ACCORRONI
Climate Technology

Water fan coils wall installation

FW MI
10 - 15 - 22

INSTALLATION MANUAL

FW EN NEW 10 - 15 - 22

CONTENTS

1. IMPORTANT SAFETY INFORMATION

To prevent injury to the user or other people and property damage, the following instructions must be followed.Incorrect operation due to ignoring of instructions may cause harm or damage.

The important safety information is listed which must be read carefully.

⚠ ***WARNING***

The air conditioner must be installed by qualified persons

Ask your dealer for installation of the air conditioner.

Incomplete installation performed by your self may result in a water leakage, electric shock, and fire.

Ask your dealer for improvement, repair, and maintenance.

Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off the power supply and call your dealer for instructions.

Never let the indoor unit or the remote controller get wet.

It may cause an electric shock or a fire.

It is not good for your health to expose your body to the airflow for a long time.

Never use a flammable spray such as hair spray, lacquer or paint near the unit.

It may cause a fire.

Do not insert fingers, rods or other objects into the air inlet or outlet.

When the fan is rotating at high speed, it will cause injury.

⚠ ***DANGER***

Do not attempt to service the unit yourself. This unit has no user serviceable components opening and removing the cover will expose you to dangerous voltage. Turning off the power supply will not prevent potential electric shock.

⚠ ***DANGER***

Never put hands or objects into the air outlet of indoor and outdoor units. This unit contains a fan running at high speed. Contact with the moving fan will cause serious injury.

⚠ ***DANGER***

To avoid the risk of serious electrical shock, never sprinkle or spill water or liquid on the unit.

⚠ ***DANGER***

Ventilate the room occasionally while the air conditioner is in use, especially if there is also a gas appliance in use in this room. Failure to follow these directions may result in a loss of oxygen in the room.

⚠ ***WARNING***

To prevent electric shock, turn off the power or disconnect the power supply plug before beginning any cleaning or other routine maintenance. Follow the directions for cleaning in the owner's manual.

⚠ ***WARNING***

Do not use liquid cleaners or aerosol cleaners. Use a soft and dry cloth for cleaning the unit. To avoid electric shock, never attempt to clean the unit by sprinkling water on it.

⚠ ***CAUTION***

Do not use caustic household dry cleaners in the unit. Drain cleaners can quickly destroy the unit components (drain pan and heat exchanger coil etc.).

NOTE: ***For proper performance, operate the unit under the usable operating temperature and humidity conditions indicated in the user's part of this manual. If the unit is operated beyond these conditions, it may cause malfunctions of the unit or dew dripping from the unit.***

Maintain room temperature at a comfortable level.

Clean air filter

A clogged air filter reduces cooling efficiency. Clean it once two weeks.

Never open doors and windows more often than necessary

To keep cool or warm air in the room, never open doors and windows more often than necessary.

Windows curtains

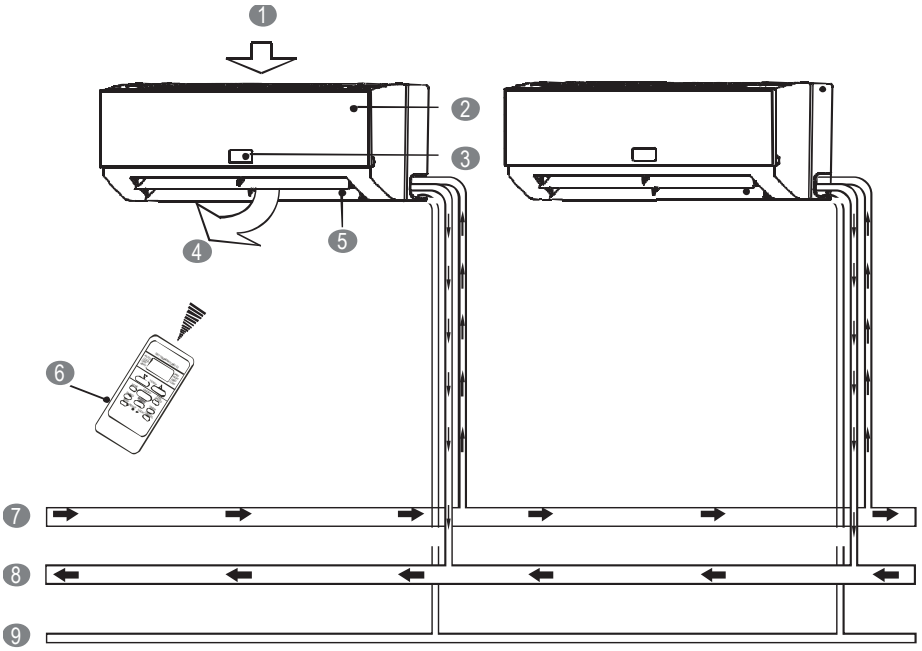
In cooling, close the curtain to avoid direct sunlight.

Get uniform circulation of room air

Adjust airflow direction for ever circulation of room air.

2. PARTS NAMES

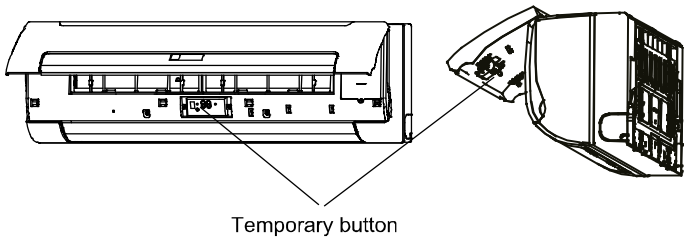
2.1. Indoor unit



Component	Name
①	Air inlet
②	Front panel
③	Display
④	Air outlet
⑤	Horizontal air deflector
⑥	Remote controller
⑦	Water inlet pipe
⑧	Water return pipe
⑨	Drain pipe

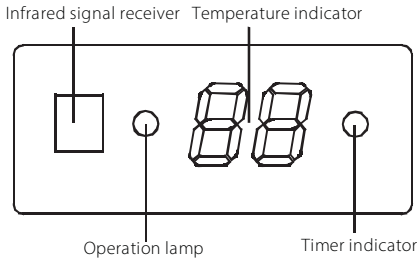
2.2. Temporary button and LCD Display

- Temporary button



If the remote control is lost or broken, use the temporary button to turn the air conditioner on or off.

- LCD Display



3. OPERATING RANGE

Maximum operating pressure		1.6Mpa
Minimum operating pressure		0.15MPa
Relative humidity		< 90% (normal 0 ~ 80%)
Minimum inlet water temperature for cooling		3°C
Maximum inlet water temperature for heating		70°C (normal 50°C)
The pH of water		6.5~7.5
Cooling/Heating	*Outdoor temperature*	21°C ~ 43°C / -5°C ~ 24°C
	Room temperature	17°C ~ 32°C / 0°C~ 30°C
	Water inlet temperature	3°C~ 20°C / 30°C ~ 70°C

4. REMOTE CONTROLLER INSTRUCTIONS

4.1. Remote controller specifications

Model	*R51/E*
Rated Voltage	*3.0V*
Lowest Voltage of CPU Emitting Signal	*2.0V*
Reaching Distance	*8m (when using 3.0 voltage, it gets 11m)*
Environment Temperature Range	*-5°C ~ + 60°C*

4.2. Performace features

1. Operating Mode: COOL, HEAT, DRY, FAN and AUTO.

2. Timer Setting Function in 24 hours.

3. Indoor Setting Temperature Range: 17°C ~ 30°C.

4. LCD (Liquid Crystal Display) of all functions.

4.3. Introduction of function buttons on the remote controller

① ***TEMP Button ▼:*** *Push the TEMP button to decrease the indoor temperature setting or to adjust the TIMER in a counter-clockwise direction.*

② ***MODE Select Button:*** *Each time you push the button, a mode is selected in a sequence that goes from AUTO, COO, DRY, HEAT and FAN as the following figure indicates:*

AUTO(COOL) → COOL → DRY → HEAT → FAN

NOTE: *HEAT only for heating and cooling units.*

③ ***SWING Button:*** *Push this switch button to change the louver angle.*

④ ***RESET Button:*** *When the RESET button is pushed, all of the current settings are cancelled and the control will return to the initial settings.*

⑤ ***ECONOMIC RUNNING Button:*** *Push this button to go into the Energy-Saving operation mode.*

