remove the switch box cover.

1 Disconnect the power supply wiring from the terminal X2M.

2 Disconnect the communication wiring from the terminal X1M.

3 Disconnect the indicated connectors from the indoor unit main PCB.



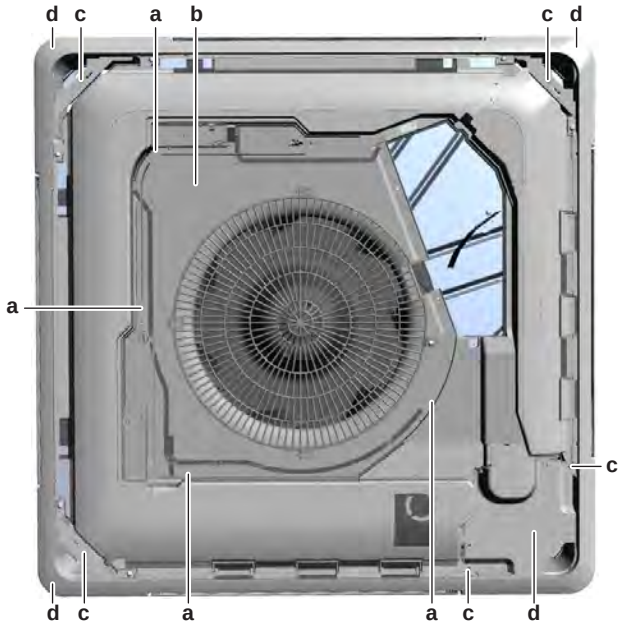
a Terminal X2M
b Terminal X1M
c Connector
d Screw (switch box)
e Screw (R32 leak detection sensor)

4 Disconnect the connectors of all field installed accessories from the indoor unit main PCB.

5 Route the disconnected wiring harnesses out of the retainers.

6 Remove the 2 screws and remove the switch box from the unit. While removing the switch box, carefully route the disconnected wiring harnesses out of the switch box.

7 Remove the 4 screws and remove the fan motor bell mouth.

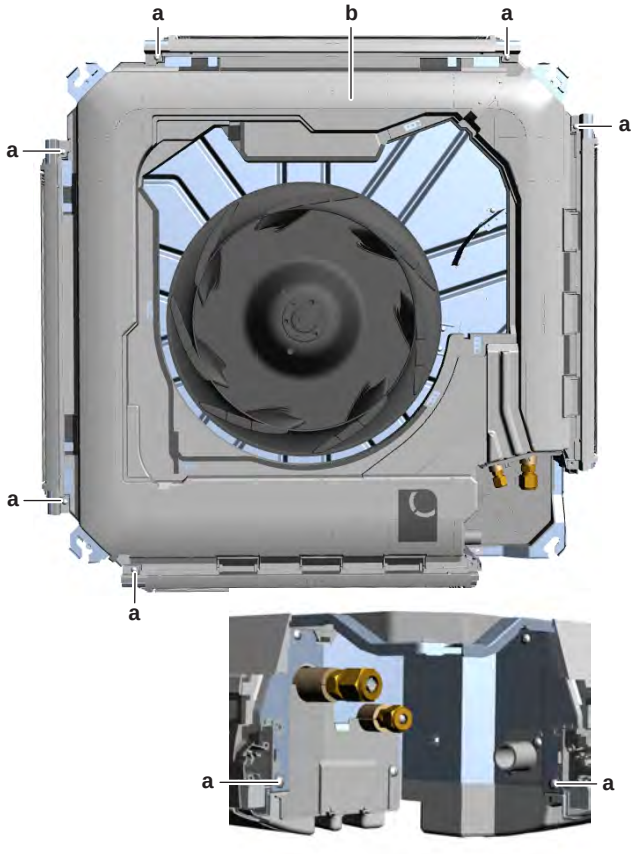


a Screw (bell mouth)
b Bell mouth
c Screw (corner cover)
d Corner cover

8 Route all wiring harnesses away from the drain pan.

9 Remove the 5 screws and remove the corner covers from the drain pan.

10 Remove the 8 screws and remove the drain pan holding plates.



a Screw (holding plate)
b Drain pan

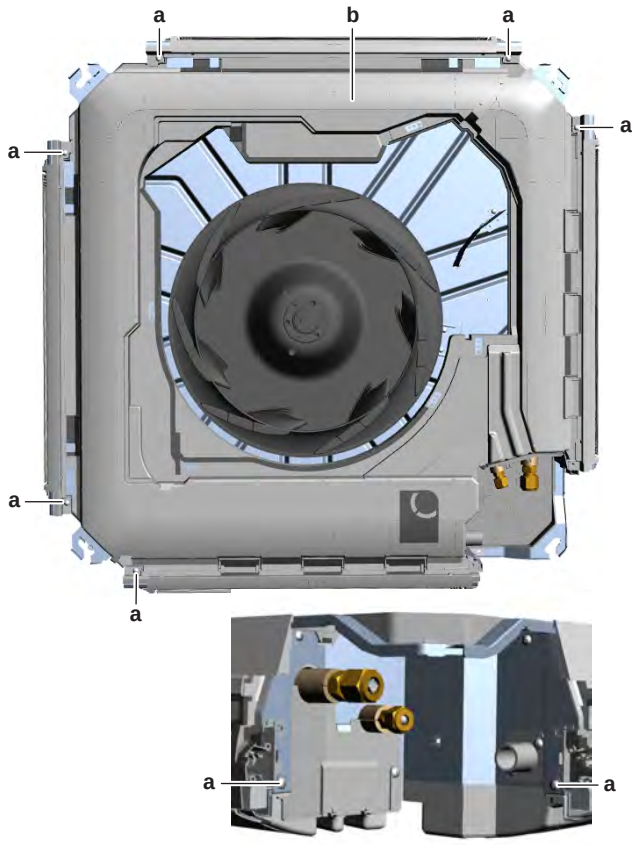
11 Carefully pull down the drain pan and remove it from the unit.

12 To install the drain pan, see "4.9 Plate work" [▶ 192].

To install the drain pan

1 Install the drain pan in the correct location on the indoor unit. Make sure the appropriate wiring harnesses are correctly routed on and under the drain pan and through the appropriate retainers.

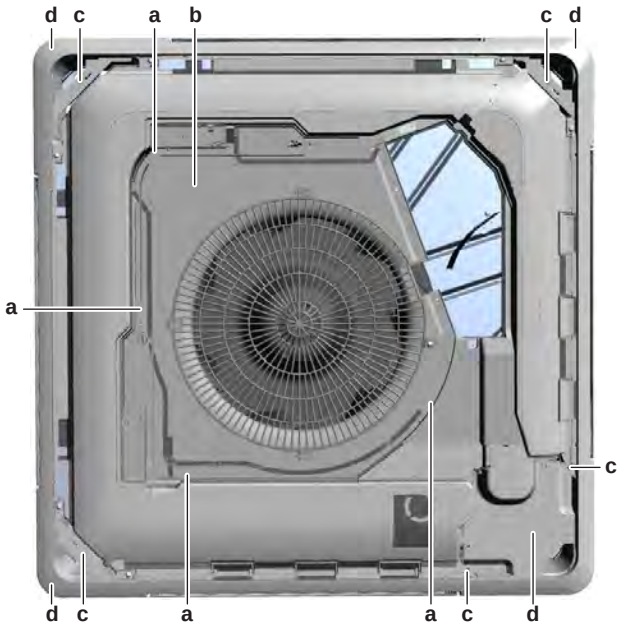
2 Install the holding plates in the correct location. Install and tighten the 8 screws to fix the holding plates.



a Screw (holding plate)
b Drain pan

3 Install the corner covers in the correct location on the drain pan.

4 Install and tighten the 5 screws to fix the corner covers.



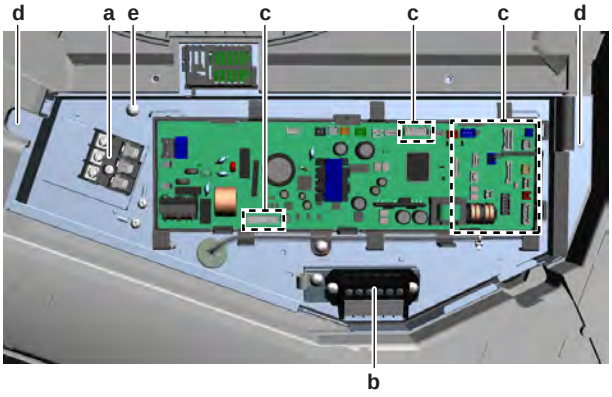
a Screw (bell mouth)
b Bell mouth
c Screw (corner cover)
d Corner cover

5 Install the fan motor bell mouth in the correct location on the indoor unit. Make sure the wiring harnesses are routed in the appropriate location.

6 Install and tighten the 4 screws to fix the bell mouth.

7 Install the switch box in the correct location in the unit. Make sure to route all disconnected wiring harnesses inside the switch box before fixing.

8 Install and tighten the 2 screws to fix the switch box.



a Terminal X2M
b Terminal X1M
c Connector
d Screw (switch box)
e Screw (R32 leak detection sensor)

9 Route all wiring harnesses through the appropriate harness retainers.

10 Connect all connectors to the indoor unit main 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.

11 Connect the communication wiring to the terminal X1M.

12 Connect the power supply wiring to the terminal X2M.

13 Install the switch box cover, see "4.9 Plate work" [▸ 192].

4.10 Presence sensor PCB

4.10.1 Checking procedures

INFORMATION

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

To perform a power check of the presence sensor PCB

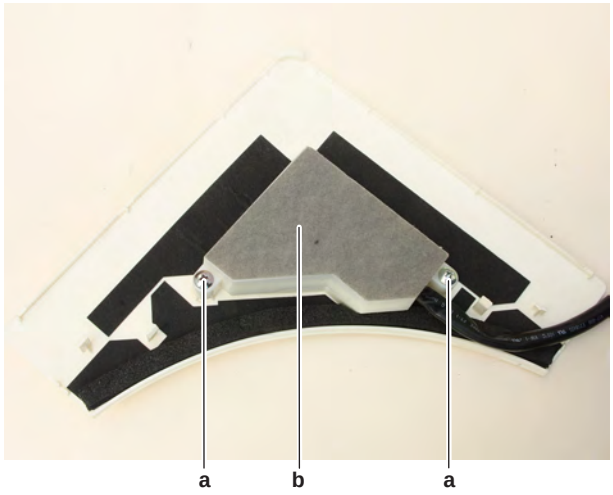
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

2 Remove the presence sensor frame from the decoration panel.

3 Remove the 2 screws and remove the cover from the back of the presence sensor frame.



a Screw
b Cover

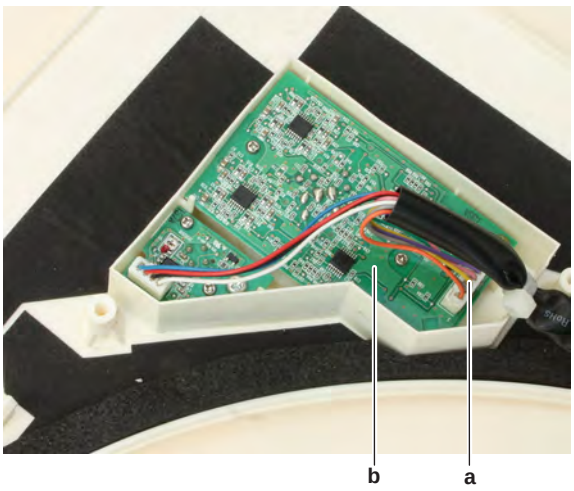
INFORMATION

Measure the continuity of all wiring between the floor temperature sensor PCB and the indoor unit main PCB. If NO continuity is measured, replace the complete presence sensor kit (BRYQ60/140B*).

4 Turn ON the power of the unit.

5 Measure the power supply voltage between the wires Grey-Orange on the presence sensor PCB connector CN.

Result: The measured voltage MUST be 4.50~5.50 V DC.



a Connector CN
b Presence sensor PCB

Is the power supply voltage to the presence sensor PCB correct?	Action
Yes	Perform an electrical check of the presence sensor PCB, see "4.10.1 Checking procedures" [▸ 237].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

To perform an electrical check of the presence sensor PCB

1. First perform a power check of the presence sensor PCB, see "4.10.1 Checking procedures" [▸ 237].
2. Turn OFF the respective circuit breaker.
3. Disconnect the floor temperature sensor connector X81A from the indoor unit main PCB.
4. On the disconnected connector, measure the resistance in reference with the table below.

The measured resistances MUST be:

+	–	Ref	+	–	Ref
Orange	Grey	57.15~69.85 kΩ	Pink	Orange	42.75~52.25 kΩ
Orange	Yellow	42.75~52.25 kΩ	Pink	Grey	607.5~742.5 kΩ
Orange	Pink	42.75~52.25 kΩ	Pink	Yellow	85.95~105.05 kΩ
Orange	Purple	42.75~52.25 kΩ	Pink	Purple	85.95~105.05 kΩ
Orange	Green	42.75~52.25 kΩ	Pink	Green	85.95~105.05 kΩ
Grey	Orange	455.4~556.6 kΩ	Purple	Orange	42.75~52.25 kΩ
Grey	Yellow	486~594 kΩ	Purple	Grey	607.5~742.5 kΩ
Grey	Pink	486~594 kΩ	Purple	Yellow	85.95~105.05 kΩ
Grey	Purple	486~594 kΩ	Purple	Pink	85.95~105.05 kΩ
Grey	Green	486~594 kΩ	Purple	Green	85.95~105.05 kΩ
Yellow	Orange	42.75~52.25 kΩ	Green	Orange	42.75~52.25 kΩ

+	–	Ref	+	–	Ref
Yellow	Grey	607.5~742.5 kΩ	Green	Grey	607.5~742.5 kΩ
Yellow	Pink	85.95~105.05 kΩ	Green	Yellow	85.95~105.05 kΩ
Yellow	Purple	85.95~105.05 kΩ	Green	Pink	85.95~105.05 kΩ
Yellow	Green	85.95~105.05 kΩ	Green	Purple	85.95~105.05 kΩ

Are the measured resistance values correct?	Action
Yes	Proceed with the next step.
No	Replace the presence sensor PCB, see "4.10.2 Repair procedures" [▶ 240].

5 Connect the presence sensor connector X81A to the indoor unit main PCB.

6 Turn ON the power of the unit.

7 Leave the presence sensor free (no presence).

8 On the connector X81A on the indoor unit main PCB, measure the output voltages in reference with the table below.

Result: The measured voltages MUST be:

VDC	COMM	REF
Green	Grey	4.05~4.95 V DC
Purple	Grey	4.05~4.95 V DC
Pink	Grey	4.05~4.95 V DC
Yellow	Grey	4.05~4.95 V DC

9 On the connector X81A on the indoor unit main PCB, again measure the output voltages in reference with the table below, while waving your hand in front of the presence sensor.

10 Measure between 2 wires, and then wave your hand in front of the presence sensor and check if the measured voltage is as indicated in the table. Repeat this step for all indicated wires.

Result: The measured voltages MUST be:

VDC	COMM	REF
Green	Grey	<2.0 V DC
Purple	Grey	<2.0 V DC
Pink	Grey	<2.0 V DC
Yellow	Grey	<2.0 V DC

Are the measured voltages correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the presence sensor PCB, "4.10.2 Repair procedures" [▶ 240].

4.10.2 Repair procedures

To remove the presence sensor PCB

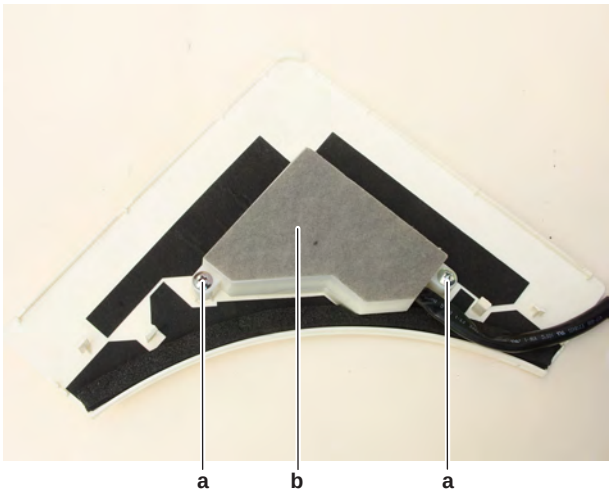
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

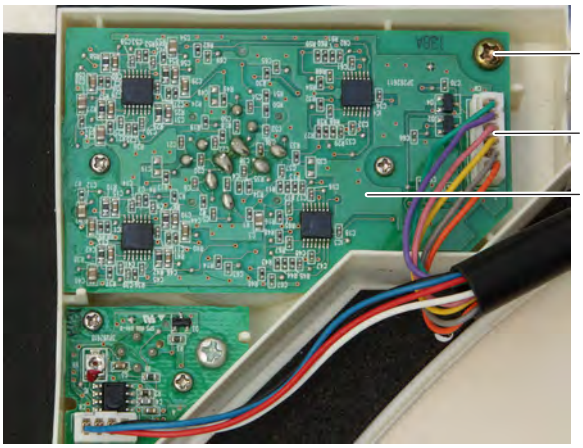
1 Remove the presence sensor frame from the decoration panel.

2 Remove the 2 screws and remove the cover from the back of the presence sensor frame.



a Screw
b Cover

3 Disconnect the connector from the presence sensor PCB.



a Connector
b Screw
c Presence sensor PCB

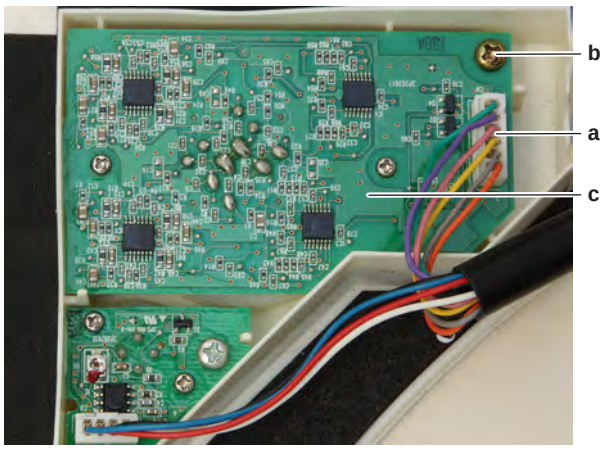
4 Remove the screw and remove the presence sensor PCB from the presence sensor frame.

5 To install the presence sensor PCB, see "4.10.2 Repair procedures" [▸ 240].

To install the presence sensor PCB

1 Install the presence sensor PCB in the correct location on the presence sensor frame.

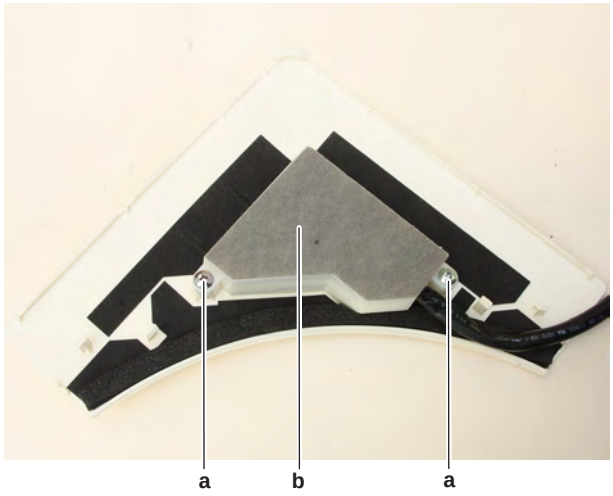
2 Install and tighten the screw to fix the presence sensor PCB.



a Connector
b Screw
c Presence sensor PCB

3 Connect the presence sensor kit wiring harness connector to the presence sensor PCB.

4 Install the cover on the back of the presence sensor frame.



a Screw
b Cover

5 Install and tighten the 2 screws to fix the cover.

6 Install the presence sensor frame in the correct location on the decoration panel.

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.

4.11 R32 leak detection sensor

4.11.1 Checking procedures

To perform an electrical check of the R32 leak detection sensor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

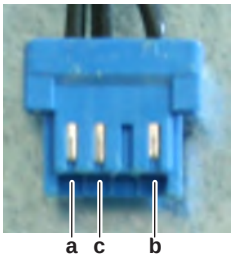
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

2 Disconnect the R32 leak detection sensor connector X41A from the indoor unit main PCB.

3 Using a multimeter in diode check, measure in reference with the image and the table below.



a Measuring point
b Measuring point
c Measuring point

VDC	COM	REF	VDC	COM	REF
a	b	1.269~1.551 V	b	a	0.414~0.506 V
a	c	OL	c	a	OL
b	c	1.053~1.287 V	c	b	OL

Measured values are correct?	Action
Yes	Continue with the next step.
No	Replace the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

4 Connect the R32 leak detection sensor connector to the indoor unit main PCB.

5 Turn ON the power using the respective circuit breaker.

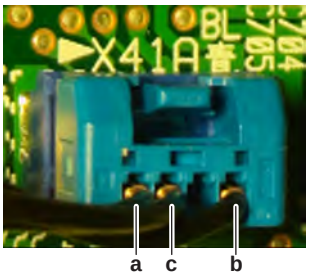
6 Start the unit operation via the user interface.

7 Activate Cooling operation via the user interface.

8 Wait until the unit is operating properly and make sure NO R32 leak is present.

9 Measure the voltage between N wire and power supply wire on connector X41A on the indoor unit main PCB.

Result: The measured voltage MUST be 5 V DC.



a Power supply
b N
c R32 leak detection

Is the measured voltage correct?	Action
Yes	Continue with the next step.
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

10 Measure the voltage between N wire and R32 leak detection wire on connector X41A on the indoor unit main PCB.

Result: The measured voltage MUST be 0.5~4.5 V DC.

Does the leak detection sensor function correctly?	Action
Yes	Return to troubleshooting of the specific error code and continue with the next procedure.
No	Replace the leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

4.11.2 Repair procedures

To remove the R32 leak detection sensor

FXAA + FXHA

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

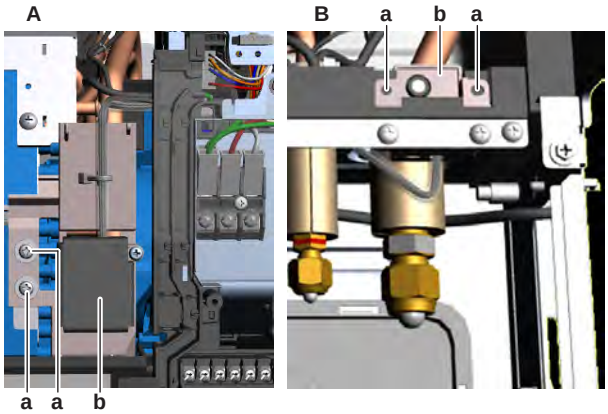
Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the R32 leak detection sensor connector X41A from the indoor unit main PCB.

2 Cut all tie straps that fix the R32 leak detection sensor wiring harness.

3 Route the R32 leak detection sensor wiring harness out of the switch box and out of the harness retainers.

4 Remove the 2 screws from the R32 leak detection sensor assembly.



A FXAA unit
B FXHA unit
a Screw
b R32 leak detection sensor assy

5 Remove the R32 leak detection sensor.

6 To install the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

FXUA

Prerequisite: Stop the unit operation via the user interface.

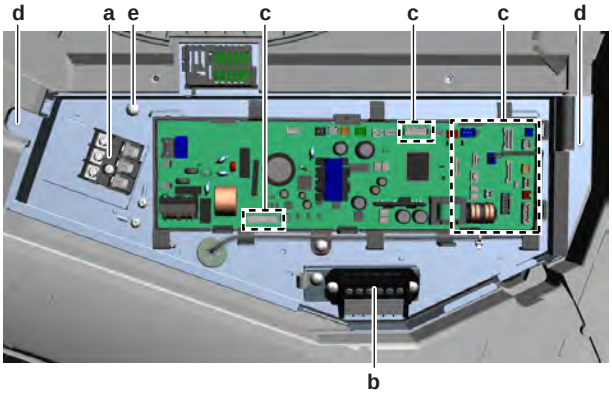
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the power supply wiring from the terminal X2M.

2 Disconnect the communication wiring from the terminal X1M.

3 Disconnect the indicated connectors from the indoor unit main PCB.



a Terminal X2M
b Terminal X1M
c Connector
d Screw (switch box)
e Screw (R32 leak detection sensor)

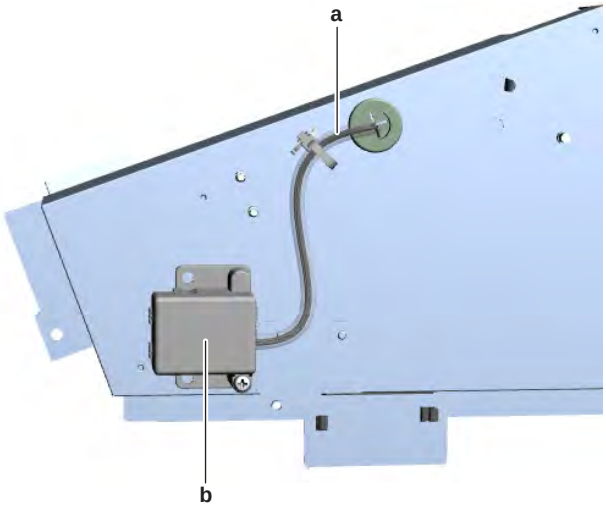
4 Disconnect the connectors of all field installed accessories from the indoor unit main PCB.

5 Route the disconnected wiring harnesses out of the retainers.

6 Remove the 2 screws and remove the switch box from the unit. While removing the switch box, carefully route the disconnected wiring harnesses out of the switch box.

7 Cut all tie straps that fix the R32 leak detection sensor wiring harness.

8 Guide the R32 leak detection sensor wiring harness through the grommet to the back side of the switch box.



a R32 leak detection sensor wiring harness
b R32 leak detection sensor assy

9 Remove the screw from the R32 leak detection sensor.

10 Remove the R32 leak detection sensor from the back side of the switch box.

11 To install the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

FXFA + FXZA

Prerequisite: Stop the unit operation via the user interface.

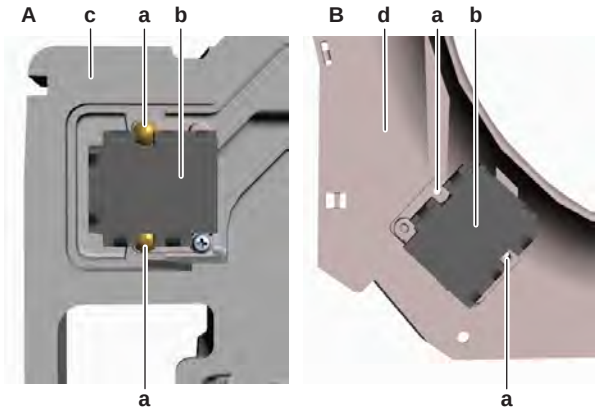
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: For FXFA units: Remove the drain pan, see "4.9 Plate work" [▸ 192].

Prerequisite: For FXZA units: Remove the bell mouth, see drain pan removal procedure in "4.9 Plate work" [▸ 192].

1 At the back side of the drain pan or bell mouth, remove the 2 screws from the R32 leak detection sensor.



A FXFA
B FXZA
a Screw
b R32 leak detection sensor
c Drain pan
d Bell mouth

2 Remove the R32 leak detection sensor from the drain pan or bell mouth.

3 To install the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

FXDA + FXSA + FXMA50~125

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the drain pan, see "4.9 Plate work" [▸ 192].

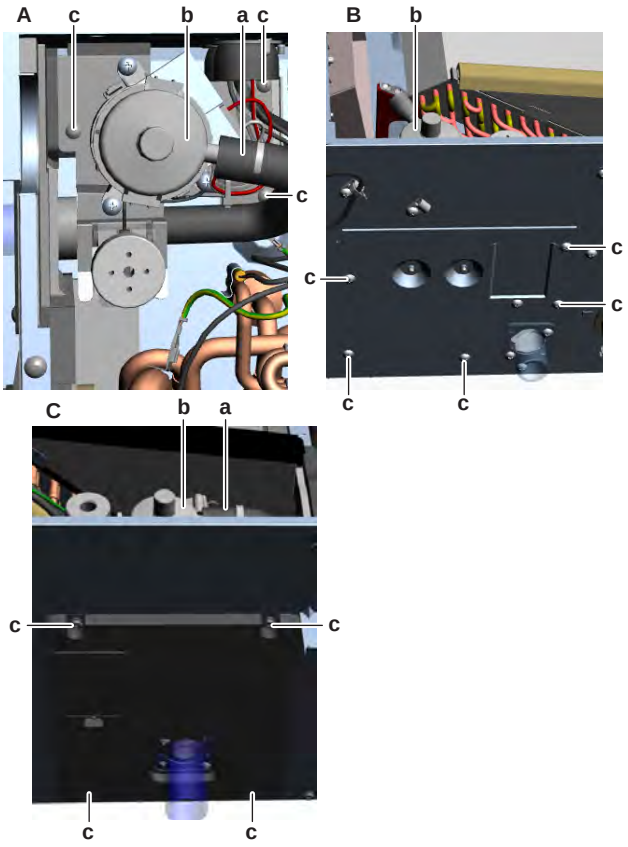
2 Disconnect the drain pump connector, float switch connector and R32 leak detection sensor connector from the indoor unit main PCB.

3 Route the disconnected wiring harnesses out of the switch box and route them away (through any holes if applicable) until they are completely free.

4 Cut all tie straps that fix the wiring harnesses.

5 Remove insulation from the wiring harnesses if needed.

6 Remove the drain outlet pipe from the drain pump.

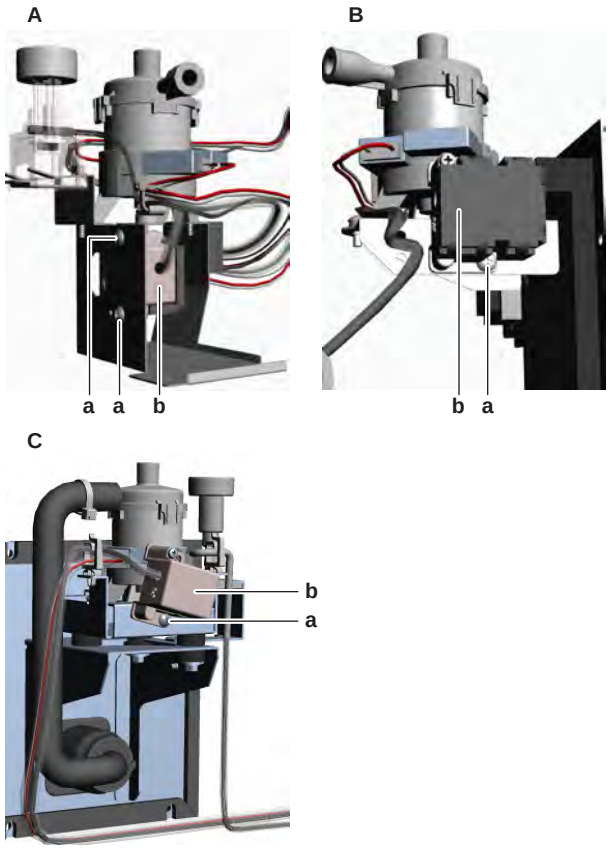


A FXDA unit
B FXSA unit
C FXMA50~125
a Drain outlet pipe
b Drain pump assy
c Screw (drain pump assy)

7 Remove the drain pump assembly (including float switch and R32 leak detection sensor) from the indoor unit as follows:

- For FXDA: Remove the 3 screws from the drain pump assembly.
- For FXSA: Remove the 5 screws from the drain pump assembly mounting plate.
- For FXMA50~125: Remove the 4 screws from the drain pump assembly mounting plate.

8 Remove the screw (FXSA + FXMA50~125) or 2 screws (FXDA) and remove the R32 leak detection sensor.



A FXDA unit
B FXSA unit
C FXMA50~125
a Screw
b R32 leak detection sensor

9 To install the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

FXMA200+250

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

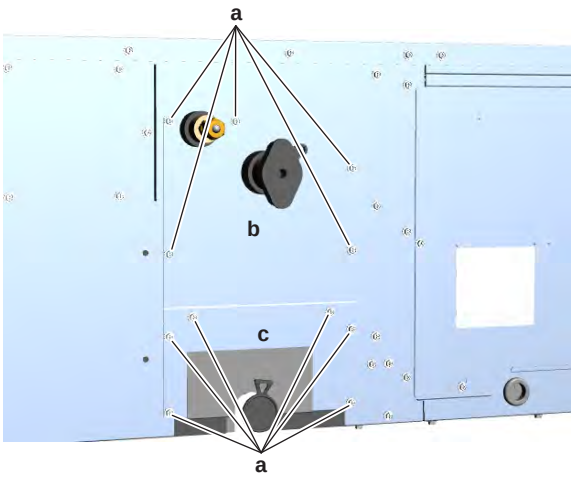
Prerequisite: Remove the drain pan, see "4.9 Plate work" [▸ 192].

1 Disconnect the R32 leak detection sensor connector X41A from the indoor unit main PCB.

2 Cut all tie straps that fix the R32 leak detection sensor wiring harness.

3 Route the R32 leak detection sensor wiring harness out of the switch box and out of the harness retainers.

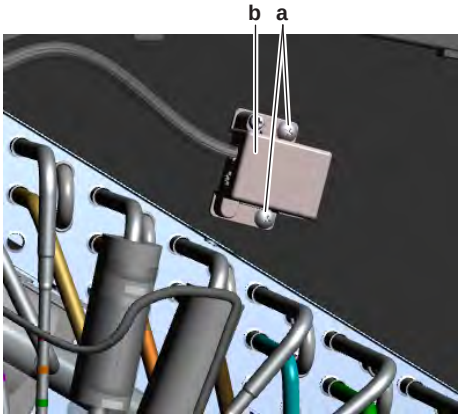
4 Remove the screws from the refrigerant piping cover and the drain pipe cover.



a Screw
b Refrigerant piping cover
c Drain pipe cover

5 Remove the refrigerant piping cover and drain pipe cover from the unit.

6 Remove the 2 screws from the R32 leak detection sensor assembly.



a Screw
b R32 leak detection sensor assy

7 Remove the R32 leak detection sensor.

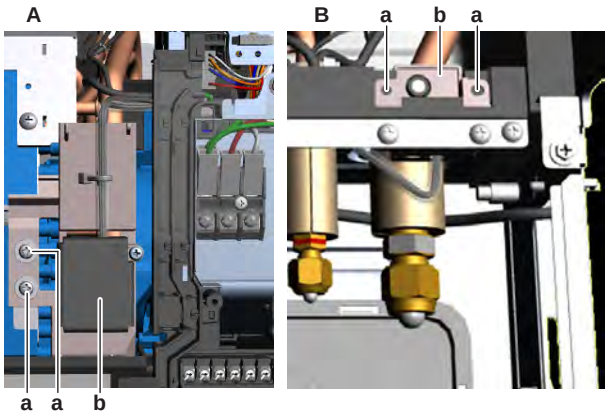
8 To install the R32 leak detection sensor, see "4.11.2 Repair procedures" [▸ 243].

To install the R32 leak detection sensor

FXAA + FXHA

1 Install the R32 leak detection sensor in the correct location on the unit.

2 Install and tighten the 2 screws to fix the R32 leak detection sensor assembly.



A FXAA unit
B FXHA unit
a Screw
b R32 leak detection sensor assy

3 Route the R32 leak detection sensor wiring harness through the appropriate harness retainers, inside the switch box towards the indoor unit main PCB.

4 Connect the R32 leak detection sensor connector to the indoor unit main 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 Install new tie straps to fix the wiring harness.

INFORMATION

Replace all cable ties that were cut during removal.

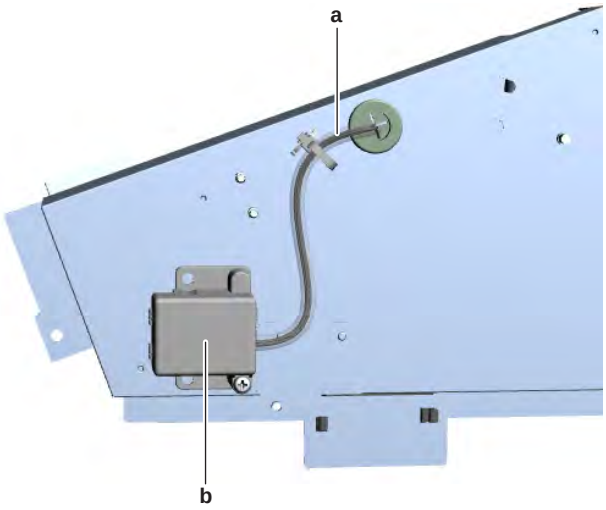
INFORMATION

Upon power supply to the indoor unit, set the field setting 25-14 = 02 to reset the timer of the R32 leak detection sensor.

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.

FXUA

1 Install the R32 leak detection sensor in the correct location on the back side of the switch box.



a R32 leak detection sensor wiring harness
b R32 leak detection sensor assy

2 Install and tighten the screw to fix the R32 leak detection sensor.

3 Route the R32 leak detection sensor wiring harness through the grommet, inside the switch box towards the indoor unit main PCB.

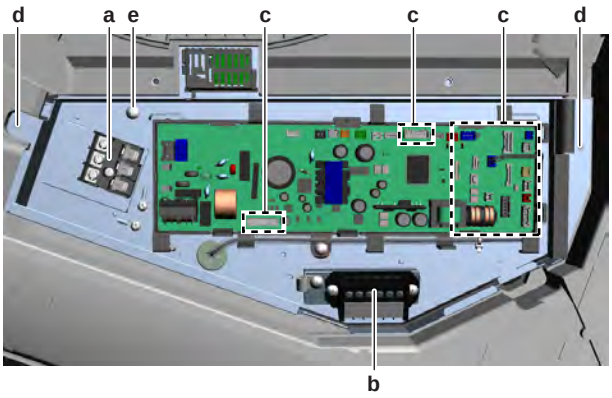
4 Install new tie straps to fix the R32 leak detection sensor wiring harness.

INFORMATION

Replace all cable ties that were cut during removal.

5 Install the switch box in the correct location in the unit. Make sure to route all disconnected wiring harnesses inside the switch box before fixing.

6 Install and tighten the 2 screws to fix the switch box.



a Terminal X2M
b Terminal X1M
c Connector
d Screw (switch box)
e Screw (R32 leak detection sensor)

7 Route all wiring harnesses through the appropriate harness retainers.

8 Connect all connectors to the indoor unit main 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.

9 Connect the communication wiring to the terminal X1M.

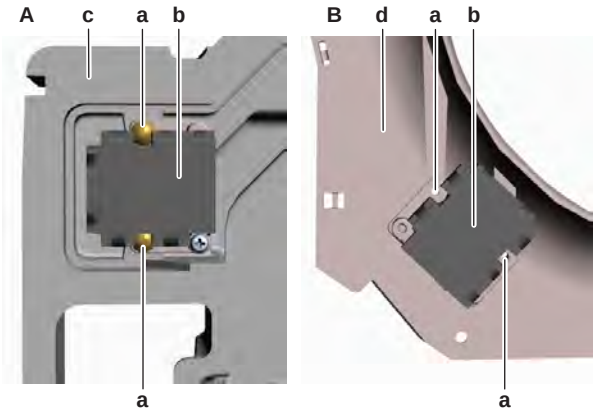
10 Connect the power supply wiring to the terminal X2M.

> **INFORMATION**
>
> Upon power supply to the indoor unit, set the field setting 25-14 = 02 to reset the timer of the R32 leak detection sensor.

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.

FXFA + FXZA

1 Install the R32 leak detection sensor in the correct location on the back side of the drain pan or bell mouth.



A FXFA
B FXZA
a Screw
b R32 leak detection sensor
c Drain pan
d Bell mouth

2 Install and tighten the 2 screws to fix the R32 leak detection sensor.

3 For FXFA units: Install the drain pan, see "4.9 Plate work" [▸ 192].

4 For FXZA units: Install the bell mouth, see drain pan installation procedure in "4.9 Plate work" [▸ 192].

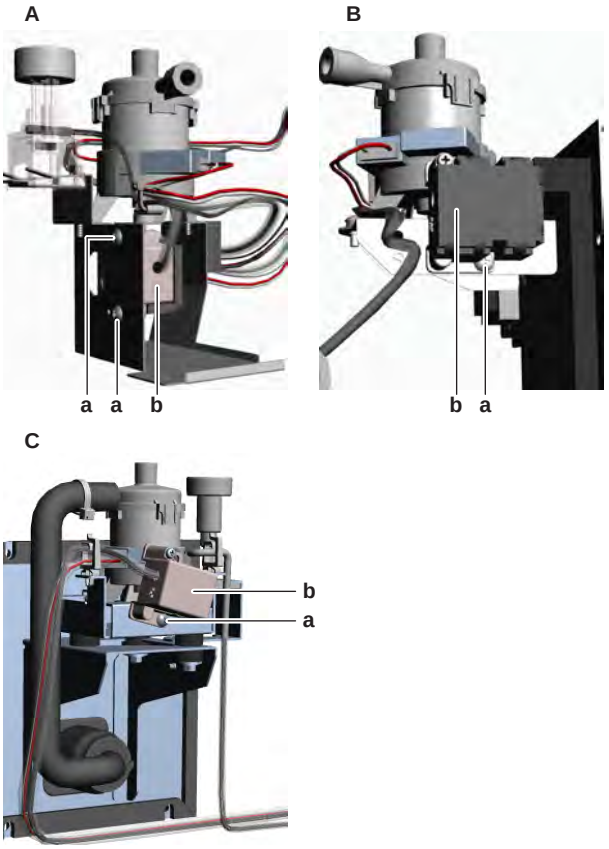
> **INFORMATION**
>
> Upon power supply to the indoor unit, set the field setting 25-14 = 02 to reset the timer of the R32 leak detection sensor.

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.

FXDA + FXSA + FXMA50~125

1 Install the R32 leak detection sensor in the correct location on the drain pump assembly.

2 Install and tighten the screw (FXSA + FXMA50~125) or 2 screws (FXDA) to fix the R32 leak detection sensor.

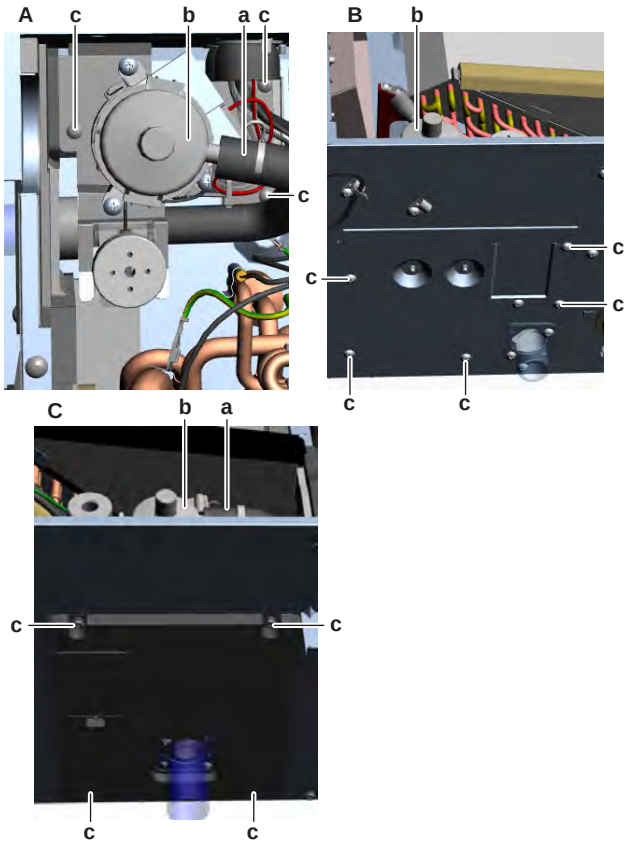


A FXDA unit
B FXSA unit
C FXMA50~125
a Screw
b R32 leak detection sensor

3 Install the drain pump assembly in the correct location on the indoor unit.

4 Fix the drain pump assembly as follows:

- For FXDA: Install and tighten the 3 screws on the drain pump assembly.
- For FXSA: Install and tighten the 5 screws on the drain pump assembly mounting plate.
- For FXMA50~125: Install and tighten the 4 screws on the drain pump assembly mounting plate.



A FXDA unit
B FXSA unit
C FXMA50~125
a Drain outlet pipe
b Drain pump assy
c Screw (drain pump assy)

5 Install the drain outlet pipe on the drain pump.

6 Install new insulation on the wiring harnesses if needed.

7 Route the wiring harnesses through the holes (if applicable) towards the indoor unit main PCB.

8 Connect the drain pump connector, float switch connector and R32 leak detection sensor connector to the indoor unit main PCB.

9 Install new tie straps to fix the wiring harnesses.

INFORMATION

Replace all cable ties that were cut during removal.

10 Install the drain pan, see "4.9 Plate work" [▸ 192].

INFORMATION

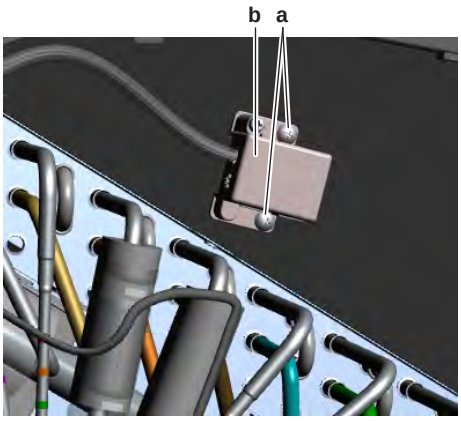
Upon power supply to the indoor unit, set the field setting 25-14 = 02 to reset the timer of the R32 leak detection sensor.

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.

FXMA200+250

1 Install the R32 leak detection sensor in the correct location on the unit.

2 Install and tighten the 2 screws to fix the R32 leak detection sensor assembly.



a Screw
b R32 leak detection sensor assy

3 Route the R32 leak detection sensor wiring harness through the appropriate harness retainers, inside the switch box towards the indoor unit main PCB.

4 Connect the R32 leak detection sensor connector to the indoor unit main 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.

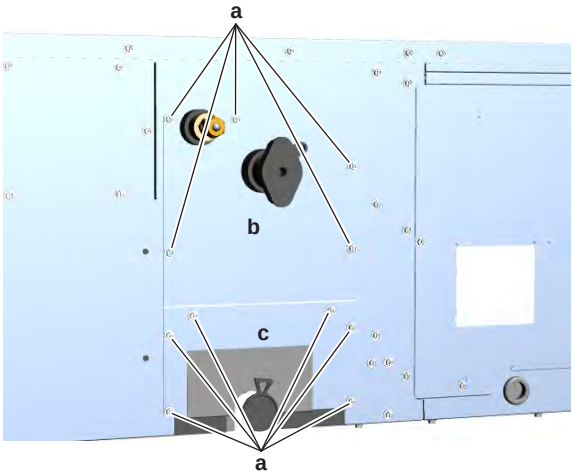
5 Install new tie straps to fix the wiring harness.

INFORMATION

Replace all cable ties that were cut during removal.

6 Install the drain pipe cover and refrigerant piping cover in the correct location on the unit.

7 Install and tighten the screws to fix the drain pipe cover and refrigerant piping cover.



a Screw
b Refrigerant piping cover
c Drain pipe cover

8 Install the drain pan, see "4.9 Plate work" [▸ 192].

INFORMATION

Upon power supply to the indoor unit, set the field setting 25-14 = 02 to reset the timer of the R32 leak detection sensor.

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.

4.12 Reactor

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

4.12.1 Checking procedures

To perform an electrical check of the reactor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

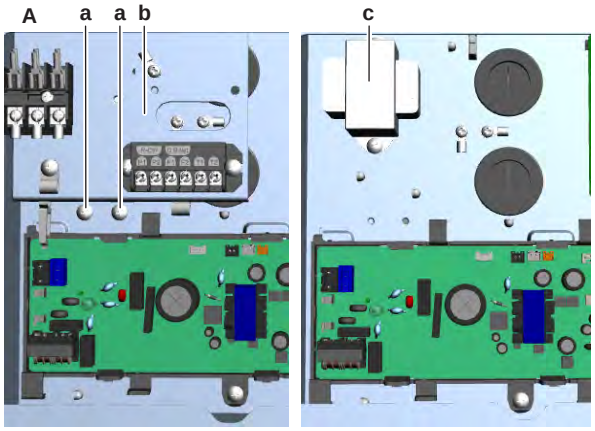
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

FXSA + FXMA50~125

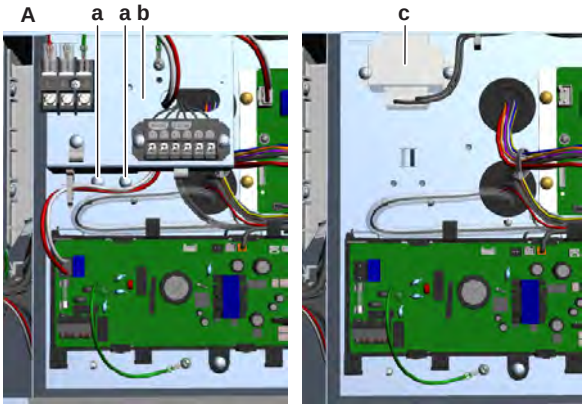
DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

1 Remove the 2 screws from the terminal blocks mounting plate.



A FXSA15~32
a Screw
b Terminal blocks mounting plate
c Reactor



A FXMA100+125
a Screw
b Terminal blocks mounting plate
c Reactor

2 Remove the terminal blocks mounting plate from the switch box.

3 Visually check the reactor for any damage or burnt-out components. If any damage is found, replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

4 Disconnect the reactor connector from the indoor unit fan PCB.

5 Using a megger device of 500 V DC, check the insulation resistance. Make sure there is no earth leakage.

Is the measured insulation resistance correct?	Action
Yes	Continue with the next step.
No	Replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

6 Measure the inductance of the reactor using an LCR meter.

Result: The inductance MUST be:

Unit	Measured inductance
FXSA15~50	29.45~32.55 mH
FXSA63~140 + FXMA50~125	14.06~15.54 mH

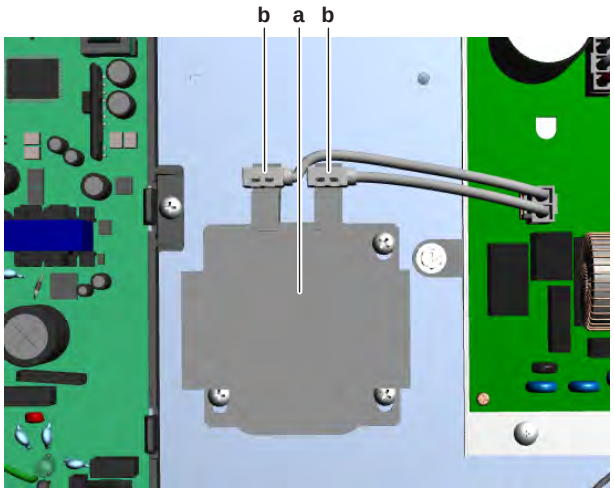
Is the inductance measurement correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next step.
No	Replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

FXMA200+250

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

1 Visually check the reactor for any damage or burnt-out components. If any damage is found, replace the reactor, see "4.12.2 Repair procedures" [▸ 257].



a Reactor
b Faston connector

2 Disconnect the Faston connectors from the reactor.

3 Using a megger device of 500 V DC, check the insulation resistance. Make sure there is no earth leakage.

Is the measured insulation resistance correct?	Action
Yes	Continue with the next step.
No	Replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

4 Measure the inductance of the reactor using an LCR meter.

Result: The inductance MUST be:

Unit	Measured inductance
FXMA200	17.1~18.9 mH
FXMA250	19~21 mH

Is the inductance measurement correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next step.
No	Replace the reactor, see "4.12.2 Repair procedures" [▸ 257].

4.12.2 Repair procedures

To remove the reactor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

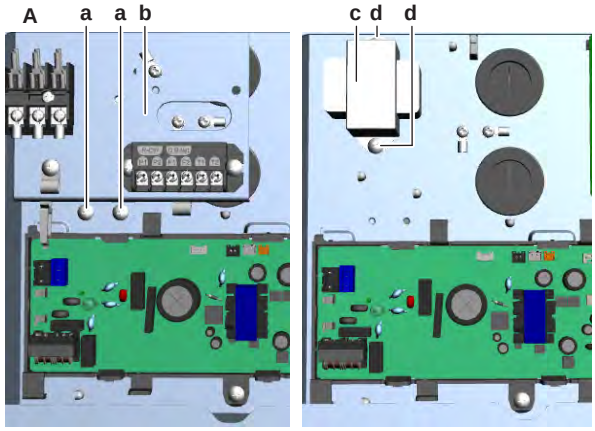
1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

FXSA + FXMA50~125

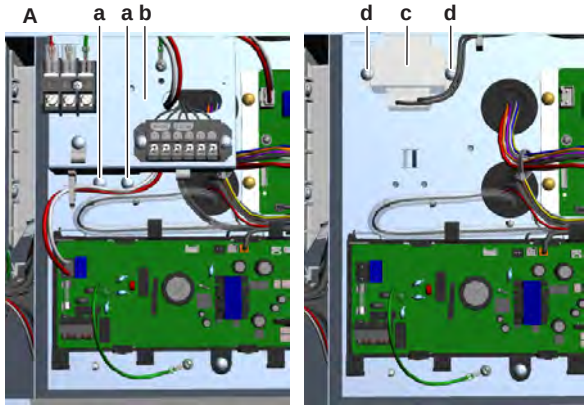
DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

1 Remove the 2 screws from the terminal blocks mounting plate.



A FXSA15~32
a Screw (mounting plate)
b Terminal blocks mounting plate
c Reactor
d Screw (reactor)



A FXMA100+125
a Screw
b Terminal blocks mounting plate
c Reactor
d Screw

2 Remove the terminal blocks mounting plate from the switch box.

3 Disconnect the reactor connector from the indoor unit fan PCB.

4 Remove the 2 screws that fix the reactor to the switch box.

5 Remove the reactor.

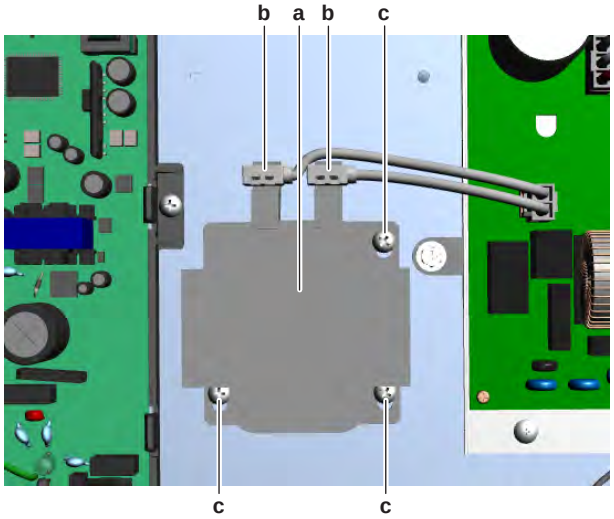
6 To install the reactor, see "4.12.2 Repair procedures" [▸ 257].

FXMA200+250

DANGER: RISK OF ELECTROCUTION

Wait for at least 10 minutes after the circuit breaker has been turned OFF, to be sure the rectifier voltage is below 10 V DC before proceeding.

1 Disconnect the Faston connectors from the reactor.



a Reactor
b Faston connector
c Screw

2 Remove the 3 screws that fix the reactor to the switch box.

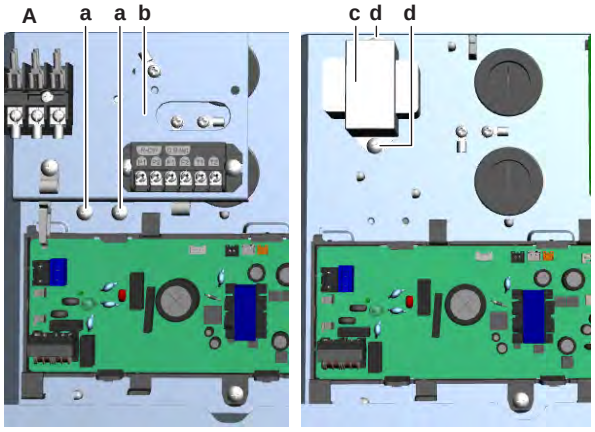
3 Remove the reactor.

4 To install the reactor, see "4.12.2 Repair procedures" [▸ 257].

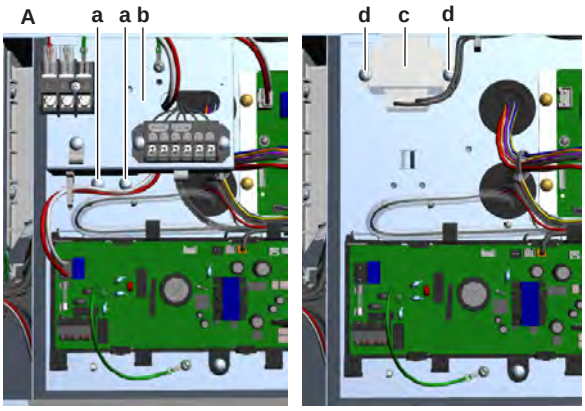
To install the reactor

FXSA + FXMA50~125

1 Install the reactor on the correct location on the switch box.



A FXSA15~32
a Screw (mounting plate)
b Terminal blocks mounting plate
c Reactor
d Screw (reactor)



A FXMA100+125
a Screw
b Terminal blocks mounting plate
c Reactor
d Screw

2 Install the 2 screws that fix the reactor to the switch box.

3 Connect the reactor connector to the indoor unit fan 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.

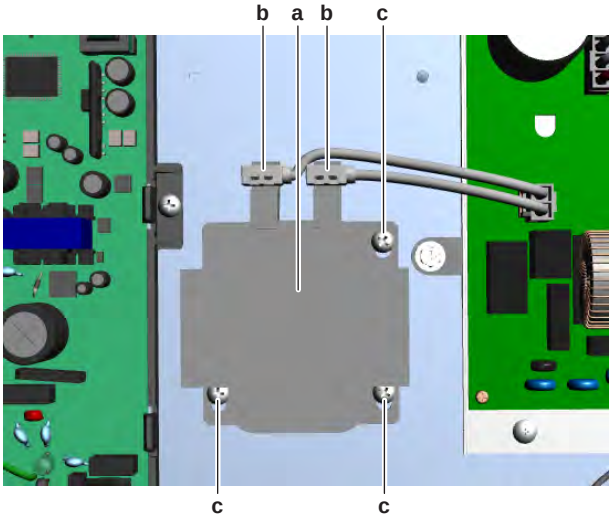
4 Install the terminal blocks mounting plate in the correct location in the switch box.

5 Install and tighten the 2 screws to fix the mounting plate.

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.

FXMA200+250

1 Install the reactor on the correct location on the switch box.



a Reactor
b Faston connector
c Screw

2 Install the 3 screws that fix the reactor to the switch box.

3 Connect the Faston connectors to the reactor.

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.

