



Installation manual

Daikin room air conditioner



FTXP50M2V1B
FTXP60M2V1B
FTXP71M2V1B

FTXF20A2V1B
FTXF25A2V1B
FTXF35A2V1B
FTXF50A2V1B
FTXF60A2V1B
FTXF71A2V1B

Installation manual
Daikin room air conditioner

English

Table of Contents

1	About the documentation	6
1.1	About this document.....	6
2	About the box	6
2.1	Indoor unit	6
2.1.1	To remove the accessories from the indoor unit.....	6
3	About the unit	6
4	Preparation	7
4.1	Preparing the installation site	7
4.1.1	Installation site requirements of the indoor unit	7
5	Installation	7
5.1	Opening the indoor unit	7
5.1.1	To remove the front panel	7
5.1.2	To re-install the front panel	7
5.1.3	To remove the front grille	7
5.1.4	To re-install the front grille	7
5.1.5	To remove the electrical wiring box cover.....	8
5.1.6	To open the service cover.....	8
5.2	Installing the indoor unit	8
5.2.1	To install the mounting plate	8
5.2.2	To drill a wall hole	9
5.2.3	To remove the pipe port cover	9
5.2.4	To provide drainage	9
5.3	Connecting the refrigerant piping	11
5.3.1	To connect the refrigerant piping to the indoor unit	11
5.4	Connecting the electrical wiring.....	11
5.4.1	To connect the electrical wiring on the indoor unit.....	11
5.5	Finishing the indoor unit installation	12
5.5.1	To insulate the drain piping, refrigerant piping and interconnection cable	12
5.5.2	To pass the pipes through the wall hole	12
5.5.3	To fix the unit on the mounting plate.....	12
6	Commissioning	12
6.1	Checklist before commissioning	12
6.2	To perform a test run	13
6.2.1	To perform a test run in winter season	13
7	Disposal	13
8	Technical data	14
8.1	Wiring diagram	14

1 About the documentation

1.1 About this document



INFORMATION

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

Target audience

Authorised installers



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.

Documentation set

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

Installation manual

- **General safety precautions:**
 - Safety instructions that you **MUST** read before installing
 - Format: Paper (in the box of the indoor unit)
- **Indoor unit installation manual:**
 - Installation instructions
 - Format: Paper (in the box of the indoor unit)
- **Installer reference guide:**
 - Preparation of the installation, good practices, 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 extranet (authentication required).

2 About the box

2.1 Indoor unit

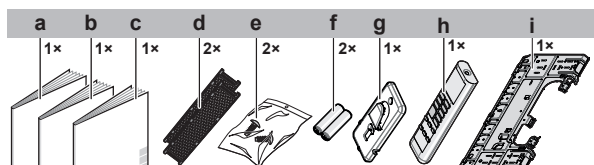


INFORMATION

The following figures are just examples and may NOT completely match your system layout.

2.1.1 To remove the accessories from the indoor unit

- 1 Remove the accessories located at the bottom of the package.



- a Installation manual
- b Operation manual
- c General safety precautions
- d Titanium apatite deodorizing and silver particle filter (only for FTXP)
- e Indoor unit fixing screw (M4×12L). Refer to "5.5.3 To fix the unit on the mounting plate" on page 12.
- f Dry battery AAA.LR03 (alkaline) for user interface
- g User interface holder
- h User interface
- i Mounting plate

3 About the unit



WARNING: FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.

4 Preparation

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).

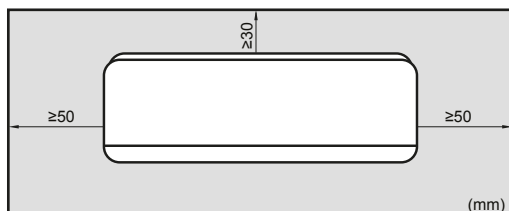
4.1.1 Installation site requirements of the indoor unit



INFORMATION

The sound pressure level is less than 70 dBA.

- **Air flow.** Make sure nothing blocks the air flow.
- **Drainage.** Make sure condensation water can be evacuated properly.
- **Wall insulation.** When conditions in the wall exceed 30°C and a relative humidity of 80%, or when fresh air is inducted into the wall, then additional insulation is required (minimum 10 mm thickness, polyethylene foam).
- **Wall strength.** Check whether the wall or the floor is strong enough to support the weight of the unit. If there is a risk, reinforce the wall or the floor before installing the unit.
- **Spacing.** Install the unit at least 1.8 m from the floor and keep the following requirements in mind for distances from the walls and the ceiling:

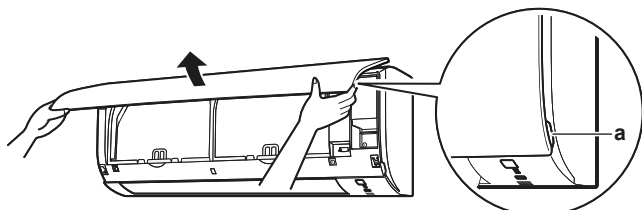


5 Installation

5.1 Opening the indoor unit

5.1.1 To remove the front panel

- 1 Hold the front panel by the panel tabs on both sides and open it.

