



YMGI, Engineered Comfort Products for A Sustainable and Efficient Green World!

INSTALLATION INSTRUCTIONS & USER MANUAL

DC INVERTER MULTIPLE ZONE (59)2 CH Branch Module for 90CH (59)2S SYMPHONY CHOIR OUTDOOR UNIT

Model Numbers:

WMMS-(59)2-ModuleS2

WMMS-(59)2-ModuleS3

WMMS-(59)2-ModuleS5



Thank you for choosing this YMGI product. Please read the owner's manual carefully before installation and operation, and retain for your records and future reference. If you need a replacement copy, please contact your local agent or visit www.ymgigroup.com to download a current electronic version.

NOTICE

This product is designed and manufactured to be free from any defects in material and workmanship during normal use and maintenance. Installation, operation, maintenance and repair must follow all standards and professional practices for regular cooling and heating equipment, such as NEC, State, or Local Codes and all related documents/manuals provided by YMGI. Failure to follow and adhere to all codes and documentation can cause damage to equipment, property even personal injury.

Installer: Currently licensed/certified HVAC technicians only. Must Read the manual and all provided documents prior to installation. Complete and fill out all required information on the warranty registration card.

User: Retain this manual and all supplied documents for your records and future reference.

Service: Use this manual for information concerning servicing and maintenance of this product.

SAFETY WARNING

Only qualified technicians should install and service this equipment. The installation, startup, operation and servicing of this equipment can be hazardous and requires a HVAC professional who has been trained, licensed and certified. Installations, adjustments or any equipment alterations done by an unqualified person could result in serious injury and even death. When working on the equipment, observe all precautions in the provided documents, on the tags, stickers, and labels that are attached to or placed on the equipment.



TABLE OF CONTENTS

Introduction 3

Note From YMGI – **Must Read** 5

Installing Technician/Contractor's Responsibilities 7

Limited Product Warranty 8

Limited Product Warranty Registration Card 10

Why Does YMGI Group Require Installation and Service to Be Performed
100% By Currently Licensed or Certified HVAC Technicians/Contractors 11

Suggestions to Aid You in Hiring an HVAC Contractor 11

Introduction to Mini Splits 12

System Diagram and Compatible Indoor Units 15

System Layout & Installation Clearance 16

Unit Dimensions 20

Specification Sheet 21

EXTENDED RATINGS-Variou s Indoor and Outdoor Temperatures 23

Recommended Tools for Installation 28

Installation Location Selection 29

Installation-Indoor Units..... 30

Connect Refrigerant Pipes Between Indoor and Outdoor Units 32

Piping Guide 33

Refrigerant System Diagram 34

Connection of Wires 36

Wiring Diagrams..... 40

Do Not Cross Pipe or Cross Wire 42

Accessories..... 43

Vacuum Testing and Charging 44

System Inspection and Trial Run..... 45

Basic Functions of the System 47

About Clashing Mode Functions..... 50

Protection Signs and Error Codes 51

Checking Units Prior To Contacting Your Technician 53

R-T Conversion Tables 55

User Notes and Installation/Service/Maintenance Notes 58



Introduction

Read this manual carefully, making sure you understand all the instructions, practices and procedures contained in this manual. Be sure you are familiar with all the safety advisories that appear throughout this manual. Your personal safety depends upon your observance of all precautions contained in this manual.

Safety advisories appear throughout this manual and your personal safety and the proper operation of this appliance depend upon the strict observance of these precautions.

The 3 types of advisories are defined in the following table:

⚠ WARNING	Indicates a potentially hazardous situation which if not avoided could result in serious injury or even death.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only. It can also be used to call attention to important details within this manual.

Important Environmental Concerns

Studies have shown that certain man-made chemicals can affect the earth's stratospheric ozone layer when released into the atmosphere. Refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs), may affect the ozone layer. Not all refrigerants have the same potential impact on the environment. YMGI Group advocates for the responsible handling of all refrigerants including industry replacements for CFCs such as HCFCs and HFCs.

Responsible Refrigerant Practices

YMGI Group believes that responsible refrigerant practices are important to our customers, the HVAC/R industry and the environment. All HVAC/R technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants, the equipment and tools necessary to perform these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. HVAC/R technicians must know the applicable laws and follow them.

Disposal Notice

Do not dispose this product or its components as unsorted municipal waste, as they contain items that may require special treatment. Contact your local waste management company for details.

⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow established electrical codes can result in death, serious personal injury and property damage. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow the requirements for field wiring installation and grounding as described in this manual and by NEC and your state and local electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in serious injury or even death. Technicians must take the necessary precautions to protect themselves from potential electrical, mechanical, and chemical hazards and **MUST** follow all precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing or servicing this unit, technicians **MUST** put on all PPE recommended for the work being undertaken. **ALWAYS** refer to appropriate Material Safety Data Sheets (MSDS) and Occupational Safety and Health Administration (OSHA) guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate MSDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection, and handling recommendations.

If there is a risk of arc or flash, technicians **MUST** put on all PPE in accordance with NFPA 70E or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit.



Copyright

This document and the information contained therein are the sole property of YMGI Group and shall not be used or reproduced in whole or in part, without the written permission of YMGI Group. YMGI Group reserves the right to revise this manual at any time and to make changes to its content without obligation to notify anyone about any modifications, revisions or changes.

⚠ WARNING

- Instructions for installation and use of this product are provided by the manufacturer.
- Installation must be performed by authorized and licensed personnel only and in accordance with all the requirements of this manual, the NEC, CEC and any state and local codes.
- For safe operation of this unit, please read and follow all instructions carefully.
- The total operation capacity of the indoor units should not exceed 120% of the total capacity of the outdoor units if all indoor units must operate at their peak capacities all the time. Otherwise, the heating and cooling operation will be diminished and less efficient which could damage the units.
- Any person responsible for system operation or system maintenance should retain this manual for reference.
- If the unit fails to operate normally, please contact your authorized system installer or HVAC professional as soon as possible and provide the following information:
 - Data on the unit (model number, serial number and owner's name).
 - A detailed description of the unit's problem before and after the problem occurred.
- To avoid personal injury or property damage, do not disassemble the unit yourself. If disassembly is required to check the unit, contact your authorized system installer or HVAC professional as they have the experience and training necessary to perform this task.

Note: Each unit has been thoroughly tested to ensure it operates correctly before leaving the factory.

Basic Cautions and Warnings

⚠ CAUTION

All units shall be installed by an experienced HVAC licensed contractor or technician. Read all manuals before installation, startup and operation.

⚠ CAUTION

All NEC, state, local codes and installation instructions must be followed for all units, otherwise, the unit warranty will be void and could result in serious damage to people or property.

⚠ WARNING

YMGI Group is not responsible for any damage or loss due to Do-It-Yourself (DIY), self-installation or any improper installation, improper operation, improper service or natural disasters of any kind.

⚠ WARNING

Do not connect power to the unit until all wiring, tubing and all unit inspections and testing have been completed. Ground the unit according to the instructions and adhering to NEC, state and local codes.

⚠ WARNING

All wiring connections must be correct and secure. Loose wire(s) or improper contacts may cause arcs or overheating which can result in a fire hazard.





Note From YMGI – Must Read

Dear Customers, Purchasers, Installers, and Contractors

Thank you for choosing an YMGI product.

All YMGI's products are fully tested and have passed rigorous safety, performance and manufacturing standards before being packed and shipped. YMGI only uses suppliers that meet our strict standards for high quality and performance for all parts. YMGI also recognizes a quality installation is equally important therefore your system must be installed by a licensed HVAC professional. A quality installation ensures your unit will operate at its highest efficiency and peak performance for many years of worry free comfort; while a poor installation can result in unit failure and cause the unit to operate inefficiently, either immediately or over time, resulting in costly repairs.

Because a quality installation is so critical, YMGI provides detailed information in our manuals which will aid the installing technician and the owner of the unit(s).

At YMGI our goal is to ensure that your YMGI units are installed properly and correctly from the beginning.

The YMGI equipment you purchased is either a split-type or a self-contained cooling/heating system. These types of systems require a certified and licensed HVAC professional technician for proper installation. Only a certified and licensed HVAC professional technician will have the knowledge, experience, and attention for all required details to perform a complete and successful installation. This equipment is different from a window or portable type air conditioners you can purchase from local retail stores such as Home Depot, Lowe's, Sears, etc. which the manufacturer may not require certified and licensed personnel to install.

Reading and following YMGI Group recommendations and requirements contained in the following pages and other documents, is the first step to help ensure a smooth installation and proper operation of your unit for many years.

⚠WARNING

YMGI doesn't recommend nor allow any do-it-yourself (DIY) installation (partially or fully). Due to the complexity of the installation of this product most DIY installations usually have problems, either immediate or near future. These problems can cost more to fix than any upfront savings. **YMGI warranty doesn't cover any DIY units.**

If you have any questions about your unit or if the unit has a problem, you should first check the manual. If you can't find a solution, then contact your local installer or service technician to schedule a service appointment. The technician can physically inspect the unit. If at the time of inspection, the installer or service technician has any questions about the unit, they can contact YMGI technical support division directly at:

Toll Free Number: (866)833-3138 or Email: techsp@ymgigroup.com

IMPORTANT: YMGI Group is the MEDIA AUTHORITY:

YMGI Group, located in O'Fallon, MO 63366 is the author of all media produced for its products and is the only party able to give any additional explanation for any data, definitions and or descriptions found within any of its media, including but not limited to YMGI product brochures, manuals, pamphlets, catalogs, and videos. YMGI's distributors, installers, dealers, agents, customers or any other third parties will not supersede YMGI in anyway concerning YMGI-published materials and their meaning. Any concerns or questions arising from YMGI distributors, installers, dealers, agents, customers or any other third parties, should be presented directly to YMGI. YMGI will respond to any concerns or questions, if necessary, about any of its media in writing.





NOTICE

- Be sure to only hire a certified and currently licensed HVAC Company to complete 100% of the installation so that all details of the installation are performed correctly and completely.
- Be sure to have ONLY the licensed HVAC professional perform all aspects of the installation. Factory Warranty will be void if any portion of the installation is not performed by a licensed HVAC contractor/technician. DIY or partial DIY will also void ALL factory warranties.
- When hiring an HVAC technician that is offering their services as a "side job" and not hiring a licensed HVAC company may pose possible risk. This may result in an incomplete or unsatisfactory installation, no guarantee for workmanship and lack of maintenance and further service to your unit.
- Have the installation technician read in full the installation manual and all supplied documents for the product model you purchased. Details within the documentation contributes greatly to the success and quality of the installation. Experience with other manufacturers may not be applied fully to another manufacturer, although there will be similarities there will also be differences. Ignoring the provided installation procedures is an act of negligence and may cause unit failure or damage which could be irrevocable and permanent.
- It is possible for a licensed contractor/technician to make a mistake during the installation. YMGI doesn't supervise nor is able to control the contractor/technician's installation. It is critical that the installer take each variable into account during the initial installation. This will ensure a complete and professional installation and that all units work properly.

⚠WARNING

The following will damage the unit and its key components resulting in loss of factory warranty:

1. Any foreign substances introduced into the system because of failure to seal the ends of the refrigeration piping before pulling the piping through any structures at time of installation.
2. Not installing an oil P-trap in the copper suction line where the indoor unit is located 18 feet or more below the outdoor unit.
3. Cross piping and/or cross wiring of any units including more than one single zone or a multi zone system.
4. Not conducting a positive leak check prior to the negative leak check.
5. Not conducting a positive leak check by charging the system with dry-nitrogen 350 PSI to hold for 3+ hours, and performing soap bubble testing.
6. Not conducting a negative leak check by evacuating the copper lines for 30 minutes for each zone. Vacuum must be held at 500 microns or better for at least 60 minutes, starting 60-minute timer after the vacuum pump is turned off.
7. Not selecting the correct size of wire or circuit breaker.
8. Not answering ALL questions in the technician's checklist located inside the warranty registration form.

⚠WARNING

The following may be overlooked, ignored, or considered unimportant during your installer's installation, but will cause your unit to underperform and may cause unit failure.

1. Any kinks in or improper bending of the copper piping.
2. Any poorly formed flares or not centering the flare with the flare nut, or not tightening all connections.
3. Not testing each indoor unit individually.
4. Not reading technical data (temp/time/pressure/current) after the system is stabilized (normally the compressor needs to run at least 10 minutes before reading the data). If the data is read too early may lead to inaccurate assessments about the unit.

In an effort to help protect our customers from possible faulty installations that can lead to premature unit failure, YMGI provides the above information for you and the technician. You can observe while your system is being installed, even though your observation is not a guarantee your system is being or has been installed properly and professionally. With the information provided above, you will know some things to look for and questions you can ask. If at any time you feel there may be an issue with the installation, please have your technician contact YMGI at (866)833-3138 x 703 with any questions, issues or concerns you may have.





