

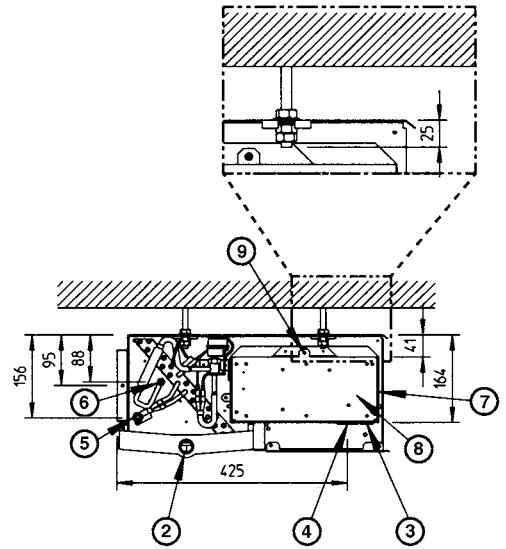
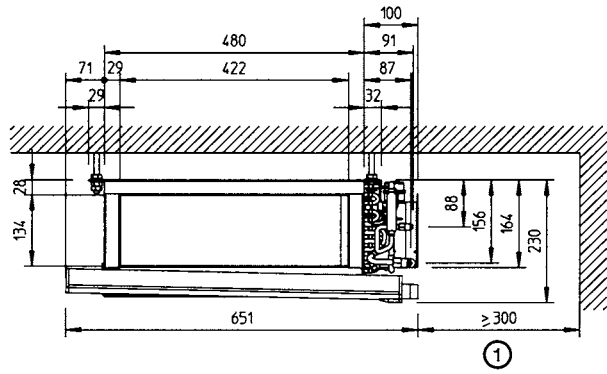
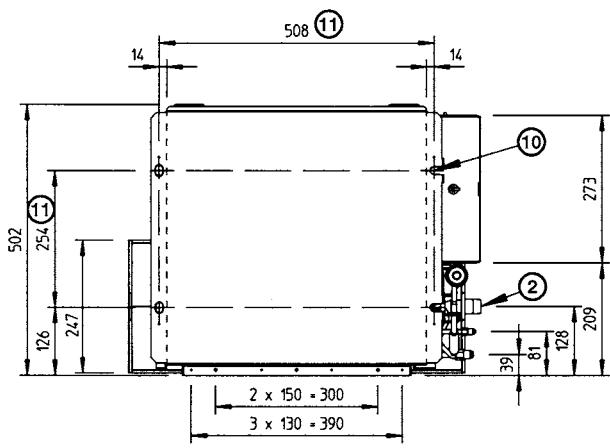
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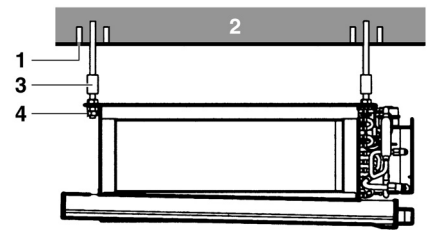
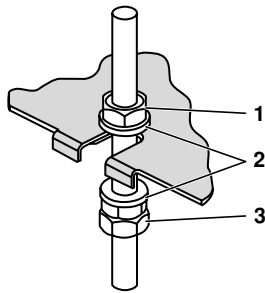
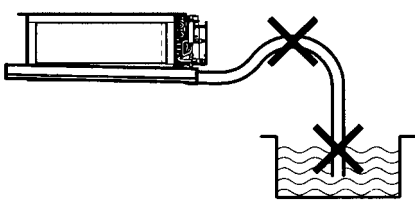
INSTALLATION AND OPERATION MANUAL

