

Always read before installation.

AISIN GHP Aisin INDOOR UNITS
INSTALLATION AND MAINTENANCE INSTRUCTIONS
[Model] Medium ESP Duct Type

■ **Applicable models**

AXMP224P7D

AXMP280P7D

■ **Important reminder**

- THOROUGHLY READ THESE INSTRUCTIONS BEFORE STARTING THE INSTALLATION AND FOLLOW ALL PROCEDURES DESCRIBED WITHIN.
- KEEP THIS MANUAL IN A HANDY PLACE FOR FUTURE REFERENCE.

After installation, always use the checklist to perform a final inspection.

EC Declaration of Conformity

Dichiarazione di Conformità CE



WE: TECNOCASA S.p.A.
La: VIA MANZONI 17
60025 Loreto (AN)
ITALY

Declare under its own responsibility that the units:

Dichiara sotto la sua Responsabilità che le Unità interne:

Type:

Tipo:

AXJP22A2D	AXJP28A2D	AXJP36A2D	AXJP45A2D	AXJP56A2D	
AXFP22AVD	AXFP28AVD	AXFP36AVD	AXFP45AVD	AXFP56AVD	AXFP90AVD
AXFP112 AVD	AXFP140AVD				
AXMP45P7D	AXMP56P7D	AXMP71P7D	AXMP90P7D	AXMP112P7D	AXMP140P7D
AXMP224P7D	AXMP280P7D				
AXAP22PAD	AXAP28PAD	AXAP36PAD	AXAP45PAD	AXAP56PAD	AXAP71PAD
AXLP22P2D	AXLP28P2D	AXLP36P2D	AXLP45P2D	AXLP56P2D	AXLP71P2D
AXCP22AVD	AXCP28AVD	AXCP36AVD	AXCP45AVD	AXCP56AVD	AXCP71AVD
AXCP90AVD	AXCP112AVD	AXCP140AVD			
AXSP22P7D	AXSP28P7D	AXSP36P7D	AXSP45P7D	AXSP56P7D	AXSP71P7D
AXSP90P7D	AXSP112P7D	AXSP140P7D			
AXHP36AVD	AXHP71AVD	AXHP112AVD			
AXDP22P7D	AXDP28P7D				

Brand: AISIN SEIKI CO.LTD

Marca:

Serial number: See the number on the unit label

N° di serie: vedere il numero sulla targa dati

Year of production: See the year on the unit label

Anno di produzione: vedere il numero sulla targa dati

Comply with following Directives of the council of the European Community:

E' conforme alle seguenti Direttive della Comunità Europea:

- 1) Directive 98/37/CE and subsequent modification, relating to machinery
Direttiva 98/37/CE e successive modifiche, relativa alle Macchine
- 2) Directive 2006/95/CE and subsequent modification, relating to low voltage LVD
Direttiva 2006/95/CE e successive modifiche, relativa alla Bassa Tensione LVD
- 3) Directive 2004/108/CE and subsequent modification, relating to electromagnetic compatibility EMC
Direttiva 2004/108/CE e successive modifiche, relative alla compatibilità elettromagnetica EMC

Date: Loreto 01 Aprile 2014

TECNOCASA S.p.A.

Name:

Mr.Mogliani Graziano

Position:


Legal Representative

Signature:

TECNOCASA S.p.A.
Via Manzoni, 17
60025 LORETO - AN
Tel. 071 977805 - Fax 071 976481
Part. IVA 01057530424

CONTENTS



	<u>Page</u>
Safety Precaution	1
Before installation.....	3
Transporting the indoor unit	4
Selecting installation site.....	4
Preparations before installation.....	5
Indoor unit installation	6
Refrigerant piping work	6
Drain piping work	8
Electric wiring work	9
Wiring example and how to set the remote controller	10
Wiring example	12
Field setting.....	13
Test operation.....	14
Wiring diagram.....	15

 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 AISIN 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 AISIN DEALER FOR ADVICE AND INFORMATION.

SAFETY PRECAUTION














The types of injuries and damages that can occur if this units are improperly installed are divided into and covered under the "  Warning" and "  Caution" graphics and other symbols. Follow these instructions carefully.

Meaning of warning, caution and other symbols.

	WARNING Failure to observe a warning may result in death or serious injury.
	CAUTION Failure to observe a caution may result in injury or damage to the equipment.

	Indicates a prohibited action.
	Indicates a necessary action.
	Indicates a necessity to install a secure earth connection.

WARNING

<p>Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine yourself.</p> <p>Improper installation may result in water leakage, electric shocks or fire. All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.</p>	
<p>Install the indoor unit on a foundation strong enough to withstand the weight of the unit.</p> <p>A foundation of insufficient strength may result in the equipment falling and causing injuries.</p>	
<p>Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.</p> <p>Improper installation work may result in the equipment falling and causing accidents.</p>	
<p>When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage.</p> <p>Excessive refrigerant in a closed ambient can lead to oxygen deficiency.</p>	
<p>Perform installation work in accordance with this installation manual.</p> <p>Improper installation may result in water leakage, electric shocks or fire.</p>	
<p>Be sure to use only the specified accessories and parts for installation work.</p> <p>Failure to use the specified parts may result in water leakage, electric shocks, fire or the unit falling.</p>	
<p>After completing the installation work, check that the refrigerant gas does not leak.</p> <p>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.</p>	
<p>Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc.</p> <p>Doing so could cause an explosion or a fire.</p>	
<p>Never touch the refrigerant leaking from refrigerant piping connection.</p> <p>If the refrigerant is put on hands, it may cause a frost bite.</p>	
<p>If any refrigerant gas leaks while working on the unit, ventilate the area thoroughly right away.</p> <p>Toxic gas may be produced if the refrigerant gas comes into contact with fire.</p>	
<p>Tighten the flare with double wrenches and use a torque wrench to check that the tightening torque is proper.</p> <p>If the torque is not proper, a joint broken by over tightening or a joint loose by under tightening could allow refrigerant to leak and cause a shortage of oxygen.</p>	
<p>Do not route the drain piping directly into to a location where corrosive gas, such as sulfurous acid gas, could potentially be generated.</p> <p>Corrosive gas could enter the indoor and could cause a gas poisoning or a shortage of oxygen.</p>	
<p>Do not touch the drain pump during the drainage flow testing.</p> <p>Failure to do so may result in electric shocks.</p>	

<p>Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.</p> <p>An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.</p>	⚠
<p>Be sure to install a secure earth connection. Do not earth the unit to a utility pipe, arrester, or telephone earth.</p> <p>Incomplete earth may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the indoor unit.</p>	⚡
<p>Be sure to install an earth leakage breaker.</p> <p>Failure to do so may result in electric shocks, or fire.</p>	⚠
<p>Never turn on the unit before finishing the installation work.</p> <p>Failure to do so could cause electrical shock or damage to the indoor unit.</p>	⊘
<p>When clamping the wirings, be sure to clamp wires appropriately not to apply any excessive power to the wire connections.</p> <p>Improper clamping could damage the wires and may result in electric shocks, fire or the terminals overheating.</p>	⚠
<p>Make sure that the remote controller wiring, and the transmission wiring between the units, and other electrical wiring do not pass through the same locations outside the unit separating as follows:</p> <ul style="list-style-type: none"> - Outside the unit; at least 50 mm - Inside the unit; at least 25 mm <p>Failure to do so could cause an electrical noise (external static) and result in mistaken operation or breakage.</p>	⚠
<p>When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the switch box lid can be securely fastened. When attaching the service lid, make sure no wirings get caught in the edges.</p> <p>Improper positioning of the switch box lid may result in electric shocks, fire or the terminals overheating.</p>	⊘
<p>Never connect the power supply wiring to the terminal board for transmission wiring.</p> <p>This mistake could damage the entire system.</p>	⚠
<p>When performing field settings or test operation, do not touch the drain pump.</p> <p>This may cause electric shock.</p>	⊘
<p>Be sure to stop operation and turn the power switch off before touching the electrical parts.</p> <p>Failure to do so could result in an electrical shock or unit malfunction.</p>	⚠
<p>Do not touch the switch with wet hands.</p> <p>This may cause electric shock.</p>	⊘

