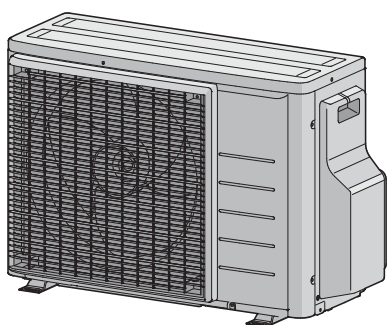




# Installation manual

## R32 Split series



2MXM40M4V1B  
2MXM50M3V1B9  
2AMXM40M4V1B  
2AMXM50M4V1B  
2AMXF40A2V1B  
2AMXF50A2V1B  
2MXF40A2V1B  
2MXF50A2V1B  
2MXM40N2V1B  
2MXM50N2V1B

Installation manual  
R32 Split series

English









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

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**2AMXF50A2V1B,**

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EN60335-2-40,

- [illegible]

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<sup>#</sup>DICZ = Daikin Industries Czech Republic s.r.o.











|                                |                                     |                                   |                                 |                              |
|--------------------------------|-------------------------------------|-----------------------------------|---------------------------------|------------------------------|
| CE - DECLARATION OF CONFORMITY | CE - ERKLÄRUNG ÜBER ÜBEREINSTIMMUNG | CE - ERKLÄRUNG OM SAMSVAR         | CE - IZJAVA O USKLADNOSTI       | CE - ATTIKTES DEKLARACJA     |
| CE - KONFORMITÄTSEKLERUNG      | CE - DICHYAZHENIE O OTOBETCTBIH     | CE - ILMOITUS YHTEENIKÄÄSUOSTESTA | CE - MEGFELELOSEG-NILATKOZAT    | CE - VYSTAVISHTS DEKLARACIJA |
| CE - DECLARATION OF CONFORMITE | CE - ДИХОДЖИТЪ ИМПОНОВАНИЕ          | CE - OVERENSTEMMINGSEKLERUNG      | CE - DEKLARACIJA ZGODNOSTI      | CE - VYHLÁSENÍ ZODY          |
| CE - CONFORMITÄTSEKLERUNG      | CE - ПОСЛАЖАВАНЕ ОЪВЕРЕНСТАНМЕЛСЕ   | CE - FORSKRÄN OM ÖVERENSTÄMMELSE  | CE - DECLARATIE DE CONFORMITATE | CE - ÜGYVÉNLÉK BEJÁNY        |

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

- [illegible]

## 2MXM50N2V1B,

- |    |                                                                                                                                                                           |    |                                                                                                                                                                           |    |                                                                                                                                                                                         |    |                                                                                                                                                                                  |    |                                                                                                                                                                                     |    |                                       |    |                                         |    |                                                                                                                                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------|----|-----------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01 | in conformity with the following standards (or other normative documents) provided that these are used in accordance with instructions.                                   | 01 | соответствует следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям.                                            | 12 | respektive uislyr er i översensstämme med följande standard(er) eller andra norm(er) (i normalis) (normalis), siempre que sean utilizados de acuerdo con nuestras instrucciones.        | 12 | respektive uislyr er i översensstämme med följande standard(er) eller andra norm(er) (i normalis) (normalis), siempre que sean utilizados de acuerdo con nuestras instrucciones. | 17 | speglaga vinnogröf ræstæpplæyðr normi linných dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami.                                              | 19 | Директив, med senere ændringer.       | 19 | Директив, с более поздними изменениями. | 21 | соответствует стандартам или другим нормативным документам, при условии, что используются согласно нашим инструкциям.                                                                                                   |
| 02 | der den følgende Norm(en) eller en anden Normdokument eller dokumentation er foreskrevet, under de Voraussetzungen, dass sie gemäß unserer Anweisungen eingesetzt werden: | 02 | der den følgende Norm(en) eller en anden Normdokument eller dokumentation er foreskrevet, under de Voraussetzungen, dass sie gemäß unserer Anweisungen eingesetzt werden: | 13 | sono conformi ai (seguenti) standardi (o altri) documenti (o a caratteri normativi), a patto che vengano usati in conformità alle nostre istruzioni.                                    | 13 | basatara saraarann standardar (a málum) öfþættar normadokumentum (öfþættar normadokumentum), ef notað er að nota þau samkvæmt okkar fyrirséðum notaðingum.                       | 18 | sunt in conformitate cu următoarele (următoarele) standarde (sau altele) documentare (normative), cu condiția ca acestea să se utilizeze în conformitate cu instrucțiunile noastre. | 10 | Direktive, med foretagne ændringer.   | 10 | Direktive, с внесенными изменениями.    | 22 | attitaka kemaia nundulys standardur (i alata) klús norminus dokumenta sem sálga, það er nauðgætt þaga nundulys norminus; það er ekki aðbúnaðs ræðsla norðugum, áðætt sörðugum standardum en öðrum normatíum dokumentum. |
| 03 | seu conformes à une des Normes prescrites:                                                                                                                                | 03 | seu conformes à une des Normes prescrites:                                                                                                                                | 14 | respektive unistyrngir af töldu översensstämme med öðrum normatíum (öðrum normatíum) (öðrum normatíum) (öðrum normatíum), ef notað er að nota þau samkvæmt okkar fyrirséðum notaðingum. | 14 | za predložení normy nebo normativní dokumentu.                                                                                                                                   | 19 | conformate cu următoarele standarde.                                                                                                                                                | 11 | Direktiven, die folgenden Änderungen: | 11 | Директивы, с следующими изменениями.    | 23 | það er ekki aðbúnaðs ræðsla norðugum, áðætt sörðugum standardum en öðrum normatíum dokumentum.                                                                                                                          |
| 04 | pour autant qu'ils soient utilisés conformément à nos instructions:                                                                                                       | 04 | pour autant qu'ils soient utilisés conformément à nos instructions:                                                                                                       | 15 | respektive unistyrngir af töldu översensstämme med öðrum normatíum (öðrum normatíum) (öðrum normatíum) (öðrum normatíum), ef notað er að nota þau samkvæmt okkar fyrirséðum notaðingum. | 15 | u skladu sa sledstæm standardum (ima) (li) drugim normativnim dokumentum (ima), uz uvjet da se oni koriste u skladu s našim uputama.                                             | 20 | conform cu următoarele standarde.                                                                                                                                                   | 20 | Direktiven, die folgenden Änderungen: | 20 | Директивы, с следующими изменениями.    | 24 | súv zróðre s ræðsluþóttum (normatíum) (altri normatíum) (normatíum) (normatíum), za predložení, že se používají v souladu s našimi pokyny.                                                                              |
| 05 | están en conformidad con la(s) siguiente(s) norma(s) (u otra(s) documental(es) normalizativa(s)), siempre que sean utilizados de acuerdo con nuestras instrucciones.      | 05 | están en conformidad con la(s) siguiente(s) norma(s) (u otra(s) documental(es) normalizativa(s)), siempre que sean utilizados de acuerdo con nuestras instrucciones.      | 16 | respektive unistyrngir af töldu översensstämme med öðrum normatíum (öðrum normatíum) (öðrum normatíum) (öðrum normatíum), ef notað er að nota þau samkvæmt okkar fyrirséðum notaðingum. | 16 | meslelekek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják.                                                                | 20 | conform cu următoarele standarde.                                                                                                                                                   | 25 | Direktive, mit Änderungen.            | 25 | Директив, с изменениями.                | 25 | urðunin, tilmiðlar mæta þögn kulaninnasi kosgylja áspáðirki standardar veir normi þættinn bættarar úppmálur.                                                                                                            |
| 06 | sono conformi ai (seguenti) standardi (o altri) documenti (o a caratteri normativi), a patto che vengano usati in conformità alle nostre istruzioni.                      | 06 | sono conformi ai (seguenti) standardi (o altri) documenti (o a caratteri normativi), a patto che vengano usati in conformità alle nostre istruzioni.                      | 19 | ob uplatenju dobno:                                                                                                                                                                     | 19 | ob uplatenju dobno:                                                                                                                                                              | 01 | Directies, als aangepast.                                                                                                                                                           | 11 | Direktive, mit Änderungen.            | 11 | Директив, с изменениями.                | 22 | attitaka kemaia nundulys standardur (i alata) klús norminus dokumenta sem sálga, það er nauðgætt þaga nundulys norminus; það er ekki aðbúnaðs ræðsla norðugum, áðætt sörðugum standardum en öðrum normatíum dokumentum. |
| 07 | conform con le norme (o altri) documenti (o a caratteri normativi), a patto che vengano usati in conformità alle nostre istruzioni.                                       | 07 | conform con le norme (o altri) documenti (o a caratteri normativi), a patto che vengano usati in conformità alle nostre istruzioni.                                       | 20 | crezându-se corectare la:                                                                                                                                                               | 20 | crezându-se corectare la:                                                                                                                                                        | 02 | Direktiven, die folgenden Änderungen:                                                                                                                                               | 12 | Direktive, mit foretagne ændringer.   | 12 | Директив, с внесенными изменениями.     | 23 | það er ekki aðbúnaðs ræðsla norðugum, áðætt sörðugum standardum en öðrum normatíum dokumentum.                                                                                                                          |
| 08 | unter jagtgehoose af bestemmelse i:                                                                                                                                       | 08 | unter jagtgehoose af bestemmelse i:                                                                                                                                       | 21 | ikazantim malarýsa:                                                                                                                                                                     | 21 | ikazantim malarýsa:                                                                                                                                                              | 03 | Direktiven, die folgenden Änderungen:                                                                                                                                               | 13 | Direktive, mit foretagne ændringer.   | 13 | Директив, с внесенными изменениями.     | 24 | súv zróðre s ræðsluþóttum (normatíum) (altri normatíum) (normatíum) (normatíum), za predložení, že se používají v souladu s našimi pokyny.                                                                              |
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| 10 | under jagtgehoose af bestemmelse i:                                                                                                                                       | 10 | under jagtgehoose af bestemmelse i:                                                                                                                                       | 23 | ikazantim malarýsa:                                                                                                                                                                     | 23 | ikazantim malarýsa:                                                                                                                                                              | 05 | Direktiven, die folgenden Änderungen:                                                                                                                                               | 15 | Direktive, mit foretagne ændringer.   | 15 | Директив, с внесенными изменениями.     | 26 | urðunin, tilmiðlar mæta þögn kulaninnasi kosgylja áspáðirki standardar veir normi þættinn bættarar úppmálur.                                                                                                            |
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01\* as set out in &lt;A&gt; and judge

