# AIR CONDITIONER OPTIONAL PARTS

## External control set

PART NO. 9374983018-02

# INSTALLATION MANUAL

For authorized service personnel only.

## Contents



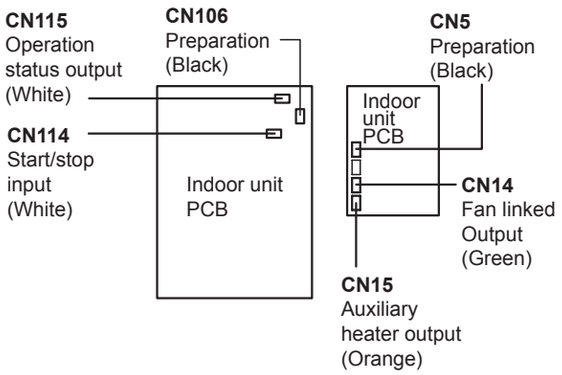
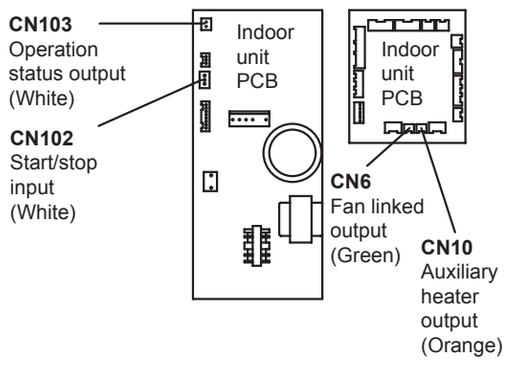
## 1. SAFETY PRECAUTIONS

| ⚠ WARNING | This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user. |
|---|---|
| • When installing each wire, please thoroughly read this manual. | |
| • Before installation be sure that all sources of power have been shut off.<br>There is a danger of electric shock. | |
| • Use the voltage as described in the signal specifications.<br>Using voltage of other specifications may result in malfunction and erroneous operation of the air conditioner. | |

| ⚠ CAUTION | This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property. |
|---|---|
| • When connecting the wires, install the insulating tube or other insulator on the connection. | |
| • Do not pull on the connectors with too much force. | |

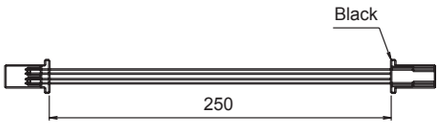
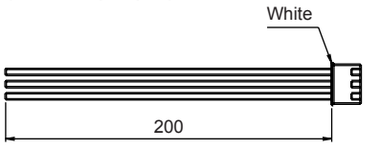
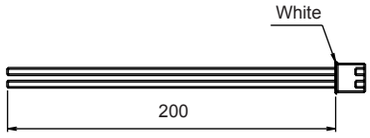
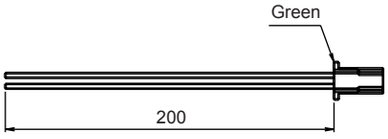
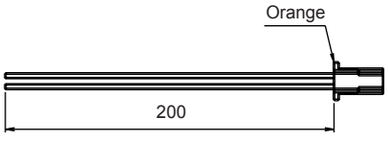
## 2. ABOUT THE UNIT

• SETTING depends on the PCB TYPE of the indoor unit. Check the PCB TYPE in the table below and set it up.

<table>
<tr><th></th><th>TYPE A</th><th>TYPE B</th></tr>
<tr><td>PCB LAYOUT</td><td> 
</td><td> 
</td></tr>
<tr><td></td><td>SEE 3.1.Setting (TYPE A)</td><td>SEE 3.2.Setting (TYPE B)</td></tr>
</table>

## 2.1. Accessories

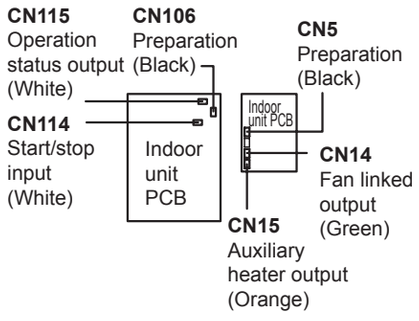
• The following installation parts are supplied. Use them as required.

