



Lossnay Energy Recovery Ventilator



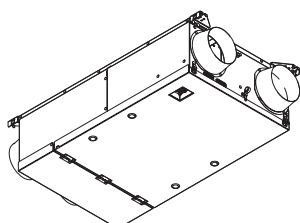
MODELS:

LGH-F110MXL-E

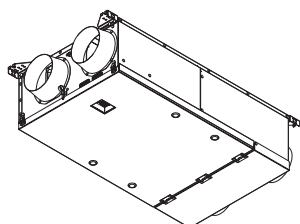
LGH-F110MXR-E

Installation Instructions

For use by dealer/contractor



LGH-F110MXR-E



LGH-F110MXL-E

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- This product is for residential use.
- This product must be correctly installed to ensure that its performance and functions are properly demonstrated and to ensure its safe use and operation. Before installation, read this Installation Instructions thoroughly. Before using external devices or components, read the installation manual for those components thoroughly.
- Installation must be performed by dealers or electrical contractors. Incorrect installation or installation by the end user may be a cause of equipment malfunction or an accident.
- Please note that a clear working space is required around the installed product to allow the maintenance door to be opened and provide sufficient access for maintenance, such as filter changes.
- The product must be installed indoors.

"Operating Instructions" and this manual must be handed over to the customer after completing the installation.

1. Safety precautions

The following signs indicate that death or serious injury may be caused by failure to heed the precautions described below.

 WARNING	Incorrect handling could cause serious injury or death.
 Do not disassemble	Do not modify or disassemble. It could cause fire, electric shock, or injury.
 Prohibition of use in bath or shower room	The Lossnay unit and remote controller should not be installed where it is highly humid, such as a bathroom or other wet place. It could cause electric shock or power leakage.
 Connect the grounding wire.	Connect the product properly to ground. The power supply cord must be plugged into a mating 3-prong grounding receptacle that is grounded in accordance with the electrical and safety codes. Malfunctioning or power leaks can cause electric shock.
 The instructions given must be followed.	Follow the laws and regulations of each country, state, or province for electrical wiring. It could cause fire, electric shock, or injury.
	Use the specified power supply and voltage (120 VAC, 60 Hz). Use of an incorrect power supply or voltage could cause fire or electric shock.
	Select a place with sufficient strength and install the main unit securely. It could cause injury or death.
	Wiring work must be performed by qualified professionals, and implemented safely and securely in accordance with appropriate standards and regulations. Poor connections or improper wiring work could cause electric shock or fire.
	Always disconnect the power supply cord from the electrical outlet before servicing or cleaning the unit. It could cause electric shock or injury.
	This unit is not designed to provide combustion and/or dilution air for a fuel-burning appliance.
	Select an adequate place for the opening to introduce outdoor air, where it will not take in the exhaust fumes such as combustion gas, and there is no risk of blockage. Shortage of fresh air could put the room in a state of oxygen deficiency.
	A steel duct must be installed with care so as not to be electrically connected to metal, wires, stainless steel plates, or other conductive materials. It could cause fire when power leakage occurs.
	It is prohibited to use the unit in locations where salt, sulfur, chlorine or hot spring steam damage is expected. It could cause fire, electric shock, or injury.
	When cutting or drilling into a wall or ceiling structure, do not damage electrical wiring or other hidden utilities.
	After disconnecting the power, do not touch the product or plug until the LED on the control panel turns off. It could cause electric shock.
	Upside-down installation and improperly oriented vertical installation are prohibited. It could cause fire, electric shock, or injury.
	Not suitable for use with solid-state speed controls.



CAUTION

Incorrect handling could cause injury or damage to property or household effects.



Prohibited

Do not place a burning appliance in a location where it is exposed directly to the air from the Lossnay unit.
It could cause an accident as a result of incomplete combustion.

Do not use at a place where it is exposed to high temperatures (104°F (40°C) or higher), naked flames, or in an environment with combustible fumes.
It could cause fire.

When using the product where it is exposed to high humidity, or where fog occurs frequently, moisture is likely to condense in the core, and may result in condensation build-up around the unit. The product should not be used under such conditions.
It could cause malfunction.

Do not install this product in a place where it is exposed to ultraviolet light.
UV may damage the covering insulation.

Avoid installing air inlets and outlets where insects are likely to gather such as a place near interior or exterior lights. In that case, choose hoods with a repellent net.
It could cause intrusion of small insects.

Do not subject the product to strong shocks.
It could cause malfunction.

Do not install in a cooking area or connect directly to any appliance.

Put on gloves during installation.
It could cause injury.

Make sure to turn the breaker OFF or unplug the power supply cord when it is not used for a long time after installation.
It could cause electric shock, power leakage, or fire as a result of deteriorated insulation.

Always use the specified screws, suspension bolts, nuts, and washers, or correctly rated wire/chain hangers.
Use of hardware with insufficient strength could result in the product falling.

Install a weather louver or intake hood for the OA inlet and EA outlet to prevent rainwater from entering the Lossnay unit. Ducts to the outdoors (OA and EA) must slope downward by 1/30 or more toward the outdoors. They shall be longer than 1 m and properly insulated.
The entry of rainwater may cause power leakage, fire, or damage to household property.

The maintenance door and other parts must be reassembled after the installation.
Dust or humidity may cause power leakage or fire.

When connecting external devices (electric heater, damper, lamp, monitoring unit, etc.) using output signals of the Lossnay unit, make sure to install safety equipment for the external devices.
The voltage at the contacts must be 30 VAC/DC or less.
It could cause fire, damage, etc. without safety equipment.

Select a duct heater in compliance with local and national laws, ordinances, and standards. The voltage at the contacts must be 30 VAC/DC or less.

Install the duct heater separated from the product by a distance of 6.6 ft (2 m) or more.
Failure to do so may result in fire or equipment damage due to the transmission of residual heat from the heater.

The unit shall be installed horizontally or vertically (Wall-mounted).
In each case, the tolerance is ±1°.

When the outdoor temperature becomes lower than 14°F (-10°C), the unit starts protective operation. Do not disturb or modify this sequence. For example, do not repeatedly turn the unit on and off extremely frequently in that situation.
It could cause water droplets to fall from the unit.

In cold areas or areas with strong winds, outdoor air may enter the unit because of the pressure difference or external wind even when the unit is stopped. It is recommended to install an electrically operated damper to block outdoor air in such cases.

In cold weather areas, even if they are within the range of operating conditions, condensation or freezing could occur on the main unit, where the duct is connected, or other sections, depending on the conditions of outdoor air and indoor temperature and humidity. Make sure to check the operating conditions and other precautions, and do not use the product if condensation or freezing is anticipated.

Do not connect the field supply fan to the product so that the air volume does not exceed the maximum air volume on Lossnay's P-Q curve. It may not work properly. Refer to 4.2.2 for connecting the Lossnay supply or intake to the duct of the Air handler or the Furnace.

When the exhaust air inlet is installed in a bathroom, take measures to reduce the absolute humidity of intake air, e.g., divert the exhaust intake duct to the other room. The exhaust air inlet must be located far from spots making high humidity, such as a shower, to avoid drawing vapor directly into the unit or duct.
It could cause water droplets to fall from the unit.

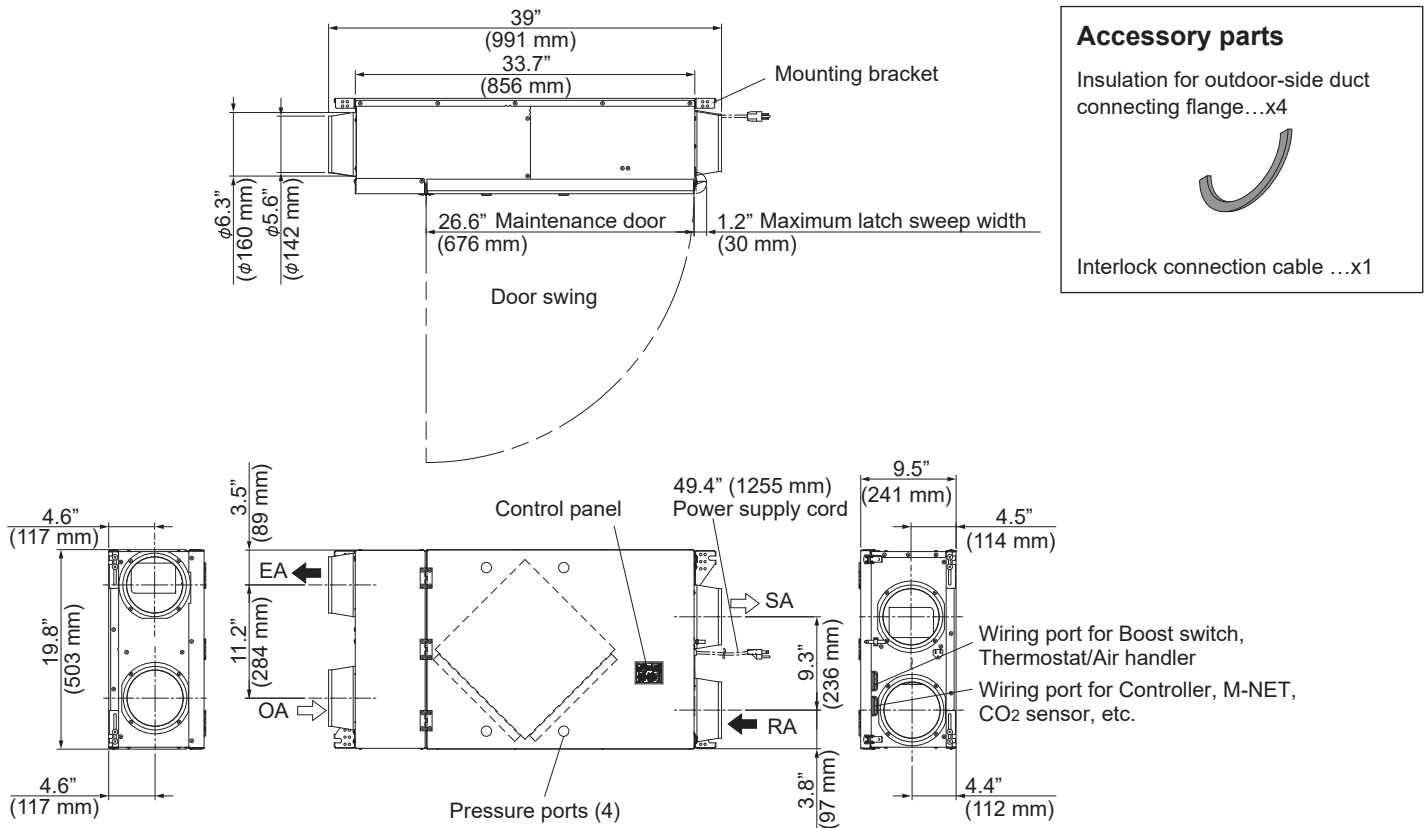


The instructions given must be followed.

2. Outline drawings

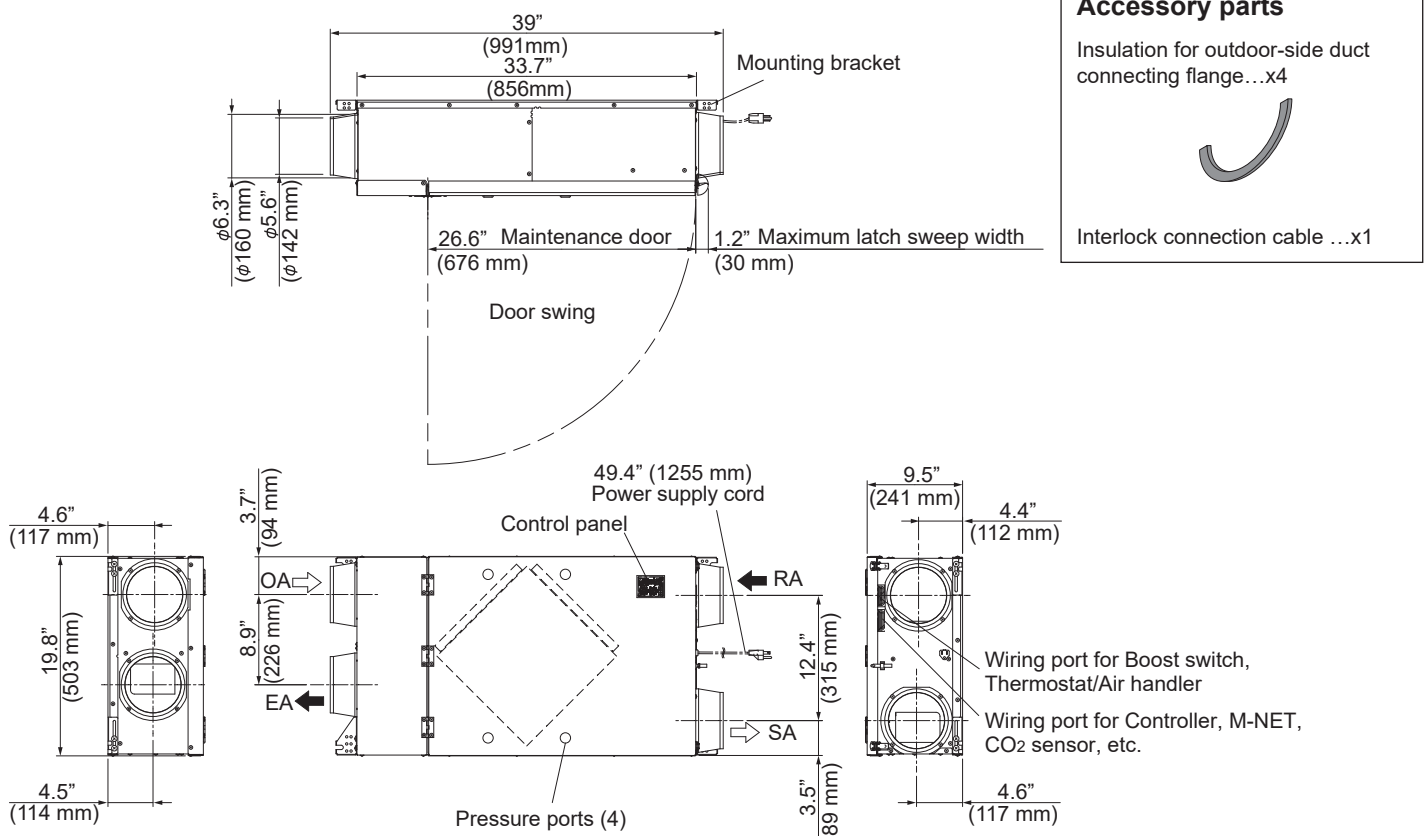
LGH-F110MXL-E

Unit: Inch (mm)

