## Photo



## Descriptions

Enable to connect the MA remote controller.
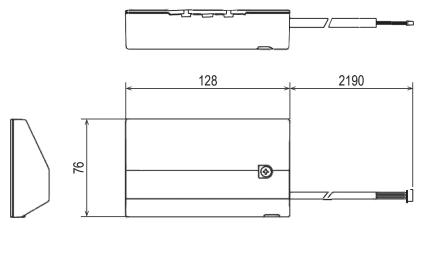
## Applicable Models

- MSZ-RW25,35,50VG
- MSZ-LN18,25,35,50,60VG2W,V,R,B
- MSZ-FT25,35,50VG
- MSZ-AP15,20VG
- MSZ-AP25,35,42,50,60,71VG
- MSZ-EF18,22,25,35,42,50VGW,B,S
- MSZ-BT20,25,35,50VG
- MSZ-HR25,35,42,50,60,71VF
- MSZ-DW25,35,50VF
- MSY-TP35,50VF
- MSZ-FH25,35,50VE2
- MSZ-SF15,20VA
- MSZ-SF25,35,42,50VE3
- MSZ-GF60,71VE2
- MSZ-WN25,35VA
- MSZ-DM25,35VA
- MFZ-KT25,35,50,60VG
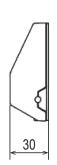- MFZ-KW25,35,50,60VG
- MLZ-KP25,35,50VF

## Specifications

| Power | | 12V DC (supplied from indoor unit) |
|---|---|---|
| Operating conditions | | Indoor only (ambient temperature: 0 to 40°C, no condensation) |
| Connection of MA smooth remote controller / MA deluxe remote controller | Communication cable | 2-wire (recommended: optional PAC remote controller cable PAC-YT81HC) |
| | Communication cable distance | Max. 10m |
| Indoor unit connecting cable | | Dedicated 5-wire cable |
| Weight | | 180g (including indoor unit connecting cable) |

## Dimensions

Unit : mm



128    2190

76

30

OPTIONAL PARTS

INDOOR UNIT

# How to Use / How to Install

# 1. Before Installation

## 1.1.  How to Use the MA Interface

■ **Functions**

**Use as wired remote controller (Fig. 1-1)**

You can use the MA remote controller as a wired remote controller.
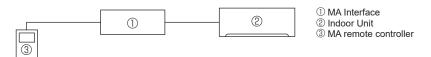
■ **Sample System Con iguration**



① MA Interface
② Indoor Unit
③ MA remote controller

**Fig. 1-1**

## 1.2.  Parts

Before installing the unit, make sure that you have all the necessary parts.

| | Accessory | | | | | | |
|---|---|---|---|---|---|---|---|
| ❶ | Interface unit [with connecting cable (5-core) and screw] | | 1 | ❺ | Fasteners (for joining the wires) | | 3 |
| ❷ | Mounting cord clamps | | 1 | ❻ | Screws for mounting 4 x 16 (Use them to fix the cord clamp ❷) | | 1 |
| ❸ | Screws for mounting 3.5 × 12 (Use them to fix the interface holder ❼) | | 2 | ❼ | Interface holder | | 1 |
| ❹ | Cable ties | | 3 | | | | |

| | Item to be Prepare at the Installation Site | |
|---|---|---|
| Ⓐ | Remote control cable (for connecting the MA Remote Controller) | 2-core sheath cable 0.3 mm$^2$ to 1.25 mm$^2$* [AWG 22 to 16]* |

\* Please use cable with supplementary insulation.
  Use wires which have insulation more than the max. voltage.
  Max. voltage is defined according to the law of the country where the interface is used.

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OPTIONAL PARTS

INDOOR UNIT

# 2. Connecting the MA Interface to Indoor Unit

● Connect the interface unit ❶ and the indoor control board of a room air conditioner using the connecting cable (5-core) that comes with the interface unit ❶.
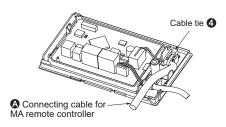
Make sure to wire and shield the cable so that the customer does not contact it.

