December 2019 No. U285

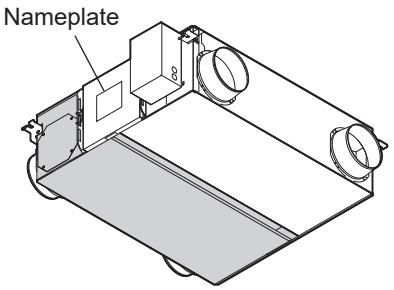
MITSUBISHI ELECTRIC

LOSSNAY ENERGY RECOVERY VENTILATOR

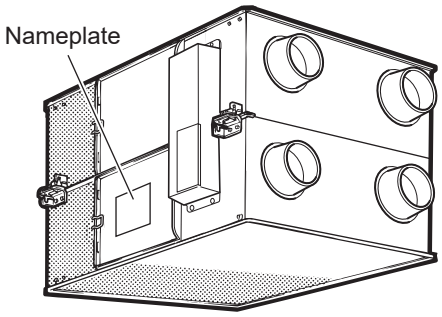
HANDBOOK

MODELS

LGH-F300RVX-E
LGH-F470RVX-E
LGH-F600RVX-E



LGH-F1200RVX-E



Remote controller (Optional)
PZ-61DR-E
PZ-43SMF-E

Filter (For replacement)
PZ-50RF8-E
PZ-80RF8-E
PZ-100RF8-E

Warning:
Repair work must be performed by the manufacturer, its service agent or a similarly qualified person in order to avoid hazards.

MITSUBISHI ELECTRIC CORPORATION

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1. Safety precautions

- Read the following precautions thoroughly before the maintenance, and then inspect and repair the product in a safe manner.
- The types and levels of danger that may arise if the product is handled improperly are described with the warning symbols shown below.

⚠ Warning

Improper handling of the product may result in serious injury or death.

◇ Electric shock
If you must inspect the circuitry while the power is on, do not touch the live parts.

(Failure to observe this warning may result in electric shock.)



◇ Turn off the power supply
Be sure to shut off the power supply isolator before disassembling the unit for repair.

(Failure to observe this warning may result in electric shock.)



◇ Modification is prohibited
Do not modify the unit.

(Failure to observe this warning may result in electric shock, fire and/or injury.)



◇ Use proper parts and tools
For repair, be sure to use the parts listed in the service parts catalog of the applicable model and use the proper tools.

(Failure to observe this warning may result in electric shock, fire and/or injury.)



◇ Proper electric work
Use the electric wires designated for electric work, and conduct electric work in accordance with your local "Electric Installation Engineering Standard", the "Indoor Wiring Regulations" and the installation instructions.

(Improper connection or wiring installation may result in electric shock and/or fire.)



◇ Replace damaged and/or degraded parts
Be sure to replace the power cord and lead wires if they are damaged and/or degraded.

(Failure to observe this warning may result in electric shock and/or fire.)



◇ Check insulation
Upon completing repair work, always measure the insulation resistance. Verify that it is at least 10 MΩ (with a 500-V DC insulation resistance tester), and then turn on the power.

(Inadequate insulation may result in electric shock.)



⚠ Caution

Improper handling of the product may result in injury or damage to properties including buildings and equipment.

◇ Caution for injury
Do not work at a location where you do not have a sure footing.

(Failure to observe this caution may result in a fall.)



◇ Wear gloves
Wear gloves when servicing.

(Failure to observe this caution may result in injury to your hands from sharp metal or other edges.)



Notes for servicing

- Inspect the earth condition, and repair it if it is incomplete. Make sure that a power supply isolator and an overload protection device are installed. If they are not installed, recommend the customer to install them.

- Make sure that the product operates properly upon completion of repair. Clean the product and the surrounding area, and then notify the customer of the completion of repair.

2. Changed points

New model	Former model	Changes from the former model
LGH-F300RVX-E	LGH-F300RX5-E	Circuit board: Newly designed Motor: Changed from AC motor to DC motor Operation in extremely cold regions: Unavailable
LGH-F470RVX-E	LGH-F470RX5-E	
LGH-F600RVX-E	LGH-F600RX5-E	
LGH-F1200RVX-E	LGH-F1200RX5-E	

3. Specifications

Model name	LGH-F300RVX-E, LGH-F470RVX-E, LGH-F600RVX-E, LGH-F1200RVX-E
Heat exchange system	Energy recovery ventilating system
Heat exchanger material	Special treated paper plate heat exchanger
Cladding	Galvanized steel sheet
Heat insulation material	Self-extinguishing urethane foam
Motor	EC motor
Filter	Non-woven fabrics filter (EU-G3)
Surrounding air condition	Shall be between 14°F (-10°C) and 104°F (40°C), 80%RH or less
Suction air condition	Shall be lower than 104°F (40°C), 80%RH
Supply fan operation under low outdoor temperature	14°F (-10°C) to 5°F (-15°C) : Intermittent operation 60 min ON, 10 min OFF 5°F (-15°C) or less: Intermittent operation 55 min OFF, 5 min ON
Function	Energy recovery ventilation/Bypass ventilation, Fan speed 1, 2, 3, 4
Electrical power supply	Single phase 208-230 V / 60 Hz
Insulation resistance	10 MΩ or more
Dielectric strength	1000 V AC 1 minute

Model name	Running current (A)	Input power (W)	Air volume			Static pressure		Exchange efficiency (%)			Noise (dB)	Dia. of the centrifugal fan (Inch (mm))	Weight	
			(CFM)	(CMH)	(W/CFM)	(in W.G)	(Pa)	Temperature	Enthalpy		Below the unit		(lbs)	(kg)
									Heating	Cooling				
LGH-F300RVX-E	1.06	155	300	510	0.52	0.46	115	65.5	63.0	50.0	34.0	8 3/4 (220)	75	34
LGH-F470RVX-E	2.15	348	470	799	0.74	0.60	150	69.0	64.0	51.0	34.5	9 5/8 (245)	110	50
LGH-F600RVX-E	2.70	438	600	1019	0.73	0.66	164	67.0	64.0	50.0	37.0	9 5/8 (245)	123	56
LGH-F1200RVX-E	5.40	880	1200	2039	0.73	0.59	147	67.0	64.0	50.0	41.0	9 5/8 (245)	251	114

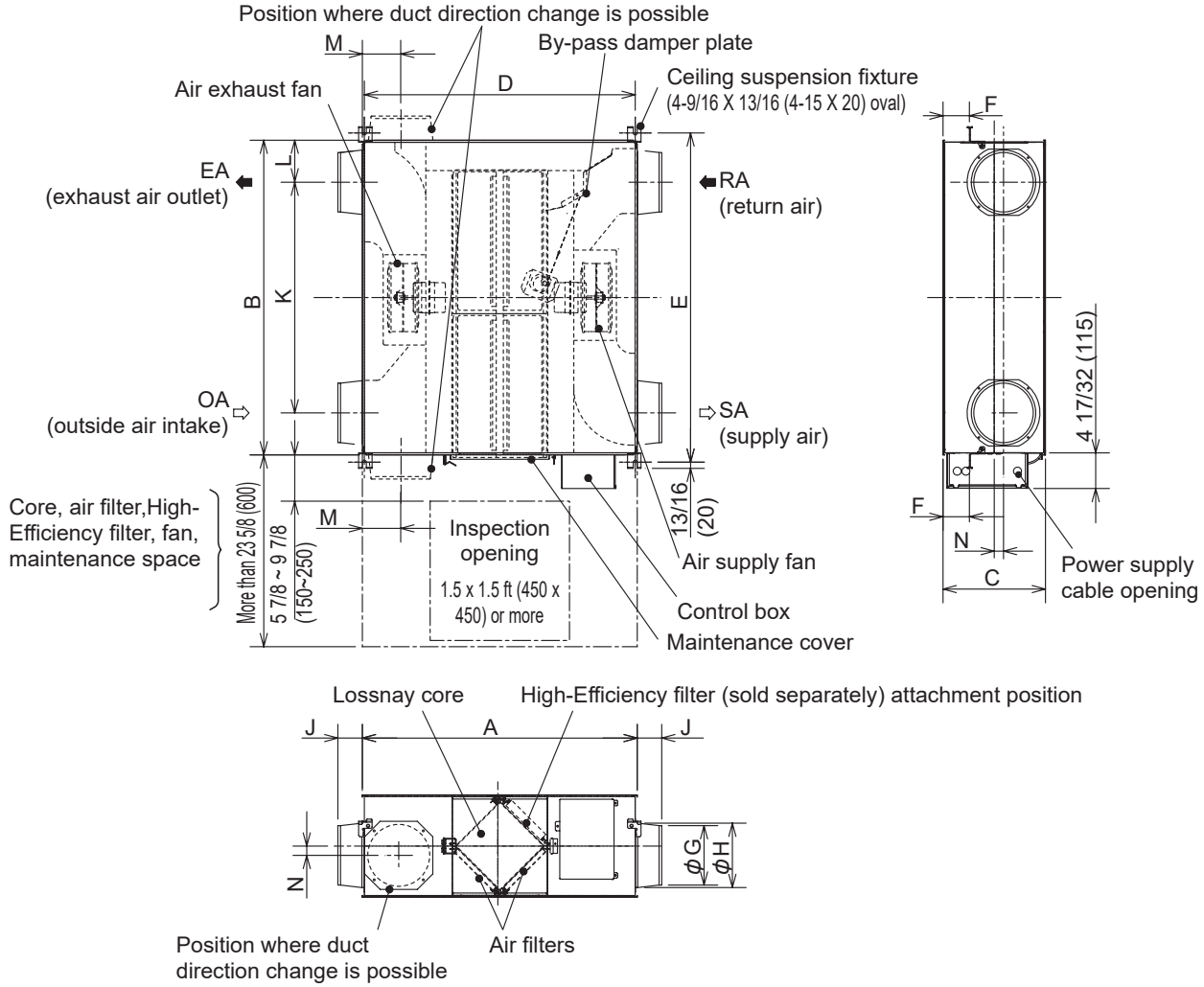
* The above values apply during energy recovery ventilation when the fan speed is set to Fan speed 4 at the rating pressure loss and 230 V / 60 Hz.
* For the specifications at the other frequency or voltages, see the spec. sheets.
* The values given in the table for the noise level reflect the levels measured at a position 4.9 feet (1.5 m) immediately below the unit in an anechoic chamber.
* Noise change or increase may occur because of the Bypass-Automatic function or Automatic fan speed change by timer setting and/or other functions.
* Temperature Exchange efficiency (%) are average of summer and winter condition.
* Mitsubishi Electric measures products according to Japan Industrial Standard (JIS B 8628:2003), therefore characteristic values are measured by chamber method.
* On-site commissioning 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 10 D (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 System. Application procedures for buildings AG3/89.3 (2001))

■ Remote controller

Model name	PZ-61DR-E	PZ-43SMF-E
Power supply requirement	12 V DC (Supplied from Lossnay unit)	
Power consumption	0.3 W	
Transmission cable	Non polarized 2-wire (AWG 22 (0.3 mm^2) sheathed cable)	
Total wiring length	219 yd. (200 m) maximum	
Number of controllable Lossnay units	15 Lossnay units maximum (Max. 2 remote controllers installable)	
Environmental condition	Temperature: 32 to 104ºF (0 to 40°C) Humidity: 30% to 90% relative humidity (no condensation)	
Weight	9/16 lb. (0.25 kg)	7/32 lb. (0.10 kg)
Color	Munsell 1.0Y9.2/0.2	

4. Outside dimensions

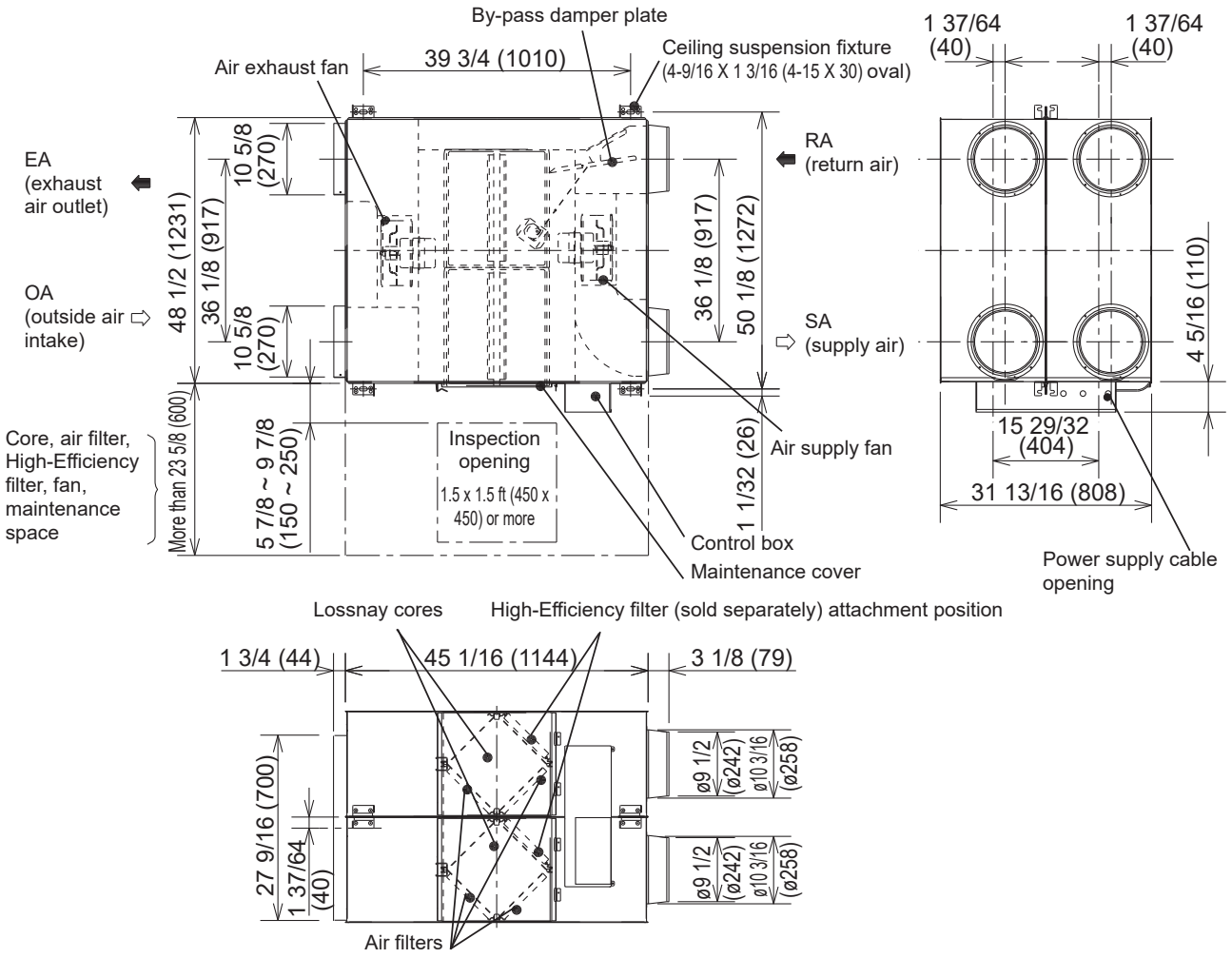
LGH-F300RVX-E, LGH-F470RVX-E, LGH-F600RVX-E



Model	Dimensions			Ceiling suspension fixture pitch			Nominal diameter	Duct connecting flange			Duct pitch				Weight lbs (kg)
	A	B	C	D	E	F		G	H	J	K	L	M	N	
LGH-F300RVX-E	34 15/16 (888)	40 (1016)	13 1/32 (331)	34 1/2 (875)	41 7/8 (1063)	3 11/32 (85)	7 7/8 (200)	7 9/16 (192)	8 3/16 (208)	3 1/8 (79)	29 3/8 (745)	5 5/16 (135.5)	4 7/8 (124)	1 3/16 (30)	75 (34)
LGH-F470RVX-E	45 1/16 (1144)	39 1/2 (1004)	15 29/32 (404)	44 17/32 (1131)	41 3/8 (1051)	3 1/32 (77)	9 7/8 (250)	9 1/2 (242)	10 3/16 (258)	3 1/8 (79)	27 3/16 (690)	6 3/16 (157)	6 1/2 (165)	1 37/64 (40)	110 (50)
LGH-F600RVX-E	45 1/16 (1144)	48 1/2 (1231)	15 29/32 (404)	44 17/32 (1131)	50 5/16 (1278)	3 1/32 (77)	9 7/8 (250)	9 1/2 (242)	10 3/16 (258)	3 1/8 (79)	36 1/8 (917)	6 3/16 (157)	6 1/2 (165)	1 37/64 (40)	123 (56)

Unit: Inch (mm)

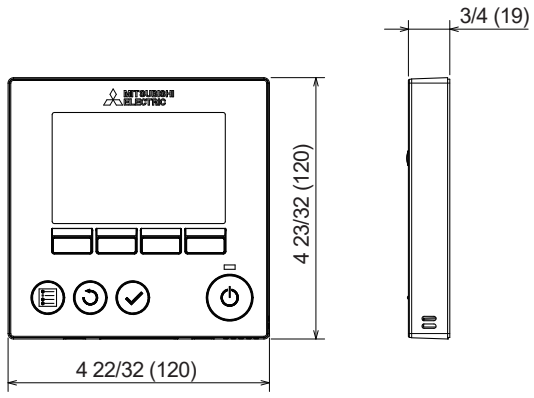
LGH-F1200RVX-E



Weight lbs (kg): 251 (114)

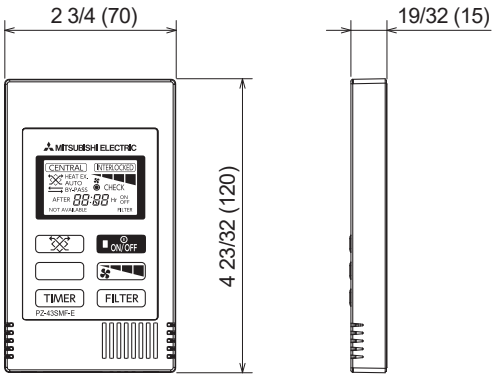
Unit: Inch (mm)

PZ-61DR-E



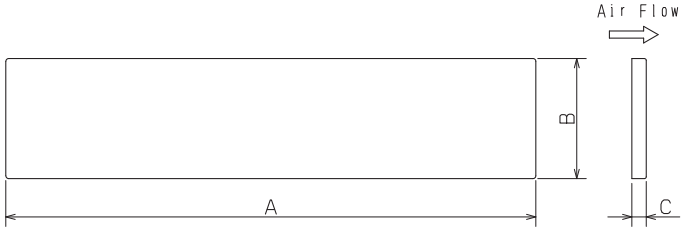
Unit: Inch (mm)

