



INSTALLATION MANUAL

R410A Split Series



Installation manual Installationsanleitung Manuel d'installation Montagehandleiding Manual de instalación Manuale d'installazione Εγχειρίδιο εγκατάστασης Manual de Instalação Руководство по монтажу Montaj kılavuzları

MODELS

CTXU25G2V1B CTXU35G2V1B CTXU42G2V1B CTXU50G2V1B

CE - DECLARATION-OF-CONFORMITY
CE - KONFORMITÄTSERKLÄRUNG
CE - DECLARATION-DE-CONFORMITE
CE - CONFORMITEITSVERKLARING

- DECLARACION-DE-CONFORMIDAD - DICHIARAZIONE-DI-CONFORMITA - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ .

CE - DECLARAÇÃO-DE-CONFORMIDADE CE - 3AABJIEHIVE-O-COOTBETCTBUN CE - OPFYLDELSESERKLÆRING CE - FORSÁKRAN-OM-ÖVERENSTÄMMELSE

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

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

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

CE - ATTIKTIES-DEKLARACIJA CE - ATBILSTIBAS-DEKLARĀCIJA CE - VYHLASENIE-ZHODY CE - UYUMLULUK-BILDIRĪSI

DAIKIN INDUSTRIES, LTD

01 @ declares under its sole responsibility that the air conditioning models to which this declar ation relates:

σε κλίέπ auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erkätung bestimmt ist:
 σε Θ declare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclar ation:

09 📾 заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:

® erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrorer:
 ® deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
 ® erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:
 ® ilmolitta yksinomaan omalla vastuuljaan, että lämän ilmoltuksen tarkolitamat ilmasiointilaitteiden mallit:

15 🙉 izjavljuje pod isključivo vlastitom odgovornošću da su modeli klima uređaja na koje se ova izjava odnosi: 14 @ prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:

17 🖭 deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:

25 廊 tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder: W. explinu atbildību apliecina, ka tātāk uzskaitīto modeļu gaisa kondiciorētāji, uz kuriem attiecas šī dektarācija:
 Wesvirlasuje na viastnú zodpovednost, že tieto klimatizačné modely, na ktoré sa vzfahuje toto vyhlásenie:

21 (во декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:

20 🖘 kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:

19 🐵 z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:

22 🗷 visiška savo alsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:

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

16 🗷 teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik: 18 @ declară pe proprie răspundere că aparatele de aer condiționat la care se referă această declarație: Φ. We verkaart nerbij op eigen evolgebene verantwoordepliched dat de arronditioning units vaarop deze verklaint betrekking heelt.
 65 (a) deckara baja su unita responsabilitäd que los modelos de aine acondicionado a los cuales hace referencia la declaración.
 66 (b) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
 77 (a) δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκειών στα οποία αναφέρεται η πορούσα δηλωση:
 78 (c) declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere: CTXU25G2V1B, CTXU35G2V1B, CTXU42G2V1B, CTXU50G2V1B 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:

10 overholder følgende standard(er) eller andet/andre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser: daß sie gemäß unseren Anweisungen eingesetzt werden: 03 sont conformes à lataux norme(s) ou autre(s) document(s) normatif(s), pour aufant qu'ils solent utilisés conformément à nos instructions. 02 deriden folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, 04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig

11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under 12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at förutsättning att användning sker i överensstämmelse med våra instruktioner: disse brukes i henhold til våre instrukser: 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

13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti: 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 07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται

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

17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi 16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják: instrukcjami:

18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiția ca acestea să fie utilizate în 21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите 20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele: 19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili: conformitate cu instrucțiunile noastre

24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade 22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su salyga, kad yra naudojami pagal mūsų nurodymus: 23 tad. ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem: s našim návodom:

инструкции:

25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur.

EN60335-2-40

αήπφωνα με τις οδηγίες μας:

nuestras instrucciones: onze instructies:

nostre istruzioni:

17 zgodnie z postanowieniami Dyrektyw: 13 noudattaen määräyksiä: 18 în urma prevederilor: 15 prema odredbama: 11 enligt villkoren i 16 követi a(z): Od overeenkomstig de bepalingen van:
OS siguiendo las disposiciones de:
OS secondo le prescrizioni per:
OY με τήριση των διατάξεων των:
OS de acourdo com o previsio en:
O9 в соответствии с положениями: 01 following the provisions of: 02 gemäß den Vorschriften der: 03 conformément aux stipulations des:

23 ievērojot prasības, kas noteiktas: 24 održiavajúc ustanovenia: 25 bunun koşullarına uygun olarak: 22 laikantis nuostatu, pateikiamu; 21 следвайки клаузите на: 19 ob upoštevanju določb: 20 vastavalt nõuetele: 10 under iagttagelse af bestemmelserne i: 12 gitt i henhold til bestemmelsene i: 14 za dodržení ustanovení předpisu:

positivo de de acordo com o Certificado <C>. όπως καθορίζεται στο <Α> και κρίνεται θετικά από το <Β> σύμφωνα με το Πιστοποιητικό <C> . tal como estabelecido em <A> e com o parecer delineato nel <A> e giudicato positivamente положительным решением <В> согласно Kak vkasaho B < A> и B соответствии с da secondo il Certificato <C>. Свидетельству «С> 09 Примечание * Σημείωση 06 Nota * 08 Nota* tel que défini dans <A> et évalué positivement par zoals vermeld in <A> en positief beoordeeld door as set out in <a>A> and judged positively by <a>B> wie in der <A> aufgeführt und von positiv beurteilt gemäß Zertifikat <C>.

som anført i <A> og positivt vurderet af i

10 Bemærk*

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

Certificado <C>.

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

03 Remarque * 02 Hinweis*

04 Bemerk*

Nota *

according to the Certificate <C>.

Note *

henhold til Certifikat <C>

a(z) <A> alapján, a(z) igazolta a megfelelést, a(z) <C> tanúsítvány szerint. kot je določeno v <A> in odobreno s strani v zgodnie z dokumentacją <A>, pozytywną opinią i Świadectwem <C>. nagu on näidatud dokumendis <A> ja heaks kiidetud järgi vastavalt sertifikaadile <C>. aşa cum este stabilit în <A> şi apreciat pozitiv de în conformitate cu Certificatul <C> skladu s certifikatom <C>. 16 Megjegyzés* 19 Opomba* 17 Uwaga* 20 Märkus* 18 Notă* jak bylo uvedeno v <A> a pozitívně zjištěno v jotka on esitetty asiakirjassa <A> ja jotka on kako je izloženo u <A> i pozitivno ocijenjeno od strane prema Certifikatu <C>. som det fremkommer i <A> og gjennom positiv bedømmelse av ifølge Sertifikat <C>. hyvāksynyt Sertifikaatin <C> mukaisesti. enligt <A> och godkäntsav enligt Certifikatet <C>. souladu s osvědčením <C>. Information * 14 Poznámka* Napomena * 12 Merk * 13 Huom *

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 05 Directivas, según lo enmendado.
 06 Direttive, come da modifica.
 07 Οδηγιών, όπως έχουν τροποποιηθεί. 02 Direktiven, gemāß Ānderung. 03 Directives, telles que modifiées. 04 Richtlijnen, zoals geamendeerd. Directives, as amended.

Electromagnetic Compatibility 2004/108/EC

Low Voltage 2006/95/EC

18 Directivelor, cu amendamentele respective 17 z późniejszymi poprawkami. както е изложено в <А> и оценено 21 Забележка * 08 Directivas, conforme alteração em. 09 Директив со всеми поправками.

25 Değiştirilmiş halleriyle Yönetmelikler.

16 irányelv(ek) és módosításaik rendelkezéseit.

15 Smjernice, kako je izmijenjeno.

14 v platném znění.

Direktiivejä, sellaisina kuin ne ovat muutettuina.

23 Direktīvās un to papildinājumos.

24 Smernice, v platnom znení.

21 Директиви, с техните изменения.

19 Direktive z vsemi spremembami.

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

20 Direktiivid koos muudatustega. 22 Direktyvose su papildymais.

> ako bolo uvedené v <A> a pozitívne zistené v súlade s osvedčením <C>. kā norādīts <A> un atbilstoši pozitīvajam <A>'da belirtildiği gibi ve <C> Sertifikasına vērtējumam saskanā ar sertifilkātu <C>. göre tarafından olumlu olarak pagal Sertifikata <C>. 23 Piezīmes * Poznámka * * S 7 23

değerlendirildiği gibi.

kaip nustatyta <A> ir kaip teigiamai nuspręsta

22 Pastaba*

положително от съгласно

Сертификата <С>

<A> DAIKIN.TCF.015 M7/10-2008 KEMA Quality B.V.

<C> 74736-KRQ/EMC97-4957

Manager Quality Control Department 1st. of Nov. 2008 Noboru Murata

DAIKIN INDUSTRIES. LTD. Umeda Center Bldg., 2-4-12, Nakazaki-Nishi. Kita-ku, Osaka, 530-8323 Japan

Safety Precautions

- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.
- Meaning of WARNING and CAUTION notices

MARNING Failure to follow these instructions properly may result in personal injury or loss of life.

