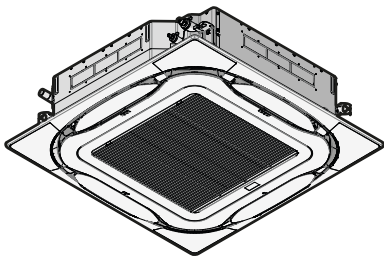




# Installation and operation manual

## VRV system air conditioner



FXFA20A2VEB  
FXFA25A2VEB  
FXFA32A2VEB  
FXFA40A2VEB  
FXFA50A2VEB  
FXFA63A2VEB  
FXFA80A2VEB  
FXFA100A2VEB  
FXFA125A2VEB

Installation and operation manual  
VRV system air conditioner

English

CE - DECLARATION-OF-COMFORMITY  
CE - KONFORMITÄTSERKLÄRUNG  
CE - DECLARATION-DE CONFORMITE  
CE - CONFORMITEITSVERKLARING

CE - DECLARACION-DE-CONFORMIDAD  
CE - DICHIARAZIONE-DI-CONFORMITA  
CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ

**Daikin Industries Czech Republic s.r.o.**

decides under its sole responsibility that the air conditioning models to which this declaration is attached are not intended for use in the Kingdom of the Netherlands. The Kingdom of the Netherlands is not liable for any damage or injury resulting from the use of the air conditioning models to which this declaration is attached.

decide sous leur seule responsabilité que les modèles de climatiseurs auxquels est attachée la présente déclaration ne sont pas destinés à être utilisés dans le Royaume des Pays-Bas. Le Royaume des Pays-Bas n'est pas responsable des dommages ou des blessures résultant de l'utilisation des modèles de climatiseurs auxquels est attachée la présente déclaration.

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CE - DECLARAÇÃO-DE-CONFORMIDADE  
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ  
CE - ÖVERENSSTÄMMELSEERKLÄRING  
CE - FÖRSÄKRAN-OM-ÖVERENSSTÄMMELSE

CE - ERKLÆRING OM-SAMSVAR  
CE - ILMOITUS-YHDENMUKAISUUDESTA  
CE - PROHLÁŠENÍ-O-SHOĐĚ

CE - IZJAVA-O-USKLAĐENOSTI  
CE - MEGFELELŐSÉGI-NYILATKOZAT  
CE - DEKLARACIJA-ZGODNOSTI  
CE - DECLARATION-DE-CONFORMITE

CE - IZJAVA O SKLADNOSTI  
CE - VASTAVUSDEKLARATSIOON  
CE - ДЕКЛАРАЦИЯ-ЗА СЪОТВЕТСТВИЕ

CE - ATITIKTIES-DEKLARĀCIJA  
CE - ATBILSTĪBAS-DEKLARĀCIJA  
CE - VYHLÁŠENIE-ZHODY  
CE - UYGUNLŪK-BEYANI

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are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:  
 worden (vogende normen) (en/of) eenen anderen Normdokument (de) documenten (en)tspreken, onder de Vooraanzetting, dat ze ge  
 unseren Anweisungen eingesetzt werden:  
 sont conformes à (aux) norme(s) ou autre(s) document(s) (normatif)s, pour autant qu'ils sont utilisés conformément à nos instructions:  
 conform de (vogende normen) (en/of) een of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze  
 instructies.

05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:

306 sono conformi all(i) seguente(i) standard(s) o all(tri) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni  
307 είναι σύμφωνα με τ(α) ακόλουθ(α) πρότυπο(α) ή άλλο(α) έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:

EN60335-2-40,

11	following the provisions of:	10	under the guidance set by	19	de uitoastigării doborât;
12	gemat den Vorschriften der:	11	entfällt	20	vesniană rușească;
13	conformément aux stipulations des:	12	gibt, hinsichtlich	21	creșterii născușii nă;
14	overeenkomstig de bepalingen van:	13	houden	22	lăcăntis născușii, păcăntis nă;
15	siguendo las disposiciones de:	14	zu	23	erkești născușii, născușii nă;
16	secondo le disposizioni per:	15	da	24	erkești născușii ușor născușii;
17	gemäß den Vorschriften per:	16	pramena	25	bușni născușii ușor născușii;
18	acordom al preskripcijam o:	17	zaprime		
19	in соответствии с положениями:	18	in the presence of		

Electromagnetic Compatibility 2014/30/EU  
Machinery 2006/42/EC

01 Nota*	as set out in <A> and judged positively by <B>	06 Nota*	delineto nel <A> e giudicato positivamente da <B>	11 Information
02 Hinweis*	according to the Certificate and as stated by us	07 Epizootium	secondo il Certificato e come dichiarato da noi	12 Merk*
03 Hinweis*	we in <A> angegeben und von <B> positiv beurteilt gemäß Zertifikat <A>	08 Nota*	omnibus <A> obznaných a potvrzených	13 Huom*
03 Remarque*	tel que défini dans <A> et évalué positivement par <B>	09 Beweismittel	mit dem feststeht, dass <A> ein gutes Produkt ist	14 Poznamka*
04 Bemerk*	conformément au Certificat <A>	10 Beweismittel	da <A> obznaných je s <B> o gorenjem pozitivu	15 Napomena*
05 Nota*	overeenkomstig het Certificat <A>		da <A> obznaných je s <B> o gorenjem pozitivu	
	as se establece en <A> y es valorado positivamente por <B>		pelusehen <A> i conotano <A> gorenjem pozitivu	
	as se establece en <A> y es valorado positivamente por <B>		seu antiteti <A> og posittiv vurderet af <B>	
			Certificat	

enligt <A> och godkänns av <B> enligt  
Certifikatet <C>  
som del i femkanten i <A> och gjennoms positiv  
bedømmelse af <B> følger **Sertifikat** <C>  
opkøbt om estlety assakrassa <A> ja jalka <B>  
on hyväksynyt **Sertifikatin** <C> mukaisesti.  
katt blev uvedeno v <A> a pozitivně zjištěno  
v <B> v souladu s osvědčením <C>  
kako je izloženo u <A> pozitivno ocijenjeno od  
<B> prema **Certificatu** <C>

16 Megjegyzés\*

17 Uwaga\*

18 Notă\*

19 Opomba\*

20 Märkus\*

a) z) alapán, a(z) <B> igazolta a megelégsé, a) <B>  
 g) tanúsítvány szentit.  
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 g) tanúsítvány szentit.  
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**abeglenika** < abegleno >  
**astabata** < astabat >  
**bezmesim** < bezmesiti >  
**ozorninika** < ozornino >  
**ot'** < ot' >

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Yasuto Hiraoka  
Managing Director  
Pilsen, 1st of July

Managing Director  
Pilsen, 1st of July 2020

**DAIKIN INDUSTRIES CZECH REPUBLIC s.r.o.**

U Nové Hospody 1/1155, 301 00 Plzeň Skvrňany,

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## 1 About the documentation

## 1.1 About this document

## 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.



## WARNING

Make sure installation, servicing, maintenance, repair and applied materials follow the instructions from Daikin and, in addition, comply with applicable legislation and are performed by qualified persons only. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard.

