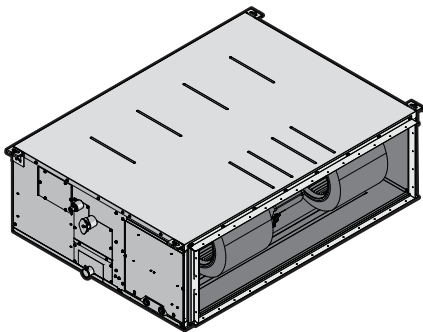




Installation and operation manual

VRV system air conditioner



FXMQ200AXVMB
FXMQ250AXVMB

Installation and operation manual
VRV system air conditioner

English

UKCA – Safety declaration of conformity

Daikin Europe N.V.

declares under its sole responsibility that the products to which this declaration relates:

FXMQ200AXVMB, FXMQ250AXVMB,

are in conformity with the following directive(s) or regulation(s), provided that the products are used in accordance with our instructions:

S.I. 2008/1597: Supply of Machinery (Safety) Regulations 2008**
S.I. 2016/1091: Electromagnetic Compatibility Regulations 2016*

as amended,

following the provisions of: BS EN 60335-2-40,

* as set out in <A> and judged positively by according to the **Certificate <C>**.

** Daikin Europe N.V. is authorised to compile the Technical Construction File.

<A>	DAIKIN.TCF.036A8/11-2022
	—
<C>	—

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1 About the documentation

1.1 About this document



INFORMATION

Make sure that the user has the printed documentation and ask him/her to keep it for future reference.

Target audience

Authorised installers + end users



INFORMATION

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

Documentation set

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
 - Safety instructions that you must read before installing
 - Format: Paper (in the box of the indoor unit)
- **Indoor unit installation and operation manual:**
 - Installation and operation instructions
 - Format: Paper (in the box of the indoor unit)
- **Installer and user reference guide:**
 - Preparation of the installation, good practices, reference data,...
 - Detailed step-by-step instructions and background information for basic and advanced usage
 - Format: Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your dealer.

The original documentation is written in English. All other languages are translations.

Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

2 Specific installer safety instructions

Always observe the following safety instructions and regulations.

Unit installation (see "**12 Unit installation**" ► 11)



CAUTION

Appliance NOT accessible to the general public, install it in a secured area, protected from easy access.

This unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment.



CAUTION

This equipment is NOT intended for use in residential locations and will NOT guarantee to provide adequate protection to radio reception in such locations.

Duct installation (see "12.2.2 Guidelines when installing the ducting" [p 12])



CAUTION

In case of installation WITHOUT the duct on inlet side, make sure to install the air filter. For more information refer to the option list of the indoor unit.



CAUTION

- Make sure the installation of the duct does NOT exceed the setting range of the external static pressure for the unit. Refer to the technical datasheet of your model for the setting range.
- Make sure to install the canvas duct so vibrations are NOT transmitted to the duct or ceiling. Use a sound-absorbing material (insulation material) for the lining of the duct and apply vibration insulation rubber to the hanging bolts.
- When welding, make sure NOT to spatter onto the drain pan or the air filter.
- If the metal duct passes through a metal lath, wire lath or metal plate of the wooden structure, separate the duct and wall electrically.
- Install the outlet grille in a position where the airflow will not come into direct contact with people.
- Do NOT use booster fans in the duct. Use the function to adjust the fan rate setting automatically (see "16 Configuration" [p 17]).

Electrical installation (see "14 Electrical installation" [p 15])



WARNING

ALWAYS use multicore cable for power supply cables.



WARNING

- All wiring MUST be performed by an authorised electrician and MUST comply with the applicable legislation.
- Make electrical connections to the fixed wiring.
- All components procured on-site and all electrical construction MUST comply with the applicable legislation.



WARNING

- If the power supply has a missing or wrong N-phase, equipment might break down.
- Establish proper earthing. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Incomplete earthing may cause electrical shock.
- Install the required fuses or circuit breakers.
- Secure the electrical wiring with cable ties so that the cables do NOT come in contact with sharp edges or piping, particularly on the high-pressure side.
- Do NOT use taped wires, stranded conductor wires, extension cords, or connections from a star system. They can cause overheating, electrical shock or fire.
- Do NOT install a phase advancing capacitor, because this unit is equipped with an inverter. A phase advancing capacitor will reduce performance and may cause accidents.



WARNING

Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provides full disconnection under overvoltage category III.



WARNING

If the supply cord is damaged, it MUST be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



WARNING

Prevent hazards due to inadvertent resetting of the thermal cut-out: power to this appliance MUST NOT be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly turned ON and OFF by the utility.

For the user

3 User safety instructions

Always observe the following safety instructions and regulations.

3.1 General



WARNING

If you are NOT sure how to operate the unit, contact your installer.



WARNING

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction

3 User safety instructions

concerning use of the appliance in a safe way and understand the hazards involved.

Children SHALL NOT play with the appliance.

Cleaning and user maintenance SHALL NOT be made by children without supervision.

WARNING

To prevent electrical shocks or fire:

- Do NOT rinse the unit.
- Do NOT operate the unit with wet hands.
- Do NOT place any objects containing water on the unit.

CAUTION

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

- Units are marked with the following symbol:



This means that electrical and electronic products may NOT be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: dismantling the system, treatment of the refrigerant, of oil and of other parts MUST be done by an authorised installer and MUST comply with applicable legislation.

Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

- Batteries are marked with the following symbol:



This means that the batteries may NOT be mixed with unsorted household waste. If a chemical symbol is printed beneath the symbol, this chemical symbol means that the battery contains a heavy metal above a certain concentration.

Possible chemical symbols are: Pb: lead (>0.004%).

Waste batteries MUST be treated at a specialised treatment facility for reuse. By ensuring waste batteries are disposed of correctly, you will help to prevent potential negative consequences for the environment and human health.

3.2 Instructions for safe operation

WARNING

- Do NOT modify, disassemble, remove, reinstall or repair the unit yourself as incorrect dismantling or installation may cause an electrical shock or fire. Contact your dealer.
- In case of accidental refrigerant leaks, make sure there are no naked flames. The refrigerant itself is entirely safe, non-toxic and non-combustible, but it will generate toxic gas when it accidentally leaks into a room where combustion air from fan heaters, gas cookers, etc. is present. ALWAYS have qualified service personnel confirm that the point of leakage has been repaired or corrected before resuming operation.

CAUTION

- NEVER touch the internal parts of the controller.
- Do NOT remove the front panel. Some parts inside are dangerous to touch and appliance problems may happen. For checking and adjusting the internal parts, contact your dealer.

WARNING

This unit contains electrical and hot parts.

WARNING

Before operating the unit, be sure the installation has been carried out correctly by an installer.

CAUTION

It is unhealthy to expose your body to the air flow for a long time.

CAUTION

To avoid oxygen deficiency, ventilate the room sufficiently if equipment with burner is used together with the system.

CAUTION

Do NOT operate the system when using a room fumigation-type insecticide. Chemicals could collect in the unit, and endanger the health of people who are hypersensitive to chemicals.

CAUTION

NEVER expose little children, plants or animals directly to the airflow.