Thin part of the connecting cable

Room air conditioner
Indoor controller board

CN105 (CN92)

Interface unit ❶

Connecting connector

Thick part of the connecting cable

Connect the connecting cable (5-core) that comes with the interface unit ❶ to the connector CN105 on the indoor control board of a room air conditioner.

⚠ Warning

Securely fix the connecting cable in the designated place. Failure to do so may cause an electric shock, fire, or malfunction.

● The connecting cable (5-core) connected to a room air conditioner should be wired according to the room air conditioner installation manual.

Notes
• Extending or shortening the connecting cable (5-core) that comes out of the interface unit ❶ cause it to malfunction. Also, keep the connecting cable (5-core) as far as possible away from the electrical wires and ground wire. Do not bundle them together.
• To prevent the board from being damaged by static electricity, always remove static electricity before starting work.

# 3. Connecting the MA Interface with each system

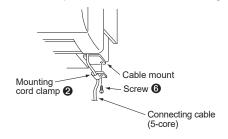(For details on each system, see the relevant instruction manual.)

● Fasten the cable tie ❹ as shown in the figure to prevent undesirable movement of the connecting cable.

Cable tie ❹

Ⓐ Connecting cable for MA remote controller

● The connecting cable (5-core) connected to a room air conditioner should be mounted at the room air conditioner or its vicinity.

If the screw for the cable mount of the room air conditioner cannot be used, replace with the screw for mounting ❻.

Cable mount

Mounting cord clamp ❷

Screw ❻

Connecting cable (5-core)

Note
When using a thick connecting cable or two connecting cables, you can broaden the hole on the interface unit using a nipper.
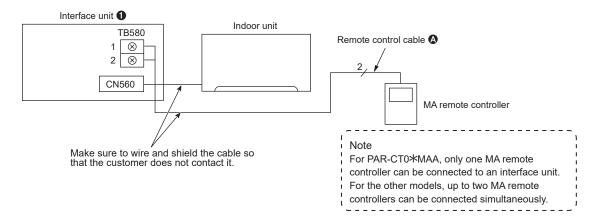After broadening the hole, use a file to rub the edge on the hole to prevent the cables from being damaged.

Notes
• If the connecting cable is not securely mounted, the connector may come off, break, or malfunction.
• The dip switch (SW500) and the rotary switch (SW580) on the interface unit ❶ do not operate if they are not set correctly.

●Conduct the settings of the interface unit ❶ dip switch (SW500) and rotary switch (SW580) before turning on the power.

OPTIONAL PARTS

INDOOR UNIT

## 3.1. Use as a Wired Remote Controller (Using the MA Remote Controller)

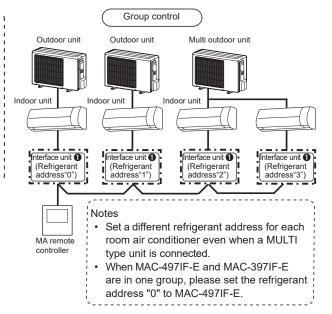■ **Connecting the SYSTEM CONTROL Interface to MA remote controller**

A room air conditioner can be operated with the wired remote control.



**Note**
For PAR-CT0✱MAA, only one MA remote controller can be connected to an interface unit.
For the other models, up to two MA remote controllers can be connected simultaneously.

- To connect with the MA remote controller, connect the MA remote control cable ❶ with TB580. (It is unpolarized.)
- When more than one unit of room air conditioner is operated in a group, make a cross wire connection at TB580 with the MA remote control cable ❶.
- The MA remote controller can carry out simultaneous control of up to 16 sets of room air conditioners.
- Up to two MA remote controllers can be connected in one group.
  However, up to one can be connected when using PAR-CT0✱MA.
- Wiring length from the interface at the refrigerant address "0" to the MA remote controller should be less than 10 m [33 ft.].
- To operate the room air conditioner in a group, make the total length of wiring for the MA remote controller less than 50 m [164 ft.].

