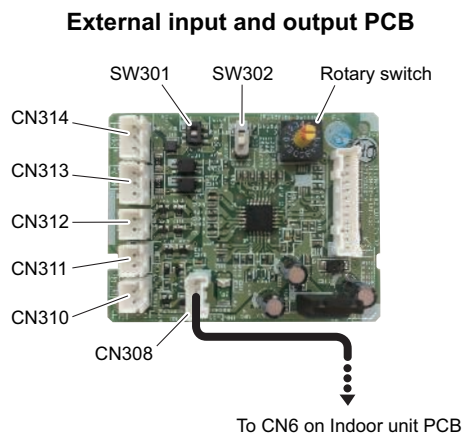


# 11-2. Wall mounted type (KGTB, 18-24KMTB, KETA, and KETA-B)



| PCB                                    | External input        | External output | Connector                        | Input select                  | Input signal |   |
|--|-----------------------|-----------------|----------------------------------|-------------------------------|--------------|---|
| External input and output (UTY-XCSXZ2) | Operation/Stop        | -               | CN313/<br>CN314                  | Dry contact/<br>Apply voltage | Edge/Pulse   |   |
|  | Forced stop           |                 | CN313                            |                               | Edge         |   |
|  | Forced thermostat off |                 |                                  |                               |              |   |
|  | -                     |                 | Operation status                 | CN310                         | -            | - |
|  |                       |                 | Error status                     | CN311                         |              |   |
|  |                       |                 | Indoor unit fan operation status | CN312                         |              |   |

**NOTE:** KETA, KETA-B: External input and output PCB cannot be used with Wireless LAN adapter simultaneously.

## External input

With using external input function, some functions on this product can be controlled from an external device.

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

### External input and output PCB

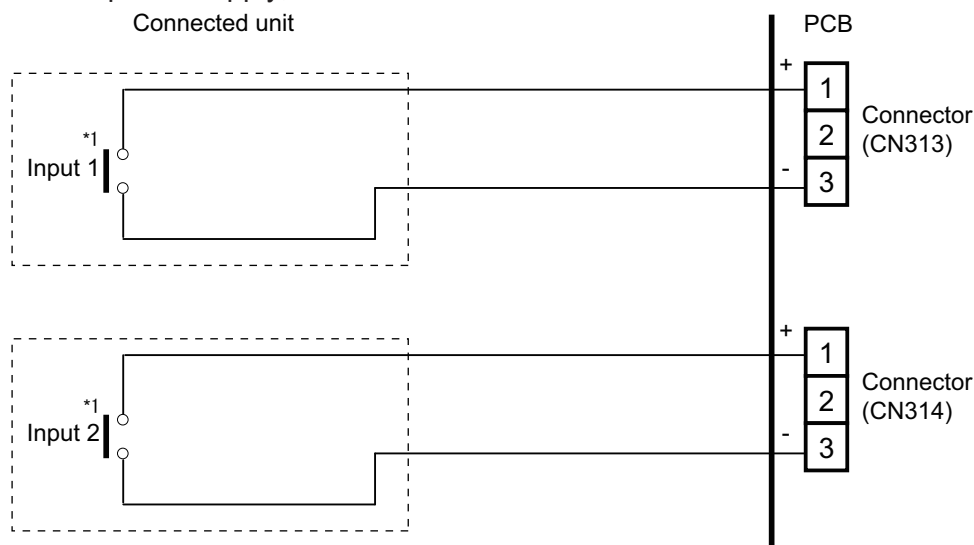
The indoor unit Operation/Stop can be set by using the input connector on the PCB.