WARNING

Do NOT place a flammable spray bottle near the air conditioner and do NOT use sprays near the unit. Doing so may result in a fire.

Maintenance and service (see "[7 Maintenance and service](#)" [p. 9])

CAUTION: Pay attention to the fan!

It is dangerous to inspect the unit while the fan is running.

Make sure to turn OFF the main switch before executing any maintenance task.

CAUTION

Do NOT insert fingers, rods or other objects into the air inlet or outlet. When the fan is rotating at high speed, it will cause injury.

WARNING

NEVER replace a fuse with a fuse of a wrong ampere ratings or other wires when a fuse blows out. Use of wire or copper wire may cause the unit to break down or cause a fire.

CAUTION

After a long use, check the unit stand and fitting for damage. If damaged, the unit may fall and result in injury.

CAUTION

Before accessing terminal devices, make sure to interrupt all power supply.

DANGER: RISK OF ELECTROCUTION

To clean the air conditioner or air filter, be sure to stop operation and turn all power supplies OFF. Otherwise, an electrical shock and injury may result.

WARNING

Be careful with ladders when working in high places.

DANGER: RISK OF ELECTROCUTION

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 warning label for persons performing service and maintenance.

CAUTION

Turn off the unit before cleaning the air outlet.

WARNING

Do NOT let the indoor unit get wet.
Possible consequence: Electrical shock or fire.

About the refrigerant (see "[7.3 About the refrigerant](#)" [p. 10])

WARNING

- The refrigerant in the system is safe and normally does NOT leak. If the refrigerant leaks in the room, contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
- Turn OFF any combustible heating devices, ventilate the room and contact the dealer where you purchased the unit.
- Do NOT use the system until a service person confirms that the portion where the refrigerant leaks is repaired.

4 About the system

Troubleshooting (see "8 Troubleshooting" [p 10])



WARNING

Stop operation and shut OFF the power if anything unusual occurs (burning smells etc.).

Leaving the unit running under such circumstances may cause breakage, electrical shock or fire. Contact your dealer.

4 About the system



WARNING

- Do NOT modify, disassemble, remove, reinstall or repair the unit yourself as incorrect dismantling or installation may cause an electrical shock or fire. Contact your dealer.
- In case of accidental refrigerant leaks, make sure there are no naked flames. The refrigerant itself is entirely safe, non-toxic and non-combustible, but it will generate toxic gas when it accidentally leaks into a room where combustion air from fan heaters, gas cookers, etc. is present. ALWAYS have qualified service personnel confirm that the point of leakage has been repaired or corrected before resuming operation.



NOTICE

Do NOT use the system for other purposes. In order to avoid any quality deterioration, do NOT use the unit for cooling precision instruments, food, plants, animals, or works of art.



NOTICE

For future modifications or expansions of your system:

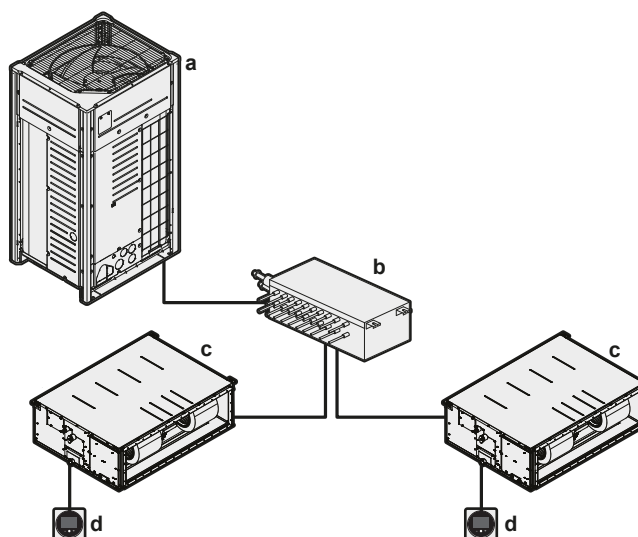
A full overview of allowable combinations (for future system extensions) is available in technical engineering data and should be consulted. Contact your installer to receive more information and professional advice.

4.1 System layout



INFORMATION

The following figure is an example and may NOT completely match your system layout



- a Outdoor unit
- b Multi BS unit
- c Indoor unit
- d Remote controller (user interface)

5 User interface



CAUTION

- NEVER touch the internal parts of the controller.
- Do NOT remove the front panel. Some parts inside are dangerous to touch and appliance problems may happen. For checking and adjusting the internal parts, contact your dealer.



NOTICE

Do NOT wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The panel may get discoloured or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. Wipe it with another dry cloth.



NOTICE

NEVER press the button of the user interface with a hard, pointed object. The user interface may be damaged.



NOTICE

NEVER pull or twist the electric wire of the user interface. It may cause the unit to malfunction.

This operation manual offers a non-exhaustive overview of the main functions of the system.

For more information about the user interface, see the operation manual of the installed user interface.

6 Operation

6.1 Operation range



INFORMATION

For the operation limits see the technical data of the connected outdoor unit.

6.2 About operation modes



INFORMATION

Depending on the installed system, some operation modes will not be available.

- The air flow rate may adjust itself depending on the room temperature or the fan may stop immediately. This is not a malfunction.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.
- **Setpoint.** Target temperature for the Cooling, Heating, and Auto operation modes.
- **Setback.** A function that keeps the room temperature in a specific range when the system is turned off (by the user, the schedule function, or the OFF timer).

6.2.1 Basic operation modes

The indoor unit can operate in various operation modes.

Icon	Operation mode
	Cooling. In this mode, cooling will be activated as required by the setpoint, or by Setback operation.
	Heating. In this mode, heating will be activated as required by the setpoint, or by Setback operation.
	Fan only. In this mode, air circulates without heating or cooling.
	Auto. In Auto mode, the indoor unit automatically switches between heating and cooling mode, as required by the setpoint.

6.2.2 Special heating operation modes

Operation	Description
Defrost	To prevent a loss of heating capacity due to frost accumulation in the outdoor unit, the system will automatically switch to defrost operation. During defrost operation, the indoor unit fan will stop operation, and the following icon will appear on the home screen: The system will resume normal operation after approximately 6 to 8 minutes.
Hot start	During hot start, the indoor unit fan will stop operation, and the following icon will appear on the home screen:

6.3 To operate the system



INFORMATION

For setting of the operation mode or other settings, see the reference guide or operation manual of the user interface.

7 Maintenance and service

7.1 Precautions for maintenance and service



CAUTION

See "3 User safety instructions" [▶ 5] to acknowledge all related safety instructions.



NOTICE

NEVER inspect or service the unit by yourself. Ask a qualified service person to perform this work. However, as end user, you may clean the air filter and air outlet.



NOTICE

Maintenance MUST be done by an authorised installer or service agent.

We recommend performing maintenance at least once a year. However, applicable legislation might require shorter maintenance intervals.



NOTICE

Do NOT wipe the controller operation panel with benzine, thinner, chemical dust cloth, etc. The panel may get discoloured or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. Wipe it with another dry cloth.