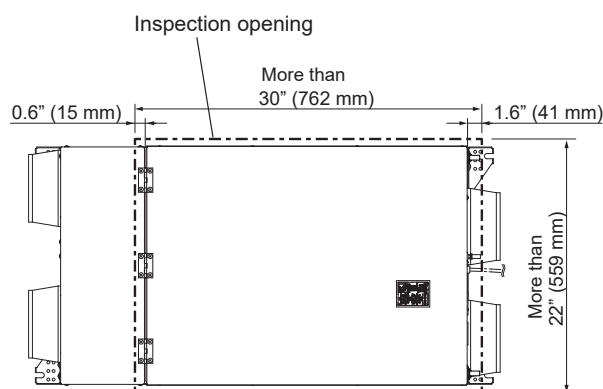
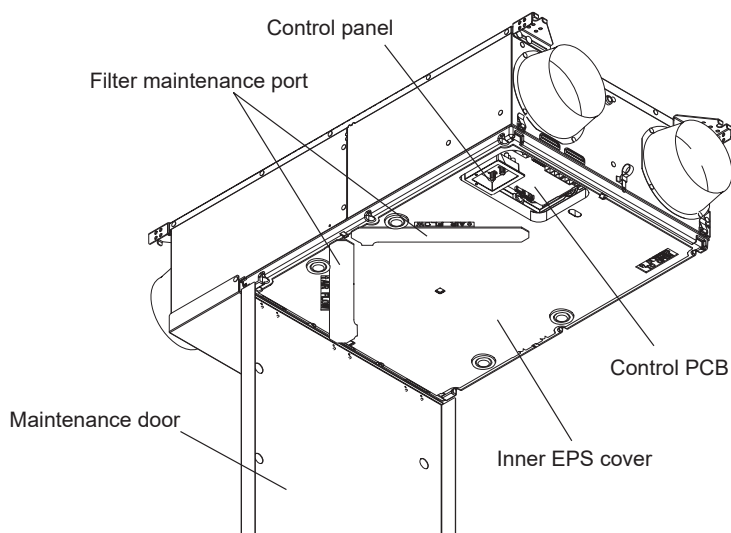


LGH-F110MXR-E

Unit: Inch (mm)

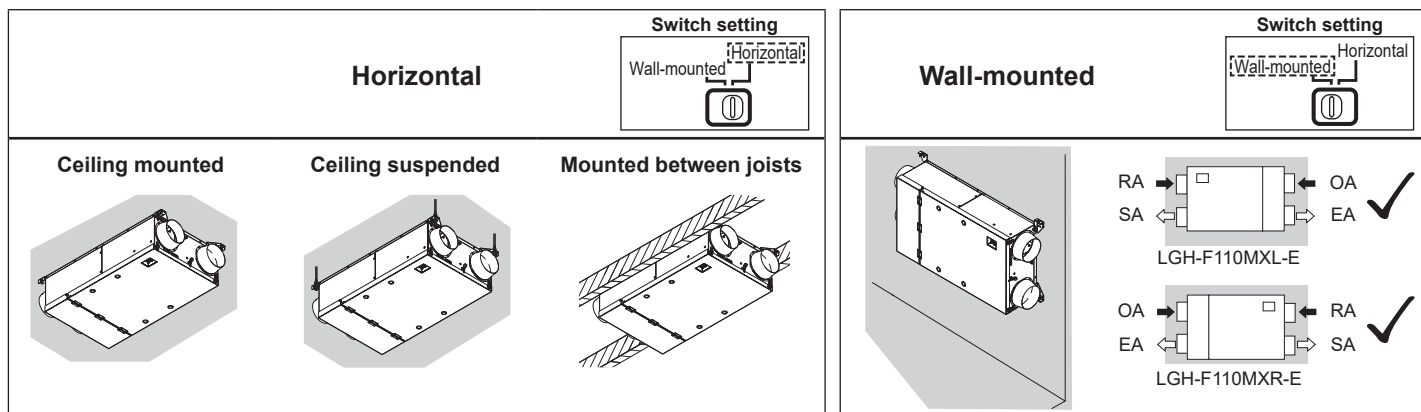


Reference for maintenance space



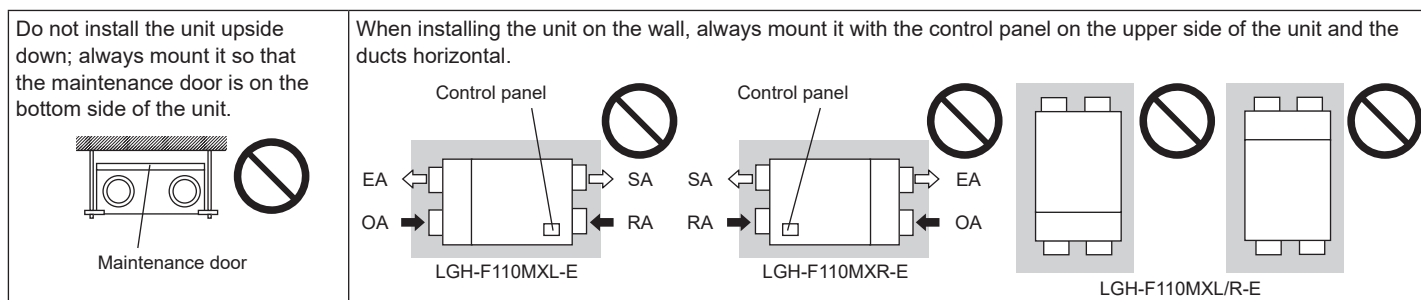
3. Standard installation examples

This product is designed to be installed by any of the following methods.



* These pictures show LGH-F110MXR-E.

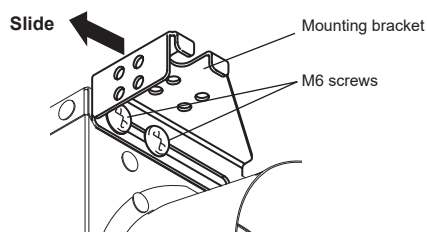
Do not install as follows:



Installing the unit in the prohibited directions may cause fire, electric shock, or injury.

Adjusting the mounting bracket pitch

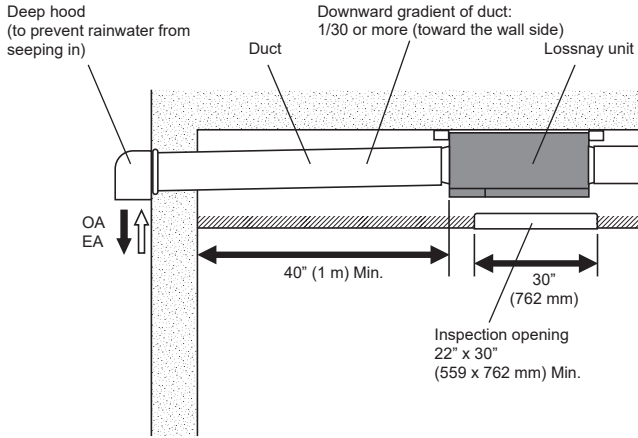
Loosen the two screws (M6) and slide the mounting bracket. After adjustment, retighten the screws (M6).



CAUTION

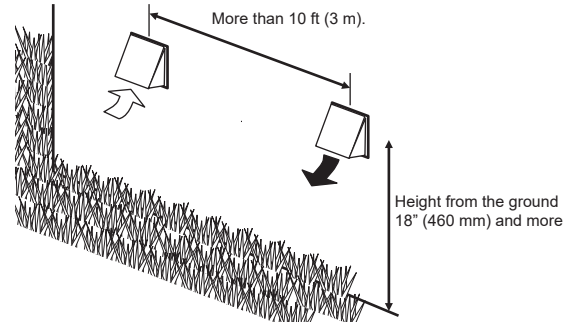
- After adjusting the mounting bracket, be sure to retighten the screws to 41.2 lbf·in (4.66 N·m).

■ Piping example

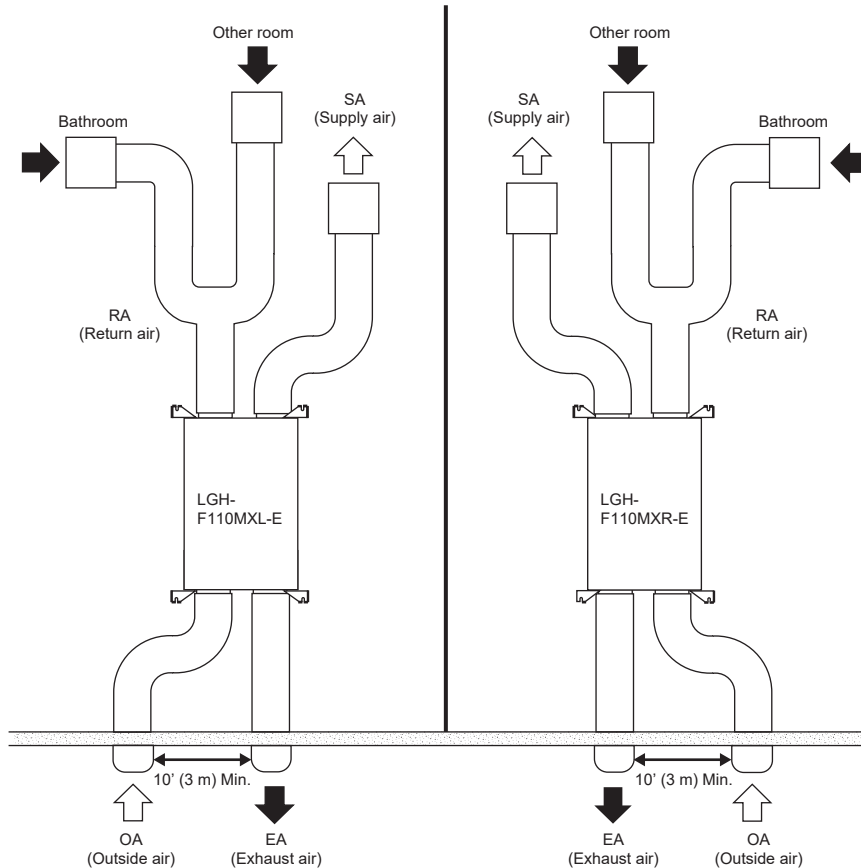


⚠ CAUTION

- The OA and EA ducts must be connected to the outside and at least 40" (1 m) away from the exhaust of the Lossnay unit.
- Ducts should be fixed individually as necessary so that their weight will not be applied to the Lossnay unit.
- Maintain at least 10 ft (3 m) of clearance between the OA intake and EA exhaust hoods. To avoid air leakage, make sure to seal the hoods with caulk or other similar material.



- When the exhaust air inlet (Return air) is installed in a bathroom, take measures to reduce the absolute humidity of intake air, e.g., divert the exhaust intake duct to the other room.
- The exhaust air inlet must be located far from spots making high humidity, such as a shower, to avoid drawing vapor directly into the unit or duct.



* This drawing is a top view.

Note

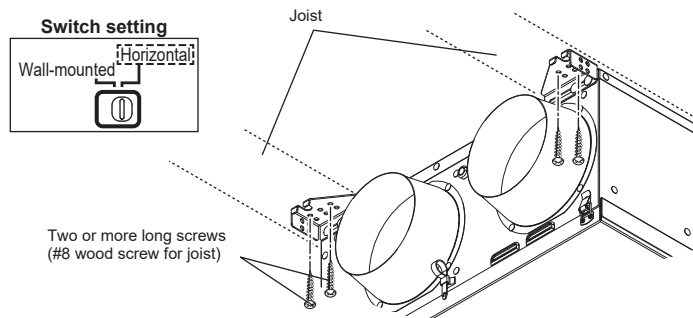
Install the Lossnay unit in accordance with the laws and regulations of each country, state, or province.

4. Installation method

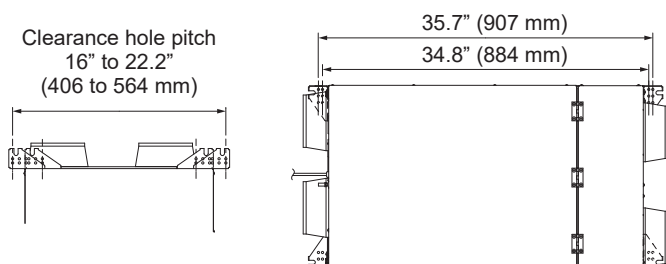
4.1 Installing the Lossnay unit

4.1.1 Ceiling (joist) mounted

Secure each of the four mounting brackets with two or more screws.



Refer to the diagram below for the pitch.



Note

- If the duct connecting flange obstructs installation, it may be temporarily removed; however, be sure to retighten the screws securely after installation.

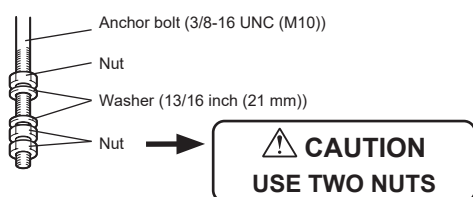
CAUTION

- Install on the ceiling or the joist with sufficient strength.
- Do not reinsert or re-drive the long screws (#8 wood screw, etc.).

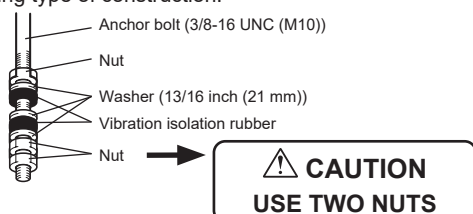
4.1.2 Ceiling suspended

4.1.2.1 Preparing the anchor bolts

Mount the washers (outer diameter of 13/16 inch (21 mm)) and nuts onto the pre-recessed anchor bolts (3/8-16 UNC (M10)), as shown in the figure below.

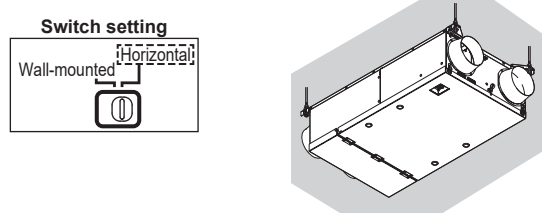


[When using (customer-prepared) vibration isolation rubber]
When using (customer-prepared) vibration isolation rubber, there is a possibility of this causing a decrease in strength, so we recommend the following type of construction.

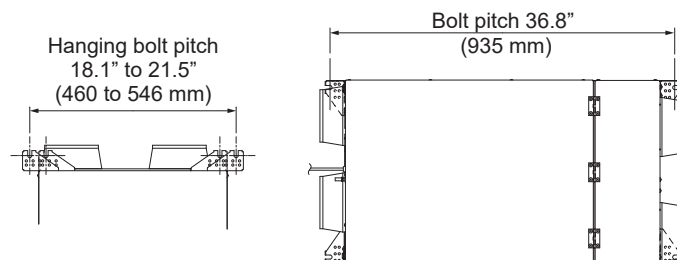


4.1.2.2 Mounting the Lossnay unit

- (1) Hang the mounting brackets on the anchor bolts and adjust in such a way that the Lossnay unit is level.
- (2) Tighten securely using double nuts.