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01\*\*\*\* DICz# is authorised to compile the Techni

- [illegible]

<sup>#</sup>DICz = Daikin Industries Czech Republic s.r.o.



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## 1 About the documentation

## 1.1 About this document

## Target audience

Authorised installers



## INFORMATION

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



## INFORMATION

This document only describes installation instructions specific to the outdoor unit. For installation of the indoor unit (mounting the indoor unit, connecting the refrigerant piping to the indoor unit, connecting the electrical wiring to the indoor unit ...), see the installation manual of the indoor unit.

## 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 outdoor unit)
- **Outdoor unit installation manual:**
  - Installation instructions
  - Format: Paper (in the box of the outdoor unit)
- **Installer reference guide:**
  - Preparation of the installation, reference data,...
  - 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.

Unit installation (see "**4 Unit installation**" ▶ 16)



## WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

Installation site (see **"4.1 Preparing the installation site"** [p 16])



### CAUTION

- Check if the installation location can support the unit's weight. Poor installation is hazardous. It can also cause vibrations or unusual operating noise.
- Provide sufficient service space.
- Do NOT install the unit so that it is in contact with a ceiling or a wall, as this may cause vibrations.



### 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).

Connecting the refrigerant piping (see **"5.2 Connecting the refrigerant piping"** [p 18])



### CAUTION

- No brazing or welding on site for units with R32 refrigerant charge during shipment.
- During installation of the refrigeration system, joining of parts with at least one part charged shall be performed taking into account the following requirements:
  - ⇒ inside occupied spaces non permanent joints are not allowed for R32 refrigerant except for site made joints directly connecting the indoor unit to piping. Site made joints directly connecting piping to indoor units shall be of non permanent type.



### CAUTION

Do NOT connect the embedded branch piping and the outdoor unit when only carrying out piping work without connecting the indoor unit in order to add another indoor unit later.



### WARNING

- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.



### 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

- Use the flare nut fixed to the unit.
- To prevent gas leakage, apply refrigeration oil only to the inside of the flare. Use refrigeration oil for R32.
- Do NOT reuse joints.



### WARNING

Connect the refrigerant piping securely before running the compressor. If the refrigerant piping is NOT connected and the stop valve is open when the compressor is run, air will be sucked in. This will cause abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.



### 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.

Charging refrigerant (see **"6 Charging refrigerant"** [p 20])



### WARNING: FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



### 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

NEVER directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.



### WARNING

- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.



### CAUTION

To avoid compressor breakdown, do NOT charge more than the specified amount of refrigerant.

Electrical installation (see **"7 Electrical installation"** [p 21])



### 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.

## 3 About the box



### WARNING

Do NOT connect the power supply to the indoor unit. This could result in electrical shock or fire.



### WARNING

- Do NOT use locally purchased electrical parts inside the product.
- Do NOT branch the power supply for the drain pump, etc. from the terminal block. This could result in electrical shock or fire.