⚠ **CAUTION**

<p>Be sure to handle with care for transporting the unit.</p> <p>Some of the units are covered with the PP band for strapping. Be sure not to grab straps when handling.</p>	⚠
<p>Be sure to dispose all of the packing materials after taking out the unit.</p> <p>Nails and wooden crates may cause a serious injury from sticking. Plastic sheet covering the unit may result in an asphyxia if a child play with it. Tear the plastic sheet before disposing.</p>	⚠
<p>Locate the indoor and outdoor units, power supply wiring and connecting wires at least 1 meter away from televisions or radios in order to prevent image interference or noise.</p> <p>Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.</p>	⚠

<p>Do not install the indoor unit in the following locations:</p> <p>(a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen Plastic parts may deteriorate and fall off or result in water leakage.</p> <p>(b) where corrosive gas, such as sulfurous acid gas, is produced Corroding copper pipes or soldered parts may result in refrigerant leakage.</p> <p>(c) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions may result in fire.</p>	⊘
<p>Do not install the unit tilted. The indoor unit is equipped with a built-in drain pump and float switch.</p> <p>If the unit is tilted against condensate flow, the float switch may malfunction and cause water to drip.</p>	⚠
<p>Be sure to insulate any field piping all the way to the piping connection inside the unit.</p> <p>Any exposed piping may cause condensation or burns if touched.</p>	⚠
<p>While following the instructions in this installation manual, install drain piping in order to ensure proper drainage and insulate piping in order to prevent condensation.</p> <p>Improper drain piping may result in water leakage and property damage to furniture and belongings.</p>	⚠
<p>Be sure not to touch the heat exchanger fin.</p> <p>Failure to do so may result in serious injury.</p>	⚠
<p>Be sure to wait for at least five minutes before turning off the power switch after stopping the operation.</p> <p>Failure to do so may cause water leakage or other problem.</p>	⚠

👉 **IMPORTANT REMINDER**








- Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps. (inverter or rapid start types)
Install the indoor unit as far away from fluorescent lamps as possible.
- Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the unit. Do not install the unit near machinery emitting electromagnetic waves.
- Be sure not to install the indoor unit into locations where the air contains high levels of salt such as that near the ocean, where the voltage fluctuates greatly such as that in a factories. Also in vehicles and vessels.
- Do not use flux when brazing refrigerant piping. Therefore, use the phosphor copper brazing filter metal (BCup-2: JIS Z 3264/B-Cu93P-710/795/: ISO 3677) which does not require flux. (Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)
- Do not use any antioxidant sold on the market. It may have an adverse effect on the refrigerant and compressor oil, resulting in equipment breakdown.
- Be sure to prevent spatter generated by welding process from coming in contact with the unit or entering into the unit. It may damage the drain pan and result in equipment breakdown.
- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger. Keep in mind that it will become the cause of getting drain pipe blocked if water collects on drain pipe.
- Do not remove the air filter except when cleaning. Unnecessary handling may damage the filter.

BEFORE INSTALLATION



- Be sure to check the type of R410A refrigerant to be used before installing the unit. Using an incorrect refrigerant will prevent normal operation of the unit.
- This units, both indoor and outdoor, are suitable for installation in a commercial and light industrial environment. If installed as a house hold appliance, it could cause electromagnetic interference.
- This unit 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.
- Refer to the installation manual attached to the outdoor unit for the details about GHP outdoor unit installation.
- 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.

Accessories

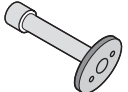
Check if the following accessories are included with your unit.

①  Metal clamp 1 piece	②  Drain hose 1 piece	③  Clamps 6 pieces
Sealing pad each  ④ Large	Insulation for fitting 1 each  ⑥ for gas pipe	
 ⑤ Small	 ⑦ for liquid pipe	

Extra parts for AXMP45 – 140M only

⑧  Washer for hanging bracket 8 pieces	⑨  Screws for duct flanges 1 set
	AXMP45 – 90M 16 pieces
	AXMP90 - 140M 28 pieces

Extra parts for AXMP224, 280M only

⑩  Attached pipings 1 set	Others	Qt.
	⑪ Screws for flange connection (M5)	48 pcs
	⑫ Insulation for hanger bracket	2 pcs
	⑬ Washer	8 pcs
	⑭ Clamp	2 pcs
	⑮ Hexagon head bolt for pipe frange (M10)	2 pcs
	⑯ Spring washer for pipe frange (M10)	2 pcs

Screws for fixing panels are attached to the air inlet panel.

Optional accessories

Following optional remote controller are required to operate this indoor unit. For the installation, refer to the installation manual attached to each accessory.


- Wired remote controller: There are two types of remote controllers. Select a remote controller according to customer request and install in an appropriate place.

Model	Cord No.
Wired type	ABRC1P528
Wireless type	BRC7E618


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

1 Items to be checked after completion of installation work

*Also review the "SAFETY PRECAUTION" on this manual

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 outdoor unit installed properly? The unit may malfunction or components may burn out.
<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.
<input type="checkbox"/>	Are the air filters fixed properly (when installing with rear duct)? Maintenance of the air filters can be impossible.

2 Items to be checked at time of delivery

Tick  when checked	
<input type="checkbox"/>	Are switch box lid, air filter and suction/discharge grille fixed firmly?
<input type="checkbox"/>	Did you explain about operations while showing the operation manual to your customer?
<input type="checkbox"/>	Did you hand the operation manual over to your customer?
<input type="checkbox"/>	Did you explain how to handle and clean the air filter and suction/discharge grille?
<input type="checkbox"/>	Dis you hand the manual of locally provided parts (if attached) over to your customer?



NOTE The items with "⚠ Warning" and "⚠ Caution" marks in the manual are the items regarding possibilities for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the manual.

Notes to the installer

- After the installation work, be sure to instruct the customer how to properly operate the system especially cleaning filters, operating different functions, and adjusting the temperature by having them carry out operations while looking at the manual.

TRANSPORTING THE INDOOR UNIT

CAUTION

<p>Be sure to handle with care for transporting the unit. Some of the units are covered with the PP band for strapping. Be sure not to grab straps when handling.</p>	!
<p>Be sure to dispose all of the packing materials after taking out the unit. Nails and wooden crates may cause a serious injury from sticking. Plastic sheet covering the unit may result in an asphyxia if a child play with it. Tear the plastic sheet before disposing.</p>	!