***VRV* System air conditioners**

FXDQ20M8V3B
FXDQ25M8V3B



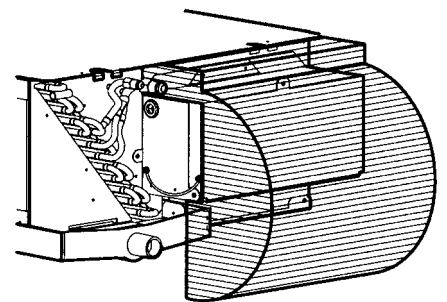
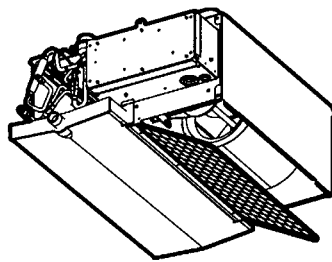
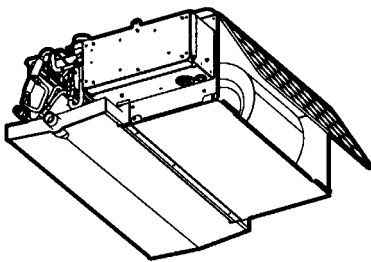
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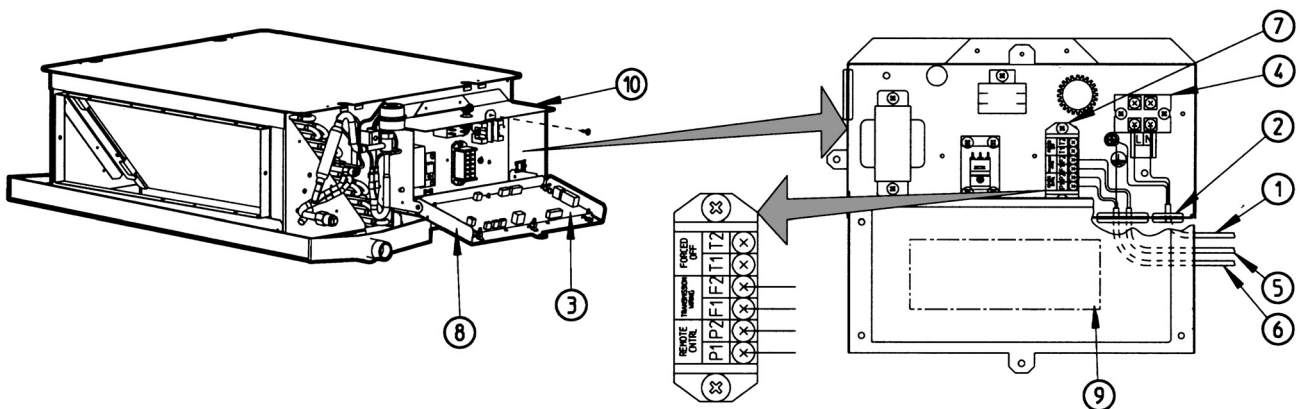
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5a

5b

6



7

CE - DECLARATION-OF-COMFORMITY
CE - KONFORMITÄTSPERKLÄRUNG
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 (air conditionnés) visés par la présente déclaration:
04 verklaart hierbij op eigen verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
05 declara 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 με αποκλειστική της ευθύνη ότι τα ποωτά του κλιματιστικών οαυκωνών 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 исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:

FXDQ20M8V3B, FXDQ25M8V3B

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 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entsprichent/sprechen, unter der Voraussetzung, daß sie gemäß unserer Anweisungen eingesetzt werden:

03 sont conformes à la/aux 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 andere document(en) zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
05 están en conformidad con la/s siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
06 sono conformi all(i) seguente(i) standard(i) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
07 είναι σύμφωνα με το(ι) ακόλουθ(ο) πρότυπο(ι) ή άλλο(ν) έγγραφο(ι) κανονιστικό(ν), υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:

EN60335-2-40,

- 01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément 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:
10 under/parhageelse af bestemmelserne i:
11 enligt villkoren i:
12 gilt i/hendhold til bestemmelserne i:
13 roudatteen määrätksiä:
14 za dodrženi ustanovení předpisu:
15 prema odredbama:
16 kövelli alzi:
17 zgodnie z postanowieniami Dyrektyj:
18 in urma prevederilor:

- 01 Note * as set out in the Technical Construction File DAIKIN.TCF.022 and judged positively by TNO according to the Certificate 0301130401.
02 Hinweis * wie in der Technischen Konstruktionsakte DAIKIN.TCF.022 aufgeführt und von TNO positiv ausgemacht gemäß Zertifikat 0301130401.
03 Remarque * tel que stipulé dans le Fichier de Construction Technique DAIKIN.TCF.022 et jugé positivement par TNO conformément au Certificat 0301130401.
04 Bemerk * zoals vermeld in het Technisch Constructiebesluit DAIKIN.TCF.022 en in orde beaonden door TNO overeenkomstig Certificat 0301130401.
05 Nota * tal como se expone en el Archivo de Construcción Técnica DAIKIN.TCF.022 y juzgado positivamente por TNO según el certificado 0301130401.
06 Nota * delineato nel File Tecnico di Cstruzione DAIKIN.TCF.022 e giudicato positivamente da TNO secondo il Certificato 0301130401.
07 Způsobení * όπως προορίζεται στο Αρχείο Τεχνικών Κατασκευών DAIKIN.TCF.022 και κρίνεται θετικά από το TNO σύμφωνα με το πιστοποιητικό 0301130401.
08 Nota * tal como establecido en el Fichero Técnico de Construcción DAIKIN.TCF.022 e como o parecer positivo de TNO de acuerdo con o Certificado 0301130401.
09 Примечание * как указано в Досье технического толкования DAIKIN.TCF.022 и в соответствии с положительным решением TNO согласно Сертификату 0301130401.