### WARNING

Keep the interconnection wiring away from copper pipes without thermal insulation as such pipes will be very hot.



### DANGER: RISK OF ELECTROCUTION

All electrical parts (including thermistors) are powered by the power supply. Do not touch them with bare hands.



### 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 wiring diagram.

Finishing the outdoor unit installation (see "8 Finishing the outdoor unit installation" [p. 22])



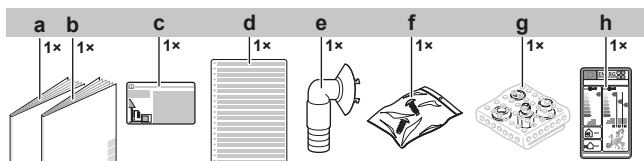
### DANGER: RISK OF ELECTROCUTION

- Make sure that the system is earthed properly.
- Turn off the power supply before servicing.
- Install the switch box cover before turning on the power supply.

## 3 About the box

### 3.1 Outdoor unit

#### 3.1.1 To remove the accessories from the outdoor unit



- a Outdoor unit installation manual
- b General safety precautions
- c Fluorinated greenhouse gases label
- d Multilingual fluorinated greenhouse gases label
- e Drain socket
- f Screw bag (for fixing wire retainer)
- g Reducer assembly
- h Energy label

## 4 Unit installation



### WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

### 4.1 Preparing the installation site



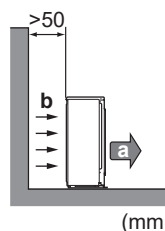
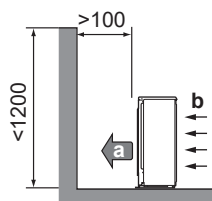
### WARNING

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).

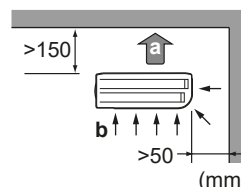
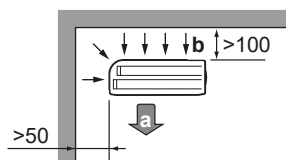
#### 4.1.1 Installation site requirements of the outdoor unit

Mind the following spacing guidelines:

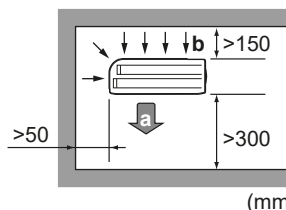
- Wall facing 1 side:



- Wall facing 2 sides:

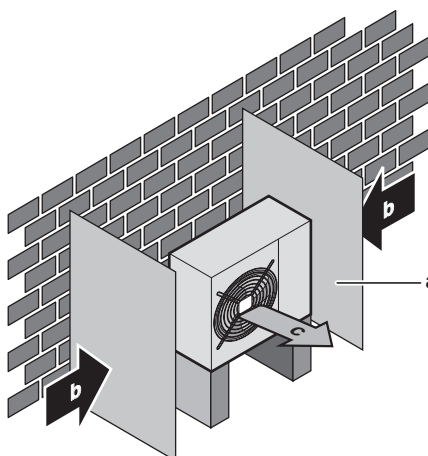


- Wall facing 3 sides:



- a Air outlet
- b Air inlet

Allow 300 mm of work space below the ceiling surface and 250 mm for piping and electrical servicing.



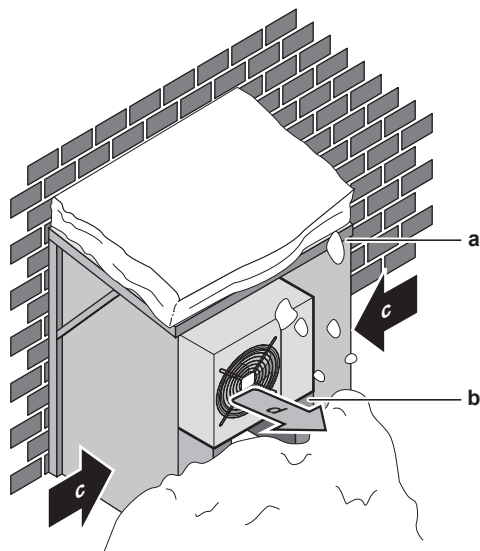
- a Baffle plate
- b Prevailing wind direction
- c Air outlet

The outdoor unit is designed for outdoor installation only, and for ambient temperatures within the following ranges:

| Cooling mode | Heating mode |
|--------------|--------------|
| -10~46°C DB  | -15~24°C DB  |

## 4.1.2 Additional installation site requirements of the outdoor unit in cold climates

Protect the outdoor unit against direct snowfall and take care that the outdoor unit is NEVER snowed up.



- a Snow cover or shed
- b Pedestal
- c Prevailing wind direction
- d Air outlet

It is recommended to provide at least 150 mm of free space below the unit (300 mm for heavy snowfall areas). Additionally, make sure the unit is positioned at least 100 mm above the maximum expected level of snow. If necessary, construct a pedestal. See "4.2 Mounting the outdoor unit" [p. 17] for more details.

In heavy snowfall areas it is very important to select an installation site where the snow will NOT affect the unit. If lateral snowfall is possible, make sure that the heat exchanger coil is NOT affected by the snow. If necessary, install a snow cover or shed and a pedestal.

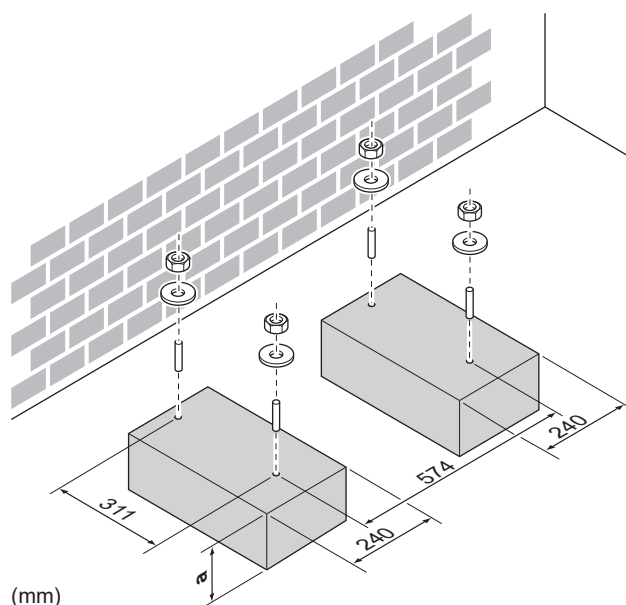
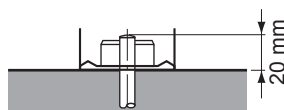
## 4.2 Mounting the outdoor unit

### 4.2.1 To provide the installation structure

Use a vibration-proof rubber (field supply) in cases where vibrations may be transmitted to the building.

