

TECHNICAL MANUAL

Model: LGH-RVXT-E

This technical document is a technical manual of LGH-RVXT-E.

It describes only the changes from LGH-RVX-E technical manual issued in January 2015.

--- Product Part ---

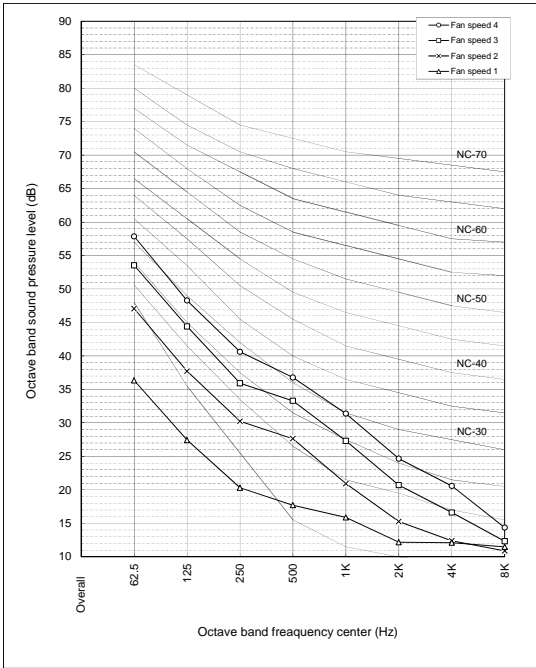
CHAPTER
4

Characteristics

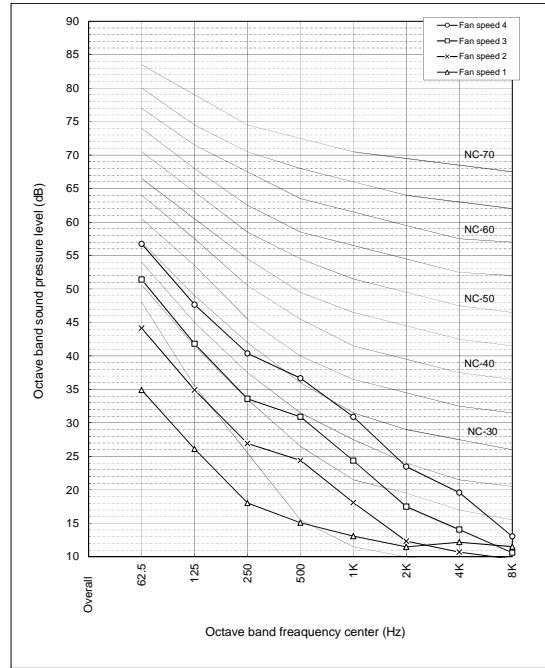
5. NC Curves

LGH-150RVXT-E

Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Energy recovery ventilation
 Power supply : Single phase 230V, 50Hz

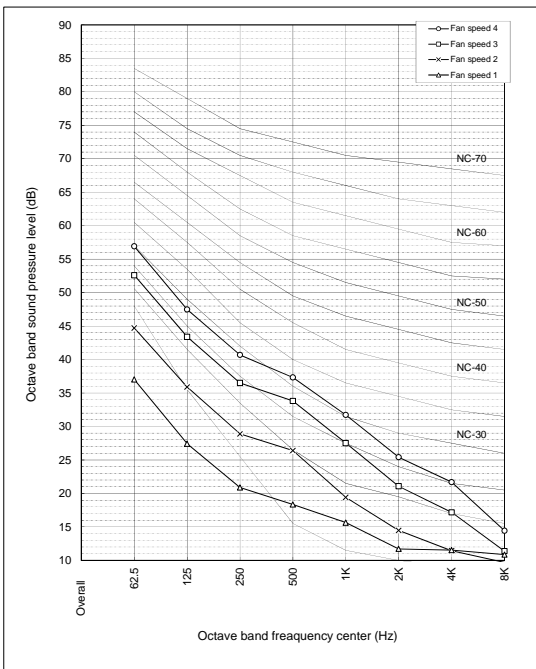


Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Bypass ventilation
 Power supply : Single phase 230V, 50Hz

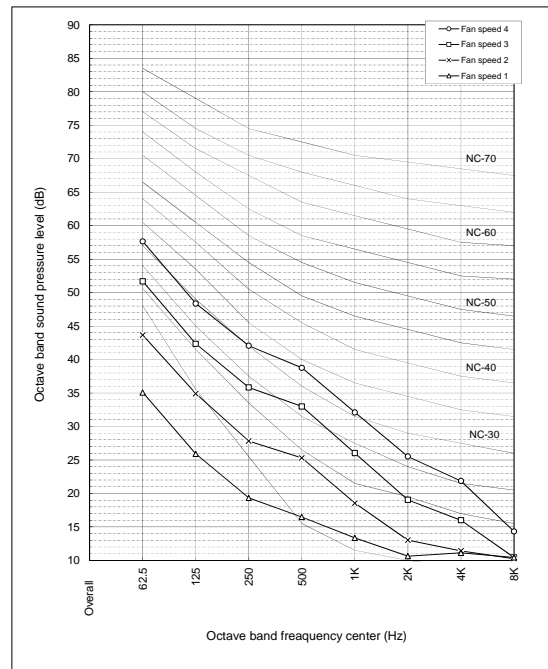


LGH-200RVXT-E

Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Energy recovery ventilation
 Power supply : Single phase 230V, 50Hz