CE - DECLARAÇÃO-DE-CONFORMIDADE
CE - ЗАРБИЈЕЊЕ-О-ОПОТБЕДТВЊИ
CE - OPEVLDELSE/ERKLARING
CE - FÖRSÄKRAN-OM-ÖVERENSÄMMELSE

CE - ERKLÄRUNG OM-SAMSVAR
CE - ILMUOTUS-YHDENMUKAISUDESTA
CE - DEKLARACJA-ZGODNOSCI
CE - DECLARAȚIE-DE-CONFORMITATE

CE - IZJAVA-O-USKLADNOSTI
CE - MEGFELELŐSÉG-NYILATKOZAT
CE - DEKLARACJA-ZGODNOSCI
CE - DECLARAȚIE-DE-CONFORMITATE

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

CE - ATTIKITES-DEKLARACIJA
CE - ATBLISTBAS-DEKLARACIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLUK-BİLDİRİSİ

- 10 00x erklærer under eneansvar, at klimaatlegmodelerne, som denne deklaration vedrører:
11 01 deklarerar i egeensvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
12 02 erklærer et fullstendig ansvar for at de luftkonditioneringsmodeller som berøres av denne deklarasjon innebærer at:
13 03a) verklaart hierbij op eigen verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
14 03b) prohlásuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
15 04) izjavlja pod sklopno vladno odgovornost, da su modeli klima uređaja na koje se ova izjava odnosi:
16 05) teljes felelősség mellett kijelenti, hogy a klímaberendezések modellek, melyekre e nyilatkozat vonatkozik:
17 06) deklaruje na własną wyjątką odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:
18 07) deklará na proprie răspundere că aparatele de aer condiționat la care se referă această declarație:

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 retningsreguleringe dokument(er), forudsat at disse anvendes i henhold til vore instruser:
11 respektive utvingning 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 uslyer eri overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forudsætning at disse bruges i henhold til våre instruktør:
13 nastavaat saaravaten standarden ja muiden objeektisten dokumentiten vaatimukseks edelkõlitan, etta niita kõvitatään objeektineme muudestist:
14 za prepotkat, že sova vzhajvati v skladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:
15 u skladu sa sledjećim standardom(na) ili drugim normativnim dokumentom(na), uz ujet da se oni koriste u skladu s našim uputama:

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

- 10 Bemerk * som anført den Tekniske Konstruktionsfil DAIKIN.TCF.022 og positivt vurderet af TNO i henhold til Certifikat 0301130401.
11 Information * uirtningten er udført enlget med den Tekniske Konstruktionsfilen DAIKIN.TCF.022 som positivt iitvges af TNO vilket også frangar af Certifikat 0301130401.
12 Merk * som det fremkommer, den Tekniske Konstruktionsfilen DAIKIN.TCF.022 og gennem positiv bedømmelse af TNO lølge Serifikat 0301130401.
13 Huom * jukka on esillä Teknisessä Asiakirjassa DAIKIN.TCF.022 ei järkeä TNO on hyväksyntä Serifikatinn 0301130401 mukaisesti.
14 Poznámka * jak bylo uvedeno v souboru technické konstrukce DAIKIN.TCF.022 a pozitivně zjišeno TNO v souladu s oveděním 0301130401.
15 Napomena * kako je izloženo u Doseju o tehničkoj konstrukciji DAIKIN.TCF.022, pozitivno ocjenjeno od strane TNO prema Certificatu 0301130401.
16 Megjegyzés * a(z) DAIKIN.TCF.022 műszaki konstrukciós dokumentációj alapján, a(z) TNO igazolta a megfelelést a(z) 0301130401 tanúsítvány szerint.
17 Uwaga * zgodnie z archiwalną dokumentacją konstrukcyjną DAIKIN.TCF.022, pozytywna opinia TNO i Swiadectwem 0301130401.
18 Nota * conform celor stabilite în Dosarul tehnic de construcție DAIKIN.TCF.022 și apreciate pozitiv de TNO în conformitate cu Certificatul 0301130401.

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

3PW25006-7

- 19 09) z svo odgovornosti izjavlja, da so modeli klimatskih naprav, na katere se zjava nanaša:
20 00) kimata so laiteliku vastutusele, et käesoleva deklaratsiooni alla kuuluvad klimaseadmede mudelid:
21 01) deklaapra na cvoit oTBOepocT, ze moAeTne kMamATeHHAHCTaAH, ze KOTpo ce OTHOcaT TaKH deKOpacHH:
22 02) vislke savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 03) ar plnu atblitbu aplienca, ka taku usklaTito modelu gaisa kondicionaTaji, uz kuriem attiecas šis deklaracija:
24 04) vyhlási na vlnšnu zodpovednost, že lieo klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 05) lamamen kendi sanumuluğunda omak üzere bu bildirimni ilgili oluğu, klima modellerinin eşğıdaki gibi olduğunu beyan eder:

16 megjelölnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerinti használatjuk:
17 megfelelnek a következőkben megadott, vagy egyéb dokumentum normalizációs, pod varunkem že užywane są zgodnie z naszymi instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) (sau al(e) documente) (normative), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:
19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabijo v skladu z našimi navodili:
20 on vastavaus järgmistele standarditele või teiste normatiivse dokumente, kui need kasutatakse vastavalt meie juhenditele:
21 соответствует на следующие стандарты или другие нормативные документы, при условии, что используются согласно нашим инструкциям:
22 allinka zemia nurobytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja leibti atbilstošs račadaja noridijumam, abita serkošiem standartiem un citiem normatīviem dokumentiem:
24 su v zbrode s nasledovny(m) normomaj(m) alebo jinym(i) normativnym(i) dokumentom(ami), za prepotkat, že se používajú v súlade s našimi návodmi:
25 urünin, lalimatlarımız ga kulanimasa koşuluyla eşğıdaki standartlar ve norm belirlen beğelerle uyumludur:

- 10 Direktiver, as amended.
11 Direktiv, med foretagne ændringer.
12 Direktives, leiles que modifiées.
13 Direktivej, leiles sa gnamendeer.
14 v platném znění.
15 Smernice, jako je zmienená.
16 irányelvi(ek) és módosítások rendelkezései.
17 z późniejszych poprawkami.
18 Direktivelor, cu amendamentele respective.
19 Direktiver, med senere ændringer.
20 Direktivrik koos muudatustega.
21 Direktivek, s tevärate muuendena.
22 Direktives su papilijimais.
23 Direktivas un to papildījumos.
24 Smernice, v platnom znení.
25 Deģisģitrijms iatērijte Jotnetmelker.

- 19 Opomba * kaj je doobeno v tehnični mapi DAIKIN.TCF.022 in odobeno s strani TNO v skladu s certifikatom 0301130401.
20 Märkus * rapu on näitaud tehnilises dokumentatsioonis DAIKIN.TCF.022 ja heaks kiitnud TNO järgi vastavat sertifikaadile 0301130401.
21 Zabelečka * kerko e založeno v Akta za tehnička konstrukcija DAIKIN.TCF.022 i oceneno pozitivno od TNO o smacno Certifikatu 0301130401.
22 Passaba * kaj nurobyva tehnične konstrukcije byloje DAIKIN.TCF.022 i pozitivna TNO pagal pažymėjimą 0301130401.
23 Píezimás * ka roekas teinistaja dokumentacija DAIKIN.TCF.022, atbilstušis TNO pozitičajim lēmumam ko apliecina sertifikats 0301130401.
24 Poznámka * ako je to stanoveno v Souboru technické konstrukce DAIKIN.TCF.022 a kladne posúdené TNO podľa Certifikatu 0301130401.
25 Not * DAIKIN.TCF.022 tehnik "apı Dosyasında belirtildiği gibi ve 0301130401 sertifikasına göre TNO tarafından olumlu olarak değerlendirilmiştir.



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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.

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.

- 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.

| Installation and operation manual | Fuse | Caution for servicing sticker | Suction air filter |
|-----------------------------------|------|-------------------------------|--------------------|
| | | | |

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.
- Wiring adaptor for electrical heater.

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. |

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 (See figure 1)

1. Select an installation site where the following conditions are fulfilled and that meets your customer's approval.

- The units are designed for ceiling concealed installation with an air discharge duct of 500 mm. (See figure 13)
- 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.)
- Make sure that no piping is passing through the hatched area (figure 6). Condensation can drip on the switch box and pipes can prevent you from opening the switch box smoothly.
- 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. 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. (See figure 1)

- | | |
|----|--|
| 1 | Service space ≥ 300 |
| 2 | Drain pipe |
| 3 | Power supply wiring port |
| 4 | Transmission wiring port |
| 5 | Gas pipe |
| 6 | Liquid pipe |
| 7 | Switch box |
| 8 | Switch box cover |
| 9 | Screw for opening the switch box cover |
| 10 | Suspension bolt pitch (x4) |
| 11 | Suspension bolt pitch distance |

PREPARATIONS BEFORE INSTALLATION

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

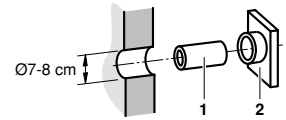
NOTE For other installation than standard installation, contact your Daikin dealer for details.

2. Make the wall hole to the outdoor side for the electric wiring, the refrigerant and drain piping.

- The hole must slope down toward the outdoor side.

- The hole size must be just as large as to hold the protective pipe ($\varnothing 7\text{-}8\text{ cm}$) (field supply).
- Use a wall hole cover (field supply) to hide the wall hole as much as possible.