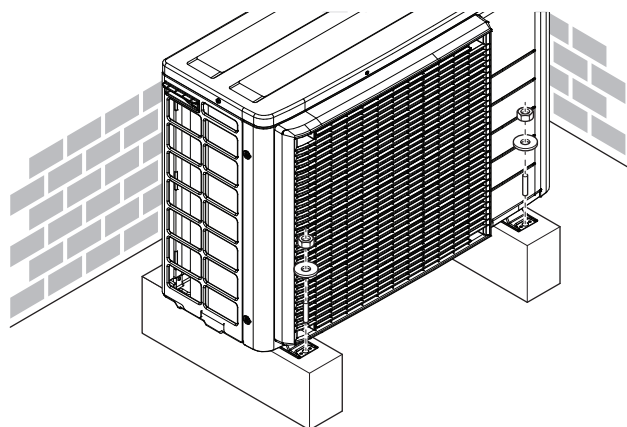
The unit may be installed directly on a concrete veranda or another solid surface as long as it provides proper drainage.

Prepare 4 sets of M8 or M10 anchor bolts, nuts and washers (field supply).



- a 100 mm above expected level of snow

### 4.2.2 To install the outdoor unit



### 4.2.3 To provide drainage



#### NOTICE

If the unit is installed in a cold climate, take adequate measures so that the evacuated condensate CANNOT freeze.



#### NOTICE

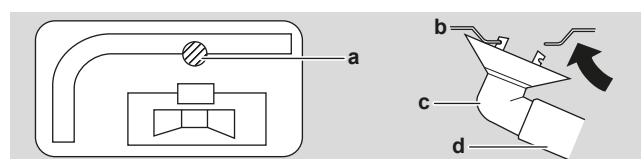
If the drain holes of the outdoor unit are blocked up by a mounting base or floor surface, place additional foot bases ≤30 mm under the outdoor unit's feet.



#### INFORMATION

For information on the available options, contact your dealer.

- 1 Use a drain plug for drainage.
- 2 Use a Ø16 mm hose (field supply).



- a Drain port
- b Bottom frame
- c Drain plug

## 5 Piping installation

d Hose (field supply)

## 5 Piping installation

### 5.1 Preparing refrigerant piping

#### 5.1.1 Refrigerant piping requirements

- **Piping material:** Phosphoric acid deoxidised seamless copper.
- **Piping diameter:**

| Class 40      |                   |
|---------------|-------------------|
| Liquid piping | 2× Ø6.4 mm (1/4") |
| Gas piping    | 2× Ø9.5 mm (3/8") |

| Class 50      |                                         |
|---------------|-----------------------------------------|
| Liquid piping | 2× Ø6.4 mm (1/4")                       |
| Gas piping    | 1× Ø9.5 mm (3/8")<br>1× Ø12.7 mm (1/2") |

- **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")     |              |                              |                                                                                   |

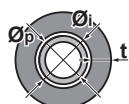
<sup>(a)</sup> Depending on the applicable legislation and the maximum working pressure of the unit (see "PS High" on the unit name plate), larger piping thickness might be required.

Usage of reducers might be required based on the indoor unit. See "5.2.1 Connections between outdoor and indoor unit using reducers" [p. 18] for more information.

#### 5.1.2 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                   |



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.

#### 5.1.3 Refrigerant piping length and height difference

The shorter the refrigerant piping, the better the performance of the system.

The piping length and height differences must comply with the following requirements.

| Model    | Minimum required space |
|----------|------------------------|
| Class 40 | 1.2 m <sup>2</sup>     |
| Class 50 | 1.8 m <sup>2</sup>     |

Shortest allowable length per room is 3 m.

|                                               |       |
|-----------------------------------------------|-------|
| Refrigerant piping length to each indoor unit | ≤20 m |
| Refrigerant piping total length               | ≤30 m |

|                                                          | Height difference outdoor-indoor | Height difference indoor-indoor |
|----------------------------------------------------------|----------------------------------|---------------------------------|
| Outdoor unit installed higher than indoor unit           | ≤15 m                            | ≤7.5 m                          |
| Outdoor unit installed lower than at least 1 indoor unit | ≤7.5 m                           | ≤15 m                           |

### 5.2 Connecting the refrigerant piping

 **DANGER: RISK OF BURNING/SCALDING**

 **CAUTION**

- No brazing or welding on site for units with R32 refrigerant charge during shipment.
- During installation of the refrigeration system, joining of parts with at least one part charged shall be performed taking into account the following requirements:
  - ⇒ inside occupied spaces non permanent joints are not allowed for R32 refrigerant except for site made joints directly connecting the indoor unit to piping. Site made joints directly connecting piping to indoor units shall be of non permanent type.

 **CAUTION**

Do NOT connect the embedded branch piping and the outdoor unit when only carrying out piping work without connecting the indoor unit in order to add another indoor unit later.

 **WARNING**

- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.

#### 5.2.1 Connections between outdoor and indoor unit using reducers

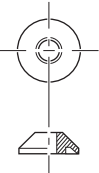
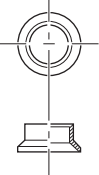
Total indoor unit capacity class that can be connected to this outdoor unit:

| Outdoor unit                     | Total indoor unit capacity class |
|----------------------------------|----------------------------------|
| 2MXM40, 2AMXM40, 2AMXF40, 2MXF40 | ≤6.0 kW                          |
| 2MXM50, 2AMXM50, 2AMXF50, 2MXF50 | ≤8.5 kW                          |

| Port            | Class          | Reducer |
|-----------------|----------------|---------|
| 2MXM40, 2AMXM40 |                |         |
| A               | 15, 20, 25, 35 | —       |
| B               | 15, 20, 25, 35 | —       |

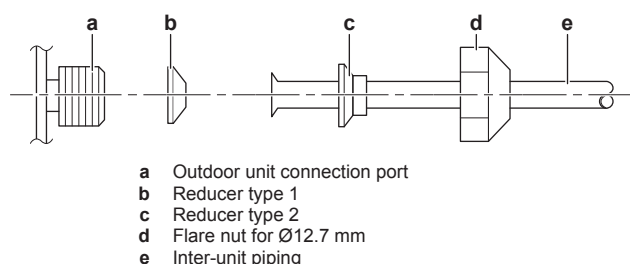
| Port                   | Class                             | Reducer |
|------------------------|-----------------------------------|---------|
| <b>2AMXF40</b>         |                                   |         |
| A                      | 25, 35                            | —       |
| B                      | 25, 35                            | —       |
| <b>2MXF40</b>          |                                   |         |
| A                      | 20, 25, 35                        | —       |
| B                      | 20, 25, 35                        | —       |
| <b>2MXM50, 2AMXM50</b> |                                   |         |
| A                      | 15, 20, 25, 35, 42 <sup>(a)</sup> | —       |
| B                      | 15, 20, 25, 35                    | 1+2     |
|                        | 42, 50                            | —       |
| <b>2AMXF50</b>         |                                   |         |
| A                      | 25, 35                            | —       |
| B                      | 25, 35                            | 1+2     |
| <b>2MXF50</b>          |                                   |         |
| A                      | 20, 25, 35                        | —       |
| B                      | 20, 25, 35                        | 1+2     |

<sup>(a)</sup> Use optional accessory.

| Reducer type | Connection                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1            | <br>$\text{Ø}12.7 \text{ mm} \rightarrow \text{Ø}9.5 \text{ mm}$   |
| 2            | <br>$\text{Ø}12.7 \text{ mm} \rightarrow \text{Ø}9.5 \text{ mm}$ |

## Connection example:

- Connecting a Ø9.5 mm pipe to a Ø12.7 mm gas pipe connection port



Coat the threaded connection port of the outdoor unit where the flare nut comes in with refrigeration oil.