⑥ ***LOCK Button:*** *Push this button to lock in all the current settings. To release settings, push again.*

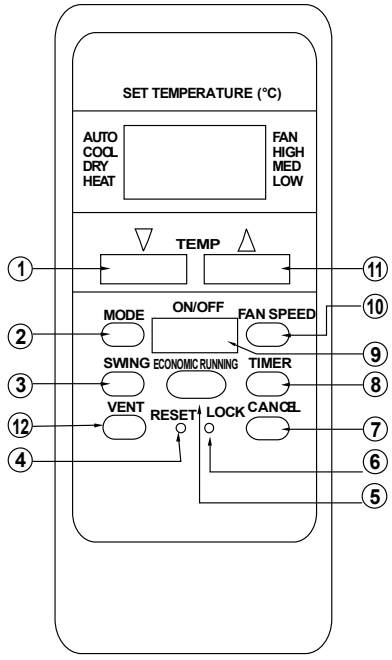


Fig. 1

⑦ ***CANCEL Button:*** *Push this button to cancel the TIMER settings.*

⑧ ***TIMER Button:*** *This button is used to preset the time ON (start to operate) and the time OFF (turn off the operation).*

⑨ ***ON/OFF Button:*** *Push this button to start the unit operation. Push the button again to stop the unit operation.*

⑩ ***FAN SPEED Button:*** *This button is used for setting Fan Speed in the sequence that goes from AUTO, LOW, MED to HIGH, then back to Auto.*

⑪ ***TEMP Button:*** *Push the button to increase the indoor temperature setting or to adjust the TIMER in a clockwise direction.*

⑫ ***VENT Button:*** *Push this button to set the ventilating mode. The ventilating mode will operate in the following sequence:*

Continuous ⟶ Auto ⟶ Off

Ventilation Function is available for the Fresh Star Series.

4.4. Names and functions of indicators on the remote controller display

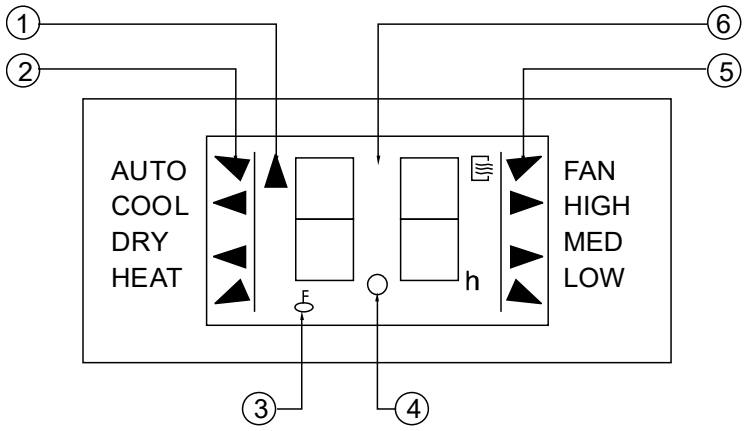


Fig. 2

① ***TRANSMISSION Indicator:*** *This indicator lights when remote controller transmits signals to indoor unit.*

② ***MODE Display:*** *Shows the current operation modes -- AUTO, COOL, DRY and HEAT. HEAT only available for heat pump model.*

③ ***LOCK display*** *is displayed by pushing the LOCK button. Push the LOCK button again to clear display.*

④ ***TIMER Display:*** *This display area shows the settings of TIMER.*

That is, if only the starting time of operation is set, it will display the TIMER ON. If only the turning off time of operation is set, it will display the TIMER OFF. If both operations are set, it will show TIMER ON OFF which indicates you have chosen to set both the starting time and off time.

⑤ ***FAN Display:*** *When the FAN button is pushed, this signal indicator lights.*

⑥ ***Digital Display Area:*** *This area will show the temperature and, if in the TIMER mode, will show the ON and OFF settings of the TIMER.*

NOTE: *All items are shown in the Fig. 2 for the purpose of clear presentation But during the actual operation only the relative functional items are shown on the display panel.*

4.5. Operating the remote controller

Install / Replace Batteries

The Remote Controller uses two alkaline dry batteries (R03/lr03X2).

1. To install batteries, slide back the cover of the battery compartment and install the batteries according to the directions (+ and -) shown on the Remote Controller.

2. To replace the old batteries, use the same method as mentioned above.

NOTE

1. When replacing batteries, do not use old batteries or a different type battery. This may cause the remote controller to malfunction.

2. If you do not use the remote controller for several weeks remove the batteries. Otherwise, battery leakage may damage the remote controller.

3. The average battery life under normal use is about 6 months.

4. Replace the batteries when there is no answering beep from the indoor unit or if the Transmission Indicator light fails to appear.

AUTOMATIC OPERATION

When the Air Conditioner is ready for use, switch on the power and the OPERATION indicator lamp on the display panel of the indoor unit starts flashing.

1. Use the MODE select button to select AUTO.IN the multi system, to avoid mode conflict; auto-mode is taken as cool mode.

2. Push the TEMP button to set the desired room temperature. The most comfortable temperature settings are between 21°C to 28°C.

3. Push the ON/OFF button to start the air conditioner. The OPERATION lamp on the display panel of the indoor unit lights. The operating mode of AUTO FAN SPEED is automatically set and there are no indicators shown on the display panel of the remote controller.

4. Push the ON/OFF button again to stop the unit operation.

NOTES

1. In the AUTO mode, the air conditioner can logically choose the mode of COOL, FAN, HEAT and DRY by sensing the difference between the actual ambient room temperature and the set temperature on the remote controller.

2. If the AUTO mode is not comfortable for you, the desired mode can be selected manually.

COOL, HEAT, and FAN ONLY Operation

1. If the AUTO mode is not comfortable, you may manually override the settings by using COOL, DRY, HEAT (heating cooling systems), or FAN ONLY modes.

2. Push the TEMP button to set the desired room temperature. When in COOLING mode, the most comfortable settings are 21°C or above. When in HEATING mode, the most comfortable settings are 28°C or below.

3. Push the FAN SPEED to select the FAN mode of AUTO, HIGH, MED or LOW.

4. Push the ON/OFF button. The operation lamp lights and the air conditioner starts to operate per your settings. Push the ON/OFF button again to stop this unit operation.

***NOTE:** The FAN ONLY mode cannot be used to control the temperature. While in this mode, only steps 1, 3 and 4 may be performed.*

DRY Operation

1. Push the MODE button to select DRY.

2. Push the TEMP button to set the desired temperature from 21°C to 28°C.

3. Push the ON/OFF button. The operation lamp lights and the air conditioner starts to operate in the DRY mode. Push the ON/OFF button again to stop this unit operation.

***NOTE:** Due to the difference of the set temperature of the unit and the actual indoor temperature, the Air Conditioner when in DRY mode will automatically operate many times without running the COOL and FAN mode.*

TIMER Operation

PUSH TIMER button to set the on and off times of the unit.

1. To set the STARTING time.

1.1 Please push the CANCEL button to cancel any former settings.

1.2 Push the TIMER button. The remote controller will show the TIMER and the signal "h" is shown on the display panel. The control is now ready to reset the TIMER ON to start the operation.

1.3 Push the TEMP button (▲ or ▼) to set desired unit START time.

1.4 After setting the TIMER there will be a one-half second delay before the remote controller transmits the signal to the Air Conditioner. Then, after approximately another 2 seconds, the set temperature will re-appear on the digital display.

2. To set the STOPPING time.

2.1 Please press the CANCEL button to cancel any former settings.

2.2 Push the TIMER button and the remote controller will show the last set time for the START operation and the signal "h" will be shown on the display panel. You are now ready to readjust the TIMER OFF to stop the operation.

2.3 Push the TEMP button to cancel the TIMER ON setting. The digital area will show "00".

2.4 Push the TIMER button and the remote controller will show the last set time for the STOP operation and the signal "h" will be shown on the display panel. You are now ready to reset the time of the STOP operation.

2.5 Push the TEMP button (▲ or ▼) to set the time you want to stop the operation.

2.6 After setting the TIMER there will be a one-half second delay before the remote controller transmits the signals to the Air Conditioner. Then after approximately another 2 seconds, the set temperature will re-appear on the digital display.

3. Set the STARTING & STOPPING time

3.1 Please press the CANCEL button to cancel any former settings.

3.2 Push the TIMER button and the remote controller will show the last set time for START operation and the signal "h" will be shown on the display panel. You are now ready to readjust the TIMER ON to start the operation.