PZ-43SMF-E



Unit: Inch (mm)

PZ-50RF8-E, PZ-80RF8-E, PZ-100RF8-E



Model	Dimension			The number of filters per set		Applicable model
	A	B	C	Supply	Exhaust	
PZ-50RF8-E	18 1/2 (470)	7 13/64 (183)	19/32 (15)	2	2	LGH-F300RVX-E
PZ-80RF8-E	21 19/64 (451)	9 9/16 (243)	19/32 (15)	2	2	LGH-F470RVX-E
PZ-100RF8-E	22 1/4 (565)	9 9/16 (243)	19/32 (15)	2	2	LGH-F600RVX-E
				4	4	LGH-F1200RVX-E

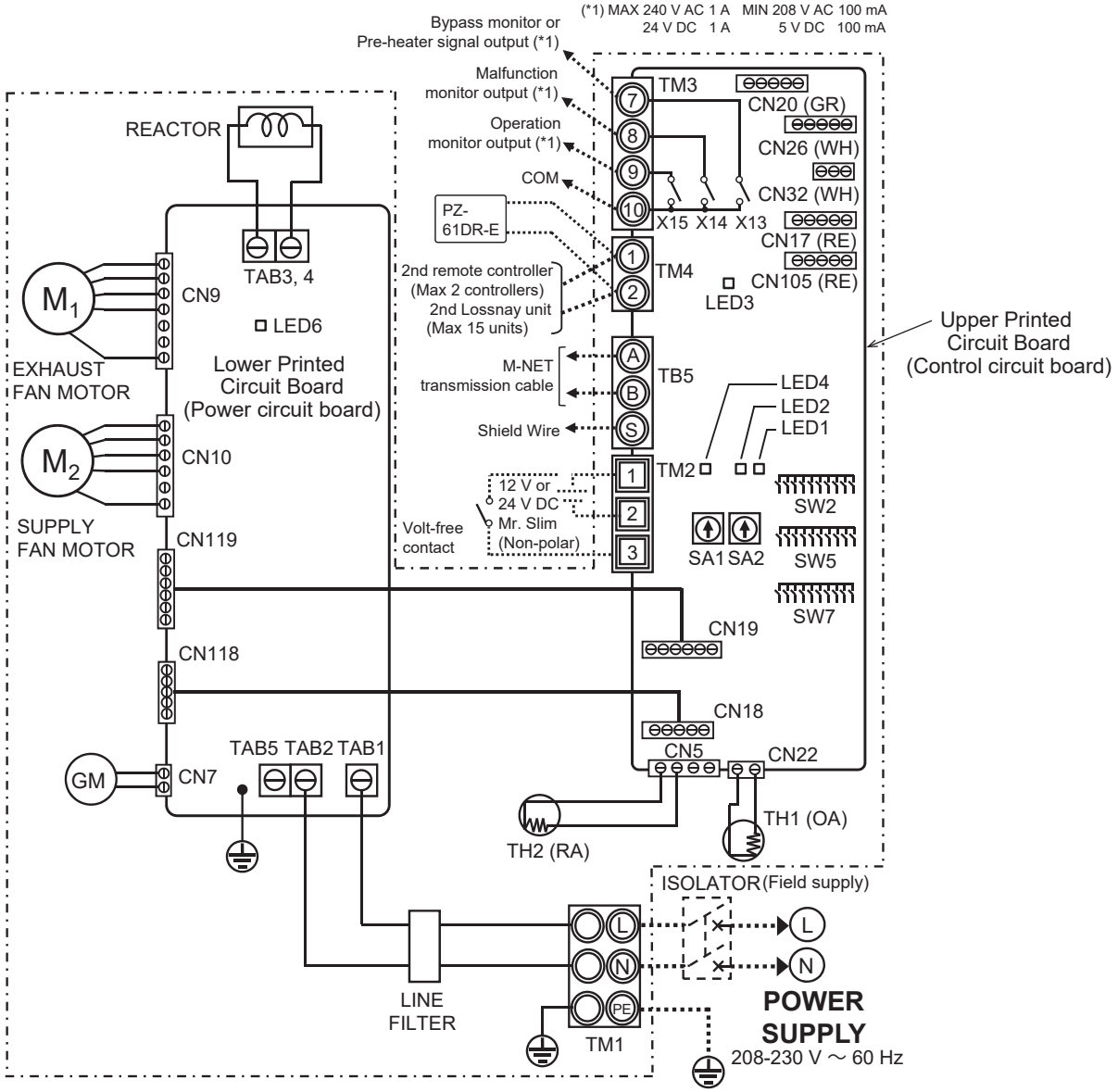
Notes:

• Each Lossnay unit is provided with one set of the filters. (Two sets for LGH-F1200RVX-E)

Unit: Inch (mm)

5. Electrical wiring diagrams

LGH-F300RVX-E, LGH-F470RVX-E, LGH-F600RVX-E



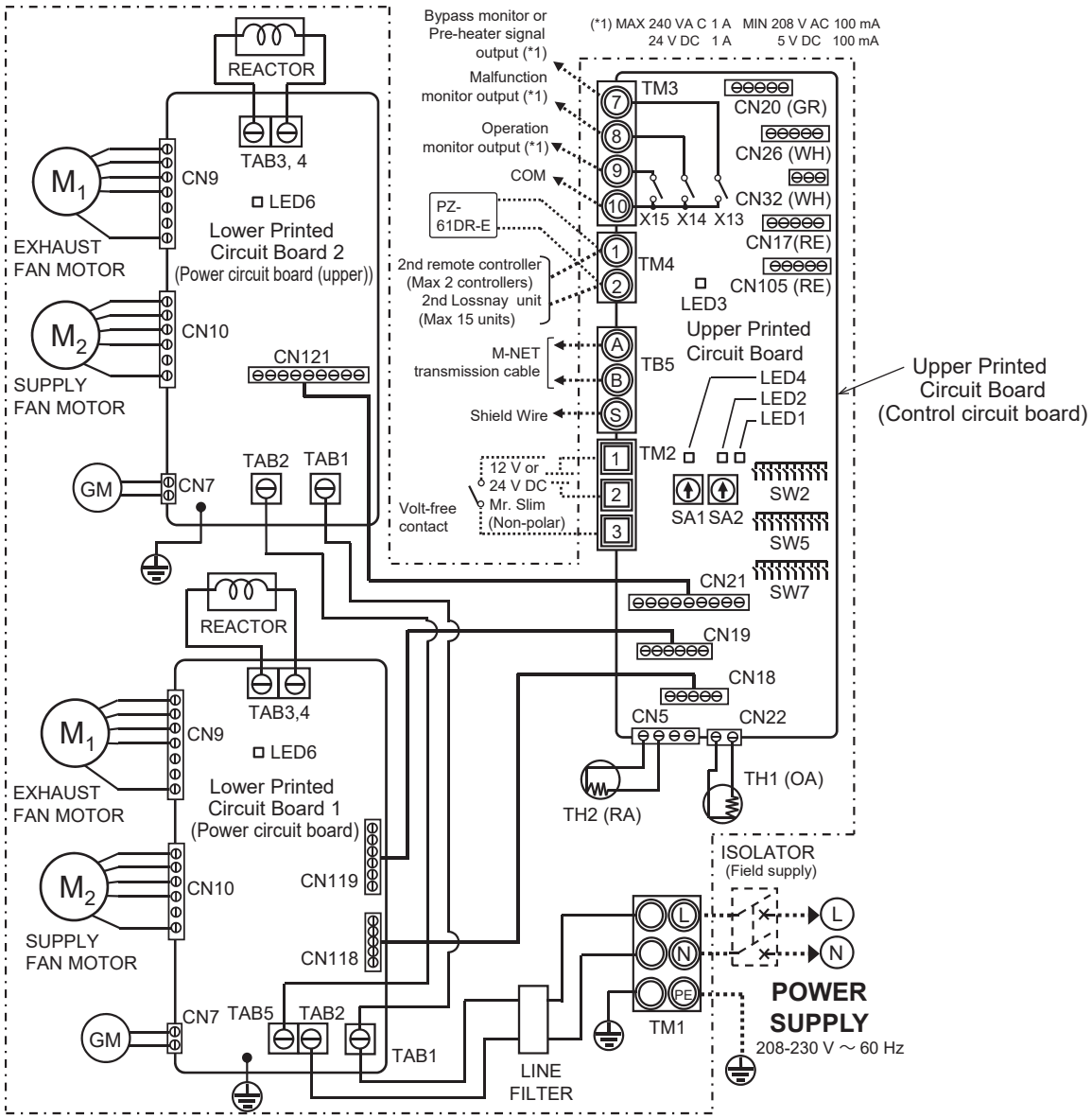
Definition of symbols		
M1: Motor for exhaust fan	X13: Relay contact	CN20: Unused
M2: Motor for supply fan	X14: Relay contact	CN26: Connector (By-pass, 0-10 V DC Fan speed control)
GM: Motor for By-pass damper	X15: Relay contact	CN32: Connector (Remote control selection)
TH1: Thermistor for outside air	CN5: Connector (Thermistor RA)	CN105: Connector (IT communication)
TH2: Thermistor for return air	CN7: Connector (Motor for By-pass damper)	SA1: Address setting rotary switch (10 digit)
SW2,5,7: Switch (Function selection)	CN9: Connector (Fan motor)	SA2: Address setting rotary switch (1 digit)
TM1: Terminal block (Power supply)	CN10: Connector (Fan motor)	LED1 to LED3: Inspection indicator lamp
TM2: Terminal block (External control input)	CN17: Connector (Fan speed 1/2/3/4)	LED4, LED6: Power supply indicator lamp
TM3: Terminal block (Monitor output)	CN18: Connector	SYMBOL ◎□: Terminal block
TM4: Terminal block (Transmission cable)	CN118: Connector	ⓒ: Connector on PCB
TB5: Terminal block (M-NET Transmission cable)	CN19: Connector	
TAB1, TAB2, (TAB5): Connector (Power supply)	CN119: Connector	
TAB3, TAB4: Connector (Reactor)	CN22: Connector (Thermistor OA)	

■ **Attention**

1. With this product, the wiring installation method will vary according to the design of the system.
2. Perform electrical installation to meet local electrical regulations.
3. Always use double insulated PVC cable for the transmission cables.
4. Wiring work must be performed by qualified professionals.
5. All supply circuits must be disconnected before obtaining access to the terminal devices.
6. Select proper circuit breaker according to the electrical current information in the chart below

Model		LGH-F300RVX-E	LGH-F470RVX-E	LGH-F600RVX-E
Maximum current when operating [A]		2.05	3.10	3.45
Inrush current after power supply ON [A]	10 ms	6.1		
	100 ms	3.6		

LGH-F1200RVX-E



Definition of symbols		
M1: Motor for exhaust fan	X13: Relay contact	CN20: Unused
M2: Motor for supply fan	X14: Relay contact	CN21: Connector
GM: Motor for By-pass damper	X15: Relay contact	CN121: Connector
TH1: Thermistor for outside air	CN5: Connector (Thermistor RA)	CN22: Connector (Thermistor OA)
TH2: Thermistor for return air	CN7: Connector (Motor for By-pass damper)	CN26: Connector (By-pass, 0-10 V DC Fan speed control)
SW2,5,7: Switch (Function selection)	CN9: Connector (Fan motor)	CN32: Connector (Remote control selection)
TM1: Terminal block (Power supply)	CN10: Connector (Fan motor)	CN105: Connector (IT communication)
TM2: Terminal block (External control input)	CN17: Connector (Fan speed 1/2/3/4)	SA1: Address setting rotary switch (10 digit)
TM3: Terminal block (Monitor output)	CN18: Connector	SA2: Address setting rotary switch (1 digit)
TM4: Terminal block (Transmission cable)	CN118: Connector	LED1 to LED3: Inspection indicator lamp
TB5: Terminal block (M-NET Transmission cable)	CN19: Connector	LED4, LED6: Power supply indicator lamp
TAB1, TAB2, (TAB5): Connector (Power supply)	CN119: Connector	SYMBOL ◎ □: Terminal block
TAB3, TAB4: Connector (Reactor)		⊡: Connector on PCB

■ **Attention**

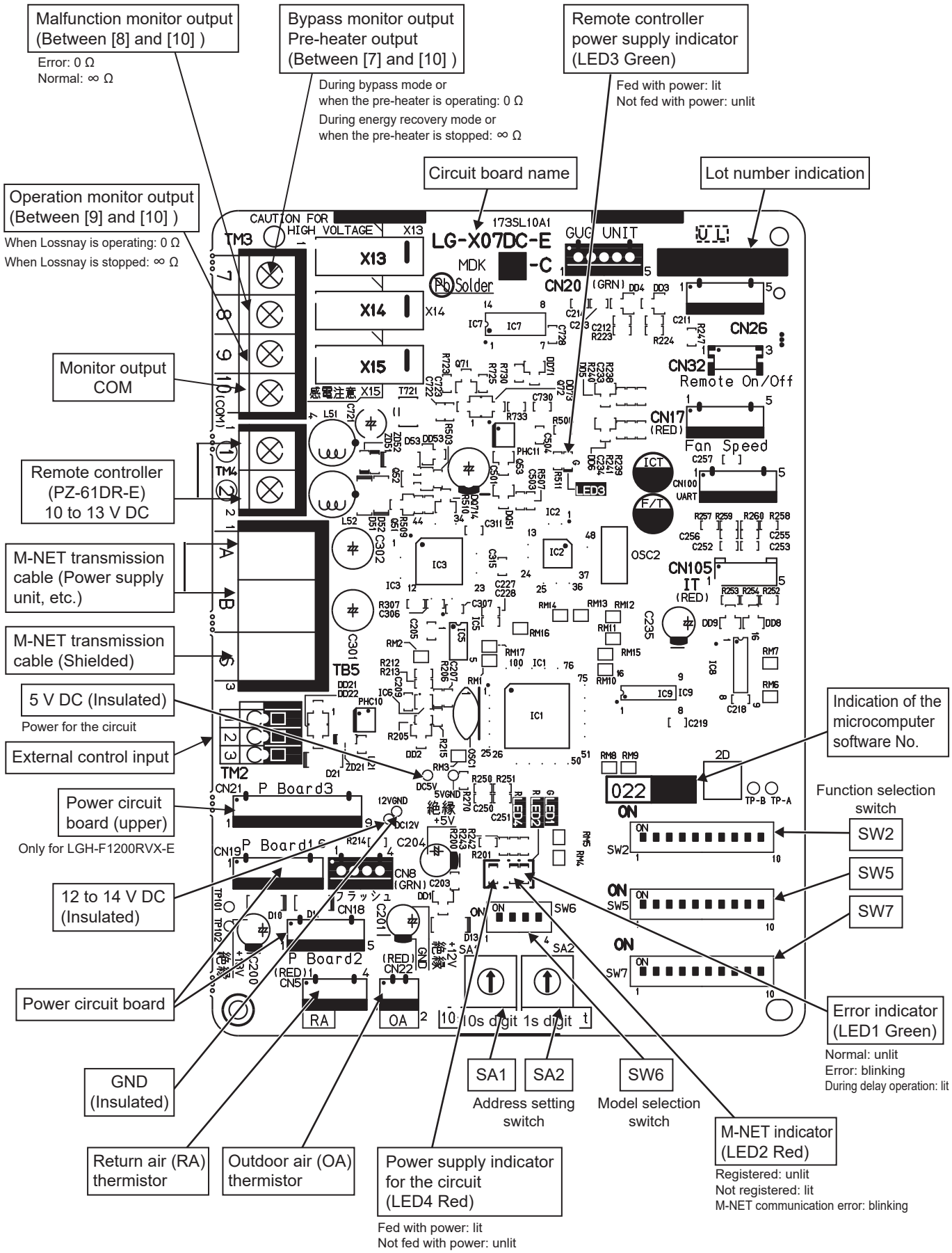
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2. Perform electrical installation to meet local electrical regulations.
3. Always use double insulated PVC cable for the transmission cables.
4. Wiring work must be performed by qualified professionals.
5. All supply circuits must be disconnected before obtaining access to the terminal devices.
6. Select proper circuit breaker according to the electrical current information in the chart below

Model		LGH-F1200RVX-E
Maximum current when operating [A]		6.40
Inrush current after power supply ON [A]	10 ms	12.2
	100 ms	7.2

6. Circuit board diagrams

● Circuit board diagrams and check points

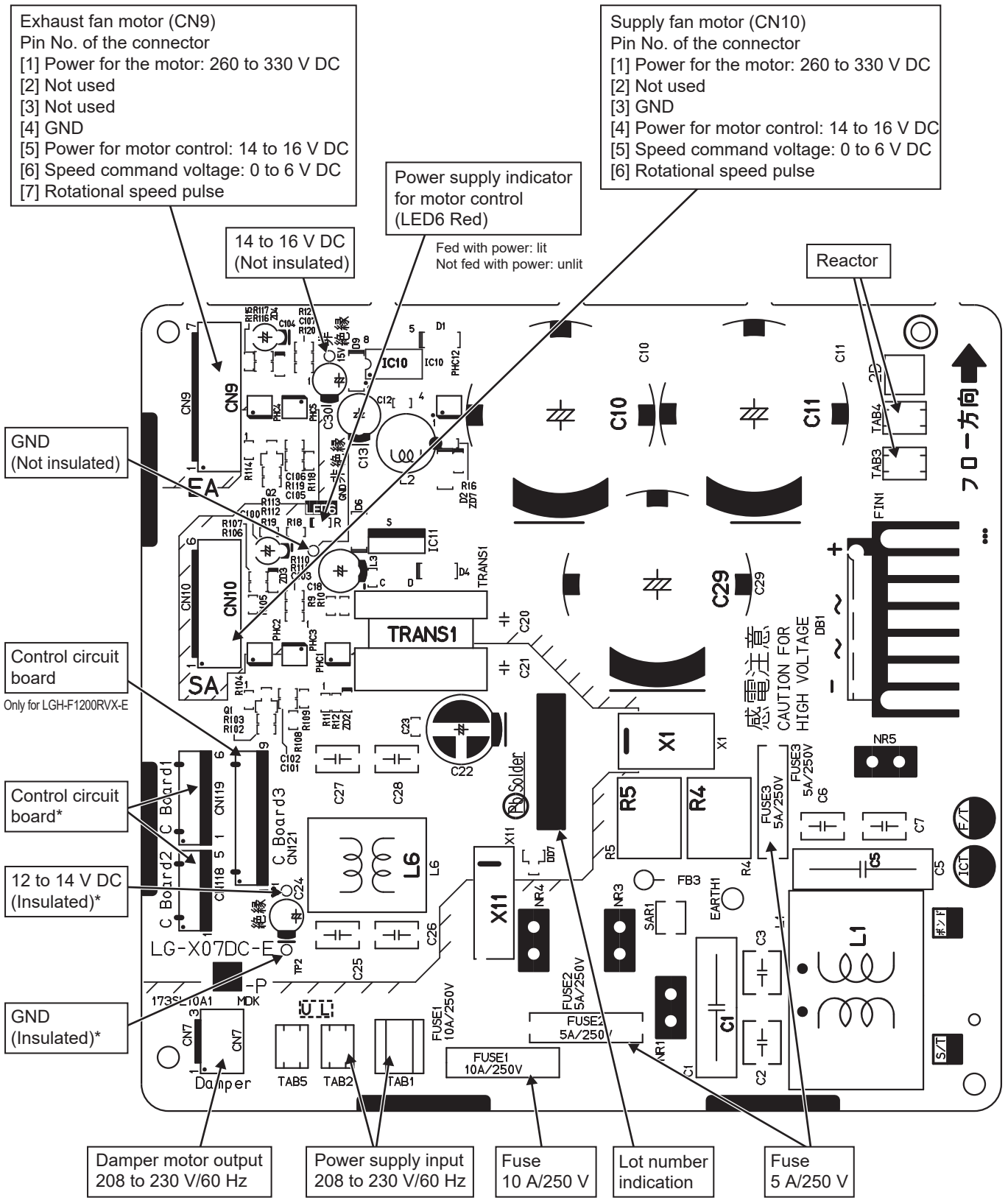
(1) Control circuit board



(2) Power circuit board

Caution:

The power circuit board is not insulated from the power line (high voltage part), except for the connection part (CN118, CN119, and CN121) with the control circuit board. Also, even when the power supply is cut off, the capacitor is charged. Therefore, wait for at least five minutes before starting work.