Refer to the diagram below for the pitch.

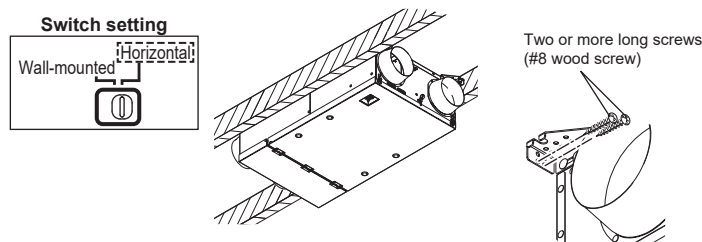


CAUTION

- Install the anchor bolts to support the product's weight and earthquake load. (Correctly rated wire or chains may also be used.)

4.1.3 Mounted between joists

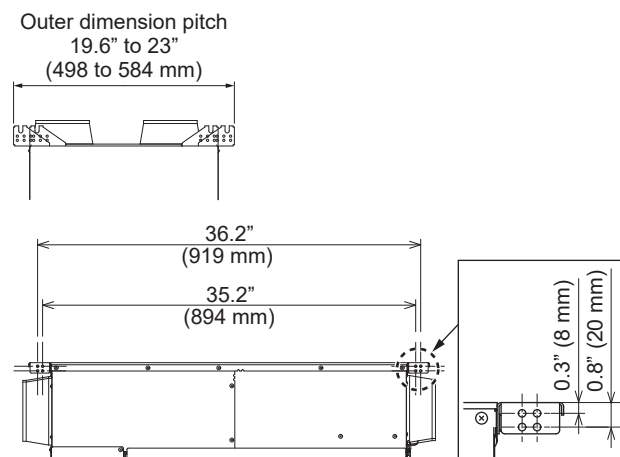
Secure each of the four mounting brackets with two or more screws.



Note

- If the duct connecting flange obstructs installation, it may be temporarily removed; however, be sure to retighten the screws securely after installation.

Refer to the diagram below for the pitch.



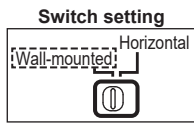
Dimensions on the opposite side are the same.

CAUTION

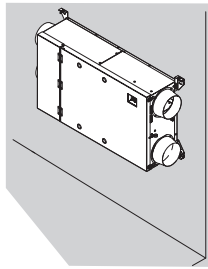
- Install on the ceiling or the joist with sufficient strength.
- Do not reinsert or re-drive the screws (#8 wood screw).

4.1.4 Wall-mounted

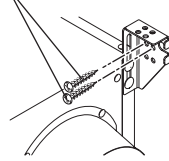
Extend the mounting brackets only on the upper side.
Secure each of the four mounting brackets with two or more screws.



CAUTION
Not a default setting



Two or more long screws
(#8 wood screw for stud)



The clearance hole pitch for wall-mounted installation is the same as that for ceiling (joist) mounting.

CAUTION

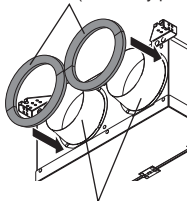
- When the Installation direction selection switch is set to “Wall-mounted”, the intermittent defrost operation changes to the intermittent sensing operation below an outdoor temperature of 5°F (-15°C), resulting in reduced supply airflow compared with the Horizontal installation setting.
- In regions where the outdoor intake air temperature remains below -13°F (-25°C), this unit should be installed horizontally rather than wall-mounted.
- Always set the control panel switch according to the installation direction. (See 5.2 Control panel)
Refer to the Operating Instructions.
- Do not reinsert or re-drive the long screws (#8 wood screw, etc.).

4.2 Duct installation

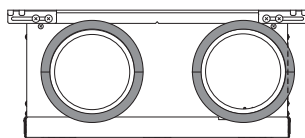
4.2.1 Attaching insulation to outdoor-side duct connecting flanges

Attach insulation (accessory parts) to the duct connecting flanges on the outdoor side and to the casing insulation surface.

Insulation (accessory parts)



Outdoor-side duct connecting flange
(OA and EA)

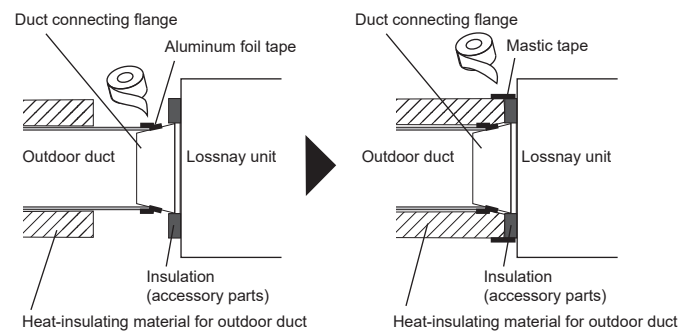
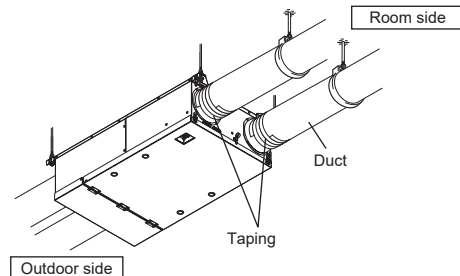


Note

- If any of the insulation protrudes from the unit casing, fold it over to the side and attach it.
- Ensure that there are no gaps at the insulation joints, and that the joints are not located on the underside of the unit. Otherwise, condensation may occur.

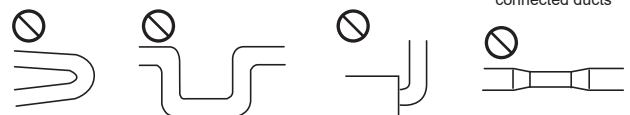
4.2.2 Connecting the ducts

- Fasten the duct securely to the duct connecting flange, and wrap aluminum foil tape (field supply) around the joints so that there is no air leakage.
- Suspend the ducts from the ceiling so that their weight will not be imposed to the Lossnay unit.
- The two outdoor ducts must be covered with heat-insulating material in order to prevent condensation from forming.



CAUTION

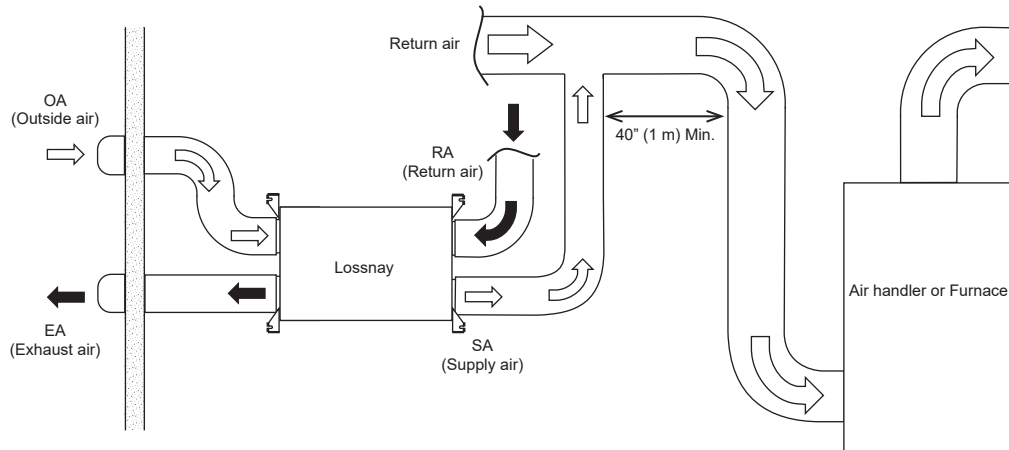
- The entire duct connecting flange shall be fully covered with heat-insulating material to ensure that no part is left exposed.
- The insulation described in 4.2.1 and heat-insulating material for the outdoor duct need to be secured with mastic tape, ensuring that there are no gaps between them and that the mastic tape covers the entire circumference.
- When the supply air (SA airflow) is set much greater than the exhaust air (RA airflow) using the Airflow selection switch, the indoor side of the Lossnay unit must be additionally insulated. Without additional insulation, it could cause condensation and water droplets to fall from the unit.
- If the Lossnay unit is used in extremely low-temperature areas, adding insulation to the unit and the SA duct is recommended to prevent condensation.
- Before attaching the ducts, check that no (debris or any other) foreign matter (scraps of paper, vinyl, etc.) has found its way inside the ducts.
- If it is expected that the ambient temperature around the place where the Lossnay unit is installed will be high during the summer air conditioning season, or that the outside temperature will be below 5°F (-15°C), it is recommended that the indoor ductwork be covered with insulating material.
- Do not carry out the following types of duct construction. (Doing so could cause a drop in airflow and generate abnormal noises.)
 - Extremely sharp bends
 - Multiple bends
 - Bends right next to the outlet
 - Extreme reduction in the diameter of the connected ducts



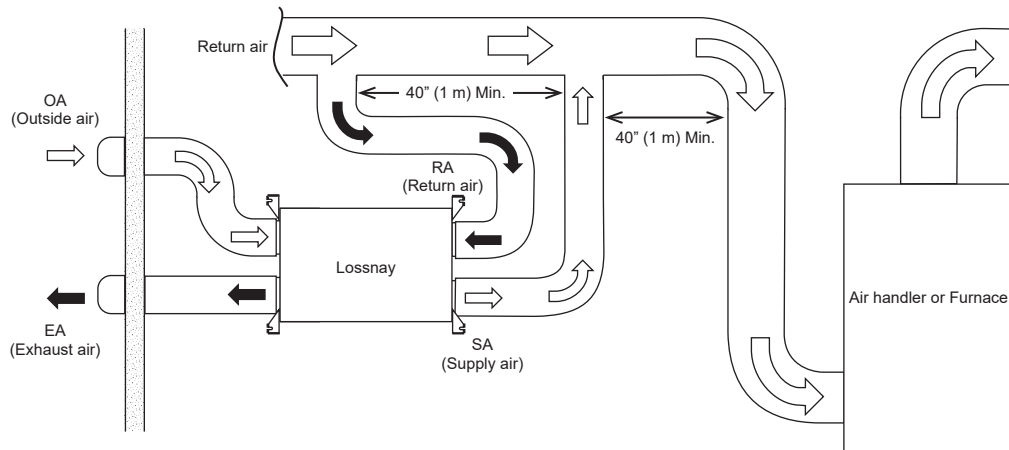
- To avoid transmission of vibrations, make sure to use a 12-inch section of flexible duct to connect rigid ducts.

4.2.3 Installation with Air handler or Furnace

■ Partially dedicated system



■ Simplified installation



CAUTION

- Any duct connections other than those specified above are prohibited.
- Ensure that the Lossnay unit and the air handler are interlocked for on/off operation when connecting the Lossnay SA or RA to the ducts of the air handler or furnace.
- Do not set the Timed Intermittent operation setting. (See 6. *Function Settings No. 59.*)
- In regions where the outdoor air temperature drops below 14°F (–10°C), install a motorized damper on the OA duct and interlock it with the SA fan. (Refer to the Signal output setting on page 16 for more details.)
- Make sure to verify that the SA and RA airflows of the Lossnay unit are at their set levels while both the air handler and Lossnay unit are running. Especially when the Lossnay unit's RA is connected to the return air duct of the air handler, high static pressure from the air handler fan may overpower the Lossnay unit, leading to insufficient RA airflow into the Lossnay unit.

5. Electrical wiring and system configuration

5.1 Wire connection diagram

Open the maintenance door to access the control PCB for external wiring.

With this product, the wiring installation method will vary according to the design of the system.

Perform electrical installation to meet local electrical regulations.

* Always use double-insulated cable for the transmission cables.

* Wiring work must be performed by qualified professionals.

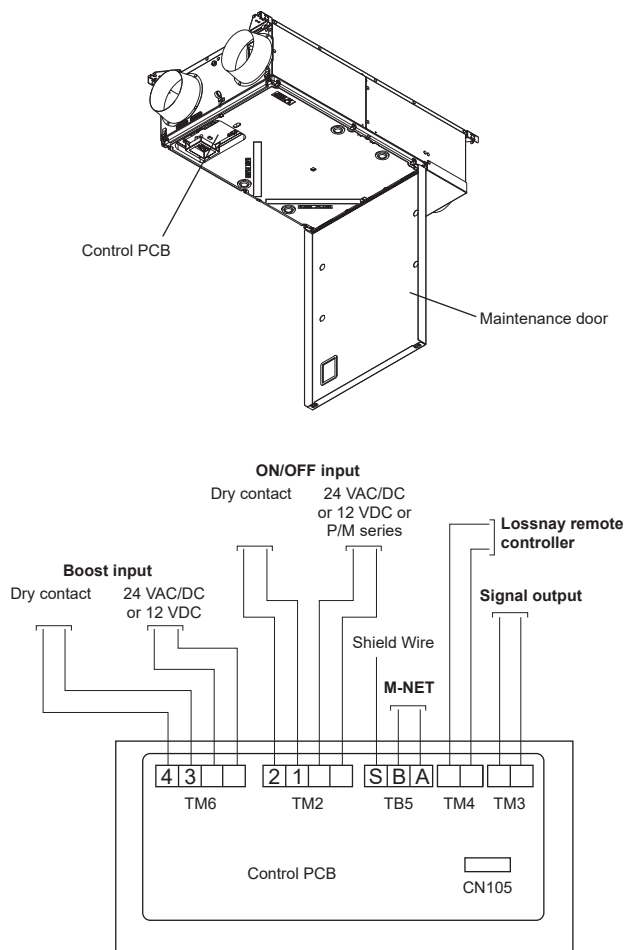
* All supply circuits must be disconnected and all LEDs on the circuit board must be off before accessing the terminal devices.

* This appliance incorporates a ground connection for functional purposes.

* Make sure to re-cover the wiring ports if tape is removed for electrical installation to avoid air leakage.

CAUTION

- Do not pull out pre-connected connectors unnecessarily during installation.
- Always separate the power supply cable and transmission cable by 2" (5 cm) or more to prevent malfunction of the unit.
- The wire used for field-wiring connections must be rated for at least 140°F (60°C).
- Check that the power plug is free of dust and make sure it is inserted fully to the base of the prongs to prevent looseness.
- All cables entering the control box must be U-trapped appropriately.
- * TM2, TM3, TM4, TB5, and TM6 are for field wiring.
- * Select a proper circuit breaker according to the current rating information.



