

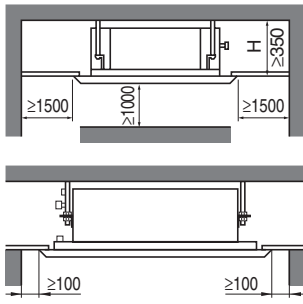
DAIKIN



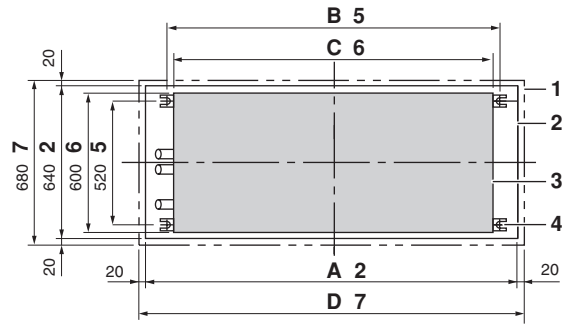
INSTALLATION AND OPERATION MANUAL

***VRV* System air conditioners**

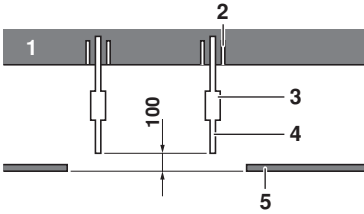
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FXCQ63M8V3B
FXCQ80M8V3B
FXCQ125M8V3B



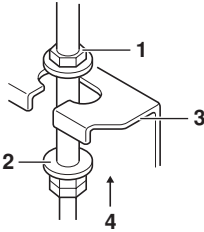
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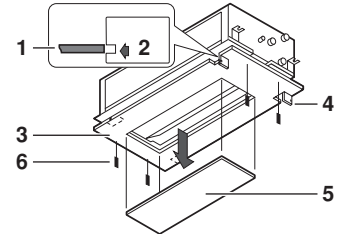
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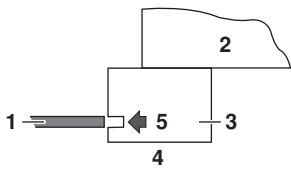
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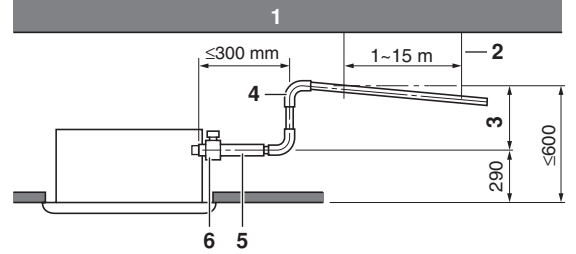
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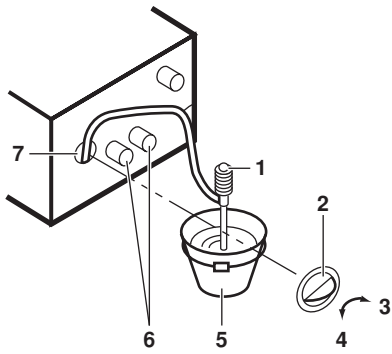
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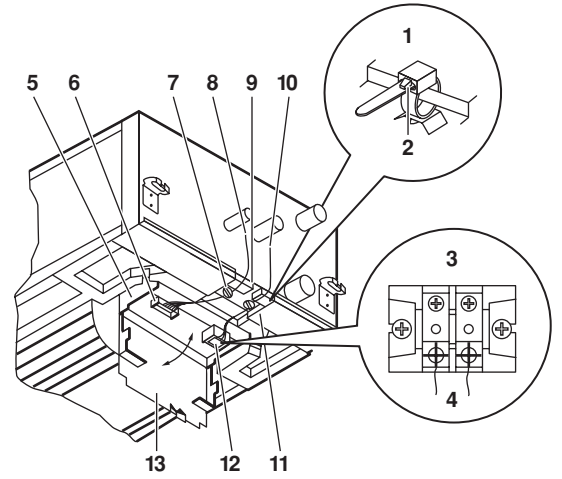
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CE - DECLARATION-OF-COMFORMITY
CE - KONFORMITÄTSERKÄRNING
CE - DECLARATION-DE-CONFORMITE
CE - CONFORMITEITS/VERKLARING

Daikin Europe N.V.

- 01 declares under its sole responsibility that the air conditioning models to which this declar ation relates:
02 erklärt auf seine alleinige Verantwortung daß die Modelle der Klimaanlage für die diese Erklärung bestimmt ist:
03 déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration ont:
04 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditionning units waarop deze verklaring betrekking heeft:
05 dichiara bajo su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
06 dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
07 δηλώνει ότι αποκλειστικά της ευθύνης ότι τα προϊόντα των κλιματιστικών συσκευών στο οποία αναφέρεται η παρούσα δήλωση:
08 declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:
09 заявляет исключительную под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящая заявлени:

FXCQ20M8V3B, FXCQ25M8V3B, FXCQ32M8V3B, FXCQ40M8V3B, FXCQ50M8V3B, FXCQ63M8V3B, FXCQ80M8V3B, FXCQ125M8V3B

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
02 gemäß den Vorschriften der:
03 conforme aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τηρών τον διατάχων των:
08 в соответствии с положениями:
09 as set out in the Technical Construction File DAIKIN.TCF.022 and judged positively by TNO according to the Certificate 0301130401.

02 Hinweis *
03 Remarque *
04 Bemerk *
05 Nota *
06 Nota *
07 Spisúvan *
08 Nota *
09 Примечание *

EN60335-2-40,

- 01 following the provisions of:
02 gemäß den Vorschriften der:
03 overeenkomstig de bepalingen van:
04 seguindo las disposiciones de:
05 secondo le prescrizioni per:
06 με τηρών τον διατάχων των:
07 в соответствии с положениями:
08 as set out in the Technical Construction File DAIKIN.TCF.022 and judged positively by TNO according to the Certificate 0301130401.