3.3 Push the TEMP button (▲ or ▼) to set the time you want to start the operation.

3.4 Push the TIMER button and the remote controller will show the last set time for STOP operation and the signal "h" will be shown on the display panel. You are now ready to reset the time of the STOP operation.

3.5 Push the TEMP button (▲ or ▼) to set the time you want to stop the operation.

3.6 After setting the TIMER there will be a one-half second delay before the remote controller transmits the signal to the Air Conditioner. Then, after approximately another 2 seconds, the set temperature will re-appear on the digital display.

NOTE

1. Please reset the TIMER after cancelling the former time settings.

2. The setting time is relative time. That is the time set is based on the delay of the current time.

WARNING

1. Be sure there are no barriers between the remote controller and the receiver of indoor unit otherwise the air conditioner will not work.

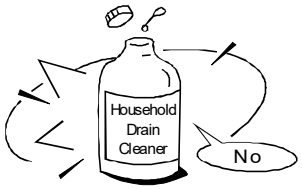
2. Keep the Remote Controller away from all liquids.

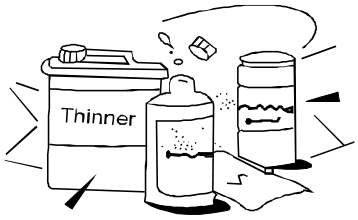
3. Protect the Remote Controller from high temperatures and exposure to radiation.

4. Keep the indoor receiver out of direct sunlight or the Air Conditioner may malfunction.

5. Keep controller away from EMI (Electro-Magnetic Interference) supplied by other household appliances.

5. MAINTENANCE





WARNING

It is necessary to stop the air conditioner and disconnect the power supply before cleaning.

Cleaning the indoor unit and remote controller

CAUTIONS

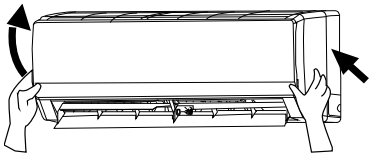
● Use a dry cloth to wipe the indoor unit and remote controller.

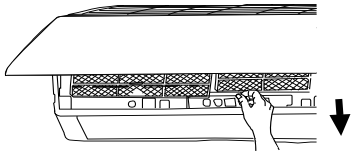
● A cloth dampened with cold water may be used on the indoor unit if it is very dirty.

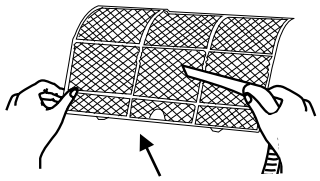
● The front panel of the indoor unit can be removed and cleaned with water. Then wipe it with a dry cloth.

● Do not use a chemically treated cloth or duster to clean the unit.

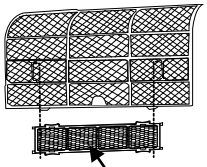
● Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.



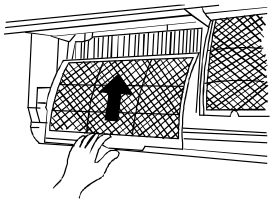




Air filter



Healthy filter



Cleaning the air filter

A clogged air filter reduces the cooling efficiency of this unit. Please clean the filter once every 2 weeks.

1) Lift the indoor unit panel up to an angle until it stops with a clicking sound.

2) Take hold of the handle of the air filter and lift it up slightly to take it out from the filter holder, and then pull it downwards.

3) Remove the AIR FILTER from the indoor unit.

- Clean the AIR FILTER once two weeks.

- Clean the AIR FILTER with a vacuum cleaner or water, and then dry it up cool place.

4) Remove the healthy filter from its support frame as shown in the Figure on the left, clean it and then install it on its original position.

5) Install the air filter back into position.

6) Insert the upper portion of air filter back into the unit taking care that the left and right edges line up correctly and place filter into position.

Maintenance

If you plan to idle the unit for a long time, perform the following:

(1) Operate the fan for about half a day to dry the inside of the unit.

(2) Stop the unit and disconnect power. Remove the batteries from the remote controller.

(3) The outdoor unit requires periodic maintenance and cleaning. Do not attempt to do this yourself. Contact your dealer or servicer.

Preparation before use

1. Be sure that there aren't obstructions in the air outlet and in the intake vents.

2. Check out whether the ground wire is properly connected.

3. Replace filters if necessary.

Maintenance after use

1. Clean filters and other parts.

2. Turn off the main if the unit is not used.

6. FOLLOWING SYMPTOMS ARE NOT AIR CONDITIONER TROUBLES

Symptom 1: The system does not operate.

■ *The air conditioner does not start immediately after the ON/OFF button on the remote controller is pressed. If the operation lamp lights, the system is in normal condition. To prevent overloading of the compressor motor, the air conditioner starts 3 minutes after it is turned ON.*

■ *If the operation lamp and the "PRE-DEF indicator light, it means you choose the heating mode. When just starting, if the compressor has not started, the indoor unit appears "anti cold wind" protection because of its over low outlet temperature.*

Symptom 2: Change into the fan mode during cooling mode

■ *In order to prevent the indoor evaporator frosting, the system will change into fan mode automatically, restore to the cooling mode after soon.*

■ *When the room temperature drops to the set temperature, the compressor goes off and the indoor unit changes to fan mode; when the temperature rises up, the compressor starts again. It is the same in the heating mode.*

Symptom 3: White mist comes out of a unit

Symptom 3.1: Indoor unit

When humidity is high during cooling operation If the interior of an indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the interior of the indoor unit. Ask your dealer for details on cleaning the unit. This operation requires a qualified service person.

Symptom 3.2: Indoor unit, outdoor unit

■ *When the system is changed over to heating operation after defrost operation moisture generated by defrost becomes steam and is exhausted.*

Symptom 4: Noise of air conditioners cooling

Symptom 4.1: Indoor unit

■ *A continuous low "shah" sound is heard when the system is in cooling operation or at a stop. When the drain pump (optional accessories) is in operation, this noise is heard.*

■ *A "pishi-pishi" squeaking sound is heard when the system stops after heating operation. Expansion and contraction of plastic parts caused by temperature change make this noise.*

Symptom 4.2: Indoor unit, outdoor unit

■ *A continuous low hissing sound is heard when the system is in operation. This is the sound of water flowing through both indoor and outdoor units.*

■ *A hissing sound which is heard at the start or immediately after stopping operation or defrost operation. This is the noise of water caused by flow stop or flow change.*

Symptom 4.3: Outdoor unit

■ *When the tone of operating noise changes. This noise is caused by the change of frequency.*

Symptom 5: Dust comes out of the unit

■ *When the unit is used for the first time in a long time. This is because dust has gotten into the unit.*

Symptom 6: The units can give off odours

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

Symptom 7: The outdoor unit fan does not spin.

■ *During operation. The speed of the fan is controlled in order to optimize product operation.*

7. TROUBLESHOOTING

7.1. Troubles and causes of air conditioner

If one of the following malfunctions occur, stop operation, shut off the power, and contact with the dealer.

