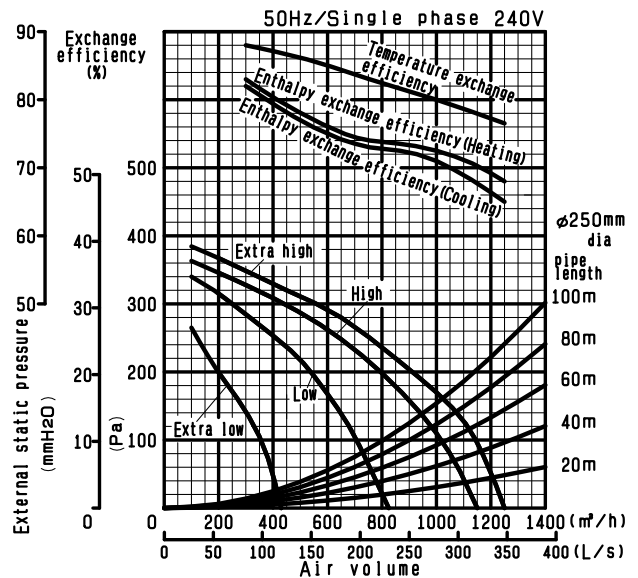
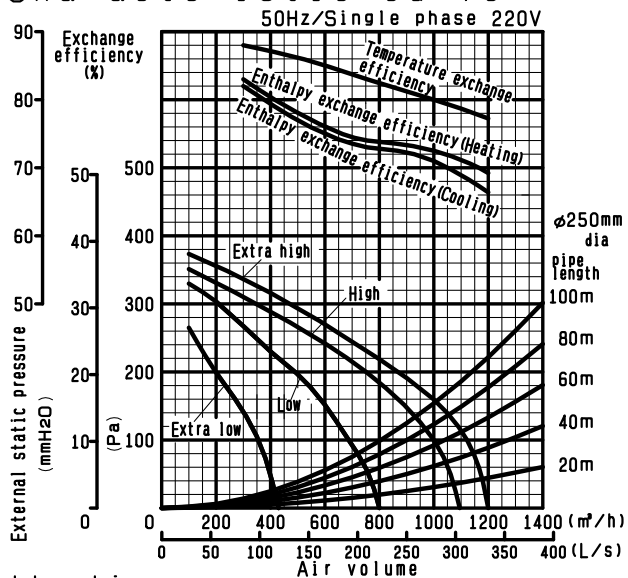


MODEL	LGH-100RX <sub>5</sub> -E	SIGN
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Heat exchange system	Air-to-air total heat exchange(sensible heat + latent heat exchange)								
Heat exchange element material	Partition-spacing plate-special treated paper								
Cladding	Galvanized steel sheet								
Heat insulating material	Self-extinguishing urethane foam								
Motor	Totally enclosed capacitor permanent split-phase induction motor.4 poles,2 units								
Blower	245mm dia. Centrifugal fan								
Filter material	Non-woven fabrics filter(Gravitational method 82%, EU-G3)								
Applicable air condition of setting environment	The setting air condition shall be between -10°C to 40°C, 80%RH or less.								
Applicable air condition range of outdoor and indoor	OA temperature shall be -15°C to +40°C, 80%RH, or less,with general air conditioning room environment.								
Functions	Lossnay ventilation/Bypass ventilation High(Extra high)-Low-Extra Low switching								
Weight	59kg								
Frequency/ Power source	50Hz/Single phase 220-240V								
Ventilation mode	Lossnay ventilation				Bypass ventilation				
Fan speed	Extra high	High	Low	Extra low	Extra high	High	Low	Extra low	
Current ( A )	2.3-2.4	2.1-2.1	1.7-1.7	0.9-0.9	2.3-2.4	2.1-2.1	1.7-1.7	0.9-0.9	
Power consumption ( W )	500-535	445-475	350-380	175-200	510-550	460-485	365-395	175-200	
Air volume	(m <sup>3</sup> /h)	1000	1000	755	415	1000	1000	755	415
	(L/s)	278	278	210	115	278	278	210	115
External static pressure	(mmH <sub>2</sub> O)	16.3-17.3	10.2-11.2	5.6-6.1	1.8	16.3-17.3	10.2-11.2	5.6-6.1	1.8
	(Pa)	160-170	100-110	55-60	18	160-170	100-110	55-60	18
Temperature exchange efficiency ( % )		80.0	80.0	83.0	87.0	-	-	-	-
Enthalpy exchange efficiency (%)	Heating	72.5	72.5	74.0	80.0	-	-	-	-
	Cooling	71.0	71.0	73.0	79.0	-	-	-	-
Noise (dB)	Measured at 1.5m under the center of panel in an anechoic chamber	36-37	34-35	31-32.5	21-22	37-38	35-36	32-33	21-22
Starting current	Under 4.6A less								
Insulation resistance	10MΩ or more (500V megger)								
Dielectric strength	AC 1500V 1 minute								

