

LOSSNAY HEAT RECOVERY VENTILATOR SYSTEM COMPONENT

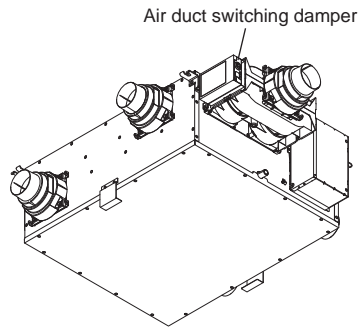
Air Duct Switching Damper

MODEL

P-133DUE-E

Applicable Model

VL-220CZGV-E
VL-220CZGV-EB
VL-220CZGV-EF



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Installation and Instruction Manual

For contractor and user








- This product is for residential use.
- The air duct switching damper is for installation between Lossnay and the return air (RA) side duct, and switches the air duct between the heat exchanger and bypass ventilation.
Do not use it for any other purpose (commercial use, etc.). The incorrect operation may be a cause of a malfunction.
- The product must be correctly installed to ensure that its performance and functions are properly demonstrated and to ensure its safe use and operation. Please read the Installation and Instruction Manual carefully before installation.
- For installation parts, be sure to use accessories and designated parts. Use of non-designated parts may be a cause of malfunction.
- Installation must be performed by dealers and electrical contractors. Incorrect installation may be a cause of a malfunction or accident. Installation by the customer may result in a malfunction or accident.
- Electrical work must be performed by a properly qualified electrician of the dealer or electrical contractor.
- Please note a clear working space is required around the installed product to allow the cover to be removed and provide sufficient access for maintenance such as filter change.
- The product must be installed indoors.




After completing installation, make sure to give the manual to the user.

- To ensure correct and safe use, read the Installation and Instruction Manual thoroughly. Before using the product, check "Safety Precautions" to use it correctly and safely.
- After reading, store the manual in a handy location for easy access.

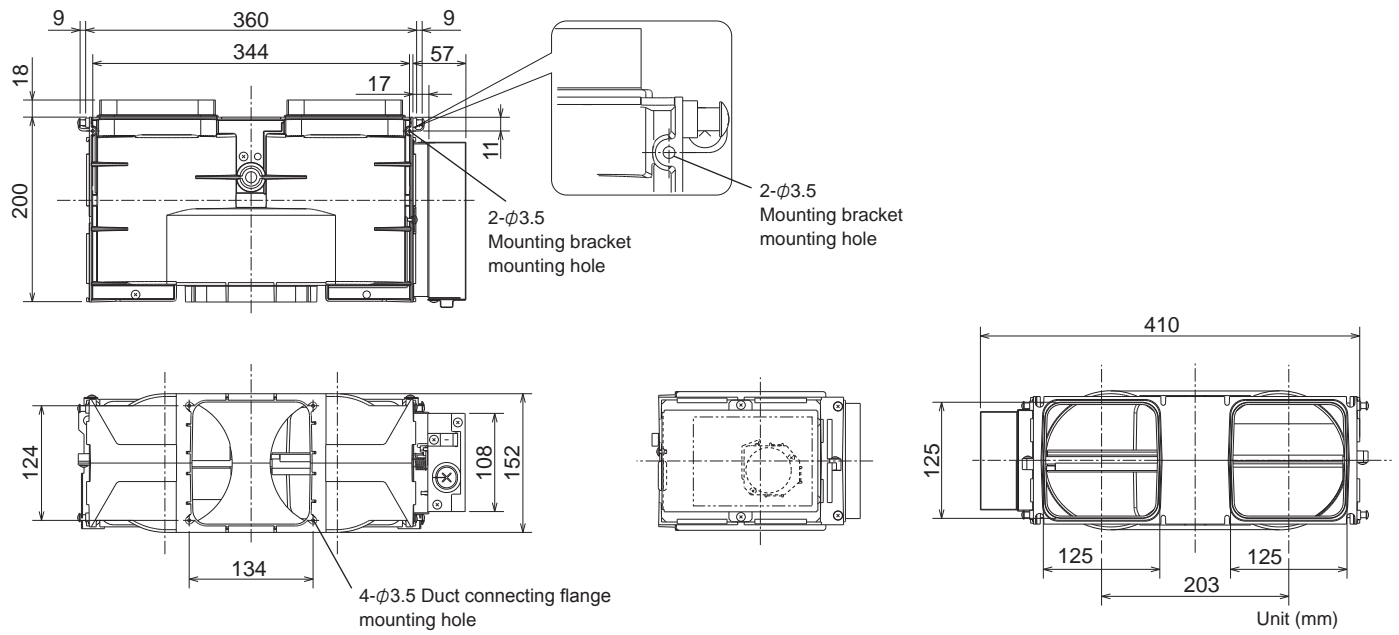
1. Safety precautions

The following symbols denote the type and degree of danger resulting from incorrect handling.

