Wiring
Make wiring connections for the parts indicated by black lines in the connection diagram.

- Operation with switching between high and low settings
Using a commercially available switch
Using the PS-005MR-E

- Operation in the high or low setting only
High speed operation
Low speed operation

Disassembling the Unit
1. Remove the guard step screw and the washer. Then slide the guard toward the wall mounting plate as shown in the diagram and remove it from the hook. (The number of guards differs depending on the model.)
2. Remove the fan nut (M5 countersunk/wafering thread) and pull off the fan.
Note: Note that the fan fits onto the shaft in a specific orientation.

Cleaning
The Air Curtain should be cleaned when it gets dirty — roughly once every three months as a general rule. Also, be sure to clean and test run the Air Curtain before starting operation for the summer and winter seasons.
- Always switch power off before cleaning.
- Never hang from the unit or push downward on it forcefully. A serious accident could result.
- Wear rubber gloves to avoid injuring your fingers.

The operation for the PS-005MR-E control switch is designed to accommodate a cable with a diameter of 1.6mm or 2.0mm only.

Essential Safety Precautions
Please be absolutely sure to read through the following information: it will help you to install the Air Curtain correctly and safely and to operate it properly.
The precautions presented here contain important safety information: be sure to follow the applicable instructions given.

- Before proceeding with installation and operation, please be sure to read “Essential Safety Precautions” as it will tell you how to install and operate the product properly and safely.
- The displays have the following significance:
  - The graphic symbols have the following significance:
    - WARN: Do not touch.
    - CAUTION: Do not use this product outside its rated voltage and power line frequency range. (Fire or electrical shock may be caused.)
    - Do not hang on the product or swing from it. (It may fall, resulting in injury.)
    - Never use the product in a bathroom or other location with excessive moisture (more than 90% RH). (Electrical shock or fire may be caused.)
    - When installing the main unit, select a location which is sufficiently strong, and install the unit securely. (Fails to do so may result in the unit falling, resulting in injury.)
    - Install the parts properly and securely. (Fails to do so may result in parts falling, resulting in injury.)
    - Wiring work should be performed safely and reliably, and in accordance with local electrical standards and internal wiring standards. (Failure to install the wiring correctly could result in electrical shock or fire.)
    - If more than one unit is to be operated at the same time, ensure that the combined current value flowing through the terminal panel to which the units are connected does not exceed 5A. (Failure to observe this precaution could result in electrical shock or fire.)
    - If the product is not going to be used for a prolonged period of time, be absolutely sure to set the circuit-breaker on the power board to the OFF position. (Deterioration in the insulation may cause electrical shock, power loss or fire.)

WARNING
- Do not touch the moving parts. (You may injure yourself.)
- Do not poke your fingers or any objects into the air outlet openings or moving parts. Operation in such a case is dangerous. (You may injure yourself.)
- Do not perform any operation while the power is still switched on, do not touch the fans or other parts while the product is still in operation. (There is a danger that the unit could suddenly start operating again and cause injury. Here is also a danger of electrical shock.)

CAUTION
- Do not apply water to the product or splash water onto it. (Short-circuiting or electrical shock may be caused.)
- Do not put the product where the combination area of its combustion device will be directly exposed to wind or air movement. (This may cause incomplete combustion or result in the flames being extinguished by blowing air on the flame system.)
- Do not use the product where the air outlet opening of the product is lower than the combustion device. (There is a danger that the product may become discolored or deteriorated.)

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Source</th>
<th>Air velocity</th>
<th>Note</th>
<th>Weight</th>
<th>Starting Current</th>
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<tr>
<td>GK-2509YS1</td>
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MITSUBISHI ELECTRIC CORPORATION

After-Sales Service
Please contact the dealer from whom the unit was purchased concerning after-sales service.

Trial Operation
When the installation work is complete, it is advised to re-check both the wiring and the fitting of the unit so that this product operates correctly with no vibration or noise.

Special Adjustment and Angle Adjustment
If the wind outside affects the effectiveness of the Air Curtain, the following speed adjustments and angle adjustments are possible.

Condition | Adjustment method | Notes
--- | --- | ---
No wind | Use the wiring diagram and cut the wiring as shown. | Use the wiring diagram and cut the wiring as shown.
Monitory parts of wind | Adjust the angle of the unit body to the wind direction as shown. | Use the wiring diagram and cut the wiring as shown.
Curtain wind | Adjust the angle of the unit body to the wind direction for optimal airflow. | Use the wiring diagram and cut the wiring as shown.

After Sales Service
Please contact the dealer from whom the unit was purchased concerning after-sales service.