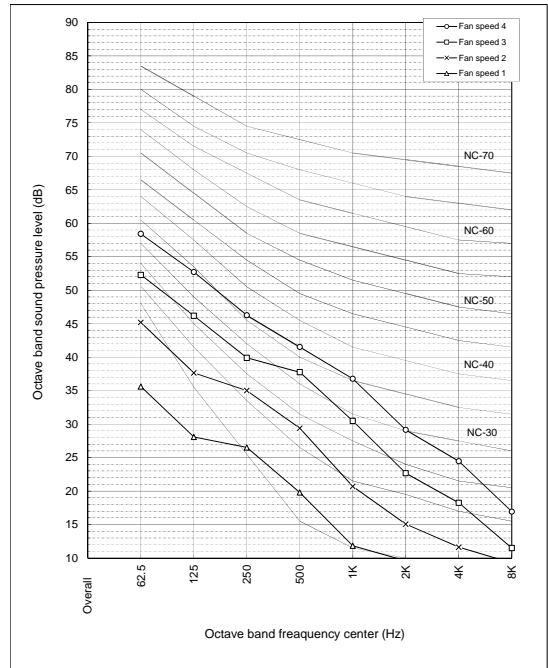
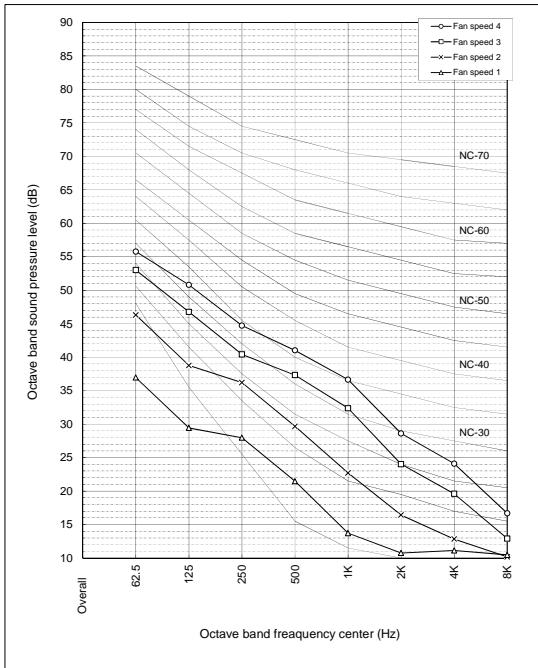
Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Bypass ventilation
 Power supply : Single phase 230V, 50Hz



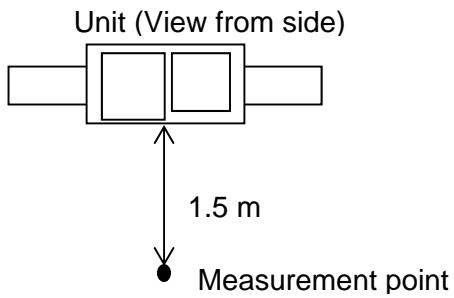
LGH-250RVXT-E

Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Energy recovery ventilation
 Power supply : Single phase 230V, 50Hz

Background noise : 25 dB or less (A range)
 Measurement site : Anechoic chamber
 Operation conditions : Bypass ventilation
 Power supply : Single phase 230V, 50Hz



Measurement point

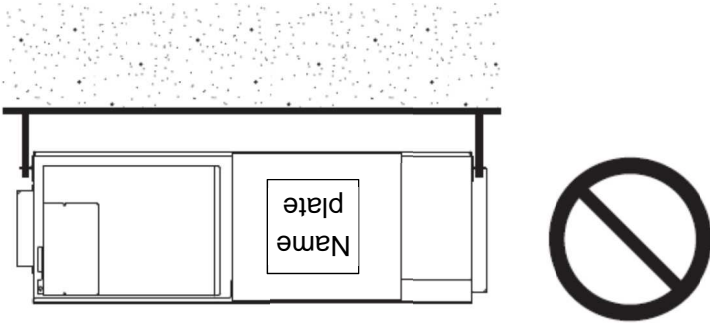


System Design Recommendations

10. Alternate Installation for Lossnay

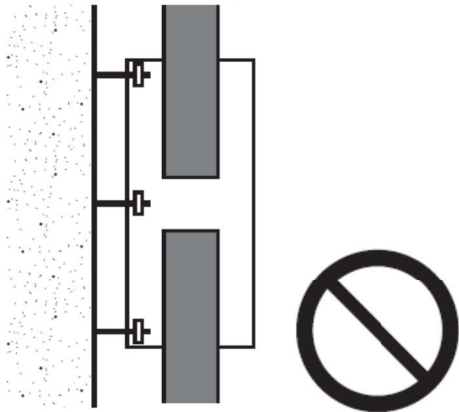
10.1 Upside-down Installation

All LGH-RVXT-E models CANNOT be installed in upside-down.