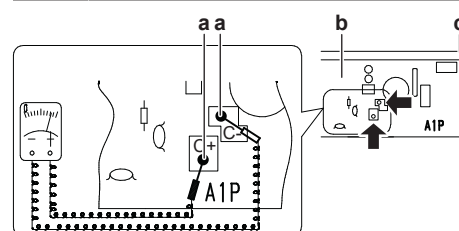
Following symbols may occur on the indoor unit:

Symbol	Explanation
	Measure the voltage at the terminals of main circuit capacitors or electrical components before servicing.



DANGER: RISK OF ELECTROCUTION

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 warning label for persons performing service and maintenance.



- a Residual voltage measuring points (C-, C+)
- b Printed circuit board
- c Control box

7.2 Cleaning the air filter and air outlet



CAUTION

Turn off the unit before cleaning the air filter and air outlet.

8 Troubleshooting

NOTICE

- Do NOT use gasoline, benzene, thinner polishing powder or liquid insecticide. **Possible consequence:** Discoloration and deformation.
- Do NOT use water or air of 50°C or higher. **Possible consequence:** Discoloration and deformation.

7.2.1 To clean the air filter

INFORMATION

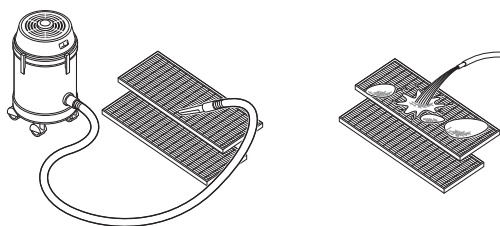
Air filter for this unit is an optional equipment. Refer to the option list for available air filter option for your unit.

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.**

7.2.2 To clean the air outlet

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 a neutral detergent.

7.3 About the refrigerant

This product contains fluorinated greenhouse gases. Do NOT vent gases into the atmosphere.

Refrigerant type: R410A

Global warming potential (GWP) value: 2087.5

NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO₂ equivalent.

Formula to calculate the quantity in CO₂ equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg]/1000

Contact your installer for more information.

WARNING

- The refrigerant in the system is safe and normally does NOT leak. If the refrigerant leaks in the room, contact with a fire of a burner, a heater or a cooker may result in a harmful gas.
- Turn OFF any combustible heating devices, ventilate the room and contact the dealer where you purchased the unit.
- Do NOT use the system until a service person confirms that the portion where the refrigerant leaks is repaired.

8 Troubleshooting

If one of the following malfunctions occur, take the measures shown below and contact your dealer.

WARNING

Stop operation and shut OFF the power if anything unusual occurs (burning smells etc.).

Leaving the unit running under such circumstances may cause breakage, electrical shock or fire. Contact your dealer.

The system MUST be repaired by a qualified service person.

Malfunction	Measure
If a safety device such as a fuse, a circuit breaker or a residual current device frequently actuates or the ON/OFF switch does NOT function properly.	Turn OFF all main power supply switches to the unit.
If water leaks from the unit.	Stop operation.
The operation switch does NOT function properly.	Turn OFF the power supply.
If the user interface displays  .	Notify your installer and report the error code. To display an error code see the reference guide of the user interface.

If the system does NOT operate properly except for the above mentioned cases and none of the above mentioned malfunctions is evident, investigate the system in accordance with the following procedures.

INFORMATION

Refer to the reference guide located on <https://www.daikin.eu> for more troubleshooting tips. Use the search function  to find your model.

If after checking all above items, it is impossible to fix the problem yourself, contact your installer and state the symptoms, the complete model name of the unit (with manufacturing number if possible) and the installation date (possibly listed on the warranty card).

9 Relocation

Contact your dealer to remove and reinstall the entire unit. Moving units requires technical expertise.

10 Disposal



NOTICE

Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts MUST comply with applicable legislation. Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery.

For the installer

11 About the box

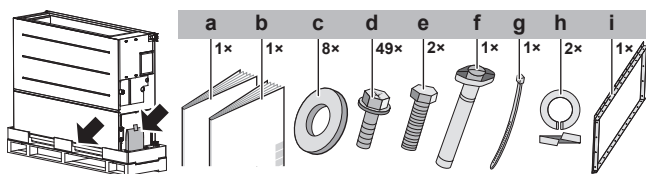
Keep the following in mind:

- At delivery, the unit MUST be checked for damage and completeness. Any damage or missing parts MUST be reported immediately to the claims agent of the carrier.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.
- Prepare in advance the path along which you want to bring the unit to its final installation position.

11.1 Indoor unit

11.1.1 To remove the accessories from the indoor unit

- Remove the accessories from the side of the unit. Air outlet flange is placed under the indoor unit.



- a Installation and operation manual
- b General safety precautions
- c Washers for hanger bracket
- d Screws for duct flanges (M5×12)
- e Hexagon head bolt (M10×40)
- f Attached piping with sealing
- g Tie wrap
- h Spring washer
- i Air outlet flange (under the indoor unit)

12 Unit installation

12.1 Preparing the installation site

12.1.1 Installation site requirements of the indoor unit



INFORMATION

The sound pressure level is less than 70 dBA.



INFORMATION

Equipment meets the requirement for commercial and light-industrial location when professionally installed and maintained.



NOTICE

If the equipment is installed closer than 30 m to a residential location, the professional installer MUST evaluate the EMC situation before installation.



CAUTION

This equipment is NOT intended for use in residential locations and will NOT guarantee to provide adequate protection to radio reception in such locations.

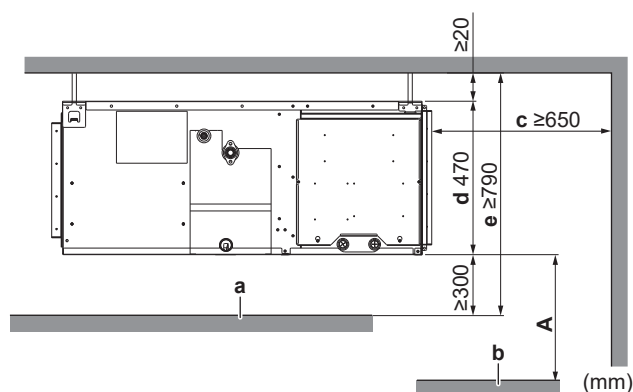


CAUTION

Appliance NOT accessible to the general public, install it in a secured area, protected from easy access.

This unit, both indoor and outdoor, is suitable for installation in a commercial and light industrial environment.