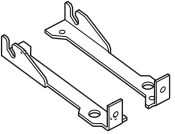




 WARNING		Incorrect handling of the product may result in serious injury or death.	
 Prohibited	<p>Do not install the product in a place that becomes hot, place subject to direct sunlight, place with a lot of oily smoke, or place where organic solvent will get on the product. Failure to heed this warning may result in fire.</p>	 Follow instructions	<p>Use 220 to 240 V AC power. Do not apply a different voltage to the product. Failure to heed this warning may result in fire, electric shock or damage to the circuit boards.</p> <p>Select a place which is strong enough to support the product, and install the product securely. Injury could result if parts fall.</p> <p>Use the designated electric wires, and connect them securely so that they do not come loose. Defective connections may result in fire.</p> <p>If the product will not be operated for a long period of time after installation, be sure to turn off the circuit breaker. It could cause electrical shock by deteriorated insulation or fire by the electric leakage.</p> <p>Electrical work must be carried out safely and reliably by a professional electrical contractor (properly qualified electrician) in accordance with internal wiring provisions and electrical-equipment technical standards. Poor connection and faulty electrical work could result in electric shock or fire.</p> <p>Install an all-pole power supply isolator at the power supply side as per local electrical regulations. All supply circuits must be disconnected before obtaining access to the terminal devices. Use the specified cable size and connect the cables securely to prevent disconnection when they are pulled. If there is a defect in the connection, there is a possibility of fire.</p> <p>When metal ducts penetrate through metal-sheeted wooden buildings or structures, install the product so that there is no electrical contact between the metal ducts and the metal sheeting. Electric leakage may cause ignition.</p> <p>Be sure to turn off the circuit breaker of Lossnay before inspection. Failure to heed this warning may result in electric shock or injury.</p> <p>Be sure to cover the terminal block with the terminal block cover after electrical work. Failure to heed this warning may result in electric leakage or fire due to dust, humidity, etc.</p> <p>For installation work parts, be sure to use only accessories and designated parts. Use of non-designated parts may result in equipment damage or accidents.</p>
 No water exposure	<p>Refrain from immersing in water or splashing the product with water. Failure to heed this warning could result in short circuit or electric shock.</p>		
 No disassembly	<p>Do not modify or disassemble the product beyond that is necessary. Failure to heed this warning may result in fire, electric shock or injury.</p>		
 Cannot be installed in a bathroom	<p>Do not install Lossnay or the remote controller in a bathroom or other humid location. Failure to heed this warning may result in electric shock or electric leakage.</p>		
 Check grounding	<p>Be sure to install the ground wire. Device failure and electric leakage may cause electric shock.</p>		

 CAUTION		Incorrect handling of the product may result in injury or damage to property or household effects.	
 Follow instructions	<p>Wear gloves when installing. Failure to heed this warning may result in injury.</p> <p>Securely install parts so that they are not twisted or deformed. Injury could result if parts fall.</p> <p>When installing the product, do not subject the product to impact: do not drop or throw the product. Damage to structures inside the product may result in air or water leakage.</p> <p>Securely install removed parts after inspection. Injury could result if parts fall.</p> <p>Do not stand on anything unstable when inspecting, installing, or removing the parts. Injury may result if you tumble down.</p>	 Follow instructions	<p>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 can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be performed by children without supervision.)</p>

2. Outside Dimensions



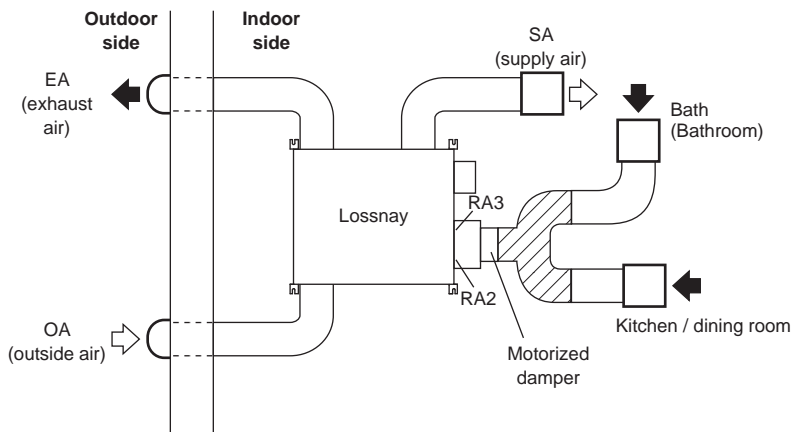
Accessories

<p>Mounting brackets: 2 (One for each of left and right)</p> 	<p>Mounting bracket fixing screws: 4 (4-10 mm)</p> 	<p>Air duct switching damper fixing screws: 4 (4-10 mm)</p> 	<p>Cord clip: 1</p> 	<p>Cord clip fixing screw: 1 (4-10 mm)</p> 
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3. Standard Installation Examples

