

INSTALLATION AND OPERATION MANUAL

IRV System air conditioners

FXLQ20P7VEB

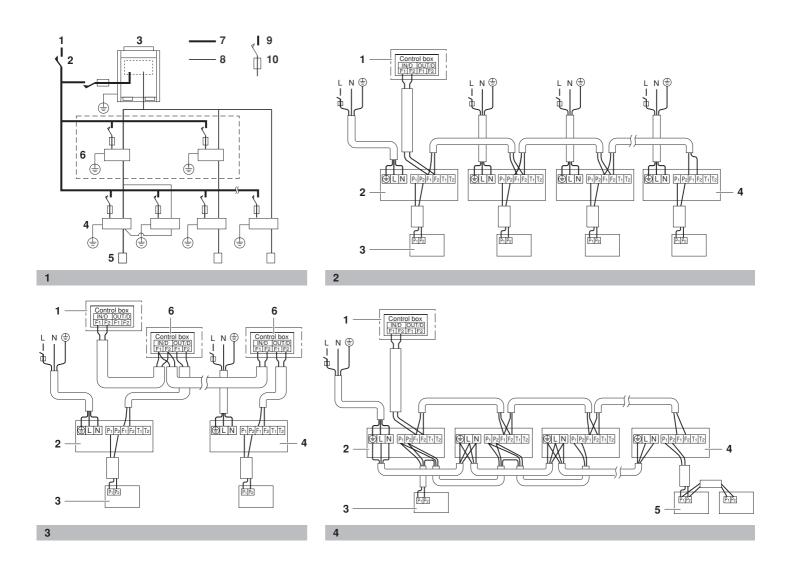
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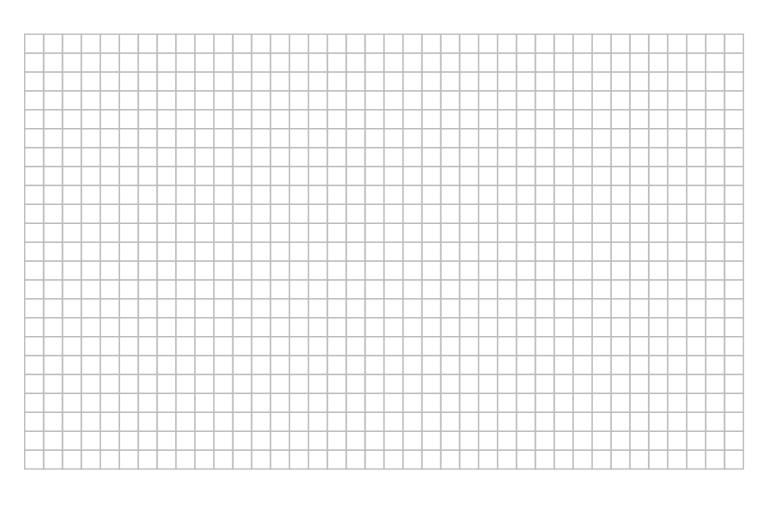
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NOTES



E - DECLARATION-OF-CONFORMITY
E - KONFORMITÀTSERKLÄRUNG
E - DECLARATION-DE-CONFORMITE
E - CONFORMITEITSVERKLARING ភុគុគុគ

DECLARACION-DE-CONFORMIDAD DICHIARAZIONE-DI-CONFORMITA ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ $\dot{\Theta}\dot{\Theta}\dot{\Theta}\dot{\Theta}$

CE - DECLARAÇÃO-DE-CONFORMIDADE CE - 3ARBJIEHME-O-COOTBETCTBUM CE - OPFYLDELSESERKLÆRING CE - FORSÅKRAN-OM-ÖVERENSTÄMMELSE

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

CE - IZJAVA-O-USKLAĐENOSTI CE - MEGFELELŐSÉGI-NYILATKOZAT CE - DEKLARACJA-ZGODNOŚCI CE - DECLARAŢIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI CE - VASTAVUSDEKLARATSIOON CE - ДЕКЛАРАЦИЯ-3A-CЪOTBETCTBИE

CE - ATTIKTIES-DEKLARACIJA CE - ATBILSTĪBAS-DEKLARĀCIJA CE - VYHLÁSENIE-ZHODY CE - UYUMLULUK-BILDĪRĪSĪ

01 (GB) declares under its sole responsibility that the air conditioning models to which this declaration relates:

D erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist:

04 (NE) verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft: 03 (F) déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:

05 (E) declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:

07 GB) δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιμαπιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση: 06 (1) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:

08 (P) declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:

99 (еч») заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление: 10 (() erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrører:

11 (S) deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att: 12 (N) erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:

13 (Fin) ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit: 14 (CZ) prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:

16 (H) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik: 15 (HB) izjavljuje pod isključivo vlastitom odgovomošću da su modeli klima uređaja na koje se ova izjava odnosi

17 (PL) deklanuje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja: 18 (RO) declară pe proprie răspundere că aparatele de aer conditionat la care se referă această declarație:

21 (в в) декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация: 20 (EST) kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid: 19 (s.o) z vso odgovomostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:

22 (T) visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija: 23 🕑 ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija:

24 (SK) vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzť ahuje toto vyhlásenie:

25 (死) tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder.

FXLQ20P7VEB*, FXLQ25P7VEB*, FXLQ32P7VEB*, FXLQ40P7VEB*, FXLQ50P7VEB*, FXLQ63P7VEB* *=, ,1,2,3,...,9

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our

02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:

03 sont conformes à lalaux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions: 04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies

05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con 06 sono conformi al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nuestras instrucciones:

07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοπαισύνται nostre istruzioni:

αήπφωνα με τις οδηγίες μας:

08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de 09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим acordo com as nossas instruções:

инструкциям: 10 overholder falgende standardjen, eller andetlandre retningsgivende dokumentjen, forudsat at disse anvendes i henhold til vone instrukser:

11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er), eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:

12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at 13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme disse brukes i henhold til våre instrukser:

14 za předpokladu, že jsou využívány v souladu s našími pokyny, odpovídají následujícím normám nebo normatívním dokumentům: 15 u skladu sa slijedečím standardom(ima) ili drugim normatívním obkumentom(ima), uz uvjet da se oni koriste u skladu s naším uputama:

21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват сълласно нашите 20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele: 22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su saļyga, kad yra naudojami pagal mūsų nurodymus: 19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili: conformitate cu instrucțiunile noastre

17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi 18 sunt în conformitate cu următorul (următoarele) standard(e) sau att(e) document(e) normativ(e), cu condiția ca acestea să fie utilizate în

16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:

25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve nom belirten belgelerle uyumludur:

24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade

23 tad. ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem:

s našim návodom:

EN60335-2-40,

19 ob upoštevaniu določb: 10 under iagttagelse af bestemmelserne i: 17 zgodnie z postanowieniami Dyrektyw: 12 gitt i henhold til bestemmelsene i: 14 za dodržení ustanovení předpisu: noudattaen määräyksiä: 18 în urma prevederilor: 15 prema odredbama: 11 enligt villkoren i 16 követi a(z): 03 conformément aux stipulations des: 04 overeenkomstig de bepalingen van: з соответствии с положениями: 07 με τήρηση των διατάξεων των: 05 siguiendo las disposiciones de: 08 de acordo com o previsto em: gemäß den Vorschriften der: 06 secondo le prescrizioni per: 01 following the provisions of: 8

22 laikantis nuostatų, pateikiamų: 23 ievērojot prasības, kas noteiktas: 25 bunun koşullarına uygun olarak 21 следвайки клаузите на: 24 održiavajúc ustanovenia: 20 vastavalt nõuetele:

jotka on esitetty asiakirjassa < A> ja jotka < B> on hyväksynyt Sertifikaatin < C> mukaisesti. jak bylo uvedeno v <A> a pozitívně zjištěno v kako je izloženo u <A> i pozitivno ocijenjeno od som det fremkommer i <A> og gjennom positiv bedømmelse av ifølge Ser tiffikat <C>. enligt <A> och godkänts av enligt strane prema Certifikatu <C>. souladus osvědčením <C> Certifikatet <C>. Information * Napomena * 14 Poznámka* 12 Merk * 13 Huom * 5 από το σύμφωνα με το Πιστοποιητικό <C> όπως καθορίζεται στο <Α> και κρίνεται θετικά tal como estabelecido em <A> e com o parecer positivo de de acordo com o Certificado <C som anført i

 som anført i

 henhold til Certifikat
 delineato nel <A> e giudicato positivamente положительным решением <В> согласно как указано в <А> и в соответствии с

da secondo il Certificato <C>.