- Make sure that the route to the installation site and any passageways are large enough for the indoor unit to be transported through.
- 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.

NOTE Do not dispose of any parts necessary for installation until the installation is complete.

SELECTING INSTALLATION SITE

WARNING

<p>Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine yourself. Improper installation may result in water leakage, electric shocks or fire. All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.</p>	!
<p>Install the indoor unit 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 injuries.</p>	!
<p>Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes. Improper installation work may result in the equipment falling and causing accidents.</p>	!
<p>When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage. Excessive refrigerant in a closed ambient can lead to oxygen deficiency.</p>	!

CAUTION

<p>Do not install the indoor unit in the following locations: (a) where a mineral oil mist or an oil spray or vapor is produced, for example in a kitchen Plastic parts may deteriorate and fall off or result in water leakage. (b) where corrosive gas, such as sulfurous acid gas, is produced Corroding copper pipes or soldered parts may result in refrigerant leakage. (c) where flammable gases may leak, where there are carbon fiber or ignitable dust suspensions in the air, or where volatile flammables such as thinner or gasoline are handled. Operating the unit in such conditions may result in fire.</p>	⊘
<p>Locate the indoor and outdoor units, power supply wiring and connecting wires at least 1 meter away from televisions or radios in order to prevent image interference or noise. Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.</p>	!

IMPORTANT REMINDER

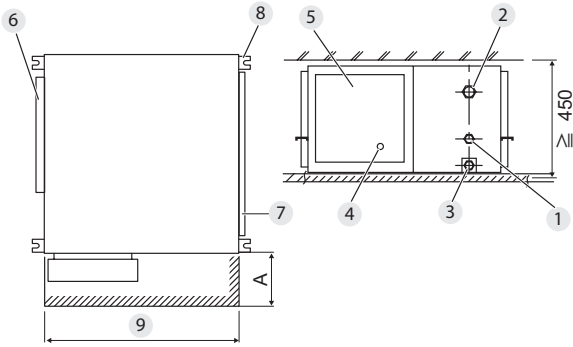
<ul style="list-style-type: none"> • Remote controller (wireless kit) transmitting distance can result shorter than expected in rooms with electronic fluorescent lamps. (inverter or rapid start types) Install the indoor unit as far away from fluorescent lamps as possible. • Electromagnetic waves may disturb the operation of the control system and result in a malfunction of the unit. Do not install the unit near machinery emitting electromagnetic waves. • Be sure not to install the indoor unit into locations where the air contains high levels of salt such as that near the ocean, where the voltage fluctuates greatly such as that in a factories. Also in vehicles and vessels.

- Do not install accessories on the casing directly. Drilling holes in the casing may damage electrical wires and consequently cause fire.

<p>NOTE</p> <ul style="list-style-type: none"> ■ When taking the unit out of the packing or moving the unit afterwards, hold the rigged 4 slings not to apply unnecessary force to the unit, especially to the pipings (refrigerant, drain). ■ In case of that the temperature and humidity of above ceiling space exceed 30 deg C and RH 80 %, reinforce the insulation (polyethylene form / grass wool etc.) of 10 mm or more in thickness by applying to the unit separately.

- 1 Select an installation site where the following conditions are fulfilled and that meets your customer's approval.
 - Where optimum air distribution can be ensured.
 - Where nothing blocks air passage.
 - Where condensate water can be properly drained.
 - Where the foundation is strong enough to bear the indoor unit weight.
 - Where the false ceiling is not noticeably on an incline.
 - Where flammable gases may leak.
 - 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.
- 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.

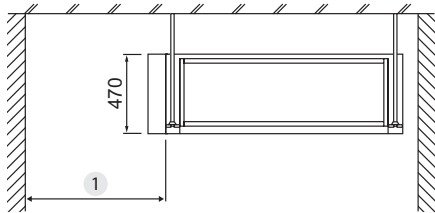
< AXMP45 - 140M >



Model	A
AXMP45 - 90M	750
AXMP112, 140M	1100

- 1 Liquid pipe connection
- 2 Gas pipe connection
- 3 Drain pipe connection
- 4 Ground terminal
- 5 Switch box
- 6 Air discharge flange
- 7 Air suction flange
- 8 Hnager bracket
- 9 Service space ≥ 700 mm

<AXMP224, 280M>

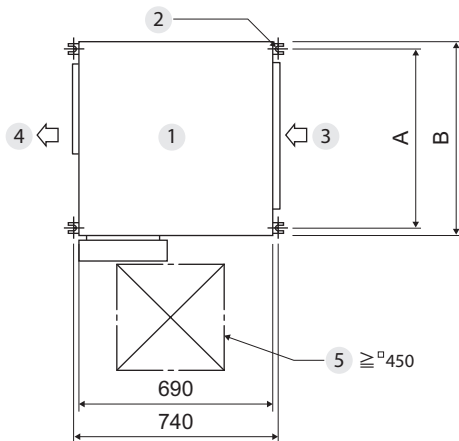


- 1 Service space ≥ 650 mm

PREPARATIONS BEFORE INSTALLATION

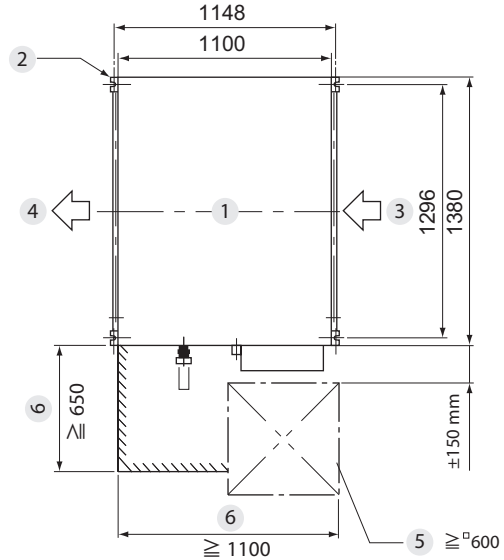
- 1 Make sure the relation of ceiling opening to unit and suspension bolt position.

< AXMP45 - 140M >



Model	A	B
AXMP45 - 90M	670	720
AXMP112, 140M	1060	1110

< AXMP224, 280M >



- 1 Indoor unit
- 2 Suspension bolt pitch (x 4 pcs)
- 3 Air inlet
- 4 Air outlet
- 5 Inspection hatch
- 6 Service space

- 2 Install a canvas duct to the air discharge outlet and air inlet so that vibration from the machine body isn't transmitted to the duct or ceiling.

In addition, acoustic (insulation material) to the inside of the duct, and vibration insulation rubber to the suspension bolts must be applied.

- 3 Make the ceiling opening needed for installation where applicable (for existing ceilings.)

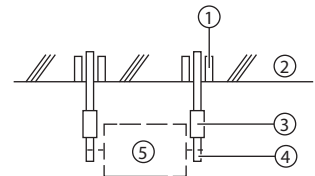
- Create the ceiling opening required for installation. From the side of the opening to the casing outlet, implement the refrigerant and drain piping and wiring for remote controller (unnecessary for wireless type) and indoor-outdoor unit casing outlet. Refer to each piping or wiring section.
- After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

- 4 Install the suspension bolts.

Use either a W3/8 or 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.

INSTALLATION EXAMPLE

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



NOTE All the above parts are field supplied.