01 Note *
02 Hinweis *
03 Remarque *
04 Bemerk *
05 Nota *
06 Nota *
07 Spisúvan *
08 Nota *
09 Примечание *

CE - DECLARACÃO-DE-CONFORMIDADE
CE - ЗАЯВЛЕНИЕ-О-СОТВЕТСТВИИ
CE - OPEYJDELSE/ERKLARING
CE - FÖRSÄKRAN-OM-ÖVERENSÄMMELSE

CE - IZJAVA-O-USKLABENOSTI
CE - ILMOITUS-YHDENMUUKAISLUDESTA
CE - DEKLARACJA-ZGODNOSCI
CE - DECLARAȚIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARACIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLUK-BİLDİRİSİ

- 10 erklærer under eneansvar, at klimaatlegemødelerne, som denne deklaration vedrører:
11 erklärt auf seine alleinige Verantwortung, daß die Luftkonditioniergerätemodelle, die in dieser Deklaration inbegriffen sind:
12 déclare sous sa seule responsabilité que les modèles de climatisation visés par la présente déclaration ont:
13 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditionning units waarop deze verklaring betrekking heeft:
14 dichiara bajo su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
15 dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
16 δηλώνει ότι αποκλειστικά της ευθύνης ότι τα προϊόντα των κλιματιστικών συσκευών στο οποία αναφέρεται η παρούσα δήλωση:
17 declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:
18 заявляет исключительную под своей ответственностью, что модели кондиционеров воздуха, к которым относится настоящая декларация:

FXCQ63M8V3B, FXCQ80M8V3B, FXCQ125M8V3B

08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:
09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
10 overholder følgende standard(er) eller andre andre tekniske dokument(er), forudsat at disse anvendes i henhold til vores instruksjoner:
11 respektive tilsvarende standard(er) eller andre andre tekniske dokument(er), under forudsætning af anvendelse med vores instruktioner:
12 respectivamente con i documenti standard(e) o altri documenti normativi, nel caso di utilizzo secondo le nostre istruzioni:
13 vastaaat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti:
14 za predpostavki, že bodo uporabljali v skladu s našimi pogoji, odgovorili naslednjim normam nebo normativnim dokumentom:
15 в соответствии с приведенными стандартами и/или другим нормативным документом(ами), изъят да се от користе в складу с нашим указаниями:

Low Voltage 73/23/EEC
Machinery Safety 99/37/EEC
Electromagnetic Compatibility 89/336/EEC *

10 Bemerk *
11 Information *
12 Merk *
13 Huom *
14 Poznámka *
15 Napomena *
16 Megjegyzés *
17 Uwaga *
18 Notá *

CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARACIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLUK-BİLDİRİSİ

- 19 zve o odgovornosti izjavlja, da so modeli klimatskih naprav, na katere se zjava nanaša:
20 kinnitab oma täieliku vastutusega, et käesoleva deklaratsiooni alla kuuluvad kliimasüsteemide mudelid:
21 deklaara na svojoto oteporost, že modelite klimatichne instalacii, za korige se otnos nazi deklaracii:
22 vyklyae savo atsakomyie skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 ar plinu atbildnu apliecinu, ka tāk uzskaitlto modeļu gaisa kondicionēāji, uz kuriem attiecas šī deklarācija:
24 vyhlási na vlastnu zodpovednost, že lieo klimatskábné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 lamamen kendi sorumluluğunda onak üzere bu bildirimli ilgili olāju, klima modellerinin ağıđdaki gibi olduğunu beyan eder:

16 megjelölnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerinti használatuk:
17 megfelelnek a következő követelmények normá i más dokumentum normalizációs, pod varunkem že uživate sa zgodnie z našimi instrukciami:
18 sunt în conformitate cu următoarele (normative) standarde (sau altele) documente (normative), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:
19 skladu z naslednjih standardi in drugimi normativi, pod pogojem, da se uporabijo v skladu z našimi navodili:
20 on vastavus järgmistele standarditele või teiste normatiivse dokumente, kui need kasutatakse vastavalt meie juhenditele:
21 соответствует на следующие стандарты или други нормативны документы, при условии, че используются нашіе инструкции:
22 atliinka zemau nurodytus standartus, standartinis ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja lieoti atbilstošs ražotāja norādījumiem, abtās sekojošiem standartiem un citiem normatīviem dokumentiem:
24 su v zrode s naslednjimi (normativni) dokumenti(ami), za predpostavki, že se používajú v súlade s našimi návodymi:
25 úrin, lalimallarm za koje kulanimasi koşuluyla ağıđdaki standartlar ve norm belirlen beğelenele uyumludur:

- 10 Direktiver, as amended.
11 Direktiven, gemäß Änderung.
12 Direktives, telles que modifiées.
13 Richtlijnen, zoals gewijzigd.
14 v pismenosti, jako je izmijenjeno.
15 Smernice, ktoré sa zmenili.
16 irányelvények, amelyek módosítottak.
17 z późniejszych poprawkami.
18 Directivelor, cu amendamentele respective.

19 Opomba *
20 Märkus *
21 Zabeleška *
22 Passaba *
23 Piezīmes *
24 Poznámka *
25 Not *

DAIKIN EUROPE NV
Zandvoordestraat 300, B-8400 Oostende, Belgium

Jiro Tomita
Director Quality Assurance
Ostend, 1st of February 2006

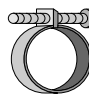






CONTENTS

	Page
Before installation	1
Important information regarding the refrigerant used	2
Selecting installation site	2
Preparations before installation	2
Indoor unit installation	2
Refrigerant piping work	3
Drain piping work	3
Electric wiring work	4
Wiring example and how to set the remote controller	5
Wiring example	5
Field setting	5
Installation of the decoration panel	7
Test operation	7
Maintenance	7
Disposal requirements	8
Wiring diagram	9

- When selecting the installation site, use the supplied paper pattern for installation.
- Do not install accessories on the casing directly. Drilling holes in the casing may damage electrical wires and consequently cause fire.

Accessories

Check if the following accessories are included with your unit.

 Clamp 1 piece	Also used as packing material  Paper pattern for installation 1 piece	 Drain hose 1 piece
 Screws M5 For paper pattern for installation 4 pieces	 Washer for hanging bracket 8 pieces	Insulation for fitting 1 each  for gas pipe
Other: installation and operation manual		 for liquid pipe

Optional accessories

- There are two types of remote controllers: wired and wireless. Select a remote controller according to customers request and install in an appropriate place. Refer to catalogues and technical literature for selecting a suitable remote controller.
- Decoration panel.

For the following items, take special care during construction and check after installation is finished

Tick ✓ when checked	
<input type="checkbox"/>	Is the indoor unit fixed firmly? The unit may drop, vibrate or make noise.
<input type="checkbox"/>	Is the gas leak test finished? It may result in insufficient cooling.
<input type="checkbox"/>	Is the unit fully insulated? Condensate water may drip.
<input type="checkbox"/>	Does drainage flow smoothly? Condensate water may drip.
<input type="checkbox"/>	Does the power supply voltage correspond to that shown on the name plate? The unit may malfunction or components may burn out.
<input type="checkbox"/>	Are wiring and piping correct? The unit may malfunction or components may burn out.
<input type="checkbox"/>	Is the unit safely grounded? Dangerous at electric leakage.
<input type="checkbox"/>	Is the wiring size according to specifications? The unit may malfunction or components may burn out.
<input type="checkbox"/>	Is nothing blocking the air outlet or inlet of either the indoor or outdoor units? It may result in insufficient cooling.
<input type="checkbox"/>	Are refrigerant piping length and additional refrigerant charge noted down? The refrigerant charge in the system might not be clear.

! READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION. KEEP THIS MANUAL IN A HANDY PLACE FOR FUTURE REFERENCE.

IMPROPER INSTALLATION OR ATTACHMENT OF EQUIPMENT OR ACCESSORIES COULD RESULT IN ELECTRIC SHOCK, SHORT-CIRCUIT, LEAKS, FIRE OR OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY TO USE ACCESSORIES MADE BY DAIKIN WHICH ARE SPECIFICALLY DESIGNED FOR USE WITH THE EQUIPMENT AND HAVE THEM INSTALLED BY A PROFESSIONAL.

IF UNSURE OF INSTALLATION PROCEDURES OR USE, ALWAYS CONTACT YOUR DAIKIN DEALER FOR ADVICE AND INFORMATION.

BEFORE INSTALLATION

- Leave the unit inside its packaging until you reach the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, this to avoid damage or scratches to the unit.
- Refer to the installation manual of the outdoor unit for items not described in this manual.
- Caution concerning refrigerant series R410A:
The connectable outdoor units must be designed exclusively for R410A.
- Do not place objects in direct proximity of the outdoor unit and do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once in the unit, such animals can cause malfunctions, smoke or fire when making contact with electrical parts.

Precautions

- Do not install or operate the unit in rooms mentioned below.
 - Places with mineral oil, or filled with oil vapour or spray like in kitchens. (Plastic parts may deteriorate.)
 - Where corrosive gas like sulphurous gas exists. (Copper tubing and brazed spots may corrode.)
 - Where volatile flammable gas like thinner or gasoline is used.
 - Where machines generating electromagnetic waves exist. (Control system may malfunction.)
 - Where the air contains high levels of salt such as air near the ocean and where voltage fluctuates a lot (e.g. in factories). Also in vehicles or vessels.

Notes to the installer

- Read this manual carefully to ensure correct installation. Be sure to instruct the customer how to properly operate the system and show him/her the enclosed operation manual.
- Explain to the customer what system is installed on the site. Be sure to fill out the appropriate installation specifications in the chapter "What to do before operation" of the outdoor unit operation manual.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.

Refrigerant type: R410A
GWP⁽¹⁾ value: 1975

⁽¹⁾ GWP = global warming potential

Periodical inspections for refrigerant leaks may be required depending on European or local legislation. Please contact your local dealer for more information.

SELECTING INSTALLATION SITE

- 1 Select an installation site where the following conditions are fulfilled and that meets your customer's approval.
 - Where optimum air distribution can be ensured.
 - Where nothing blocks air passage.
 - Where condensate water can be properly drained.
 - Where the false ceiling is not noticeably on an incline.
 - Where sufficient clearance for maintenance and service can be ensured.
 - Where piping between indoor and outdoor units is possible within the allowable limit. (Refer to the installation manual of the outdoor unit.)
 - This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
 - Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances.
(Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)
- 2 Ceiling height
This indoor unit may be installed on ceilings up to 3 m in height.
- 3 Use suspension bolts for installation. Check whether the ceiling is strong enough to support the weight of the indoor unit. If there is a risk, reinforce the ceiling before installing the unit.
(The installation pitch is marked on the paper pattern for installation. Refer to it to check for points requiring reinforcing.)
Space required for installation see [figure 1](#).

PREPARATIONS BEFORE INSTALLATION

1. Relation of ceiling opening to unit and suspension bolt position. (See [figure 2](#))

Model	A	B	C	D
FXCQ20-32	990	820	780	1030
FXCQ40+50	1205	1035	995	1245
FXCQ63	1390	1220	1180	1430
FXCQ80+125	1880	1710	1670	1920

- 1 Decoration panel
- 2 Ceiling opening
- 3 Indoor unit
- 4 Suspension bolt (x4)
- 5 Suspension pitch
- 6 Unit outside dimensions
- 7 Panel outside dimensions

2. Make the ceiling opening needed for installation where applicable. (For existing ceilings.)
 - Refer to the paper pattern for installation for the ceiling opening dimensions.
 - Create the ceiling opening required for installation. From the side of the opening to the casing outlet, implement the refrigerant and drain piping and wiring for remote controller (unnecessary for wireless type) and indoor-outdoor unit casing outlet. Refer to each piping or wiring section.
 - After making an opening in the ceiling, it may be necessary to reinforce ceiling beams to keep the ceiling level and to prevent it from vibrating. Consult the builder for details.

3. Install the suspension bolts. (use either a W3/8 or M10 size bolt.)
Use anchors for existing ceilings, and a sunken insert, sunken anchors or other field supplied parts for new ceilings to reinforce the ceiling in order to bear the weight of the unit. Adjust clearance from the ceiling before proceeding further.
Installation example see [figure 3](#).

- 1 Ceiling slab
- 2 Anchor
- 3 Long nut or turn-buckle
- 4 Suspension bolt
- 5 False ceiling

NOTE All the above parts are field supplied.



For other installation than standard installation, contact your Daikin dealer for details.

INDOOR UNIT INSTALLATION

When installing optional accessories (except for the decoration panel), read also the installation manual of the optional accessories. Depending on the field conditions, it may be easier to install optional accessories before the indoor unit is installed. However, for existing ceilings, install fresh air inlet component kit and branch duct before installing the unit.

1. Install the indoor unit temporarily.
 - Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket.
Securing the hanger bracket see [figure 4](#).

- 1 Field supplied
- 2 Washer (supplied with the unit)
- 3 Hanger bracket
- 4 Tighten (double nut)

2. Fix the paper pattern for installation. (For new ceilings only.)
 - The paper pattern for installation corresponds with the measurements of the ceiling opening. Consult the builder for details.
 - The centre of the ceiling opening is indicated on the paper pattern for installation. The centre of the unit is indicated on the label attached to the unit and on the paper pattern for installation.
 - After cutting out a slit for the unit in the center of the paper pattern for installation (supplied with the unit), install it with the 4 supplied screws.
 - Fold the guide section of the paper pattern for installation and adjust the height of the unit so that the notch in the guide is at the position where you expect the ceiling surface to be. See [figure 5](#).