CAUTION Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

The safety marks shown in this manual have the following meanings:

Be sure to follow the instructions.

Be sure to establish an earth connection.

Never attempt.

After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate
the air conditioner and take care of it with the aid of the operation manual.

↑ WARNING

- Ask your dealer or qualified personnel to carry out installation work.
 Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.
- Install the air conditioner in accordance with the instructions in this installation manual.
 Improper installation may result in water leakage, electric shocks or fire.
- Be sure to use only the specified accessories and parts for installation work. Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.
- Install the air conditioner on a foundation strong enough to withstand the weight of the unit.

 A foundation of insufficient strength may result in the equipment falling and causing injury.
- Electrical work must be performed in accordance with relevant local and national regulations and with instructions in this installation manual. Be sure to use a dedicated power supply circuit only.
 Insufficiency of power circuit capacity and improper workmanship may result in electric shocks or fire.
- Use a cable of suitable length.

Do not use tapped wires or an extension lead, as this may cause overheating, electric shocks or fire.

Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal
connections or wires.

Improper connections or securing of wires may result in abnormal heat build-up or fire.

- When wiring the power supply and connecting the wiring between the indoor and outdoor units, position the wires
 so that the control box lid can be securely fastened.
 Improper positioning of the control box lid may result in electric shocks, fire or over heating terminals.
- If refrigerant gas leaks during installation, ventilate the area immediately.

Toxic gas may be produced if the refrigerant comes into contact with fire.

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- After completing installation, check for refrigerant gas leakage.
 - Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.

• When installing or relocating the air conditioner, be sure to bleed the refrigerant circuit to ensure it is free of air, and use only the specified refrigerant (R410A).

- The presence of air or other foreign matter in the refrigerant circuit causes abnormal pressure rise, which may result in equipment damage and even injury.
- During installation, attach the refrigerant piping securely before running the compressor.
 If the compressor is not attached and the stop valve is open when the compressor is run, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- Be sure to earth the air conditioner.

Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks.



Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks or fire.

CAUTION

Do not install the air conditioner at any place where there is a danger of flammable gas leakage.
 In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out.



- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation.
 - Improper drain piping may result in indoor water leakage and property damage.
- Tighten the flare nut according to the specified method such as with a torque wrench.
 If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.

Accessories



Mounting plate	1	Wireless remote controller	1	① Operation manual	1
B Titanium apatite photocatalytic air-purifying filter (short)	1	(F) Remote controller holder	1	(K) Installation manual	1
© Titanium apatite photocatalytic air-purifying filter (long)	1	G Dry batteries AAA. LR03 (alkaline)	2		
Air supply filter (gray)	1	(H) Indoor unit fixing screws (M4 × 12L)	2		

Choosing an Installation Site

• Before choosing the installation site, obtain user approval.

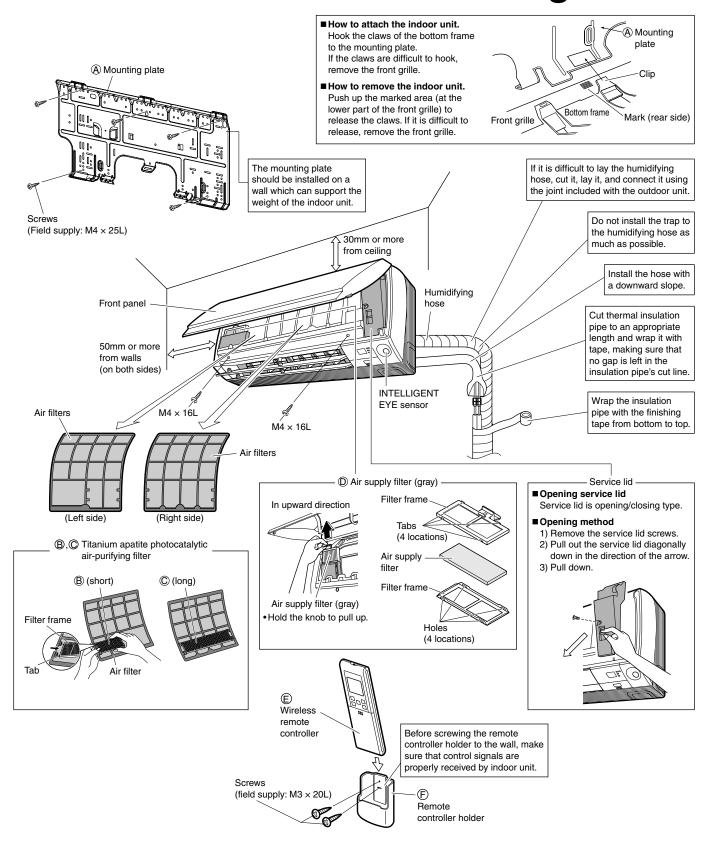
1. Indoor unit.