- *Indicator lamps flash rapidly (5Hz), after your disconnection and connection of the unit again, the situation is the same.*
- *Fuse or circuit breaker work frequently.*
- *Foreign matter or matter has fallen into the unit.*
- *Remote controller is disabled or the switch is out of order.*
- *Any other unusual condition is observed.*

Symptoms	***Causes***	***Solution***
Unit does not start	• *Power failure.* • *Power switch is off.* • *Fuse of power switch may have burned.* • *Batteries of remote controller exhausted or other problem of controller.*	• *Wait for the comeback of power.* • *Switch on the power.* • *Replace Location:* • *Replace the batteries or check the controller.*
Air flowing normally but completely can't cooling	• *Temperature is not set correctly.*	• *Set the temperature properly.*
Low cooling effect	• *Outdoor unit and indoor unit heat exchanger is dirty.* • *The air filter is dirty.* • *Inlet/outlet of indoor/outdoor units is blocked.* • *Doors and windows are open.* • *Sunlight directly shine.* • *Too much heat resource.* • *Outdoor temp. is too high.*	• *Clean the heat exchanger.* • *Clean the air filter.* • *Eliminate all dirties and make air smooth.* • *Close doors and windows.* • *Make curtains in order to shelter from sunshine.* • *Reduce heat source.* • *AC cooling capacity reduces (normal).*
Low heating effect	• *Outdoor temperature is lower than 7°C.* • *Doors and windows not completely closed.*	• *Use heating device.* • *Close doors and windows.*
Water flows out from the unit	• *The water in the drainpipe is too cold and condensing.*	• *Pack the drainpipe with a insulation cotton.*
	• *The drainpipe is clogged or broken up.*	• *Clean or change the drainpipe*
	• *The connection of the inlet/outlet pipe is not close.*	• *Connect the piping well.*
	• *The drainpipe outlet is so high that the water goes out from the condensate collecting plate.*	• *Set the drainpipe outlet lower than the unit's bottom.*
	• *The unit is heavily inclined.*	• *Place the unit horizontal.*

7.2. Troubles and causes of remote controller

Before asking for serving or repairing, check the following points. (Refer to the table below)

Trouble	Cause	Solutions
The fan speed can not be changed.	When the automatic mode is selected, the air conditioner will automatically change the fan speed.	Check whether the MODE indicated on the display "AUTO
	When dry operation is selected, the air conditioner automatically changes the fan speed. The fan speed can be selected during "COOL" , "FAN ONLY", and "HEAT"	Check whether the MODE indicated on the display is "DRY"
The remote controller signal is not transmitted even when the ON/OFF button is pushed.	The power supply is off.	Check whether the signal transmitter of the remote controller is properly directed to the infrared signal receiver of the indoor unit.
The TEMP. indicator does not come on.	The temperature cannot be set during FAN mode.	Check whether the MODE indicated on the display is FAN ONLY
The indication on the display disappears after a lapse of time.	The air conditioner operation will stop up to the set time	Check whether the timer operation has come to an end when the TIMER OFF is indicated on the display.
The TIMER ON indicator goes off after a lapse of certain time.	Up to the set time, the air conditioner will automatically start and the appropriate indicator will go off.	Check whether the timer operation is started when the TIMER ON is indicated on the display.
No receiving tone sounds from the indoor unit even when the ON/OFF button is pressed.	Directly transmit the signal transmitter of the remote controller to the infrared signal receiver of the indoor unit, and then repeatly push the ON/OFF button twice.	Check whether the signal transmitter of the remote controller is properly directed to the infrared signal receiver of the indoor unit when the ON/OFF button is pressed.

7.3. Failure codes

Stop the unit immediately if one of the following faults occurs. Disconnect the power, do not attempt to repair the unit yourself and contact the nearest authorised customer service center.

Codes	Failure description
E2	Room temperature sensor check channel is abnormal.
E3	Evaporator sensor checking channel is abnormal.(T2C)
E4	Evaporator sensor checking channel is abnormal.(T2H)
E7	EEprom malfunction.
E8	Fan failure.
P0	Protection against freezing
P1	Excess water temperature protection
EE	Water-level switch malfunction.
PF	Not set models.
__	Indoor unit switch at long-range controller is dialed to OFF.

8. INSTALLATION INSTRUCTIONS

8.1. Safety precautions

■ Be sure to be in conformity with the local, national and international laws and regulations.

■ Read "PRECAUTIONS" carefully before installation.

■ The following precautions include important safty items. Observe them and never forget.

■ Keep this manual in a handy place for future reference.

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.

⚠ ***WARNING:*** *Failure to observe a warning may result in death.*

⚠ ***AVVERTENZA:*** *Failure to observe a caution may result in injury or damage to the equipment.*

After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.

⚠ ***WARNING: Be sure only trained and qualified service personnel to install, repair or service the equipment.***

Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.

- Install according to this installation instructions strictly.

If installation is defective, it will cause water leakage, electrical shock and fire.

- Use the attached accessories parts and specified parts for installation.

Otherwise, it will cause the set to fall, water leakage, electrical shock and fire.

- The appliance must be installed 2.3m above floor.

- The appliance shall not be installed in the laundry.

- Before obtaining access to terminals, all supply circuits must be disconnected.

- The appliance must be positioned so that the plug is accessible.

- The enclosure of the appliance shall be marked by word, or by symbols, with the direction of the fluid flow.

- For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and single outlet must be used.

If electrical circuit capacity is not enough or defect in electrical work, it will cause electrical shock fire.

- Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal.

If connection or fixing is not perfect, it will cause heat-up or fire at the connection.

- Wiring routing must be properly arranged so that control board cover is fixed properly.

If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.

- If the supply cord is damaged, it must be replaced by the manufacture or its service agent or a similarly qualified person in order to avoid a hazard.

- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

- Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances.

Otherwise, it will cause fire or electrical shock.

- If the water leaks during installation, ventilate the area immediately.

⚠ ***CAUTION***

- Ground the air conditioner.

Do not connect the ground wire to gas or water pipes, lightning rod or telephone ground wire.Incomplete grounding may result in electric shocks.

- Be sure to install an earth leakage breaker.

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

- Connect the outdoor unit wires, then connect the indoor unit wires.

You are not allowed to connect the air conditioner with the power source until wiring and piping the air conditioner is done.

- 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.

- Install 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.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- Don't install the air conditioner in the following locations:

■ *There is petrolatum existing.*

■ *There is salty air surrounding (near the coast).*

■ *There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).*

■ *The Volt vibrates violently (in the factories).*

■ *In buses or cabinets.*

■ *In kitchen where it is full of oil gas.*

■ *There is strong electromagnetic wave existing.*

■ *There are inflammable materials or gas.*

■ *There is acid or alkaline liquid evaporating.*

■ *Other special conditions.*

8.2. Installation information

■ *To install properly, please read this "installation manual" at first.*

■ *The air conditioner must be installed by qualified persons.*

■ *When installing the indoor unit or its tubing, please follow this manual as strictly as possible.*

■ *If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the relevant standards to electrical appliances.*

■ *When all the installation work is finished, please turn on the power only after a thorough check.*

■ *Regret for no further announcement if there is any change of this manual caused by product improvement.*

INSTALLATION ORDER

■ *Select the location;*

■ *Install the indoor unit;*

■ *Install the outdoor unit;*

■ *Connect the drain pipe;*

■ *Wiring;*

■ *Test operation*

8.3. Accessory

Please check whether the following fittings are of full scope. If there are some spare fittings, please restore them carefully.

Name	*Profile*	*Quantity*	*Use*
Screw ST3.9x25 for installation board		*8*	*Secure the installation board*
Plastic expanded tube		*8*	----------
Wrapping tape		*1*	----------
Drain pipe		*1*	----------
Wall conduit cover		*1*	----------
Remote controller (including operation manual)		*1*	----------
Frame		*1*	*Hold the remote controller*
Mounting screw (ST2.9 x 10-C-H)		*2*	*Insulation Holder for remote controller*
Alkaline dry batteries (AM4)		*2*	*For remote controller*
Seel gasket		*4*	*For connect water pipe*
Network matching wire			*The indoor unit which at the terminal of communication system between port X and port Y. should connect a impedance*
Insulation			*Prevent the walls from getting damp*
User's-installer's manual	----------	*1*	----------

⚠ ***Cautions on remote controller installation:***

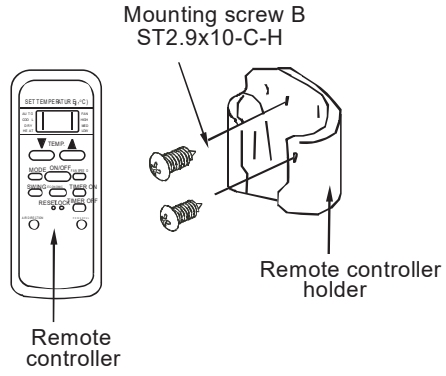
■ *Never throw or beat the controller.*

■ *Before installation, operate the remote controller to determine its location in a reception range.*

■ *Keep the remote controller at least 1m apart from the nearest TV set or stereo equipment. (it is necessary to prevent image disturbances or noise interferences.)*

■ *Do not install the remote controller in a place exposed to direct sunlight or close to a heating source, such as a stove.*

■ *Note that the positive and negative poles are right positions when loading batteries.*



8.4. Inspecting and handling the unit

At delivery, the package should be checked and any damage should be reported immediately to the carrier claims agent.