- 1 Ceiling
- 2 Lower surface of ceiling
- 3 Paper pattern for installation (supplied with the unit)
- 4 Guide section (4 corners)
- 5 Cut-out section
- 6 Screws (x4 supplied with the unit)

3. Adjust the height of the unit. (For existing ceilings only.)
Cut out the guide section of the supplied paper pattern for installation, place on the bottom surface of the unit, and adjust the height of the unit so that the notch of the guide matches the lower surface of the ceiling. See figure 6.

- 1 Ceiling
- 2 Unit body
- 3 Guide portion
- 4 Unit height adjustment
- 5 Lower surface of ceiling

4. Adjust the unit to the right position for installation.
(Refer to the chapter "Preparations before installation" on page 2)
5. Check if the unit is horizontally levelled.
- Do not install the unit tilted. The indoor unit is equipped with a built-in drain pump and float switch.
(If the unit is tilted against condensate flow, the float switch may malfunction and cause water to drip.)
 - Check if the unit is levelled at all four corners with a water level or a water-filled vinyl tube as shown in figure 7.

- 1 Water level
- 2 Vinyl tube

6. Remove the paper pattern for installation (For new ceilings only.)

REFRIGERANT PIPING WORK

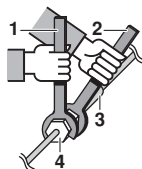
For refrigerant piping of outdoor unit, refer to the installation manual supplied with the outdoor unit.

Before rigging tubes, check which type of refrigerant is used.

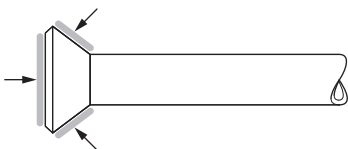
! All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.

- Use a pipe cutter and flare suitable for R410A.
- Apply ether oil or ester oil around the flare portions before connecting.
- To prevent dust, moisture or other foreign matter from infiltrating the tube, either pinch the end, or cover it with tape.
- The outdoor unit is charged with refrigerant.
- Be sure to use both a spanner and torque wrench together when connecting or disconnecting pipes to/from the unit.

- 1 Torque wrench
- 2 Spanner
- 3 Piping union
- 4 Flare nut

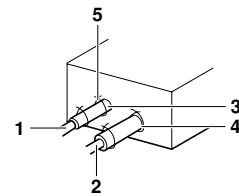


- Do not mix anything other than the specified refrigerant, such as air, etc., inside the refrigerant circuit.
- Refer to Table 1 for the dimensions of flare nut spaces and the appropriate tightening torque. (Overtightening may damage the flare and cause leaks.)
- When connecting the flare nut, coat the flare both inside and outside with ether oil or ester oil and initially tighten by hand 3 or 4 turns before tightening firmly.
Coat here with ether oil or ester oil



- Check the pipe connector for gas leaks.

- 1 Liquid pipe
- 2 Gas pipe
- 3 Insulation for fitting of liquid line (supplied with the unit)
- 4 Insulation for fitting of gas line (supplied with the unit)
- 5 Clamps (use 2 clamps per insulation)



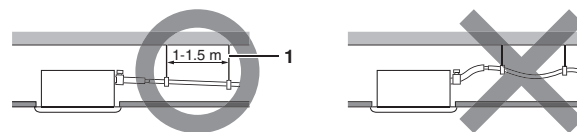
- If the refrigerant gas leaks during the work, ventilate the area. A toxic gas is emitted by the refrigerant gas being exposed to a fire.
- Finally make sure there is no refrigerant gas leak. A toxic gas may be released by the refrigerant gas leaking indoor and being exposed to flames from an area heater, cooking stove, etc.

Table 1

Pipe gauge	Tightening torque	Flare dimension A (mm)	Flare shape
Ø6.4	14.2~17.2 N·m (144~176 kgf·cm)	8.7~9.1	
Ø9.5	32.7~39.9 N·m (333~407 kgf·cm)	12.8~13.2	
Ø12.7	49.5~60.3 N·m (504~616 kgf·cm)	16.2~16.6	
Ø15.9	61.8~75.4 N·m (630~770 kgf·cm)	19.3~19.7	

DRAIN PIPING WORK

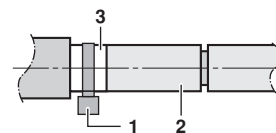
Rig the drain piping as shown in figure and take measures against condensation. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.



- 1 Hanging bar

1. Install the drain pipes.
 - Keep piping as short as possible and slope it downwards so that air may not remain trapped inside the pipe.
 - Keep pipe size equal to or greater than that of the connecting pipe (Vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter).
 - Insert the supplied drain hose into the drain socket, up to the white tape.
 - Tighten the clamp until the screw head is less than 4 mm from the hose.

- 1 Clamp metal
- 2 Drain hose
- 3 White tape (field supply)



- Insulate the drain hose inside the building.
- If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).

How to perform piping (See figure 8)

- 1 Ceiling slab
 - 2 Hanger bracket
 - 3 Adjustable (310 or less)
 - 4 Drain raising pipe
 - 5 Drain hose (supplied with the unit)
 - 6 Clamp metal (supplied with the unit)
- 1 Connect the drain hose to the drain raising pipes, and insulate them.
 - 2 Connect the drain hose to the drain outlet on the indoor unit, and tighten it with the clamp.

Precautions

- Install the drain raising pipes at a height of less than 310 mm.
- Install the drain raising pipes at a right angle to the indoor unit and no more than 300 mm from the unit.

NOTE



- The incline of attached drain hose should be 75 mm or less so that the drain socket does not have to stand additional force.
- To ensure a downward slope of 1:100, install hanging bars every 1 to 1.5 m.
- If unifying multiple drain pipes, install the pipes as shown in figure 9. Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.

- 1 T-joint converging drain pipes
2. After piping work is finished, check if drainage flows smoothly.
 - Open the water inlet lid, add approximately 2 l of water gradually and check the drainage flow.

Method of adding water. See figure 10.

- 1 Portable pump
- 2 Water inlet lid
- 3 Close
- 4 Open
- 5 Bucket
- 6 Refrigerant piping
- 7 Water inlet






If adding water from the charge inlet at the fan casing, be sure to put the lid back in its original position.

When electric wiring work is finished

Check drainage flow during COOL running, explained in chapter "Test operation" on page 7.

When electric wiring work is not finished

- Remove the switch box lid and connect the power supply and remote controller to the terminals. See figure 11.
- 1 Clamps A and B details
 - 2 Clip
 - 3 Terminal board
 - 4 220 V-240 V single phase power supply
 - 5 Electric parts box
 - 6 Terminal board for transmission wiring
 - 7 Clamp B
 - 8 Transmission wiring
 - 9 Guide plate
 - 10 Power supply wiring
 - 11 Clamp A
 - 12 Terminal board for power supply
 - 13 Electric parts box lid

- Next, press the inspection/test operation button  on the remote controller. The unit will engage the test operation mode. Press the operation mode selector button  until selecting fan operation . Then, press the on/off button . The indoor unit fan and drain pump will start up. Check that the water has drained from the unit. Press  to go back to the first mode.