MITSUBISHI ELECTRIC CORPORATION

Operating and Installation Instructions
Be sure to read these instructions and follow after installing the work. Installation work must be carried out by a dealer or a specialist installation contractor. Communication switches are required to operate this unit.

- This is a single-phase product. Check the power supply before proceeding with the installation work.

- Be sure to hand over these Operating and Installation Instructions to the user when the installation work has been completed.

- Before reading this information, keep it in a place where anyone using the product can refer to it at any time.

Wiring
Make wiring connections for the parts indicated by black lines in the connection diagram.

- Operation with switching between high and low settings
Using a commercially available switch
Using the PS-005MR-E

- Operation in the high or low setting only
High speed operation
Low speed operation

Disassembling the Unit
1. Remove the guard step screw and the washer. Then slide the guard toward the wall mounting plate as shown in the diagram and remove it from the hook. (The number of guards differs depending on the model.)
2. Remove the fan nut (M5 countersunk/wafering thread) and pull off the fan.
Note: Note that the fan fits onto the shaft in a specific orientation.

Cleaning
Use a cloth dipped in neutral detergent to wipe away dirt from the system unit, guards, fans and ducts. Then wipe with a dry cloth to remove any remaining detergent.

Note: Do not use solvents such as the following to clean the unit:
- Paint thinner, alcohol, benzine, gasoline, kerosene, aerosol sprays, alkaline solvents or chemicals in chemically treated cleaning clothes. (Surface deterioration or discoloration could result.)

Installation Work
- Trial Operation
- Special Adjustment and Angle Adjustment
- After Sales Service
- Specifications

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Description of Functions
- The unit is supplied with overcurrent protection devices (thermal fuses) to prevent overheating of the motor due to overload conditions. Should the ambient temperature rise to an inordinately high or an overloaded state, if a phase interruption occurs during operation, or if an operation is continued in some way may fail, burn out, preventing power from being supplied to the unit. Should this occur, the fan and control circuit will be opened. Be sure to check that the power is off before the unit is in operation. (There is a danger of electric shock if the unit is in operation with power turned on.)
- If the unit is exposed to rain, be sure to inspect the input and output connections (including the ground connection) for any damage. (There is a danger of electric shock if the unit is in operation with power turned on.)
- Grounding should be made to prevent shock to the user in the event of malfunctioning or power outages. (When the unit is not in operation, the power will be disconnected.)
- If the unit is not in operation, do not open the control box to avoid electric shock. (There is a danger of electric shock if the unit is in operation with the cover open.)
- The unit is operated by communicating between the control terminal unit and the control box. In case the motor and switch are not operated by power switch, the power will be turned off at the control box. (There is a danger of electric shock if the unit is in operation with power turned on.)
- The control box is operated by a separate control unit. (There is a danger of electric shock if the unit is in operation with power turned on.)
- The unit is driven by a separate control unit. (There is a danger of electric shock if the unit is in operation with power turned on.)

Specifications

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MITSUBISHI ELECTRIC CORPORATION

After Sales Service
Please contact the dealer from whom the unit was purchased concerning after-sales service.

MITSUBISHI ELECTRIC CORPORATION

Operating and Installation Instructions
Be sure to read these instructions and follow after installing the work. Installation work must be carried out by a dealer or a specialist installation contractor.

- Communication switches are required to operate this unit.
- This is a single-phase product. Check the power supply before proceeding with the installation work.

- Be sure to hand over these Operating and Installation Instructions to the user when the installation work has been completed.

- Before reading this information, keep it in a place where anyone using the product can refer to it at any time.
Mounting Method

Mounting locations and surfaces differ, but in any case make sure that the unit is mounted sufficiently securely and that it is level.

### Mounting examples

**Wall mounting**

- Mount the decorative panel to the ceiling (obtained by customer)
- Secure the wall mounting plate in place directly using the supplied wood screws and washers (large).

**Ceiling mounting**

- Mount the round contact terminals onto the end of the power cord.
- Remove the cover of the terminal panel, which is obtained by customer.
- Sink the sink bolt into the wall so that it extends approximately 15 mm from the surface of the wall.
- Remove the (two) angle adjustment screws that are temporarily secured to the protruding portion at the bottom of the unit body.
- If the panel is 20 mm thick or more, secure the wall mounting plate in place using the washers (small), spring washers, and nuts included with it.
- Note: If there is a gap of at least 15 mm between the wall mounting plate and the wall, otherwise the body of the unit will bump into the wall and it will not be possible to mount it.
- If multiple units are to be installed side by side, there must be a gap of at least 34 mm between the wall mounting plates.