INSTALLING TECHNICIAN/CONTRACTOR'S RESPONSIBILITIES

1. Discuss with the customer detailed information about the structure to be conditioned, local weather (typical design, extreme temperature/humidity conditions, cooling and heating hours), previous and existing HVAC equipment (if any), usage and dependence on new HVAC equipment or YMGI products.
2. Performing a cooling/heating load calculation by using commercially available professional programs/methods such as Right-J (Manual J) for residential HVAC applications and Right-CommLoad (ASHRAE RTS/CLTD) for light commercial and commercial HVAC applications.
3. Contact your YMGI distributor/sales department or contact the manufacturer directly to obtain additional information to fully understand your YMGI products, including but not limited to product features, cooling/heating performance at standard ratings/conditions and extreme conditions, allowed indoor and outdoor temperature and humidity ranges, installation, operation, maintenance, service, warranty, parts and any other issues pertaining to YMGI products.
4. Select the correct (most suitable) YMGI product unit models and accessories necessary for your HVAC applications and list them in the proposal/quote, in writing, on company's quotation form or letter head, based upon the information you collected from 1), 2) and 3).
5. List your currently valid HVAC license number and EPA number in your proposal/quote.
6. Make sure you are the only party to perform the entire installation and you will not sub-contract any part of the installation to any non-licensed parties or persons. You will be solely responsible for the entire installation that you have been contracted.
7. Make sure you have all the materials you need to properly, completely and correctly finish the installation. The YMGI units and accessories may be just a portion of what you will need for the project. When support issues arise, remember YMGI employees and YMGI distributors/sales, dealers and agents are not installers and may only provide suggestions. You are the only decision maker to determine what other materials you need to complete the installation.
8. When connecting electrical wires, follow all NEC, state and local codes and ensure the installation of all YMGI units and accessories meet these requirements.
9. Connect the unit to a correctly sized electrical power source. If the unit is installed in an area where lightning or storms occur frequently, a correctly sized and type of power surge protector must be installed between the outdoor unit and the power source.
10. Select the correct types and sizes of HVAC circuit breakers, disconnect switch boxes, wires and conduit from circuit breaker to disconnect box and then from disconnect box to outdoor unit.
11. Select the proper location for installing indoor units and outdoor units with all factory requirements being followed (cooling/heating air inlets and outlets are not blocked or restricted, mounting structure is secure, installation for convenience is considered, allow adequate clearance for maintenance/service and all applicable codes are met).
12. Cap/tape the two ends of every copper line before running them through any structure to keep any foreign substances from entering the pipe causing contamination. Label them A-A, B-B, C-C, D-D, or any other identifying marks on each pair of copper lines and wiring cable sets to keep from cross-piping or cross-wiring in multiple zone installations or where pipes for different single zone systems are close to one another.
13. Secure the wiring cables that connect between the indoor unit and outdoor unit, following all applicable NEC, state and local codes for your installation. If there is no special NEC, state or local codes to govern how these wires are to be installed, you can tape/cable tie them along with insulated copper line.
14. Tighten all pipe and wire connections ensuring there is no leakage or false connections.
15. Conduct a positive pressure leakage test, checking each of the inter-connecting copper lines between each indoor unit and outdoor unit by charging with dry-nitrogen at the outdoor unit's service port (note: do not back-seat stopping valve). A liquid soap solution shall be applied at all pipe connections to check for leakage. A 1/4" - 5/16" hose/valve adaptor may be needed if you have a 1/4" traditional manifold hose connection.
16. If there is no positive leaking, then conduct a negative pressure leakage test, checking all inter-connecting copper lines between each indoor unit and outdoor unit by pulling vacuum at the outdoor unit's service port (note: do not back-seat stopping valve) and checking that the vacuum level of 500 Microns can be held for at least 60 minutes.
17. If there is no leakage found at any of the refrigeration pipe connections, flip up the indoor unit's face panel and remove filter, carefully pour some clear water onto the up-right aluminum coil surface to test if the water can drain out of each the indoor unit's freely without finding any leakage.
18. If there is water leakage found, locate the source of the leak and correct it. Only after everything is clear, engage the correct electrical power to the system.
19. Then back-seat stopping valves of the outdoor unit to release refrigerant from the outdoor unit into the inter-connecting pipes and indoor unit.
20. Make sure both the indoor unit and outdoor unit are powered on correctly, operating the indoor unit in fan mode first. Then move on to test cooling, dehumidifying/drying, heating and other modes.
21. Read refrigerant pressures and pipe/valve temperatures only after the system is stabilized (normally 10 minutes after cooling/heating mode is started successfully). Record this data into the technician checklist in the lower half section of the Limited Product Warranty Registration Card/Form.
22. Adjust refrigerant charging level (remove refrigerant if pipe is shorter, the temperature is colder; add refrigerant if pipe is longer the temperature is warmer), following the manufacturer's instructions. If the average pipe length is shorter or longer than 25' and pressure/temperature readings at the outdoor unit service valves are not falling into normal ranges.
23. Explain to the user/owner about proper unit operation and maintenance. Leave your contact information to allow them to reach you. If the customer finds the unit doesn't work properly and cannot resolve the issue themselves, check the customer's units/parts/accessories and correct the issue if there is one. Communicate with YMGI-technical support line at (866)833-3138 x 703, if further help necessary.

Following these requirements will aid in ensuring that the units to be installed meet general HVAC practicing standards and necessary factory requirements. Finding any possible problems early, preventing any further damage to the unit will help to ensure a properly working unit for many years.





LIMITED PRODUCT WARRANTY

Once the installation and successful testing of the system has been completely performed by a qualified licensed/certified HVAC technician/contractor, the registration card/form is filled out completely and correctly, and filed along with a valid installation invoice from the contractor within 7 days of the original installation, the following standard **Limited Product Warranty** is qualified: **7-years** on the **compressor** and **2-year** on **PARTS ONLY**. There is **no labor coverage**.

YMGI products are designed and manufactured free from defects in workmanship, and materials for normal use. However, if for any reason, including occasionally transporting between YMGI factories/warehouses and your delivery location, you discover the unit has issues, YMGI Group will help field a solution by following YMGI's established warranty procedures:

Compressor: YMGI will warrant the compressor of an YMGI-validated and approved warranty filing, for a period of 7 years from the date of successful installation at its original installation location.

Parts: YMGI will warrant parts of an YMGI-validated and approved warranty filing, for two years from the date of successful installation at original installation location.

All warranty compressors and parts replaced will become the sole property of YMGI Group and must be returned to YMGI Group upon request. Warranty parts may be new or refurbished. All parts are tested and approved before shipping.

At no time does YMGI Group warrant labor cost of any type. Warranty will start from the date of successful installation at original installation location, or 90 days as of original shipping date from YMGI Group, whichever comes first.

This is a standard limited liability warranty and DOES NOT cover the following:

- Any damage or repairs to properties, or persons as an incident of or consequence of improper faulty transportation, installation, operation, maintenance or service.
- Any damage caused by frozen or broken water hoses or refrigeration pipes in the event of equipment failure.
- Any damage due to floods, fire, wind, lightening, accidents, corrosive atmosphere or any other conditions beyond the control of YMGI Group.
- Any damage due to interruption or inadequate electrical service to equipment.
- Any products that are installed outside the US or Canada.
- Any unit that has been moved from its original installation address.
- Any labor costs associated with the installation or service of the unit.
- Poor unit performance due to improper unit selection (SEER, Unit size).

To validate the above warranties, ALL of the following conditions must all be fulfilled:

1. The unit was fully (100%) and successfully installed by a licensed or certified HVAC technician.
2. The unit was installed following all NEC, state and local codes.
3. The unit was installed following all the information within the Instructions and User Manuals provided by YMGI Group.
4. ALL fields, especially the technician-checklist, of the **Limited Warranty Registration Card/Form** were filled completely by the installing technician and signed by both the installing company technician and the unit owner.
5. The **Limited Warranty Registration Card/Form** and a copy of the original installing company's invoice have been received by YMGI Group-Warranty Dept., POB 1559, O'Fallon, MO 63366, within 7 days of successful installation.

**No warranty filing will be validated or approved, if any one of the above conditions are not met.
Product registration doesn't guarantee the validity of this limited warranty statement.**





Steps to follow for warranty part replacement:

1. The installing or service technician must contact YMGI tech support at 1-866-833-3138 ext. 703 from the installation location to check and confirm with YMGI Technical support the exact part(s) needed to fix the problem(s).
2. YMGI will check the customer's warranty filing. There will be no charge for Parts with a validated and approved warranty. Any Parts that have not been validated and approved or have an invalid warranty filing resulting in an unapproved warranty request, will be charged accordingly.
3. ***YMGI will ground ship out the parts ASAP. Expedited shipping is available at the customer's expense.***
4. Replacement parts that have an approved warranty registration are to be warranted for the remainder of the 2-year on parts and a 7-year compressor warranty. Purchasing of replacement parts without a valid warranty filing or unapproved warranty request, will be sold as is and are not covered by any warranty.

YMGI is continually improving products with various engineering changes and these changes are made without prior notice. Such improvements or changes include but are not limited to product specification, appearance, functionality, size, packaging, etc. These improvements or changes will not void the limited warranty stated herein. YMGI is the final authority concerning this warranty policy.





LIMITED PRODUCT WARRANTY REGISTRATION FORM

Top Portion and Keep Copy A is for YMGI Internal records. Copy B is for Installer to Fill out and Mail back to YMGI. Bottom Copy C for Customer records.

For YMGI Use Only	Date:	Shipping Packing List Number:	Registration Card Serial No.
	Did the Company Pay YMGI:	Unit(s) Work Successfully:	Yes/No
	Installation Invoice Attached to the Registration Card	Hired YMGI Recommended HVAC Contractor/Technician?	Warranty Approved
Outdoor Unit Serial Number :	Indoor Unit Serial Numbers:	Unit 1	Unit 6
		Unit 2	Unit 7
		Unit 3	Unit 8
		Unit 4	Unit 9
		Unit 5	Unit 10

Contact at Installation Location:

Name:	Phone:	Fax:
Address:	Email:	
City:	State (Province):	Country:

Contact of the Installing HVAC Contractor/Technician:

Technician Full Name (Print):	Phone:	Fax:
HVAC Technician's Company:	Email:	
Company Address:	City:	State (Province):
Currently Licensed/Certified HVAC Technician License or Certification Number:	License Approved/Certified by:	
Official Phone # to Check the License Validity:		

Checklist for Installing HVAC Technician to Verify Installation Quality, and for Warranty Processing Purpose (If not filled out completely by technician, warranty will be voided)

1) Did you install the whole system? If not, please note below.	15) Where is the outdoor unit located?	Is the outdoor unit anchored to ground or secured onto wall bracket?
Yes No % of installation done by you (HVAC technician).	Ground wall balcony roof other location or pad	Yes No
2) What had been done, prior to your arrival?	16) Have you checked to make sure there is no cross-piping and/or cross-wiring between any two indoor units (zones)? What was your procedure?	
3) Did you read the User Manual and Installation Instructions before starting the installation?	17) Were the refrigerant pipe ends capped or sealed, prior to running them through structures to keep debris from entering the copper lines?	
Yes No	18) Have you checked both cooling and heating on all indoor units individually to ensure proper function?	
4) Who unpacked the unit and accessory boxes to check for damage?	Yes No	
5) Supply electrical power V/Ph/Hz measured at wiring terminal block of	19) Did you charge the inter-connecting copper pipes and indoor unit with nitrogen to check for positive leakage (pressures 150-200PSI), before conducting a vacuum leak check?	
Indoor unit: Outdoor unit:	Yes No	
6) Incoming electrical power V/Ph/Hz measured at terminal blocks of	20) Did you vacuum correctly to check the connecting pipes and indoor unit for leakage? What was the micron gauge reading, for how many minutes?	
Indoor unit: Outdoor unit:	21) Did you check the compressor's start and stop sequences to determine proper functionality?	
7) Wire gauge, length and terminal colors between circuit breaker/disconnect switch to outdoor unit:	Yes No	
8) Wire gauge, length and terminal colors between each indoor and outdoor unit:	22) If copper length were not made to the supplied or recommended refrigerant pipe length, how much refrigerant added or deducted?	
Unit A Unit B Unit C Unit D	23) Measured refrigerant pressures at outdoor service suction valve, when unit was stabilized.	
9) The size of HVAC circuit breaker/fuse or disconnect switch to the outdoor unit:	Heat pump (PSI): Cooling (PSI): Outdoor Ambient Temp. (°F):	
10) Are the inter-connecting wires and copper lines between indoor and outdoor units installed/covered/protected by line set covers, or anything else?	24) What were the measured temperatures (probe not touching any metal):	
11) What is the refrigerant pipe length between each indoor unit and the outdoor unit?	At cooling: indoor return air °F Discharge air °F and outdoor °F	
Unit A Unit B Unit C Unit D	At heating: indoor return air °F Discharge air °F and outdoor °F	
12) Where is/are the indoor unit(s) located? (Bedroom, kitchen, etc.)	25) Have you checked all unit functions with customer present, and all functions are working correctly?	
Unit A Unit B Unit C Unit D	Yes No	
13) What is the elevation difference between each indoor unit and the outdoor unit?	26) Did you show the user how to operate the unit? Did he/she understand you?	
Unit A Unit B Unit C Unit D	Yes No Yes No	
14) Did you check the indoor unit for condensate leakage and refrigerant leakage, before and after connecting them?	27) Do you provide regular one-year free technical service for this installation?	
Yes No	Yes No	
Installation Finished and Unit Works Successfully.	Installation Finished and Unit Works Successfully.	
Print Name of Installation HVAC Technician:	Print Name of Owner:	
Signature:	Signature:	
Date and time:	Date and time:	

By signing above, I acknowledge the liability and responsibility for any false statement or omission of facts, and I authorize YMGI to verify the details provided above, and make its decision on warranty. I understand our filing or filling out of the warranty card/form DOES NOT imply automatic warranty approval, because warranty is approved only to qualified and successful installations by a qualified HVAC technician. I understand that the warranty (if approved) is a standard 5 year compressor and 1 year parts only, and does not include any labor coverage. I agree to and will follow all the contents contained in the Limited Product Warranty Policy of YMGI, and no other entity, stated in public, including but not limited to manuals, web site, email, etc.

Important Note: A copy of the installing HVAC company's invoice to show all their work details, your payment proof, center copy B of this registration card filled out after a successful installation, all three (3) MUST be mailed together to Warranty Dept., YMGI Group, POB 1559, O'Fallon, MO 63366, for warranty processing. Customer keeps bottom copy C. YMGI will check against copy A that was kept at YMGI.





WHY DOES YMGI GROUP REQUIRE INSTALLATION AND SERVICE TO BE PERFORMED 100% BY CURRENTLY LICENSED OR CERTIFIED HVAC TECHNICIANS/CONTRACTORS?

1. Expertise and Safety:

They have the training and experience to accurately and safely install and service your equipment. The equipment runs with high-pressure refrigerant, oil and electrical current. The copper lines must be installed properly to prevent leakage and foreign substances from contaminating the refrigerant system.

2. You will save money in the long run:

If any problem occurs with the unit that has been fully installed by a currently licensed or certified technician/contractor, contact the original licensed or certified HVAC technician to evaluate the unit as they have the training and experience to correct the problem quickly and efficiently. A technician may be unwilling to repair an issue on a unit that they did not install. If you do find a technician willing to perform this service, there is an increased possibility of higher service fees, increased service visits, or delayed service from that technician.