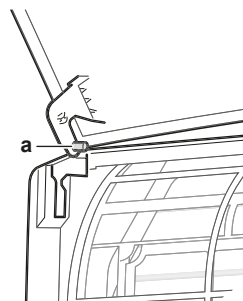


a Panel tabs

- 2 Remove the front panel by sliding it to the left or the right and pulling it toward you.

Result: The front panel shaft on 1 side will be disconnected.

- 3 Disconnect the front panel shaft on the other side in the same manner.



a Front panel shaft

5.1.2 To re-install the front panel

- 1 Attach the front panel. Align the shafts with the slots and push them all the way in.
- 2 Close the front panel slowly; press at both sides and at the centre.

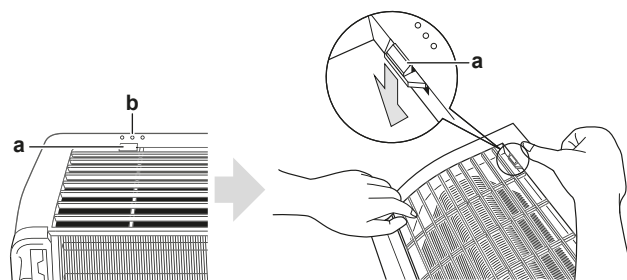
5.1.3 To remove the front grille



CAUTION

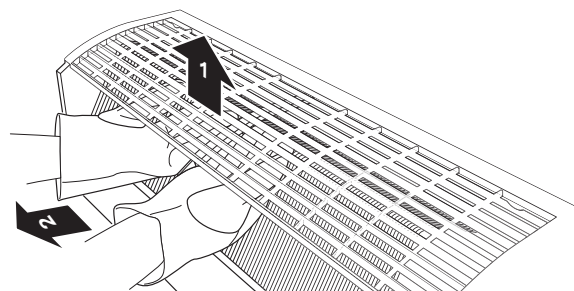
Wear adequate personal protective equipment (protective gloves, safety glasses,...) when installing, maintaining or servicing the system.

- 1 Remove the front panel to remove the air filter.
- 2 Remove 2 screws (class 20~35) or 3 screws (class 50~71) from the front grille.
- 3 Push down the 3 upper hooks marked with a symbol with 3 circles.



a Upper hook
b Symbol with 3 circles

- 4 We recommend opening the flap before removing the front grille.
- 5 Place both hands under the centre of the front grille, push it up and then toward you.



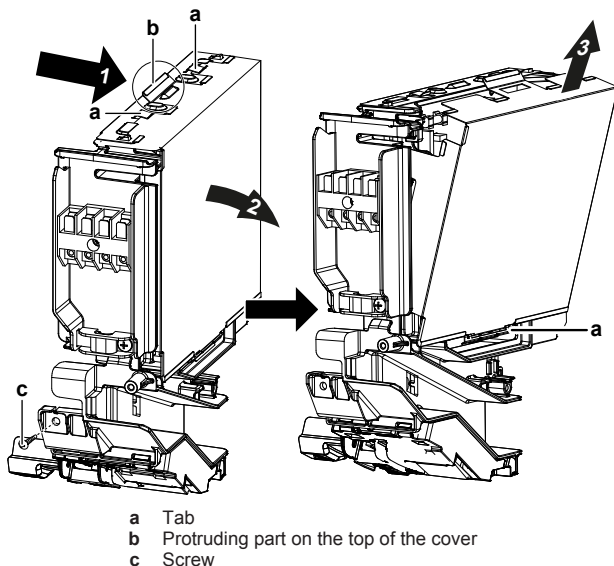
5.1.4 To re-install the front grille

- 1 Install the front grille and firmly engage the 3 upper hooks.
- 2 Install 2 screws (class 20~35) or 3 screws (class 50~71) back on the front grille.
- 3 Install the air filter and then mount the front panel.

5 Installation

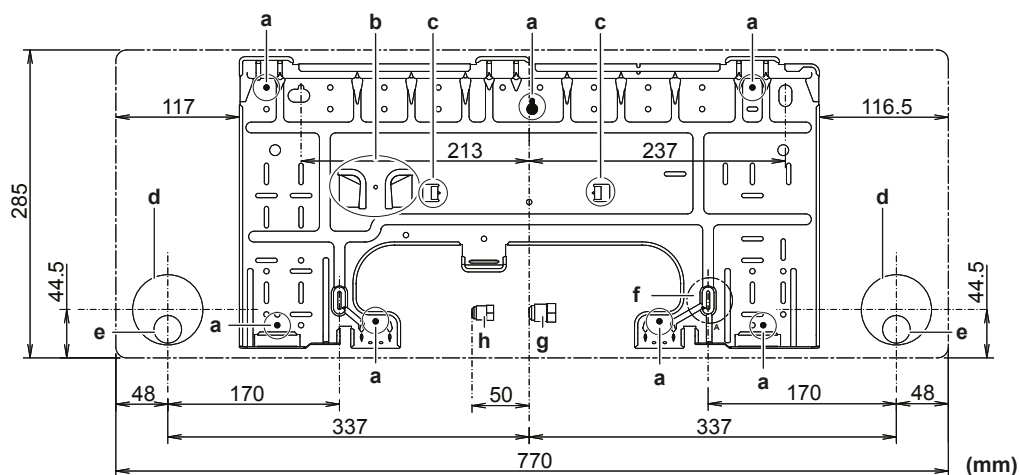
5.1.5 To remove the electrical wiring box cover

- 1 Remove the front grille.
- 2 Remove 1 screw from the electrical wiring box.
- 3 Open the electrical wiring box cover by pulling the protruding part on the top of the cover.
- 4 Unhook the tab on the bottom and remove the electrical wiring box cover.