5.2 Control panel

Operation mode selection

OFF	Stops the operation
External	ON/OFF interlocked with external device (Remote controller, M-NET, or Thermostat)
CN105	Unavailable * Stops the operation
ON	Starts in accordance with the panel settings

Operation indication LED 1 (green)

Unlit	Unit stopping
Lit	Unit running
6 Blinks	Defrost or sensing operation under 5°F (-15°C)
0.5 sec ON/ 0.5 sec OFF	Maintenance Stand-by operation
2 sec ON/ 2 sec OFF	Trial operation

Power indication LED 2 (red)

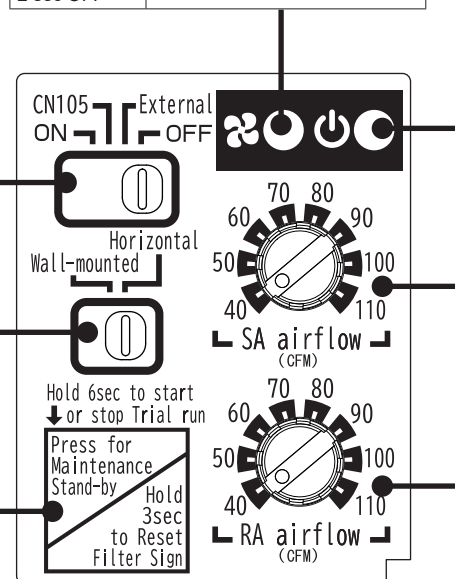
Unlit	No power is supplied
Lit	Power is supplied
1 sec ON/ 1 sec OFF	Starting up
2 sec ON/ 1 sec OFF	Filter maintenance sign
5 Blinks	Filter maintenance sign was just reset

Installation direction selection

Horizontal
Wall-mounted

Maintenance switch

Single push	Starts Maintenance Stand-by operation (3 hours) to defrost and dry inside the unit before opening the maintenance door
3 sec hold	Resets the filter maintenance sign after replacing the filter
6 sec hold	Starts trial run, when held again, the trial run stops



Error indicator information on LED 2

Number of blinks	Error details
1	Supply motor error
2	Exhaust motor error
4	Thermistor error
7	Supply voltage fault
8	Pre-heater error
9	Communication error
10	Function setting fault
11	RC overcurrent
12	CO2 sensor error
13	M-NET error

Airflow selection switch

Supply and Return airflow can be selected independently.
* Air volume can be set in increments of 10 CFM, and air volume does not change between each number.

CAUTION

- When the outdoor air temperature drops lower than 14°F (-10°C), or external devices or sensors are connected, air volumes selected on the control panel are not always the same as actual air volume.

5.3 System configuration

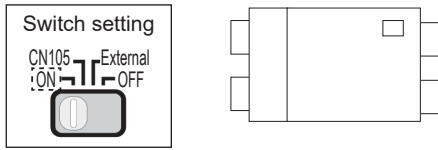
System configuration	Operation mode selection switch on the control panel	ON/OFF	Normal airflow Setting by	Boost airflow switching by	Combination use			
					Lossnay remote controller	M-NET	External device	CO2 sensor
1 Stand-alone	ON 	Control panel	Control panel	External Input	N	N	N	Y
2 Lossnay remote controller	External 	Remote controller	Control panel	- External input - Lossnay remote controller	—	Y	N	Y
3 MELANS (M-NET)	External 	Centralized controller, MA remote controller, or ME remote controller	Control panel	- External input - Centralized controller - MA remote controller - ME remote controller	Y	—	N	Y
4 P/M series CN2L connection	External 	MA remote controller	Control panel	- External input - MA remote controller	N	N	N	Y
5 External device (Thermostat/Furnace/ MITSUBISHI air handler)	External 	External device signal	Control panel	External input	N	N	—	Y

Note

- It is prohibited to form a group of multiple Lossnay units via TM4 in any configuration for this model.
- When using the Lossnay remote controller (TZ/PZ-62DR-E), the icon  or  is displayed on the screen during boost operation. While the icon  is displayed, the boost operation cannot be switched from the Lossnay remote controller.

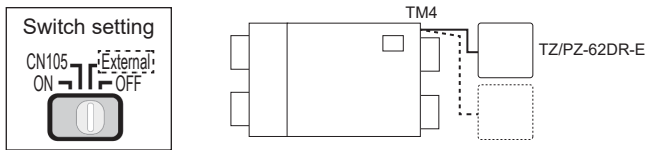
5.3.1 System configuration for ON/OFF interlock

1 Stand-alone system

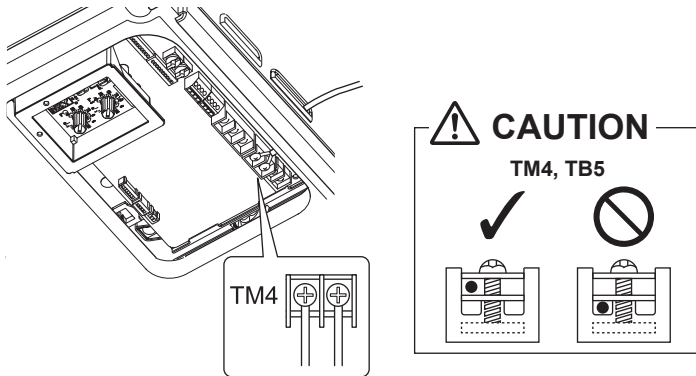


- This unit starts operating just by plugging it in.
- Set "Operation Mode selection" on the control panel to "ON".
- To stop the operation, set "Operation Mode selection" to "OFF".
- Select airflow setting on the control panel for Supply and Exhaust air.
- External input is available (TM6) for boost airflow switch.

2 Lossnay remote controller (TZ/PZ-62DR-E)



- Set "Operation Mode selection" on the control panel to "External".
- On/Off can be controlled by the remote controller.
- Select airflow setting on the control panel for Supply and Exhaust air.
- External input is available (TM6) for boost airflow switch.

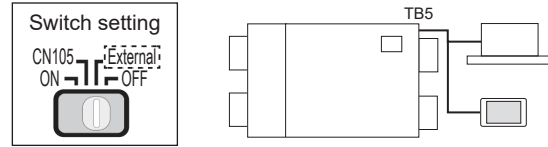


- When controlling the Lossnay units with MELANS, connect wires according to section 3.
- Securely connect the transmission cable from the remote controller to the input terminal block (TM4). (No polarity)
Wire type: two-core sheathed cable
Wire diameter: AWG22 (0.3 mm²)
- If there are two remote controllers, connect them in the same way.
- Keep the overall length of the transmission cable between the Lossnay unit and the remote controller within 656 ft (200 m).

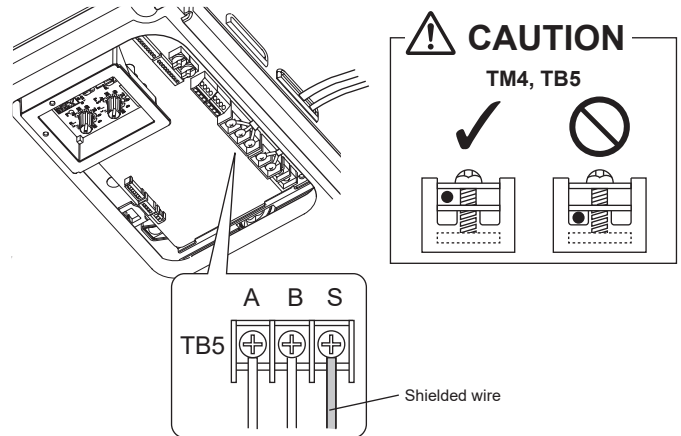
Note

- Do not tighten the screws on the terminal block with a torque larger than 10.62 lb·in (1.2 N·m).
It could damage the circuit board.
- Take care not to connect M-NET transmission cable to TM4.
- When connecting multiple cables to the terminal, use a round terminal.
- Solid wire (single-stranded wire) cannot be connected.

3 When connecting to CITY MULTI and Mitsubishi Electric Air Conditioner Network System (MELANS)



- Set "Operation mode selection" on the control panel to "External".
- On/Off can be controlled by the centralized controller, MA remote controller, or ME remote controller of the interlocked indoor unit.
- Select airflow setting on the control panel for Supply and Exhaust air.
- External input is available (TM6) for boost airflow switch.



- Connect a shielded wire to terminal TB5 (S) on the circuit board.
- Address setting is required. (Refer to 6. Function settings)
- Connect any of the CITY MULTI indoor unit or Mitsubishi Electric Air Conditioner Network System (MELANS) - to the Lossnay unit (using the M-NET transmission cables).
- See Section 2 Lossnay remote controller (TZ/PZ-62DR-E) (When using the Lossnay remote controller with M-NET).
- Securely connect the M-NET transmission cables to TB5 (A)(B). (No polarity)
Wire type: Shielded wire (CVVS/CPEVS)
Wire diameter: AWG 16 (1.25 mm²)

Note

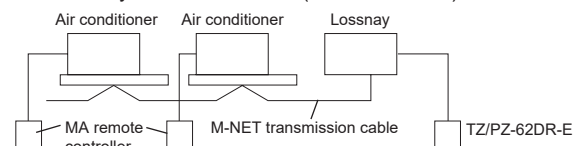
- It is not possible to interlock with the P series/M series via CN2L or with an external device.
- Grouping multiple Lossnay units is prohibited for LGH-F110MXL/R-E.

CAUTION

- Do not tighten the screws on the terminal block with a torque larger than 10.62 lb·in (1.2 N·m).
It could damage the circuit board.
- Always use shielded wires for the M-NET transmission cables, and finish the shield properly.
- Be sure to turn off the M-NET power supply during Lossnay wiring; otherwise, it may cause a malfunction.

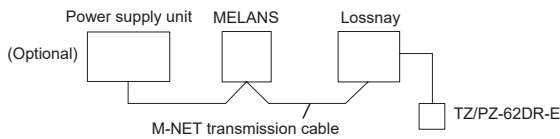
When interlocking with Mitsubishi M-NET air conditioner

- One Lossnay unit can be interlocked with up to 16 indoor units.
- Perform interlock settings at the system controller or local remote controller of the CITY MULTI indoor unit.
- The Lossnay remote controller (TZ/PZ-62DR-E) can be used.



When connecting to MELANS

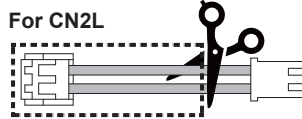
- Connect the power supply unit.
- The Lossnay remote controller (TZ/PZ-62DR-E) can be used.



* Limit the total length of the transmission cables no longer than 1640 ft (500 m). Limit the wiring length between the Lossnay unit and the power supply unit (optional) or the outdoor unit no longer than 656 ft (200 m).

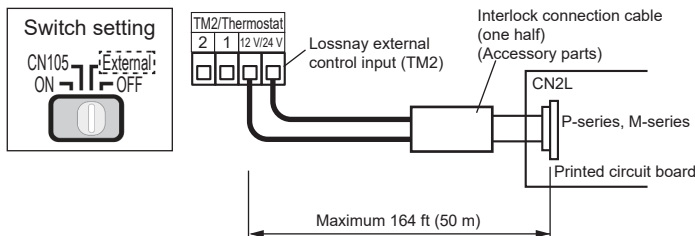
4 When connecting a Mitsubishi air conditioner (P-series, M-series (CN2L connection)) with an MA Remote controller

Set "Operation mode selection" on the control panel to "External". The interlock connection cable (accessory parts) has two connectors at both ends: one for CN2L of P-series and M-series units, and the other for CN2C of a MITSUBISHI air handler. Cut the cable and use one half as required.



Connect one half of the cable connector to CN2L on the circuit board of the indoor unit, then connect the lead wire side to the wet-contact terminals of the input terminal block (TM2) for the Lossnay external control input.

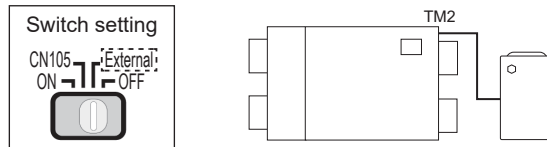
- Always separate the power supply cable and the Slim-Lossnay connection cable by 2" (5 cm) or more to prevent the unit from malfunctioning.
- The interlock connection cable is 4" (10 cm) long. When wiring, extend it as far as necessary.



Note

- To interlock the Lossnay unit with the indoor unit, the function setting on the MA remote controller is necessary. Refer to the MA remote controller manual for details.
- Use the MA remote controller of P-series, M-series for switching Lossnay ON/OFF.
- While the Lossnay airflow is set to "High" on the MA remote controller, Lossnay continues boost operation. (Lossnay does not automatically return to normal airflow.)
- When the Automatic recovery after power failure setting of the interlocked indoor unit is set to "Enable", Lossnay may start boost operation after a power interruption and restoration.
- The actual operating status of Lossnay fan speed may not always match the remote controller display.
- Ensure that all connections are secure and that the appropriate insulation is provided.
Use a sheathed extension cable or cable rated AWG20 to 16 (0.5 mm² to 1.5 mm²).
- Only one Lossnay unit and one M-series or P-series indoor unit can be interlocked. Interlocking multiple units is not possible.
- The Lossnay unit cannot be connected to M-NET in this case.
- Operation with only the Lossnay unit ON while the M-series or P-series indoor unit is OFF is possible. Conversely, operation with the indoor unit ON and the Lossnay unit OFF is not possible.

5 When interlocking with external devices such as a thermostat, air handler, gas furnace, or other external equipment



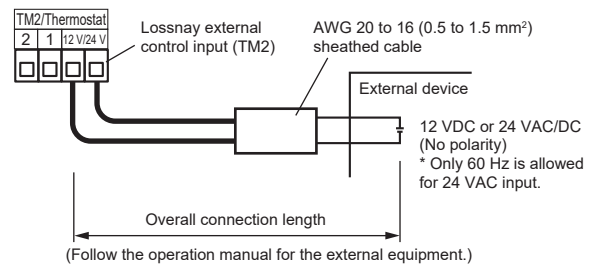
- Set "Operation mode selection" on the control panel to "External".
- On/Off can be controlled by a signal from the external device.
- Select airflow setting on the control panel for Supply and Exhaust air.
- External input is available (TM6) for boost airflow switch.

CAUTION

- The connection may vary according to the output signal type of the external device.
- Do not press the terminal with a force of more than 19.6 N when connecting the cable to TM2.

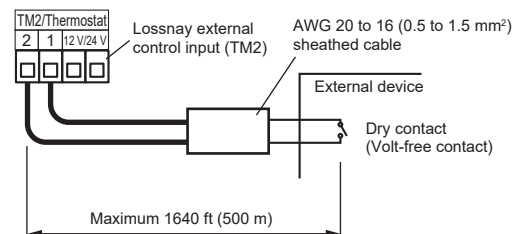
When the external device has a wet contact (charged contact) of 12 VDC or 24 VAC/DC

- The level signal width must be more than 10 seconds for ON and OFF.



When the external device has a dry contact (volt-free contact)

- The level signal width must be more than 10 seconds for ON and OFF.
- The wiring should be as shown in the figure below.