When handling the unit, take into account the following:

1) *Fragile, handle the unit with care.*

2) *Choose on before hand the path along which the unit is to be brought in.*

3) *Move this unit as originally package as possible.*

4) *When lifting the unit, always use protectors to prevent belt damage and pay attention to the position of the unit's centre of gravity.*

8.5. Indoor unit installation

8.5.1 Installation place

Installation in the following places may cause trouble.If it is unavoidable, please consult with the local dealer.

■ *A place full of machine oil.*

■ *A saline place such as coast.*

■ *A place full of sulfide gas such as hot-spring resort.*

■ *Places where there are high frequency machines such as wireless equipment, welding*

■ *Machine, and medical facility.*

■ *A place there is no combustive gases and volatile matter.*

■ *A place of special environmental conditions.*

Indoor Unit:

■ *A place where is no obstacle near the inlet and outlet area.*

■ *A place which can bearf the indoor unit.*

■ *A place which is convenient to maintenance.*

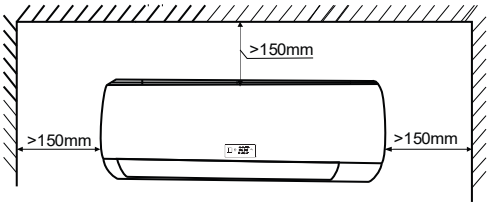
■ *A place which provides the space around the indoor unit as required right in the diagram.*

■ *There is strong electromagnetic wave exist-ing.*

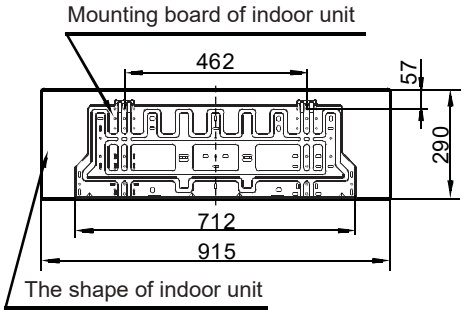
■ *A place which is far from heat, steam and inflammable gas.*

8.5.2 Required space, Mounting installation board and drilling a hole

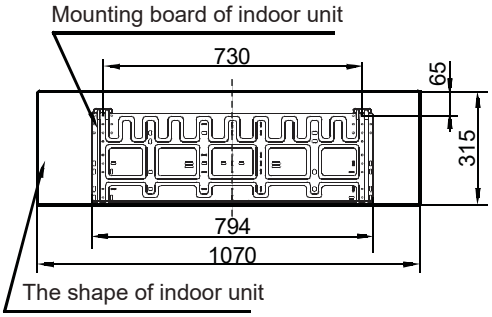
1) Required space



Mod. FW MI 10 - 15



Mod. FW MI 22

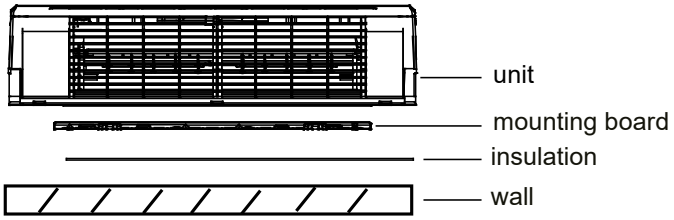


2) Mounting installation board

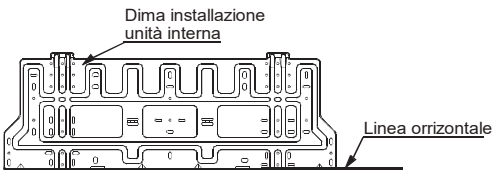
■ *It is recommended to install insulation between mounting board and wall to avoid wall getting damp.*

■ *Install the installation board horizontally on structural parts in the wall with the spaces provided around the plate.*

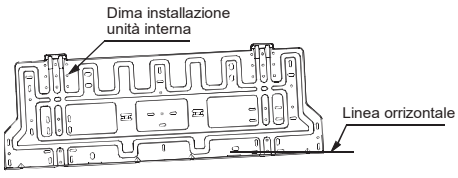
■ *In case of brick, concrete or similar type walls, make 5mm diameter, holes in the wall. Insert clip anchors for appropriate mounting screws.*



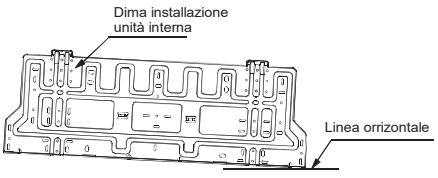
■ *Fix the installation board on the wall.*



O (Right installation)



X (False installation)



X False installation)

3) Drilling a hole

■ *Determine the pipe hole position using the installation board, and drill the pipe hole (Ø 95mm) so it slants slightly downward.*

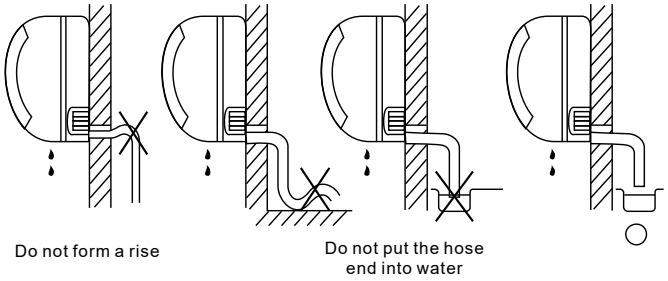
■ *Always use a wall hole conduit when piercing metal lath, ply wood or metal plate.*

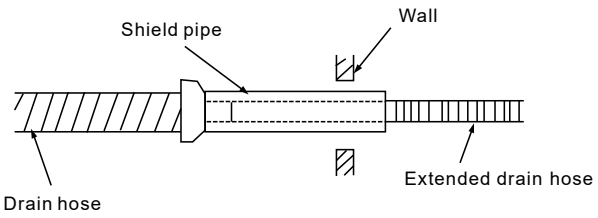
8.5.3 Connective Pipe and Drainage Installation

1) Drainage

■ *Run the drain hose sloping downward. Do not install the drain hose as illustrated below.*

■ *When connection extension drain hose, insulate the connecting part of extension drain hose with a shield pipe*



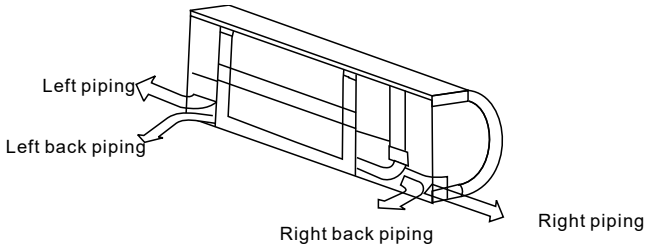


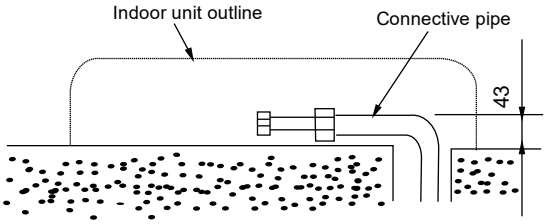
2) Connection pipe:

■ *For the left-hand and rear-left-hand piping, install the piping as shown. Bend the connective pipe to be laid at 43mm height or less from the wall.*

■ *Fix the end of the connective pipe. (Refer to paragraph: **WATER PIPING INSTALLATION**)*

- After connecting, all connective pipe should be covered by heat-resistant materials.





CAUTIONS

■ *Connect the indoor unit first then the outdoor unit and bend and arrange the pipe carefully.*

■ *Do not allow the piping to let out from the back of the indoor unit.*

■ *Be careful not to let the drain hose slack.*

■ *Insulate both of the auxiliary piping.*

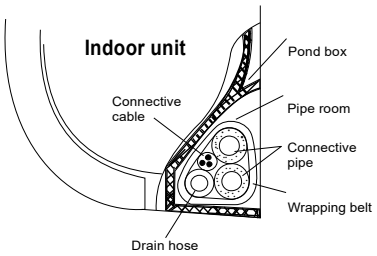
■ *Banding the drain hose under the auxiliary pipe.*

■ *Do not allow the piping to let out from the back of the indoor unit.*

3) Piping and bandaging

■ *Wind the connective cable, drain hose and wiring with tape securely, evenly as shown below.*

■ *Because the condensed water from rear of the indoor unit is gathered in Pond Box and is piped out of room. Do not put anything else in the box.*

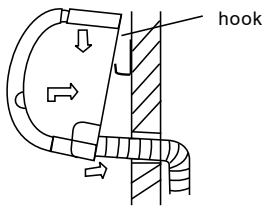


8.5.4 Indoor unit installation

■ *Pass the piping through the hole in the wall.*

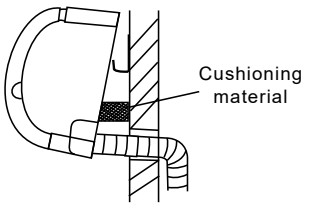
■ *Put the claw at the back of the indoor unit on the hook of the installation board, move the Indoor Unit from side to side to see that it is securely hooked.*

■ *Piping can easily be made by lifting the indoor unit with a cushioning material*



between the indoor unit and the wall. Get it out after finish piping.