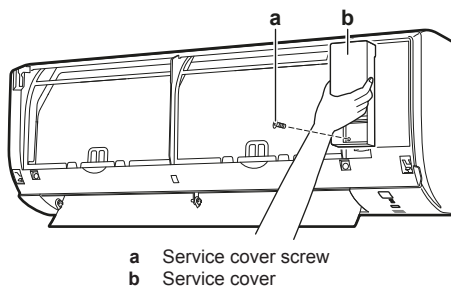
- 5 To re-install the cover, first hook the bottom tab onto the electrical wiring box, and slide the cover into the 2 upper tabs.

Class 20~35:



5.1.6 To open the service cover

- 1 Remove 1 screw from the service cover.
- 2 Pull out the service cover horizontally away from the unit.



5.2 Installing the indoor unit

5.2.1 To install the mounting plate

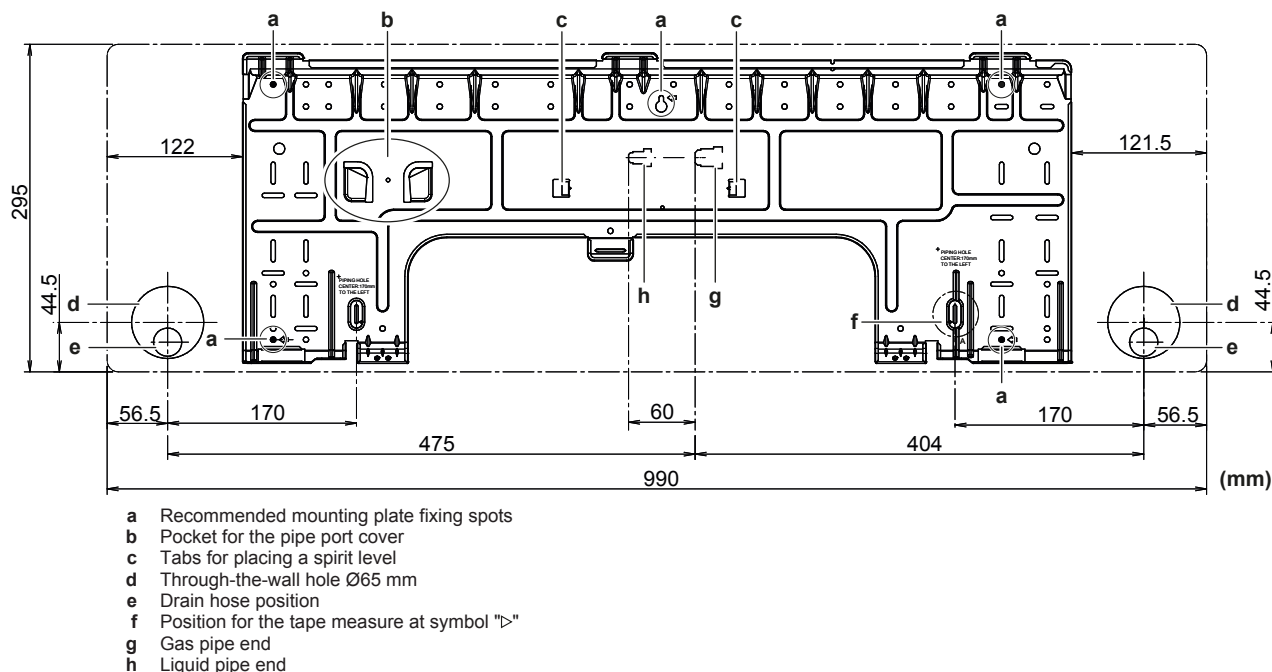
- 1 Install the mounting plate temporarily.
- 2 Level the mounting plate.
- 3 Mark the centres of the drilling points on the wall using a tape measure. Position the end of tape measure at symbol ">".
- 4 Finish the installation by securing the mounting plate on the wall using M4×25L screws (field supply).



INFORMATION

The removed pipe port cover can be kept in the mounting plate pocket.

Class 50~71:



5.2.2 To drill a wall hole



CAUTION

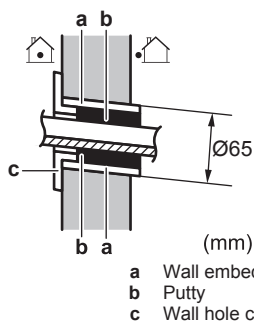
For walls containing a metal frame or a metal board, use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.



NOTICE

Be sure to seal the gaps around the pipes with sealing material (field supply), in order to prevent water leakage.