3. It's the law!

The federal, state and/or local government and authorities have various governing laws or regulations, guidelines, ordinances, etc. These laws may require only licensed or certified professionals can install and service this type of high pressure HVAC equipment.

SUGGESTIONS TO AID YOU IN HIRING AN HVAC CONTRACTOR:

1. Hire a currently practicing, licensed/certified HVAC professional technician/contractor. Technicians, who are no longer practicing (retired, etc.) in this field, may not have current technical knowledge or may lack experience on the equipment you have purchased.
2. Hiring a licensed technician to install your unit as a "side job" and not hiring a licensed HVAC company may pose possible risk. This may result in an incomplete or unsatisfactory installation, no guarantee for workmanship and lack of maintenance and further service to your unit.
3. Hire a technician/contractor who services customers in your local area and one you are familiar with. Local contractors have a faster response time and it will be easier for you to determine if they are reputable.
4. Use only a reputable licensed/certified HVAC installation professional to prevent any unexpected charges because of unethical business practices.
5. Check their references, verify they provide professional service for their customers. N.A.T.E or A.C.C.A certified technicians are strongly recommended.
6. Some contractors/technicians may not feel comfortable about installing equipment that has been purchased by someone other than themselves. They prefer to purchase and install the equipment themselves. You can contact YMGI directly to check and see if there are contractors in your area who have installed our products or any similar products.
7. Ask for a detailed quote for the complete installation project. A flat rate quote is the safest contract for both you and the contractor.
8. Local HVAC technicians may charge you on a project basis or on an hourly basis. It has been our general experience; **a full single head installation normally can cost \$800 to \$1500.** These costs are estimates, and your actual costs may differ due to your specific job requirements and installation location.
9. Number of hours can vary depending upon each individual situation, some factors are, but not limited to:
 - Difficulty or complexity of securely installing the indoor unit.
 - Difficulty or length of the inter-connecting pipes and wires to be installed.
10. A successful installation is dependent on all these suggestions and all the necessary steps are followed.
11. If the contractor(s)/technician(s) are experienced with the systems/brands you purchased. **You might save on the installation cost, but remember to always ask for and verify references.**
12. The contracts should list and detail all work to be performed and the standards they will follow. Some contractors are willing to include a 1-year installation/service warranty at no extra charge. Check to see if this is an available option. If available, make sure it is included in the contract.
13. Verify and confirm the installation is completed and all the unit functions have been tested and working properly. All items on the checklist should be checked and clearly marked in the warranty registration card/form, prior to paying the contractor in full.

The cost of not having your unit professionally installed can be more expensive than the additional cost of hiring a certified contractor. Protect your investment and warranty eligibility by doing it right the first time.



⚠ WARNING**Safety Precautions**

1. Follow these instructions to complete the necessary installation process. Carefully read this manual before installation and unit startup or servicing.
2. Wire size of power cord should be properly sized to meet the required electrical loads. Should the power cord get damaged, the power cord should be replaced with a manufacturer approved cable.
3. After connecting the power cord, attach the electric box cover and secure properly.
4. Always meet the nitrogen charge requirements when welding pipes.
5. Never short-circuit or cancel the pressure switch as this will result in damage to the unit.
6. Connect the wired controller before energizing, otherwise the wired controller cannot be used.
7. Before using the unit, verify the piping and wiring are correct. This will avoid water leakage, refrigerant leakage, electric shock, or fire etc.
8. Do not insert fingers or objects into the air outlet or inlet grille.
9. Open a door or window for ventilation for allowing fresh air to enter the room to avoid depleting the oxygen while gas/oil supplied heating equipment is used during the installation.
10. Never start up or shut off the unit by means of directly plugging into or unplugging the power cord from the power outlet.
11. Turn off the unit after it runs at least five minutes, otherwise it will influence the oil return of the compressor.
12. Do not allow children to operate this unit.
13. Do not operate this unit with wet hands.
14. Turn off the unit or disconnect the power supply before cleaning the unit. This will avoid possible electric shock or personnel injury.
15. Never spray or splash water towards the unit. This can cause a malfunction in the unit or can result in electric shock.
16. Do not expose the unit to moist or corrosive environments.
17. While operating in cooling mode, do not set the indoor unit's room temperature too low.
18. YMGI Group recommends that only properly trained and authorized personnel be allowed to repair or service the unit. Improper repairs or servicing can result in electric shock or fire hazards. Please contact YMGI Group if you need help locating a qualified repair or service technician.
19. Before installation, check the power supply to ensure it is sufficient to meet and is in accordance with the requirements specified on the nameplate of the unit. Ensure the power overload is functioning correctly and make sure it is properly maintained.
20. Installation must be performed only by an authorized installer or HVAC professional in accordance with the requirements set by the NEC and CEC. Do not attempt to install the unit yourself. Improper handling may result in water leakage, electric shock, fire, and voiding of the warranty.
21. Be sure to use only approved accessories and parts to prevent water leakage, electric shock and fire.
22. Make sure the unit is grounded properly prior to connecting to power source, to avoid electric shock. Do not connect the ground wire to a gas pipe, water pipe, lightning rod or telephone line.
23. Energize the unit for 8 hours before operation. Turn off or disconnect the power within 24 hours to prevent short-cycling (to protect the compressor).
24. If refrigerant leakage happens in a confined space during installation, ventilate immediately. Poisonous gases can occur if the refrigerant gas is exposed to fire.
25. Volatile liquids, such as paint thinners or solvents if exposed to the unit's surface will cause damage to the surface finish. Only use a soft cloth along with a mild non-abrasive detergent to clean the outer casing of the unit.
26. If the unit does not operate normally or if you notice any type of burning odor, power off the unit and turn off the main power supply, then immediately contact your YMGI authorized repair service center or HVAC professional.

NOTICE

YMGI Group will not be responsible for any personal injury or any property damage caused by improper or incorrect installation, improper service or maintenance or by not following the instructions listed in this manual.

DO NOT pull on the power supply cords or refrigeration lines that are connected to the indoor and outdoor units. Install the power supply cords and secure them into position. PVC line set cover is recommended for the outdoor unit to protect against rain, sunlight and accidental damage.

DO NOT allow cold air to blow directly onto people for a prolonged period, as this could make people cold and uncomfortable.

DO NOT undersize any of the power supply wires.

DO NOT connect several units to a single breaker. Don't undersize or oversize the circuit breaker. A poorly sized circuit breaker can cause unit failure and even fire.

DO NOT wire or open a unit while the unit is running. Make sure to disconnect the power supply and switch off all circuits prior to inspecting or servicing the unit. Inspecting and servicing the unit while the power supply is connected, and the circuits are switched on could cause an electrical shock or fire.

DO NOT install the indoor unit near any cooking surfaces, in direct sunlight or any ventilation systems. Poor placement could decrease efficiency and waste energy.

DO NOT install the unit in places where there is exposure to flammable materials or gas.

DO NOT apply chemical solvents, flammable insecticides, or abrasive materials directly on the unit. Clean the unit only with a soft dry cloth.

DO NOT install the unit in a damp laundry room or near flammable gas. All units must be protected by a certified electrical circuit breaker in accordance with all safety and electrical codes.

DO NOT use the system for anything other than what it was designed.

DO NOT store or install the units near food, paint, or other chemicals.

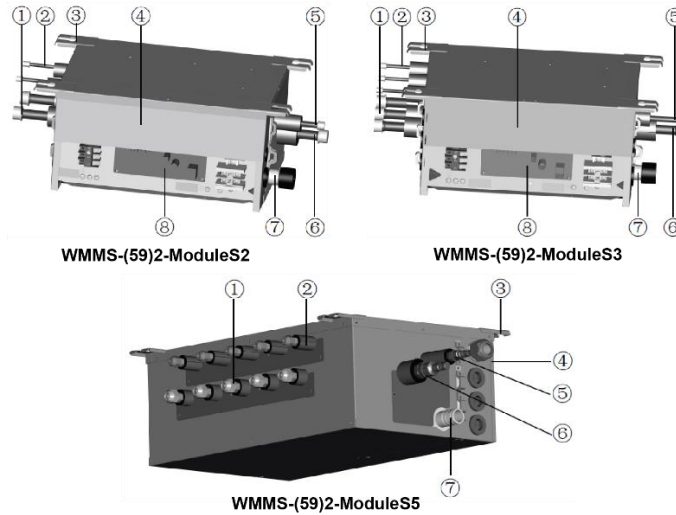
DO NOT use the unit in cool or dry mode for prolonged periods where humidity is higher than 90%.

DO NOT operate the unit for prolonged periods without refreshing ambient air. Open a door or window periodically to allow in fresh air.

BRIEF INTRODUCTION TO MINI SPLIT WALL MOUNT SYSTEM

Mini Split Wall Mount Systems are designed for high performance, easy installation and service. Each system consists of one or several indoor units and one outdoor unit, which are connected by one set or several multiple sets of interconnection refrigerant pipes and electric wires.

As shown in the following sample picture of outdoor unit, air is drawn through the coil from the rear side and then discharged from the front side. In cooling mode, air passing through coil is heated; in heating mode, air passing through coil is cooled.



Sample Wall Mount Mini Split System (For Continuous Engineering Improvement and Various Marketing Needs and Actual Part Availability, Unit Appearance Subject to Change or Update Continuously without Prior Notice)

Outdoor unit(s) provides the electrical and thermal power for the whole system. Electrical and thermal components such as compressors and motors and heat exchange coils and others, are incorporated into the cabinet in an optimized order. They can be either hung on the wall or installed on the ground. Once stacking or bracket kit is used, some outdoor units can be stacked 2 or 3 units high, depending upon unit size and applications. Air is discharged horizontally, quietly and smoothly. These units are a perfect fit in locations where installation and applications of general up-flow condensing units are limited, such as apartments, condos, lofts, multi-families and high-rise buildings and others named or unnamed.

Indoor unit(s) delivers the thermal and acoustical comfort to the rooms. Air is drawn through the coil from the front or topside and then discharged from the bottom. In cooling mode, air passing through coil is cooled; in heating mode, air passing through coil is heated. Air is filtered or treated by the built in mechanism (washable or enzyme equipped or electrostatic powered filter, varies from model to model), before being delivered into the room, with more than enough comfort and care, at a wide angle (swing or not, varies from model to model).



Apartments



Offices, Restaurants, Gyms, etc.



Homes

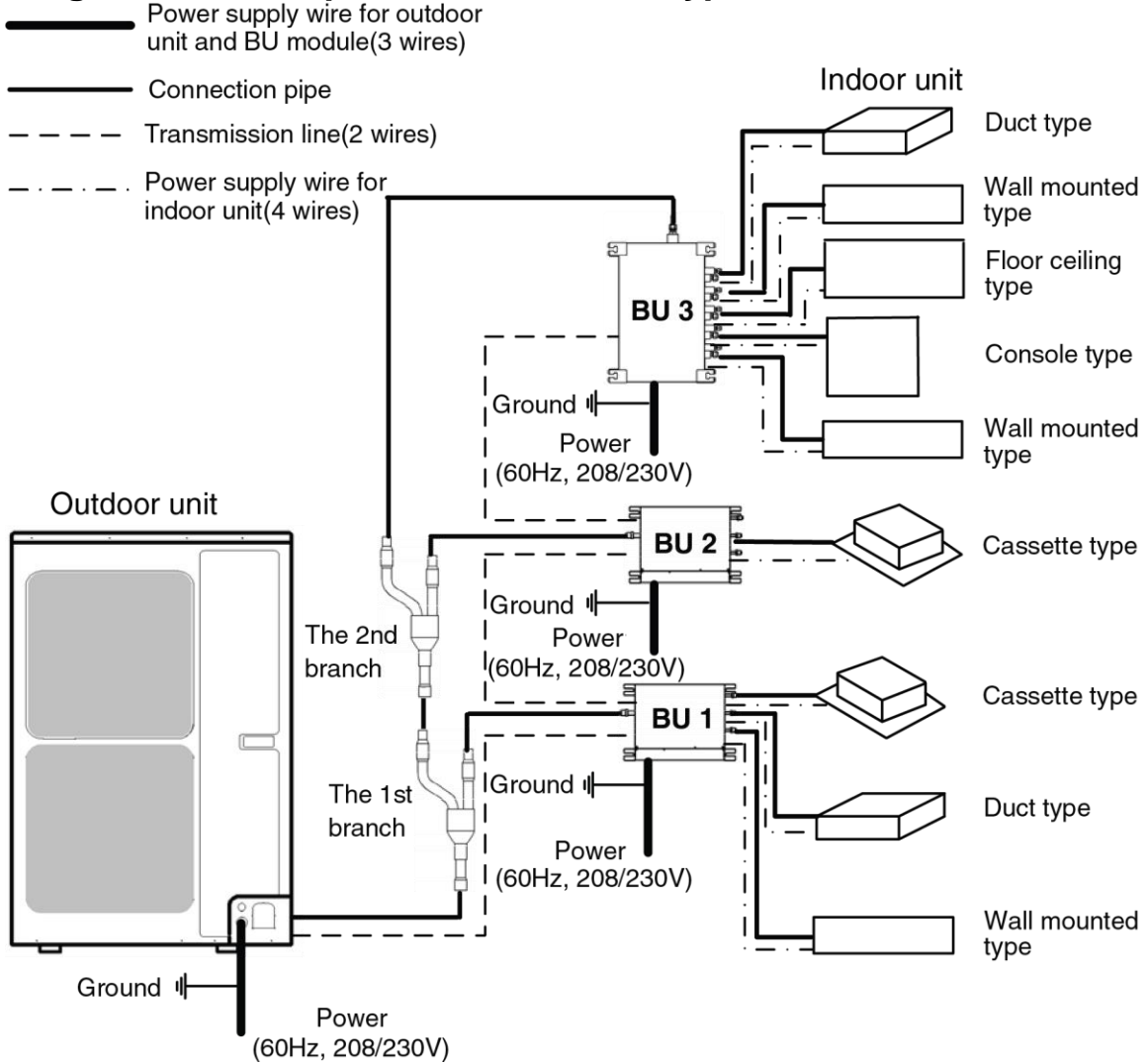
NOTES:

Since ductless system is not designed to incorporate or use with ducted return or discharge tunnels, one single-zone unit should NOT be used to take care of the cooling or heating load of more than one-story room. Several single-zone ductless systems or multiple-zone ductless systems shall be proper in this regard.