Electric wiring work

General instructions

- All field supplied parts and materials and electric works must conform to local codes.
- Use copper wire only.
- Follow the "Wiring diagram" attached to the unit body to wire the outdoor unit, indoor units and the remote controller. For details on hooking up the remote controller, refer to the "Installation manual of the remote controller".
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal board wiring to the outdoor unit and BS unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.

Electrical characteristics

Model	Hz	Volts	Voltage range
FXCQ20~125	50	230	min.198-max.264

Model	Power supply		Fan motor	
	MCA	MFA	kW	FLA
FXCQ20	0.5	16 A	0.010	0.4
FXCQ25+32	0.5	16 A	0.015	0.4
FXCQ40+50	0.8	16 A	0.020	0.6
FXCQ63	0.9	16 A	0.030	0.7
FXCQ80	1.1	16 A	0.050	0.9
FXCQ125	1.3	16 A	0.085	1.0

MCA: Min. circuit Amps (A)
MFA: Max. Fuse Amps (A)
kW: Fan Motor Rated Output (kW)
FLA: Fan Load Amps (A)

NOTE

For details, refer to "Electrical data".



Specifications for field supplied fuses and wire

Model	Power supply wiring		
	Field fuses	Wire	Size
FXCQ20~125	16 A	H05VV-U3G	Local codes

Model	Transmission wiring	
	Wire	Size
FXCQ20~125	Sheathed wire (2)	0.75-1.25mm ²

NOTE

- For details, refer to the chapter "Wiring example" on page 5.
- Allowable length of transmission wiring between indoor and outdoor units, and between the indoor unit and the remote controller is as follows:
 - Outdoor unit - indoor unit: max. 1000 m (total wiring length: 2000 m)
 - Indoor unit - remote controller: max 500 m

WIRING EXAMPLE AND HOW TO SET THE REMOTE CONTROLLER

How to connect wiring (See figure 11)

- **Power supply wiring**
Remove the switch box lid (1) and connect the wires to the power supply terminal board inside. While doing this, pull the wires inside through the rubber bush A and clamp the wires along with other wires using clamp A, untightening the clip of clamp A by pressing. After the connection, tighten clamp A as before.
- **Unit wiring and remote controller wiring**
Remove the switch box lid (2) and pull the wires inside through the rubber bush B and connect to the terminal board for unit transmission wiring.

Precautions (See figure 12)

- 1 Terminal board for unit transmission wirings
 - 2 Clamp
 - 3 Transmission wiring between units
 - 4 Remote controller wiring
 - 5 Power supply wiring
 - 6 Field supplied wires
 - 7 Power supply terminal board
 - 8 Earth terminal (supplied with the unit)
- 1 Observe the notes mentioned below when wiring to the power supply terminal board.
 - Do not connect wires of different gauge to the same power supply terminal. (Looseness in the connection may cause overheating.)
 - When connecting wires of the same gauge, connect them according to the figure.



- 2 Keep total current of crossover wiring between indoor units less than 12 A. Branch the line outside the terminal board of the unit in accordance with electrical equipment standards, when using two power wiring of a gauge greater than 2 mm² (Ø1.6). The branch must be sheathed in order to provide an equal or greater degree of insulation as power supply wiring itself.
- 3 Do not connect wires of different gauge to the same grounding terminal. Looseness in the connection may deteriorate the protection.
- 4 Remote controller cords and wires connecting the units should be located at least 50 mm away from power supply wiring. Not following this guideline may result in malfunction due to electrical noise.
- 5 For the remote controller wiring, refer to the "Installation manual of the remote controller" supplied with the remote controller.
- 6 Never connect the power supply wiring to the terminal board for transmission wiring. This mistake could damage the entire system.

- 7 Use only specified wires and tightly connect wires to the terminals. Be careful that wires do not place external stress on the terminals. Keep wiring in neat order so that they do not obstruct other equipment such as popping open the service cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in the worse case, electric shock or fire.

WIRING EXAMPLE

- Fit the power supply wiring of each unit with a switch and fuse as shown in figure 13.
 - 1 Power supply
 - 2 Main switch
 - 3 Power supply wiring
 - 4 Transmission wiring
 - 5 Switch
 - 6 Fuse
 - 7 BS unit REYQ only
 - 8 Indoor unit
 - 9 Remote controller

Complete system example (3 systems)

When using 1 remote controller for 1 indoor unit. (Normal operation.) (See figure 14).

For group control or use with 2 remote controllers (See figure 15).

When including BS unit (See figure 16).

- 1 Outdoor unit
- 2 Indoor unit
- 3 Remote controller (Optional accessories)
- 4 Most downstream indoor unit
- 5 For use with 2 remote controllers
- 6 BS unit

NOTE

It is not necessary to designate indoor unit address when using group control. The address is automatically set when the power is activated.

Precautions

1. A single switch can be used to supply power to units on the same system. However, branch switches and branch circuit breakers must be selected carefully.
2. For a group control remote controller, choose the remote controller that suits the indoor unit which has the most functions.
3. Do not ground the equipment on gas pipes, water pipes, lightning rods or crossground with telephones. Improper grounding could result in electric shock.

FIELD SETTING

Field setting must be made on the remote controller in function of the installation condition.

- Setting can be made by changing the "Mode number", "First code No." and "Second code No."
- For setting and operation, refer to the "Field settings" in the installation manual of the remote controller.