INDOOR UNIT INSTALLATION

WARNING

Perform installation work in accordance with 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 water leakage, electric shocks, fire or the unit falling.



CAUTION

Do not install the unit tilted. The indoor unit is equipped with a built-in drain pump and float switch.

If the unit is tilted against condensate flow, the float switch may malfunction and cause water to drip.



NOTE



- When installing optional accessories (except for the decoration panel), read also the installation manual of the optional accessories.
- Depending on the field conditions, it may be easier to install optional accessories before the indoor unit is installed.

1 Install the indoor unit temporarily.

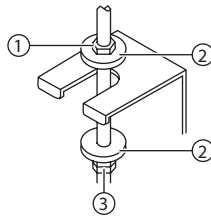
- Lift the indoor unit's body, and insert the attachment part on the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washers (AXMP45 - 140M: ⑨ AXMP224, 280M: ⑬) from the upper and lower sides of the hanger bracket.

1 Nut (field supply)

2 Washer (supplied with the unit ⑨ / ⑬)

3 Hanger bracket

4 Double nut (field supply, tighten)



NOTE



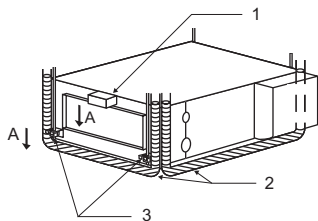
To ensure they are safely secured, use the supplied washers, and secure them with a double nut to make sure.

2 Adjust the height of the unit.

3 Adjust the unit to the right position for installation.

4 Check if the unit is horizontally levelled.

- Check if the unit is levelled at all four corners with a water level or a water-filled vinyl tube as shown below.



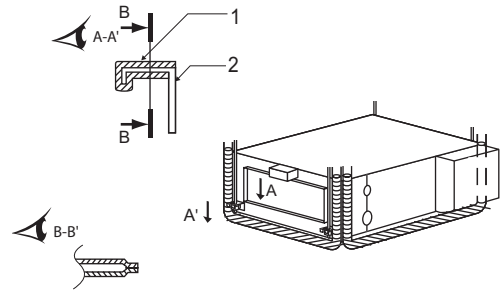
1 Water level

2 Vinyl tube

3 Hanger bracket

5 Tighten the upper nut.

- Insulate the two hanger brackets on the discharge side with the sealing material ⑫ (× 2 pcs). Insulate the edges so that the surface and edges of the hanger brackets cannot be seen. (for AXMP224, 280M only).



1 Hanger bracket

2 Insulation for hanger bracket ⑫ (supplied with the unit)
*AXMP224, 280M only

REFRIGERANT PIPING WORK

This equipment use non-flammable refrigerant, R410A exclusively. Be sure to install the unit according to follows:

- Use a pipe cutter and flaring tools suitable for the type of refrigerant.
- Apply compressor oil NL10 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.

WARNING

Ask your dealer or qualified personnel to carry out installation work. Do not try to install the machine yourself.

Improper installation may result in water leakage, electric shocks or fire. All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.



Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc.

Doing so could cause an explosion or a fire.



Never touch the refrigerant leaking from refrigerant piping connection.

If the refrigerant is put on hands, it may cause a frost bite.



If any refrigerant gas leaks while working on the unit, ventilate the area thoroughly right away.

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



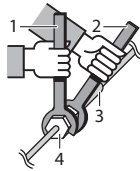
NOTE



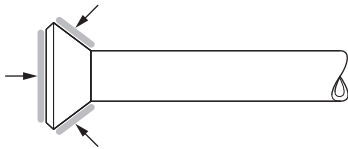
- For refrigerant piping of outdoor unit, refer to the installation manual attached to the outdoor unit.
- Execute heat insulation work completely on both sides of the gas piping and the liquid piping to prevent a water leakage. Use heat insulation with a heat resistance of 120 deg C or more.
- Reinforce the heat insulation depending on the field conditions. Condensation may form on the surface of the insulating material.
- Be sure to check the type of R410A refrigerant to be used before installing the unit. Using an incorrect refrigerant will prevent normal operation of the unit.

- 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 Pipe union
- 4 Flare nut



- When connecting the flare nut, coat the flare both with compressor oil NL10 and initially tighten by hand 3 or 4 turns before tightening firmly. Coat here with compressor oil NL10.



WARNING

Tighten the flare with double wrenches and use a torque wrench to check that the tightening torque is proper.

If the torque is not proper, a joint broken by over tightening or a joint loose by under tightening could allow refrigerant to leak and cause a shortage of oxygen.



- Refer to Table 1 for the dimensions of flare nut spaces and the appropriate tightening torque. Overtightening may damage the flare and cause leaks.

Table 1

Pipe gauge	Tightening torque	Flare dimension A (mm)	Flare shape
Ø6.4 (1/4")	14.2 - 17.2 N•m (144 - 176 kgf•cm)	8.7 - 9.1	
Ø9.5 (3/8")	32.7 - 39.9 N•m (333 - 407 kgf•cm)	12.8 - 13.2	
Ø12.7 (1/2")	49.5 - 60.3 N•m (504 - 616 kgf•cm)	16.2 - 16.6	
Ø15.9 (5/8")	61.8 - 75.4 N•m (630 - 770 kgf•cm)	19.3 - 19.7	

- Use Table 2 as a reference if a torque wrench is not available. As tightening the flare nut with the wrench, there is the position where the torque will suddenly increase. Further tighten the nut to the angle as shown on Table 2 from that position.

Table 2

Pipe gauge	Further tightening angle (°)	Recommended arm length of tool (mm)
Ø6.4 (1/4")	60 - 90	± 150
Ø9.5 (3/8")	60 - 90	± 200
Ø12.7 (1/2")	30 - 90	± 250
Ø15.9 (5/8")	30 - 90	± 300

NOTE



The flare nut used must be those included with the main body. Failure to do so cause refrigerant to leak.

Attached piping installation is required for connecting gas piping of AXMP224, 280M.

- Use attached piping ⑩ according to the size of the piping to be connected.

When connecting the piping ⑩, use the hexagon head bolts ⑮ (× 2 pcs) and spring washers ⑯ (× 2 pcs). Appropriate tightening torque is as follows;

Tightening torque

21.5 - 28.9 N•m

- Connect refrigerant piping and branching according to the installation manual attached to the outdoor unit.

Indoor unit to be connected	Gas piping diameter	Liquid piping diameter
AXMP224M	Ø19.1 (3/4") Use attached piping.	Ø9.5 (3/8")
AXMP280M	Ø22.2 (7/8") Use attached piping.	Ø9.5 (3/8")

- Check the pipe connector for gas leaks.

WARNING

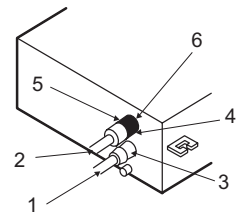
After completing the installation work, check that the refrigerant gas does not leak.

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.



- After checking the pipe-connection for gas leakage, insulate the liquid and gas piping according to the following figure. Be sure to place the joint of insulator upwardly faced on the gas line piping.
- Wrap the small sealing pad ⑤ only around the insulation for the joints on the gas piping side.

