MITSUBISHI SC-WBGW256 Superlink WEB & BACnet Gateway Installation Guide

M4TSUBISHI SC-WBGW256 Superlink WEB & BACnet Gateway Installation Guide

- 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.

Contents

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.

- 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, sensor y or mental capabilities, or lack of experience and knowledge, unless they have been given supervisi on or instruction concerning use of the appliance by a person responsible for their safety. Children s hould 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.

-  **Clearances, creepage distances and solid insulation.**
  The primary and secondary wires must be reinforced insulated. Keep the wires at least 5mm apart or add a p rotective 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.**

  Damage to or breakdown or malfunction of the gateway may result. Where it is exposed to direct sunlight W here the ambient temperature becomes 0 °C or below, or 40 °C or above Where the surface is not flat Wher e 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. Where machinery generates radio wa ves.

Accessories

Gateway main unit, CD-ROMs (Manual and Energy consumption calculation software: 1 each), Round-type crimp-style terminals (Large: 2, Small: 4)

Installation Work

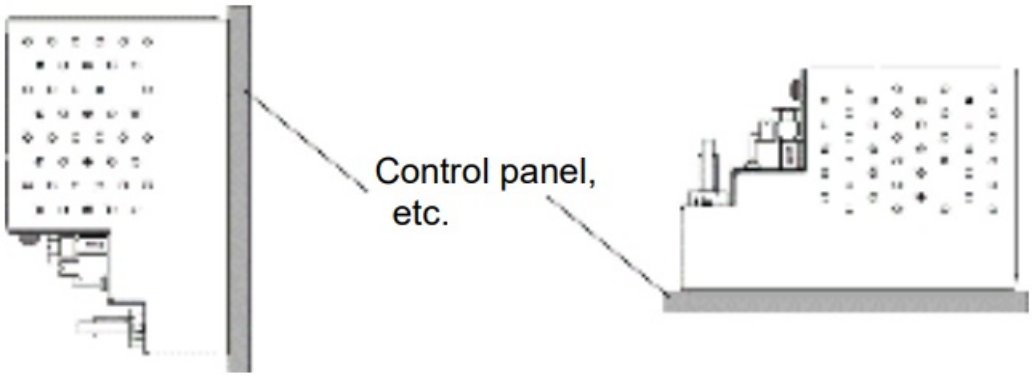
1. **Installation location**

   The installation location should be a cool place indoors with enough cooling air circulation.
2. **Parts procured on site**

   Before installing the gateway, prepare the following parts.
   - Main body installation screws (M4) ×4
   - Wiring (Refer to “4. Wiring”.)
   - Leakage breaker (Cut-off device with a contact gap of 3 mm or more according to overvoltage category III)
3. **Installation procedure**

   Install the gateway in the orientation shown in the figure 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.