- 1 Protective pipe (field supply)
- 2 Wall hole cover (field supply)



3. The fan speed for this indoor unit is preset to provide standard external static pressure.

If higher or lower external static pressure is required, reset the external static pressure by changing the initial setting from the remote controller.

4. Install the suspension bolts. (See figure 4)

(Use M10 size bolt for the suspension 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.

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

NOTE All the above parts are field supplied.



INDOOR UNIT INSTALLATION

When installing optional accessories, 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.

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. (See figure 3)

- 1 Field procurement
- 2 Washer for hanger bracket
- 3 Tighten (double nut)

2. Check if the unit is horizontally levelled.

- Do not install the unit tilted.
- Check if the unit is levelled at all four corners with a water level or a water-filled vinyl tube as shown in figure 9.

- 1 Water level
- 2 Vinyl tube

3. Tighten the upper nut.

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.

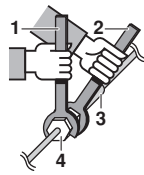


All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.

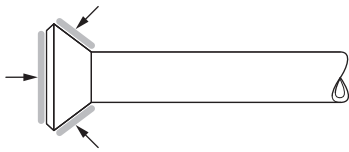
- Use a pipe cutter and flare suitable for R410A.
- Apply ether oil or ester oil around the flare portions before connecting.

- 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



- 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.
- Be sure to insulate the gas pipe and the liquid pipe separately with polyethylene foam insulation material (thermal conductivity = 0.041~0.052 kW/mK).

| | Inside diameter | Wall thickness |
|------------------------|-----------------|----------------|
| Gas pipe insulation | 12~15 mm | 8~10 mm |
| Liquid pipe insulation | 8~10 mm | 7~10 mm |

NOTE For the gas pipe, use a polyethylene foam resistant to a temperature of 110°C.

- ⚠ When inserting the refrigerant piping in the wall hole, take care not to let dust or moisture come into the piping. Protect the pipes with a cap or seal the pipe end completely with tape.

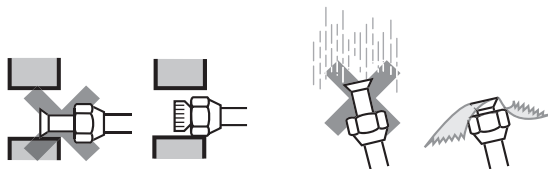
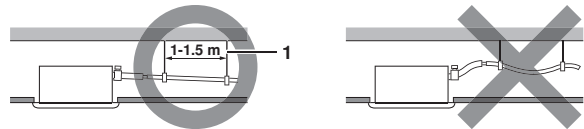


Table 1

| 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 | |
| Ø12.7 | 49.5~60.3 N·m (504~616 kgf·cm) | 16.2~16.6 | |

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.

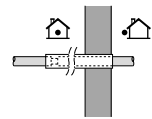


- 1 Hanging bar

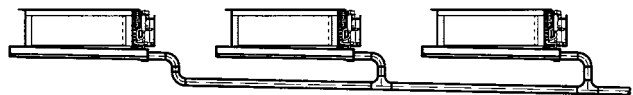
1. Install the drain pipes.

- 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).
- Do not use a trap in the drain piping and never put the end of the hose into water. (See figure 2)
- If you extend the drain hose, always insulate it up to the outdoor side with polyethylene foam insulation material (field supply).

- 1 Drain hose fixed to the indoor unit
- 2 Indoor side extension drain hose
- 3 Wall
- 4 Polyethylene foam



- 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.



2. After piping work is finished, check if drainage flows smoothly.

- Make sure that the drain hose is firmly connected.
- Pour some water into the drain pan to check if the water flows smoothly.






When electric wiring work is finished

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

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 7)

- 1 Power supply wiring
- 2 Wiring port
- 3 Indoor PC board
- 4 Power supply terminal board
- 5 Transmission wiring between units
- 6 Remote controller wiring
- 7 Terminal board for unit transmission wiring
- 8 Electric parts box lid
- 9 Wiring diagram
- 10 Electric parts box

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 switch box cover 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 |
|-----------|----|-------|-------------------|
| FXDQ20+25 | 50 | 230 | min. 198–max. 264 |

| Model | Power supply | | Fan motor | |
|-----------|--------------|------|-----------|-----|
| | MCA | MFA | KW | FLA |
| FXDQ20+25 | 0.2 | 16 A | 0.01 | 0.1 |

MCA: Min. circuit Amps (A)
MFA: Max. Fuse Amps (A)
KW: Fan Motor Rated Output (kW)
FLA: Full 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 |
| FXDQ20+25 | 16 A | H05VV-U3G | Local codes |

| Model | Wire | Size |
|-----------|-------------------|---------------------------|
| FXDQ20+25 | Sheathed wire (2) | 0.75–1.25 mm ² |

NOTE ■ For details, refer to the chapter "Wiring example".



