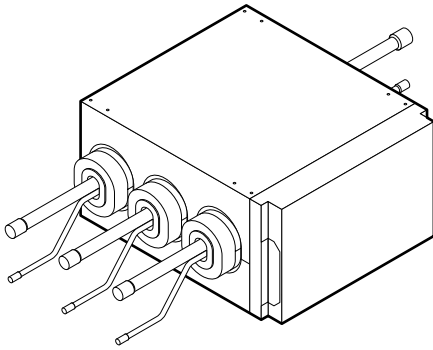


**DAIKIN**

**INVERTER**

# INSTALLATION MANUAL

## BP (Branch Provider) Unit



### Models

**BPMKS967A2B**

**BPMKS967A3B**

Installation manual  
BP (Branch Provider) Unit

**English**

Installationsanleitung  
BP-Gerät (Abzweigdose)

**Deutsch**

Manuel d'installation  
Unité BP (Fournisseur de branchement)

**Français**

Montagehandleiding  
BP (Branch Provider) Unit

**Nederlands**

Manual de instalación  
Unidad BP (Proveedor de ramificaciones)

**Español**

Manuale d'installazione  
Unità BP (Branch Provider)

**Italiano**

Εγχειρίδιο εγκατάστασης  
Μονάδα BP (Παροχέας Διακλάδωσης)

**Ελληνικά**

Manual de Instalação  
Unidade BP (Fornecedora de Ramificação)

**Portugues**

Руководство по установке  
BP-блок (блок провайдера ветви)

**Русский**

CE - DECLARACION-OF-COMFORMITY  
CE - KONFORMITÄTSEKRLÄRUNG  
CE - DECLARATION-DE-COMFORMITE  
CE - CONFORMITEITSEKVLÄRUNG

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

CE - FÖRSÄKRAN-OM-ÖVERENSSTÄMMELSE  
CE - ERKLÄRING OM-SÄMSVAR  
CE - ILMOITUS-YHDENMUKAISUUDESTA  
CE - PROHLÁSENÍ-O-SHOĐE

CE - DEKLARATIE-DE-CONFORMITATE  
CE - IZJAVA O SKLADNOSTI  
CE - ZAVIAVUS DEKLARACIJA  
CE - ATBILSTĪBAS DEKLARĀCIJA  
CE - VYHLASENIE ZHODY

CE - DECLARATION-DE-CONFORMITATE  
CE - IZJAVA O SKLADNOSTI  
CE - ZAVIAVUS DEKLARACIJA  
CE - ATBILSTĪBAS DEKLARĀCIJA  
CE - VYHLASENIE ZHODY

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

## DAIKIN INDUSTRIES, LTD.

- 01 (en) declares under its sole responsibility that the air conditioning models to which this declaration relates:
- 02 (d) erklärt auf seine alleinige Verantwortung daß die Modelle der Klimaanlage für die diese Erklärung bestimmt ist:
- 03 (f) déclare sous sa seule responsabilité que les appareils cités conditionnés visés par la présente déclaration:
- 04 (nl) verklaart hierbij op zijn exclusieve verantwoordelijkheid dat de airconditioning units waartoe deze verklaring betrekking heeft:
- 05 (e) dichiara bajo su unica responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
- 06 (i) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
- 07 (gr) δηλώνει με αποκλειστική της ευθύνη ότι το προϊόν της κλιματιστικής συσκευής στο οποίο αναφέρεται η παρούσα δήλωση:
- 08 (c) declara sub sua exclusiva responsabilitate, que os modelos de ar conditionat a que esta declaratie se refera:

BPMKS967A2B, BPMKS967A3B

- 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 einen anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
- 03 sont conformes à la(s) norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:
- 04 conformi de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
- 05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
- 06 sono conformi alle seguente(i) standard(i) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
- 07 είναι σύμφωνο με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο(α) έγγραφο(α) κανονισμών, 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 τήρηση των διατάξεων των:
- 08 de acordo com o previsto em:
- 09 a conformiteits- of poslovenenik:
- 10 under tillagelse af bestemmelserne i:
- 11 enligt villkoren i:
- 12 gitt i henhold til bestemmelserne i:
- 13 noudataan määräyksiä:
- 14 za održani uslovenici prečpisi:
- 15 prema odredbama:
- 16 kóveti (á):
- 17 zgodnie z postanowieniami Dyrekty:
- 18 in urma prevederilor:
- 19 ob upoštevni določ:
- 20 vestavati nariaden:
- 21 sredstavki krajevne na:
- 22 laikantis nuostatų, paleikiamų:
- 23 įvairiųjų pabrūtas, kas nurodaktas:
- 24 održavajući ustanovljená:
- 09 a conformiteits- of poslovenenik: **17** zgodnie z postanowieniami Dyrekty:
- 10 under tillagelse af bestemmelserne i: **18** in urma prevederilor:
- 11 enligt villkoren i: **19** ob upoštevni določ:
- 12 gitt i henhold til bestemmelserne i: **20** vestavati nariaden:
- 13 noudataan määräyksiä: **21** sredstavki krajevne na:
- 14 za održani uslovenici prečpisi: **22** laikantis nuostatų, paleikiamų:
- 15 prema odredbama: **23** įvairiųjų pabrūtas, kas nurodaktas:
- 16 kóveti (á): **24** održavajući ustanovljená:
- 09 a conformiteits- of poslovenenik: **17** zgodnie z postanowieniami Dyrekty:
- 10 under tillagelse af bestemmelserne i: **18** in urma prevederilor:
- 11 enligt villkoren i: **19** ob upoštevni določ:
- 12 gitt i henhold til bestemmelserne i: **20** vestavati nariaden:
- 13 noudataan määräyksiä: **21** sredstavki krajevne na:
- 14 za održani uslovenici prečpisi: **22** laikantis nuostatų, paleikiamų:
- 15 prema odredbama: **23** įvairiųjų pabrūtas, kas nurodaktas:
- 16 kóveti (á): **24** održavajući ustanovljená:

- 01 Note \* as set out in the Technical Construction File **Daikin.TCF.015** and judged positively by **KEIMA** according to the Certificate **74736-KRO/EI/C97-4957**.
- 02 Hinweis \* wie in der Technischen Konstruktionsakte **Daikin.TCF.015** aufgeführt und von **KEIMA** positiv ausgezeichnet gemäß Zertifikat **74736-KRO/EI/C97-4957**.
- 03 Remarque \* tel que stipulé dans le Fichier de Construction Technique **Daikin.TCF.015** et jugé positivement par **KEIMA** conformément au Certificat **74736-KRO/EI/C97-4957**.
- 04 Bemerk \* zoals vermeld in het Technische Constructiebestand **Daikin.TCF.015** en in orde bevonden door **KEIMA** overeenkomstig Certificaat **74736-KRO/EI/C97-4957**.
- 05 Nota \* tal como se expone en el Archivo de Construcción Técnica **Daikin.TCF.015** y juzgado positivamente por **KEIMA** según el Certificado **74736-KRO/EI/C97-4957**.
- 06 Nota \* delimitat nel File tecnico di Costruzione **Daikin.TCF.015** e giudicato positivamente da **KEIMA** secondo il Certificato **74736-KRO/EI/C97-4957**.
- 07 Σημείωση \* όπως προορίζεται στο Αρχείο Τεχνικής Κατασκευής **Daikin.TCF.015** και κρίνεται θετικά από το **KEIMA** σύμφωνα με το Πρωτόκολλο **74736-KRO/EI/C97-4957**.
- 08 Nota \* tal como estabelecido no Ficheiro Técnico de Construção **Daikin.TCF.015** e como o parecer positivo de **KEIMA** de acordo com o Certificado **74736-KRO/EI/C97-4957**.

- 09 (en) заверит, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
- 10 (de) erklert under enersvar, at klimaanlegsmodelerne, som denne deklaration vedrører:
- 11 (s) deklarerer i egen skap av hundsransvarig, at luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
- 12 (nl) erklert dat ik lullidening anseer for at de luftkonditioneringsmodeller som berøres av denne deklarasjon innebarer at:
- 13 (fi) ilmoittaa yksinomaan omelta vastuullaan, että tämän ilmoituksen tarkoitamat ilmastointilaitteiden mallit:
- 14 (gr) δηλώνω με své pine αποβρώσισι, že modely klimatizace, k nimě se toto prohlášení vztahuje:
- 15 (it) izjavljajo pod skljubno vlastno odgovornostjo da su modeli klima uređaja na koje se ova izjava odnosi:
- 16 (c) tejes teletsešes teđatibáan kjelenti, bogi a klimatizerenozes modeliek, mteyektre e nymákozi voratkozi:

- 17 (e) déclare sur la responsabilité exclusive d'acceptation, que les modèles de climatiseurs, dont les références sont indiquées ci-dessous, sont conformes aux dispositions de la norme:
- 18 (de) erklert die Verantwortung für die Einhaltung der Bestimmungen der Norm für die angegebenen Klimageräte:
- 19 (s) z av odgovornosti izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:
- 20 (nl) verklaar dat de afgegeven modellen conform zijn aan de eisen van de norm:
- 21 (fi) vakuuttaa omalla vastuullaan, että nämä ilmoituksen tarkoitamat ilmastointilaitteiden mallit:
- 22 (gr) δηλώνω με αποκλειστική μου ευθύνη, ότι οι μονοί κλιματιστικών συσκευών που αναφέρονται στην παρούσα δήλωση:
- 23 (it) izjavljajo pod skljubno vlastno odgovornostjo, da su modeli klima uređaja na koje se ova izjava odnosi:
- 24 (c) tejes teletsešes teđatibáan kjelenti, bogi a klimatizerenozes modeliek, mteyektre e nymákozi voratkozi:
- 15 u skladu sa slijedećim standardima ili drugim normativnim dokumentima), uz uvjet, da se oni koriste u skladu s našim uputama:
- 16 megfelelőek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:
- 17 spēlniek vnmogi nesepejoių norm i nymoi dokumentov normalizacijoių, pod varunkiem že užtvarte są zgodnie z naszymi instrukcijami:
- 18 sunt în conformitate cu următorii (următoare) standard(e) sau al(e) documente(n) normativ(e), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre
- 19 skaidri nasekjiojis standarti d drugi normativi, pod pogojem, da se uporabijo u skladu z našimi navodili:
- 20 u vastauses jrgmájisje standarte(j)ga, voi teise normativise dokumente(j)ga, kui need kasutatakse vastavalt meie juhendile:
- 21 conformitar na cizime standarti ili drugi normativni dokumenti, pri uslovenic, da se koristat u skladu u namure instrukcijam:
- 22 atlinke žemiu nurodytu standartu su sąlyga, kad yra naudojami pagal mūsų nurodymus:
- 23 kad, je lieoti atbilstosi ražojia norárijumem, atbisi sekojiosim standartem an ošiem normativim dokumentim:
- 24 su zvhose s naseševoujymj normojamj) alebo njymj) normativnymj) dokumentomj(ami), za prepokožiatu, že sa používajú v súlade s našim návodom:

- 01 Directies, als amended.
- 02 Directien, gemäß Änderung.
- 03 Directives, telles que modifiées.
- 04 Richtlijnen, zoals geamendard.
- 05 Directivas, según lo emmendado.
- 06 Directive, come da modifica.
- 07 Обявљив, омак, ёшоу рпоноуијбј.
- 08 Directivas, conforme alteração em.
- 09 Директиве со изменени поправками.
- 10 Direktiver, med senere ændringer.
- 11 Direktivi, med foretagne ændringer.
- 12 Direktiv, med foretagne ændringer.
- 13 Direktiv, se korevare korevenenia.
- 14 v platnem znanj.
- 15 Smerenica, kako je izmijenjeno.
- 16 išnarytė(j)ė) is mdoosidásak renelikezėsit.
- 17 a pójnieszimj popravkami.
- 18 Direktivtor, cu amendamentele respective.
- 19 Direktive, med foretagne ændringer.
- 20 Direktivd loos muudatustega.
- 21 Direktiv, se korevare korevenenia.
- 22 Direktivose su papilomams.
- 23 Direktivus un to papildinėjimus.
- 24 Smerenica, v platnom zneni.

17 **Uwaga \*** zgodnie z archiwale dokumentacji konstrukcyjnej **Daikin.TCF.015**, pozytywna opinia **KEIMA** i Szwedeciem **74736-KRO/EI/C97-4957**.

18 **Notá \*** som anført i den Tekniske Konstruktionsfil **Daikin.TCF.015** og positivt vurderet af **KEIMA** i henhold til Certificat **74736-KRO/EI/C97-4957**.

19 **Opomba \*** uruslunjan ar utforri, enigtiget med den Tekniske Konstruktionsfilen **Daikin.TCF.015** som positivt nrtugas av **KEIMA** vilket odest framgar av Certifikat **74736-KRO/EI/C97-4957**.

20 **Márkus \*** jalka blyo urelevo u saoubu tehnické konstrukcie **Daikin.TCF.015** a pozitivně zjišeno **KEIMA** v souladu s ovědčáním **74736-KRO/EI/C97-4957**.

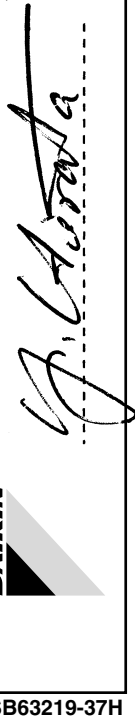
21 **Zabewonka \*** jalka on eslešty tektivessá Asekkijassa **Daikin.TCF.015** ja jalka **KEIMA** on hyväksynyt Sertifikaatin **74736-KRO/EI/C97-4957** mukaisesti.

22 **Pastaba \*** jalk blyo urelevo u saoubu tehnické konstrukcie **Daikin.TCF.015** a pozitivně zjišeno **KEIMA** v souladu s ovědčáním **74736-KRO/EI/C97-4957**.

23 **Pezimes \*** jalko je zobjázo u Datočes o tehnické konstrukci **Daikin.TCF.015** i pozitivno odjetereno od strane **KEIMA** prema Certificatu **74736-KRO/EI/C97-4957**.

24 **Poznamka \*** až j **Daikin.TCF.015** mšuzak konstruktiois dokumentáciá, aqájn, až j **KEIMA** igzolja a mejšejelási až j **74736-KRO/EI/C97-4957** banušivány szerint.

25B63219-37H



Yoshiaki Hirata  
Manager Quality Control Department  
Shiga, 1st of Mar. 2005

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




# Safety Precautions

- Read these Safety Precautions carefully to ensure correct installation.
- This manual classifies the precautions into WARNING and CAUTION.  
Be sure to follow all the precautions below: they are all important for ensuring safety.





 **WARNING**.....Failure to follow any of WARNING is likely to result in such grave consequences as death or serious injury.




 **CAUTION**.....Failure to follow any of CAUTION may in some cases result in grave consequences.

- The following safety symbols are used throughout this manual:

 Be sure to observe this instruction.	 Be sure to establish an earth connection.	 Never attempt.
--	---	--

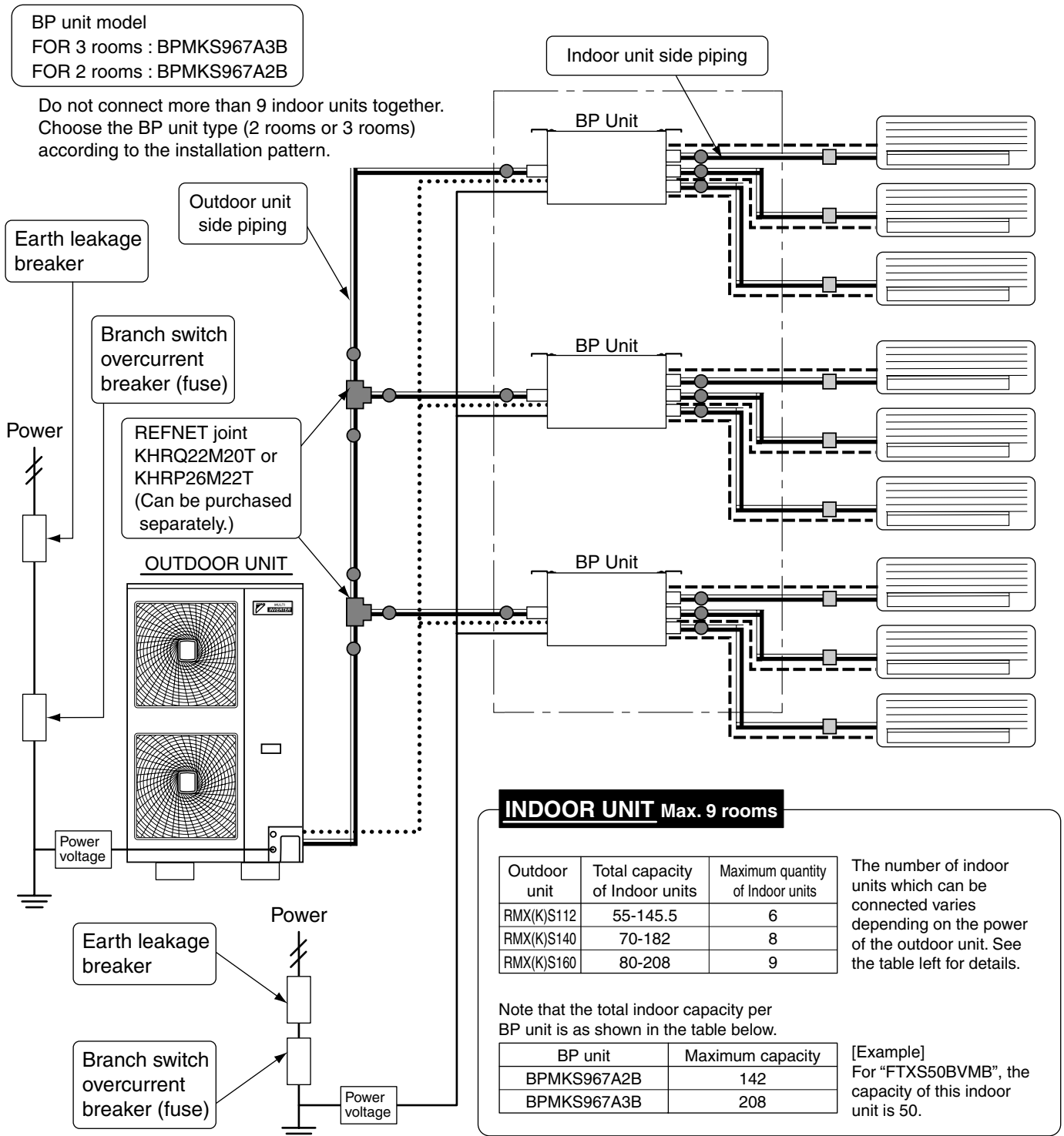
- After completing installation, test the unit to check for installation errors. Give the user adequate instructions concerning the use and cleaning of the unit according to the Operation Manual.