## 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 <http://www.daikineurope.com/support-and-manuals/product-information/>

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.

## 2 Specific installer safety instructions

### General



#### WARNING

Make sure installation, servicing, maintenance, repair and applied materials follow the instructions from Daikin and, in addition, comply with applicable legislation and are performed by qualified persons only. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard.

### Installation site (see "12.1 Preparing the installation site" ▶ 13)



#### WARNING

The appliance shall be stored in a room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).



#### 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.

### Refrigerant piping installation (see "13 Piping installation" ▶ 17)



#### CAUTION

- Do NOT use mineral oil on flared part.
- Do NOT reuse piping from previous installations.
- NEVER install a drier to this R32 unit to guarantee its lifetime. The drying material may dissolve and damage the system.



#### CAUTION

- Incomplete flaring may cause refrigerant gas leakage.
- Do NOT re-use flares. Use new flares to prevent refrigerant gas leakage.
- Use flare nuts that are included with the unit. Using different flare nuts may cause refrigerant gas leakage.



#### 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.

### Electrical installation (see "14 Electrical installation" ▶ 18)



#### 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

- 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

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 provide 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.



#### CAUTION

- Each indoor unit has to be connected to a separate user interface. Only a safety system compatible remote controller can be used as the user interface. See technical data sheet for remote controller compatibility (e.g. BRC1H52/82\*).
- The user interface has to be put in the same room as the indoor unit. For details, please refer to the installation and operation manual of the user interface.

### Commissioning (see "15 Commissioning" ▶ 19)



#### WARNING

If the panels on the indoor units are not installed yet, make sure to power OFF the system after finishing the test run. To do so, turn OFF operation via the user interface. Do NOT stop operation by turning OFF the circuit breakers.

## 2.1 Instructions for equipment using R32 refrigerant



#### WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



### WARNING

- Do NOT pierce or burn.
- Do NOT use means to accelerate the defrosting process or to clean the equipment, other than those recommended by the manufacturer.
- Be aware that R32 refrigerant does NOT contain an odour.



### WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) and have a room size as specified below.



### WARNING

Make sure installation, servicing, maintenance and repair comply with instructions from Daikin and with applicable legislation (for example national gas regulation) and are executed only by authorised persons.



### WARNING

If one or more rooms are connected to the unit using a duct system, make sure:

- there are no operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) in case the floor area is less than the minimum floor area A (m<sup>2</sup>).
- no auxiliary devices, which may be a potential ignition source, are installed in the duct work (example: hot surfaces with a temperature exceeding 700°C and electric switching device);
- only auxiliary devices approved by the manufacturer are used in the duct work;
- air inlet AND outlet are connected directly to the same room by ducting. Do NOT use spaces such as a false ceiling as a duct for the air inlet or outlet.



### NOTICE

- Precautions shall be taken to avoid excessive vibration or pulsation to refrigeration piping.
- Protection devices, piping and fittings shall be protected as far as possible against adverse environmental effects.
- Provision shall be made for expansion and contraction of long runs of piping.
- Piping in refrigerating systems shall be designed and installed such as to minimise the likelihood of hydraulic shock damaging the system.
- The indoor equipment and pipes shall be securely mounted and guarded such that accidental rupture of equipment or pipes cannot occur from events such as moving furniture or reconstruction activities.



### CAUTION

Do NOT use potential sources of ignition in searching for or detection of refrigerant leaks.



### NOTICE

- Do NOT re-use joints and copper gaskets which have been used already.
- Joints made in installation between parts of refrigerant system shall be accessible for maintenance purposes.

## 2.1.1 Installation space requirements



### CAUTION

The total refrigerant charge in the system cannot exceed the requirements for minimum floor area of the smallest room that is served. For minimum floor area requirements for indoor units, see the installation and operation manual of the outdoor unit.



### WARNING

This appliance contains R32 refrigerant. For the minimum floor area of the room in which the appliance is stored refer to installation and operation manual of the outdoor unit.



### NOTICE

- Pipework shall be protected from physical damage.
- Installation of pipework shall be kept to a minimum.

## 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

Children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge can only use this appliance if they have been



### 3 User safety instructions

given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

Children **MUST NOT** play with the appliance.

Cleaning and user maintenance **MUST NOT** be carried out 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: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation.

Units must be treated at a specialized 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 specialized 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 electric 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 mildly flammable, but it will generate toxic gas when it accidentally leaks into a room where combustible 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**

This unit is equipped with electrically powered safety measures, such as a refrigerant leak detector. In order to be effective, the unit must be electrically powered at all times after installation, except for short service periods.

#### **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 objects below the indoor and/or outdoor unit that may get wet. Otherwise condensation on the unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, and objects under the unit may get dirty or damaged.

#### **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 10])

#### **CAUTION: Pay attention to the fan!**

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

Be 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.

#### **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 electric shock and injury may result.

#### **WARNING**

Be careful with ladders when working in high places.

#### **CAUTION**

Turn off the unit before cleaning the air filter, suction grille, air outlet and outside panels.

#### **CAUTION**

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

#### **WARNING**

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

About the refrigerant (see ["7.3 About the refrigerant"](#) [p 12])

#### **WARNING: MILDLY FLAMMABLE MATERIAL**

The refrigerant inside this unit is mildly flammable.

#### **WARNING**

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.

## 4 About the system

- Be aware that the refrigerant inside the system is odourless.

### WARNING

The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of 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 unit until a service person confirms that the part from which the refrigerant leaked has been repaired.

### WARNING

It is necessary to replace the sensor after every detection or at the end of the lifetime. Authorized person only MUST replace the sensor.

### WARNING

The appliance shall be stored in a room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).

Troubleshooting (see "[8 Troubleshooting](#)" [p 12])

### 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, electric 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 electric 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 mildly flammable, but it will generate toxic gas when it accidentally leaks into a room where combustible 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.



### CAUTION

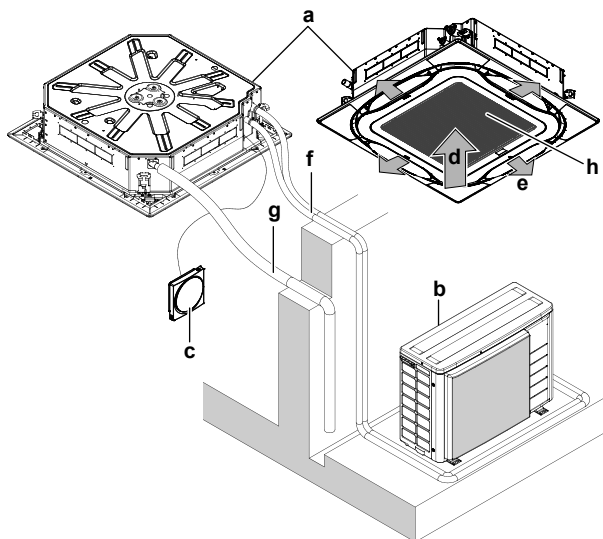
This unit is equipped with electrically powered safety measures, such as a refrigerant leak detector. In order to be effective, the unit must be electrically powered at all times after installation, except for short service periods.