### Characteristic curve

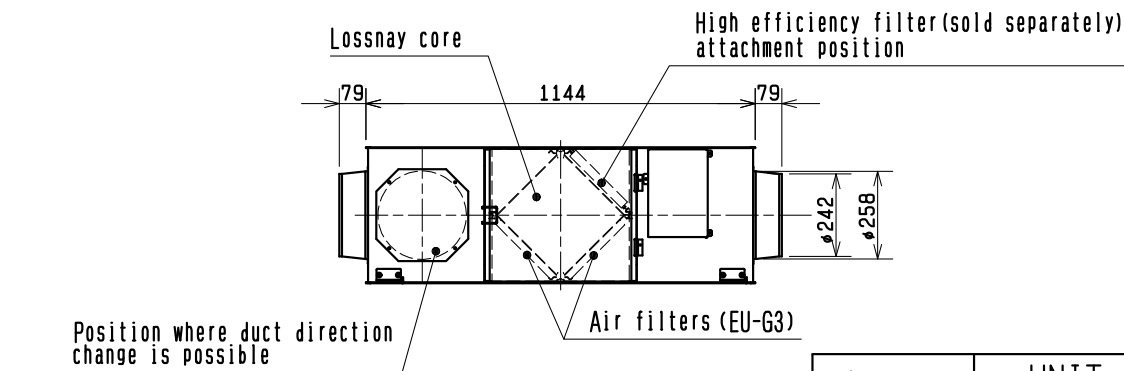
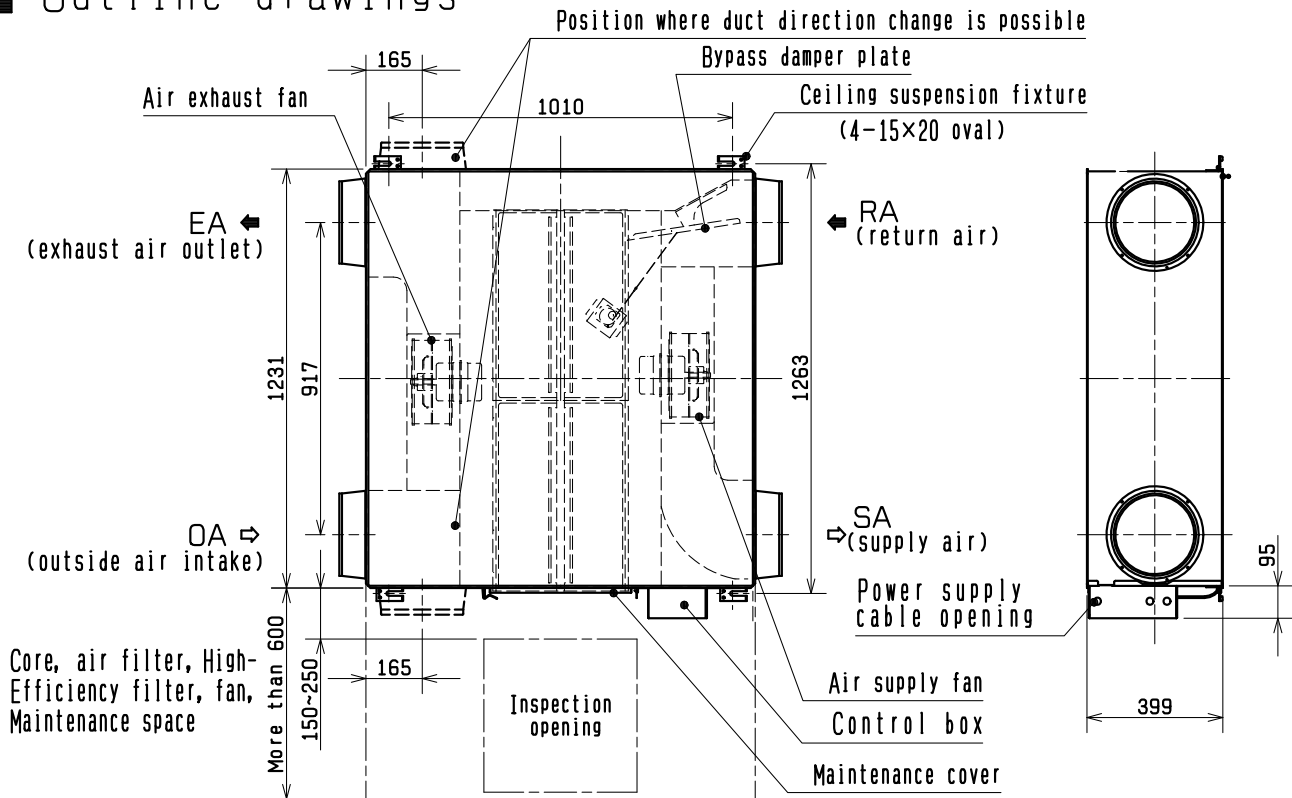