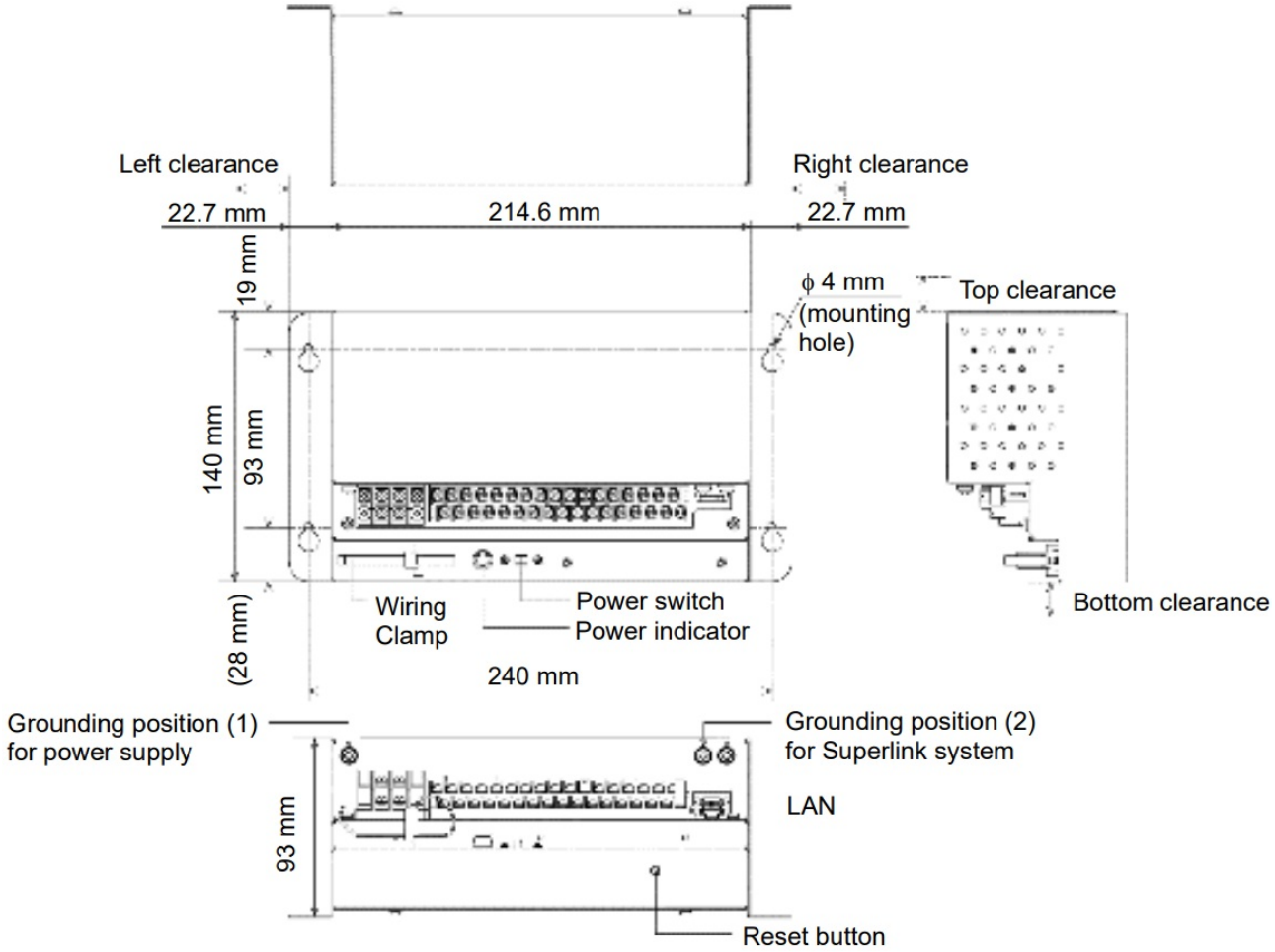


4. **Installation clearances**

For cooling and service work, provide the following clearances above and below and to the right and left.
Bottom clearance Min. 100 mm (Recommended length of 200 mm or more) Space for wiring and service
Top clearance Min. 30 mm Space for cooling
Left clearance Min. 30 mm Space for cooling
Right clearance Min. 30 mm Space for cooling

For cooling and service work, provide the following clearances above and below and to the right and left.
Bottom clearance Min. 100 mm (Recommended length of 200 mm or more) Space for wiring and service

Top clearance Min. 30 mm Space for cooling
Left clearance Min. 30 mm Space for cooling
Right clearance Min. 30 mm Space for cooling



Wiring

- Use the supplied round-type crimp-style terminals (large) when connecting wires to the power supply terminal block.
- Do not use any supply cord lighter than one specified in below.
  - Ordinary tough rubber sheathed cord (code designation 60245 IEC 53)
- Do not turn on the power supply (power switch) until all of the work is completed.
- Wait at least two minutes after the indoor and outdoor units are turned on before turning on the power supply.
- Except for the accessories, all of the components are obtained at the site.
- 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.
- Perform grounding work. Wire the ground for the power supply to Grounding point (1), shown in the diagram for “3.4