■ *Push the lower part of the Indoor Unit up to the wall, then move the Indoor Unit from side to side, up and down to check if it is hooked securely.*



8.6. Water pipe installation

8.6.1 Material and Size of the piping

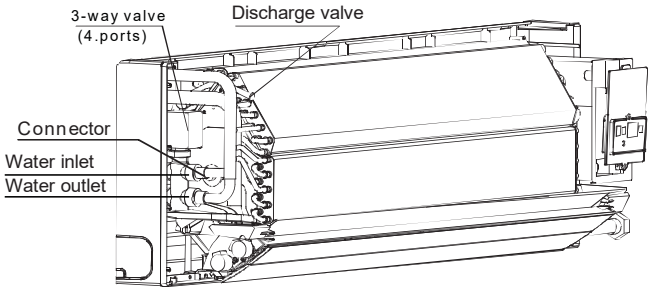
Models	***FW MI 10 - 15 - 22***
Pipe material	*Copper Pipe for Air Conditioner*
Coil connections	*3/4”*
(flate plate)	*3/4”*

8.6.2 Connection of the water pipe

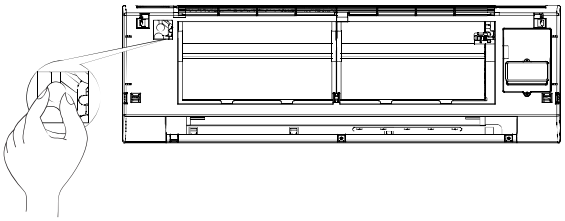
Connection of the water pipe should be done by professionals.

Double-span should be used when connecting pipes of Indoor Unit.

NOTE: *Please refer to installation instructions for the water piping conection of the air conditioner that with throttle device inside.*



■ *At the first debugging, completely expel air from coils via expelling valve.*



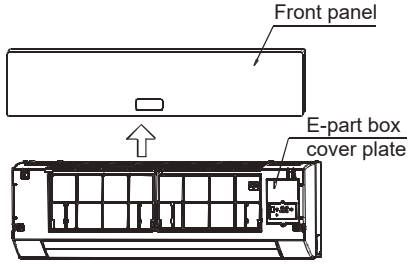
8.7. Wiring chart

♦ *Le funzioni di riserva sono selezionabili a richiesta dell'utente.*

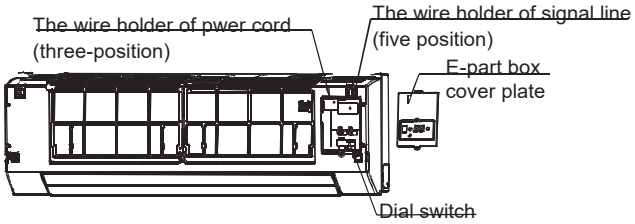
♦ *Un interruttore multipolare con una distanza di contatto di almeno 3 mm in tutti i poli dovrebbe essere inserito nel cablaggio convalori di corrente nominale d’intervento di almeno di 10mA secondo la normativa nazionale.*

♦ *Il cablaggio elettrico dell’apparecchio deve essere eseguito in concordanza con le normative nazionale.*

1) Take out the front panel, then dismantle the E-part box cover plate (refer to the figure below.)



2) Individual connect the power cord and signal line, adjust the dial switch (refer to the figure below.)



8.7.1 Terminal Board Diagram

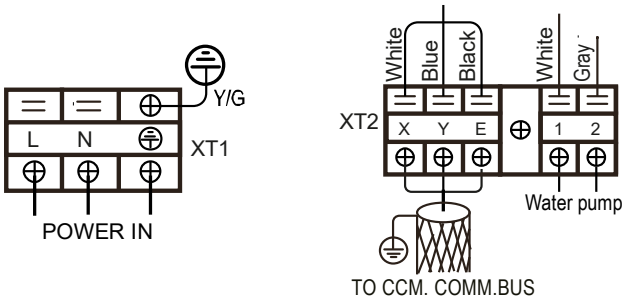
Please refer to the indoor unit wiring diagram for the wiring.

NOTE: *The air-conditioners can connect with Central Control Monitor (CCM). Before operation, please wiring correctly and set system address and network address of indoor units.*

■ *Power supply specifications*

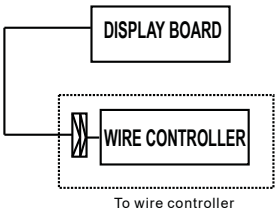
Models		***FW MI 10 - 15 - 22***
Power supply	*Phase*	*Single phase*
	Frequency and volt	*220-240V ~, 50Hz*
Circuit breaker/fuse (A)		*15/15*
Indoor unit power wiring (mm²)	*Below 20m*	*Twisted pairwire 2.5 mm²*
	Below 50m	*Twisted pairwire 6 mm²*
Ground wiring (mm²)		*1.5 mm²*

The power cord type designation is H05RN-F or above.



- Please adopt the shielded twisted-pair wire, and connect the shielded layer to E.

The reserved wire control function is indicated in broken line table, users can purchase the wire controller when necessary.



8.7.2 Network address setting

Every air-conditioner in network has only one network address to distinguish each other. Address code of air-conditioner in LAN is set by code switch on Network Interface Module (NIM), and the set range is 0-63.

Toggle switch set		***Network address code***
S1	**ENC2**	
		00 ~ 15
		16 ~ 31
		32 ~ 47
		48 ~ 63

9. TEST OPERATION

- *The test operation must be carried out after the entire installation has been completed.*
- *Please confirm the following points before the test operation:*
- *The indoor unit and outdoor unit are installed properly.*
- *Tubing and wiring are correctly completed.*
- *The piping system is leakage-checked.*
- *The drainage is unimpeded.*
- *The heating insulation works well.*
- *The ground wiring is connected correctly.*
- *The power voltage fits the rated voltage of the air conditioner.*
- *There is no obstacle at the outlet and inlet of the outdoor and indoor units.*
- *The air conditioner is pre-heated by turning on the power.*

TEST OPERATION

■ *Set the air conditioner under the mode of "**COOLING**" with the remote controller, and check the following points. If there is any malfunction, please resolve it according to the chapter "**TROUBLESHOOTING**" of this Manual".*

1) The indoor unit

- *Whether the switch on the remote controller works well.*
- *Whether the buttons on the remote controller works well.*
- *Whether the air flow louver moves normally.*
- *Whether the room temperature is adjusted well.*
- *Whether the indicator lights normally.*
- *Whether the temporary buttons works well.*
- *Whether the drainage is normal.*
- *Whether there is vibration or abnormal noise during operation.*
- *Whether the air conditioner heats well.*