07 Σημείωση *

08 Nota*

tel que défini dans <A> et évalué positivement par

Remarque 02 Hinweis*

ខ

conformément au Certificat <C>. overeenkomstig Certificaat <C>.

wie in der <A> aufgeführt und von positiv beurteilt gemäß Zertifikat <C>. as set out in <A> and judged positively by

according to the Certificate <C>.

Note *

5

Nota*

8

Свидетельству <С>

10 Bemærk *

positivamente por **** de acuerdo con el **Certificado <C>**. como se establece en <A> y es valorado

Примечание,

8

zoals vermeld in <A> en positief beoordeeld door

Bemerk *

05 Nota *

21 Забележка * както е изложено в <A> и оценено 09 Директив со всеми поправками. a(z) <A> alapján, a(z) igazolta a megfelelést, zgodnie z dokumentacją < A>, pozytywną opinią a(z) <C> tanúsítvány szerint.

16 Megjegyzés* 17 Uwaga *

25 Değiştirilmiş halleriyle Yönetmelikler.

16 irányelv(ek) és módosításaik rendelkezéseit. 18 Directivelor, cu amendamentele respective.

07 Οδηγιών, όπως έχουν τροποποιηθεί. 08 Directivas, conforme alteração em.

15 Smjernice, kako je izmijenjeno. 17 z późniejszymi poprawkami.

14 v platném znění.

05 Directivas, según lo enmendado. 03 Directives, telles que modifiées. 04 Richtlijnen, zoals geamendeerd.

*

Machinery 2006/42/EC (29/12/2009 →) Electromagnetic Compatibility 2004/108/EC

Machinery 98/37/EC (→ 29/12/2009)

Low Voltage 2006/95/EC

06 Direttive, come da modifica.

02 Direktiven, gemäß Änderung.

01 Directives, as amended.

21 Директиви, стехните изменения.

23 Direktīvās un to papildinājumos.

24 Smernice, v platnom znení.

22 Direktyvose su papildymais.

Direktiivejä, sellaisina kuin ne ovat muutettuina.

19 Direktive z vsemi spremembami.

10 Direktiver, med senere ændringer. 11 Direktiv, med företagna ändringar. 12 Direktiver, med foretatte endringer

Direktiivid koos muudatustega.

kaip nustatyta <A> ir kaip teigiamai nuspręsta pagal Sertifikatą <C>. kā norādīts <A> un atbilstoši pozitīvajam vērtējumam saskanā ar sertifikātu <C>. положително от <В> съгласно Сертификата <С>. 24 Poznámka * 23 Piezīmes* 22 Pastaba* kot je določeno v <A> in odobreno s strani v aşa cum este stabilit în <A> și apreciat pozitiv de în conformitate cu Certificatul <C>.

 | Świadectwem <C>.

ako bolo uvedené v <A> a pozitívne zistené v <A>'da belirtildiği gibi ve <C> Sertifikasına olumlo tarafından súlade s osvedčením <C>. değerlendirildiği gibi. **%** * S

22

didetud järgi vastavalt sertifikaadile <C>.

nagu on näidatud dokumendis <A> ja heaks

skladu s certifikatom <C>

19 Opomba 20 Märkus*

18 Notă*

0510260101 ဂ္စ olarak

DAIKIN.TCF.024D23/02-2009

۹ ę

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DAIKIN 4PW53090-1A

Ostend, 28th of September 2009 Director Quality Assurance Jiro Tomita

OVITEVITO

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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.

The English text is the original instruction. Other languages are translations of the original instructions.



Installation must be done by a licensed technician. The choice of materials and installation must comply with the applicable national and international regulations.

BEFORE INSTALLATION

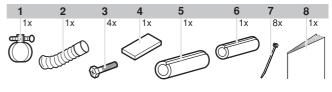
- Leave the unit inside its packaging until you reach the installation site. Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, this to avoid damage or scratches to the unit.
- Refer to the installation manual of the outdoor unit for items 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.
- When moving the unit while removing it from the carton box, be sure to lift it without exerting any pressure on other parts, especially the refrigerant piping, drain piping and other resin 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.
 - Where there is no risk of flammable gas leaking.
 - The equipment is not intended for use in a potentially explosive atmosphere.
- Do not install accessories on the casing directly. Drilling holes in the casing may damage electrical wires and consequently cause fire
- This appliance is not intended for use by persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
 - Children should be supervised to ensure that they do not play with the appliance.