 <b>WARNING</b>	
• Installation should be left to the dealer or another professional. Improper installation may cause water leakage, electrical shock, or fire.	
• Install the air conditioner according to the instructions given in this manual. Incomplete installation may cause water leakage, electrical shock, or fire.	
• Be sure to use the supplied or specified installation parts. Use of other parts may cause the unit to come to lose, water leakage, electrical shock, or fire.	
• Install the air conditioner on a solid base that can support the weight of the unit. An inadequate base or incomplete installation may cause injury in the event the unit falls off the base.	
• Electrical work should be carried out in accordance with the installation manual and the national electrical wiring rules or code of practice. Insufficient capacity or incomplete electrical work may cause electrical shock or fire.	
• Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.	
• For wiring, use a cable length enough to cover the entire distance with no connection. Do not use an extension cord. Do not put other loads on the power supply, use a dedicated power circuit. (Failure to do so may cause abnormal heat, electrical shock or fire.)	
• Use the specified types of wires for electrical connections from the BP unit to the indoor and outdoor units. Firmly clamp the interconnecting wires so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating or fire.	
• After connecting interconnecting and supply wiring be sure to shape the cables so that they do not put undue force on the electrical covers or panels. Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, or fire.	
• If any refrigerant has leaked out during the installation work, ventilate the room. (The refrigerant produces a toxic gas if exposed to flames.)	
• After all installation is complete, check to make sure that no refrigerant is leaking out. (The refrigerant produces a toxic gas if exposed to flames.)	
• When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air. (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise or rupture, resulting in injury.)	
• During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the shut-off valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.	
• During installation, attach the refrigerant piping securely before running the compressor. If the compressor is not attached and the shut-off valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.	
• Be sure to establish a ground. Do not ground the unit to a utility pipe, arrester, or telephone ground. Incomplete ground may cause electrical shock. A high surge current from lightning or other sources may cause damage to the air conditioner.	
• Be sure to install an earth leakage breaker. Failure to install an earth leakage breaker may result in electrical shocks.	

 <b>CAUTION</b>	
• Do not install the air conditioner in a place where there is danger of exposure to inflammable gas leakage. If the gas leaks and builds up around the unit, it may catch fire.	
• This unit is for indoor use. (If installing outdoors, place in a location away from wind and rain.)	

# System Layout


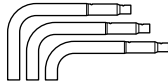
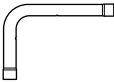
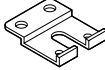






For installation of the indoor and outdoor units, follow the instructions in the Installation manual for each unit.



- Power supply line (3 wires) [ 1 ~ 50Hz 230V ]  
\*Outdoor unit and all BP units require their own power supply.
- Transmission line (2 wires)
- Power supply and transmission line (4 wires)

- Piping
- Brazing connection
- Flare connection

# Accessories

① Installation Manual 	1pc.	⑥ For indoor unit side piping (gas) (pipe joint) 	BPMKS967A3B (For 3 rooms) : 3pcs. BPMKS967A2B (For 2 rooms) : 2pcs.
② For outdoor unit side piping (gas) (pipe joint) 	1pc.	⑦ Hanger metal 	4pcs.
③ For outdoor unit side piping (gas) (pipe joint) 	1pc.	⑧ Screws 	8pcs.
④ For outdoor unit side piping (liquid) (pipe joint) 	1pc.	⑨ Binding band 	2pcs.
⑤ For indoor unit side piping (liquid) (pipe joint) 	1pc.	⑩ Heat insulation (2pcs. is 1set) 	BPMKS967A3B (For 3 rooms) : 4sets BPMKS967A2B (For 2 rooms) : 3sets

## Items to be prepared in the field

- Connecting wires between BP unit and indoor unit (H05VV(\*), 4 wires, 1.6mm or 2.0mm)
- Connecting wires (H05VV(\*), 3 wires, 1.6mm or 2.0mm)
- Transmission wires (H05VV(\*), 2 wires, 0.75mm<sup>2</sup> to 1.25mm<sup>2</sup>)
- Installation parts (hanging bolts: 4 × M10 or M8; nuts: 8; flat washers: 8)
- Screws for wall-mounting: 6 × M5
- Heat insulation (joint) [Thermal conductivity: **0.041 - 0.052W/mK (0.035 - 0.045kcal/mh°C) or more** / thickness **13mm (1/2 inch) or more** / Heat resistance: 100°C or higher (Only heat pump system)]

(\*) Only in protected pipes, use H07RN-F when protected pipes are not use.  
 Specifications for local wiring power cord and branch wiring are in compliance with IEC60245.

# Precautions for Selecting the Location

## The BP unit is for indoor use.

Install in a location such as above a ceiling or behind a wall in accordance with the following conditions:

- That the unit is fully supported, and is in a location with little or no vibration.
- That the refrigerant pipes for the indoor and outdoor units can be repaired with ease, and that the units are placed well within the distance from each other allowed by the pipe length.
- That there is nothing nearby that produces heat or steam (gas).
- When installing, that there is enough room for servicing the unit.
- Do not install in location that is hot or humid for long periods of time.  
 A location where the dry-bulb (DB) temperature around the BP unit reaches 60°C or higher.
- A well-ventilated area.
- Do not install near bedrooms. The sound of refrigerant flowing through the piping may sometimes be audible.  
 For restrictions on installation, refer to P5-6. "Installation".