- 1 Bore a 65 mm large feed-through hole in the wall with a downward slope towards the outside.
- 2 Insert a wall embedded pipe into the hole.
- 3 Insert a wall cover into the wall pipe.

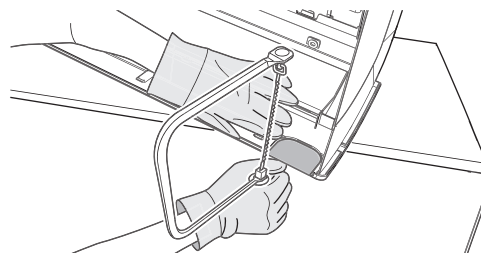


- 4 After completing wiring, refrigerant piping and drain piping, do NOT forget to seal the gap with putty.

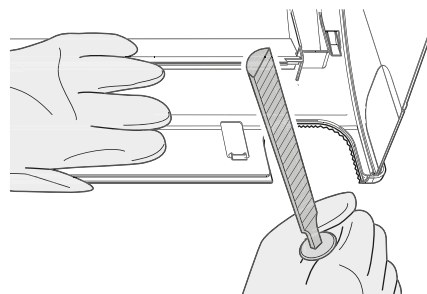
5.2.3 To remove the pipe port cover

To connect the piping on right-side, right-bottom, left-side or left-bottom, the pipe port cover MUST be removed.

- 1 Cut off the pipe port cover from inside the front grille using a coping saw.



- 2 Remove any burrs along the cut section using a half round needle file.



NOTICE

Do NOT use nippers to remove the pipe port cover, as this would damage the front grille.

5.2.4 To provide drainage

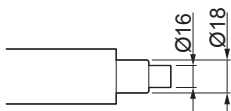
Make sure condensation water can be evacuated properly. This involves:

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

General guidelines

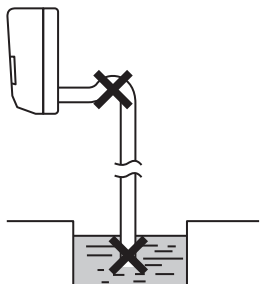
- **Pipe length.** Keep drain piping as short as possible.
- **Pipe size.** If drain hose extension or embedded drain piping is required, use appropriate parts that match the hose front end.

5 Installation

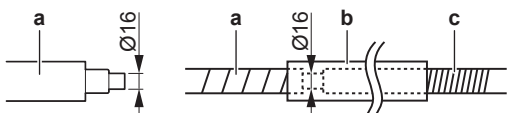


NOTICE

- Install the drain hose with a downward slope.
- Traps are NOT permitted.
- Do NOT put the end of the hose in water.

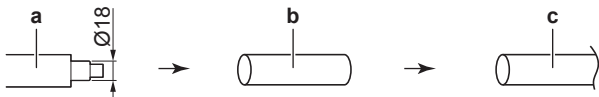


- Drain hose extension.** To extend the drain hose, use a field supplied hose with inner Ø16 mm. Do NOT forget to use a heat insulation tube on the indoor section of the extension hose.



- a Drain hose supplied with the indoor unit
- b Heat insulation tube (field supply)
- c Extension drain hose

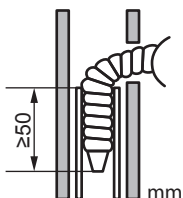
- Rigid polyvinyl chloride pipe.** When connecting a rigid polyvinyl chloride pipe (nominal Ø13 mm) directly to the drain hose as with embedded piping work, use a field supplied drain socket (nominal Ø13 mm).



- a Drain hose supplied with the indoor unit
- b Drain socket with nominal Ø13 mm (field supply)
- c Rigid polyvinyl chloride pipe (field supply)

- Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.

- Insert the drain hose in the drain pipe as shown in the following figure, so it will NOT be pulled out of the drain pipe.

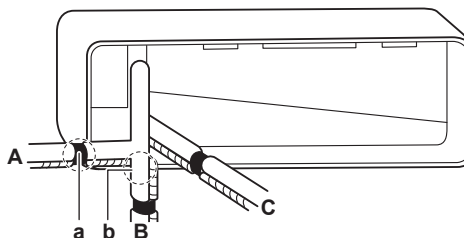


To connect the piping on right side, right-back, or right-bottom

INFORMATION

The factory default is right-side piping. For left-side piping, remove the piping from the right side and install it on the left side.

- Attach the drain hose with adhesive vinyl tape to the bottom of the refrigerant pipes.
- Wrap the drain hose and the refrigerant pipes together using insulation tape.



- A Right-side piping
- B Right-bottom piping
- C Right-back piping
- a Remove the pipe port cover here for right-side piping.
- b Remove the pipe port cover here for right-bottom piping.

To connect the piping on left side, left-back, or left-bottom

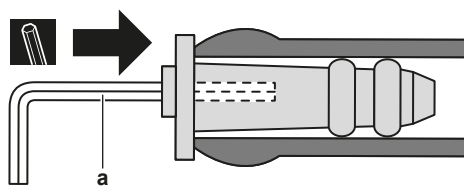
INFORMATION

The factory default is right-side piping. For left-side piping, remove the piping from the right side and install it on the left side.