## NOTICE

Use an appropriate wrench to avoid damaging the connection thread by overtightening the flare nut. Be careful NOT to overtighten the nut, or the smaller pipe may be damaged (about 2/3-1× the normal torque).

## 5.2.2 To connect the refrigerant piping to the outdoor unit

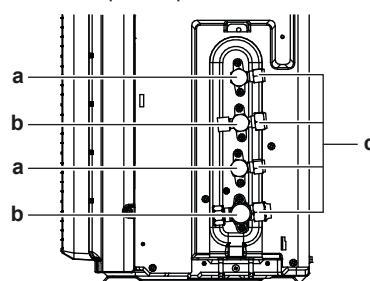
- Piping length.** Keep field piping as short as possible.
- Piping protection.** Protect the field piping against physical damage.



## WARNING

Connect the refrigerant piping securely before running the compressor. If the refrigerant piping is NOT connected and the stop valve is open when the compressor is run, air will be sucked in. This will cause abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.

- 1 Connect the liquid refrigerant connection from the indoor unit to the liquid stop valve of the outdoor unit.



- a Liquid stop valve  
b Gas stop valve  
c Service port

- 2 Connect the gas refrigerant connection from the indoor unit to the gas stop valve of the outdoor unit.



## NOTICE

It is recommended that the refrigerant piping between indoor and outdoor unit is installed in a ducting or the refrigerant piping is wrapped with finishing tape.

## 5.3 Checking the refrigerant piping

### 5.3.1 To check for leaks



## NOTICE

Do NOT exceed the unit's maximum working pressure (see "PS High" on the unit name plate).



## NOTICE

Make sure to use a recommended bubble test solution from your wholesaler. Do not use soap water, which may cause cracking of flare nuts (soap water may contain salt, which absorbs moisture that will freeze when the piping gets cold), and/or lead to corrosion of flared joints (soap water may contain ammonia which causes a corrosive effect between the brass flare nut and the copper flare).

- 1 Charge the system with nitrogen gas up to a gauge pressure of at least 200 kPa (2 bar). It is recommended to pressurize to 3000 kPa (30 bar) in order to detect small leaks.
- 2 Check for leaks by applying the bubble test solution to all connections.
- 3 Discharge all nitrogen gas.

### 5.3.2 To perform vacuum drying



## NOTICE

Connect the vacuum pump to **both** the service ports of the gas stop valves.

- 1 Vacuum the system until the pressure on the manifold indicates -0.1 MPa (-1 bar).
- 2 Leave as is for 4-5 minutes and check the pressure:

## 6 Charging refrigerant

| If the pressure... | Then...                                                         |
|--------------------|-----------------------------------------------------------------|
| Does not change    | There is no moisture in the system. This procedure is finished. |
| Increases          | There is moisture in the system. Go to the next step.           |

- Vacuum the system for at least 2 hours to a manifold pressure of -0.1 MPa (-1 bar).
- After turning the pump OFF, check the pressure for at least 1 hour.
- If you do NOT reach the target vacuum or CANNOT maintain the vacuum for 1 hour, do the following:
  - Check for leaks again.
  - Perform vacuum drying again.



### NOTICE

Be sure to open the gas stop valve after piping installation and vacuuming. Running the system with the valve closed, the compressor may break down.

## 6 Charging refrigerant

### 6.1 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: FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



### 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.



### WARNING

NEVER directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.

### 6.2 To determine the additional refrigerant amount

| If the total liquid piping length is... | Then...                                                                                                                                          |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| ≤20 m                                   | Do NOT add additional refrigerant.                                                                                                               |
| >20 m                                   | $R = (\text{total length (m) of liquid piping} - 20 \text{ m}) \times 0.020$<br>$R = \text{Additional charge (kg) (rounded in units of 0.1 kg)}$ |



### INFORMATION

Piping length is the one-way length of liquid piping.

### 6.3 To determine the complete recharge amount



### INFORMATION

If a complete recharge is necessary, the total refrigerant charge is: the factory refrigerant charge (see unit name plate) + the determined additional amount.

### 6.4 To charge additional refrigerant



### WARNING

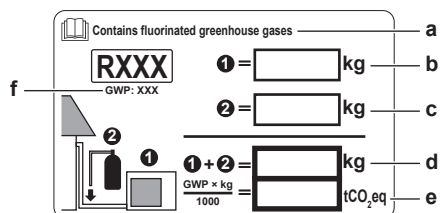
- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.

**Prerequisite:** Before charging refrigerant, make sure the refrigerant piping is connected and checked (leak test and vacuum drying).

- Connect the refrigerant cylinder to the service port.
- Charge the additional refrigerant amount.
- Open the gas stop valve.

### 6.5 To fix the fluorinated greenhouse gases label

- Fill in the label as follows:



- a If a multilingual fluorinated greenhouse gases label is delivered with the unit (see accessories), peel off the applicable language and stick it on top of a.
- b Factory refrigerant charge: see unit name plate
- c Additional refrigerant amount charged
- d Total refrigerant charge
- e **Quantity of fluorinated greenhouse gases** of the total refrigerant charge expressed as tonnes CO<sub>2</sub> equivalent.
- f GWP = Global warming potential



## 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

Use the GWP value mentioned on the refrigerant charge label.

- 2 Fix the label on the inside of the outdoor unit near the gas and liquid stop valves.

## 7 Electrical installation



### DANGER: RISK OF ELECTROCUTION



### WARNING

Appliance shall be installed in accordance with national wiring regulations.



### 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.



### WARNING

Do **NOT** connect the power supply to the indoor unit. This could result in electrical shock or fire.



### WARNING

- Do **NOT** use locally purchased electrical parts inside the product.
- Do **NOT** branch the power supply for the drain pump, etc. from the terminal block. This could result in electrical shock or fire.