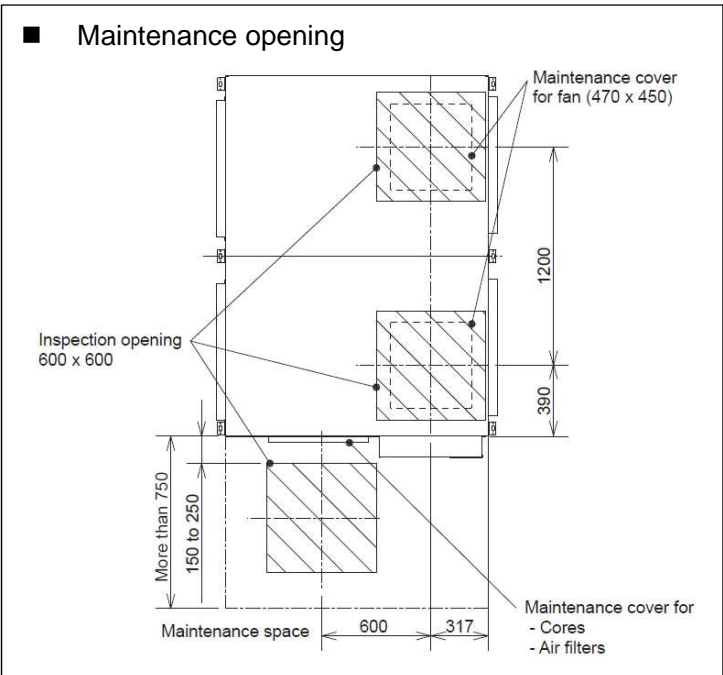
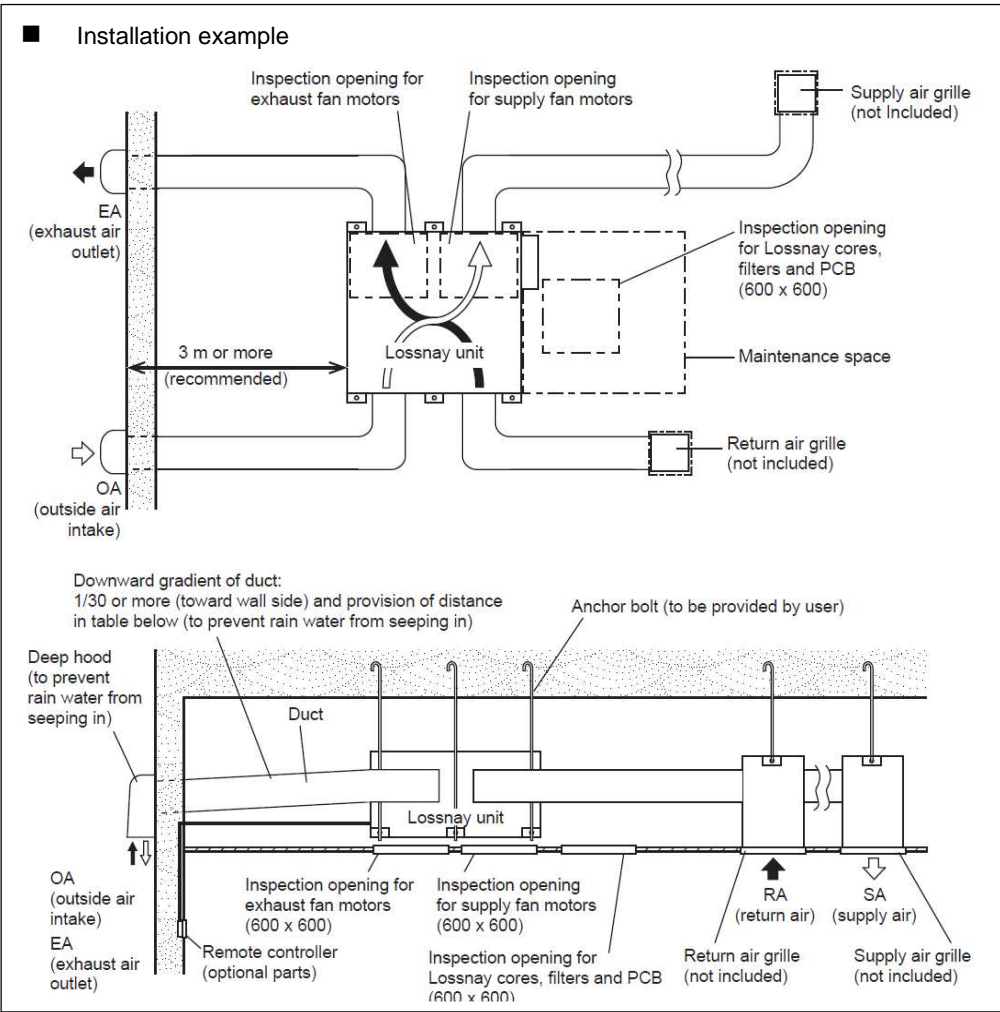
10.2 Prohibition on vertical installation

All LGH-RVXT-E models are prohibited to install vertical or incline. It may cause malfunction or decrease performance (motor noise, water incoming, etc)



Installation Considerations

1. LGH-Series Lossnay Ceiling Embedded Type (LGH-RVXT-E Series)



1.1 Choosing the Duct Attachment


This function is not available for LGH-RVXT-E series.