Accessories

Check if the following accessories are included with your unit.



- Metal clamp
- 2 Drain hose
- 3 Leveling screw
- 4 Sealing pad
- 5 Insulation for gas pipe
- 6 Insulation for liquid pipe
- 7 Clamp

8

Installation and operation manual

Optional accessories

There are two types of remote controllers: wired and wireless.

- Select a remote controller according to customer request and install in an appropriate place.
- Refer to catalogues and technical literature for selecting a suitable remote controller.

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

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

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.
- This unit can be installed on the floor or be mounted to a wall.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

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

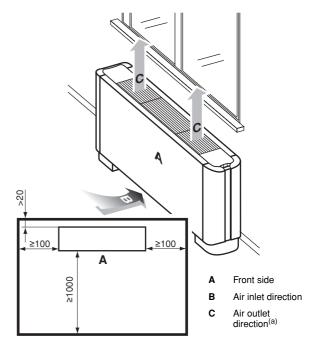
Refrigerant type: R410A GWP⁽¹⁾ value: 1975

(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

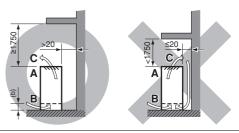
- 1 Select an installation site where the following conditions are fulfilled and that meets your customer's approval.
 - Where optimum air distribution can be ensured.
 - Where nothing blocks air passage.
 - Where condensate water can be properly drained.
 - Where the floor or wall is strong enough to bear the indoor unit weight.
 - 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.)
 - When installing the wireless remote controller kit, the distance between wireless remote controller and indoor unit might be shorter if there are fluorescent lights who are electrically started in the room. The indoor unit must be installed as far as possible away from fluorescent lights.
 - Do not place objects that are susceptible to moisture directly beneath the indoor or outdoor units. Under certain conditions, condensation on the main unit or refrigerant pipes, air filter dirt or drain blockage may cause dripping, resulting in fouling or failure of the object concerned.





2

Make sure no short circuit of air is caused when placing the unit directly under a windowsill.



⁽a) The air outlet direction can be chosen by rotating the discharge grill.

unit of measurement = mm

⁽b) ≥100 mm in case of wall mounting

INDOOR UNIT INSTALLATION

As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company.

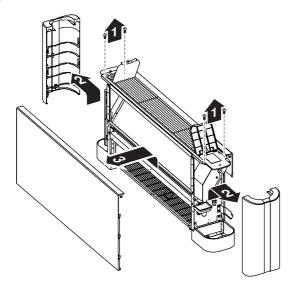
Make sure wiring, piping and drain piping meets your customer's requirements and must comply with local and national regulations.



Ensure the unit is level when installed so that drainage flows smoothly. If inclined, water can leak.

How to open and close the front panel

To open the front panel, remove 4 screws from the corner pieces, unhook the corner pieces and remove the front panel as shown in the figure below.



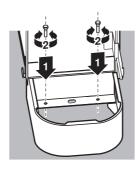
To close the front panel, use the opposite method.

Floorstanding installation



Make sure that the floor is strong enough to bear the unit weight.

 Level the indoor unit with the leveling screws (accessory part).
 If the floor is too uneven to level the unit, place the unit on a flat and level base.

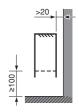


2 If the unit is in danger of falling over, either fasten to the wall using the holes provided, or fasten to the floor with a field supplied floor fastener.

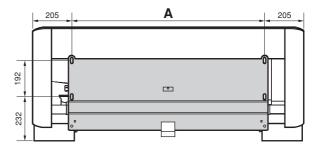
Wallmounted installation



- Check whether the wall is strong enough to bear the weight of the unit. If there is a risk, reinforce the wall before installing the unit.
- Use the installation mount on the rear of the unit for installation.
- The unit requires minimum 100 mm clearance on the underside for air intake and minimum 20 mm clearance from the wall by using spacers (field supply).

