

# MITSUBISHI ELECTRIC

Air-Conditioners For Building Application

## Remote ON/OFF <input> signal adapter PAC-SC36NA-E

### Installation Manual

This installation manual describes only the connection of the Remote ON/OFF <output> signal adapter to the outdoor 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 outdoor unit. Depending on the connection, Demand, Night mode, Snow sensor etc. can be controlled.

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-SC36NA-E.

## 1 Safety Precaution

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

<b>WARNING</b>	This symbol denotes what could lead to serious injury or death if your misuse the PAC-SC36NA-E.
<b>CAUTION</b>	This symbol denotes what could lead to a personal injury or property damage if you misuse the PAC-SC36NA-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-SC36NA-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-SC36NA-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-SC36NA-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-SC36NA-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.
- Do not install in any steamy place such a bathroom or kitchen.** Avoid any place where moisture is condensed into dew. 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.

## 2 Parts list

Make sure that the following items are included in the package.

- Remote ON/OFF <input> signal adapter 3 m (9-3/4 ft) ..... 1 pcs.

## 3 Connection to the Outdoor Unit

Connect the connector side of the Remote ON/OFF <input> signal adapter to the connector CN3D, CN3N and CN3S of the outdoor unit control board as necessary. The connector can only be connected in one direction only. Do not force the connection.

## 4 Locally Procured Parts

All parts other than the Remote ON/OFF <input> signal adapter (PAC-SC36NA-E) are procured locally. The items required will depend on the connection method. Refer to the example of use shown below.

(Example)

- External timer ..... No voltage contact out put timer (with separate circuits for power supply and switch).
- 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.

- Transit relay ..... When the wiring work as described in 6. *Wiring Restrictions* is required, this relay is used.
- Control cable ..... The length of the electrical wiring for the PAC-SC37SA 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 mm<sup>2</sup> ~ 1.25 mm<sup>2</sup> (16 to 22 AWG)  
Don't extend the cable more than 10 meters (32 ft).

### CAUTION:

- Wiring should be covered by insulation tube with supplementary insulation.
- Use relays or switches with IEC or equivalent standard.
- The electric strength between accessible parts and control circuit should have 2750 V or more.

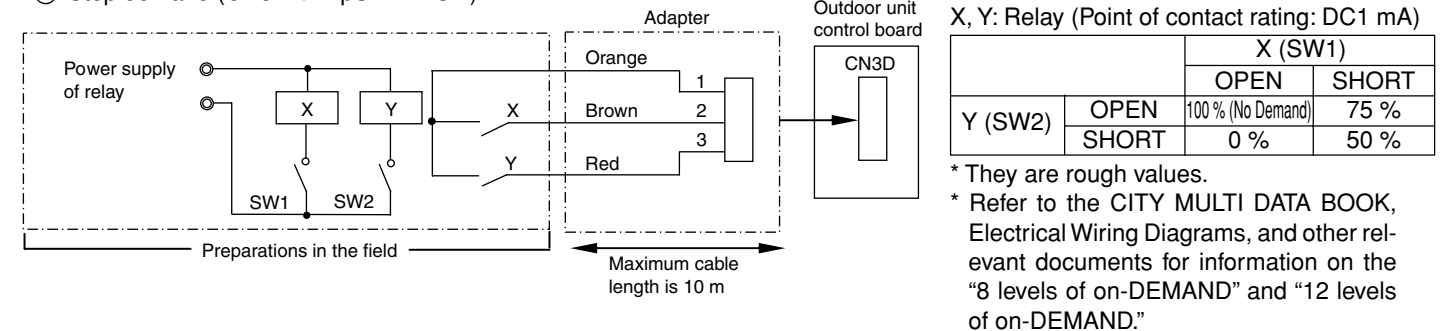
## 5 Locally Procured Wiring

Basic connection methods for following models are shown below as examples.

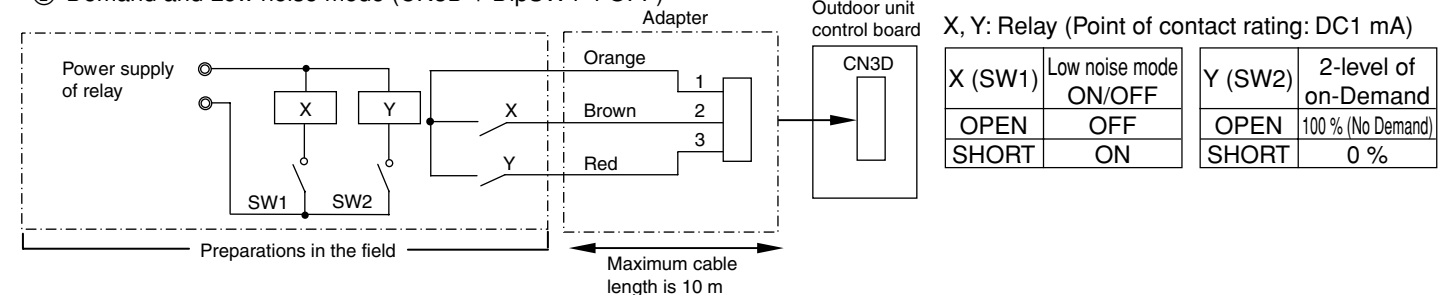
For details and the connection method with another models, refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagram etc.