## 4.1 System layout



### INFORMATION

The following illustration is an example and might NOT match your system layout.



- a Indoor unit
- b Outdoor unit
- c User interface
- d Suction air
- e Discharge air
- f Refrigerant piping + transmission cable
- g Drain pipe
- h Suction grille and air filter



## 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 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.



### 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
	<b>Cooling.</b> In this mode, cooling will be activated as required by the setpoint, or by Setback operation.
	<b>Heating.</b> In this mode, heating will be activated as required by the setpoint, or by Setback operation.

Icon	Operation mode
	<b>Fan only.</b> In this mode, air circulates without heating or cooling.
	<b>Dry.</b> In this mode, the air humidity will be lowered with a minimal temperature decrease.  The temperature and fan speed are controlled automatically and cannot be controlled by the controller.  Dry operation will not function if the room temperature is too low.
	<b>Auto.</b> 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
<b>Defrost</b>	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: 
<b>Hot start</b>	During hot start, the indoor unit fan will stop operation, and the following icon will appear on the home screen: 

#### 6.2.3 Adjusting the airflow direction

The following airflow directions can be set:

Direction	Screen
<b>Fixed position.</b> The indoor unit blows air in 1 of 5 fixed positions.	
<b>Swing.</b> The indoor unit alternates between the 5 positions.	
<b>Auto.</b> The indoor unit adjusts its airflow direction according to movement sensed by a movement sensor.	

## 7 Maintenance and service



### INFORMATION

Depending on system layout and organisation, Auto airflow direction may not be available.



### INFORMATION

For setting procedure of the airflow direction, see the reference guide or the manual of the used user interface.

#### Automatic airflow control

In the following operating conditions, the airflow direction of the indoor units is controlled automatically:

- When the room temperature is higher than the controller's setpoint for heating operation (including auto operation).
- When the indoor units run in heating operation mode, and the Defrost function is active.
- When the indoor units run in Continuous operation, and the airflow direction is Horizontal.



### WARNING

Never touch the air outlet or the horizontal blades while the swing flap is in operation. Fingers may become caught or the unit may break down.



### NOTICE

Avoid operating in the horizontal direction. It may cause dew or dust to settle on the ceiling or flap.

#### 6.2.4 Active circulation airflow

Use active circulation airflow to heat or cool the room more quickly.



### INFORMATION

For setting procedure of the active circulation airflow, see the reference guide or the manual of the used user interface.

### 6.3 To operate the system



### INFORMATION

For setting of the operation mode, airflow direction, active circulation airflow 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



### NOTICE

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

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



### 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.



### 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, suction grille, air outlet and outside panels.



### 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.



### 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.



### 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 electric shock and injury may result.



### WARNING

Be careful with ladders when working in high places.

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.

### 7.2 Cleaning the air filter, suction grille, air outlet and outside panels



### CAUTION

Turn off the unit before cleaning the air filter, suction grille, air outlet and outside panels.

#### 7.2.1 To clean the air filter

##### 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:

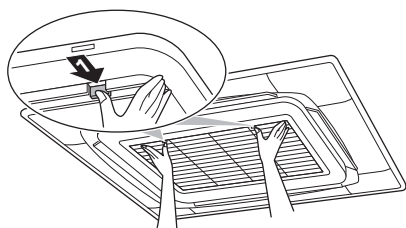


### NOTICE

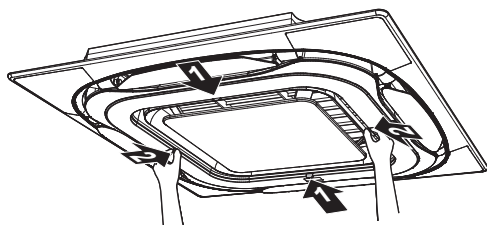
Do NOT use water of 50°C or higher. **Possible consequence:** Discoloration and deformation.

- 1 Open the suction grille.

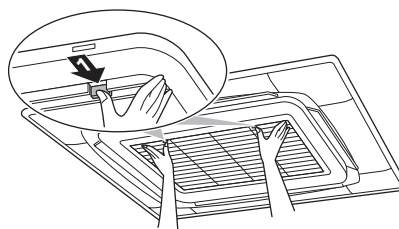
**Standard panel:**



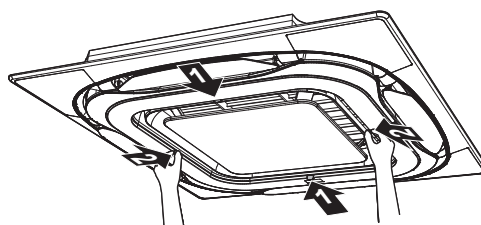
**Design panel:**



**Standard panel:**

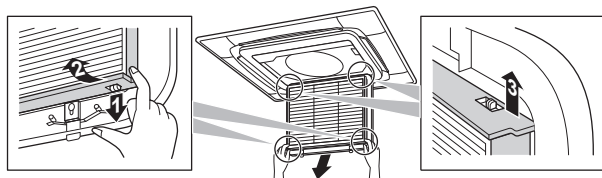


**Design panel:**

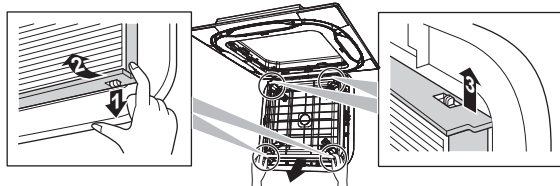


- 2 Remove the air filter.

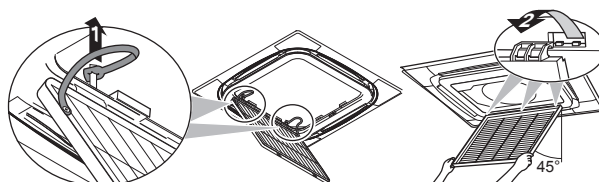
**Standard panel:**



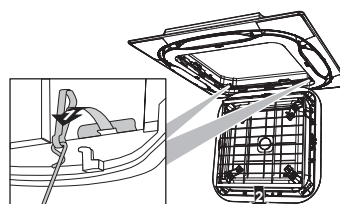
**Design panel:**



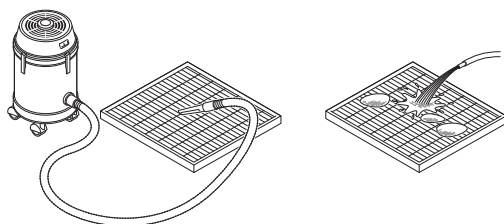
**Standard panel:**



**Design panel:**



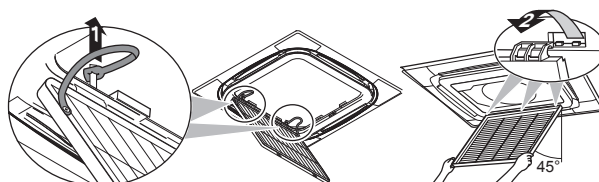
- 3 Clean the air filter. Use a vacuum cleaner or wash with water. If the air filter is very dirty, use a soft brush and neutral detergent.