Summary of field settings

Mode No. (Note 1)	First code No.	Description of setting	Second code No. (Note 2)				
			01	02	03	04	
10 (20)	0	Filter contamination - Heavy/Light = Setting to define time between 2 filter cleaning display indications. (When contamination is high, setting can be changed to half the time in between 2 filter cleaning display indications.)	Ultra-long-life filter	±10,000 hrs.	±5,000 hrs.		
			Long-life filter	±2,500 hrs.	±1,250 hrs.		
			Standard filter	±200 hrs.	±100 hrs.		
	1	Long-life filter type Change the setting when ultra-long-life filter is installed. This setting is important for time between 2 filter cleaning display indications (refer to 10-0-0X).	Long-life filter	Ultra-long-life filter			
	2	Thermostat sensor selection	Use both the unit sensor (or remote sensor if installed) AND the remote controller sensor. (See note 5+6)	Use unit sensor only (or remote sensor if installed). (See note 5+6)	Use remote controller sensor only. (See note 5+6)		
	3	Setting for display of time between 2 filter cleaning display indications	Display	Do not display			
12 (22)	0	Output signal X1-X2 of the optional KRP1B PCB kit	Thermostat-on + compressor run		Operation	Malfunction	
	1	ON/OFF input from outside (T1/T2 input) = Setting when forced ON/OFF is to be operated from outside.	Forced OFF	ON/OFF operation			
	2	Thermostat differential changeover = Setting when remote sensor is used.	1°C	0.5°C			
	3	Fan setting during thermostat OFF at heating operation	LL	Set speed	OFF (See note 3)		
13 (23)	4	Airflow direction range setting This setting is to be changed when range of swing flap movement needs to be changed.	Upper	Normal	Lower		
			0°C	1°C	2°C	3°C (See note 7)	
			5	Auto-restart after power failure	Disabled	Enabled	
15 (25)	3	Drain pump operation + humidifier interlock	Equipped	Not equipped			
			9	Fixed cool/heat master	Disabled	Enabled	

Note 1: Setting is carried out in the group mode, however, if the mode number inside parentheses is selected, indoor units can also be set individually.

Note 2: Factory settings of the Second code No. are marked in grey backgrounds.

Note 3: Only use in combination with optional remote sensor or when setting 10-2-03 is used.

Note 4: If group control is selected and remote sensor is to be used, then set 10-6-02 & 10-2-03.

Note 5: If setting 10-6-02 + 10-2-01 or 10-2-02 or 10-2-03 are set at the same time, then setting 10-2-01, 10-2-02 or 10-2-03 have priority.

Note 6: If setting 10-6-01 + 10-2-01 or 10-2-02 or 10-2-03 are set at the same time, then setting for group connection, 10-6-01 has priority and for individual connection, 10-2-01, 10-2-02 or 10-2-03 have priority.

Note 7: More settings for Differential automatic change over temperatures are:

Second code No.	05	4°C
	06	5°C
	07	6°C
	08	7°C

Control by 2 Remote Controllers (Controlling 1 indoor unit by 2 remote controllers)

- When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB".

Main/sub changeover

- Insert a wedge-head screwdriver into the recess between the upper and lower part of the remote controller and, working from the 2 positions, pry off the upper part. (See figure 17) (The remote controller PC board is attached to the upper part of the remote controller.)
- Turn the main/sub changeover switch on one of the two remote controller PC boards to "S". (See figure 18) (Leave the switch of the other remote controller set to "M".)

- Remote controller PC board
- Factory setting
- Only one remote controller needs to be changed

Computerised control (forced off and on/off operation)

- Wire specifications and how to perform wiring.
 - Connect input from outside to terminals T1 and T2 of the terminal board (remote controller to transmission wiring).

Wire specification	Sheathed vinyl cord or cable (2 wire)
Gauge	0.75-1.25 mm ²
Length	Max. 100 m
External terminal	Contact that can ensure the minimum applicable load of 15 V DC, 10 mA

See figure 19.

- Input A
- Actuation
 - The following table explains "forced off" and "on/off operations" in response to input A.

Forced off	on/off operation
Input "on" stops operation	input off → on: turns on the unit (impossible by remote controllers)
Input "off" enables control	input on → off: turns off the unit (by remote controller)

- How to select forced off and on/off operation
 - Turn the power on and then use the remote controller to select operation.
 - Set the remote controller to the field set mode. For details, refer to the chapter "How to set in the field", in the remote controller manual.
 - When in the field set mode, select mode No. 12, then set the first code (switch) No. to '1'. Then set second code (position) No. to '01' for forced off and to '02' for on/off operation. (forced off at factory set.) (See figure 20)

- Second code No.
- Mode No.
- First code No.
- Field set mode

Centralized control

- For centralized control, it is necessary to designate the group No. For details, refer to the manual of each optional controller for centralized control.

INSTALLATION OF THE DECORATION PANEL

Refer to the installation manual attached to the decoration panel.

After installing the decoration panel, ensure that there is no space between the unit body and decoration panel.

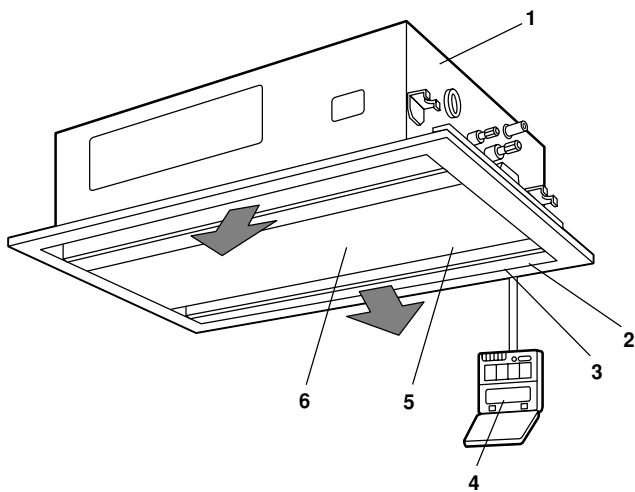
TEST OPERATION

Refer to the installation manual of the outdoor unit.

- The operation lamp of the remote controller will flash when an error occurs. Check the error code on the liquid crystal display to identify the trouble. An explanation of error codes and the corresponding trouble is provided on "Caution for servicing" sticker on the indoor units switch box.

Precautions

In case something is wrong with the unit and it does not operate, refer to the malfunction diagnosis label attached to the unit.




- 1 Drain pumping device (built-in) drain water is removed from the room during cooling
- 2 Air flow flap (at air outlet)
- 3 Air outlet
- 4 Remote controller
- 5 Air inlet
- 6 Air filter (inside suction grille)

MAINTENANCE

IMPORTANT

- ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE.
- BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED.
- DO NOT USE WATER OR AIR OF 50°C OR HIGHER FOR CLEANING AIR FILTERS AND OUTSIDE PANELS.

How to clean the air filter

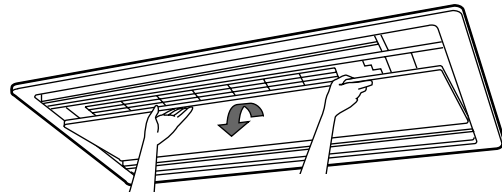
Clean the air filter when the display shows "  " (TIME TO CLEAN AIR FILTER).


Increase the frequency of cleaning if the unit is installed in a room where the air is extremely contaminated.

(As a yardstick for yourself, consider cleaning the filter once a half year.)