### Preparations Before Mounting

- **Concrete walls, steel frame, steel pillars**
  1. Mount the round contact terminals onto the end of the power cord.
  2. Remove the cover of the terminal panel, which is obtained by customer.
  3. Sink the sink bolt into the wall so that it extends approximately 15 mm from the surface of the wall.
  4. Remove the (two) angle adjustment screws that are temporarily secured to the protruding portion at the bottom of the unit body.
  5. Remove the wall mounting plate from the unit body.
  6. Secure the wall mounting plate in place using the washers (small), spring washers, and nuts included with it.

- **Panel wall**
  1. If the panel is 20 mm thick or more, secure the wall mounting plate in place directly using the supplied wood screws and washers (large).
  2. If the panel is less than 20 mm thick, mount a reinforcing panel (obtained by the customer) that will make it 20 mm thick or more.

### Fixtures and Fittings

- **Mounting bolt (commercially available)**
- **Decorative panel (providing by customer)**
- **Universal register (provided by customer)**
- **Washer**
- **Spring washer**
- **Nut**

### Ceiling recessed mounting

1. Determine the appropriate mounting locations to the dimensions indicated in diagram at left.
2. Secure the decorative panel to the ceiling brackets using commercially available mounting screws screwed into all of the mounting holes (4.5 mm diameter) in the ceiling brackets.
3. Secure the ceiling brackets to the ceiling.

### Ceiling bracket (system part)

- **Mounting bolt (commercially available)**
- **Decorative panel (providing by customer)**
- **Universal register (provided by customer)**
- **Washer**
- **Spring washer**
- **Nut**

### System parts

- **Ceiling bracket**
- **FS-G0509-E Control Switch**

### Table of dimension changes

<table>
<thead>
<tr>
<th>TYPE</th>
<th>A</th>
<th>B</th>
<th>Number of items</th>
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<td>180</td>
<td>180</td>
<td>6</td>
</tr>
</tbody>
</table>

### Mounting the Unit Body

1. Fit the hook eyelets on the unit body into the guide grooves in the wall mounting plate.
2. Slide them down along the grooves until they stop.
3. Install the unit body into the guide grooves in the wall mounting plate.
4. Secure the ceiling brackets to the ceiling using a mounting method appropriate to the material and structure of the ceiling. If the customer supplies decorative panels, the installation will be even more attractive.
5. Determine the mounting angle of the unit opening in five steps to approximately 10° on the indoor and outdoor sides.
6. Tilt the unit body so that the outflow opening is approximately 10° on the indoor and outdoor sides.
7. To orient the Air Curtain straight down, use the angle adjustment screws to secure it in the center position.
8. If there is a wall to the side of the Air Curtain, the ceiling brackets must be at least 78 mm from the wall. Otherwise, it will not be possible to mount the Air Curtain. Mounting the ceiling brackets and those of the next must be at least 156 mm.
9. Place the control switch on the wall. Otherwise it will not be possible to mount the Air Curtain.
10. A switch of the configuration shown in the figure below, or the optional FS-04SW-E control switch is necessary if speed adjustment is required.

### Electrical Work

- **Electrical work should be performed by a contractor specializing in this type of work.**
- **Power supply cables with a capacity appropriate to the current value of the Air Curtain (or, if multiple units are used, the total current of the Air Curtains) should be used for the electrical lines.**
- **This unit requires the use of a control switch.**
- **A switch of the configuration shown in the figure below, or the optional FS-04SW-E control switch is necessary if speed adjustment is required. This switch must have a minimum contact separation of 3 mm in all poles.**
- **A power ON/OFF switch (2-pole) is required for operation at high/low speed.**
- **When selecting a motor circuit breaker, use a value of 1.2 to 1.5 times that of the maximum load current listed in the specifications as a rule of thumb.**
- **The total current value for the product's terminal panel should not exceed 5 A.**
- **The contact capacity should be greater than the total operating current of all the connected Air Curtain units, and the operation coil current should not exceed 15A (switch capacity).**
- **The total current value for the product's terminal panel should not exceed 5 A.**

### Wiring method

1. Mount the round contact terminals onto the end of the power cord.
2. Remove the cover of the terminal panel, which is obtained by customer.
3. Connect the power cord to the terminal panel.
4. Screw the cover of the terminal panel (which was removed earlier) back on.

### Notes

- **Align the screw holes on the unit body with the angle of the adjustment screws and then tighten them. Otherwise the screw heads could be crushed. making adjustment impossible.**
- **The decorative panel should not weigh more than 6 kg.**
- **The decorative panel should not weigh more than 6 kg.**
- **The product may be installed vertically. Take care regarding the orientation of the unit body and follow the instructions for wall mounting.