#### Input select:

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

##### – Dry contact

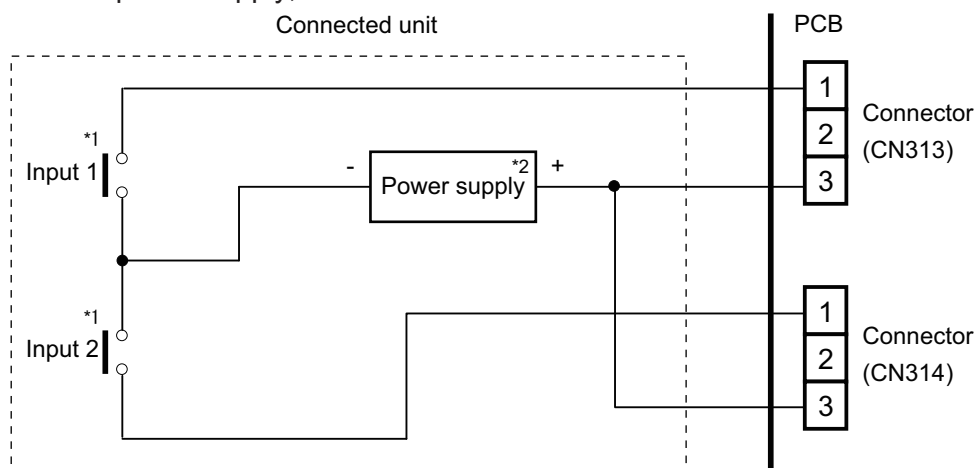
In case of internal power supply, set the slide switch of SW301 to "NON VOL" side.



\*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 slide switch of 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 to 24 V, 10 mA or more.

## External output

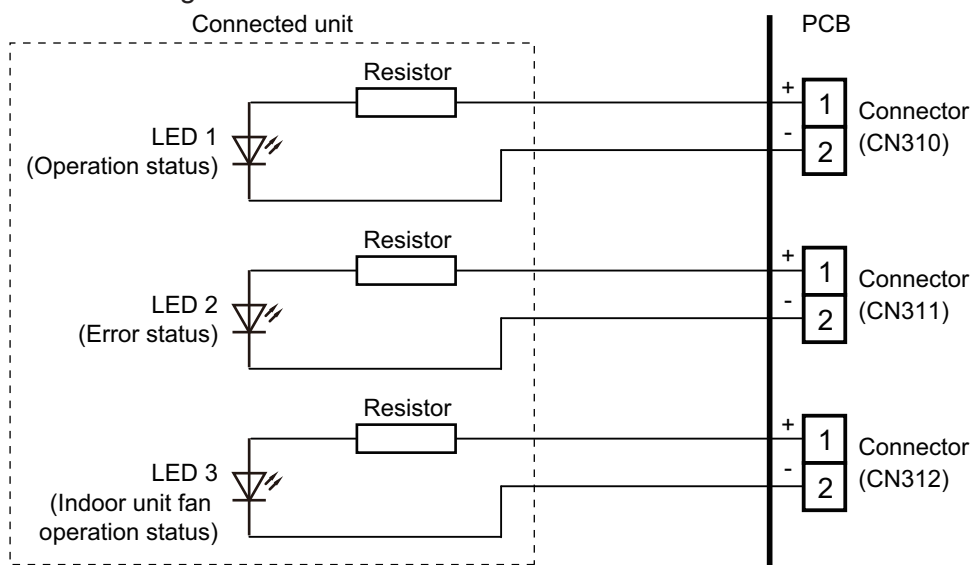
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

### External input and output PCB

- 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 ["Combination of external input and output"](#) on page 159.

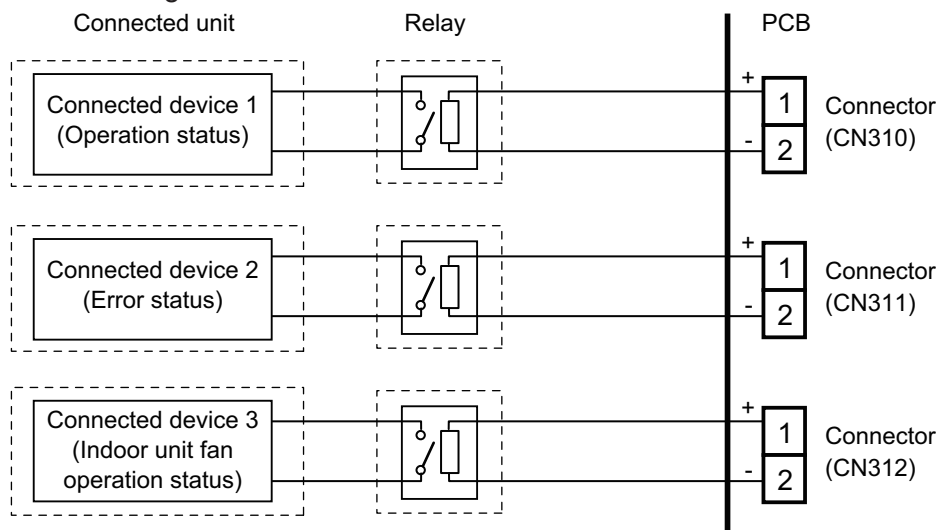
#### When indicator or other components are connected directly:

**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.

Combination examples of external input and output are as follows:

| Mode | Function setting | External input and output PCB (Rotary SW) | External input                |               |             |
|------|------------------|---|-------------------------------|---------------|-------------|
|      |                  |   | External input and output PCB |               |             |
|      |                  |   | CN313                         | CN314         | Signal type |
| 0-1  | 60-00            | 1   | Operation/Stop                | Not available | Edge        |
|      |                  |   | Operation                     | Stop          | Pulse       |
| 0-2  | 60-00            | 2   | Forced Thermostat OFF         | Not available | Edge        |
| 1—8  | 60-01 to 60-08   | 3 - 9, A                                  | (Setting prohibited)          |               |             |
| 9    | 60-09            | B   | Forced Thermostat OFF         | Not available | Edge        |
| 10   | 60-10            | C   | Forced Thermostat OFF         | Not available | Edge        |
| 11   | 60-11            | D   | Forced Thermostat OFF         | Not available | Edge        |

| Mode | Function setting | External input and output PCB (Rotary SW) | External output               |                                  |                                  |
|------|------------------|---|-------------------------------|----------------------------------|----------------------------------|
|      |                  |   | External input and output PCB |                                  |                                  |
|      |                  |   | CN310                         | CN311                            | CN312                            |
| 0-1  | 60-00            | 1   | Operation/Stop                | Error status                     | Indoor unit fan operation status |
| 0-2  | 60-00            | 2   | Error status                  | Indoor unit fan operation status | Not available                    |
| 1—8  | 60-01 to 60-08   | 3 - 9, A                                  | (Setting prohibited)          |                                  |                                  |
| 9    | 60-09            | B   | Operation/Stop                | Indoor unit fan operation status | Not available                    |
| 10   | 60-10            | C   | Operation/Stop                | Error status                     | Not available                    |
| 11   | 60-11            | D   | Operation/Stop                | Indoor unit fan operation status | Error status                     |

**NOTE:** Input of Operation/Stop depends on the setting of function setting 46.

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

01: (Setting prohibited)

02: Forced stop

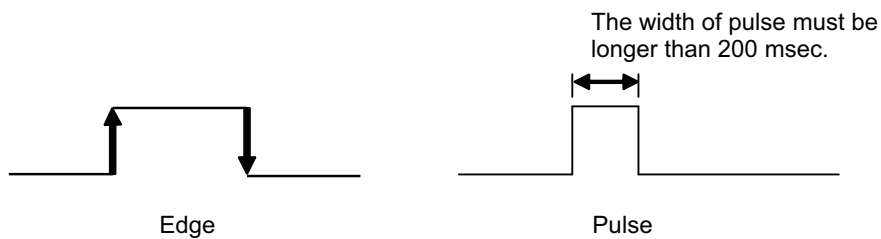
03: Operation/Stop mode 2 (R.C. disabled)

## ● Input signal type

### External input and output PCB:

The input signal type can be selected.