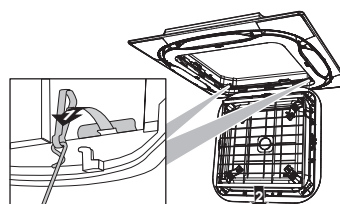
- 4 Dry the air filter in the shadow.
- 5 Reattach the air filter and close the suction grille.
- 6 Turn ON the power.
- 7 To remove warning screens, see the reference guide of the user interface.

- 2 Remove the suction grille.

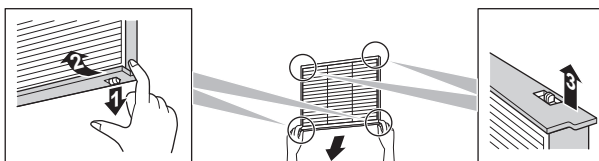
**Standard panel:**



**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).

## 7.2.3 To clean the air outlet and outside panels



### WARNING

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

## 7.2.2 To clean the suction grille



### NOTICE

Do NOT use water of 50°C or higher. **Possible consequence:** Discoloration and deformation.

- 1 Open the suction grille.

## 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.
- Do NOT scrub firmly when washing the blade with water. **Possible consequence:** The surface sealing peels off.

Clean with a soft cloth. If it is difficult to remove stains, use water or neutral detergent.

## 7.3 About the refrigerant

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

Refrigerant type: R32

Global warming potential (GWP) value: 675



### NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO<sub>2</sub> equivalent.

**Formula to calculate the quantity in CO<sub>2</sub> equivalent tonnes:** GWP value of the refrigerant × total refrigerant charge [in kg] / 1000

Please contact your installer for more information.



### WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



### WARNING

The appliance shall be stored in a room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).



### WARNING

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.



### WARNING

The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of 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 unit until a service person confirms that the part from which the refrigerant leaked has been repaired.

### 7.3.1 About the refrigerant leakage sensor



### WARNING

It is necessary to replace the sensor after every detection or at the end of the lifetime. Authorized person only MUST replace the sensor.



### NOTICE

Functionality of the safety measures are periodically automatically checked. In case of malfunction, error code will display on the user interface.



### NOTICE

The R32 refrigerant leakage sensor is a semiconductor detector which may incorrectly detect substances other than R32 refrigerant. Avoid using chemical substances (e.g. organic solvents, hair spray, paint) in high concentrations, in the close proximity of the indoor unit because this may cause misdetection of the R32 refrigerant leakage sensor.



### INFORMATION

Lifetime of the sensor is 10 years. The user interface displays error "**CH-05**" 6 months before the end of the sensor lifetime and error "**CH-02**" after the end of the sensor lifetime. For more information refer to the reference guide of the user interface and contact your dealer.

### In case of detection when the unit is standby

When the detection occurs when the unit is standby, "false detection check" will occur.

### False detection check

- Unit starts fan operation on the lowest setting.
  - User interface displays error code "**A0-13**", emits alarm sound and status indicator is blinking.
  - Sensor checks if refrigerant leakage or misdetection occurred.
- If refrigerant leakage is NOT detected, **Result:** system returns to normal operation after approximately 2 minutes.
  - If refrigerant leakage is detected, **Result:**
    - User interface displays error "**A0-11**", emits alarm sound and status indicator is blinking.
    - Contact your dealer immediately. For more information, see the installation manual of the outdoor unit.

### In case of detection when the unit is turned on

- User interface displays error "**A0-11**", emits alarm sound and status indicator is blinking.
- Contact your dealer immediately. For more information, see the installation manual of the outdoor unit.



### INFORMATION

To stop alarm of the user interface see the reference guide of the user interface.



### INFORMATION

The minimum airflow during normal operation or during the refrigerant leakage detection is always >240 m<sup>3</sup>/h.

## 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, electric 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 <http://www.daikineurope.com/support-and-manuals/product-information/> for more troubleshooting tips.

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 for removing and reinstalling the total unit. Moving units requires technical expertise.

## 10 Disposal



#### NOTICE

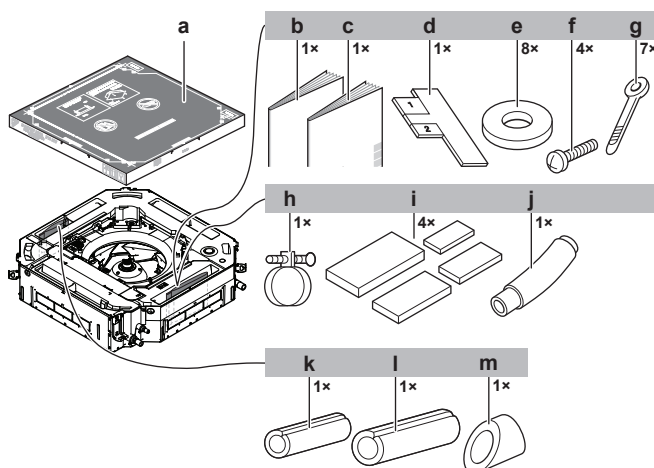
Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts MUST comply with applicable legislation. Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery.

## For the installer

## 11 About the box

### 11.1 Indoor unit

#### 11.1.1 To remove the accessories from the indoor unit



- a Paper pattern for installation (upper part of packing)
- b General safety precautions
- c Indoor unit installation and operation manual
- d Installation guide
- e Washers for hanger brackets
- f Screws (to temporarily attach the paper pattern for installation to the indoor unit)
- g Tie wraps
- h Metal clamp
- i Sealing pads: Large (drain pipe), medium 1 (gas pipe), medium 2 (liquid pipe), small (electrical wiring)
- j Drain hose
- k Insulation piece: Small (liquid pipe)
- l Insulation piece: Large (gas pipe)
- m Insulation piece (drain pipe)

## 12 Unit installation

### 12.1 Preparing the installation site

Avoid installation in an environment with a lot of organic solvents such as ink and siloxane.



#### WARNING

The appliance shall be stored in a room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).

#### 12.1.1 Installation site requirements of the indoor unit



#### INFORMATION

The sound pressure level is less than 70 dBA.

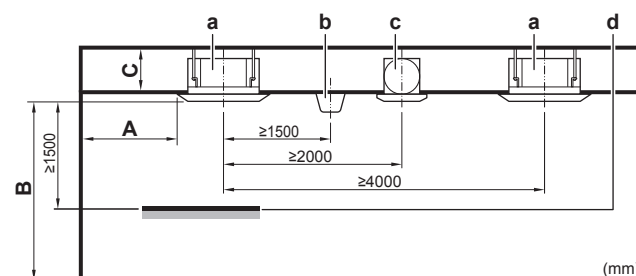


#### CAUTION

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.