CHAPTER
9

Maintenance

2. Cleaning the Lossnay Core and Pre-filter

Remove all dust and dirt on air filters and Lossnay core at regular intervals in order to prevent a deterioration in the Lossnay functions.

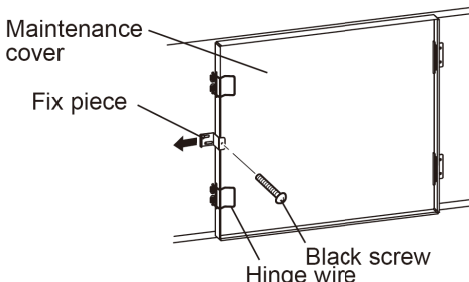
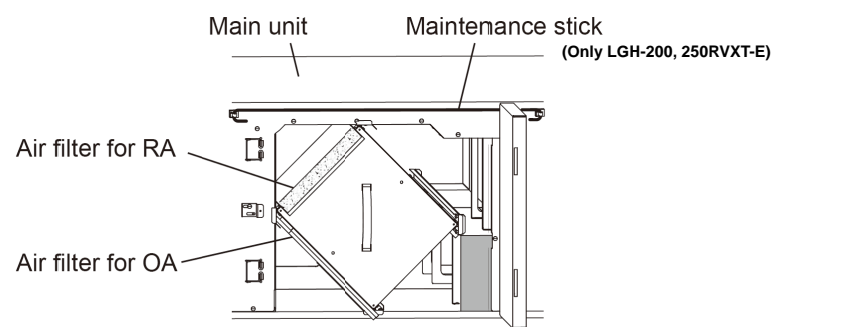
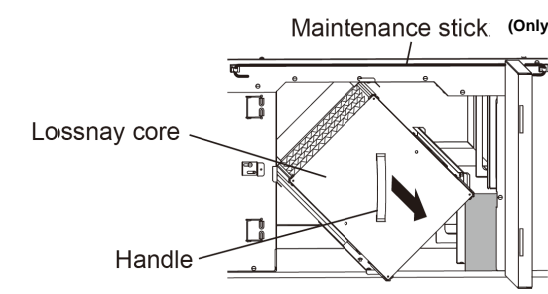
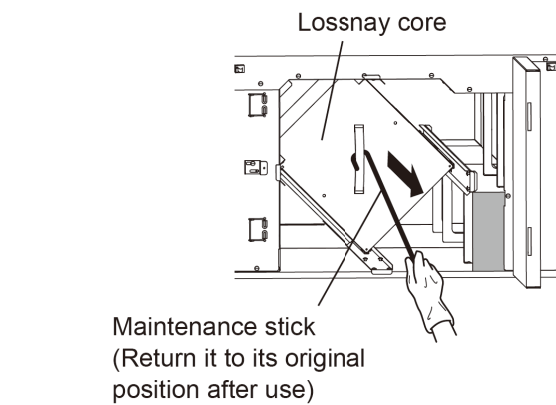
Guideline: Clean the air filters once a year (or when  are indicated on the remote controller)

Clean the Lossnay cores once two year.

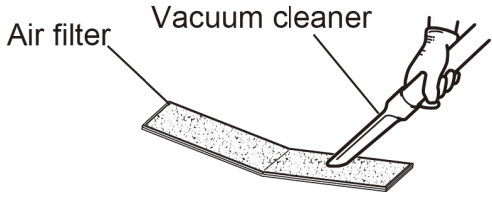
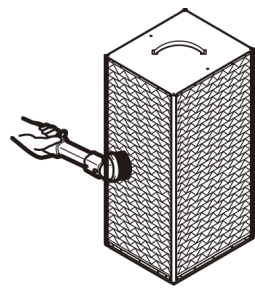
(Clean the Lossnay cores once a year if possible.)

(Frequency should be increased depending on the extent of dirt.)