Piping example

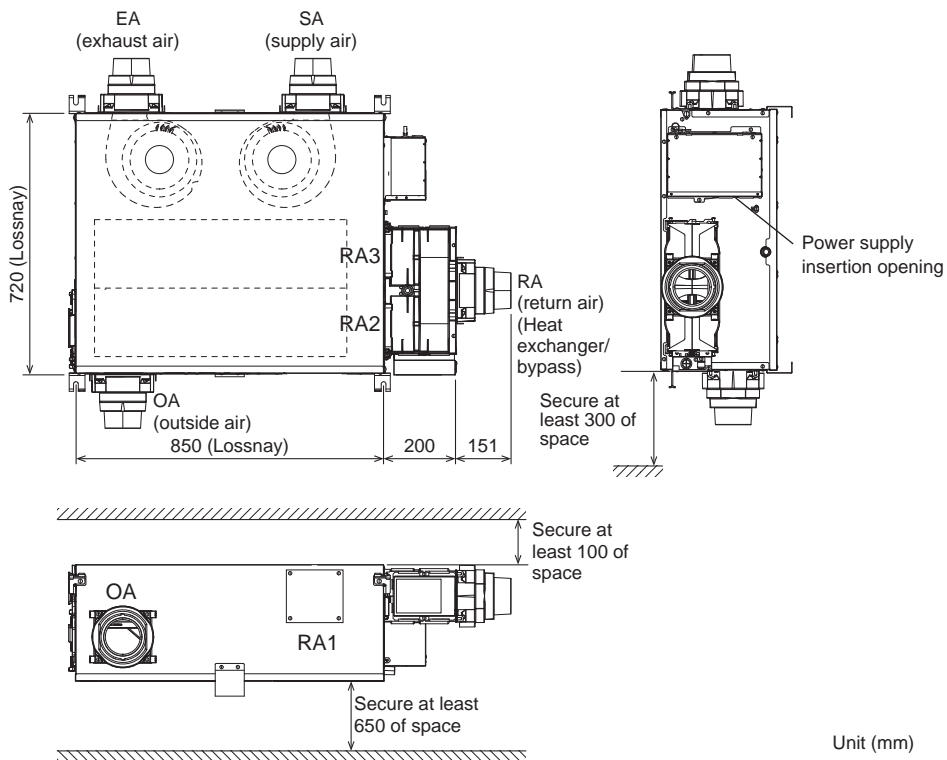
- When connecting the RA (return air) to a bathroom, be sure to branch into two lines and return air from two locations, the bathroom and living room.



Name of Connection Point		Connection Location
RA (return air)	RA2* RA3*	For intake from living room, toilet, wash basin, bathroom, etc.
EA (exhaust air)		For exhaust air of inside air
OA (outside air)		For intake of outside air
SA (supply air)		For air supply opening to living room

* When RA2 and RA3 are used, use grills equipped with filter.

Working space (required space around Lossnay)



Unit (mm)

Provide an inspection opening at least 745 x 530 mm in size

Locate the inspection opening at a position that allows Lossnay to be carried to its installation site to perform installation work and that allows the worker to go to the installation site to perform maintenance.

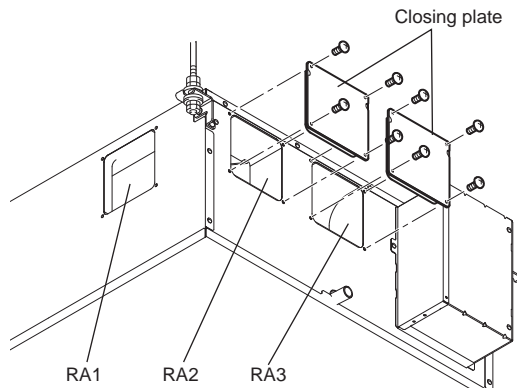
If the inspection opening is too small, additional work may unavoidably arise, such as widening of the inspection opening because electrical installation or other work cannot be carried out. Please understand that expenses incurred in additional work shall be borne by the contractor.

4. Installation Procedure

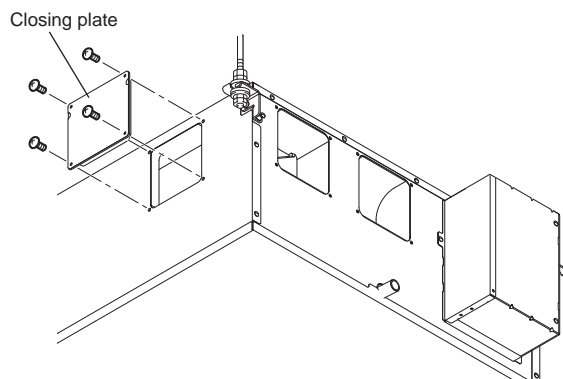
When operating two Lossnays with a remote controller, mount the damper on each Lossnay.