# Installation

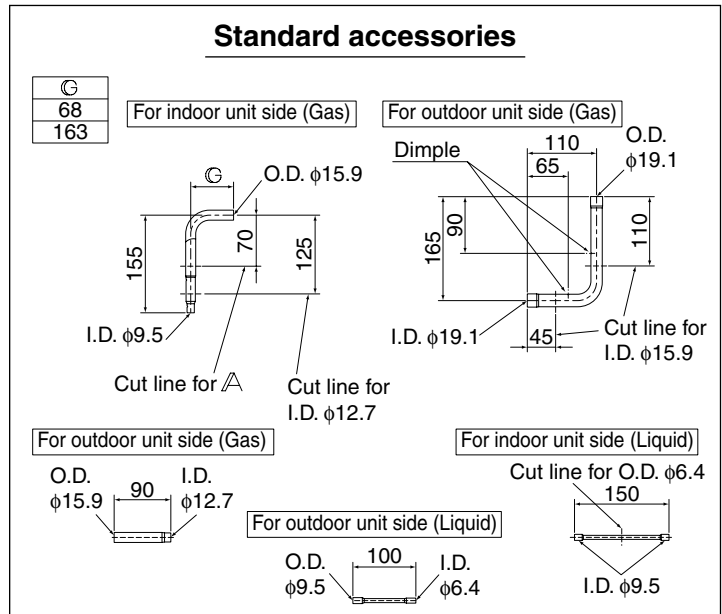
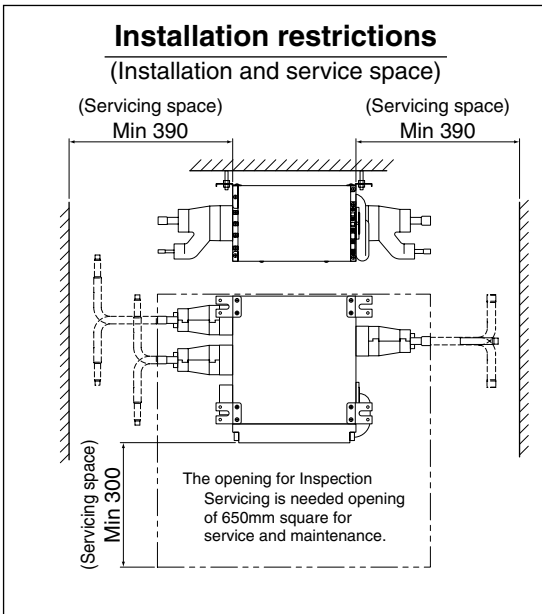
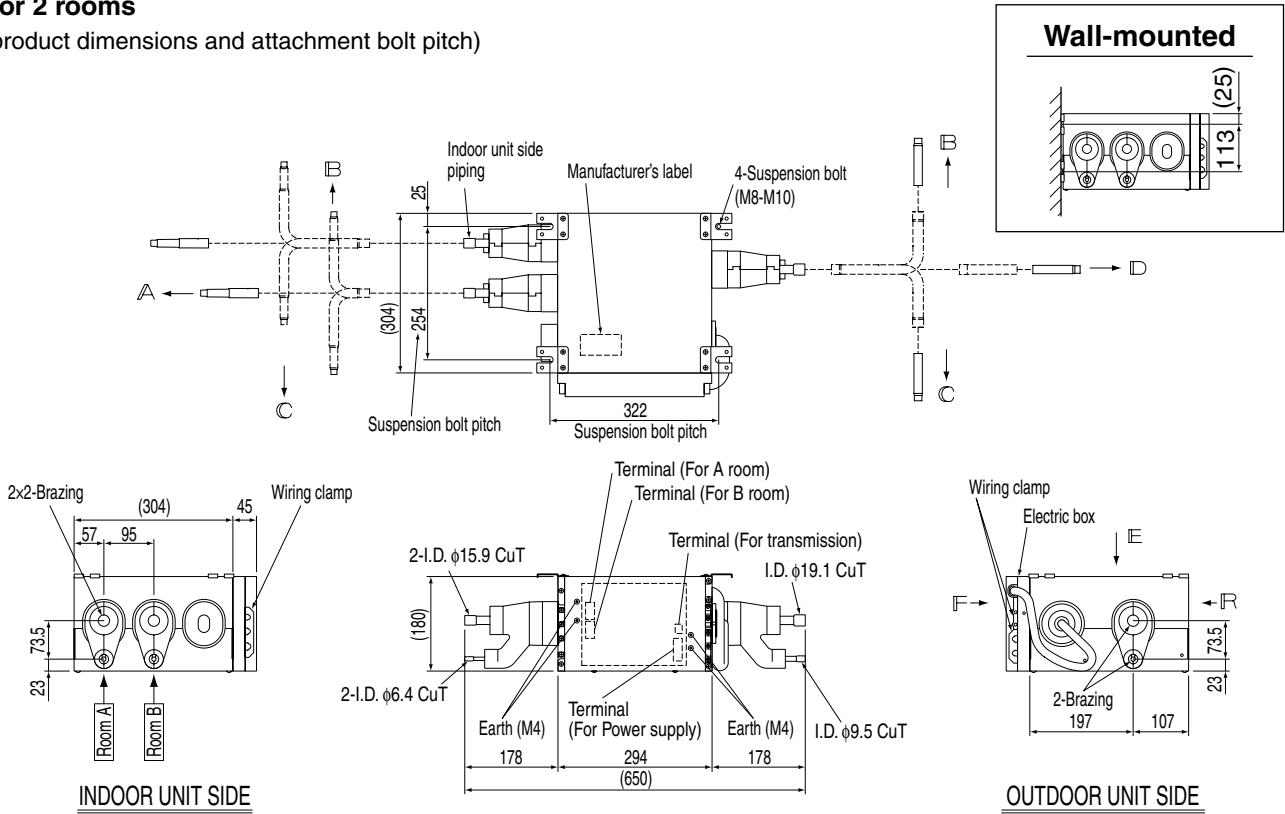
Example of connection (Connection of 8 units heat pump system)			Branch with refnet joint																											
<p>① indoor unit</p> <p>BP ① BP unit</p> <p>△ refrigerant branch kit (refnet joint)</p>																														
Maximum allowable length	Between outdoor and BP units	Total piping length	Pipe length between outdoor and BP units $\leq 55\text{m}$ [Example] $a+b+c+d+e \leq 55\text{m}$																											
	Between BP and indoor units	Total piping length	Piping length between BP and indoor units: RMX(K)S112 $\leq 60\text{m}$ / RMX(K)S140 $\leq 80\text{m}$ / RMX(K)S160 $\leq 90\text{m}$ [Example] RMXS140: $f+g+h+i+j+k+l+m \leq 80\text{m}$																											
	Between BP and indoor unit	1 room length	Piping length between BP and indoor unit $\leq 15\text{m}$ [Example] $f, g, h, i, j, k, l, m \leq 15\text{m}$																											
Allowable height	Between outdoor and indoor units	Difference in height	Difference in height between outdoor and indoor units ( $H1$ ) $\leq 30\text{m}$																											
	Between outdoor and BP units	Difference in height	Difference in height between outdoor and BP units ( $H2$ ) $\leq 30\text{m}$																											
	Between BP and BP units	Difference in height	Difference in height between BP unit and BP units ( $H3$ ) $\leq 15\text{m}$																											
	Between indoor and indoor units	Difference in height	Difference in height between indoor and indoor units ( $H4$ ) $\leq 15\text{m}$																											
Minimum allowable length *1 Since the sound of refrigerant may be transferred from the outdoor unit to the indoor unit to the indoor unit, make the pipe length from the outdoor unit to the first junction 5m or longer.	Piping length		Pipe length between outdoor and first refrigerant branch kit (refnet joint) $\geq 5\text{m}$ [Example] $a \geq 5\text{m}$																											
Allowable length after the branch *2 Branch kit are recommended to set as possible as near the BP units. c, d, e are recommended to be as possible as short.	Piping length		Piping length from first refrigerant branch kit (refnet joint) to indoor unit $\leq 40\text{m}$ [Example] unit 8: $b+c+m \leq 40\text{m}$ [Example] unit 6: $b+e+k \leq 40\text{m}$ [Example] unit 3: $d+h \leq 40\text{m}$																											
Refrigerant branch kit selection (refrigerant branch kits can only be used with R410A)	Refrigerant branch kit (refnet joint) name: KHRQ22M20T or KHRP26M22T																													
Piping size selection	<p>• Piping size (Outer diameter <math>\times</math> minimum thickness)</p> <table border="1"> <thead> <tr> <th></th> <th>symbol</th> <th>Gas pipe</th> <th>Liquid pipe</th> </tr> </thead> <tbody> <tr> <td>Between outdoor unit and first refrigerant branch kit</td> <td>a</td> <td><math>\phi 19.1 \times 1.0</math></td> <td><math>\phi 9.5 \times 0.8</math></td> </tr> <tr> <td>Between first refrigerant branch kit and the other branch kit</td> <td>b</td> <td><math>\phi 15.9 \times 1.0</math></td> <td><math>\phi 9.5 \times 0.8</math></td> </tr> <tr> <td>Between refrigerant branch kit and BP unit</td> <td>c, d, e</td> <td colspan="2">See the table A</td> </tr> </tbody> </table> <p>Table A</p> <table border="1"> <thead> <tr> <th>Total indoor capacity Q</th> <th>Gas pipe</th> <th>Liquid pipe</th> </tr> </thead> <tbody> <tr> <td><math>Q_c, Q_d, Q_e \leq 5.0\text{kW}</math></td> <td><math>\phi 12.7 \times 0.8</math></td> <td><math>\phi 6.4 \times 0.8</math></td> </tr> <tr> <td><math>Q_c, Q_d, Q_e &gt; 5.0\text{kW}</math></td> <td><math>\phi 15.9 \times 1.0</math></td> <td><math>\phi 9.5 \times 0.8</math></td> </tr> </tbody> </table> <p>*<math>Q_c, Q_d, Q_e</math> is total connected indoor capacity *Subscript c, d, e indicates the above symbol</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>[Example]</p> <p>indoor 4: 2.5kW }  indoor 5: 3.5kW } <math>Q_e = 11.0\text{kW}</math>  indoor 6: 5.0kW }  =&gt; (Gas pipe) <math>\phi 15.9 \times 1.0</math> / (Liquid pipe) <math>\phi 9.5 \times 0.8</math></p> </div>						symbol	Gas pipe	Liquid pipe	Between outdoor unit and first refrigerant branch kit	a	$\phi 19.1 \times 1.0$	$\phi 9.5 \times 0.8$	Between first refrigerant branch kit and the other branch kit	b	$\phi 15.9 \times 1.0$	$\phi 9.5 \times 0.8$	Between refrigerant branch kit and BP unit	c, d, e	See the table A		Total indoor capacity Q	Gas pipe	Liquid pipe	$Q_c, Q_d, Q_e \leq 5.0\text{kW}$	$\phi 12.7 \times 0.8$	$\phi 6.4 \times 0.8$	$Q_c, Q_d, Q_e > 5.0\text{kW}$	$\phi 15.9 \times 1.0$	$\phi 9.5 \times 0.8$
	symbol	Gas pipe	Liquid pipe																											
Between outdoor unit and first refrigerant branch kit	a	$\phi 19.1 \times 1.0$	$\phi 9.5 \times 0.8$																											
Between first refrigerant branch kit and the other branch kit	b	$\phi 15.9 \times 1.0$	$\phi 9.5 \times 0.8$																											
Between refrigerant branch kit and BP unit	c, d, e	See the table A																												
Total indoor capacity Q	Gas pipe	Liquid pipe																												
$Q_c, Q_d, Q_e \leq 5.0\text{kW}$	$\phi 12.7 \times 0.8$	$\phi 6.4 \times 0.8$																												
$Q_c, Q_d, Q_e > 5.0\text{kW}$	$\phi 15.9 \times 1.0$	$\phi 9.5 \times 0.8$																												

# Installation

- This unit may be installed suspended from the ceiling or mounted on the wall.
- **This unit may only be installed vertically, as shown in the diagram below.** (Side E is facing up.)  
However, it may be freely installed in any direction forward or back, and to the sides.
- Be sure to leave a **650mm square** opening for service and inspection as shown in the diagram below, for both ceiling-suspended installation and wall-mounted installation.
- This unit **“does not require drain treatment”**.
- This unit may be installed with sides F or R facing forward (servicing direction).
- The piping for the indoor unit may be freely led around in directions A, B, C or D.
- The inclination of side E must be within  $\pm 5^\circ$  degrees forward or back or to the sides.