4.13 Remote controller user interface

4.13.1 Checking procedures

INFORMATION

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

To check the correct functioning of the remote controller user interface

1 Check the display for the following items:

- Pinhole, bright spot, black spot, white spot, black line, white line, foreign particle, bubble:
  The color of a small area is different from the remainder. The phenomenon does NOT change with voltage.
- Contrast variation:
  The color of a small area is different from the remainder. The phenomenon changes with voltage.
- Polarizer defect:
  Scratch, dirt, particle, bubble on polarizer or between polarizer and glass.
- Dot defect:
  The pixel appears bright or dark abnormally.
- Functional defect:
  No display, abnormal display, open or missing segment, short circuit, false viewing direction.
- Glass defect:
  Glass cracks, shaved corner of glass, surplus glass.

2 Check that information is shown correctly and can be navigated through on the display of the remote controller user interface.

3 Check that settings can be changed and saved, see "4.13.2 Repair procedures" [▸ 263].

Does the remote controller user interface function correctly?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

4 Perform a check of the communication wiring between the remote controller and the unit PCB.

Communication wiring is correct?	Action
Yes	Replace the remote controller user interface, see "4.13.2 Repair procedures" [▸ 263].
No	Correct the wiring between the remote controller and the unit PCB, see "7.2 Wiring diagram" [▸ 359].

To check the settings

1 See the relevant documentation (installer reference guide, remote controller manual, ...) to check if the specific setting is correct.

Is the setting correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Adjust the specific setting see "4.13.2 Repair procedures" [▸ 263].

To check the software and EEPROM version

1 Compare the software ID and EEPROM version of the remote controller user interface and the PCB with the ones provided in the Updater Tool. Re-install the software with the Updater Tool if versions do NOT match.

Is the installed software and EEPROM version correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Re-install the software with the Updater Tool see "4.13.2 Repair procedures" [▸ 263].

To check the communication wiring between the remote controller and the unit PCB

1 Make sure that all wires between the remote controller user interface P1/P2 and the connector X30A: 5-6 on the indoor unit PCB are firmly and correctly connected, see "7.2 Wiring diagram" [▸ 359].

2 Check the continuity of all wires.

3 Replace any damaged or broken wires.

INFORMATION

Correct the wiring as needed.

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.

4.13.2 Repair procedures

To remove the user interface

1 See relevant manual of the user interface (remote controller) for the correct procedure.

2 To install the user interface, see "4.13.2 Repair procedures" [▸ 263].

To install the user interface

1 See relevant manual of the user interface (remote controller) for the correct procedure.

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 adjust the settings

1 See the relevant documentation (installer reference guide, remote controller manual, ...) to adjust the specific setting.

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 software

1 Install the software using the Updater Tool. See the Business Portal (http://www.mydaikin.eu) for more information about the Updater Tool.

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.

4.14 Self-cleaning decoration panel

4.14.1 Air filter motor

Checking procedures

To perform an electrical check of the air filter motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the air filter motor connector from the self-cleaning decoration panel main PCB.

2 Measure the resistance between the following wires of the motor connector.

Result: The measurements MUST be as shown in the table below.

Wires	Measured resistance (Ω)
Blue-Red	209.25~240.75
Blue-Black	
Blue-Yellow	
Blue-Brown	
Red-Black	418.5~481.5
Red-Yellow	
Red-Brown	
Black-Yellow	
Black-Brown	
Yellow-Brown	

Air filter motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the air filter motor, see "Repair procedures" [▸ 265].

4 Measure the resistance between the following pins of the connector on the air filter motor.

Result: The measurements MUST be as shown in the table below.

Pins	Measured resistance (Ω)
3-1	209.25~240.75
3-2	
3-4	
3-5	
1-2	418.5~481.5
1-4	
1-5	
2-4	
2-5	
4-5	

Air filter motor resistance measurements are correct?	Action
Yes	Replace the air filter motor wiring harness, see "Repair procedures" [▸ 265].
No	Replace the air filter motor, see "Repair procedures" [▸ 265].

Repair procedures

As the air filter motor wiring harness is part of the air filter motor limit switch, replace the limit switch to replace the air filter motor wiring harness. See "4.14.5 Limit switch" [▸ 284].

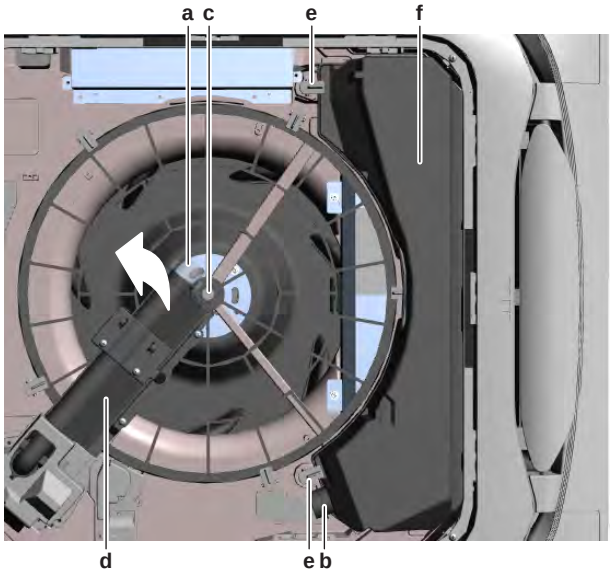
To remove the air filter motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

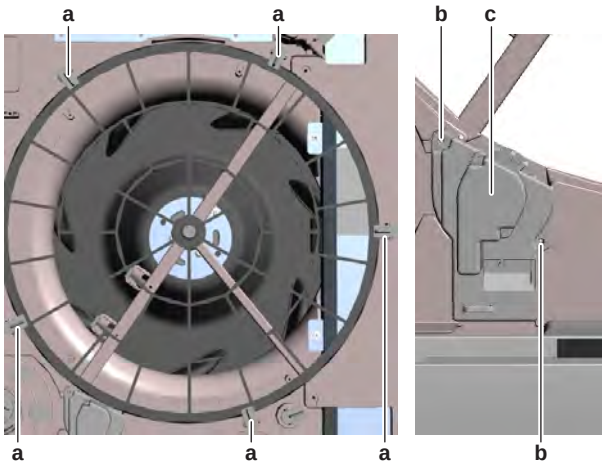


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

2 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

3 Unlock the dust box retainers and remove the dust box from the decoration panel.

4 Unlock the filter retainers and remove the air filter from the decoration panel.

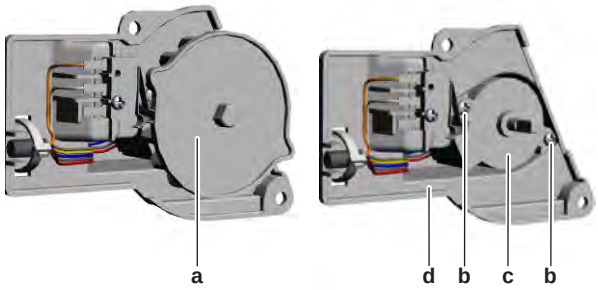


a Retainer (air filter)

b Screw
c Air filter motor assy

5 Remove the 2 screws and remove the air filter motor assembly from the self-cleaning decoration panel.

6 Remove the gear from the air filter motor.



a Gear
b Screw
c Air filter motor
d Mount

7 Remove the 2 screws and remove the air filter motor from its mount.

8 Disconnect the connector from the air filter motor.

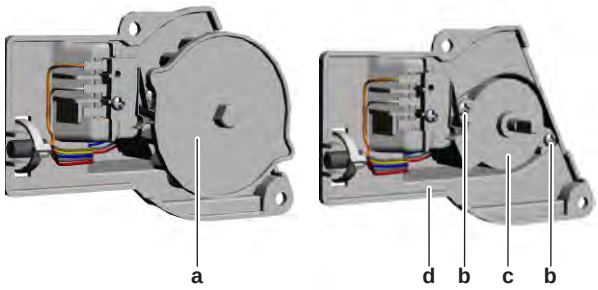
9 Remove the air filter motor.

10 To install the air filter motor, see "Repair procedures" [▸ 265].

To install the air filter motor

1 Connect the wiring harness connector to the air filter motor.

2 Install the air filter motor in the correct location on its mount. Make sure the wiring harness is routed in the correct location.

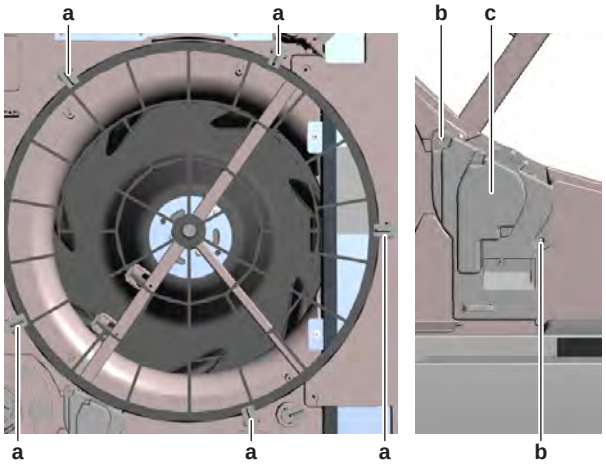


a Gear
b Screw
c Air filter motor
d Mount

3 Install and tighten the 2 screws to fix the air filter motor.

4 Install the gear on the air filter motor.

5 Install the air filter motor assembly in the correct location on the self-cleaning decoration panel.



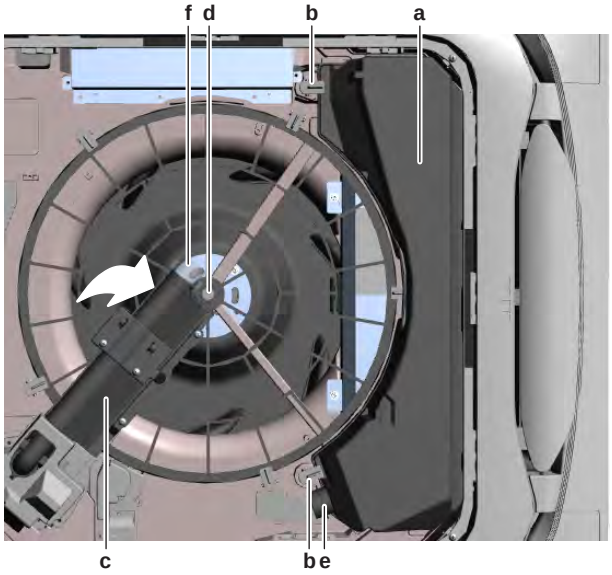
a Retainer (air filter)
b Screw
c Air filter motor assy

6 Install and tighten the 2 screws to fix the air filter motor assembly.

7 Install the air filter in the correct location on the decoration panel. Make sure the air filter is fitted correctly on the air filter motor gear.

8 Lock the air filter retainers to fix the air filter.

9 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box
b Dust box retainer
c Brush assy
d Screw (brush assy)
e Duct connection on dust box
f Duct connection on brush assy

10 Turn the brush assembly clockwise to the correct location on the air filter frame. Install and tighten the screw to fix the brush assembly.

11 Connect the duct to the dust box and to the brush assembly.

12 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

Is the problem solved?	Action
Yes	No further actions required.

Is the problem solved?	Action
No	Return to the troubleshooting of the specific error and continue with the next procedure.

4.14.2 Brush motor

Checking procedures

To perform an electrical check of the brush motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the brush motor connector from the self-cleaning decoration panel main PCB.

2 Measure the resistance between the following wires of the motor connector.

Result: The measurements MUST be as shown in the table below.

Wires	Measured resistance (Ω)
Red-Black	232.5~267.5
Red-Blue	
Red-Yellow	
Red-Brown	
Black-Blue	465~535
Black-Yellow	
Black-Brown	
Blue-Yellow	
Blue-Brown	
Yellow-Brown	

Brush motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the brush motor, see "Repair procedures" [▸ 269].

4 Measure the resistance between the following pins of the connector on the brush motor.

Result: The measurements MUST be as shown in the table below.

Pins	Measured resistance (Ω)
1-2	232.5~267.5
1-3	
1-4	
1-5	

Pins	Measured resistance (Ω)
2-3	465~535
2-4	
2-5	
3-4	
3-5	
4-5	

Brush motor resistance measurements are correct?	Action
Yes	Replace the brush motor wiring harness, see "Repair procedures" [▸ 269].
No	Replace the brush motor, see "Repair procedures" [▸ 269].

Repair procedures

To replace the brush motor wiring harness, see procedures for brush motor replacement. Procedures are identical.

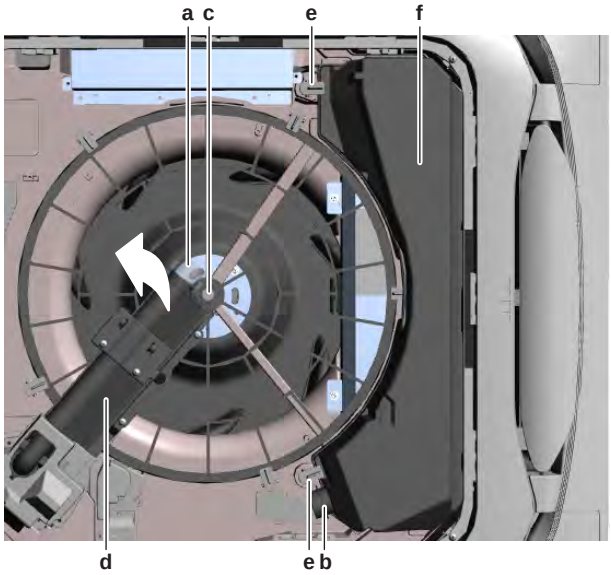
To remove the brush motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

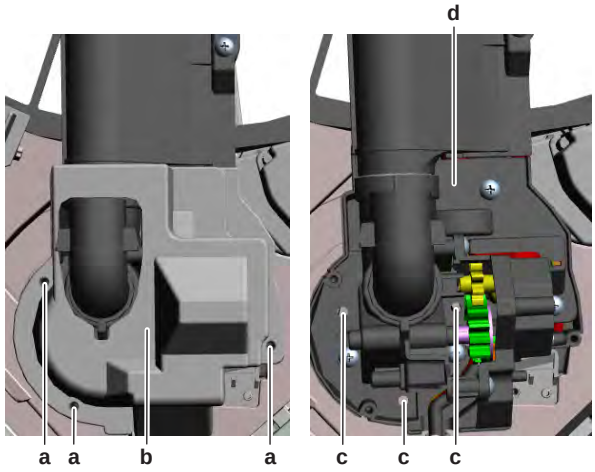


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

2 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

3 Unlock the dust box retainers and remove the dust box from the decoration panel.

4 Remove the 3 screws and remove the cover from the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

5 Disconnect the following connectors from the self-cleaning decoration panel main PCB:

- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

6 Route the disconnected wiring harnesses out of the appropriate retainers and out of the switch box.

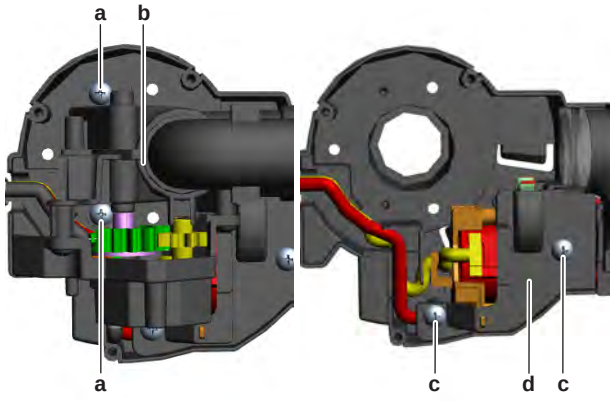
7 Cut all tie straps that fix the disconnected wiring harnesses.

8 Remove the 3 screws from the brush assembly while holding it.

9 Remove the brush assembly from the decoration panel.

10 Cut the tie strap that fixes the wiring harnesses to the brush assembly.

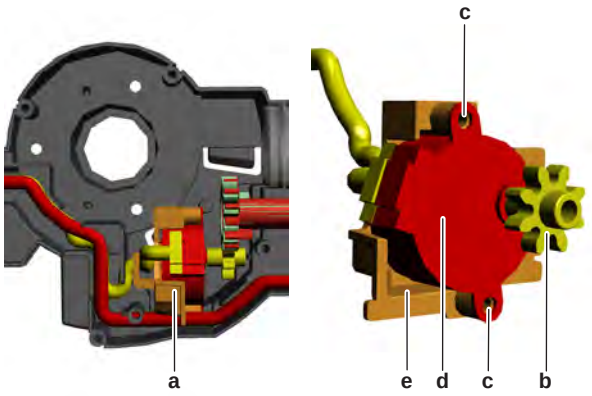
11 Remove the 2 screws and remove the damper unit from the brush assembly.



a Screw (damper unit)
b Damper unit
c Screw (gear cover)
d Gear cover

12 Remove the 2 screws and remove the gear cover from the brush assembly.

13 Carefully remove (pull out) the brush motor assembly from the brush assembly.



a Brush motor assy
b Gear
c Screw
d Brush motor
e Mount

14 Remove the gear from the brush motor.

15 Remove the 2 screws and remove the brush motor from its mount.

16 Disconnect the connector from the brush motor.

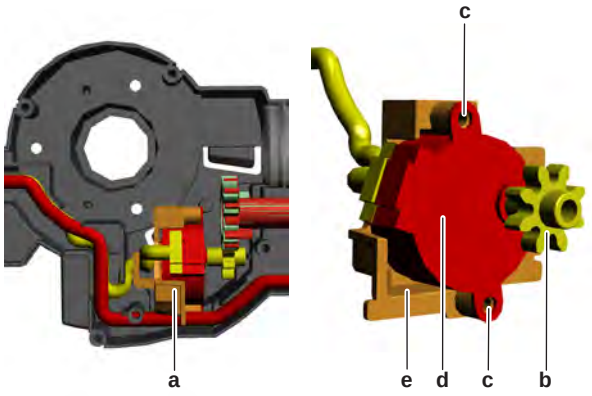
17 Remove the brush motor.

18 To install the brush motor, see "Repair procedures" [▸ 269].

To install the brush motor

1 Connect the wiring harness connector to the brush motor.

2 Install the brush motor in the correct location on its mount. Make sure the wiring harness is routed in the correct location.



a Brush motor assy
b Gear
c Screw
d Brush motor
e Mount

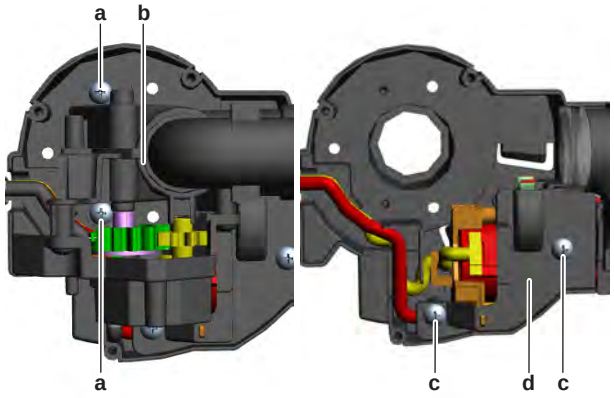
3 Install and tighten the 2 screws to fix the brush motor.

4 Install the gear on the brush motor.

5 Install the brush motor assembly in the correct location on the brush assembly. Make sure the gears (of the dust sensor unit and brush motor) are correctly inserted.

6 Install the gear cover in the correct location on the brush assembly.

7 Install and tighten the 2 screws to fix the gear cover.



a Screw (damper unit)
b Damper unit
c Screw (gear cover)
d Gear cover

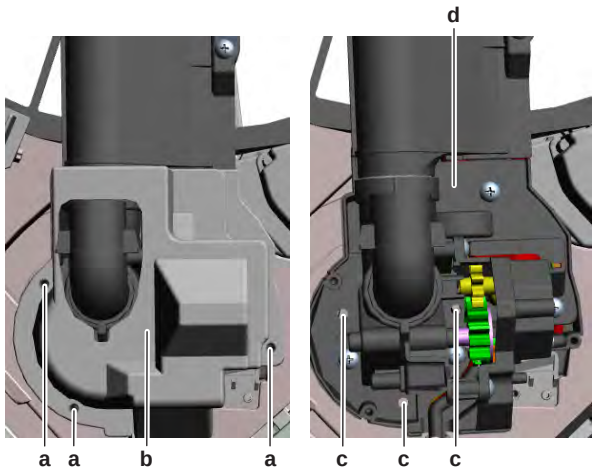
8 Install the damper unit in the correct location on the brush assembly. Make sure the wiring harnesses are correctly routed.

9 Install and tighten the 2 screws to fix the damper unit.

10 Install a new tie strap to fix the wiring harnesses to the brush assembly.

11 Install the brush assembly in the correct location on the decoration panel. Make sure the seal is correctly installed and NOT damaged (replace as needed).

12 Install and tighten the 3 screws to fix the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

13 Route the wiring harnesses of the damper motor, damper motor limit switch, brush motor and dust sensor unit through the appropriate harness retainers, inside the switch box of the self-cleaning decoration panel.

14 Connect the following connectors to the self-cleaning decoration panel main PCB:

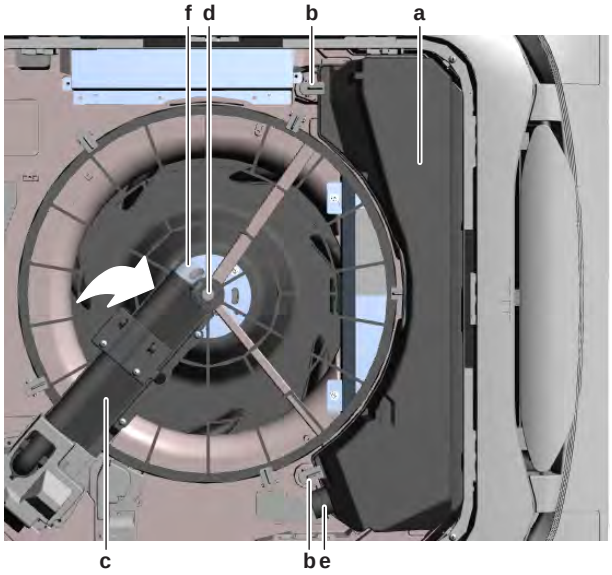
- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

15 Install new tie straps to fix these wiring harnesses as needed.

16 Install the cover of the brush assembly in the correct location.

17 Install and tighten the 3 screws to fix the cover.

18 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box
b Dust box retainer
c Brush assy
d Screw (brush assy)
e Duct connection on dust box
f Duct connection on brush assy

19 Turn the brush assembly clockwise to the correct location on the air filter frame. Install and tighten the screw to fix the brush assembly.

20 Connect the duct to the dust box and to the brush assembly.

21 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

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.

4.14.3 Damper motor

Checking procedures

To perform an electrical check of the damper motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the damper motor connector from the self-cleaning decoration panel main PCB.

2 Measure the resistance between the following wires of the motor connector.

Result: The measurements MUST be as shown in the table below.

Wires	Measured resistance (Ω)
Red-Black	232.5~267.5
Red-Blue	
Red-Yellow	
Red-Brown	
Black-Blue	465~535
Black-Yellow	
Black-Brown	
Blue-Yellow	
Blue-Brown	
Yellow-Brown	

Damper motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the damper motor, see "Repair procedures" [▸ 275].

4 Measure the resistance between the following pins of the connector on the damper motor.

Result: The measurements MUST be as shown in the table below.

Pins	Measured resistance (Ω)
1-2	232.5~267.5
1-3	
1-4	
1-5	
2-3	465~535
2-4	
2-5	
3-4	
3-5	
4-5	

Damper motor resistance measurements are correct?	Action
Yes	Replace the damper motor wiring harness, see "Repair procedures" [▸ 275].
No	Replace the damper motor, see "Repair procedures" [▸ 275].

Repair procedures

As the damper motor wiring harness is part of the damper motor limit switch, replace the limit switch to replace the damper motor wiring harness. See "4.14.5 Limit switch" [▸ 284].

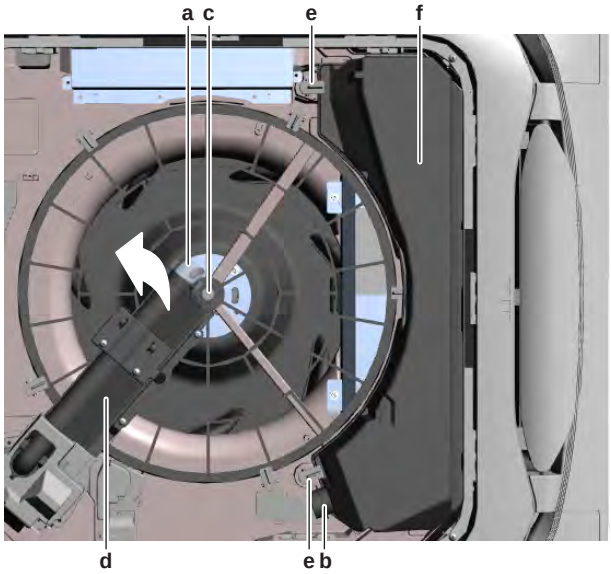
To remove the damper motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

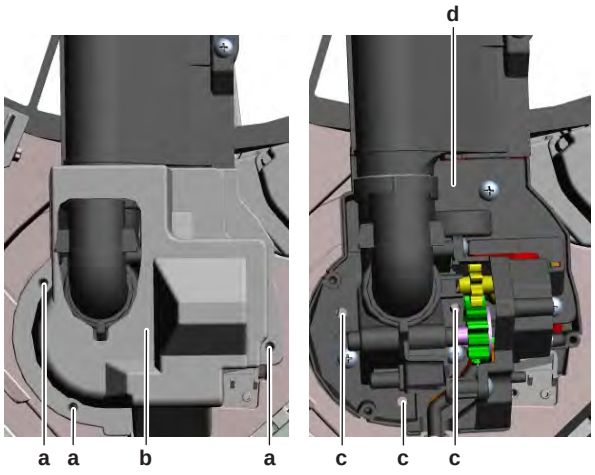


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

2 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

3 Unlock the dust box retainers and remove the dust box from the decoration panel.

4 Remove the 3 screws and remove the cover from the brush assembly.



a Screw (cover)

b Cover
c Screw (brush assy)
d Brush assy

5 Disconnect the following connectors from the self-cleaning decoration panel main PCB:

- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

6 Route the disconnected wiring harnesses out of the appropriate retainers and out of the switch box.

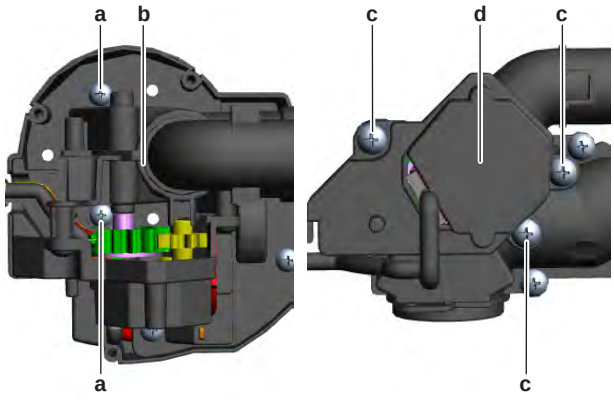
7 Cut all tie straps that fix the disconnected wiring harnesses.

8 Remove the 3 screws from the brush assembly while holding it.

9 Remove the brush assembly from the decoration panel.

10 Cut the tie strap that fixes the wiring harnesses to the brush assembly.

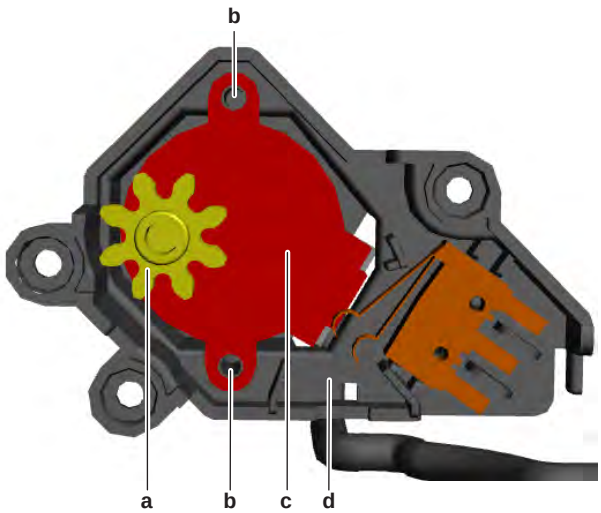
11 Remove the 2 screws and remove the damper unit from the brush assembly.



a Screw (damper unit)
b Damper unit
c Screw (damper motor assy)
d Damper motor assy

12 Remove the 3 screws and remove the damper motor assembly from the damper unit.

13 Remove the gear from the damper motor.



a Gear
b Screw
c Damper motor

d Mount

14 Remove the 2 screws and remove the damper motor from its mount.

15 Disconnect the connector from the damper motor.

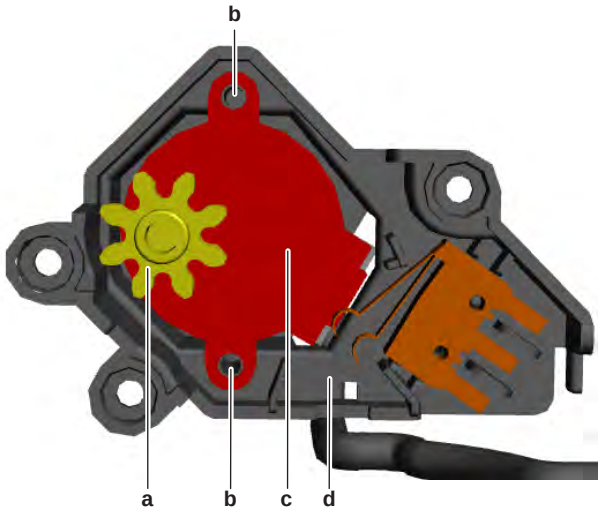
16 Remove the damper motor.

17 To install the damper motor, see "Repair procedures" [▸ 275].

To install the damper motor

1 Connect the wiring harness connector to the damper motor.

2 Install the damper motor in the correct location on its mount. Make sure the wiring harness is routed in the correct location.



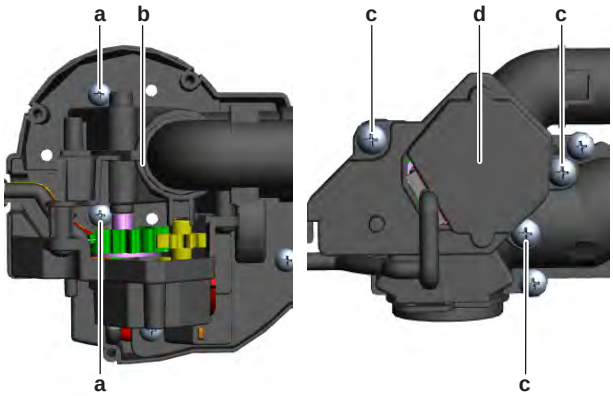
a Gear
b Screw
c Damper motor
d Mount

3 Install and tighten the 2 screws to fix the damper motor.

4 Install the gear on the damper motor.

5 Install the damper motor assembly in the correct location on the damper unit. Make sure the gears are correctly inserted.

6 Install and tighten the 3 screws to fix the damper motor assembly.



a Screw (damper unit)
b Damper unit
c Screw (damper motor assy)
d Damper motor assy

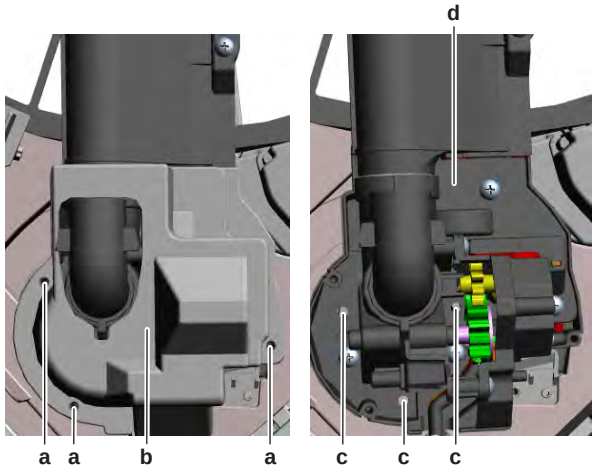
7 Install the damper unit in the correct location on the brush assembly. Make sure the damper motor wiring harness is correctly routed.

8 Install and tighten the 2 screws to fix the damper unit.

9 Install a new tie strap to fix the wiring harnesses to the brush assembly.

10 Install the brush assembly in the correct location on the decoration panel. Make sure the seal is correctly installed and NOT damaged (replace as needed).

11 Install and tighten the 3 screws to fix the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

12 Route the wiring harnesses of the damper motor, damper motor limit switch, brush motor and dust sensor unit through the appropriate harness retainers, inside the switch box of the self-cleaning decoration panel.

13 Connect the following connectors to the self-cleaning decoration panel main PCB:

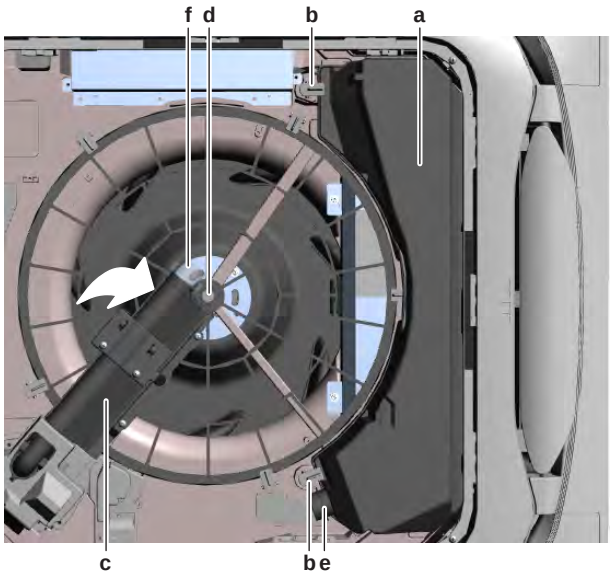
- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

14 Install new tie straps to fix these wiring harnesses as needed.

15 Install the cover of the brush assembly in the correct location.

16 Install and tighten the 3 screws to fix the cover.

17 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box
b Dust box retainer
c Brush assy
d Screw (brush assy)
e Duct connection on dust box
f Duct connection on brush assy

18 Turn the brush assembly clockwise to the correct location on the air filter frame. Install and tighten the screw to fix the brush assembly.

19 Connect the duct to the dust box and to the brush assembly.

20 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

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.

4.14.4 Dust sensor unit

Checking procedures

To perform an electrical check of the dust sensor unit

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the dust sensor unit connector from the self-cleaning decoration panel main PCB.

2 On the disconnected connector, perform a diode check between the connector wires of the dust sensor emitter.

Result: The measurements MUST be:

VDC	Comm	Ref
Red	Black	1.24
Black	Red	OL

3 On the disconnected connector, measure the resistance between the connector wires (white-blue) of the dust sensor receiver.

Result: The measurements MUST be approximately 97.0 Ω.

Are all measurements correct?	Action
Yes	Dust sensor unit is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the dust sensor unit, see "Repair procedures" [▸ 280].

Repair procedures

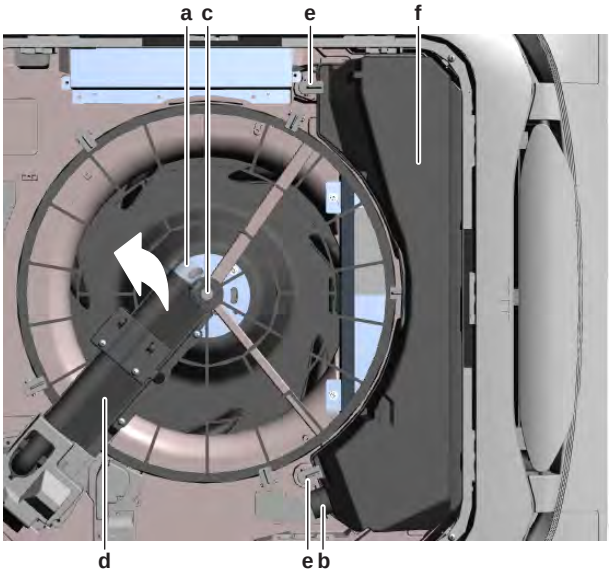
To remove the dust sensor unit

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

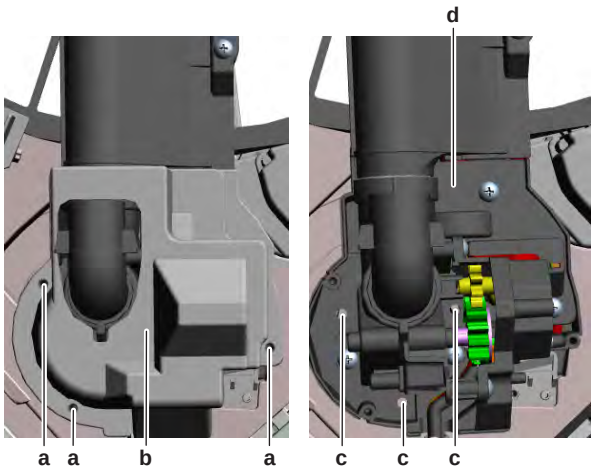


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

2 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

3 Unlock the dust box retainers and remove the dust box from the decoration panel.

4 Remove the 3 screws and remove the cover from the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

5 Disconnect the following connectors from the self-cleaning decoration panel main PCB:

- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

6 Route the disconnected wiring harnesses out of the appropriate retainers and out of the switch box.

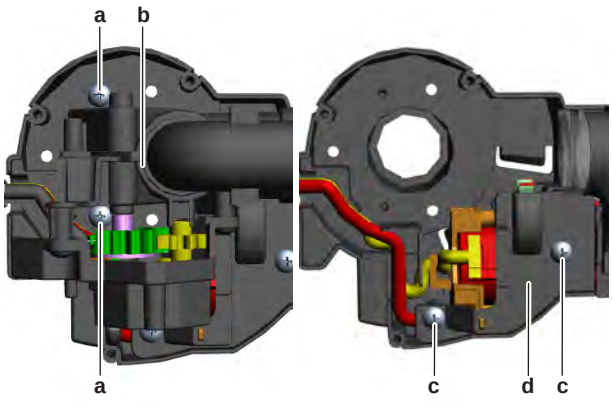
7 Cut all tie straps that fix the disconnected wiring harnesses.

8 Remove the 3 screws from the brush assembly while holding it.

9 Remove the brush assembly from the decoration panel.

10 Cut the tie strap that fixes the wiring harnesses to the brush assembly.

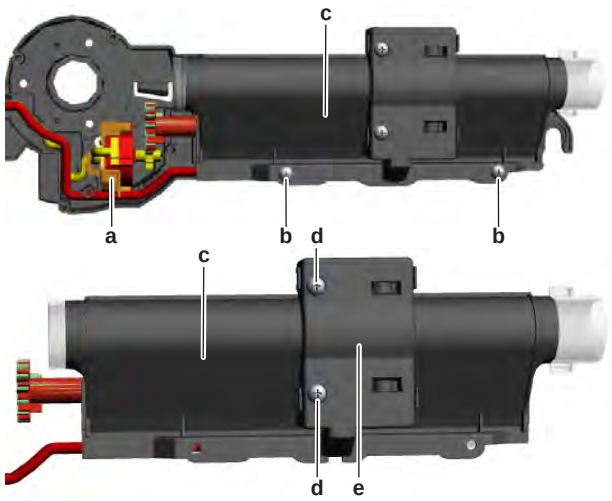
11 Remove the 2 screws and remove the damper unit from the brush assembly.



a Screw (damper unit)
b Damper unit
c Screw (gear cover)
d Gear cover

12 Remove the 2 screws and remove the gear cover from the brush assembly.

13 Carefully remove (pull out) the brush motor assembly from the brush assembly.



a Brush motor assy
b Screw (brush unit)
c Brush unit
d Screw (dust sensor unit)
e Dust sensor unit

14 Remove the 2 screws and remove the brush unit from the brush assembly.

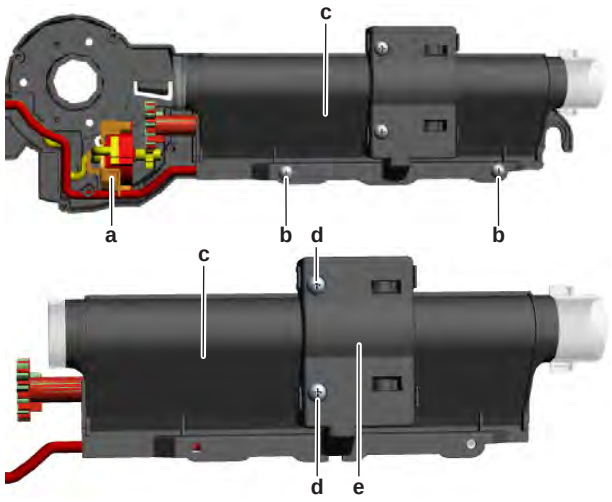
15 Remove the 2 screws from the dust sensor unit.

16 Remove the dust sensor unit from the brush unit.

17 To install the dust sensor unit, see "Repair procedures" [▸ 280].

To install the dust sensor unit

1 Install the dust sensor unit in the correct location on the brush unit. Make sure the wiring harness is routed in the correct location.



a Brush motor assy
b Screw (brush unit)
c Brush unit
d Screw (dust sensor unit)
e Dust sensor unit

2 Install and tighten the 2 screws to fix the dust sensor unit.

3 Install the brush unit in the correct location on the brush assembly.

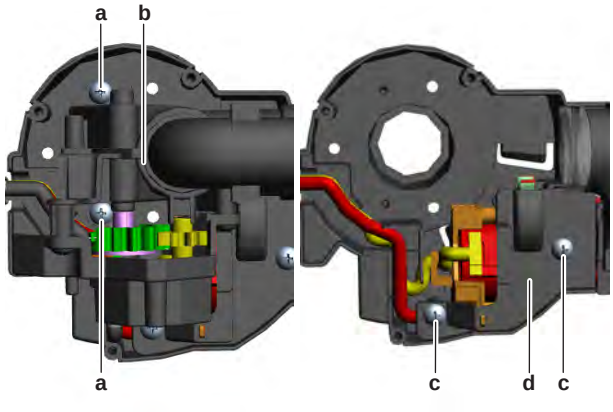
4 Install and tighten the 2 screws to fix the brush unit.

5 Route the dust sensor unit wiring harness as shown above.

6 Install the brush motor assembly in the correct location on the brush assembly. Make sure the gears (of the dust sensor unit and brush motor) are correctly inserted.

7 Install the gear cover in the correct location on the brush assembly.

8 Install and tighten the 2 screws to fix the gear cover.



a Screw (damper unit)
b Damper unit
c Screw (gear cover)
d Gear cover

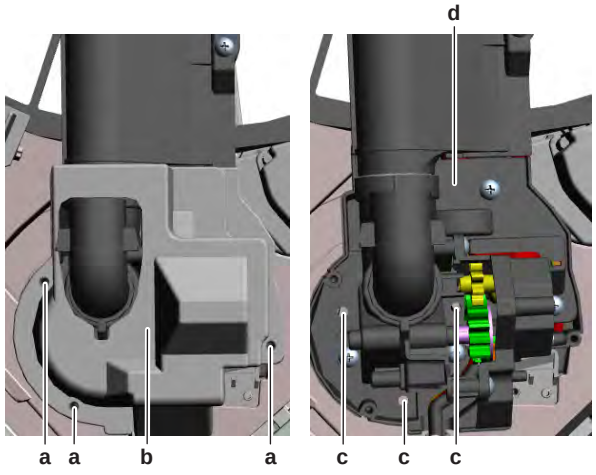
9 Install the damper unit in the correct location on the brush assembly. Make sure the wiring harnesses are correctly routed.

10 Install and tighten the 2 screws to fix the damper unit.

11 Install a new tie strap to fix the wiring harnesses to the brush assembly.

12 Install the brush assembly in the correct location on the decoration panel. Make sure the seal is correctly installed and NOT damaged (replace as needed).

13 Install and tighten the 3 screws to fix the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

14 Route the wiring harnesses of the damper motor, damper motor limit switch, brush motor and dust sensor unit through the appropriate harness retainers, inside the switch box of the self-cleaning decoration panel.

15 Connect the following connectors to the self-cleaning decoration panel main PCB:

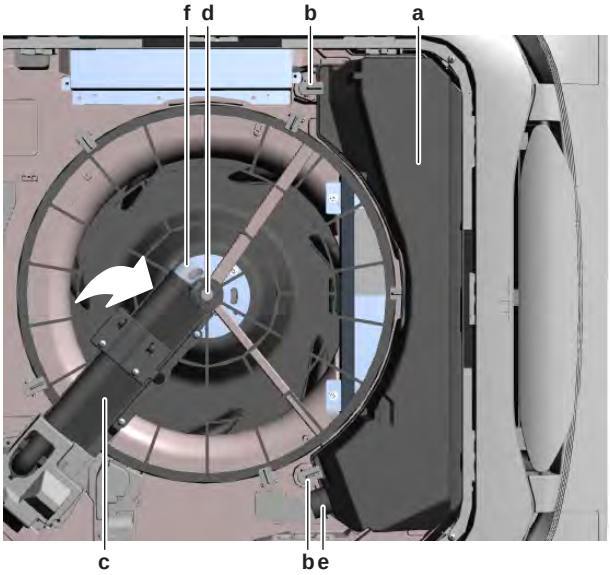
- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

16 Install new tie straps to fix these wiring harnesses as needed.

17 Install the cover of the brush assembly in the correct location.

18 Install and tighten the 3 screws to fix the cover.

19 Install the dust box in the correct location on the decoration panel and lock the dust box retainers.



a Dust box
b Dust box retainer
c Brush assy
d Screw (brush assy)
e Duct connection on dust box
f Duct connection on brush assy

20 Turn the brush assembly clockwise to the correct location on the air filter frame. Install and tighten the screw to fix the brush assembly.

21 Connect the duct to the dust box and to the brush assembly.

22 Install the suction grille, see "6.2.6 To clean the suction grille" [▸ 353].

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.

4.14.5 Limit switch

Checking procedures

To perform an electrical check of the limit switch

Air filter motor limit switch

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the air filter motor limit switch connector from the self-cleaning decoration panel main PCB.

2 Turn ON the power of the unit.

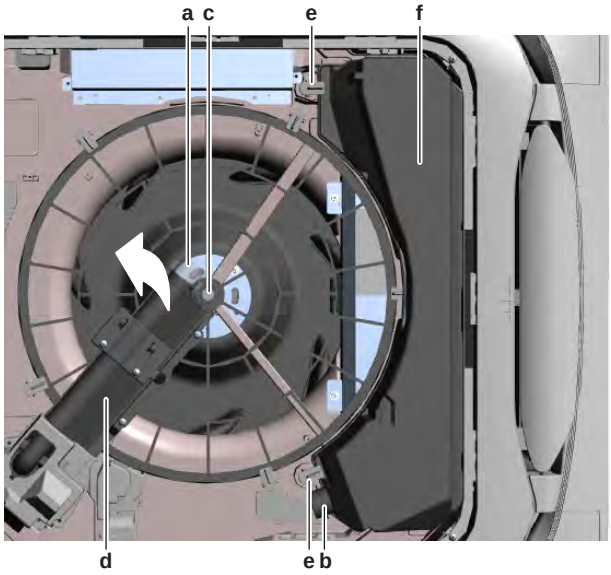
3 Measure the voltage between the pins of connector X8A on the self-cleaning decoration panel main PCB.

Result: The measured voltage MUST be 13.5 V DC.

Is the measured voltage correct?	Action
Yes	Continue with the next step.
No	Perform a check of the self-cleaning decoration panel main PCB, see "Checking procedures" [▸ 291].

4 Turn OFF the respective circuit breaker.

5 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

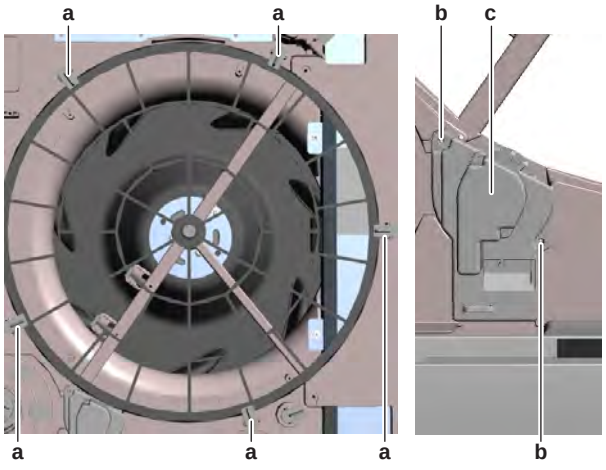


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

6 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

7 Unlock the dust box retainers and remove the dust box from the decoration panel.

8 Unlock the filter retainers and remove the air filter from the decoration panel.

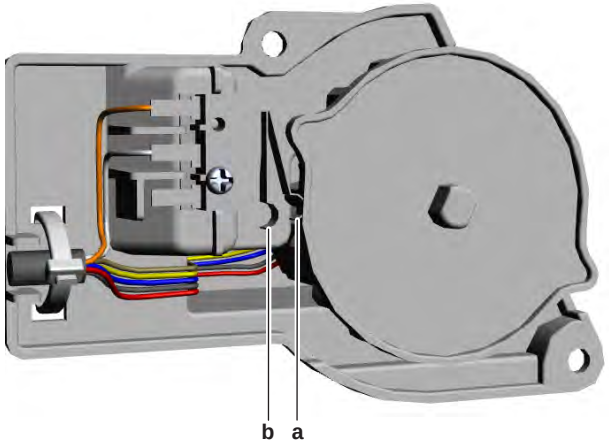


a Retainer (air filter)
b Screw
c Air filter motor assy

9 Remove the 2 screws and remove the air filter motor assembly from the self-cleaning decoration panel.

10 With the limit switch (installed on the air filter motor assembly) in normal open position, measure the resistance between the pins of the limit switch connector (that was disconnected from the self-cleaning decoration panel main PCB).

Result: The measured resistance MUST be OL (switch open).



a Limit switch open position
b Limit switch closed position

11 Manually close the limit switch and again measure the resistance between the pins of the limit switch connector.

Result: The measured resistance MUST be 0 Ω (switch closed).

Limit switch resistance measurements are correct?	Action
Yes	Limit switch is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the limit switch, see "Repair procedures" [▸ 289].

Damper motor limit switch

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the damper motor limit switch connector from the self-cleaning decoration panel main PCB.

2 Turn ON the power of the unit.

3 Measure the voltage between the pins of connector X10A on the self-cleaning decoration panel main PCB.

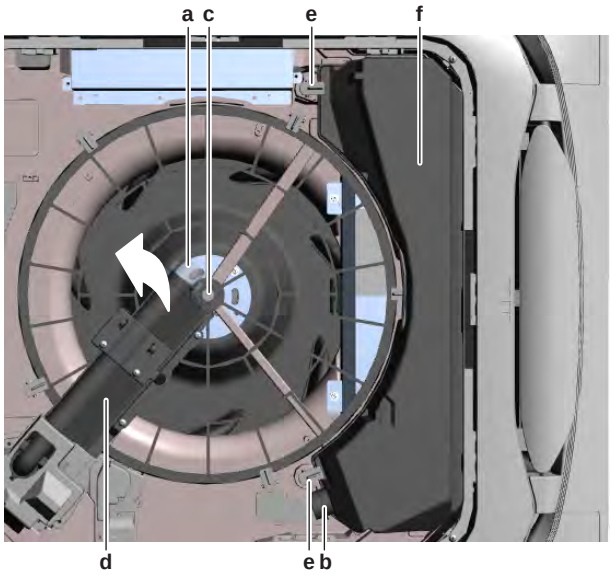
Result: The measured voltage MUST be 13.5 V DC.

Is the measured voltage correct?	Action
Yes	Continue with the next step.

Is the measured voltage correct?	Action
No	Perform a check of the self-cleaning decoration panel main PCB, see "Checking procedures" [▶ 291].

4 Turn OFF the respective circuit breaker.

5 Disconnect the duct from the dust box and from the brush assembly and remove the duct.

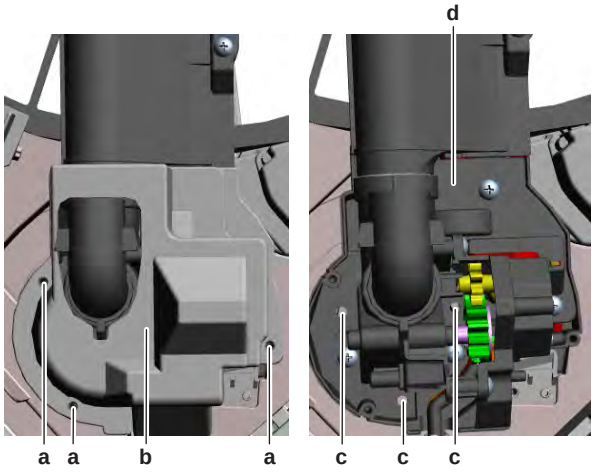


a Duct connection on brush assy
b Duct connection on dust box
c Screw (brush assy)
d Brush assy
e Dust box retainer
f Dust box

6 Loosen the screw of the brush assembly and rotate the brush assembly counterclockwise to the side of the decoration panel.

7 Unlock the dust box retainers and remove the dust box from the decoration panel.

8 Remove the 3 screws and remove the cover from the brush assembly.



a Screw (cover)
b Cover
c Screw (brush assy)
d Brush assy

9 Disconnect the following connectors from the self-cleaning decoration panel main PCB:

- Brush motor connector
- Damper motor connector
- Damper motor limit switch connector
- Dust sensor unit connector

10 Route the disconnected wiring harnesses out of the appropriate retainers and out of the switch box.

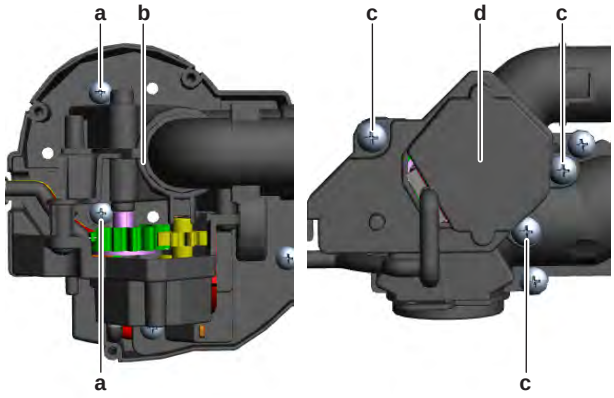
11 Cut all tie straps that fix the disconnected wiring harnesses.

12 Remove the 3 screws from the brush assembly while holding it.

13 Remove the brush assembly from the decoration panel.

14 Cut the tie strap that fixes the wiring harnesses to the brush assembly.

15 Remove the 2 screws and remove the damper unit from the brush assembly.

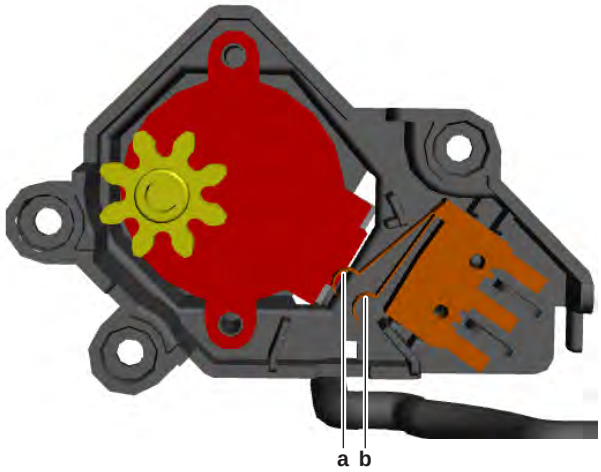


a Screw (damper unit)
b Damper unit
c Screw (damper motor assy)
d Damper motor assy

16 Remove the 3 screws and remove the damper motor assembly from the damper unit.

17 With the limit switch (installed on the damper motor assembly) in normal open position, measure the resistance between the pins of the limit switch connector.

Result: The measured resistance MUST be OL (switch open).



a Limit switch open position
b Limit switch closed position

18 Manually close the limit switch and again measure the resistance between the pins of the limit switch connector.

Result: The measured resistance MUST be 0 Ω (switch closed).

Limit switch resistance measurements are correct?	Action
Yes	Limit switch is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the limit switch, see "Repair procedures" [▸ 289].

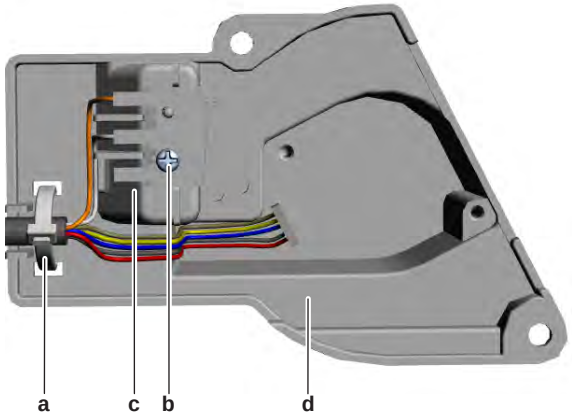
Repair procedures

To remove the limit switch

Air filter motor limit switch

Prerequisite: Remove the air filter motor, see "Repair procedures" [▸ 265].

1 Cut the tie strap that fixes the limit switch and air filter motor wiring harness to the air filter motor mount.



a Tie strap
b Screw
c Air filter motor limit switch
d Air filter motor mount

2 Remove the screw and remove the limit switch from the air filter motor mount.

3 Disconnect the air filter motor connector and air filter motor limit switch connector from the self-cleaning decoration panel main PCB.

4 Cut all tie straps that fix the air filter motor and limit switch wiring harness.

5 Route the wiring harness out of the appropriate harness retainers.

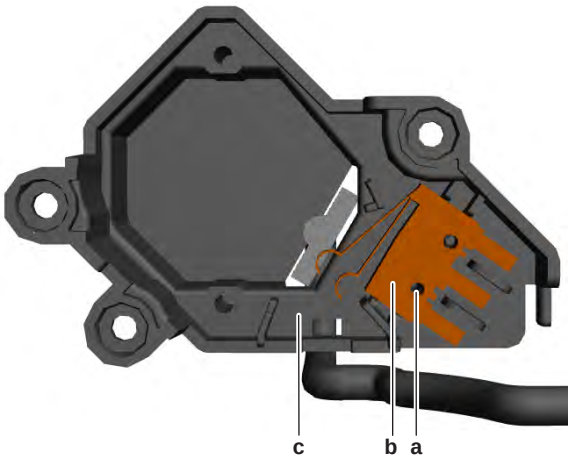
6 Remove the air filter motor limit switch (including the wiring harness of the air filter motor).

7 To install the air filter motor limit switch, see "Repair procedures" [▸ 289].

Damper motor limit switch

Prerequisite: Remove the damper motor, see "Repair procedures" [▸ 275].