Note:

The components marked with * are not placed on the power circuit board (upper) of LGH-F1200RVX-E.

7. Troubleshooting

■ **Work precautions**

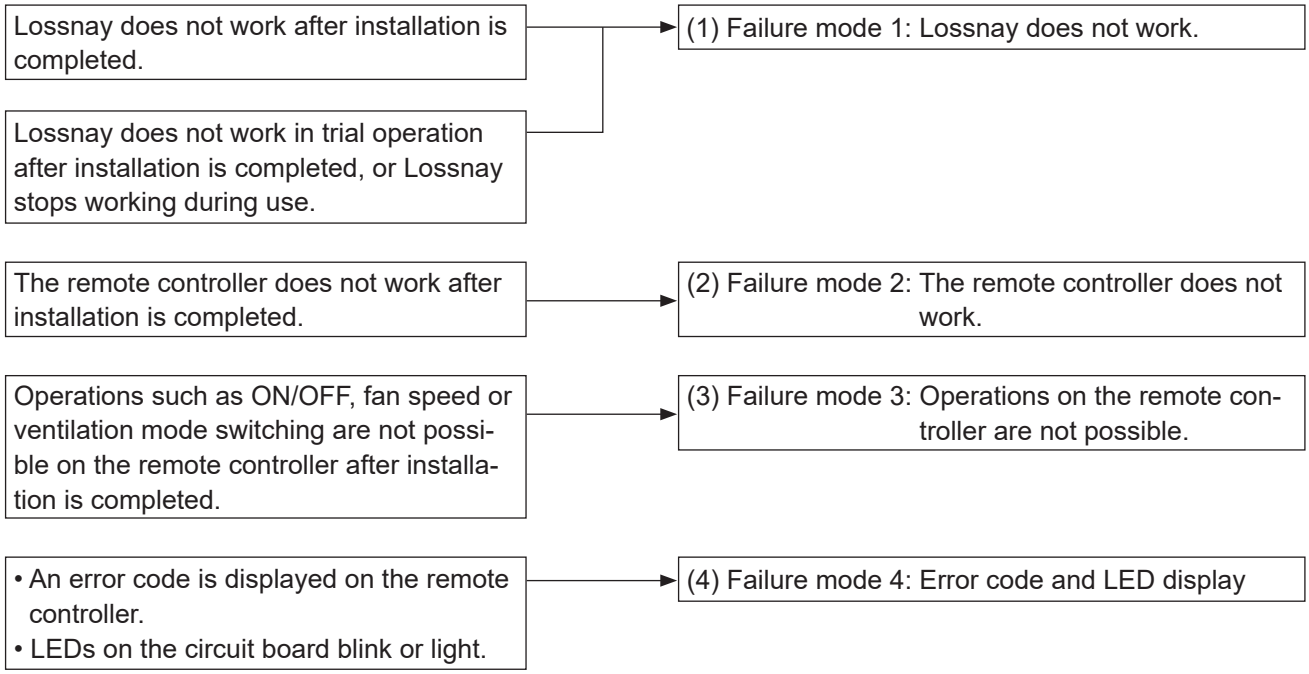
- Before starting the service, the power supply isolator must be turned off. Pay sufficient attention to avoid electric shock or injury.
- When removing or touching the cables, circuit boards or other parts, make sure to turn off the power supply isolator.
- Even after the power supply isolator is turned off, the capacitor on the circuit board retains high voltage for a while. Therefore, before servicing, wait for at least five minutes, and then use a tester to check that the voltage has dropped.
- Once the power supply is turned off, be sure to wait for at least five minutes before turning the power back on again.
- When servicing, power supply to M-NET must be turned off. Live-line working may cause a circuit board failure.
- When servicing, recreate the malfunction two or three times before starting repairs.
- When servicing, always keep proper footing.
- When disconnecting the motor connectors, make sure that the power supply is turned off. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.
- When removing the circuit board, always hold it at both ends and remove carefully in order not to apply force to the surface mounted parts.
- When removing the circuit board, be careful of the metal edges on the board.
- When removing or inserting the connectors for the circuit board, hold the entire housing section. Never pull on the lead wires.
- When circuit board is considered to be a cause, check closely for any broken section on the copper foil patterns, burning or discoloration.
- After replacing the circuit board, make sure that the switch settings on the new board are the same as the old board.
- Make sure to connect the power supply wires correctly.
- Avoid application of abnormal voltage.
- When carrying out wiring, power supply to M-NET must be turned off, otherwise it will cause a malfunction.

7-1 Service flowchart

After checking the check items below, follow the troubleshooting for servicing.

Applicable Device	Applicable Model
Lossnay Energy Recovery Ventilator	LGH-F300RVX-E, LGH-F470RVX-E, LGH-F600RVX-E, LGH-F1200RVX-E
Lossnay Remote Controller	PZ-61DR-E, PZ-43SMF-E

No.	Preliminary check item	Details
1	Product information	• Model name of the product • Serial number of the product, manufacturing lot number of the circuit board • Microcomputer software version marked on the circuit board
2	Fault status	• Fault status (For example, the fan does not operate.) • Error code display on the remote controller • Operation setting of the remote controller (ventilation mode setting, fan speed setting, etc.)
3	Frequency of fault occurrence	• Frequency of fault occurrence (frequency of date and time of occurrence, regularity of occurrence, etc.) • Operating time up to fault occurrence • Date of start of use, date of fault occurrence
4	Timing of fault occurrence	• Remote controller operation performed before fault occurrence • Operating status, etc.
5	System settings	• Function selection switch settings and address setting of the product • Model name and address setting of the Lossnay remote controller or system controller, etc. • Function settings on PZ-61DR-E when it is used
6	System drawings	• System Configuration • Wiring • Record of the Lossnay function setting statuses



7-2 Check details

(1) Failure mode 1: Lossnay does not work.

● **Initial Check Items**

Check the following details if Lossnay does not work after installation is completed.

[1] Power supply

No.	Check Item	Corrective action
1	Is the main power supply on?	Turn the main power supply on.
2	Is the current capacity of the power supply isolator appropriate?	Use an appropriate power supply isolator.
3	Is the designated cable used for the power supply cable?	Use the designated cable.
4	Is the specified power supply supplied to the power supply terminal (TM1)? 208-230 V/60 Hz	Supply the designated power supply.
5	Is the power supply cable incorrectly wired, is there a faulty connection or are screws loose?	Connect the cable securely and correctly, and tighten the screws firmly.
6	Is there a faulty connection on the power supply terminals (TM1, TAB1, TAB2, and TAB5)?	Connect the lead wires securely.
7	Is there a faulty connection on the reactor terminals (TAB3 and TAB4)? For LGH-F1200RVX-E, check both the power circuit board and power circuit board (upper).	Connect the lead wires securely.
8	Are the power supply indicator lamps (LED4 and LED6, red) lit? For LGH-F1200RVX-E, check both the power circuit board and power circuit board (upper).	Check the above items.

[2] Transmission cables

(Remote controller transmission cable, M-NET transmission cable, external input/output signal cable)

No.	Check Item	Corrective action
1	Are the designated cables used for the remote controller transmission cable and M-NET transmission cable? (See Table 2-1 and Table 2-2.)	Use the designated transmission cables.
2	Are the designated cables used for the external input/output signal cable? (See Table 2-3.)	Use the designated cables.
3	Are the transmission cables wired using multicore cables?	Use the designated transmission cables.
4	Are multiple transmission cables wired in the same piping duct?	Wire the transmission cable away from one another.
5	Is the power supply cable wired at least 2 inch (5 cm) away from transmission cables?	Wire the power supply cable at least 2 inch (5 cm) away from the transmission cables.
6	Are the transmission cables connected to the designated terminal block? (See Table 2-1 and Table 2-2.)	Connect the transmission cables to the designated terminal blocks.
7	Are the transmission cables incorrectly wired, is there a faulty connection or are screws loose?	Connect the cable securely and correctly, and tighten the screws firmly.
8	Is the wiring length of the transmission cable within the regulations? (See Table 2-1 and Table 2-2.)	Wire the cables within the regulations.
9	Are communication cables wired at least 2 inch (5 cm) away from the other communication cables?	Wire the cables at least 2 inch (5 cm) away from the other cables.
10	Does the external input signal match the specifications? (See Table 2-3.)	Input the signal that matches the specifications.
11	Is the external input signal input to the Lossnay set as the main Lossnay?	Input the signal to the Lossnay set as the main Lossnay (SW5-10 ON).
12	Is the function selection for the external output signal set correctly?	Set the function selection switches (SW2-8, 5-2, and 5-6) on the circuit board correctly. Set the function settings (No. 57 and 58) of PZ-61DR-E correctly.

Table 2-1

M-NET transmission cable specifications

Cable	M-NET transmission cable
Type	Shielded cable CVVS, CPEVS
Number of cores	2-core cable
Cable diameter	AWG 16 to 14 (1.25 mm^2 to 2.0 mm^2)
Max. extension	219 yd. (200 m) (Note 1)
Total extension	547 yd. (500 m) (Note 2)
Terminal block	TB5 [A] [B]

(Note 1) Distance from the power supply unit to the furthest unit or system controller.

(Note 2) Overall length of the cable between the units and the system controllers.

Table 2-2

Remote controller transmission cable specifications

Cable	PZ-61DR-E or PZ-43SMF-E transmission cable
Type	Sheathed cable
Number of cores	2-core cable
Cable diameter	AWG 22 (0.3 mm^2)
Total extension	219 yd. (200 m)
Terminal block	TM4 [1] [2]

Table 2-3 External input/output specifications

Function name	Terminal or connector on the circuit board	Signal specifications	Materials used	Total extension
External control input (volt-free contact)	TM2 [1] [3]	Level/pulse (Note 1)	Single-lead 1/32 in. (0.8 mm) to 3/64 in. (1.2 mm) dia. or twisted lead AWG 20 (0.5 mm^2) to AWG 15 (1.5 mm^2)	547 yd. (500 m)
External control input (12 V DC, 24 V DC)	TM2 [1] [2]	Level/pulse (Note 1)	Single-lead 1/32 in. (0.8 mm) to 3/64 in. (1.2 mm) dia. or twisted lead AWG 20 (0.5 mm^2) to AWG 15 (1.5 mm^2)	(Note 2)
Mr. Slim indoor unit control signal	TM2 [1] [2]	Serial signal	Slim-Lossnay connection cable (Accessory parts)	547 yd. (500 m)
Remote/local switching	CN32 [1] [3]	Level (Note 1)	Remote ON/OFF adaptor (PAC-SE55RA-E, PAC-715AD)	11 yd. (10 m)
Remote ON/OFF input	CN32 [1] [2]			
Fan speed 4 input (volt-free contact)	CN17 [1] [2]	Level (Note 1)	Remote display adaptor (PAC-SA88HA-E, PAC-725AD)	
Fan speed 3 input (volt-free contact)	CN17 [1] [3]			
Fan speed 2 input (volt-free contact)	CN17 [1] [4]			
Fan speed 1 input (volt-free contact)	CN17 [1] [5]			
Bypass mode input (volt-free contact)	CN26 [1] [2]			
Fan speed switching input (0 to 10 V DC)	CN26 [4] [5]	Analog		

<Caution>

- Input the signals to the Lossnay (SW5-10 ON, with the smallest address setting) set as the main Lossnay in the group.

(Note 1) The input signal must conform to the following specifications:

Level signal Volt-free contact, 12 V DC, 24 V DC, the duration of ON and OFF should be 10-second or more.

Pulse signal Volt-free contact, 12 V DC, 24 V DC, the duration of ON should be 200 msec. or more, and minimum 10-second absence is necessary to the next pulse .

In the case of relay contact input, use a relay having a contact rating of 15 V DC/0.1 A or higher and a minimum applicable load of 1 mA or less.

(Note 2) Check the specifications of the external device.

[3] Monitor output signal cable

No.	Check Item	Corrective action
1	Is the signal cable wired by multicore cable?	Wire the cable using a 2-core cable.
2	Are the signal cables and transmission cables wired in the same piping duct?	Wire the signal cables away from the transmission cables.
3	Is the power supply cable wired at least 2 inch (5 cm) away from signal cables?	Wire the power supply cable at least 2 inch (5 cm) away from the signal cables.
4	Is the signal cable connected to the designated terminal block? (See Table 3-1.)	Connect the signal cable to the designated terminal block.
5	Is the signal cable incorrectly wired, is there a faulty connection or are screws loose?	Connect the cable securely and correctly, and tighten the screws firmly.
6	Is the output capacity of the signal cable within rating? (See Table 3-1.)	Use the signal cable within rating.
7	Is the function selection for the external output signal set correctly?	Set the function selection switches (SW2-8, 5-2, and 5-6) on the circuit board correctly. Set the function settings (No. 57 and 58) of PZ-61DR-E correctly. (See the Lossnay technical manual.)

Table 3-1 Monitor Output Specifications

Terminal block	TM3 [9] [10]	TM3 [8] [10]	TM3 [7] [10]
Function Name	Operation monitor	Malfunction monitor	Bypass monitor or Pre-heater
Signal specifications	Volt-free contact		
Output rating	240 V AC, 1 A		
	24 V DC, 1 A		
Min. applicable load	208 V AC, 100 mA		
	5 V DC, 100 mA		

[4] Function setting (See the Lossnay technical manual for details.)

No.	Check Item	Corrective action
1	Is the main Lossnay set correctly?	Check the function selection switch (SW5-10) on the circuit board. When an external signal is input to multiple Lossnay units, set one of the units in the group as the main Lossnay (SW5-10 ON).
2	Are the function selection switches on the circuit board set correctly to suit the required application?	Set the function selection switches (SW2, SW5, and SW7) on the circuit board correctly.
3	Is the applicable model used as the Lossnay remote controller?	Use PZ-61DR-E or PZ-43SMF-E. (The air conditioner remote controller including MA controller cannot be used.)
4	When PZ-61DR-E is used, are the function selections set correctly to suit the required application?	Set the function selections correctly.
5	Was a function set with the function selection switches on the circuit board after the function is set with PZ-61DR-E?	Set the function again with PZ-61DR-E. For the function that can be set with both PZ-61DR-E and the function selection switches, if the function is set to other than "DIP-SW priority" with PZ-61DR-E, setting with the function selection switches is disabled.
6	Is the Lossnay address set correctly?	Set the address setting switches (SA1 and SA2) correctly.

[5] LED Indications on the circuit board

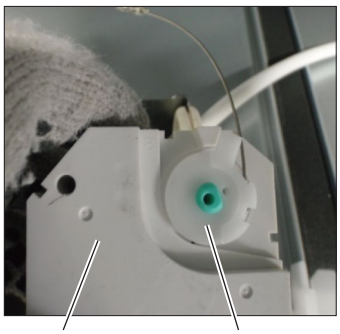
No.	LED	Contents	Check Item	Corrective action
1	LED1 (Green)	Lossnay main unit error indicator	Blinking: Starting up, error occurred	See Failure Mode 4.
			Lit: During delay operation	Lossnay operates after the delay time has passed.
			Unlit: Other than above	It is normal.
2	LED2 (Red)	M-NET System error indicator	Blinking: Error occurred	See Failure Mode 4.
			Lit: No M-NET connection information	When using M-NET, perform group registration with the system controller.
			Unlit: Other than above	It is normal.
3	LED3 (Green)	Remote controller power supply indicator	Lit: Power supplied to the remote controller (Main Lossnay)	The LED goes out when power is supplied to the remote controller from other Lossnay units in a multiple Lossnay group.
			Unlit: Power not supplied to the remote controller (Sub Lossnay)	
4	LED4 (Red)	Power supply indicator (control circuit board)	Check that this LED is lit	The LED lights while power is being supplied to the control circuit board.
5	LED6 (Red)	Power supply indicator (power circuit board)	Check that this LED is lit	The LED lights while power is being supplied to the power circuit board. (Do not touch components on the circuit board when the LED is lit.)

● **Individual function check items**

[6] If Lossnay does not work in the trial operation after installation is completed, or if Lossnay stops working during use, check the following items.