### (1) Y, HP, R2 series

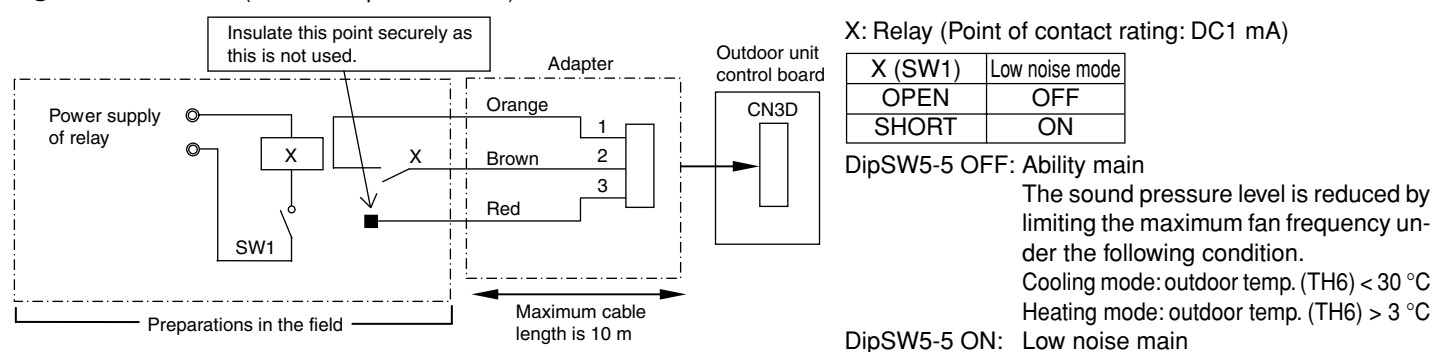
- Step demand (CN3D + DipSW4-4 ON)



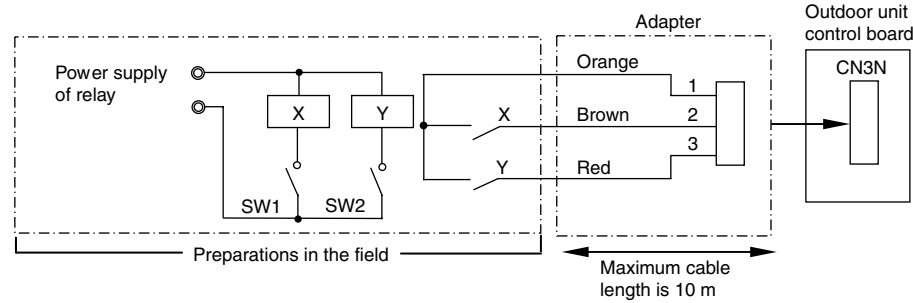
- Demand and Low noise mode (CN3D + DipSW4-4 OFF)



- Low noise mode (CN3D + DipSW4-4 OFF)



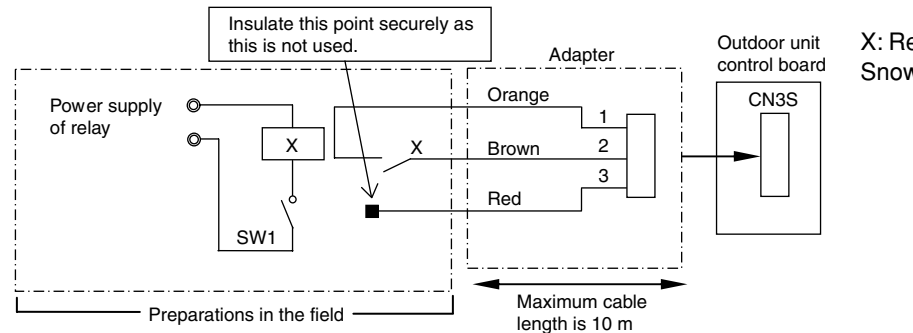
④ Auto change over (CN3N) (R2 exclude)



SW1: Cool/Heat  
SW2: Validity/Invalidity of SW1  
X, Y: Relay (Point of contact rating: DC1 mA)