### Attention

- Lossnay stops supply fan for 10min every 60min while detecting OA temperature lower than -10°C.
  - The current, power consumption and efficiency are based on the above air flow rate.
  - Fan speed is changed by remote controller. Multi Ventilation Mode should be set on the unit or RC (PZ-60DR-E).
  - Lossnay ventilation mode starts automatically while detecting OA temperature lower than 8°C, even Bypass mode is selected. Remote controller continues to display "Bypass ventilation" in this case.
  - The noise level at 1.5m away from outlets in the 45° direction is about 16dB greater than the indicated value at high speed.
  - Temperature Exchange efficiency(%) is based on winter condition.
  - Mitsubishi Electric measures products according to Japan Industrial Standard(JIS B 8628), therefore Q-H curves are measured by chamber method.
  - In United Kingdom, on-site measurements by pitot tube method could be as much 20% difference from JIS test room conditions. If the measuring point is close to sources of turbulence like bends, contractions and dampers etc, it is difficult to measure air volume correctly. A straight duct length more than 10D(D=duct diameter)from the source of turbulence is recommended for correct measurement. On-site measurement should therefore be measured in accordance with BSRIA guideline (Commissioning Air Systems. Application procedures for buildings AG3/89.3(2001))
- \*Specifications may be subject to change without notice.

SPECIFICATIONS	DATE	TYPE MODEL	CEILING RECESSED LOSSNAY LGH-100RX <sub>5</sub> -E (50Hz)	
	10-Apr.-13			
<b>MITSUBISHI ELECTRIC CORPORATION</b>	NUMBER	<b>ND108085B</b>	1/5	