No.	Problem	Factor	Corrective action
1	The fan does not operate even though the trial operation switch (SW2-1) on the circuit board is turned ON.	The connectors between the fan motor and circuit board is disconnected.	Check the connector (CN9) for the exhaust fan motor and the connector (CN10) for the supply fan motor.
		The connector between the control circuit board and power circuit board is disconnected.	Check the connector connections (CN18-CN118 and CN19-CN119).
			Check the connector connection (CN21-CN121). (For LGH-F1200RVX-E only)
		The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
		The temperature around the product is high.	Use the product at a temperature of 104°F (40°C) or lower.
		Fan motor failure	Check the resistance between the motor leads. (See (6) Motor resistance table (page 36).) If the measured value is significantly different from the values specified in the table, replace the fan motor.
		Circuit board failure	Disconnect the connectors (CN9 and CN10), and check the output voltage of each pin of the connectors within one minute after turning the switch (SW2-1) ON. (One minute later, the error will occur.) (See chapter 6. (2) Power circuit board (page 11).) If the voltage value is abnormal, replace the circuit board. If the problem persists, replace the fan motor.

No.	Problem	Factor	Corrective action
2	Though the remote controller display indicates the fan is running, the fan stops by itself.	The Lossnay unit is operating in the protective mode (intermittent operation).	When PZ-61DR-E is used, it displays the icon "" that indicates the protective operation is in-progress. For details, see the Lossnay technical manual or remote controller manual.
		The Lossnay unit is set to the delay operation.	When PZ-61DR-E is used, it displays the icon "" that indicates the delay operation is in-progress. LED1 (green) on the control circuit board lights. Lossnay operates in 30 minutes (or 15 minutes) after the air conditioner is operated to run. Check the function selection switch (SW5-1) on the circuit board or the function setting (No. 9) of PZ-61DR-E. (See the Lossnay technical manual.)
		The interlocked air conditioner (Mr. Slim indoor unit or City Multi indoor unit) is defrosting.	The supply fan has been stopped to prevent cold air from blowing out. When the air conditioner finishes defrosting, the fan operation is started automatically.
		The system is switching the ventilation mode.	When switching the ventilation mode (Energy recovery mode/Bypass mode), the fan stops (for approx. 30 seconds).
		The temperature around the product is high.	When the ambient temperature of the product is high (higher than 104°F (40°C)), the fan may stop to prevent the fan motor from overheating.
3	The fan does not stop even though the remote controller is operated to stop operation.	The pre-heater or operation monitor with delay operation is set to be used.	If the pre-heater or operation monitor with delay operation is set to be used, the fan continues operating for three minutes after the stop operation. Check the function selection switches (SW2-8 and 5-6) on the circuit board or the function settings (No. 57 and 58) of PZ-61DR-E. (See the Lossnay technical manual.)
4	Even though the remote controller is operated to change the fan speed, the fan speed does not change.	The indoor negative pressure setting or the indoor positive pressure setting is set.	Check the function selection switches (SW2-4 and 2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-61DR-E. (See the Lossnay technical manual.)
		The external fan speed input is set. (CN17)	When PZ-61DR-E is used, it displays the icon "". Check the fan speed switching input (CN17).
		The external fan speed input is set. (CN26)	When PZ-61DR-E is used, it displays the icon "". Check the function selection switches (SW2-3 and 2-6) on the circuit board or the function setting (No. 63) of PZ-61DR-E. (See the Lossnay technical manual.)
		The system is operating in the protective mode (intermittent operation).	When PZ-61DR-E is used, it displays the icon "" that indicates the protective operation is in-progress. For details, see the Lossnay technical manual or remote controller manual.
		The pre-heater is ON.	When the pre-heater is ON, Lossnay runs at Fan speed 2 or higher speed. Even when Fan speed 1 is selected with the remote controller or external fan speed input, Lossnay runs at Fan speed 2.
5	The fan operation is unstable.	The motor rotation speed is under control.	This product controls the motor by detecting the motor rotation speed. The fan operation may be unstable during rotation speed control (for maximum about 10 minutes).
6	Air volume is abnormally large or small.	The model selection switch (SW6) is not set correctly after the circuit board is replaced.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)

No.	Problem	Factor	Corrective action
7	The damper does not operate even though the trial operation switch (SW2-1) on the circuit board is turned ON.	The connector between the damper motor and circuit board is disconnected.	Check the connection of the connector (CN7) on the power circuit board.
		Mechanical failure	Remove the rod of the damper board and check if the damper board can be moved by hand.
		Damper motor failure	Remove the rod of the damper board and turn the trial operation switch (SW2-1) ON. The damper motor operates in about 30 seconds. If the damper motor does not operate, replace the damper motor (GM assembly).
		Circuit board failure	Disconnect the connector (CN7) from the power circuit board and check the voltage value between the pins of CN7 when the trial operation switch (SW2-1) is turned ON. (Voltage is output in about 30 seconds after switch ON.) If there is no voltage value, replace the circuit board.
			If the problem persists, replace the damper motor (GM assembly).
8	Abnormal noise comes from the damper motor	Mis-assembling of the damper motor	Remove the GM assembly from the main unit, and then remove the damper motor from the damper motor casing to check the pulley position. If the position is incorrect, adjust it as shown in the picture below, and then reassemble the GM assembly.  Damper motor Pulley
		Damper motor failure	If no error is found around the pulley and wire, replace the GM assembly.
9	Even though the remote controller is operated to change the ventilation mode, the ventilation mode is not changed.	The outdoor temperature is 46.4°F (8°C) or lower.	When the outdoor temperature is 46.4°F (8°C) or lower, the ventilation mode is fixed to the Energy recovery mode.
		The signal is input to the Bypass mode switching input (CN26 [1] [2]).	Check the Bypass mode switching input (CN26 [1] [2]). (See the Lossnay technical manual.)
		The Lossnay unit is performing the Night-purge operation.	When PZ-61DR-E is used, The ventilation mode cannot be changed during the Night-purge operation. (See the Lossnay technical manual.)
		The pre-heater is ON, or within one hour after the pre-heater is turned OFF.	When the pre-heater is ON, or for one hour after the pre-heater is turned OFF, the ventilation mode is fixed to the Energy recovery mode.

No.	Problem	Factor	Corrective action
10	The ventilation mode cannot be switched when Lossnay is operating in the automatic mode.	Temperature condition for Energy recovery mode or Bypass mode is not satisfied.	Check the temperature map. For details, see the Lossnay technical manual.
		It has not passed 30 minutes since the ventilation mode is switched.	Switching of the ventilation mode is controlled in 30 minutes cycle.
		The outdoor temperature is 46.4°F (8°C) or lower.	When the outdoor temperature is 46.4°F (8°C) or lower, the ventilation mode is fixed to the Energy recovery mode.
		The signal is input to the Bypass mode switching input (CN26 [1] [2]).	Check the Bypass mode switching input (CN26 [1] [2]). (See the Lossnay technical manual.)
		The operation mode of the interlocked air conditioner (Mr. Slim indoor unit or City Multi indoor unit) is set to fan operation or heating.	If the operation mode of the interlocked air conditioner is fan operation or heating, the ventilation mode of Lossnay is fixed to the Energy recovery mode.
		The pre-heater is ON, or within one hour after the pre-heater is turned OFF.	When the pre-heater is ON, or for one hour after the pre-heater is turned OFF, the ventilation mode is fixed to the Energy recovery mode.
11	Air volume is too small.	Is the air filter clogged?	Clean the air filter.
		Pressure loss in the duct is too high.	Set the supply/exhaust fan power up setting. (See the Lossnay technical manual.)
		The model selection switch (SW6) is not set correctly after the circuit board is replaced.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
		The indoor negative pressure setting or the indoor positive pressure setting is set.	Check the function selection switches (SW2-4 and 2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-61DR-E. (See the Lossnay technical manual.)
		Power supply voltage is low.	Check the power supply voltage.
		In interlock with the air conditioner, the outdoor air intake port of the Lossnay unit is connected with the air conditioner by using a duct.	In this case, even if the Lossnay remote controller is operated to start Lossnay while the air conditioner is stopped, Lossnay will not supply air.
		Are the Filterboxes used?	To use the Filterboxes, set the function of Fan power up individually for RA (return air) and OA (outdoor air intake) sides. Check the function selection switches (SW7-4 and 7-5) on the circuit board of the Lossnay unit or the function settings (No. 64 and 65) of PZ-61DR-E.
		Are the filters in the Filterboxes clogged?	Clean or replace the filters in the Filterboxes.

No.	Problem	Factor	Corrective action
12	Actual fan speed of the Lossnay unit differs from the fan speed set with the remote controller.	The signal is input to the fan speed input (CN17).	Check the fan speed input (CN17). (See the Lossnay technical manual.)
		The signal is input to the fan speed switching input (CN26 [4] [5]).	Check the fan speed switching input (CN26 [4] [5]). (See the Lossnay technical manual.)
		Function setting (No. 8) of PZ-61DR-E "Max. fan speed setting during the first 30 minutes" is enabled.	Lossnay operates at fan speed 4 for 30 minutes when operation starts. (See the Lossnay technical manual.)
		The indoor negative pressure setting or the indoor positive pressure setting is set.	Check the function selection switches (SW2-4 and 2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-61DR-E. (See the Lossnay technical manual.)
13	The Night-purge operation cannot be stopped with PZ-61DR-E.	Usual start/stop button operation cannot stop the Night-purge operation.	Press the start/stop button once to display the operation screen, and then press the start/stop button again.
14	Even though the Night-purge is set, Lossnay does not perform the Night-purge operation.	Conditions of the Night-purge are not satisfied.	When the Night-purge conditions such as the indoor/outdoor temperature are not satisfied, Lossnay does not perform the Night-purge operation. For details, see the Lossnay technical manual.
		The Night-purge schedule is not set.	Check the setting of PZ-61DR-E or the system controller that supports Night-purge operation. For details, see the Lossnay technical manual.
15	The Night-purge operation stops in halfway through.	The operating condition became outside the Night-purge conditions.	When the operating condition becomes outside the Night-purge conditions, the Night-purge operation ends. For details, see the Lossnay technical manual.
		The Lossnay remote controller or the system controller was operated to start or stop the operation of the Lossnay unit.	When the start or stop operation is performed during the Night-purge operation, the Night-purge operation ends.
		A controller other than PZ-61DR-E or a controller that is not supporting Night-purge is operated to change the ventilation mode.	When a controller other than those supporting Night-purge is operated to change the ventilation mode, the system performs the normal ventilating operation. (See the Lossnay technical manual.)

(2) Failure mode 2: The remote controller does not work.

If the remote controller does not work after installation is completed, check the following items.

[1] PZ-61DR-E

No.	Problem	Factor	Corrective action
1	Nothing is displayed on the remote controller. The ON/OFF lamp does not blink.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		In one group, three or more PZ-61DR-E controllers are connected.	Only up to two PZ-61DR-E controllers can be connected in one group.
		In one group, 16 or more Lossnay units are connected.	Only up to 15 Lossnay units can be connected in one group.
		The wiring length of the remote controller exceeds 219 yd. (200 m).	The wiring length of the remote controller shall be within 219 yd. (200 m).
		In one group, two or more Lossnay units are set as the main Lossnay (SW5-10 ON).	Only one Lossnay unit can be set as the main Lossnay in one group.
2	The remote controller continues to display "Please Wait". Error code "6831" is displayed.	The remote controller is starting up.	The remote controller displays "Please Wait" during start-up for maximum four minutes.
		Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		The remote controller transmission cable is connected to the terminal block (TB5 [A] [B]) for the M-NET transmission cable.	Connect the remote controller transmission cable to the terminal block (TM4 [1] [2]).
		PZ-43SMF-E is used together.	PZ-61DR-E and PZ-43SMF-E cannot be used together.
3	It takes time for the remote controller to be fed with power after turning the Lossnay unit ON.	The Lossnay unit is starting up.	The remote controller is not fed with power during start-up of the Lossnay unit for maximum one minute.

[2] PZ-43SMF-E

No.	Problem	Factor	Corrective action
1	The power indicator "◉" is not displayed.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		In one group, three or more PZ-43SMF-E controllers are connected.	Only up to two PZ-43SMF-E controllers can be connected in one group.
		In one group, 16 or more Lossnay units are connected.	Only up to 15 Lossnay units can be connected in one group.
		The wiring length of the remote controller exceeds 219 yd. (200 m).	The wiring length of the remote controller shall be within 219 yd. (200 m).
		In one group, two or more Lossnay units are set as the main Lossnay (SW5-10 ON).	Only one Lossnay unit can be set as the main Lossnay in one group. (See the Lossnay technical manual.)
2	"H0" is displayed on the remote controller.	The remote controller is starting up.	The remote controller displays "H0" during start-up for a maximum of one minute.

No.	Problem	Factor	Corrective action
3	It takes time for the remote controller to be fed with power after turning the Lossnay unit ON.	The Lossnay unit is starting up.	The remote controller is not fed with power during start-up of the Lossnay unit for a maximum of one minute.
4	The inspection number "6801" is displayed on the remote controller.	Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		The remote controller transmission cable is connected to the terminal block (TB5 [A] [B]) for the M-NET transmission cable.	Connect the remote controller transmission cable to the terminal block (TM4 [1] [2]).
		PZ-61DR-E is used together.	PZ-43SMF-E and PZ-61DR-E cannot be used together.

(3) Failure mode 3: Operations on the remote controller are not possible.

● **Initial Check Items**

If the system cannot be operated with the remote controller after installation is completed, check the following items.

No.	Check item	Notes
1	Are the function selection switches (SW2, SW5, and SW7) on the Lossnay circuit board set correctly to suit the required application?	Depending on the settings of the function selection switches, Lossnay may automatically operate or stop, or specific operation may be unable to be performed with the remote controller.
2	When PZ-61DR-E is used, are the function selections set correctly to suit the required application?	Depending on the settings of the function selections, Lossnay may automatically operate or stop, or specific operation may be unable to be performed with the remote controller.
3	When PZ-61DR-E is used, are icons and characters displayed on the PZ-61DR-E screen?	Based on the icon and characters, you can check statuses such as the timer operation, Night-purge, and protective operation. (See the Lossnay technical manual.)
4	Is the system controller of M-NET used?	The system controller can be used to start/stop Lossnay, change fan speed or ventilation mode, and prohibit the start/stop operation by PZ-61DR-E or PZ-43SMF-E.
5	Is the external input used?	If the interlock mode is set to the "External input priority ON/OFF interlock" and if the external device is operating, the stop operation by PZ-61DR-E is prohibited. (See the Lossnay technical manual.)
		If the Remote/Local switching (CN32) is set to remote, the start/stop operation by the Lossnay remote controller is prohibited. (See the Lossnay technical manual.)
		Priority is given to the operation by the fan speed switching input and Bypass mode switching input. (CN17, CN26) (See the Lossnay technical manual.)

● **Individual check items**

If the system cannot be started/stopped using the remote controller after installation is completed, check the following items.

[1] PZ-61DR-E or PZ-43SMF-E

No.	Problem	Factor	Corrective action
1	Some Lossnay units in the group do not operate.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		The remote controller transmission cables are not correctly connected between the terminals (TM4 [1] [2]) of the Lossnay units in the group.	Connect the remote controller transmission cables correctly between the terminals (TM4 [1] [2]) of the Lossnay units in the group.
		The system is operating in the protective mode (intermittent operation).	For details, see the Lossnay technical manual.
2	The screen display of the remote controller changes by itself. Even if you press the buttons, the screen returns to the original screen right away.	Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		The group wiring and the group setting of the system controller do not match.	Check the group wiring or the group setting of the system controller.
		When the system controller is used, the Lossnay unit, which is set as the main Lossnay (SW5-10 ON), is not set to the address with the smallest number in the group.	Set the Lossnay unit, which is set as the main Lossnay (SW5-10 ON) to the address with the smallest number. (See the Lossnay technical manual.)
3	The ventilation mode cannot be changed with the remote controller.	The Lossnay unit is performing the Night-purge operation.	The ventilation mode cannot be changed during the Night-purge operation. (See the Lossnay technical manual.)
		The signal is input to the Bypass mode switching input (CN26 [1] [2]).	Check the Bypass mode switching input (CN26 [1] [2]). (See the Lossnay technical manual.)
4	Even though the function settings (No. 37 and/or 38) of PZ-61DR-E are set to "1", the indoor temperature and/or supply air temperature are not displayed. (For PZ-61DR-E only)	The Lossnay unit is performing the Bypass mode ventilation.	The indoor temperature and/or supply air temperature are not displayed during the Bypass mode.
5	Even though the function settings (No. 36, 37 and/or 38) of PZ-61DR-E are set to "1", the outdoor temperature, indoor temperature and/or supply air temperature are not displayed. (For PZ-61DR-E only)	The setting of PZ-61DR-E is not correct.	Select "Yes" at "Temp. display" menu of PZ-61DR-E. For details, see the installation manual of PZ-61DR-E.
6	The indoor, outdoor, and/or supply air temperature display of PZ-61DR-E blink. (For PZ-61DR-E only)	The indoor, outdoor, and/or supply air temperature are outside the measurement range.	In the following cases, the temperature display blinks. Outdoor temperature: 32°F (0°C) or lower, 100.4°F (38°C) or higher Indoor and supply air temperature: 46.4°F (8°C) or lower, 100.4°F (38°C) or higher

[2] Interlocking with air conditioners (Mr. Slim indoor unit or City Multi indoor unit) or external devices

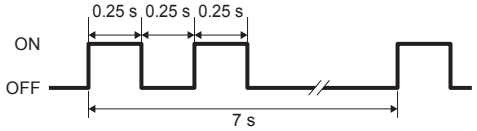
No.	Problem	Factor	Corrective action
1	Lossnay interlock settings cannot be performed with the remote controller.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		Lossnay address setting is incorrect.	Check the Lossnay address.
2	Lossnay does not perform interlock operation.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the remote controller transmission cable or external input/output signal cables	Check the items described in (1) [2].
		The Lossnay unit is not set for interlock operation.	Set the interlock setting.
		The terminal block connected and the type of external signal do not match (charged or volt-free)	Check the type of external signal and the connections of the external control input terminal (TM2).
		The type of external signal and input setting do not match (level signal or pulse signal).	Check the type of external signal and the setting of the input (level or pulse). (See the Lossnay technical manual.)
		The Lossnay unit is set to the delay operation.	When PZ-61DR-E is used, it displays the icon "" that indicates the delay operation is in-progress. LED1 (green) on the control circuit board lights. The Lossnay unit starts operation in 30 minutes (or 15 minutes) after starting operation by the air conditioner or external signal. Check the function selection switch (SW5-1) on the circuit board or the function setting (No. 9) of PZ-61DR-E. (See the Lossnay technical manual.)
		The interlock mode of the Lossnay unit is set to "ON Interlock" or "OFF Interlock".	Check the interlock mode setting. (See the Lossnay technical manual.)
		In a group of multiple Lossnay units, no Lossnay unit is set to the main Lossnay.	For a group of multiple Lossnay units, set one Lossnay unit as the main Lossnay (SW5-10 ON) to input external control signal. (See the Lossnay technical manual.)
		In a group of multiple Lossnay units, external control signal is input to a Lossnay unit other than the main Lossnay.	
		The Lossnay unit is operating in the protective mode (intermittent operation).	For details, see the Lossnay technical manual.