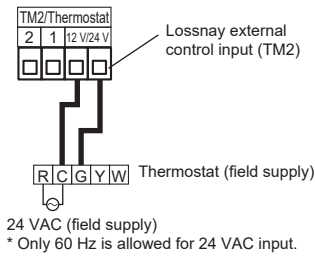
CAUTION

- If an optocoupler or any other type of polar coupler is used at the dry contact (volt-free contact), connect the positive side to terminal ① and the negative side to terminal ②.

When connecting a thermostat (field supply)

Refer to 5.1 regarding details of signal restrictions and terminals on the Lossnay PCB.
The following instructions show connection examples; refer to the manual of the field-supply thermostat for details.

■ Example of connection to a typical thermostat



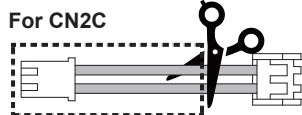
- When Lossnay SA or RA ducts are connected to the air handler duct, the Lossnay unit always needs to be interlocked with the fan of the air handler or furnace.
- If the field-supply thermostat has a ventilation or other accessory terminal, the Lossnay unit can be controlled by connecting it to TM2.
- If the thermostat has multi-speed fan control and the Lossnay unit is required to be interlocked with the fan of the air handler or fan coil, ensure that the Lossnay unit does not stop when the air handler fan speed changes.
For example, if the air handler is capable of selecting "High" and "Low" fan speeds, connect the thermostat's Low output terminals (such as G and C) to the wet contact side of the TM2 terminal, and connect the High output terminal to the TM2 dry contact via a relay.

Note

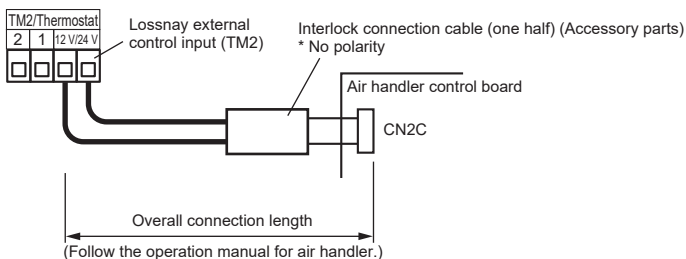
- There is no power supply to the thermostat from the Lossnay unit.

When connecting to a MITSUBISHI air handler (PVA, SVZ, PAA series)

The interlock connection cable (accessory parts) has two connectors at both ends: one for CN2L of P-series and M-series units, and the other for CN2C of a MITSUBISHI air handler. Cut the cable and use one half as required.



Refer to the MITSUBISHI air handler manual regarding details of the ERV compatibility, ERV output, and air-handler settings.



5.3.2 System configuration for boost operation and changing airflow settings

1 When connecting the CO₂ sensor PZ-70CSD-E or PZ-70CSW-E

- Airflow is controlled automatically according to the CO₂ concentration.
- External input is available (TM6) for boost airflow switch.



When the CO₂ sensor is activated by the following function setting, the fan speed starts to change automatically according to the CO₂ concentration.

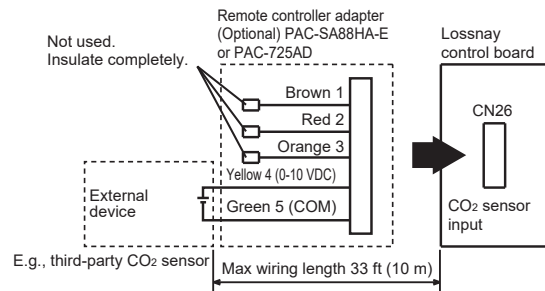
- "CO₂ boost control" and "CO₂ linear control" are selectable via the DIP-SW on the Lossnay PCB or the function setting on the TZ/PZ-62DR-E remote controller. By using "CO₂ boost control", Lossnay automatically switches to boost operation when the CO₂ concentration exceeds the threshold. In "CO₂ linear control", the fan speed changes linearly according to the CO₂ concentration.
- Connect and install correctly by following the Installation Manual for PZ-70CSD-E or PZ-70CSW-E. To activate CO₂ sensor control, refer to 6. *Function Settings No. 66.*

CAUTION

- Noise may change or increase because of automatic fan-speed changes due to defrosting operation and/or other functions.

2 To change fan speed by 0-10 VDC input (e.g., third-party CO₂ sensor)

- Airflow is controlled automatically according to the 0–10 VDC input.
- External input is available (TM6) for boost airflow switch.
- Establish the wire connection by inserting the optional remote controller adapter (PAC-SA88HA-E or PAC-725AD) into connector CN26.



To change fan speed by 0-10 VDC input, the wiring should be as shown in the picture above. Set the DIP-SW [SW5-6 to SW5-8] to select the sensors and operation mode of the Lossnay unit.

Refer to 6. *Function Settings No. 66* for more details.

This function cannot be used with the CO₂ sensor PZ-70CSD-E or PZ-70CSW-E.

CAUTION

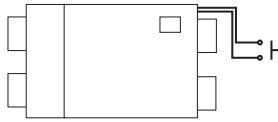
- Make sure of correct polarity.
- Do not apply voltages higher than 10 VDC.
- Noise may change or increase because of automatic fan-speed changes due to defrosting operation and/or other functions.

In addition to a CO₂ sensor, sensors with a 0–10 V output, such as a humidity sensor, can also be used.

Convert the CO₂ concentration specified in each function setting into voltage according to the following table.

CO ₂ concentration [ppm]	0	200	400	600	800	1000	1200	1400	1600	1800	2000
Voltage [VDC]	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0

3 Change the fan speed to “Boost” by an external switch

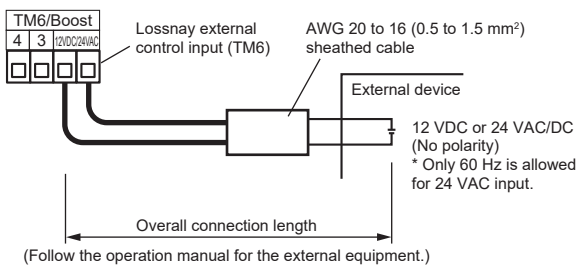


- It is possible to boost the fan speed by an external switch.
- During “Boost operation”, the airflow is fixed at 110 CFM. If the SA and RA airflow is set to be unbalanced using the Airflow selection switch, the airflow for the higher setting turns to 110 CFM during Boost operation, while the airflow for the lower setting maintains the same difference. When the normal airflow is set at 110 CFM, the airflow is not increased by Boost operation.
- In winter, boost airflow may not reach 110 CFM when the outdoor temperature is under 5°F (-15°C).
- There is no power supply to the boost switch from the Lossnay unit.

DIP-SW [SW2-3] settings vary depending on the type of input signal from the external device (level or pulse).

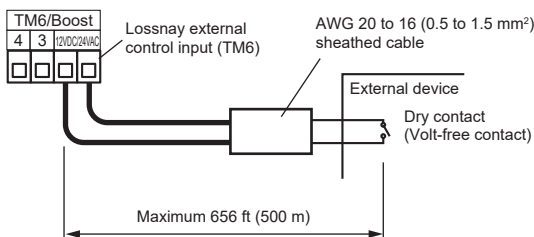
When the external device has a wet contact (charged contact) of 12 VDC or 24 VAC/DC

- If the input is pulse signal, set the DIP-SW [SW2-3] to the ON position. (Refer to 6. *Function Settings No. 29*.)
- When a level signal is selected, the signal width must be more than 10 seconds for ON and OFF.
- When a pulse signal is selected, the pulse width must be at least 200 ms.



When the external device has a dry contact (volt-free contact)

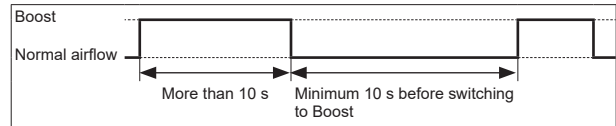
- If the input is pulse signal, set the DIP-SW [SW2-3] to the ON position. (Refer to 6. *Function Settings No. 29*.)
- When a level signal is selected, the signal width must be more than 10 seconds for ON and OFF.
- When a pulse signal is selected, the pulse width must be at least 200 ms.



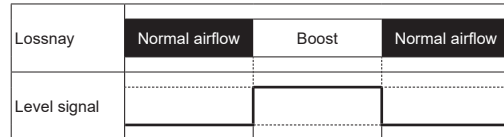
CAUTION

- If an optocoupler or any other type of polar coupler is used at the dry contact (volt-free contact), connect the positive side to terminal ③ and the negative side to terminal ④.

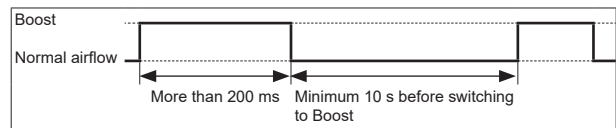
■ Level signal



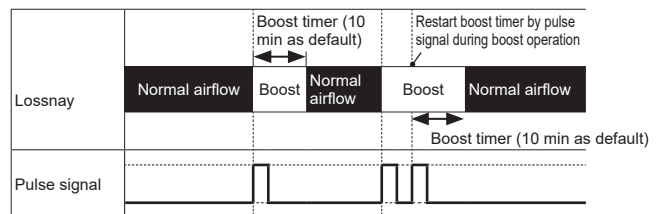
Type of signal	Lossnay operation
Volt-free contact	When the contact is closed, Lossnay switches to boost mode. When it is opened, Lossnay returns to normal airflow mode.
12 VDC or 24 VAC/DC	When the signal has voltage, Lossnay switches to boost mode. When it is 0 V, Lossnay returns to normal airflow mode.



■ Pulse signal



If the input is pulse signal, set the DIP-SW [SW2-3] to the ON position. (Refer to 6. *Function Settings No. 29*.)



Boost timer can be changed.

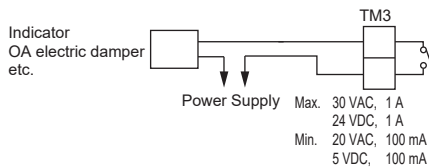
Refer to 6. *Function Settings No. 58* (DIP SW [SW2-4 and SW2-5]).

Each pulse signal restarts the boost timer from the beginning, even during boost operation. The boost operation does not finish until the set time has elapsed after the last pulse.

5.3.3 Signal output from the Lossnay unit

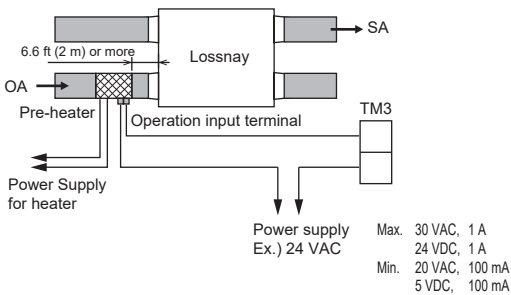
Set the DIP switch (DIP-SW) on the Lossnay PCB or function setting on the remote controller TZ/PZ-62DR-E as shown in the following table, depending on the necessary output signal from the Lossnay unit. For more information on signal output, see 6. *Function Settings No. 12*.

DIP-SW setting (when the function setting is set to 0)			Function setting on TZ/PZ-62DR-E	Signal output
SW5-1	SW5-2	SW5-3	62DR-E	
-	-	-	0	DIP-SW priority (TZ/PZ-62DR-E factory setting)
OFF	OFF	OFF	1	Operation monitor (DIP-SW factory setting)
ON	OFF	OFF	2	Malfunction monitor
OFF	ON	OFF	3	No output
ON	ON	OFF	4	Supply fan operation monitor
OFF	OFF	ON	5	Exhaust fan operation monitor
ON	OFF	ON	6	Pre-heater signal output
OFF	ON	ON	7	After-heater signal output
ON	ON	ON	-	No output



- Do not tighten the screws on the terminal block TM3 with a torque larger than 4.43 lb·in (0.5 N·m). It could damage the circuit board.
- When connecting multiple cables to the terminal, use a round terminal.

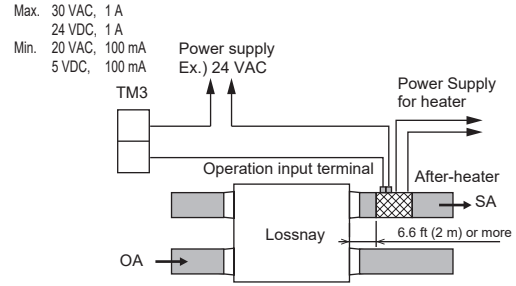
When using the Pre-heater output signal, the wiring should be as shown in the figure below.



CAUTION

- Failure to follow the instructions below could cause a fire.
- Choose an OA pre-heater that can control the heater outlet air temperature even when airflow is at either maximum or minimum. Otherwise, it could cause the supply fan to enter intermittent operation.
- Select a duct heater in compliance with local and national laws, ordinances, and standards.
- Always select a heater that is equipped with a non-self-resetting safety device.
- Do not directly supply power from the Lossnay unit to the duct heater. Doing so could cause a fire.
- Install a circuit breaker for the duct heater in compliance with all applicable laws, ordinances, and standards.
- Install the duct heater separate from the Lossnay unit by a distance of 6.6 ft (2 m) or more. Failure to do so may result in damage to the equipment due to the transmission of residual heat from the heater.
- Ensure that the duct heater and the Lossnay unit have been wired properly and that the Lossnay function settings have been configured, and then always check operation by performing a trial operation.
- For the duct heater output, see 6. *Function Settings Nos. 60 and 61*.

When using the after-heater output signal, the wiring should be as shown in the figure below.



For the heater, observe the cautions listed in the Pre-heater section.

6. Function settings

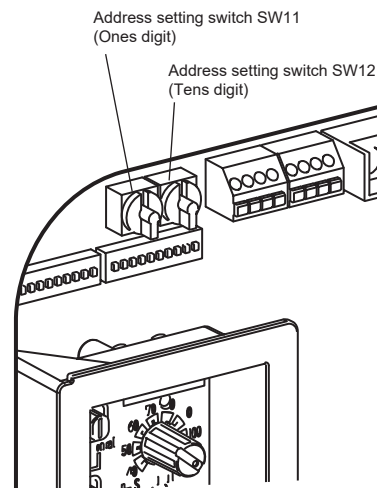
Setting the address

Address setting is required when connecting to CITY MULTI and MELANS.

Turn the address setting switch on the circuit board.

- SW12 indicates the tens digit and SW11 indicates the ones digit.
- The factory setting is "00".

* When the address number has been changed, the data in the memory is automatically reset. (All function-setting data is initialized.)



Changing the function selection switches (DIP-SW: SW2 and SW5)

Set the function selection switches (SW2 and SW5) to perform the appropriate function.

* All functions can also be set from the remote controller (TZ/PZ-62DR-E).

