


Installation Manual for M-ACCESS Gateway RM-CGW-E2


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- This installation manual describes installation procedure and precautions for the gateway.
- Please also refer to the indoor unit's manual, outdoor unit's manual and other supplied manuals.
- For proper gateway installation, please read this manual carefully before starting installation work.
- The gateway must be installed in accordance with national wiring regulations.
- The gateway is precision equipment, so please handle it with enough care to prevent damage due to falling and being stepped on.
- For other languages, download from Web site.
https://www.mhi-mth.co.jp/en/products/detail/air-conditioner_users_manual.html




1. Safety Precautions

- Before starting the installation work, please read these “Safety Precautions” and follow them properly. All of the following are important and must be observed strictly.















 **WARNING:**
Failure to follow these instructions properly may result in serious consequences such as death and severe injury.










 **CAUTION:**
Failure to follow these instructions properly may cause injury or property damage. There could be serious consequences depending on the circumstances.

- The following pictograms are used in the text.

 Never do.	  Always follow the instructions given.
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- After the installation, please make a test run and confirm no abnormalities occur during the test run.
- Please explain the operation method to the customers according to the user's manual and product specifications.
- Keep this manual in a safe place where users can consult it whenever needed. Show this manual to installers when moving or repairing the gateway. When the ownership of the gateway is transferred, this manual should be given to the new owner.

 WARNING	
	• Consult your dealer or a professional contractor to install the gateway. Improper installation done on your own may cause electric shock, fire or breakdown.
	• Installation work should be performed properly according to this installation manual. Improper installation work may result in electric shock, fire or breakdown.
	• Be sure to use accessories and specified parts for installation work. Use of unspecified parts may result in falls, fire or electric shock.
	• Choose an installation location inside a locked enclosure. Otherwise, electric shock or incorrect operation may result.
	• The electrical work should be performed by a qualified electrical engineer, according to electrical standards, local electrical safety regulations and wiring specifications. Incomplete installation work may cause electric shock or fire.
	• Turn off the power supply before starting electrical work or repairing/inspecting the gateway. Otherwise, electric shock, injury, breakdown or malfunction may result.
	• When wiring, ensure solid connections and fasten specified cables securely so that terminal connections may not be subject to external forces from cables. Incomplete connection or improper connection of terminal wiring may cause electric shock or fire.
	• Do not modify the gateway. Otherwise, electric shock, fire or breakdown may result.
	• Do not install the gateway in a special environment or where inflammable gas could generate, flow in, accumulate or leak. If the gateway is used in places where air contains dense oil mist, steam, organic solvent vapor, corrosive gas ammonia, sulfuric compounds, acid, etc.) or where acidic or alkaline solutions, special sprays, etc., are used, electric shock, breakdown, smoke or fire may result due to corrosion or significant deterioration of the performance.
	• Do not install the gateway where excessive water vapor is generated or condensation occurs. Otherwise, electric shock, fire or breakdown may result.
	• Do not use the gateway in a place where it can get wet, such as a laundry room. Otherwise, electric shock, fire or breakdown may result.
	• Do not operate the gateway with wet hands. Otherwise, electric shock may result.
	• Do not wash the gateway with water. Otherwise, electric shock, fire or breakdown may result.

 WARNING	
	• 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. Children should be supervised to ensure that they do not play with the appliance. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
	• Cleaning and user maintenance shall not be made by children without supervision.
 CAUTION	
	• Please perform grounding work. Please do not connect the ground wire to gas pipes, water pipes, a lightning rod or a telephone ground wire. Incomplete grounding work may cause electric shock or fire if electric leakage or breakdown occurs.
	• Be sure to install a leakage breaker at the installation location. If a leakage breaker is not installed, electric shock may result.
	• The primary and secondary wires must be reinforced insulated. Keep the wires at least 5 mm apart or add a protective tube to the wires.
	• Make sure to remove static electricity before connecting terminals. Use an antistatic wristband or touch the metal part on the back of the device to remove static electricity from your body before connecting the terminals. If static electricity removal is incomplete, it may cause a malfunction.
	• Do not install the gateway in the following places. (1) Damage to or breakdown or malfunction of the gateway may result. <ul style="list-style-type: none">• Where it is exposed to direct sunlight• Where the ambient temperature becomes 0 °C or below, or 40 °C or above• Where the surface is not flat• Where the soundness of the installation area is insufficient• Where dust tends to accumulate, such as on the floor (2) Abnormality in the control system or abnormal operation may result. <ul style="list-style-type: none">• Where machinery generates radio waves.