Installing Lossnay

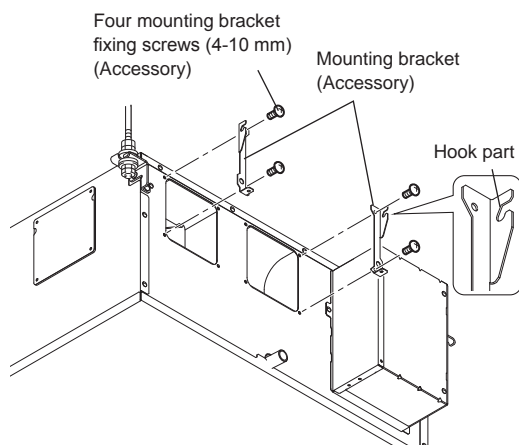
- (1) Remove the closing plates on the return air side (RA2 and RA3) of Lossnay. (Screw tightening torque: 1.2 to 1.5 N·m)



- (2) Cover the RA1 opening using a removed closing plate and four screws (4-6 mm). (Screw tightening torque: 1.2 to 1.5 N·m)

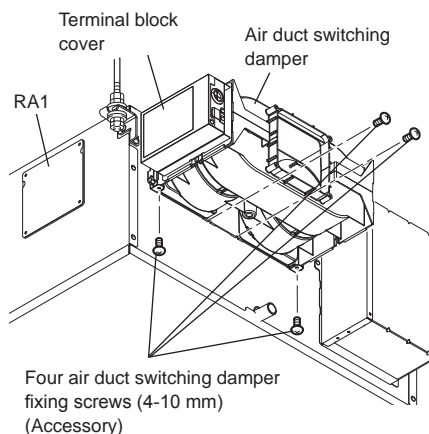
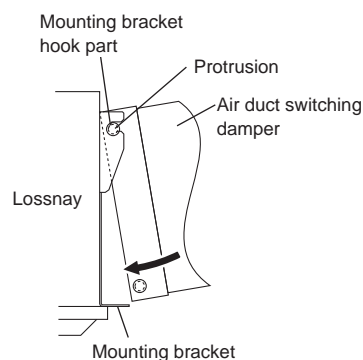
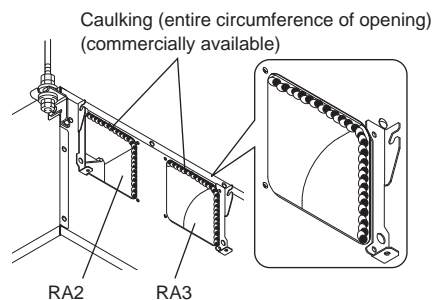


- (3) Referring to the figure below, attach two supplied mounting brackets to Lossnay so that the hook parts are at the top using four supplied mounting bracket fixing screws (4-10 mm). (Screw tightening torque: 1.2 to 1.5 N·m)



- (4) Hook the protrusions of the air duct switching damper on the hook parts in two places of the mounting brackets so that the terminal block cover becomes as shown in the figure below (RA1 side) and mount the damper with four supplied air duct switching damper fixing screws (4-10 mm). (Screw tightening torque: 0.6 to 1.0 N·m)

When installing the damper, fill in any gaps between the damper openings and the openings (RA2·RA3) of Lossnay with caulking compound (entire circumference of opening) (commercially available).



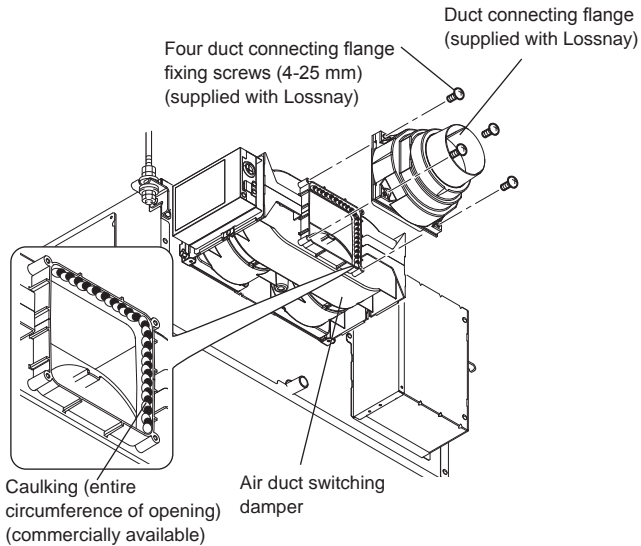
Note:

- If the air duct switching damper fixing screws cannot be tightened, the air duct switching damper may not be mounted properly so check for lifting of the mounting brackets and Lossnay.