- 1 Liquid pipe
- 2 Gas pipe
- 3 Insulation for fitting of liquid line (supplied with the unit ⑦)
- 4 Insulation for fitting of gas line (supplied with the unit ⑥)
- 5 Small sealing pad (supplied with the unit ⑤)
- 6 Clamps (× 4 pcs, supplied with the unit ③)



CAUTION

Be sure to insulate any field piping all the way to the piping connection inside the unit.

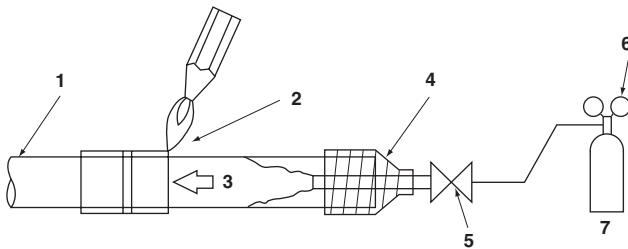
Any exposed piping may cause condensation or burns if touched.



- When brazing the refrigerant piping, only begin brazing after having carried out nitrogen substitution (Note 1) or while flushing the inside of piping with nitrogen gas (Note 2). Once this is done, connect the indoor unit with a flared or a flanged connection.

IMPORTANT REMINDER

- Do not use flux when brazing refrigerant piping. Therefore, use the phosphor copper brazing filter metal (BCup-2: JIS Z 3264/B-Cu93P-710/795/: ISO 3677) which does not require flux. (Flux has extremely harmful influence on refrigerant pipings. For instance, if the chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)
- Do not use any antioxidant sold on the market. It may have an adverse effect on the refrigerant and compressor oil, resulting in equipment breakdown.
- Be sure to prevent spatter generated by welding process from coming in contact with the unit or entering into the unit. It may damage the drain pan and result in equipment breakdown.



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

- NOTE**
- Note 1** :Refer to the installation manual attached to the outdoor unit for details about how to carry out nitrogen substitution.
- Note 2** :Nitrogen gas flow should be kept at 0.02 Mpa with a pressure reducing valve when brazing with flushing nitrogen gas.

DRAIN PIPING WORK

WARNING

Do not route the drain piping directly into to a location where corrosive gas, such as sulfurous acid gas, could potentially be generated.

Corrosive gas could enter the indoor and could cause a gas poisoning or a shortage of oxygen.

CAUTION

While following the instructions in this installation manual, install drain piping in order to ensure proper drainage and insulate piping in order to prevent condensation.

Improper drain piping may result in water leakage and property damage to furniture and belongings.

IMPORTANT REMINDER

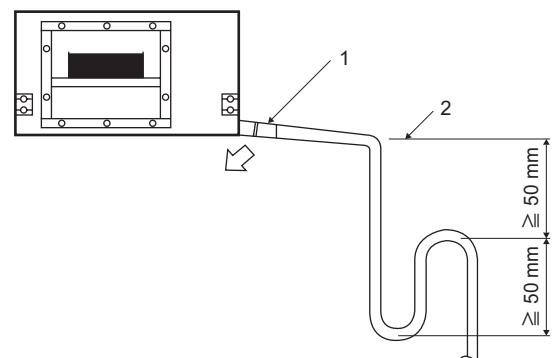
- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger. Keep in mind that it will become the cause of getting drain pipe blocked if water collects on drain pipe.

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.

- Install the drain pipes.
 - Keep piping as short as possible and slope it downwards of 1:100 so that air may not remain trapped inside the pipe.

< AXMP45 – 140M >

- 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).
- There is negative pressure inside the unit relative to atmospheric pressure when the unit is running, so be sure to provide drain trap on the drain outlet as follows;



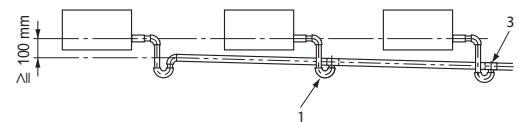
- 1 Drain hose (supplied with the unit ②)
- 2 Bottom of the unit

- In order to prevent any foreign matter such as moisture, garbage, and dust from clogging inside the piping, avoid curves as much as possible, and arrange so the trap can be cleaned.

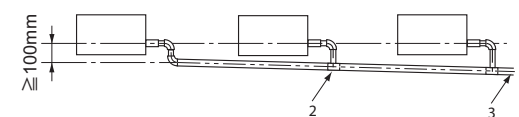
< AXMP224, 280M >

- A drain trap need not be installed. (See the following figure)
- The diameter of the piping is the same as that of the connecting pipe (PS1B), and should be kept equal to or greater than that of the connecting pipe.

- NOTE**
- If unifying multiple drain pipes, install the pipes as shown in following figure. Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.
- < AXMP45 – 140M >



For AXMP224, 280M, a drain trap need not be installed.

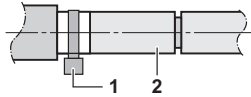


- 1 Drain trap
- 2 T-joint converging drain pipes
- 3 Slope downwards at a gradient of at least 1:100

<All units>

- Insert the drain hose ② into the drain socket.
- Tighten the metal clamp ① until the screw head is less than 4 mm from the hose.

- 1 Metal clamp (supplied with the unit ①)
- 2 Drain hose (supplied with the unit ②)



- Wrap the sealing pad ⑤ over the metal clamp ① and drain hose ② to insulate.

- 1 Metal clamp (supplied with the unit ①)
- 2 Sealing pad (large, supplied with the unit ④)








- After piping work is finished, check if drainage flows smoothly.
 - Make sure that the drain hose is firmly connected.
 - Pour approximately 1 liter of water gradually into the drain pan to check the drainage flow.

When electric wiring work is finished

Check drainage flow during the cooling operation, explained in "Test operation" on page 14.

When electric wiring work is not finished

1. Remove the switch box cover and connect the single-phase power supply and the remote controller to the terminals. (Refer to "Electric wiring work" on page 9 for switch box attachment/detachment and wiring.)
2. 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. Note that the fan also starts rotating. Press  to go back to the first mode.
3. After checking the drainage flow, turn off the power, remove the switch box lid and disconnect the power supply from the terminal again.
4. Reattach the switch box lid.

WARNING

Do not touch the drain pump during the drainage flow testing.
Failure to do so may result in electric shocks.

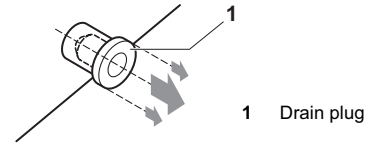
- After the testing of drain piping is finished, make sure to insulate the following place to prevent any possible water leakage due to dew condensation.
 - Complete drain piping inside the building (field supply)
 - Drain socket

NOTE Be sure not to remove the drain pipe plug. Water might leak out.



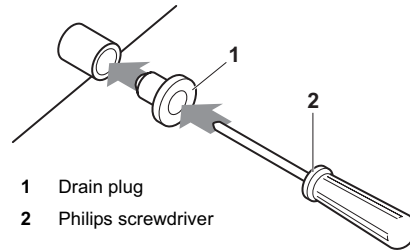
The drain outlet is only used to discharge water if the drain pump is not used or before maintenance. Gently put in and out the drain plug. Excessive force may deform the drain socket of the drain pan.

- Pulling out the plug



Do not wiggle the plug up and down

- Pushing in the plug



Set the plug and push it by using a Philips screwdriver

ELECTRIC WIRING WORK

General instructions

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

WARNING

Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.