## Outline drawings



	UNIT	SCALE
	mm	N. T. S

## Attention

- When using the product where it is exposed to high temperatures and humidity (40°C or higher, RH 80% or higher), or where fog occurs frequently, moisture is likely to condense in the core, and may result in condensation build up in the unit. The product should not be used under such conditions.
- Outdoor air may enter the Lossnay owing to the pressure difference between indoor and outdoor or external winds even when the product is not operated. It is recommended to install an Electrically operated damper to block the outdoor air.
- In a cold weather area, an area with strong external winds or where fog occurs frequently, cold outdoor air, external winds or fog may be introduced into the product when its operation is stopped. It is recommended to install an Electrically operated damper.
- In a cold weather area, or others, dewing 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 moisture, even if they are within the range of operating conditions. Make sure to confirm the operating conditions and other precautions, and do not use the product if dewing or freezing is anticipated.
- The outside ducts must be tilted at a gradient (1/30 or more) down toward the outdoor louvres from Lossnay, and properly insulated. (The entry of rain water may cause power leakage, fire, or damage to household property)
- The two outdoor ducts must be covered with heat-insulating material in order to prevent condensation from forming. 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, it is recommended that the indoor ductwork be covered with insulation material.
- Inspection opening (450×450 or 600×600mm) must be installed on the filter and Lossnay core removing side.

※Specifications may be subject to change without notice.

OUTLINE DRAWINGS	DATE	TYPE MODEL	CEILING RECESSED LOSSNAY	
	10-Apr.-13		LGH-100RX <sub>5</sub> -E (50Hz)	
MITSUBISHI ELECTRIC CORPORATION		NUMBER	ND108085B	2/5

# Outline drawings

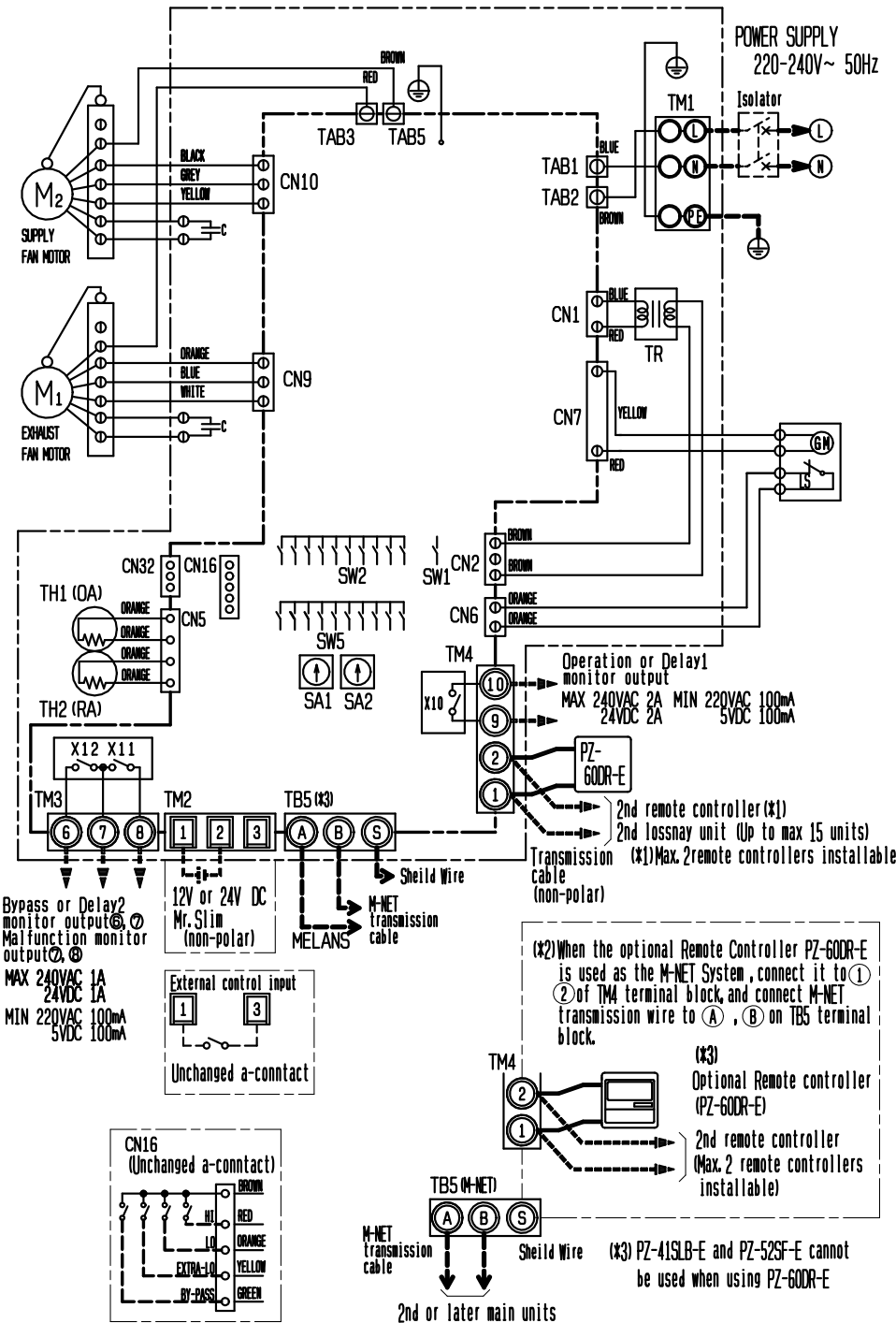
- NOTE
1. TM1, TM2, TM3, TM4, TB5 shown in dotted lines are field work.
  2. Isolator should be provided by the customer.
  3. Be sure to connect the grounding wire.