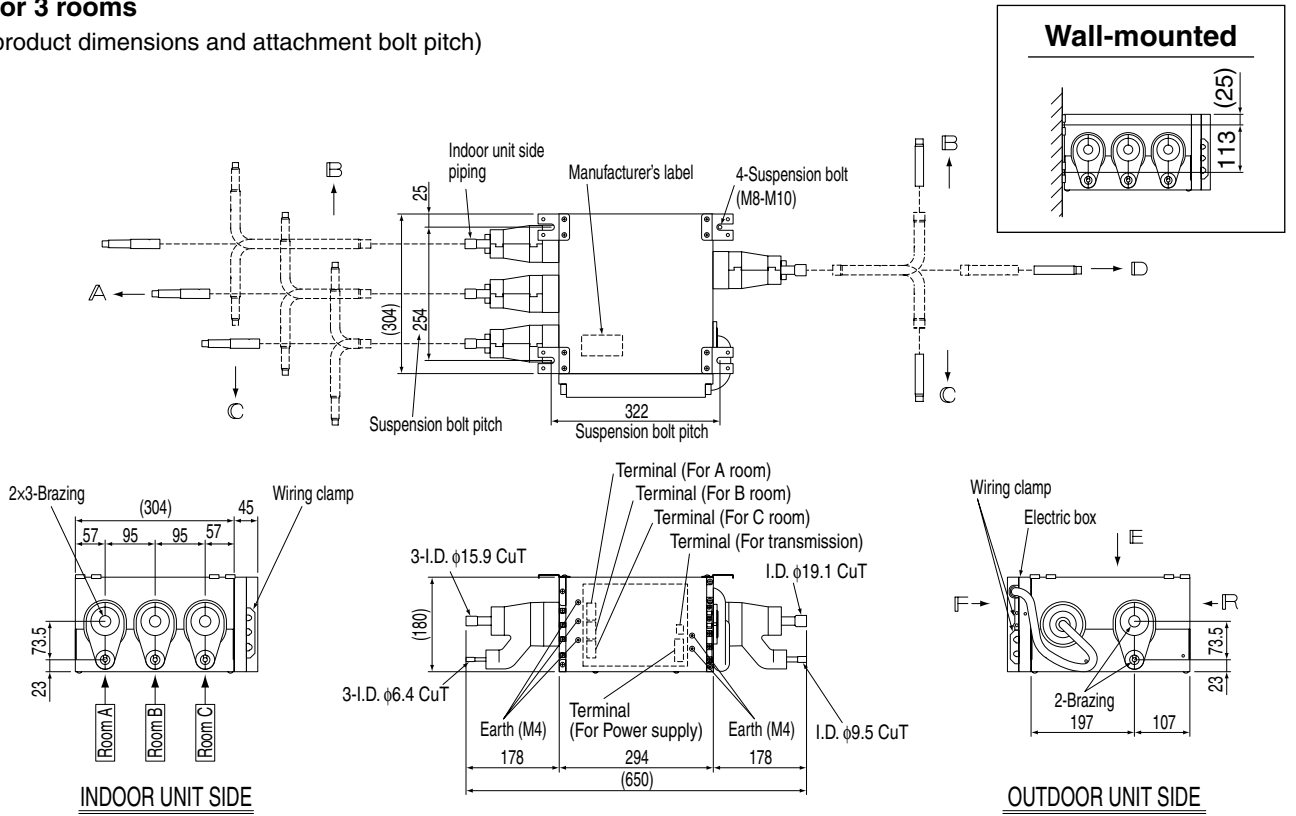
## ◆ For 2 rooms

(product dimensions and attachment bolt pitch)



◆ For 3 rooms

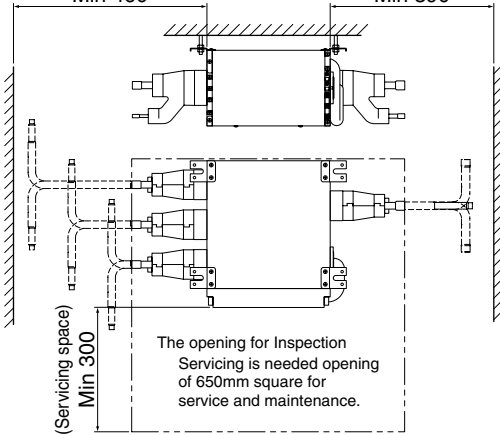
(product dimensions and attachment bolt pitch)



**Installation restrictions**

(Installation and service space)

(Servicing space) Min 460 (Servicing space) Min 390

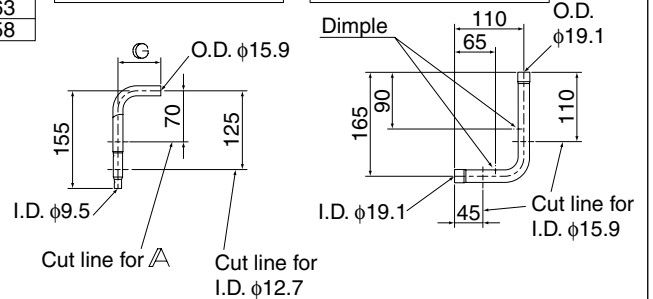


**Standard accessories**

G
68
163
258

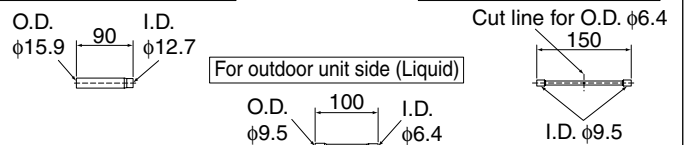
For indoor unit side (Gas)

For outdoor unit side (Gas)



For outdoor unit side (Gas)

For indoor unit side (Liquid)



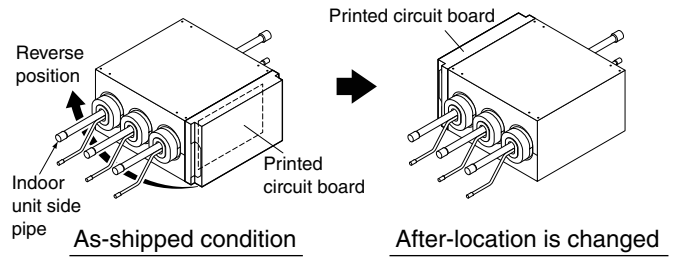


# Installation of the Unit

## 1. Replacing the electric box

- This unit has two different installation types: (1) ceiling-suspended type and (2) wall-mounted type.
- Choose the proper installation pattern according to the location of installation.
- The installation location for the printed circuit board can be changed.
- **Procedure for changing the installation location of the printed circuit board.**

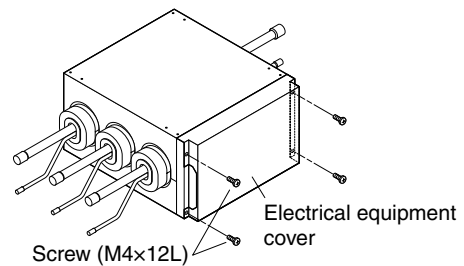
If the installation location of the printed circuit board needs to be changed because of the installation conditions, perform the following:



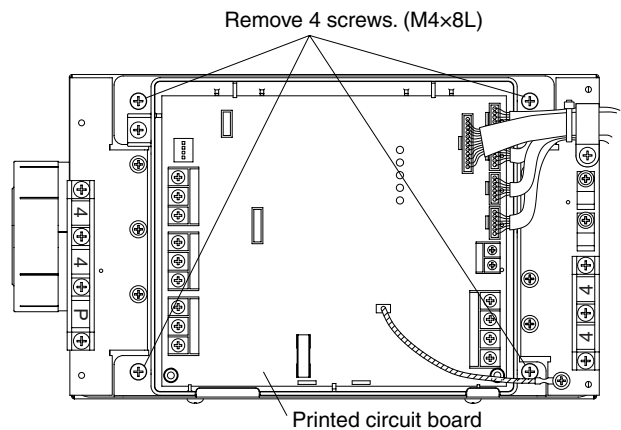
### ⚠ Caution

- Before doing any wiring on site, replace the electric box.

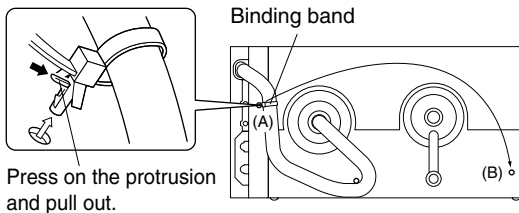
- 1) Remove the screws and pull off the electrical equipment cover.