If the function is switched later using the remote controller, the Lossnay unit operates according to the remote controller setting.



CAUTION

- The power supply to the Lossnay unit must be turned off before changing the DIP-SW settings. Otherwise, it may cause electric shock, injury, or the change may not take effect.

(SW2)		
OFF	ON	
1	☐	No. 57 Optional filter setting
2	☐	No. 63 CO ₂ boost threshold setting
3	☐	No. 29 Signal type selection for boost operation input
4	☐	No. 58 Boost timer setting
5	☐	
6	☐	No. 1 Filter maintenance indicator setting
7	☐	No. 17 Exhaust fan setting during air conditioner defrosting
8	☐	No. 5 Automatic recovery setting after power interruption
9	☐	No. 59 Timed Intermittent operation setting
10	☐	

(SW5)		
OFF	ON	
1	☐	No. 12 Monitor output setting
2	☐	
3	☐	
4	☐	No. 79 Supply airflow fine-adjustment
5	☐	
6	☐	No. 66 CO ₂ sensor type and control selection
7	☐	
8	☐	
9	☐	No. 80 Exhaust airflow fine-adjustment
10	☐	

DIP-SW SW6 is used to identify the model for the circuit board. When replacing the circuit board, set the same setting as the old one.

(SW6)

	SW6-1	SW6-2	SW6-3	SW6-4
LGH-F110MXL-E	ON	OFF	OFF	OFF
LGH-F110MXR-E	ON	OFF	OFF	OFF

No.	Function	Setting Data															Factory setting	DIP-SW No.					
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14			15				
1	Filter maintenance indicator setting	DIP-SW priority	N/A	Available	—	—	—	—	—	—	—	—	—	—	—	—	0	2-6					
5	Automatic recovery setting after a power interruption	DIP-SW priority	Stop when power is recovered	Run when power is recovered	Return to the state before interruption	—	—	—	—	—	—	—	—	—	—	—	0	2-8					
12	Monitor output setting (TM3)	DIP-SW priority	Operation monitor	Malfunction monitor	N/A	Supply fan monitor	Exhaust fan monitor	Pre-heater output	SA fan monitor output with delay operation (for after-heater)	—	—	—	—	—	—	—	0	5-1 5-2 5-3					
17	Exhaust fan setting during air conditioner defrosting	DIP-SW priority	No change	Stop	—	—	—	—	—	—	—	—	—	—	—	—	0	2-7					
29	Signal type selection for boost operation input	DIP-SW priority	Level signal	Pulse signal	—	—	—	—	—	—	—	—	—	—	—	—	0	2-3					
36	Outdoor temperature display setting	N/A	Available	—	—	—	—	—	—	—	—	—	—	—	—	—	1	N/A					
38	CO2 concentration display setting	N/A	Available	—	—	—	—	—	—	—	—	—	—	—	—	—	1	N/A					
42	Outdoor temperature correction	Setting data 0 to 14 --> Outdoor temperature correction -7 K (-12.6°F (-7°C)) to 7 K (12.6°F (7°C))															—	7	N/A				
44	CO2 concentration correction	Setting data 0 to 10 --> CO2 concentration correction -500 ppm to 500 ppm (100 ppm increments)															—	—	—	—	—	5	N/A
57	Optional filter setting	DIP-SW priority	Standard filter	Optional filter	—	—	—	—	—	—	—	—	—	—	—	—	0	2-1					
58	Boost timer setting	DIP-SW priority	5 min	10 min	15 min	20 min	25 min	30 min	40 min	50 min	60 min	—	—	—	—	—	0	2-4 2-5					
59	Timed intermittent operation setting	DIP-SW priority	5 min ON/ 55 min OFF	10 min ON/ 50 min OFF	15 min ON/ 45 min OFF	20 min ON/ 40 min OFF	25 min ON/ 35 min OFF	30 min ON/ 30 min OFF	35 min ON/ 25 min OFF	40 min ON/ 20 min OFF	45 min ON/ 15 min OFF	50 min ON/ 10 min OFF	55 min ON/ 5 min OFF	N/A	—	—	0	2-9 2-10					
60	Pre-heater output setting 1) ON temperature	32°F (0°C)	28°F (-2°C)	25°F (-4°C)	21°F (-6°C)	18°F (-8°C)	14°F (-10°C)	10°F (-12°C)	7°F (-14°C)	3°F (-16°C)	0°F (-18°C)	-4°F (-20°C)	-8°F (-22°C)	-11°F (-24°C)	-15°F (-26°C)	-18°F (-28°C)	—	0	N/A				
61	Pre-heater output setting 2) OFF interval	1 hr	2 hrs	3 hrs	4 hrs	5 hrs	—	—	—	—	—	—	—	—	—	—	0	N/A					
62	LED usage setting for PZ-70CSW-E during-non operation	Unlit	Lit	—	—	—	—	—	—	—	—	—	—	—	—	—	0	N/A					
63	CO2 boost threshold setting	DIP-SW priority	400 ppm	500 ppm	600 ppm	700 ppm	800 ppm	900 ppm	1000 ppm	1100 ppm	1200 ppm	1300 ppm	1400 ppm	1500 ppm	1600 ppm	1700 ppm	1800 ppm	0	2-2				
66	CO2 sensor type and control selection	DIP-SW priority	N/A	CO2 sensor PZ-70CSW-E/Boost	CO2 sensor PZ-70CSD-E/Boost	Third-party CO2 sensor/Boost	CO2 sensor PZ-70CSW-E/Linear	CO2 sensor PZ-70CSD-E/Linear	Third-party CO2 sensor/Linear	—	—	—	—	—	—	—	0	5-6 5-7 5-8					
67	Threshold duration for PZ-70CSW-E LED	10 min	15 min	20 min	25 min	30 min	—	—	—	—	—	—	—	—	—	—	2	N/A					
68	Threshold concentration for PZ-70CSW-E LED	1000 ppm	1100 ppm	1200 ppm	1300 ppm	1400 ppm	1500 ppm	1600 ppm	1700 ppm	1800 ppm	1900 ppm	2000 ppm	—	—	—	—	5	N/A					
79	Supply airflow fine-adjustment	DIP-SW priority	-1	±0	+1	+2	—	—	—	—	—	—	—	—	—	—	0	5-4 5-5					
80	Exhaust airflow fine-adjustment	DIP-SW priority	-1	±0	+1	+2	—	—	—	—	—	—	—	—	—	—	0	5-9 5-10					
83	Filter maintenance interval setting — thousands digit	0 hr	1000 hrs	2000 hrs	3000 hrs	4000 hrs	5000 hrs	6000 hrs	7000 hrs	8000 hrs	9000 hrs	Optional filter priority	—	—	—	—	10	N/A					
84	Filter maintenance interval setting — hundreds digit	0 hr	100 hrs	200 hrs	300 hrs	400 hrs	500 hrs	600 hrs	700 hrs	800 hrs	900 hrs	Optional filter priority	—	—	—	—	10	N/A					
89	CO2 concentration setting for maximum airflow — hundreds digit	600 ppm	700 ppm	800 ppm	900 ppm	1000 ppm	1100 ppm	1200 ppm	1300 ppm	1400 ppm	1500 ppm	1600 ppm	1700 ppm	1800 ppm	1900 ppm	2000 ppm	—	4	N/A				
90	CO2 concentration setting for maximum airflow — tens digit	0 ppm	50 ppm	—	—	—	—	—	—	—	—	—	—	—	—	—	0	N/A					
91	CO2 concentration setting for minimum airflow — hundreds digit	300 ppm	400 ppm	500 ppm	600 ppm	700 ppm	800 ppm	900 ppm	1000 ppm	1100 ppm	1200 ppm	1300 ppm	1400 ppm	1500 ppm	1600 ppm	1700 ppm	—	1	N/A				
92	CO2 concentration setting for minimum airflow — tens digit	0 ppm	50 ppm	—	—	—	—	—	—	—	—	—	—	—	—	—	1	N/A					
93	CO2 sensor correction	-250 ppm	-200 ppm	-150 ppm	-100 ppm	-50 ppm	0 ppm	50 ppm	100 ppm	150 ppm	200 ppm	250 ppm	—	—	—	—	5	N/A					
100	Initialization (Nos. 1 to 99)	N/A	Initialize	—	—	—	—	—	—	—	—	—	—	—	—	—	0	N/A					

This table shows the summary of the function settings. Refer to the following pages for more details.

The functions indicated with "N/A" in the "DIP-SW No." column are available only when used with the remote controller TZ/PZ-62DR-E.

Refer to the Operation Manual of the TZ/PZ-62DR-E remote controller for more details.

No. 1 Filter maintenance indicator setting

Set the indicator for the filter maintenance sign on the control panel and the remote controller TZ/PZ-62DR-E.

DIP-SW			TZ/PZ-62DR-E		Filter maintenance indicator
SW No.	Setting	Setting check	Function No.	Setting Data	
SW2-6	—	—	1	0 (Factory setting)	DIP-SW priority
	ON			1	N/A
	OFF (Factory setting)			2	Available on the LED of the control panel and on the screen of TZ/PZ-62DR-E

No. 5 Automatic recovery setting after a power interruption

Set the automatic recovery following a power interruption.
If the operation mode selection switch is set to External and a power interruption occurs while Lossnay is operating with an external signal via TM2, the Lossnay remote controller, or M-NET, this function can be used to set the operation status after power is restored.

DIP-SW			TZ/PZ-62DR-E		Lossnay operation when power is restored
SW No.	Setting	Setting check	Function No.	Setting Data	
SW2-8	—	—	5	0 (Factory setting)	DIP-SW priority
	OFF (Factory setting)			1	Lossnay remains stopped.
	—	—		2	Lossnay starts operation.
	ON			3	Lossnay returns to the state before the interruption*

* Lossnay returns to the condition before the power interruption regardless of the external input condition after power is restored.

- If a power interruption occurs during boost operation via the boost timer (such as input from the Lossnay remote controller), Lossnay does not return to boost operation.
- If a power interruption occurs during trial run, Lossnay does not return to trial run.

For ON/OFF mode

When the operation mode selection switch is set to ON/OFF, Lossnay starts operation or remains stopped depending on the switch setting.

No. 12 Monitor output setting

Set operation monitor output from TM3 synchronized with fan operation, ventilation mode or occurrence of malfunction.

DIP-SW			TZ/PZ-62DR-E		Contents
SW No.	Setting	Setting check	Function No.	Setting Data	
SW5-1 SW5-2 SW5-3	—	—	12	0 (Factory setting)	DIP-SW priority
	5-1 OFF 5-2 OFF 5-3 OFF (Factory setting)			1	Operation monitor output The output turns ON while Lossnay is operating.
	5-1 ON 5-2 OFF 5-3 OFF			2	Malfunction monitor output The output turns ON when a malfunction occurs in the Lossnay unit.
	5-1 OFF 5-2 ON 5-3 OFF			3	N/A
	5-1 ON 5-2 ON 5-3 OFF			4	SA fan monitor output * When the supply fan stops due to low outdoor temperature or defrosting, the output stops
	5-1 OFF 5-2 OFF 5-3 ON			5	EA fan monitor output
	5-1 ON 5-2 OFF 5-3 ON			6	Pre-heater output The output starts 10 seconds after the supply fan starts operation. The fan continues to operate for 3 minutes after the output stops. Lossnay starts the output when the outdoor temperature is 32°F (0°C) or lower (adjustable in Function setting No. 60), and stops the output when the detected temperature reaches 59°F (15°C). Lossnay stops the output every 1 hour (adjustable in Function setting No. 61). An error code is shown on the remote controller, and the output stops in the following cases: 1) Outdoor temperature becomes higher than 59°F (15°C) within 15 minutes after the output starts. 2) Outdoor temperature becomes -20°C or lower, 60 minutes after the output starts.
	5-1 OFF 5-2 ON 5-3 ON			7	SA fan monitor output with delay operation (for after-heater) The output starts 10 seconds after the supply fan starts operation. The fan continues to operate for 3 minutes after the output stops.
	5-1 ON 5-2 ON 5-3 ON			—	N/A

- To use as the after-heater output, observe the cautions listed on page 16.

- For heater selection, observe the cautions listed on page 16.

No. 17 Exhaust fan setting during air conditioner defrosting

This function can be used when the Lossnay supply duct is connected to P series, M series, or CITY MULTI indoor unit.

Set the operation of the exhaust fan during defrosting of the air conditioner (when the supply fan stops).

To enable this function, the indoor unit must also be configured.

Refer to the indoor unit manual.

DIP-SW			TZ/PZ-62DR-E		Exhaust fan operation during air conditioner defrosting
SW No.	Setting	Setting check	Function No.	Setting Data	
SW2-7	—	—	17	0 (Factory setting)	DIP-SW priority
	OFF (Factory setting)			1	No change
	ON			2	Stop

No. 29 Signal type selection for boost operation input

Set the boost input signal type from an external device for TM6.
Change this setting if pulse input is used via a momentary switch or similar device.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Contents
SW No.	Setting		Function No.	Setting Data		
SW2-3	—	—	29	0 (Factory setting)		DIP-SW priority
	OFF (Factory setting)			1		Level signal
	ON			2		Pulse signal

No. 36 Outdoor temperature display setting

Set to display the outdoor temperature detected by the Lossnay unit thermistor.

This function is not available via the DIP-SW on the Lossnay PCB.
This function is available only when “Sensor value” is set to “Yes (Display)” on the remote controller TZ/PZ-62DR-E.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Outdoor temperature display
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	36	0		N/A
	—	—		1 (Factory setting)		Available on the screen of TZ/PZ-62DR-E

No. 38 CO₂ concentration display setting

Set to display the CO₂ concentration.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration display
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	38	0		N/A
	—	—		1 (Factory setting)		Available on the screen of TZ/PZ-62DR-E

- This function is available only when “Sensor value” is set to “Yes (Display)” on the remote controller TZ/PZ-62DR-E.
- When displaying CO₂ concentration, the supply air temperature cannot be displayed simultaneously.
- The CO₂ concentration display shows the value detected by a CO₂ sensor connected to the Lossnay unit. The value may differ from the actual indoor CO₂ concentration. This function cannot be used as a measuring instrument.
- The value may significantly differ from the actual indoor CO₂ concentration for approx. 15 minutes after starting operation.