Removing the parts

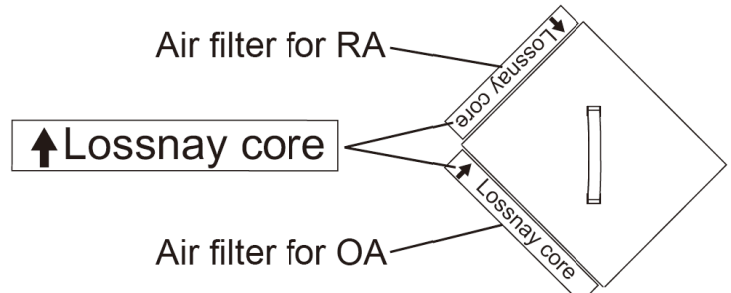


<p>1) Maintenance cover</p> <ol style="list-style-type: none"> 1. Remove the black screws. 2. Slide the fix piece to outside. 3. Open hinge wires. 	
<p>2) Air filters and Lossnay cores</p> <ol style="list-style-type: none"> 1. Remove the front filters from the main unit. 	
<p>2. Hold the handle and draw the Lossnay cores out from the main unit.</p>	
<p>3. For LGH-200RVXT-E and LGH-250RVXT-E, use the maintenance stick attached to remove the third Lossnay cores.</p>	

Cleaning the parts

<p>1) Air filters Use a vacuum cleaner to remove light dust. To remove stubborn dirt wash in a mild solution of detergent and lukewarm water (under 40°C).</p> <p>CAUTION</p> <ul style="list-style-type: none"> Never wash the filters in very hot water and never wash them by rubbing them. Do not dry the filters by exposing them to a flame. 	 <p>Air filter Vacuum cleaner</p>
<p>2) Lossnay cores Use a vacuum cleaner to suck up the dust and dirt on the exposed surfaces of the Lossnay cores. Use a soft brush only to clean exposed surface areas.</p> <p>CAUTION</p> <ul style="list-style-type: none"> Do not use the hard nozzle of the vacuum cleaner. It may damage the exposed surfaces of the Lossnay cores. Under no circumstance should the Lossnay cores be washed in water. 	<p>Do NOT wash in water.</p> 

Assembly after maintenance

Bearing in mind the following points, assemble the parts following the sequence for their in reverse.

<ul style="list-style-type: none"> Arrange the Lossnay core with the air filter side downward. Filters have front and back side. Set the correct side of the filter according to the arrow on the filter frame. 	 <p>Air filter for RA Lossnay core Air filter for OA</p>
<ul style="list-style-type: none"> Note the difference of filter height between outdoor air filter and return air filter. 	 <p>Air filter for OA 290 Air filter for RA 250</p>
<p>Note</p> <ul style="list-style-type: none"> If  are indicated on the remote controller, turn off the indication, after maintenance. 	

--- Control Part ---

CHAPTER
2

Function

2.3 Function setting from PZ-61DR-E

2.3.1 Function list

No.	Function	Setting Data								Factory setting	DIP-SW No.	Individual setting
		0	1	2	3	4	5	6	7			
*33	Night-purge setting 4) Time span for memorizing	24 hrs	48hrs	72hrs	-	-	-	-	-	0	N/A	-

The functions indicated with * are newly added or modified from Lossnay LGH-RX5-E series.

Function No.33 is added from LGH-RVXT-E series. And this function is also available for LGH-RVX-E (November 2015 production, serial No. 2015110001 or later).

6. Night-purge function

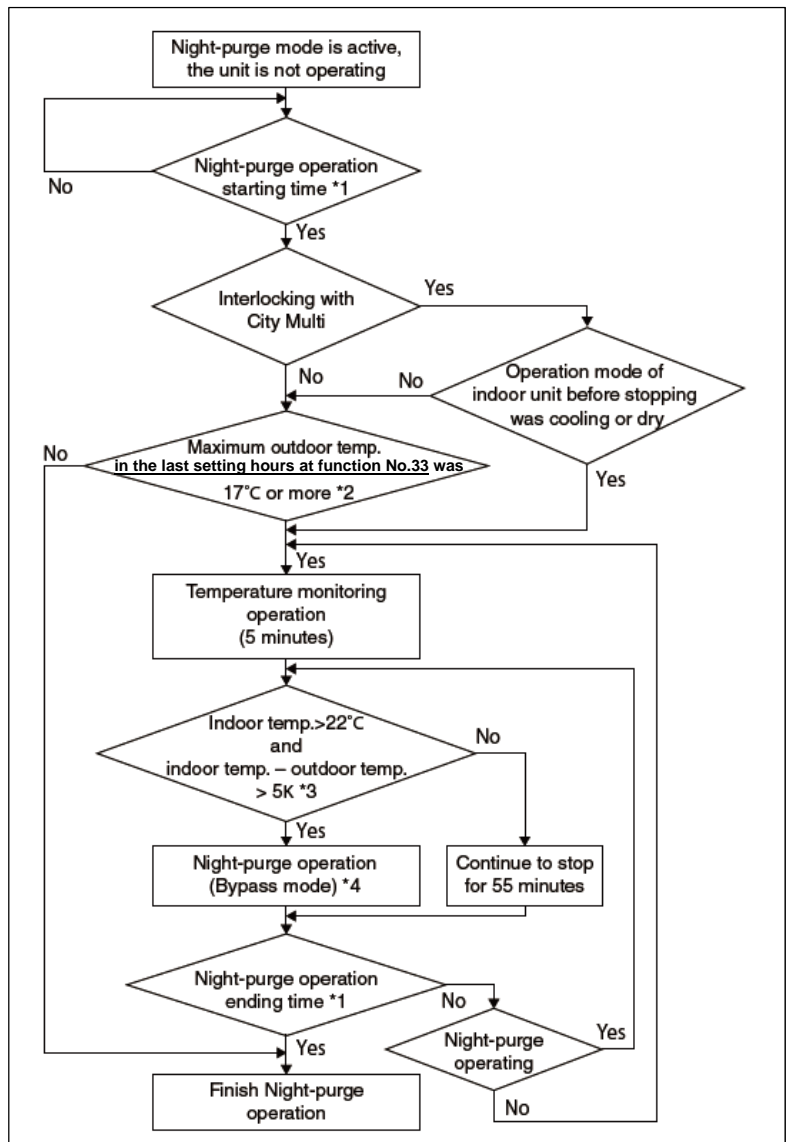
6.1 Descriptions of Night-purge function.