| Name and shape | Q'ty | Description | Connector | |
|---|---|---|---|---|
| | | | TYPE A | TYPE B |
| Installation manual  | 1 | This manual | | |
| Wire (Preparation)   | 1 | **Preparation**<br>When the external input/output is used, connect the external signal wire. | CN106<br>CN5 | Not used |
| Wire (Start/stop input)   WIRE TYPE : AWG22 UL1430 | 1 | **Start/stop input**<br>You can control air conditioner on/off by external input. | CN114 | CN102 |
| Wire (Operation status output)   WIRE TYPE : AWG22 UL1430 | 1 | **Operation status output**<br>You can display air conditioner on/off by external output. | CN115 | CN103 |
| Wire (Fan linked output)   WIRE TYPE : AWG24 UL1430 | 1 | **Fan linked output**<br>You can control sub fan by synchronization with fan operation of indoor unit. | CN14 | CN6 |
| Wire (Auxiliary heater output)   WIRE TYPE : AWG24 UL1430 | 1 | **Auxiliary heater output**<br>You can control electrical heater (booster) by synchronization with heating operation.<br>**Only Duct type air conditioner.** | CN15 | CN10 |

# 3. SETTING

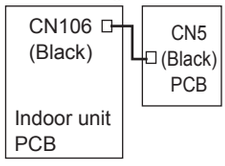
## 3.1. Setting (TYPE A)

**PCB LAYOUT**




### 3.1.1. Preparation

• When the external input/output is used, connect the external signal wire as shown in the figure.




### 3.1.2. Start/stop input setting

• You can control air conditioner ON/OFF operation by external input.

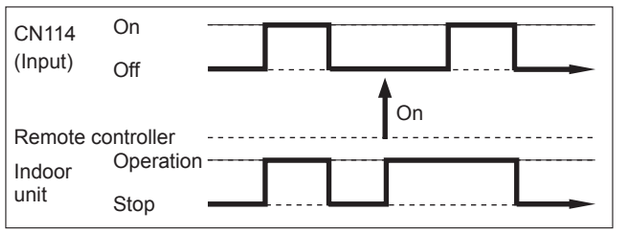
• You can select either Edge and Pulse by changing the DIP-switch on the indoor unit.

| | NO. | SW state | |
|---|---|---|---|
| | | OFF | ON |
| **SW2 DIP-Switch** | 2 | Edge | Pulse |

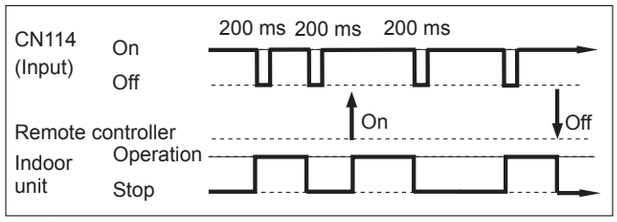
## SIGNAL SPECIFICATION

- No voltage
- ON/OFF continuous signal
- Contact capacity : DC12V 10mA

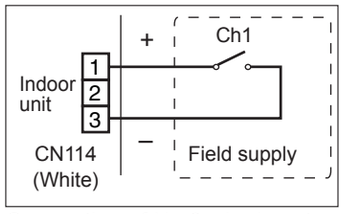
**Edge signal**




**Pulse signal**




**Setting example**




Connection of No.2 wire is not required.

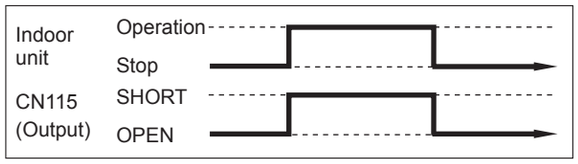
### 3.1.3. Operation status setting

- You can display air conditioner ON/OFF operation by external output.