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



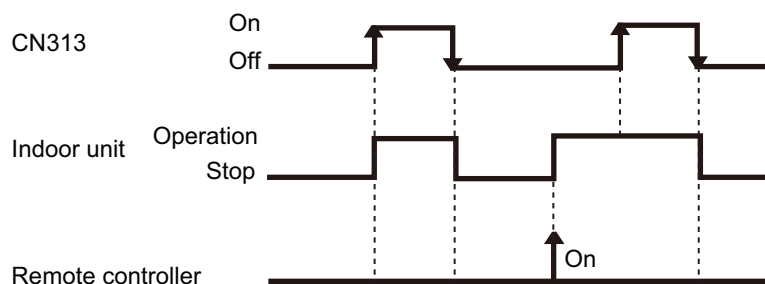
## ■ Details of function

### ● Control input function

- When function setting is "Operation/Stop" mode 1

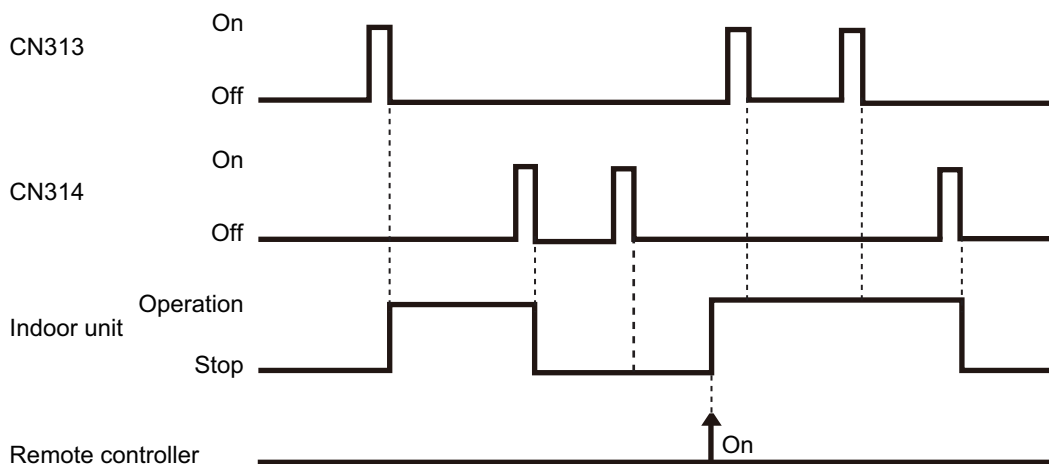
– In the case of "Edge" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command   |
|--------------------|--|-------------------------------|-------|--------------|-----------|
|                    |  | External input and output PCB | CN313 | Off → On     | Operation |
| 46-00              | 60-00 / 1                                  |                               |       | On → Off     | Stop      |



– In the case of "Pulse" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command   |
|--------------------|--|-------------------------------|-------|--------------|-----------|
|                    |  | External input and output PCB | CN313 | Pulse        | Operation |
| 46-00              | 60-00 / 1                                  |                               | CN314 | Pulse        | Stop      |



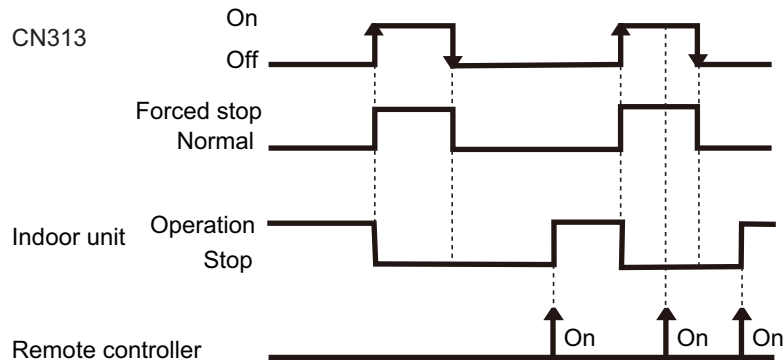
#### NOTES:

- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.