2. Before Installation

2.1 Accessories

Items	Q'ty	Remarks
Gateway	1	RM-CGW-E2
Installation manual	1	
Round-type crimp-style terminal (L)	2	For power cord of Gateway
Round-type crimp-style terminal (S)	4	For communication wire of Gateway
Termination resistor	2	For remote terminal communication (180 Ohm)

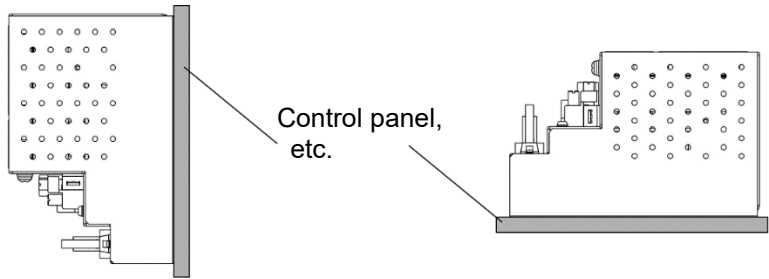
2.2 Locally provided parts

Items	Q'ty	Remarks
Screws (M4)	4	Attachment screw for Gateway
Communication wire	As required	Wire type : MVVS 2-core wire Wire diameter : 0.75 mm ² ~ 1.25 mm ² Maximum length : 1000 m
Power cord	1	Wire diameter : 1.25 mm ² (60245 IEC 53)
Ground wire	1	Wire diameter : 0.75 mm ² ~ 6.00 mm ²
Wiring for digital Input	As required	Wire diameter : 0.75 mm ² ~ 1.25 mm ²
Leakage breaker	1	Cut-off device with a contact gap of 3 mm or more according to overvoltage category III
LAN cable	As required	10BASE-T or 100BASE-TX
《Other equipment required for Internet connection》 Ex; Modular cable, Router, Modem		

