<ORIGINAL>

GB **WT11107X01**

Air-Conditioners For Building Application

<Input> signal adapter for ventilation interlock — PAC-SC46NA-E

Installation Manual

This installation manual describes only the connection of the <Input> signal adapter for ventilation interlock to the heat source unit of CITY MULTI air conditioner series.
This part is a wiring member to connect the external circuit (locally procured) to the board on the heat source unit.
You can change the settings so that the unit can be operated only when a signal is input from the local instrumentation.
When continuously implementing mechanical ventilation in accordance with UL60335-2-40/IEC60335-2-40, if the airflow of the mechanical ventilation being conducted on-site exceeds the ventilation amount required by regulations, please turn ON the input to allow the unit to operate. If the airflow falls below the amount required by regulations, please turn OFF the input to make the unit inoperable.
According to the requirements of UL60335-2-40/IEC60335-2-40, if the ventilation airflow decreases, the unit must stop within 10 seconds and output a signal indicating that the airflow has dropped.
For details of compatible models, connection method, and setting method, refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagram, etc.
For your safety, be sure to read firstly "1 Safety Precaution" described below thoroughly and then install the PAC-SC46NA-E.

1 Safety Precaution

- The following two symbols are used to denote dangers that may be caused by incorrect use.

⚠ **WARNING**	This symbol denotes what could lead to serious injury or death if your misuse the PAC-SC46NA-E.
⚠ **CAUTION**	This symbol denotes what could lead to a personal injury or property damage if you misuse the PAC-SC46NA-E.

- After reading this instruction manual, keep it in a place where the end user can find it anytime he or she wants to it. When someone moves, repairs or uses the PAC-SC46NA-E, make sure that this manual is forwarded to the final user.

⚠ WARNING

- **Ask your dealer or technical representative to install the unit.**
  Any deficiency caused by your own installation may result in an electric shock or fire.
- **Ensure that installation work is done correctly following this instruction manual.**
  Any deficiency caused by installation may result in an electric shock or fire.
- **Firmly connect the wiring using the specified cables. Carefully check that the cables do not exert any forces on the terminals.**
  Improper wiring connections may produce heat and possibly a fire.
- **Never modify or repair the PAC-SC46NA-E.**
  Any deficiency caused by your modification or repair may result in an electric shock or fire. Consult with your dealer about repair.
- **All electrical work must be performed by a licensed technician, according to local regulations and the instructions given in this manual.**
  Any lack of electric circuit or any deficiency caused by installation may result in an electric shock or fire.
- **Do not move and re-install the PAC-SC46NA-E yourself.**
  Any deficiency caused by installation may result in an electric shock or fire. Ask your distributor or special vendor for moving and installation.
- **Stop the operation if any malfunction occurs.**
  If malfunction occurs (burning smell, etc.), stop the operation and turn off the power supply. Contact your dealer or technical representative. If the controller continues to operate after a malfunction occurs, this may cause damage, electric shock or fire.
- **Do not turn on the main power until installation has been completed.**
  Doing so may result in electric shock or fire.

⚠ CAUTION

- **Do not install in any place exposed to flammable gas leakage.**
  Flammable gases accumulated around the body of PAC-SC46NA-E may cause an explosion.
- **Do not use in any special environment.**
  Using in any place exposed to oil (including machine oil), steam and sulfuric gas may deteriorate the performance significantly or give damage to the component parts.
- **Wire so that it does not receive any tension.**
  Tension may cause wire breakage, heating or fire.
- **Do not install in any place at a temperature of more than 40°C (104°F) or less than 0°C (32°F) or exposed to direct sunlight.**
- **Do not install in any place where acidic or alkaline solution or special spray are often used.**
  Doing so may cause an electric shock or malfunction.
- **Use standard wires in compliance with the current capacity.**
  A failure to this may result in an electric leakage, heating or fire.
- **Do not wash with water.**
  Doing so may cause an electric shock or malfunction.

Additional Precautions

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
  Children should be supervised to ensure that they do not play with the appliance.
- This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

2 Parts list

Make sure that the following items are included in the package.
- <Input> signal adapter for ventilation interlock 3 m (9-3/4 ft) .....1 pc.
- Tie band.....1 pc.

3 Connection to the Heat Source Unit

Connect the connector side of the <Input> signal adapter for ventilation interlock to the connector CN3Y of the heat source unit control board. The connector can only be connected in one direction. Do not force the connection.

4 Locally Procured Parts

All parts other than the <Input> signal adapter for ventilation interlock (PAC-SC46NA-E) are procured locally.
The items required will depend on the connection method. Refer to the example of use shown below.
(Example)
① External timer.....No voltage contact output timer (with separate circuits for power supply and switch).
② Switch.....Single pole, single action switch.

> ⚠ **CAUTION: Choose the parts for the contact for minute electric current.**
> The timer and the contact of the switch will require degrees of 5 VDC, 12 V or 1 mA load. Choosing the wrong parts may cause stoppage of the adapter.

③ Transit relay.....When the wiring work as described in *8. Wiring Restrictions* is required, this relay is used.
④ Control cable.....The length of the electrical wiring for the PAC-SC46NA-E is 3 meters (9-3/4 ft).
To extend this length, use sheathed 2-core cable
Control cable type: CVV, CVS, CPEV or equivalent
Cable size: 0.5 mm² ~ 1.25 mm² (16 to 22 AWG)
Don't extend the cable more than 10 meters (32 ft).