## Definition of symbols

- M1 :Motor for exhaust fan
- M2 :Motor for supply fan
- C :Capacitor
- GM :Motor for Bypass movement
- LS :Microswitch
- TH1:Thermistor for outside air
- TH2:Thermistor for return air
- SW1:Switch(Main/sub change)
- SW2, 5:Switch(Function selection)
- TM1:Terminal block(Power supply)
- TM2:Terminal block  
(External control input)
- TM3:Terminal block(Monitor output)
- TM4:Terminal block  
(Transmission cable and monitor output)
- TB5:Terminal block  
(M-NET Transmission cable)
- TAB1, TAB2:Connector(Power supply)
- TR1:Control circuit transformer
- X10, X11, X12 :Relay contact
- CN1:Connector(Transformer primary)
- CN5:Connector(Thermistor)
- CN6:Connector(Microswitch)
- CN7:Connector(Motor for Bypass operation)
- TAB3:Tab connector(Fan motor)
- TAB5:Tab connector(Fan motor)
- CN9:Connector(Fan motor)
- CN10:Connector(Fan motor)
- CN16:Connector(High/Low/Bypass switch)  
(Remote control selection)
- SA1:Address setting rotary switch  
(10 digit)
- SA2:Address setting rotary switch  
(1 digit)

## SYMBOL

- □ :Indicates terminal block.
- ⊙ :Connector.
- ⊞ :Board insertion connector or fastening connector of control board.



## Attention

- 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 PVC cable for the transmission cables.
  - Wiring work must be performed by qualified professionals.
  - All supply circuits must be disconnected before obtaining access to the terminal devices.

\*Specifications may be subject to change without notice.

WIRING DIAGRAM	DATE	TYPE MODEL	CEILING RECESSED LOSSNAY	
	10-Apr.-13		LGH-100RX <sub>5</sub> -E (50Hz)	
MITSUBISHI ELECTRIC CORPORATION		NUMBER	ND108085B	3/5

## Lossnay model selection advices

### 1. Operating environment

Install this product in an environment where the temperature ranges from -10°C to +40°C and the relative humidity is less than 80%RH. If condensation is expected to form, heat up the fresh outside air should be treated.

### 2. Do not use under high temperature and humidity condition

Condensation will occur and water will gather inside the Lossnay cores under high temperature and humidity condition, such as warm swimming pool, bathroom, greenhouse or foggy place.

### 3. Condition of outdoor, indoor and return air

Avoid using Lossnay under air condition with acid, alkalis, organic solvent, oil mist, paint, or harmful gas as pesticide, corrosive gas, etc.

### 4. Insulation failure caused by salt or sulphur air and hot spring steam, Rust, fire or malfunction may occur.

Installing high quality filters inside outdoor air duct if the Lossnay operates in salt or sulphur air conditions.