- Remove the insulation fixing screw on the right side and remove the drain hose.
- Remove the drain plug on the left side and attach it to the right side.

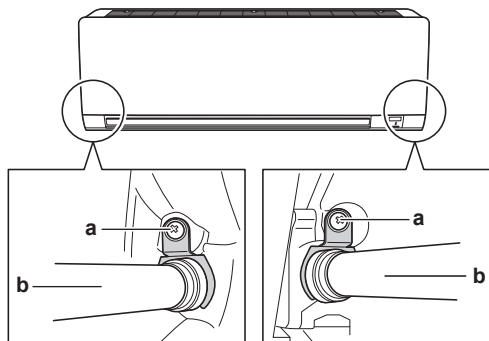
NOTICE

Do NOT apply lubricating oil (refrigerant oil) to the drain plug when inserting it. The drain plug may deteriorate and cause drain leakage from the plug.



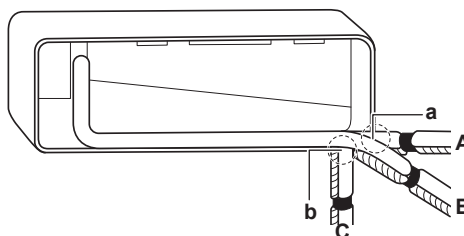
- a 4 mm hexagonal wrench

- Insert the drain hose on the left side and do not forget to tighten it with the fixing screw; otherwise water leakage may occur.



- a Insulation fixing screw
- b Drain hose

- Attach the drain hose to the refrigerant pipes bottom side using adhesive vinyl tape.

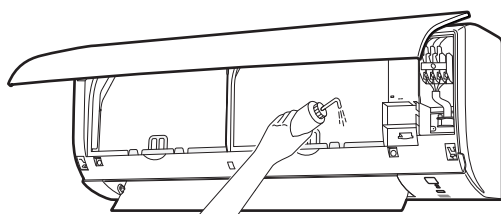


- A Left-side piping
- B Left-back piping
- C Left-bottom piping

- a Remove the pipe port cover here for left-side piping.
- b Remove the pipe port cover here for left-bottom piping.

To check for water leaks

- 1 Remove the air filters.
- 2 Gradually pour approximately 1 l of water in the drain pan, and check for water leaks.



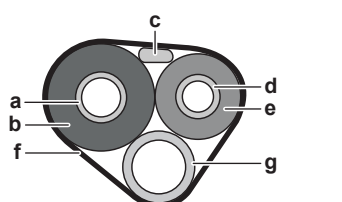
5.3 Connecting the refrigerant piping



DANGER: RISK OF BURNING

5.3.1 To connect the refrigerant piping to the indoor unit

- **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, interconnection cable and drain hose on the indoor unit as follows:



- a Gas pipe
- b Gas pipe insulation
- c Interconnection cable
- d Liquid pipe
- e Liquid pipe insulation
- f Finishing tape
- g Drain hose



NOTICE

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

5.4 Connecting the electrical wiring



DANGER: RISK OF ELECTROCUTION



WARNING

ALWAYS use multicore cable for power supply cables.



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.



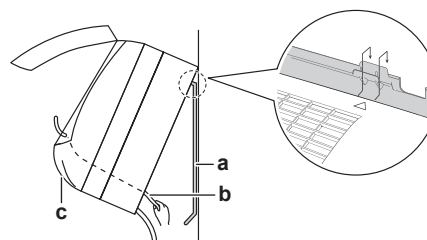
WARNING

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

5.4.1 To connect the electrical wiring on the indoor unit

Electrical work should be carried out in accordance with the installation manual and the national electrical wiring rules or code of practice.

- 1 Set the indoor unit on the mounting plate hooks. Use the "△" marks as a guide.



- a Mounting plate (accessory)
- b Interconnection cable
- c Wire guide

- 2 Open the front panel, and then the service cover. Refer to "5.1 Opening the indoor unit" on page 7.
- 3 Pass the interconnection cable from the outdoor unit through the feed-through wall hole, through the back of the indoor unit and through the front side.

Note: In case the interconnection cable was stripped in advance, cover the ends with insulating tape.

- 4 Bend the end of the cable up.



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.
- In order to avoid any electrical interference the distance between both wirings should **ALWAYS** be at least 50 mm.

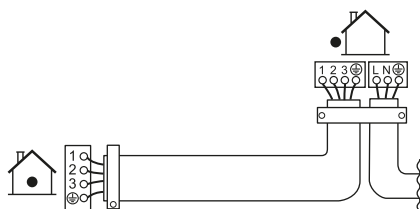


WARNING

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

- 5 Strip the wire ends approximately 15 mm.
- 6 Match wire colours with terminal numbers on the indoor unit terminal blocks and firmly screw the wires to the corresponding terminals.
- 7 Connect the earth wire to the corresponding terminal.
- 8 Firmly fix the wires with the terminal screws.
- 9 Pull the wires to make sure that they are securely attached, then retain the wires with the wire retainer.
- 10 Shape the wires so that the service cover fits securely, then close the service cover.