[3] System controller

No.	Problem	Factor	Corrective action
1	The group of Lossnay cannot be set with the system controller.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		M-NET transmission cable is connected to the remote controller terminal block (TM4 [1] [2]).	Connect the M-NET transmission cable to the M-NET transmission cable terminal block (TB5 [A] [B]).
		Lossnay address setting is incorrect.	Check the address setting switches (SA1 and SA2) on the Lossnay circuit board.
		Power is not supplied to the M-NET transmission cable.	If the system is configured with only Lossnay units, connect the power supply unit. (See the Lossnay technical manual.)
		The wiring length of the M-NET transmission cable is longer than specified. (Longer than 219 yd. (200 m) from the power supply unit, or longer than 547 yd. (500 m) in total length)	Check the wiring length of the transmission cable. (See the Lossnay technical manual.)
2	Some Lossnay units in the group do not operate.	The power of the Lossnay unit is not ON.	Check the items described in (1) [1].
		Faulty connection of the M-NET transmission cable	Check the items described in (1) [2].
		The remote controller transmission cables are not correctly connected between the terminals (TM4 [1] [2]) of the Lossnay units in the group.	Connect the remote controller transmission cables correctly between the terminals (TM4 [1] [2]) of the Lossnay units in the group.
		The Lossnay unit is operating in the protective mode (intermittent operation).	For details, see the Lossnay technical manual.
3	The screen display of the system controller changes by itself. Even if you press the buttons, the screen returns to the original screen right away.	Faulty connection of the remote controller transmission cable	Check the items described in (1) [2].
		When PZ-61DR-E is used, the group wiring and the group setting of the system controller do not match.	Check the group wiring or the group setting of the system controller.
		The Lossnay unit, which is set as the main Lossnay (SW5-10 ON), is not set to the address with the smallest number in the group.	Set the Lossnay unit, which is set as the main Lossnay (SW5-10 ON) to the address with the smallest number. (See the Lossnay technical manual.)

(4) Failure mode 4: Error code and LED display

An error code displayed on the remote controller (PZ-61DR-E, PZ-43SMF-E) or the M-NET controller, and blinking or illumination of LED1 (green) or LED2 (red) on the circuit board show the type of an error.
The LED blink interval is 0.25 seconds for both on and off. The display duration is approximately 7 seconds.



Error display example: Two blinks

Error display list

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
3126	8 blinks	—	External device error	When the terminals (TM3 [7] [10]) are set for pre-heater output (function selection switch (SW5-6) on the circuit board is ON, or the function setting (No. 58) of PZ-61DR-E set to "2"), the following conditions were satisfied. • Outdoor air temperature detected by OA thermistor stays at 158°F (70°C) or higher for one minute. • Outdoor air temperature detected by OA thermistor exceeds 59°F (15°C) within 15 minutes after the pre-heater output starts. • Outdoor air temperature is still 14°F (-10°C) or lower one hour after the pre-heater output starts. Causes of the above phenomenons are described below.	See below.
				The pre-heater is connected to the wrong terminal.	Connect the pre-heater to the terminals (TM3 [7] [10]). (See the Lossnay technical manual.)
				Faulty connection of the pre-heater	Check the pre-heater connections.
				The output capacity of the pre-heater is too large with respect to the air volume of the Lossnay unit.	Adjust the output capacity of the pre-heater. When the pre-heater is used, run the Lossnay at a higher fan speed.
				The output capacity of the pre-heater is too small with respect to the air volume of the Lossnay unit.	Adjust the output capacity of the pre-heater. When the pre-heater is used, run the Lossnay at a lower fan speed.
				Even though the pre-heater is in use, the function selection switch (SW5-6) on the circuit board is not set to ON, or the function setting (No. 58) of PZ-61DR-E is not set to "2".	Check the setting of the function selection switch (SW5-6) on the circuit board or the function setting (No. 58) of PZ-61DR-E. (See the Lossnay technical manual.)
				Even though the pre-heater is not in use, the function selection switch (SW5-6) on the circuit board is set to ON, or the function setting (No. 58) of PZ-61DR-E is set to "2".	
				Pre-heater failure	Replace the pre-heater.
				Pre-heater relay failure	Replace the relay for the pre-heater.
				Circuit board failure	Replace the circuit board.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
4101	11 blinks	—	Overcurrent error of the remote controller terminal	Shorting between remote controller terminals	Check the remote controller wiring.
				In one group, two or more Lossnay units are set as the main Lossnay (SW5-10 ON).	Only one Lossnay unit can be set as the main Lossnay in one group. (See the Lossnay technical manual.)
				M-NET transmission cable is connected to the remote controller terminal block (TM4 [1] [2]).	Connect the M-NET transmission cable to the M-NET transmission cable terminal block (TB5 [A] [B]).
				Three or more remote controllers are connected.	Up to two remote controllers can be connected.
				Circuit board failure	Replace the circuit board.
				Remote controller failure	Replace the remote controller.
4116	1 blink	—	Abnormal rotation of the supply fan motor (in the lower unit for LGH-F1200RVX-E) (Centrifugal fan does not work, insufficient motor speed, excessive motor speed, or rotation detected when operation is stopped)	Faulty connection of the supply fan motor connector (CN10) on the power circuit board	Check the connector (CN10) connection.
				Faulty connection of the connectors (CN18 - CN118 and CN19 - CN119) between the control circuit board and power circuit board	Check the connector connections (CN18 - CN118 and CN19 - CN119).
				The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
				The temperature around the product is high.	Use the product at a temperature of 164°F (40°C) or lower.
				The motor and centrifugal fan are not fixed securely.	Check the installation state of the motor and centrifugal fan, and fix them securely.
				Deformed centrifugal fan	Replace the centrifugal fan.
				Foreign objects around the centrifugal fan	Check the air course and around the centrifugal fan, and remove any foreign matter.
				Fan motor failure	Check the resistance between the motor leads. (See (6) Motor resistance table (page 36).) If the measured value is significantly different from the values specified in the table, replace the fan motor.
				Circuit board failure	Replace the circuit board.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
4116	2 blinks	—	Abnormal rotation of the exhaust fan motor (in the lower unit for LGH-F1200RVX-E) (Centrifugal fan does not work, insufficient motor speed, excessive motor speed, or rotation detected when operation is stopped)	Faulty connection of the exhaust fan motor connector (CN9) on the power circuit board	Check the connector (CN9) connection.
				Faulty connection of the connectors (CN18 - CN118 and CN19 - CN119) between the control circuit board and power circuit board	Check the connector connections (CN18 - CN118 and CN19 - CN119).
				The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
				The temperature around the product is high.	Use the product at a temperature of 104°F (40°C) or lower.
				The motor and centrifugal fan are not fixed securely.	Check the installation state of the motor and centrifugal fan, and fix them securely.
				Deformed centrifugal fan	Replace the centrifugal fan.
				Foreign objects around the centrifugal fan	Check the air course and around the centrifugal fan, and remove any foreign matter.
				Fan motor failure	Check the resistance between the motor leads. (See (6) Motor resistance table (page 36).) If the measured value is significantly different from the values specified in the table, replace the fan motor.
				Circuit board failure	Replace the circuit board.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
4116	6 blinks	—	(Only for LGH-F1200RVX-E) Abnormal rotation of the supply fan motor in the upper unit (Centrifugal fan does not work, insufficient motor speed, excessive motor speed, or rotation detected when operation is stopped)	Faulty connection of the supply fan motor connector (CN10) on the power circuit board (upper)	Check the connector (CN10) connection on the power circuit board (upper).
				Faulty connection of the connectors (CN18 - CN118, CN19 - CN119, and CN21 - CN121) between the control circuit board and power circuit board	Check the connectors connections (CN18 - CN118, CN19 - CN119, and CN21 - CN121).
				Faulty connection of the reactor connectors (TB3 and TB4) on the power circuit board (upper)	Check the connector (TB3 and TB4) connections on the power circuit board (upper).
				The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
				The temperature around the product is high.	Use the product at a temperature of 104°F (40°C) or lower.
				The motor and centrifugal fan are not fixed securely.	Check the installation state of the motor and centrifugal fan, and fix them securely.
				Deformed centrifugal fan	Replace the centrifugal fan.
				Foreign objects around the centrifugal fan	Check the air course and around the centrifugal fan, and remove any foreign matter.
				Fan motor failure	Check the resistance between the motor leads. (See (6) Motor resistance table (page 36).) If the measured value is significantly different from the values specified in the table, replace the fan motor.
				Circuit board failure	Replace the circuit board.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
4116	7 blinks	—	(Only for LGH-F1200RVX-E) Abnormal rotation of the exhaust fan motor in the upper unit (Centrifugal fan does not work, insufficient motor speed, excessive motor speed, or rotation detected when operation is stopped)	Faulty connection of the exhaust fan motor connector (CN9) on the power circuit board (upper)	Check the connector (CN9) connection on the power circuit board (upper).
				Faulty connection of the connectors (CN18 - CN118, CN19 - CN119, and CN21 - CN121) between the control circuit board and power circuit board	Check the connectors connections (CN18 - CN118, CN19 - CN119, and CN21 - CN121).
				Faulty connection of the reactor connectors (TB3 and TB4) on the power circuit board (upper)	Check the connector (TB3 and TB4) connections on the power circuit board (upper).
				The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)
				The temperature around the product is high.	Use the product at a temperature of 104°F (40°C) or lower.
				The motor and centrifugal fan are not fixed securely.	Check the installation state of the motor and centrifugal fan, and fix them securely.
				Deformed centrifugal fan	Replace the centrifugal fan.
				Foreign objects around the centrifugal fan	Check the air course and around the centrifugal fan, and remove any foreign matter.
				Fan motor failure	Check the resistance between the motor leads. (See (6) Motor resistance table (page 36).) If the measured value is significantly different from the values specified in the table, replace the fan motor.
				Circuit board failure	Replace the circuit board.
5101	4 blinks	—	Outdoor air (OA) thermistor related error	Faulty connection of the thermistor connector (CN22) on the control circuit board	Check the connector (CN22) connection.
				Thermistor failure	Disconnect the connector (CN22), and check the resistance of the thermistor. If the equivalent thermistor resistance differs greatly from the ambient temperatures, replace the thermistor. (See (5) Temperatures and thermistor resistance table (page 36).)

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
5102	5 blinks	—	Indoor air (RA) thermistor related error	Faulty connection of the thermistor connector (CN5) on the control circuit board	Check the connector (CN5) connection.
				Thermistor failure	Disconnect the connector (CN5), and check the resistance of the thermistor. If the equivalent thermistor resistance differs greatly from the ambient temperatures, replace the thermistor. (See (5) Temperatures and thermistor resistance table (page 36).)
6201	—	—	PZ-61DR-E circuit board error	Remote controller failure (Data cannot be read properly from nonvolatile memory.)	Replace the remote controller.
6202	—	—	PZ-61DR-E circuit board error	Remote controller failure (The clock function does not work properly.)	Replace the remote controller.
6600	—	6 blinks	Multiple address error	The system contains two or more units (*1) set with the same address in the same M-NET transmission cable line.	Find the units (*1) set with the same address, and set unique addresses to these units.
6602	—	2 blinks	Transmission error (transmission processor hardware error)	Faulty connection of the M-NET transmission cable	Check the items described in (1) [2].
				• Wiring was performed with power still supplied to the M-NET transmission cable. • Accidental communication error	Restart the system after completing wiring. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board.
				Power is supplied to the same transmission cable from two or more power supply units. The power supply unit is connected to the TB3 terminal of the transmission booster.	Check the wiring of the power supply unit and the transmission booster.
				PZ-61DR-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-61DR-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)
				Malfunction of the unit (*1) where an error occurs	Check the unit (*1) where the error occurs.

*1 This refers to devices assigned an address number in MELANS such as the Lossnay unit, City Multi indoor unit, or system controller.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
6603	—	5 blinks	Transmission error (transmission bus busy)	Faulty connection of the M-NET transmission cable	Check the items described in (1) [2].
				• Wiring was performed with power still supplied to the M-NET transmission cable. • Accidental communication error	Restart the system after completing wiring. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board.
				Power is supplied to the same transmission cable from two or more power supply units. The power supply unit is connected to the TB3 terminal of the transmission booster.	Check the wiring of the power supply unit and the transmission booster.
				PZ-61DR-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-61DR-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)
				Malfunction of the unit (*1) where an error occurs	Check the unit (*1) where the error occurs.
6606	—	3 blinks	Transmission/ reception error (communication error with transmission processor)	Faulty connection of the M-NET transmission cable	Check the items described in (1) [2].
				• Wiring was performed with power still supplied to the M-NET transmission cable. • Accidental communication error	Restart the system after completing wiring. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board.
				Malfunction of the unit (*1) where an error occurs	Check the unit (*1) where the error occurs.
6607	—	8 blinks	Transmission/ reception error (no ACK error)	The power of the Lossnay unit is not ON.	Check the power of the Lossnay unit.
				The Lossnay address was changed.	Check the Lossnay address.
				PZ-61DR-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-61DR-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)
6608	—	8 blinks	Transmission/ reception error (no response error)	Multiple M-NET transmission cables are wired using multicore cables.	Using the applicable cable, wire the transmission cable away from one another.
				The M-NET transmission cable is not securely connected.	Check the transmission cable connections.
				The wiring length of the M-NET transmission cable is longer than specified. (Longer than 219 yd. (200 m) from the power supply unit, longer than 547 yd. (500 m) in total length)	Check the wiring length of the transmission cable.
				PZ-61DR-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-61DR-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)

*1 This refers to devices assigned an address number in MELANS such as the Lossnay unit, City Multi indoor unit, City Multi outdoor unit, or system controller.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
6801	9 blinks	—	PZ-43SMF-E communication error	Multiple PZ-43SMF-E transmission cables are wired using multicore cables.	Using the applicable cable, wire the transmission cable away from one another.
				The power supply cable is too close to the PZ-43SMF-E transmission cable.	Wire the power supply cable at least 2 inch (5 cm) away from the transmission cable.
				Faulty connection of the PZ-43SMF-E transmission cable	Check the transmission cable connections.
				The wiring length of the PZ-43SMF-E transmission cable is longer than specified (219 yd. (200 m) or more).	Check the wiring length of the transmission cable.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.
				PZ-43SMF-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-43SMF-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)
6831	9 blinks	—	PZ-61DR-E communication error (no reception)	Faulty connection of the PZ-61DR-E transmission cable	Check the items described in (1) [2]. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board or PZ-61DR-E remote controller.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.
				PZ-61DR-E is connected to the terminals (TB5 [A] [B]).	Connect PZ-61DR-E to the terminals (TM4 [1] [2]). (See the Lossnay technical manual.)
6832	9 blinks	—	PZ-61DR-E communication error (synchronization recovery error)	Faulty connection of the PZ-61DR-E transmission cable	Check the items described in (1) [2]. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board or PZ-61DR-E remote controller.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.

Error code	LED1 (Green)	LED2 (Red)	Symptom	Cause	Corrective action
6833	9 blinks	—	PZ-61DR-E communi-cation error (hardware error)	Faulty connection of the PZ-61DR-E transmission cable	Check the items described in (1) [2]. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board or PZ-61DR-E remote con-troller.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.
6834	9 blinks	—	PZ-61DR-E communi-cation error (start bit de-tection error)	Faulty connection of the PZ-61DR-E transmission cable	Check the items described in (1) [2]. If the error re-occurs, check for noise on the transmission cable. If the above does not correct the problem, replace the Lossnay circuit board or PZ-61DR-E remote con-troller.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.
7113	10 blinks	—	Function set-ting error	In one group, two or more Lossnay units are set as the main Lossnay (SW5-10 ON).	Only one Lossnay unit can be set as the main Lossnay in one group. (See the Lossnay technical manual.)
				The group contains two or more Lossnay units set with the same address.	Set unique addresses to these units.
				The Lossnay unit, which is set as the main Lossnay (SW5-10 ON), is not set to the address with the smallest number in the group.	Set the Lossnay unit, which is set as the main Lossnay (SW5-10 ON) to the address with the smallest number. (See the Lossnay technical manual.)
				The MA remote controller for the air conditioner (Mr. Slim indoor unit or City Multi indoor unit) is connected.	Replace the remote controller with PZ-61DR-E.
				The remote controller terminals (TM4 [1] [2]) of the Lossnay unit and the remote controller terminals of the City Multi indoor unit are connected together within the group.	Assign the Lossnay units and City Multi indoor units to the different groups.
				The Lossnay is used in the same group as LGH-RX5-E type Lossnay.	The LGH-F**RVX-E type Lossnay cannot be used in the same group as LGH-RX5-E type Lossnay.
				The model selection switch (SW6) is not set correctly.	Make the SW6 setting appropriate for the model. (See chapter 8. (8) Setting status record (page 48).)

