



For correct use of the electromagnetic controller, be sure to read carefully these “Safety Precautions” and Instruction Manual packaged with the product before installation, operation, maintenance and inspection of it.
In this manual, the safety precautions are classified into “WARNING” and “CAUTION”.

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|  WARNING | Mishandling may cause hazardous situations resulting in death or serious injury. |
|  CAUTION | Mishandling may cause hazardous situations resulting in moderate disability or minor injury, or property damage only. |

Even if an instruction is classified as “CAUTION”, failure to observe may lead to serious results, depending on the situation.
Since all the instructions are important, be sure to observe them.
Keep the Instruction Manual in a safe place for easy reference when necessary.
Be sure to deliver the Instruction Manual to a final owner who use the product.

 **WARNING**

General

- Do not use the product for the following:
 1. Medical devices concerning sustaining and control of human life and body.
 2. Machinery and equipment for transfer and transportation of persons.
 3. Important stocked parts for machinery.
- Note that the product is not designed for purposes requiring high-level safety.

Installation

- Do not use the product in a place where hazardous materials such as ignitable materials, explosive materials, and inflammable materials.
Failure to observe this may cause fire, explosion or ignition.
- When installing the product, be sure to fix it securely. Otherwise, drop or abnormal operation of it may cause injury.
- Avoid use of the product in a place where is exposed to droplets of water or oil.
- Be sure to provide Class D grounding. Otherwise, electric leakage may cause electric shock or malfunction.
- When connecting the product, always refer to the “instruction manual” to avoid miswiring.
Failure to observe this may cause malfunction or abnormal operation.

Operation

- The product is not equipped with power failure protector. If the primary power supply is interrupted in the event of power failure or instantaneous power failure, the output voltage to the electromagnet is also interrupted. If power failure or instantaneous power failure may occur, be sure to additionally use a power failure protector (uninterruptible power system).
Otherwise, attracted object may drop and cause injury.
- Avoid splash to the product. Splash or cleaning with water may cause abnormal operation and result in injury, electric shock or fire.
- Do not touch the terminal block and attach or detach I/O connector while the power is on. Otherwise, it may cause electric shock and or abnormal operation.
- Make sure that an attracting signal is not inputted and then turn on the power. If the power is turned on while the attracting signal is inputted, the electromagnet may start attraction and it may cause injury.
- If the product produces abnormal heat, smoke or odor, turn off the power immediately. If you continue to use it, the product may be damaged or ignited.
- If the protection function (alarm) of the product is activated, eliminate the cause completely before use. Abnormal operation of the product may cause injury, damage or failure of the product.
- If the indicator (display) of the product does not light, turn off the power immediately.

Maintenance and inspection

- Do not disassemble or modify the product. Otherwise, abnormal operation may cause injury, electric shock or fire.
- Be sure to turn off the power before maintenance or inspection. Failure to observe this may cause injury, electric shock or fire.

Disposal

- Do not put the product into fire. Failure to observe this may result in damage of the product or emission of toxic gas.

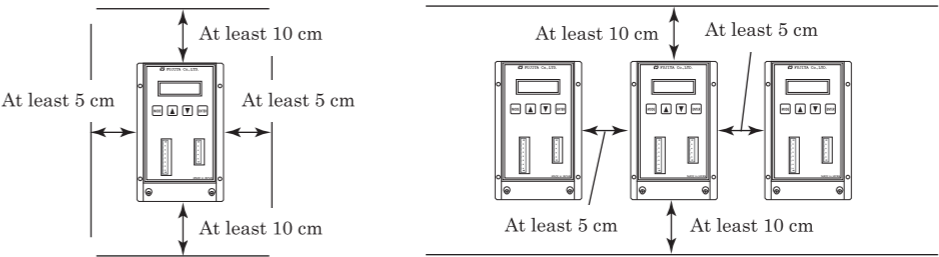
 **CAUTION**

General

- Do not touch the heat radiating fin. It will get hot and cause skin burn.

Installation

- Use the product under the following environmental conditions. Failure to observe this may cause malfunction or abnormal operation.
 1. Ambient temperature: -10 to 40℃
 2. Humidity: 10 to 90% RH (without condensation)
 3. No corrosive gas, explosive gas, oil mist, dust or steam.
 4. Vibration: 4.9 m/s² (at vibration frequency of less than 20 Hz), 9.8 m/s² (vibration frequency of less than 50 Hz)
 5. Altitude: Not more than 1,000 m
- Install the product on an indoor, well-ventilated location. For spacings from other equipment or in case of more than one unit used, refer to the drawing below.
Note that the spacings below are minimum. A cooling fan (※1) is incorporated at the top of the product. To achieve good ventilation, keep the top and bottom spacings as wide as possible.



※1. The sensor of cooling fan monitors the temperature inside the product. When the temperature exceeds the set value, the fan starts rotation. It does not always rotate.

Request of selection

- Total current values of electromagnets which can be connected to the electromagnetic controller should be not more than 80% of the maximum output current of the controller.
If you intend to connect more than one electromagnet, refer to the following formula.

Number of electromagnet capable of being controlled = $\frac{\text{Maximum output current of electromagnetic controller}}{\text{Current value of electromagnet}} \times 0.8 \text{ (margin)}$

※When exporting (or providing to non-resident) articles requiring permission of export stipulated in the Foreign Exchange and Foreign Trade Act or falling within the cargo (or technology) subject to approval, permission of export, approval or permission of service transaction under the above Act is required.