No. 42 Outdoor temperature correction

Set the correction for the outdoor temperature that is displayed by Function No. 36 on the PZ-62DR-EA screen.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Correction to the thermistor detection value
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	42	0		-7 K (-12.6°F/-7°C)
	—	—		1		-6 K (-10.8°F/-6°C)
	—	—		2		-5 K (-9°F/-5°C)
	—	—		3		-4 K (-7.2°F/-4°C)
	—	—		4		-3 K (-5.4°F/-3°C)
	—	—		5		-2 K (-3.6°F/-2°C)
	—	—		6		-1 K (-1.8°F/-1°C)
	—	—		7 (Factory setting)		0 K (0°F/0°C)
	—	—		8		+1 K (+1.8°F/+1°C)
	—	—		9		+2 K (+3.6°F/+2°C)
	—	—		10		+3 K (+5.4°F/+3°C)
	—	—		11		+4 K (+7.2°F/+4°C)
	—	—		12		+5 K (+9°F/+5°C)
	—	—		13		+6 K (+10.8°F/+6°C)
	—	—		14		+7 K (+12.6°F/+7°C)

No. 44 CO₂ concentration correction

The CO₂ concentration displayed on the remote controller TZ/PZ-62DR-E can be corrected.

This function is available when there is a CO₂ concentration gap due to the location of the CO₂ sensor.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration correction
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	44	0		-500 ppm
	—	—		1		-400 ppm
	—	—		2		-300 ppm
	—	—		3		-200 ppm
	—	—		4		-100 ppm
	—	—		5 (Factory setting)		±0 ppm
	—	—		6		100 ppm
	—	—		7		200 ppm
	—	—		8		300 ppm
	—	—		9		400 ppm
	—	—		10		500 ppm

No. 57 Optional filter setting

Set SW2-1 as below when PZ-F110MF-E (optional high efficiency filter) is installed. The interval of the filter maintenance indicator displayed on the remote controller or LED 2 on the control panel is automatically adjusted for the optional filter.

This function can also be set from the remote controller TZ/PZ-62DR-E.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Contents
SW No.	Setting		Function No.	Setting Data		
SW2-1	—	—	57	0 (Factory setting)		DIP-SW priority
	OFF (Factory setting)			1		When the optional filter is NOT installed in the Lossnay unit. (The standard filters are used.)
	ON			2		When the optional filter is installed in the Lossnay unit.

The default time intervals for the filter maintenance sign are as follows:

- Standard filter: 5,900 hours
- Optional filter: 2,200 hours

To change these intervals, refer to Function No. 83 and No. 84.

Actual timing varies depending on the airflow setting.

No. 58 Boost timer setting

Set the boost duration after receiving a boost signal from the controller, or after a pulse signal is input to TM6. This function is not available when the boost input signal of TM6 is set to "Level signal" in Function No.29, or when a signal is received from the MA remote controller connected to the M/P series indoor unit interlocked with Lossnay via CN2L connection.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Boost timer setting
SW No.	Setting		Function No.	Setting Data		
SW2-4 SW2-5	—	—	58	0 (Factory setting)		DIP-SW priority
	—	—		1		5 min
	2-4 OFF 2-5 OFF (Factory setting)			2		10 min
	—	—		3		15 min
	2-4 ON 2-5 OFF			4		20 min
	—	—		5		25 min
	—	—		6		30 min
	2-4 OFF 2-5 ON			7		40 min
	—	—		8		50 min
	2-4 ON 2-5 ON			9		60 min

No. 59 Timed intermittent operation setting

Timed Intermittent operation setting can be activated by this setting. The supply and exhaust fans keep ON and OFF for a certain period of time according to the selection.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Timed Intermittent operation
SW No.	Setting		Function No.	Setting Data		
SW2-9 SW2-10	—	—	59	0 (Factory setting)		DIP-SW priority
	—	—		1		5 min ON/55 min OFF
	—	—		2		10 min ON/50 min OFF
	2-9 ON 2-10 ON			3		15 min ON/45 min OFF
	—	—		4		20 min ON/40 min OFF
	—	—		5		25 min ON/35 min OFF
	2-9 OFF 2-10 ON			6		30 min ON/30 min OFF
	—	—		7		35 min ON/25 min OFF
	—	—		8		40 min ON/20 min OFF
	2-9 ON 2-10 OFF			9		45 min ON/15 min OFF
	—	—		10		50 min ON/10 min OFF
	—	—		11		55 min ON/5 min OFF
	2-9 OFF 2-10 OFF (Factory setting)			12		N/A

When this timer is set, the icon [] is displayed on the Lossnay remote controller.

- Priority is given to higher-level controls such as intermittent operation in cold regions.
- This function is not available when the unit is controlled by a CO₂ sensor.

No. 60 Pre-heater output setting 1) ON temperature

Set the outdoor temperature for pre-heater output ON.

When the detected temperature falls to the set value or below, the pre-heater output starts.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Outdoor temp. for pre-heater output ON
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	60	0 (Factory setting)		32°F (0°C) or below
	—	—		1		28°F (-2°C) or below
	—	—		2		25°F (-4°C) or below
	—	—		3		21°F (-6°C) or below
	—	—		4		18°F (-8°C) or below
	—	—		5		14°F (-10°C) or below
	—	—		6		10°F (-12°C) or below
	—	—		7		7°F (-14°C) or below
	—	—		8		3°F (-16°C) or below
	—	—		9		0°F (-18°C) or below
	—	—		10		-4°F (-20°C) or below
	—	—		11		-8°F (-22°C) or below
	—	—		12		-11°F (-24°C) or below
	—	—		13		-15°F (-26°C) or below
	—	—		14		-18°F (-28°C) or below

No. 61 Pre-heater output setting 2) OFF interval

Set the pre-heater output interval. Output stops according to the set interval.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Pre-heater output OFF interval
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	61	0 (Factory setting)		1 hr
	—	—		1		2 hrs
	—	—		2		3 hrs
	—	—		3		4 hrs
	—	—		4		5 hrs

No. 62 LED usage setting for PZ-70CSW-E during non-operation

The wall-mounted type CO₂ sensor PZ-70CSW-E has the LED which indicates the concentration level.

The LED state (lit or unlit) can be selected when the Lossnay unit is not operating.

Refer to the Installation Manual of PZ-70CSW-E for more details.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	LED state when Lossnay is not operating
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	62	0 (Factory setting)		Unlit
	—	—		1		Lit

No. 63 CO₂ boost threshold setting

When a CO₂ sensor is connected to the Lossnay unit and the CO₂ boost control is selected via the DIP-SW (SW5-6 to SW5-8) or the function setting No. 66, CO₂ concentration threshold [ppm] for switching to boost operation can be selected with this setting.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration threshold
SW No.	Setting		Function No.	Setting Data		
SW2-2	—	—	63	0 (Factory setting)		DIP-SW priority
	—	—		1		400 ppm
	—	—		2		500 ppm
	—	—		3		600 ppm
	—	—		4		700 ppm
	ON			5		800 ppm
	—	—		6		900 ppm
	OFF (Factory setting)			7		1000 ppm
	—	—		8		1100 ppm
	—	—		9		1200 ppm
	—	—		10		1300 ppm
	—	—		11		1400 ppm
				12		1500 ppm
				13		1600 ppm
				14		1700 ppm
				15		1800 ppm

No. 66 CO₂ sensor type and control selection

When connecting a CO₂ sensor to the Lossnay unit, set this item. Lossnay changes fan speed according to the input voltage to CN26 when third-party CO₂ sensor or PZ-70CSW-E/PZ-70CSD-E CO₂ sensor is connected. Refer to their manuals for details.

Do not set values other than the settings below.

* The selection of [CO₂ control: No/Yes] on the remote controller TZ/PZ-62DR-E is not applicable for this product. Do not change this setting.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ sensor type and control selection
SW No.	Setting		Function No.	Setting Data		
SW5-6 SW5-7 SW5-8	—	—	66	0 (Factory setting)		DIP-SW priority
	5-6 OFF 5-7 OFF 5-8 OFF (Factory setting)			1		No external fan speed control input
	5-6 ON 5-7 OFF 5-8 OFF			2		PZ-70CSW-E with boost control
	5-6 OFF 5-7 ON 5-8 OFF			3		PZ-70CSD-E with boost control
	5-6 ON 5-7 ON 5-8 OFF			4		3rd party's CO ₂ sensor (0-10 VDC equals to 0-2000 ppm) with boost control
	5-6 OFF 5-7 OFF 5-8 ON			5		PZ-70CSW-E with linear control
	5-6 ON 5-7 OFF 5-8 ON			6		PZ-70CSD-E with linear control
	5-6 OFF 5-7 ON 5-8 ON			7		3rd party's CO ₂ sensor (0-10 VDC equals to 0-2000 ppm) with linear control
	5-6 ON 5-7 ON 5-8 ON			—	—	No external fan speed control input

No. 67 Threshold duration for PZ-70CSW-E LED

The LED on the CO₂ sensor PZ-70CSW-E changes from orange (MID) to red (HIGH) when the CO₂ level remains above the threshold concentration for the set number of minutes.

The threshold duration can be changed.

Refer to the Installation Manual of PZ-70CSW-E for details.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Threshold duration for PZ-70CSW-E LED
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	67	0		10 min
	—	—		1		15 min
	—	—		2 (Factory setting)		20 min
	—	—		3		25 min
	—	—		4		30 min

No. 68 Threshold concentration for PZ-70CSW-E LED

The threshold concentration at which the LED on the CO₂ sensor PZ-70CSW-E changes from green (LOW) to orange (MID) can be adjusted.

Refer to the Installation Manual of PZ-70CSW-E for details.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Threshold concentration for PZ-70CSW-E LED
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	68	0		1000 ppm
	—	—		1		1100 ppm
	—	—		2		1200 ppm
	—	—		3		1300 ppm
	—	—		4		1400 ppm
	—	—		5 (Factory setting)		1500 ppm
	—	—		6		1600 ppm
	—	—		7		1700 ppm
	—	—		8		1800 ppm
	—	—		9		1900 ppm
	—	—		10		2000 ppm

No. 79 Supply airflow fine-adjustment

The supply airflow can be selected in 10 CFM increments by using the Airflow selection switch on the control panel. This function allows fine adjustments to increase or decrease the supply airflow relative to the airflow selected by the switch.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Supply airflow fine-adjustment
SW No.	Setting		Function No.	Setting Data		
SW5-4 SW5-5	—	—	79	0 (Factory setting)		DIP-SW priority
	5-4 ON 5-5 OFF			1		-1
	5-4 OFF 5-5 OFF (Factory setting)			2		±0
	5-4 OFF 5-5 ON			3		+1
	5-4 ON 5-5 ON			4		+2

Airflow does not increase when 110 CFM is selected by the Airflow selection switch.

No. 80 Exhaust airflow fine-adjustment

The exhaust airflow can be selected in 10 CFM increments by using the Airflow selection switch on the control panel. This function allows fine adjustments to increase or decrease the exhaust airflow relative to the airflow selected by the switch.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Exhaust airflow fine-adjustment setting
SW No.	Setting		Function No.	Setting Data		
SW5-9 SW5-10	—	—	80	0 (Factory setting)		DIP-SW priority
	5-9 ON 5-10 OFF			1		-1
	5-9 OFF 5-10 OFF (Factory setting)			2		±0
	5-9 OFF 5-10 ON			3		+1
	5-9 ON 5-10 ON			4		+2

Airflow does not increase when 110 CFM is selected by the Airflow selection switch.

No. 83, 84 Filter maintenance interval setting

Filter maintenance indicator is displayed on the remote controller according to the interval set in this function.

The interval can be set from 100 hours to 9900 hours depending on site conditions.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Filter maintenance interval setting — thousands digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	83	0		0
	—	—		1		1
	—	—		2		2
	—	—		3		3
	—	—		4		4
	—	—		5		5
	—	—		6		6
	—	—		7		7
	—	—		8		8
	—	—		9		9
	—	—		10 (Factory setting)		Optional filter setting priority

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Filter maintenance interval setting — hundreds digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	84	0		0
	—	—		1		1
	—	—		2		2
	—	—		3		3
	—	—		4		4
	—	—		5		5
	—	—		6		6
	—	—		7		7
	—	—		8		8
	—	—		9		9
	—	—		10 (Factory setting)		Optional filter setting priority

When both Functions No. 83 and No. 84 are set to "10", the filter maintenance interval depends on default value in Function No. 57.

No. 89, 90 CO₂ concentration setting for maximum airflow

The CO₂ concentration at which the fan speed turns to 110 CFM (maximum airflow) can be set.

To set 50 ppm, set Function No. 90 to 1.

(For example, if the target is 950 ppm, set Function No. 89 to 3 and Function No. 90 to 1.)

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration for maximum airflow — hundreds digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	89	0		600 ppm
	—	—		1		700 ppm
	—	—		2		800 ppm
	—	—		3		900 ppm
	—	—		4 (Factory setting)		1000 ppm
	—	—		5		1100 ppm
	—	—		6		1200 ppm
	—	—		7		1300 ppm
	—	—		8		1400 ppm
	—	—		9		1500 ppm
	—	—		10		1600 ppm
	—	—		11		1700 ppm
	—	—		12		1800 ppm
	—	—		13		1900 ppm
	—	—		14		2000 ppm

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration for maximum airflow — tens digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	90	0 (Factory setting)		0 ppm
	—	—		1		50 ppm

No. 91, 92 CO₂ concentration setting for minimum airflow

The CO₂ concentration at which the fan speed turns to 40 CFM (minimum airflow) can be set.

To set 50 ppm, set Function No. 92 to 1.

(For example, if the target is 950 ppm, set Function No. 91 to 6 and Function No. 92 to 1.)

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration for minimum airflow — hundreds digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	91	0		300 ppm
	—	—		1 (Factory setting)		400 ppm
	—	—		2		500 ppm
	—	—		3		600 ppm
	—	—		4		700 ppm
	—	—		5		800 ppm
	—	—		6		900 ppm
	—	—		7		1000 ppm
	—	—		8		1100 ppm
	—	—		9		1200 ppm
	—	—		10		1300 ppm
	—	—		11		1400 ppm
	—	—		12		1500 ppm
	—	—		13		1600 ppm
	—	—		14		1700 ppm

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ concentration for minimum airflow — tens digit
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	92	0		0 ppm
	—	—		1 (Factory setting)		50 ppm

No. 93 CO₂ sensor correction

The CO₂ concentration can be corrected when the CO₂ sensor PZ-70CSW-E or PZ-70CSD-E is connected.

In this function, the control value of CO₂ concentration is corrected. On the other hand, Function No. 44 corrects only the displayed CO₂ concentration value.

This function is not available via the DIP-SW on the Lossnay PCB.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	CO ₂ sensor analogue correction
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	93	0		-250 ppm
	—	—		1		-200 ppm
	—	—		2		-150 ppm
	—	—		3		-100 ppm
	—	—		4		-50 ppm
	—	—		5		±0 ppm
	—	—		(Factory setting)		
	—	—		6		50 ppm
	—	—		7		100 ppm
	—	—		8		150 ppm
	—	—		9		200 ppm
	—	—		10		250 ppm

No. 100 Initialization (Nos. 1 to 99)

Set to initialize the remote controller TZ/PZ-62DR-E settings.

All settings that are configured by users will be cancelled.