3. Installation Work

3.1 Installation location and orientation

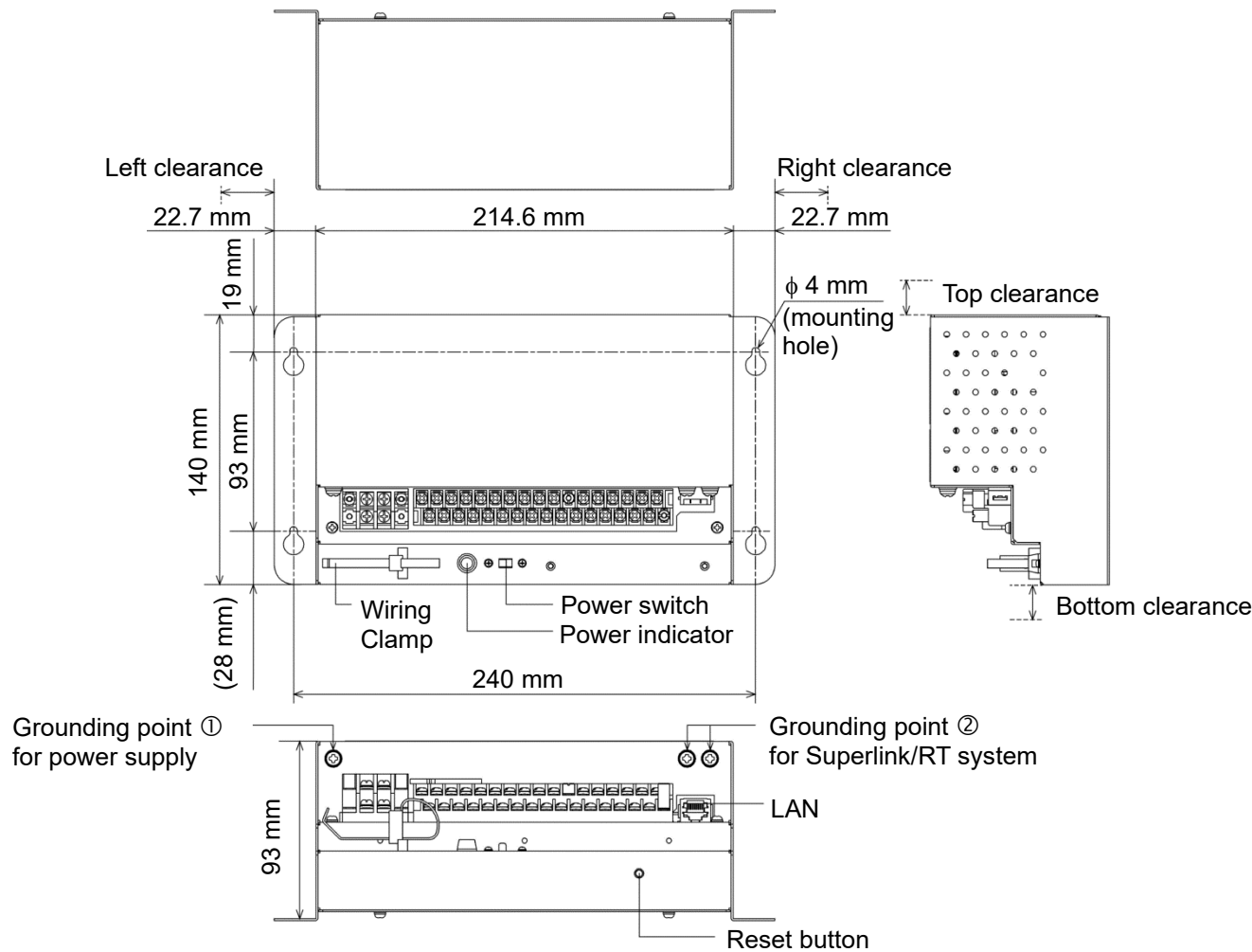
Please make sure to install the Gateway in a cool indoor place with enough cooling air circulation.
The Gateway should be installed in the orientation shown below and so that letters can be read correctly.
Any other orientation may cause cooling failure of internal parts that may result in a malfunction or breakdown.



3.2 Installation clearances

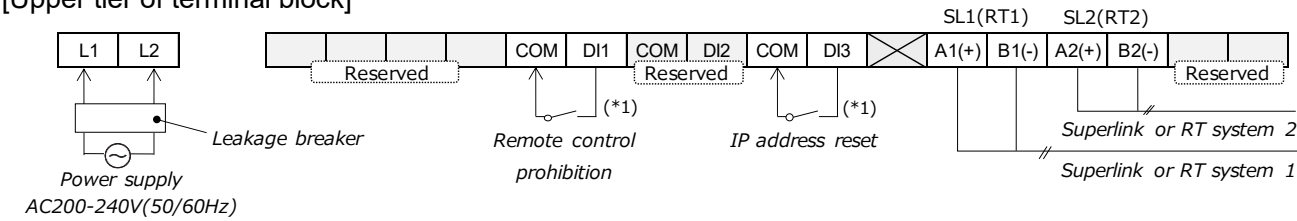
Be sure to leave the following minimum clearances for cooling and workability.

- Bottom clearance : Min. 100 mm (200 mm or more suggested for making wiring and service easier)
- Top clearance : Min. 30 mm
- Left/Right clearance : Min. 30 mm

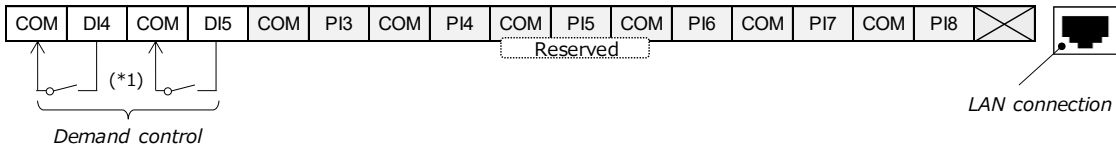


4. Wiring

[Upper tier of terminal block]



[Lower tier of terminal block]



(*1) Non voltage dry contact type A, Contact capacity DC12V/10mA

4.1 General caution

Before connecting the wires, remove the cover of the terminal block. **After the work is completed, return the cover of the terminal block to its original position.** The cover is used to prevent electric shock from accidental contact.
Do not turn on the power supply (power switch) until all of the work is completed.