<Night-purge starting condition>

No.	Content
1	Lossnay is OFF
2	The time display is between operation starting time and end time. *1
3	Summer condition judgement (correspond to any of the following) <ul style="list-style-type: none"> Outdoor temperature was detected more than 17°C within the last setting hours at function No. 33. *2 The Lossnay unit is interlocked with City Multi and operation mode of indoor unit was "cool" or "dry"
4	Indoor temperature is higher than 22°C
5	Indoor temperature is 5K higher than outdoor temperature. *3

*2
The threshold of outdoor temperature can be set to between 15°C and 30°C (1K increments). Factory setting is 17°C. If the maximum outdoor temperature in the last setting hours at function No. 33 exceeded this temperature value (threshold), Lossnay starts the temperature monitoring operation.

*1, *3, *4 and *5 are the same as the technical manual of LGH-RVX-E.



6.2 How to set Night-purge from the remote controller (PZ-61DR-E)

From <STEP 1> to <STEP 4> are the same as the technical manual of LGH-RVX-E.

<STEP 5> Night-purge setting 4) Time span for memorizing

Set one of conditions for Night-purge start, time span for memorizing the threshold of outdoor temperature.

For example;

If Lossnay unit operates every day, please set “24 hrs (factory setting)”.

If Lossnay unit stop during weekend, please set “72 hrs” so that Lossnay can start Night-purge in the Monday morning.

This function is N/A from Lossnay unit DIP-SW.

DIP-SW		Setting check	PZ-61DR-E		Setting check	Time span for memorizing
SW No.	Setting		Function No.	Setting Data		
N/A	-	-	33	0 (Factory setting)		24 hrs
	-	-		1		48 hrs
	-	-		2		72 hrs

7.2.5 Reference of heater capacity

Quick reference for heater capacity calculation for each model.

When heater capacity is calculated with fan speed 2

[kW]

Model		LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Air flow rate m ³ /h		750	1000	1250
Heater capacity	Target OA temp. increase 5K	1.25	1.67	2.08
	Target OA temp. increase 10K	2.50	3.33	4.17

When heater capacity is calculated with fan speed 3

[kW]

Model		LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Air flow rate m ³ /h		1125	1500	1875
Heater capacity	Target OA temp. increase 5K	1.88	2.50	3.12
	Target OA temp. increase 10K	3.75	5.00	6.25

When heater capacity is calculated with fan speed 4

[kW]

Model		LGH-150RVXT-E	LGH-200RVXT-E	LGH-250RVXT-E
Air flow rate m ³ /h		1500	2000	2500
Heater capacity	Target OA temp. increase 5K	2.50	3.33	4.17
	Target OA temp. increase 10K	5.00	6.67	8.33

Revised information

CHAPTER 3

Remote controller

2. Lossnay Remote Controller (PZ-43SMF-E)

⑮ [FILTER] Button

Press twice to reset the filter sign display while the Lossnay unit is operating.