Be sure to install a secure earth connection. Do not earth the unit to a utility pipe, arrester, or telephone earth.
Incomplete earth may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the indoor unit.

Be sure to install an earth leakage breaker.
Failure to do so may result in electric shocks, or fire.

Never turn on the unit before finishing the installation work.

Failure to do so could cause electrical shock or damage to the indoor unit.



Electrical characteristics

Model	Hz	Volts	Voltage range
AXMP45 - 280M	50	220 - 240	min. 198-max. 264
	60	220	min. 198-max. 242

Model	50Hz		Power supply		Fan motor	
	MCA	MFA	KW	FLA		
AXMP45 - 71M	1.3	15 A	0.100	1.0		
AXMP90M	1.5	15 A	0.160	1.2		
AXMP112M	2.5	15 A	0.270	2.0		
AXMP140M	3.8	15 A	0.430	3.0		
AXMP224M	8.1	15 A	0.380x2	6.5		
AXMP280M	9.0	15 A	0.380x2	7.2		

Model	60Hz		Power supply		Fan motor	
	MCA	MFA	KW	FLA		
AXMP45 - 71M	1.4	15 A	0.100	1.1		
AXMP90M	1.6	15 A	0.160	1.3		
AXMP112M	3.0	15 A	0.270	2.4		
AXMP140M	4.4	15 A	0.430	3.5		
AXMP224M	9.0	15 A	0.380x2	7.2		
AXMP280M	10.1	15 A	0.380x2	8.1		

MCA: Min. circuit Amps (A)

MFA: Max. Fuse Amps (A)

KW: Fan Motor Rated Output (kW)

FLA: Full Load Amps (A)

NOTE

For details, contact your AISIN dealer for the electrical data.



Specifications for field supplied fuses and wire

Model	Power supply wiring		
	Field fuses	Wire	Size
AXMP45 - 280M	15 A	H05VV - U3G	Local codes

Model	Remote controller wiring and Transmission wiring	
	Wire	Size
AXMP45 - 280M	Sheathed wire (2 core)	0.75 - 1.25 mm ²

NOTE

For details, refer to the chapter "Wiring example" on page 12.

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

WARNING

When clamping the wirings, be sure to clamp wires appropriately not to apply any excessive power to the wire connections.

Improper clamping could damage the wires and may result in electric shocks, fire or the terminals overheating.

Make sure that the remote controller wiring, and the transmission wiring between the units, and other electrical wiring do not pass through the same locations outside the unit separating as followings:

- Outside the unit; at least 50 mm
- Inside the unit; at least 25 mm

Failure to do so could cause an electrical noise (external static) and result in mistaken operation or breakage.

When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the switch box lid can be securely fastened. When attaching the service lid, make sure no wirings get caught in the edges.

Improper positioning of the switch box lid may result in electric shocks, fire or the terminals overheating.

Never connect the power supply wiring to the terminal board for transmission wiring.

This mistake could damage the entire system.

CAUTION

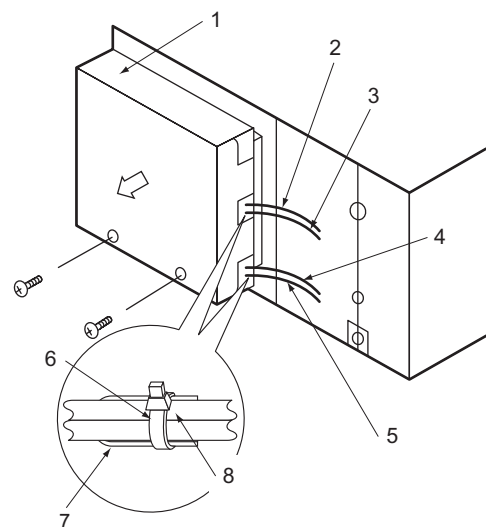
Locate the indoor and outdoor units, power supply wiring and connecting wires at least 1 meter away from televisions or radios in order to prevent image interference or noise.

Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.

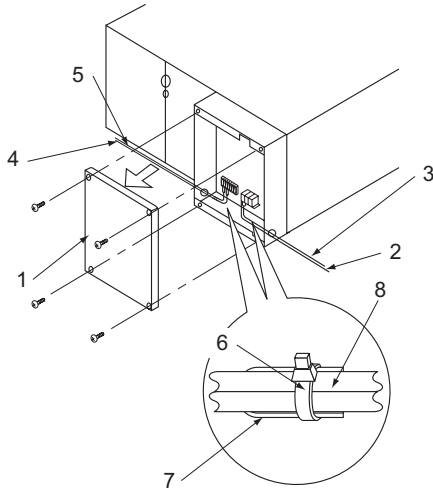
How to connect wiring

Remove the switch box lid as shown below, and make the connections.

< AXMP45 - 140M >



< AXMP224, 280M >



- 1 Switch box lid
- 2 Ground wiring
- 3 Power supply wiring
- 4 Transmission wiring
- 5 Remote controller wiring
- 6 Clamp (supplied with the unit ③)
- 7 Wire locking bracket
- 8 Wiring

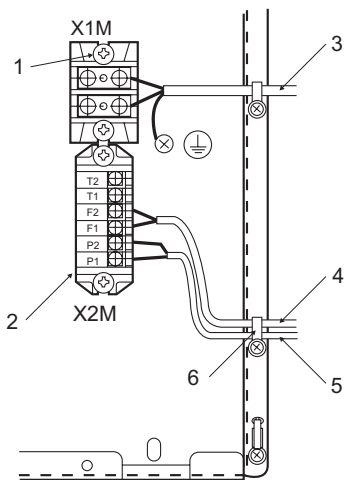
■ Power supply wiring

Hold the switch box lid and loosen the anchoring screws, then remove the switch box lid. Connect the wires to the power supply terminal board inside. While doing this, pull the wires inside through the power supply wiring port and clamp the wires with the plastic clamp ③.

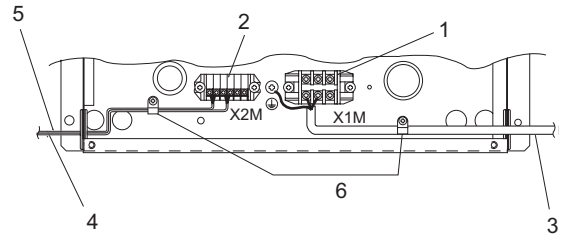
■ Unit wiring and remote controller wiring

Hold the switch box lid and loosen the anchoring screws, then remove the switch box lid. Pull the wires inside through the transmission wiring port and connect to the terminal board for unit transmission wiring. After the connection, securely fix wires with plastic clamp ③.

< AXMP45 - 140M >



< AXMP224, 280M >

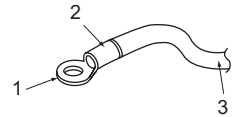


- 1 Power supply terminal block
- 2 Terminal block for remote controller
- 3 Power supply wiring, ground wiring
- 4 Transmission wiring
- 5 Remote controller wiring
- 6 Clamp (supplied with the unit ③)

Precautions

1 Use round crimp-style terminals for connecting wires to the power supply terminal board.

- 1 Round-crimp style terminal
- 2 Attach insulation sleeve
- 3 Electric wire



If unavoidable, 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 For the remote controller wiring, refer to the installation manual of the remote controller supplied with the remote controller.