4. Installation Procedure (Continued)

- (5) Attach the duct connecting flange (supplied with Lossnay) to the air duct switching damper with four duct connecting flange fixing screws (4-25 mm). (Screw tightening torque: 0.6 to 1.0 N·m)

When installing the duct connecting flange, fill in any gaps between the damper opening and the opening of the duct connecting flange (entire circumference of opening) with caulking compound (commercially available).



Note:

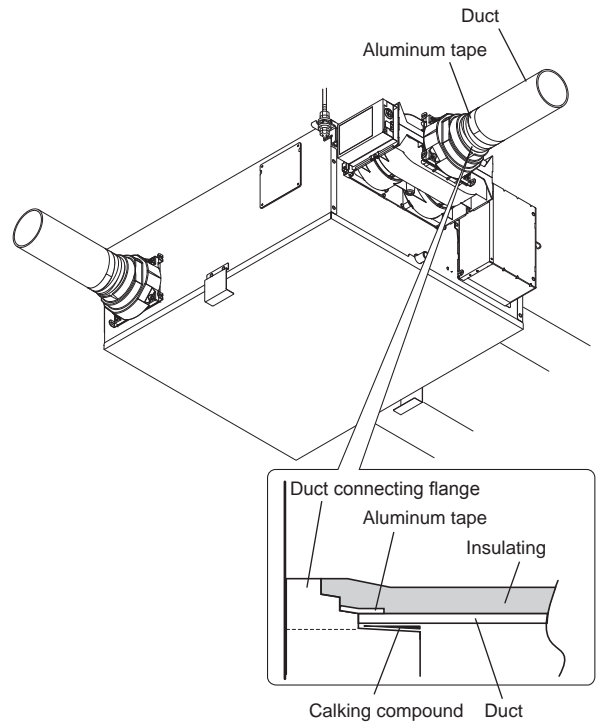
- Check that the air duct switching damper and duct connecting flange are securely mounted to Lossnay.

Duct piping

Follow the instructions of "Duct Piping" in the installation manual for Lossnay.

Note:

- Make sure that there are no metal chips or other foreign matter (e.g. paper or vinyl) inside the ducts before connecting the ducts.



5. Electrical Work

⚠ WARNING

Electrical work must be carried out safely and reliably by a professional electrical contractor (properly qualified electrician) in accordance with internal wiring provisions and electrical equipment technical standards.

Poor connection and faulty electrical work could result in electric shock or fire.

Use 220 to 240 V AC power. Do not apply a different voltage to the product.

Failure to heed this warning may result in fire, electric shock or damage to the circuit boards.

Use the designated electric wires, and connect them securely so that they do not come loose.

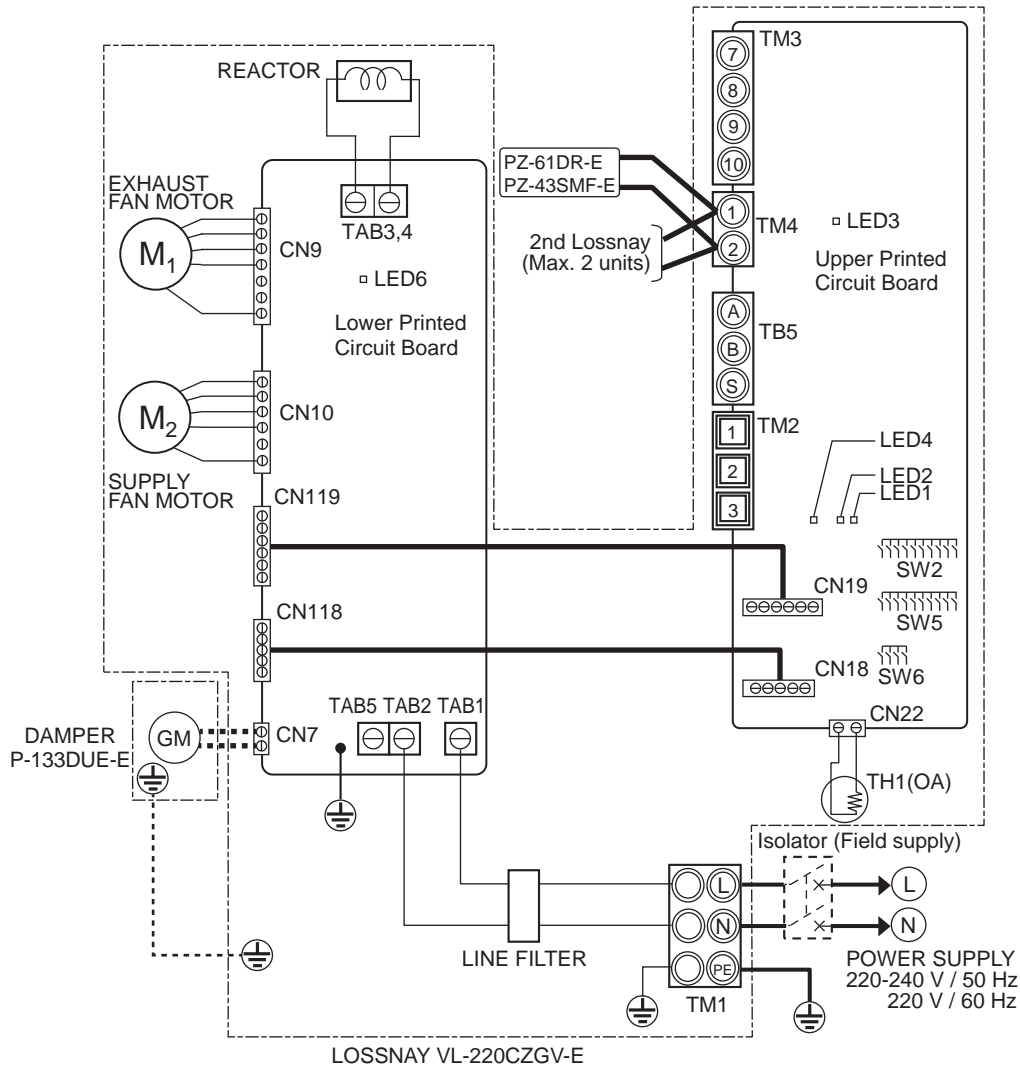
Defective connections may result in fire.