- The indoor unit should be sited in a place where:
 - 1) the restrictions on installation specified in the indoor unit installation drawings are met,
 - 2) both air intake and exhaust have clear paths met,
 - 3) the unit is not in the path of direct sunlight,
 - 4) the unit is away from the source of heat or steam,
 - 5) there is no source of machine oil vapour (this may shorten indoor unit life),
 - 6) cool (warm) air is circulated throughout the room,
 - 7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may shorten the remote controller range,
 - 8) the unit is at least 1m away from any television or radio set (unit may cause interference with the picture or sound),
 - 9) install at the recommended height (1.8m).

2. Wireless remote controller.

1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote controller signals are properly received by the indoor unit (within 7m).

Indoor Unit Installation Drawings



INTELLIGENT EYE sensor

CAUTION

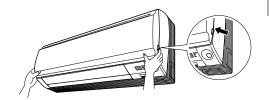
- 1) Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.
- 2) Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

Preparation before Installation

1. Removing and installing front panel.

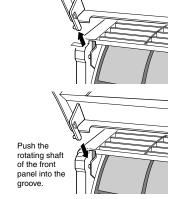
Removal method

Hook fingers on the tabs on the left and right of the main body, and open until the panel stops. Slide the front panel sideways to disengage the rotating shaft. Then pull the front panel toward you to remove it.



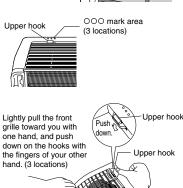
Installation method

Align the tabs of the front panel with the grooves, and push all the way in. Then close slowly. Push the center of the lower surface of the panel firmly to engage the tabs.



2. Removing and installing front grille.

- Removal method
- 1) Remove front panel to remove the air filter.
- 2) Remove 2 screws from the front grille.
- 3) In front of the OOO mark of the front grille, there are 3 upper hooks. Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand.



When there is no work space because the unit is close to ceiling

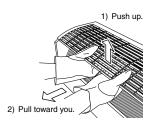
CAUTION

Be sure to wear protection gloves.

Place both hands under the center of the front grille, and while pushing up, pull it toward you.

Installation method

- 1) Install the front grille and firmly engage the upper hooks (3 locations).
- 2) Install 2screws of the front grille.
- 3) Install the air filter and then mount the front panel.

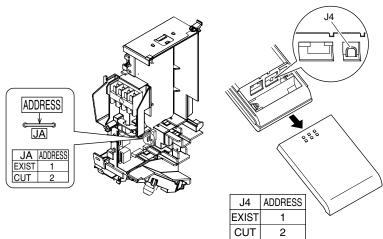


Preparation before Installation

3. How to set the different addresses.

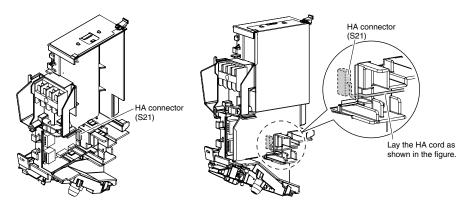
When 2 indoor units are installed in 1 room, the 2 wireless remote controllers can be set for different addresses.

- Remove the metal plate electrical wiring cover.
 (Refer to the Removal/attachment methods)
 - (Refer to the Removal/attachment methods of metal plate electrical wiring covers.)
- 2) Cut the address jumper (JA) on the printed circuit board.
- Cut the address jumper (J4) in the remote controller.



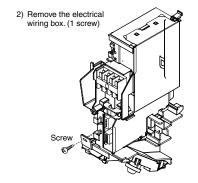
4. When connecting to an HA system. (Wired remote controller, central remote controller etc.)

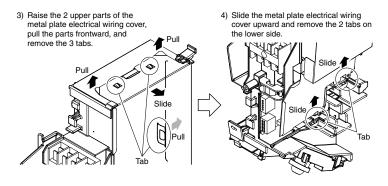
- Remove the metal plate electrical wiring cover.
 (Refer to the Removal/ attachment methods of metal plate electrical wiring covers.)
- Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.
- Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.