• When function setting is "Forced stop" mode

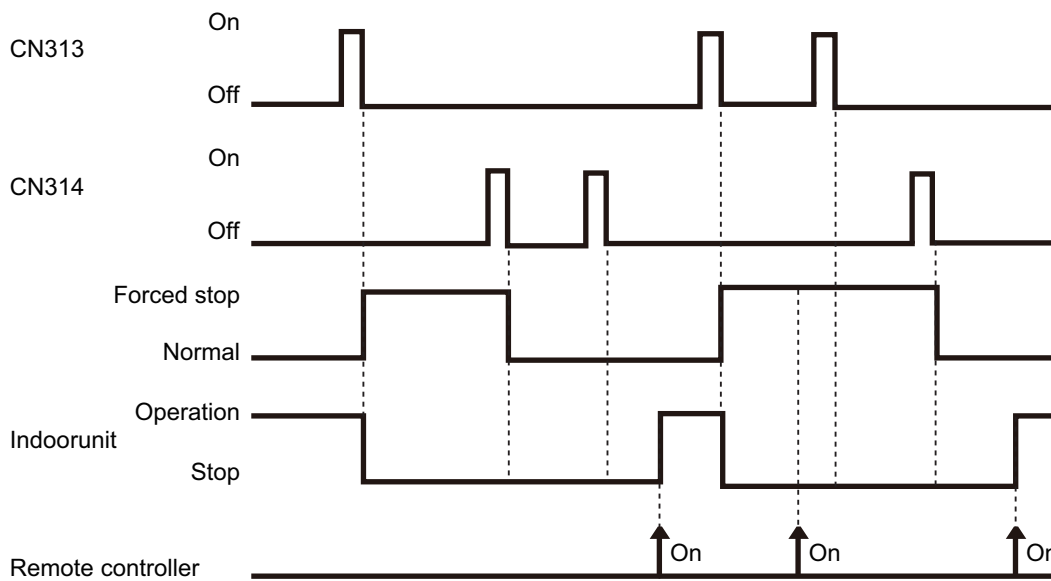
– In the case of "Edge" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command     |
|--------------------|--|-------------------------------|-------|--------------|-------------|
|                    |  | External input and output PCB | CN313 | Off → On     | Forced stop |
| 46-02              | 60-00 / 1                                  |                               |       | On → Off     | Normal      |



– In the case of "Pulse" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command     |
|--------------------|--|-------------------------------|-------|--------------|-------------|
|                    |  | External input and output PCB | CN313 | Pulse        | Forced stop |
| 46-02              | 60-00 / 1                                  |                               | CN314 | Pulse        | Normal      |



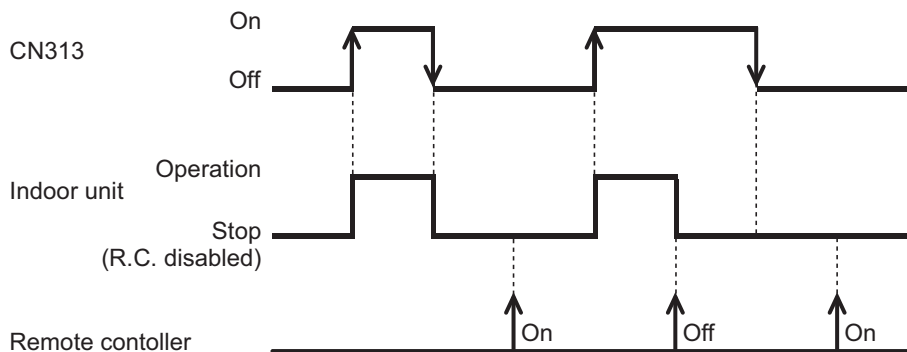
**NOTES:**

- When the forced stop is triggered, indoor unit stops and Operation/Stop operation by the remote controller is restricted.
- When forced stop function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

• When function setting is "Operation/Stop" mode 2

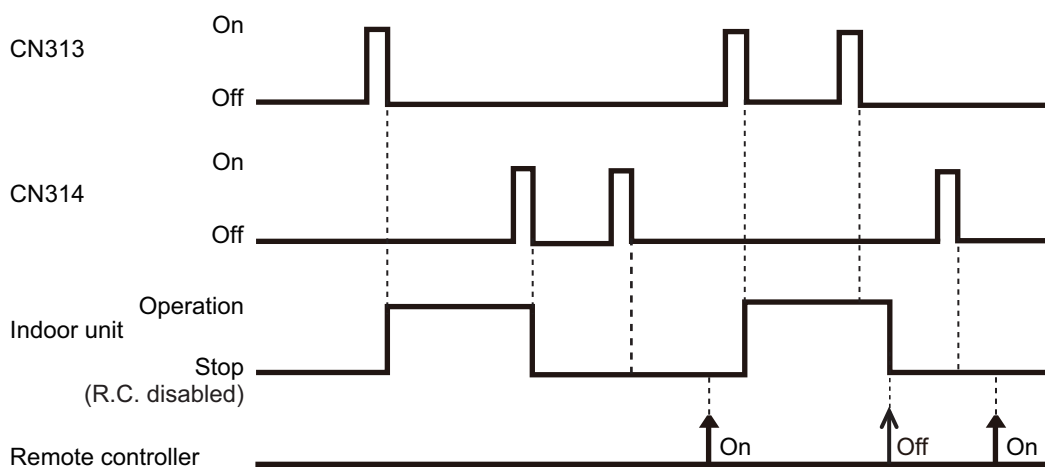
– In the case of "Edge" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command              |
|--------------------|--|-------------------------------|-------|--------------|----------------------|
| 46-03              | 60-00 / 1                                  | External input and output PCB | CN313 | Off → On     | Operation            |
|                    |  |                               |       | On → Off     | Stop (R.C. disabled) |