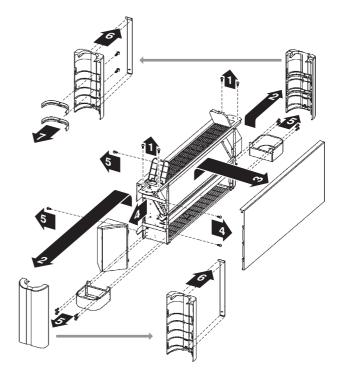


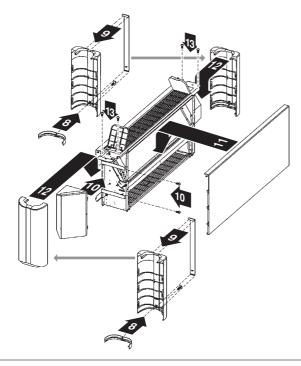
Positioning of holes for fastening to the wall.
 Unit of measurement = mm.



Model	A (mm)
FXLQ20 + FXLQ25	590
FXLQ32 + FXLQ40	730
FXLQ50 + FXLQ63	1010

2 The legs can be removed if the indoor unit is to be hung on a wall. To do so, remove the legs and mount the 2 decorationstrips to the corner pieces as shown in the figures below.





NOTE

When mounting the unit to a wall, operating sound may become bigger.

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 the used refrigerant.
- To prevent dust, moisture or other foreign matter from infiltrating the tube, either pinch the end, or cover it with tape.
- Use copper alloy seamless pipes (ISO 1337).
- The outdoor unit is charged with refrigerant.
- To prevent water leakage, execute heat insulation work completely on both sides of the gas and liquid piping. When using a heat pump, the temperature of the gas piping can reach up to approximately 120°C. Use insulation which is sufficiently heat resistant.
- 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.
- Use annealed material only for flare connections.

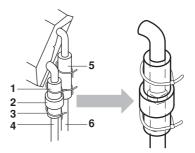
Refer to the table below for the dimensions of flare nut spaces and the appropriate tightening torque. (Overtightening may damage the flare and cause leaks.)

Pipe gauge (mm)	Tightening torque (N·m)	Flare dimension A (mm)	Flare shape
Ø6.4	15~17	8.7~9.1	90°±2
Ø9.5	33~39	12.8~13.2	A 45°22
Ø12.7	50~60	16.2~16.6	R=0.4~0.8
Ø15.9	63~75	19.3~19.7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

When connecting the flare nut, coat the flare inner surface with ether oil or ester oil and initially tighten 3 or 4 turns by hand before tightening firmly.



- 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. If the refrigerant gas leaks during the work, ventilate the area.
- Finally, insulate as shown in the figure below.



- 1 Insulation for gas pipe (accessory part)
- 2 Sealing pad (accessory part) (wrapped over union)
- 3 Clamp (4x accessory part)
- 4 Gas pipe
- 5 Insulation for liquid pipe (accessory part)
- 6 Liquid pipe



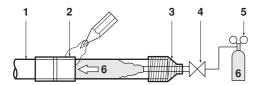
Be sure to insulate local piping all the way into the pipe connections inside the unit.

Exposed piping may cause condensation or may cause burns when touched.

Cautions for brazing

- Be sure to carry out a nitrogen blow when brazing.

 Brazing without carrying out nitrogen replacement or releasing nitrogen into the piping will create large quantities of oxidized film on the inside of the pipes, adversely affecting valves and compressors in the refrigerating system and preventing normal operation.
- When brazing while inserting nitrogen into the piping, nitrogen must be set to 0.02 MPa with a pressure-reducing valve (=just enough so that it can be felt on the skin).



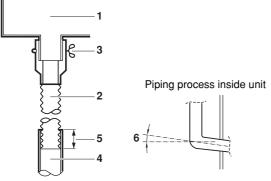
- Refrigerant piping
- 2 Part to be brazed
- 3 Taping
- 4 Hands valve
- 5 Pressure-reducing valve
- 6 Nitrogen

DRAIN PIPING WORK

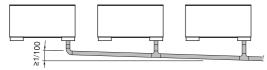
Rig the drain pipe as shown below. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.

1 Carry out the drain piping

Connect the drain hose (accessory part) using the attached hose and parts, as shown in the figure below.



- 1 Drip pan
- 2 Drain hose (accessory part)
- 3 Metal clamp (accessory part)
- 4 3/4" drain pipe
- 5 Cut to a suitable length
- 6 Slope
- 2 If converging multiple drain pipes, install according to the procedure shown below. Use a slope downwards at a gradient of at least 1/100.