• Removal methods of metal plate electrical wiring covers

- 1) Remove the front grille.
- 2) Remove the electrical wiring box. (1 screw)
- 3) Raise the 2 upper parts of the metal plate electrical wiring cover, pull the parts frontward, and remove the 3 tabs.
- 4) Slide the metal plate electrical wiring cover upward and remove the 2 tabs on the lower side.

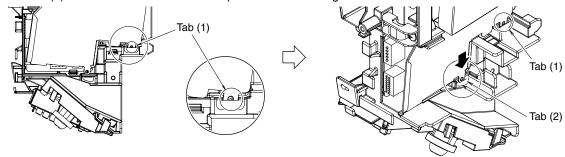




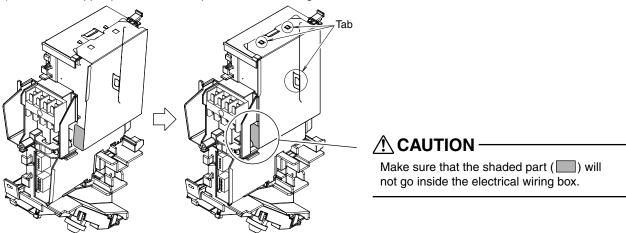
Attachment methods of metal plate electrical wiring covers

Attach the metal plate electrical wiring covers as shown below.

- 1) Lean the metal plate electrical wiring cover as shown in the figure and attach tab (1) on the lower side to the electrical wiring box.
- 2) Attach tab (2) on the lower side of the metal plate electrical wiring cover.



3) Push in the upper part of the metal plate electrical wiring cover and attach the 3 tabs.

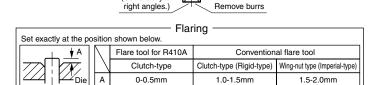


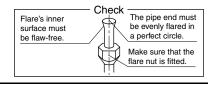
Refrigerant Piping Work

With a multi indoor unit, install as described in the installation manual supplied with the multi outdoor unit.

1. Flaring the pipe end.

- 1) Cut the pipe end with a pipe cutter.
- 2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
- 3) Put the flare nut on the pipe.
- 4) Flare the pipe.
- 5) Check that the flaring is properly made.





∱ WARNING -

- 1) Do not use mineral oil on flared part.
- 2) Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- 3) Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- 4) Do never install a drier to this R410A unit in order to guarantee its lifetime.
- 5) The drying material may dissolve and damage the system.
- 6) Incomplete flaring may cause refrigerant gas leakage.

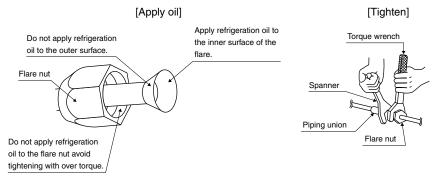
Refrigerant Piping Work

2. Refrigerant piping.

CAUTION

- 1) Use the flare nut fixed to the main unit. (To prevent cracking of the flare nut by aged deterioration.)
- 2) To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- 3) Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

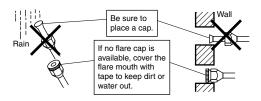
Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.



Flare nut tightening torque					
Gas	Liquid side				
25/35/42 class	50 class	Liquid Side			
3/8 inch	1/2 inch	1/4 inch			
32.7-39.9N • m (330-407kgf • cm)	49.5-60.3N • m (505-615kgf • cm)	14.2-17.2N • m (144-175kgf • cm)			

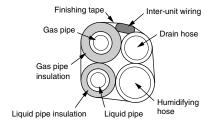
2-1. Caution on piping handling.

- 1) Protect the open end of the pipe against dust and moisture.
- All pipe bends should be as gentle as possible. Use a pipe bender for bending.



2-2. Selection of copper and heat insulation materials.

- When using commercial copper pipes and fittings, observe the following:
- Insulation material: Polyethylene foam
 Heat transfer rate: 0.041 to 0.052W/mK (0.035 to 0.045kcal/(mh•°C))
 Refrigerant gas pipe's surface temperature reaches 110°C max.
 Choose heat insulation materials that will withstand this temperature.



Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side		Liquid side	Gas pipe thermal insulation		Liquid pipe
25/35/42 class	50 class	Liquid Side	25/35/42 class	50 class	thermal insulation
O.D. 9.5mm	O.D. 12.7mm	O.D. 6.4mm	I.D. 12-15mm	I.D. 14-16mm	I.D. 8-10mm
Minimum bend radius			Thickness 10mm Min.		
30mm or more	40mm or more	30mm or more			
Thickness 0.8mm (C1220T-O)					

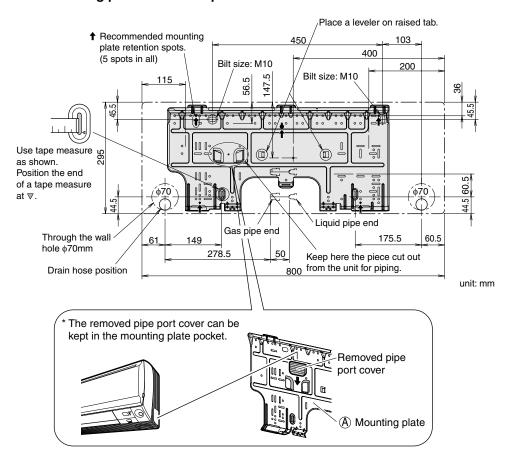
3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

Indoor Unit Installation

1. Installing the mounting plate.

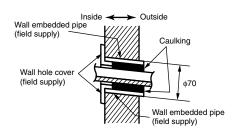
- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
 - 1) Temporarily secure the mounting plate to the wall, make sure that the panel is completely level, and mark the boring points on the wall.
 - 2) Secure the mounting plate to the wall with screws.

Recommended mounting plate retention spots and dimensions



2. Boring a wall hole and installing wall embedded pipe.

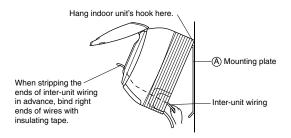
- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
 - Bore a feed-through hole of 70mm in the wall so it has a down slope toward the outside.
 - 2) Insert a wall pipe into the hole.
 - 3) Insert a wall cover into wall pipe.
 - After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.



Indoor Unit Installation

3. Inter-unit wiring.

- 1) Open the front panel, then remove the service lid.
- 2) Pass the inter-unit wiring from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side. Bend the ends of tie wires upward for easier work in advance. (If the inter-unit wiring ends are to be stripped first, bundle wire ends with adhesive tape.)
- 3) Press the bottom frame of the indoor unit with both hands to set it on the mounting plate hooks. Make sure the wires do not catch on the edge of the indoor unit.



4. Humidifying hose installation work.

CAUTION -

- Be sure to use humidifying hose sold as optional accessory. (KPMH996A10S (10m set), KPMH996A15S (15m set))
 - 1) The length of the humidifying hose needs to be set to ensure humidifying capacity. Cut off any excess hose. Use the remote controller to set the hose length. (Refer to page 13.)
- Attach a cover to the end of each humidifying hose so that no moisture or foreign substance will go into the hose when leaving the hose without being connected to the outdoor and indoor units.
- When laying the humidifying hose inside the wall, block the ends of the humidifying hose with tape or the like to prevent water or anything else from entering it until it is connected to the indoor unit and outdoor unit ducts.
- Do not bend the humidifying hose more than 90°.
- Use caution not to deform the cuff while installing the humidifying hose.

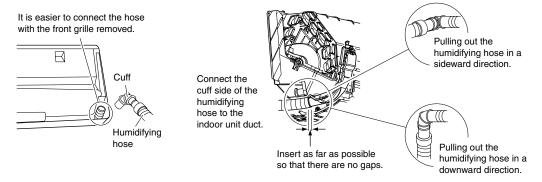
4-1. Connecting to the indoor unit.

- · Connect the cuff side of the humidifying hose to the indoor unit duct.
- Use the humidifying hose of suitable length as shown below.

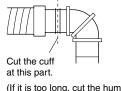
10m set: the 8m hose

15m set: the 2m hose

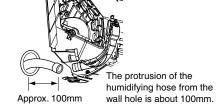
• When connecting the humidifying hoses of the indoor and outdoor units, refer to the installation manual provided to the outdoor unit.



Left-back piping

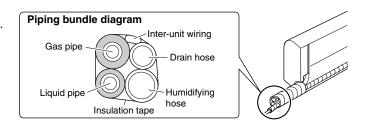


(If it is too long, cut the humidifying hose and bond the separately sold cuff with adhesive for vinyl to adjust the length.)

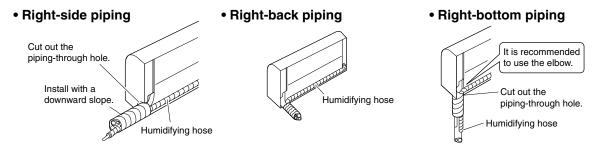


5. Laying piping, hoses, and wiring.

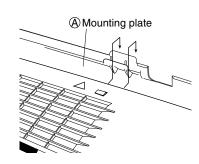
- Connect the humidifying hose to the indoor unit duct. See **4. Humidifying hose installation work** for details.
- Lay the piping, drain hose and humidifying hose according to the orientation of the piping coming out of the unit, as shown below.
- Make sure the drain hose is sloped downward.
- Wrap the piping, drain hose and humidifying hose together using insulation tape.