1 Remove the screw that fixes the damper motor limit switch to the damper motor mount.



a Screw
b Damper motor limit switch
c Damper motor mount

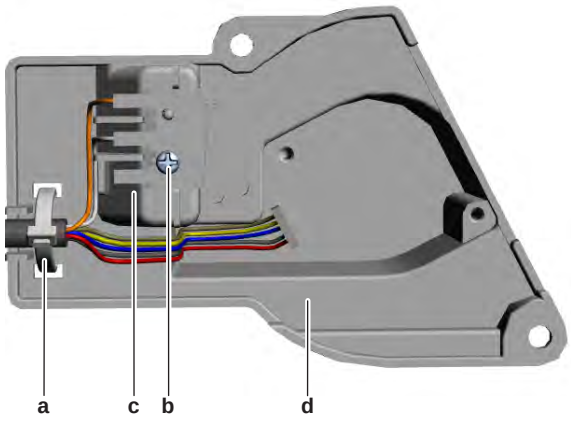
2 Remove the damper motor limit switch (including the wiring harness of the damper motor).

3 To install the damper motor limit switch, see "Repair procedures" [▸ 289].

To install the limit switch

Air filter motor limit switch

1 Install the air filter motor limit switch on the correct location on the air filter motor mount.



a Tie strap
b Screw
c Air filter motor limit switch
d Air filter motor mount

2 Install and tighten the screw to fix the limit switch.

3 Install a new tie strap to fix the limit switch and air filter motor wiring harness to the air filter motor mount.

4 Connect the air filter motor and air filter motor limit switch wiring harness to the appropriate connectors of the self-cleaning decoration panel main PCB.

5 Route the wiring harness through the appropriate retainers.

6 Install new tie straps (as needed) to fix the wiring harness.

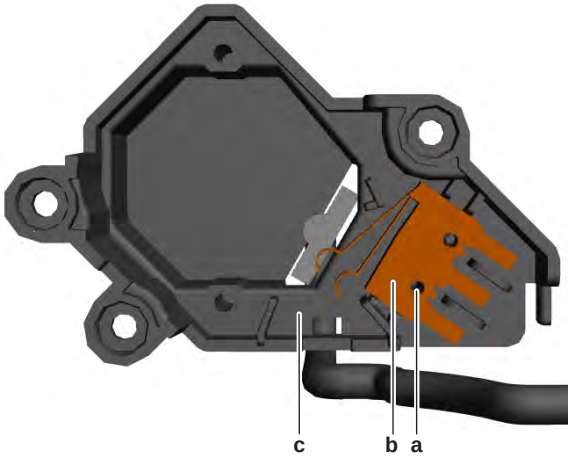
7 Install the air filter motor, see "Repair procedures" [▸ 265].

Is the problem solved?	Action
Yes	No further actions required.

Is the problem solved?	Action
No	Return to the troubleshooting of the specific error and continue with the next procedure.

Damper motor limit switch

1 Install the damper motor limit switch on the correct location on the damper motor mount.



a Screw
b Damper motor limit switch
c Damper motor mount

2 Install and tighten the screw to fix the limit switch.

3 Install the damper motor, see "Repair procedures" [▸ 275].

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.

4.14.6 Main PCB

Checking procedures

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

To perform a power check of the self-cleaning decoration panel main PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Turn ON the power of the unit.

2 Measure the voltage between the pins 1-2 of connector X1A on the self-cleaning decoration panel main PCB.

Result: The measured voltage MUST be 16 V DC.

3 Measure the voltage between the pins 3-4 of connector X1A on the self-cleaning decoration panel main PCB.

Result: The measured voltage MUST be 1~7 V DC.

a Connector X1A

Is the measured voltage on the PCB correct?	Action
Yes	Return to "Checking procedures" [▸ 291] of the PCB and continue with the next procedure.
No	Continue with the next step.

4 Remove the switch box cover of the indoor unit, see "4.9 Plate work" [▸ 192].

5 Disconnect the wiring harness from the connectors X35A and X70A on the indoor unit main PCB.

6 Turn ON the power of the unit.

7 Measure the output voltage on the connector X35A on the indoor unit main PCB.

Result: The measured voltage MUST be 16 V DC.

8 Measure the output voltage on the connector X70A on the indoor unit main PCB.

Result: The measured voltage MUST be 1~7 V DC.

INFORMATION

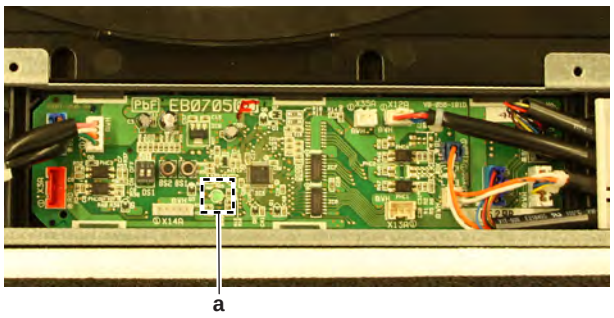
The wiring harness between the indoor unit main PCB and the self-clenaing decoration panel main PCB consists of 2 parts. 1 part connecting the indoor unit main PCB to the intermediate connector and 1 part connecting the intermediate connector to the self-clenaing decoration panel main PCB. Check and replace the appropriate part of the wiring harness if needed.

Are the output voltages correct?	Action
Yes	Replace the wiring harness between the indoor unit main PCB and the self-cleaning decoration panel main PCB, see "Repair procedures" [▸ 294].
No	Perform a check of the indoor unit main PCB, see "4.8.1 Checking procedures" [▸ 176].

To check the HAP LED of the self-cleaning decoration panel main PCB

Prerequisite: First check the power supply to the main PCB, see "Checking procedures" [▸ 291].

1 Locate the HAP LED on the main PCB.



a HAP LED

> **INFORMATION**
>
> Make sure the correct software is available on the PCB. If NOT, update using the updater tool.

Does the HAP LED blink in regular intervals (1 second ON/1 second OFF)?	Action
Yes	Return to "Checking procedures" [▸ 291] of the main PCB and continue with the next procedure.
No	Replace the main PCB, see "Repair procedures" [▸ 294].

To check if the correct spare part is installed

Prerequisite: First perform all earlier main PCB checks, see "Checking procedures" [▸ 291].

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 PCB installed?	Action
Yes	Return to "Checking procedures" [▸ 291] of the main PCB and continue with the next procedure.
No	Replace the main PCB, see "Repair procedures" [▸ 294].

To check the wiring of the self-cleaning decoration panel main PCB

Prerequisite: First perform all earlier main PCB checks, see "Checking procedures" [▸ 291].

Prerequisite: Stop the unit operation via the user interface.

1. Turn OFF the respective circuit breaker.
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" [▸ 359].

> **INFORMATION**
>
> Correct the wiring as needed.

Is the problem solved?	Action
Yes	No further actions required.
No	Return to "Checking procedures" [▸ 291] of the 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.

Repair procedures

To remove the self-cleaning decoration panel main PCB

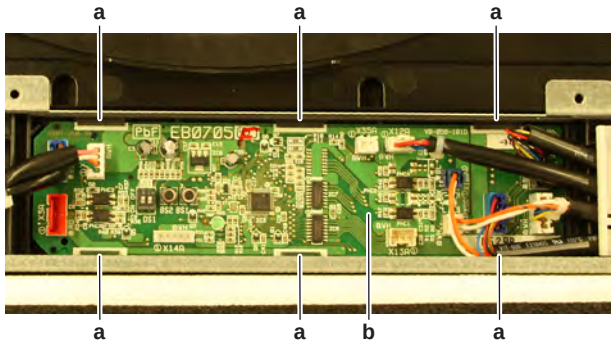
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the self-cleaning decoration panel switch box cover, see "4.9 Plate work" [▸ 192].

1 Disconnect all connectors from the self-cleaning decoration panel main PCB.

2 Carefully pull the PCB at the side and unlatch the PCB holders one by one.



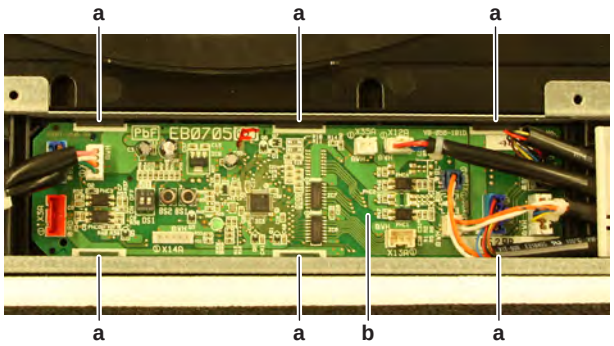
a PCB holder
b self-cleaning decoration panel main PCB

3 Remove the self-cleaning decoration panel main PCB from the switch box.

4 To install the self-cleaning decoration panel main PCB, see "Repair procedures" [▸ 294].

To install the self-cleaning decoration panel main PCB

1 Install the self-cleaning decoration panel main PCB in the correct location. Firmly latch the PCB holders to fix the PCB.



a PCB holder
b self-cleaning decoration panel main PCB

2 Connect all connectors to the self-cleaning decoration panel main PCB.

INFORMATION

Use the wiring diagram and connection diagram for correct installation of the connectors, see "7.2 Wiring diagram" [▸ 359].

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.

3 Install the self-cleaning decoration panel switch box cover, see "4.9 Plate work" [▸ 192].

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 remove the wiring harness between the self-cleaning decoration panel main PCB and indoor unit main PCB

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the self-cleaning decoration panel, see "4.9 Plate work" [▸ 192].

- TO REMOVE THE WIRING HARNESS BETWEEN THE SLEF-CLEANING DECORATION PANEL MAIN PCB AND THE INTERCONNECTOR

Prerequisite: Remove the self-cleaning decoration panel switch box cover, see "4.9 Plate work" [▸ 192].

1 Disconnect the wiring harness from the connectors X1A and X2A on the self-cleaning decoration panel main PCB.

2 Route the wiring harness out of the appropriate retainers and cut all tie straps (if applicable) that fix the wiring harness.

3 Remove the wiring harness.

4 To install the wiring harness, see "Repair procedures" [▸ 294].

- TO REMOVE THE WIRING HARNESS BETWEEN THE INDOOR UNIT MAIN PCB AND THE INTERCONNECTOR

Prerequisite: Remove the switch box cover from the indoor unit, see "4.9 Plate work" [▸ 192].

1 Disconnect the wiring harness from the connectors X35A, X39A and X70A on the indoor unit main PCB.

2 Route the wiring harness out of the appropriate retainers and cut all tie straps (if applicable) that fix the wiring harness.

3 Remove the wiring harness.

4 To install the wiring harness, see "Repair procedures" [▸ 294].

To install the wiring harness between the self-cleaning decoration panel main PCB and indoor unit main PCB

- TO INSTALL THE WIRING HARNESS BETWEEN THE SELF-CLEANING DECORATION PANEL MAIN PCB AND THE INTERCONNECTOR

1 Connect the wiring harness to the connectors X1A and X2A on the self-cleaning decoration panel main 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.

2 Route the wiring harness through the appropriate retainers and fix it using new tie straps (as needed).

3 Install the self-cleaning decoration panel switch box cover, see "4.9 Plate work" [▸ 192].

4 Install the self-cleaning decoration panel, see "4.9 Plate work" [▸ 192].

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 WIRING HARNESS BETWEEN THE INDOOR UNIT MAIN PCB AND THE INTERCONNECTOR

1 Connect the wiring harness to the connectors X35A, X39A and X70A on the indoor unit main 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.

2 Route the wiring harness through the appropriate retainers and fix it using new tie straps (as needed).

3 Install the switch box cover of the indoor unit, see "4.9 Plate work" [▸ 192].

4 Install the self-cleaning decoration panel, see "4.9 Plate work" [▸ 192].

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.

4.15 Swing flap motor

4.15.1 Wall mounted indoor units

Checking procedures

To perform an electrical check of the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the swing flap motor connector from the indoor unit main PCB.

2 Measure the resistance between the following wires (pins) of the motor connector.

Result: The measurements MUST be as shown in the table below.

Swing flap motor	Wires	Measured resistance (Ω)
M1S	Red-Orange	279~321
	Red-Yellow	
	Red-Pink	
	Red-Blue	
	Orange-Yellow	558~648
	Orange-Pink	
	Orange-Blue	
	Yellow-Pink	
	Yellow-Blue	
	Pink-Blue	

Swing flap motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the swing flap motor, see "Repair procedures" [▸ 298].

4 Measure the resistance between the following pins of the connector on the swing flap motor.

Result: The measurements MUST be as shown in the table below.

Swing flap motor	Pins (Wires)	Measured resistance (Ω)
M1S	1-2 (Red-Orange)	279~321
	1-3 (Red-Yellow)	
	1-4 (Red-Pink)	
	1-5 (Red-Blue)	
	2-3 (Orange-Yellow)	558~648
	2-4 (Orange-Pink)	
	2-5 (Orange-Blue)	
	3-4 (Yellow-Pink)	
	3-5 (Yellow-Blue)	
	4-5 (Pink-Blue)	

Swing flap motor resistance measurements are correct?	Action
Yes	Replace the swing flap motor wiring harness, see "Repair procedures" [▸ 298].
No	Replace the swing flap motor, see "Repair procedures" [▸ 298].

Repair procedures

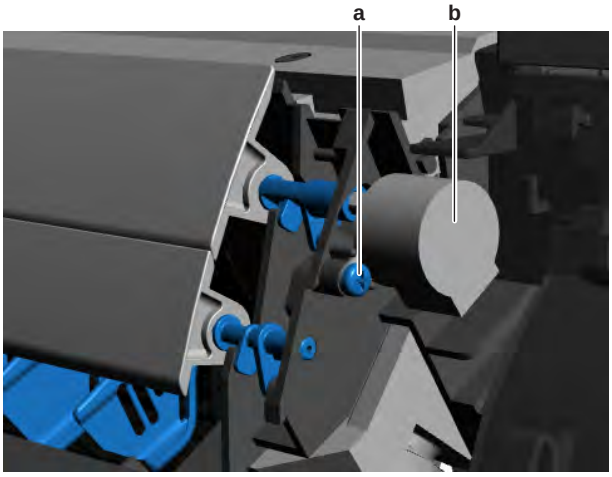
To remove the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1. Remove both swing flaps from the indoor unit (by clicking it out).
2. Remove the screw from the swing flap motor.



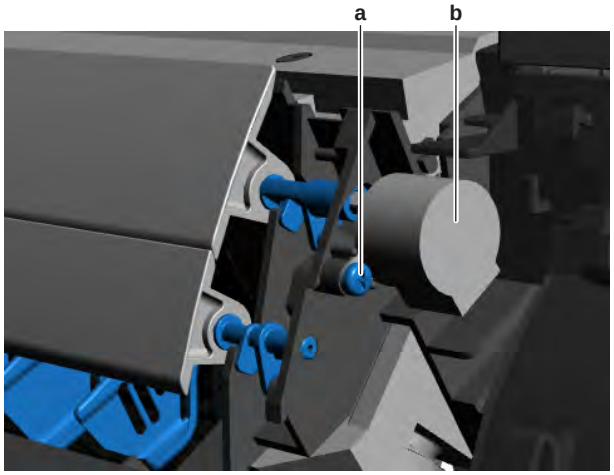
a Screw
b Swing flap motor

3. Remove the swing flap motor from the coupling piece.
4. Disconnect the connector from the swing flap motor.
5. To install the swing flap motor, see "Repair procedures" [▸ 298].

To install the swing flap motor

1 Connect the wiring harness to the swing flap motor.

2 Install the swing flap motor in the correct location on the indoor unit. Make sure the swing flap motor shaft is correctly inserted in the coupling piece.



a Screw
b Swing flap motor

3 Install and tighten the screw to fix the swing flap motor.

4 Install both swing flaps in the indoor unit (by clicking it on).

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 remove the swing flap motor wiring harness

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the wiring harness from the swing flap motor.

2 Cut all tie straps that fix the wiring harness.

3 Route the wiring harness out of the retainers.

4 Disconnect the wiring harness from the indoor unit main PCB.

5 To install the swing flap motor wiring harness, see "Repair procedures" [▸ 298].

To install the swing flap motor wiring harness

1 Connect the wiring harness to the swing flap motor.

2 Route the wiring harness through the appropriate retainers towards the indoor unit main PCB.

3 Connect the wiring harness to the indoor unit main 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.

4 Install new tie straps to fix the wiring harness as needed.

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.

4.15.2 Sensing cassette indoor units

Checking procedures

To perform an electrical check of the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

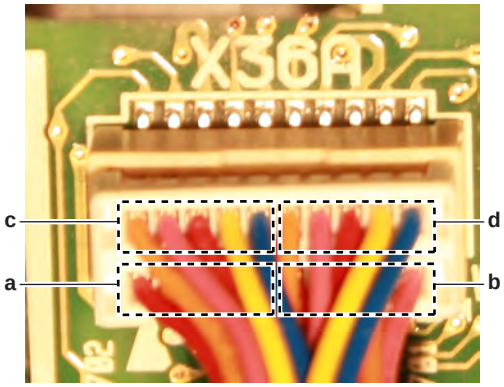
1 Disconnect the swing flap motor connector from the indoor unit main PCB.

2 Measure the resistance between the following wires (pins) of the motor connector.

Result: The measurements MUST be as shown in the table below.

Unit	Swing flap motor	Wires	Measured resistance (Ω)
FXZA with decoration panel BYFQ60B	M1S	Blue-Red	186~214
		Blue-Black	
		Blue-Brown	
		Blue-Yellow	
		Red-Black	372~428
		Red-Broxn	
		Red-Yellow	
		Black-Brwon	
		Black-Yellow	
		Brown-Yellow	

Unit	Swing flap motor	Wires	Measured resistance (Ω)
FXZA with decoration panel BYFQ60C FXFA	M1S M2S M3S M4S	Red-Orange	279~321
		Red-Yellow	
		Red-Pink	
		Red-Blue	
		Orange-Yellow	558~648
		Orange-Pink	
		Orange-Blue	
		Yellow-Pink	
		Yellow-Blue	
		Pink-Blue	



a M1S
b M2S
c M3S
d M4S

Swing flap motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 For FXFA and FXZA with decoration panel BYFQ60C: Remove the swing flap motor, see "Repair procedures" [▸ 303].

4 For FXZA with decoration panel BYFQ60B: Remove the decoration panel, see "4.9 Plate work" [▸ 192] and disconnect the swing flap motor connector.

5 Measure the resistance between the following pins of the connector on the swing flap motor.

Result: The measurements MUST be as shown in the table below.

Unit	Swing flap motor	Pins (Wires)	Measured resistance (Ω)
FXZA with decoration panel BYFQ60B	M1S	3-1 (Blue-Red)	186~214
		3-2 (Blue-Black)	
		3-4 (Blue- Yellow)	
		3-5 (Blue-Brown)	
		1-2 (Red-Black)	372~428
		1-4 (Red-Yellow)	
		1-5 (Red-Brown)	
		2-4 (Black-Yellow)	
		2-5 (Black-Brown)	
		4-5 (Yellow-Brown)	

Unit	Swing flap motor	Pins (Wires)	Measured resistance (Ω)
FXZA with decoration panel BYFQ60C FXFA	M1S M2S M3S M4S	1-2 (Red-Orange)	279~321
		1-3 (Red-Yellow)	
		1-4 (Red-Pink)	
		1-5 (Red-Blue)	
		2-3 (Orange-Yellow)	558~648
		2-4 (Orange-Pink)	
		2-5 (Orange-Blue)	
		3-4 (Yellow-Pink)	
		3-5 (Yellow-Blue)	
		4-5 (Pink-Blue)	

INFORMATION

For FXFA units with self-cleaning decoration panel BYCQ140E2G: The swing flap motors wiring harness consists of 2 parts. 1 part connecting the 4 swing flap motors to the intermediate connector and 1 part connecting the intermediate connector to the indoor unit main PCB. Check and replace the appropriate part of the wiring harness if needed.

Swing flap motor resistance measurements are correct?	Action
Yes	Replace the swing flap motor wiring harness, see "Repair procedures" [▸ 303].
No	Replace the swing flap motor, see "Repair procedures" [▸ 303].

Repair procedures

To remove the swing flap motor

FXFA

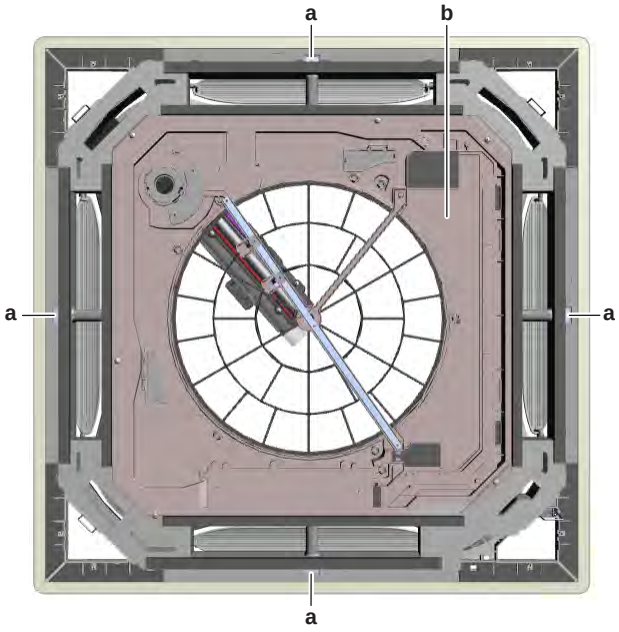
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the decoration panel, see "4.9 Plate work" [▸ 192].

1 For units with self-cleaning decoration panel: Remove the 4 screws and remove the self-cleaning assembly from the decoration panel.

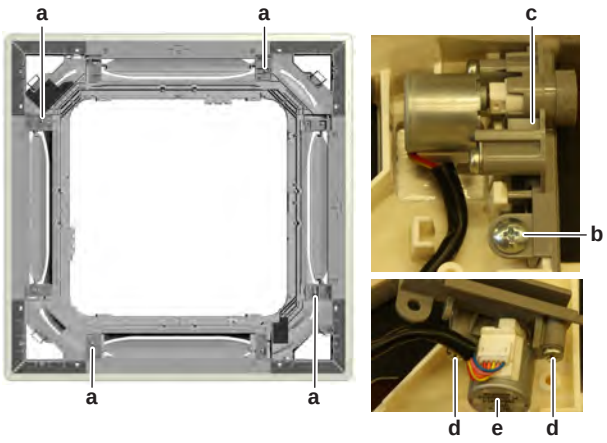


a Screw
b Self-cleaning assembly

2 On the back side of the decoration panel, remove the insulation as needed.

3 Remove the appropriate swing flap from the decoration panel (by clicking it out).

4 Remove the screw and remove the appropriate swing flap motor cover.



a Screw (cover)
b Screw (bearing assy)
c Bearing assy
d Screw (swing flap motor)
e Swing flap motor

5 Remove the screw from the appropriate bearing assembly.

6 Remove the bearing assembly and swing flap motor from the decoration panel.

7 Remove the 2 screws from the swing flap motor.

8 Remove the swing flap motor from the bearing assembly.

9 Disconnect the connector from the swing flap motor.

10 To install the swing flap motor, see "Repair procedures" [▸ 303].

FXZA with decoration panel BYFQ60C

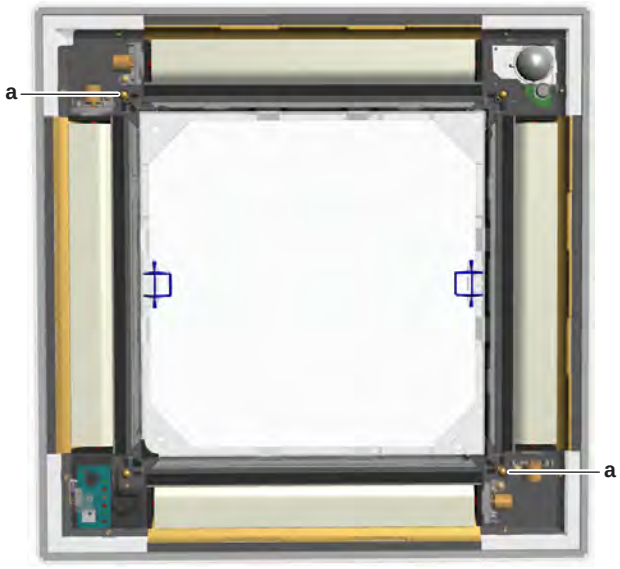
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the decoration panel, see "4.9 Plate work" [▸ 192].

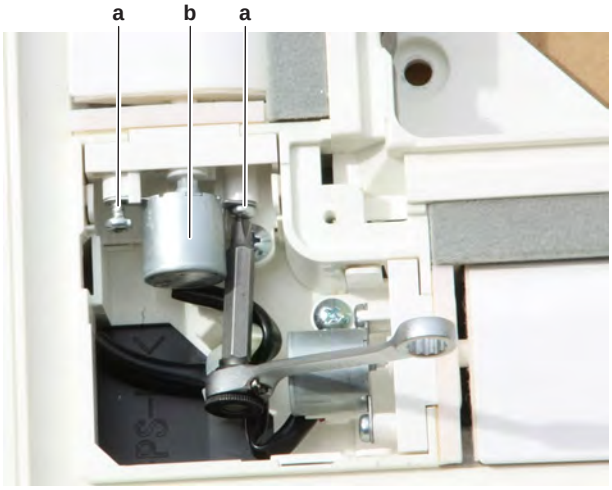
1 Remove the screw and remove the appropriate corner cover.



a Screw (corner cover)

2 Remove the appropriate swing flap from the decoration panel (by clicking it out).

3 Remove the 2 screws from the swing flap motor.



a Screw
b Swing flap motor

4 Remove the swing flap motor from the bearing.

5 Disconnect the connector from the swing flap motor.

6 To install the swing flap motor, see "Repair procedures" [▸ 303].

FXZA with decoration panel BYFQ60B

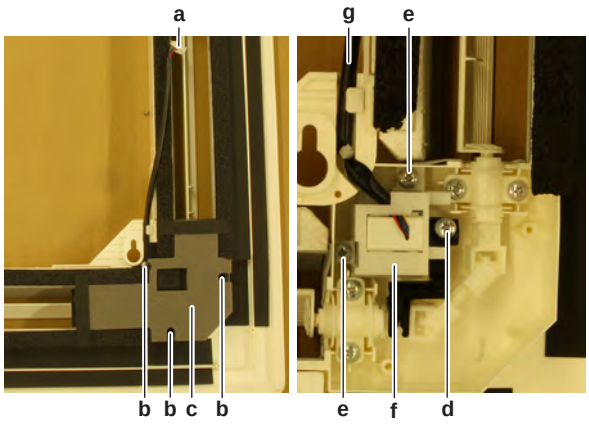
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

Prerequisite: Remove the decoration panel, see "4.9 Plate work" [▸ 192].

1 On the back side of the decoration panel, disconnect the swing flap motor connector.



a Connector
b Screw (cover)
c Cover
d Screw (coupling piece)
e Screw (swing flap motor bracket)
f Swing flap motor bracket
g Wiring harness

2 Remove the 3 screws and remove the cover.

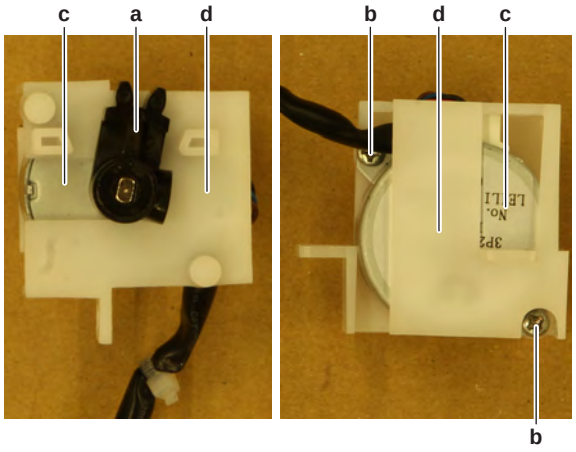
3 Remove the screw from the coupling piece.

4 Remove the 2 screws from the swing flap motor bracket.

5 Route the wiring harness out of the harness retainer.

6 Remove the swing flap motor and bracket from the decoration panel.

7 Remove the coupling piece from the swing flap motor shaft.



a Coupling piece
b Screw (swing flap motor)
c Swing flap motor

d Bracket

8 Remove the 2 screws from the swing flap motor.

9 Remove the swing flap motor from the bracket.

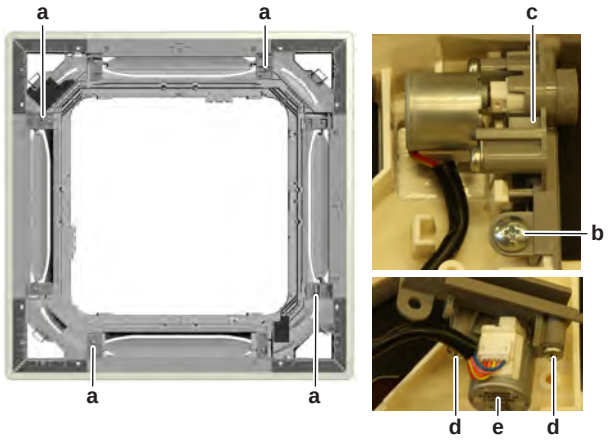
10 To install the swing flap motor, see "Repair procedures" [▸ 303].

To install the swing flap motor

FXFA

1 Connect the wiring harness to the swing flap motor.

2 Install the swing flap motor in the correct location on the bearing assembly. Make sure the swing flap motor shaft is correctly inserted.



a Screw (cover)
b Screw (bearing assy)
c Bearing assy
d Screw (swing flap motor)
e Swing flap motor

3 Install and tighten the 2 screws to fix the swing flap motor.

4 Install the bearing assembly with swing flap motor in the correct location on the decoration panel. Make sure the swing flap motor wiring harness is routed in the correct location.

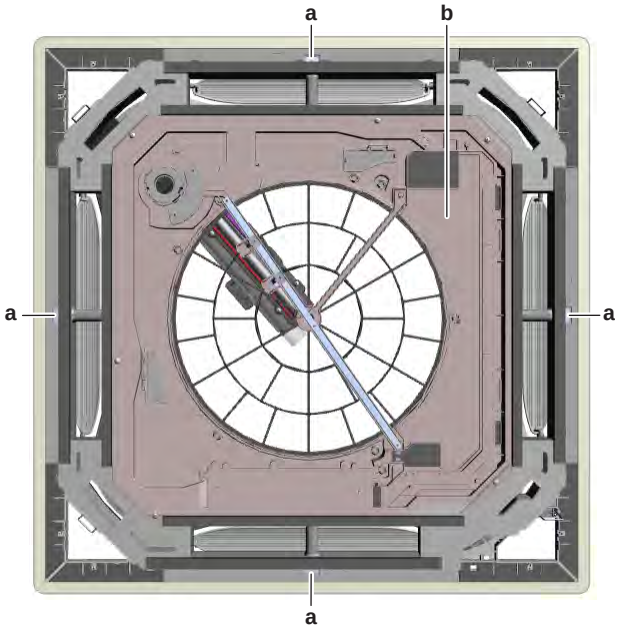
5 Install and tighten the screw to fix the bearing assembly to the decoration panel.

6 Install the appropriate swing flap motor cover in the correct location. Install and tighten the screw to fix the cover.

7 Install the appropriate swing flap (by clicking it on).

8 On the back side of the decoration panel, install the insulation as needed.

9 For units with self-cleaning decoration panel: Install the self-cleaning assembly in the correct location on the decoration panel. Make sure the wiring harness of the self-cleaning assembly is routed in the correct location. Install and tighten the 4 screws to fix the self-cleaning assembly.



a Screw
b Self-cleaning assembly

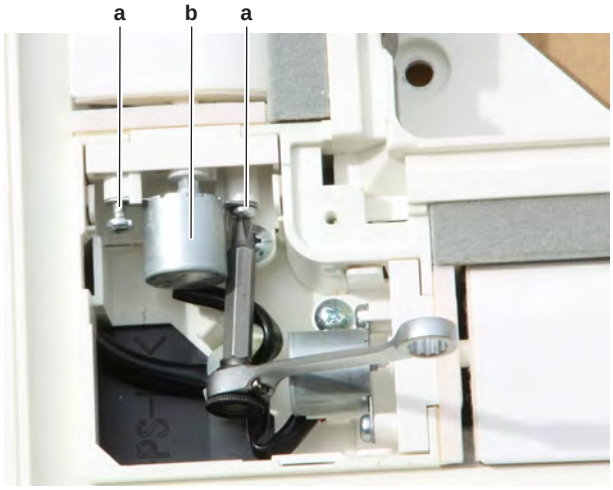
10 Install the decoration panel, see "4.9 Plate work" [▸ 192].

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.

FXZA with decoration panel BYFQ60C

1 Connect the wiring harness to the swing flap motor.

2 Install the swing flap motor in the correct location on the bearing. Make sure the swing flap motor shaft is correctly inserted.

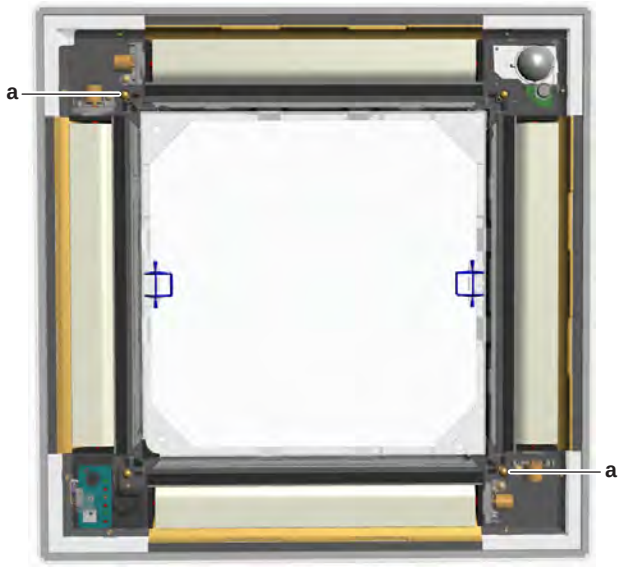


a Screw
b Swing flap motor

3 Install and tighten the 2 screws to fix the swing flap motor.

4 Install the appropriate swing flap (by clicking it on).

5 Install the appropriate corner cover in the correct location on the decoration panel.



a Screw (corner cover)

6 Install and tighten the screw to fix the corner cover.

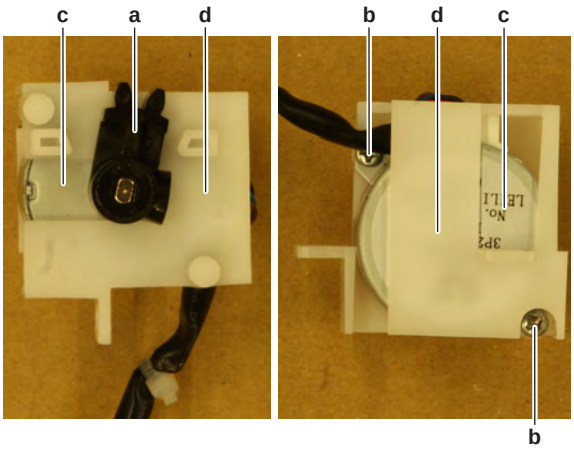
7 Install the decoration panel, see "4.9 Plate work" [▸ 192].

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.

FXZA with decoration panel BYFQ60B

1 Install the swing flap motor in the correct location on the bracket.

2 Install and tighten the 2 screws to fix the swing flap motor.

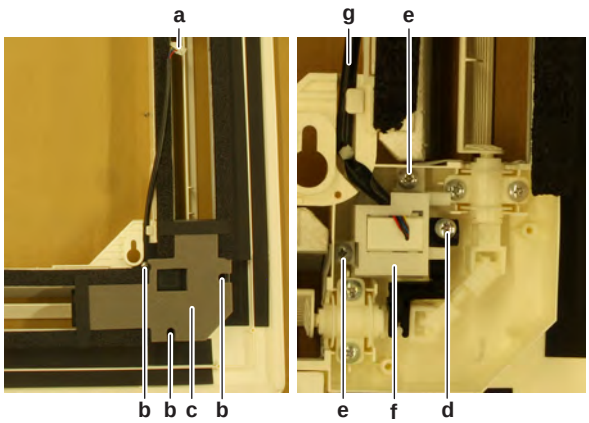


a Coupling piece
b Screw (swing flap motor)
c Swing flap motor
d Bracket

3 Install the coupling piece on the swing flap motor shaft.

4 Install the swing flap motor and bracket in the correct location on the decoration panel.

5 Install the 2 screws on the bracket. Do NOT yet tighten the screws.



a Connector
b Screw (cover)
c Cover
d Screw (coupling piece)
e Screw (swing flap motor bracket)
f Swing flap motor bracket
g Wiring harness

6 Connect the coupling piece to the link.

7 Install and tighten the screw to fix the coupling piece to the link.

8 Tighten the 2 screws to fix the swing flap motor bracket.

9 Route the swing flap motor wiring harness through the harness retainer.

10 Install the cover in the correct location on the decoration panel.

11 Install and tighten the 3 screws to fix the cover.

12 Connect the swing flap motor connector to the wiring harness (connecting the swing flap motor to the indoor unit main PCB).

13 Install the decoration panel, see "4.9 Plate work" [▸ 192].

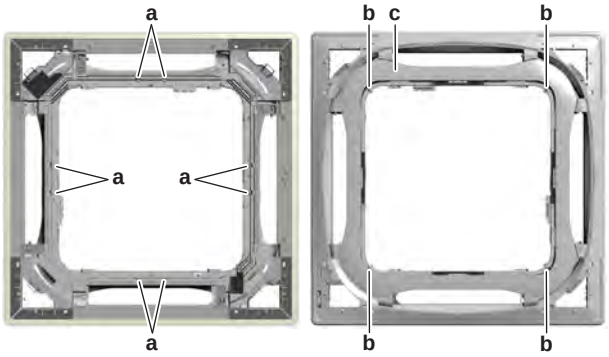
Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

To remove the swing flap motor wiring harness

FXFA

Prerequisite: Remove all 4 swing flap motors, see "Repair procedures" [▸ 303].

1 At the back side of the decoration panel, remove the 8 screws that fix the inner decorative ring.



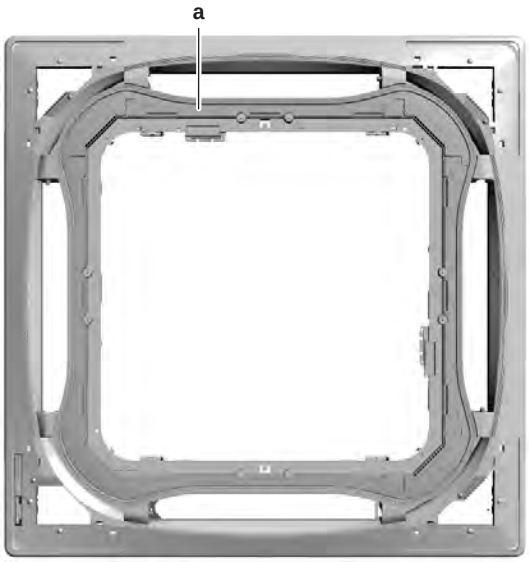
a Screw (inner decorative ring – back side)
b Screw (inner decorative ring – front side)

c Inner decorative ring

2 At the front side of the decoration panel, remove the 4 screws that fix the inner decorative ring.

3 Remove the inner decorative ring from the decoration panel.

4 Remove the inner insulation ring from the decoration panel.



a Inner insulation ring

5 Cut all tie straps that fix the swing flap motors wiring harness.

6 Route the wiring harness out of the appropriate harness retainers.

7 Remove the swing flap motors wiring harness from the decoration panel.

8 To install the swing flap motors wiring harness, see "Repair procedures" [▸ 303].

- TO REMOVE THE WIRING HARNESS CONNECTING THE INTERMEDIATE CONNECTOR TO THE INDOOR UNIT MAIN PCB (ONLY FOR DECORATION PANEL BYCQ140E2G)

Prerequisite: Remove the decoration panel, see "4.9 Plate work" [▸ 192].

1 Disconnect the wiring harness from the indoor unit main PCB.

2 Cut all tie straps that fix the wiring harness and route the wiring harness out of the appropriate retainers.

3 Remove the wiring harness.

4 To install the wiring harness, see "Repair procedures" [▸ 303].

FXZA with decoration panel BYFQ60B

Prerequisite: Remove the decoration panel, see "4.9 Plate work" [▸ 192].

1 At the back side of the decoration panel, disconnect the swing flap motor connector from the wiring harness (connecting the swing flap motor to the indoor unit main PCB).

2 Route the wiring harness (connecting the swing flap motor to the indoor unit main PCB) out of the appropriate harness retainers and cut all tie straps that fix the wiring harness.

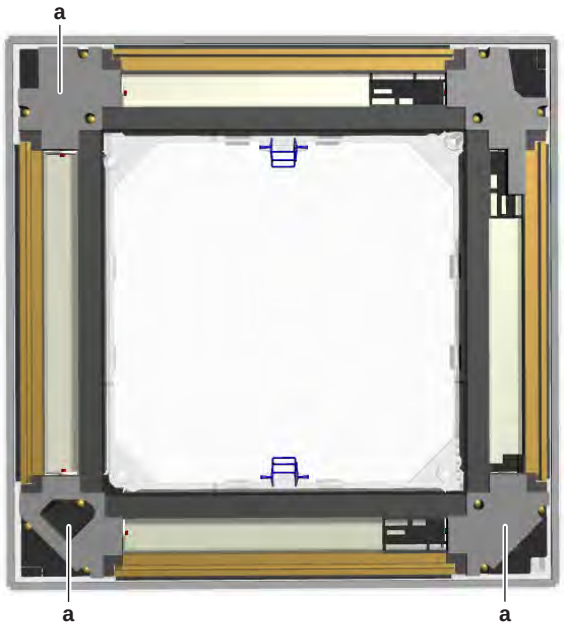
3 Remove the wiring harness from the decoration panel.

4 To install the wiring harness, see "Repair procedures" [▸ 303].

FXZA with decoration panel BYFQ60C

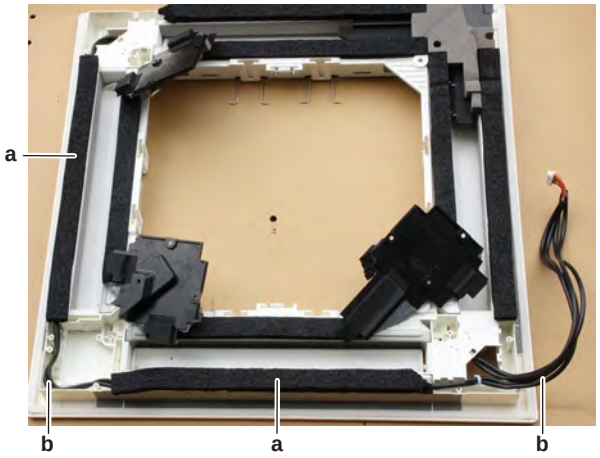
Prerequisite: Remove the 4 swing flap motors, see "Repair procedures" [▶ 303].

1 At the back side of the decoration panel, remove the screws and remove the 3 corner covers as indicated in the image below.



a Cover

2 Carefully remove the black insulation covering the swing flap motors wiring harness.



a Insulation
b Swing flap motors wiring harness

3 Route the wiring harness out of the appropriate harness retainers.

4 Remove the swing flap motors wiring harness from the decoration panel.

5 To install the wiring harness, see "Repair procedures" [▶ 303].

To install the swing flap motor wiring harness

FXFA

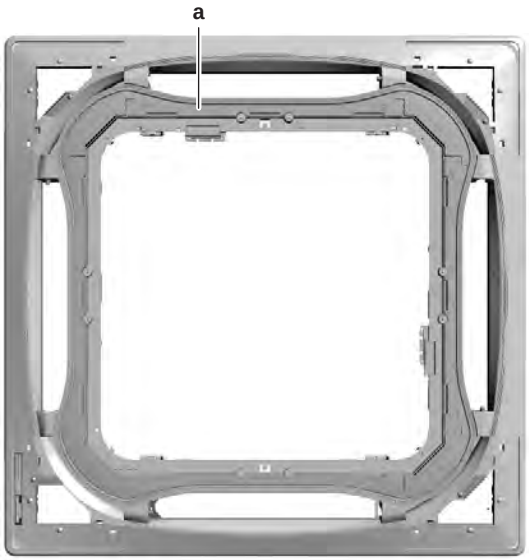
1 Route the wiring harness in all correct locations. Do NOT yet route the wiring harness through the appropriate retainers.

2 Connect the wiring harness to the 4 swing flap motors and make sure swing flap motors are in the correct location (for installation). Do NOT yet install the swing flap motors on the decoration panel.

3 Route the wiring harness through the appropriate retainers.

4 Install new tie straps to fix the wiring harness to the decoration panel.

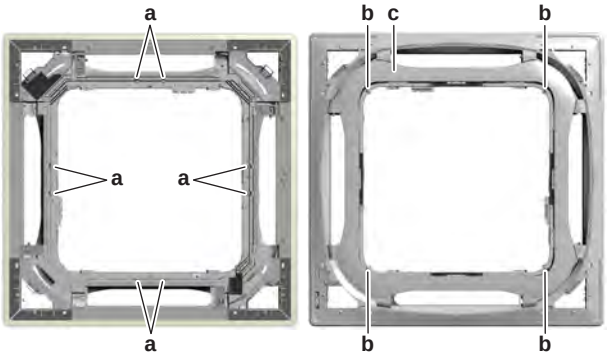
5 Install the inner insulation ring in the correct location on the decoration panel.



a Inner insulation ring

6 Install the inner decorative ring in the correct location on the decoration panel.

7 Install and tighten the 4 screws at the front side of the decoration panel to fix the inner decorative ring.



a Screw (inner decorative ring – back side)
b Screw (inner decorative ring – front side)
c Inner decorative ring

8 Install and tighten the 8 screws at the back side of the decoration panel to fix the inner decorative ring.

9 Install all 4 swing flap motors, see "Repair procedures" [▸ 303].

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 WIRING HARNESS CONNECTING THE INTERMEDIATE CONNECTOR TO THE INDOOR UNIT MAIN PCB (ONLY FOR DECORATION PANEL BYCQ140E2G)

1 Connect the wiring harness connector to the indoor unit main PCB.

2 Route the wiring harness through the appropriate harness retainers and fix using new tie straps.

3 Install the decoration panel, see "4.9 Plate work" [▸ 192].

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.

FXZA with decoration panel BYFQ60B

1 At the back side of the decoration panel, connect the swing flap motor connector to the wiring harness (connecting the swing flap motor to the indoor unit main PCB).

2 Route the wiring harness (connecting the swing flap motor to the indoor unit main PCB) through the appropriate retainers.

3 Install new tie straps to fix the wiring harness to the decoration panel.

4 Install the decoration panel, see "4.9 Plate work" [▸ 192].

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.

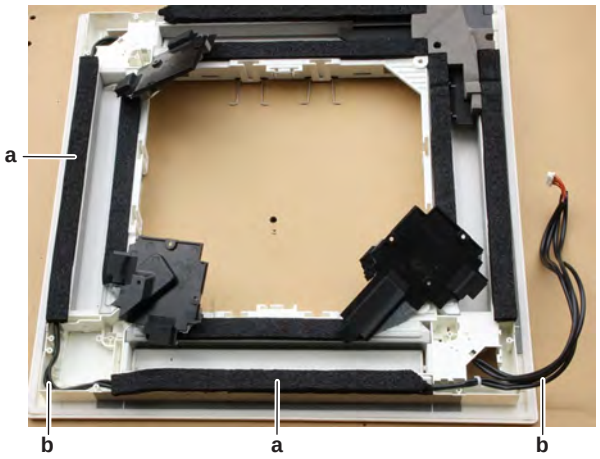
FXZA with decoration panel BYFQ60C

1 Route the wiring harness in all correct locations. Do NOT yet route the wiring harness through the appropriate retainers.

2 Connect the wiring harness to the 4 swing flap motors and make sure swing flap motors are in the correct location (for installation). Do NOT yet install the swing flap motors on the decoration panel.

3 Route the wiring harness through the appropriate retainers.

4 Install the black insulation in the correct location on the decoration panel.



a Insulation
b Swing flap motors wiring harness

5 Install the 3 corner covers in the correct location on the decoration panel.

6 Install and tighten the screws to fix the corner covers.

7 Install the 4 swing flap motors, see "Repair procedures" [▸ 303].

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.

4.15.3 Suspend (1-way) indoor units

Checking procedures

To perform an electrical check of the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the swing flap motor connector from the indoor unit main PCB.

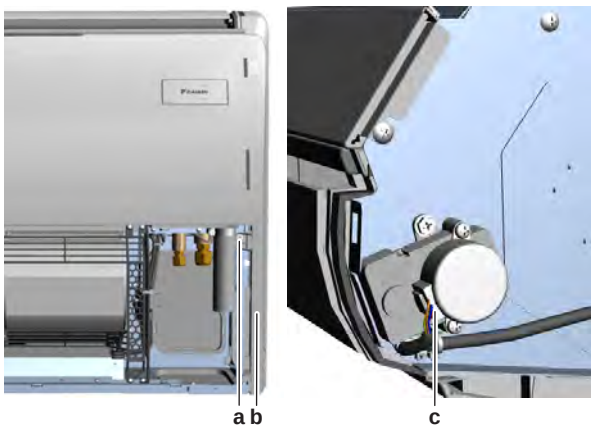
2 Measure the resistance between the following wires (pins) of the motor connector.

Result: The measurements MUST be as shown in the table below.

Swing flap motor	Wires	Measured resistance (Ω)
M1S	Red-Blue	223.2~256.8
	Red-Brown	
	Red-Black	
	Red-Yellow	
	Blue-Brown	446.4~513.6
	Blue-Black	
	Blue-Yellow	
	Brown-Black	
	Brown-Yellow	
	Black-Yellow	

Swing flap motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the screw and remove the right side panel from the unit.



a Screw
b Right side panel
c Swing flap motor connector

4 Disconnect the connector from the swing flap motor.

5 Measure the resistance between the following pins of the connector on the swing flap motor.

Result: The measurements MUST be as shown in the table below.

Swing flap motor	Pins (Wires)	Measured resistance (Ω)
M1S	1-2 (Red-Black)	223.2~256.8
	1-3 (Red-Blue)	
	1-4 (Red-Yellow)	
	1-5 (Red-Brown)	
	2-3 (Black-Blue)	446.4~513.6
	2-4 (Black-Yellow)	
	2-5 (Black-Brown)	
	3-4 (Blue-Yellow)	
	3-5 (Blue-Brown)	
	4-5 (Yellow-Brown)	

Swing flap motor resistance measurements are correct?	Action
Yes	Replace the swing flap motor wiring harness, see "Repair procedures" [▸ 315].
No	Replace the swing flap motor, see "Repair procedures" [▸ 315].

Repair procedures

To remove the swing flap motor

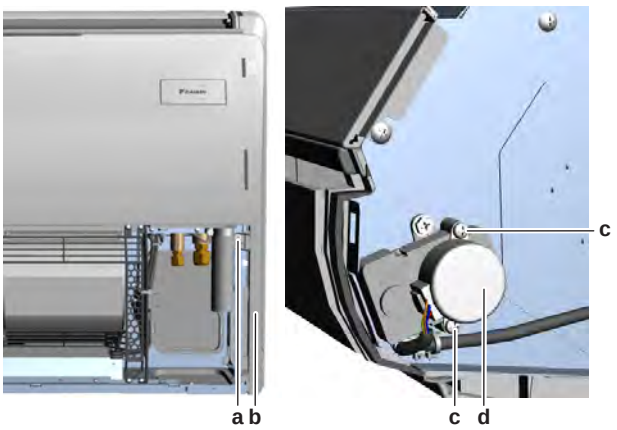
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the screw from the right side plate.

2 Slide the right side plate to the front and remove them from the unit.



a Screw (right side plate)
b Right side plate
c Screw (swing flap motor)
d Swing flap motor

3 Remove the 2 screws from the swing flap motor.

4 Remove the swing flap motor from the gearcase assembly.

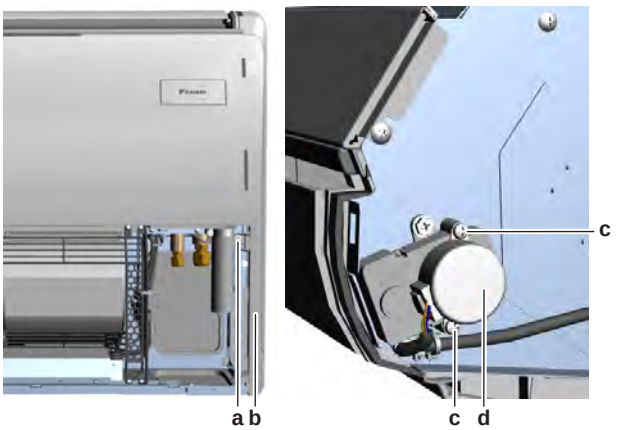
5 Disconnect the connector from the swing flap motor.

6 To install the swing flap motor, see "Repair procedures" [▸ 315].

To install the swing flap motor

1 Connect the wiring harness to the swing flap motor.

2 Install the swing flap motor in the correct location on the gearcase assembly. Make sure the swing flap motor shaft is correctly inserted.



a Screw (right side plate)
b Right side plate
c Screw (swing flap motor)
d Swing flap motor

3 Install and tighten the 2 screws to fix the swing flap motor.

4 Slide the right side plate in the correct location on the unit.

5 Install and tighten the screw to fix the right side plate.

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 remove the swing flap motor wiring harness

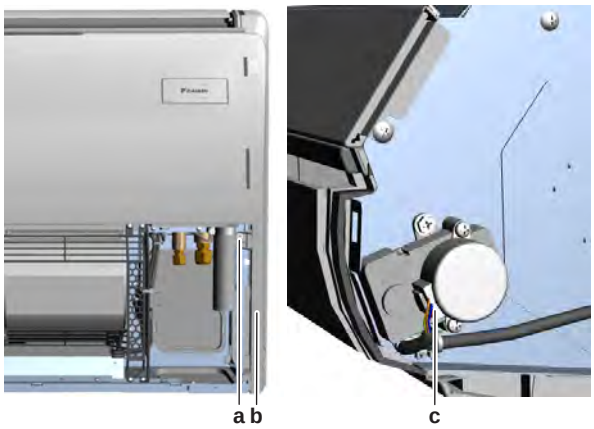
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the screw from the right side plate.

2 Slide the right side plate to the front and remove them from the unit.



a Screw (right side plate)
b Right side plate
c Swing flap motor connector

3 Disconnect the wiring harness from the swing flap motor.

4 Cut all tie straps that fix the wiring harness.

5 Remove the screws that fix the wiring harness brackets.

6 Route the wiring harness out of the appropriate retainers.

7 Disconnect the wiring harness from the indoor unit main PCB.

8 To install the swing flap motor wiring harness, see "Repair procedures" [▸ 315].

To install the swing flap motor wiring harness

1 Connect the wiring harness to the swing flap motor.

2 Route the wiring harness through the appropriate retainers towards the indoor unit main PCB.

3 Connect the wiring harness to the indoor unit main PCB.

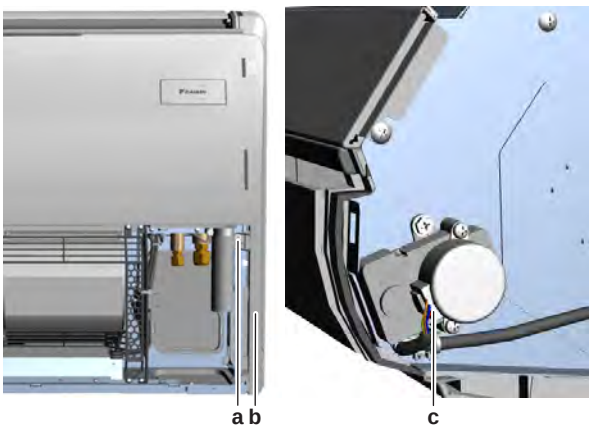
WARNING

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.

4 Install new tie straps to fix the wiring harness as needed.

5 Install and tighten the screws to fix the wiring harness brackets.

6 Slide the right side plate in the correct location on the unit.



a Screw (right side plate)
b Right side plate
c Swing flap motor connector

7 Install and tighten the screw to fix the right side plate.

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.

4.15.4 Suspend (4-way) indoor units

Checking procedures

To perform an electrical check of the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

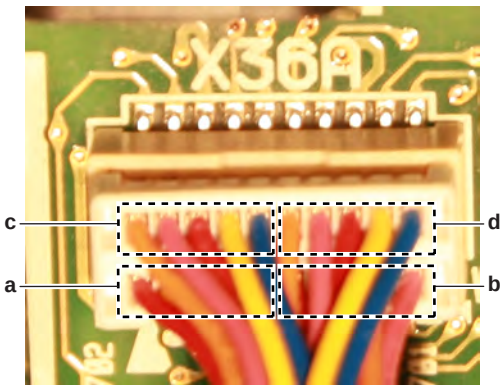
Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Disconnect the swing flap motor connector from the indoor unit main PCB.

2 Measure the resistance between the following wires (pins) of the motor connector.

Result: The measurements MUST be as shown in the table below.

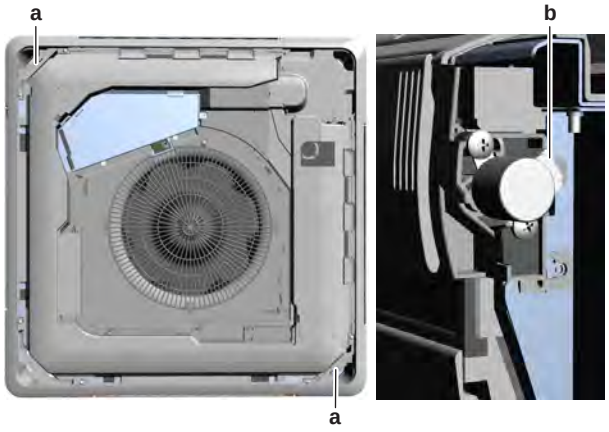
Swing flap motor	Wires	Measured resistance (Ω)
M1S M2S M3S M4S	Red-Orange	279~321
	Red-Yellow	
	Red-Pink	
	Red-Blue	
	Orange-Yellow	558~648
	Orange-Pink	
	Orange-Blue	
	Yellow-Pink	
	Yellow-Blue	
	Pink-Blue	



a M1S
b M2S
c M3S
d M4S

Swing flap motor resistance measurements are correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Continue with the next step.

3 Remove the screw and remove the corner cover(s) from the unit.



a Screw (corner cover)
b Swing flap motor connector

4 Disconnect the connector from the swing flap motor.

5 Measure the resistance between the following pins of the connector on the swing flap motor.

Result: The measurements MUST be as shown in the table below.

Swing flap motor	Pins (Wires)	Measured resistance (Ω)
M1S M2S M3S M4S	1-2 (Red-Orange)	279~321
	1-3 (Red-Yellow)	
	1-4 (Red-Pink)	
	1-5 (Red-Blue)	
	2-3 (Orange-Yellow)	558~648
	2-4 (Orange-Pink)	
	2-5 (Orange-Blue)	
	3-4 (Yellow-Pink)	
	3-5 (Yellow-Blue)	
	4-5 (Pink-Blue)	

Swing flap motor resistance measurements are correct?	Action
Yes	Replace the swing flap motor wiring harness, see "Repair procedures" [▸ 320].
No	Replace the swing flap motor, see "Repair procedures" [▸ 320].