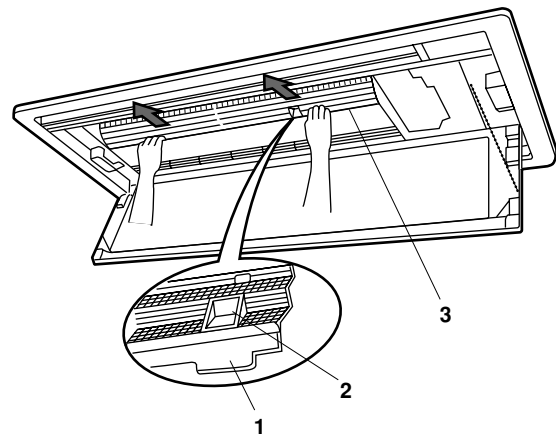
If dirt becomes impossible to clean, change the air filter. (Air filter for exchange is optional.)

1. Open the suction grille.
Grip the suction grille on one side, and open by pulling toward yourself while holding it up.



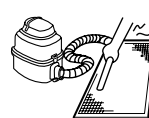
NOTE  Do not let go of the suction grille when opening or closing it. If released, the grille will spring back closed.

2. Remove the air filters.
Push the air filters operation section with both hands in the direction indicated by the arrow, undo the air filter clips, and take out downward.



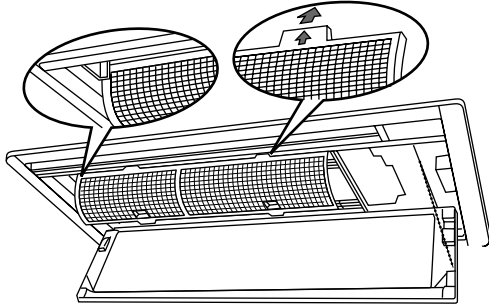
- 1 Clip
- 2 Operation section
- 3 Air filter

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



Remove water and dry in the shade.

- 4. Fix the air filter.
With the air filter's arrow direction facing upward, push up along the guide.
Replace the air filter by performing the filter removal procedure in reverse.



- 5. Shut the air inlet grille.
Refer to item No. 1.
- 6. After turning power on, press the FILTER SIGN RESET button.
The "TIME TO CLEAN AIR FILTER" display disappears.
(For details, refer to the operation manual of the outdoor unit.)

NOTE Do not remove the air filter except when cleaning.
Unnecessary handling may damage the filter.

How to clean the air outlet and outside panels

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

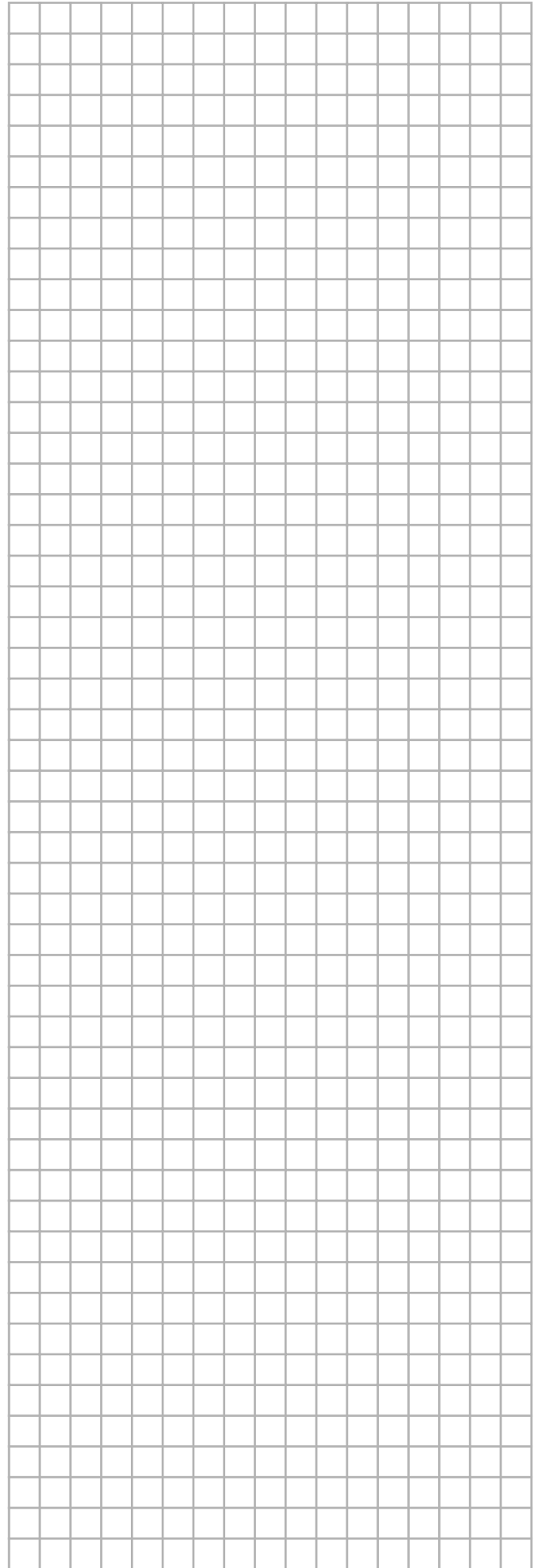
NOTE

- Do not use gasoline, benzene, thinner, polishing powder nor liquid insecticide. It may cause discolouring or warping.
- Do not let the indoor unit get wet. It may cause electric shock or fire.
- Clean the air suction grille when it is closed.

DISPOSAL REQUIREMENTS

Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

NOTES



WIRING DIAGRAM

	: FIELD WIRING
	: TERMINAL
	: CONNECTOR
	: WIRE CLAMP
	: PROTECTIVE EARTH (SCREW)

BLK	: BLACK
BLU	: BLUE
ORG	: ORANGE
PNK	: PINK
RED	: RED
WHT	: WHITE
YLW	: YELLOW

33H	.....	FLOAT SWITCH
33S	.....	LIMIT SWITCH (SWING FLAP)
A1P	.....	PRINTED CIRCUIT BOARD
C1R	.....	CAPACITOR (M1F)
F1T	.....	THERMAL FUSE (125°C)(M1F EMBEDDED)
F1U	.....	FUSE (250 V/5 A)
F2U	.....	FIELD FUSE
HAP	.....	LIGHT EMITTING DIODE (SERVICE MONITOR - GREEN)
M1F	.....	MOTOR (INDOOR FAN)
M1P	.....	MOTOR (DRAIN PUMP)
M1S	.....	MOTOR (SWING FLAP)
Q2E	.....	EARTH LEAK DETECTOR
R1T	.....	THERMISTOR (AIR)
R2T,R3T	.....	THERMISTOR (COIL)
RyA	.....	MAGNETIC RELAY (M1S)
RyF1-3	.....	MAGNETIC RELAY (M1F)
RyP	.....	MAGNETIC RELAY (M1P)
X1M	.....	TERMINAL STRIP (POWER)
X2M	.....	TERMINAL STRIP (CONTROL)
T1R	.....	TRANSFORMER (220-240 V/22 V)
Y1E	.....	ELECTRONIC EXPANSION CIRCUIT