5-1. Right-side, right-back, or right-bottom piping.



- 1) Wrap the pipes, hoses and inter-unit wiring using insulation tape as shown in the piping bundle diagram.
- 2) Put all the pipes through the through-hole in the wall and hook the indoor unit onto the (A) mounting plate.
- 3) Connect the pipes.

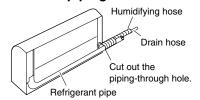


5-2. Left-side, left-back, or left-bottom piping.

How to replace the drain plug and drain hose. Drain hose attachment position Replacing onto the left side * The drain hose is on the back of the unit. 1) Remove the insulation fixing screws on the right to remove the drain hose. 2) Remove the drain plug on the left side and attach it to the right side. Left side Right side Front side of unit 3) Insert the drain hose and tighten with the screws which were removed at STEP 1). Attachment on the right side Attachment on the left side (factory default) Insulation Indoor unit fixing screw fixing screw Drain hose Drain hose How to set drain plug No gap Do not apply lubricating oil (refrigeration oil) when inserting. Application of causes deterioration and drain leakage of the plug. Insert a hexagon wrench (4mm).

Indoor Unit Installation

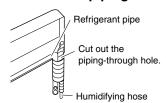
Left-side piping



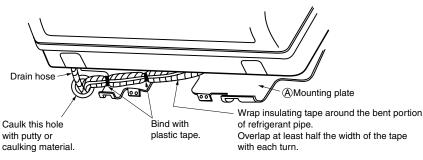
Left-back piping



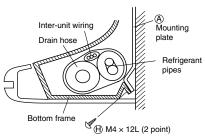
Left-bottom piping



- 1) Replace the drain plug and drain hose. (How to replace the drain plug and drain hose.)
- 2) Pull in the refrigerant piping and lay it so that it matches the liquid and gas piping marked on the (A) mounting plate.
- 3) Hook the indoor unit onto the (A) mounting plate.
- 4) Connect the pipes. If it is difficult to do, remove the front grille first.
- 5) Wrap the insulation on the piping with insulation tape. If you are not replacing the drain hose, store it in the location shown as right figure.



6) While exercising care so that the inter-unit wiring do not catch indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with screws (M4 \times 12L).

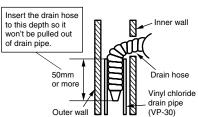


5-3. Wall embedded piping.

Follow the instructions given under

Left-side, left-back, or left-bottom piping

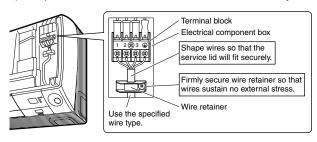
1) Insert the drain hose to this depth so it won't be pulled out of the drain pipe.

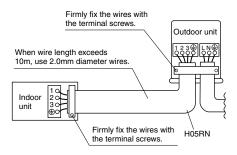


6. Wiring.

With a multi indoor unit, install as described in the installation manual supplied with the multi outdoor unit.

- 1) Strip wire ends (15mm).
- 2) Match wire colours with terminal numbers on indoor and outdoor unit's terminal blocks and firmly screw wires to the corresponding terminals.
- 3) Connect the earth wires to the corresponding terminals.
- 4) Pull wires to make sure that they are securely latched up, then retain wires with wire retainer.
- 5) In case of connecting to an adapter system. Run the remote controller cable and attach the S21.
- 6) Shape the wires so that the service lid fits securely, then close service lid.



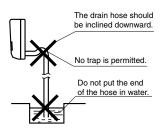


↑ WARNING -

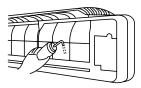
- 1) Do not use tapped wires, strand wires, extensioncords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- 2) Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.

7. Drain piping.

1) Connect the drain hose, as described right.

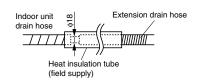


2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.



3) When drain hose requires extension, obtain an extension hose commercially available.

Be sure to thermally insulate the indoor section of the extension hose.



4) When connecting a rigid polyvinyl chloride pipe (nominal diameter 13mm) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 13mm) as a joint.

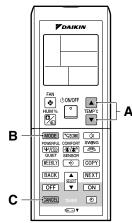


Setting the Humidifying Hose Length

CAUTION

If the humidifying hose length is not set or it is set incorrectly, the humidifying capacity may diminish or strange sound may occur from humidifying hose.

