



## External input and output PCB

# INSTALLATION MANUAL

For authorized service personnel only.

## 1. SAFETY PRECAUTIONS

- Hand this manual to the customer to keep for future use, such as relocating or repairing the product.

<b>⚠ WARNING</b>	Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.
When installing the unit, please read this manual thoroughly.	
Before installation, be sure that all sources of power have been shut off. There is a danger of electric shock.	
Do not turn on the power until all installation works is complete.	
For the PCB and locally purchased parts, apply voltage indicated on specifications of parts. Application of unspecified voltage may result in failure or malfunction of air conditioner.	
<b>⚠ CAUTION</b>	Indicates a potentially hazardous situation that may result in minor or moderate injury or damage to property.
Do not pull on the connectors with too much force.	


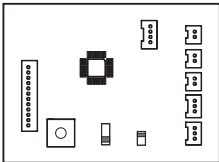


## 2. ABOUT THE UNIT

### 2.1. General

- This PCB is an adapter connecting indoor unit control PC board and local wiring for various controls (remote operations, operation status display, error status display), and fan operation status.

## 2.2. Parts and accessories

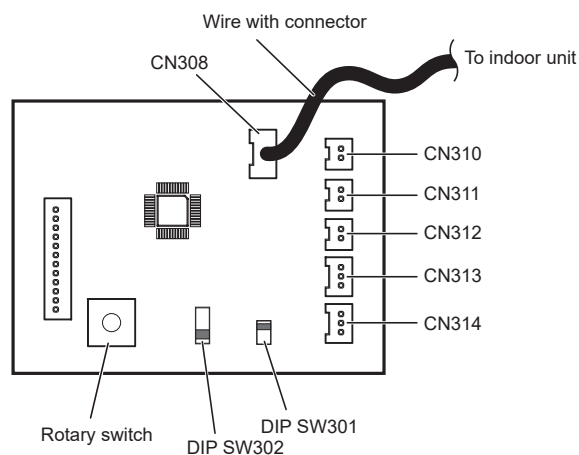
- The following installation parts are supplied. Use them as required.

Name and shape	Q'ty	Description
Installation manual 	1	This manual
External input and output PCB 	1	For various external input/output connections
Wire with connector 	1	For connecting the PCB
Cable tie 	1	For binding the wires

\* Depending on the indoor unit, the External input and output PCB box (option) is necessary for installation.

## 2.3. Connecting the PCB

Description of External input and output PCB



- Connection depends on the PCB type of the indoor unit. Refer to the installation manual of the indoor unit for details on how to connect to the indoor unit PCB.

## 3. SETTING

### 3.1. Connectable devices

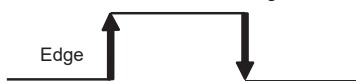
	External input/output	Connector	Input select	Input signal
External input	Operation/Stop	CN313/CN314	Dry contact/ Apply voltage	Edge/Pulse
	Forced thermostat off	CN313		Edge
External output	Operation status	CN310 CN311 CN312	—	—
	Error status			
	Indoor unit fan operation status			
	External heater output			

#### ■ Input signal type

The input signal type can be selected.

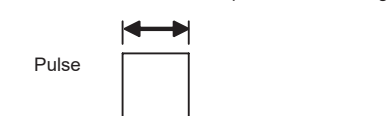
Signal type (edge or pulse) can be switched by the DIP SW302 on the External input and output PCB.

When DIP SW302 is on the "Edge" side.



When DIP SW302 is on the "Pulse" side.

The width of pulse must be longer than 200 msec.



### 3.2. External input

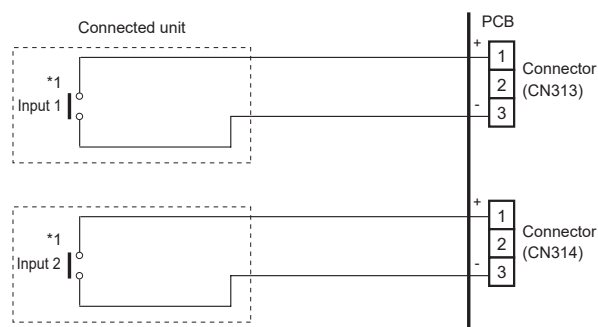
- "Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 150 m.
- The wire connection should be separate from the power cable line.