- **Spacing.** Mind the following requirements:

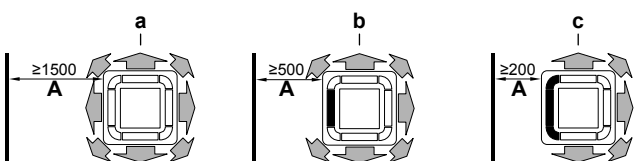




## 12 Unit installation

- A** Minimum distance to the wall (see below)  
**B** Minimum and maximum distance to the floor (see below)  
**C** 20~63 class:  
 $\geq 224$  mm: In case of installation with standard decoration panel  
 $\geq 266$  mm: In case of installation with design decoration panel  
 $\geq 304$  mm: In case of installation with self-cleaning decoration panel  
 $\geq 274$  mm: In case of installation with fresh air intake kit 80~100 class:  
 $\geq 266$  mm: In case of installation with standard decoration panel  
 $\geq 308$  mm: In case of installation with design decoration panel  
 $\geq 346$  mm: In case of installation with self-cleaning decoration panel  
 $\geq 316$  mm: In case of installation with fresh air intake kit 125 class:  
 $\geq 308$  mm: In case of installation with standard decoration panel  
 $\geq 350$  mm: In case of installation with design decoration panel  
 $\geq 388$  mm: In case of installation with self-cleaning decoration panel  
 $\geq 358$  mm: In case of installation with fresh air intake kit  
**a** Indoor unit  
**b** Lighting (the figure shows ceiling-mounted lighting, but recessed lighting is also allowed)  
**c** Air fan  
**d** Static volume (example: table)

- A: Minimum distance to the wall.** Depends on the air flow directions towards the wall.



- a** Air outlet and corners open  
**b** Air outlet closed, corners open (optional blocking pad kit required)  
**c** Air outlet and corners closed (optional blocking pad kit required)

- B: Minimum and maximum distance to the floor:**

- Minimum: 2.7 m to avoid accidental touching.
- Maximum: Depends on the air flow directions and the capacity class. Also make sure the "Ceiling height" field setting corresponds with the actual situation. See "16.1 Field setting" [p 19].

If air flow direction...	Then B	
	FXFA20~100	FXFA125
All-round	$\leq 3.5$ m	$\leq 4.2$ m
4-way <sup>(a)</sup>	$\leq 4.0$ m	$\leq 4.5$ m
3-way <sup>(a)</sup>	$\leq 3.5$ m	$\leq 4.2$ m

<sup>(a)</sup> Optional blocking kit required



### INFORMATION

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

### Minimum floor area requirements



### CAUTION

The total refrigerant charge in the system cannot exceed the requirements for minimum floor area of the smallest room that is served. For minimum floor area requirements for indoor units, see the installation and operation manual of the outdoor unit.

## 12.2 Mounting the indoor unit

### 12.2.1 Guidelines when installing the indoor unit



#### 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.

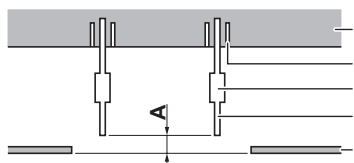
- Decoration panel.** Install the decoration panel always **after** installing the unit.



#### NOTICE

After installing the decoration panel:

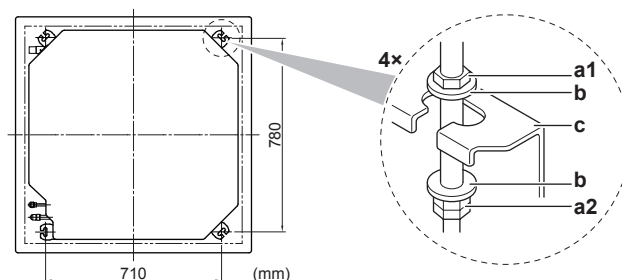
- Make sure there is no gap between the unit body and the decoration panel. **Possible consequence:** Air might leak and cause dew drop.
- Make sure no oil remains on the plastic parts of the decoration panel. **Possible consequence:** Degradation and damage of plastic parts.
- Ceiling strength.** Check 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.



- A** 50~100 mm: In case of installation with standard panel  
 100~150 mm: In case of installation with fresh air intake kit or design panel  
 130~180 mm: In case of installation with self-cleaning decoration panel

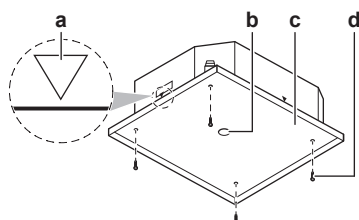
- a** Ceiling slab  
**b** Anchor  
**c** Long nut or turnbuckle  
**d** Suspension bolt  
**e** Suspended ceiling

- Suspension bolts.** Use M8~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.



- a1** Nut (field supply)  
**a2** Double nut (field supply)  
**b** Washer (accessories)  
**c** Hanger bracket (attached to the unit)

- Paper pattern for installation** (upper part of the packing). Use the paper pattern to determine the correct horizontal positioning. It contains the necessary dimensions and centers. You can attach the paper pattern to the unit.



- a Centre of the unit
- b Centre of the ceiling opening
- c Paper pattern for installation (upper part of the packing)
- d Screws (accessories)

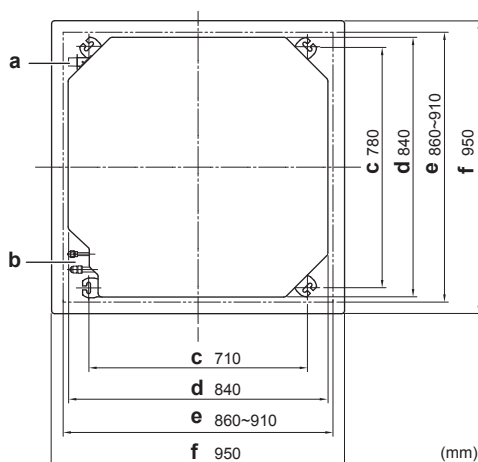
#### • Ceiling opening and unit:

- Make sure the ceiling opening is within the following limits:

**Minimum:** 860 mm to be able to fit the unit.

**Maximum:** 910 mm to ensure enough overlap between the decoration panel and the suspended ceiling. If the ceiling opening is larger, add extra ceiling material.

- Make sure the unit and its hanger brackets (suspension) are centered within the ceiling opening.