### WARNING

Keep the interconnection wiring away from copper pipes without thermal insulation as such pipes will be very hot.



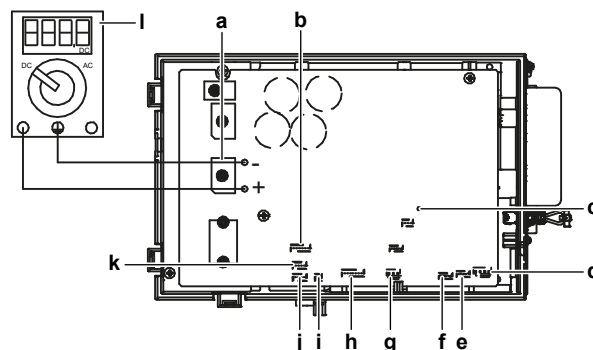
### DANGER: RISK OF ELECTROCUTION

All electrical parts (including thermistors) are powered by the power supply. Do not touch them with bare hands.



### 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 wiring diagram.



- a DB1 diode bridge
- b S90 thermistor lead wire
- c LED A
- d S40 thermal overload relay lead wire
- e S20 (white) room A electronic expansion valve coil
- f S21 (red) room B electronic expansion valve coil
- g S80 (white) 4-way valve lead wire connector
- h S70 fan motor lead wire
- i S99 heating lock
- j S91 (red) liquid thermistor lead wire
- k S92 (white) gas thermistor lead wire
- l Multimeter (DC voltage range)

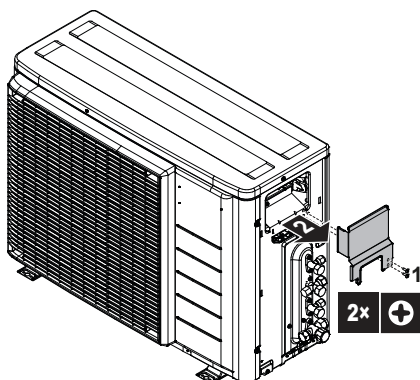
## 7.1 Specifications of standard wiring components

| Component                              |           |                                                                                                                                                    |
|----------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply cable                     | Voltage   | 220~240 V                                                                                                                                          |
|                                        | Phase     | 1~                                                                                                                                                 |
|                                        | Frequency | 50 Hz                                                                                                                                              |
|                                        | Wire type | 3-core cable 2.5 mm <sup>2</sup><br>H05RN-F (60245 IEC 57)<br>H07RN-F (60245 IEC 66)<br>3-core cable 4.0 mm <sup>2</sup><br>H07RN-F (60245 IEC 66) |
| Interconnection cable (indoor↔outdoor) |           | 4-core cable 1.5 mm <sup>2</sup> or 2.5 mm <sup>2</sup> and applicable for 220~240 V<br>H05RN-F (60245 IEC 57)                                     |
| Recommended circuit breaker            |           | 16 A                                                                                                                                               |
| Residual current device                |           | MUST comply with applicable legislation                                                                                                            |

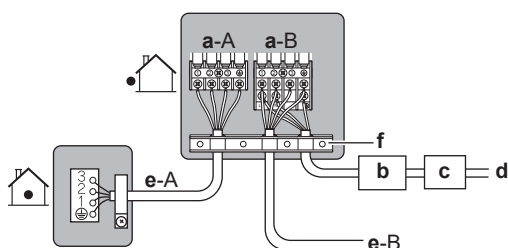
## 7.2 To connect the electrical wiring to the outdoor unit

- 1 Remove the switch box cover (2 screws).

## 8 Finishing the outdoor unit installation

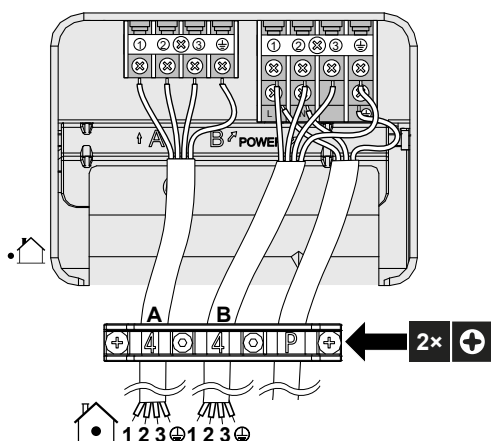


- 2 Connect the wires between the indoor and outdoor units so that the terminal numbers match. Make sure to match the symbols for piping and wiring.
- 3 Make sure to connect correct wiring to correct room (A to A, B to B).



- a Terminal for room (A, B)
- b Circuit breaker
- c Earth leakage circuit breaker
- d Power supply wire
- e Interconnection wire for room (A, B)
- f Wire retainer

- 4 Tighten the terminal screws securely using a Phillips screwdriver.
- 5 Check that the wires do not disconnect by pulling them lightly.
- 6 Firmly secure the wire retainer to avoid external stress on wire terminations.
- 7 Pass the wiring through the cutout on the bottom of the protection plate.
- 8 Make sure the electrical wiring does not contact with the gas piping.



- 9 Reattach the switch box cover and the service cover.

## 8 Finishing the outdoor unit installation

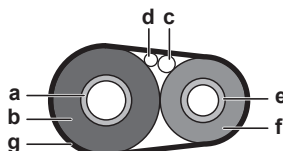
### 8.1 To finish the outdoor unit installation



#### **DANGER: RISK OF ELECTROCUTION**

- Make sure that the system is earthed properly.
- Turn off the power supply before servicing.
- Install the switch box cover before turning on the power supply.

- 1 Insulate and fix the refrigerant piping and cables as follows:



- a Gas pipe
- b Gas pipe insulation
- c Interconnection cable
- d Field wiring (if applicable)
- e Liquid pipe
- f Liquid pipe insulation
- g Finishing tape

- 2 Install the service cover.