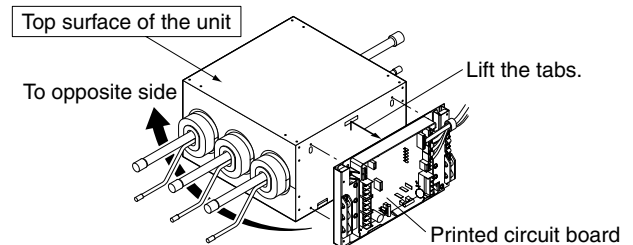
- 2) Remove 4 screws shown in the figure on the below, remove the printed circuit board.



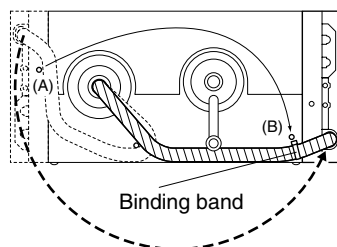
- 3) Remove the binding band (A) which holds the wires.



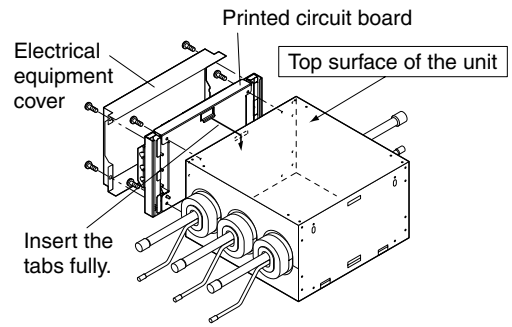
- 4) Remove the printed circuit board, and reattach as shown in the figure.



- 5) Reattach the binding band to position (B).



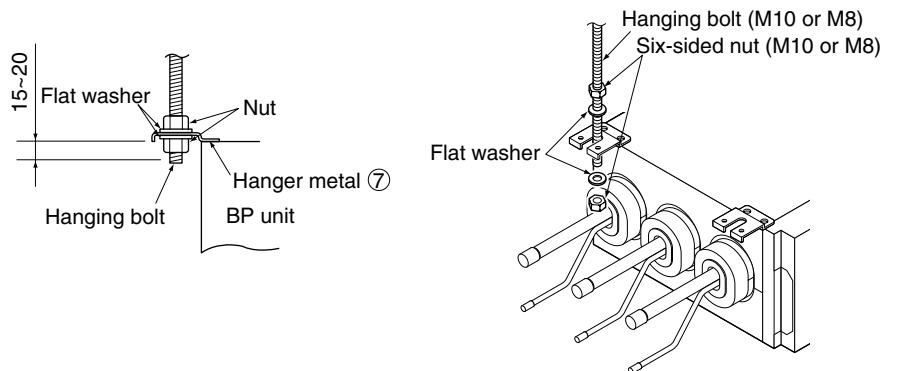
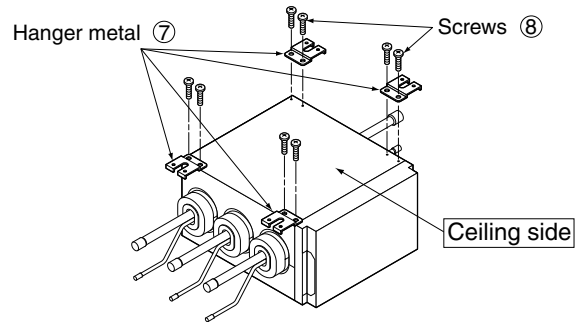
- 6) Attach the printed circuit board and electrical equipment cover to the other side and secure with the screws.



## 2. Ceiling-suspended type

### Procedure:

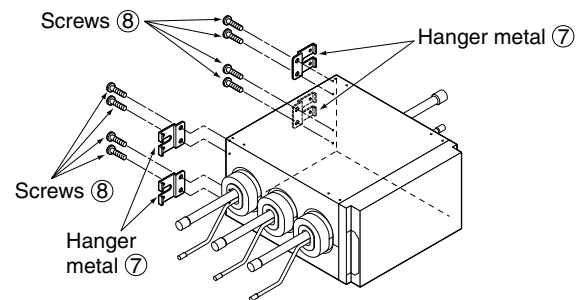
- 1) Fix the furnished hanger metal ⑦ with two screws ⑧. (4 locations in total)
  - 2) Using an insert-hole-in-anchor, hang the hanging bolt.
  - 3) Install a hexagon nut and a flat washer (field supply) to the hanging bolt as shown in the figure in the below, and lift the unit to hang on the hanger metal.
  - 4) After checking with a level that the unit is level, tighten the hexagon nut.
- \* The tilt of the unit should be within  $\pm 5^\circ$  in front/ back and left/right.



## 3. Wall-mounted type

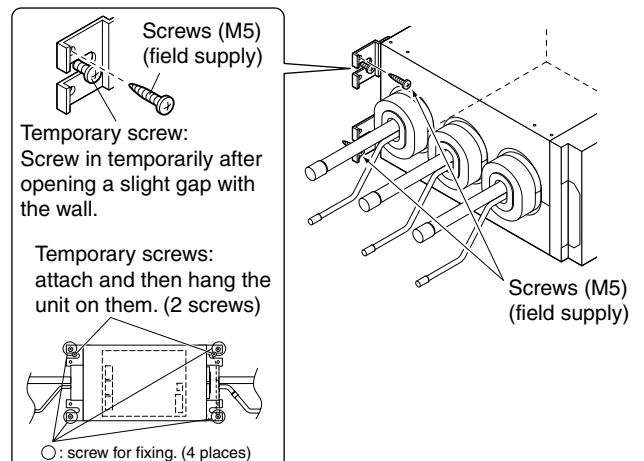
### Procedure:

- 1) Fix the furnished hanger metal ⑦ with two screws ⑧. (4 locations in total)
  - 2) Create a gap with the wall and screw in the temporary screws, and hang the BP unit.
  - 3) After checking with a level that the unit is level, fix the unit with screws (M5, field supply).
- \* The tilt of the unit should be within  $\pm 5^\circ$  in front/ back and left/right.



### CAUTION

- Be sure to install the unit with the top surface up.
- Do not install near bedrooms. The sound of refrigerant flowing through the piping may sometimes be audible.

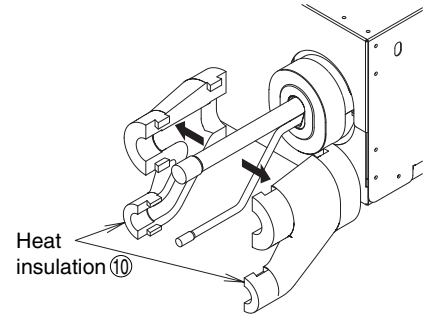


# Connection of Refrigerant Piping

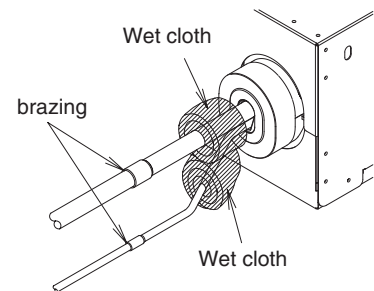
See the indoor and outdoor units installation manual for details on the size of connection piping to the indoor and outdoor units.

## 1. About brazing pipes on site

- 1) Before brazing, remove the heat insulation.
- 2) Remove the blue-colored tape, and throw it out.

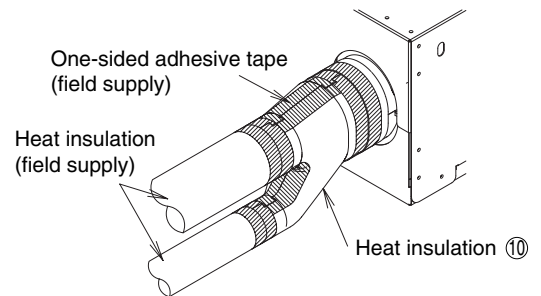


- 3) Wrap the pipes to be brazed with sufficient wet cloths so that brazing does not affect the unit.
- 4) After brazing, use wet cloths or spray mist to sufficiently cool off all pipes.
- 5) When brazing, be careful that the flame of the torch does not come in contact with the unit.  
(Since the inside of the unit is made of plastic, it may become deformed or melt, destroying its heat-insulation performance.)



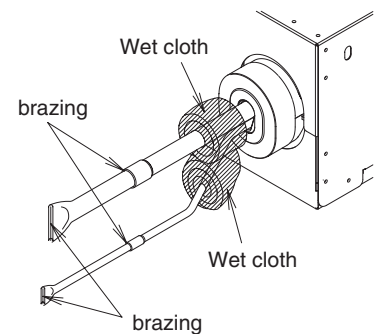
## 2. Insulation of pipes

- 1) Attach heat insulation to each pipe.
- 2) When attaching insulation to the pipes, use one-sided adhesive tape or similar materials to thoroughly prevent air from entering the heat insulation.
- 3) Eliminate any gaps in the heat insulation.