Repair procedures

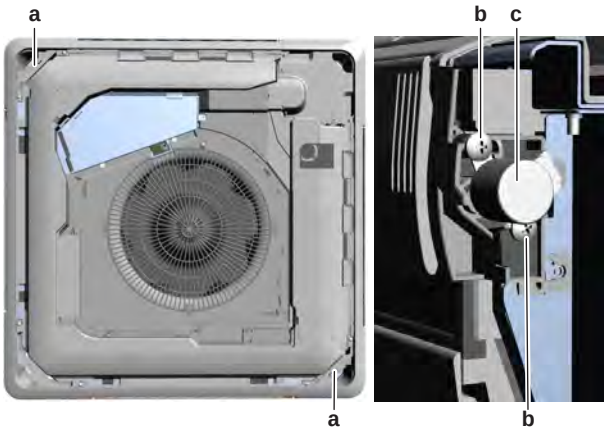
To remove the swing flap motor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the screw and remove the corner cover(s) from the unit.



a Screw (corner cover)
b Screw (swing flap motor)
c Swing flap motor

2 Remove the 2 screws from the swing flap motor.

3 Remove the swing flap motor from the bearing assembly.

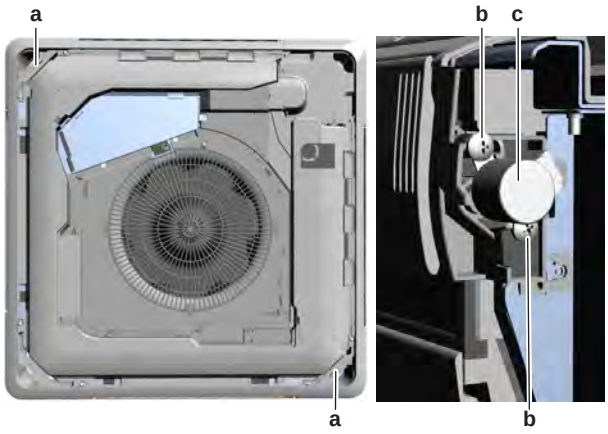
4 Disconnect the connector from the swing flap motor.

5 To install the swing flap motor, see "Repair procedures" [▸ 320].

To install the swing flap motor

1 Connect the wiring harness to the swing flap motor.

2 Install the swing flap motor in the correct location on the bearing assembly. Make sure the swing flap motor shaft is correctly inserted.



a Screw (corner cover)
b Screw (swing flap motor)
c Swing flap motor

3 Install and tighten the 2 screws to fix the swing flap motor.

4 Install the corner cover(s) in the correct location on the unit.

5 Install and tighten the screw to fix the corner cover(s).

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.

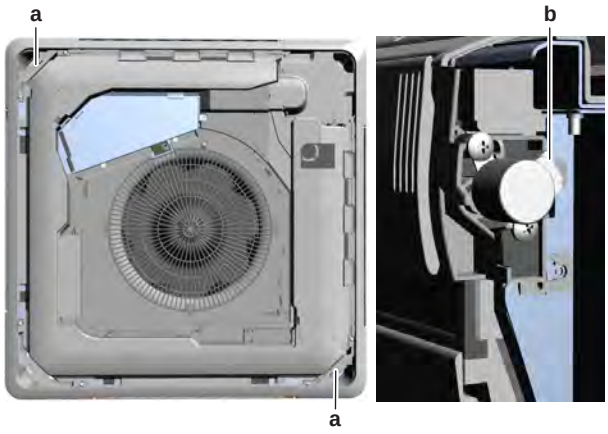
To remove the swing flap motor wiring harness

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Remove the screw and remove the corner covers from the unit.

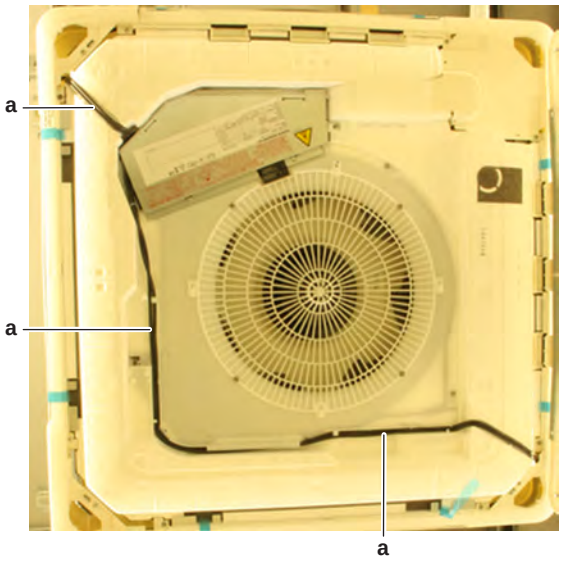


a Screw (corner cover)
b Swing flap motor connector

2 Disconnect the swing flap motor wiring harness connectors from all 4 swing flap motors.

3 Disconnect the swing flap motor wiring harness connector from the indoor unit main PCB.

4 Route the wiring harness out of the appropriate harness retainers and cut all tie straps that fix the wiring harness.



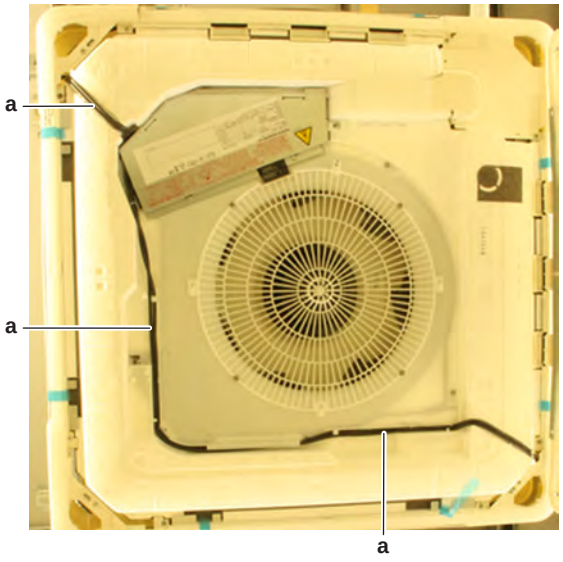
a Swing flap motor wiring harness

5 Remove the wiring harness from the unit.

6 To install the wiring harness, see "Repair procedures" [▸ 320].

To install the swing flap motor wiring harness

1 Route the wiring harness through the appropriate retainers. Route the 4 swing flap motor connectors to the correct location.



a Swing flap motor wiring harness

2 Connect the swing flap motor wiring harness connectors to the 4 swing flap motors.

3 Route the swing flap motor wiring harness inside the switch box and though the appropriate retainers towards the indoor unit main PCB.

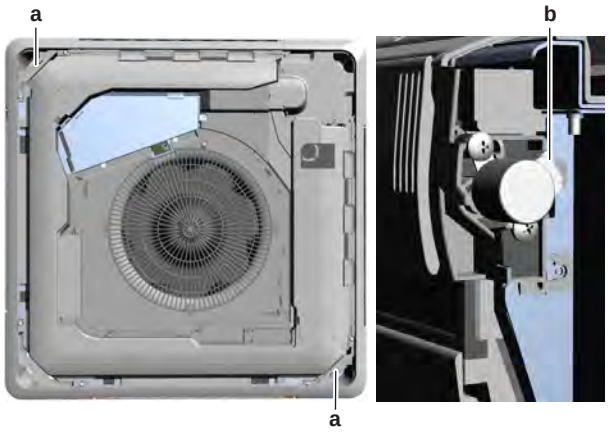
4 Connect the swing flap motor wiring harness connector to the indoor unit main PCB.

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 Install new tie straps to fix the wiring harness to the unit.

6 Install the corner covers in the correct location on the unit.



a Screw (corner cover)
b Swing flap motor connector

7 Install and tighten the screws to fix the corner covers.

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.

4.16 Thermistors

4.16.1 Checking procedures

INFORMATION

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

To perform a mechanical check of the specific thermistor

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Locate the thermistor and remove the insulation if needed. Check that the thermistor is correctly installed and that there is thermal contact between the thermistor and the piping or ambient (for air thermistor).

Is the thermistor correctly installed (thermal contact between the thermistor and the piping)?	Action
Yes	Perform an electrical check of the specific thermistor, see "4.16.1 Checking procedures" [▶ 323].
No	Correctly install the thermistor, see "4.16.2 Repair procedures" [▶ 326].

To perform an electrical check of the specific thermistor

1 First perform a mechanical check of the thermistor, see "4.16.1 Checking procedures" [▶ 323].

2 Locate the thermistor.

> **INFORMATION**
>
> Remove the thermistor from its holder if not reachable with a contact thermometer.

3 Measure the temperature using a contact thermometer.

FXFA

Name	Symbol	Location (PCB)	Connector (pins)	Reference (table)
Suction air thermistor	R1T	A1P (I/U)	X16A:1-2	A
Refrigerant liquid thermistor	R2T	A1P (I/U)	X88A:1-2	B
Gas thermistor	R3T	A1P (I/U)	X88A:3-4	C

FXAA + FXZA + FXSA + FXDA + FXUA + FXHA + FXMA

Name	Symbol	Location (PCB)	Connector (pins)	Reference (table)
Suction air thermistor	R1T	A1P (I/U)	X16A:1-2	A
Refrigerant liquid thermistor	R2T	A1P (I/U)	X18A:1-2	B
Gas thermistor	R3T	A1P (I/U)	X17A:1-3	C

4 Determine the thermistor resistance that matches the measured temperature.

Thermistor – Table A

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
–30	361.8	5	51.0	40	10.6	75	2.9
–25	265.5	10	39.1	45	8.7	80	2.5
–20	196.6	15	31.5	50	7.2	85	2.1
–15	147.6	20	25.0	55	5.9	90	1.8
–10	111.7	25	20.0	60	4.9		
–5	85.3	30	16.1	65	4.1		
0	65.7	35	13.0	70	3.5		

Thermistor – Table B

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
–30	364.4	5	51.1	40	10.6	75	3.0
–25	267.0	10	39.1	45	8.7	80	2.5
–20	197.8	15	31.5	50	7.2	85	2.1
–15	148.1	20	25.0	55	6.0	90	1.8
–10	112.0	25	20.0	60	5.0		
–5	85.5	30	16.1	65	4.2		
0	65.8	35	13.0	70	3.5		

Thermistor – Table C

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
–30	352.1	5	51.2	40	10.7	75	3.0
–25	261.2	10	39.3	45	8.8	80	2.5
–20	195.4	15	31.6	50	7.3	85	2.2
–15	147.3	20	25.2	55	6.0	90	1.9
–10	111.8	25	20.1	60	5.0		
–5	85.5	30	16.2	65	4.2		
0	65.8	35	13.2	70	3.5		

5 Disconnect the thermistor connector from the appropriate PCB.

6 Measure the resistance between the appropriate pins of the thermistor connector.

7 Check that the measured resistance value matches the resistance determined through the measured temperature (earlier step in the procedure).

- E.g. R1T thermistor:
- Measured temperature with contact thermometer: 23.1°C,
- Resistance value determined through temperature (using the thermistor table A):
  Resistance at 23°C: 21.90 kΩ,
  Resistance at 24°C: 20.90 kΩ,
- Disconnect connector X16A and measure resistance between the thermistor wires:
  Measured resistance: 21.86 kΩ,
- Measured resistance value is inside the range. R1T thermistor passes the check.

INFORMATION

All thermistors have a resistance tolerance of 3%.

INFORMATION

Connect the service monitoring tool to the unit or use field settings mode 1 (see service manual of the outdoor unit) to monitor the thermistors.

If the measured resistance value matches the resistance determined through the measured temperature, but the temperature for the corresponding thermistor via service monitoring tool or field settings mode 1 is NOT correct, replace the applicable PCB.

Does the measured resistance of the thermistor match with the temperature determined resistance?	Action
Yes	Thermistor is OK. Return to the troubleshooting of the specific error and continue with the next procedure.
No	Replace the specific thermistor, see "4.16.2 Repair procedures" [▸ 326].

4.16.2 Repair procedures

INFORMATION

Procedures described below are valid for all units. Note that NOT all units are shown in the images and therefore your unit may look slightly different.

To remove the thermistor

Indoor unit air (room) thermistor

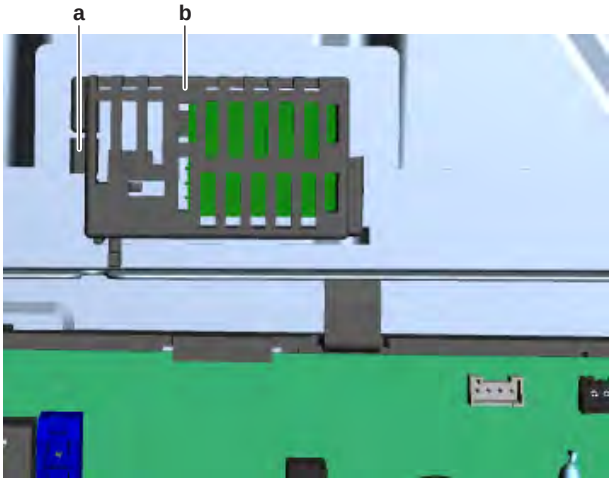
Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

1 Remove the required plate work, see "4.9 Plate work" [▸ 192].

- FXUA + FXFA

1 Push the retainer lip and remove the thermistor bracket from the unit.



a Retainer lip
b Thermistor bracket

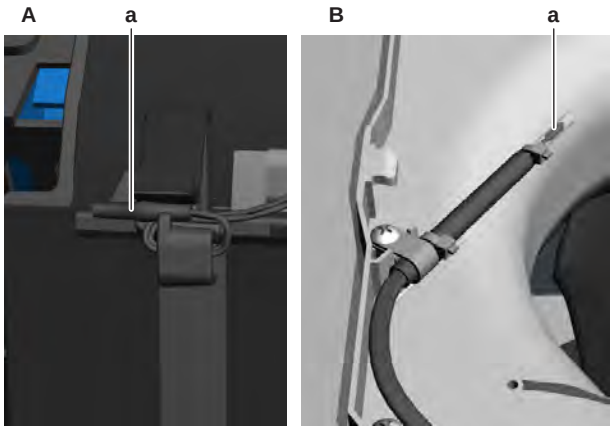
2 Remove the air thermistor from the bracket.

3 Cut all tie straps that fix the thermistor harness and route the harness out of the retainers.

4 Disconnect the thermistor connector from the indoor unit main PCB and remove the thermistor.

- OTHER INDOOR UNITS

1 Remove the screw from the thermistor bracket or cut the tie strap(s) and remove the thermistor from its location or holder.



A FXAA unit
B FXZA unit
a Air thermistor

2 Cut all tie straps that fix the thermistor harness and route the harness out of the retainers (if applicable).

3 Disconnect the thermistor connector from the indoor unit main PCB and remove the thermistor.

Other refrigerant side thermistors

Prerequisite: Stop the unit operation via the user interface.

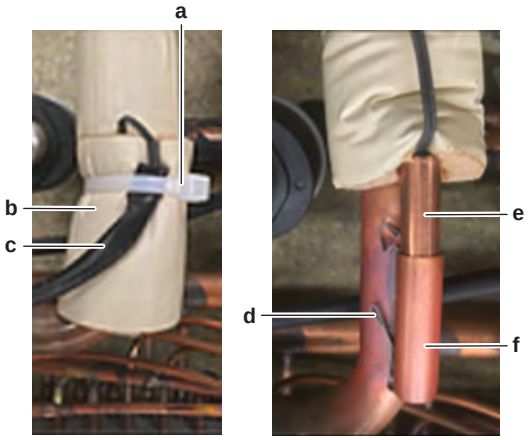
Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Locate the thermistor that needs to be removed.

- THERMISTOR IN HOLDER

1 If applicable, cut the tie strap(s) that fix the insulation and the thermistor wire.



a Tie strap
b Insulation
c Thermistor wire
d Clip

e Thermistor
f Thermistor holder

2 If applicable, cut and remove the insulation.

3 Pull the clip that fixes the thermistor.

4 Remove the thermistor from the thermistor holder.

5 Cut all tie straps that fix the thermistor wiring harness.

6 Disconnect the thermistor connector from the indoor unit main PCB and remove the thermistor.

INFORMATION

Some of the thermistors are wired to the same connector. See connector and pin information of the thermistors at the start of the electrical check procedure and "7.2 Wiring diagram" [▸ 359]. ALWAYS replace the complete set of thermistors wired to the same connector.

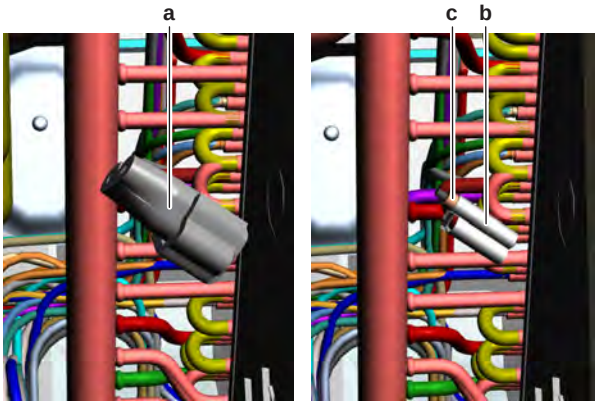
7 When removing the complete set of thermistors wired to the same connector:

- Remove all other thermistors wired to the connector from their thermistor holder,
- Disconnect the thermistor connector,
- Remove the complete set of thermistors.

8 To install the thermistor, see "4.16.2 Repair procedures" [▸ 326].

- THERMISTOR IN CLIP

1 Remove the insulation.



a Insulation
b Clip
c Thermistor

2 Remove the clip an thermistor from the refrigerant piping.

3 Remove the thermistor from the clip.

4 Cut all tie straps that fix the thermistor wiring harness.

5 Disconnect the thermistor connector from the indoor unit main PCB and remove the thermistor.

INFORMATION

Some of the thermistors are wired to the same connector. See connector and pin information of the thermistors at the start of the electrical check procedure and "7.2 Wiring diagram" [▸ 359]. ALWAYS replace the complete set of thermistors wired to the same connector.

6 When removing the complete set of thermistors wired to the same connector:

- Remove all other thermistors wired to the connector from their thermistor holder,
- Disconnect the thermistor connector,
- Remove the complete set of thermistors.

7 To install the thermistor, see "4.16.2 Repair procedures" [▶ 326].

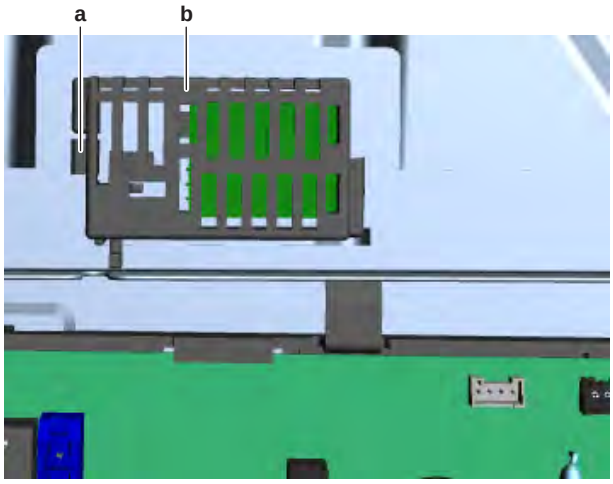
To install the thermistor

Indoor unit air (room) thermistor

- FXUA + FXFA

1 Install the air thermistor in the correct location on the bracket.

2 Install the thermistor bracket in the correct location on the unit.



a Retainer lip
b Thermistor bracket

3 Route the thermistor harness through the appropriate retainers towards the indoor unit main PCB.

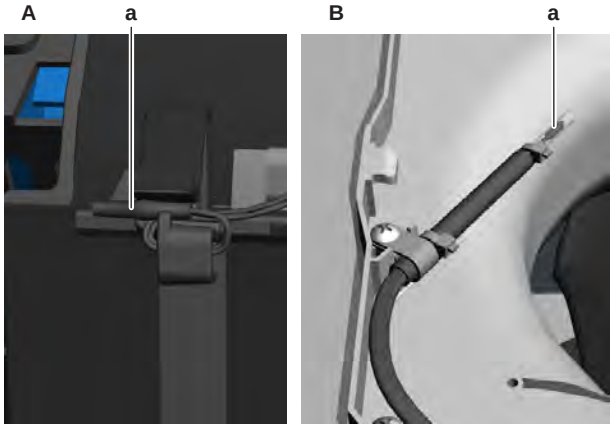
4 Connect the thermistor harness to the indoor unit main PCB.

> **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 thermistor harness using new tie straps.

- OTHER INDOOR UNITS

1 Install the air thermistor in the correct location or holder.



A FXAA unit
B FXZA unit
a Air thermistor

2 Fix the air thermistor using new tie strap(s) or install and tighten the screw to fix the thermistor bracket.

3 Route the thermistor harness through the appropriate retainers (if applicable) towards the indoor unit main PCB.

4 Connect the thermistor harness to the indoor unit main PCB.

WARNING

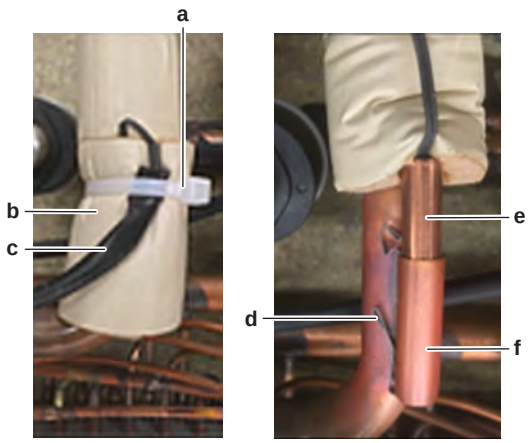
When reconnecting a connector to the PCB, make sure to connect it on the correct location and do NOT apply force, as this may damage the connector or connector pins of the PCB.

5 Fix the thermistor harness using new tie straps.

Other refrigerant side thermistors

- THERMISTOR IN HOLDER

1 Pull the clip and install the thermistor in the specific thermistor holder. Make sure the clip is in the correct position (blocking the thermistor).



a Tie strap
b Insulation
c Thermistor wire
d Clip
e Thermistor
f Thermistor holder

2 Route the thermistor harness through the appropriate retainers (if applicable) towards the indoor unit main PCB.

3 Connect the thermistor connector to the indoor unit main PCB.

INFORMATION

Some of the thermistors are wired to the same connector. See connector and pin information of the thermistors at the start of the electrical check procedure and "7.2 Wiring diagram" [▸ 359]. ALWAYS replace the complete set of thermistors wired to the same connector.

4 When installing the complete set of thermistors wired to the same connector:

- Install all other thermistors wired to the connector in their thermistor holder,
- Route the thermistor harness of all thermistors towards the appropriate PCB or intermediate connector,
- Connect the thermistor connector.

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.

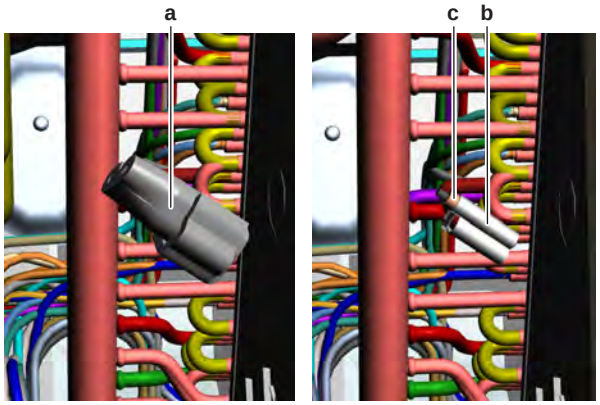
5 Fix the thermistor wiring harness using new tie straps.

6 If applicable, install the insulation around the thermistor and fix it using new tie straps.

- THERMISTOR IN CLIP

1 Install the thermistor in the clip.

2 Install the clip in the correct location on the refrigerant piping. Make sure there is thermal contact between the thermistor and the refrigerant piping.



a Insulation
b Clip
c Thermistor

3 Route the thermistor harness through the appropriate retainers (if applicable) towards the indoor unit main PCB.

4 Connect the thermistor connector to the indoor unit main PCB.

INFORMATION

Some of the thermistors are wired to the same connector. See connector and pin information of the thermistors at the start of the electrical check procedure and "7.2 Wiring diagram" [▸ 359]. ALWAYS replace the complete set of thermistors wired to the same connector.

5 When installing the complete set of thermistors wired to the same connector:

- Install all other thermistors wired to the connector in their thermistor holder,
- Route the thermistor harness of all thermistors towards the appropriate PCB or intermediate connector,
- Connect the thermistor connector.

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.

6 Fix the thermistor wiring harness using new tie straps.

7 Correctly install the insulation around the thermistor.

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.

5 Third party components

5.1 Electrical circuit

5.1.1 Checking procedures

To check the power supply to the indoor unit

Prerequisite: Stop the unit operation via the remote controller.

Prerequisite: Turn OFF the respective circuit breaker.

1. Remove the required plate work, see "4.9 Plate work" [▸ 192].
2. Check that the power supply cables and earth connection are firmly fixed to the indoor unit power supply terminal X2M.
3. Measure the insulation resistance between each power supply terminal and the ground using a megger device of 500 V DC. All measurements MUST be >1MΩ. If insulation resistance is <1MΩ, earth leakage is present.
4. Turn ON the power using the respective circuit breaker.
5. Measure the voltage between L and N on the indoor unit power supply terminal X2M.

   Result: The voltage MUST be 230 V AC ± 10%.

Is the measured voltage (power supply) correct?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Adjust the power supply, see "5.1.2 Repair procedures" [▸ 336].

To check if the power supply is compliant with the regulations

1. Check that the power source is in line with the requirements described in the databook.

Is the power supply compliant with the regulations?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Adjust the power supply, see "5.1.2 Repair procedures" [▸ 336].

To check F1-F2 transmission

To check the F1-F2 wiring

1 Check that the wiring:

- is within installation length limits,
- is of the proper wire type,
- is of the proper wire thickness,
- is properly fixed to the terminals,
- is executed according to the installation manual, with no star connections.

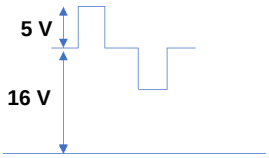
2 Check that no shielded cables are used or that shielded cables are grounded only on one side of the cable.

3 Check that F1-F2 wiring has continuity all over.

Is the wiring correctly executed, as indicated in the installation manual?	Action
Yes	Continue with the next step in this checking procedure.
No	Modify the wiring, see the installation manual.

To measure the F1-F2 transmission

F1-F2 transmission is a D3Net rectangular waveform, 16 VDC ± 5 V with 16-5V amplitude that appears on the 16V base line:



F1-F2 terminals on indoor units, outdoor units and central controllers are all possible measurement points. Use as many points as you can and take the time necessary for measurement if analyzing with an oscilloscope.

On outdoor units, measurement should be done either at F1-F2 IN or F1-F2 OUT. If the F1-F2 OUT terminal is not used, then measure at the F1-F2 IN terminal.

You can conduct the measuring with a multimeter or an oscilloscope.

To measure the F1-F2 transmission with a multimeter:

4 Set the multimeter to DC Voltage measurement.

5 Measure on the F1 and F2 terminals.

Result: 16 V DC should be read.

To measure the F1-F2 transmission with an oscilloscope:

INFORMATION

Ensure that probes are securely connected to F1-F2 terminals. Otherwise, distortions will be generated resulting in misinterpretation of data. It is recommended to connect temporary cables to the probes and then connect the cables to the terminals securely.

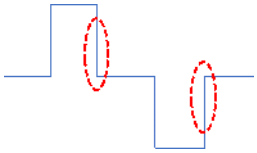
6 Measure at as many points as you can, this can help to determinate the problem.

For example: if the measurements at the indoor unit side are distorted while central controller and outdoor unit seem OK, you can suppose that the failure in transmission is related to the indoor unit side.

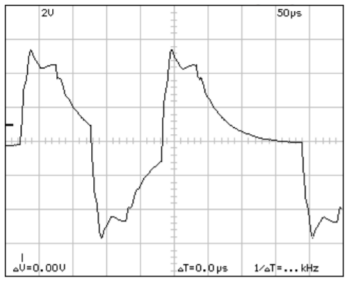
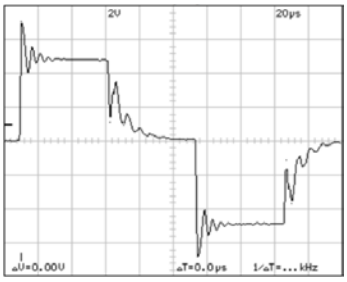
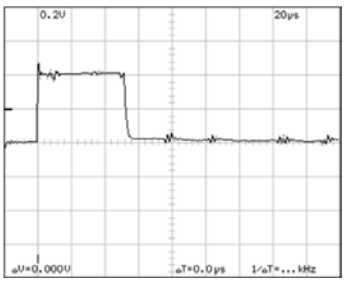
7 Set time base (horizontal) to 50 µs/div to 100 µs. Voltage axis (vertical) should be set to 2V/div to 5V. Set position properly, otherwise the data may appear outside the screen. In AC mode, which is a sampling mode in oscilloscopes, waveforms appear in the middle of the screen. So, it is recommended to use AC mode if possible.

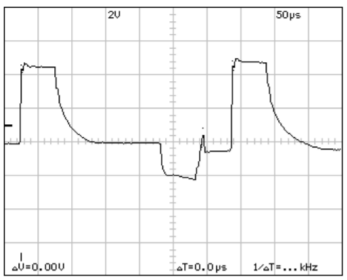
8 Set the triggering mode of the oscilloscope to "Normal". If "Auto" mode is selected, observed waveforms may be cleared instantaneously leading to misinterpretation of data.

9 Ignore very short-time pulses of 1V amplitude or less, or overshooting at the rising edge may be ignored. Focus on the shown points of the waveform below:



Examples of waveform distortions on D3Net and possible causes:

	**Rounded waveforms at falling edges.** Possible reasons: ▪ Excessive wire length, ▪ Excessive number of connected devices, ▪ Branching (star connections).
	**Ringing.** Possible reasons: ▪ Transmission wiring very close to high voltage cables, ▪ Use of multi-conductor type wires.
	**Noise.** Possible reasons: ▪ Transmission wiring very close to high voltage cables, ▪ Transmission wiring effected from external equipment causing noise.

	**Faulty Waveform.** Possible reasons: ▪ Transmission circuit failure on a PCB.

After checking and correcting possible causes of F1-F2 transmission problems, perform a communication reset (see "5.1.2 Repair procedures" [▸ 336]).

To check the wiring between the outdoor unit and the indoor unit

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" [▸ 359].

INFORMATION

Correct the wiring as needed.

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.

5.1.2 Repair procedures

To adjust the power supply

1. Make sure that the power source is in line with the requirements described in the databook.
2. Adjust the power supply within 50 Hz ± 3%.

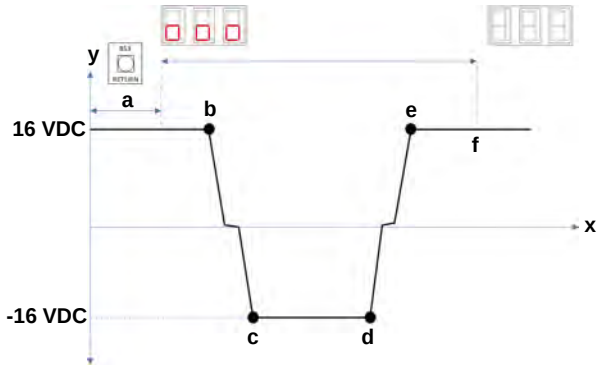
Is the problem solved?	Action
Yes	No further actions required.
No	Return to the troubleshooting of the specific error and continue with the next procedure.

To perform a communication reset

NOTICE

If an indoor unit is powered OFF when communication reset is performed, the outdoor unit will delete this indoor unit information since this unit will not be identified during re-initialization. If so, this unit will not be recognized by the outdoor unit upon power restore to this indoor unit.

1 Set multimeter to V DC measurement. The example below is performed while COM-F1 and V DC-F2, the polarity will be opposite than the graph below if connected otherwise (which is not a problem).



a Y: Voltage (VDC)
b X: Time

2 Push BS3 (RETURN) and hold it for 5 seconds until the 7-segment display shows "000". Then release BS3.

Result: After a while, voltage will drop to almost 0 V DC. At this stage it means that re-initialization has started.

Result: Depending on the system size, voltage will rise to 16 V DC and hit 0 V back again several times.

Result: When finished, 7-Segment Display will turn OFF. This indicates that re-initialization has completed.

The time this procedure takes, depends on the amount of indoor units.

To correct the wiring between PCB's

Prerequisite: Stop the unit operation via the user interface.

Prerequisite: Turn OFF the respective circuit breaker.

Prerequisite: Remove the required plate work, see "4.9 Plate work" [▸ 192].

1 Make sure that all wires are firmly and correctly connected, see "7.2 Wiring diagram" [▸ 359].

2 Check the continuity of all wires.

3 Replace any damaged or broken wires.

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.

5.2 Refrigerant circuit

5.2.1 Checking procedures

INFORMATION

Depending on the combination between the indoor unit and outdoor unit, these procedures may differ. See the service manual of the appropriate outdoor unit for the correct procedures.

INFORMATION

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

5.2.2 Repair procedures

INFORMATION

Depending on the combination between the indoor unit and outdoor unit, these procedures may differ. See the service manual of the appropriate outdoor unit for the correct procedures.

5.3 Manufacturer components

5.3.1 Checking procedures

To check the correct operation / setting of the manufacturer component

1 See the specific dealer manual to check for the correct installation, operation or setting of your component.

Does the component function correctly?	Action
Yes	Return to the troubleshooting of the specific error and continue with the next procedure.
No	Adjust the specific component, see "5.3.2 Repair procedures" [▸ 338].

5.3.2 Repair procedures

To adjust the manufacturer component

1 See the specific dealer manual to adjust your component.

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.

5.4 External factors

5.4.1 Checking procedures

To check for objects that may block the airflow

1 Check for the presence of object(s) near the indoor unit that may block the airflow. Remove the object(s) as needed.

Is the problem solved?	Action
Yes	No further actions required.

Is the problem solved?	Action
No	Return to the troubleshooting of the specific error and continue with the next procedure.

To check for an external power source

1 Check for the presence of an external power source. This might cause electrical interference (electrical noise disturbance).

2 If an external power source was found, remove it.

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.

6 Maintenance

NOTICE

General maintenance/inspection checklist. Next to the maintenance instructions in this chapter, a general maintenance/inspection checklist is also available on the Daikin Business Portal (authentication required).

The general maintenance/inspection checklist is complementary to the instructions in this chapter and can be used as a guideline and reporting template during maintenance.

6.1 Maintenance schedule

To ensure optimal availability of the unit, certain checks and inspections on the unit and the field wiring have to be carried out at regular intervals. See the checking procedures in this manual for inspection of the components mentioned below.

The intervals depend on:

- Local legislation,
- the conditions at the installation site (presence of dust, sea salt, harmful gas, oil mist, power supply fluctuation, bumps, vibration etc.),
- how the unit is operated (frequent stop and start, longer operation hours etc.),
- total running hours of the unit,
- ambient conditions (high heat and humidity load etc.)

Depending on the above mentioned factors, maintenance may be required sooner than the mentioned interval here below.

The table below also assumes a unit operation of 10 hours/day and 2500 hours/year.
Normal use of the unit is considered when a unit is not performing the stop/start cycle (Thermo OFF and then ON) more than 6 times/hour.

Component	Inspection	Maintenance
Electric Motor	1 year	20.000 hours
PCB		25.000 hours
Heat Exchanger		5 years
Sensor, Thermistor		5 years
User Interface, Switches		25.000 hours
Drain Pan		8 years
Expansion Valve		20.000 hours
Solenoid Valve		20.000 hours
Air Filter		5 years
High Efficiency Filter		1 year
Fuse		10 years
Crankcase Heater		8 years
Components under pressure		In case of corrosion
R32 leak sensor (indoor)		10 years

Also, the cleaning of air filters, heat exchangers, fan propellers, drain pans etc. has to be carried out at regular intervals, see Maintenance procedures for outdoor units (see outdoor unit service manual) and "6.2 Maintenance procedures for indoor units" [▸ 341].

6.2 Maintenance procedures for indoor units

6.2.1 To check the general status of the unit

Prerequisite: Stop the unit operation via the user interface.

1. Switch off all the indoor units.
2. Clean the outside panels, see "6.2.2 To clean the air outlet and exterior" [▸ 343].
3. Check if any other equipment interferes with the operation of the indoor unit (other device exhaust towards indoor unit heat exchanger, oil mist, water vapour etc, corrosive or explosive ambient, electrical equipment, blocked air outlets or inlets, etc...) Refer to installation manual.
4. Make sure that there is sufficient air flow or no air by-pass on the indoor unit heat exchanger in cooling mode.
5. Check superheat for refrigerant.
   Normally the expansion valve for the indoor unit is driven to keep minimum 3K of superheat.
   If not, even if the filters are cleaned, it might be that:

- the heat exchanger is clogged by dust (see "6.2.4 To clean the indoor unit heat exchanger" [▸ 344]),
- an air by-pass is present,
- the fan cannot deliver discharge air due to longer supply duct,
- expansion valve is malfunctioning (see next step).

6 The best way to judge expansion valve bleeding is to operate indoor units in cooling, set the dedicated indoor unit to Fan only operation and then check refrigerant thermistors by Service Checker. Fan only operated indoor unit sets expansion valve to 0 pulse. If the gas thermistor on the indoor unit is close to evaporation temperature and does not rise to ambient temperature in time, the expansion valve is bleeding and needs to be replaced. Once check is completed switch to other indoor unit and set the operation to Fan only and proceed in similar manner.

7 Clean the inside of the unit.

NOTICE

To clean the inside of the unit:

- Use water or compressed air, not warmer than 50° C.
- Do not use any cleaning agents or chemicals.
- Do not use pressurized water.

8 Check the general status inside the cover plates.

9 Check if the drain is properly drained by pouring water in the drain pan. Check drain pan and drain piping if this is not the case.

10 Check the visual appearance of all the components. Refer to component check methods if any irregularity is found.

11 Check the flare connections and their surrounding for oil drips and signs of leaks.

12 Check the electrical connections. Tighten and secure the connections when necessary.

13 Check if power supply is in conform with legislation. See "To check if the power supply is compliant with the regulations" [▸ 333].

14 Check and tighten the power supply wiring on the dedicated terminal.

15 Check the insulation on piping and refrigerant branches. Replace or fix insulation where necessary.

INFORMATION

Depending on the setting of parameter 20-0 on the indoor unit remote controller, a filter sign is indicated on the remote controller (or central controller if present). This indicates that the time that was set by the parameter has passed and filter cleaning is required. For more information, refer to installation manual for the indoor unit.

16 Remove and clean the air filters, see "6.2.5 To clean the air filters" [▸ 344].

17 Make sure there is a filter on the air suction line for the indoor unit. Refer to installation manual for the indoor unit.

INFORMATION

When air filters are not cleaned at regular intervals, dust begins to accumulate on the indoor unit heat exchanger.

18 Check the indoor unit heat exchanger and clean him if necessary, see "6.2.4 To clean the indoor unit heat exchanger" [▸ 344]. Normally this is not a required step if the unit is not exposed to oil mist alike exhaust and when filters are cleaned regularly.

To clean the indoor unit heat exchanger it may be necessary to remove bottom plate, side covers, drain pan, fan propeller and fan motor to gain access to the indoor unit heat exchanger.

19 Check wireless remote controller battery (if present).

20 Log the maintenance in the log-book.

After outdoor unit maintenance (see outdoor unit service manual) and indoor unit maintenance is performed, check the system via Service Checker for normal operation. See "3.3 Symptom based troubleshooting" [▸ 61].

6.2.2 To clean the air outlet and exterior

WARNING

Do NOT let the indoor unit get wet. **Possible consequence:** Electrical shock or fire.

Clean with a soft cloth. If it is difficult to remove stains, use water or neutral detergent.

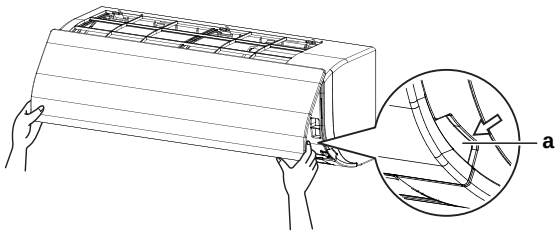
6.2.3 To clean the front panel

WARNING

Do NOT let the indoor unit get wet. **Possible consequence:** Electrical shock or fire.

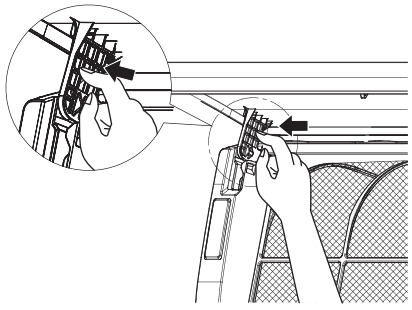
You can remove the front panel to clean it.

1 Open the front panel. Hold the front panel by the panel tabs on both sides and open until the panel stops.



a Panel tab

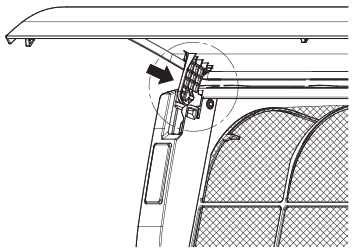
2 Remove the front panel by pushing hooks on either side of the front panel towards the side of the unit and remove the panel.



3 Clean the front panel. Wipe it with a soft cloth soaked in water by using only neutral detergent.

4 Wipe panel with a dry soft cloth and let it dry up in the shade.

5 Attach the front panel. Align the hooks of the front panel with the slots and push them all the way in.



6 Close the front panel slowly.

6.2.4 To clean the indoor unit heat exchanger

1 Straighten the hair fins.

2 Clear the indoor unit heat exchanger from dust, … using a fin-comb or compressed air/N_2.

CAUTION

Avoid bending or damaging the hair fins of the indoor unit heat exchanger during the cleaning process.

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.

6.2.5 To clean the air filters

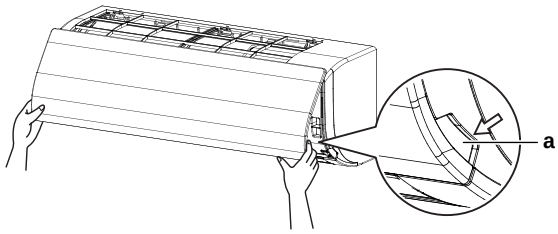
FXAA

When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

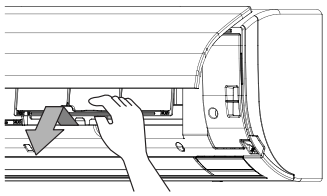
How to clean the air filter:

1 **Open the front panel.** Hold the front panel by the panel tabs on both sides and open until the panel stops.

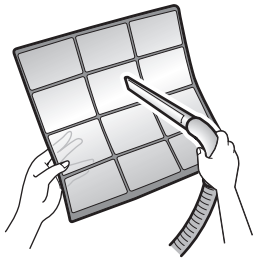


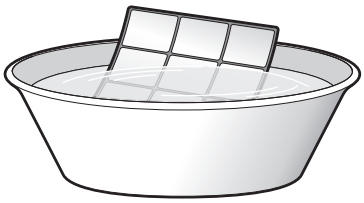
a Panel tab

2 **Remove the air filter.** Push up the tab in the center of the air filter slightly then pull the air filter out in a downward direction.



3 **Clean the air filter**. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.





4 **Dry the air filter in the shadow.**

5 **Reattach the air filter.** Replace the air filter as it was.

6 **Close the front panel.** Hold the front panel by the panel tabs on both sides and close it slowly.

7 Turn ON the power.

8 To remove warning screens, see the reference guide of the user interface.

FXFA

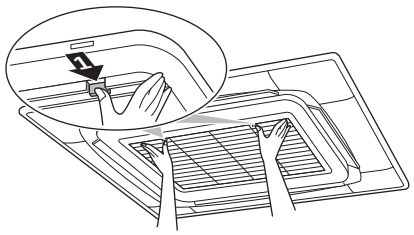
When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

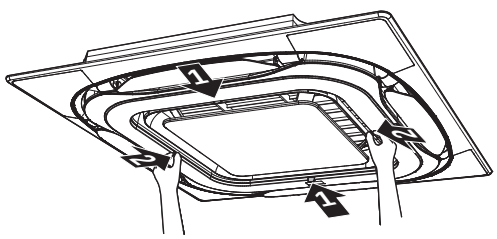
How to clean the air filter:

1 Open the suction grille.

Standard panel:

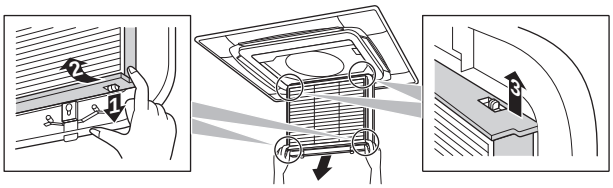


Design panel:

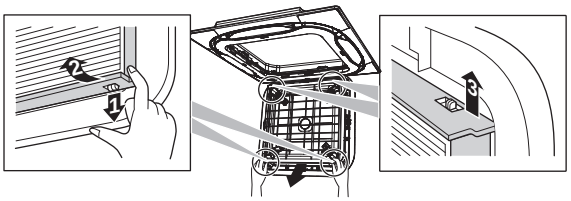


2 Remove the air filter.

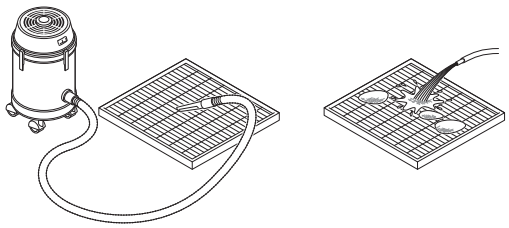
Standard panel:



Design panel:



3 Clean the air filter. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



4 Dry the air filter in the shadow.

5 Reattach the air filter and close the suction grille.

6 Turn ON the power.

7 To remove warning screens, see the reference guide of the user interface.

FXSA

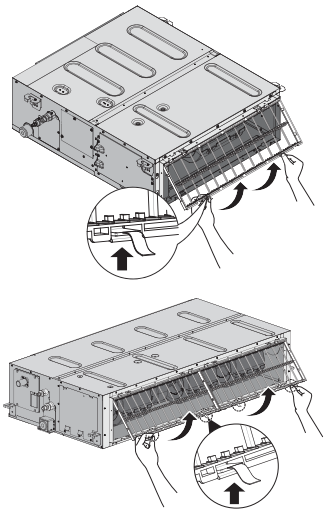
When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

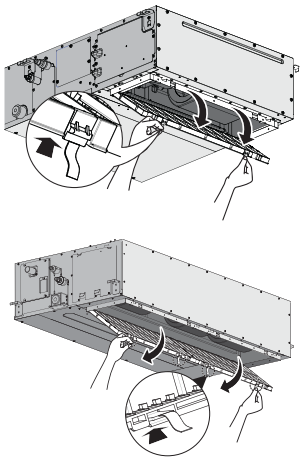
How to clean the air filter:

1 **Remove the air filter.** Pull its cloth upward (in case of rear suction) or backward (in case of bottom suction).

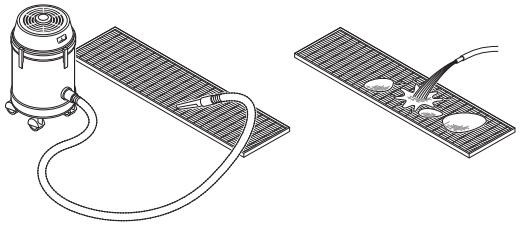
rear suction



bottom suction



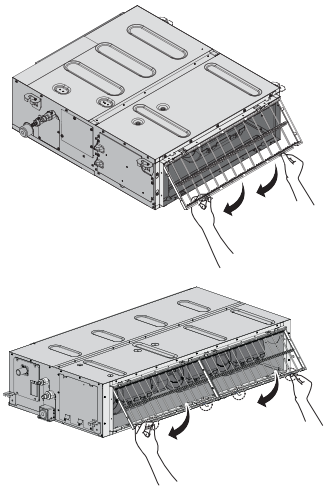
2 **Clean the air filter.** Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



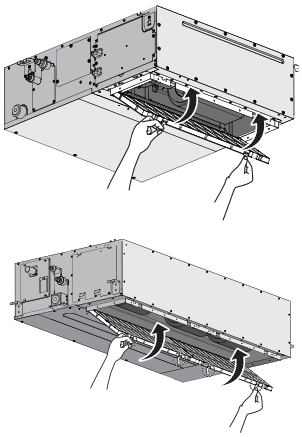
3 **Dry the air filter in the shadow.**

4 **Re-attach the air filter.** Align the 2 hanger brackets and push the 2 clips in their place and pull the cloth if necessary.

rear suction



bottom suction



5 Confirm that all hangers are fixed.

6 In case of bottom suction, close the air inlet grille. In case of rear suction, close service duct opening.

7 Turn ON the power.

8 To remove warning screens, see the reference guide of the user interface.

FXDA

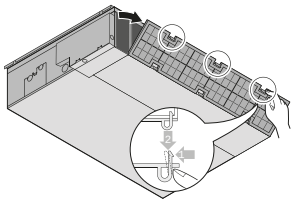
When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

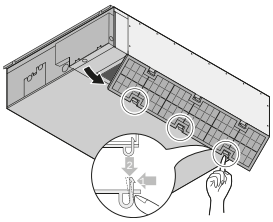
How to clean the air filter:

1 **Remove the air filter.** Push the hooks and pull the filter as shown in illustration below. (2 hooks for 10~32 class or 3 hooks for 40~63 class)

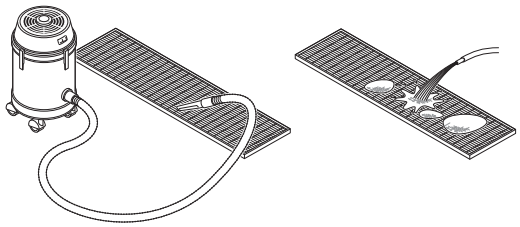
rear suction



bottom suction



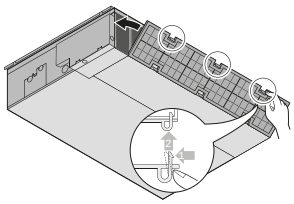
2 **Clean the air filter**. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



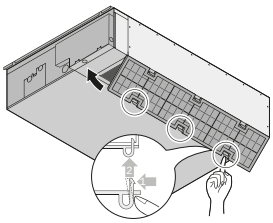
3 **Dry the air filter in the shadow.**

4 **Reattach the air filter.** Hook the filter behind the flap and attach the filter to the main unit while pushing down on the hooks.

rear suction



bottom suction



5 Make sure that hooks are properly fixed.

6 Turn ON the power.

7 To remove warning screens, see the reference guide of the user interface.

FXZA

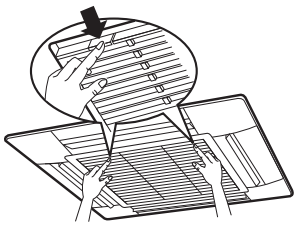
When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

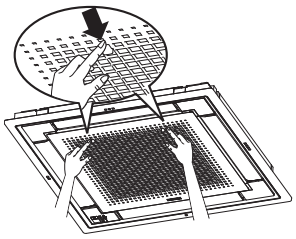
How to clean the air filter:

1 Open the suction grille.

BYFQ60B

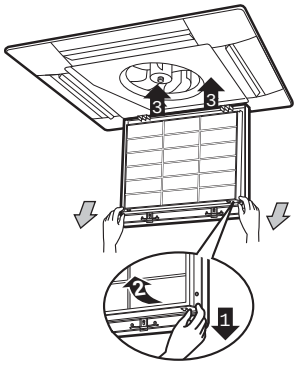


BYFQ60C

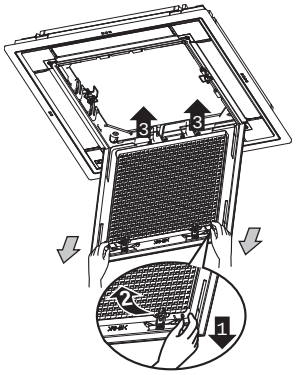


2 Remove the air filter.

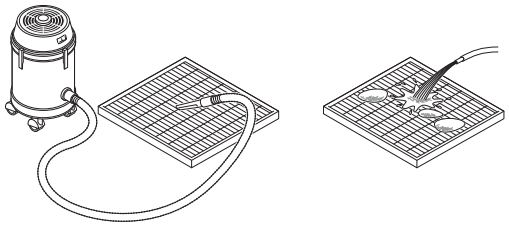
BYFQ60B



BYFQ60C



3 Clean the air filter. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



4 Dry the air filter in the shadow.

5 Reattach the air filter and close the suction grille.

6 Turn ON the power.

7 To remove warning screens, see the reference guide of the user interface.

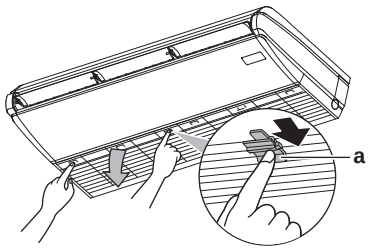
FXHA

When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

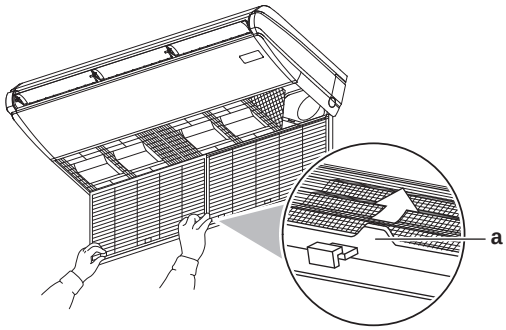
How to clean the air filter:

1 **Open the suction grille**. Simultaneously slide all knobs (2 for class 32, 3 for class 50~100) in the direction of the arrow and carefully open the suction grille.



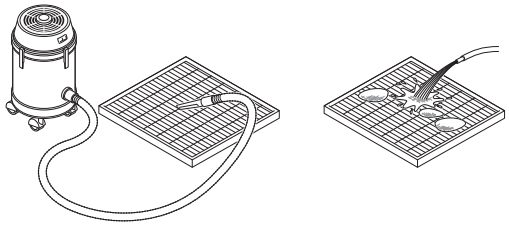
a Knob

2 **Remove the air filter.** Push up the filter knobs at 2 places and take out the air filter.



a Filter knob

3 **Clean the air filter.** Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



4 Dry the air filter in the shadow.

5 Reattach the air filter and close the suction grille.

6 Turn ON the power.

7 To remove warning screens, see the reference guide of the user interface.

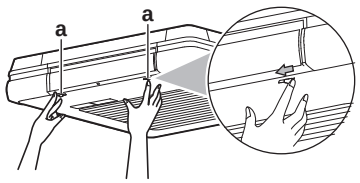
FXUA

When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification is displayed.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

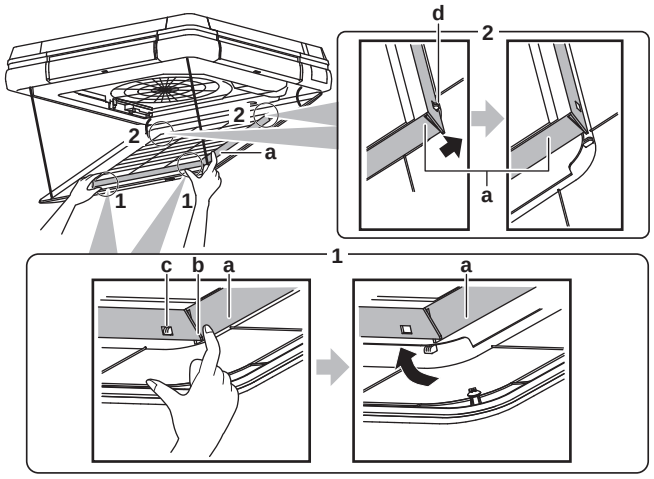
How to clean the air filter:

1 **Open the suction grille.** Simultaneously slide the two knobs and open the suction grille carefully.



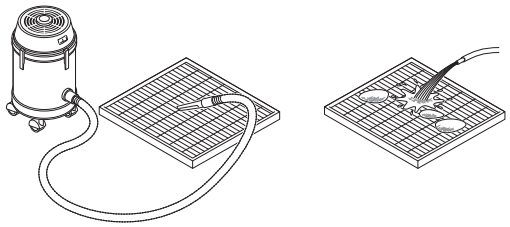
a Knobs

2 **Remove the air filter.** Pull the bottom end of the air filter on each side to remove it from the tabs on the suction grille, then lift the air filter up to remove it from the tabs on the top part of the suction grille.



a Air filter
b Bottom end of the air filter
c Tab on the bottom part of the suction grille
d Tab on the top part of the suction grille

3 **Clean the air filter.** Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



4 Dry the air filter in the shadow.

5 Reattach the air filter and close the suction grille.

6 Turn ON the power.

7 To remove warning screens, see the reference guide of the user interface.

FXMA50~125

When to clean the air filter:

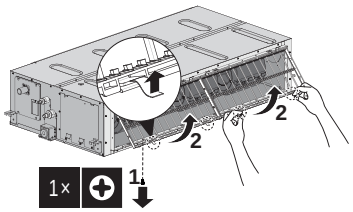
- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification displays.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

How to clean the air filter:

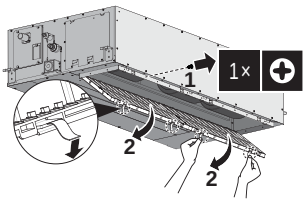
1 **Remove the filter fixing screw.** In case of installation without duct on the suction side, remove the filter fixing screw.

2 **Remove the air filter.** Pull its cloth upward (in case of rear suction) or backward (in case of bottom suction).

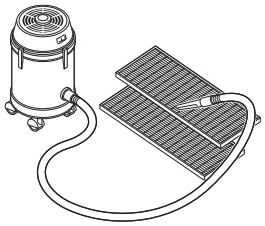
rear suction

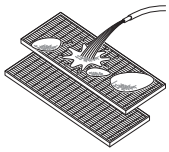


bottom suction



3 **Clean the air filter.** Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.





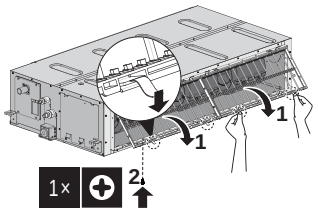
4 **Dry the air filter in the shadow.**

5 **Re-attach the air filter.** Align the 4 hanger brackets and push the 4 clips in their place and pull the cloth if necessary.

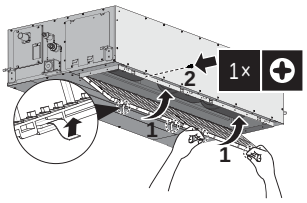
6 Confirm that all hangers are fixed.