ANNESSI / ANNEXES / ANHANG / ANEXOS

1. Specifiche / *Specifications* / Technische Daten / Especificações

Modelli/*Models*/Modell/Modelos				**FW MI 10**	**FW MI 15**	**FW MI 22**
Alimentazione elettrica/*Power supply*/Spannungsversorgung/ Fonte de energia			V/Ph/Hz	220-240/1/50		
Portata aria/*Air flow*/Luftmenge/ Fluxo de ar		H/M/L	m^3/h	492/454/400	825/689/590	862/741/634
			CFM	289/267/235	485/405/347	507/435/372
Raffreddamento[1] *Cooling*[1] Kühlen[1] Arrefecimento[1]	Capacità/*Capacity*/Leistung		kW	2.7/2.59/2.39	3.81/3.3/2.88	4.47/3.98/3.48
	Portata acqua *Water flow rate* Wassermenge Ritmo de fluxo de água		m^3/h	0.48/0.46/0.42	0.67/0.57/0.51	0.77/0.68/0.61
	Caduta pressione acqua *Water pressure drop* Druckverlust Queda de pressão da água		kPa	31.61/28.63/25.36	56.75/41.23/33.02	41.17/33.54/27.05
	Potenza assorbita / *Power input* Leistungsaufnahme/ Entrada de energia		W	13/11/10	34/22/15	26/18/13
Riscaldamento[2] *Heating*[2] Heizen[2] Aquecimento[2]	Capacità/*Capacity/ Capacidade*		kW	2.94/2.8/2.58	4.3/3.65/3.09	4.84/4.23/3.62
	Portata acqua *Water flow rate* Wassermenge		m^3/h	0.51/0.49/0.46	0.73/0.64/0.56	0.84/0.73/0.64
	Caduta pressione acqua *Water pressure drop* Druckverlust Queda de pressão da água		kPa	32.66/34.89/30.24	51.86/47.53/35.69	36.82/33.83/26.26
	Potenza assorbita *Power input* / Leistungsaufnahme/ potência absorvida		W	11/11/9	31/20/14	22/16/12
Riscaldamento[3] *Heating*[3] Heizen[3] Aquecimento[3]	Capacità/*Capacity*/Leistung/ *Capacidade*		kW	3.29/3.03/2.63	5.08/4.33/3.77	5.68/4.94/4.24
	Portata acqua *Water flow rate* Wassermenge Ritmo de fluxo de água		m^3/h	0.48/0.46/0.42	0.67/0.57/0.51	0.77/0.68/0.61
	Caduta pressione acqua *Water pressure drop* Druckverlust Queda de pressão da água		kPa	37.49/30.25/26.53	61.94/37.88/30.34	43.74/29.69/23.98
	Potenza assorbita / *Power input* / Leistungsaufnahme/ Entrada de energia		W	12/10/8	31/20/14	23/16/12
Livello pressione sonora/*Sound pressure level/ Nível de pressão sonora*			dB(A)	32/30/27	45/39/35	38/34/30
Rated current/ Corrente nominal			A	0.2	0.4	0.3
Motore ventilatore *Fan motor* Ventilatormotor Motor de ventilador	Tipo/*Type*/Typ/Modelo			DC Motor	DC Motor	DC Motor
	Quantità/*Quantity*/Anzahl/ quantidade			1	1	1
Ventilatore *Fan Ventilatorrad Ventilador*	Tipo/*Type*/Typ/Modelo			Ventilatore tangenziale/*Cross-flow fan/ Ventilador de fluxo cruzado*		
	Quantità/*Quantity*/Anzahl/ quantidade			1	1	1
Evaporatore *Coil* Register *Bobina*	Ranghi/*Rows*/Reihen/ filas			2		
	Pressione massima di funzionamento *Max. Working pressure* Max. Betriebsdruck Máx. Pressão no trabalho		MPa	1.6		
	Diametro/*Diameter*/Durchmesser/ diâmetro		mm	Φ7		
Unità/*Unit*/Einheit	Dimensioni/*Dimensions*/Größe/ dimensões (W×H×D)		mm	915×290×230	915×290×230	1072×315×230
	Peso netto/*Net weight/Gewicht netto/ peso líquido*		kg	12.7	12.7	15.1
Tubo collegamento *Pipe connection* Rohrverbindung	Ingresso acqua/uscita acqua *Water inlet/outlet pipe* Wassereintritt / -austritt Tubo de entrada / saída de água		inch	RC3/4		
	Tubo di drenaggio/*Drain pipe*/Kondensatleitung/ Tubo de drenagem		mm	ODΦ20		

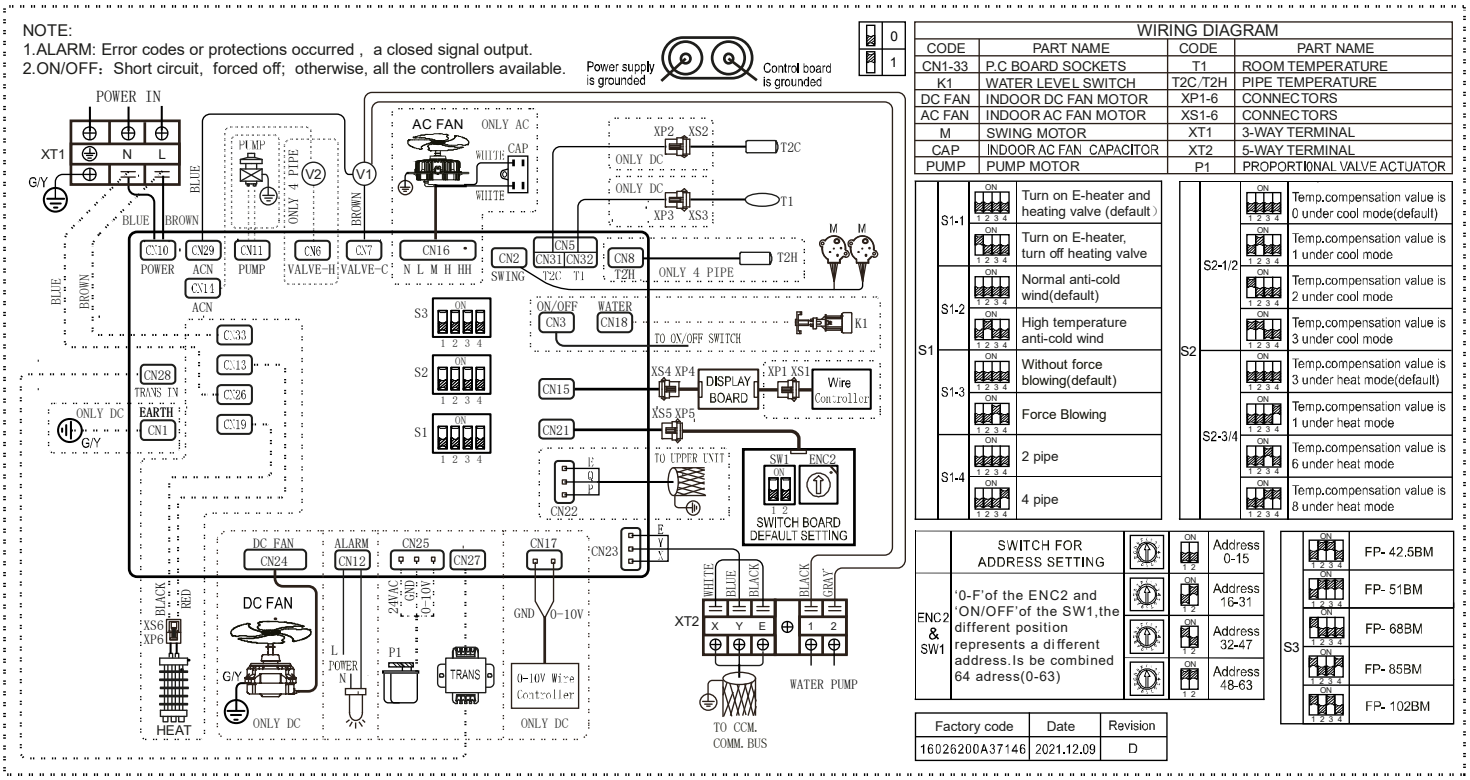
Note/*Notes*/Anmerkungen/Notas

Condizioni di prova/ Condições de teste: **1 Capacità di raffreddamento/ Capacidade de refrigeração** - Temp. interna b.s./b.u. 27/19°C/ Temperatura interna B.s./b.u. 27/19 ° C	***Test Conditions:*** ***1 Cooling capacity*** *- Room temp. d.b./b.u. 27/19°C.* *- Water inlet temp. 7°C.*	**Testbedingungen:** **1 Kühlleistung** Raumtemperatur TK/FK. 27/19°C - Wassereintrittstemperatur 7°C