4.2 Communication wiring (A1/B1/A2/B2)

- Shielded wire (MVVS 2 core) 0.75 mm² - 1.25 mm²
- Max. 1000 m per line (Max. distance: 1000 m, Total wire length: 1000 m)
- Be sure to use the supplied round-type crimp-style terminals(small) when connecting wires to the terminal block.
- Wire the ground to Grounding point ② and make sure to have a ground for both ends of shielded wire. (shown in the diagram for “3.2 Installation clearances”)

Communication protocol should be properly configured according to the products to be connected.
See the M-ACCESS Setup manual for details of the configuration.

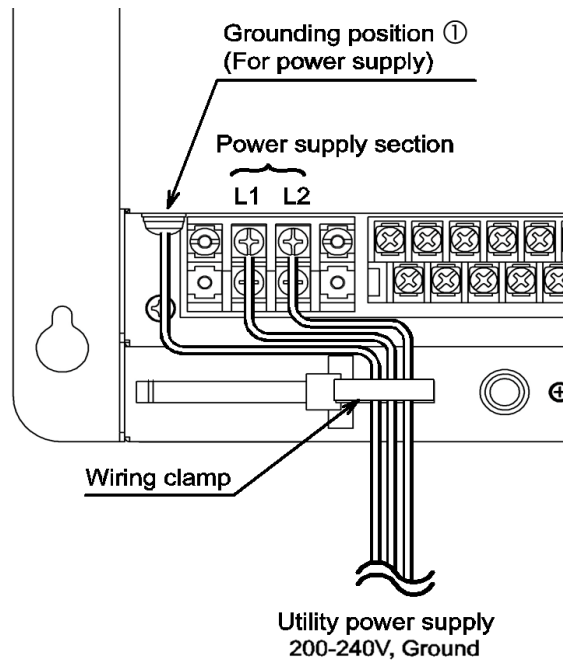
	Superlink	Remote Terminal (RT)
Product Type	Air conditioning unit	CO2 heat pump unit, CO2 condensing unit, Chiller
Connection		
Termination Register	Not required	Must be installed for each terminal.
Polarity	There is no polarity for Superlink.	Correctly connect A1/A2(+), B1/B2(-) with the '+' and '-' polarities as shown above.

NOTE

- 1500m of max total wire length is possible only when all indoor and outdoor units are compatible with New Superlink. However, wire diameter should be 0.75 mm² and maximum distance stays 1000m.
- Superlink and RT communication can NOT be selected separately for A1/B1 and A2/B2. (ex ; Superlink for A1/B1 and RT for A2/B2 are not possible.)
- Mixing multiple product type in RT communication line is possible.

4.3 Power supply (L1/L2)

- Use the supplied round-type crimp-style terminals(large) when connecting wires to the power supply.
- Do not use any supply cord lighter than one specified in below.
Ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
- Wait at least two minutes after the indoor and outdoor units are turned on before turning on the power supply.
- Wire the ground for the power supply to Grounding point ①.
(shown in the diagram for “**3.2 Installation clearances**”.)
- Use the Wiring clamp beside the power LED to fasten the wires connected to the power supply terminal block.



- When pulling out wires from the enclosure, secure or cover the wires with conduit to prevent tension from being applied to the terminals.

4.4 Digital Input (DI1/DI3/DI4/DI5)

- Shielded wire 0.75 mm² - 1.25 mm²
- Non voltage dry contact type A, Contact capacity DC12V/10mA
- For safety reasons, use the round-type crimp-style terminals with insulated sleeves for connecting all wires to terminal blocks.

4.5 LAN cable

- 10BASE-T or 100BASE-TX compatible products.
- When using wireless LAN, communication may not be possible if the product is surrounded by metal, or if the product is installed near an object that does not allow radio waves to pass through, such as metal or reinforced concrete.

5. Reference Information

To start M-ACCESS, please access M-ACCESS website and complete registration steps according to the Setup Manual below.

- M-ACCESS web site
[URL] <https://mhi.m-access.net>
- Setup Manual
[URL] https://www.mhi-mth.co.jp/en/products/detail/air-conditioner_users_manual.html