7 **Re-install the filter fixing screw.** In case of installation without duct on the suction side, re-install the filter fixing screw.

rear suction



bottom suction



8 In case of bottom suction with duct, close the protective guard. In case of rear suction with duct, close service duct opening.

9 Turn ON the power.

10 To remove warning screens, see the reference guide of the user interface.

FXMA200+250

INFORMATION

Air filter for this unit is an optional equipment. Refer to the option list for available air filter option for your unit.

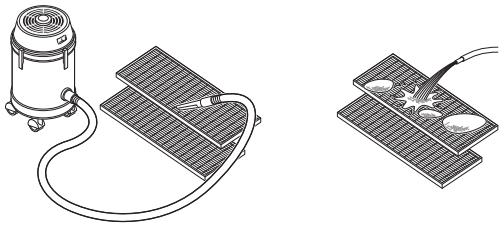
When to clean the air filter:

- Rule of thumb: Clean every 6 months. If the air in the room is extremely contaminated, increase the cleaning frequency.
- Depending on the settings, the user interface can display the **"Time to clean filter"** notification. Clean the air filter when the notification displays.
- If the dirt becomes impossible to clean, change the air filter (= optional equipment).

How to clean the air filter:

1 **Remove the air filter** (composed of 3 equal parts). For the removal procedure 8 mm pre-filter refer to the reference guide of the indoor unit. For other air filter types refer to the installation manual of the filter chamber.

2 **Clean the air filter.** Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



3 **Dry the air filter in the shadow.**

4 **Re-attach the air filter.**

5 Turn ON the power.

6 To remove warning screens, see the reference guide of the user interface.

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.

6.2.6 To clean the suction grille

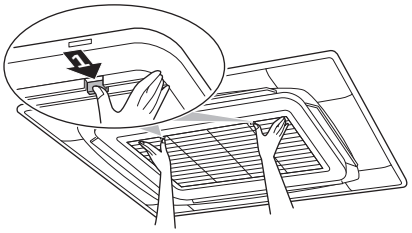
NOTICE

Do NOT use water of 50°C or higher. **Possible consequence:** Discoloration and deformation.

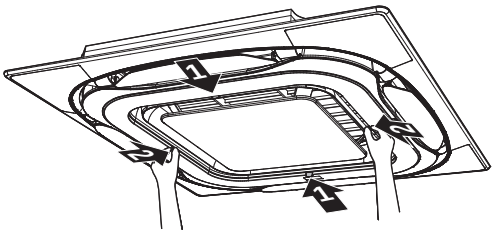
FXFA

1 Open the suction grille.

Standard panel:

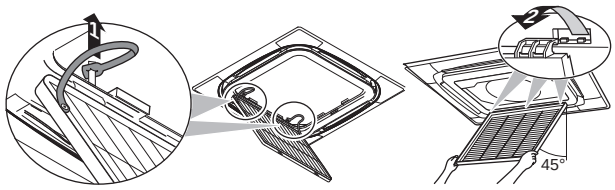


Design panel:

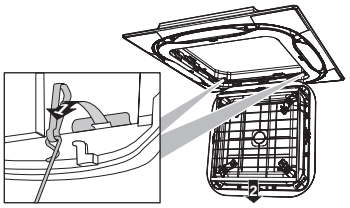


2 Remove the suction grille.

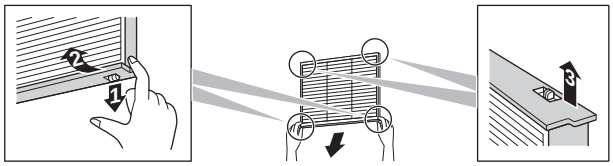
Standard panel:



Design panel:



3 Remove the air filter.



4 Clean the suction grille. Wash with a soft bristle brush, and water or neutral detergent. If the suction grille is very dirty, use a typical kitchen cleaner, leave it on for 10 min, then wash it with water.

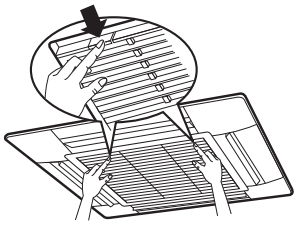
5 Reattach the air filter (step 3 in reverse order).

6 Reattach the suction grille and close it (step 2 and 1 in reverse order).

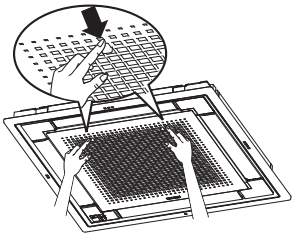
FXZA

1 Open the suction grille.

BYFQ60B

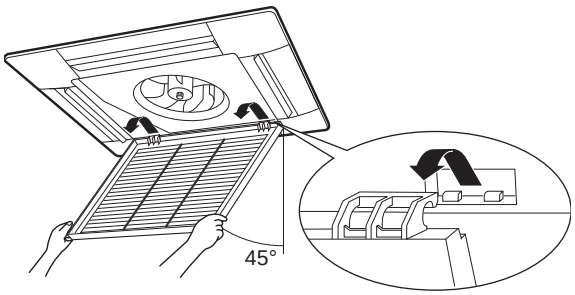


BYFQ60C

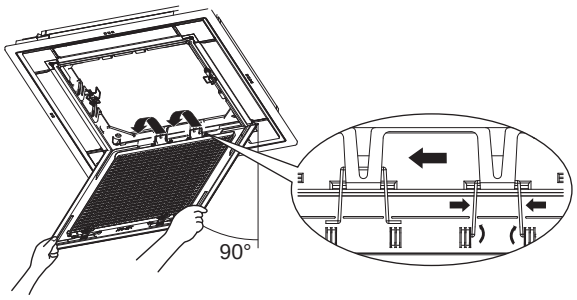


2 Remove the suction grille.

BYFQ60B

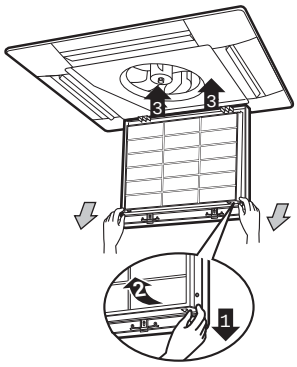


BYFQ60C

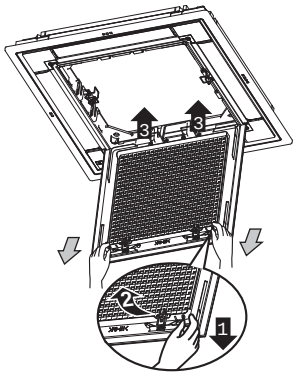


3 Remove the air filter.

BYFQ60B



BYFQ60C



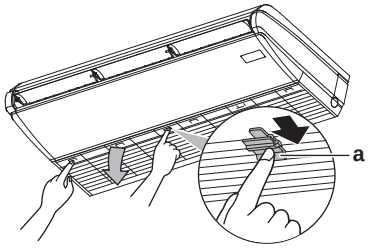
4 Clean the suction grille. Wash with a soft bristle brush and water or neutral detergent. If the suction grille is very dirty, use a typical kitchen cleaner, leave it on for 10 min, then wash it with water.

5 Reattach the air filter (step 3 in reverse order).

6 Reattach the suction grille and close it (step 2 and 1 in reverse order).

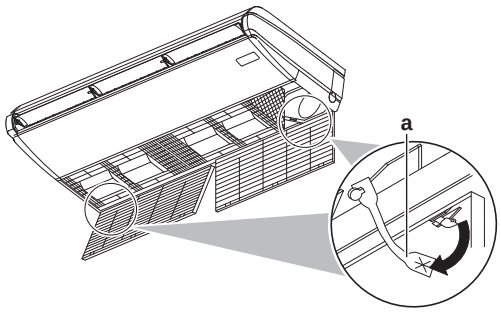
FXHA

1 **Open the suction grille**. Simultaneously slide all knobs (2 for class 32, 3 for class 50~100) in the direction of the arrow and carefully open the suction grille.

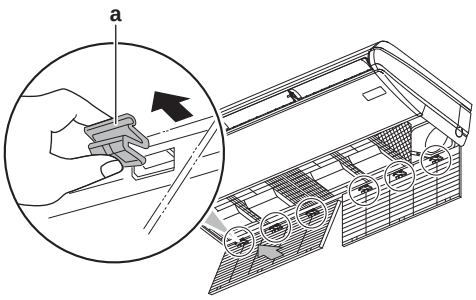


a Knob

2 **Remove the suction grille.** While keeping the suction grille open, unhook the straps from the indoor unit. Then remove the clips (2 for class 32, 3 for class 50~100) holding the suction grille.



a Strap



a Clip

3 **Remove the air filter.** See "6.2.5 To clean the air filters" [▸ 344].

4 **Clean the suction grille.** Wash with a soft bristle brush and water or neutral detergent. If the suction grille is very dirty, use a typical kitchen cleaner, leave it on for 10 min, then wash it with water.

5 **Reattach the air filter.** See "6.2.5 To clean the air filters" [▸ 344].

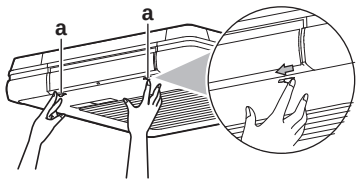
6 **Reattach the suction grille and close it.** (steps 2 and 1 in reverse order).

INFORMATION

When closing the suction grille, make sure the straps of the suction grille are not pinched anywhere.

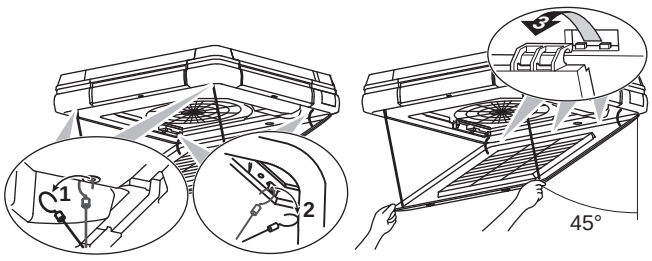
FXUA

1 **Open the suction grille**. Simultaneously slide the two knobs and carefully open the suction grille.



a Knobs

2 **Remove the suction grille.** Unhook the 4 straps from the indoor unit. Open the suction grille in a 45° angle and unhook it from the hooks (3 places).



3 **Remove the air filter.** See "6.2.5 To clean the air filters" [▸ 344].

4 **Clean the suction grille.** Wash with a soft bristle brush and water or neutral detergent. If the suction grille is very dirty, use a typical kitchen cleaner, leave it on for 10 min, then wash it with water.

5 **Reattach the air filter.** See "6.2.5 To clean the air filters" [▸ 344].

6 **Reattach the suction grille and close it.** (steps 2 and 1 in reverse order).

INFORMATION

When closing the suction grille, make sure the straps of the suction grille are not pinched anywhere.

7 Technical data

7.1 Detailed information setting mode

7.1.1 Detailed information setting mode: Indoor unit

See the installer reference guide on business portal for more information.

7.1.2 Detailed information setting mode: Remote controller

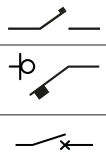
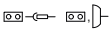
See the installer reference guide on business portal for more information.

7.2 Wiring diagram

7.2.1 Wiring diagram: Indoor unit

Unified wiring diagram legend

For applied parts and numbering, refer to the wiring diagram on the unit. Part numbering is by Arabic numbers in ascending order for each part and is represented in the overview below by "*" in the part code.

Symbol	Meaning	Symbol	Meaning
	Circuit breaker		Protective earth
			
	Connection		Protective earth (screw)
	Connector		Rectifier
	Earth		Relay connector
	Field wiring		Short-circuit connector
	Fuse		Terminal
	Indoor unit		Terminal strip
	Outdoor unit		Wire clamp
	Residual current device		

Symbol	Colour	Symbol	Colour
BLK	Black	ORG	Orange
BLU	Blue	PNK	Pink
BRN	Brown	PRP, PPL	Purple
GRN	Green	RED	Red
GRY	Grey	WHT	White
SKY BLU	Sky blue	YLW	Yellow

Symbol	Meaning
A*P	Printed circuit board
BS*	Pushbutton ON/OFF, operation switch
BZ, H*O	Buzzer
C*	Capacitor
AC*, CN*, E*, HA*, HE*, HL*, HN*, HR*, MR*_A, MR*_B, S*, U, V, W, X*A, K*R_*, NE	Connection, connector
D*, V*D	Diode
DB*	Diode bridge
DS*	DIP switch

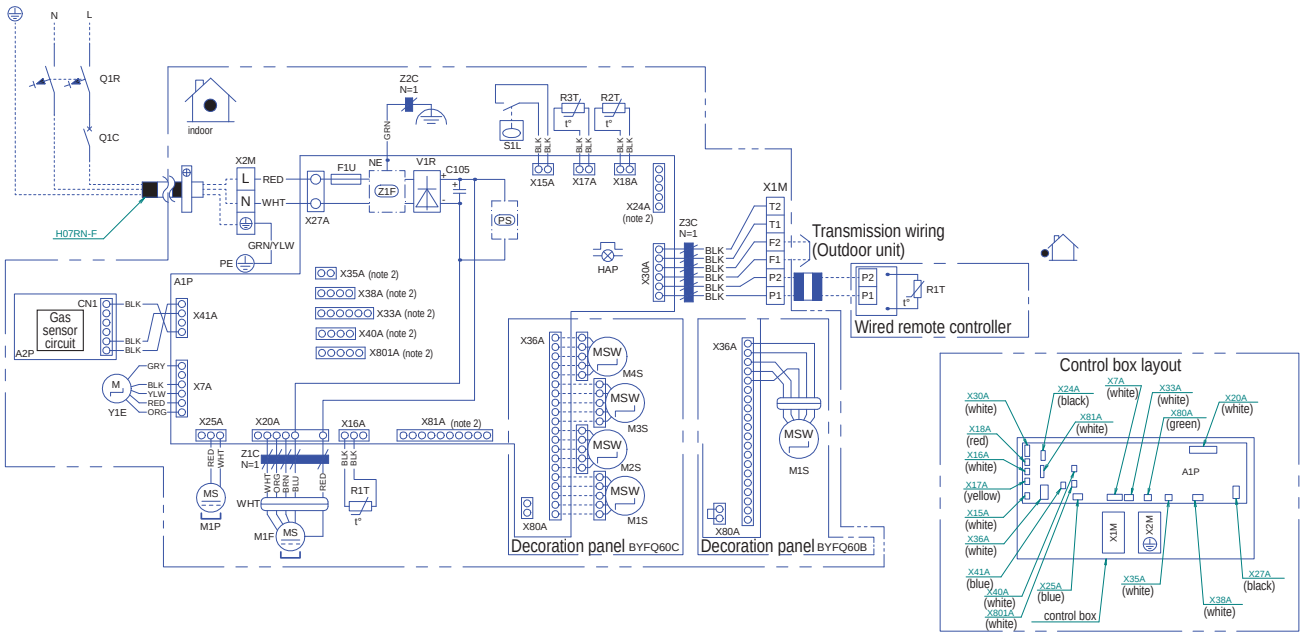
Symbol	Meaning
E*H	Heater
FU*, F*U, (for characteristics, refer to PCB inside your unit)	Fuse
FG*	Connector (frame ground)
H*	Harness
H*P, LED*, V*L	Pilot lamp, light emitting diode
HAP	Light emitting diode (service monitor green)
HIGH VOLTAGE	High voltage
IES	Intelligent eye sensor
IPM*	Intelligent power module
K*R, KCR, KFR, KHuR, K*M	Magnetic relay
L	Live
L*	Coil
L*R	Reactor
M*	Stepper motor
M*C	Compressor motor
M*F	Fan motor
M*P	Drain pump motor
M*S	Swing motor
MR*, MRCW*, MRM*, MRN*	Magnetic relay
N	Neutral
n=*, N=*	Number of passes through ferrite core
PAM	Pulse-amplitude modulation
PCB*	Printed circuit board
PM*	Power module
PS	Switching power supply
PTC*	PTC thermistor
Q*	Insulated gate bipolar transistor (IGBT)
Q*C	Circuit breaker
Q*DI, KLM	Earth leak circuit breaker
Q*L	Overload protector
Q*M	Thermo switch
Q*R	Residual current device
R*	Resistor
R*T	Thermistor
RC	Receiver
S*C	Limit switch

Symbol	Meaning
S*L	Float switch
S*NG	Refrigerant leak detector
S*NPH	Pressure sensor (high)
S*NPL	Pressure sensor (low)
S*PH, HPS*	Pressure switch (high)
S*PL	Pressure switch (low)
S*T	Thermostat
S*RH	Humidity sensor
S*W, SW*	Operation switch
SA*, F1S	Surge arrester
SR*, WLU	Signal receiver
SS*	Selector switch
SHEET METAL	Terminal strip fixed plate
T*R	Transformer
TC, TRC	Transmitter
V*, R*V	Varistor
V*R	Diode bridge, Insulated-gate bipolar transistor (IGBT) power module
WRC	Wireless remote controller
X*	Terminal
X*M	Terminal strip (block)
Y*E	Electronic expansion valve coil
Y*R, Y*S	Reversing solenoid valve coil
Z*C	Ferrite core
ZF, Z*F	Noise filter

FXZA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

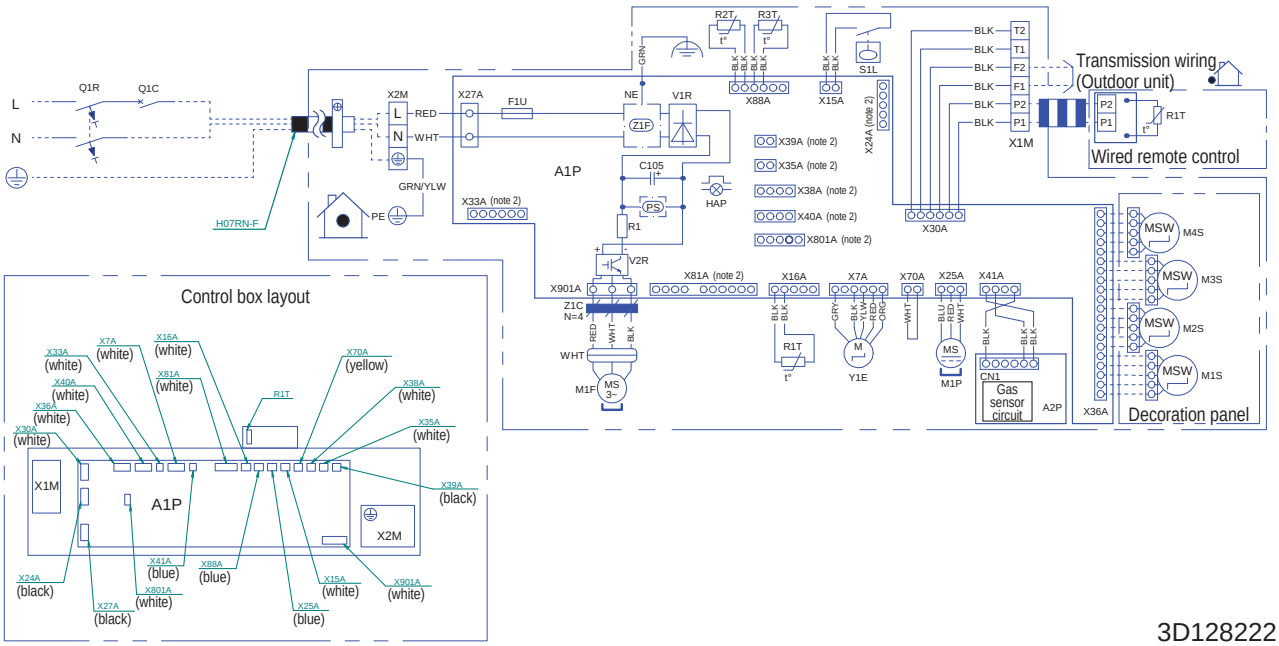


3D128234

FXFA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

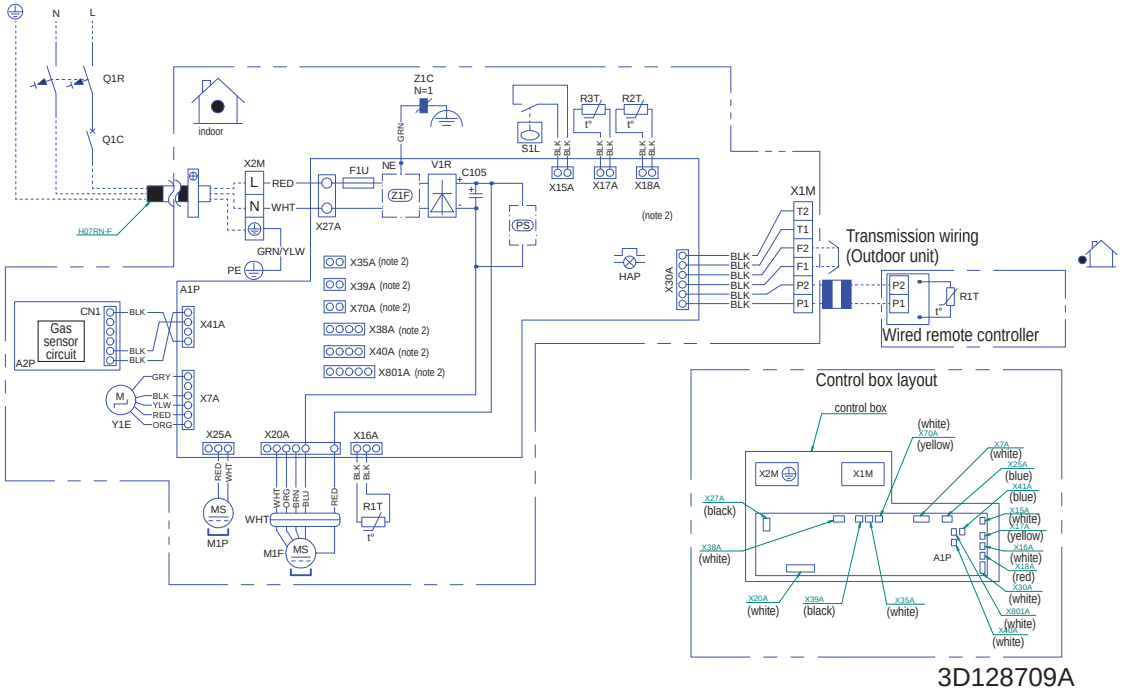


3D128222

FXDA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

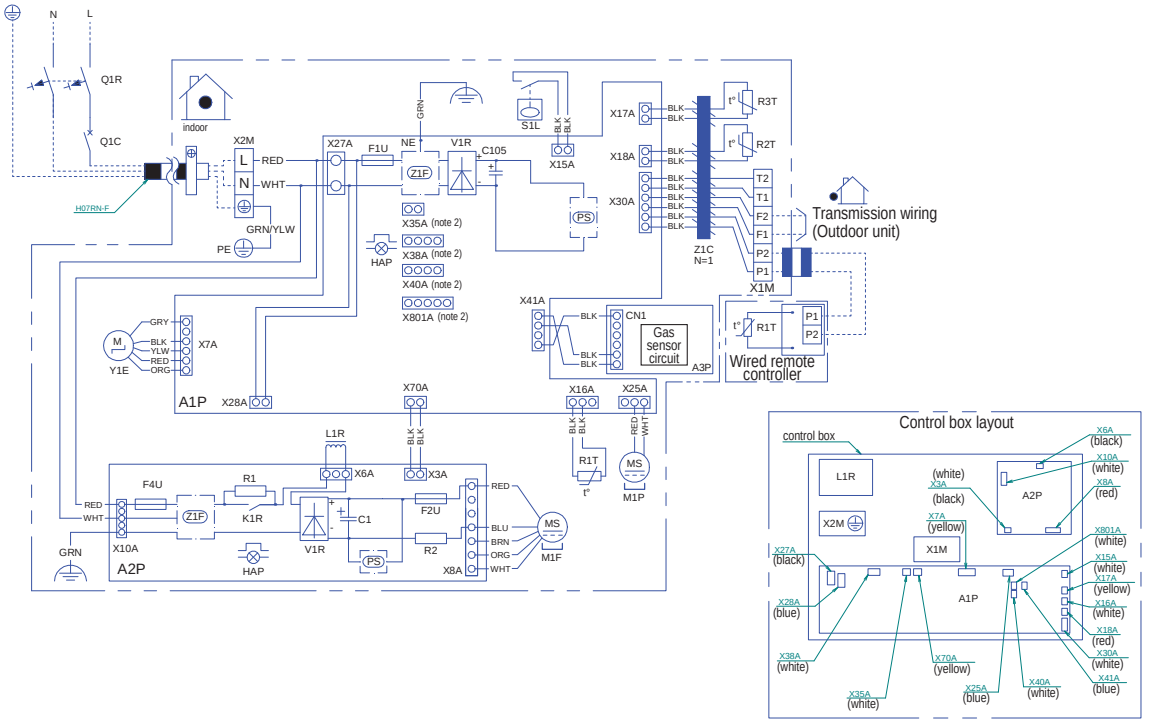


3D128709A

FXSA20~FXSA125

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

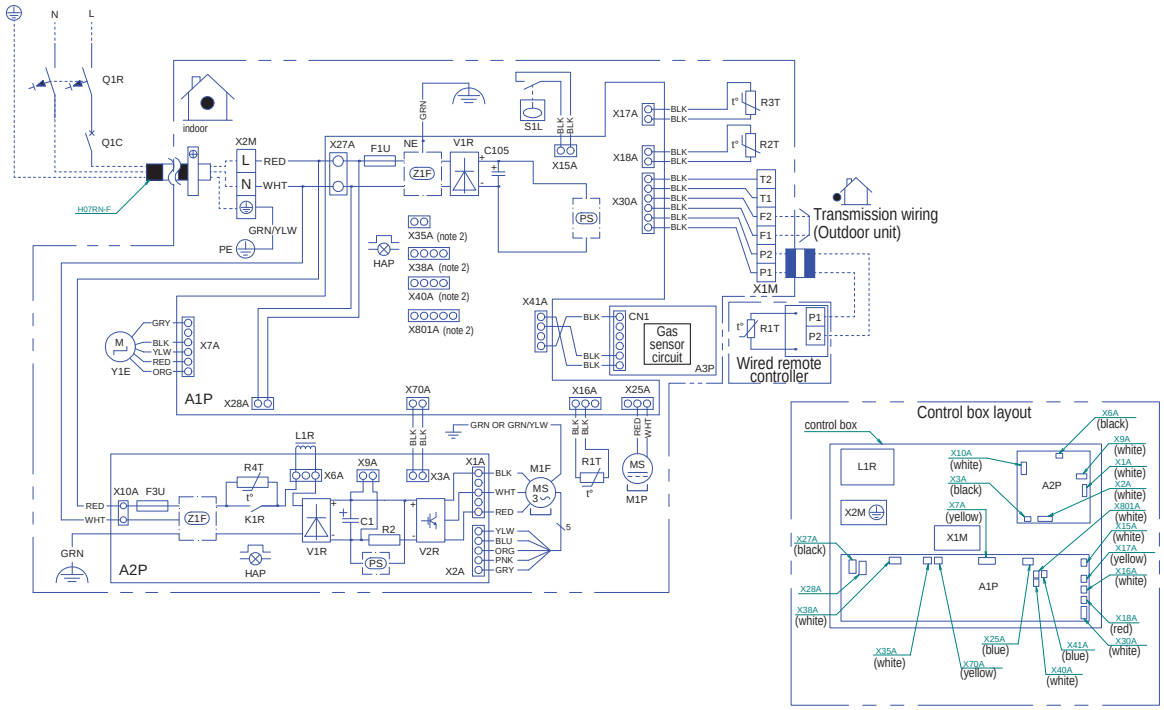


3D128710

FXSA140

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

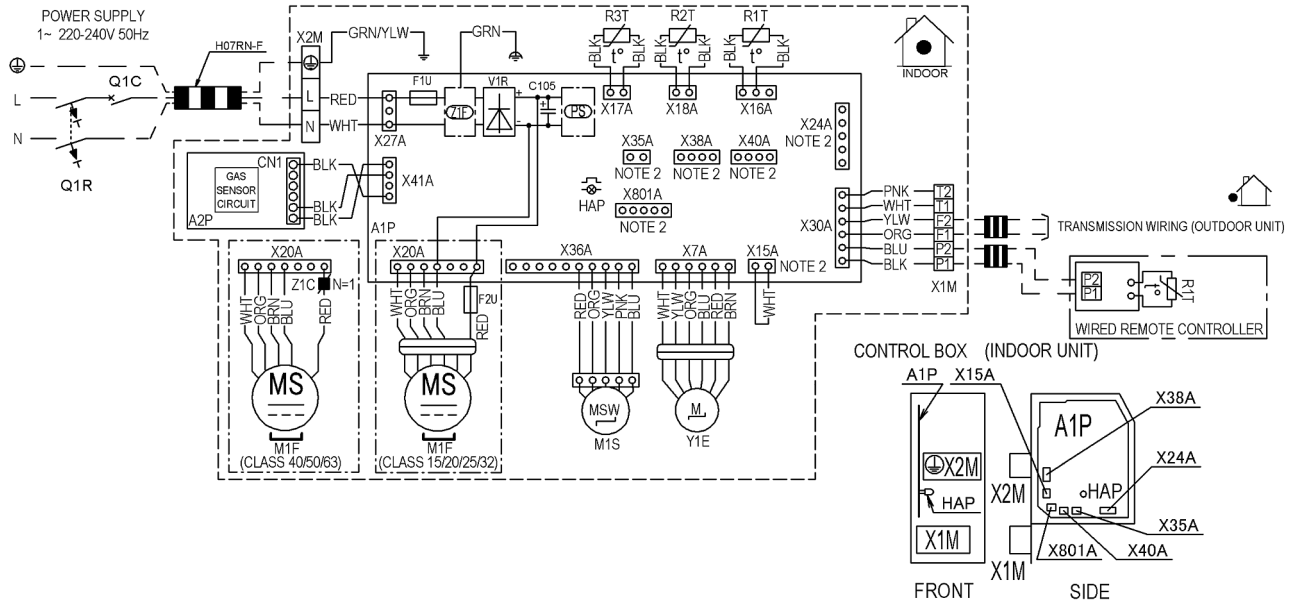


3D128748

FXAA

INFORMATION

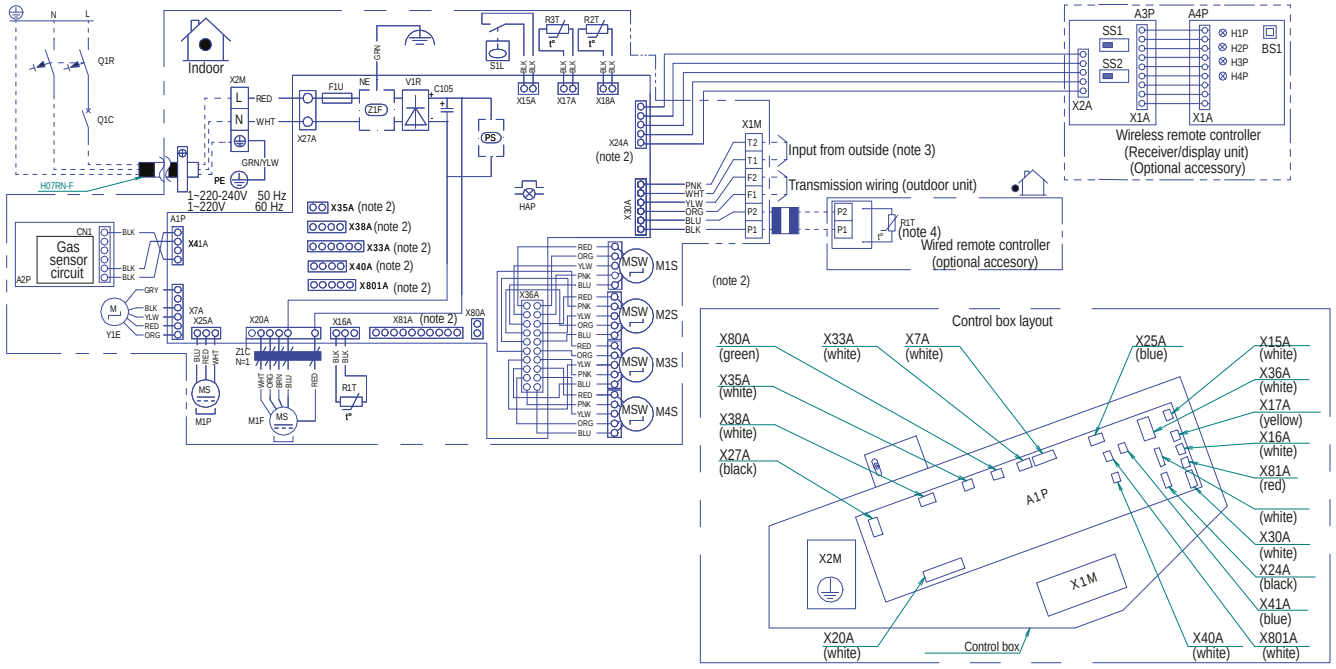
The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



FXUA

INFORMATION

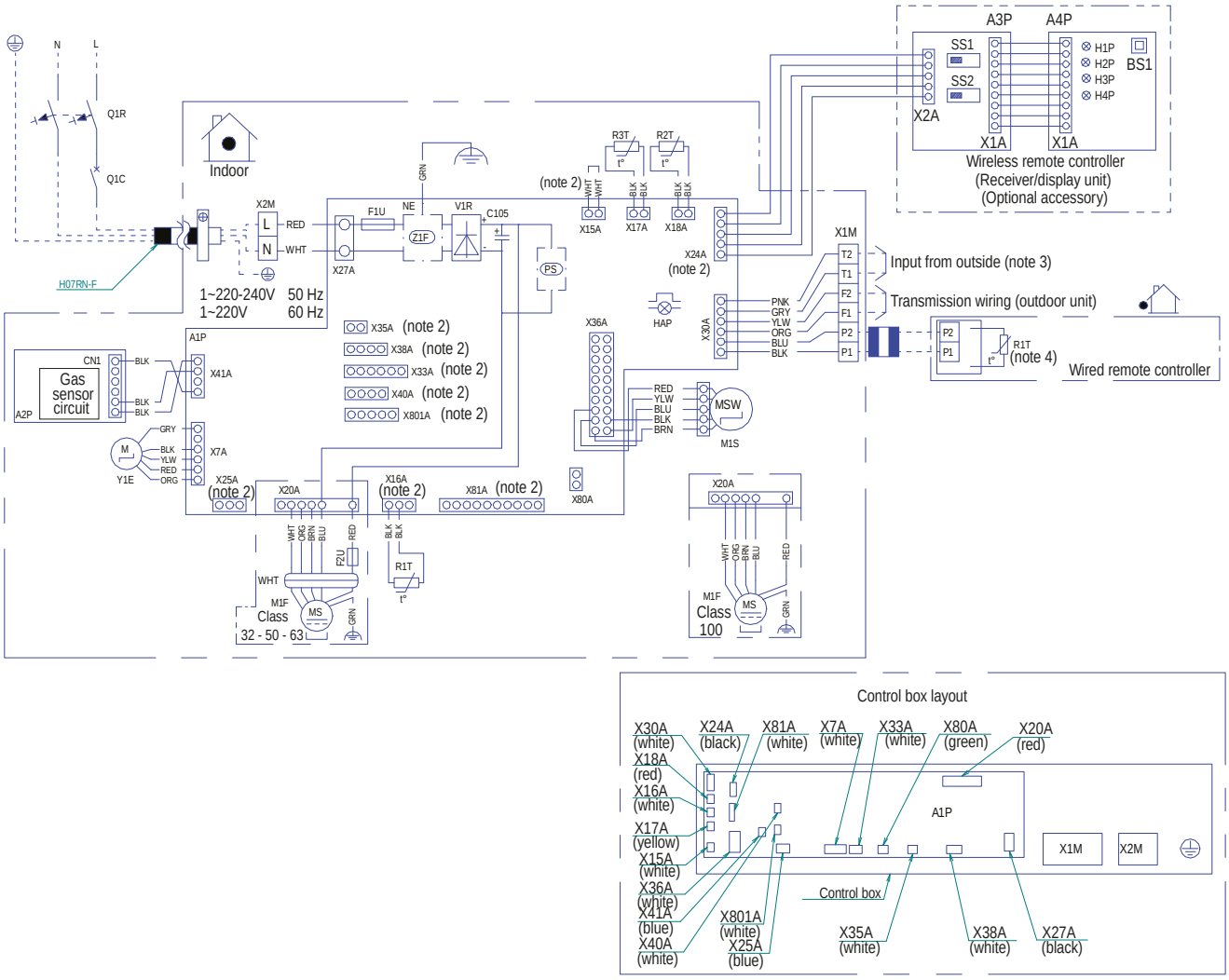
The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



FXHA

INFORMATION

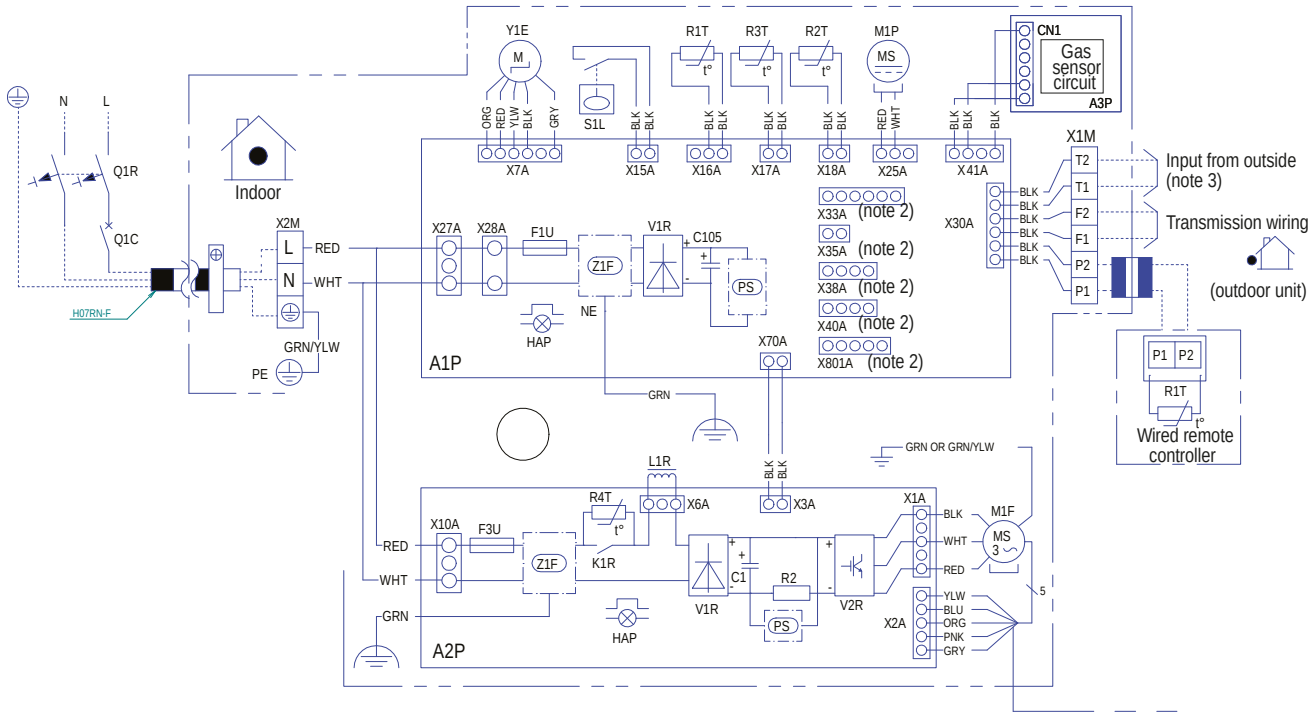
The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



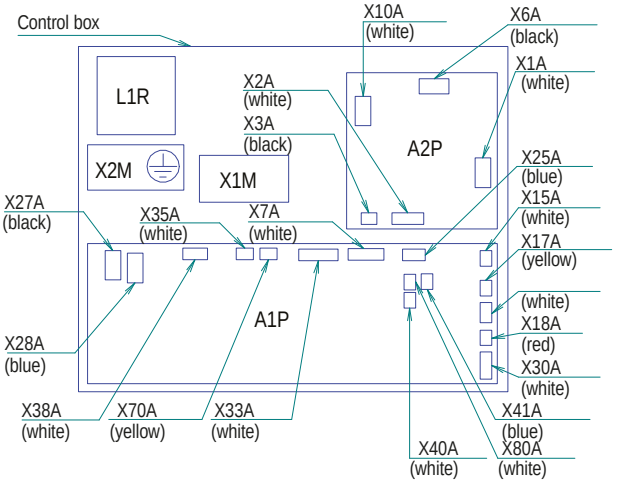
FXMA50~125

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



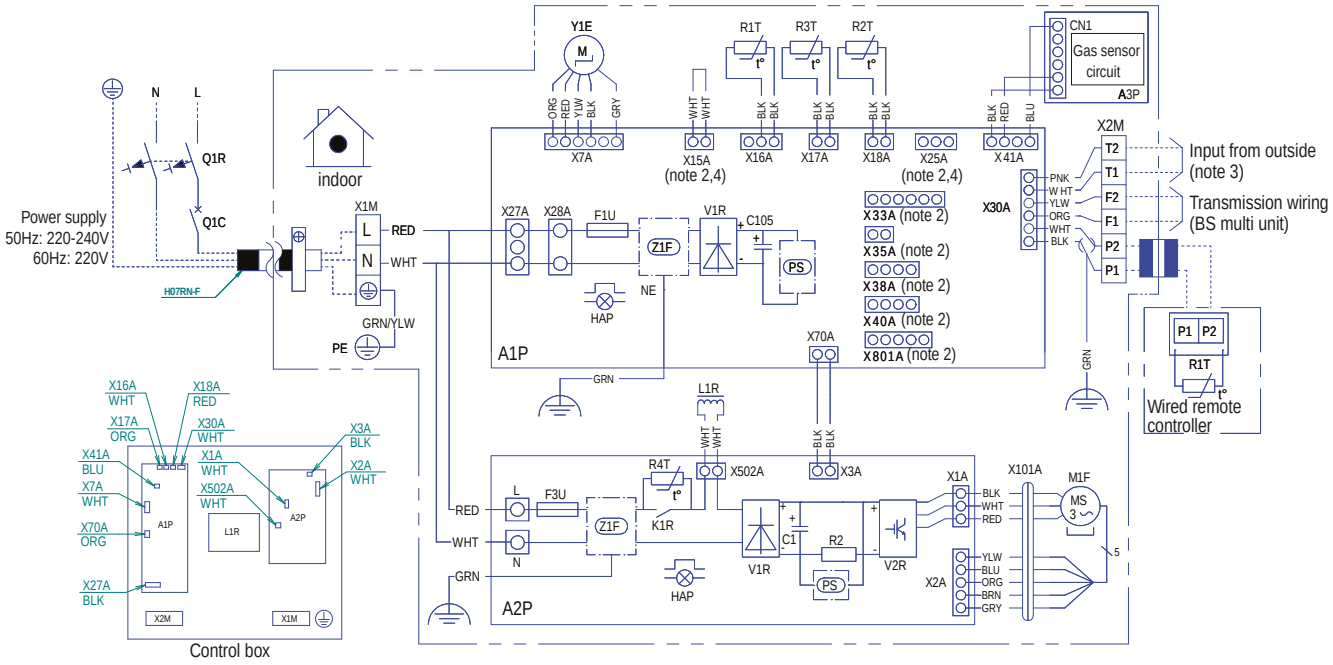
Control box layout



FXMA200+250

INFORMATION

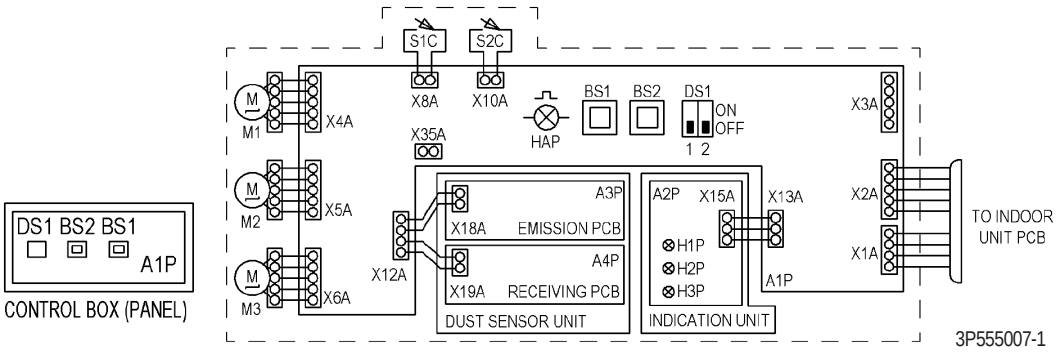
The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



Self-cleaning decoration panel BYCQ140E2G

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



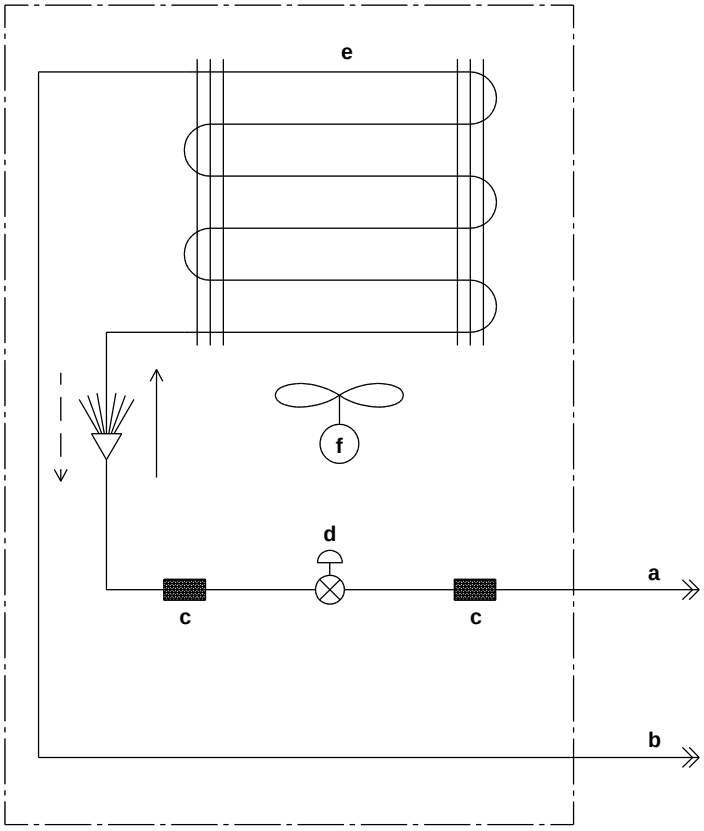
7.3 Piping diagram

7.3.1 Piping diagram: Indoor unit

FXFA + FXZA

INFORMATION

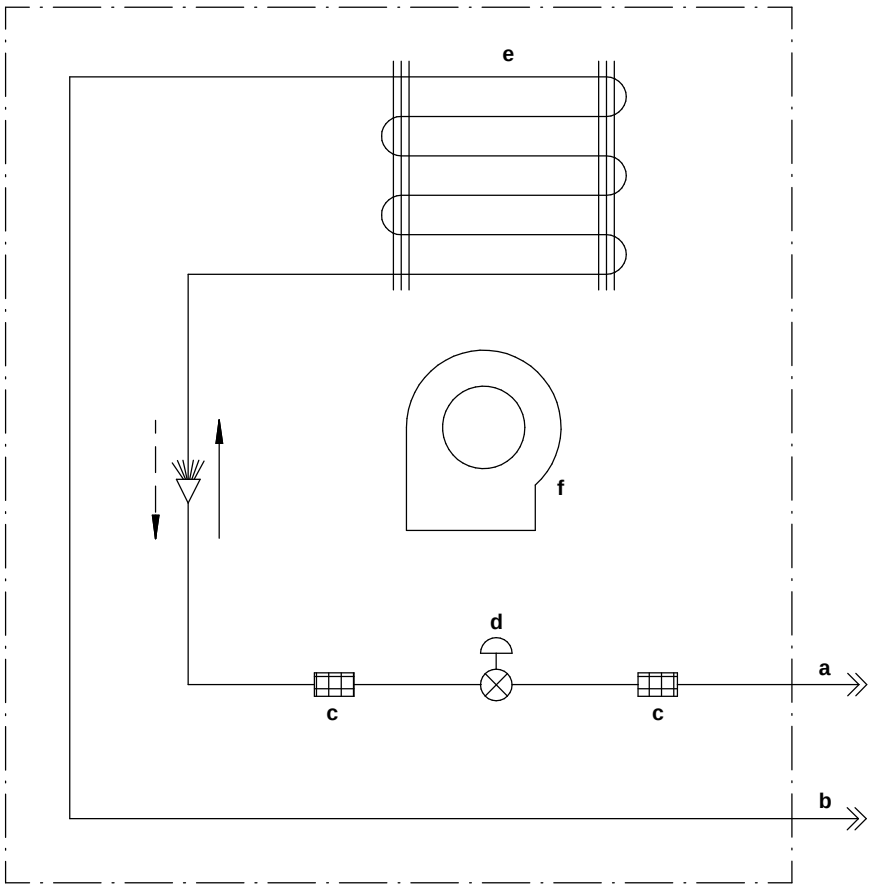
The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.



a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Fan
Heating
Cooling

FXSA

> **INFORMATION**
>
> The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

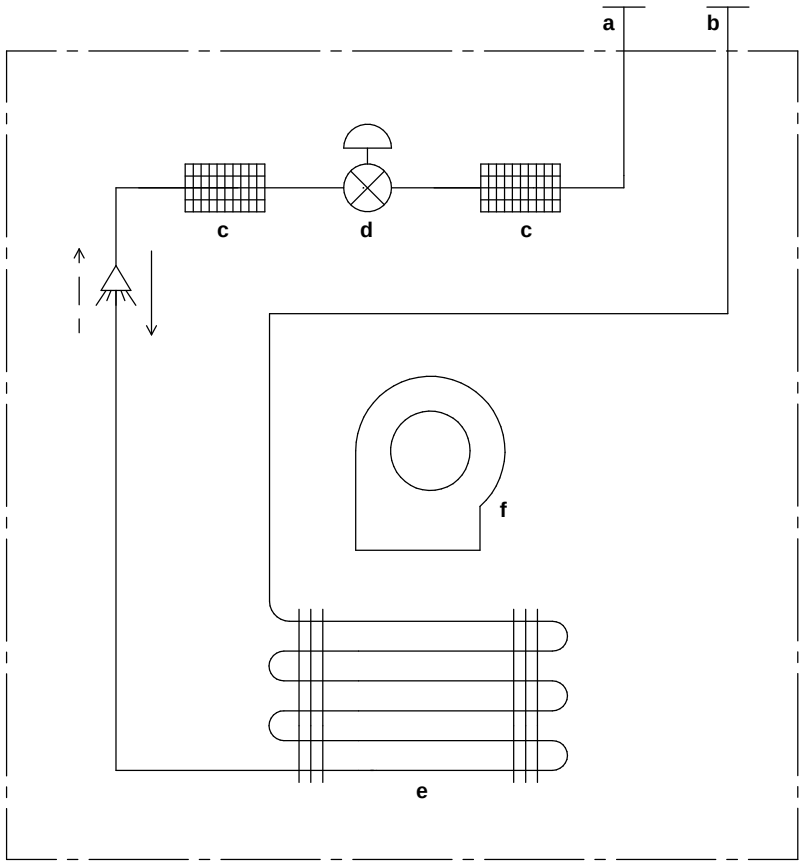


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Fan
Heating
Cooling

FXDA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

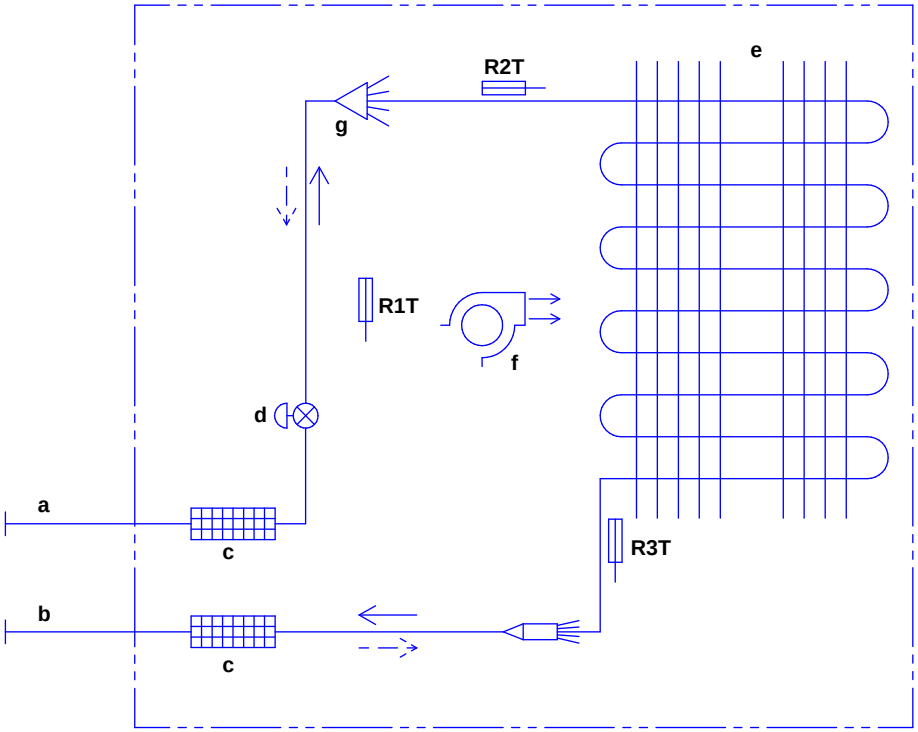


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Fan
Heating
Cooling

FXAA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

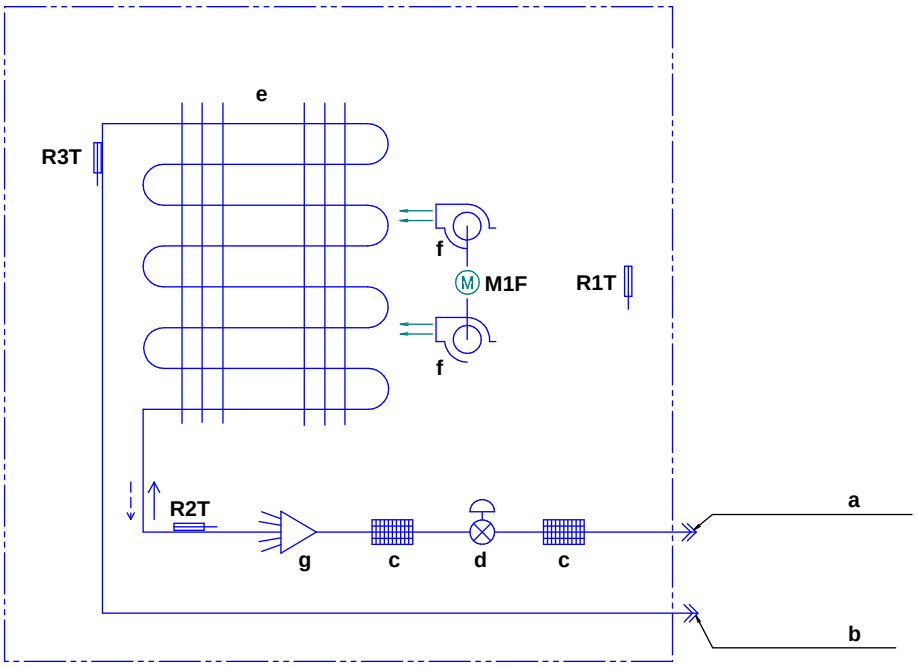


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Crossflow fan
g Distributor
R1T Air thermistor
R2T Refrigerant liquid thermistor
R3T Refrigerant gas thermistor
--► Heating
—► Cooling

FXHA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

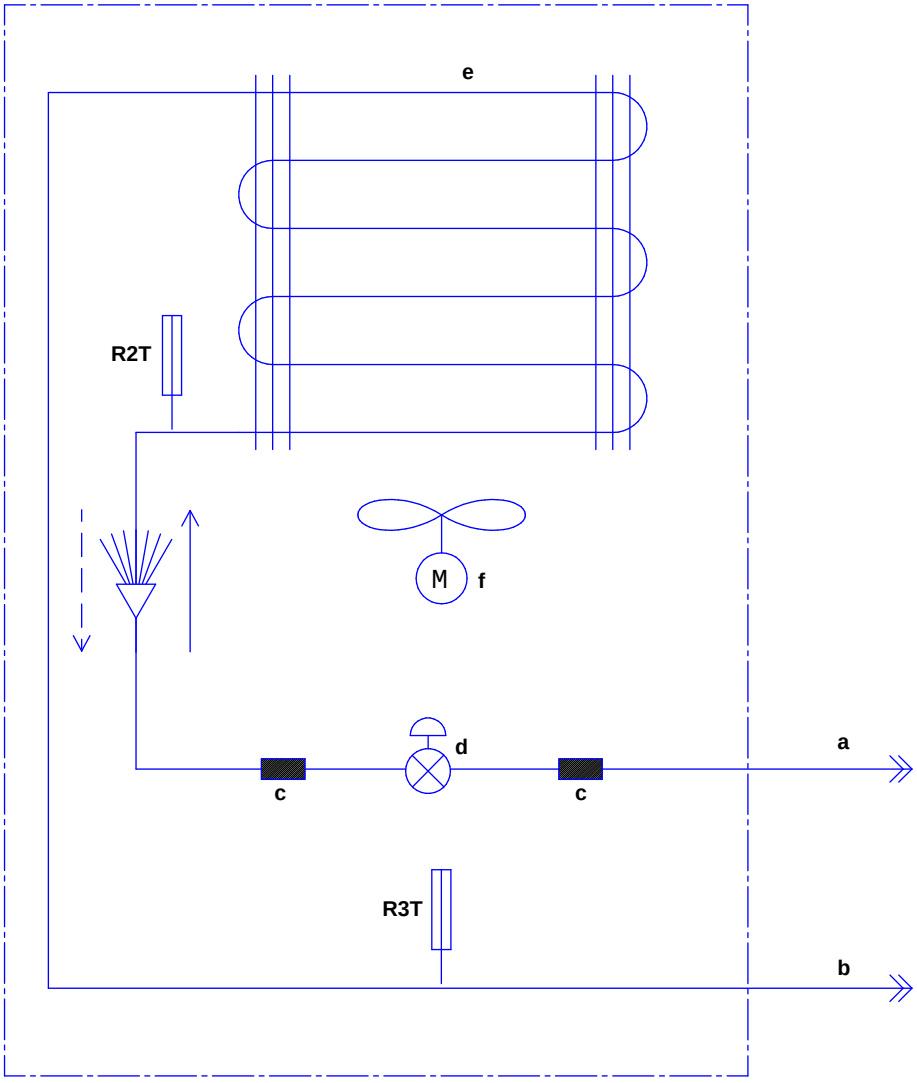


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Crossflow fan
g Distributor
M1F Fan motor
R1T Air thermistor
R2T Refrigerant liquid thermistor
R3T Refrigerant gas thermistor
Heating
Cooling

FXUA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

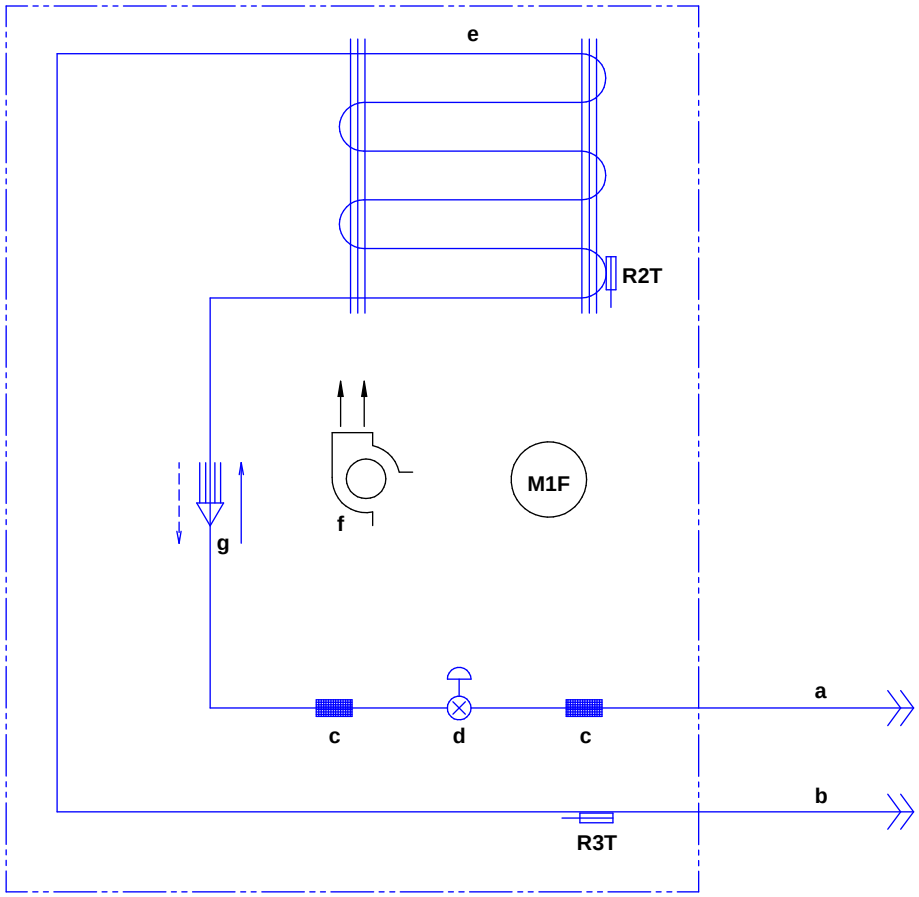


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Fan
R2T Refrigerant liquid thermistor
R3T Refrigerant gas thermistor
--► Heating
—► Cooling

FXMA

INFORMATION

The diagrams shown in this manual may be incorrect due to changes/updates to the unit. Correct diagrams are supplied with the unit and can also be found in the technical data book.