### 5. Intake of mist or outdoor air during off-mode operation

Outdoor air or mist may flow through the duct into your room when Lossnay is in off-mode at windy and foggy area. To prevent intake of outdoor air or fog, a damper is advised to be installed.

### 6. Entry of insects

When using the product in an environment where there is a window, or opening near the outdoor hood, so that insects are likely to gather around the interior or exterior light, take note that small insects may intrude into the Lossnay filters.

### 7. By-pass ventilation

In the case of "By-pass" ventilation, the supply air temperature slightly rises more than the outside air temperature because of the effect around the ducts or the unit motors.

### 8. Usage of M-NET.

When solely using Lossnay units, power supply unit is required to connect to centralized control. Number of power supply units or the transmission boosters should correspond with the connected Lossnay units.

## Caution for installation

1. Do not modify the unit as it may cause malfunction.

2. Do not install Lossnay unit vertically or on an incline. It may cause malfunction or deterioration of performance.

3. Leaving sufficient space for maintenance purpose.

4. The location of the air inlet

Take care in locating air inlet to prevent intake of dirty air or disgusting smell from exhaust gas of factory, air from rubbish disposal, etc.

5. Take precautions when using the product in a quiet location.

6. Heat insulation foam for duct

Take care as below to prevent the contaminate ceiling by duct condensation.

① The two outdoor ducts (OA and EA) must be covered with heat-insulating material in order to prevent condensation.

② 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, it is recommended that the indoor ductwork be covered with insulation material.

③ Outdoor air may come into unit during not operating unit by the pressure difference between indoor and outdoor or the outdoor wind. In this case you should install a damper.

④ It is possible for condensation and freezing to occur in the cold regions inside the unit because of the outdoor air condition or humidity condition above ceiling. Make sure to install supplemental insulation foam.

⑤ In the case that air condition around Lossnay unit is high temperature in summer, it is recommended that there are heat insulation foam on indoor side duct to prevent heat recovery decreased by warming indoor duct. In winter, it is possible to cool indoor side duct without heat insulation foam on indoor side duct.

※Specifications may be subject to change without notice.

SAFETY NOTES	DATE	TYPE MODEL	CEILING RECESSED LOSSNAY	
	10-Apr.-13		LGH-100RX <sub>5</sub> -E (50Hz)	
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## 7. Prevent entry of rainwater into Lossnay unit

Install weather louvre or "Weather cover" for OA inlet & EA outlet.

This is to prevent rainwater entering the Lossnay unit.

Ducts to outdoor(OA and EA) should decline by 1/30 or more.

- ① Install the anchor bolts to ensure the product's weight or earthquake load. (Correctly rated wire/chain may also be used)
- ② Do not install this product in a place where it is exposed to ultraviolet light.  
(UV may be damage covering insulation.)

## 8. Electrical Work

A single pole isolator must be installed at the origins of mains power supply.

Use single flush box, to support remote controller.

Must connect ground wiring.

When connecting external devices (electrically operated damper, lamp, monitoring unit, etc.) using output signals of the lossnay unit, make sure to install safety equipment for the external devices.

(It could cause fire, damage, etc. without safety equipment)

## Maintenance

Refer to each model's operation instructions for the suggested maintenance period and methods.

General indication of lifetime of the main parts is as below.

Time below is unrelated to guaranteed period for service. And parts exchange period varies with usage condition.

Lossnay cores	: around 10 years with maintenance as stated periods.
Air Filters	: around 5 years with maintenance as stated periods
High efficiency filters	: 3000 hours (Optional Parts)
Motor	: 30000 hours

※Specifications may be subject to change without notice.

SAFETY NOTES	DATE	TYPE MODEL	CEILING RECESSED LOSSNAY	
	10-Apr.-13		LGH-100RX <sub>5</sub> -E (50Hz)	
MITSUBISHI ELECTRIC CORPORATION		NUMBER	ND108085B	5/5