- 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

- Open the switch box cover, as shown in [figure 7](#), to make connections.

Precautions

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 16](#).


- 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

When using 1 remote controller for 1 indoor unit (Normal operation) (See figure 8)

For group control or use with 2 remote controllers (See figure 10)

When including BS unit (See figure 12)

- 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 | | |
| 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 inbetween 2 filter cleaning display indications.) | Ultra-long-life filter | ±10,000 hrs. | ±5,000 hrs. | — | — | |
| | | Long-life filter | Light | ±2,500 hrs. | Heavy | | | ±1,250 hrs. |
| | | Standard filter | | ±200 hrs. | | | | ±100 hrs. |
| 10 (20) | 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 | — | — | — | |
| | 6 | Thermostat sensor in group control | Use unit sensor only (or remote sensor if installed). (See note 6) | Use both the unit sensor (or remote sensor if installed) AND the remote controller sensor. (See note 4+5+6) | — | — | — | |
| 12 (22) | 0 | Output signal X1-X2 of the optional KRP1B PCB kit | Thermostat-on+ compressor run | — | Operation | Mal-function | | |
| | 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 | — | — | | |
| | 3 | Fan setting during thermostat OFF at heating operation | LL | Set speed | OFF (See note 3) | — | | |
| | 4 | Differential automatic changeover | 0°C | 1°C | 2°C | 3°C (See note 7) | | |
| | 5 | Auto-restart after power failure | Disabled | Enabled | — | — | | |
| | 9 | Fixed cool/heat master | Disabled | Enabled | — | — | | |
| 13 (23) | 6 | Setting the external static pressure (To be set in function of the connected duct resistance) | Normal | High static pressure | Low static pressure | — | | |
| 15 (25) | 3 | Drain pump operation + humidifier interlock | Equipped | Not equipped | — | — | | |

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

1. 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 11)
(The remote controller PC board is attached to the upper part of the remote controller.)
2. Turn the main/sub changeover switch on one of the two remote controller PC boards to "S". (See figure 15)
(Leave the switch of the other remote controller set to "M".)
 - 1 Remote controller PC board
 - 2 Factory setting
 - 3 Only one remote controller needs to be changed

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) |
|--------------------|---|
| 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 14.

- 1 Input A
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 (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 17)

- 1 Second code No.
- 2 Mode No.
- 3 First code No.
- 4 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.

TEST OPERATION

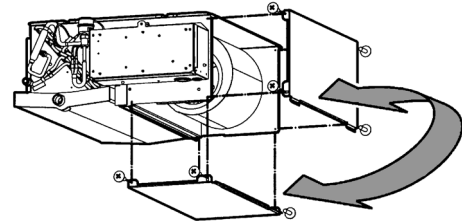
Refer to the installation manual of the outdoor unit.

- 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 included in the accessory bag.

SPECIAL FEATURES

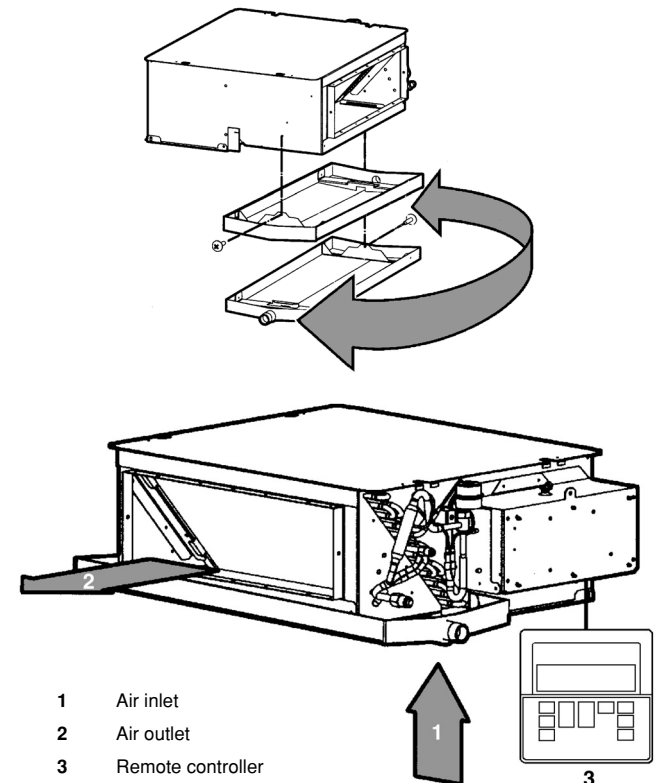
Air suction direction

- This feature allows the user to choose the air suction direction. By switching the plate from bottom to rear, the air suction direction can be changed from the rear to the bottom side.



Drain pan outlet

- The customer has the possibility to select either right or left sided water drain outlet.




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.)