These units are designed for applications at:

- Residential
- Institutional
- Commercial
- Light commercial
- Industrial
- Hospital

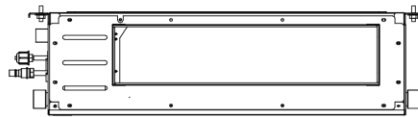
System Diagram and Compatible Indoor Unit Types



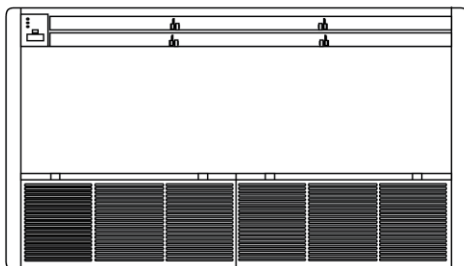
Wall Mount EW Indoor Unit



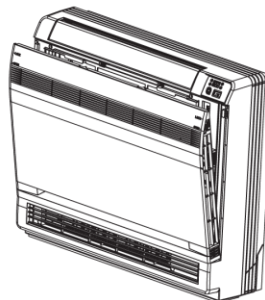
Recessed Fan Coil EF Indoor Unit



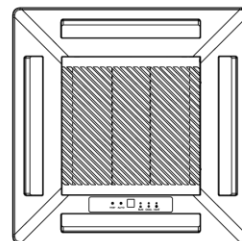
Floor/Wall Mount EU Indoor Unit



Console EL Indoor Unit



Ceiling Cassette Indoor Unit EC

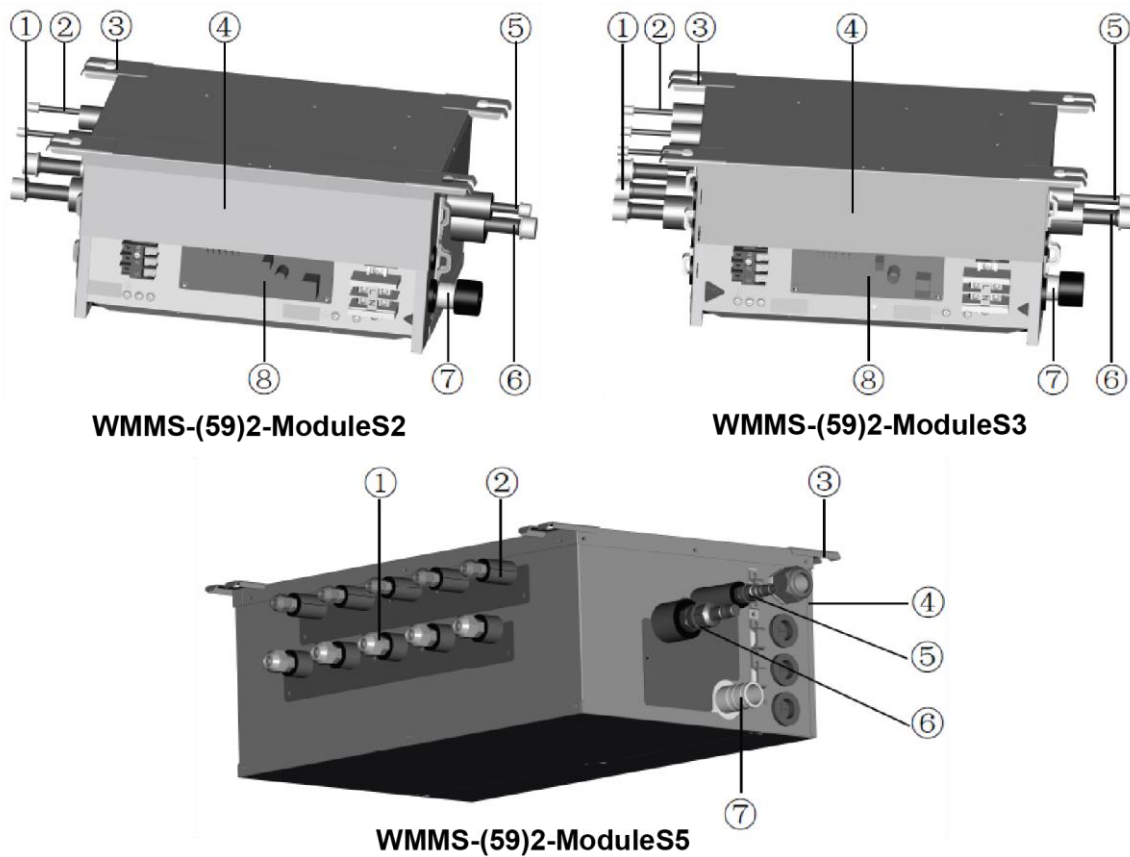


Product Introduction

The Branch Unit Module of the YMG I (59)2S Series is the latest branch device, uses the latest in intelligent control technology. It can respond to changes of the heating or cooling load of the indoor units, and can coordinate the flow rate of the refrigerant.

The compact design gives you flexibility in choosing the installation location, and can easily fit above the ceiling of a living, hallway, on a balcony, or in a closet, etc.

Main Parts

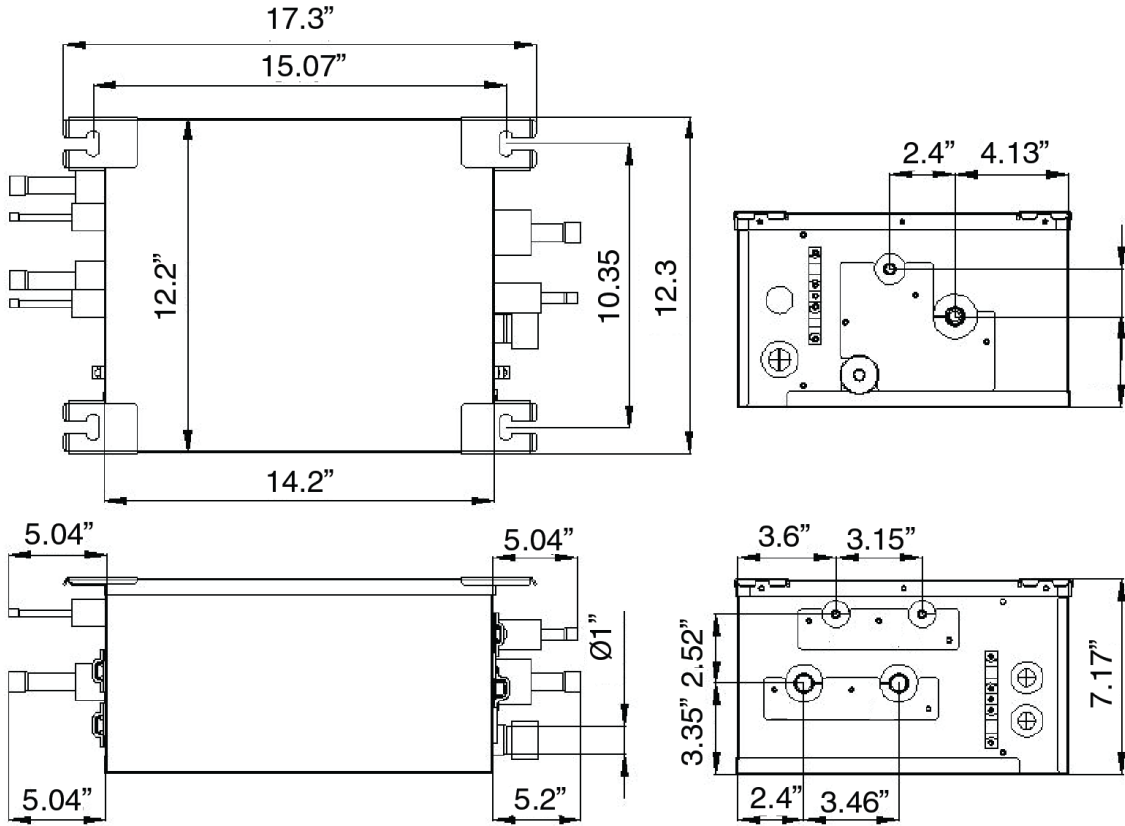


NO.	Name
①	Gas piping of indoor unit
②	Liquid piping of indoor unit side
③	Hanger metal
④	Electrical equipment plate
⑤	Liquid piping of outdoor unit side
⑥	Gas piping of outdoor unit side
⑦	Drain hole
⑧	Printed circuit board

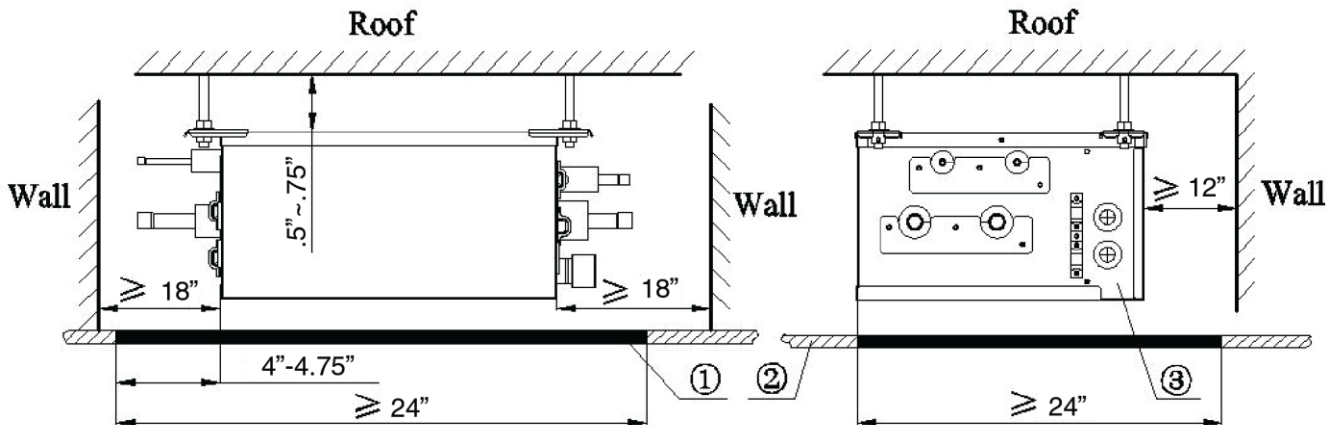
UNIT ENGINEERING SUBMITTALS-MECHANICAL

BRANCH MODULE UNIT

WMMS-(59)2-ModuleS2



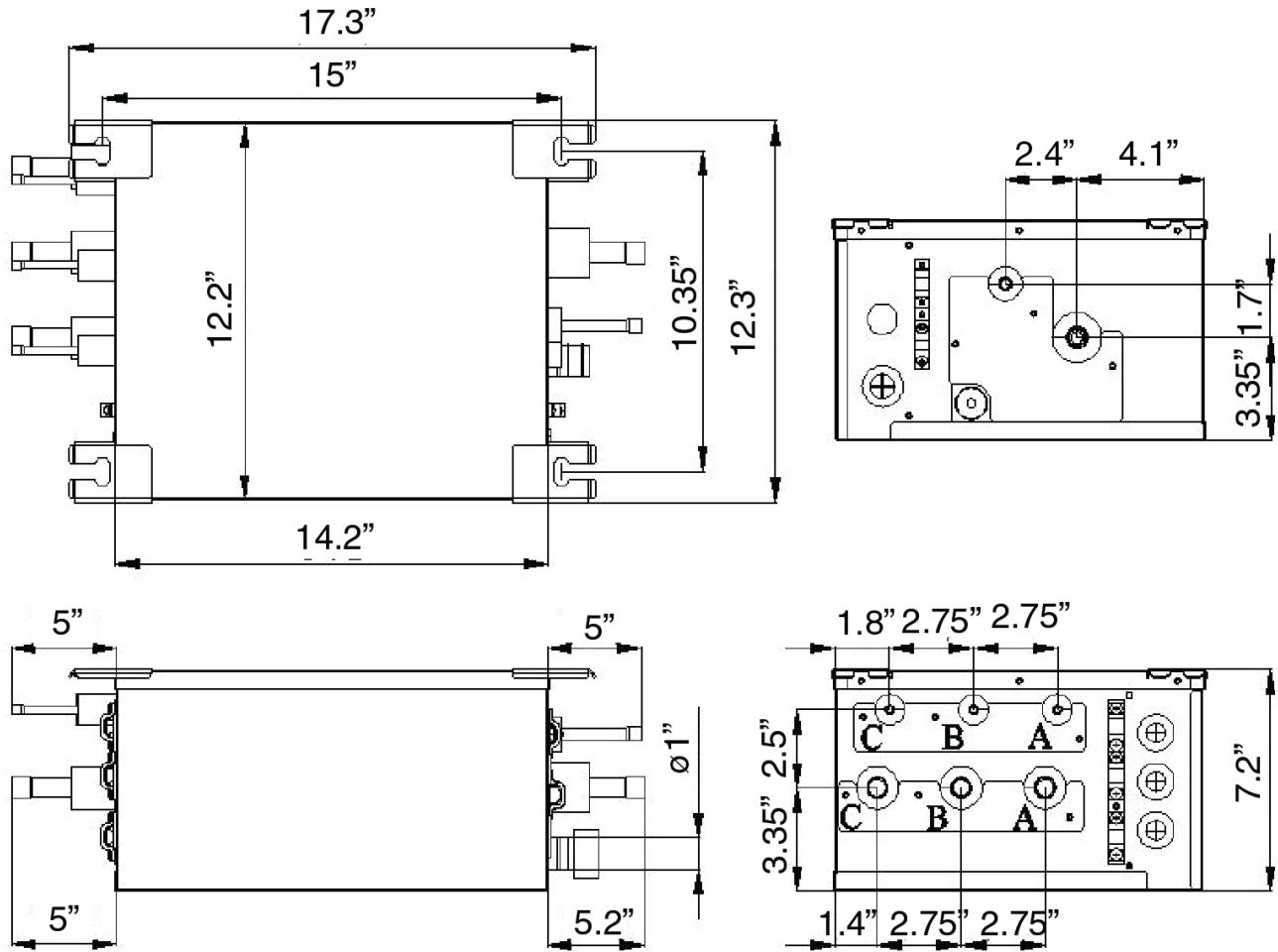
Clearances



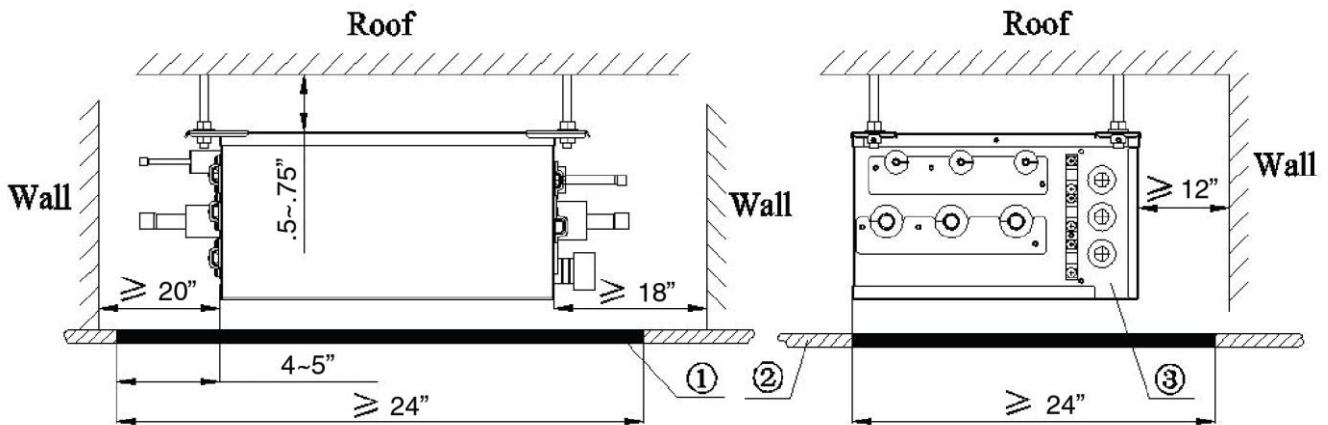
①	Servicing space
②	Ceiling
③	Electrical box side