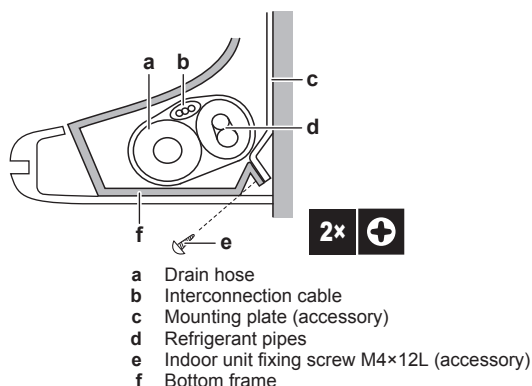
6 Commissioning



5.5 Finishing the indoor unit installation

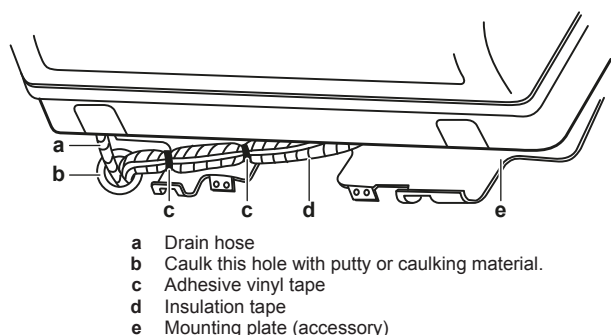
5.5.1 To insulate the drain piping, refrigerant piping and interconnection cable

- 1 After the drain piping, refrigerant piping and the electrical wiring are finished. Wrap refrigerant pipes, interconnection cable and drain hose together using insulation tape. Overlap at least half the width of the tape with each turn.



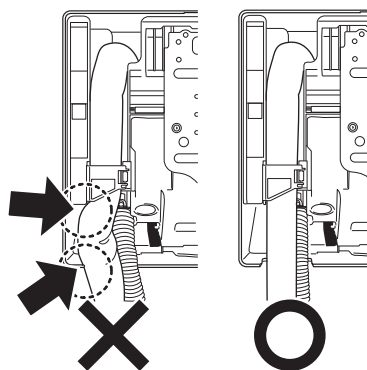
5.5.2 To pass the pipes through the wall hole

- 1 Shape the refrigerant pipes along the pipe path marking on the mounting plate.



NOTICE

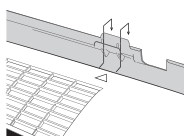
- Do NOT bend refrigerant pipes.
- Do NOT push the refrigerant pipes onto the bottom frame or the front grille.



- 2 Pass the drain hose and refrigerant pipes through the wall hole.

5.5.3 To fix the unit on the mounting plate

- 1 Set the indoor unit on the mounting plate hooks. Use the "△" marks as a guide.



- 2 Press the bottom frame of the unit with both hands to set it on the bottom hooks of the mounting plate. Make sure that the wires do NOT get squeezed anywhere.

Note: Take care that the interconnection cable does NOT get caught in the indoor unit.

- 3 Press the bottom edge of the indoor unit with both hands until it is firmly caught by the mounting plate hooks.
- 4 Secure the indoor unit to the mounting plate using 2 indoor unit fixing screws M4x12L (accessory).

6 Commissioning



NOTICE

NEVER operate the unit without thermistors and/or pressure sensors/switches. Burning of the compressor might result.

6.1 Checklist before commissioning

Do NOT operate the system before the following checks are OK:

☐	You read the complete installation instructions, as described in the installer reference guide .
☐	The indoor units are properly mounted.
☐	The outdoor unit is properly mounted.
☐	Air inlet/outlet Check that the air inlet and outlet of the unit is NOT obstructed by paper sheets, cardboard, or any other material.
☐	There are NO missing phases or reversed phases .
☐	The refrigerant pipes (gas and liquid) are thermally insulated.
☐	Drainage Make sure drainage flows smoothly. Possible consequence: Condensate water might drip.

☐	The system is properly earthed and the earth terminals are tightened.
☐	The fuses or locally installed protection devices are installed according to this document, and have NOT been bypassed.
☐	The power supply voltage matches the voltage on the identification label of the unit.
☐	The specified wires are used for the interconnection cable .
☐	The indoor unit receives the signals of the user interface .
☐	There are NO loose connections or damaged electrical components in the switch box.
☐	The insulation resistance of the compressor is OK.
☐	There are NO damaged components or squeezed pipes on the inside of the indoor and outdoor units.
☐	There are NO refrigerant leaks .
☐	The correct pipe size is installed and the pipes are properly insulated.
☐	The stop valves (gas and liquid) on the outdoor unit are fully open.

Result: 7⁺ will appear on the display. Test run operation is selected. Test run operation will stop automatically after about 30 minutes.

10 To stop operation, press .



INFORMATION

Some of the functions CANNOT be used in the test run operation mode.

If a power failure occurs during operation, the system automatically restarts immediately after power is restored.

7 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.

6.2 To perform a test run

Prerequisite: Power supply MUST be in the specified range.

Prerequisite: Test run may be performed in cooling or heating mode.

Prerequisite: Test run should be performed 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. Test run can be disabled if necessary.
- 2 When the test run is finished, set the temperature to a normal level. In cooling mode: 26~28°C, in heating mode: 20~24°C.
- 3 The system stops operating 3 minutes after the unit is turned OFF.