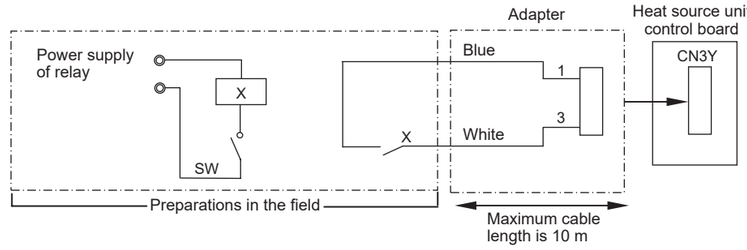
> ⚠ **CAUTION:**
> **1. Wiring should be covered by insulation tube with supplementary insulation.**
> **2. Use relays or switches with IEC or equivalent standard.**
> **3. Run the signal cables away from the cables in high-voltage areas. (Do not place them in the same conduit.)**

5 Locally Procured Wiring

Basic connection method for the following model is shown below as an example.
For details, refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagram, etc.

(1) WY, WR2 series

① <Input> signal for ventilation interlock (CN3Y)



X: Relay (Point of contact rating: DC1 mA)

X (SW)	Ventilation interlock
OPEN	OFF
SHORT	ON

6 Switch setting

Turn ON Dip SW No. 782 to activate the input signal for ventilation interlock.
When the setting is enabled, the heat source unit can be operated only when a signal is input to CN3Y.
Default setting: OFF (Disabled)

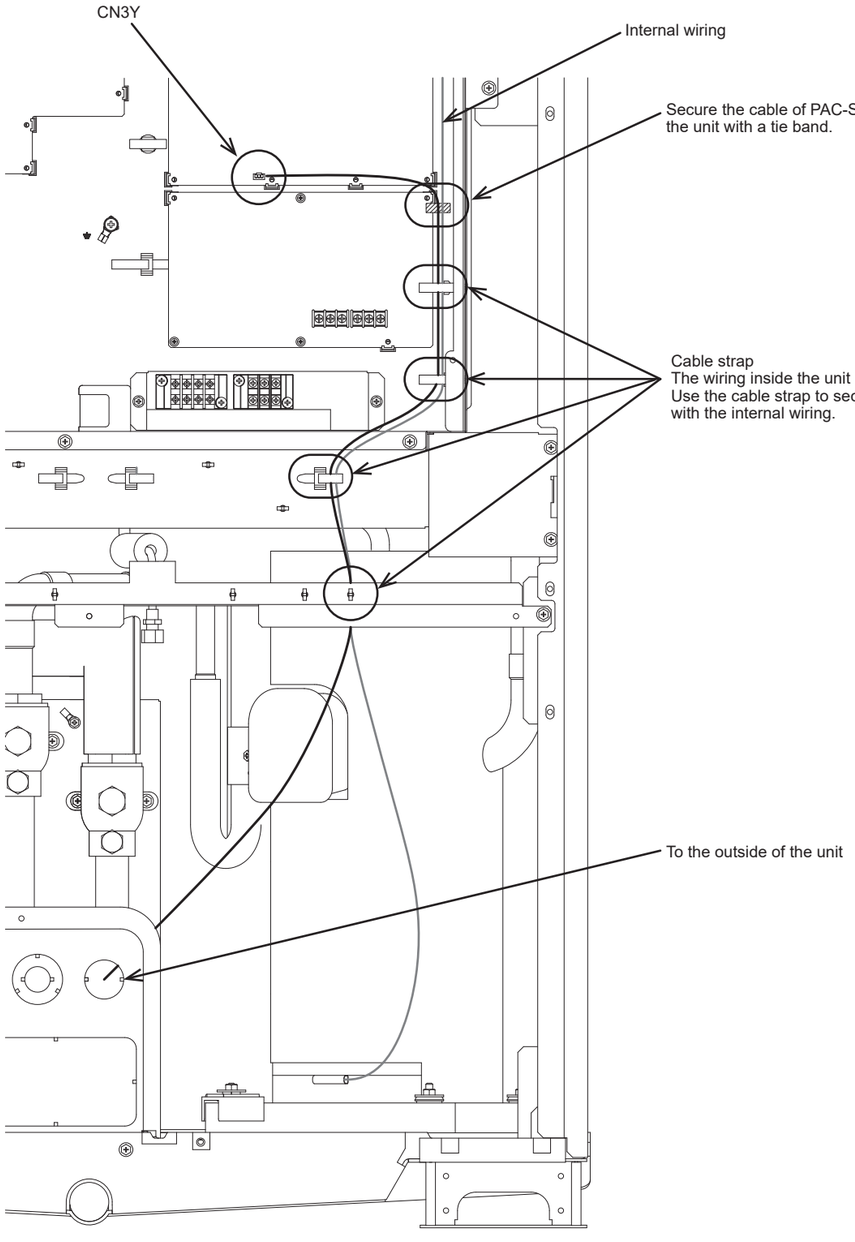
Switch No.	782
Operation	• Dip Switch No.782 is OFF (default setting) Input signal for ventilation interlock is disabled. Even if the input to CN3Y is OFF, the unit can be operated.
	• Dip Switch No.782 is ON Input signal for ventilation interlock is enabled. When the input to CN3Y is OFF, the unit is inoperable.

SW4 0: OFF, 1: ON									
1	2	3	4	5	6	7	8	9	10
0	1	1	1	0	0	0	0	1	1

* To change the settings, set SW6-10 to ON, set SW4, and press and hold SWP3 for 2 seconds or longer (OFF→ON).
LD3 will light up when the switch setting is ON, and lights off when OFF.
For details of setting method, refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagram, etc.

7 Wiring connection

Firmly connect the wiring using the specified cable.
Route the specified cable as shown in the figure below.
Carefully check that the cables do not exert any forces on the terminals.



8 Wiring Restrictions

Keep the length of the cable connecting to the circuit board of the heat source unit shorter than 10 meters (32 ft).
Longer than 10 meters (32 ft) could cause improper operation.
Use a transit relay when extending wiring such as remote wiring.

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