- Drainage.** Make sure condensation water can be evacuated properly.
- Ceiling insulation.** When conditions in the ceiling exceed 30°C and a relative humidity of 80%, or when fresh air is inducted into the ceiling, then additional insulation is required (minimum 10 mm thickness, polyethylene foam).
- Protective guards.** Make sure to install protective guards (field supply) on the suction and discharge side to prevent somebody from touching the fan blades or heat exchanger.
- Spacing.** Mind the following requirements:



- A Minimum distance to the floor: 2.5 m** to avoid accidental touching

- a Ceiling
- b Floor surface
- c Maintenance space
- d Minimum required space of installation
- e Minimum space for allowing downward slope 1/100 for drainage

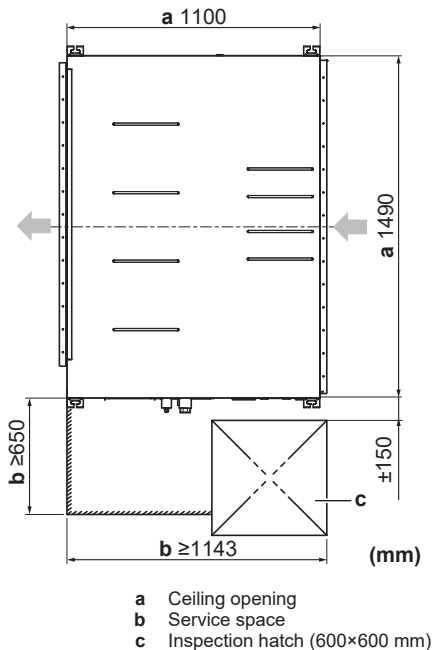
- Discharge grille.** Minimum requirement installation height of discharge grille ≥ 1.8 m.

12 Unit installation

Service space and ceiling opening size

Make sure ceiling opening is big enough to ensure a sufficient clearance for maintenance and service.

Top view:



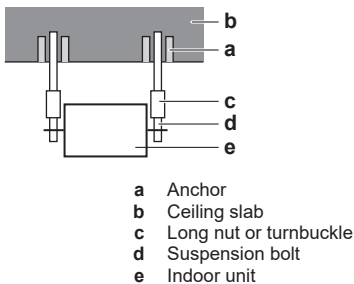
INFORMATION

Some options may require additional service space. See the installation manual of the used option before installation.

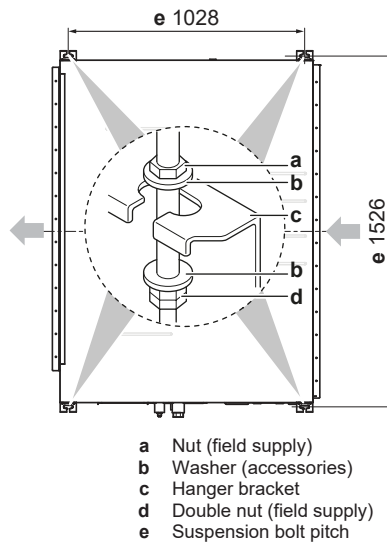
12.2 Mounting the indoor unit

12.2.1 Guidelines when installing the indoor unit

- **Ceiling strength.** Check whether the ceiling is strong enough to support the weight of the unit. If there is a risk, reinforce the ceiling before installing the unit.
 - For existing ceilings, use anchors.
 - For new ceilings, use sunken inserts, sunken anchors or other field supplied parts.



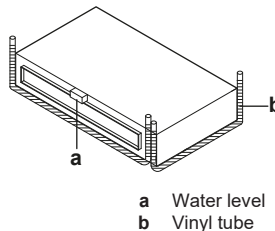
- **Suspension bolts.** Use M10 suspension bolts for installation. Attach the hanger bracket to the suspension bolt. Fix it securely using a nut and washer from the upper and lower sides of the hanger bracket.



▪ Install the unit temporarily.

- 1 Attach the hanger bracket to the suspension bolt.
- 2 Fix it securely.

- **Level.** Make sure the unit is level at all four corners using a level or a water-filled vinyl tube.



- 3 Tighten the upper nut.



NOTICE

Do NOT install the unit tilted. **Possible consequence:** If the unit is tilted against the direction of the condensate flow (the drain piping side is raised), the float switch might malfunction and cause water to drip.



INFORMATION

Optional equipment. When installing optional equipment, also read the installation manual of the optional equipment. Depending on the field conditions, it might be easier to install the optional equipment first.



INFORMATION

For installation of the optional 8 mm pre-filter see the reference guide located on <https://www.daikin.eu>. Use the search function 🔍 to find your model.

12.2.2 Guidelines when installing the ducting



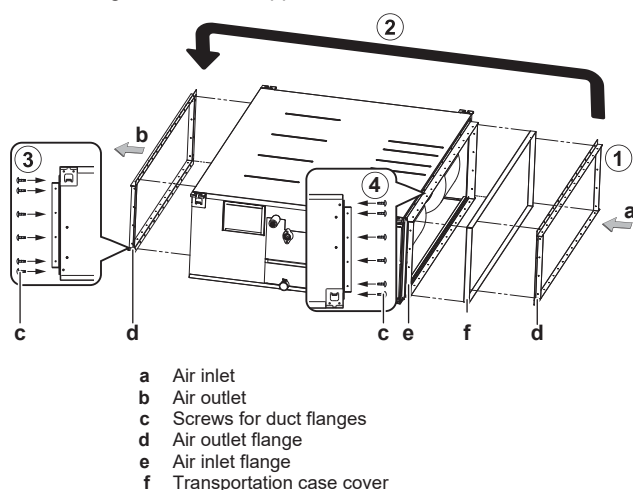
CAUTION

In case of installation WITHOUT the duct on inlet side, make sure to install the air filter. For more information refer to the option list of the indoor unit.

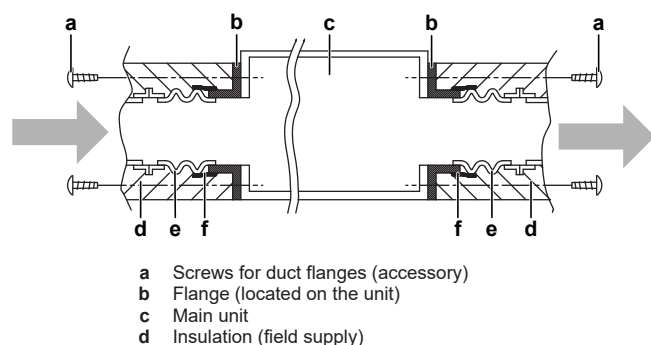

CAUTION

- Make sure the installation of the duct does NOT exceed the setting range of the external static pressure for the unit. Refer to the technical datasheet of your model for the setting range.
- Make sure to install the canvas duct so vibrations are NOT transmitted to the duct or ceiling. Use a sound-absorbing material (insulation material) for the lining of the duct and apply vibration insulation rubber to the hanging bolts.
- When welding, make sure NOT to spatter onto the drain pan or the air filter.
- If the metal duct passes through a metal lath, wire lath or metal plate of the wooden structure, separate the duct and wall electrically.
- Install the outlet grille in a position where the airflow will not come into direct contact with people.
- Do NOT use booster fans in the duct. Use the function to adjust the fan rate setting automatically (see "16 Configuration" ▶ 17).

The ducting is to be field supplied.



- Remove the air outlet flange from the transportation case cover.
- Move and attach the air outlet flange to the air outlet side.
- Fix the air outlet flange with the 34 screws for duct flanges (accessory).
- Fix the air inlet flange using the remaining 15 screws for duct flanges (accessory).
- Connect the canvas duct to the inside of the flange on both sides.
- Connect the duct to the canvas duct on both sides.
- Wind aluminium tape around the flanges and duct connections. Make sure there are no air leaks at any other connection.
- Insulate the ducts to prevent condensation from forming. Use glass wool or polyethylene foam 25 mm thick.