BRANCH MODULE UNIT

WMMS-(59)2-ModuleS3



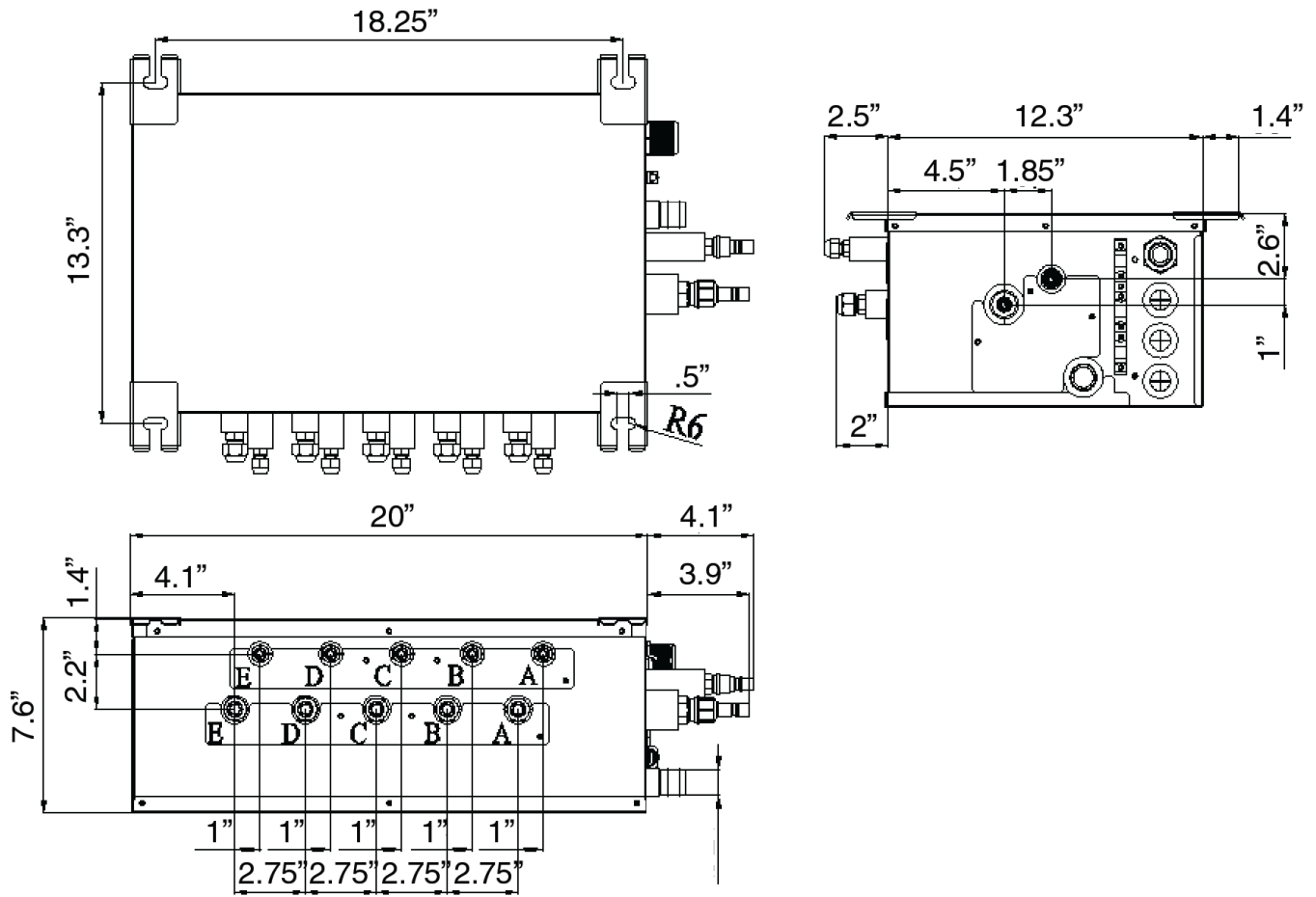
Clearances



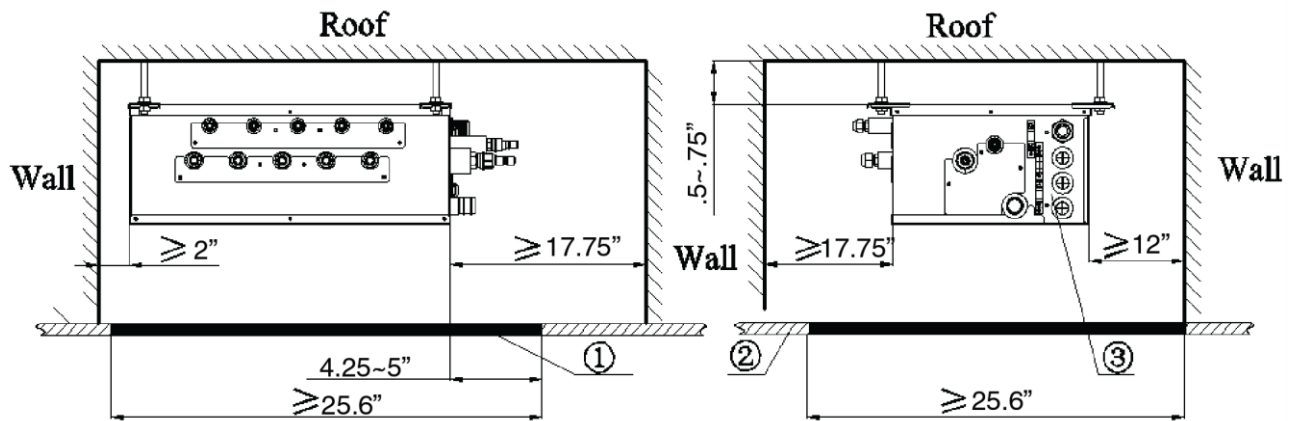
①	Servicing space
②	Ceiling
③	Electrical box side

BRANCH MODULE UNIT

WMMS-(59)2-ModuleS5



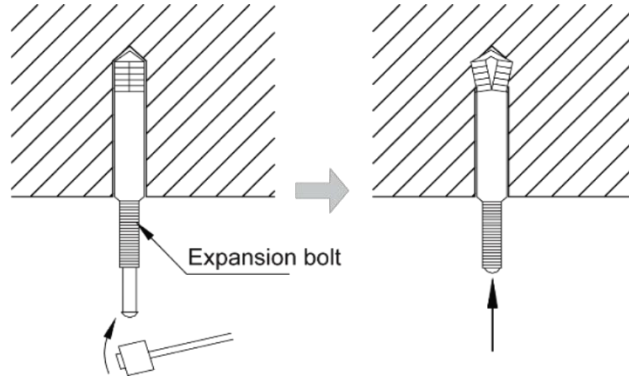
Clearances



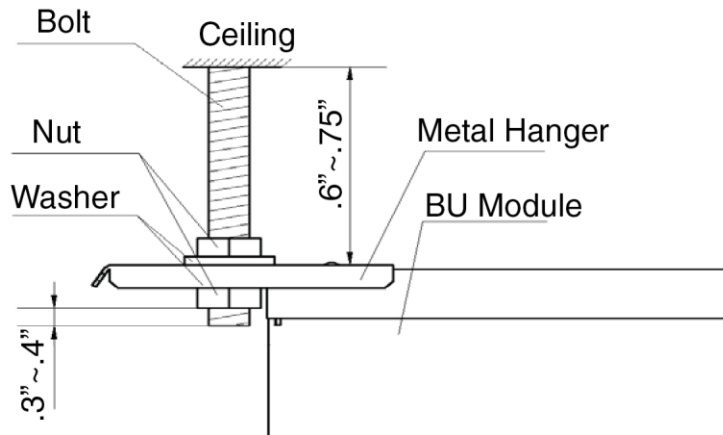
①	Servicing space
②	Ceiling
③	Electrical box side

Installation Instructions

- 1) Check the installation location and ensure it is strength and level. Otherwise, there should be enough space to install drainage pipe, so that the condensed water can be discharged.
- 2) Reference to the size of hanger metal and drill 4 holes in the installation location.
- 3) Hang the hanger bolts.



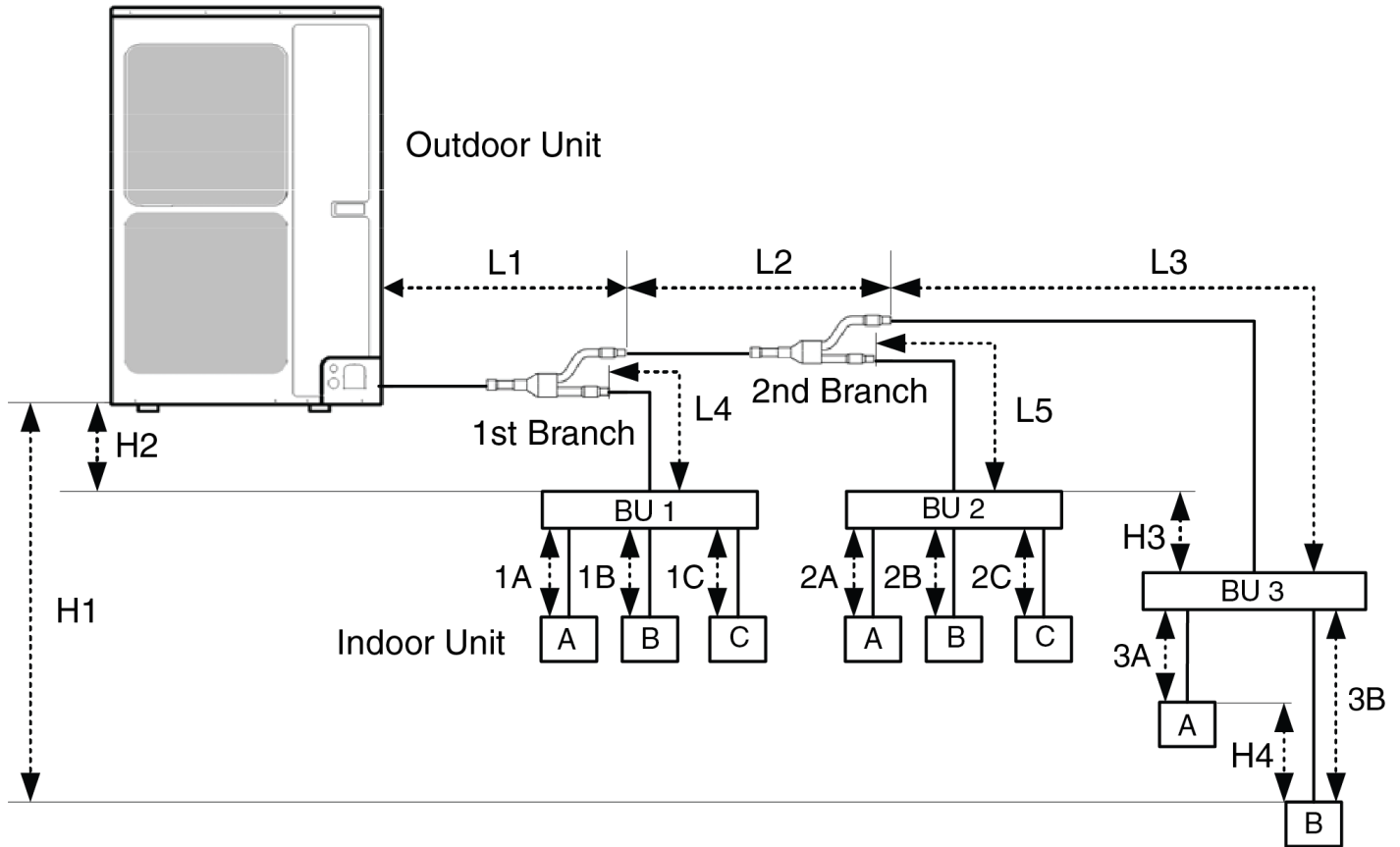
- 4) Fix the modules securely with the hanger bolts. You can get the M10 or M8 hanger bolts, nuts and washers from the market.



- 5) Adjusting the nuts position, so that the BU module should be level in front/back and left/right.