**Notes**
- Be sure to set the "Auto Heating/Cooling Display Setting" of the MA remote controller OFF before use.
  * For details on the "Auto Heating/Cooling Display Setting", refer to the MA remote controller instruction manual.
  * When the "Auto Heating/Cooling Display Setting" is ON, the remote controller display may differ from the actual operating status of the unit.
- A test run cannot be initiated using the test run switch on the MA remote controller.
- Group control with CITY MULTI is unable.



**Notes**
- Set a different refrigerant address for each room air conditioner even when a MULTI type unit is connected.
- When MAC-497IF-E and MAC-397IF-E are in one group, please set the refrigerant address "0" to MAC-497IF-E.

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■ **Setting when MA remote controller is connected**

●Setup of an refrigerant address

| SW No. | Refrigerant address | Comments |
|---|---|---|
| SW580 | Address can be set from 0 to 15  | • Set the refrigerant address of the unit that supplies electric power to the MA remote controller to "0." <br> • When carrying out group operation of two of more room air conditioners, set different refrigerant addresses within the group. <br> *A to F of the rotary switch correspond to refrigerant addresses 10 to 15. |

●Setup of Room temperature detector position

| Functions | SW No. | Operating details |
|---|---|---|
| Room temperature detector position | SW500  ON <br>  <br> OFF | SW500-2: OFF <br> • Temperature detected by suction temperature sensor of the unit is made to be room temperature. <br> SW500-2: ON <br> • Temperature detected by temperature sensor of the remote controller is made to be room temperature. |

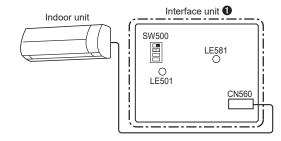●Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)

| Functions | SW No. | Operating details |
|---|---|---|
| P series is mixed in the same group | SW500  ON <br>  <br> OFF | SW500-1: OFF <br> • Set to OFF when P series is not mixed in the same group. <br> SW500-1: ON <br> • Set to ON when P series is mixed in the same group. |

OPTIONAL PARTS

INDOOR UNIT

# 4. Dip Switch Details

■ **SW500 - Function Setting**

| SW No. | Functions | OFF(Factory setting) | ON | Comments |
|---|---|---|---|---|
| SW500-1 | Setting when P series is mixed in the same group (only when running group operation using the MA remote controller) | No mixture | Mixed | |
| SW500-2 | Room temperature detector | Indoor unit | MA remote controller | |
| SW500-3 | Interface status display switching | LE501: Confirmation of communications with indoor unit<br><br>LE581: Confirmation of supplying power to MA remote controller | LE501: Confirmation of communications with MA remote controller<br><br>LE581: Confirmation of supplying power to MA remote controller | |
| SW500-4 | Not in use | —<br>(Set to OFF) | — | |

# 5. Test Run (Check Operations)

You can check the status of the interface unit by the LED lamp on the interface unit ❶ board.



● Use the table below to check communications. If communications cannot be carried out normally, check that the relevant communications line is not disconnected from the connector or terminal box.
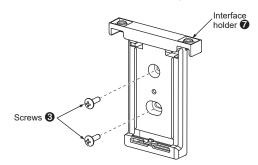
| Functions | SW No. | Operating details |
|---|---|---|
| Interface status monitor | SW500 ON / OFF (switch 3 / 4) | SW500-3: OFF<br>● LE501 (Orange): When blinking at an interval of about 1 second, the Interface unit is communicating normally with the room air conditioner. When the lamp is off, the Interface unit is not communicating normally with the room air conditioner.<br>SW500-3: ON<br>● LE501 (Orange): When blinking at an interval of about 10 second, the Interface unit is communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller.<br>* LE581 (Orange) displays the following status irrespective whether SW500-3 is on or off.<br>● When lit, power is supplied to the MA remote controller from the Interface unit ❶. When extinguished, power is not supplied. |