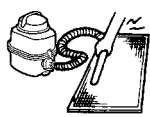
NOTE  Do not operate the air conditioner without filters, this to avoid dust accumulation inside the unit.

1. Removing the air filter

- Rear suction (See figure 5a):
Pull the bottom side of the air filter backwards, over the 2 bends.
- Bottom suction (See figure 5b):
Pull the filter over the two bends situated at the backside of the unit.

2. Cleaning the air filter

- Remove dust from the air filter using a vacuum cleaner and gently rinse them in cool water. Do not use detergent or hot water to avoid filter shrinking or deformation. After cleaning dry them in the shade.




3. Replacing the air filter

- Rear suction (See figure 5a):
Hook the filter behind the flap situated at the top of the unit and push the other side gently over the 2 bends.
- Bottom suction (See figure 5b):
Hook the filter behind the flap situated at the middle of the unit and push the other side gently over the 2 bends.

4. 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.)




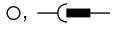

NOTE 

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

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

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

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

| | | |
|---------|-------|--|
| A1P | ..... | PRINTED CIRCUIT BOARD |
| C1R | ..... | CAPACITOR (FAN) |
| F1U | ..... | FUSE (250 V/10 A) |
| F2U | ..... | FIELD FUSE |
| HAP | ..... | LIGHT EMITTING DIODE (SERVICE MONITOR - GREEN) |
| M1F | ..... | MOTOR (FAN) |
| Q1E | ..... | EARTH LEAK DETECTOR |
| R1T | ..... | THERMISTOR (AIR) |
| R2T,R3T | ..... | THERMISTOR (REFRIGERANT) |
| RyF1-3 | ..... | MAGNETIC RELAY (FAN) |
| X1M | ..... | TERMINAL STRIP (POWER) |
| X2M | ..... | TERMINAL STRIP (CONTROL) |
| T1R | ..... | TRANSFORMER (220-240 V/22 V) |
| Y1E | ..... | ELECTRONIC EXPANSION CIRCUIT |

OPTIONAL PARTS

| | | |
|------|-------|-----------------------|
| J1EH | ..... | ELECTRIC HEATER |
| K1R | ..... | MAGNETIC RELAY (J1EH) |

ADAPTOR FOR WIRING

| | | |
|---------|-------|----------------------------|
| RyC,RyF | ..... | MAGNETIC RELAY |
| RyH | ..... | MAGNETIC RELAY (J1EH) |
| F1U,F2U | ..... | FUSE (250 V/5 A) |
| X1A,X2A | ..... | CONNECTOR (WIRING ADAPTOR) |
| X1M | ..... | TERMINAL STRIP |

CONNECTOR FOR OPTIONAL PARTS

| | | |
|------|-------|--|
| X16A | ..... | CONNECTOR (WIRING ADAPTOR) |
| X18A | ..... | CONNECTOR (WIRING ADAPTOR FOR ELECTRICAL APPENDICES) |

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

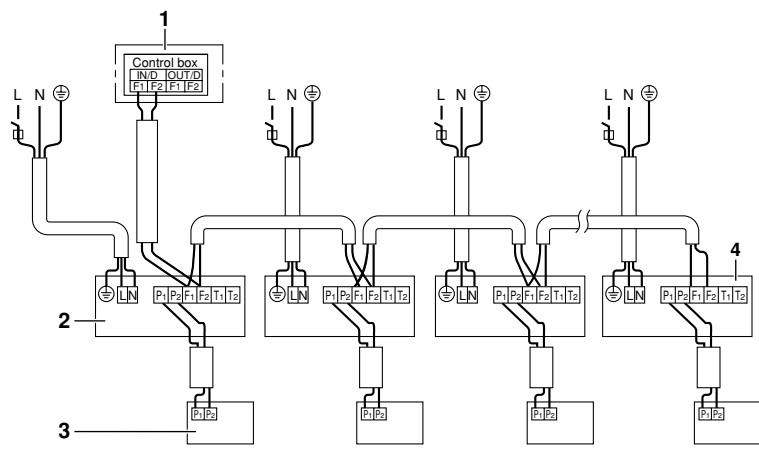
NOTE



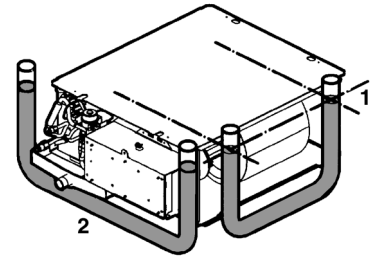
1. WHEN USING THE CENTRAL REMOTE CONTROLLER, SEE MANUAL FOR CONNECTION TO THE UNIT.
2. X23A IS CONNECTED WHEN THE CENTRAL REMOTE CONTROLLER IS USED.
3. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED OFF OR ON/OFF CONTROL OPERATION CAN BE SELECTED BY THE REMOTE CONTROLLER. SEE INSTALLATION MANUAL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