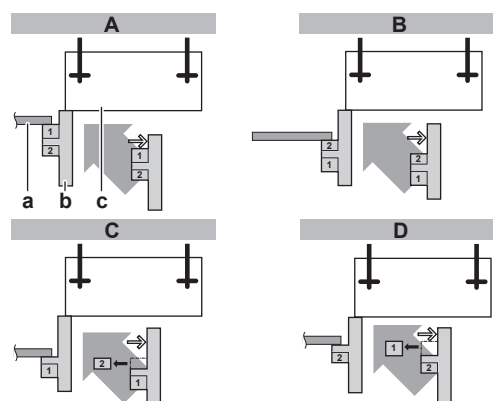


- a Drain piping
- b Refrigerant piping
- c Hanger bracket pitch (suspension)
- d Unit
- e Ceiling opening
- f Decoration panel

Example	If A <sup>(a)</sup>	Then	
		B <sup>(a)</sup>	C <sup>(a)</sup>
	860 mm	10 mm	45 mm
	910 mm	35 mm	20 mm

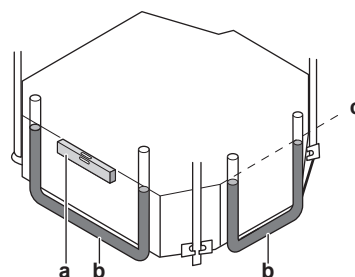
- <sup>(a)</sup> A: Ceiling opening
- B: Distance between the unit and the ceiling opening
- C: Overlap between the decoration panel and the suspended ceiling

- **Installation guide.** Use the installation guide to determine the correct vertical position.



- A In case of installation with standard decoration panel
- B In case of installation with fresh air intake kit
- C In case of installation with self-cleaning decoration panel
- D In case of installation with design decoration panel
- a Suspended ceiling
- b Installation guide (accessory)
- c Unit

- **Level.** Make sure the unit is level at all 4 corners using a level or a water-filled vinyl tube.



- a Level
- b Vinyl tube
- c Water level



#### 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.

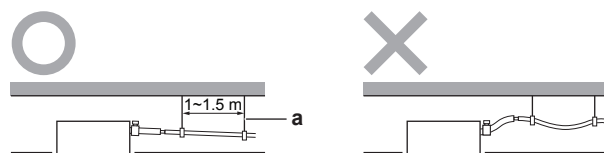
### 12.2.2 Guidelines when installing the drain piping

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

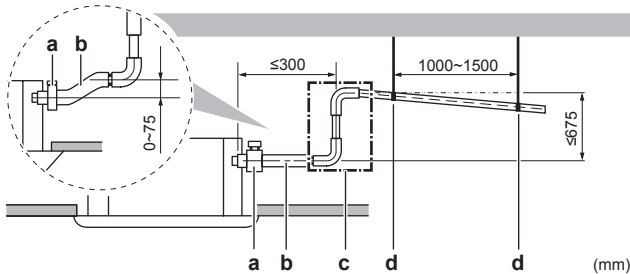
- **Pipe length.** Keep drain piping as short as possible.
- **Pipe size.** Keep the pipe size equal to or greater than that of the connecting pipe (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter).
- **Slope.** Make sure the drain piping slopes down (at least 1/100) to prevent air from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



## 12 Unit installation

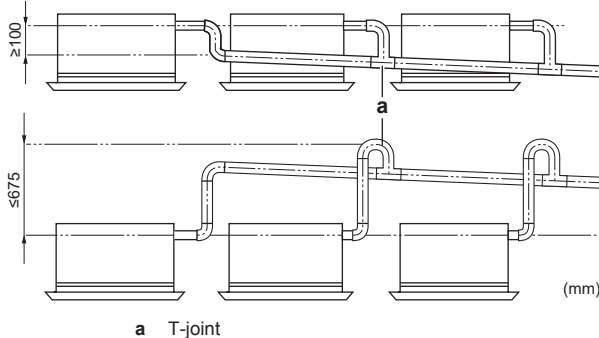
- a Hanging bar
- O Allowed
- X Not allowed

- **Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.
- **Rising piping.** If necessary to make the slope possible, you can install rising piping.
  - Drain hose inclination: 0~75 mm to avoid stress on the piping and to avoid air bubbles.



- a Metal clamp (accessory)
- b Drain hose (accessory)
- c Rising drain piping (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter) (field supply)
- d Hanging bars (field supply)

- **Combining drain pipes.** You can combine drain pipes. Make sure to use drain pipes and T-joints with a correct gauge for the operating capacity of the units.



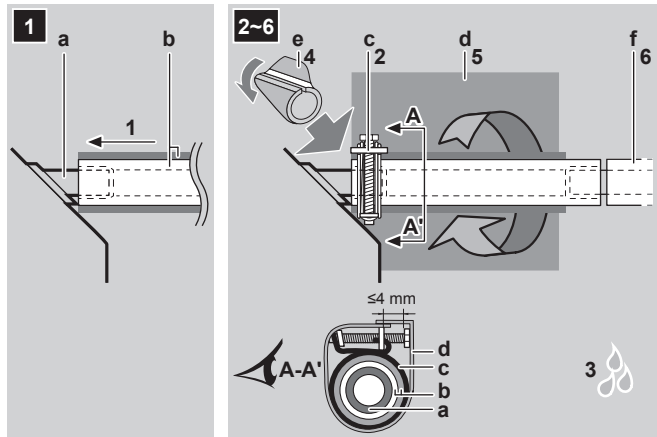
### To connect the drain piping to the indoor unit



#### NOTICE

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

- 1 Push the drain hose as far as possible over the drain pipe connection.
- 2 Tighten the metal clamp until the screw head is less than 4 mm from the metal clamp part.
- 3 Check for water leaks (see "[To check for water leaks](#)" [▶ 16]).
- 4 Install the insulation piece (drain pipe).
- 5 Wind the large sealing pad (= insulation) around the metal clamp and drain hose, and fix it with tie wraps.
- 6 Connect the drain piping to the drain hose.



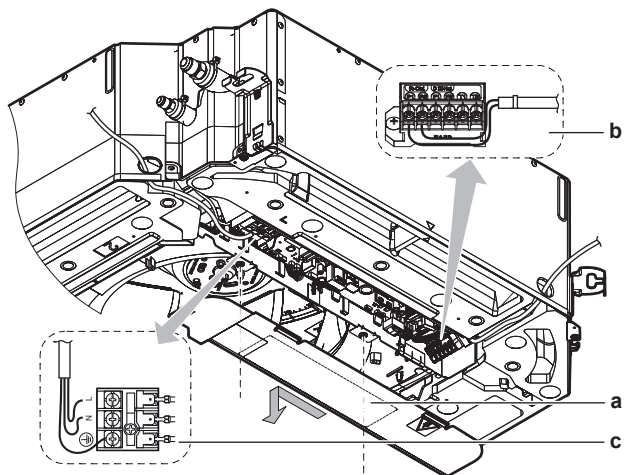
- a Drain pipe connection (attached to the unit)
- b Drain hose (accessory)
- c Metal clamp (accessory)
- d Large sealing pad (accessory)
- e Insulation piece (drain pipe) (accessory)
- f Drain piping (field supply)

### 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.

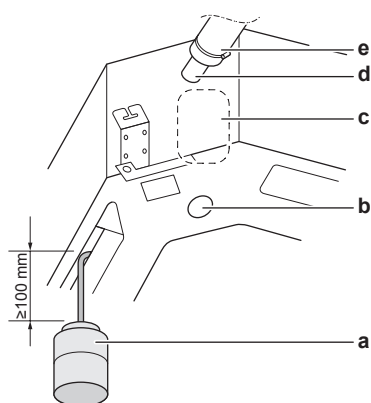
#### When installation of the system is not yet completed

- 1 Temporarily connect electrical wiring.
  - Remove the service cover (a).
  - Connect the user interface (b).
  - Connect the power supply (c).
  - Reattach the service cover (a).