- e Canvas duct (field supply)
- f Aluminium tape (field supply)

- Filter.** Be sure to attach an air filter inside the air passage on the air inlet side. Use an air filter with dust collecting efficiency $\geq 50\%$ (gravimetric method).

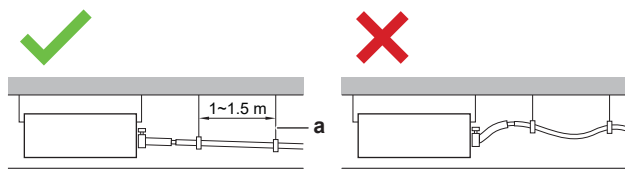
12.2.3 Guidelines when installing the drain piping

Make sure condensation water can be evacuated properly. This involves:

- General guidelines
- Connecting the drain piping to the indoor unit
- Checking for water leaks

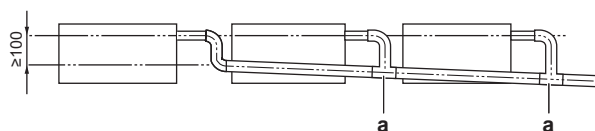
General guidelines

- Pipe length.** Keep drain piping as short as possible.
- Pipe size.** Keep the pipe size equal to or greater than that of the connecting pipe (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter).
- Slope.** Make sure the drain piping slopes down (at least 1/100) to prevent air from being trapped in the piping. Use hanging bars as shown.



- a Hanging bar
- ✓ Allowed
- ✗ Not allowed

- Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.
- Combining drain pipes.** It is possible to combine drain pipes. Use drain pipes and T-joints with the correct gauge for the operating capacity of the units.

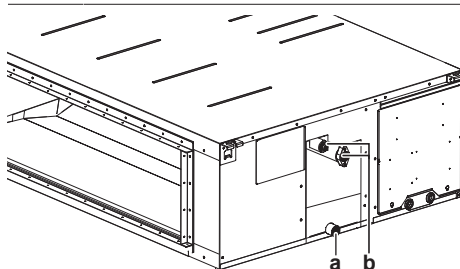


a T-joint

To connect the drain piping to the indoor unit


NOTICE

Incorrect connection of the drain hose might cause leaks, and damage the installation space and surroundings.



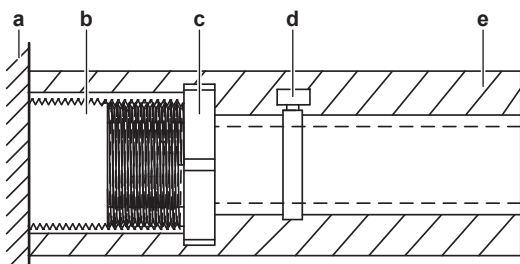
- a Drain pipe connection
- b Refrigerant pipes

Drain piping connection

- Pull out the drain plug.
- Install the adapter for the drain hose (field supply).

13 Piping installation

- Push the drain hose as far as possible over the adapter for the drain hose.
- Tighten the metal clamp until the screw head is less than 4 mm from the metal clamp part.
- Check for water leaks (see ["To check for water leaks"](#) [▶ 14]).
- Install the insulation piece (drain pipe).



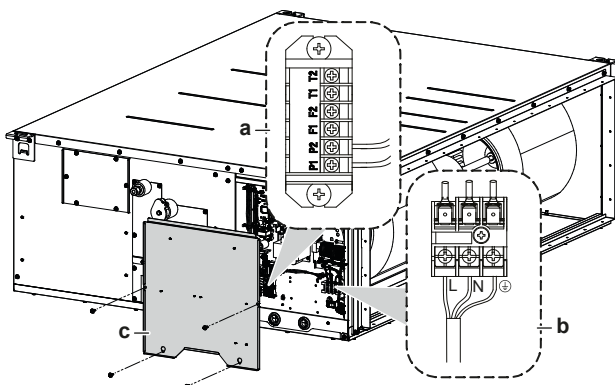
- a Indoor unit
- b BSP 1" internal thread
- c Adapter (field supply)
- d Metal clamp (field supply)
- e Insulation material for drain pipe (field supply)

To check for water leaks

The procedure differs depending on whether installation of the system is already completed. When installation of the system is not yet completed, temporarily connect the user interface and power supply to the unit.

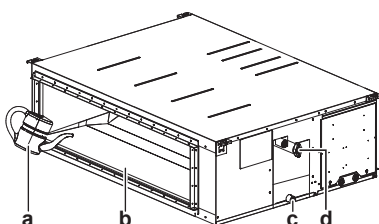
When installation of the system is not yet completed

- Temporarily connect electrical wiring.
 - Remove the service cover.
 - Connect the power supply.
 - Connect the user interface.
 - Reattach the service cover.



- a User interface terminal block
- b Power supply terminal block
- c Service cover with wiring diagram

- Turn ON the power supply.
- Start fan only operation (see the reference guide or the service manual of the user interface).
- Gradually pour approximately 1 l of water to the drain pan, and check for leaks.



- a Container with water
- b Drain pan
- c Drain outlet

d Refrigerant pipes

- Turn OFF the power.
- Disconnect the electrical wiring.
 - Remove the service cover.
 - Disconnect the power supply.
 - Disconnect the user interface.
 - Reattach the service cover.

When installation of the system is already completed

- Start cooling operation (see the reference guide or the service manual of the user interface).
- Gradually pour approximately 1 l of water to the drain pan, and check for leaks (see ["When installation of the system is not yet completed"](#) [▶ 14]).

13 Piping installation

13.1 Preparing refrigerant piping

13.1.1 Refrigerant piping requirements



NOTICE

The piping and other pressure-containing parts shall be suitable for refrigerant. Use phosphoric acid deoxidised seamless copper for refrigerant piping.

- Foreign materials inside pipes (including oils for fabrication) must be ≤30 mg/10 m.

Refrigerant piping diameter

Use the same diameters as the connections on the outdoor units:

Class	Pipe outer diameter (mm)	
	Liquid pipe	Gas pipe
200	Ø9.5 mm	Ø19.1 mm
250	Ø9.5 mm	Ø22.2 mm

Refrigerant piping material

- Piping material:** phosphoric acid deoxidised seamless copper
- Flare connections:** Only use annealed material.
- Piping temper grade and thickness:**

Outer diameter (Ø)	Temper grade	Thickness (t) ^(a)	
9.5 mm (3/8")	Annealed (O)	≥0.8 mm	
19.1 mm (3/4")			
22.2 mm (7/8")			

^(a) Depending on the applicable legislation and the maximum working pressure of the unit (see "PS High" on the unit name plate), larger piping thickness might be required.

13.1.2 Refrigerant piping insulation

- Use polyethylene foam as insulation material:
 - with a heat transfer rate between 0.041 and 0.052 W/mK (0.035 and 0.045 kcal/mh°C)
 - with a heat resistance of at least 120°C
- Insulation thickness

Pipe outer diameter ($\varnothing_p$)	Insulation inner diameter ($\varnothing_i$)	Insulation thickness (t)
9.5 mm (3/8")	10~14 mm	≥13 mm
19.1 mm (3/4")	20~24 mm	
22.2 mm (7/8")	23~27 mm	



If the temperature is higher than 30°C and the humidity is higher than RH 80%, the thickness of the insulation materials should be at least 20 mm to prevent condensation on the surface of the insulation.