6.2.1 To perform a test run in winter season

When operating the air conditioner in **Cooling** mode in winter, set it to test run operation using the following method.

For FTXP units

- 1 Press , , and  simultaneously.
- 2 Press .
- 3 Select 7⁺.
- 4 Press .
- 5 Press  to switch the system on.

Result: Test run operation will stop automatically after about 30 minutes.

- 6 To stop operation, press .

For FTXF units

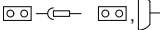
- 7 Press  to switch the system on.
- 8 Press the centre of , , and  simultaneously.
- 9 Press  twice.

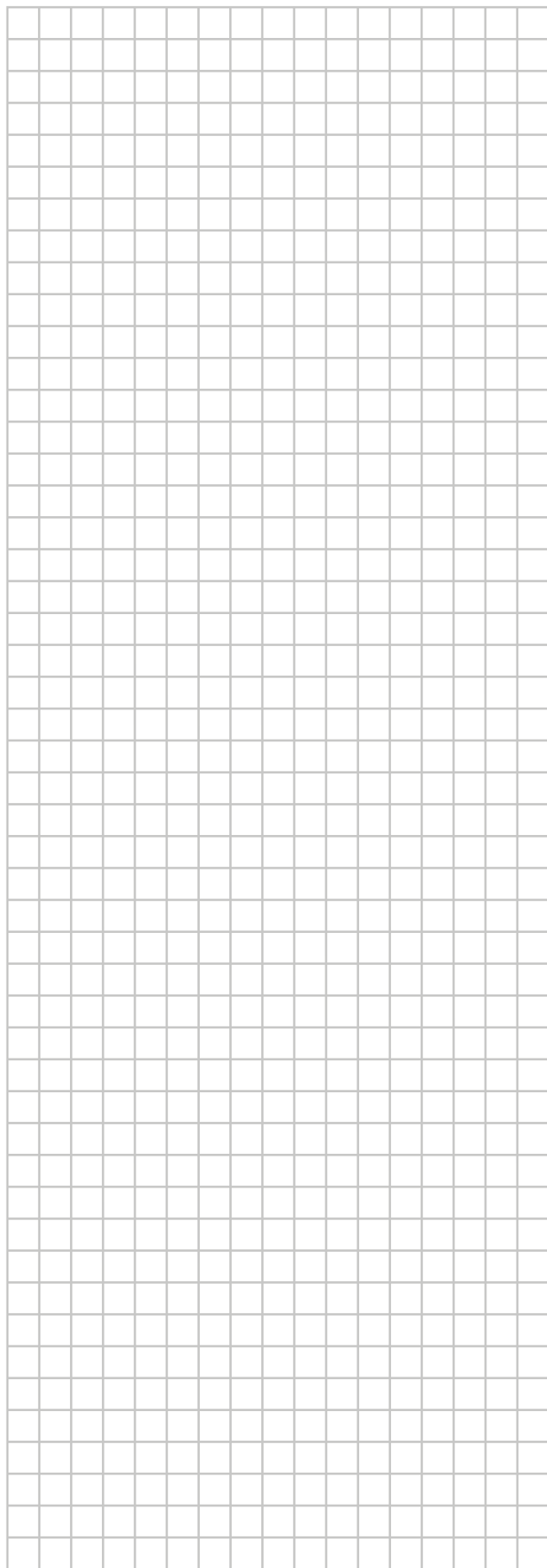
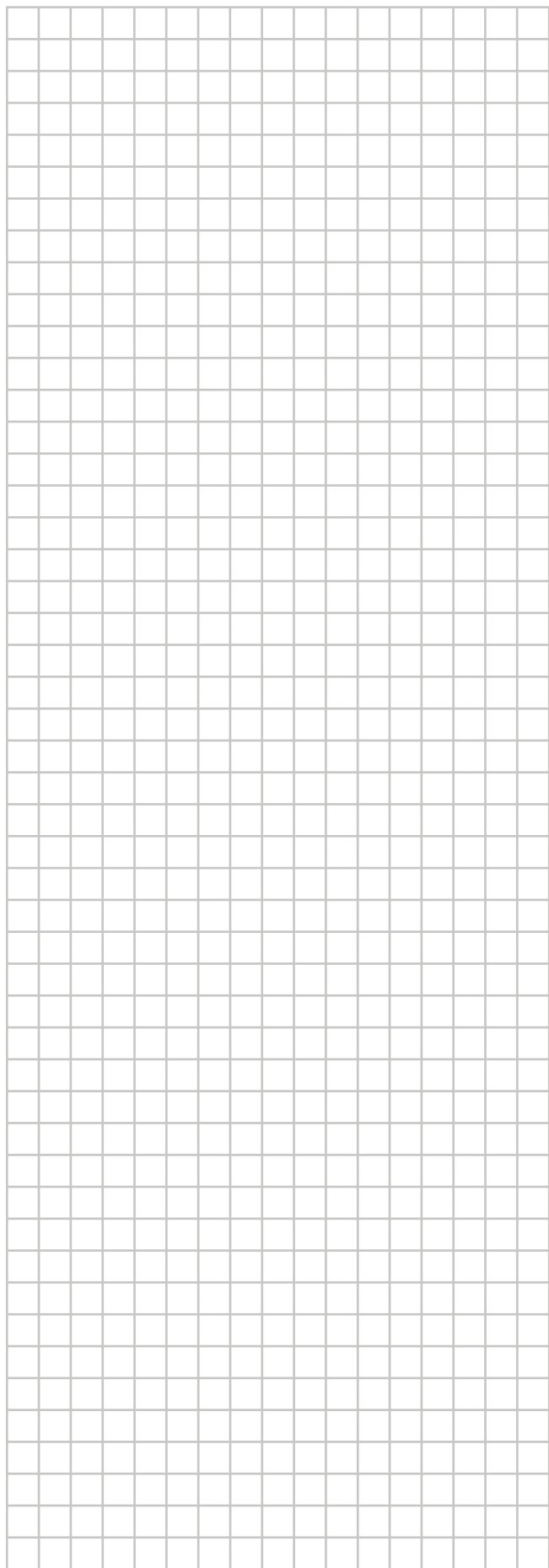
8 Technical data