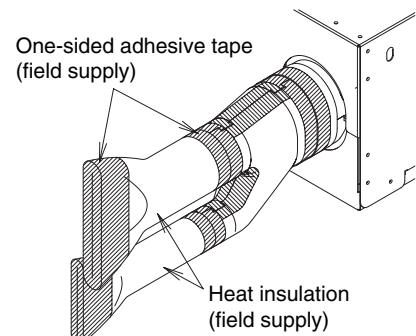


## 3. Unconnected pipes

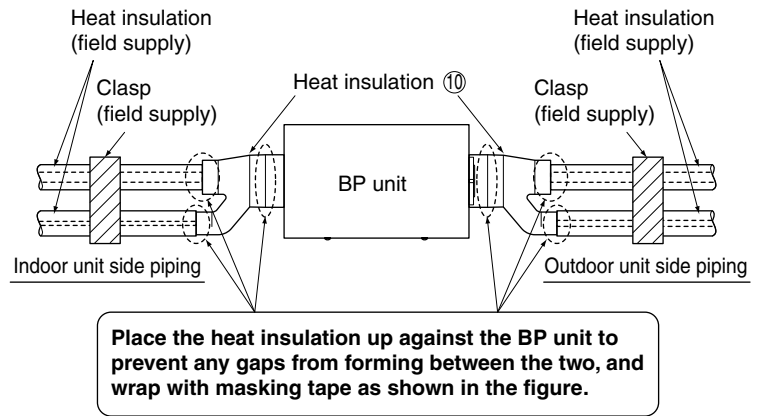
- 1) For pipes not yet connected to a room, pinch the end of the pipe and braise them.
- 2) When brazing this area too, wrap the pipes with sufficient wet cloths to protect the unit.
- 3) After brazing this area too, cool the pipes sufficiently.



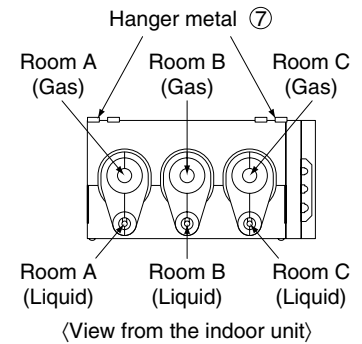
- 4) Attach heat insulation, and use one-sided adhesive tape to thoroughly prevent air from entering the heat insulation.
- 5) Cover the ends of the pipes with sufficient heat insulation.



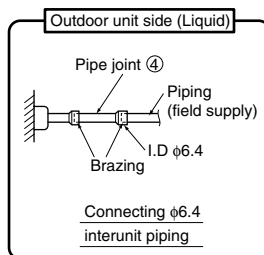
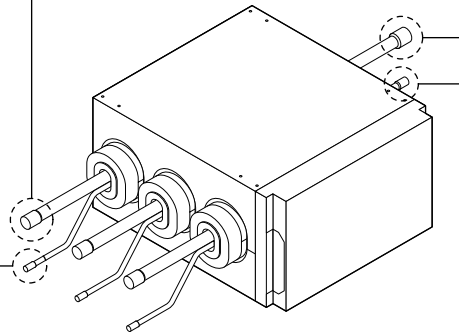
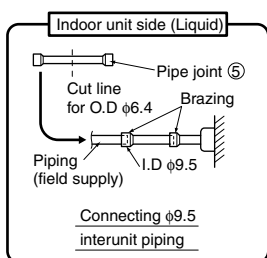
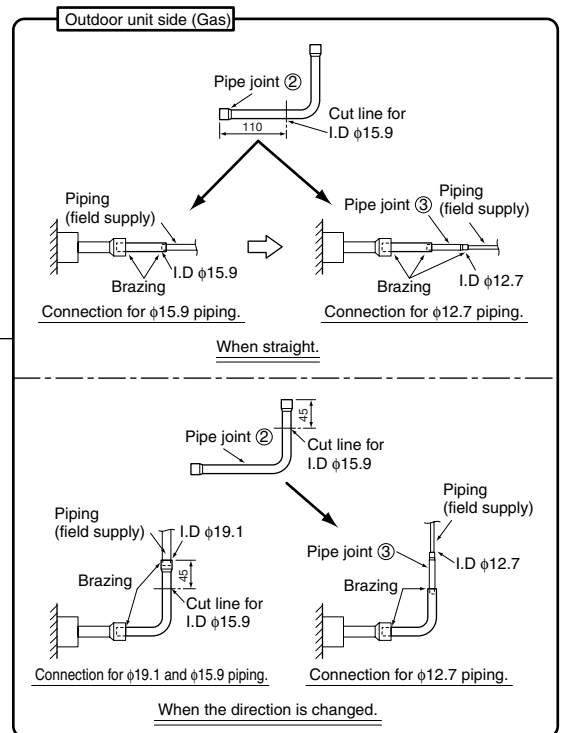
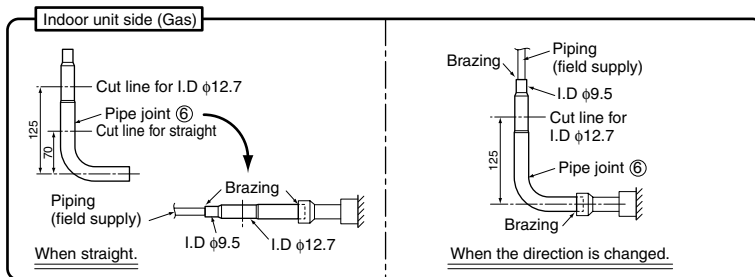
- After brazing and system leakage check, connect a heat insulation (field supply), and let it cure completely following the procedure illustrated right. Use the heat insulation with the following specifications:  
Thermal conductivity: **0.041-0.052W/mK (0.035-0.045kcal/mh°C or more)** / thickness 13mm or more  
Heat resistance = 100°C or higher (only heat pump system)
- To ensure that the weight of the local interunit piping does not bear on directly on the BP unit, secure it near the BP unit using the clasp (field supply).



- When connecting indoor units, make sure to connect refrigerant pipes and connection wires to the appropriate connection ports marked with matching alphabets (A, B and C).



- When changing the routing direction, use the pipe joints ② and ⑥ (accessories). Use pipe joints ③, ④ and ⑤ to connect refrigerant pipes with different diameters.

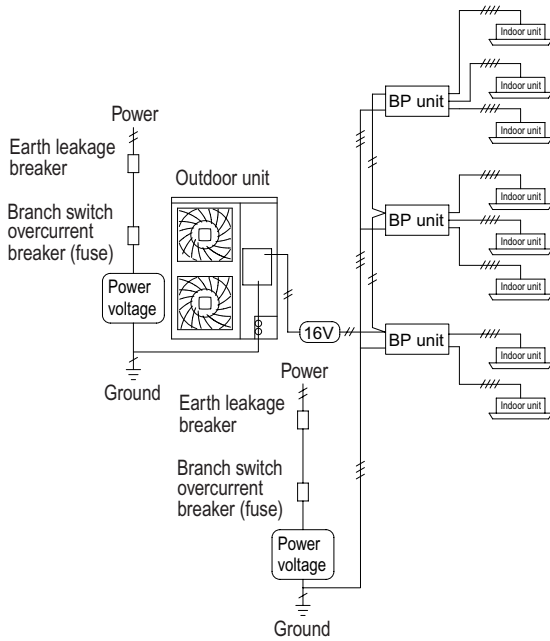


**NOTE**

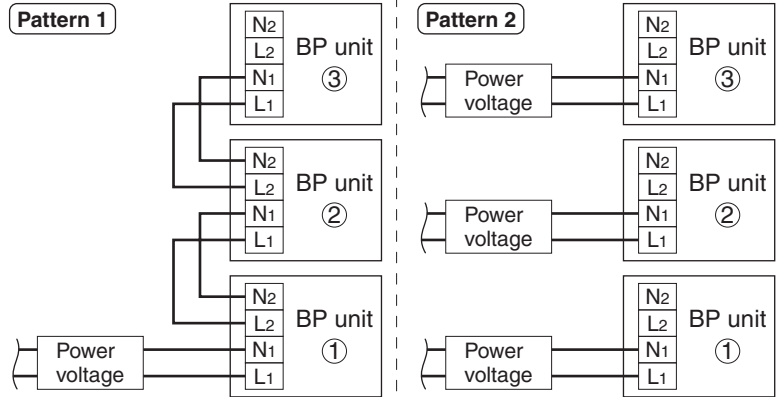
When changing the direction of the piping to something other than the above, bend the piping on site.

# Connecting the Wiring

## Connection example of total system wiring



The following kind of wiring methods is okay for the power line.



- Crossover wiring is possible for the power line.

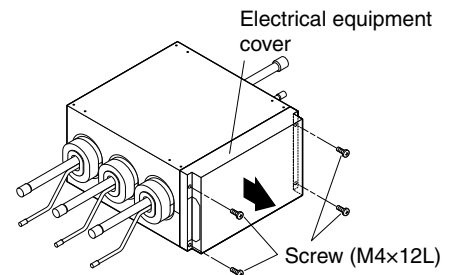
- It is also possible to supply power from the BP units themselves.

### CAUTION

- Be sure to connect the power line to L1 and N1.
- For crossover wiring, take the line from L2 and N2 and connect it to L1 and N1 on the other BP unit.