NOTES

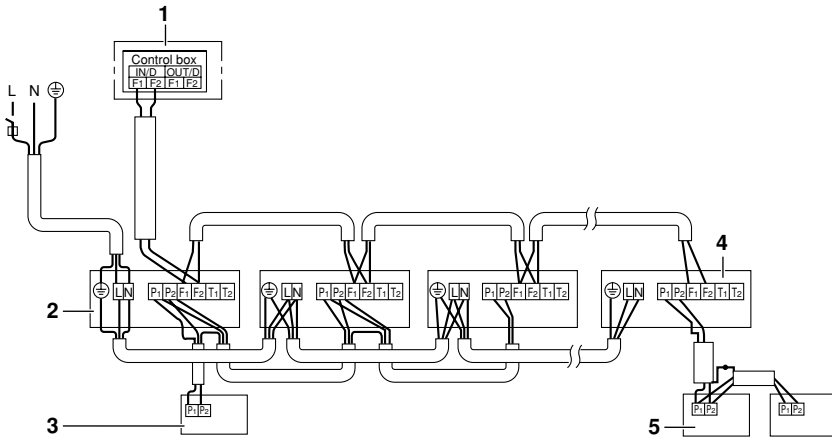




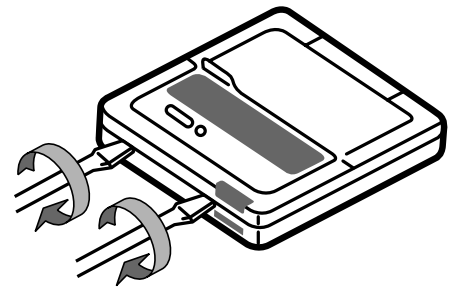
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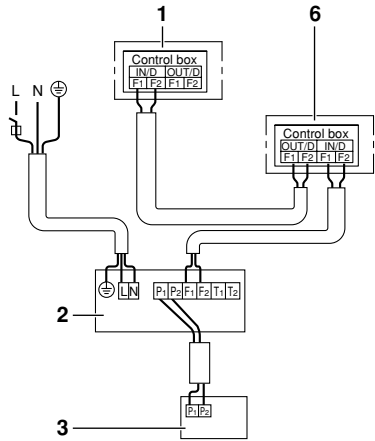
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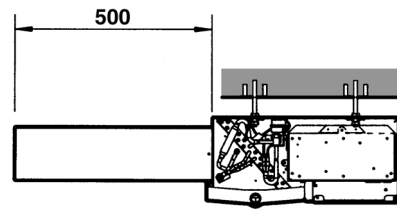
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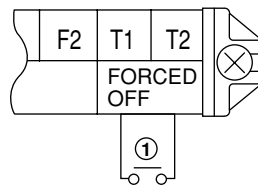
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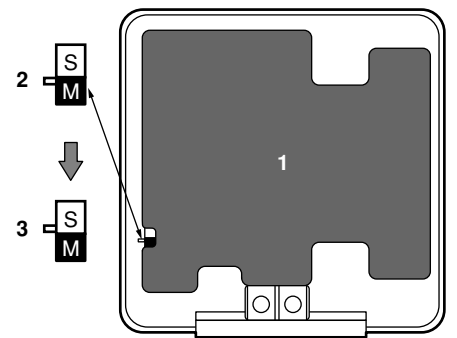
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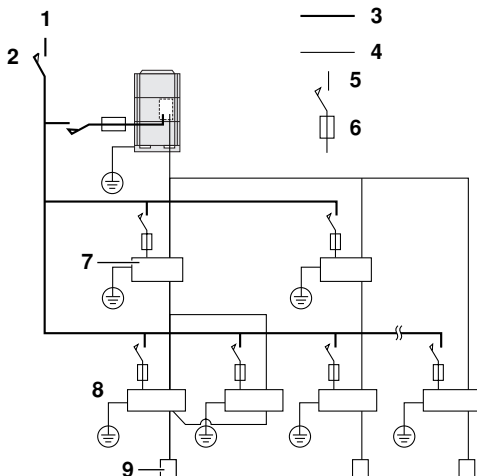
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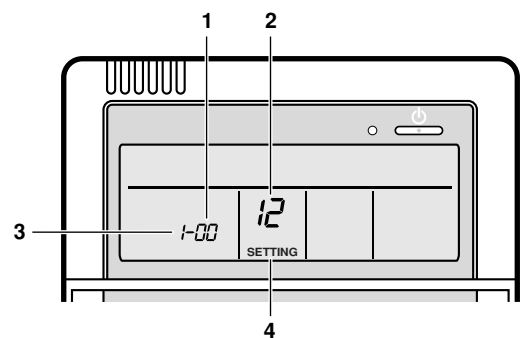
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