#### ■ Input select

Use either one of these types of terminals according to the application. (Both types of terminals cannot be used simultaneously.)

- Dry contact

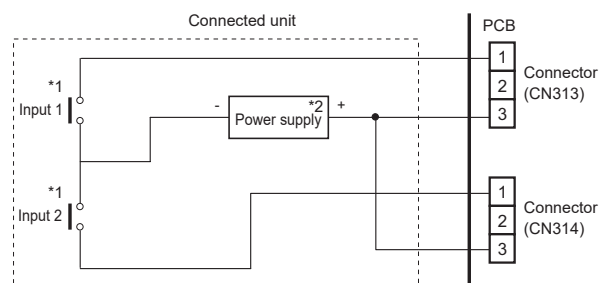
In case of internal power supply, set the DIP SW301 to "NON VOL" side.



\*1: The switches can be used on the following condition:  
DC 12 V to 24 V, 1 mA to 15 mA.

- Apply voltage

In case of external power supply, set the DIP SW301 to "VOL" side.



\*1: The switches can be used on the following condition:  
DC 12 V to 24 V, 1 mA to 15 mA.

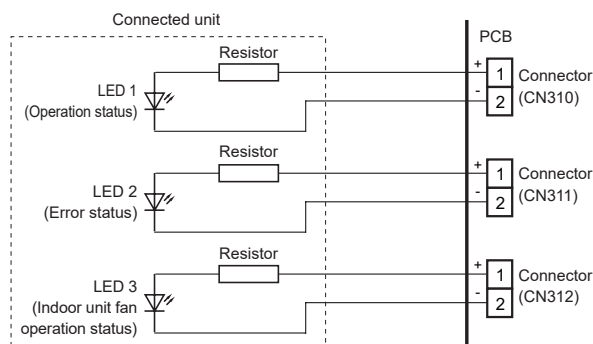
\*2: Make the power supply DC 12 V to 24 V 10 mA or more.

### 3.3. External output

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V $\pm$ 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to the technical manual.

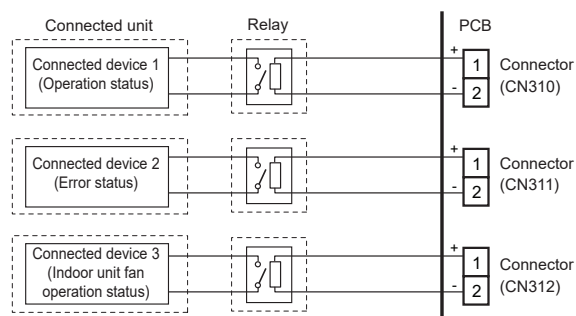
#### ■ When indicator or other components are connected directly

**Example:** Function setting 60 is set to "00".



#### ■ When connecting with a device equipped with a power supply

**Example:** Function setting 60 is set to "00".



#### Combination of external input and output

By combining the function setting of the indoor unit and rotary switch setting of the External input and output PCB, you can select various combinations of functions.

To set the function setting, refer to the installation manual of the indoor unit.

For details, please refer to the technical manual.

Combination examples of external input and output are as follows:

Mode	Rotary SW	External input			External output		
		1	2	Signal type	1	2	3
0-1	1	Operation/Stop	Not available	Edge	Operation/Stop	Error status	Indoor unit fan operation status
		Operation	Stop	Pulse			
0-2	2	Forced Thermostat OFF	Not available	Edge	Error status	Indoor unit fan operation status	External heater output
1 to 8	3 to 9, A	Available for USA Market Only ※For details regarding the settings, please check the technical manual.					
9	B	Forced Thermostat OFF	Not available	Edge	Operation/Stop	Indoor unit fan operation status	External heater output
10	C	Forced Thermostat OFF	Not available	Edge	Operation/Stop	Error status	External heater output
11	D	Forced Thermostat OFF	Not available	Edge	Operation/Stop	Indoor unit fan operation status	Error status

**NOTES:** Input of Operation/Stop depends on the setting of function setting 46 of the indoor unit.

00: Operation/Stop mode 1 (R.C. enabled)

01: (Setting prohibited)

02: Forced stop

03: Operation/Stop mode 2 (R.C. disabled)