13.2 Connecting the refrigerant piping



DANGER: RISK OF BURNING/SCALDING



INFORMATION

- For **liquid piping**, use a flare connection.
- For **gas piping**, use the attached piping (accessory) and fix it with the hexagon head bolts and spring washers (accessory)

13.2.1 To connect the refrigerant piping to the indoor unit

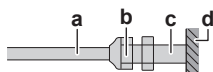


CAUTION

Install the refrigerant piping or components in a position where they are unlikely to be exposed to any substance which may corrode components containing refrigerant, unless the components are constructed of materials that are inherently resistant to corrosion or are suitably protected against corrosion.

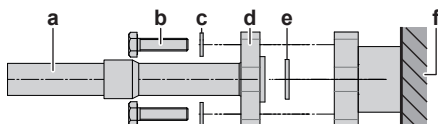
- Pipe length.** Keep refrigerant piping as short as possible.

- Connect the **liquid piping** to the unit using the flare connections.



- a Field piping
- b Flare nut (attached to the unit)
- c Refrigerant pipe connection (attached to the unit)
- d Indoor unit

- Connect the **gas piping** using the attached piping (accessory). Fix it to the unit using hexagon head bolts (M10×40) (accessory) and spring washers (accessory). Place sealing (on the attached piping) between the connection.



- a Field piping
- b Hexagon head bolt (M10×40)
- c Spring washer (accessory)
- d Attached piping
- e Sealing (on the attached piping)
- f Indoor unit



NOTICE

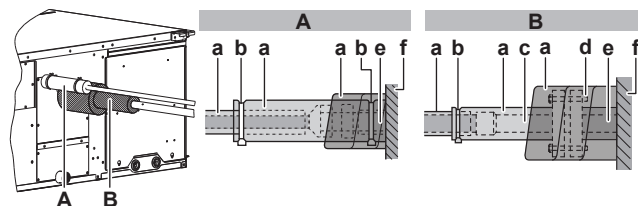
- Join the attached piping (accessory) and the field refrigerant piping (field supply) by brazing before fixing the attached piping to the unit.
- Do NOT braze the refrigerant piping directly to the indoor unit.



CAUTION

Do NOT reuse sealing (on the attached piping). Always use new sealing to prevent refrigerant gas leaks.

- Insulate the refrigerant piping on the indoor unit as follows:



- A Liquid piping
- B Gas piping

- a Insulation material (field supply)
- b Cable tie (field supply)
- c Attached piping (accessory)
- d Hexagon head bolt and spring washer (accessory)
- e Refrigerant pipe connection (attached to the unit)
- f Unit



NOTICE

Make sure to insulate all refrigerant piping. Any exposed piping might cause condensation.

14 Electrical installation



DANGER: RISK OF ELECTROCUTION



WARNING

ALWAYS use multicore cable for power supply cables.



WARNING

Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provides full disconnection under overvoltage category III.



WARNING

If the supply cord is damaged, it MUST be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



WARNING

Prevent hazards due to inadvertent resetting of the thermal cut-out: power to this appliance MUST NOT be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly turned ON and OFF by the utility.

14.1 Specifications of standard wiring components

Component		Class	
		200	250
Power supply cable	MCA ^(a)	4.3 A	5.2 A
	Voltage	220~240 V/220 V	
	Phase	1~	
	Frequency	50/60 Hz	
	Wire sizes	1.5 mm ² (3-core wire) H07RN-F (60245 IEC 66)	
Transmission wiring		For specification refer to the installation manual of the outdoor unit	

14 Electrical installation

Component	Class	
	200	250
User interface cable	0.75 to 1.25 mm ² (2-core wire) H05RN-F (60245 IEC 57) Length ≤500 m	
Recommended field fuse	6 A	
Residual current device	Must comply with applicable legislation	

^(a) MCA=Minimum circuit ampacity. Stated values are maximum values (see electrical data of indoor unit for exact values).

14.2 To connect the electrical wiring to the indoor unit

NOTICE

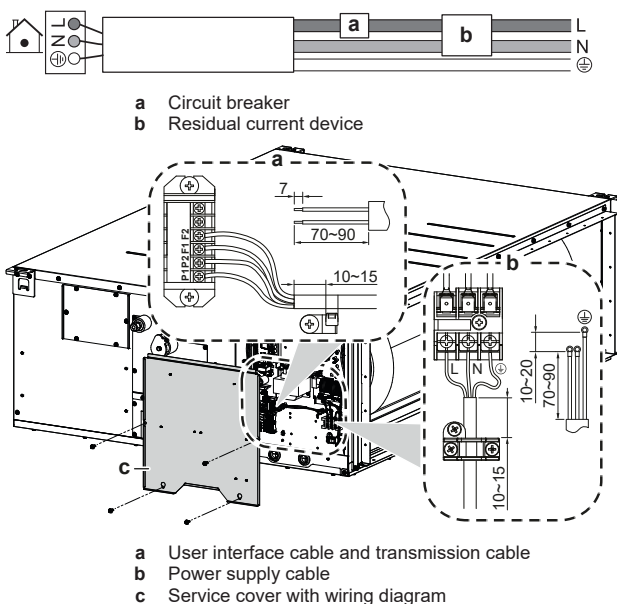
- Follow the wiring diagram (delivered with the unit, located at the inside of the service cover).
- For instructions on how to connect the optional equipment, see the installation manual delivered with the optional equipment.
- Make sure the electrical wiring does NOT obstruct proper reattachment of the service cover.

It is important to keep the power supply and the transmission wiring separated from each other. In order to avoid any electrical interference the distance between both wirings should ALWAYS be at least 50 mm.

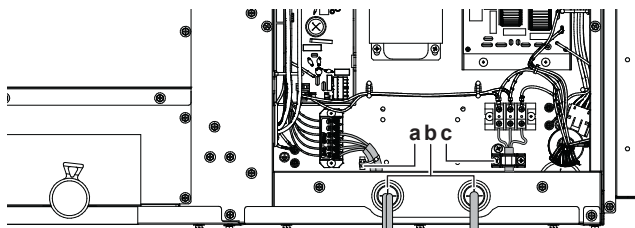
NOTICE

Be sure to keep the power line and transmission line apart from each other. Transmission wiring and power supply wiring may cross, but may NOT run parallel.

- Remove the service cover.
- User interface cable:** Route the cable through the opening for cable, connect the cable to the terminal block (symbols P1, P2).
- Transmission cable:** Route the cable through the opening for cable, connect the cable to the terminal block (make sure the symbols F1, F2 match with the symbols on the outdoor unit). Bundle the transmission cable with the user interface cable and fix them with a tie wrap on the wiring fixture.
- Power supply cable:** Route the cable through the frame and connect the cable to the terminal block (L, N, earth). Fix the cable with a tie wrap on the wiring fixture.