RECEIVER/DISPLAY UNIT (ATTACHED TO WIRELESS REMOTE CONTROLLER)

A2P,A3P	.....	PRINTED CIRCUIT BOARD
BS	.....	ON/OFF BUTTON
H1P	.....	LIGHT EMITTING DIODE (ON - RED)
H2P	.....	LIGHT EMITTING DIODE (TIMER - GREEN)
H3P	.....	LIGHT EMITTING DIODE (FILTER SIGN - RED)
H4P	.....	LIGHT EMITTING DIODE (DEFROST - ORANGE)
SS1	.....	SELECTOR SWITCH (MAIN/SUB)
SS2	.....	SELECTOR SWITCH (WIRELESS ADDRESS SET)

CONNECTOR FOR OPTIONAL PARTS

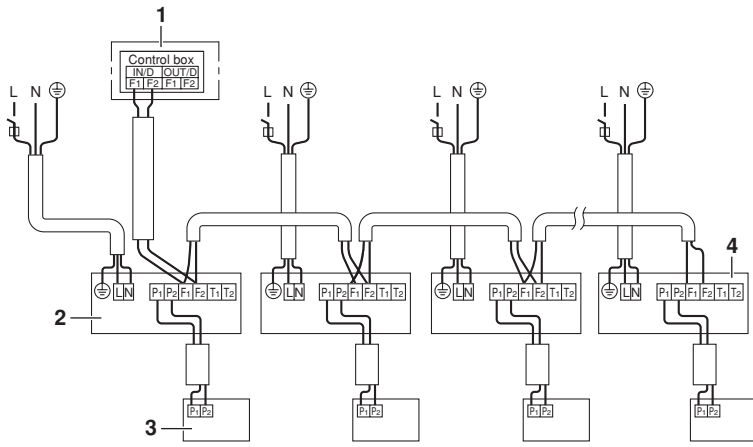
X18A	.....	CONNECTOR (ADAPTOR FOR ELECTRICAL APPENDICES)
X23A	.....	CONNECTOR (WIRELESS REMOTE CONTROLLER)

RECEIVER/DISPLAY UNIT	:
WIRED REMOTE CONTROLLER	:
SWITCH BOX	:
TRANSMISSION WIRING	:
INPUT FROM OUTSIDE	:
CENTRAL REMOTE CONTROLLER	:

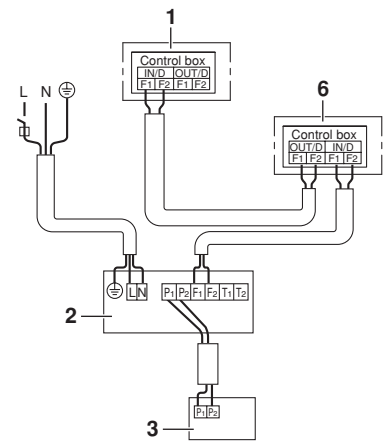
NOTE



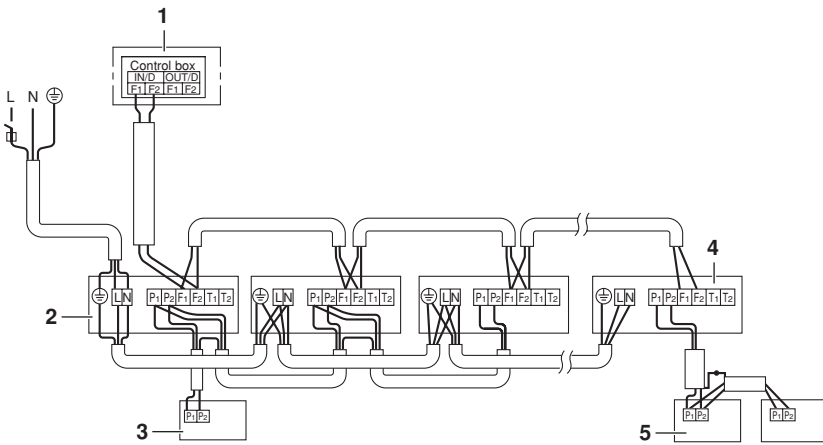
1. WHEN USING THE CENTRAL REMOTE CONTROLLER, SEE MANUAL FOR CONNECTION TO THE UNIT.
2. X23A IS CONNECTED WHEN THE CENTRAL REMOTE CONTROLLER IS USED.
3. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY THE REMOTE CONTROLLER. SEE INSTALLATION MANUAL FOR MORE DETAILS.



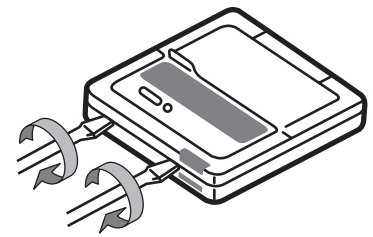
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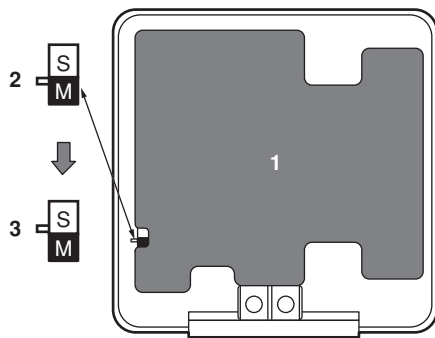
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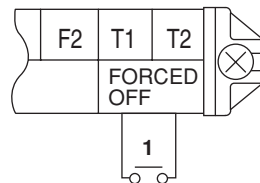
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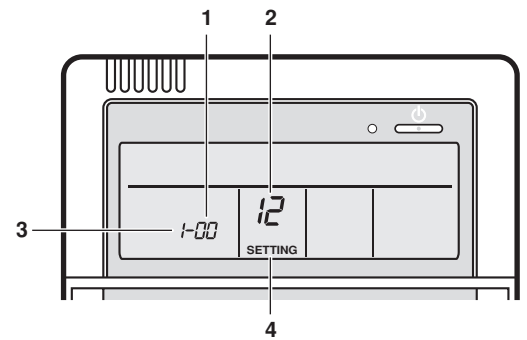
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