(5) Temperatures and thermistor resistance table

Temperature		Resistance value	Temperature		Resistance value	Temperature		Resistance value	Temperature		Resistance value	Temperature		Resistance value
(°F)	(°C)	(kΩ)	(°F)	(°C)	(kΩ)	(°F)	(°C)	(kΩ)	(°F)	(°C)	(kΩ)	(°F)	(°C)	(kΩ)
-22	-30	53.9 - ∞	19.4	-7	18.0	46.4	8	9.5	73.4	23	5.4	100.4	38	3.1
⋮	⋮	⋮	21.2	-6	17.2	48.2	9	9.2	75.2	24	5.1	102.2	39	3.1
-4.0	-20	32.8	23.0	-5	16.5	50.0	10	8.8	77.0	25	5.0	104.0	40	3.0
-2.2	-19	31.2	24.8	-4	15.7	51.8	11	8.5	78.8	26	4.8	105.8	41	2.8
-0.4	-18	29.8	26.6	-3	15.1	53.6	12	8.1	80.6	27	4.7	107.6	42	2.7
1.4	-17	28.4	28.4	-2	14.5	55.4	13	7.8	82.4	28	4.5	109.4	43	2.7
3.2	-16	27.1	30.2	-1	13.8	57.2	14	7.6	84.2	29	4.3	111.2	44	2.6
5.0	-15	25.8	32.0	0	13.3	59.0	15	7.3	86.0	30	4.2	113.0	45	2.5
6.8	-14	24.7	33.8	1	12.8	60.8	16	7.0	87.8	31	4.0	114.8	46	2.4
8.6	-13	23.6	35.6	2	12.2	62.6	17	6.7	89.6	32	3.9	116.6	47	2.3
10.4	-12	22.5	37.4	3	11.7	64.4	18	6.5	91.4	33	3.7	118.4	48	2.2
12.2	-11	21.5	39.2	4	11.2	66.2	19	6.3	93.2	34	3.6	120.2	49	2.2
14.0	-10	20.6	41.0	5	10.7	68.0	20	6.0	95.0	35	3.5	122.0	50	2.1
15.8	-9	19.7	42.8	6	10.3	69.8	21	5.8	96.8	36	3.4	⋮	⋮	⋮
17.6	-8	18.8	44.6	7	10.0	71.6	22	5.6	98.6	37	3.2	194	90	0 - 0.7

* Measure the indoor air (RA) thermistor resistance across pin No. 1 and 2 of CN5, and the outdoor air (OA) thermistor resistance across pin No. 1 and 2 of CN22.

(6) Motor resistance table

⚠**Cautions**:

- Before disconnecting the motor connectors, make sure that the power is turned OFF and the circuit board is discharged adequately.
- Even after the power supply is cut off, the capacitor is charged. Therefore, high voltage is applied to the motor for a while. Make sure that the LEDs on the circuit board are turned OFF before starting work.
- Never touch the circuit board while the power is ON. It causes electric shock and failure of the unit.

Replace the fan motor in the following cases.

[1] If it is hard to rotate the motor shaft by hand

[2] If the resistance between the motor leads is significantly different from the values specified in the table below
*Before measuring the resistance, the motor connectors must be disconnected from the circuit board.

<LGH-F300RVX-E>

Lead color	Black-Red	Black-White	Black-Yellow	Black-Blue
Normal resistance	About 815 kΩ	About 40 kΩ	About 105 kΩ	∞ kΩ

<LGH-F470RVX-E, LGH-F600RVX-E, LGH-F1200RVX-E>

Lead color	Black-Red	Black-White	Black-Yellow	Black-Blue
Normal resistance	∞ kΩ	About 50 kΩ	About 150 kΩ	∞ kΩ

8. Overhauling procedures

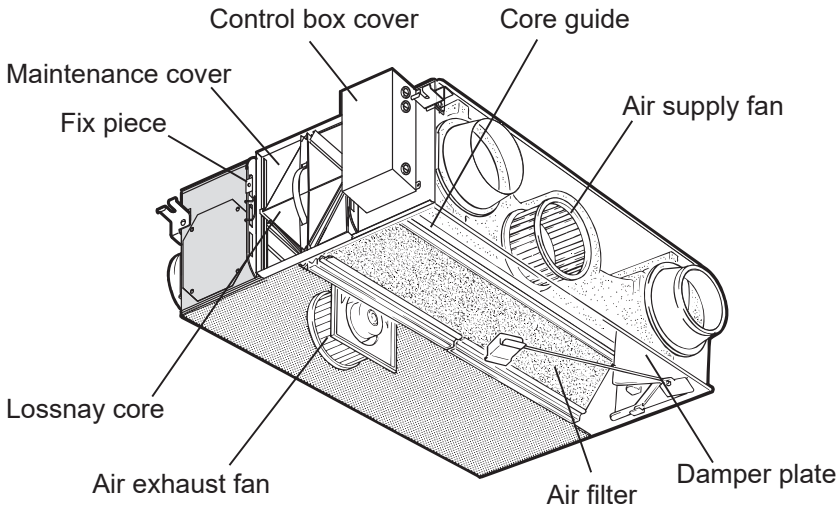
■ Work precautions

- When touching the electric components such as circuit boards and fan motors, do not touch the components for more than 5 minutes after power-off, and then start working. If LED4 on the circuit board is lit, do not touch the electric components.
- Before replacing parts, repair troubled sections according to the instructions described in the troubleshooting.
- When servicing, always keep proper footing.
- When servicing, always turn off the power supply isolator. Pay sufficient attention to avoid electrical shock or injury.
- Make sure to connect the power wires correctly.
- Avoid application of abnormal voltage.
- Be careful with the falling of parts.
- After completing repairs, check that the unit operates properly.

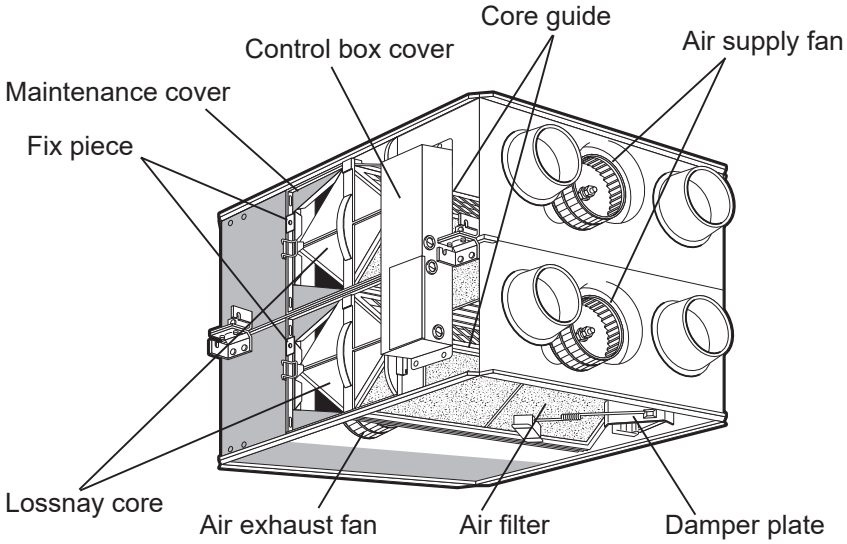
∗ **Always wear gloves when servicing.**

<External and internal view of the product>

Models LGH-F300 to F600RVX-E



Model LGH-F1200RVX-E



(1) Turning power off

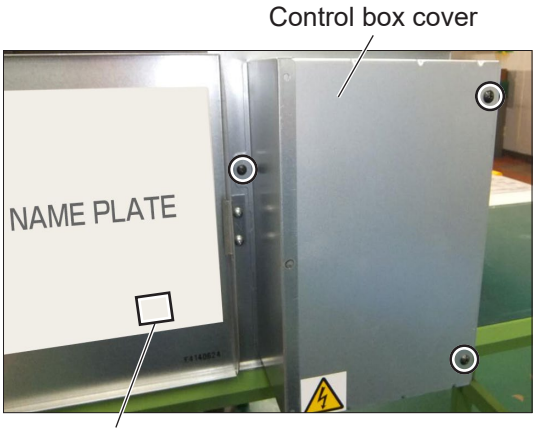
[1] Shut down the unit.

[2] Turn off the power supply isolator.

> Precaution
> When servicing, power supply to M-NET must be turned off. Live-line working may cause a circuit board failure.

(2) Fan parts

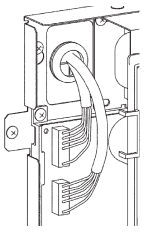
[1] Unscrew the black screws (three special screws 4×8, indicated by ○) to remove the control box cover.

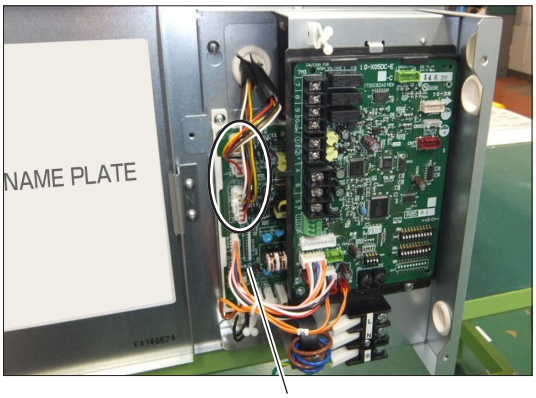


[2] Check that LED4 on the circuit board is OFF, and then disconnect the motor connectors (indicated by ○) from the power circuit board.

> Precaution
> When disconnecting the motor connectors, make sure that the power supply is turned off. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.

> Assembly precaution
> After connecting the motor connectors, check the wiring inside the main unit. If the motor leads are slack and are likely to interfere with the removal/insertion of the Lossnay cores, draw the motor leads into the control box. Pay attention not to allow the motor leads to contact the components on the circuit board.

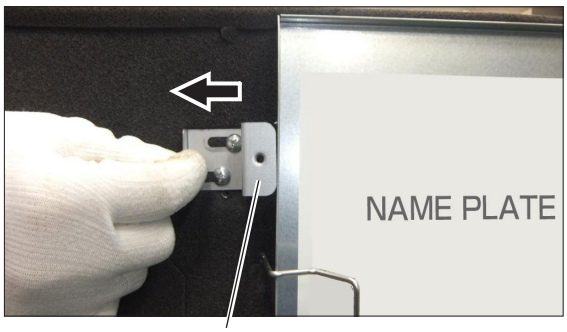




[3] Unscrew the black screw (one special screw 4×8, indicated by ○) for the fix piece.



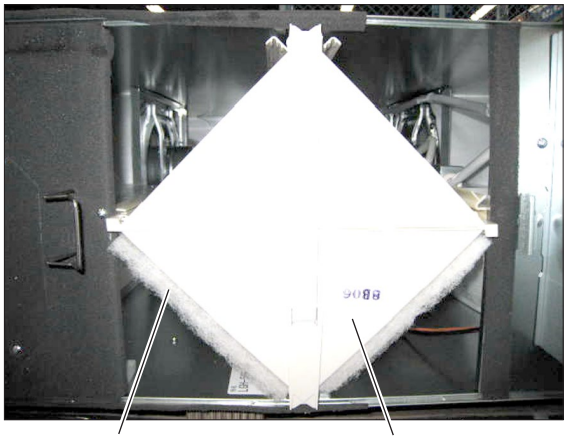
[4] Slide the fix piece to the left side.



[5] Pull out the hinge, and open the maintenance cover.



[6] Draw the Lossnay cores (with filters) from the main unit.



[7] Unscrew the screws (one special screw M4 for each core guide, indicated by ○), and remove the core guides (left (L) and right (R)).

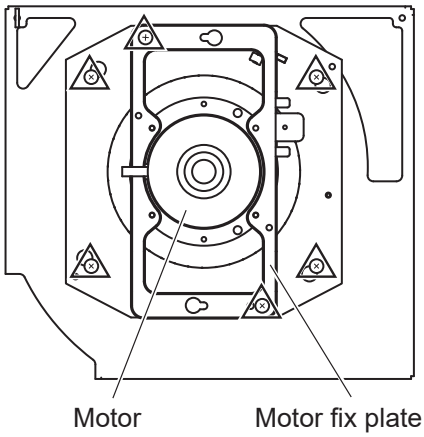


[8] Take off the separators.

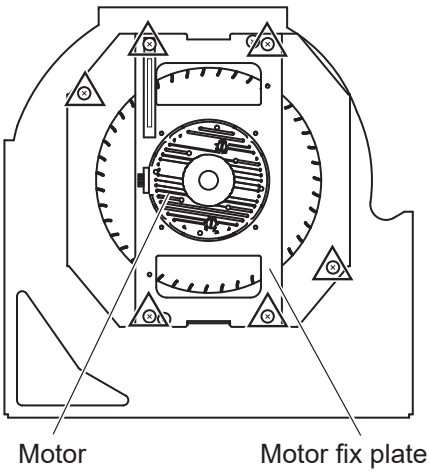


[9] Unscrew the screws (Six PTT screws 5×10, indicated by △), and remove the motor fix plate.

For LGH-F300RVX-E



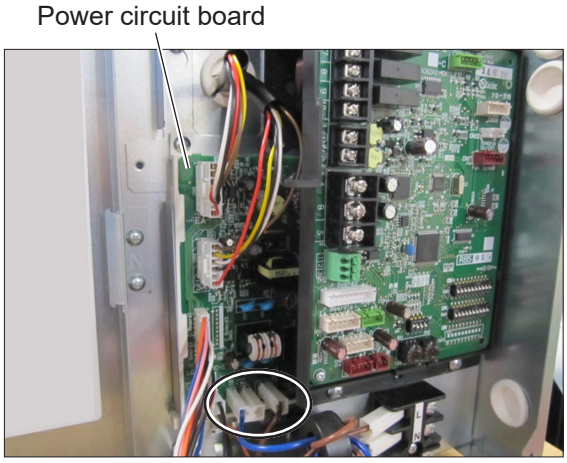
For LGH-F470RVX-E to LGH-F1200RVX-E



(3) Terminal block parts

[1] Remove the control box cover. → See (2) [1] .

[2] Check that LED4 on the circuit board is OFF, and then disconnect the connectors (indicated by ○) from the power circuit board.



[3] Unscrew the screw (one PT screw 4×8 BS, indicated by ○) and the lock washer (4).

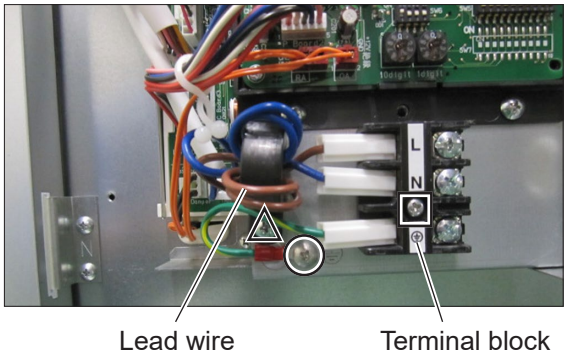
[4] Remove the terminal block with the read wires.

For LGH-F300RVX-E

• Unscrew the screws (one PT screw 4×8 indicated by △ and one PPT screw 4×20 indicated by □).

For LGH-F470RVX-E to LGH-F1200RVX-E

• Unscrew the screw (one PPT screw 4×20 indicated by □).

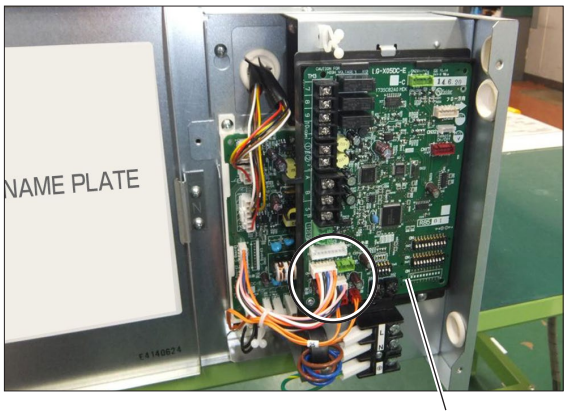


(4) Control parts (For LGH-F300RVX-E to LGH-F600RVX-E)

Precaution
Before replacing the circuit boards, see (6) Procedures for replacing the circuit boards (on pages 45 to 47).

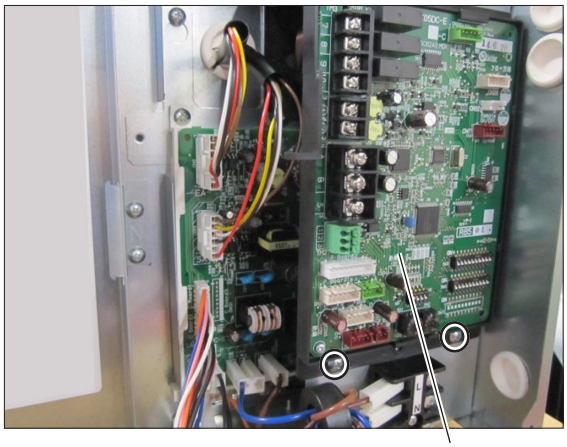
[1] Remove the control box cover. → See (2) [1] .

[2] Check that LED4 on the circuit board is OFF, and then disconnect the connectors (indicated by ○) from the control circuit board.



Control circuit board

[3] Unscrew the screws (two PT screws 4×8, indicated by ○), and remove the control circuit board.

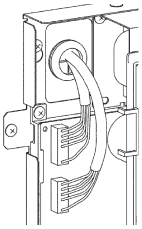


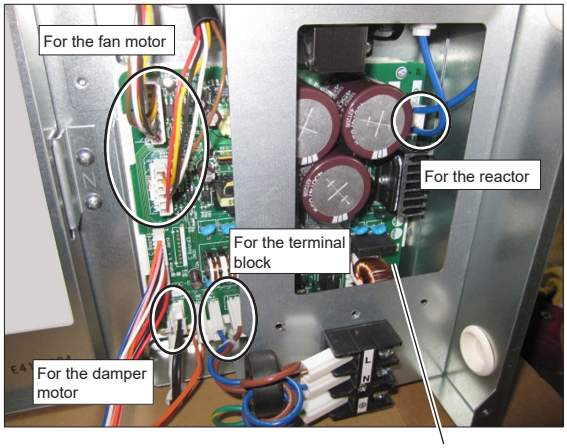
Control circuit board
(LG-X07DC-E·C)

[4] Disconnect the connectors (indicated by ○) from the power circuit board.

Precaution
When disconnecting the motor connectors, make sure that the power supply is turned off. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.

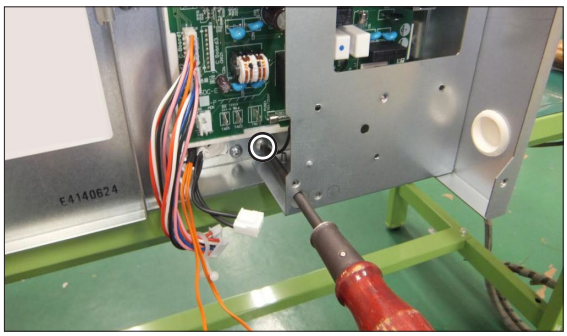
Assembly precaution
After connecting the motor connectors, check the wiring inside the main unit.
If the motor leads are slack and are likely to interfere with the removal/insertion of the Lossnay cores, draw the motor leads into the control box.
Pay attention not to allow the motor leads to contact the components on the circuit board.