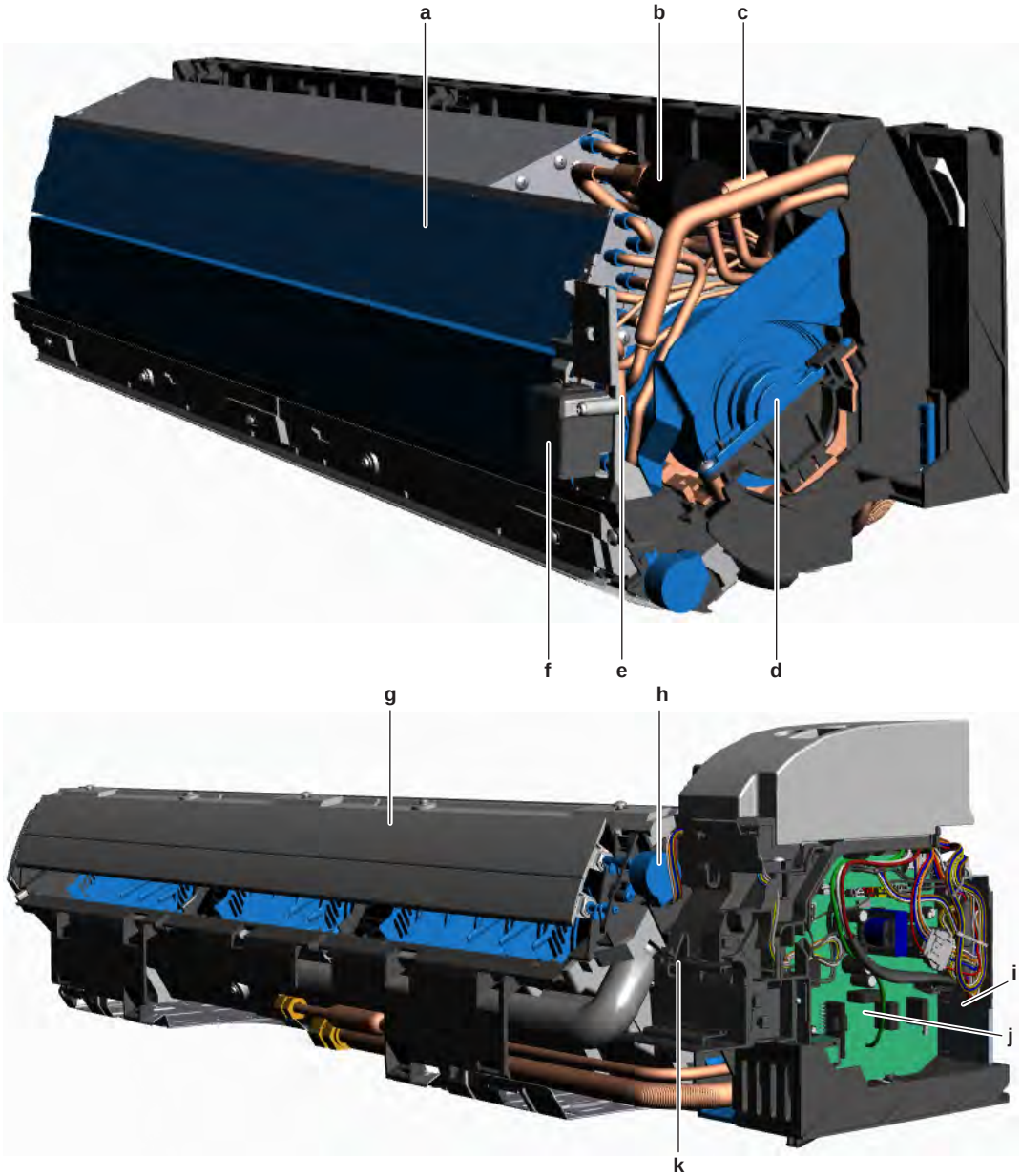


a Field piping (liquid connection)
b Field piping (gas connection)
c Filter
d Expansion valve
e Heat exchanger
f Sirocco fan
g Distributor
M1F Fan motor
R2T Refrigerant liquid thermistor
R3T Refrigerant gas thermistor
--► Heating
—► Cooling

7.4 Component overview

7.4.1 Component overview: Wall mounted indoor unit

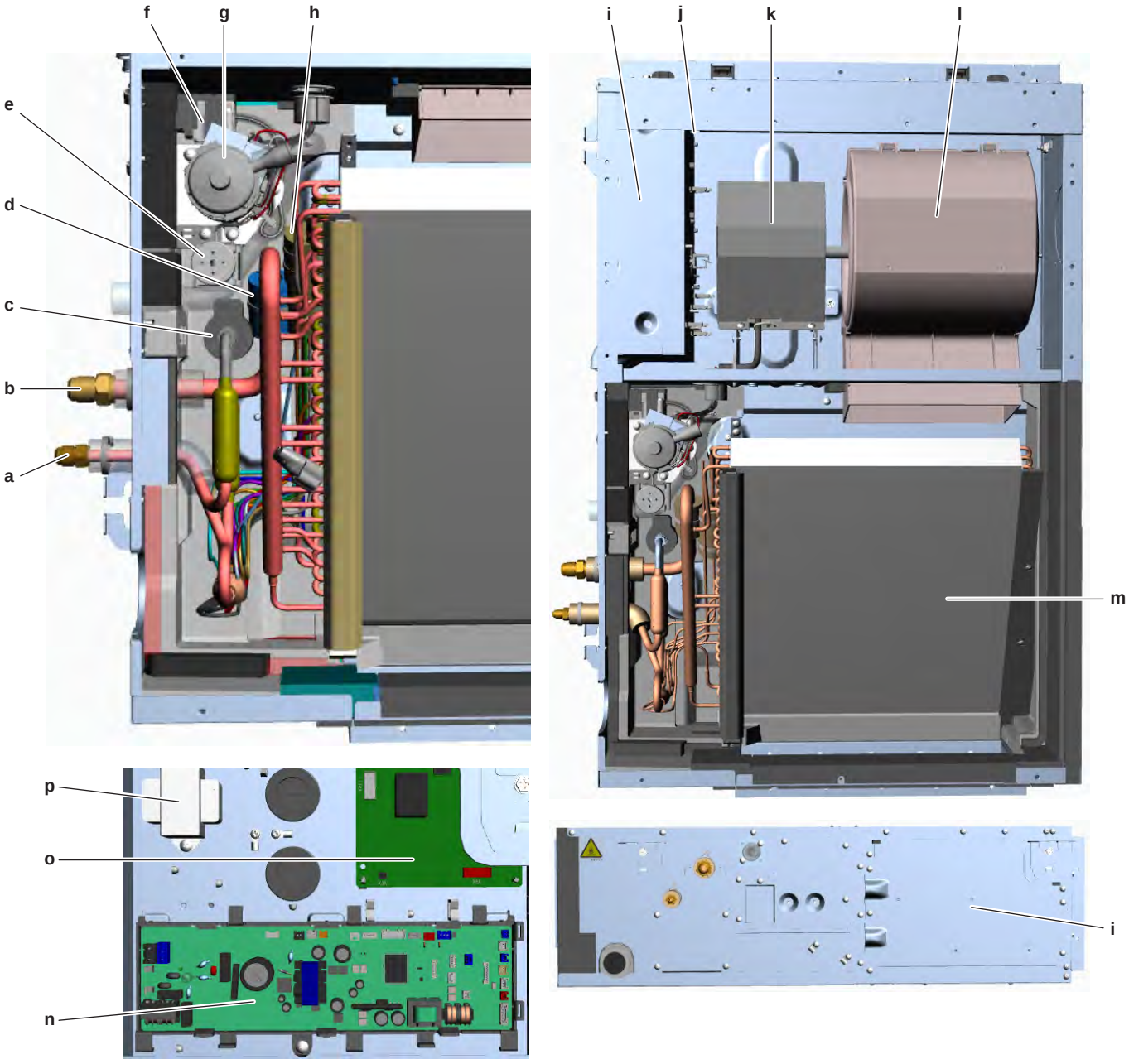
FXAA



- **a** Heat exchanger
- **b** Expansion valve coil Y1E
- **c** Gas thermistor R3T
- **d** Fan motor M1F
- **e** Refrigerant liquid thermistor R2T
- **f** R32 leak detection sensor
- **g** Swing flap
- **h** Swing flap motor M1S
- **i** Switch box
- **j** Indoor unit main PCB A1P
- **k** Suction air thermistor R1T

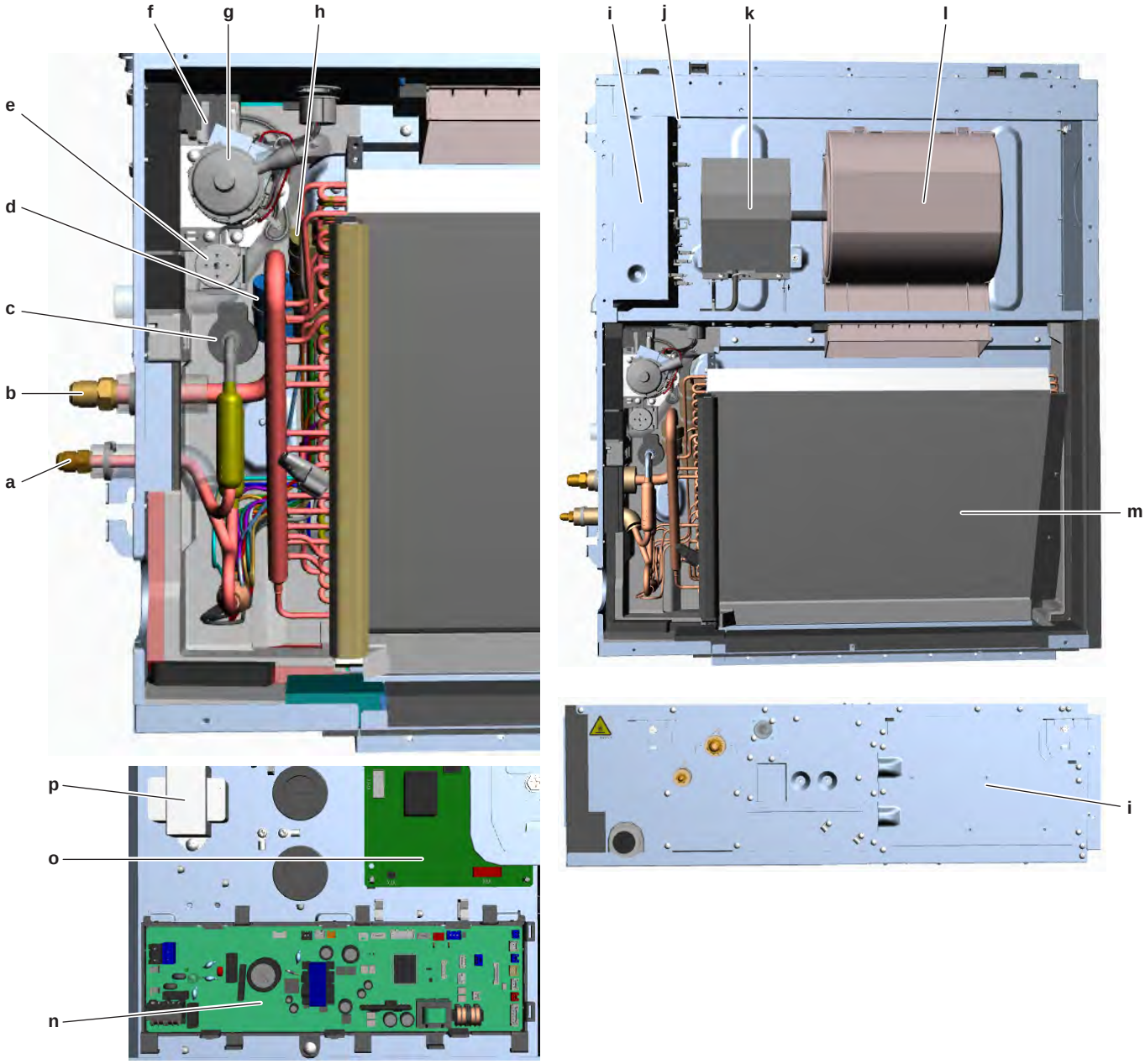
7.4.2 Component overview: Duct indoor unit

FXSA15~32



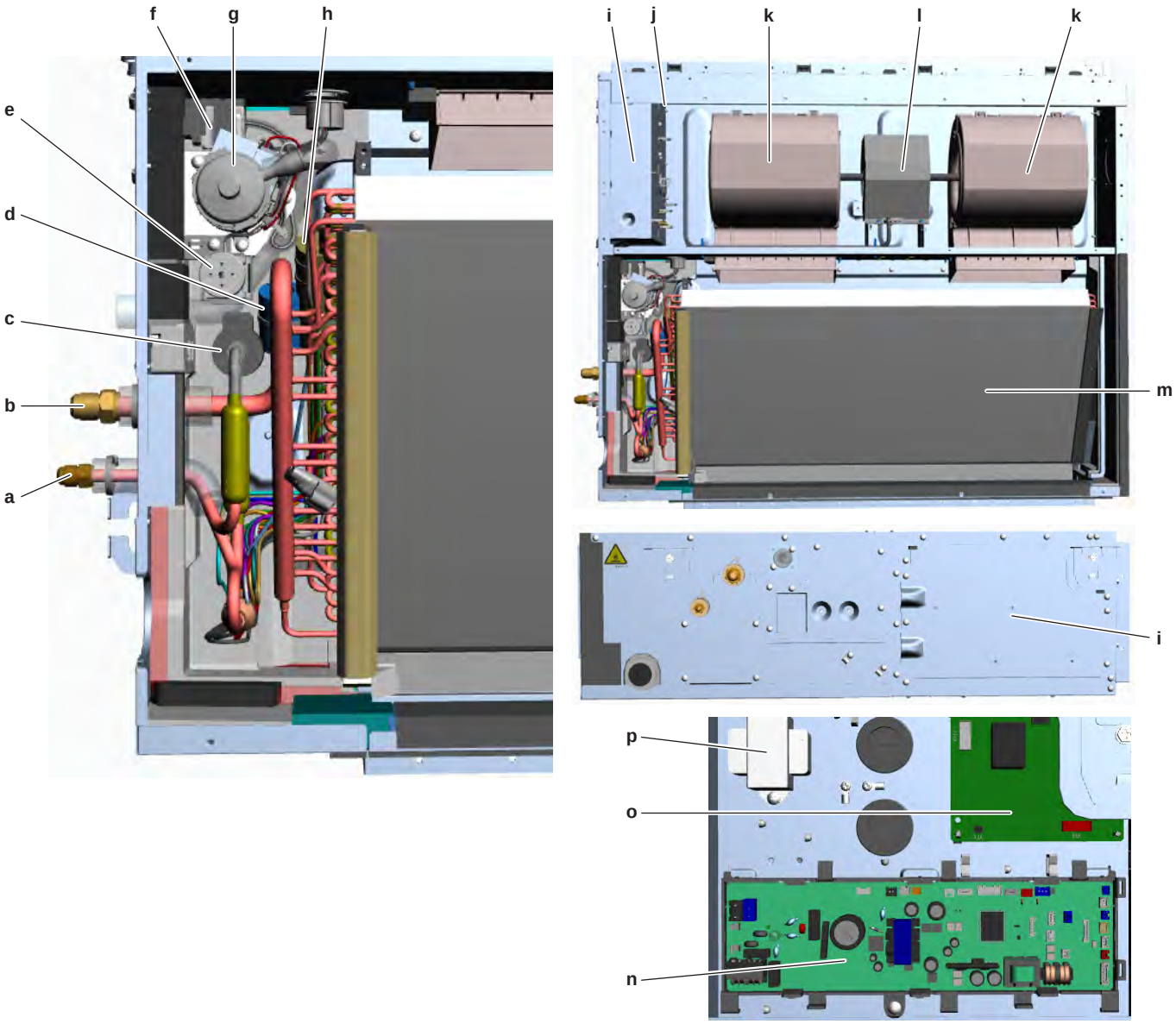
a	Refrigerant liquid connection	**i**	Switch box
b	Refrigerant gas connection	**j**	Suction air thermistor R1T
c	Expansion valve Y1E	**k**	Indoor unit fan motor M1F
d	Gas thermistor R3T	**l**	Fan
e	Float switch S1L	**m**	Heat exchanger
f	R32 leak detection sensor	**n**	Indoor unit main PCB A1P
g	Drain pump M1P	**o**	Indoor unit fan PCB A2P
h	Refrigerant liquid thermistor R2T	**p**	Reactor L1R

FXSA40+50



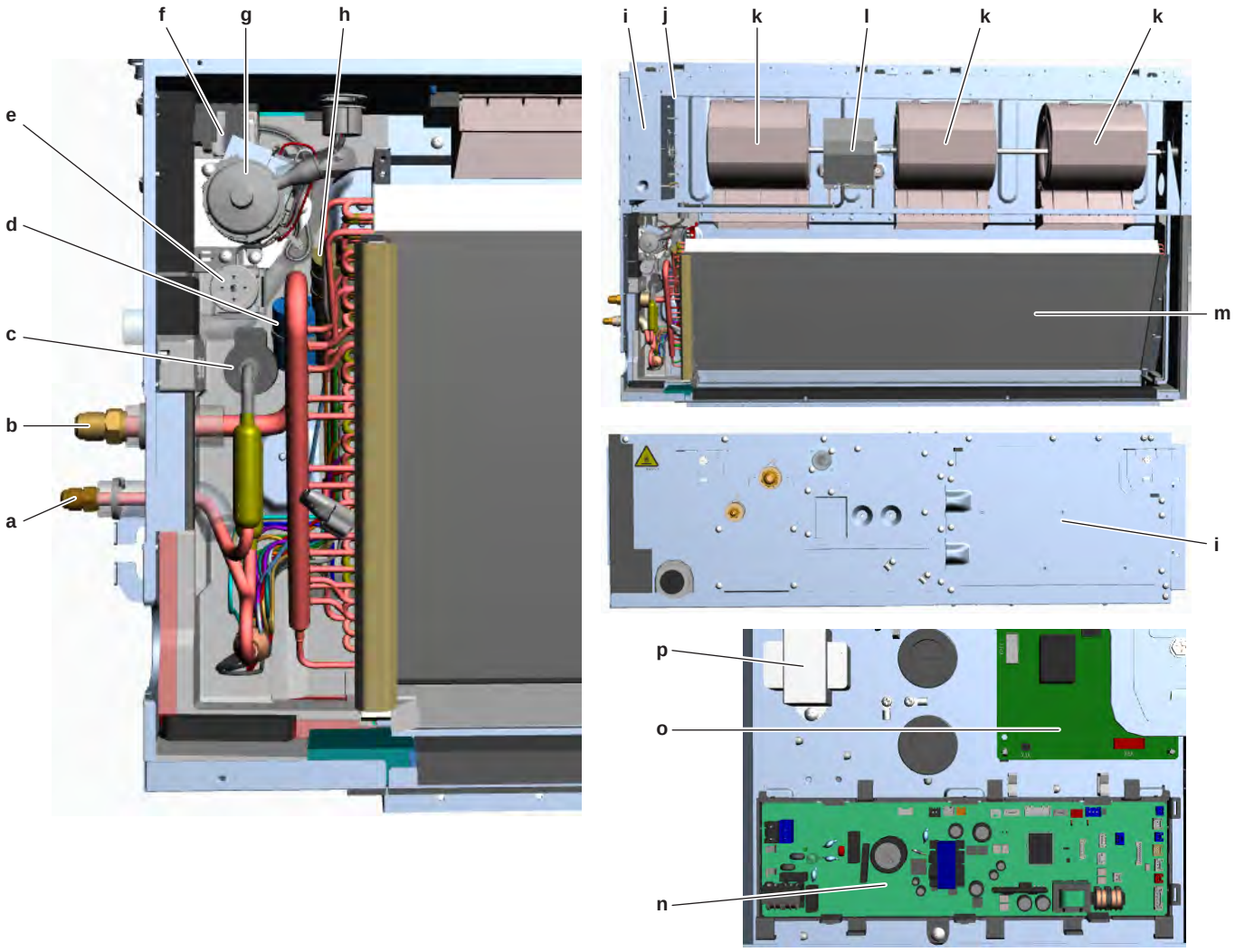
a	Refrigerant liquid connection
b	Refrigerant gas connection
c	Expansion valve Y1E
d	Gas thermistor R3T
e	Float switch S1L
f	R32 leak detection sensor
g	Drain pump M1P
h	Refrigerant liquid thermistor R2T
i	Switch box
j	Suction air thermistor R1T
k	Indoor unit fan motor M1F
l	Fan
m	Heat exchanger
n	Indoor unit main PCB A1P
o	Indoor unit fan PCB A2P
p	Reactor L1R

FXSA63+80



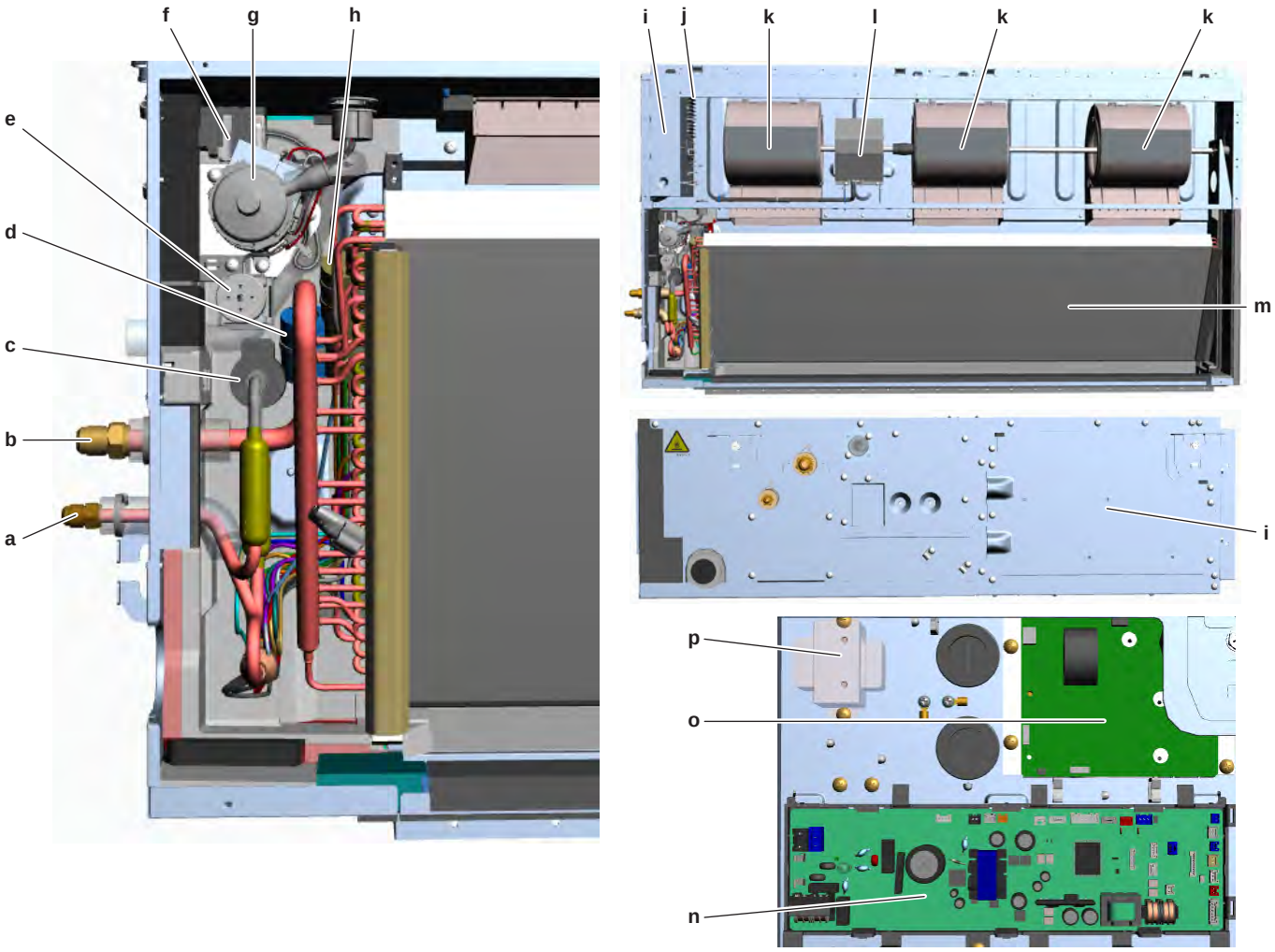
a	Refrigerant liquid connection
b	Refrigerant gas connection
c	Expansion valve Y1E
d	Gas thermistor R3T
e	Float switch S1L
f	R32 leak detection sensor
g	Drain pump M1P
h	Refrigerant liquid thermistor R2T
i	Switch box
j	Suction air thermistor R1T
k	Fan
l	Indoor unit fan motor M1F
m	Heat exchanger
n	Indoor unit main PCB A1P
o	Indoor unit fan PCB A2P
p	Reactor L1R

FXSA100+125



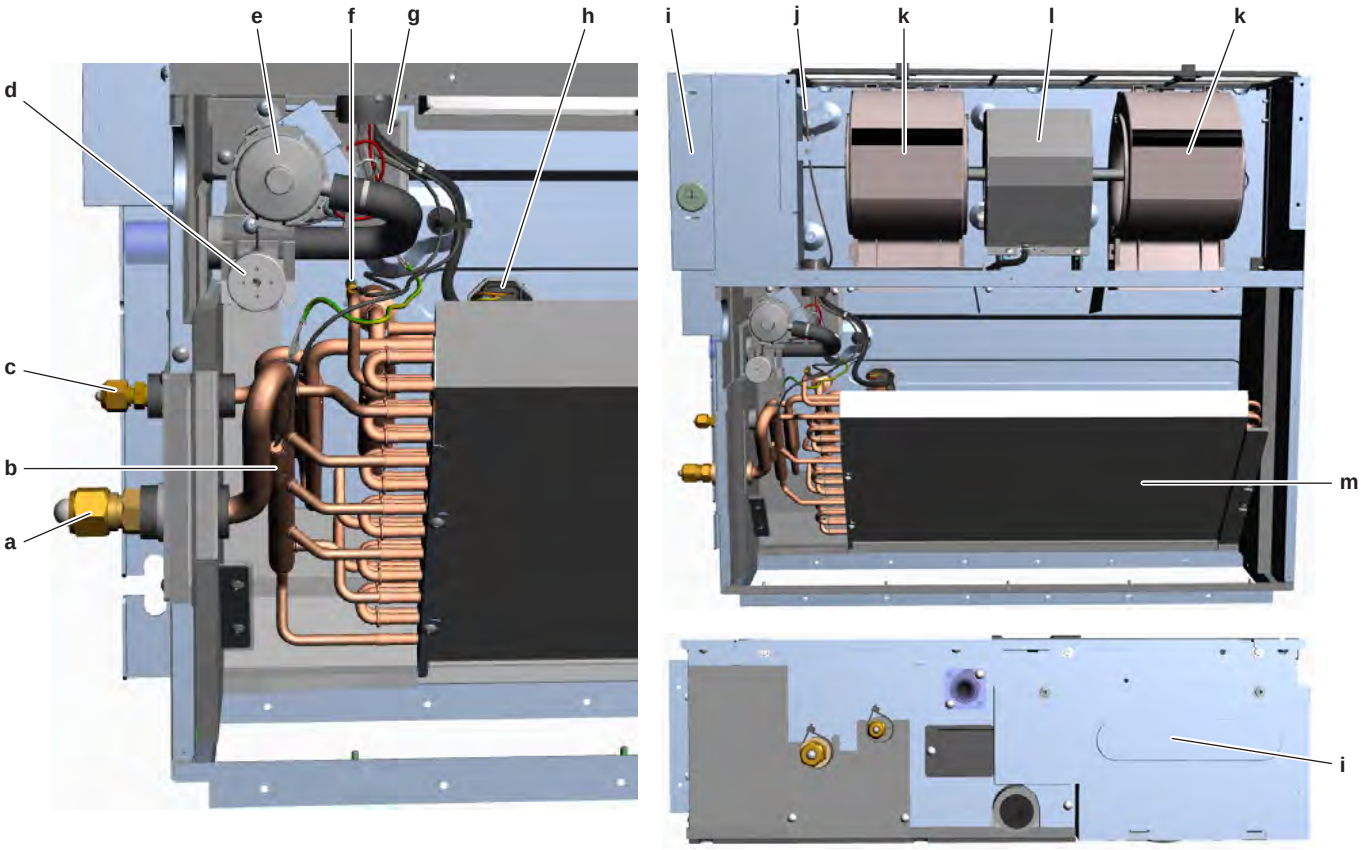
a	Refrigerant liquid connection	**i**	Switch box
b	Refrigerant gas connection	**j**	Suction air thermistor R1T
c	Expansion valve Y1E	**k**	Fan
d	Gas thermistor R3T	**l**	Indoor unit fan motor M1F
e	Float switch S1L	**m**	Heat exchanger
f	R32 leak detection sensor	**n**	Indoor unit main PCB A1P
g	Drain pump M1P	**o**	Indoor unit fan PCB A2P
h	Refrigerant liquid thermistor R2T	**p**	Reactor L1R

FXSA140



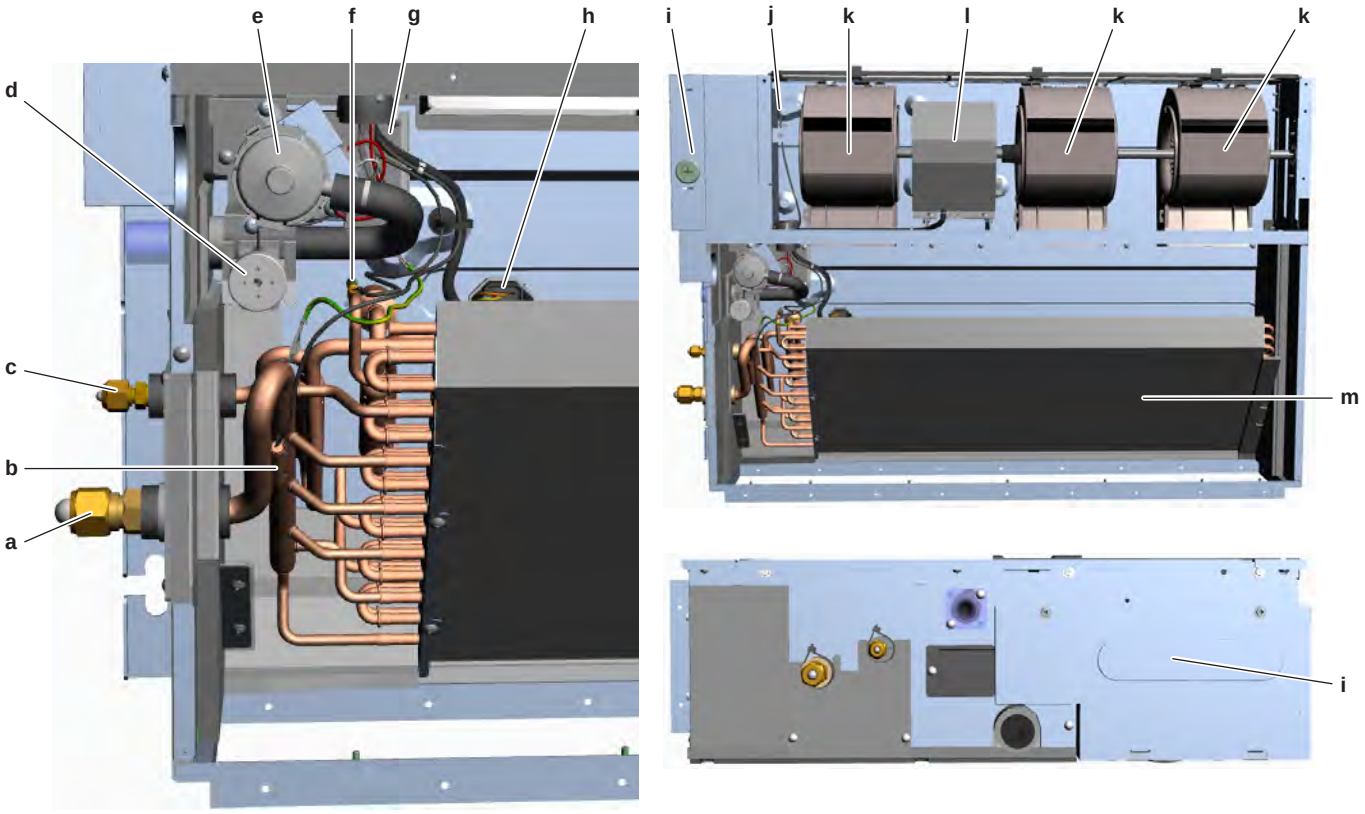
a	Refrigerant liquid connection
b	Refrigerant gas connection
c	Expansion valve Y1E
d	Gas thermistor R3T
e	Float switch S1L
f	R32 leak detection sensor
g	Drain pump M1P
h	Refrigerant liquid thermistor R2T
i	Switch box
j	Suction air thermistor R1T
k	Fan
l	Indoor unit fan motor M1F
m	Heat exchanger
n	Indoor unit main PCB A1P
o	Indoor unit fan PCB A2P
p	Reactor L1R

FXDA10~32



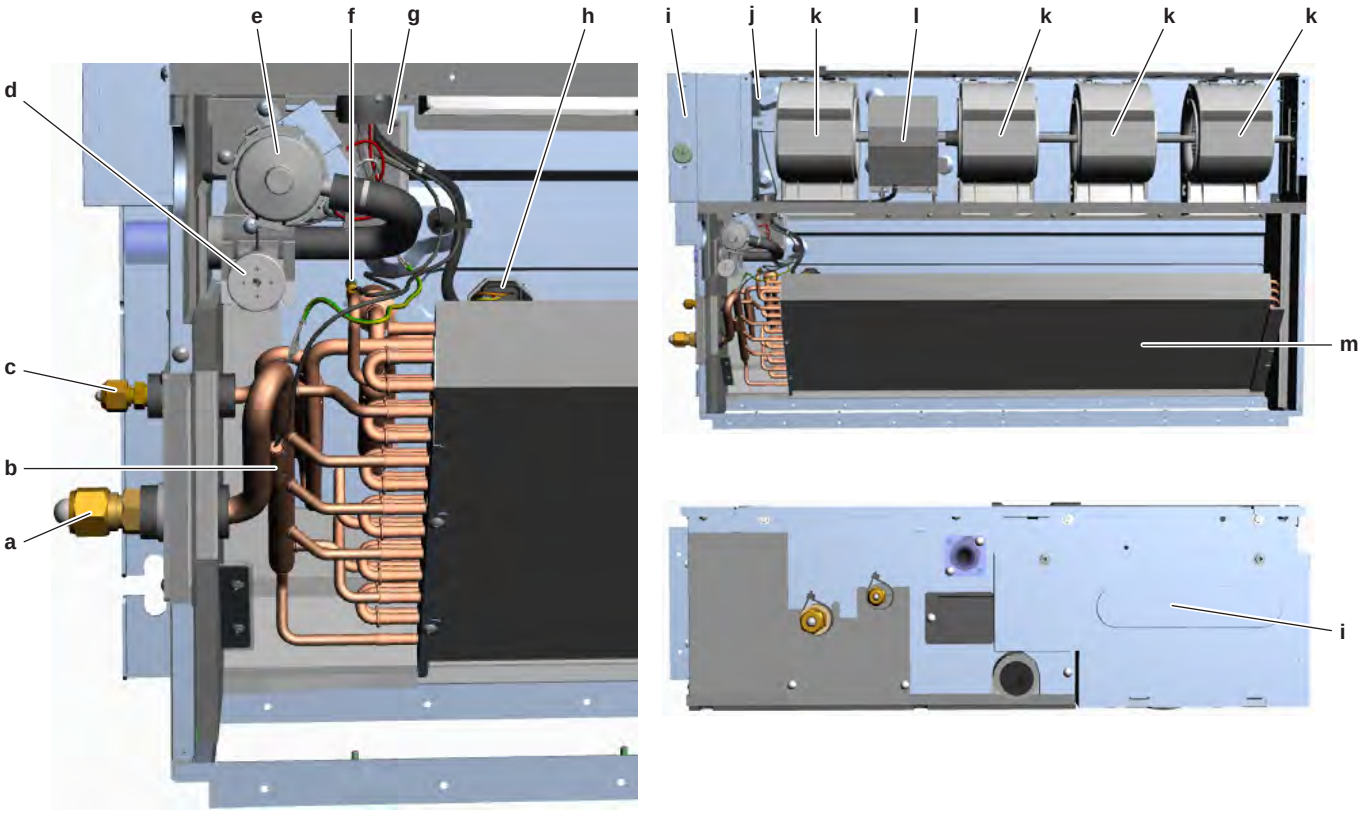
a	Refrigerant gas connection
b	Gas thermistor R3T
c	Refrigerant liquid connection
d	Float switch S1L
e	Drain pump M1P
f	Refrigerant liquid thermistor R2T
g	R32 leak detection sensor
h	Expansion valve Y1E
i	Switch box
j	Suction air thermistor R1T
k	Fan
l	Indoor unit fan motor M1F
m	Heat exchanger

FXDA40+50



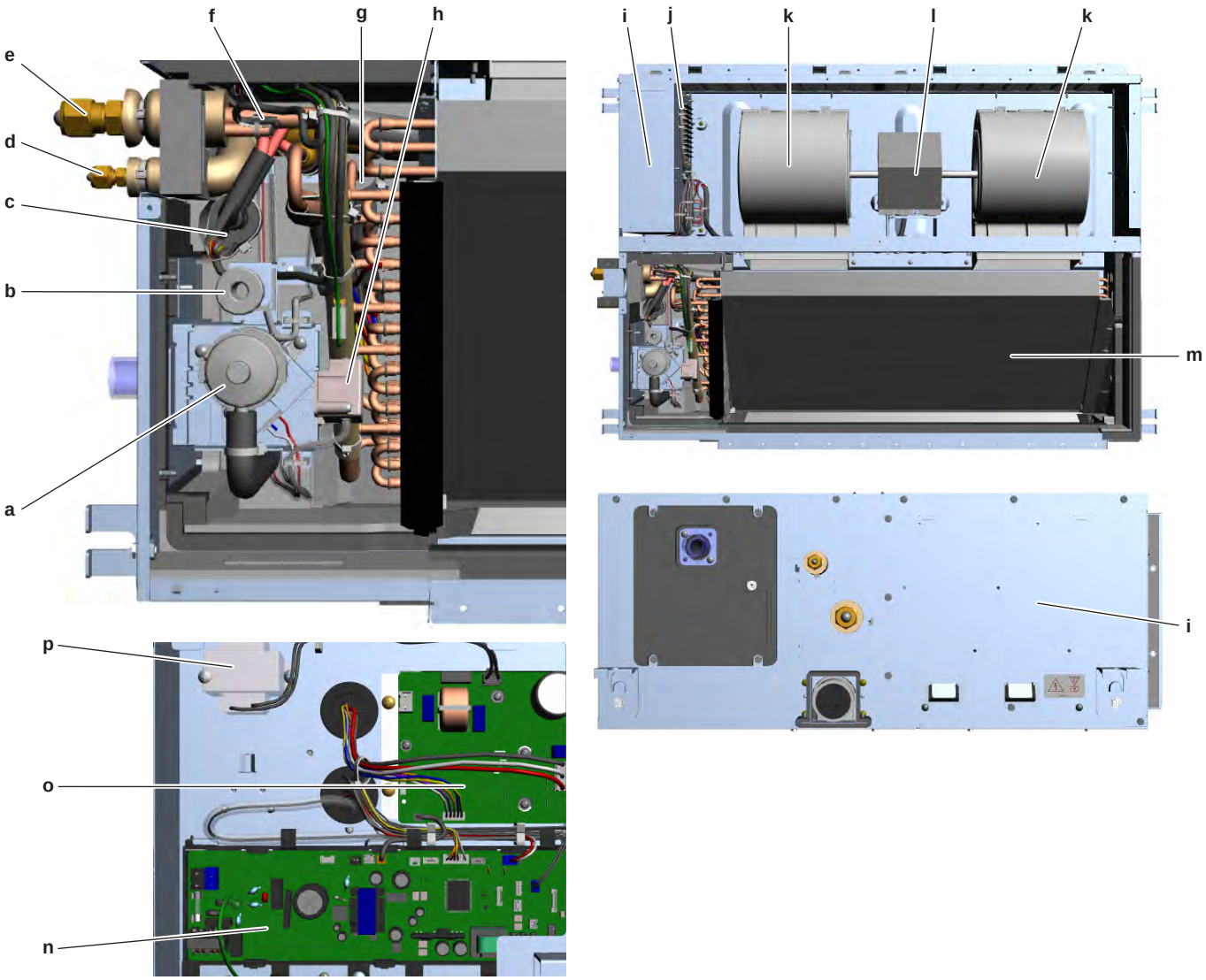
a	Refrigerant gas connection	**h**	Expansion valve Y1E
b	Gas thermistor R3T	**i**	Switch box
c	Refrigerant liquid connection	**j**	Suction air thermistor R1T
d	Float switch S1L	**k**	Fan
e	Drain pump M1P	**l**	Indoor unit fan motor M1F
f	Refrigerant liquid thermistor R2T	**m**	Heat exchanger
g	R32 leak detection sensor		

FXDA63



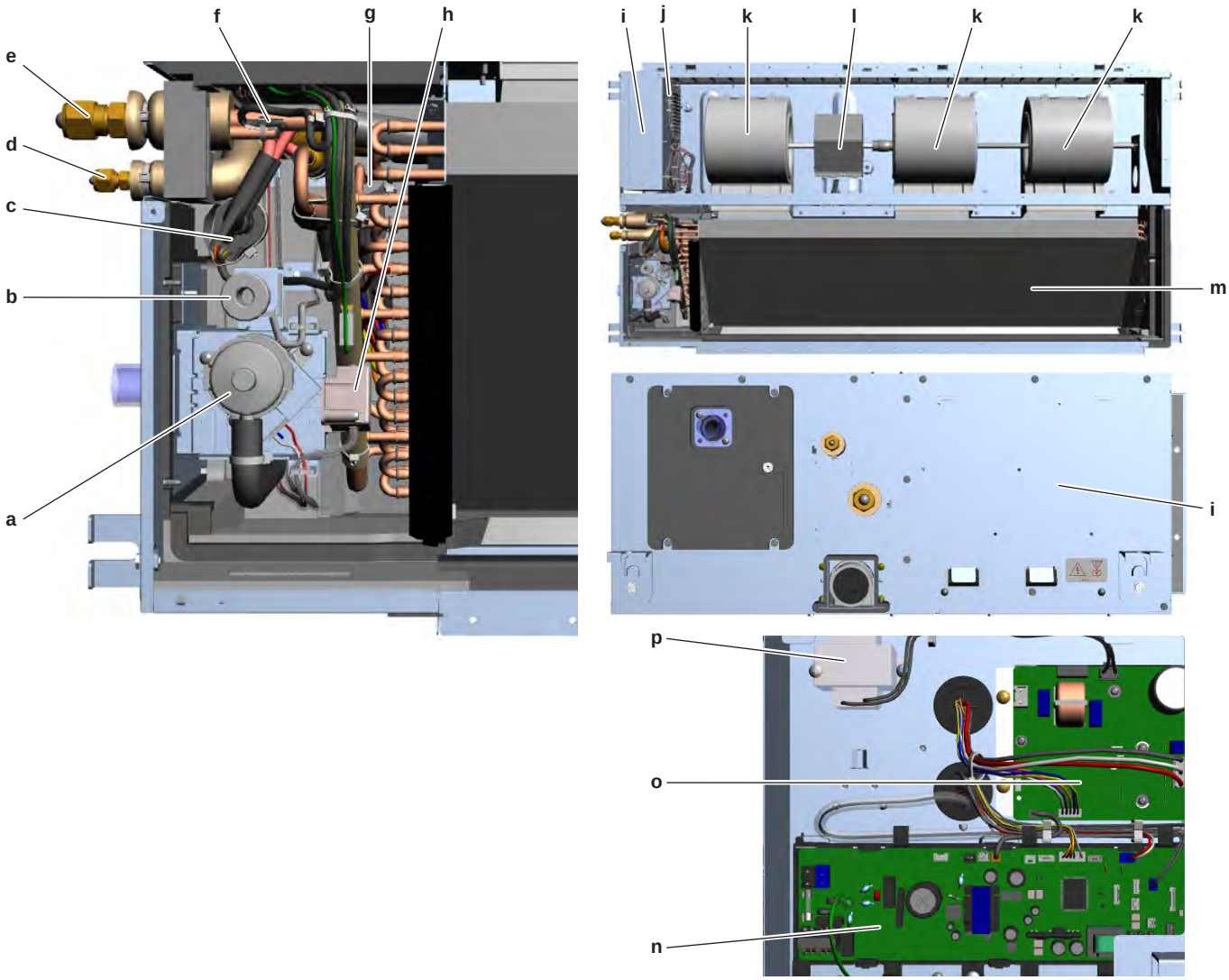
a	Refrigerant gas connection
b	Gas thermistor R3T
c	Refrigerant liquid connection
d	Float switch S1L
e	Drain pump M1P
f	Refrigerant liquid thermistor R2T
g	R32 leak detection sensor
h	Expansion valve Y1E
i	Switch box
j	Suction air thermistor R1T
k	Fan
l	Indoor unit fan motor M1F
m	Heat exchanger

FXMA50~80



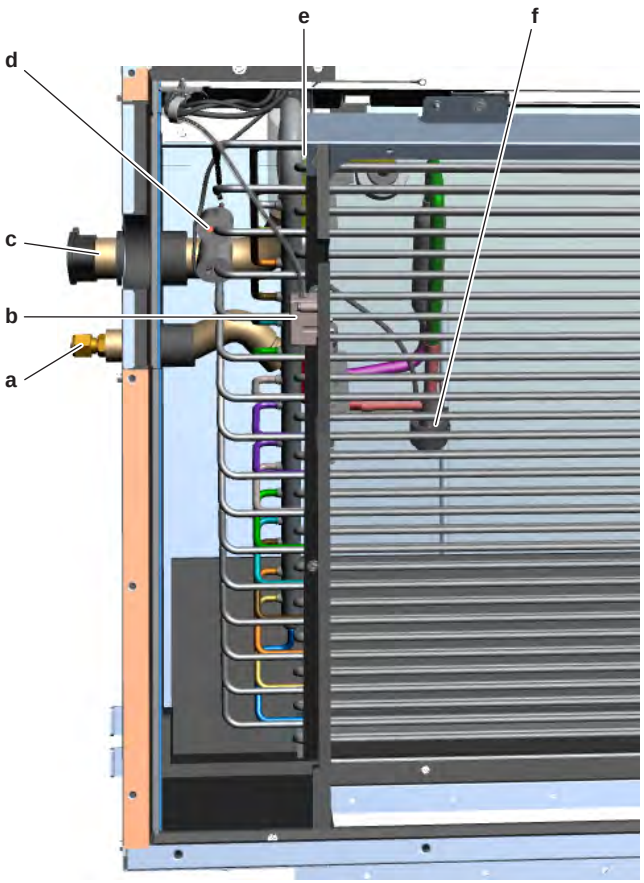
a	Drain pump M1P
b	Float switch S1L
c	Expansion valve Y1E
d	Refrigerant liquid connection
e	Refrigerant gas connection
f	Gas thermistor R3T
g	Refrigerant liquid thermistor R2T
h	R32 leak detection sensor
i	Switch box
j	Suction air thermistor R1T
k	Fan
l	Indoor unit fan motor M1F
m	Heat exchanger
n	Indoor unit main PCB A1P
o	Indoor unit fan PCB A2P
p	Reactor L1R

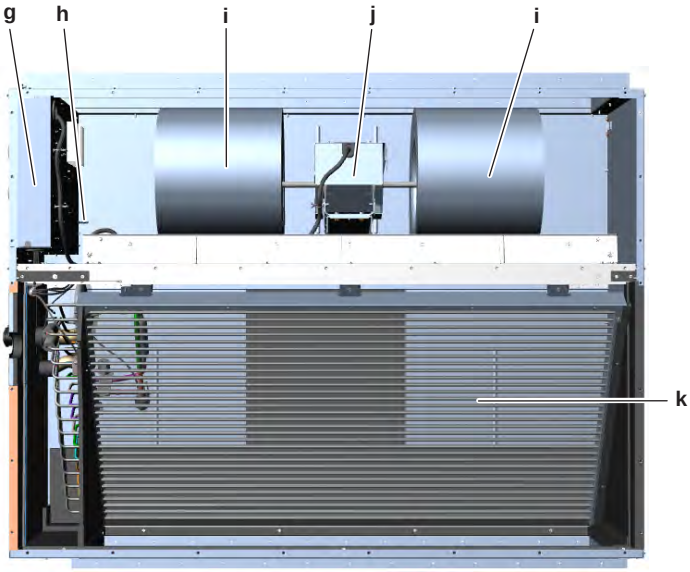
FXMA100+125

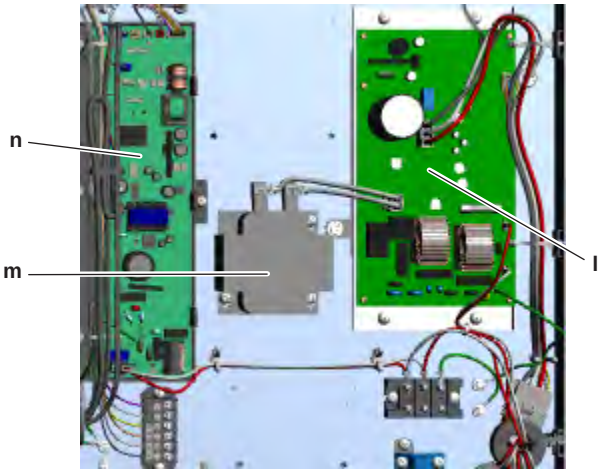


a	Drain pump M1P	**i**	Switch box
b	Float switch S1L	**j**	Suction air thermistor R1T
c	Expansion valve Y1E	**k**	Fan
d	Refrigerant liquid connection	**l**	Indoor unit fan motor M1F
e	Refrigerant gas connection	**m**	Heat exchanger
f	Gas thermistor R3T	**n**	Indoor unit main PCB A1P
g	Refrigerant liquid thermistor R2T	**o**	Indoor unit fan PCB A2P
h	R32 leak detection sensor	**p**	Reactor L1R

FXMA200

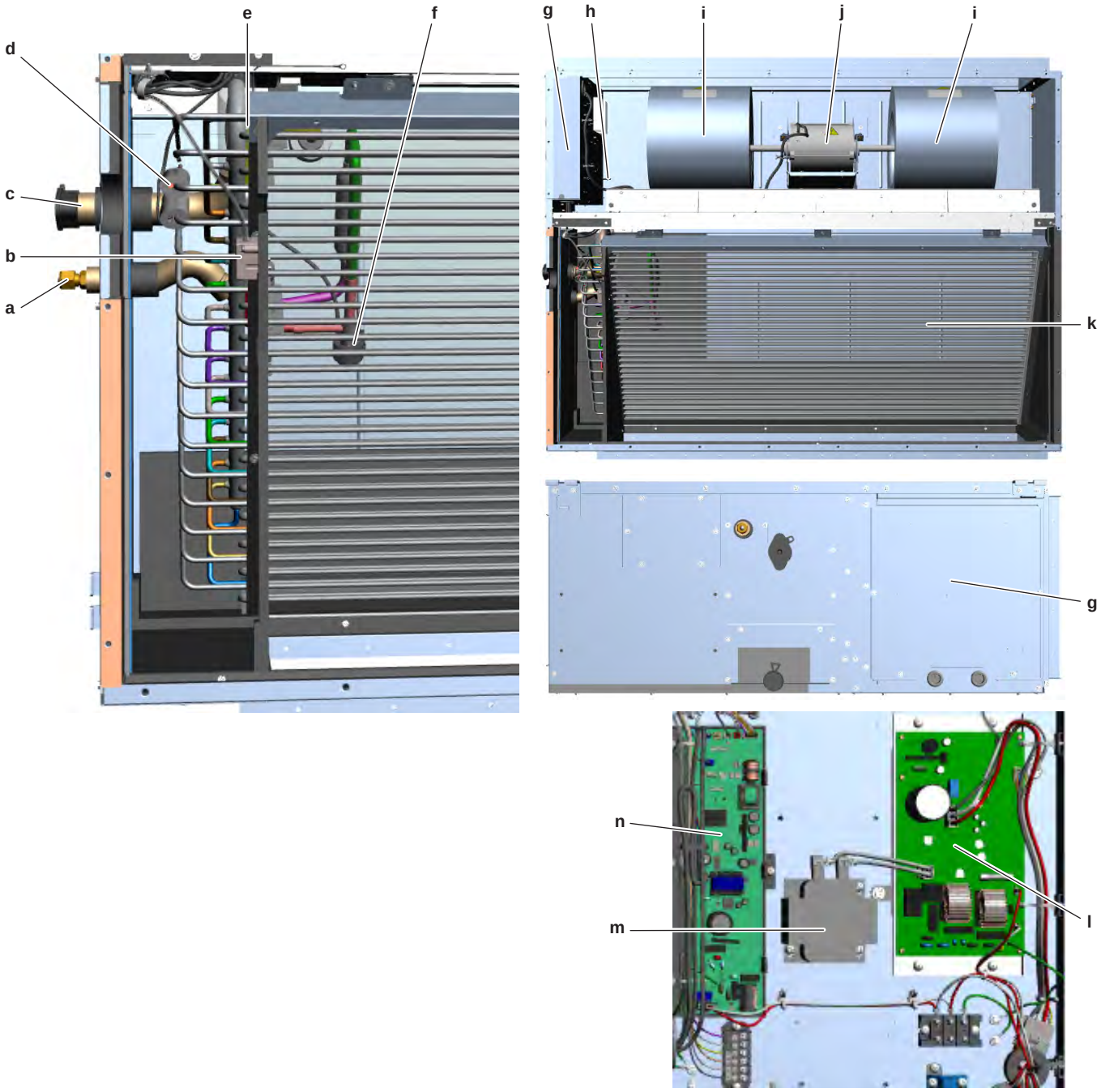






a Refrigerant liquid connection
b R32 leak detection sensor
c Refrigerant gas connection
d Refrigerant liquid thermistor R2T
e Gas thermistor R3T
f Expansion valve Y1E
g Switch box
h Suction air thermistor R1T
i Fan
j Indoor unit fan motor M1F
k Heat exchanger
l Indoor unit fan PCB A2P
m Reactor L1R
n Indoor unit main PCB A1P