5 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 switch box cover. Make sure the cover closes tight. Incomplete connections could result in overheating, and in the worse case, electric shock or fire.

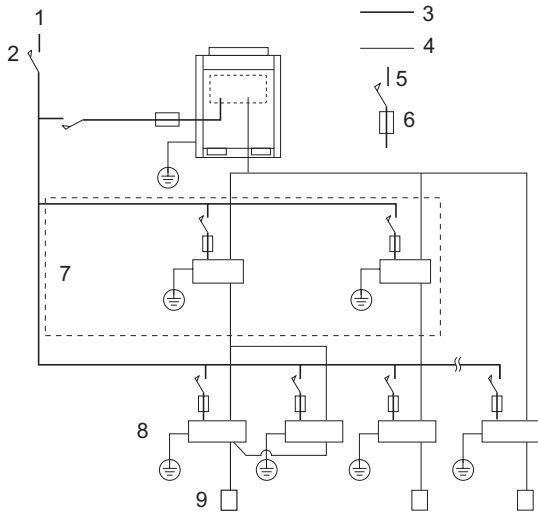
- 6 Use the correct driver for tightening the terminal screws. If the blade is too small, the head of the screw will not be properly tightened. Refer to the table below for the tightening torque of the terminal screws.

Terminal		Tightening torque (N•m)
Remote controller, Transmission wiring and forced off terminal block (6P)		0.79 - 0.97
Power supply terminal block	AXMP45 - 140M (2P)	1.18 - 1.44
	AXMP224M, 280M	2.39 - 2.91
Ground terminal	AXMP45 - 140M	1.44 - 1.94
	AXMP224M, 280M	3.02 - 4.08

- 7 After all wiring connections are done, fill in any gaps in the casing wiring holes with putty or insulation material (field supply) to prevent small animals or dirt from entering the unit from outside and causing short circuits in the switch box.

WIRING EXAMPLE

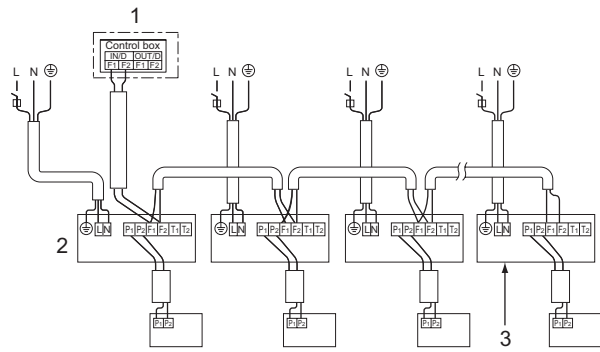
- Fit the power supply wiring of each unit with a switch and fuse as shown below.



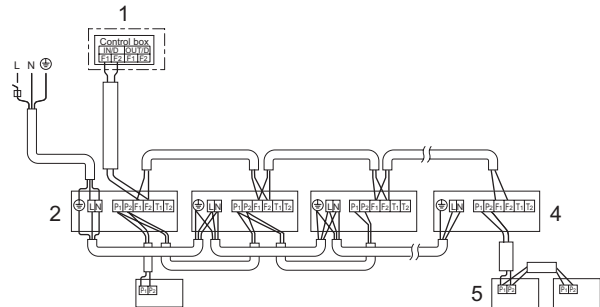
- Power supply
- Main switch
- Power supply wiring
- Transmission wiring
- Switch
- Fuse
- BS unit (only for heat recovery system)
- Indoor unit
- Remote controller

Complete system example (3 systems)

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

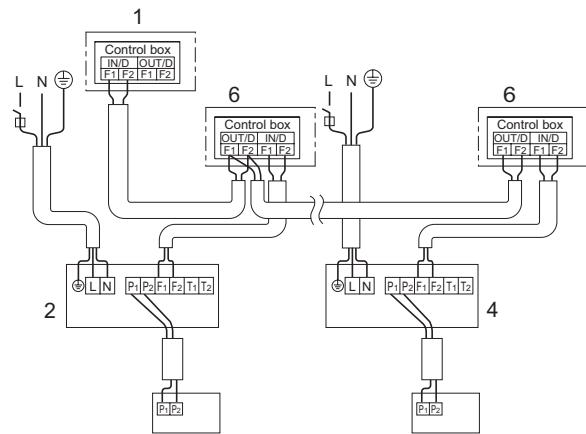


2. For group control or use with 2 remote controllers



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

3. When including BS unit



- Outdoor unit
- Indoor unit
- Remote controller (optional accessories)
- Most downstream indoor unit
- For use with 2 remote controllers
- BS unit (only for heat recovery system)

NOTE

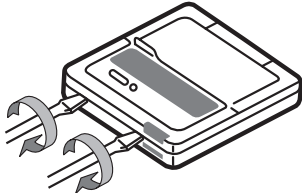
- A single switch can be used to supply power to units on the same system. However, branch switches and branch circuit breakers must be selected carefully.
- For a group control remote controller, choose the remote controller that suits the indoor unit which has the most functions.
- Do not ground the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

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

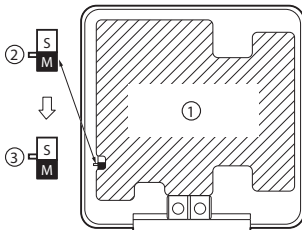
- When using 2 remote controllers, one must be set to "MAIN" and the other to "SUB".

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.



- 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".



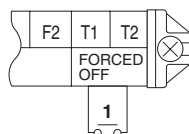
- Leave the switch of the other remote controller set to "M".
- 1 Remote controller PC board
 - 2 Factory setting
 - 3 Only one remote controller needs to be changed if factory settings have remained untouched.

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, 1 mA

- 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 \rightarrow on: turns on the unit (impossible by remote controllers)
Input "off" enables control	input on \rightarrow off: turns off the unit by remote controller

3. How to select forced off and on/off operation

- To enable forced off and on/off operation, field setting must be preliminary performed. Refer to following "Field setting" on page 13.

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.

FIELD SETTING**! WARNING**

When performing field settings or test operation, do not touch the drain pump.
This may cause electric shock.

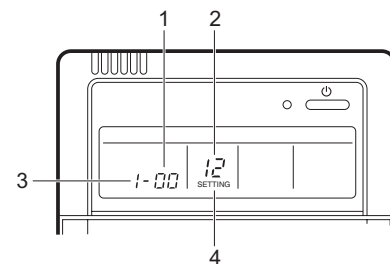


Field setting must be made on the remote controller in function of the installation condition.

- Make sure that the service lids are closed on the indoor and outdoor units.
- Setting can be made by changing the "Mode number", "First code No." and "Second code No.".

EXAMPLE: When setting forced on 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 installation manual attached to the remote controller.
- When in the field setting mode, select mode No.12, then set the first code No. to '1'. Then set seconde code No. to '01' for forced off and to '02' for on/off operation.



- 1 Second code No.
- 2 Mode No.
- 3 First code No.
- 4 Field set mode

- For setting and operation, refer to the "Field settings" in the installation manual of the remote controller.