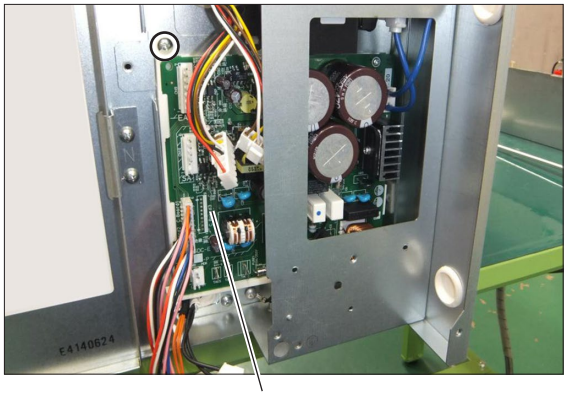


Power circuit board

[5] Unscrew the earth fixing screw (one PT screw 4×8 BS, indicated by ○) and the lock washer (4).

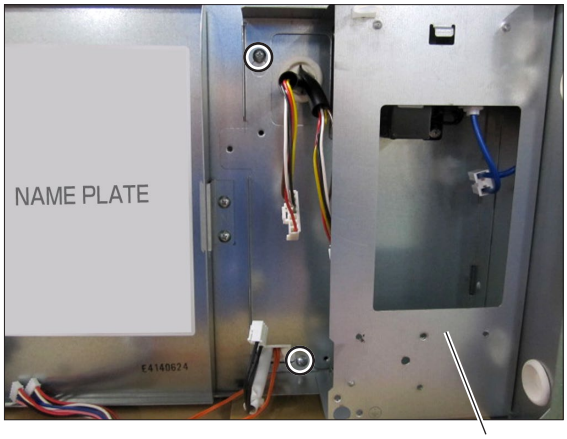


[6] Unscrew the screw (one PT screw 4×8, indicated by ○), and remove the power circuit board.

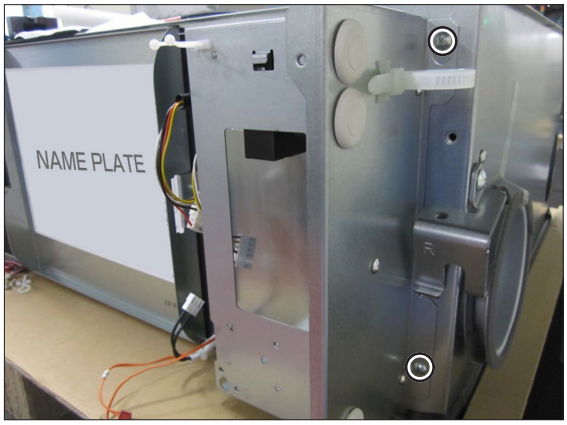


Control circuit board
(LG-X07DC-E·P)

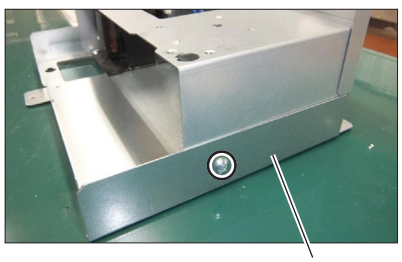
[7] Unscrew the screws (four PTT screws 4×8, indicated by ○), and remove the control unit from the main unit.



Control unit

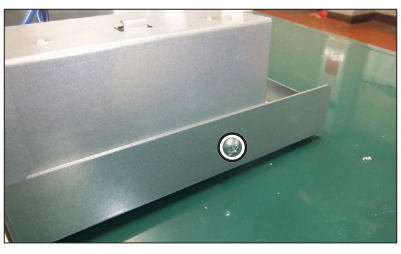


[8] Unscrew the screws (three PT screws 4×8, indicated by ○) to remove the control base.

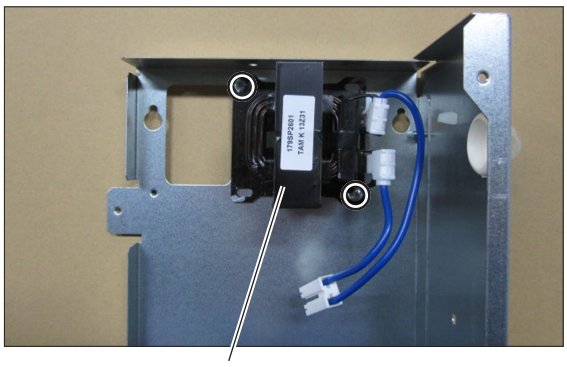


Control base





[9] Unscrew the screws (two PT screws 4×8, indicated by ○), and remove the reactor.



(5) Control parts (For LGH-F1200RVX-E)

Precaution
Before replacing the circuit boards, see (6) Procedures for replacing the circuit boards (on pages 45 to 47).

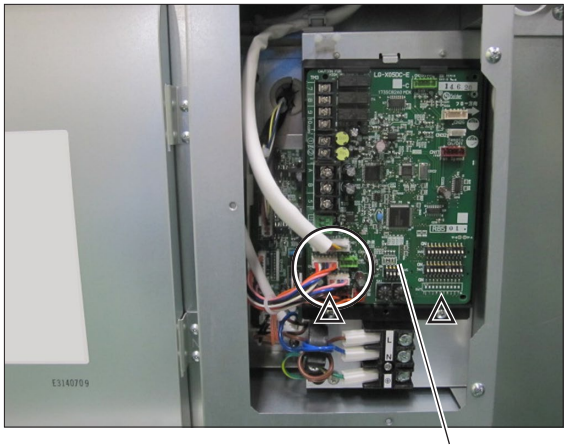
● **When removing only the control circuit board**

[1] Unscrew the black screws (three special screws 4×8, indicated by ○) to remove the control cover.



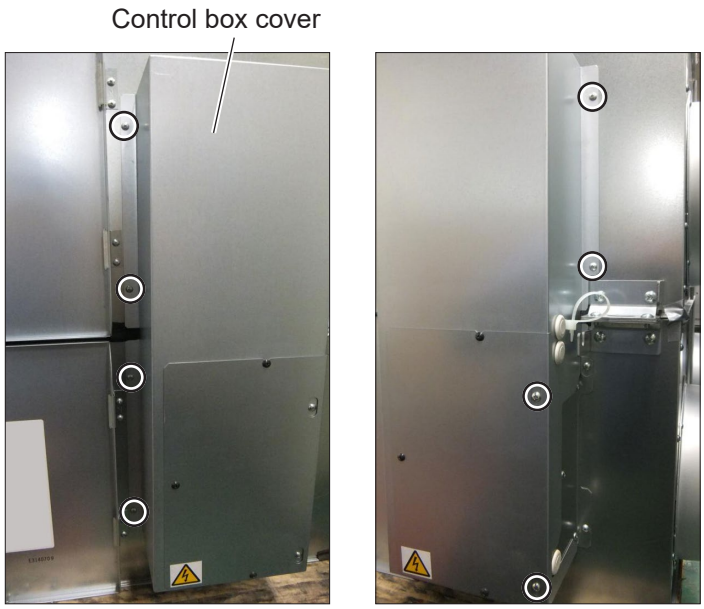
[2] Check that LED4 on the circuit board is OFF, and then disconnect the connectors (indicated by ○) from the control circuit board.

[3] Unscrew the screws (two PT screws 4×8, indicated by △), and remove the control circuit board.



● **When removing the power circuit boards or reactors**

[1] Unscrew the screws (eight PT screws 4×8, indicated by ○) to remove the control box cover.



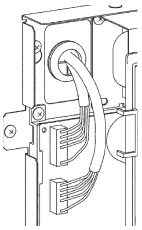
[2] Remove the circuit boards and reactors.

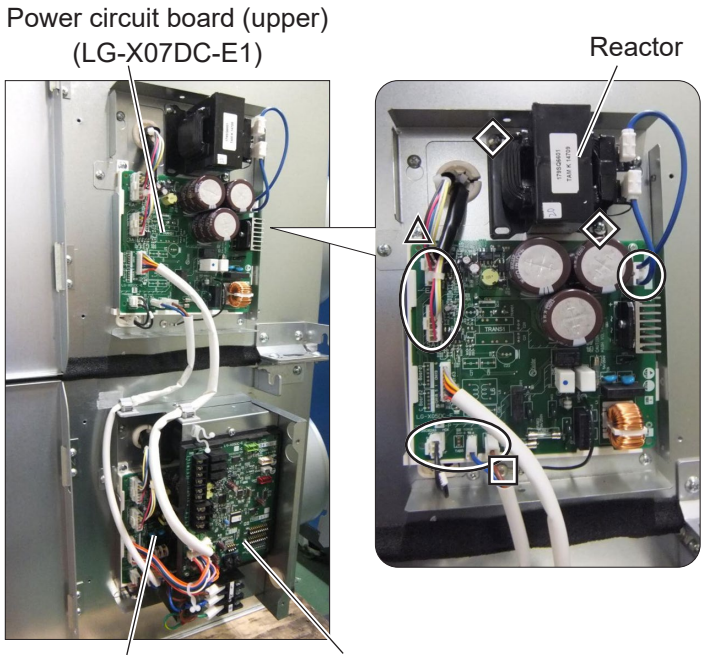
[Upper unit]

a. Disconnect the connectors (indicated by ○).

Precaution
When disconnecting the motor connectors, make sure that the power supply is turned off. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.

Assembly precaution
After connecting the motor connectors, check the wiring inside the main unit.
If the motor leads are slack and are likely to interfere with the removal/insertion of the Lossnay cores, draw the motor leads into the control box.
Pay attention not to allow the motor leads to contact the components on the circuit board.





b. Unscrew the screw (one PT screw 4×8 BS, indicated by □) and the lock washer (4).

c. Unscrew the screw (one PT screw 4×8, indicated by △), and remove the power circuit board (upper).

d. Unscrew the screws (two PT screws 4×8, indicated by ◇), and remove the reactor.

[Lower unit]

a. Remove the control circuit board. → See (5) [2] and [3] (on page 43).

b. Remove the power circuit board. → See (4) [4] to [6] (on page 41 and 42).

c. Remove the reactor. → See (4) [7] to [9] (on pages 42 and 43).

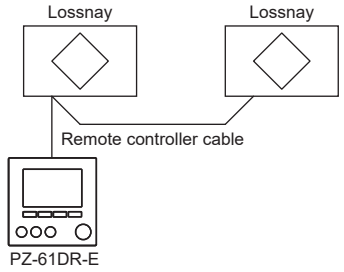
✻ When reassembling

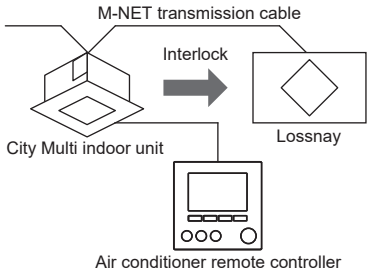
- Reassemble the unit in the reverse order of disassembly.
- After reassembly, always make a test run to be sure that the unit operates properly.

(6) Procedures for replacing the circuit boards

Notes

- Before removing the circuit boards for replacement, check the following Steps 1 and 2.
- When the Lossnay remote controller PZ-61DR-E is connected, make sure to replace the circuit boards as described in the Steps.

<table>
<tr><th>Step</th><th>Details</th><th colspan="2">Check item</th></tr>
<tr><td rowspan="5">1</td><td colspan="3">Check the system configuration.</td></tr>
<tr><td>Check if PZ-61DR-E is connected to the circuit board to be replaced.</td><td>PZ-61DR-E connection</td><td></td></tr>
<tr><td>The following describes settings required when replacing the circuit boards per the system configuration.
Check which system configuration is applicable, and then replace the circuit boards.</td><td>System Configuration</td><td></td></tr>
<tr><td colspan="3">(A)


[1] Setting of the function selection switches on the circuit board.
[2] Setting of the PZ-61DR-E functions.
[3] Address setting (when M-NET is used).
➡ Go to Step 2.</td></tr>
<tr><td colspan="3">(B)


[1] Setting of the function selection switches on the circuit board.
[2] Address setting.
➡ Go to Step 3.</td></tr>
<tr><td>2</td><td colspan="3">Check the settings on PZ-61DR-E.</td></tr>
<tr><td></td><td>Regarding the settings on PZ-61DR-E, prepare the data recorded at the time of installation (setting status record, etc.).

In the case there is no data recorded at the time of installation, and if the Lossnay unit can be operated with PZ-61DR-E, use the form in "(8) Setting status record (page 48)" to record the settings on PZ-61DR-E.
To check the settings on PZ-61DR-E, see the Lossnay technical manual or remote controller manual.
• On the function setting screen of PZ-61DR-E, display the M-NET address of the Lossnay unit for which you wish to check the settings.
• The address can be checked by the address setting switches (SA1 and SA2) on the Lossnay circuit board.</td><td>Setting status record</td><td></td></tr>
<tr><td>3</td><td colspan="3">Setting status record of the address setting switches and function selection switches on the circuit board</td></tr>
<tr><td></td><td>Using the form in "(8) Setting status record (page 48)", record setting statuses necessary for replacing the circuit board.
Remove the control box cover, and check the setting status of each switch on the circuit board.
If the function setting statuses were recorded at the time of installation, this step can be skipped.
[1] Address setting (SA1 and SA2)
[2] Function selection switches and model selection switch setting (SW2, SW5, SW7, and SW6)
[3] External input (as necessary, record the connection status)</td><td>Setting status record</td><td></td></tr>
</table>

<table>
<tr><th>Step</th><th>Details</th><th colspan="2">Check item</th></tr>
<tr><td>4</td><td colspan="3">Removing the circuit boards</td></tr>
<tr><td></td><td colspan="3">• For the working precautions, see page 37.
• For removing the circuit boards, see (4) Control parts (For LGH-F300RVX-E to LGH-F600RVX-E) (page 41) or (5) Control parts (For LGH-F1200RVX-E) (page 43).</td></tr>
<tr><td>5</td><td colspan="3">Attaching the circuit boards</td></tr>
<tr><td></td><td>[1] According to the function status record data prepared in Step 3, set the address setting switches, function selection switches, and model selection switch of the new circuit board.
a. Address setting (SA1 and SA2)
b. Function selection switches and model selection switch setting (SW2, SW5, SW7, and SW6)</td><td>Address setting
Function setting
Model selection</td><td></td></tr>
<tr><td></td><td>[2] Attach the power circuit board in the reverse order of the steps for removing.
Make sure to connect the connectors listed in the following table.
<table>
<tr><th>Connector</th><th>Symbol on the circuit board</th><th>Check</th></tr>
<tr><td>For power supply connection</td><td>TAB1, TAB2, TAB5*</td><td></td></tr>
<tr><td>For reactor connection</td><td>TAB3, TAB4</td><td></td></tr>
<tr><td>For exhaust fan motor connection</td><td>CN9</td><td></td></tr>
<tr><td>For supply fan motor connection</td><td>CN10</td><td></td></tr>
<tr><td>For damper motor connection</td><td>CN7</td><td></td></tr>
<tr><td>For control circuit board connection</td><td>CN118, CN119, CN121*</td><td></td></tr>
</table>
* Only LGH-F1200RVX-E is equipped with TAB5 and CN121.</td><td>Circuit board fixing screw (1 pc.)
Base fixing screw (1 pc.)
Earth fixing screw (1 pc.)</td><td></td></tr>
<tr><td></td><td>[3] Reattach the base of the control circuit board, and then attach the connectors, remote controller transmission cable, M-NET transmission cable, and external signal cable, etc.
Make sure to connect the connectors or terminals listed in the following table.
(Connect PZ-61DR-E or PZ-43SMF-E transmission cable terminal, M-NET transmission cable terminal, and connector/terminal for external signal cable only when they are used.)
<table>
<tr><th>Connector and terminal</th><th>Symbol on the circuit board</th><th>Check</th></tr>
<tr><td>For thermistor connection (outdoor temperature (OA))</td><td>CN22</td><td></td></tr>
<tr><td>For thermistor connection (indoor temperature (RA))</td><td>CN5</td><td></td></tr>
<tr><td>For power circuit board connection</td><td>CN18, CN19, CN21*</td><td></td></tr>
<tr><td>PZ-61DR-E or PZ-43SMF-E transmission cable terminal</td><td>TM4 [1] [2]</td><td></td></tr>
<tr><td>M-NET transmission cable terminal</td><td>TB5 [A] [B]</td><td></td></tr>
<tr><td>For external signal cable connection</td><td>TM2, TM3, CN17, CN26, CN32, CN105</td><td></td></tr>
</table>
* Only LGH-F1200RVX-E is equipped with CN21.</td><td>Connector connection
PZ-61DR-E or PZ-43SMF-E transmission cable connection
M-NET transmission cable connection
External signal cable connection</td><td></td></tr>
<tr><td></td><td>[4] Reattach the control box cover.
• LGH-F300RVX-E to LGH-F600RVX-E : Cover screw 3 pieces
• LGH-F1200RVX-E : Cover screw 8 pieces</td><td>Cover screw (black)</td><td></td></tr>
</table>

Step	Details	Check item	
6	Function setting with PZ-61DR-E		
	When PZ-61DR-E is connected, according to the function status record data prepared in Step 2, set the function settings with PZ-61DR-E. If PZ-61DR-E is not connected, skip this step and proceed to Step 7. To perform function settings with PZ-61DR-E, see the Lossnay technical manual or remote controller manual. The selection method for "M-NET address" on the function setting screen differs between when the address setting switch on the Lossnay circuit board is set (the address is other than "00") and when it is not set (the address is "00"). Check the address setting of the replaced circuit board. <When the address switch setting is other than "00"> For all function settings, always select the address of the Lossnay unit which the circuit boards were replaced. Even when there are multiple Lossnay units in the group, do not select "All". <When the address switch is "00"> Always select "All". Note: • When changing the settings of the function selection switches and address setting switches on the circuit board after the functions were set with PZ-61DR-E, reset the function settings according to "(7) Initialization (page 47)". After resetting the function settings, perform the function settings again in the order of Step 5 [1] and Step 6. • If you change the M-NET address after the functions were set with PZ-61DR-E, the settings with PZ-61DR-E will be reset. In this case, set the functions again with PZ-61DR-E.	Address setting	
		Function setting	
7	Restarting the system		
	Turn the power back on to the Lossnay unit which the circuit boards have been replaced, or when using M-NET, turn the power back on to the power supply unit connected to the Lossnay unit. In trial operation, make sure that the Lossnay unit with replaced circuit boards operates properly, and finish replacement work.	Trial operation	

(7) Initialization

Set to initialize the remote controller PZ-61DR-E function setting.
All function settings which are changed by users are canceled.