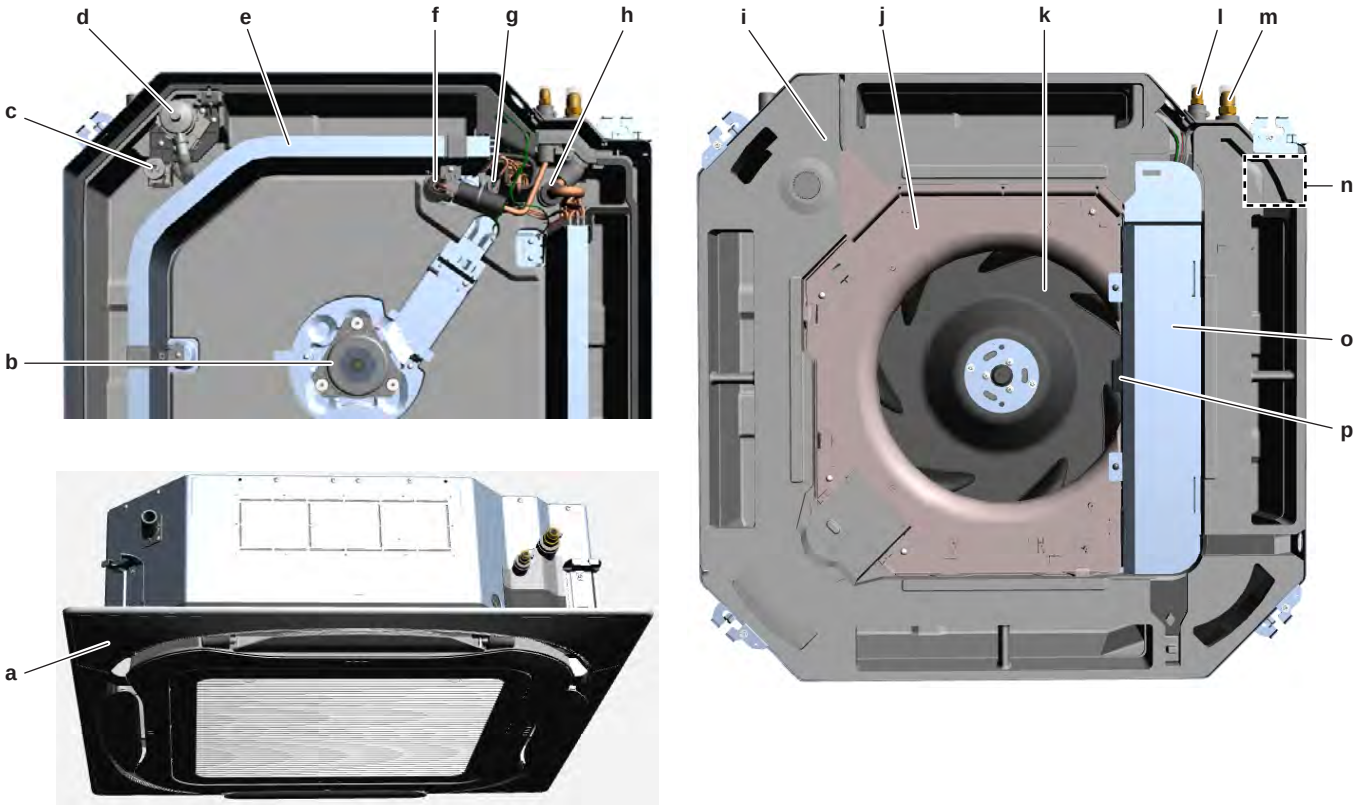
FXMA250



a	Refrigerant liquid connection
b	R32 leak detection sensor
c	Refrigerant gas connection
d	Refrigerant liquid thermistor R2T
e	Gas thermistor R3T
f	Expansion valve Y1E
g	Switch box
h	Suction air thermistor R1T
i	Fan
j	Indoor unit fan motor M1F
k	Heat exchanger
l	Indoor unit fan PCB A2P
m	Reactor L1R
n	Indoor unit main PCB A1P

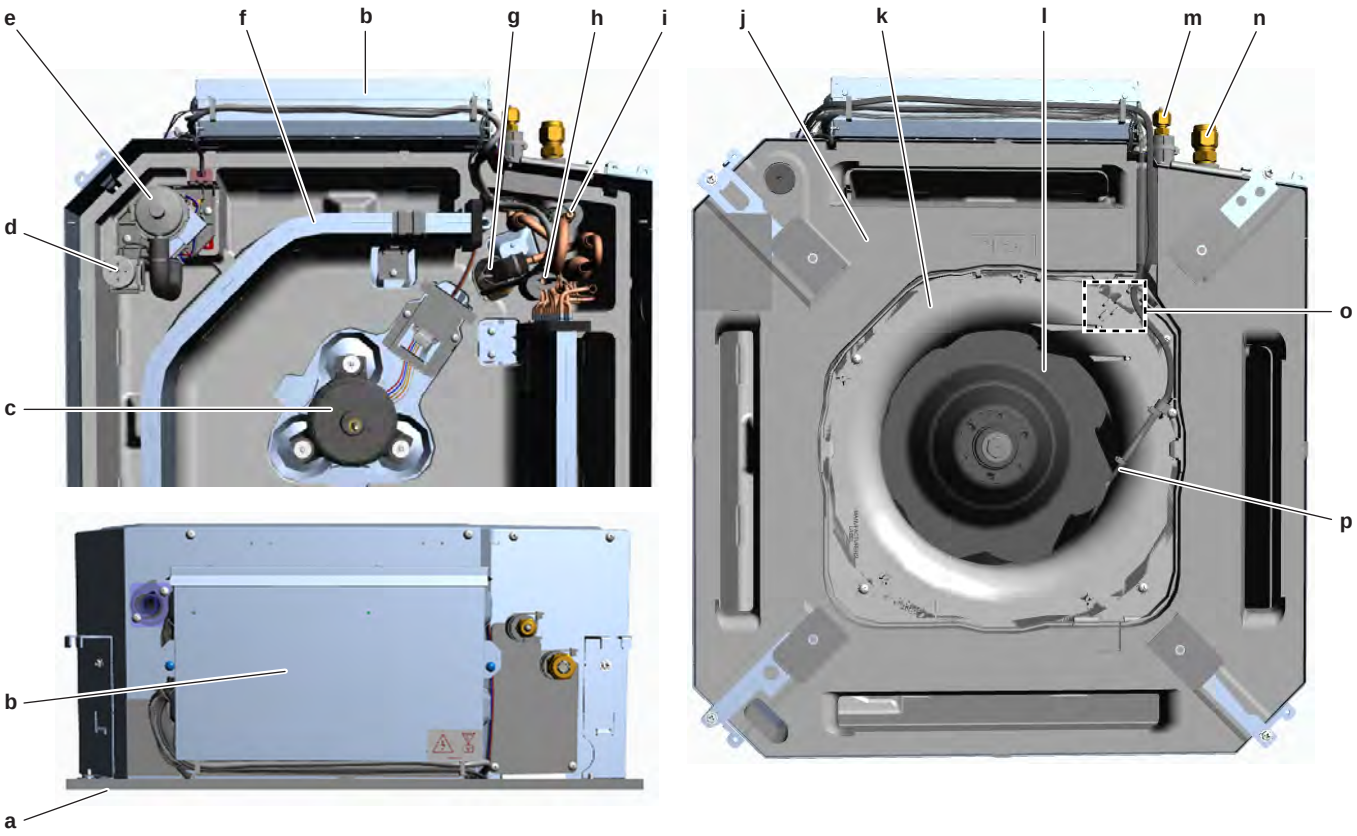
7.4.3 Component overview: Sensing cassette indoor unit

FXFA



a Decoration panel
b Indoor unit fan motor M1F
c Float switch S1L
d Drain pump M1P
e Heat exchanger
f Expansion valve Y1E
g Refrigerant liquid thermistor R2T
h Gas thermistor R3T
i Drain pan
j Bell mouth
k Fan rotor
l Refrigerant liquid connection
m Refrigerant gas connection
n R32 leak detection sensor (at the back side of the drain pan)
o Switch box
p Suction air thermistor R1T

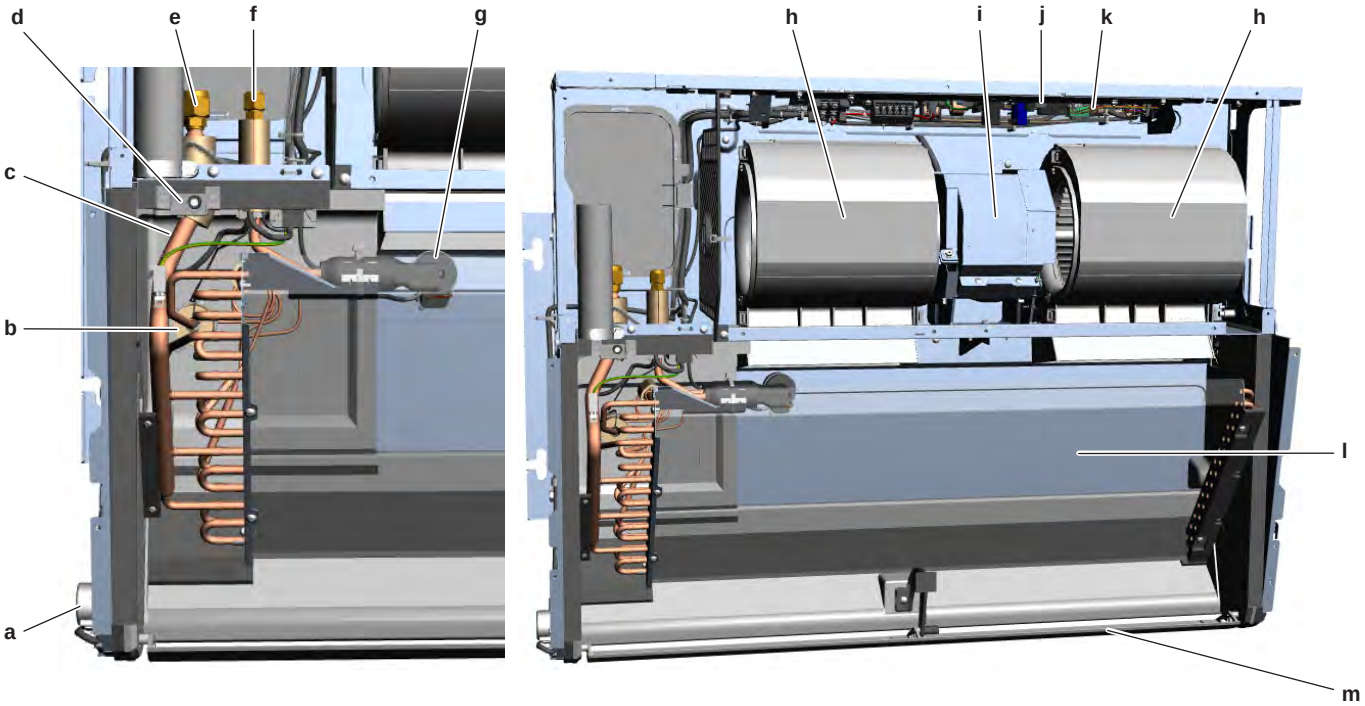
FXZA



a Decoration panel
b Switch box
c Indoor unit fan motor M1F
d Float switch S1L
e Drain pump M1P
f Heat exchanger
g Expansion valve Y1E
h Refrigerant liquid thermistor R2T
i Gas thermistor R3T
j Drain pan
k Bell mouth
l Fan rotor
m Refrigerant liquid connection
n Refrigerant gas connection
o R32 leak detection sensor (at the back side of the bell mouth)
p Suction air thermistor R1T

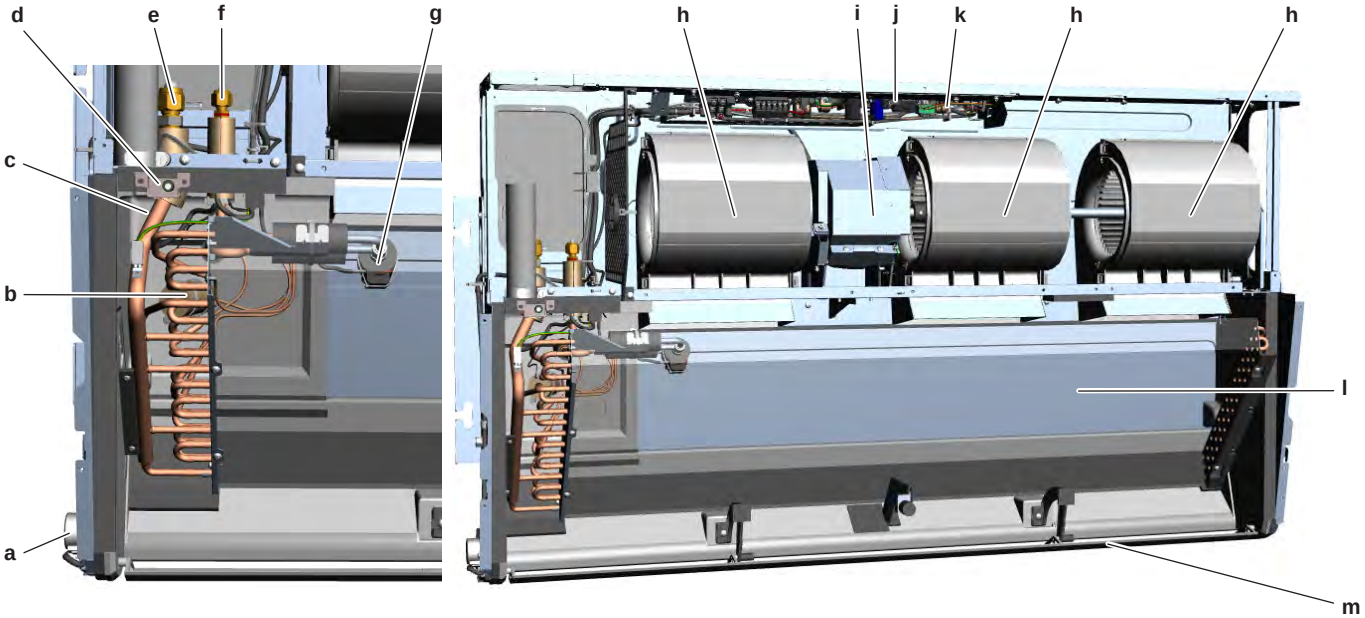
7.4.4 Component overview: Suspend (1-way) indoor unit

FXHA32



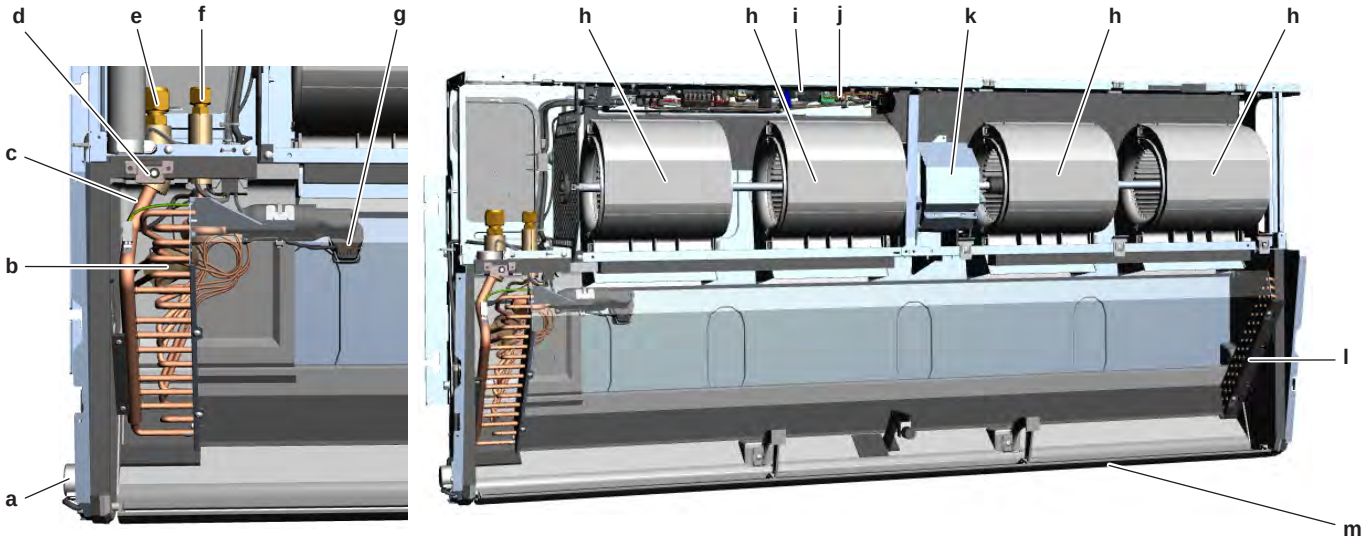
- **a** Swing flap motor M1S
- **b** Refrigerant liquid thermistor R2T
- **c** Gas thermistor R3T
- **d** R32 leak detection sensor
- **e** Refrigerant gas connection
- **f** Refrigerant liquid connection
- **g** Expansion valve Y1E
- **h** Fan
- **i** Indoor unit fan motor M1F
- **j** Suction air thermistor R1T
- **k** Indoor unit main PCB A1P
- **l** Heat exchanger
- **m** Swing flap

FXHA50+63



- **a** Swing flap motor M1S
- **b** Refrigerant liquid thermistor R2T
- **c** Gas thermistor R3T
- **d** R32 leak detection sensor
- **e** Refrigerant gas connection
- **f** Refrigerant liquid connection
- **g** Expansion valve Y1E
- **h** Fan
- **i** Indoor unit fan motor M1F
- **j** Suction air thermistor R1T
- **k** Indoor unit main PCB A1P
- **l** Heat exchanger
- **m** Swing flap

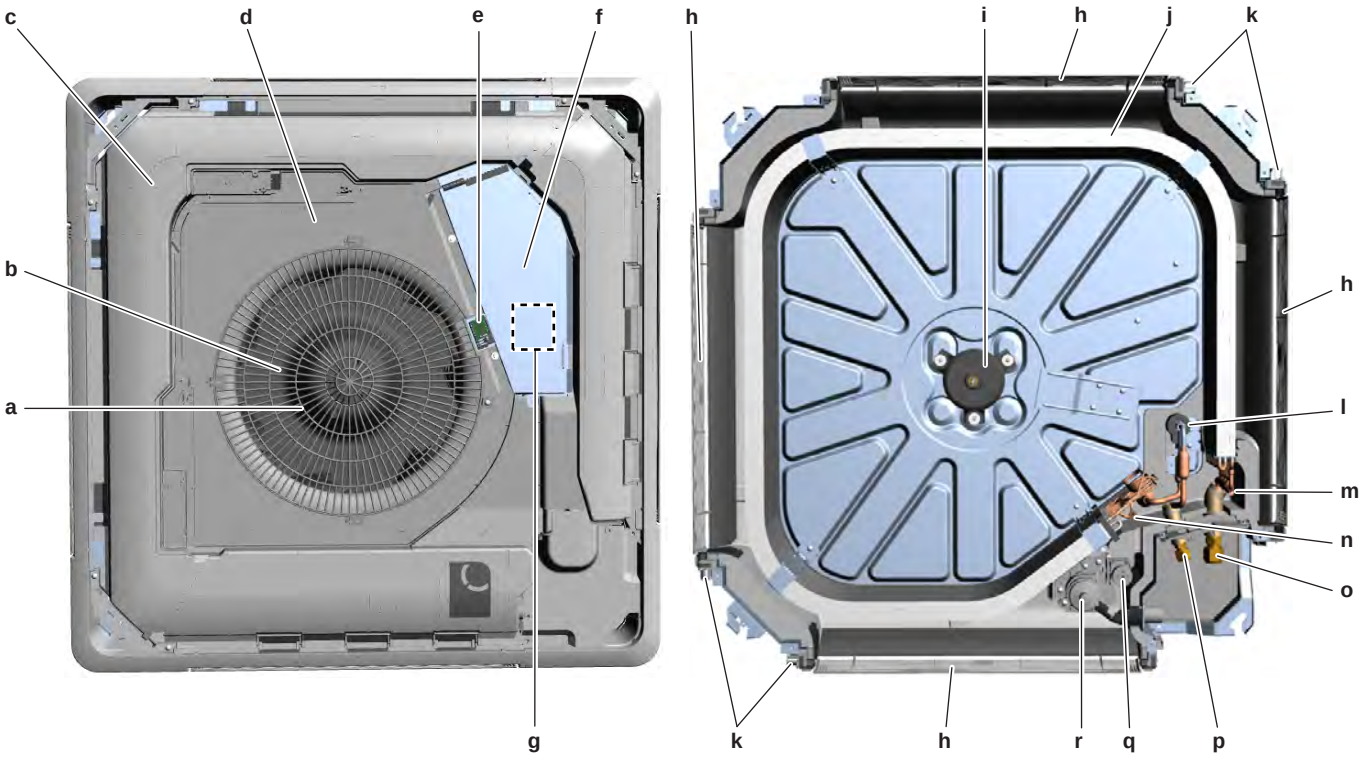
FXHA100



a	Swing flap motor M1S
b	Refrigerant liquid thermistor R2T
c	Gas thermistor R3T
d	R32 leak detection sensor
e	Refrigerant gas connection
f	Refrigerant liquid connection
g	Expansion valve Y1E
h	Fan
i	Suction air thermistor R1T
j	Indoor unit main PCB A1P
k	Indoor unit fan motor M1F
l	Heat exchanger
m	Swing flap

7.4.5 Component overview: Suspend (4-way) indoor unit

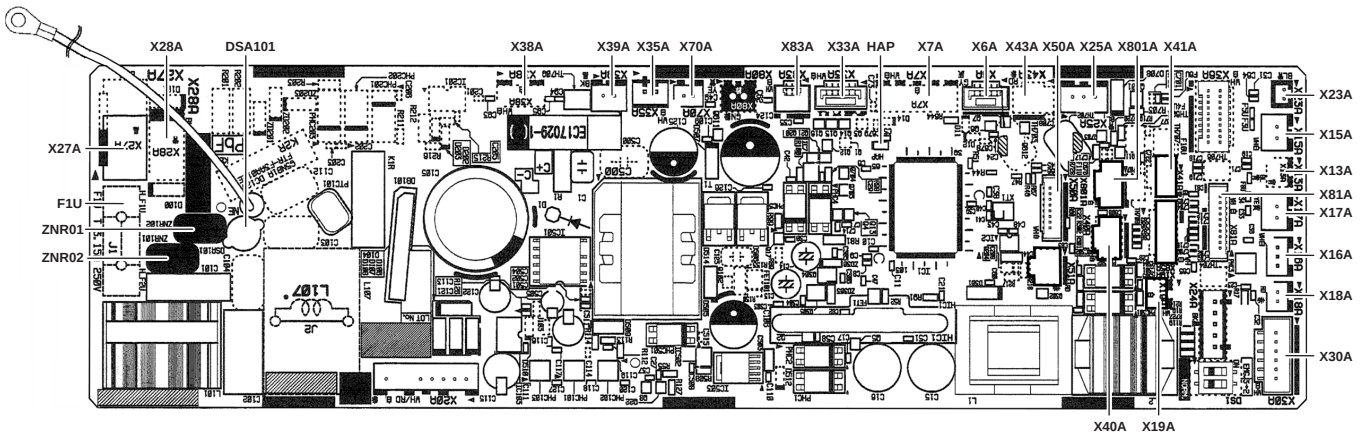
FXUA



a	Fan guard net
b	Fan rotor
c	Drain pan
d	Bell mouth
e	Suction air thermistor R1T
f	Switch box
g	R32 leak detection sensor (at the back side of the switch box)
h	Swing flap
i	Indoor unit fan motor M1F
j	Heat exchanger
k	Swing flap motor
l	Expansion valve Y1E
m	Gas thermistor R3T
n	Refrigerant liquid thermistor R2T
o	Refrigerant gas connection
p	Refrigerant liquid connection
q	Float switch S1L
r	Drain pump M1P

7.4.6 PCB Overview

FXSA unit main PCB

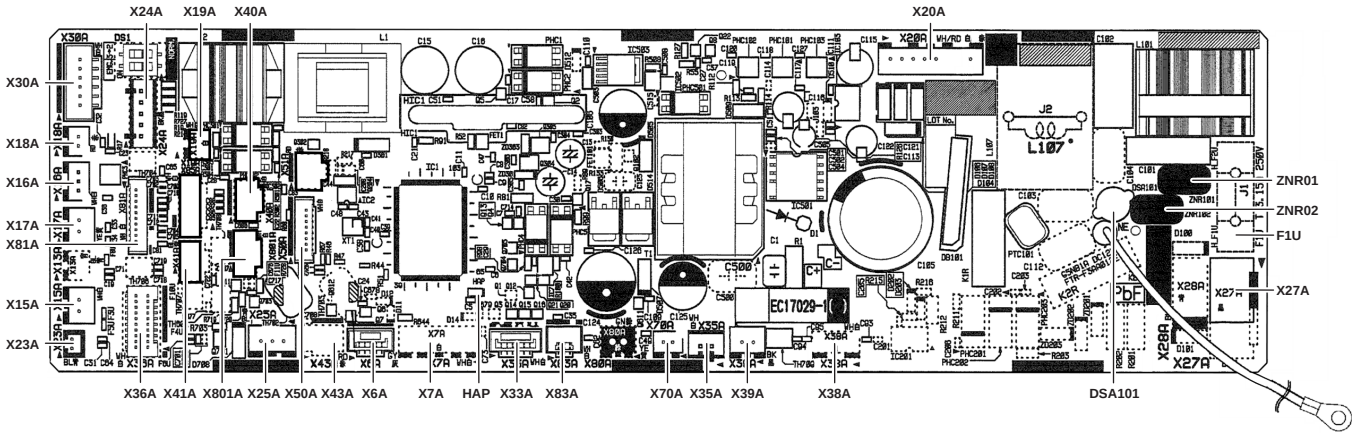


Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X13A	Blue	Air out thermistor	1	Ground (0 V)
			2	Sensor
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB (E)KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3-X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)
X38A	White	Option multi-tenant	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A50/51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)

Connector	Color	Function	Pin	Signals
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB	1	DCV
			2	Ground (0 V)
X81A	White	Option presence sensor	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXDA unit main PCB



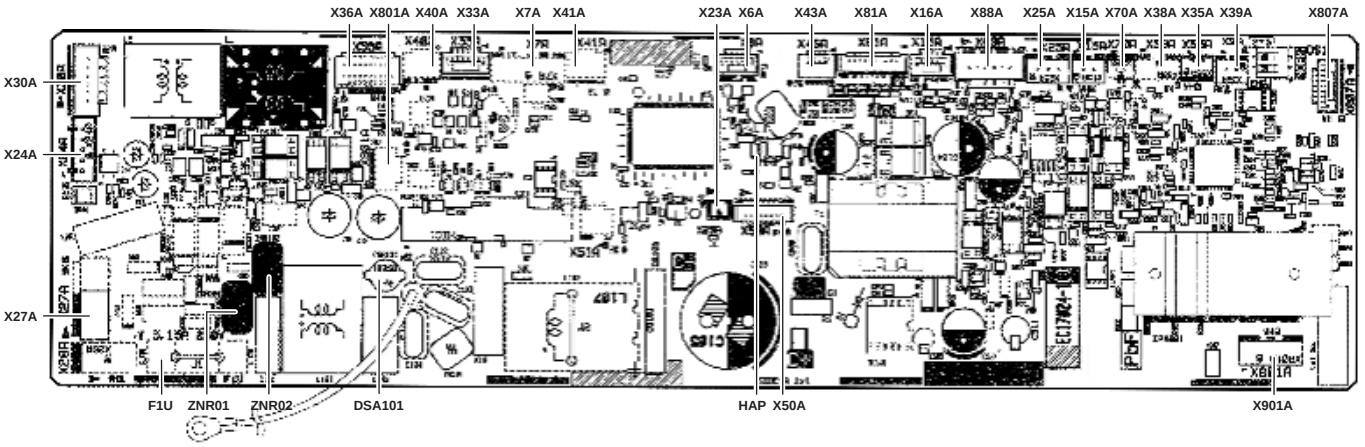
Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X20A	White	Fan motor	1	Not used
			2	Tacho (4p/rotation)
			3	V-speed (0~4.5 V DC)
			4	15.5 V DC
			5	Ground (0 V)
			6	Not used
			7	Not used
			8	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Decoration panel flap Not used this model	1	Coil A – flap 1
			2	Coil B – flap 1
			3	Coil A' – flap 1
			4	Coil B' – flap 1
			5	+13.5 V DC
			6	Coil A – flap 2
			7	Coil B – flap 2
			8	Coil A' – flap 2
			9	Coil B' – flap 2
			10	+13.5 V DC
			11	Coil A – flap 3
			12	Coil B – flap 3
			13	Coil A' – flap 3
			14	Coil B' – flap 3
			15	+13.5 V DC
			16	Coil A – flap 4
			17	Coil B – flap 4
			18	Coil A' – flap 4
			19	Coil B' – flap 4
			20	+13.5 V DC
X38A	White	Option multi-tenant	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A50/51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)

Connector	Color	Function	Pin	Signals
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB (not used)	1	DCV
			2	Ground (0 V)
X81A	White	Option presence sensor	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXFA unit main PCB



Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor and Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	+5.0 V DC
			4	Sensor
			5	Ground (0 V)
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input

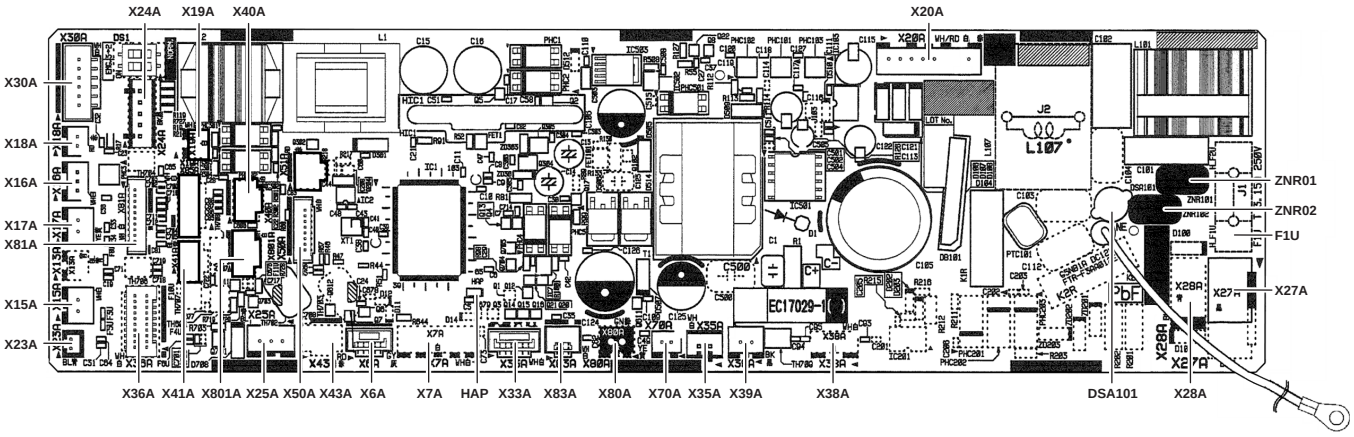
Connector	Color	Function	Pin	Signals
X24A	Black	Wireless user interface BRC7FA/FB 532F	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB (E)KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3-X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC PCB BYCQ140E2G	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Decoration panel flap	1	Coil A – flap 1
			2	Coil B – flap 1
			3	Coil A' – flap 1
			4	Coil B' – flap 1
			5	+13.5 V DC
			6	Coil A – flap 2
			7	Coil B – flap 2
			8	Coil A' – flap 2
			9	Coil B' – flap 2
			10	+13.5 V DC
			11	Coil A – flap 3
			12	Coil B – flap 3
			13	Coil A' – flap 3
			14	Coil B' – flap 3
			15	+13.5 V DC
			16	Coil A – flap 4
			17	Coil B – flap 4
			18	Coil A' – flap 4
			19	Coil B' – flap 4
			20	+13.5 V DC
X38A	White	Option multi-tenant	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC PCB BYCQ140E2G	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A50/51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)

Connector	Color	Function	Pin	Signals
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write IC1	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication option self-cleaning PCB	1	DCV
			2	Ground (0 V)
X81A	White	Option presence sensor BRYQ140B8/C8	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X88A	Blue	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor coil
		Gas thermistor	3	Ground (0 V)
			4	Sensor gas
		Air outlet thermistor	5	Ground (0 V)
			6	Sensor air out
X801A	White	WLAN adapter option	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)

Connector	Color	Function	Pin	Signals
X807A	White	ROM write IC801	1	+5.0 V DC
			2	Boot
			3	RXD
			4	TXD
			5	Reset
			6	Not used
			7	Ground (0 V)
X901A	White	Fan motor	1	U winding
			2	Not used
			3	V winding
			4	Not used
			5	W winding
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXZA unit main PCB



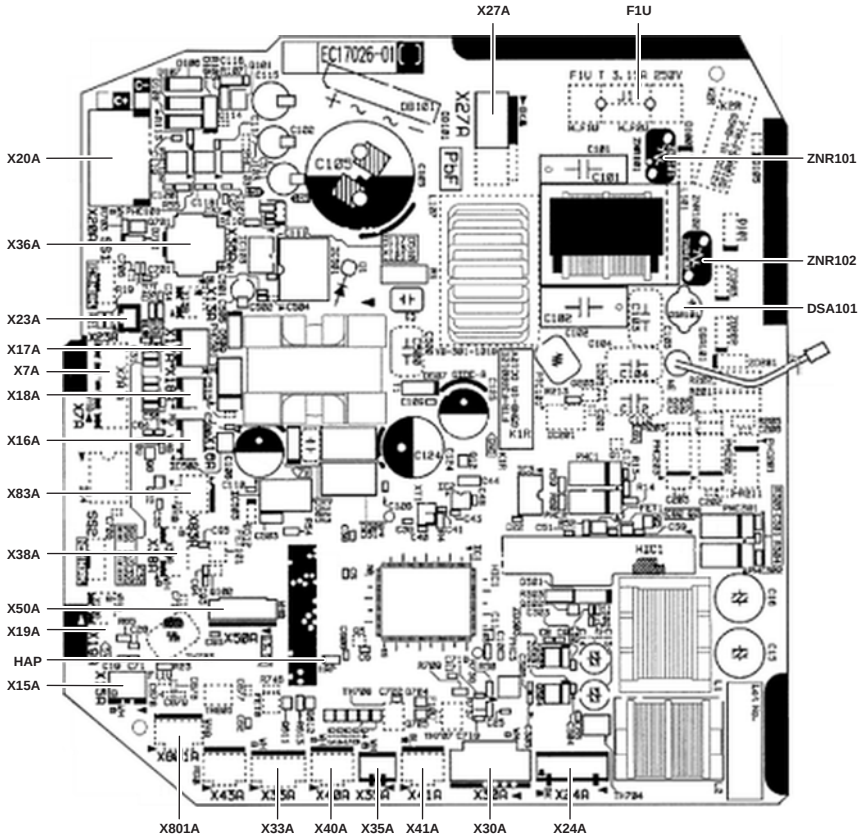
Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X20A	White	Fan motor	1	Not used
			2	Tacho (4p/rotation)
			3	V-speed (0~4.5 V DC)
			4	15.5 V DC
			5	Ground (0 V)
			6	Not used
			7	Not used
			8	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface BRC7EB/F 530W/S	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Decoration panel flap	1	Coil A – flap 1
			2	Coil B – flap 1
			3	Coil A' – flap 1
			4	Coil B' – flap 1
			5	+13.5 V DC
			6	Coil A – flap 2
			7	Coil B – flap 2
			8	Coil A' – flap 2
			9	Coil B' – flap 2
			10	+13.5 V DC
			11	Coil A – flap 3
			12	Coil B – flap 3
			13	Coil A' – flap 3
			14	Coil B' – flap 3
			15	+13.5 V DC
			16	Coil A – flap 4
			17	Coil B – flap 4
			18	Coil A' – flap 4
			19	Coil B' – flap 4
			20	+13.5 V DC
X38A	White	Option multi-tenant DTA114A61	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A50/51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Not used
			4	Ground (0 V)

Connector	Color	Function	Pin	Signals
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2~7	Read Write
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB	1	DCV
			2	Ground (0 V)
X80A	Green	Infra-red sensor	1	Input
			2	Ground (0 V)
X81A	White	Option presence sensor BRYQ60A3	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option BRP069C51	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXAA unit main PCB

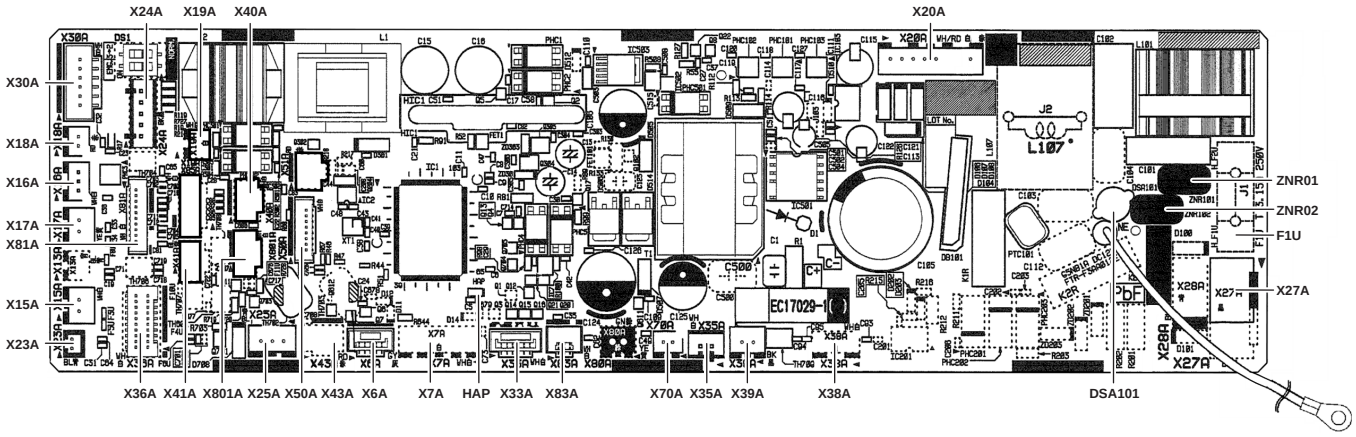


Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
			3	Not used
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor

Connector	Color	Function	Pin	Signals
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input
X20A	White	Fan motor	1	Tacho (4p/rotation)
			2	V-speed (0~4.5 V DC)
			3	15.5 V DC
			4	Ground (0 V)
			5	Not used
			6	Not used
			7	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X27A	Black	Power input	1	L
			2	N
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB (E)KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3-X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Decoration panel flap	1	Coil A – flap 1
			2	Coil B – flap 1
			3	Coil A' – flap 1
			4	Coil B' – flap 1
			5	+13.5 V DC
X38A	White	Option multi-tenant	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X40A	White	Option PCB ERP01A50/51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR101	Black	Zener diode L <-> N	-	0 V AC
ZNR102	Black	Zener diode N <-> DSA101	-	0 V AC

FXUA unit main PCB



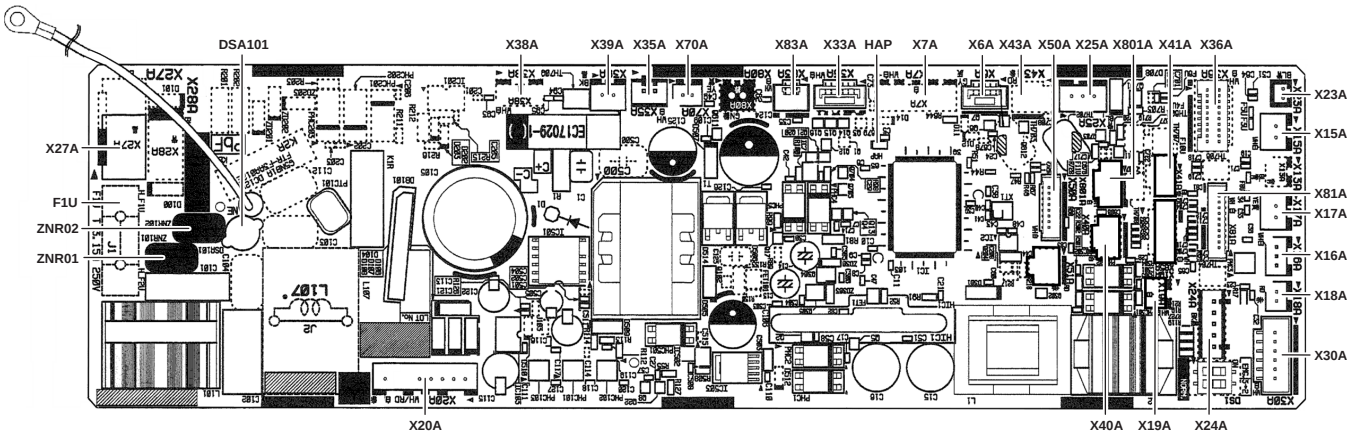
Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X20A	White	Fan motor	1	Not used
			2	Tacho (4p/rotation)
			3	V-speed (0~4.5 V DC)
			4	15.5 V DC
			5	Ground (0 V)
			6	Not used
			7	Not used
			8	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface HP/CO BRC7CB58/59	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Air discharge flap	1	Coil A – flap 1
			2	Coil B – flap 1
			3	Coil A' – flap 1
			4	Coil B' – flap 1
			5	+13.5 V DC
			6	Coil A – flap 2
			7	Coil B – flap 2
			8	Coil A' – flap 2
			9	Coil B' – flap 2
			10	+13.5 V DC
			11	Coil A – flap 3
			12	Coil B – flap 3
			13	Coil A' – flap 3
			14	Coil B' – flap 3
			15	+13.5 V DC
			16	Coil A – flap 4
			17	Coil B – flap 4
			18	Coil A' – flap 4
			19	Coil B' – flap 4
			20	+13.5 V DC
X38A	White	Option multi-tenant	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)

Connector	Color	Function	Pin	Signals
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB: jumper	1	DCV
			2	Ground (0 V)
X81A	White	Option presence sensor – BRE49B2	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option BRP069C51	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXHA unit main PCB



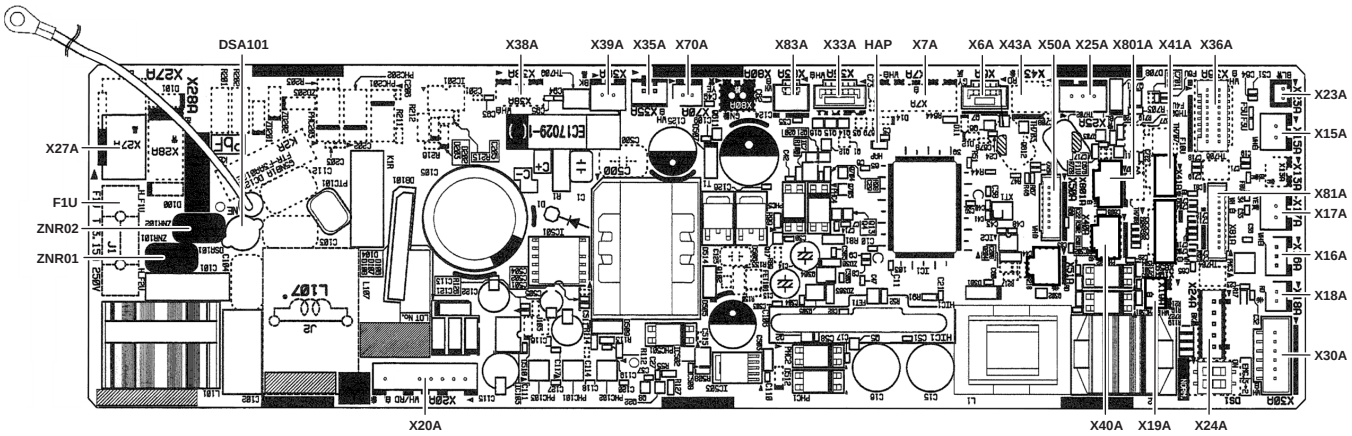
Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X20A	White	Fan motor	1	Not used
			2	Tacho (4p/rotation)
			3	V-speed (0~4.5 V DC)
			4	15.5 V DC
			5	Ground (0 V)
			6	Not used
			7	Not used
			8	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface HP/CO BRC7GA53-9/56	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Air discharge flap	1	+13.5 V DC
			2	Coil A – flap 1
			3	Coil B – flap 1
			4	Coil A' – flap 1
			5	Coil B' – flap 1
X38A	White	Option multi-tenant Not used	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB: jumper	1	DCV
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X81A	White	Option presence sensor Not used	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option BRP069C51	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXMA50~125 unit main PCB



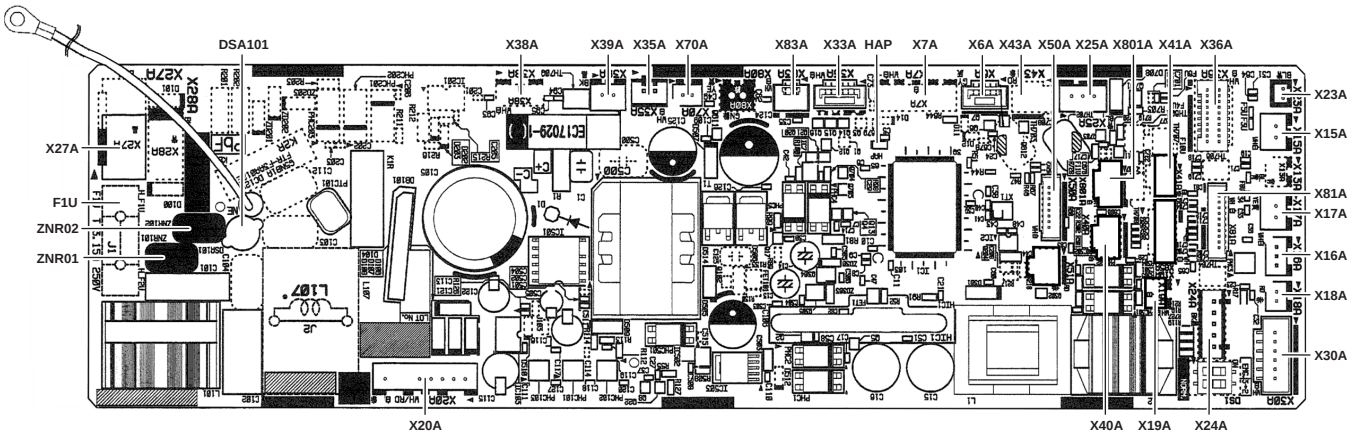
Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input

Connector	Color	Function	Pin	Signals
X20A	White	Fan motor	1	Not used
			2	Tacho (4p/rotation)
			3	V-speed (0~4.5 V DC)
			4	15.5 V DC
			5	Ground (0 V)
			6	Not used
			7	Not used
			8	320 V DC
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface HP/CO BRC4C65/66	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X36A	White	Air discharge flap Not used	1	+13.5 V DC
			2	Coil A – flap 1
			3	Coil B – flap 1
			4	Coil A' – flap 1
			5	Coil B' – flap 1
X38A	White	Option multi-tenant Not used	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)
X40A	White	Option PCB ERP01A51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB: jumper	1	DCV
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X81A	White	Option presence sensor Not used	1	+5.0 V DC
			2	Quadrant 1
			3	Quadrant 2
			4	Quadrant 3
			5	Quadrant 4
			6	Ground (0 V)
			7	Floor °C
			8	Ground (0 V)
			9	+5.0 V DC
			10	Floor °C
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option BRP069C51	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

FXMA200+250 unit main PCB

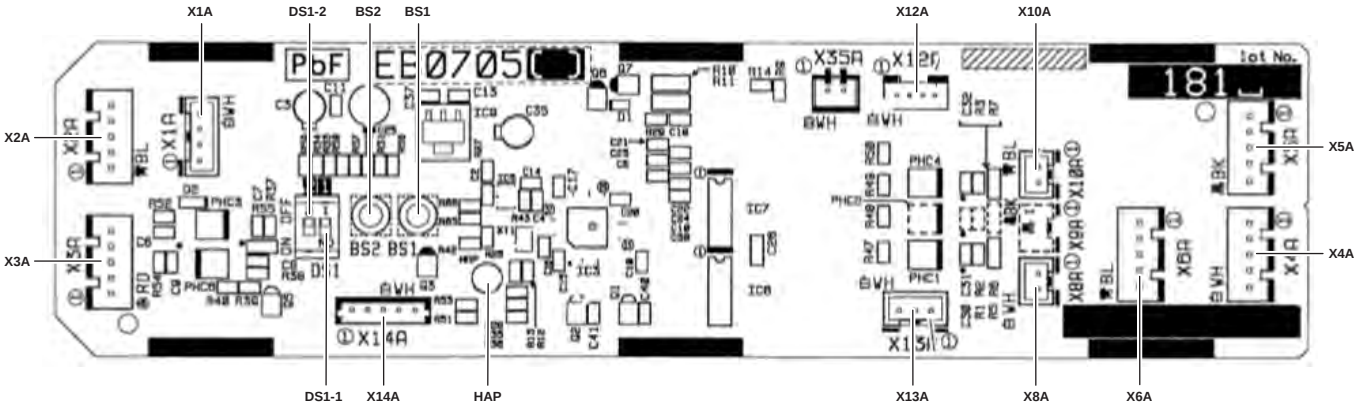


Connector	Color	Function	Pin	Signals
DSA101	-	Surge absorber	-	0 V AC
F1U	-	Fuse, 3.15 ACA	-	230 V AC
HAP	Green	HAP LED power processor		HAP
X6A	Grey	Air clean unit	1	Not used
			2	Output
			3	Input
			4	Input
			5	Ground (0 V)
X7A	White	Electronic expansion valve	1	Coil A
			2	Coil B
			3	Coil A’
			4	Coil B’
			5	+13.5 V DC
			6	+13.5 V DC
X15A	White	Float switch option Default jumper	1	NC input
			2	Ground (0 V)
X16A	White	Air in thermistor	1	+5.0 V DC
			2	Sensor
X17A	Yellow	Gas thermistor	1	Ground (0 V)
			2	Sensor
X18A	Red	Refrigerant liquid thermistor	1	Ground (0 V)
			2	Sensor
X19A	White	Expansion valve select	1	+5.0 V DC
			2	Input
X20A	White	Fan motor Not present		

Connector	Color	Function	Pin	Signals
X23A	Blue	Capacity adapter	1	Ground (0 V)
			2	Input
X24A	Black	Wireless user interface HP/CO BRC4C65	1	+16.0 V DC
			2	Ground (0 V)
			3	Input
			4	P2 user interface
			5	P1 user interface
X25A	Blue	Drain pump	1	Tacho (4p/rotation)
			2	+13.5 V DC
			3	Ground (0 V)
X27A	Black	Power input	1	L
			2	N
X28A	Blue	Power 230 V AC	1	N
			2	L
X30A	White	System wiring	1	T1 input
			2	T2 input
			3	F2 Dill-net
			4	F1 Dill-net
			5	P2 user interface
			6	P1 user interface
X33A	White	Option PCB €KRP01…	1	+16.0 V DC
			2	Output X1X2
			3	Output X3–X4
			4	Output Y1
			5	Output Y2
			6	Input Y5
X35A	White	Power 16 V DC	1	+16.0 V DC
			2	Ground (0 V)
X36A	White	Air discharge flap Not used		
X38A	White	Option multi-tenant Not used	1	+5.0 V DC
			2	Ground (0 V)
			3	+13.5 V DC
			4	+16.0 V DC
X39A	Black	Power 13.5 V DC	1	+13.5 V DC
			2	Ground (0 V)

Connector	Color	Function	Pin	Signals
X40A	White	Option PCB ERP01A51	1	+13.5 V DC
			2	Output 1
			3	Output 2
			4	Ground (0 V)
X41A	Blue	R32 leak detection sensor	1	+5.0 V DC
			2	Pulse width
			3	Pulse width
			4	Ground (0 V)
X43A	Red	Option streamer	1	+13.5 V DC
			2	Input
			3	Output
			4	Ground (0 V)
X50A	White	ROM write	1	+5.0 V DC
			2	SLXK
			3	RXD
			4	TXD
			5	Busy
			6	CNV
			7	Reset
			8	Ground (0 V)
X70A	Yellow	Communication Main PCB <-> Inverter PCB: jumper	1	DCV
			2	Ground (0 V)
X81A	White	Option presence sensor Not used		
X83A	White	Humidity sensor	1	+5.0 V DC
			2	Sensor
			3	Ground (0 V)
X801A	White	WLAN adapter option BRP069C51	1	Input
			2	TXD
			3	RXD
			4	+13.5 V DC
			5	Ground (0 V)
ZNR01	Black	Zener diode L <-> N	-	0 V AC
ZNR02	Black	Zener diode N <-> DSA101	-	0 V AC

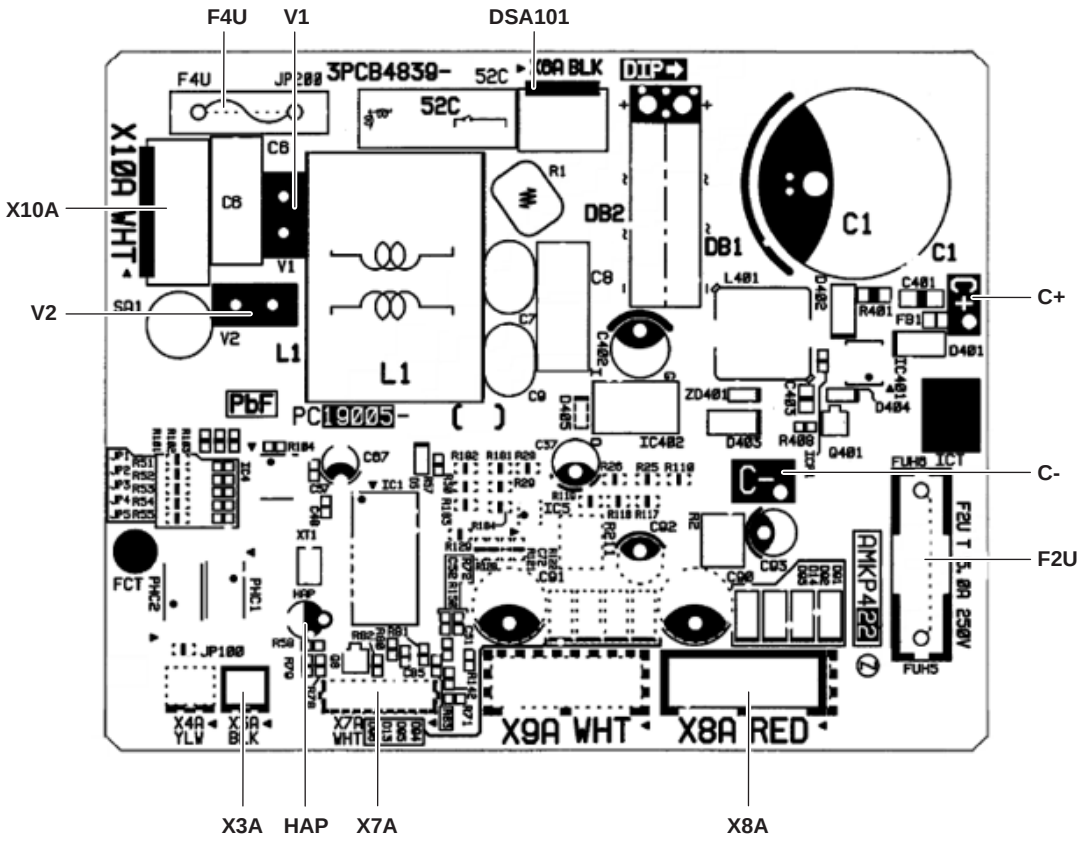
Self-cleaning decoration panel (BYCQ140E2G) PCB



Connector	Color	Function	Pin	Signals
X1A	White	Communication A1P of FXFA <-> A1P of BYCQ	1-2	+16.0 V DC
			3-4	+1.0~7.0 V DC
X2A	Blue	Communication A1P of FXFA <-> A1P of BYCQ (M1S)	3-1	0.0 V DC (Off) +5.0 V DC (Moving)
			3-2	0.0 V DC (Off) +5.0 V DC (Moving)
			3-4	0.0 V DC (Off) +5.0 V DC (Moving)
			3-5	0.0 V DC (Off) +5.0 V DC (Moving)
X3A	Red	A1P of BYCQ <-> M1S	-	Not used
X4A	White	M1 filter motor	3-1	0.0 V DC (Off) +5.0 V DC (Moving)
			3-2	0.0 V DC (Off) +5.0 V DC (Moving)
			3-4	0.0 V DC (Off) +5.0 V DC (Moving)
			3-5	0.0 V DC (Off) +5.0 V DC (Moving)
X5A	Black	M2 brush motor	3-1	0.0 V DC (Off) +5.0 V DC (Moving)
			3-2	0.0 V DC (Off) +5.0 V DC (Moving)
			3-4	0.0 V DC (Off) +5.0 V DC (Moving)
			3-5	0.0 V DC (Off) +5.0 V DC (Moving)

Connector	Color	Function	Pin	Signals
X6A	Blue	M3 damper motor	3-1	0.0 V DC (Off) +5.0 V DC (Moving)
			3-2	0.0 V DC (Off) +5.0 V DC (Moving)
			3-4	0.0 V DC (Off) +5.0 V DC (Moving)
			3-5	0.0 V DC (Off) +5.0 V DC (Moving)
X8A	White	Limit switch filter S1C	1-2	+13.5 V DC (contact open) 0.0 V DC (contact closed)
X10A	Blue	Limit switch damper S2C	1-2	+13.5 V DC (contact open) 0.0 V DC (contact closed)
X12A	White	Dust sensor	1-2	0.0 V DC
			3-4	+4.5 V DC
X13A	White	LED's self-cleaning	2-3	+13.5 V DC (Green LED ON) 0.0 V DC (Green LED OFF)
			1-3	+13.5 V DC (Red LED ON) 0.0 V DC (Red LED OFF)
X14A	White	Flash write	1-5	+5.0 V DC
X35A	White	Power IN	1-2	+16 V DC
HAP	Green	HAP LED power processor		HAP
BS1	-	Push button forced self-cleaning		
BS2	-	Push button cleaning sign reset		
DS1-1	-	Disable filter cleaning		
DS1-2	-	Light sensibility dust sensor		

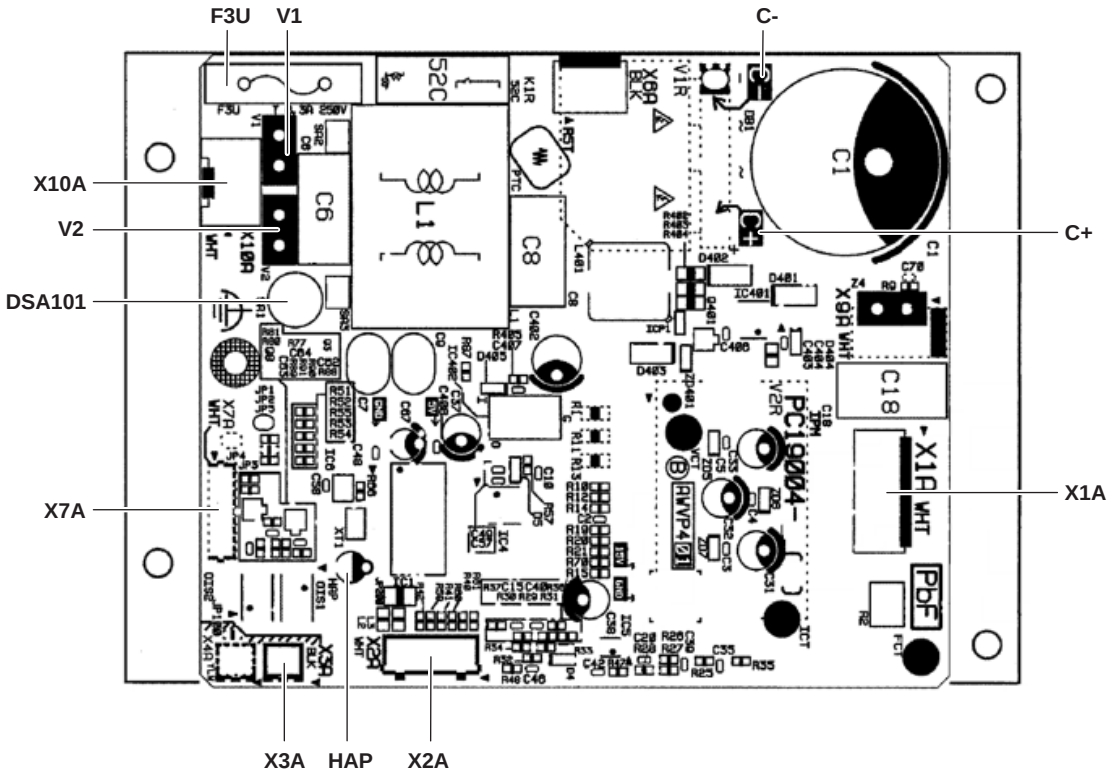
FXSA15~125 unit fan PCB



Connector	Color	Function	Pin	Signals
C+	-	DCV main power +	-	+320 V DC
C-	-	DCV main power 0 V	-	
DSA101	-	Surge absorber	-	0 V AC
F2U	-	Fuse, 5.0 T ACA Fan motor	-	320 V DC <-> C–
F4U	-	Fuse, power input 6.3 T ACA	-	230 V AC
HAP	Green	HAP LED power processor	-	HAP
X3A	Black	Communication A1P <-> A2P	1	+5.0 V DC
			2	+5.0 V DC
X7A	White	Read / Write	1	+5.0 V DC
			2	Read
			3	Write
			4	Check status
			5	Ground (0 V)

Connector	Color	Function	Pin	Signals
X8A	Red	Fan motor signals	1	+15 V DC (4p/rotation)
			2	Speed signal 0~4.5 V DC
			3	Processor 15 V DC
			4	Ground (0 V)
			5	Not used
			6	Not used
			7	+320 V DC
X10A	White	Power input	1	L = 230 V AC
			2	N
			3	Earth
V1	Black	Zener diode L <-> N	-	230 V AC
V2	Black	Zener diode N <-> DSA101	-	0 V AC

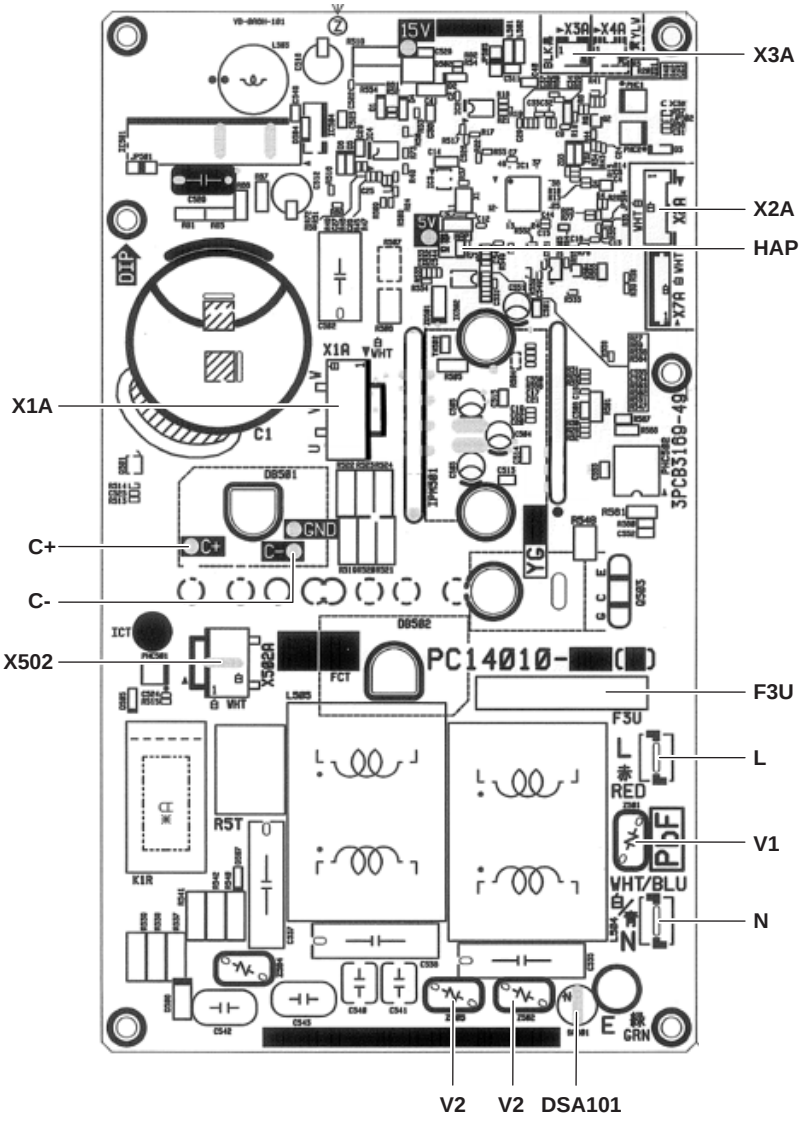
FXSA140 + FXMA50~125 unit fan PCB



Connector	Color	Function	Pin	Signals
C+	-	DCV main power +	-	+320 V DC
C-	-	DCV main power 0 V	-	
DSA101	-	Surge absorber	-	0 V AC
F3U	-	Fuse, power input 6.3 T ACA	-	230 V AC
HAP	Green	HAP LED power processor	-	HAP

Connector	Color	Function	Pin	Signals
X1A	White	Motor winding W	1	50~300 V AC
		Motor winding V	3	
		Motor winding U	5	
X2A	Red	Fan motor rotation signal	1	“U“ 15 V DC (4p/rotation)
			2	“V“ 15 V DC (4p/rotation)
			3	“W“ 15 V DC (4p/rotation)
			4	+15 V DC
			5	Ground (0 V)
X3A	Black	Communication A1P <-> A2P	1	+5.0 V DC
			2	+5.0 V DC
X7A	White	Read / Write	1	+5.0 V DC
			2	Read
			3	Write
			4	Check status
			5	Ground (0 V)
X10A	White	Power input	1	L = 230 V AC
			2	N
V1	Black	Zener diode L <-> N	-	230 V AC
V2	Black	Zener diode N <-> DSA101	-	0 V AC

FXMA200+250 unit fan PCB



Connector	Color	Function	Pin	Signals
C+	-	DCV main power +	-	+320 V DC
C-	-	DCV main power 0 V	-	
DSA101	-	Surge absorber	-	0 V AC
F3U	-	Fuse, power input 6.3 T ACA	-	230 V AC
HAP	Green	HAP LED power processor	-	HAP
L	Red	Power input	-	L = 230 V AC
N	Blue	Power input	-	N
X1A	White	Motor winding W	1	50~300 V AC
		Motor winding V	3	
		Motor winding U	5	

Connector	Color	Function	Pin	Signals
X2A	Red	Fan motor rotation signal	1	“U“ 15 V DC (4p/rotation)
			2	“V“ 15 V DC (4p/rotation)
			3	“W“ 15 V DC (4p/rotation)
			4	+15 V DC
			5	Ground (0 V)
X3A	Black	Communication A1P <-> A2P	1	+5.0 V DC
			2	+5.0 V DC
X502	White	Reactor	1	230 V AC (<->N)
			2	230 V AC (<->N)
V1	Black	Zener diode L <-> N	-	230 V AC
V2	Black	Zener diode N <-> DSA101	-	0 V AC

7.5 Field information report

See next page.