– In the case of "Pulse" input:

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command              |
|--------------------|--|-------------------------------|-------|--------------|----------------------|
| 46-03              | 60-00 / 1                                  | External input and output PCB | CN313 | Pulse        | Operation            |
|                    |  |                               | CN314 | Pulse        | Stop (R.C. disabled) |

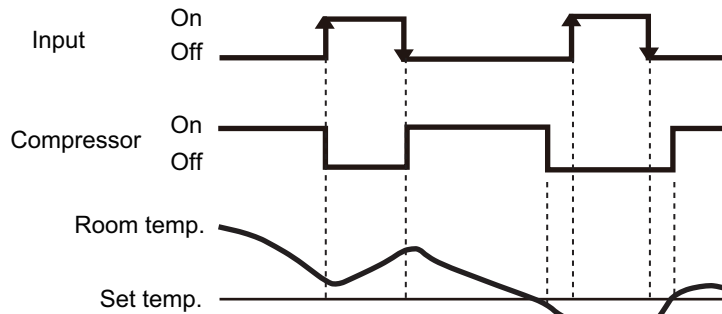


**NOTE:** When "Operation/Stop" mode 2 function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.



• Forced thermostat off function

| Function setting / | Rotary SW on External input and output PCB | External input                |       | Input signal | Command          |
|--------------------|--|-------------------------------|-------|--------------|------------------|
|                    | 60-00 / 2<br>60-09 / B<br>60-10 / C        | External input and output PCB | CN313 | Off → On     | Thermostat off   |
|                    |  |                               |       | On → Off     | Normal operation |

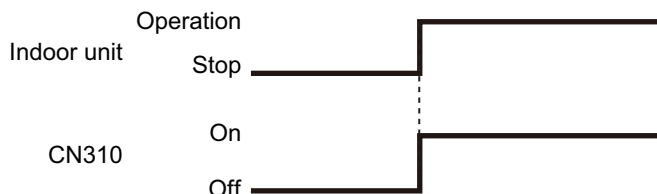


## ● Control output function

### • Operation/Stop status

| Function setting / | Rotary SW on External input and output PCB | External output               |       | Output signal | Command   |
|--------------------|--|-------------------------------|-------|---------------|-----------|
| 60-00 / 1          |  | External input and output PCB | CN310 | Off → On      | Operation |
|                    |  |                               |       | On → Off      | Stop      |

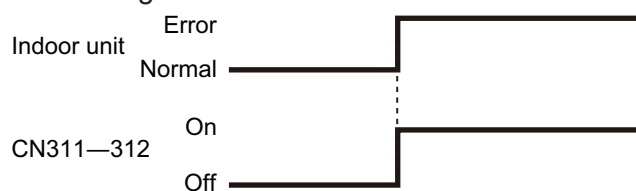
The output is low when the unit is stopped.



### • Error status

| Function setting / | Rotary SW on External input and output PCB | External output               |       | Output signal | Command |
|--------------------|--|-------------------------------|-------|---------------|---------|
| 60-00 / 1          |  | External input and output PCB | CN311 | Off → On      | Error   |
|                    |  |                               |       | On → Off      | Normal  |

The output is ON when an error is generated for the indoor unit.



### • Indoor unit fan operation status

| Function setting / | Rotary SW on External input and output PCB | External output               |       | Output signal | Command  |
|--------------------|--|-------------------------------|-------|---------------|----------|
| 60-00 / 1          |  | External input and output PCB | CN312 | Off → On      | Fan run  |
|                    |  |                               |       | On → Off      | Fan stop |

| Output signal     | Condition  |
|-------------------|--|
| On<br>Low → High  | The indoor unit fan is operating.  |
| Off<br>High → Low | The fan is stopped or during cold air prevention.<br>During thermostat off when in dry mode operation. |