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

- 2 Turn ON the power.
- 3 Start fan only operation (see the reference guide or the service manual of the user interface).
- 4 Gradually pour approximately 1 l of water through the air discharge outlet, and check for leaks.



- a Plastic watering can
- b Service drain outlet (with rubber plug). Use this outlet to drain water from the drain pan
- c Drain pump location
- d Drain pipe connection
- e Drain pipe

- 5 Turn OFF the power.
- 6 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

- 1 Start cooling operation (see the reference guide or the service manual of the user interface).
- 2 Gradually pour approximately 1 l of water through the water inlet, and check for leaks (see "When installation of the system is not yet completed" ▶ 16)).

## 13 Piping installation

### 13.1 Preparing refrigerant piping

#### 13.1.1 Refrigerant piping requirements



#### CAUTION

Piping MUST be installed according to instructions given in "13 Piping installation" ▶ 17]. Only mechanical joints (e.g. braze+flare connections) that are compliant with the latest version of ISO14903 can be used.



#### NOTICE

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

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

#### Refrigerant piping diameter

For piping connections of the indoor unit use the following piping diameters:

Class	Pipe outer diameter (mm)	
	Liquid pipe	Gas pipe
20~32	Ø6.4	Ø9.5
40~80	Ø6.4	Ø12.7
100~125	Ø9.5	Ø15.9

#### 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) <sup>(a)</sup>	
6.4 mm (1/4")	Annealed (O)	≥0.8 mm	
9.5 mm (3/8")			
12.7 mm (1/2")			
15.9 mm (5/8")			

<sup>(a)</sup> 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 (Ø <sub>p</sub> )	Insulation inner diameter (Ø <sub>i</sub> )	Insulation thickness (t)
6.4 mm (1/4")	8~10 mm	≥10 mm
9.5 mm (3/8")	12~15 mm	≥13 mm
12.7 mm (1/2")	14~16 mm	≥13 mm
15.9 mm (5/8")	17~20 mm	≥13 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

#### 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.

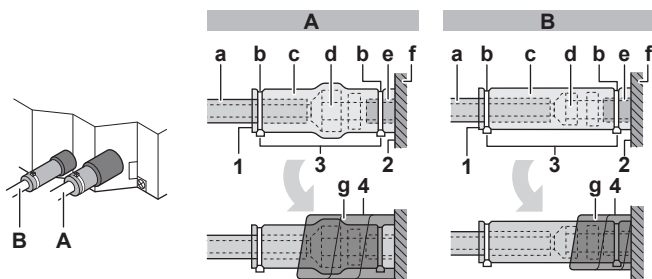


#### WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.

- **Pipe length.** Keep refrigerant piping as short as possible.
- **Flare connections.** Connect refrigerant piping to the unit using flare connections.
- **Insulation.** Insulate the refrigerant piping on the indoor unit as follows:

## 14 Electrical installation



A Gas piping  
B Liquid piping

a Insulation material (field supply)  
b Tie wrap (accessory)  
c Insulation pieces: Large (gas pipe), small (liquid pipe) (accessories)  
d Flare nut (attached to the unit)  
e Refrigerant pipe connection (attached to the unit)  
f Unit  
g Sealing pads: Medium 1 (gas pipe), medium 2 (liquid pipe) (accessories)

- 1 Turn up the seams of the insulation pieces.
- 2 Attach to the base of the unit.
- 3 Tighten the tie wraps on the insulation pieces.
- 4 Wrap the sealing pad from the base of the unit to the top of the flare nut.

### NOTICE

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

(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

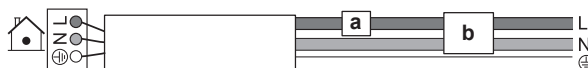
- Follow the wiring diagram (delivered with the unit, located at the inside of the service cover).
- For instructions on how to connect the optional equipment, see the installation manual delivered with the optional equipment.
- Make sure the electrical wiring does NOT obstruct proper reattachment of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

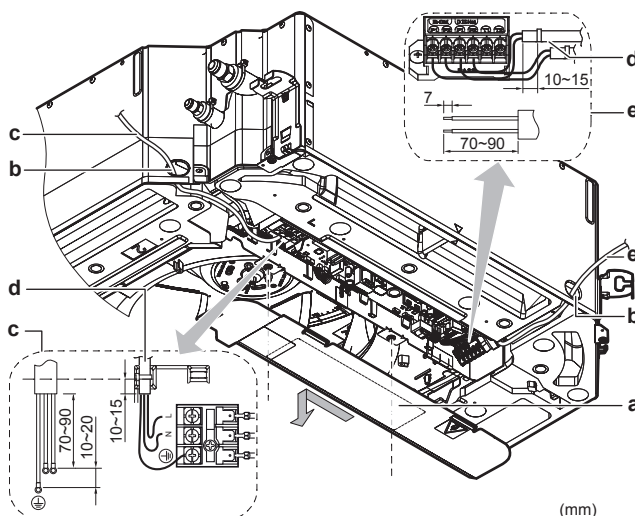
Be sure to keep the power line and transmission line apart from each other. Transmission wiring and power supply wiring may cross, but may NOT run parallel.

- 1 Remove the service cover.
- 2 **User interface cable:** Route the cable through the frame, connect the cable to the terminal block (symbols P1, P2) and fix the cable with a tie wrap.
- 3 **Transmission cable:** Route the cable through the frame, connect the cable to the terminal block (make sure the symbols F1, F2 match with the symbols on the outdoor unit), and fix the cable with a tie wrap.
- 4 **Power supply cable:** Route the cable through the frame and connect the cable to the terminal block (L, N, earth).



a Circuit breaker  
b Residual current device

- 5 Divide the small sealing (accessory) and wrap it around the cables to prevent water from entering the unit.
- 6 Seal all gaps with a sealing material (field supply) to prevent small animals from entering the system.
- 7 Reattach the service cover.



a Service cover (with wiring diagram)  
b Opening for cables  
c Connection of power supply