Select converging drain pipes with a size that is suitable for the operating capacity of the unit.

- 3 After piping work is finished, check if drainage flows smoothly.Pour approximately 1 liter of water slowly in the air outlet and check drainage flow.
- 4 Be sure to insulate all indoor pipes.



Drain piping connections

- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.
- Keep in mind that the drain pipe will become blocked if water remains in the drain pipe.

ELECTRIC WIRING WORK

General instructions

- All field supplied parts and materials and electric works must be conform to local and national regulations.
- All wiring must be performed by an authorized electrician.
- Use copper wire only.
- Follow the "Wiring diagram" attached to the unit 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".
- Attach the earth leakage circuit breaker and fuse to the power supply line.
- A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in the fixed wiring in accordance with relevant local and national legislation. Note that the operation will restart automatically if the main power supply is turned off and then turned back on again.
- This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B..., and be sure the terminal block 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.
- Be sure to ground the air conditioner.
- Do not connect the ground wire to:
 - gas pipes: might cause explosions or fire if gas leaks.
 - telephone ground wires or lightning rods: might cause abnormally high electric potential in the ground during lightning storms.
 - plumbing pipes: no grounding effect if hard vinyl piping is used
- Make sure electrical wires are stripped equally.



Precautions

- 1 Observe the notes mentioned below when wiring to the power supply terminal board.
 - Use a round crimp-style terminal for insulation sleeve for connection to the terminal block for wiring the units. When none are available, follow the instructions below.



- 1 Round crimp-style terminal
- 2 Attach insulation sleeve
- 3 Wiring
- 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 dimension, connect them according to the figure.







Use the specified electric wire. Connect the wire securely to the terminal. Lock the wire down without applying excessive force to the terminal. Use torques according to the table below.

Terminal	Size	Tightening torque (N·m)
Terminal block for remote controller	M3.5	0.79~0.97
Power supply terminal block	M4	1.18~1.44
Ground terminal	M4	1.44~1.94

- When attaching the control box lid, make sure not to pinch any wires.
- After all wiring connections are done, fill in any gaps in the casing wiring holes with putty or insulation material (field supply) thus to prevent small animals or dirt from entering the unit from outside and causing short circuits in the control box.
- 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 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 dimensions 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 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 control box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in the worse case, electric shock or fire
- 7 Fasten wiring with clamps (accessory part).

Electrical characteristics

			Voltage	Pov sup		Fan m	otor
Model	Hz	Volts	range	MCA	MFA	kW	FLA
20				0.3	15	0.015	0.2
25	50/60	220-240/220	±10%	0.3	15	0.015	0.2
32				0.6	15	0.025	0.5
40				0.6	15	0.025	0.5
50				0.6	15	0.035	0.5
63				0.6	15	0.035	0.5

MCA: Minimum Circuit Amps (A)
MFA: Maximum Fuse Amps (A)
FLA: Full Load Amps (A)

NOTE

For details, refer to "Electrical data" in the technical data book.

Specifications for field supplied fuses and wire

	Power supply wiring		
Model	Field fuses	Wire	Size
20~63	16 A	H05VV-U3G	Local codes

Model	Wire	Size
20~63	Sheathed wire (2)	0.75-1.25 mm ²

NOTE

For details, refer to "Wiring examples" on page 7.



Allowable length of transmission wiring between indoor and outdoor units, and between the indoor unit and the remote controller is as follows:

- 1. Outdoor unit indoor unit: max. 1000 m (total wiring length: 2000 m)
- 2. Indoor unit remote controller: max 500 m

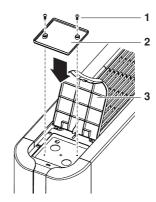
How to install the remote controller and wiring inside the unit

Remote controller installation

NOTE

Refer to the installation manual of the remote controller for instructions on fastening and wiring work.

If mounting a remote controller on the unit, mount the remote controller (optional accessory) as shown in the figure.

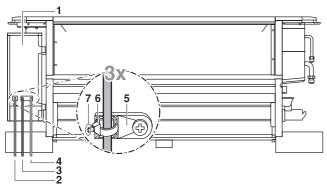


- 1 Installation screw
- 2 Lower case of remote controller
- 3 Lid of control panel

Open the left side lid of the control panel and mount the lower case of the remote controller.