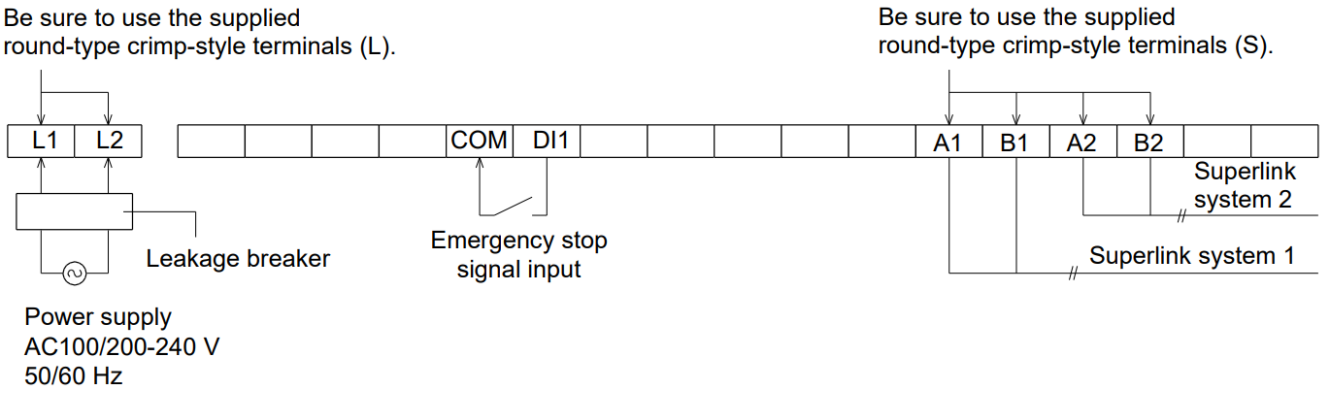
  Installation clearances”.
- Use the Wiring clamp beside the power LED to fasten the wires connected to the power supply terminal block.
- When pulling out wires from the enclosure, secure or cover the wires with conduit to prevent tension from being applied to the terminals.

Superlink signal line
Shielded wire (2 core, 0.75 mm2 – 1.25 mm2)
Max. 1000 m per line (Max. distance: 1000 m, Total wire length: 1000 m)

Wire the ground for the Superlink system to Grounding point (2), shown in the diagram for “3.4 Installation clearances”.
Note 1: When the gateway is used, use a shielded wire as the Superlink signal wire. Ground both ends of the shielded wire.
Wire the ground of the gateway to Grounding point (2), shown in the diagram for “3.4 Installation clearances”.
Note 2: The communication protocol can be chosen from either of the following two types.
One is the conventional Superlink (denoted as previous Superlink below), and the other is the new Superlink. Choose either the new or previous setting for Superlink. (See user’s manual.) Whether the actual connection network is the new Superlink or previous Superlink depends on the type of connected indoor unit, outdoor unit, etc. Contact your sales representative or dealer for more information. If the indoor and outdoor units connected to the network are all compatible with the new Superlink, a total wire length of 1500 m per line is possible (maximum distance: 1000 m). However, be sure to use wire with a diameter of 0.75 mm2
if the total wire length exceeds 1000 m. For further information, please contact your sales representative or dealer.
Note 3: Be sure to use the supplied round-type crimp-style terminals (small) when connecting wires to the Superlink terminal block
Emergency stop line, gas meter or watt-hour meter line
Shielded wire 0.75 mm2 – 1.25 mm2
For safety reasons, use the round-type crimp-style terminals with insulated sleeves for connecting all wires to terminal blocks.

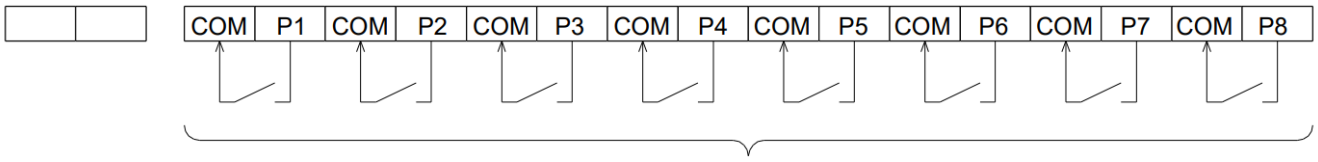
Wire as shown below

1. Upper tier of terminal block



Power supply AC100/200-240 V 50/60 Hz

2. Lower tier of terminal block



Power input from gas meter or watt-hour meter (8 points)

Please connect a gas meter or a watt-hour meter that satisfies the specifications below.

- meter with pulse transmitter
- meter with pulse width of 80 ms or more

The energy consumption calculated by this gateway does not conform to OIML, and there are no guarantees concerning the results of the calculations.
For selecting the gas meter or the watt-hour meter, please refer to the technical manual.

Documents / Resources

	**MITSUBISHI SC-WBGW256 Superlink WEB & BACnet Gateway** [pdf] Installation Guide SC-WBGW256 Superlink WEB BACnet Gateway, Superlink WEB BACnet Gateway, WEB BACnet Gateway, BACnet Gateway, Gateway