8 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 extranet (authentication required).

8.1 Wiring diagram

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 symbol "*" in the part code.					
	:	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
BLK : BLACK	GRN : GREEN	PNK : PINK	WHT : WHITE		
BLU : BLUE	GRY : GREY	PRP, PPL : PURPLE	YLW : YELLOW		
BRN : BROWN	ORG : ORANGE	RED : RED			
A*P	:	PRINTED CIRCUIT BOARD	PS	:	SWITCHING POWER SUPPLY
BS*	:	PUSHBUTTON ON/OFF, OPERATION SWITCH	PTC*	:	THERMISTOR PTC
BZ, H*O	:	BUZZER	Q*	:	INSULATED GATE BIPOLAR TRANSISTOR (IGBT)
C*	:	CAPACITOR	Q*DI	:	EARTH LEAK CIRCUIT BREAKER
AC*, CN*, E*, HA*, HE*, HL*, HN*,	:	CONNECTION, CONNECTOR	Q*L	:	OVERLOAD PROTECTOR
HR*, MR*_A, MR*_B, S*, U, V,			Q*M	:	THERMO SWITCH
W, X*A, K*R_*			R*	:	RESISTOR
D*, V*D	:	DIODE	R*T	:	THERMISTOR
DB*	:	DIODE BRIDGE	RC	:	RECEIVER
DS*	:	DIP SWITCH	S*C	:	LIMIT SWITCH
E*H	:	HEATER	S*L	:	FLOAT SWITCH
F*U, FU* (FOR CHARACTERISTICS,	:	FUSE	S*NPH	:	PRESSURE SENSOR (HIGH)
REFER TO PCB INSIDE YOUR UNIT)			S*NPL	:	PRESSURE SENSOR (LOW)
FG*	:	CONNECTOR (FRAME GROUND)	S*PH, HPS*	:	PRESSURE SWITCH (HIGH)
H*	:	HARNESS	S*PL	:	PRESSURE SWITCH (LOW)
H*P, LED*, V*L	:	PILOT LAMP, LIGHT EMITTING DIODE	S*T	:	THERMOSTAT
HAP	:	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	S*RH	:	HUMIDITY SENSOR
HIGH VOLTAGE	:	HIGH VOLTAGE	S*W, SW*	:	OPERATION SWITCH
IES	:	INTELLIGENT EYE SENSOR	SA*, F1S	:	SURGE ARRESTOR
IPM*	:	INTELLIGENT POWER MODULE	SR*, WLU	:	SIGNAL RECEIVER
K*R, KCR, KFR, KHuR, K*M	:	MAGNETIC RELAY	SS*	:	SELECTOR SWITCH
L	:	LIVE	SHEET METAL	:	TERMINAL STRIP FIXED PLATE
L*	:	COIL	T*R	:	TRANSFORMER
L*R	:	REACTOR	TC, TRC	:	TRANSMITTER
M*	:	STEPPER MOTOR	V*, R*V	:	VARISTOR
M*C	:	COMPRESSOR MOTOR	V*R	:	DIODE BRIDGE
M*F	:	FAN MOTOR	WRC	:	WIRELESS REMOTE CONTROLLER
M*P	:	DRAIN PUMP MOTOR	X*	:	TERMINAL
M*S	:	SWING MOTOR	X*M	:	TERMINAL STRIP (BLOCK)
MR*, MRCW*, MRM*, MRN*	:	MAGNETIC RELAY	Y*E	:	ELECTRONIC EXPANSION VALVE COIL
N	:	NEUTRAL	Y*R, Y*S	:	REVERSING SOLENOID VALVE COIL
n=*, N=*	:	NUMBER OF PASSES THROUGH FERRITE CORE	Z*C	:	FERRITE CORE
PAM	:	PULSE-AMPLITUDE MODULATION	ZF, Z*F	:	NOISE FILTER
PCB*	:	PRINTED CIRCUIT BOARD			
PM*	:	POWER MODULE			



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

Copyright 2018 Daikin

3P512025-7H 2018.09