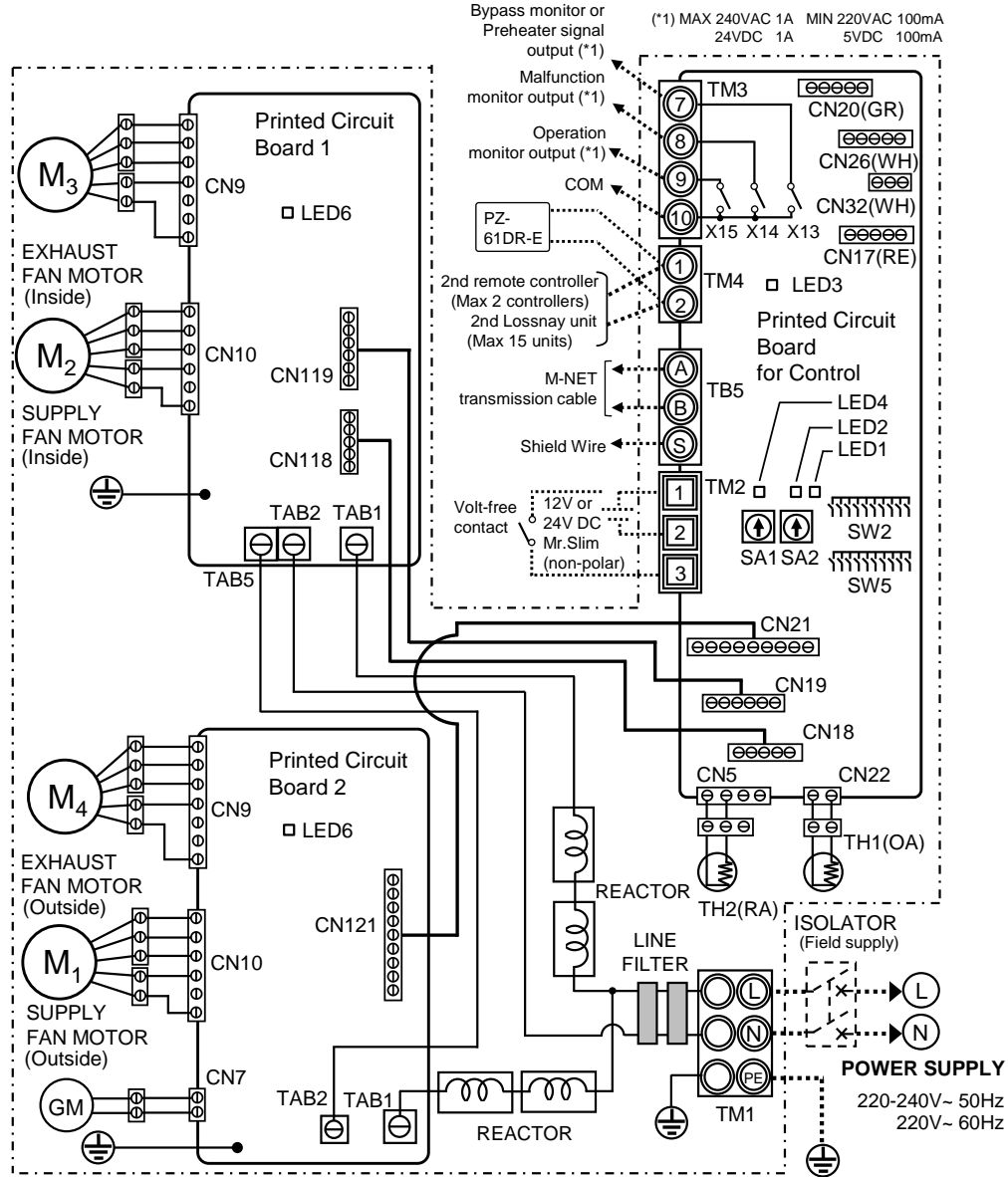
Caution: Even when the centralized controller (AE-200E or other) which has filter reset function is connected, please reset while the Lossnay unit is operating.

CHAPTER
4

Wiring Diagram

2. Wiring diagram --- Models LGH-150 to 200 RVXT-E

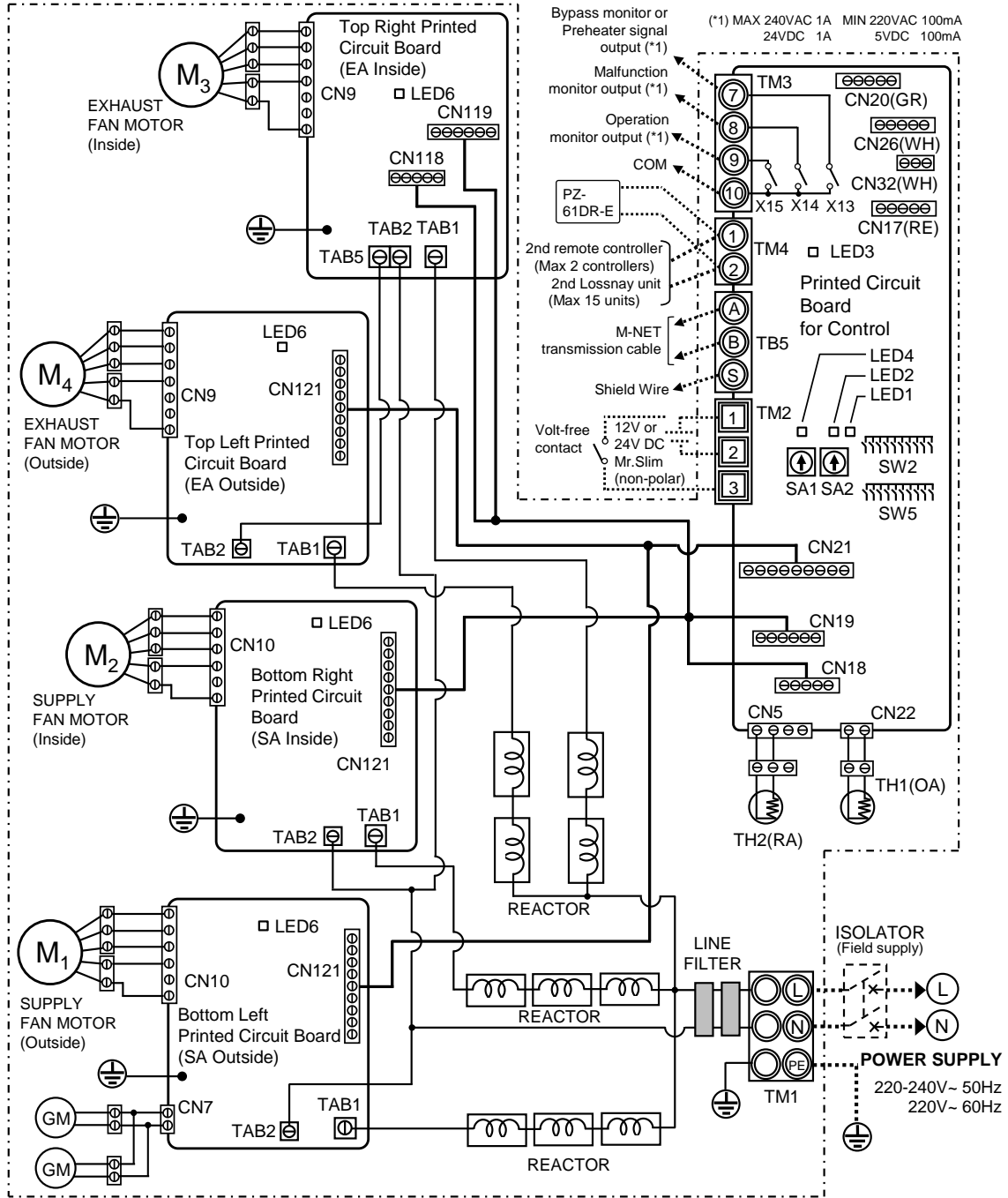
- * TM1, TM2, TM3, TM4, TB5 shown in dotted lines are field work.
- * Be sure to connect the ground wire.
- * A power supply isolator must be installed.
- * Always use an all-pole isolator for the main switch power connection.