Be sure to install the ground wire.

Device failure and electric leakage may cause electric shock.

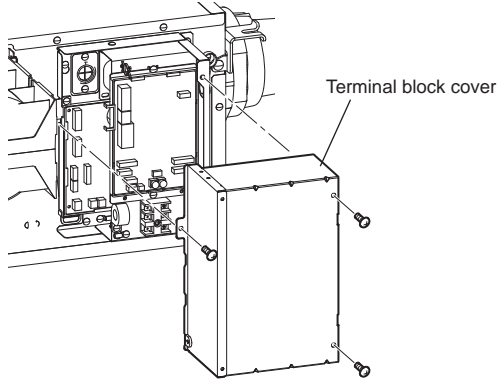
Wire connection diagram

- CN7 shown in dotted lines are field work.
- Connect the ground wire of the damper to VL-220CZGV-E.

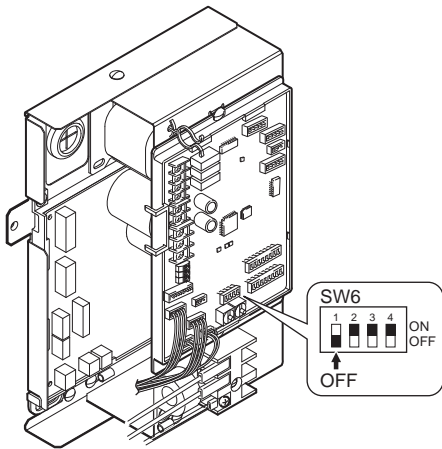


5. Electrical Work (Continued)

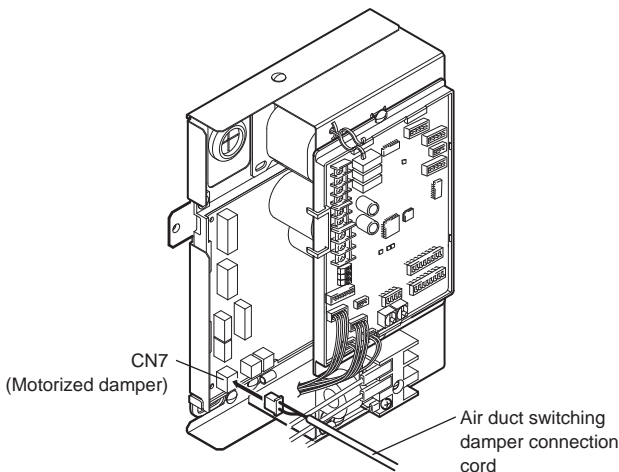
(1) Remove the terminal block cover from Lossnay. (3 screws)



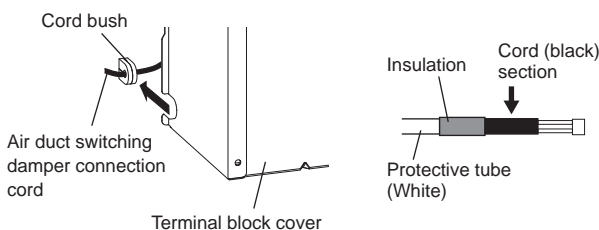
(2) Change SW6-1 to OFF.