DIP-SW		Setting check	TZ/PZ-62DR-E		Setting check	Initialization
SW No.	Setting		Function No.	Setting Data		
N/A	—	—	100	0		N/A
	—	—		(Factory setting)		
				1		Available

7. Check points after installation work

After installation work has been completed, check the following points once again.

If any failure is detected, be sure to fix it.

Check the following points before trial operation, and place a check mark ☒ in the corresponding check box.

	Reference page	Check box
(1) Check points - Main unit installation work		
A distance of 9.8 ft (3 m) or more from the building wall surface is secured for the outdoor-side ducts (OA, EA). A deep hood is provided on the outdoor air inlet and outlet to prevent rainwater and snow from seeping in.	3. <i>Standard installation examples</i>	
A downward gradient of 1/30 or more toward the building wall is provided for the outdoor-side ducts (OA, EA).	3. <i>Standard installation examples</i>	
The two outdoor-side ducts (OA, EA) are covered with a heat-insulating material.	4.2 <i>Duct installation</i>	
The cap for the pressure port is installed on its original position after airflow measurement.	8.3 <i>Airflow commissioning by pressure port</i>	
At least 2 screws are used to fix each mounting bracket for the following installation methods: Ceiling-mounted, Mounted-between-joists, and Wall-mounted.	4.1 <i>Installing the Lossnay unit</i>	
The maintenance door of the Lossnay unit is located at the bottom for Horizontal installation.	2. <i>Outline drawings</i>	
The control panel of the Lossnay unit is located on the upper side of the unit, and the ducts are horizontal for Wall-mounted installation.	3. <i>Standard installation examples</i>	
The space where the Lossnay unit is installed and the RA intake are not humid.	1. <i>Safety Precautions</i> 3. <i>Standard installation examples</i>	
Lossnay SA and RA ducts are correctly connected to the duct system of the air handler or furnace, and the interlock setting is correct.	4.2.3 <i>Installation with Air handler or Furnace</i> 5.3 <i>System configuration</i>	
(2) Check points - Wiring work		
The combination of power supply voltage, model name, and remote controller is correct.	5. <i>Electrical wiring and system configuration</i>	
The wires are correctly connected according to the wire connection diagram.	5. <i>Electrical wiring and system configuration</i>	
The wires are securely connected to the terminal blocks.	5. <i>Electrical wiring and system configuration</i>	
The wires are securely fixed.	5. <i>Electrical wiring and system configuration</i>	
The connectors on the circuit board are securely connected.	5. <i>Electrical wiring and system configuration</i>	
The cables are correctly fixed using the cord clips.	5. <i>Electrical wiring and system configuration</i>	
In terms of size and specifications, the proper transmission cables are used.	5. <i>Electrical wiring and system configuration</i>	
The cable is U-trapped before entering the control box.	5. <i>Electrical wiring and system configuration</i>	
(3) Check points - Function setting		
The address setting switches (SW11, SW12) are correctly set.	6. <i>Function settings</i>	
The function selection switches (SW2, SW5) are correctly set.	6. <i>Function settings</i>	
The function settings using the remote controller are correct. (For details, refer to the Installation Manual of the remote controller TZ/PZ-62DR-E.)	6. <i>Function settings</i>	
The power plug is free of dust, and is inserted all the way to the base of the prongs to prevent looseness.	5. <i>Electrical wiring and system configuration</i>	
(4) Check points - Control panel setting		
The installation direction selection switch is set correctly depending on the product orientation.	3. <i>Standard installation examples</i> 5.2 <i>Control Panel</i>	
There is no error indication on LED2.	5.2 <i>Control Panel</i> 8.4 <i>If trouble occurs during trial operation</i>	

To prevent early failures, be sure to check the check points after installation work.

8. Trial operation

After the system has been installed and before the ceiling panel is installed, make sure that the wires are properly connected, and then test the system's operation.

8.1 Lossnay trial operation

This function can be used in the following situations.

- When heater output, malfunction monitor output, operation monitor output, and other outputs are connected
- When the outdoor temperature is 14°F/-10°C or lower (In normal operation, Lossnay will switch to cold area operation.)
- When the CO₂ sensor PZ-70CSW-E is connected

(1) Supply power to the Lossnay unit.

(2) Hold the Maintenance switch on the control panel for 6 seconds.

After 1 hour, the trial operation stops automatically.

Alternatively, it can be stopped by holding the Maintenance switch on the control panel for 6 seconds again.

			Minutes	0							1	2	3	4
			Seconds	0	10	20	30	40	50	60				
TM3	TZ/PZ-62DR-E		Fan operation	ON										
DIP-SW	Function No.	Setting data												
5-1 OFF 5-2 OFF 5-3 OFF	12	1	Operation monitor output	ON										
5-1 ON 5-2 OFF 5-3 OFF		2	Malfunction monitor output	ON										
5-1 ON 5-2 ON 5-3 OFF		4	SA fan monitor output	ON										
5-1 OFF 5-2 OFF 5-3 ON		5	EA fan monitor output	ON										
5-1 ON 5-2 OFF 5-3 ON		6	Pre-heater output	OFF							ON			
5-1 OFF 5-2 ON 5-3 ON		7	SA fan monitor output with delay operation (for after-heater)	OFF						ON				
PZ-70CSW-E LED			Green Orange Red	Green (10 sec)	Orange (10 sec)	Red (10 sec)	Repeated lighting in the order shown on the left							

Error code "0900" appears on the remote controller.

The timing in the chart is a general guideline.

(3) Check that each function is operating normally.

(4) Hold the Maintenance switch on the control panel for 6 seconds to stop the trial operation.

8.2 Lossnay trial operation in the whole system

8.2.1 For interlock systems with air conditioners or other external devices

- Use the remote controller for the air conditioner or the operating switches for the external device to check that the external device and the Lossnay unit are interlocked.

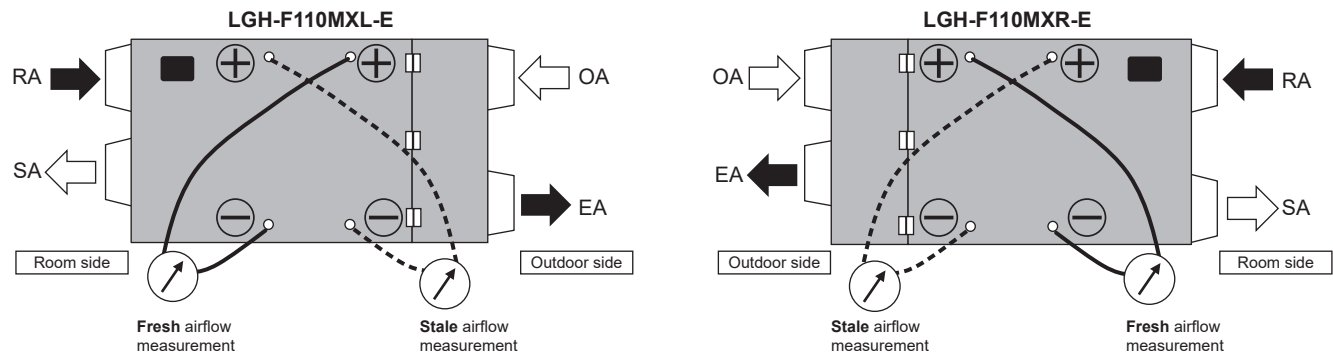
8.2.2 For the MELANS system

- Check Lossnay operation using the Mitsubishi Electric Air-Conditioner Network System (MELANS).

8.3 Airflow commissioning by pressure port

Be sure to measure the differential pressure of the intake and exhaust paths using a manometer.

- 1. Remove the cap from the static pressure port.
- 2. Insert the tube into the static pressure port.
- 3. Measure the differential pressure.
- 4. After the measurement, be sure to replace the cap on the static pressure port.



Airflow (CFM)		40	50	60	70	80	90	100	110
Differential pressure (reference) (Pa/in W.G.)	Fresh	21/0.08	26/0.11	32/0.13	38/0.15	43/0.17	49/0.20	55/0.22	60/0.24
	Stale	22/0.09	28/0.11	34/0.14	40/0.16	46/0.18	52/0.21	58/0.23	64/0.26

* When an optional high efficiency filter is installed in the Lossnay unit, the differential pressures differ from those shown in the table above. Refer to the manual for the high efficiency filter.

CAUTION

- Use a tube with a diameter between 6 mm and 10 mm.
- Do not insert the tube with excessive force, as it may damage the inner components.
- To ensure accurate static pressure measurement, support the tube by hand during the measurement.
- Make sure to return the cap to its original position after the measurement.
- The above airflow conversion table is for reference and does not guarantee performance.

8.4 If trouble occurs during trial operation

Symptom	Remedy																					
Lossnay does not operate even when the operation switch of the remote controller (TZ/PZ-62DR-E) is pressed.	- Check that the Operation mode selection switch on the control panel is set to “External”. - Check the power supply. (The specified power supply is single-phase 120 V, 60 Hz.) - Check for a short circuit or disconnection in the transmission cable for the remote controller TZ/PZ-62DR-E. (Check that the voltage between the terminals of the transmission cables is 10 to 13 VDC.) - Check that a clearance of 2 in. (5 cm) is provided between the transmission cable and the power supply cable and other transmission cables. - Operate Lossnay independently by switching to trial mode to check whether it operates properly.<table><tr><td>Lossnay operates</td><td>⇒</td><td>Check the signal lines</td></tr><tr><td>Lossnay doesn’t operate</td><td>⇒</td><td>Check the power supply</td></tr></table>	Lossnay operates	⇒	Check the signal lines	Lossnay doesn’t operate	⇒	Check the power supply															
Lossnay operates	⇒	Check the signal lines																				
Lossnay doesn’t operate	⇒	Check the power supply																				
When M-NET is used, Lossnay does not operate by the M-NET system controller.	- Check if three or more remote controllers are connected. (The maximum is two.) - Check that the Operation mode selection switch on the control panel is set to “External”. - Check the power supply. (Specified power supply: single-phase 120 V, 60 Hz.) - Check that the power supply unit is connected, and the power is supplied. (For a system with the Lossnay unit only, it is necessary to install the power supply unit.) - Check the transmission cable for short-circuit or broken wires. (Check that 20-30 VDC is detected between the terminals of transmission cable.) - Check that a clearance of 2 in. (5 cm) is provided between the transmission cable and the power supply cable and other transmission cables. - Operate Lossnay independently to check whether it operates properly.<table><tr><td>Lossnay operates</td><td>⇒</td><td>Inspect the transmission cable</td></tr><tr><td>Lossnay doesn’t operate</td><td>⇒</td><td>Check the power supply</td></tr></table>	Lossnay operates	⇒	Inspect the transmission cable	Lossnay doesn’t operate	⇒	Check the power supply															
Lossnay operates	⇒	Inspect the transmission cable																				
Lossnay doesn’t operate	⇒	Check the power supply																				
Air conditioner indoor unit or external device does not interlock.	- Check the Lossnay registration status in the system remote controller. - Check that the Operation mode selection switch on the control panel is set to “External”. - Check the overall cable length between the indoor unit or external device and Lossnay unit. (Refer to the Technical Manuals or other such documents.) - Check the connections at the external control input terminal block (TM2). When the external device has a wet contact (charged contact) of 12 VDC or 24 VAC/DC: connect to the external control input terminals 12 VDC/24 VAC/DC. When the external device has a dry contact (volt-free contact): connect to the external control input terminals ① and ②. - Perform the registration using the remote controller for the air conditioner or MELANS. (Refer to the Installation Instructions of the remote controller for the air conditioner or MELANS.) - Check the following items after removing the transmission cable from the external device.<table><tr><td></td><td>Operation signal</td><td>Stop signal</td></tr><tr><td>Charged 12 VDC or 24 VAC/DC output device</td><td>12 VDC or 24 VAC/DC</td><td>0 VDC</td></tr><tr><td>Volt-free contact output device</td><td>Resistance: 0 Ω</td><td>Infinite resistance Ω</td></tr><tr><td>P series, M series (CN2L)</td><td>2 to 6 VDC (pulse signal)</td><td>2 to 6 VDC (pulse signal)</td></tr></table>		Operation signal	Stop signal	Charged 12 VDC or 24 VAC/DC output device	12 VDC or 24 VAC/DC	0 VDC	Volt-free contact output device	Resistance: 0 Ω	Infinite resistance Ω	P series, M series (CN2L)	2 to 6 VDC (pulse signal)	2 to 6 VDC (pulse signal)									
	Operation signal	Stop signal																				
Charged 12 VDC or 24 VAC/DC output device	12 VDC or 24 VAC/DC	0 VDC																				
Volt-free contact output device	Resistance: 0 Ω	Infinite resistance Ω																				
P series, M series (CN2L)	2 to 6 VDC (pulse signal)	2 to 6 VDC (pulse signal)																				
Lossnay does not stop.	Check that Lossnay is not in trial operation or that Operation mode selection switch is not set to “ON”.																					
Lossnay does not switch to boost operation.	Check that DIP-SW [SW2-3] or Function No.29 is correctly set according to the input signal type from the external device (level or pulse).																					
The power indication LED 2 (red) on the control panel	<table><tr><td>1 blink</td><td>Fault on supply fan motor</td><td rowspan="9">Turn the power off and consult your dealer.</td></tr><tr><td>2 blinks</td><td>Fault on exhaust fan motor</td></tr><tr><td>4 blinks</td><td>Fault on OA thermistor</td></tr><tr><td>7 blinks</td><td>Fault on power supply voltage</td></tr><tr><td>8 blinks</td><td>Fault on pre-heater capacity or relay</td></tr><tr><td>9 blinks</td><td>Fault on remote controller communication</td></tr><tr><td>10 blinks</td><td>Fault on function setting</td></tr><tr><td>11 blinks</td><td>Fault on power supply to remote controller</td></tr><tr><td>12 blinks</td><td>Fault on CO2 sensor</td></tr><tr><td>13 blinks</td><td>Fault on M-NET communication</td></tr></table> LED also blinks just after the power supply is turned ON during the unit startup sequence.	1 blink	Fault on supply fan motor	Turn the power off and consult your dealer.	2 blinks	Fault on exhaust fan motor	4 blinks	Fault on OA thermistor	7 blinks	Fault on power supply voltage	8 blinks	Fault on pre-heater capacity or relay	9 blinks	Fault on remote controller communication	10 blinks	Fault on function setting	11 blinks	Fault on power supply to remote controller	12 blinks	Fault on CO2 sensor	13 blinks	Fault on M-NET communication
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11 blinks	Fault on power supply to remote controller																					
12 blinks	Fault on CO2 sensor																					
13 blinks	Fault on M-NET communication																					

■ When an error code blinks on the remote controller, follow the procedures shown in the Installation and Operating Manuals provided with the remote controller.

■ If the remote controller is not used, operate after approximately 2 minutes from turning on the power for the Lossnay unit.