## Work procedure

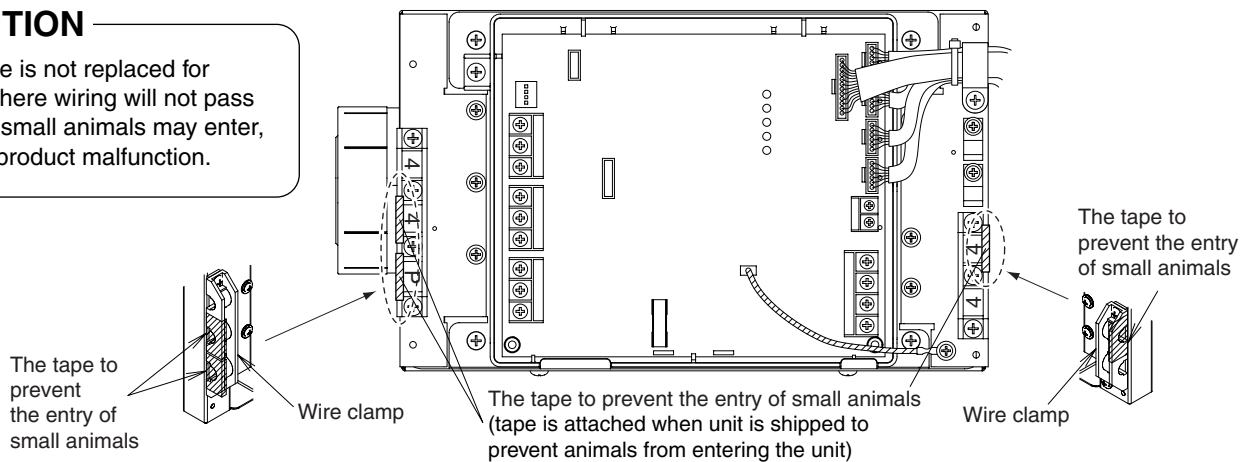
- 1) Remove the screws and pull off the electrical equipment cover.



- 2) Tape is attached to the wire binding band. The purpose of the tape is to prevent small animals from entering the unit. Only remove the tape from places where wiring it to be passed through.

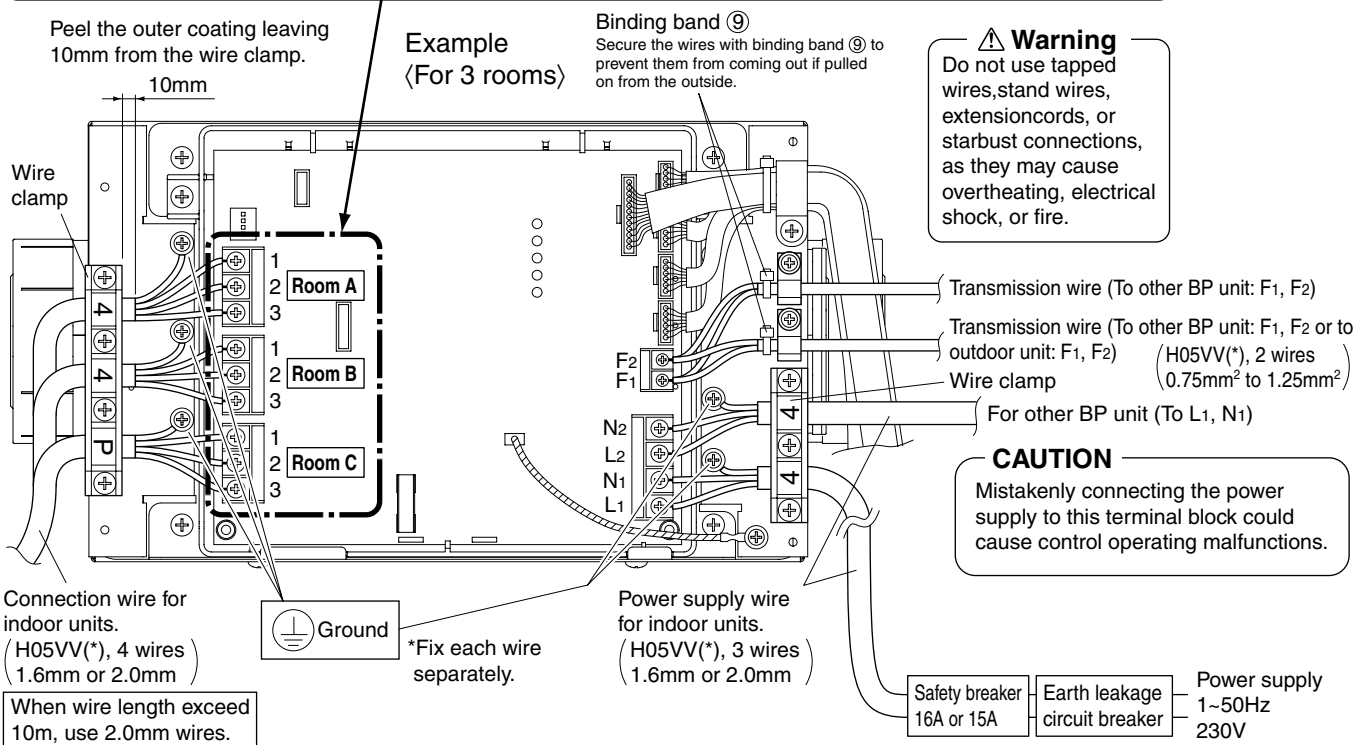
### CAUTION

If the tape is not replaced for places where wiring will not pass through, small animals may enter, causing product malfunction.



3) Follow the instructions on the wiring nameplate to connect the connection wires of indoor/outdoor units to terminal block numbers. (1, 2, 3, F1 and F2) Always fix each ground wire separately with a ground screw. (See the figure below.)

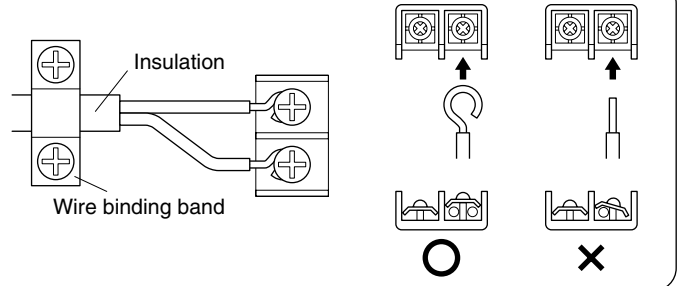
**NOTE: The terminal block numbers are arranged from top to bottom in order of 1, 2 and 3.**



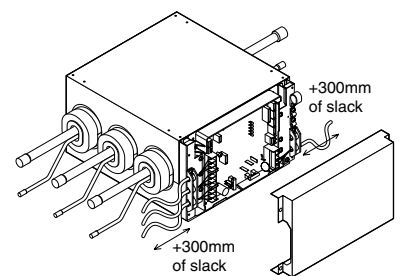
(\*) Only in protected pipes, use H07RN-F when protected pipes are not use.  
Specifications for local wiring power cord and branch wiring are in compliance with IEC60245.

**CAUTION**

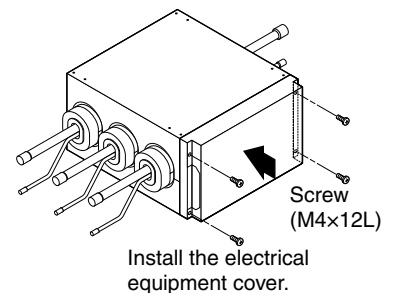
- All local interunit wiring must be secured using the wire binding band over the insulation, as shown in the figure.
- When connecting the connection wires to the terminal block using a single core wire, be sure to perform curling. Problems with the work may cause heat and fires.



4) Allow 300mm for the pulling-out section of harness.



5) Return the electrical equipment cover to its original position, and fix it with the screws.



# Operating Test

Follow the “Operating test” as described in the installation manual of the outdoor unit.

If the BP unit does not operate normally during the test run, the error can be checked on the remote controller display for the indoor unit.

## Error codes displayed on the remote controller

Malfunction code	Nonconformity during installation	Remedial action
A9	Electric expansion valve connector not connected (BP unit)	Please contact your dealer.
E2	Printed circuit board faulty (BP unit)	
J0	Liquid and gas thermistor faulty (BP unit)	
U4	Transmission error between BP unit and indoor unit	Connect correctly the interconnections between BP unit and indoor unit.
U9	Transmission error between outdoor unit and other BP unit	Connect correctly the interconnections between outdoor and other BP unit.
UJ	Transmission error between outdoor unit and this BP unit connecting with the indoor unit of error code displayed	Connect correctly the interconnections between outdoor and this BP unit connecting with the indoor unit of error code displayed.

## The BP Unit

Simple diagnosis can be done using the LEDs on the BP unit's circuit board.

For details, see the label on the inside of the BP unit's electrical equipment cover.

**DAIKIN INDUSTRIES, LTD.**

Head office:

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

Tokyo office:

JR Shinagawa East Bldg., 18-1, Konan  
2-chome, Minato-ku, Tokyo, 108-0075 Japan  
<http://www.daikin.com/global/>

**DAIKIN EUROPE NV**

Zandvoordestraat 300, B-8400 Oostende, Belgium