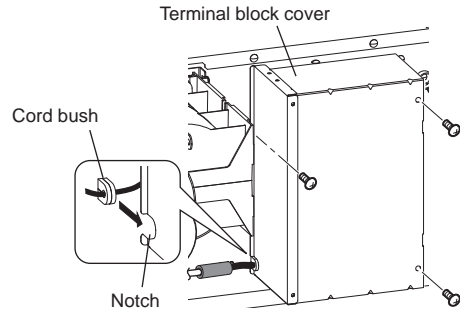
(3) Insert the connector of the air duct switching damper connection cord into the PCB connector [CN7] of Lossnay.



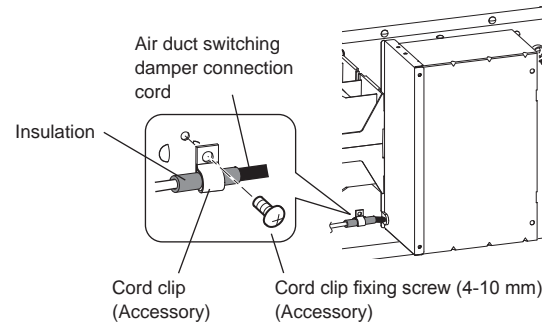
(4) Remove the cord bush from the terminal block cover. Pass the air duct switching damper connection cord through the cord bush. Fix the cord bush on the cord (black) section.



(5) Insert the cord bush into the notch in the terminal block cover and secure the terminal block cover with three screws.

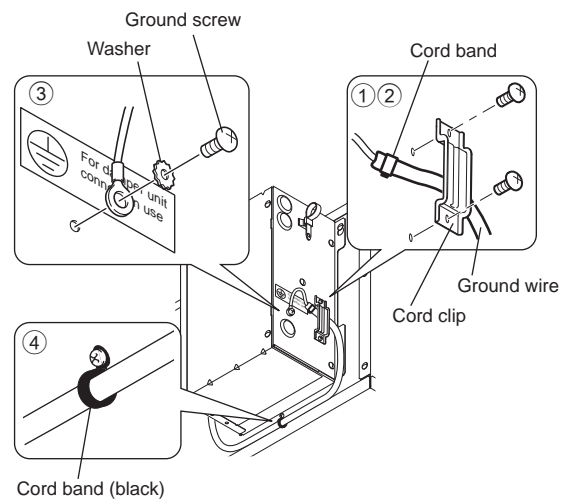


(6) Pass the air duct switching damper connection cord through the supplied cord clip. Fix the cord clip to the exterior of Lossnay with the supplied cord clip fixing screw (4-10 mm). When fixing the cord clip, fix the cord clip over the insulation.



(7) Perform the grounding work using the ground wire.

- ① Detach the cord clip.
- ② Secure the ground wire with the cord clip so that the cord band is placed toward the ground screw side.
- ③ Unscrew the ground screw. Connect the ground with the ground screw and the washer.
- ④ Secure the ground wire with the cord band (black).



6. Post-installation and Trial Operation Checks

When you have finished installation work, inspect the following items according to the following check list before turning the power on.

Be sure to correct any malfunctions that are found. (The functions are not being demonstrated or safety cannot be ensured)

After the system has been installed, make sure that wires are properly connected, then test the system's operation, referring to the operation manual for the remote controller.

■ **Perform trial operation with the user in attendance.**

		Check Item	Remedy for Malfunction	Check
Installation	Installation of Lossnay	Are Lossnay and the duct piping installed on the indoor side of the insulation layer/airtight layer?	Install them on the indoor side of the insulation layer/airtight layer.	
		Is the specified maintenance space provided?	Provide the specified maintenance space.	
		Is there foreign matter inside the air duct switching damper?	Remove any foreign matter.	
		Is the air duct switching damper installed on the return air side (RA2 and RA3) of Lossnay?	Install it on the return air side (RA2 and RA3).	
		Is the orientation of the air duct switching damper correct?	Install it correctly.	
		Is RA1 covered?	Cover it with a closing plate.	
	Duct connection	Are there metal chips or other foreign matter (e.g. paper or vinyl) inside the duct?	Remove any foreign matter.	
		Is the duct connected to the air duct switching damper?	Securely connect the duct.	
	Wiring	Are the wires connected correctly?	Connect the wires correctly.	
Trial operation	Is operation performed properly? - Is the power supply voltage 220 to 240 V AC? - Is the electrical work performed as indicated in the wiring diagram?		- Connect 220 to 240 V power. - Connect the wires as indicated in the wiring diagram.	
	Is the air duct switched?		If the wiring is incorrect, connect the wires correctly. If the air duct switching damper is oriented incorrectly, install it correctly.	
	Check that there is no abnormal vibration or noise. (An operation sound is generated when the air duct is switched but that sound is not abnormal.)		If any screws are loose, tighten them again. If the duct is loosely connected, connect it again.	
Remote controller		Is the ventilation mode indication displayed?	Set SW6-1 to OFF.	