Installation of Refrigerant Pipes

Allowable Length and Drop Height of Connecting Pipe



The sorts		The Pipes	Length (feet)
Maximum allowable length	Total length between outdoor unit and BU modules	$L1+L2+L3+L4+L5$	181
	Total length between indoor units and BU	WMMS-80CH-V2B(59)2S	263
		WMMS-90CH-V2B(59)2S	295
	Between indoor unit and BU module	$1A;1B;1C;2A; 2B;2C;3A;3B$	49
	Between indoor unit and the 1st branch	$L4+1B;L2+L5+2A; L2+L3+3B$	131
Maximum allowable length	Between outdoor and indoor units	H1	99
	Between outdoor units and BU modules	H2	99
	Between BU and BU modules	H3	49
	Between indoor and indoor units	H4	49
Minimum allowable length	Between outdoor and the 1st branch	L1	16
	Between BU and the branch	L3; L4; L5	as possible as short

NOTICE!

BU module should be placed within the level between the outdoor unit and indoor unit.

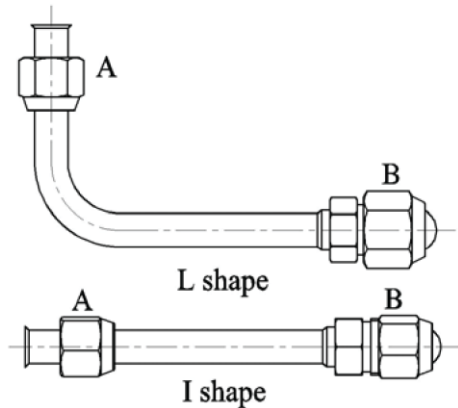
Installation of Piping Adapter (KM21-BBU15-3)

If the piping connection size of BU module does not match with that of the outdoor unit and indoor units, it should prevail with the piping connection size of the outdoor unit and indoor units.

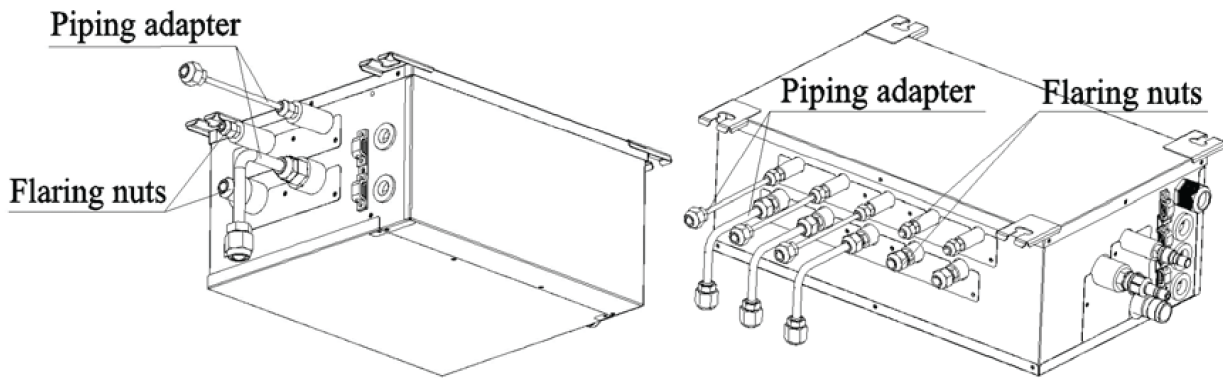
Install the optional piping adapters to the BU module, so that the piping connection size of BU module can match with that of the outdoor unit and indoor units.

1) Piping adapter (Optional accessories)

	Name	Port A (mm/inch)	Port B (mm/inch)
1	Φ15.9→Φ19.05	Φ15.9(5/8)	Φ19.05(3/4)
2	Φ9.52→Φ12.7	Φ9.52(3/8)	Φ12.7(1/2)
3	Φ9.52→Φ15.9	Φ9.52(3/8)	Φ15.9(5/8)
4	Φ6.35→Φ9.52	Φ6.35(1/4)	Φ9.52(3/4)



- 2) Install the piping adapter
 - a. Refer to the piping connection size of the outdoor unit and indoor units, the appropriate piping adapter should be adopted.
 - b. Align the flared end of copper tube with the center of pipe joint. Tighten the nuts with hands.
 - c. Then tighten the flaring nuts with torque wrench until you hear a “click”.



- 3) Sealing the unconnected port

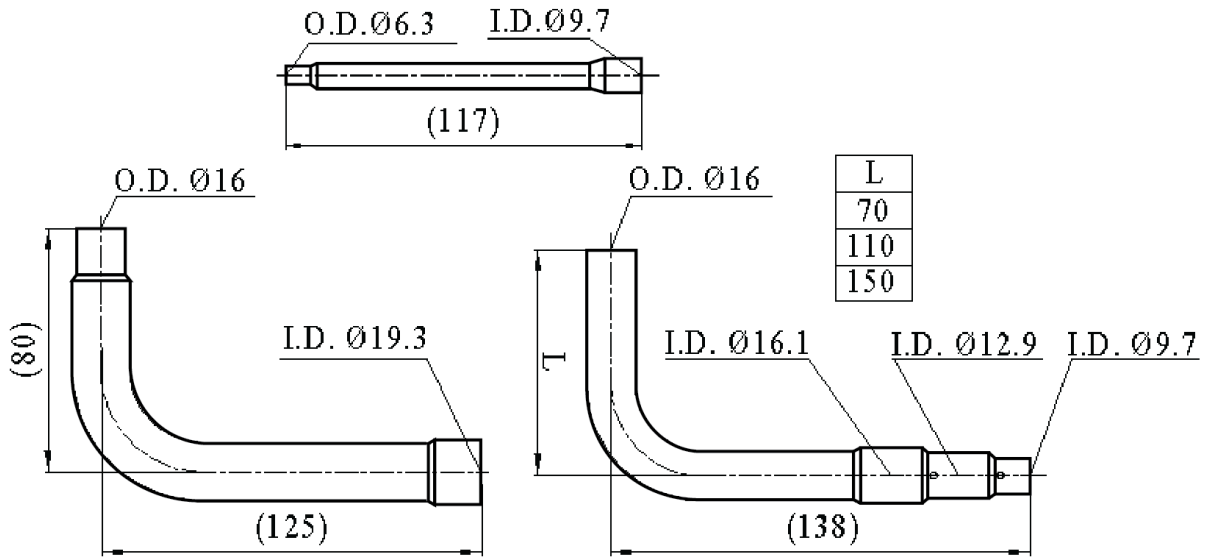
If the port of BU module on the indoor side is not connected to an indoor unit, the port must be sealed to prevent refrigerant leaks. Please tighten the copper flaring nuts to the unconnected port with torque wrench until you hear a “click”.

Installation of Piping Adapter (KM21-BBU12-3 and KM21-BBU13-3)

If the piping connection size of BU module does not match with that of the outdoor unit and indoor units, it should prevail with the piping connection size of the outdoor unit and indoor units.

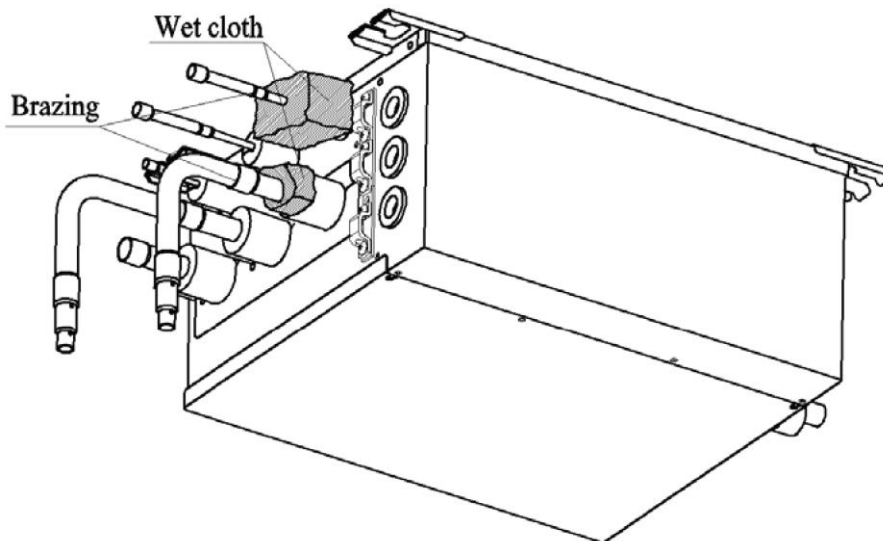
Braze the optional piping adapters to the BU module, so that the piping connection size of BU module can match with that of the outdoor unit and indoor units.

1. Piping adapter(Standard accessories)

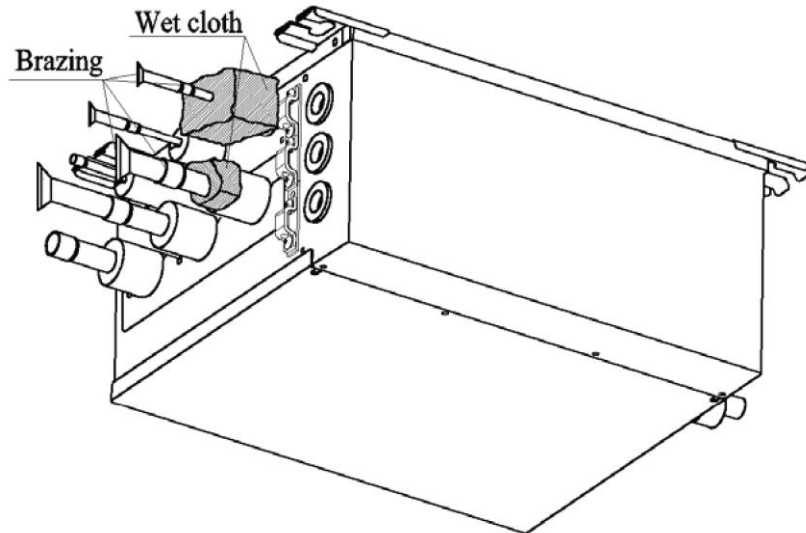


2. Brazing the piping adapter

- If the connection size of the pipe adapter selected is different from the piping connection size of BU module, cut the tube of the piping adapter from middle with tube cutter and remove the burrs.
- To avoid heat damage the internal structure of the BU module, wrap the pipes to be brazed with sufficient wet cloths.
- After brazing, use wet cloths to cool off the pipes to be brazed sufficient.



3. Sealing the unconnected port
If the port of BU module indoor side is not connected to an indoor unit, the port must be sealed to prevent refrigerant leaks.
 - a. Select the appropriate piping adapter.
 - b. Pinch the end of the chosen piping.
 - c. To avoid heat damage the internal structure of the BU module, wrap the pipes to be brazed with sufficient wet cloths.



4. After brazing, use wet cloths to cool off the pipes to be brazed sufficient.

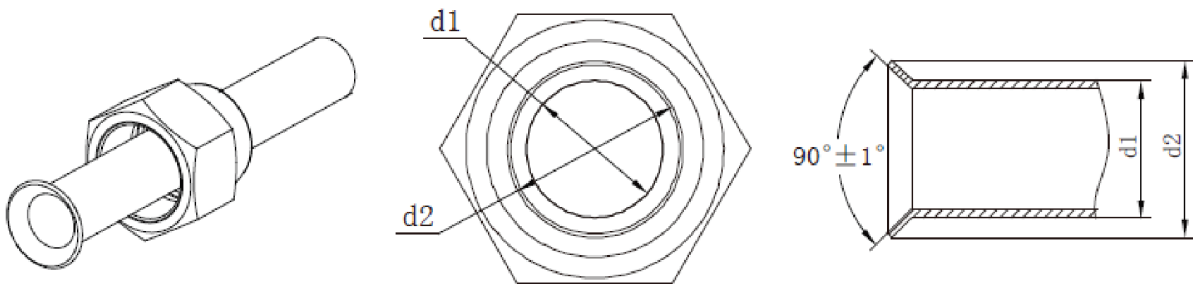
Precaution for Connection

⚠ CAUTION

1. Conform to the following principles during pipe connection: Outdoor unit shall be installed close to the indoor unit, hence to minimize the length and bends of connection pipes; the height gap of outdoor unit and indoor units should be as small as possible; the radius of curvature should be as large as possible.
2. The brazing operation must be strictly in accordance with the process requirements. Rosin joint or pin hole is not allowed.
3. During the installation, do not damage the pipeline. The pipeline's radius of bending must be over than 200mm (8inch). The pipes cannot repeatedly be bent or straightened. Otherwise it will get harden and crack. Do not bend or straight the pipes for more than 3 times at the same position.

1) The process of flaring

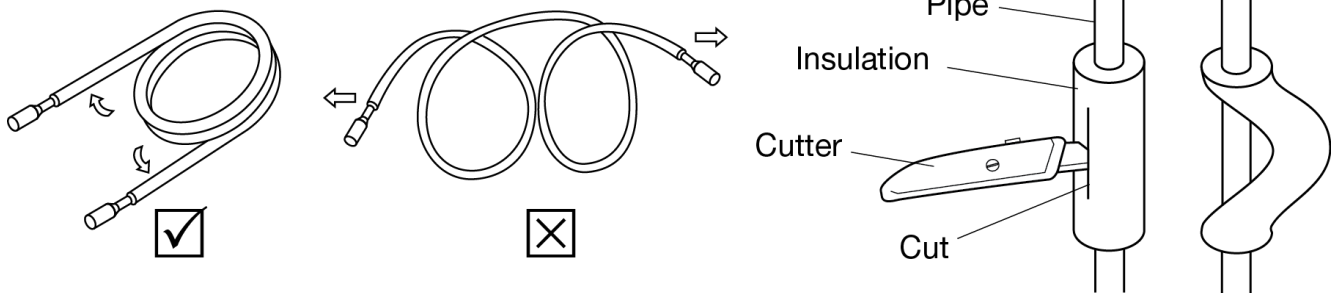
- a. Using the tube cutter to cut the connecting pipe in the appropriate place and remove the burrs.
- b. Install the nut before the flaring operation.
- c. Check the flared portion, whether there is fractured or not.