		X (SW1)	
		OPEN	SHORT
Y (SW2)	OPEN (Auto change over: OFF)	NORMAL	
	SHORT (Auto change over: ON)	COOL	HEAT

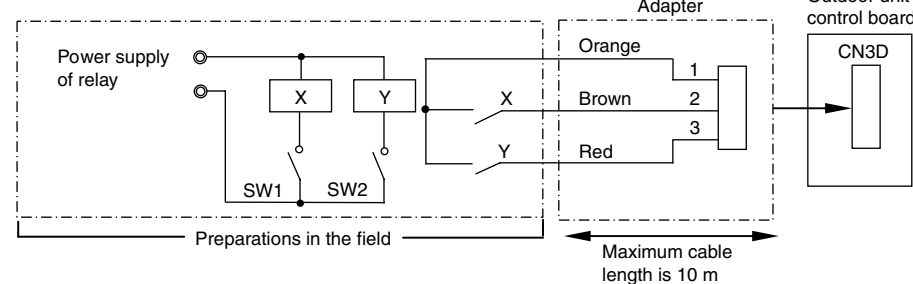
⑤ Snow sensor (CN3S)



X: Relay (Point of contact rating: DC1 mA)  
Snow sensor: The outdoor fan runs when X is closed in stop mode or thermostat mode.

(2) S series

① Step demand (CN3D + DipSW8-1 ON)

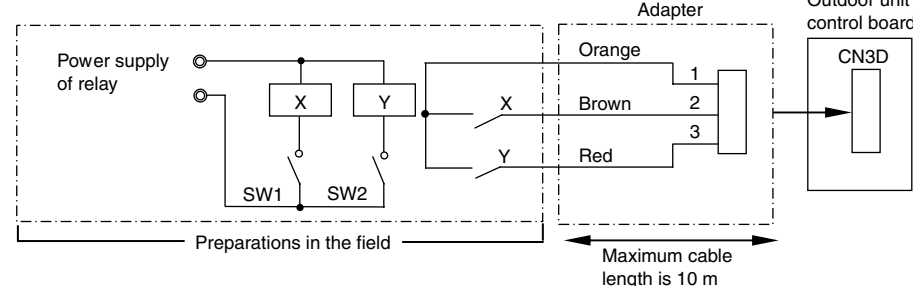


X, Y: Relay (Point of contact rating: DC1 mA)

		X (SW1)	
		OPEN	SHORT
Y (SW2)	OPEN	100 %	75 %
	SHORT	0 %	50 %

\* They are rough values.  
\* Refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagrams, and other relevant documents for information on the "8 levels of on-DEMAND" and "12 levels of on-DEMAND."

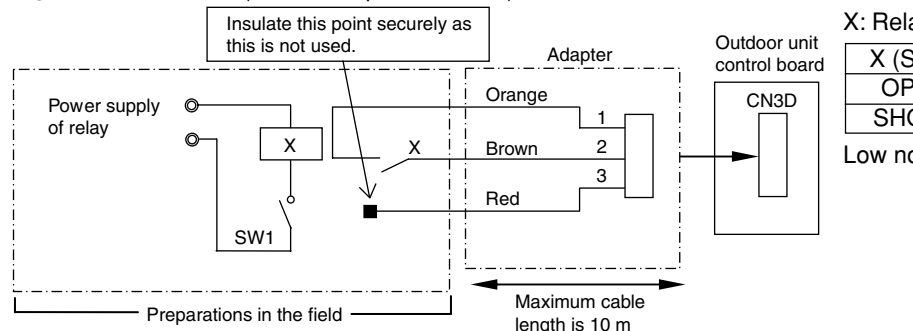
② Demand and Low noise mode (CN3D + DipSW8-1 OFF)



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

X (SW1)	Low noise mode ON/OFF	Y (SW2)	Compressor ON/OFF
OPEN	OFF	OPEN	OFF
SHORT	ON	SHORT	ON

③ Low noise mode (CN3D + DipSW8-1 OFF)

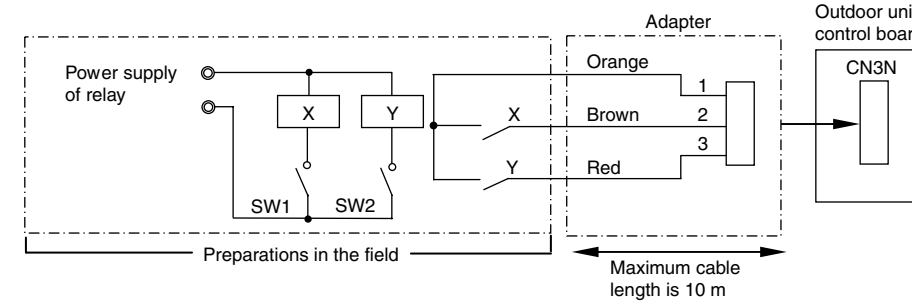


X: Relay (Point of contact rating: DC1 mA)

X (SW1)	Low noise mode
OPEN	OFF
SHORT	ON

Low noise mode: The sound pressure level is reduced by controlling the maximum fan frequency and compressor frequency.