Wiring installation

Remove the control box cover and connect the wiring.

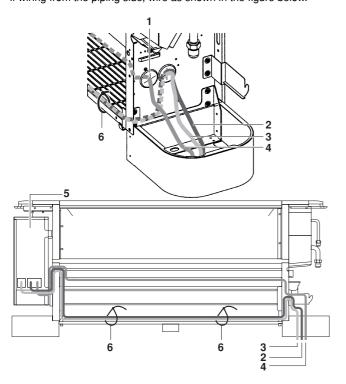


- Control box
- 2 Power supply wiring (field supply)
- 3 Remote controller wiring (field supply)
- 4 Transmission wiring (field supply)
- 5 Clamp fastener
- 6 Clamp (accessory part)
- 7 Cut off excess after fastening

NOTE

For control box wiring, also refer to the "Electric Wiring Diagram" label on the control box cover.

If wiring from the piping side, wire as shown in the figure below.



- 1 Pass through hole of opposite frame panel in same manner
- 2 Remote controller wiring
- 3 Transmission wiring
- 4 Power supply wiring and ground wiring
- 5 Control box
- 6 Fasten with clamp (accessory part)



Do not switch the remote controller wiring, transmission wiring and power supply wiring when connecting the wires to the terminal blocks.

WIRING EXAMPLES

Fit the power supply wiring of each unit with a switch and fuse as shown in figure 1.

1	Power supply	6	BS unit (only for heat
2	Main switch		recovery system)
3	Outdoor unit	7	Power supply wiring
4	Indoor unit	8	Transmission wiring
5	Remote controller	9	Switch
		10	Fuse

Complete system example (3 systems)

When using 1 remote controller for 1 indoor unit. (Normal operation) (See figure 2)

For group control or use with 2 remote controllers (See figure 4)

When including BS unit (See figure 3)

- 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

PRECAUTIONS

- 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.
- For a group control remote controller, choose the remote controller that suits the indoor unit which has the most functions.
- 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.

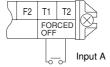
Control by 2 Remote Controllers (Controlling 1 indoor unit by 2 remote controllers)

When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB". Refer to the installatoin manual of the remote controller.

Computerised control (forced off and on/off operation)

- 1 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)
Gau	ge	0.75-1.25 mm ²
Len	gth	Max. 100 m
Exte	ernal terminal	Contact that can ensure the minimum applicable load of 15 V DC, 10 mA



2 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

- 3 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 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.)

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.

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.

Error code	Meaning
88	Error in power supply to indoor unit
Cl	Transmission error between fan driver PCB and controller PCB of the indoor unit
C6	Improper combination of fan driver PCB of the indoor unit or setting failure in control PCB type
U3	Test operation of the indoor unit has not been finished

If any of the items in following table are displayed on the remote controller, there may be a problem with the wiring or power, so check the wiring again.

Error code	Meaning
٨	There is a short circuit at the forced off terminals (T1, T2)
UY or UH	The power on the outdoor unit is off The outdoor unit has not been wired for power supply Incorrect transmission of forced off wiring
no display	The power on the indoor unit is off The indoor unit has not been wired for power supply Incorrect transmission wiring, forced off wiring or remote controller wiring

MAINTENANCE



Caution

- 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.
- Do not wash the air conditioner with water. Doing so may result in an electric shock.
- Do not operate for many hours with opened windows. This may cause condensation.
- Do not stand or place objects on the air conditioner. This could result in injury due falling or turning over.
- Do not place containers with water on the air conditioner.
 - If the containers are turned over, the water could result in equipment failure or electric shock and fire.
- Do not operate the unit with the control panel lid open. If water gets inside the panel, it could result in equipment failure or electric shock.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

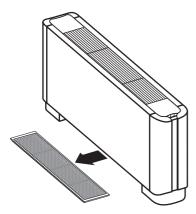
How to clean the air filter

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.

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

Remove the air filter.



2 Clean the air filter.

Use vacuum cleaner (A) or wash the air filter with water (B).

(A) Using a vacuum cleaner



When the air filter is very dirty, use soft brush and neutral detergent.

Remove water and dry in the shade.

- 3 Fix the air filter.
- 4 After turning on the power, press FILTER SIGN RESET button.
 The "TIME TO CLEAN AIR FILTER" display is turned off.