2) Precaution for elbow operation

- a. The elbow operation could be done by hands. Be careful and do not damage the pipe.
- b. If the thermal insulation on the refrigerant pipe has not removed, do not bend the pipe. Failure to do so can cause the pipe to crack. It is recommended that the installer should make an incision with a knife into the thermal insulation and remove it. After bending the piping is completed, replace the thermal insulation on the exposed area of the pip with a binding band.

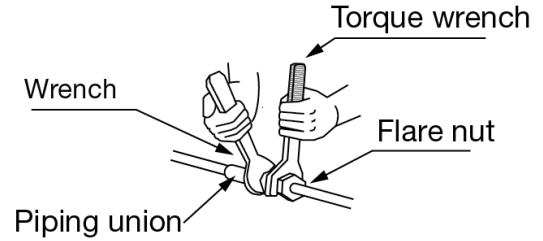
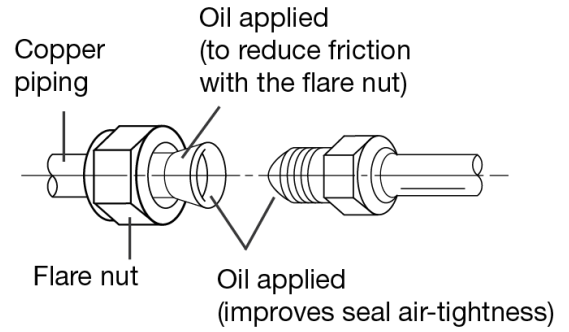
Extend the refrigerant pipe by unwinding it.



3) The process of installing the refrigerant pipes

- a. Remove the screw on caps from the pipes.
- b. Align the flared end of copper tube with the center of pipe joint. Tighten the nuts by hand. (If the flared end of the copper tube and the center of pipe joint are not in alignment, it is difficult to tighten the nuts by hand. Please do not tighten the nut using a wrench. Using a wrench can strip the threads if too much force is applied when connecting).
- c. Tighten the flaring nuts with a torque wrench until you hear a "click". (The spanner and torque wrench should be held perpendicular to the refrigerant pipeline).
- d. Use the following table for the torque required to tighten the nuts.

Pipe diameter (mm/inch)	Thickness of copper tube (mm/inch)	Tightening torque (N·m/1bf·ft)
Φ6.35(1/4)	≥0.8 (1/32)	15~30 (11~22)
Φ9.52(3/8)	≥0.8 (1/32)	35~40 (26~29)
Φ12.7(1/2)	≥0.8 (1/32)	45~50 (33~37)
Φ15.9(5/8)	≥1.0 (1/25)	≥1.0 (1/25) 60~65 (44~48)
Φ19.05(3/4)	≥1.0 (1/25)	≥1.0 (1/25) 70~75 (52~55)

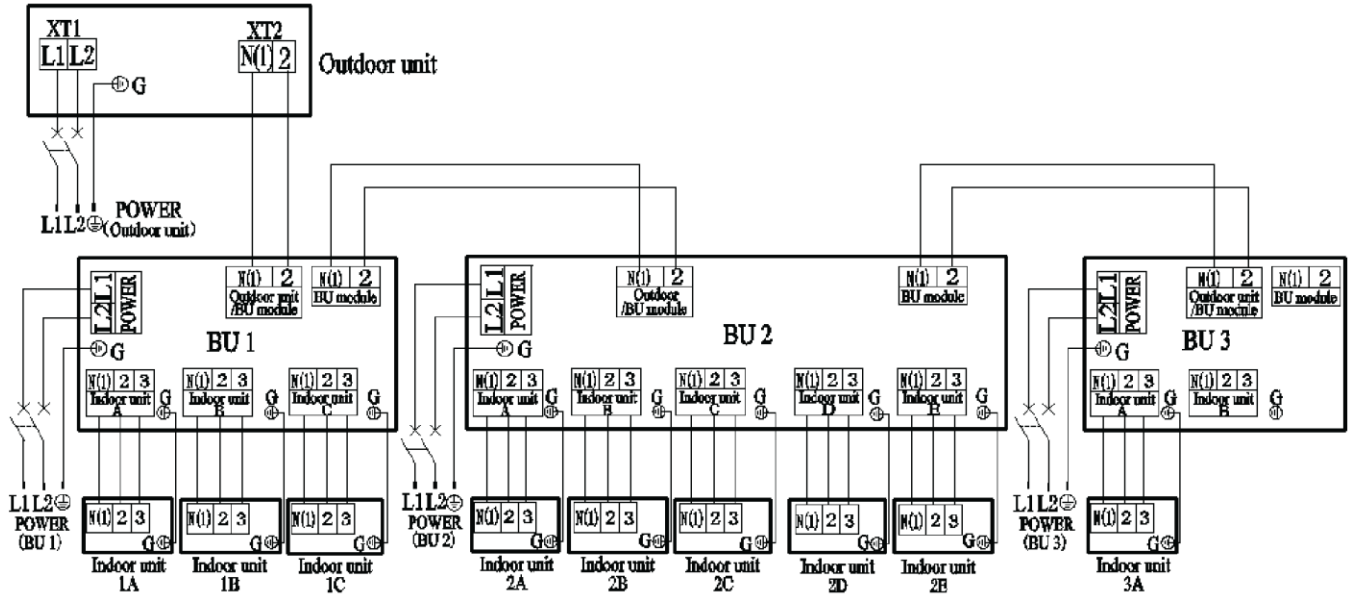


⚠ CAUTION

1. Never forcefully pull on any of the joints of the indoor unit when connecting an indoor unit to the BU module to the refrigerant line. This can cause the capillary pipe or other pipes can crack, which will result in refrigerant leakage.
2. The refrigerant pipe should be supported by brackets. Do not attempt to support the weight of the unit using the refrigerant lines.
3. For the Super Free Match system, each pipe should be labeled to tell which system it belongs to avoid mistaken inaccurate piping.

Electrical Wiring Work

Wiring Connection



NOTICE

The "L1" and "3" terminals are connected to the live wire, the "L2" and "N(1)" terminals are connected to the neutral wire, and the "2" terminal is connected to the transmission (communication) line.

Requirements of Power Circuit and Cable

Phase and frequency		1Ph,60Hz
Voltage		208/230V
Recommended cable of outdoor unit (Pieces x Sectional area)	WMMS-80CH-V2B(59)2S	3x6.0 mm2
	WMMS-90CH-V2B(59)2S	
Recommended cable of BU module (Pieces x Sectional area)		3x0.75 mm2
Transmission line (Pieces x Sectional area)		2x1.5 mm2
Recommended cable of indoor unit (Pieces x Sectional area)		4x0.75mm2
Capacity of the air switch	WMMS-80CH-V2B(59)2S	40A
	WMMS-90CH-V2B(59)2S	40A
	BU module	10A


NOTICE

- The total length of the transmission line between the outdoor unit and the furthest BU module should not be more than 180 feet (55m). If the transmission line exceed this, the system will work properly.
- The specifications of the power cable and transmission line listed in the table above are determined based on the maximum power (maximum amps) of the unit.
- The specifications of the power wire listed in the table above should be used to determine the conduit-guarded multi-wire copper cable (YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 104°F (40°C) and tolerant to 194°F (90°C), and should at minimum use ordinary polychloroprene sheathed wires. If operating conditions are different, wiring should be modified according to the relevant national standard.
- The specifications of the breaker listed in the table above are applied to a breaker with a maximum operating temperature of 104°F (40°C). If the conditions that the unit will be used are different, the breaker should be modified in accordance with the related national standard.
- The length of the recommended power wires should be 49 feet (15meters) or less. If longer than 49 feet, a heavier (smaller gauge) wire should be used.

- | |
|--|
| 6. Referenced power cable and transmission line length is for reference only. Depending on the conditions of your installation, humidity or construction materials, a thicker insulation or heavier gauge wire may be appropriate. |
| 7. An all-pole disconnect switch with a contact separation of at least 1/8 inch (3mm) on all poles should be connected to the fixed wiring. |

Ground Wire Requirements

⚠ WARNING

- | |
|--|
| 1. The air conditioner is classified into the Class I appliances, so its ground ways must be reliable. |
| 2. The ground wire must be fixed on the screw hole with the Ground symbol.  |
| 3. The yellow-green wire of the air conditioner is the ground wire and must be fixed by the tapping screw. |
| 4. And it cannot be used for other purpose or cut off. Otherwise, it will cause the hazard of electric shock. |
| 5. The reliable ground terminal should be provided and the ground wire SHOULD NEVER be connected to any of the following: <ul style="list-style-type: none"> a. Water pipes b. Coal gas pipes c. Sewage pipes d. Lightning rods e. Telephone lines f. Other places a professional would consider unreliable electrical grounds. |

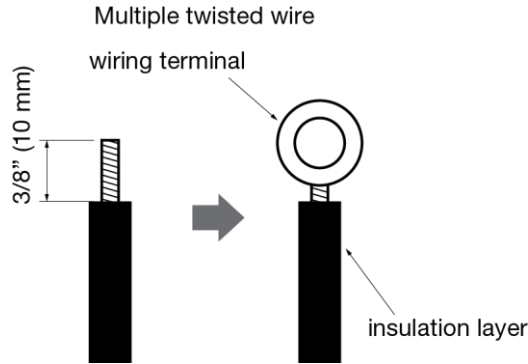
Precautions for the Electrical Wiring Installation

⚠ WARNING

- | |
|--|
| 1. Electrical installation should be performed by a professional as recommended by the local laws, regulations and this manual. |
| 2. The ground connection should be stable and reliable. The ground wire should be connected to the dedicated ground used by the appliance by a professional. |
| 3. Before starting work, the power must not be supplied to the unit. |
| 4. A breaker coupled with the leakage current protection switch must be equipped in the circuits, which is of enough capacity and of both magnetic and thermal tripping functions in case of a short circuit or overload. |
| 5. Wiring should use a cable length that is long enough to cover the entire distance with no splices. If a splice is unavoidable, make sure that the wiring connection is reliable, that nothing can come into contact with the wiring, and that the splice is properly sealed and insulated. Failure to do this can cause electrical shock or fire etc. |
| 6. A power cable that is appropriate for the rated voltage, and on a dedicated circuit for the air conditioner should be used. |
| 7. Do not pull on the power cable after it is installed. |
| 8. The power cable should be of the recommended thickness and recommended insulation. If the wiring or insulation is damaged, the wire should be replaced. |
| 9. A multi-strand copper wire should be used for the power cable and the transmission (communication) wires. |

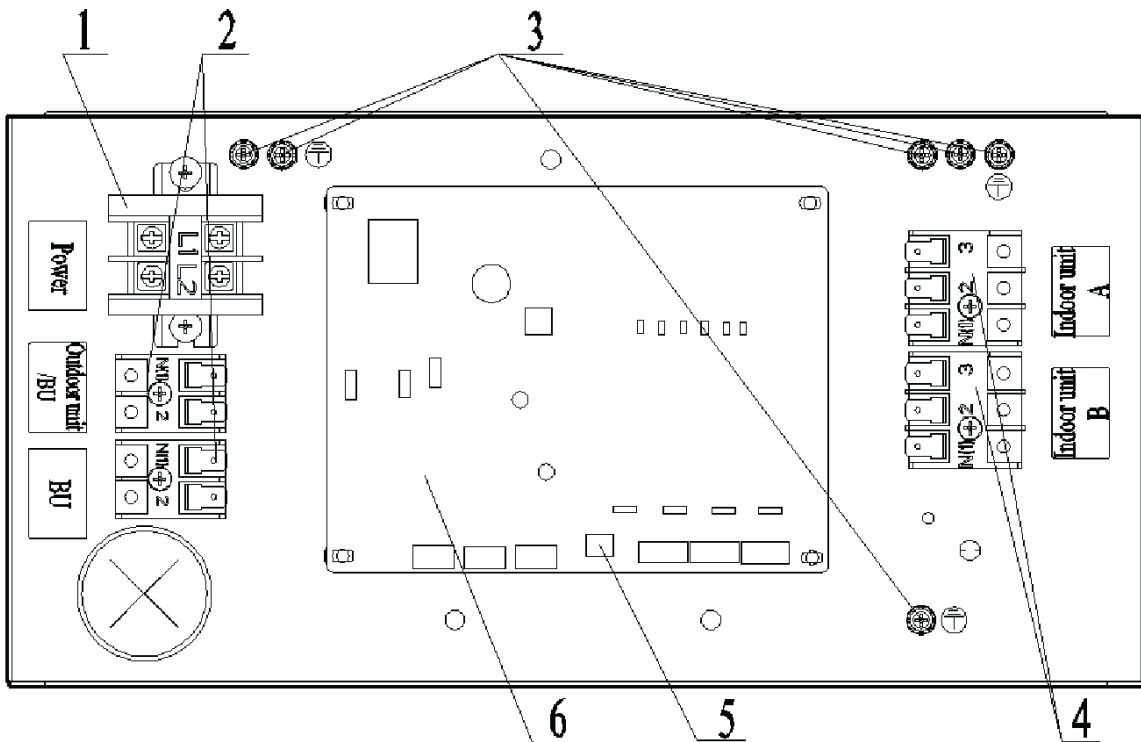
Precaution of Running Wires

1. Use a wire stripper to strip off the insulation layer at the end of the wires.
2. Loosen the screws on the terminal block of the air conditioner.
3. Press the ends of the cable tightly onto the round terminals corresponding to the size of the screws.
4. Pass the screw through the round terminals and tighten it onto the terminal block.