M1 : Motor for supply fan (outside)	X13 : Relay contact	CN21 : Connector
M2 : Motor for supply fan (inside)	X14 : Relay contact	CN121 : Connector
M3 : Motor for exhaust fan (inside)	X15 : Relay contact	CN22 : Connector (Thermistor OA)
M4 : Motor for exhaust fan (outside)	CN5 : Connector (Thermistor RA)	CN26 : Connector (By-pass, 0 - 10 VDC Fan speed control)
GM : Motor for By-pass damper	CN7 : Connector (Motor for By-pass damper)	CN32 : Connector (Remote control selection)
TH1 : Thermistor for outside air	CN9 : Connector (Fan motor)	SA 1 : Address setting rotary switch (tens digit)
TH2 : Thermistor for return air	CN10 : Connector (Fan motor)	SA 2 : Address setting rotary switch (ones digit)
SW2,5 : Switch (Function selection)	CN17 : Connector (Fan speed 1/2/3/4)	LED1 to 4 : Inspection indicator lamp
TM1 : Terminal block (Power supply)	CN18 : Connector	LED6 : Power supply indicator lamp
TM2 : Terminal block (External control input)	CN118 : Connector	SYMBOL : Terminal block
TM3 : Terminal block (Monitor output)	CN19 : Connector	: Connector on PCB
TM4 : Terminal block (Transmission cable)	CN119 : Connector	
TB5 : Terminal block (M-NET Transmission cable)		
TAB1, TAB2, TAB5 : Connector (Power supply)		

3. Wiring diagram --- Models LGH-250RVXT-E

- * TM1, TM2, TM3, TM4, TB5 shown in dotted lines are field work.
- * Be sure to connect the ground wire.
- * A power supply isolator must be installed.
- * Always use an all-pole isolator for the main switch power connection.



M1 : Motor for supply fan (outside)	X13 : Relay contact	CN21 : Connector
M2 : Motor for supply fan (inside)	X14 : Relay contact	CN121 : Connector
M3 : Motor for exhaust fan (inside)	X15 : Relay contact	CN22 : Connector (Thermistor OA)
M4 : Motor for exhaust fan (outside)	CN5 : Connector (Thermistor RA)	CN26 : Connector (By-pass, 0 - 10 VDC Fan speed control)
GM : Motor for By-pass damper	CN7 : Connector (Motor for By-pass damper)	CN32 : Connector (Remote control selection)
TH1 : Thermistor for outside air	CN9 : Connector (Fan motor)	SA1 : Address setting rotary switch (tens digit)
TH2 : Thermistor for return air	CN10 : Connector (Fan motor)	SA2 : Address setting rotary switch (ones digit)
SW2,5 : Switch (Function selection)	CN17 : Connector (Fan speed 1/2/3/4)	LED1 to 4 : Inspection indicator lamp
TM1 : Terminal block (Power supply)	CN18 : Connector	LED6 : Power supply indicator lamp
TM2 : Terminal block (External control input)	CN19 : Connector	SYMBOL : Terminal block
TM3 : Terminal block (Monitor output)	CN118 : Connector	: Connector on PCB
TM4 : Terminal block (Transmission cable)	CN119 : Connector	
TB5 : Terminal block (M-NET Transmission cable)		
TAB1, TAB2, TAB5 : Connector (Power supply)		