Setting the humidifying hose length.



A: TEMP button

- B: MODE selector button
- C: CANCEL button

Set the humidifying hose length to ensure humidifying capacity. Use the remote controller to set the humidifying hose length. When doing this, power on the unit as communication is established between the unit and the remote controller. Be sure to direct the remote controller toward the indoor unit while setting the humidifying hose length.

(The humidifying hose length includes the rear of the indoor unit.)

• Set the humidifying hose length according the following procedure after check the installed hose length.

Pipe set mode (Hose length setting)

- Press "MODE" button and "TEMP" button (2 locations) at the same time. (To cancel, do not operate the button for 60 seconds. The display will return to normal.)
- 2) Press "TEMP ▲▼ " button and select "₽\$" (Pipe set mode).
- 3) Press "MODE" button to activate the Pipe set mode. (When the unit receive signal, the sound emitted. Be sure to check the sound. If the sound is not heard, press "MODE" button again.)
- 4) Pressing "TEMP ▲▼ " button changes the humidifying hose length. You may set the hose length to 6 levels:

"
$$\sim$$
 3.0", " \sim 3.1", " \sim 4.1", " \sim 8.1", " \sim 8.1", " \sim 10.0".

5) Hold "MODE" button for more than 2 seconds.

The display changes to "P[" (Pipe check mode).

Pipe check mode (Hose length check)

- 6) Press "MODE" button again to activate the pipe check mode.
- Press "TEMP ▲▼" button and select the hose length.
 Beep sound indicate that the setting of the remote controller accords or disaccord with the unit.
 - · accord: a long beep
 - disaccord: a short beep

If you set the wrong humidifying hose length, press "CANCEL" button. The display returns to step 4). Reset the hose length.

8) Hold "MODE" button for more than 5 seconds. The humidifying hose length setting is complete and the display returns to normal.

2. When the unit cannot be powered on.

When setting the humidifying hose length without powering on the unit, the indoor unit does not receive the information at step 3) and 5) shown above. However, the remote controller stores the humidifying hose length information.

(When the customer uses the unit, the humidifying hose length information is send to the indoor unit to be set.)











(Set point)







(Set point; long beep)



Trial Operation and Testing

1. Trial operation and testing.

- 1-1 Measure the supply voltage and make sure that it falls in the specified range.
- 1-2 Trial operation should be carried out in either cooling or heating mode.
- · In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
 - 1) Trial operation may be disabled in either mode depending on the room temperature. Use the remote controller for trial operation as described below.
 - 2) After trial operation is complete, set the temperature to a normal level (26°C to 28°C in cooling mode, 20°C to 24°C in heating mode).
 - 3) For protection, the system disables restart operation for 3 minutes after it is turned off.
- 1-3 To perform a test run for HUMID HEAT operation, activate test run mode from the remote controller following the instructions below and select the HUMID HEAT operation.
- 1-4 Carry out the test operation in accordance with the operation manual to ensure that all functions and parts, such as louver movement, are working properly.
 - The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
 - If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial operation from remote controller

- 1) Press "ON/OFF" button to turn on the system.
- 2) Press "TEMP" button (2 locations) and "MODE" button at the same time.
- 3) Press "MODE" button twice.
 - (" 7" will appear on the display to indicate that Trial Operation mode is selected.)
- 4) Trial run mode terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press "ON/OFF" button.

2. Test items.

Test items	Symptom (diagnostic display on RC)	Check
Indoor and outdoor units are installed properly on solid bases.	Fall, vibration, noise	
No refrigerant gas leaks.	Incomplete cooling/heating function	
Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated.	Water leakage	
Draining line is properly installed.	Water leakage	
System is properly earthed.	Electrical leakage	
The specified wires are used for inter-unit wiring connections.	Inoperative or burn damage	
Indoor or outdoor unit's air intake or exhaust has clear path of air. Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote controller commands.	Inoperative	
No strange noise from the humidifying hose.	Bubble sound*	

^{*} When the bubble sound is heard, water may be in the humidifying hose. Do the HOSE DRY operation.

HOSE DRY operation for humidifying hose

- 1) Press "TEMP" button (2 locations) and "MODE" button at the same time.
- 2) Press "TEMP ▲▼" button and select " " (DRYING mode).
- 3) Press "MODE" button to start the HOSE DRY operation. HOSE DRY operation will work about 30 minutes. (To cancel the HOSE DRY operation, hold "MODE" button for more than 5 seconds.)
- 4) Activate test run for HUMID HEAT operation again, check that the bubble sound is not heard from the humidifying hose.

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