OPTIONAL PARTS

INDOOR UNIT

# 6. Mounting the MA Interface Unit

When the interface is mounted to the back-side dent of the indoor unit, it should not touch the piping and the drain hose of the indoor unit.
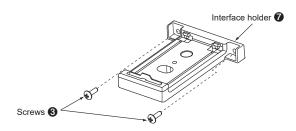
The Interface unit should be placed in a location where the connecting cable from the interface can reach an indoor unit.

Wiring for remote controller cable shall be apart (5 cm or more) from power source wiring so that it is not influenced by electric noise from power source wiring.

The device will not function properly if the connecting cable is extended, so the connecting cable should not be extended.

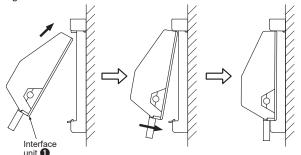Mount the interface unit securely to a pillar or wall using 2 or more screws.

■ Using the interface holder ❼

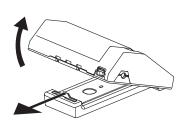1. Mount the Interface holder ❼ to a pillar or wall using 2 mounting screws ❸.

Interface holder ❼

Screws ❸

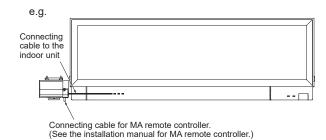● You can mount the holder on the level.

Interface holder ❼

Screws ❸

2. Insert the top of the interface unit ❶ into the top claws of the holder, then fix the unit in the holder by pushing it against the wall to click the bottom of the unit into the bottom claw of the holder.

<Mounting the interface unit>

Interface unit ❶

<Dismounting the interface unit>

e.g.

Connecting cable to the indoor unit

Connecting cable for MA remote controller.
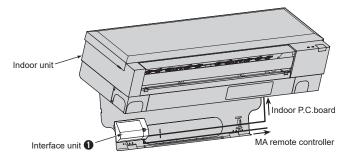(See the installation manual for MA remote controller.)

Note
Mount the holder and interface unit beside the indoor unit so that a user cannot touch the connecting cable to the indoor unit.

■ Mounting the interface unit behind the indoor unit

Indoor unit

Indoor P.C.board

Interface unit ❶

MA remote controller

Note
Mount the interface unit at the left side behind the indoor unit as shown in the figure above so that it does not come to contact with the piping and the drain hose of the indoor unit.
If the indoor unit is connected to the outdoor unit through the piping from the left side of the indoor unit, do not mount the interface unit behind the indoor unit.

OPTIONAL PARTS

INDOOR UNIT

# 7. Notes Regarding Use

The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

This Interface unit ❶ operates room air conditioners using the controls of a P series, but there are several limitations imposed as a result of the functional differences between room air conditioners and packaged air conditioners.

1. When operating the system using a MA Remote Controller these operations will not appear on the display of the wireless remote controller.

2. When original dehumidification mode is set with the remote controller attached to the room air conditioner, "Dry" is displayed because there is no mode corresponding to dehumidification on the MA remote controller.

3. Because the temperature range of the room air conditioners is broader than a MA Remote Controller when the room air conditioners is set to lower than 17 ℃ (63 ℉) or higher than 30 ℃ (87 ℉), the temperature display on the MA Remote Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16 ℃ (61 ℉), the display on a MA Remote controller may read "17 ℃ (63 ℉)").

4. Timer operations should be set using only the remote controller that came with the room air conditioners or the MA Remote Controller. If both are used to set the timer to the same time, the timer will not function properly.

5. A part of functions including the operation of horizontal air blow direction cannot be used from the MA remote controller.

# 8. Specifications

| Input voltage | 12 V ⎓ |
|---|---|
| Power consumption | 2 W |
| Input current | 0.15 A |

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