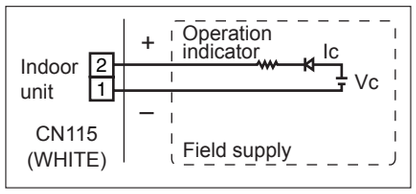
## SIGNAL SPECIFICATION

- No voltage contact.
- Contact capacity : Max. DC24V 10mA to 1A or less

**Output signal**



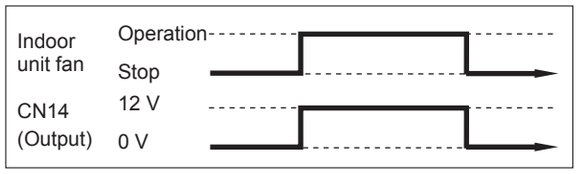

**Setting example**



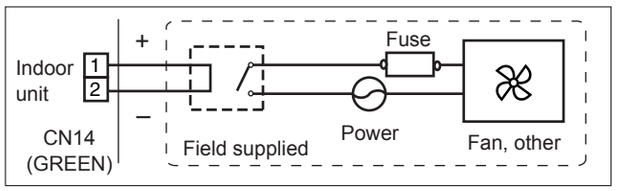

### 3.1.4. Fan linked output setting

- You can control sub fan by synchronization with fan operation of indoor unit.

**Output signal**




**Setting example**



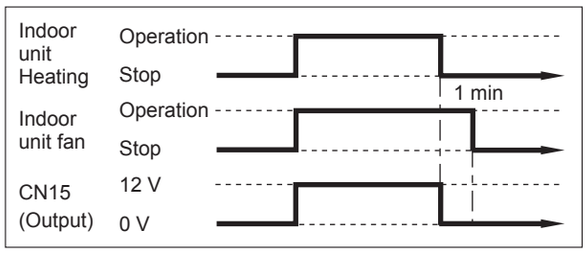

### 3.1.5. Auxiliary heater output setting (Only duct type air conditioner)

- You can control electrical heater (booster) by synchronization with heating operation.
- When temperature is -10 to -3 degrees from set point, external electrical heater is ON.
- When temperature is -1 degree from set point, external electrical heater stops.

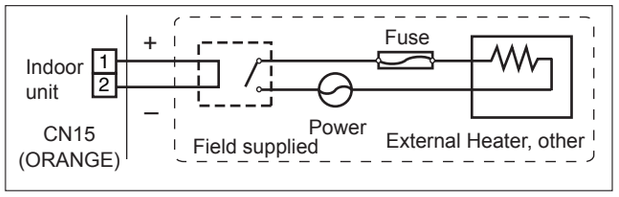
## JUMPER WIRE (INDOOR UNIT)

- This is used to continue indoor unit fan operation for 1 minute after thermo OFF in heating mode.
- 1 minute delay control set by cutting JM3 on PCB.

**Output signal**

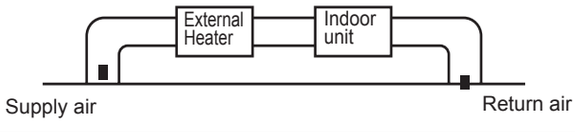



**Setting example**



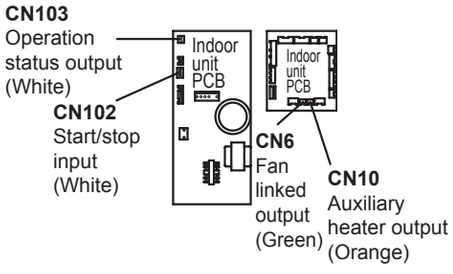

**⚠ CAUTION**

Please locate external a heater between the indoor unit and the ductwork.
Please be sure to use delay control of a fan.




## 3.2. Setting (TYPE B)

**PCB LAYOUT**



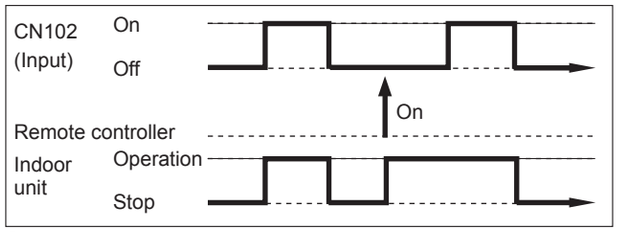
### 3.2.1. Start/stop input setting

- You can control air conditioner ON/OFF operation by external input.