Summary of field settings

Mode No. (Note 1)	First code No.	Description of setting		Second code No. (Note 2)			
				01	02	03	04
10 (20)	0	Filter contamination - Heavy/Light (Setting of filter sign display interval for cleaning.) (Setting to reduce displaying period to half when filter contamination is high.)	Ultra-long-life filter	±10,000 hrs.	±5,000 hrs.	—	—
			Long-life filter	±2,500 hrs.	±1,250 hrs.		
			Standard filter	±200 hrs.	±100 hrs.		
	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	Display of air filter cleaning sign (to be set when not setting filter cleaning sign)	Display	Do not display	—	—	
5	Information to I-manager, I-touch controller	Only unit sensor value (or remote sensor value if installed).	Sensor value as set by 10-2-0X or 10-6-0X.	—	—		
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 for 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	—	—	
15 (25)	3	Drain pump operation + humidifier interlock	Not equipped	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 controller 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 changeover" function temperatures are:

05	4°C
06	5°C
07	6°C
08	7°C

TEST OPERATION

⚠ WARNING

When performing field settings or test operation, do not touch the drain pump.

This may cause electric shock.



Be sure to stop operation and turn the power switch off before touching the electrical parts.

Failure to do so could result in an electrical shock or unit malfunction.



Do not touch the switch with wet hands.

This may cause electric shock.



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 are provided on "Trouble diagnosis" of the outdoor unit installation manual.
- In case something is wrong with the unit and it does not operate, refer to the malfunction diagnosis label attached to the unit. If any of the items in the following table are displayed, there may be a problem with the wiring or power, so double-check the wiring.

Remote control display	Content
"Concentrated Management" is lit up	<ul style="list-style-type: none"> • There is a short circuit at the T1, T2 terminals for "forced off" function
"U4" is lit up "UH" is lit up	<ul style="list-style-type: none"> • The outdoor unit power is OFF • The outdoor unit has not been wired for power supply • Incorrect wiring of the transmission wiring and/or "forced off" wiring • Disconnected transmission wiring
No display	<ul style="list-style-type: none"> • The indoor unit power is OFF • The indoor unit has not been wired for power supply • Incorrect wiring of the remote controller wiring and/or the "forced off" wiring • Disconnected remote controller wiring

WIRING DIAGRAM

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

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

33H	.....	FLOAT SWITCH
A1P	.....	PRINTED CIRCUIT BOARD
A2P	.....	TERMINAL BOARD
C1R	.....	CAPACITOR (FAN)
F1U	.....	FUSE (250 V/10 A)
F2U	.....	FIELD FUSE
HAP	.....	LIGHT EMITTING DIODE (SERVICE MONITOR - GREEN)
M1F	.....	MOTOR (FAN)
M1P	.....	MOTOR (DRAIN PUMP)
Q2E	.....	EARTH LEAK DETECTOR
R1T	.....	THERMISTOR (AIR)
R2T,R3T	.....	THERMISTOR (REFRIGERANT)
RyF1-3	.....	MAGNETIC RELAY (FAN)
RyP	.....	MAGNETIC RELAY (DRAIN PUMP)
X1M	.....	TERMINAL STRIP (POWER)
X2M	.....	TERMINAL STRIP (CONTROL)
T1R	.....	TRANSFORMER (220-240 V/22 V)
Y1E	.....	ELECTRONIC EXPANSION CIRCUIT

OPTIONAL PARTS

F3-5U	.....	FUSE (250 V/16 A)
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.

Ceiling-mounted High ESP Duct Type AXMP (45, 56, 71, 90, 112, 140,224,280) MA-W

- THOROUGHLY READ THESE INSTRUCTIONS BEFORE AND FOLLOW ALL PROCEDURES DESCRIBED WITHIN.
- KEEP THIS MANUAL IN A HANDY PLACE ALONG WITH THE OPERATION MANUAL

⚠ ONLY A QUALIFIED SERVICE PERSON IS ALLOWED TO PERFORM MAINTENANCE.

BEFORE OBTAINING ACCESS TO TERMINAL DEVICES, ALL POWER SUPPLY CIRCUITS MUST BE INTERRUPTED.

FOR INSTALLATION OF OPTICAL PARTS, ONLY A QUALIFIED PERSON IS ALLOWED TO DO SO TO PREVENT ANY OF WATER LEAKAGE, ELECTRICAL SHOCK OR FIRE.

SAFETY PRECAUTION

The types of injuries and damages that can occur if this units are improperly installed are divided into and covered under the " ⚠ Warning" and " ⚠ Caution" graphics and other symbols. Follow these instructions carefully.

Meaning of warning, caution and other symbols.

⚠ WARNING	Failure to observe a warning may result in death or serious injury.
⚠ CAUTION	Failure to observe a caution may result in injury or damage to the equipment.

⊘	Indicates a prohibited action.
⚠	Indicates a necessary action.
⚡	Indicates a necessity to install a secure earth connection.

MAINTENANCE

⚠ WARNING

Be sure to stop operation and turn the power switch off before cleaning the air conditioner. **⚠**
Failure do so could result in an electrical shock or injury. To prevent an injury, make sure that the fan has stopped before working on the indoor unit.

Do not wash the indoor unit with water or a detergent spray. **⊘**
Doing so could cause an electrical shock or a fire.

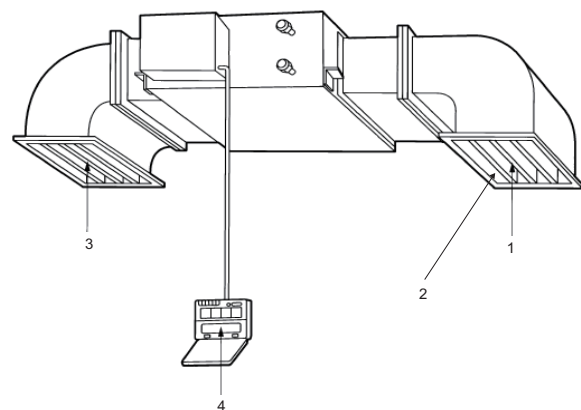
Be sure to stop operation and turn the power switch off before cleaning the air conditioner. **⚠**
Failure do so could result in an electrical shock or injury. To prevent an injury, make sure that the fan has stopped before working on the indoor unit.

Do not wash the indoor unit with water or a detergent spray. **⊘**
Doing so could cause an electrical shock or a fire.

⚠ CAUTION

Do not place anything other than the designated air filter to the air inlet. **⊘**
Failure to do so could lower the indoor unit performance and cause damage to household property from the leakage.

Use a stable tool when cleaning the indoor unit. **⚠**
Since it is high-place work, use extra cautions for the place standing at.




- 1 Suction grill
- 2 Air filter (option, inside suction grill)
- 3 Air outlet
- 4 Remote controller

How to clean the air filter

👉 IMPORTANT REMINDER

• Do not remove the air filter except when cleaning. Unnecessary handling may damage the 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 the dirt becomes impossible to clean, change the air filter. (Air filter for exchange is optional.)

Refer to the operation manual attached to the air filter for how to detach and attach the air filter.

AISIN
Geared up for the future



0051
0497
05/004/8

Made in Japan

Distributore Unico Europeo - *European sole distributor*

TECNOCASA
CLIMATIZZAZIONE

Via Manzoni, 17 - 60025 Loreto (AN) - Italy
Tel. +39 071 977805 - Fax +39 071 976481
www.tecno-casa.com - www.aisin.it
info@tecno-casa.com