- Temp. ingresso acqua 7°C/Temperatura de entrada de água 7°C - Temp.uscita acqua 12°C/Temperatura de saída da água 12°C **2 Riscaldamento/Aquecimento:** - Temp. ingresso acqua 45°C/Temperatura de entrada de água 45°C - Temp. uscita acqua 40°C/Temperatura de saída de água 40 ° C - Temp. interna 20°C b.s/Temp. interno 20 ° C b.s **3 Modalità di riscaldamento/Modo de aquecimento:** Temperatura aria in ingresso 20°C DB, Temp. acqua in ingresso/Portata acqua 50℃/*(Stessa portata acqua come nelle condizioni nominali standard in raffreddamento)/ Temperatura do ar de entrada 20 ° C DB, temperatura da água de entrada / Fluxo de água 50 ℃ / * (Mesmo fluxo de água que nas condições nominais padrão em resfriamento) **- La rumorisità è testata in camera semi-anecoica per prove/O ruído é testado em uma câmara semi-anecóica para testes.**	*- Water outlet temp. 12°C.* ***2 Heating capacity:*** *- Water inlet temperature 45°C.* *- Water outlet temperature 40°C.* *- Room temp. d.b. 20°C.* ***3 Heating mode:*** *Enter air temperature 20°C DB, enter water teperaure/water flow 50℃/*(same water flow as in standard rating condition in cooling)* ***- Noise is tested in semi-anechoic test room.***	- Wasseraustrittstemperatur 12°C **2 Heizleistung:** - Wassereintrittstemperatur 45°C - Wasseraustrittstemperatur 40°C - Raumtemperatur. TK. 20°C **3 Heizleistung:** Lufteintrittstemperatur 20°C DB, Wassereintrittstemperatur/Wassermenge 50℃/* (Gleicher Wasserdurchfluss wie im Standard-Nennzustand beim Abkühlen) **- Schalltestbedingung im halbschalltoten Raum**

2. Schema elettrico / *Wiring diagram* / Schaltschema/

Mod.: FW MI 10 - 15 - 22



WIRING DIAGRAM			
CODE	PART NAME	CODE	PART NAME
CN1-33	P.C BOARD SOCKETS	T1	ROOM TEMPERATURE
K1	WATER LEVEL SWITCH	T2C/T2H	PIPE TEMPERATURE
DC FAN	INDOOR DC FAN MOTOR	XP1-6	CONNECTORS
AC FAN	INDOOR AC FAN MOTOR	XS1-6	CONNECTORS
M	SWING MOTOR	XT1	3-WAY TERMINAL
CAP	INDOOR AC FAN CAPACITOR	XT2	5-WAY TERMINAL
PUMP	PUMP MOTOR	P1	PROPORTIONAL VALVE ACTUATOR

S1		
S1-1	ON	Turn on E-heater and heating valve (default)
		Turn on E-heater, turn off heating valve
S1-2	ON	Normal anti-cold wind(default)
		High temperature anti-cold wind
S1-3	ON	Without force blowing(default)
		Force Blowing
S1-4	ON	2 pipe
		4 pipe

S2		
S2-1/2	ON	Temp.compensation value is 0 under cool mode(default)
		Temp.compensation value is 1 under cool mode
		Temp.compensation value is 2 under cool mode
		Temp.compensation value is 3 under cool mode
S2-3/4	ON	Temp.compensation value is 3 under heat mode(default)
		Temp.compensation value is 1 under heat mode
		Temp.compensation value is 6 under heat mode
		Temp.compensation value is 8 under heat mode

Factory code	Date	Revision
16026200A37146	2021.12.09	D

KEY / *LEGENDA* / LEGENDE/LENDA

- *ROOM TEMP. SENSOR/ TEMPERATURA AMBIENTE. SENSOR*
- *MIDDLE PIPE TEMP. SENSOR/ - MIDDLE PIPE TEMP. SENSOR*
- *POWER SUPPLY/ FONTE DE ENERGIA*
- *SWING MOTOR/ - MOTOR DE GIRO*
- *FAN MOTOR/ - MOTOR DE VENTILADOR*
- *RT: TEMPERATURE SENSOR/ - RT: SENSOR DE TEMPERATURA*
- *WATER LIVEL SWITCH/ - INTERRUPTOR DE NÍVEL DE ÁGUA*
- *FAN MOTOR CAP./ - CAP DO MOTOR DO VENTILADOR*
- *3-WAY VALVE/- VÁLVULA DE 3 VIAS*
- *TRANSFORMER7 - TRANSFORMER*
- *DISPLAY BOARD/ - PLACA DE VISUALIZAÇÃO*
- *TO WIRE CONTROLLER/PARA O CONTROLADOR DE FIO*
- *TO ON/OFF SWITCH7 - PARA LIGAR / DESLIGAR*
- *TO CENTRAL CONTROL MONITOR7 - PARA MONITOR DE CONTROLE CENTRAL*
- *SWITCHING BOARD/ - QUADRO DE COMUTAÇÃO*
- *DEFAULT SETTING/ - CONFIGURAÇÃO PADRÃO*
- *WATER PUMP MOTOR/ MOTOR DA BOMBA DE ÁGUA*
- *ANION GENERATOR/ - GERADOR ANION*
- *RED / VERMELHO*
- *BLACK/NEGRO*
- *BLUE/ AZUL*
- *Y/G: YELLOW GREEN/ VERDE AMARELO*
- *WHITE/ BRANCO*
- *CN: CONNECTORS ON BOARD/ CN: CONECTORES A BORDO*
- *L: LIVE/ - L: AO VIVO*
- *N: NEUTRAL/ - N: NEUTRO*

- SENSORE TEMP. INTERNA
- SENSORE TEMP. EVAPORATORE
- ALIMENTAZIONE
- MOTORE ALETTE
- MOTORE VENTILATORE
- SENSORE TEMP. INTERNA
- INTERRUTTORE LIVELLO ACQUA
- CONDENSATORE MOTORE VENTILATORE
- VALVOLA A 3 VIE
- TRASFORMATORE
- DISPLAY
- AL FILOCOMANDO
- ALL'INTERRUTTORE ON/OFF
- AL MONITOR DI CONTROLLO CENTRALE
- SCHEDA MICROINTERRUTTORI
- IMPOSTAZIONE DI DEFAULT
- MOTORE POMPA ACQUA
- GENERATORE DI ANIONI
- ROSSO
- NERO
- BLU
- GIALLO VERDE
- BIANCO
- CONNETTORI SU SCHEDA
- FASE
- NEUTRO
- PER IMPOSTAZIONE INDIRIZZAMENTO RETE CONDIZIONATORI.
  '0-F' del mictrointerruttore ENC2 e 'ON/OFF' di SW1 per impostazione rete
- PER SELEZIONE FUNZIONE
  'ON/OFF' di SW2 per selezione la funzione anti-aria fredda e funzione anti-aria calda.
- Si prega di utilizzare un cavo schermato di 3-fili schermato e collegare la schermatura a terra.

NOTA: Le funzioni indicate nelle aree tratteggiate non sono disponibili su alcuni condizionatori.

- *RAUMTEMPERATURSENSOR*
- *MITTLERER REGISTERSENSOR (FROSTSCHUTZ)*
- *SPANNUNGSVERSORGUNG*
- *SWINGMOTOR*
- *LÜFTERMOTOR*
- *RAUMTEMP: TEMPERATURSENSOR*
- *WASSER NIVEAUSCHALTER*
- *VENTILATOR-MOTOR KONDENSATOR*
- *DREIWEGE-VENTIL*
- *TRANSFORMATOR*
- *ANZEIGETAFEL*
- *ZUR KABELFERNBEDIENUNG*
- *EIN / AUS – SCHALTER*
- *ZU GRUPPENSTEUERUNG*
- *EINSTELLPLATINE*
- *STANDARDEINSTELLUNG*
- *KONDENSATPUMPE (OPTION)*
- *ANIONEN GENERATOR (OPTION)*
- *ROT*
- *SCHWARZ*
- *BLAU*
- *GELB – GRÜN*
- *WEISS*
- *CN: ANSCHLÜSSE AN PLATINE*
- *L: AUSSENLEITER*
- *N: NEUTRALLEITER*
- *FÜR NETZWERK-ADRESSEINSTELLUNG*
- *'0-F' des ENC2 und 'ON / OFF' des SW1 für die Adresseinstellung*
- *FÜR FUNKTIONSAUSWAHL*
- *'ON / OFF' des SW2 für Funktionsauswahl: Anti-Kalt-Windfunktion und*
- *Anti-Heißwind-Funktion*
- *Bitte 3-adriges, abgeschirmtes Kabel verwenden und die Abgeschirmung mit Erde verbinden*

HINWEIS: *Die gestrichelten Rechteck beschreiben Funktionen, die nicht für alle Klimaanlagen verfügbar sind*

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