④ Auto change over (CN3N)

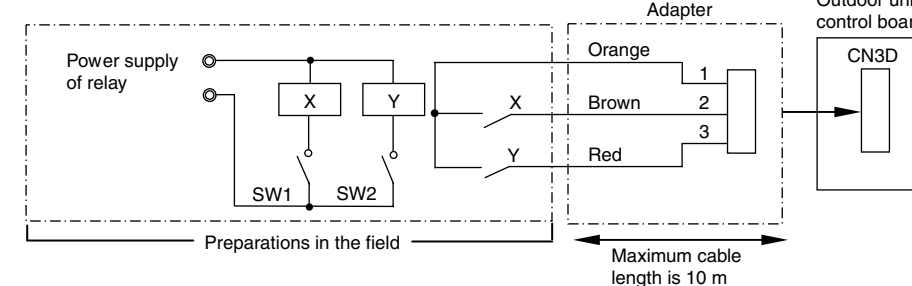


SW1: Cool/Heat  
SW2: Validity/Invalidity of SW1  
X, Y: Relay (Point of contact rating: DC1 mA)

		X (SW1)	
		OPEN	SHORT
Y (SW2)	OPEN (Auto change over: OFF)	NORMAL	
	SHORT (Auto change over: ON)	COOL	HEAT

(3) WY, WR2 series

① Step demand (CN3D + DipSW4-4 ON)

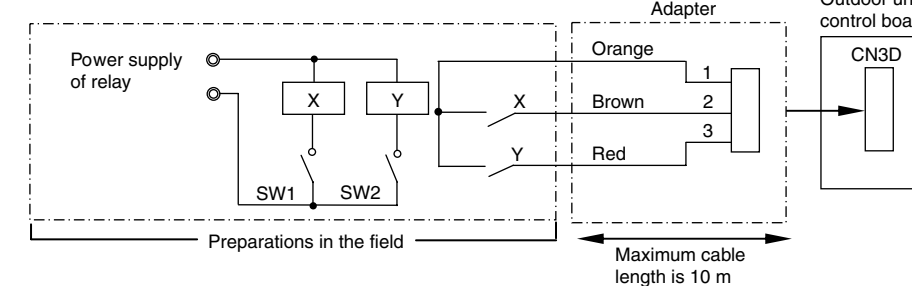


X, Y: Relay (Point of contact rating: DC1 mA)

		X (SW1)	
		OPEN	SHORT
Y (SW2)	OPEN	100 % (No Demand)	75 %
	SHORT	0 %	50 %

\* They are rough values.  
\* Refer to the CITY MULTI DATA BOOK, Electrical Wiring Diagrams, and other relevant documents for information on the "8 levels of on-DEMAND."

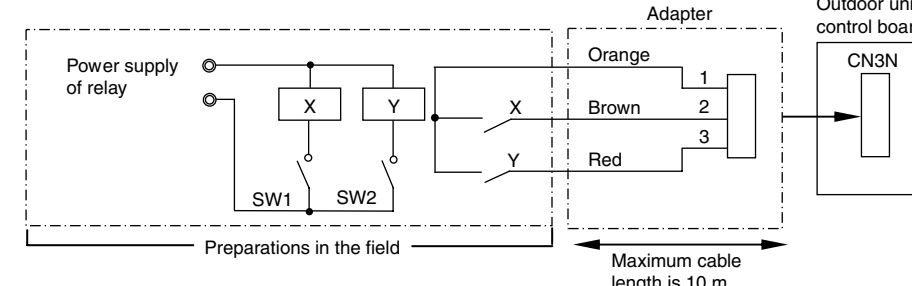
② Demand and Low noise mode (CN3D + DipSW4-4 OFF)



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

X (SW1)	Low noise mode ON/OFF	Y (SW2)	2-level of on-Demand
OPEN	OFF	OPEN	100 % (No Demand)
SHORT	ON	SHORT	0 %

③ Auto change over (CN3N) (WR2 excluded)



SW1: Cool/Heat  
SW2: Validity/Invalidity of SW1  
X, Y: Relay (Point of contact rating: DC1 mA)

		X (SW1)	
		OPEN	SHORT
Y (SW2)	OPEN (Auto change over: OFF)	NORMAL	
	SHORT (Auto change over: ON)	COOL	HEAT

6 Wiring Restrictions

Keep the length of the cable connecting to the circuit board of the indoor 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.