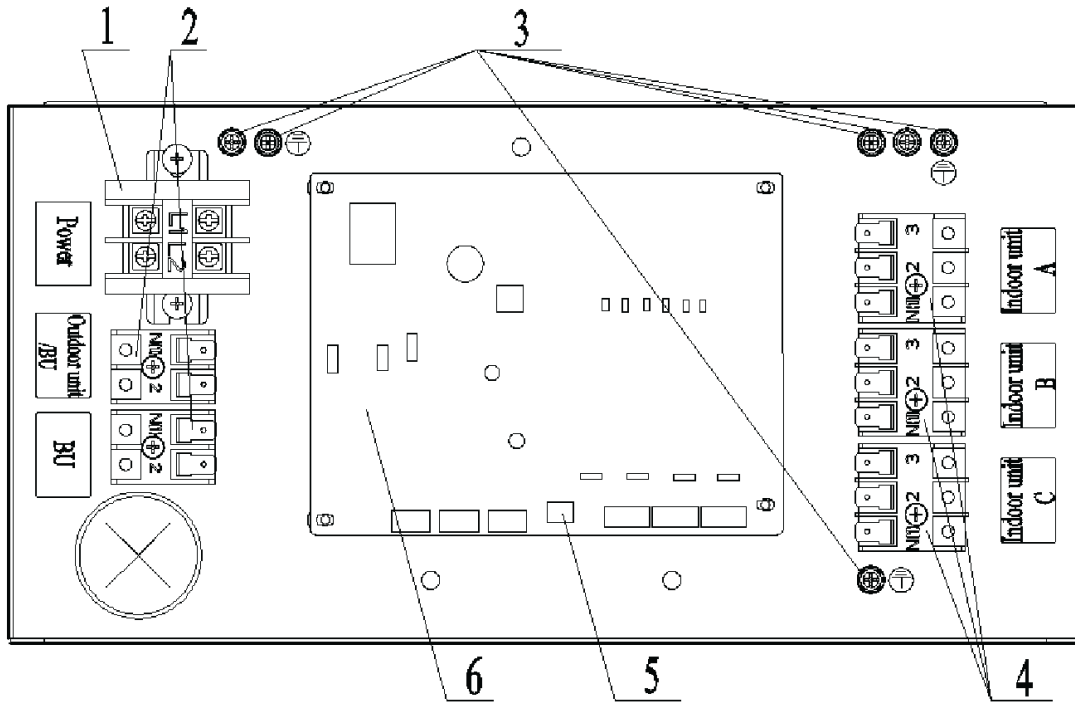


Procedures for Electrical Wiring Work

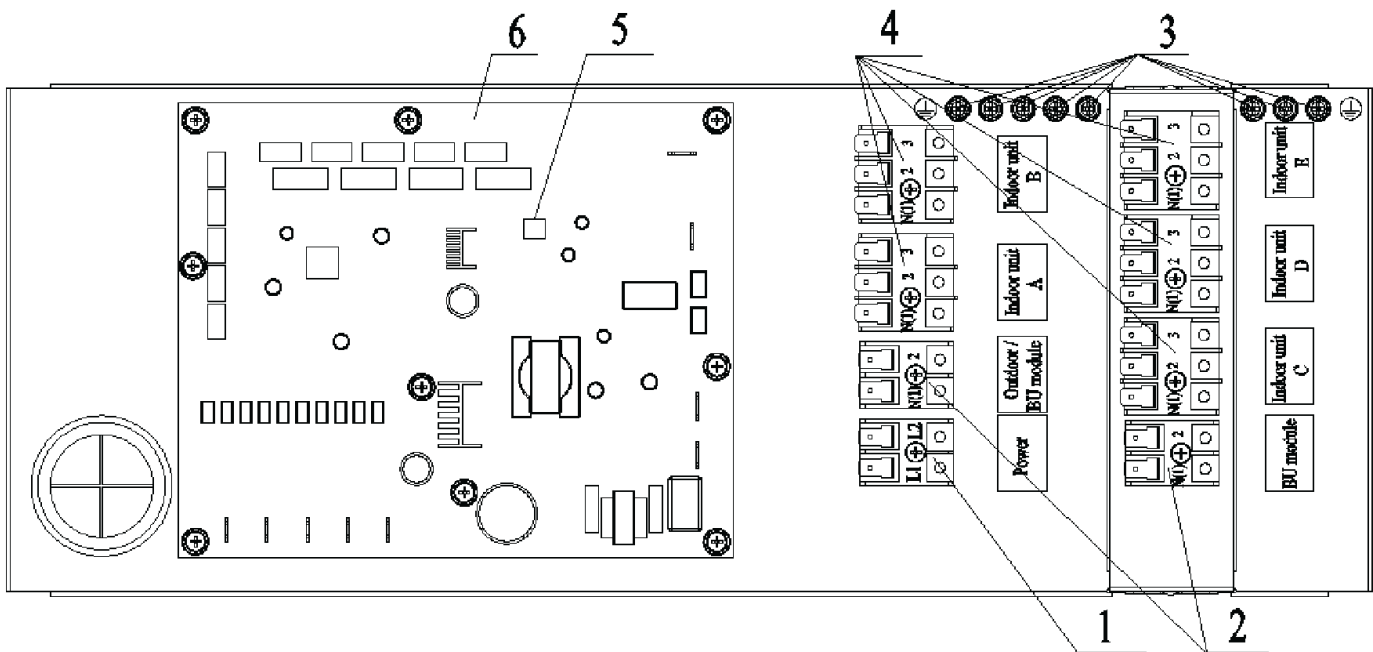
1. Unscrew the electrical equipment plate.
2. The layout of the components behind the electrical equipment plate.



WMMS-(59)2 MODULE S2



WMMS-(59)2 MODULE S3



WMMS-(59)2 MODULE S5

NO.	Name
1	Terminal black for BU module power supply
2	Terminal black for transmission line
3	Ground screw
4	Terminal black for indoor unit power supply
5	DIP switch
6	Printed circuit board

3. Run the power cable and transmission line through the rubber ring. Make sure the rubber ring is in the correct position after running the cable through the hole, so that the ring protects the power cable and transmission line from damage by metal. The rubber ring must be in the correct position or it can cause electrical shock or fire etc.
4. Connect the power wires of the BU module to the L1, L2 terminals, indicated by the Power icon, and connect the BU module to the ground screw.
5. Connect the transmission line of the BU module to the N(1), 2 terminals with the Outdoor unit/BU module icon.
6. If the transmission line needs to be connected to an additional BU module, please connect the extra BU Module line to the N(1), 2 terminals indicated with the BU module icon.
7. Connect the power cable of the indoor unit to the N(1), 2 and 3 terminals indicated by the icons for Indoor unit A (B, C, D and E) and the ground screw.
8. Secure the power cable and transmission line firmly into the wire clip.
9. Reattach the electrical equipment plate with screws.

CAUTION

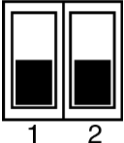
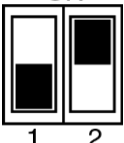
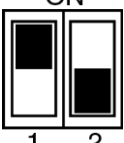
- | |
|---|
| 1. The transmission line and the power cable must be separated by an interval of at least 3/4inch (2cm). Failure to do so can result in communication issues between the units. |
| 2. Confirm that each cable connected to a terminal screw is precisely and securely attached after finishing the electric connection, and before starting power to the unit. |
| 3. Attach each ground wire separately to the ground screw. |
| 4. When connecting indoor units, make sure to connect refrigerant pipes and power cables to the same connection ports marked with matching letters (A, B, C, D and E). |
| 5. If the power and communication wires are connected to the terminal incorrectly, the unit will not work normally. |
| 6. Refrigerant pipes should be supported by brackets. Do not attempt to support the weight of the branch box module or indoor units with the refrigerant pipes. |
| 7. When installing the system, it is recommended that each pipe and wire should be labeled, so that if the unit requires servicing, it is easy to tell which indoor unit it goes to, and avoid inaccurate wiring or piping. |

Instructions for Setting the DIP Switches

2 digits DIP is used to assign an address when using multi-BU modules. An address cannot be repeated in the same unit.

- One outdoor unit can connect to no more than 3 BU modules.
- “ON” side means "ON" and the opposite side represents "OFF".

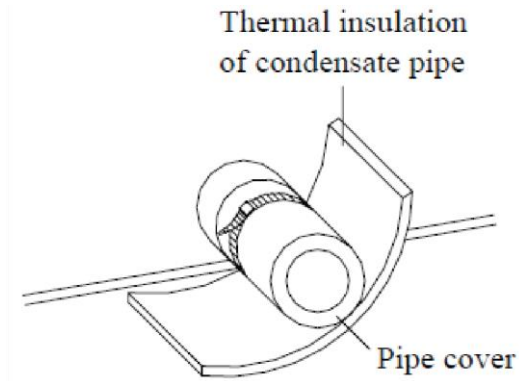
NOTICE!: The black box in the illustrations below indicates the switch.

Number	DIP Code		Icon	Address
	DIP 1	DIP 2		
1 OFF		OFF	<p>ON</p>  <p>1 2</p>	BU 1
2 OFF		ON	<p>ON</p>  <p>1 2</p>	BU 2
3 OFF		OFF	<p>ON</p>  <p>1 2</p>	BU 3

Drainage Pipeline Design

Installation of Drain Hose

1. Remove the rubber plug in the drain hole.
2. Connect the drain hose to the drain hole of BU module.
3. The drain hose should be kept at a 5 to 10 degrees of descending angle, to facilitate proper drainage of the condensing water. Make sure that your installation angle does not put too much weight or pressure on the hose.
4. Insulation material should be placed on the joints of the drain hose, to prevent from condensation. Secure the drain hose firmly using a binding band.



5. The end of the drain hose should be inserted into the hole for the drainage pipeline.

Design of Drainage Pipeline

1. The drainage pipeline should be kept at a certain angle ($1/50$ — $1/100$) to avoid bulges in the pipes where there are water bends.
2. The drainage pipeline should be made from hard PVC piping, used for common plumbing applications which can be purchased locally. The diameter of the PVC pipes is not less than 1-1/4 inch (31mm) and the pipeline should be secured as close to the BU module as possible.
3. Insert the drain hose into the drain hole of drainage pipeline. Use binding band to fix it tightly.
4. Do not use glue or other adhesives to connect the drain hose to the drainage hole.
5. When the drainage pipe is laid for multiple units, the final position of the shared pipeline should be approximately 4 inches (100mm) lower than the drainage hole of each module. If this is the case, thicker special-purpose piping should be used.

NOTICE!

Wall brackets should be used to fix the drain pipe to the wall at intervals of about 3-1/4 feet (1 meter). The drain pipe should not be left unsupported.

Test Operation

After the entire installation has been completed, follow the “operation test” as described in the WMMS-90CH-V2B(59)2S Outdoor Unit installation manual.

Troubleshooting

⚠ WARNING

1. In the event of abnormal conditions (like a strong odor), shut off the power supply immediately and then contact an HVAC technician. Running the unit when experiencing abnormal running conditions can damage the air conditioner, and may also cause electric shock or fire hazard .
2. Do not attempt to repair the air conditioning yourself. Contact a qualified and licensed HVAC to perform all service and system repairs. Incorrect repair can damage to equipment and can lead to injury or death, as well as electrical shock and create a fire hazard etc.

ERROR CODES

Error	Indicating LED flashing times			Indoor unit error code	Outdoor unit error code
	Yellow LED	Green LED	Red LED		
BU 1 is connected	Flash 1 time				
BU 2 is connected	Flash 2 times				
BU 3 is connected	Flash 3 times				
Indoor unit A is connected		Flash 1 time			
Indoor unit B is connected		Flash 2 times			
Indoor unit C is connected		Flash 3 times			
Indoor unit D is connected		Flash 4 times			
Indoor unit E is connected		Flash 5 times			
Indoor unit A gas tube temperature sensor error			Flash 1 time	b7	b7 indoor unit address
Indoor unit A liquid tube temperature sensor error			Flash 2 times	b5	b5 indoor unit address
Indoor unit B gas tube temperature sensor error			Flash 3 times	b7	b7 indoor unit address
Indoor unit B liquid tube temperature sensor error			Flash 4 times	b5	b5 indoor unit address
Indoor unit C gas tube temperature sensor error			Flash 5 times	b7	b7 indoor unit address
Indoor unit C liquid tube temperature sensor error			Flash 6 times	b5	b5 indoor unit address
Indoor unit D gas tube temperature sensor error			Flash 7 time	b7	b7 indoor unit address
Indoor unit D liquid tube temperature sensor error			Flash 8 times	b5	b5 indoor unit address
Indoor unit E gas tube temperature sensor error			Flash 9 time	b7	b7 indoor unit address
Indoor unit E liquid tube temperature sensor error			Flash 10 times	b5	b5 indoor unit address

After-Sales Service

If there is any quality or other issue, please contact technical support at YMG.



YMGI is dedicated to designing, manufacturing and distributing the highest quality, energy saving and environmentally friendly air conditioner and heat pump products, while providing the best service and support to all of our customers. Our mission is to help build a sustainable, efficient and green world.

YMGI Symphony-Ductless & Ducted Heat Pump & Heat Recovery:

- **Symphony SOLAR DC Inverter**
 (56) Single PV, (79) Single PH 12-18K Btu/h
 (86) Single Zone All DC 09-24K Btu/h
 (55) Multi Zone Solar VRF 3, 4, 8, 16, and 24 Ton.
- **Symphony SOLO DC Inverter**
 (54) Series -22 °F Heat Pump and Universal Cabinet
 (57)2,3 Single Zone 16 SEER, 09-36K Btu/h
 (58)4, (78)1-Single Zone 18-23 SEER, 09-36K Btu/h
- **Symphony CHOIR DC Inverter**
 (46)2 DC Inverter Multiple Zone 15 SEER, 2x09K and 2x12K Btu/h
 (59)2S-DC Inverter Multiple Zone 16 SEER 6x09K to 9x09K Btu/h
 (59)4-DC Inverter Multiple Zone 21 SEER 2x09K to 5x12K Btu/h
- **Symphony VRF - DC Inverter HP, Heat Recovery, and Solar. Up to 64 zones.**
 (55)5 -4°F Heat Pump, Heat Recovery
 (55)5 -22°F Ultra Heating Heat Pump, Heat Recovery
Air Source and Water Source
- **Symphony HARMONY-Packaged Self-Contained**
 42"x16" PTAC/PTHP Electric Heater or Hot Water Coil
 26"x16" TTWA
 VPAK
- **Symphony CONDUCTOR-Split Type Condensing Units**
 Side Discharge VRUO, YTAC & SHCR

601 Arrow Ln, O'Fallon, MO 63366
www.YmgiGroup.com
Tel: 866-833-3138 • Fax: 866-377-3355
Email: info@YmgiGroup.com

Unit appearance and specifications are subject to change without notice.
Copyright ©2023 YMGI Group