## 9 Configuration

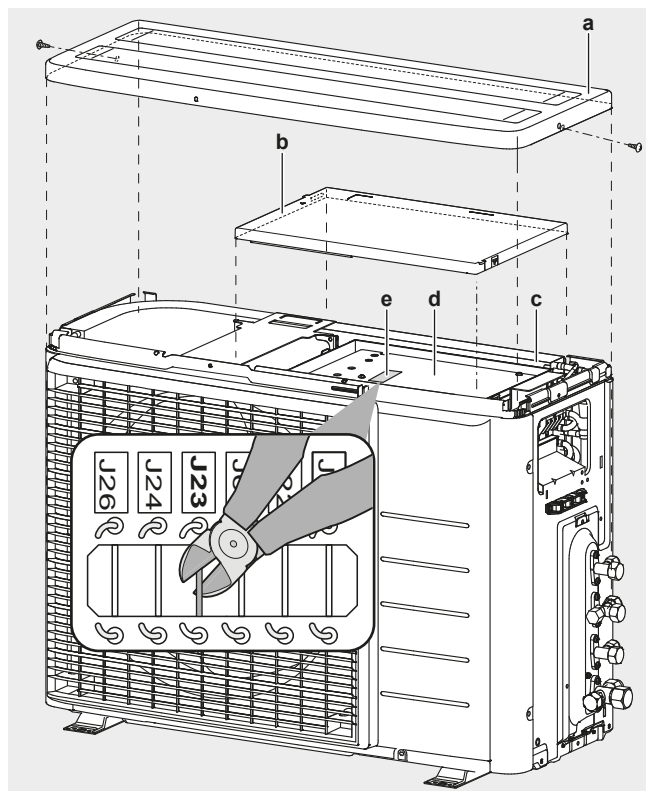
### 9.1 About ECONO mode prohibition setting

This setting disables the input control signal from the user interface. Use this setting when you wish to block reception of input controls (cooling/heating) from indoor unit user interfaces.

#### 9.1.1 To turn on ECONO mode prohibition setting

**Prerequisite:** The main power supply MUST be turned off.

- 1 Remove the top plate of the outdoor unit (2 screws on sides)
- 2 Remove the electric box cover by sliding it. Be careful not to bend the electric box hook.
- 3 Cut the jumper (J23).



- a Top plate
- b Electric box cover
- c Electric box
- d PCB
- e PCB jumpers

- 4 Reinstall the electric box cover and the top plate in reverse order and turn on the main power supply.

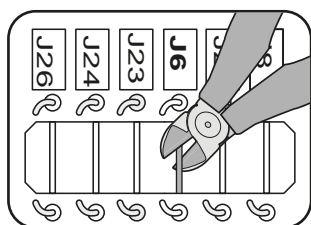
## 9.2 About night quiet mode

The night quiet mode function makes the outdoor unit run more quietly at nighttime. This will reduce the cooling capacity of the unit. Explain Night quiet mode to the customer and confirm if customer wants to use this mode.

### 9.2.1 To turn on the night quiet mode

**Prerequisite:** The main power supply MUST be turned off.

- 1 Remove the top plate and the electric box cover of the outdoor unit (see "9.1.1 To turn on ECONO mode prohibition setting" ▶ 22)
- 2 Cut the jumper J6.



- 3 Reinstall the top plate and the electric box cover.



#### CAUTION

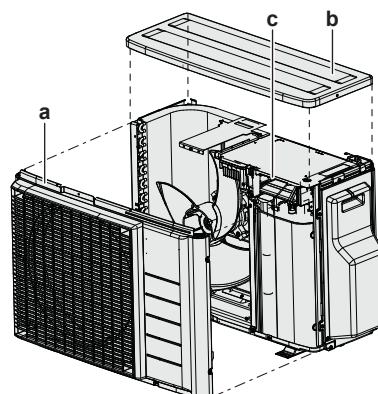
When reinstalling the electric box cover, be careful not to pinch the fan motor lead wire.

## 9.3 About heat mode lock

Heat mode lock limits the unit to heat operation.

### 9.3.1 To turn on heat mode lock

- 1 Remove the top plate (2 screws) and the front plate (8 screws).
- 2 To set heat mode lock remove the S99 connector.
- 3 To reset the heat pump mode (cooling/heating), plug the connector back.



- a Front plate
- b Top plate
- c S99 connector

| Mode                         | S99 connector |
|------------------------------|---------------|
| Heat pump (cooling, heating) | Connected     |
| Heating only                 | Disconnected  |

- 4 Reinstall the top plate and the front plate.



#### INFORMATION

Forced operation is also available in heating mode.

## 9.4 About standby electricity saving function

The standby electricity saving function:

- turns OFF the power supply to the outdoor unit and,
- turns ON the standby electricity saving mode on the indoor unit.

The standby electricity saving function works with following units:

FTXM, FTXP, FTXJ, FVXM, ATXF

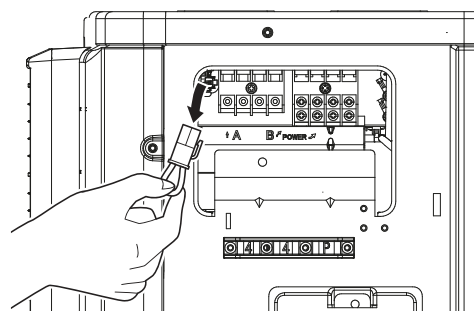
If another indoor unit is used, the connector for standby electric saving must be plugged in.

The standby electricity saving function is turned off before shipping.

### 9.4.1 To turn on standby electricity saving function

**Prerequisite:** The main power supply MUST be turned off.

- 1 Remove the service cover.
- 2 Disconnect the selective standby electricity saving connector.



- 3 Turn on the main power supply.

## 10 Commissioning

### 10 Commissioning



#### NOTICE

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

#### 10.1 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"/> | The <b>indoor unit</b> is properly mounted.                                                                                                                                      |
| <input type="checkbox"/> | The <b>outdoor unit</b> is properly mounted.                                                                                                                                     |
| <input type="checkbox"/> | The system is properly <b>earthed</b> and the earth terminals are tightened.                                                                                                     |
| <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"/> | There are NO <b>refrigerant leaks</b> .                                                                                                                                          |
| <input type="checkbox"/> | The <b>refrigerant pipes</b> (gas and liquid) are thermally insulated.                                                                                                           |
| <input type="checkbox"/> | The correct pipe size is installed and the <b>pipes</b> are properly insulated.                                                                                                  |
| <input type="checkbox"/> | The <b>stop valves</b> (gas and liquid) on the outdoor unit are fully open.                                                                                                      |
| <input type="checkbox"/> | <b>Drainage</b><br>Make sure drainage flows smoothly.<br><b>Possible consequence:</b> Condensate water might drip.                                                               |
| <input type="checkbox"/> | The indoor unit receives the signals of the <b>user interface</b> .                                                                                                              |
| <input type="checkbox"/> | The specified wires are used for the <b>interconnection cable</b> .                                                                                                              |
| <input type="checkbox"/> | The <b>fuses, circuit breakers</b> , or locally installed protection devices are installed according to this document, and have NOT been bypassed.                               |
| <input type="checkbox"/> | Check if marks (room A~E) on the wiring and piping match for each indoor unit.                                                                                                   |
| <input type="checkbox"/> | Check if the priority room setting is set for 2 or more rooms. Keep in mind that the DHW generator for Multi or the Hybrid for Multi shall not be selected as the priority room. |

#### 10.2 Checklist during commissioning

|                          |                                   |
|--------------------------|-----------------------------------|
| <input type="checkbox"/> | To perform a <b>wiring</b> check. |
| <input type="checkbox"/> | To perform an <b>air purge</b> .  |
| <input type="checkbox"/> | To perform a <b>test run</b> .    |

#### 10.3 Trial operation and testing

|                          |                                                                                                      |
|--------------------------|------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Before starting the test run, measure the voltage at the primary side of the <b>safety breaker</b> . |
|--------------------------|------------------------------------------------------------------------------------------------------|

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> | The <b>piping and wiring work</b> match.                                    |
| <input type="checkbox"/> | The <b>stop valves</b> (gas and liquid) on the outdoor unit are fully open. |

Initialization of the Multi system can take several minutes depending on the number of indoor units and options used.