Explaining to the User

- Explain to the user where the circuit breaker and remote controller are located.
- Tell the user the results of checks performed using the check list.
- Hand over the Installation and Instruction Manual to the user.
- Explain how to use correctly according to the Installation and Instruction Manual. In particular, "Safety Precautions" describe important notices and warnings relating to safety. Explain to users that they should observe these.

7. How to Use

Note:

- Also read the instruction manuals for Lossnay and remote controller.
- An operation sound is generated when the air duct is switched but that sound is not abnormal.
- When exhausting air from a humid place such as an in-use bathroom, operate Lossnay for 24 hours.

When using PZ-61DR-E

Power ON/OFF

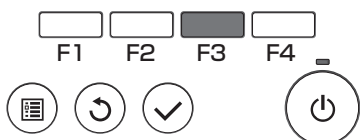
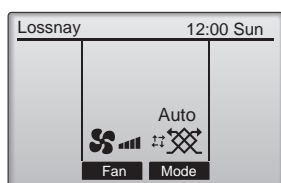
ON



Press the **ON/OFF** button.

The ON/OFF lamp will light up in green, and the operation will start.

Ventilation mode



Press the **F3** button to go through the Ventilation mode in the following order.



Display	Function
Auto / Auto ↔↔ / ↔↔	The mode is switched automatically between the heat exchanger mode and by-pass mode. Initial preset temperature: At 22 °C to 28 °C, the by-pass mode is used. Details on how to change the temperature setting are given in "Function Setting" of the installation manual for Lossnay (VL-220CZGV-E).
↔↔	Lossnay runs in the heat exchanger mode.
↔↔	Lossnay runs in the by-pass mode.

When the outdoor temperature decreases to 8 °C or lower, the mode is switched automatically to heat exchanger mode even if Ventilation mode was set. The indication on the remote controller remains as by-pass mode. (Freeze prevention)

7. How to Use (Continued)

When using PZ-43SMF-E

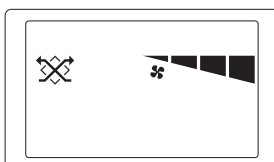
Power ON/OFF




Press the **ON/OFF** button.

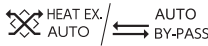


The ON/OFF lamp will light up, and the operation will start.

Ventilation mode



Press the  button to go through the Ventilation mode in the following order.



Display	Function
	The mode is switched automatically between the heat exchanger mode and by-pass mode. Initial preset temperature: At 22 °C to 28 °C, the by-pass mode is used. The temperature setting value cannot be changed.
	Lossnay runs in the heat exchanger mode.
	Lossnay runs in the by-pass mode.

When the outdoor temperature decreases to 8 °C or lower, the mode is switched automatically to heat exchanger mode even if Ventilation mode was set. The indication on the remote controller remains as by-pass mode. (Freeze prevention)

8. Troubleshooting

Take the following actions if trouble shown in the table below occurs. If trouble is not corrected even after taking the required action, or if trouble other than that indicated in the following table occurs, be sure to turn the circuit breaker off and then contact your dealer or an electrical contractor.

Symptom	Cause	Action
The damper does not switch even if the mode is switched between heat exchange ventilation and bypass ventilation with the remote controller.	The ON/OFF button on the remote controller is not "ON".	Press the ON/OFF button on the remote controller to turn on.
	Power is not supplied to the air duct switching damper.	Check the circuit breaker. Is there a power outage?
	The outdoor temperature is 8 °C or lower.	When the outdoor temperature is 8 °C or lower, the mode is fixed to bypass ventilation.
Damper switching sound occurs at Auto-ventilation mode.	Auto-ventilation mode is selected.	It is not a malfunction. When Auto-ventilation mode is selected, the by-pass mode and the heat exchanger mode are switched automatically based on the outdoor temperature.

* Also carefully read the instruction manual for Lossnay to which the part is attached.

9. After-Sales Service

Consult with your dealer about the after-sales services provided for Lossnay.

- If you hear strange sounds, if no air is blown out or if some other trouble occurs, turn off the power and contact your dealer. Consult with your dealer concerning the cost of inspection or repair work.

■ Retention period of functional repair parts

We will retain the functional repair parts for six years after terminating production of the product.

The functional repair part means a part which is necessary to maintain the function of the product.

Manufactured by: **MITSUBISHI ELECTRIC CORPORATION**

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