In case a problem occurred on the unit which could not be resolved by using the content of this service manual or in case you have a problem which could be resolved but of which the manufacturer should be notified, we advise you to contact your distributor.
To facilitate the investigation, additional information is required. Please fill out the following form before contacting your distributor.

FIELD INFORMATION REPORT

Key person information	
Name:	Company name:
Your contact details Phone number:	E-mail address:
Site address:	
Your reference:	Date of visit:

Claim information	
Title:	
Problem description:	
Error code:	Trouble date:
Problem frequency:	
Investigation steps done:	
Insert picture of the trouble.	
Current situation (solved, not solved,…):	
Countermeasures taken:	
Comments and proposals:	
Part available for return (if applicable):	

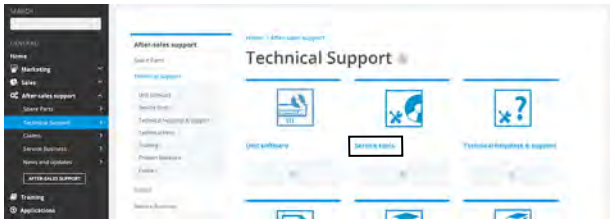
Application information
Application (house, apartment, office,…):
New project or reimbursement:
Piping layout / Wiring layout (simple schematic):

Unit / Installation information	
Model name:	Serial number:
Installation / commissioning date:	Software version user interface:
Software version outdoor PCB:	

Provide pictures of the field settings overview (viewable on the user interface).

7.6 Service tools

1. For an overview of the available service tools, check the Daikin Business Portal (authentication required).
2. Go to the tab After-sales support on the left navigation pane and select Technical support.



3. Click the button Service tools. An overview of the available service tools for the different products is shown. Also additional information on the service tools (instruction, latest software) can be found here.

7.7 Field settings

7.7.1 To retrieve the field settings

Via the indoor unit remote controller BRC1H

BRC1H remote controller

See the installer and user reference guide of the Madoka wired remote controller for correct procedure.

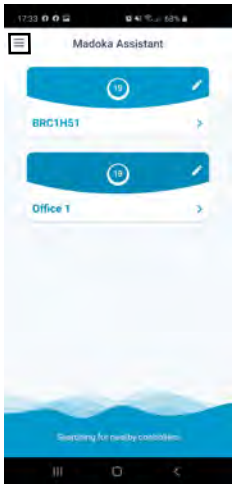
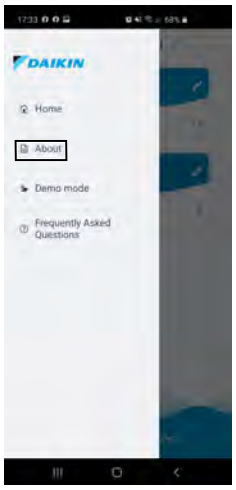
Madoka Assistant for BRC1H

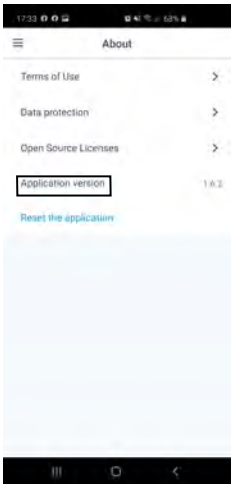
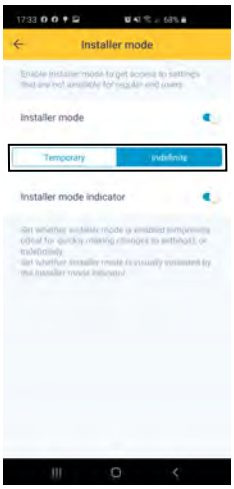
INFORMATION

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 set as installer mode

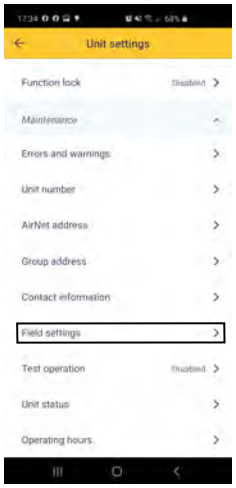
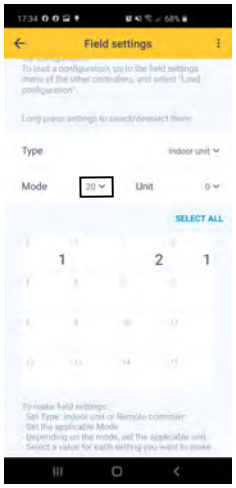
In order to retrieve the field settings, the Madoka Assistant app has to be set as installer mode. If already set as, skip to "To retrieve field settings".

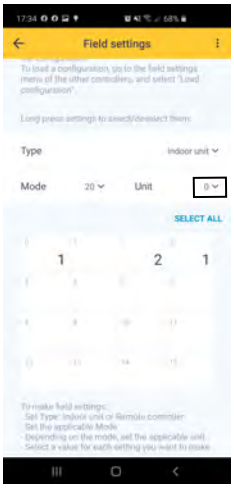
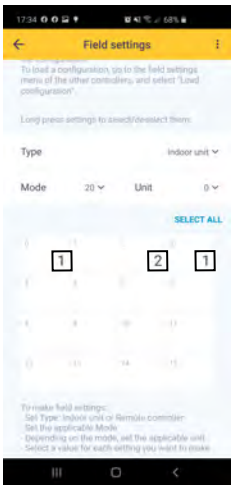
#	Action	Image	Result
1	Tap the menu icon.		The menu screen is diaplyed.
2	Tap About in the menu screen.		The About menu screen is displayed.

#	Action	Image	Result
3	Tap Application version 5 times.		Installer mode screen is displayed.
4	Select (tap) the length of time the Madoka Assistant app is set as installer mode: ▪ Temporary for 30 minutes ▪ Indefinite for unlimited time		The Madoka Assistant app is set as installer mode.

To retrieve field settings

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

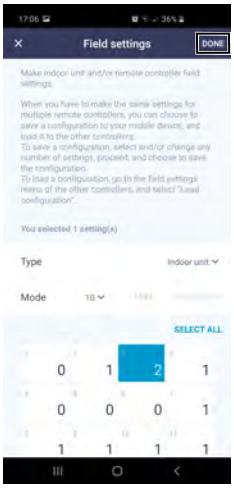
#	Action	Image	Result
2	Tap Field settings.		The Field settings screen is displayed.
3	Tap and select the type for which you want to set the field settings: ▪ Indoor unit ▪ Remote controller		Field settings can now be set for the selected type.
4	Tap and select the desired Mode No. from the drop down list.		The field setting mode is now selected.

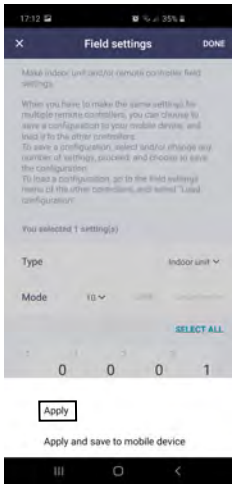
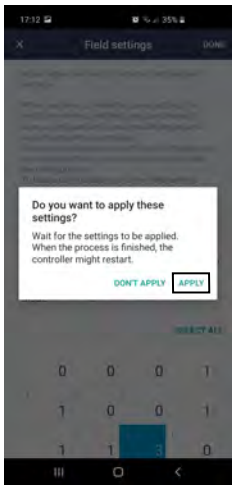
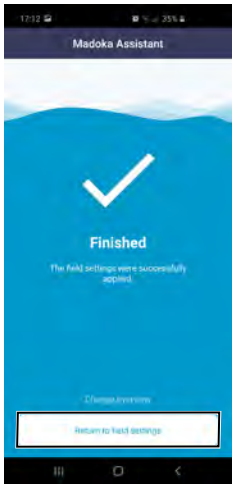
#	Action	Image	Result
5	In the case of setting per indoor unit during group control (When Mode No. such as 20, 21, 22, 23, 25 are selected), tap and select the Indoor unit No. which is required to set. In the case of group total setting, this operation is NOT needed.		▪ In the case of individual setting per indoor unit, current settings are displayed. ▪ In the case of group total setting, all of Second Code No. which may be set are displayed as “*”. ▪ Second Code No. “-” means no function.
6	Tap the Second Code No. of the First Code No. to be changed. Select the desired Second Code No. Multiple identical mode number settings are available.		Field settings are now set as desired, but still need to be saved.

INFORMATION

In case of multiple settings, repeat previous steps to change the settings.

To save field settings

#	Action	Image	Result
1	Tap Done.		The screen to apply the field settings is displayed.

#	Action	Image	Result
2	Tap Apply to remote controller.		Changes are applied to the field settings.
3	Tap Apply.		Changes to the field settings are confirmed.
4	Tap Return to field settings.		Field settings are saved.

7.7.2 Overview of field settings for indoor units

The overview lists all possible settings for the indoor units. The availability of the setting depends on the indoor unit type, see "Field settings as per type indoor unit". **Bold content is default setting**.
See indoor unit or remote controller manuals for more detailed information to access the field settings.

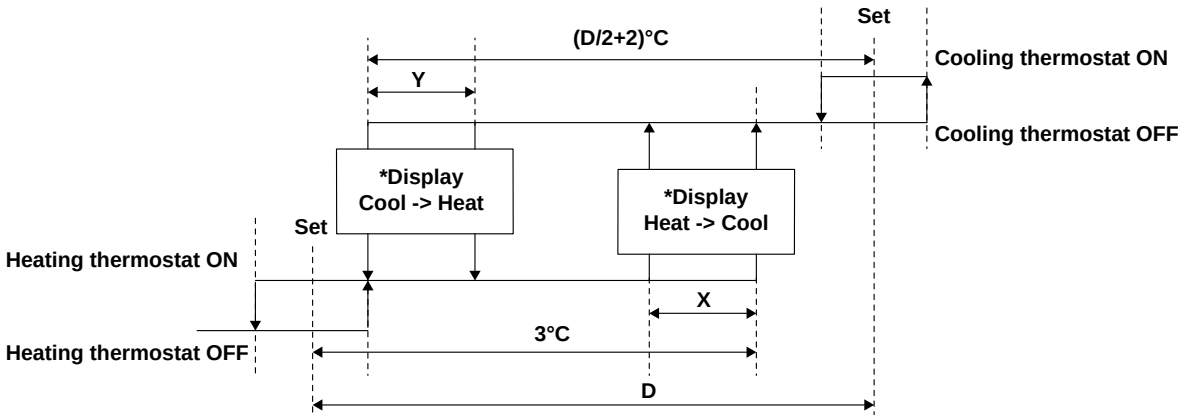
Setting	1st code	Description function	2nd code	Description setting	Note
10/20	0	Filter contamination (time between 2 filter cleaning display indications)	**01**	**Light**	Ultra-long life filter: ±10.000 hrs Long-life filter: ±2.500 hrs Standard filter: ±200 hrs
			02	Heavy	Ultra-long life filter: ±5.000 hrs Long-life filter: ±1.250 hrs Standard filter: ±100 hrs
	1	Long life filter type	**01**	**Long life filter**	Filterclass G1
			02	Ultra long life filter (option)	Filter type F6 high efficiency 64 for FXCQ, FXUQ, FXFQ, FXZQ, FXKQ, FXSQ, FXDQ, FXMQ Filter type F7 for VAM (additional filter) Filter type F8 very high efficiency 90 for FXCQ, FXFQ, FXSQ, FXMQ
			03	No maintenance filter	
			04	Oil guard filter	For installations in greasy environment
	2	Indoor thermostat sensor selection (no effect when used in conjunction with presence sensor BRYQ)	**01**	**Use both the unit sensor (or remote sensor if installed) AND the remote controller sensor.**	Note: If setting 10-6-02 + 10-2-01 or 10-2-02 or 10-2-03 are set at the same time, then setting 10-2-01,10-2-02 or 10-2-03 have priority. Note: If setting 10-6-01 + 10-2-01 or 10-2-02 or 10-2-03 are set at the same time, then setting for group connection, 10-6-01 has priority and for individual connection, 10-2-01, 10-2-02 or 10-2-03 have priority.
			02	Use return air sensor only (or remote sensor if installed).	
			03	Use remote controller sensor only.	
	3	Filter sign display	**01**	**Display**	
			02	Do not display	
	4	Filter switching	**01**	**Standard**	
			02	Oil mysterious filter	
			03	Roll oil mist filter	
	5	Remote controller thermistor visible by central control device in group wiring P1/P2	**01**	**No**	
			02	Yes	
	6	Air thermistor selection in group wiring P1/P2	**01**	**Return air thermistor (individual units)**	
			02	Thermistor designated by field setting 20-2	
	7	Absence delay detecting time (presence sensor)	**01**	**30 minutes**	
			02	60 minutes	
	8	Compensation air sensor heating	**01**	**Reduce 2°C to measurement air sensor**	
			02	Measurement air sensor	
	9	central control	**01**	**Accept**	
			02	Ignore	
	10	Switching time dry operation => cooling when Eco Mode is Set	01	30 minutes	
			02	60 minutes	
			03	90 minutes	
			04	**No change (keep dry keep)**	
	11	Cooling thermo OFF operation change setting	**01**	**Disabled**	
			02	Enabled	
	12	Internal clean valid invalid / Streamer control valid invalid	01	Valid/invalid at connection	
			02	Enabled/enabled at connection	
			03	**Disabled/Disabled**	
			04	Disabled / Enabled	
			05	Enable/disable	
			06	Enabled/Enabled	
	13	Not used	-		
	14	Not used	-		
	15	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
11/21	0	Not used	-		
	1	Not used	-		
	2	Not used	-		
	3	Fan setting of heating	**01**	**Standard**	
			02	Slight increase (* 1.05)	
			03	Increase (* 1.10)	
	4	Not used	-		
	5	Not used	-		
	6	Sensitivity presence sensor	01	High sensitive	Only when BRYQ is present
			02	Low Sensitive	
			03	**Standard**	
			04	Disable presence sensor	
	7	External static pressure setting: Automatic air flow adjustment function	**01**	**Automatic aif flow adjustment is OFF**	Then unit will refer to setting 23-6
			02	Completion of automatic airflow adjustment	Only for FXSQ, FXMQ
			03	Start of automatic airflow adjustment	1. Turn off the indoor unit 2. Set indoor unit to fan operation mode. 3. Choose desired fanspeed (L, H, HH) 4. Change setting 21-7-00 to 21-7-03 and exit setting menu 5. Activate indoor unit to start the learning function 6. Learn
	8	Compensation by floor sensor (% Air °C/ % floor °C)	01	Floor sensor disabled (100/0)	Only when BRYQ is present
			02	Air suction temperature priority (70/30)	
			03	**Standard (50/50)**	
			04	Floor temperature priority (30/70)	
	9	Correction of floor temperature (heating)	01	-4˚C	Only when BRYQ is present
			02	-2˚C	
			03	**No correction**	
			04	+2˚C	
	10	Not used	-		
	11	Not used	-		
	12	Not used	-		
	13	Not used	-		
	14	Not used	-		
	15	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
12/22	0	Output signal X1-X2 of the optional KRP1 PCB kit	**01**	**Indoor unit Thermo ON Output**	
			02	Option	
			03	Operation Output	
			04	Malfunction Output	
	1	External ON/OFF (T1/T2 input) = setting when forced ON/OFF is operated from outside.	**01**	**Forced OFF**	
			02	ON/OFF Operation	
			03	Emergency	
			04	Forced OFF - multi tenant	
			05	Interlocking setting A	
			05	Interlocking setting B	
	2	Thermostat differential (for set temperature button increase/decrease increments)	**01**	**1°C**	FXFQ, FXZQ, FXCQ, FXKQ, FXUQ, FXHQ, VKM, "biddle"
			02	0,5°C	FXSQ, FXMQ, FXAQ, FXLQ, FXNQ, FXDQ, EKEQM
	3	Fan speed Thermo OFF heating mode	**01**	**LL**	
			02	Set speed by remocon	
			03	OFF	Use ONLY in combination with optional remote sensor or when setting 10-2-03 is used.
			04	Monitoring LL	fan 6 minutes off-2 minutes LL
			05	Monitoring L	fan 6 minutes off-2 minutes L
			06	Monitoring H	fan 6 minutes off-2 minutes H
	4	Differential ("D") for automatic changeover. Temperature difference between cooling setpoint and heating setpoint in automatic mode. Differential is cooling setpoint minus heating setpoint.	**01**	**0°C (Default when HP Outdoor)**	Example: Cooling 24°C / Heating 24°C (see note setting 17/27-7 and 18/28-8)
			02	1°C	Example: Cooling 24°C / Heating 23°C (see note setting 17/27-7 and 18/28-8)
			03	2°C	Example: Cooling 24°C / Heating 22°C (see note setting 17/27-7 and 18/28-8)
			04	**3°C (Default when HR Outdoor)**	Example: Cooling 24°C / Heating 21°C (see note setting 17/27-7 and 18/28-8)
			05	**4°C (Default when VKM)**	Example: Cooling 24°C / Heating 20°C (see note setting 17/27-7 and 18/28-8)
			06	5°C	Example: Cooling 24°C / Heating 19°C (see note setting 17/27-7 and 18/28-8)
			07	6°C	Example: Cooling 24°C / Heating 18°C (see note setting 17/27-7 and 18/28-8)
			08	7°C	Example: Cooling 24°C / Heating 17°C (see note setting 17/27-7 and 18/28-8)
	5	Auto-restart after power failure	01	Disabled	Restart operation only if switched on prior to power failure.
			02	**Enabled**	
	6	Fan speed Thermo OFF cooling mode	01	LL	
			02	**Set speed by remote controller**	
			03	OFF	Use ONLY in combination with optional remote sensor or when setting 10-2-03 is used.
			04	Monitoring LL	fan 6 minutes off-2 minutes LL
			05	Monitoring L	fan 6 minutes off-2 minutes L
			06	Monitoring H	fan 6 minutes off-2 minutes H
	7	Cooling switching temperature "X" point setting	**01**	**0.0°C**	(a)
			02	0.5°C	
			03	1.0°C	
			04	1.5°C	
			05	2.0°C	
			06	2.5°C	
			07	3.0°C	
	8	Heating switching temperature "Y" point setting	**01**	**0.0°C**	
			02	0.5°C	
			03	1.0°C	
			04	1.5°C	
			05	2.0°C	
			06	2.5°C	
			07	3.0°C	

Setting	1st code	Description function	2nd code	Description setting	Note
12/22	9	Forced Cool/Heat Master	**01**	**Disabled (select by cool/heat selection button controller)**	Only when HP Outdoor
			02	Enabled (not possible by cool/heat selection button controller)	
	10	Absence confirmation time (wiring remodeling output)	01	0 minutes	
			02	5 minutes	
			03	**10 minutes**	
			04	15 minutes	
	11	Floor temperature correction TA (other than heating)	01	+4°C	
			02	+2°C	
			03	**0°C (no correction)**	
			04	–2°C	
	12	C value correction (actual floor temperature)	01	0.0 °C	
			02	0.25°C	
			03	**0.5°C**	
			04	1.0°C	
	13	Not used	-		
	14	Not used	-		
	15	Not used	-		

(a) Cooling switching temperture "X" point setting and Heating switching temperature "Y" point setting:



Setting	1st code	Description function	2nd code	Description setting	Note
13/23	0	Airflow setting (Ceiling height)	**01**	**Normal ceiling (H <2.7 m)**	Depends on indoor unit, check indoor unit installation manuals
			02	Slightly higher ceiling 2.7 m <H <3 m	
			03	High ceiling (3 m <H <3.5 m)	
	1	Selection of number airflow direction	**01**	**4 directions**	Only for BRYQ60A7
			02	3 directions	
	1	Selection of airflow direction (set when an optional blocking path kit has been installed, 4-way blow panel)	**01**	**4 directions**	Freeze-up protection will be triggered when R2T <–1°C for 10 minutes.
			02	3 directions	Freeze-up protection will be triggered when R2T <0°C for 1 minute OR R2T <1°C for 15 minutes
			03	2 directions	
	2	Swing pattern setting if 4 swing motors	**01**	**All directions, simultaneous swing**	
			02	No meaning	
			03	Synchronized swing, opposite sides	
	3	Output to flap motor	**01**	**Enabled**	When using a decoration panel for outlet
			02	Disabled	
	4	Setting of airflow direction adjustment range	01	Draft prevention	High position (10°-40°)
			02	**Standard**	Standard position (10°-65°)
			03	Ceiling soiling prevention	Low position (30°-65°)
	5	Fanspeed setting	**01**	**Standard**	Only for FXFQ, FXHQ and FXZQ
			02	level 1	
			03	level 2	
			04	level 3	
			05	level 4	
			06	level 5	
	5	External static pressure setting	**01**	**Standard (10/15 Pa)**	Only for FXDQ and FXNQ
			02	High (30/44 Pa)	
			03	Medium external static pressure	
			04	Medium external static pressure	
	6	External static pressure setting	**01**	**Normal**	
			02	High external static pressure	
			03	Low external static pressure	
	6	External static pressure setting	**01**	**30 Pa**	Only for FXMQ40
			02	50 Pa	For FXSQ, FXMQ, FXTQ
			03	60 Pa	External static pressure value based on nominal airflow rate @HH Speed Some setting values depend on the indoor unit. See indoor Unit installation manual for setting range and values.
			04	70 Pa	
			05	80 Pa	
			06	90 Pa	
			07	100 Pa	
			08	110 Pa	
			09	120 Pa	
			10	130 Pa	
			11	140 Pa	
			12	150 Pa	
			13	160 Pa	
			14	180 Pa	Only for FXMQ50~125
			15	200 Pa	
	7	Thermostat swing cooling thermostat-off	**01**	**set 1**	Fixed => Settings, Swing => Swing
			02	set 2	Fixed => setting, swing => P0
			03	set 3	Fixed => P0, swing => P0
			04	set 4	Fixed => Settings, Swing => Swing
			05	set 5	Fixed => Setting, Swing => P2
			06	set 6	Fixed => P2, swing => P2
			07	set 7	Fixed => Settings, Swing => Swing
	8	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
13/23	9	Switch timer cooling <-> heating (minutes)	**01**	**0**	
			02	1	
			03	2	
			04	3	
			05	4	
			06	5	
			07	6	
			08	7	
			09	8	
			10	9	
			11	10	
			12	15	
			13	20	
			14	25	
			15	30	
	10	Dust box full sign / reset control	**01**	**No reset filter sign**	Only if BYCQ140E2GF (self-cleaning) decoration panel is mounted.
			02	Reset filter sign	
	11	Duct air inlet	**01**	**Rear**	
			02	Bottom	
	12	Error history switching setting	**01**	**Abnormality**	
			02	Retry	
	13	circulating air flow control	01	Disabled	
			02	**Enabled**	
	14	Circulating air flow state switching time	**01**	**Pattern 1**	
			02	Pattern 2	
			03	Pattern 3	
			04	Pattern 4	
			05	Pattern 5	
			06	Pattern 6	
			07	Pattern 7	
			08	Pattern 8	
	15	Panel type	**01**	**Standard**	
			02	Flat	
			03	Standard	
			04	Flat	

Setting	1st code	Description function	2nd code	Description setting	Note
14/24	0	Not used	-		
	1	D3gate array width detecion mode setting	01	Outdoor judgment	
			02	**Always ON**	
			03	Always OFF	
	2	Display cleaning requirement on the remote control according to number of operating hours	01	Display after 1250 hours	Only for "BEA..."
			02	Display after 2500 hours	
			03	**Display after 2500 hours**	
	3	Brush/filter check sign display presence/absence setting	**01**	**No display**	Only for "BEA..."
			02	Display after 32000 hours	
			03	Display after 48000 hours	
			04	Display after 72000 hours	
	4	Panel indicator (green)	01	ON while unit is ON or filter cleaning is ON	Only for "BEA..."
			02	ON while filter cleaning ONLY	
			03	**OFF**	
			04	ON	
	5	Self cleaning during operation	**01**	**Disabled**	Only for "BEA..."
			02	Heating only	
			03	Cooling only	
			04	Heating and cooling	
	6	Fan switching delay in hot-start	01	0 minutes (fan starts immediately)	Only for Air Curtain CAV/CYV
			02	1 minute	
			03	**3 minutes**	
			04	5 minutes	
	7	Domestic/overseas	**01**	**Overseas**	All exept Air Curtain CAV/CYV
			02	Domestic	
	7	Fan switching delay for hotstart in °C depending on the condensing temperature	01	34°C	Only for Air Curtain CAV/CYV
			02	37°C	
			03	40°C	
			04	**43°C**	
	8	Fanspeed during defrost and oil return	01	OFF	Only for Air Curtain CAV/CYV
			02	**LL**	
			03	Set speed by remocon	
	8	Auto cleaning program	01	User choice from remocon (between AUTO and schedule)	Only for "BEA..."
			02	ONLY Schedule (Auto not available in remocon settings)	
			03	12 hours automatic fixing	
			04	48 hours auto fixing	
			05	96 hours automatic fixing	
			06	**Automatic fixing 168 hours**	
			07	Not fixed automatically 168 hours	
	9	Filter movement angle setting Fan setting during cleaning	**01**	**Moving angle L Fan L**	Only for "BEA..."
			02	Moving angle S Fan L	
			03	Moving angle L Fan OFF	
			04	Moving angle S Fan OFF	
	10	Not used	-		
	11	Not used	-		
	12	Not used	-		
	13	Not used	-		
	14	Not used	-		
	15	Deodorizing filter integrated setting	**01**	**Accumulated**	
			02	Not accumulated	

Setting	1st code	Description function	2nd code	Description setting	Note
15/25	0	Drain pump operation cooling thermostat-off	01	Delay off	5 minutes off after cooling thermostat-off
			02	**Keep operation**	
	1	Humidification during Thermo OFF (heating)	**01**	**OFF**	
			02	ON	
	2	Direct duct connection to indoor unit (i.e Fresh air connection)	**01**	**Not equipped**	
			02	Equipped	Fan must be operated from indoor unit
	3	Drain pump operation if humidifier is used (heating)	**01**	**Not equipped**	
			02	Heating operation: continuous operation,	Heating stop: always ON.
			03	Heating operation: 3 minutes ON/5 minutes OFF	Heating stop: always ON.
			04	Heating operation: 3 minutes ON/5 minutes OFF,	Heating stop: 480 minutes ON/1 minute OFF
			05	Heating operation: 3 minutes ON/5 minutes OFF,	Heating stop: 120 minutes ON/1 minute OFF
			06	Heating operation: 3 minutes ON/5 minutes OFF	
	4	Filter sign	**01**	**By timer**	
			02	By external input	
	5	Independent ventilation	**01**	**Not equipped**	Only for VKM
			02	Equipped	
	5	Ventilation only	**01**	**disabled**	
			02	enabled	
	6	Independent unit	**01**	**No**	Only for VKM
			02	Yes	
	6	Cleaning only	**01**	**No**	
			02	Yes	
	7	Not used	-		
	8	Not used	-		
	9	Demand control	**01**	**Level 0**	
			02	Level 1	
			03	Level 2	
			04	Level 3	
			05	Level 4	
			06	Level 5	
			07	Level 6	
			08	Level 7	
	10	Not used	-		
	11	Not used	-		
	12	Expansion valve fully closed control	**01**	**disabled**	
			02	enabled	
	13	R32 leak safety system setting	01	Do NOT set	
			02	**enabled**	
			03	disabled max.24 hours	
	14	R32 Sensor replacement completion setting	**01**	**Normal**	
			02	Reset	
	15	External contact output setting	**01**	**disabled**	
			02	enabled	

HRV VAM-FB/J7 and VKM-GB

Setting	1st code	Description function	2nd code	Description setting	Note
17/27	0	Interval time for filter sign indication	**01**	**2500 hours**	Only for VKM
			02	1250 hours	
			03	No counting	
	1	Night time free cooling operation setting	**01**	**No free cooling possible**	Only for VKM. Free cooling starts when outdoor temperature is below indoor temperature and when minimum stop-time has expired. Ambient temperature is checked 1x per hour. (combination with setting 27-6 and 27-7)
			02	Free cooling 2 hours after unit OFF	
			03	Free cooling 4 hours after unit OFF	
			04	Free cooling 6 hours after unit OFF	
			05	Free cooling 8 hours after unit OFF	
	2	Pre-Cool/Pre-Heat function	**01**	**Disabled**	In case of group wiring (P1/P2) to VRV DX indoor: - when operation off for minimum 2 hours, - when ON command given, HRV ventilation starts delayed to limit load in the room.
			02	Enabled	
	3	Pre-cool/Pre-heat timer	**01**	**30 minutes**	
			02	45 minutes	
			03	60 minutes	
	4	Fan speed initial setting	**01**	**Normal**	Possibility to use SS1 on VKM PCB
			02	Ultra High	
	5	Direct duct connection with VRV indoor unit	**01**	**No direct duct**	VKM works independent from VRV indoor units
			02	With direct duct (Fan OFF)	The fan of the VKM stops immediately when indoor unit fan stops (remocon off, defrost, oil return and hot start)
			04	No direct duct	The fan of VKM goes to low speed when the fan of indoor unit stops (thermo off, defrost, oil return and hot start)
			06	With direct duct (Fan OFF)	The fan of VKM goes to low speed when the fan of indoor unit stops (thermo off, defrost, oil return and hot start)
			08	No direct duct (Fan OFF)	
	5	Fan speed setting when Heating Thermo OFF, Defrost and Oil Return (Cold Areas, VKM only)	**01**	**Set speed by remocon**	Only for VKM, in case independent operation. Do NOT use set 03 / 05 / 07
			02	Heating Thermo OFF: Set speed by remocon Defrost: Fan OFF / Oil Return: Fan OFF	
			04	Heating Thermo OFF: Fan Low Defrost: Fan OFF / Oil Return: Fan OFF	
			06	Heating Thermo OFF: Fan Low Defrost: Fan OFF / Oil Return: Fan OFF	
			08	Heating Thermo OFF: Set speed by remocon Defrost: Fan OFF / Oil Return: Fan OFF	
	6	Ventilation airflow setting when night time free cooling is activated	**01**	**High**	Only for VKM
			02	Ultra High	
	7	target temperature for independent night purge	01	18°C	
			02	19°C	
			03	20°C	
			04	21°C	
			05	22°C	
			07	23°C	
			08	24°C	
			09	**25°C**	
			10	26°C	
			11	27°C	
			12	28°C	
			13	30°C	
	8	Centralized zone interlock setting	**01**	**Disabled**	
			02	Enabled	
	9	Pre-heat time extension setting	**01**	**0 minutes**	
			02	30 minutes	
			03	60 minutes	
			04	90 minutes	
	10 through 15	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
18/28	0	External signal setting (J2-JC)	**01**	**Last Command**	
			02	Priority external command	
			03	Priority on operation	
			04	disable night time purge (forced stop)	
			05	not used	
			06	24 Ventilation	
	1	Operation ON at power ON	**01**	**Disabled**	When operation required when power on (example without BRC nor Central control used)
			02	Enabled	
	2	Auto restart after power failure	**01**	**Disabled**	
			02	Enabled	
	3	Opton BRP4A50A signal X3-X4	01	Not used	
			02	Not used	
			03	**Only heating**	
			04	Heating + Cooling	
	4	Display for ventilation mode	**01**	**Show**	Only for VKM
			02	Hide	
	5	Not used	-		
	6	Automatic ventilation mode	**01**	**Linear**	
			02	Not sued	
			03	Tap A	
			04	Tab B	
	7	Fresh air supply/ Air exhaust indication	**01**	**No indication supply**	Only for VKM
			02	No indication exhaust	
			03	Indication supply	
			04	Indication exhaust	
	8	External input terminal function selection (J1-JC)	**01**	**Fresh-up**	Fresh-up Operation
			02	Error input	Error Code 60 displayed
			03	Error input + forced stop	
			04	Forced off	
			05	Fan forced off	
			06	Air flow increase	Fan speed is increased 1 step (L -> H, H -> HH)
			07	Humidifier drain error	
	9	KRP50-2 or BRP4A50A output signal X1-X2 / X3-X4	**01**	**Operation / Humidifier**	
			02	Operation / Error	
			03	Operaton / Fan L-H-UH	
			04	Operation / Fan H-UH	
			05	24hr vent+operation / Fan operation	
			06	24 hr vent / fan operation	
			07	Humidifier / H_2O valve ON	
			08		
			09		
			10		
			11		
	10	Not used	-		
	11	Not used	-		
	12	Not used	-		
	13	Not used	-		
	14	Not used	-		
	15	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
19/29	0	Ventilation air flow setting	01	Low	Only for VKM
			02	Low	
			03	Low	
			04	Low	
			05	High	
			06	**High**	
	1	Low tap setting 1/xx /hr (min off, min on)	**01**	**Off**	
			02	operate 1/15 hr (28/2)	
			03	operate 1/10 hr (27/3)	
			04	Operate 1/6 (25/5)	
			05	Operate 1/4 (22,5/7,5)	
			06	Operate 1/3 (20/10)	
			07	Operate 1/2 (15/15)	
			08	Always step 1	
			09	Always step 2	
			10	Always step 3	
			11	Always step 4	
			12	Always step 5	
			13	Always step 6	
			14	Always step 7	
			15	Always step 8	
	2	Supply fan step	01	1	
			02	2	
			03	3	
			04	4	
			05	5	
			06	6	
			07	7	
			08	**8**	
			09	9	
			10	10	
			11	11	
			12	12	
			13	13	
			14	14	
			15	15	
	3	Exhaust fan step	01	1	
			02	2	
			03	3	
			04	4	
			05	5	
			06	6	
			07	7	
			08	**8**	
			09	9	
			10	10	
			11	11	
			12	12	
			13	13	
			14	14	
			15	15	

Setting	1st code	Description function	2nd code	Description setting	Note
19/29	4	forced van operation 1/xx /hr (min off, min on)	**01**	**Off**	
			02	operate 1/15 hr (28/2)	
			03	operate 1/10 hr (27/3)	
			04	Operate 1/6 (25/5)	
			05	Operate 1/4 (22,5/7,5)	
			06	Operate 1/3 (20/10)	
			07	Operate 1/2 (15/15)	
			08	Always step 1	
			09	Always step 2	
			10	Always step 3	
			11	Always step 4	
			12	Always step 5	
			13	Always step 6	
			14	Always step 7	
			15	Always step 8	
	5	Not used	-		
	6	Not used	-		
	7	Reference concentration shift for ventilation air flow control (ppm)	**01**	**0**	
			02	+200	
			03	+400	
			04	+600	
			05	-200	
			06	-400	
			07	-600	
	8	Stop ventilation by automatic ventilation/Fan residual operation	01	Enabled / Disabled	
			02	**Disabled / Disabled**	
			03	Enabled / Enabled	
			04	Disabled / Enabled	
	9	Normal ventilation tap on automatic ventilation air flow control	**01**	**Independent UH**	
			02	Independent H	
			03	VRV Control UH	
			04	VRV control H	
			05	Option CO_2 sensor	
	1A	Permanent Fresh up	**01**	**Disabled**	
			02	Enabled	

BRC1E + BRC1H

Setting	1st code	Description function	2nd code	Description setting	Note
1b	0	Permission Level	**01**	**Level 2**	On-Off, Set Temp, Delay, Min-Max Operation, Fan speed, Swing
			02	Level 3	On-Off, Set Temp, Fan Speed
	0	Quiet Mode display	**01**	**Show**	Depends on Remocon type, see installer reference guide for Remote Controller
			02	Hide	
	1	Setback function	**01**	**Not available**	Older remocons equipped Home Leave Function, basicly same as setback function but only available in Heating Mode.
			02	Available	
	2	Thermistor in remocon (only for limit operation and setback function	**01**	**Use**	
			02	Do not use	
	3	Start setback function	05	5°C	Depends on Remocon type, see installer reference guide for Remote Controller
			06	6°C	
			07	7°C	
			08	8°C	
			09	9°C	
			10	**10°C**	
			11	11°C	
			12	12°C	
			13	13°C	
			14	14°C	
			15	15°C	
	4	Stop setback function	**01**	**1K**	Depends on Remocon type, see installer reference guide for Remote Controller
			02	2K	
			03	3K	
			04	4K	
			05	5K	
	4	Error code detail	01	Without subcode	Depends on Remocon type, see installer reference guide for Remote Controller
			02	With subcode in service mode	
			03	With subcode in basic mode	
			04	**Without subcode on main screen and with subcode on error screen**	
	5	Usage of 'limited' function in combination with centralised control	**01**	**Not available**	'Limited' function = additional mode to permit keeping the temperature between a minimum and maximum value.
			02	Available	
	7	Display symbol for defrost and hot-start	**01**	**ON**	
			02	OFF	
	8	Daylight saving time	01	Not active	
			02	**Automatic**	
			03	Manual	
			04	According to central controller	
	11	Clock display in remocon	**01**	**ON**	
			02	OFF	
	13	Display method	01	Text	
			02	**Symbols**	
	14	Number of flaps that can be blocked by remocon setting	**01**	**1**	Only for FXFQ. It is strongly advised not to use setting 2,3 and 4
			02	2	
			03	3	
			04	4	
			05	None	
	15	Swing setting	**01**	**Swing can be set by remocon**	Depends on indoor unit, check indoor unit installation manuals
			02	Swing setting disabled to set by remocon	

Setting	1st code	Description function	2nd code	Description setting	Note
1c	0	Display of room temperature	01	OFF	
			02	**ON**	
	1	Which thermistor to show on remocon	01	R1T on indoor unit	For Auto-function and Setback Function
			02	**Thermistor on remocon**	
	2	Selection mode display in auto mode	01	OFF	Whether or not 'heating/cooling' is displayed during automatic mode (otherwise only 'automatic' is mentioned on remocon)
			02	**ON**	
	3	Permission Level Setting	**01**	**Level 2**	Depends on indoor unit, check indoor unit installation manuals
			02	Level 3	
	4	Backlight of remocon	01	Permanently OFF	
			02	**ON for 30 seconds after 1st push**	Goes OFF after 20 seconds when no button pushed
			03	Always ON	
	5	Operation when bakclight is OFF	**01**	**No**	When pushing a button, first backlight is activated, function of button is not activated
			02	Yes	When pushing a button, backlight is activated and immediately function of button is activated
	6	Display of remocon	**01**	**Permanent display**	The screen always shows values
			02	Screen goes blank after 5 minutes	Touching any button re-activates screen
	7	RC prohibited backup	**01**	**Disabled**	
			02	Enabled	
	8	Switching selection when there are main and sub Remote controller	**01**	**BRC air sensor**	
			02	Air return air sensor	
	9	Sensor selection when there are Main & Sub Remocon	**01**	**Main Remocon**	Setting 1c-1 is taken into consideration of the selected remocon
			02	Sub Remocon	
	10	Sensor offset for Main Remocon	01	–3°C	Offset for temperature display Depends on Remocon type, see installer reference guide for Remote Controller
			02	–2.5°C	
			03	–2°C	
			04	–1.5°C	
			05	**–1°C**	
			06	–0.5°C	
			07	0°C	
			08	+0.5°C	
			09	+1°C	
	11	Sensor offset for Sub Remocon	01	–3°C	Offset for temperature display Depends on Remocon type, see installer reference guide for Remote Controller
			02	–2.5°C	
			03	–2°C	
			04	–1.5°C	
			05	**–1°C**	
			06	–0.5°C	
			07	0°C	
			08	+0.5°C	
			09	+1°C	
	12	External input BC-B1 for window contact for BRP7A option	**01**	**Do not use**	Only when BRP7A
			02	Use	
	13	External input BC-B2 for keycard contact for BRP7A option	**01**	**Do not use**	Only when BRP7A
			02	Use	
	14	ΔT primary	**01**	**1K**	
			02	2K	
			03	3K	
			04	4K	
	15	ΔT secondary	**01**	**1K**	
			02	2K	
			03	3K	
			04	4K	

Setting	1st code	Description function	2nd code	Description setting	Note
1e	0	Set temp mode changeover' visibility in the menu	**01**	**Visible in menu**	
			02	Hidden	
	1	Temperature unit selection between ˚C and ˚F	**01**	**Disabled**	From factory, unit is locked to °C
			02	Enabled	Selection visible in the menu to switch between temperature units
	2	Setback function	01	Disabled	Only for older remocons, where Home Leave function is present. Home Leave Function is basically Setback function but only in heating mode.
			02	**Enabled**	
	2	Setback Function	01	Disabled	
			02	Enabled for heating	
			03	Enabled for cooling	
			04	**Enabled for heating and cooling**	
	3	Selection set temperature in limit operation when power on/off	01	Do not keep	
			02	**Keep**	
	4	Timer setting in case central controller present	**01**	**Not visible**	To avoid conflict between timer of central controller and remocon
			02	Visible	
	5	Hour display selection between 24h and 12h	**01**	**Disabled**	From factory, unit is locked to 24h
			02	Enabled	Selection visible in the menu to switch between 24h and 12h
	6	Count-down timer	01	Hidden	
			02	**Visible in menu**	
	7	Rotation overlap time	01	30 minutes	
			02	15 minutes	
			03	**10 minutes**	
			04	5 minutes	
	8	Home screen setpoint	**01**	**Numeric**	
			02	Symbolic	
	9	Change-over' and 'Centralized' Symbol display	01	Not visible	
			02	**Visible**	
	10	Display for prohibited function when remocon is locked through centralised control	01	Key-symbol	
			02	**Text message**	
	11	Switching delay in automatic mode	01	15 minutes	
			02	30 minutes	
			03	**60 minutes**	
			04	90 minutes	
	12	Symbol view reference value (Cooling / upper)	**01**	**Fixed 10°C**	
			02	10°C+	
			03	20°C+	
			04	30°C+	
	13	Symbol view reference value (Cooling / lower)	**01**	**+1°C**	
			02	+2°C	
			03	+3°C	
			04	+4°C	
			05	+5°C	
			06	+6°C	
			07	+7°C	
			08	+8°C	
			09	+9°C	
			10	+10°C	
	14	Symbol view reference value (Heating / upper)	**01**	**Fixed 10°C**	
			02	10°C+	
			03	20°C+	
			04	30°C+	

Setting	1st code	Description function	2nd code	Description setting	Note
1e	15	Symbol view reference value (Heating / lower)	**01**	**+1°C**	
			02	+2°C	
			03	+3°C	
			04	+4°C	
			05	+5°C	
			06	+6°C	
			07	+7°C	
			08	+8°C	
			09	+9°C	
			10	+10°C	

BRC1H

Setting	1st code	Description function	2nd code	Description setting	Note
R1	0	Not used	-		
	1	Not used	-		
	2	Not used	-		
	3	Controller thermistor adjustment Cooling	00	–3°C	
			01	–2.5°C	
			02	–2°C	
			03	**–1.5°C**	
			04	–1°C	
			05	–0.5°C	
			06	0°C	
			07	+0.5°C	
			08	+1°C	
			09	+1.5°C	
			10	+2°C	
			11	+2.5°C	
			12	+3°C	
	4	Controller thermistor adjustment Heating	00	–3°C	
			01	–2.5°C	
			02	–2°C	
			03	**–1.5°C**	
			04	–1°C	
			05	–0.5°C	
			06	0°C	
			07	+0.5°C	
			08	+1°C	
			09	+1.5°C	
			10	+2°C	
			11	+2.5°C	
			12	+3°C	
	5	Controller thermistor adjustment Auto change-over	00	–3°C	
			01	–2.5°C	
			02	–2°C	
			03	**–1.5°C**	
			04	–1°C	
			05	–0.5°C	
			06	0°C	
			07	+0.5°C	
			08	+1°C	
			09	+1.5°C	
			10	+2°C	
			11	+2.5°C	
			12	+3°C	

Setting	1st code	Description function	2nd code	Description setting	Note
R1	5	Controller thermistor adjustment Fan-only	00	–3°C	
			01	–2.5°C	
			02	–2°C	
			03	**–1.5°C**	
			04	–1°C	
			05	–0.5°C	
			06	0°C	
			07	+0.5°C	
			08	+1°C	
			09	+1.5°C	
			10	+2°C	
			11	+2.5°C	
			12	+3°C	
	6	Not used	-		
	7	Home screen	00	Detailed	
			01	**Standard**	
	8	Back-light no operation timer	**00**	**5 seconds**	
			01	10 seconds	
			02	20 seconds	
	9	Status indicator faintness	00	0% - OFF	
			01	1%	
			02	2%	
			03	3%	
			04	5%	
			05	7%	
			06	9%	
			07	11%	
			08	13%	
			09	**15%**	
			10	17%	
			11	20%	
	10	Back-light faintness	00	0% - OFF	
			01	1%	
			02	2%	
			03	3%	
			04	4%	
			05	**5%**	
	11	Status indicator mode	00	Normal	
			01	Hotel setting 1	
			02	**Hotel setting 2**	
	12	Bluetooth Low Energy Advertising	00	Disable	
			01	**Enabled**	
	13	BLE advertising signal transmission	**00**	**Always ON**	
			01	Enable manually	
	14	Display of numeric comparison	**00**	**Always visible**	
			01	Fixed screen	
	15	Status display of BLE setting screen	**00**	**Disabled**	
			01	Enabled	
R2	0	Buzzer	**00**	**Disabled**	
			01	Enabled	
	1	Touch button indicator on screen	00	None	
			01	**Small**	
			02	Medium	
			03	Large	

Setting	1st code	Description function	2nd code	Description setting	Note
R2	2	Touch switch sensitivity threshold (left and center)	00	No correction	
			01	1	
			02	2	
			03	3	
			04	4	
			05	5	
			06	6	
			07	7	
			08	8	
			09	9	
			10	**10**	
			11	11	
			12	12	
			13	13	
			14	14	
			15	15	
	3	Touch switch sensitivity threshold (right and center)	00	No correction	
			01	1	
			02	2	
			03	3	
			04	4	
			05	5	
			06	6	
			07	**7**	
			08	8	
			09	9	
			10	10	
			11	11	
			12	12	
			13	13	
			14	14	
			15	15	
	4	Touch switch sensitivity threshold (left + center + right)	00	No correction	
			01	1	
			02	2	
			03	3	
			04	4	
			05	5	
			06	6	
			07	7	
			08	8	
			09	9	
			10	**10**	
			11	11	
			12	12	
			13	13	
			14	14	
			15	15	
	5	Type controller R32 safety system	**00**	**Normal mode**	Full control
			01	Only buzzer	Only sound
			02	Superviser mode	Sound + error
	6	Alarm (only if BRC1H52*)	**01**	**Enabled**	
			02	Disabled	
	7	Not used	-		

Setting	1st code	Description function	2nd code	Description setting	Note
R2	8	Not used	-		
	9	Not used	-		
	10	Not used	-		
	11	Not used	-		
	12	Not used	-		
	13	Not used	-		
	14	Bluetooth Low Energy module connection interval setting	**00**	**35.0 ms**	
			01	37.5 ms	
			02	40.0 ms	
			03	42.5 ms	
			04	45.0 ms	
			05	47.5 ms	
			06	50.0 ms	
			07	52.5 ms	
			08	55.0 ms	
			09	57.5 ms	
			10	32.5 ms	
			11	30.0 ms	
			12	27.5 ms	
			13	25.0 ms	
			14	22.5 ms	
			15	20.0 ms	
	15	Not used	-		

7.7.3 Field settings as per type of indoor unit

The overview lists the availability of the setting per indoor unit type.

Field setting									
Upper	Lower	FXFA	FXZA	FXDA	FXSA	FXMA	FXAA	FXUA	FXHA
10 (20)	0	01	01	01	01	01	01	01	01
	1	01	01	04	01	01	01	01	01
	2	02	02	01	02	02	01	02	01
	3	01	01	01	01	01	01	01	01
	4	spare							
	5	01	01	01	01	01	01	01	01
	6	01	01	01	01	01	01	01	01
	7	01	01	01	01	01	na	01	na
	8	01	01	01	na	na	01	01	01
	9	spare							
	10	04	04	04	04	04	04	04	04
	11	01	01	01	01	01	01	01	01
	12	03	na	na	na	na	na	na	na
	13	spare							
	14	spare							
	15	spare							
11 (21)	0	spare							
	1	spare							
	2	spare							
	3	01	01	01	na	na	01	01	01
	4	spare							
	5	spare							
	6	03	03	04	04	04	na	03	na
	7	na	na	na	01	01	na	na	na
	8	03	03	01	na	na	na	03	na
	9	03	03	03	na	na	na	03	na
	10	spare							
	11	spare							
	12	spare							
	13	spare							
	14	spare							
	15	spare							
12 (22)	0	01	01	01	01	01	01	01	01
	1	04	01	01	01	01	01	01	01
	2	01	01	02	01	01	02	01	02
	3	01	01	01	01	01	01	01	01
	4	01	01	01	01	01	01	01	01
	5	02	02	02	02	02	02	02	02
	6	02	02	02	02	02	02	02	02
	7	01	01	01	01	01	01	01	01
	8	01	01	01	01	01	01	01	01
	9	01	01	01	01	01	01	01	01
	10	03	03	03	03	03	na	03	na
	11	03	03	03	na	na	na	03	na
	12	03	na	na	na	na	na	na	na
	13	spare							
	14	spare							
	15	spare							

Field setting									
Upper	Lower	FXFA	FXZA	FXDA	FXSA	FXMA	FXAA	FXUA	FXHA
13 (23)	0	01	01	01	01	01	01	01	01
	1	01	01	na	na	na	01	01	na
	2	03	03	na	na	na	na	03	na
	3	na	01	na	na	na	01	na	na
	4	01	02	02	na	na	02	03	03
	5	01	01	01	01	04	01	01	01
	6	na	na	na	01	07	na	na	na
	7	04	01	01	na	na	01	01	01
	8	spare							
	9	01	01	01	01	01	01	01	na
	10	spare							
	11	na	na	na	01	01	na	na	na
	12	01	na	na	01	01	na	na	na
	13	02	na	na	na	na	na	na	na
	14	01	na	na	na	na	na	na	na
	15	01	na	na	na	na	na	na	na
14 (24)	0	spare							
	1	02	02	02	02	02	02	02	02
	2	02	na	na	na	na	na	na	na
	3	01	na	01	na	na	na	na	na
	4	03	na	04	na	na	na	na	na
	5	01	na	na	na	na	na	na	na
	6	spare							
	7	01	01	01	01	01	01	01	01
	8	06	na	02	na	na	na	na	na
	9	03	Na	02	na	na	na	na	na
	10	01	na	na	na	na	na	na	na
	11	spare							
	12	spare							
	13	spare							
	14	spare							
	15	01	na	na	na	na	na	na	na
15 (25)	0	02	02	02	02	02	02	02	02
	1	01	01	01	01	01	01	01	01
	2	01	01	01	na	na	01	01	01
	3	01	01	01	01	01	01	01	01
	4	01	01	01	01	01	01	01	01
	5	01	01	01	01	01	01	01	01
	6	01	01	01	01	01	01	01	01
	7	spare							
	8	spare							
	9	01	01	01	01	01	01	01	01
	10	spare							
	11	spare							
	12	01	01	01	01	01	01	01	01
	13	02	02	02	02	02	02	02	02
	14	01	01	01	01	01	01	01	01
	15	01	01	01	01	01	01	01	01

BRC1H52*

Field setting (lower)	Field setting (upper)				
	1b	1c	1e	R1	R2
0	01	02	na	na	na
1	01	02	na	na	01
2	na	02	04	na	10
3	na	na	02	03	07
4	04	02	02	03	00
5	01	01	01	03	00
6	01	na	02	03	00
7	01	02	03	00	00
8	02	01	01	00	na
9	01	na	02	09	na
10	na	02	01	05	na
11	02	05	03	02	na
12	01	02	01	01	na
13	na	02	01	00	na
14	01	01	01	00	00
15	na	01	01	00	na

BRC1E53

Field setting (lower)	Field setting (upper)		
	1b	1c	1e
0	01	02	na
1	01	02	01
2	na	02	04
3	na	na	02
4	04	02	01
5	01	01	02
6	01	na	02
7	01	02	03
8	02	01	01
9	01	01	02
10	na	07	02
11	01	07	03
12	01	02	na
13	01	02	na
14	01	na	na
15	01	na	na

DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

ESIE21-15 2022.09