#### 10.3.1 To perform a test run

**Prerequisite:** Power supply MUST be in the specified range.

**Prerequisite:** Test run operation may be done in cooling or heating mode.

**Prerequisite:** Test run should be done in accordance with the operation manual of the indoor unit to make sure that all functions and parts are working properly.

- 1 In cooling mode, select the lowest programmable temperature. In heating mode, select the highest programmable temperature.
- 2 Measure the temperature at the indoor unit inlet and outlet after running the unit for about 20 minutes. The difference should be more than 8°C (cooling) or 15°C (heating).
- 3 First check operation of each unit individually, then check simultaneous operation of all indoor units. Check both heating and cooling operation.
- 4 When test run is finished, set the temperature to a normal level. In cooling mode: 26~28°C, in heating mode: 20~24°C.



#### INFORMATION

- Test run can be disabled if necessary.
- After the unit is turned OFF, it cannot be started again for 3 minutes.
- During cooling operation, frost may form on the gas stop valve or other parts. This is normal.



#### INFORMATION

- Even if the unit is turned OFF, it consumes electricity.
- When the power turns back on after a power break, the previously selected mode will be resumed.

## 11 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.

## 12 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).

### 12.1 Wiring diagram

#### 12.1.1 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  |
|        |        | 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                             |

| Symbol                 | Meaning                                                             |
|------------------------|---------------------------------------------------------------------|
| 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                                                            |
| 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                                                        |

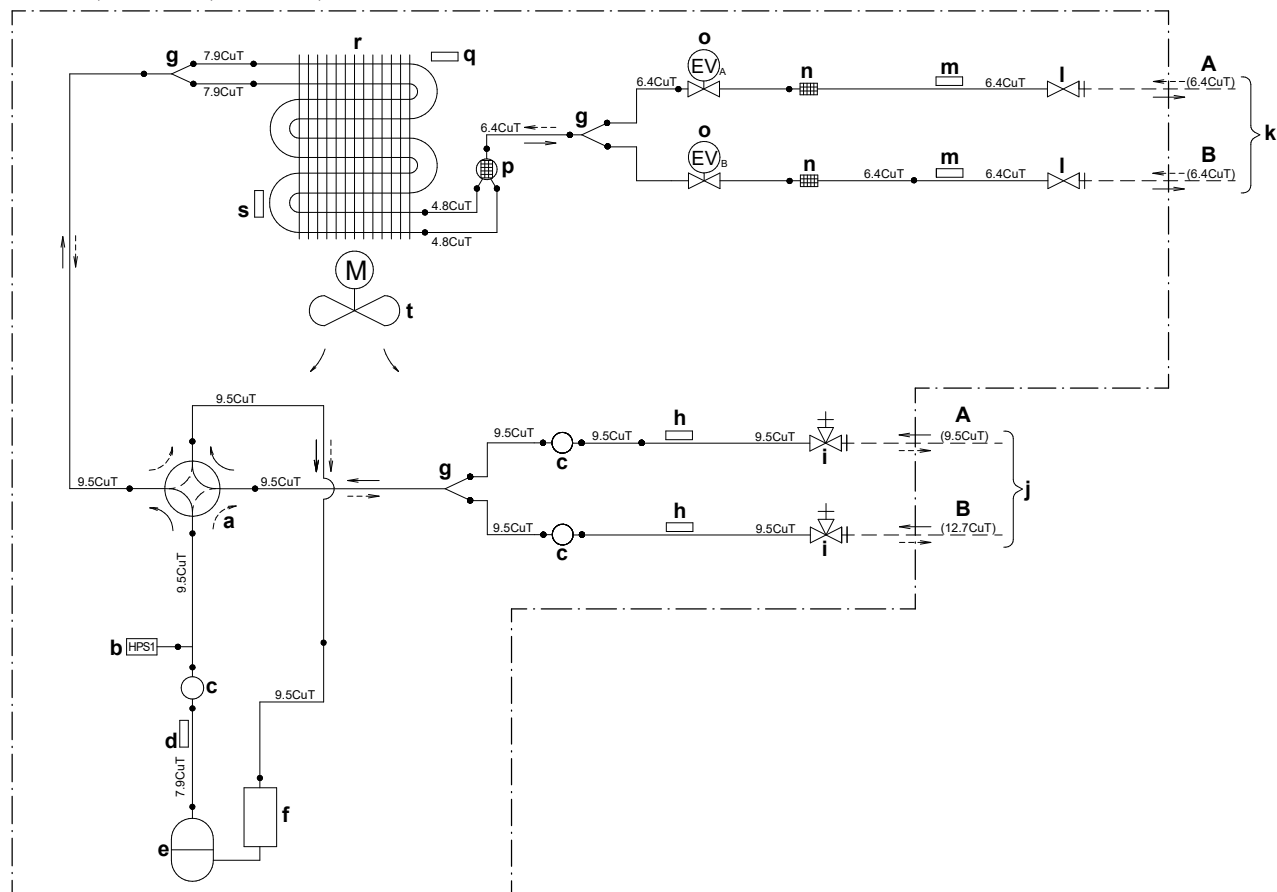
## 12.2 Piping diagram: Outdoor unit

Component PED category classification:

- High pressure switches: category IV
- Compressor: category II
- Other components: refer to PED article 4, paragraph 3

## 12 Technical data

### 2MXM50, 2AMXM50, 2AMXF50, 2MXF50



- A** Room A
- B** Room B
- a** 4-way valve ON: heating
- b** High pressure switch with automatic reset
- c** Muffler
- d** Discharge pipe thermistor
- e** Compressor
- f** Accumulator
- g** Branch pipe
- h** Thermistor (gas)
- i** Gas stop valve
- j** Field piping (gas)
- k** Field piping (liquid)
- l** Liquid stop valve
- m** Thermistor (liquid)
- n** Filter
- o** Motor-operated valve
- p** Muffler
- q** Outdoor air temperature thermistor
- r** Heat exchanger
- M** Fan motor
- Refrigerant flow: cooling
- - → Refrigerant flow: heating



**EAC**



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

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

**DAIKIN EUROPE N.V.**

Zandvoordestraat 300, B-8400 Oostende, Belgium

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