- Plastic clamp for tie wrap (for transmission cable):** Pass tie wraps through the plastic clamps and fasten to fix the cables.
- Cable clamp (for power supply cable):** Fix the cable with the cable clamp.



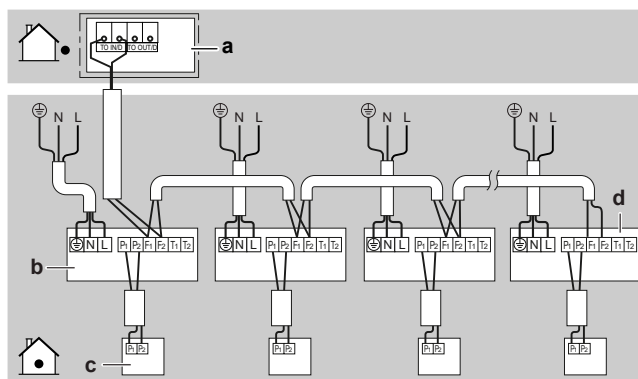
- a Plastic clamp for tie wrap
- b Opening for cables
- c Cable clamp

- Wrap the sealing (field supply) around the cables to prevent water from entering the unit. Seal all gaps to prevent small animals from entering the system.
- Reattach the service cover.

Complete system examples

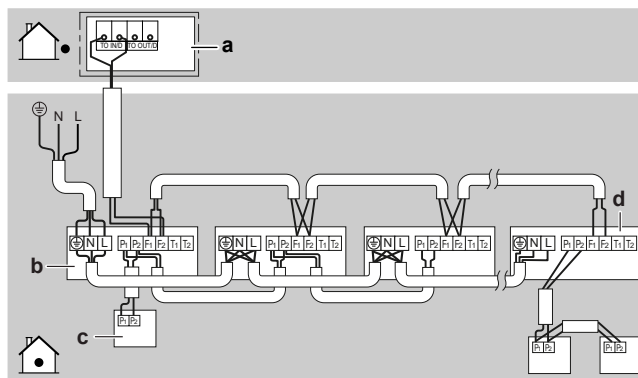
- 1 user interface controls 1 indoor unit.
- Group control or 2 user interfaces control 1 indoor unit
- With BS unit

1 user interface controls 1 indoor unit.



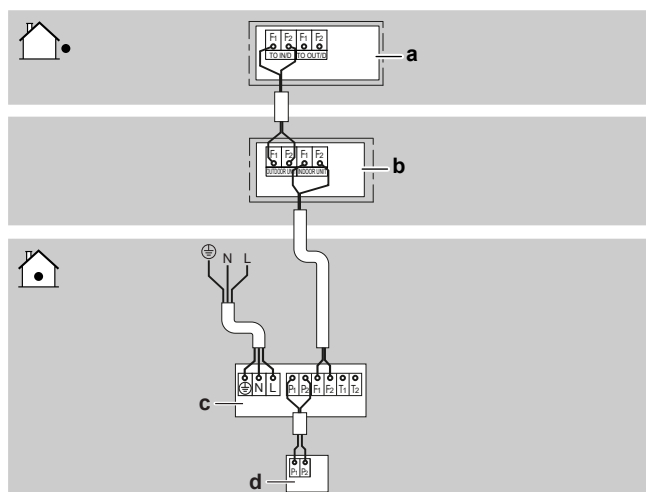
- a Outdoor unit
- b Indoor unit
- c User interface
- d Most downstream indoor unit

Group control or 2 user interfaces control 1 indoor unit



- a Outdoor unit
- b Indoor unit
- c User interface
- d Most downstream indoor unit

With BS unit



- a Outdoor unit
b BS unit
c Indoor unit
d User interface

15 Commissioning



NOTICE

General commissioning checklist. Next to the commissioning instructions in this chapter, a general commissioning checklist is also available on the Daikin Business Portal (authentication required).

The general commissioning checklist is complementary to the instructions in this chapter and can be used as a guideline and reporting template during commissioning and hand-over to the user.



NOTICE

ALWAYS operate the unit with thermistors and/or pressure sensors/switches. If NOT, burning of the compressor might be the result.

15.1 Checklist before commissioning

- 1 After the installation of the unit, check the items listed below.
- 2 Close the unit.
- 3 Power up the unit.

☐	You have read the complete installation and operation instructions described in the installer and user reference guide .
☐	Installation Check that the unit is properly installed, to avoid abnormal noises and vibrations when starting up the unit.
☐	Drainage Make sure drainage flows smoothly. Possible consequence: Condensate water might drip.
☐	Ducting Make sure the ducting is properly installed and insulated.
☐	Field wiring Be sure that the field wiring has been carried out according to the instructions described in the chapter "14 Electrical installation" [▶ 15], according to the wiring diagrams and according to the applicable legislation.



Power supply voltage

Check the power supply voltage on the local supply panel. The voltage **MUST** correspond to the voltage on the nameplate of the unit.



Earth wiring

Be sure that the earth wires have been connected properly and that the earth terminals are tightened.



Fuses, circuit breakers, or protection devices

Check that the fuses, circuit breakers, or the locally installed protection devices are of the size and type specified in the chapter ["14 Electrical installation"](#) [▶ 15]. Be sure that neither a fuse nor a protection device has been bypassed.



Internal wiring

Visually check the electrical component box and the inside of the unit for loose connections or damaged electrical components.



Pipe size and pipe insulation

Be sure that correct pipe sizes are installed and that the insulation work is properly executed.



Damaged equipment

Check the inside of the unit for damaged components or squeezed pipes.



Field settings

Make sure all field settings you want are set. See ["16.1 Field setting"](#) [▶ 17].

15.2 To perform a test run



INFORMATION

- Perform the test run according to the instructions in the outdoor unit manual.
- The test run is only completed if there is no malfunction code displayed on the user interface or the outdoor unit 7-segment display.
- See the service manual for the complete list of error codes and a detailed troubleshooting guideline for each error.



NOTICE

Do NOT interrupt the test run.

16 Configuration

16.1 Field setting

Make the following field settings so that they correspond with the actual installation setup and with the needs of the user:

- External static pressure setting using:
 - Airflow automatic adjustment setting
 - User interface
- Air volume when thermostat control is OFF
- Time to clean air filter
- Thermostat sensor selection
- Thermostat sensor in group control
- Thermostat differential changeover (if remote sensor is used)
- Differential for automatic changeover
- Auto-restart after power failure

16 Configuration

- T1/T2 input setting

Setting: External static pressure



INFORMATION

- The fan speed of the indoor unit is preset to ensure the standard external static pressure.
- To set a higher or lower external static pressure, reset the initial setting with the user interface.