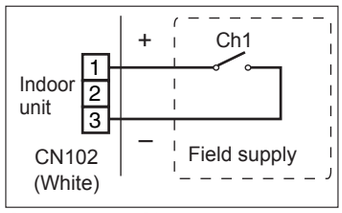
**SIGNAL SPECIFICATION**

- No voltage
- ON/OFF continuous signal
- Contact capacity : DC12V 10mA

**Input signal**




**Setting example**




Connection of No.2 wire is not required.

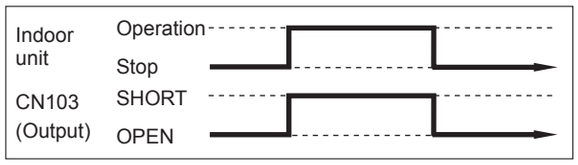
### 3.2.2. Operation status setting

- You can display air conditioner ON/OFF operation by external output.

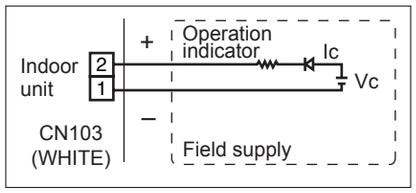
**SIGNAL SPECIFICATION**

- No voltage contact.
- Contact capacity : Max. DC24V 10mA to 1A or less

**Output signal**



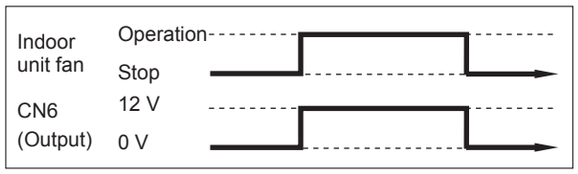

**Setting example**



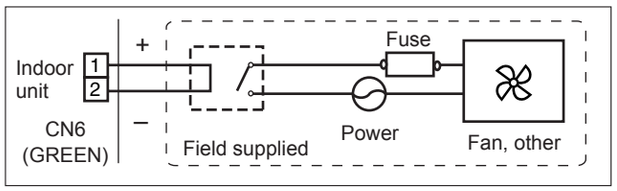

### 3.2.3. Fan linked output setting

- You can control sub fan by synchronization with fan operation of indoor unit.

**Output signal**




**Setting example**



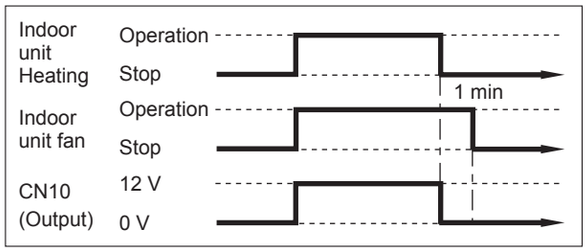

### 3.2.4. Auxiliary heater output setting (Only duct type air conditioner)

- You can control electrical heater (booster) by synchronization with heating operation.
- When temperature is -10 to -3 degrees from set point, external electrical heater is ON.
- When temperature is -1 degree from set point, external electrical heater stops.

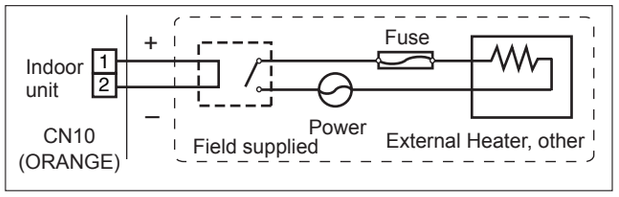
**JUMPER WIRE (INDOOR UNIT)**

- This is used to continue indoor unit fan operation for 1 minute after thermo OFF in heating mode.
- 1 minute delay control set by cutting JM3 on PCB.

**Output signal**

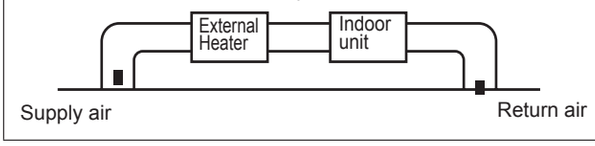



**Setting example**




**⚠ CAUTION**

Please locate external a heater between the indoor unit and the ductwork.
Please be sure to use delay control of a fan.




## 4. CONNECTING TO EXTERNAL DEVICE

- Connect the tip of the wire to the external equipment.
- If necessary, extend it with locally procured wire.
- Ensure that the connecting part is insulated for protection.