## 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 provide 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.

### 14.1 Specifications of standard wiring components

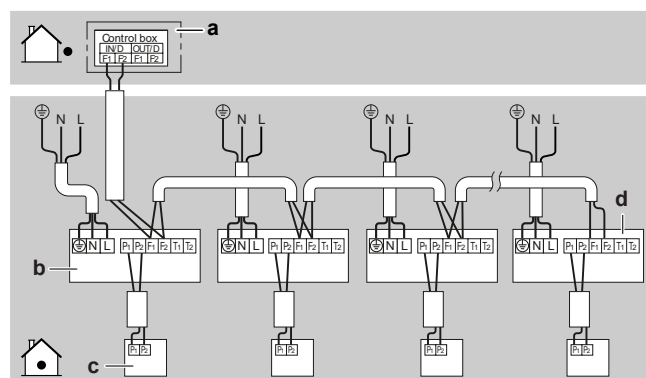
Component		Class				
		20~40	50+63	80	100	125
Power supply cable	MCA <sup>(a)</sup>	0.3 A	0.4 A	0.6 A	0.8 A	1.3 A
	Voltage	220~240 V				
	Phase	1~				
	Frequency	50/60 Hz				
	Wire sizes	1.5 mm <sup>2</sup> (3-core wire) H07RN-F (60245 IEC 66)				
Transmission wiring		0.75 to 1.25 mm <sup>2</sup> (2-core wire) H05RN-F (60245 IEC 57)				
User interface cable		User interface - maximum 500 m				
Recommended field fuse		6 A				
Residual current device		Must comply with applicable legislation				



- d Tie wrap  
e Connection of user interface and transmission cable

### Complete system example

1 user interface controls 1 indoor unit.



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



#### NOTICE

Group control connection is NOT allowed.



#### CAUTION

- Each indoor unit has to be connected to a separate user interface. Only a safety system compatible remote controller can be used as the user interface. See technical data sheet for remote controller compatibility (e.g. BRC1H52/82\*).
- The user interface has to be put in the same room as the indoor unit. For details, please refer to the installation and operation manual of the user interface.

## 15 Commissioning



#### 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

After the installation of the unit, first check the items listed below. Once all checks are fulfilled, the unit must be closed. Power-up the unit after it is closed.

<input type="checkbox"/>	You read the complete installation and operation instructions, as described in the <b>installer and user reference guide</b> .
<input type="checkbox"/>	The <b>indoor unit</b> is properly mounted.
<input type="checkbox"/>	The <b>outdoor unit</b> is properly mounted.
<input type="checkbox"/>	Make sure <b>drain piping</b> is properly installed, insulated and drainage flows smoothly. Check for water leaks. <b>Possible consequence:</b> Condensate water might drip.
<input type="checkbox"/>	The <b>refrigerant pipes</b> (gas and liquid) are installed correctly and thermally insulated.
<input type="checkbox"/>	There are NO <b>refrigerant leaks</b> .
<input type="checkbox"/>	There are NO <b>missing phases</b> or <b>reversed phases</b> .

<input type="checkbox"/>	The system is properly <b>earthed</b> and the earth terminals are tightened.
<input type="checkbox"/>	The <b>fuses</b> or locally installed protection devices are installed according to this document, and have NOT been bypassed.
<input type="checkbox"/>	The <b>power supply voltage</b> matches the voltage on the identification label of the unit.
<input type="checkbox"/>	There are NO <b>loose connections</b> or damaged electrical components in the switch box.
<input type="checkbox"/>	There are NO <b>damaged components</b> or <b>squeezed pipes</b> on the inside of the indoor and outdoor units.
<input type="checkbox"/>	The <b>stop valves</b> (gas and liquid) on the outdoor unit are fully open.

### 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:

- Ceiling height
- Decoration panel type
- Air flow direction range
- Air volume when thermostat control is OFF
- Time to clean air filter
- Thermostat sensor selection
- Thermostat differential changeover (if remote sensor is used)
- Differential automatic changeover
- Auto-restart after power failure



#### INFORMATION

- The connection of optional accessories to the indoor unit might cause changes to some field settings. For more information, see the installation manual of the optional accessory.
- Following setting are only applicable when using the BRC1H52\* user interface. When using any other user interface, see the installation manual or service manual of the user interface.

#### Setting: Ceiling height

This setting must correspond with the actual distance to the floor, capacity class and air flow directions.

- For 3-way and 4-way airflows (which require an optional blocking pad kit), see the installation manual of the optional blocking pad kit.

## 16 Configuration

- For all-round airflow, use the table below.

If the distance to the floor is (m)	Then <sup>(1)</sup>		
	M	SW	—
≤2.7	13 (23)	0	01
2.7<x≤3.0			02
3.0<x≤3.5			03

### Setting: Decoration panel type

When installing or changing the decoration panel type, ALWAYS check if the correct values are set.

If the ... decoration panel is used	Then <sup>(1)</sup>		
	M	SW	—
Standard or self-cleaning	13 (23)	15	01
Design			02

### Setting: Airflow direction range

This setting must correspond with the needs of the user.

If you want set the airflow direction range to...	Then <sup>(1)</sup>		
	M	SW	—
Upper	13 (23)	4	01
Medium			02
Lower			03

### 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 <sup>(1)</sup>		
		M	SW	—
During thermostat OFF at cooling operation	LL <sup>(2)</sup>	12 (22)	6	01
	Setup volume <sup>(2)</sup>			02
	OFF <sup>(a)</sup>			03
	Monitoring 1 <sup>(2)</sup>			04
	Monitoring 2 <sup>(2)</sup>			05
	Monitoring 3 <sup>(2)</sup>			06
	H <sup>(2)</sup>			07
During thermostat OFF at heating operation	LL <sup>(2)</sup>	12 (22)	3	01
	Setup volume <sup>(2)</sup>			02
	OFF <sup>(a)</sup>			03
	Monitoring 1 <sup>(2)</sup>			04
	Monitoring 2 <sup>(2)</sup>			05
	Monitoring 3 <sup>(2)</sup>			06
	H <sup>(2)</sup>			07

<sup>(a)</sup> Only use in combination with optional remote sensor or when setting **M** 10 (20), **SW** 2, **—** 3 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 <sup>(1)</sup>		
	M	SW	—
±2500 h (light)	10 (20)	0	01
±1250 h (heavy)			02
Notification ON		3	01
Notification OFF			02

### 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 <sup>(1)</sup>		
	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 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 <sup>(1)</sup>		
	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.

<sup>(1)</sup> 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

<sup>(2)</sup> Fan speed:

- LL**: Low fan speed (set during thermostat OFF)
- L**: Low fan speed (set by the user interface)
- H**: High fan speed
- 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, 3**: The fan is OFF, but runs for a short time every 6 minutes to detect the room temperature by **LL** (Monitoring 1), by **L** (Monitoring 2) or by **H** (Monitoring 3).

If you want to set...	Then <sup>(1)</sup>			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 <sup>(1)</sup>		
	M	SW	—
Disabled	12 (22)	5	01
Enabled			02

## 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

Symbol	Meaning	Symbol	Meaning
	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
		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
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

<sup>(1)</sup> 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

Symbol	Meaning
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
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







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