Settings for external static pressure can be achieved in 2 ways:

- Using the airflow automatic adjustment function
- Using the user interface

To set external static pressure by airflow automatic adjustment function



NOTICE

- Do NOT adjust the dampers during the fan only operation for airflow automatic adjustment.
 - For the external static pressure higher than 100 Pa, do NOT use airflow automatic adjustment function.
 - If the ventilation paths have been changed, perform the airflow automatic adjustment again.
- Test run MUST be done with a dry coil, run the unit for 2 hours with fan only to dry the coil.
 - Check if the power supply wiring, duct, air filter are properly attached. If the closing damper is installed in the unit, make sure it is open.
 - If there is more than one air inlet and outlet, adjust the dampers so that the airflow rate of each air inlet and outlet is conform with the designed airflow rate.
- Operate the unit in **fan only mode** prior to using the airflow automatic adjustment function.
 - Stop** the air conditioning unit.
 - Set the value** number "—" to 03 for **M** 11(21) and **SW** 7.
 - Start** the air conditioning unit.

Result: The operation lamp lights up and the unit starts the fan operation for airflow automatic adjustment.

- After airflow automatic adjustment is finished (air conditioning unit will stop) check if the value number "—" is set to 02. If there is no change, perform the setting again.

Setting content:	Then ⁽¹⁾		
	M	SW	—
Airflow adjustment is OFF	11(21)	7	01
Completion of automatic airflow adjustment			02
Start of automatic airflow adjustment			03

To set external static pressure by the user interface

Check the indoor unit setting: the value number "—" must be set to 01 for **M** 11(21) and **SW** 7.

- Change the value number "—" according to the external static pressure of the duct to be connected as in table below.

M	SW	—	External static pressure (Pa) ⁽¹⁾
13(23)	6	01	50
		02	75
		03	100
		04	115
		05	130
		06	150
		07	160
		08	175
		09	190
		10	200
		11	210
		12	220
		13	230
		14	240
		15	250

Setting: Air volume when thermostat control is OFF

This setting must correspond with the needs of the user. It determines the fan speed of the indoor unit during thermostat OFF condition.

- If you have set the fan to operate, set the air volume speed:

If you want...		Then ⁽¹⁾		
		M	SW	—
During thermostat OFF at cooling operation	LL ⁽²⁾	12 (22)	6	01
	Setup volume ⁽²⁾			02
	OFF ^(a)			03
	Monitoring 1 ⁽²⁾			04
	Monitoring 2 ⁽²⁾			05
During thermostat OFF at heating operation	LL ⁽²⁾	12 (22)	3	01
	Setup volume ⁽²⁾			02
	OFF ^(a)			03
	Monitoring 1 ⁽²⁾			04
	Monitoring 2 ⁽²⁾			05

^(a) Only use in combination with optional remote sensor or when setting **M** 10 (20), **SW** 2, — 03 is used.

Setting: Time to clean air filter

This setting must correspond with the air contamination in the room. It determines the interval at which "Time to clean filter" notification is displayed on the user interface.

If you want an interval of... (air contamination)	Then ⁽¹⁾		
	M	SW	—
±2500 h (light)	10 (20)	0	01
±1250 h (heavy)			02
Notification ON		3	01
Notification OFF			02

⁽¹⁾ Field settings are defined as follows:

- **M:** Mode number – **First number:** for group of units – **Number between brackets:** for individual unit
- **SW:** Setting number
- **—:** Value number
- **■:** Default

⁽²⁾ Fan speed:

- **LL:** Low fan speed (set during thermostat OFF)
- **L:** Low fan speed (set by the user interface)
- **Setup volume:** The fan speed corresponds to the speed the user has set (low, medium, high) using the fan speed button on the user interface.
- **Monitoring 1, 2:** The fan is OFF, but runs for a short time every 6 minutes to detect the room temperature by **LL** (Monitoring 1) or by **L** (Monitoring 2).

Setting: Thermostat sensor selection

This setting must correspond with how/if the remote controller thermostat sensor is used.

When the remote controller thermostat sensor is...	Then ⁽¹⁾		
	M	SW	—
Used in combination with indoor unit thermistor	10 (20)	2	01
Not used (indoor unit thermistor only)			02
Used exclusively			03

Setting: Thermostat sensor in group control

This setting must correspond with how/if the remote controller thermostat sensor is used in group control.

If you want to use...	Then ⁽¹⁾		
	M	SW	—
Unit sensor only (or remote sensor (if installed)) ^(a)	10 (20)	6	01
Unit sensor (or remote sensor (if installed)) AND remote controller sensor ^(b) ^(c)			02

^(a) If setting 10(20)-6-01 + 10(20)-2-01 or 10(20)-2-02 or 10(20)-2-03 are set at the same time, then setting for group connection: 10(20)-6-01 has priority.

^(b) If setting 10(20)-6-02 + 10(20)-2-01 or 10(20)-2-02 or 10(20)-2-03 are set at the same time, then setting 10(20)-2-01 or 10(20)-2-02 or 10(20)-2-03 have priority.

^(c) When the remote controller sensor is used in group control, set 10(20)-6-02 and 10(20)-2-03.

Setting: Thermostat differential changeover (if remote sensor is used)

If the system contains a remote sensor, set the increase/decrease increments.

If you want to change increments to...	Then ⁽¹⁾		
	M	SW	—
1°C	12 (22)	2	01
0.5°C			02

Setting: Differential for automatic changeover

Set temperature difference between cooling setpoint and heating setpoint in automatic mode (availability depends on the system type). Differential is cooling setpoint minus heating setpoint.

If you want to set...	Then ⁽¹⁾			Example
	M	SW	—	
0°C	12 (22)	4	01	cooling 24°C/heating 24°C
1°C			02	cooling 24°C/heating 23°C
2°C			03	cooling 24°C/heating 22°C
3°C			04	cooling 24°C/heating 21°C
4°C			05	cooling 24°C/heating 20°C
5°C			06	cooling 24°C/heating 19°C
6°C			07	cooling 24°C/heating 18°C
7°C			08	cooling 24°C/heating 17°C

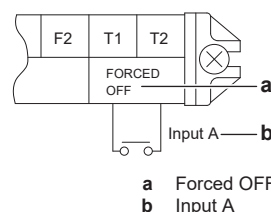
Setting: Auto-restart after power failure

Depending on the needs of the user, you may disable/enable the automatic restart after a power failure.

If you want auto-restart after power failure...	Then ⁽¹⁾		
	M	SW	—
Disabled	12 (22)	5	01
Enabled			02

Setting: T1/T2 input setting

Remote control is available by transmission the external input to the terminals T1 and T2 on the terminal block for the user interface and the transmission wiring.



Wiring requirements	
Wiring specification	Sheathed vinyl cord or 2-core cable
Wiring size	0.75~1.25 mm ²
Wiring length	Maximum 100 m
External contact specification	Contact that can make and break the min. load of DC15 V · 1 mA

This setting must correspond with the needs of the user.

If you want to set...	Then ⁽¹⁾		
	M	SW	—
Forced OFF	12 (22)	1	01
ON/OFF Operation			02
Emergency (recommended for alarm operation)			03
Forced OFF - multi tenant			04
Interlocking setting A			05
Interlocking setting B			06

⁽¹⁾ Field settings are defined as follows:

- **M**: Mode number – **First number**: for group of units – **Number between brackets**: for individual unit
- **SW**: Setting number
- **—**: Value number
- **■**: Default

17 Technical data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

17.1 Wiring diagram

17.1.1 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
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

Symbol	Meaning
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
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

Symbol	Meaning
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