How to clean air outlet and outside panels

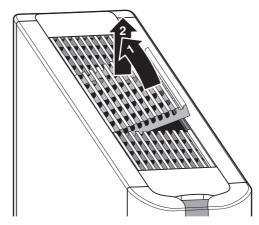
- Clean with soft cloth.
- When it is difficult to remove stains, use water of neutral detergent.
- Clean the air inlet grille when it is shut.

NOTE

Do not use gasoline, benzene, thinner, polishing powder, liquid insecticide. It may cause discolouring or warping.

Do not let the indoor unit get wet. It may cause an electric shock or a fire.

Removal and installation of discharge grill



Lift the rear using the front as a leverage. To install use the opposite method.

NOTE

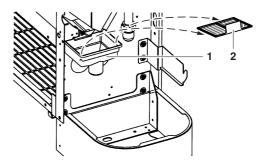


Be sure to install the discharge grill in the same way as before removal. Otherwise the air flow direction will be avers with a short circuit of air or a wrong spreading of air as possible result. Refer to the figures mentioned in the note on page 2.

How to clean the drain strainer

The drain strainer clears dirt out of the drain water and prevents the piping from clogging. However, if the strainer mesh gets clogged, water may overflow. Remove and wash the mesh with water before and after seasons when the unit is in use and once during those seasons.

1 Remove the drain strainer in the drip pan under the drain pan and wash off any dirt that may have accumulated.



- 1 Drip pan
- 2 Drain strainer (take out)
- 2 Return the drain strainer to its previous position so that the strainer does not leak.

NOTE



Because cleaning requires removing the front panel, contact your local dealer.

Start up after a long stop

Confirm the following:

- Check that the air inlet and outlet are not blocked. Remove any obstacle.
- Check if the earth is connected.

Clean the air filter and outside panels.

After cleaning the air filter, make sure to attach it.

Turn on the main power supply switch.

- The control panel display lights when the power is turned on.
- To protect the unit, turn on the main power switch at least 6 hours before operation.

What to do when stopping the system for a long period

Turn on FAN OPERATION for half a day and dry the unit.

Refer to the operation manual of the outdoor unit.

Cut off the power supply.

- When the main power switch is turned on, some wattage is being consumed even if the system is not operating.
- The remote controller display is turned off when the main power switch is turned off.

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.

WIRING DIAGRAM

:TERMINAL BLOCK

O, D- : CONNECTOR

-O- :TERMINAL

::IVE

N :NEUTRAL

C1......CAPACITOR (M1F)
F1U.......FUSE (B, 5 A, 250 V)
HAP......LIGHT EMITTING DIODE
(SERVICE MONITOR - GREEN)
K1R~K3R......MAGNETIC RELAY (M1F)
M1F......MOTOR (INDOOR FAN)
Q1M.....THERMO SWITCH (M1F EMBEDDED)
R1T......THERMISTOR (AIR)
R2T,R3T......THERMISTOR (COIL)

T1R.....TRANSFORMER (220-240 V/22 V)

A1P.....PRINTED CIRCUIT BOARD

WIRED REMOTE CONTROLLER

(OPTIONAL ACCESSORY)

CONTROL BOX (INDOOR)

TRANSMISSION WIRING

CENTRAL REMOTE CONTROLLER

INPUT FROM OUTSIDE

POWER SUPPLY

:

 BLK
 : BLACK
 PNK
 : PINK

 BLU
 : BLUE
 RED
 : RED

 BRN
 : BROWN
 WHT
 : WHITE

 ORG
 : ORANGE
 YLW
 : YELLOW

X1M.....TERMINAL BLOCK (POWER SUPPLY)

X2M.....TERMINAL BLOCK (CONTROL)

Y1EELECTRONIC EXPANSION VALVE

CONNECTOR OPTIONAL ACCESSORY

X18ACONNECTOR (WIRING ADAPTOR FOR ELECTRICAL APPENDICES)

WIRED REMOTE CONTROLLER

R1TTHERMISTOR (AIR)
SS1SELECTOR SWITCH (MAIN/SUB)

NOTE

- 1. WHEN USING THE CENTRAL REMOTE CONTROLLER, SEE MANUAL FOR CONNECTION TO THE UNIT.
- 2. 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.
- 3. USE COPPER CONDUCTORS ONLY.





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