DIP-SW		Setting check	PZ-61DR-E		Setting check	Initialization
SW No.	Setting		Function No.	Setting Data		
N/A	-	-	100	0		N/A
	-	-		1		Available

(8) Setting status record

[1] Basic information

Date:

Installation location:		
Model name: LGH-F (300 · 470 · 600 · 1200) RVX-E		
Serial number on the nameplate (eight-digit):		
Address setting:		
Lot number marked on the circuit board:		
Microcomputer software version marked on the circuit board:		
Lossnay remote controller: (Used · Not used)	Model name:	
Interlocking with City Multi: (Set . Not set)	Model name:	M-NET address:
Interlocking with Mr. Slim: (Set . Not set)	Model name:	
System controller: (Used · Not used)	Model name:	
The number of Lossnay units in a group:		
Address number (The smallest number in the group):		

[2] Function selection switches

Enter the setting status of the function selection switches on the circuit board.

SW2	ON	OFF
1	□	□
2	□	□
3	□	□
4	□	□
5	□	□
6	□	□
7	□	□
8	□	□
9	□	□
10	□	□

SW5	ON	OFF
1	□	□
2	□	□
3	□	□
4	□	□
5	□	□
6	□	□
7	□	□
8	□	□
9	□	□
10	□	□

SW7	ON	OFF
1	□	□
2	□	□
3	□	□
4	□	□
5	□	□
6	□	□
7	□	□
8	□	□
9	□	□
10	□	□

: Factory setting

SW6	ON	OFF
1	□	□
2	□	□
3	□	□
4	□	□

Note: SW6 setting differs according to the model.

Model	SW6-1	SW6-2	SW6-3	SW6-4	SW7-8
LGH-F300RVX-E	OFF	ON	ON	ON	ON
LGH-F470RVX-E	OFF	ON	ON	OFF	ON
LGH-F600RVX-E	ON	ON	ON	OFF	ON
LGH-F1200RVX-E	ON	OFF	OFF	ON	ON

[3] Function settings

Enter the setting data of the functions set with PZ-61DR-E.

Function No.	Setting Data
1	(0)
2	(0)
5	(0)
6	(0)
7	(0)
8	(0)
9	(0)
13	(0)
14	(0)
15	(0)

Function No.	Setting Data
28	(0)
30	(0)
31	(5)
32	(2)
33	(0)
34	(0)
36	(0)
37	(0)
38	(0)
39	(7)

Function No.	Setting Data
40	(0)
41	(7)
42	(7)
51	(0)
52	(0)
53	(6)
54	(1)
55	(0)
56	(0)
57	(0)

Function No.	Setting Data
58	(0)
59	(0)
60	(0)
61	(0)
62	(0)
63	(0)
66	(0)
100	(0)

( ) : Factory setting

[4] External input

Enter the usage of the external input/output on the control circuit board.

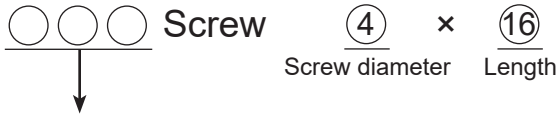
Terminal or connector on the circuit board	Function Name	Used	Not used	Connected device
TM2 [1] [2] [3]	External control input	□	□	
CN32	Remote/local switching	□	□	
CN17 [1] [2]	Fan speed 4 input	□	□	
CN17 [1] [3]	Fan speed 3 input	□	□	
CN17 [1] [4]	Fan speed 2 input	□	□	
CN17 [1] [5]	Fan speed 1 input	□	□	
CN26 [1] [2]	Bypass mode input	□	□	
CN26 [4] [5]	Fan speed switching input (0 to 10 V DC)	□	□	
CN105	IT communication	□	□	
TM3 [7] [10]	Bypass monitor or Pre-heater output	□	□	
TM3 [8] [10]	Malfunction monitor output	□	□	
TM3 [9] [10]	Operation monitor output	□	□	

9. Parts catalog

Please note the following when using the parts catalog.

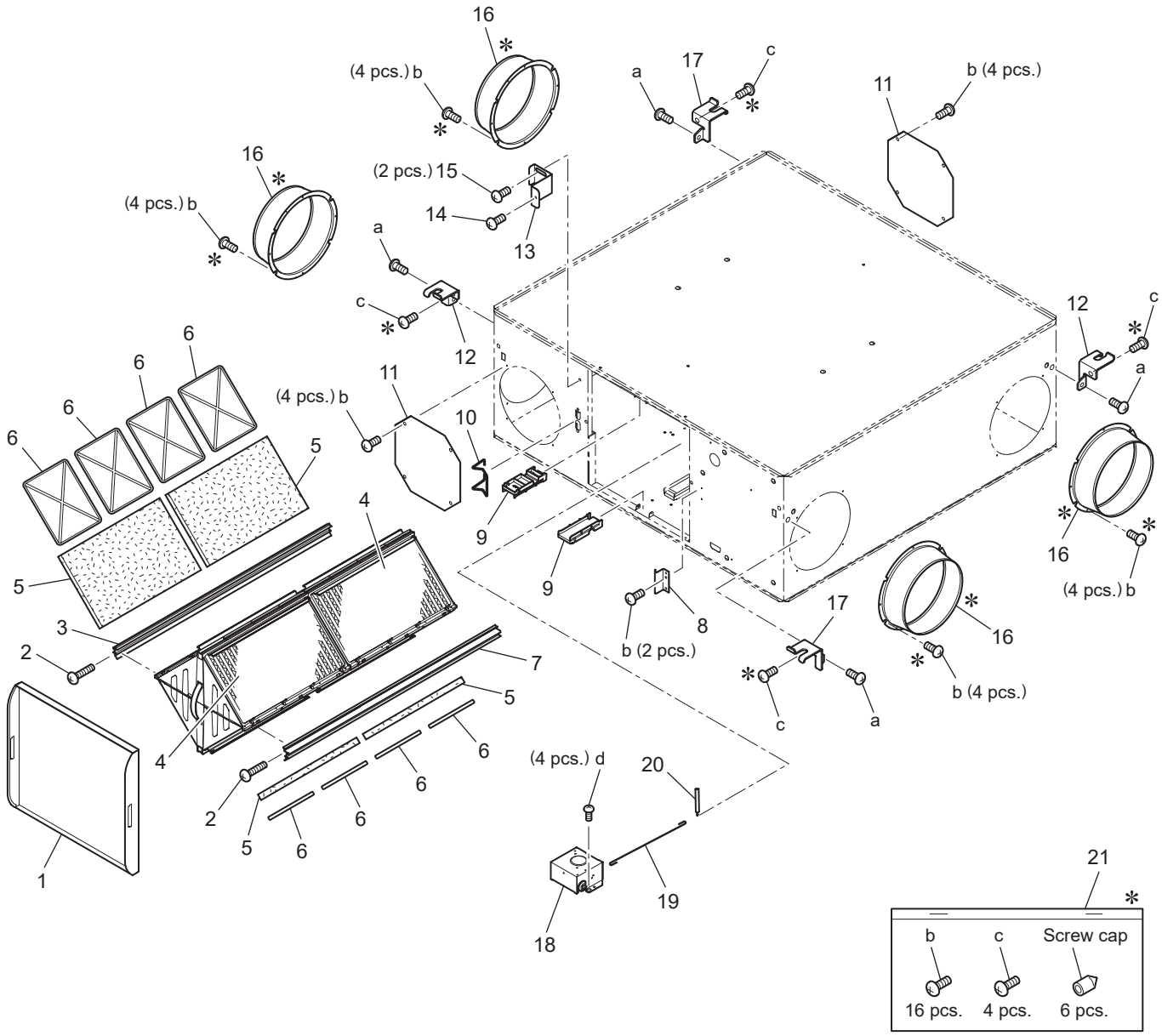
1. When ordering parts, always indicate the part number, part name, and the number of parts required.
2. It may take time for you to receive the parts. Make an inquiry about a rush order.
3. Specifications may be subject to change without notice.
4. Parts marked with ⚠ and ▒▒▒ are critical for safety.
5. To maintain safety and performance, always replace the parts with the parts prescribed.
6. When replacing the parts to which the nameplate is attached, remove the nameplate and attach it to the new parts.

Description of screw abbreviations



Abbreviation	Description
PC screw	Cross recess flat head machine screw
PRC screw	Cross recess oval head machine screw
PP screw	Cross recess pan head machine screw
SW · PP screw	Cross recess pan head screw with spring washer
PPT screw	Cross recess tapping screw
PCT screw	Cross recess flat head tapping screw
PTT screw	Cross recess truss head tapping screw
PT screw	Cross recess truss head machine screw
SET screw	Slotted head stop screw
SQ · SET screw	Square head stop screw
P · SET screw	Pan head stop screw
PMT screw	Primer truss head screw
HS · SET screw	Hexagon head stop screw
P · R · W screw	Cross recess round wood screw
P · C · W screw	Cross recess flat head wood screw
P · R · C · W screw	Cross recess round and flat wood screw
R · W screw	Slotted round wood screw
PW · PP screw	Cross recess pan head screw with small washer
SW-PW · PP screw	Cross recess pan head machine screw with spring washer and flat washer

LGH-F300RVX-E



<Standard screws>

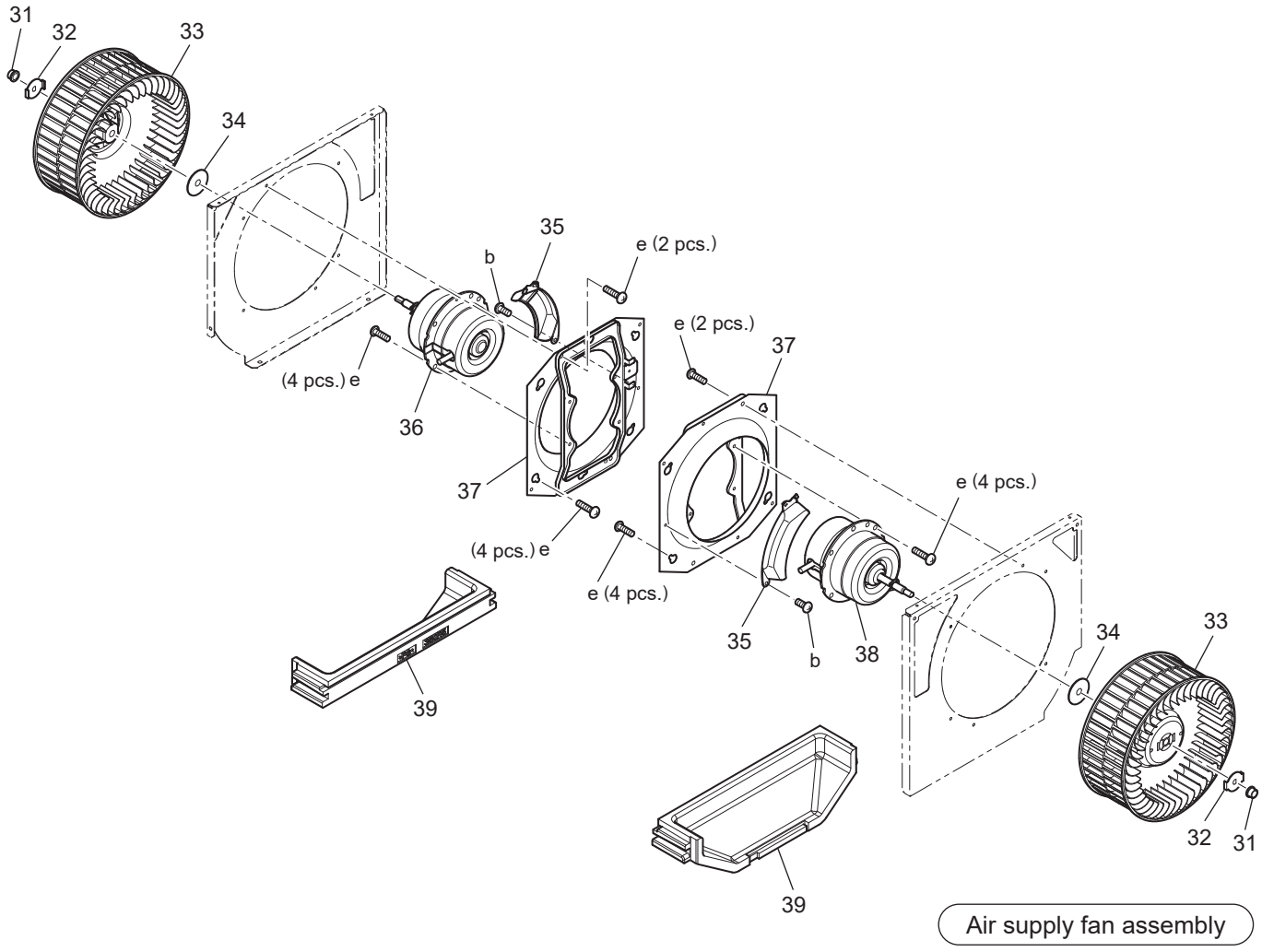
Symbol	Screw name
a	PT screw 6x12
b	PTT screw 4x8
c	PT screw 5x10
d	PTT screw 4x6

∗ shows accessory parts.

LGH-F300RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Maintenance cover	W50 013 709	1		
2	Special screw M4	W00 000 101	2		
3	Core guide L	W50 013 382	1		
4	Lossnay core	W50 004 719	2	⚠	With the filter stoppers
5	Filter	W50 004 723	4	⚠	
6	Filter stopper	W50 016 710	8		
7	Core guide R	W50 013 389	1		
8	Fix piece	W50 013 722	1		
9	Lead support	W50 013 705	2		
10	Hinge	W50 004 344	1		
11	Cover	W50 003 707	2		
12	Hanger L	W36 002 380	2		
13	Fix piece	W50 004 731	1		
14	Special screw 4x8	W00 000 089	4		
15	Special screw 4x8	W00 000 098	2		
16	Flange	W50 004 609	4		
17	Hanger R	W50 004 380	2		
18	GM assembly	W50 019 260	1	⚠	AC220･240V
19	Rod	W50 013 151	1		
20	Pull spring	W50 013 156	1		
21	Screws in bag	W50 013 051	1		

Air exhaust fan assembly



Air supply fan assembly

<Standard screws>

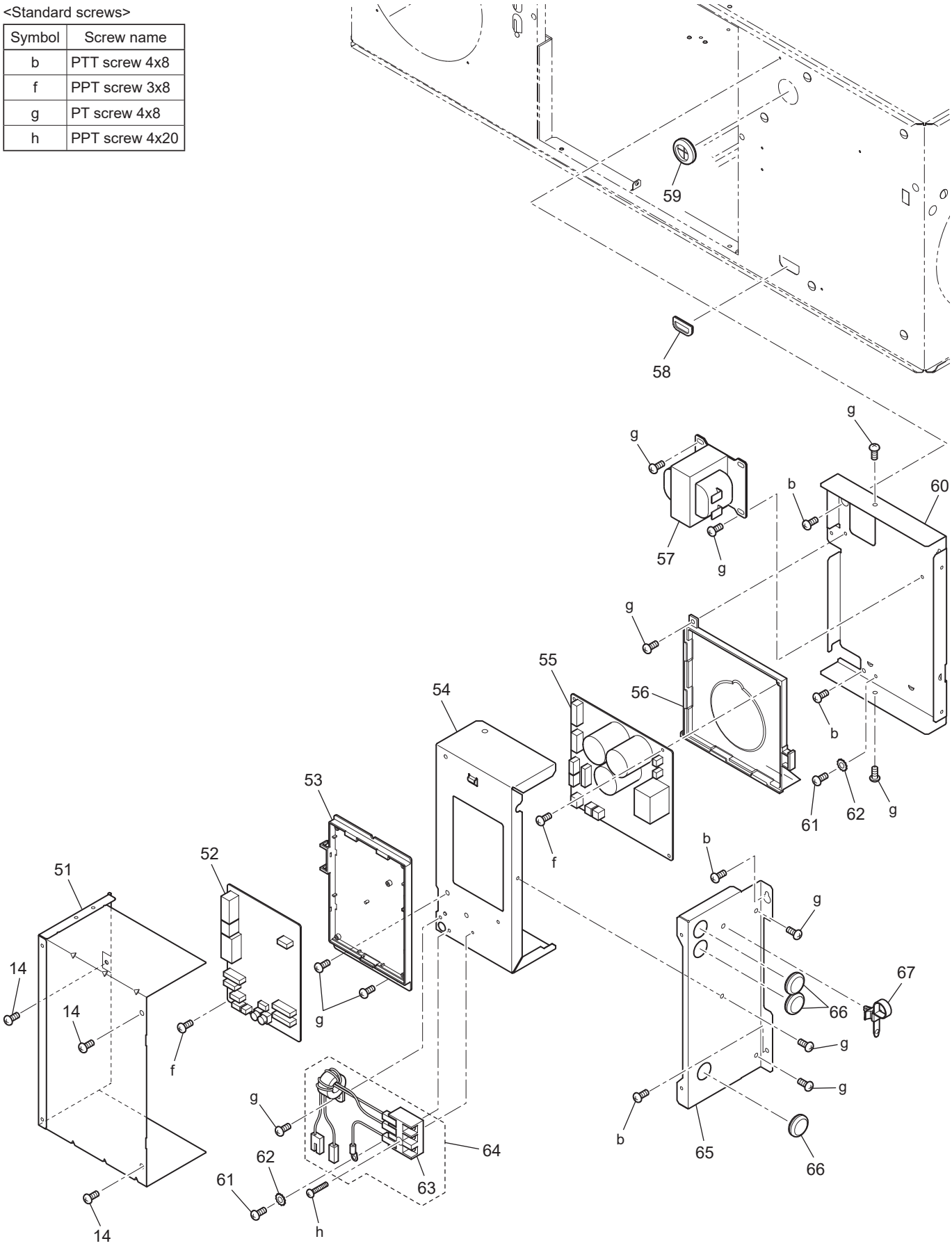
Symbol	Screw name
a	PTT screw 4x8
e	PTT screw 5x10

LGH-F300RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Special nut (M8)	W00 000 121	2		Left-handed
32	Tab washer	W00 000 134	2		
33	Centrifugal fan	W50 013 481	2	⚠	φ 220
34	Special washer (10)	W50 003 478	2		φ 40 (Outer dia.)
35	Air guide	W50 013 508	2		
36	DC motor (EA)	W50 019 454	1	⚠	
37	Motor fix plate	W50 013 723	2		
38	DC motor (SA)	W50 019 453	1	⚠	
39	Separator	W50 013 486	2		

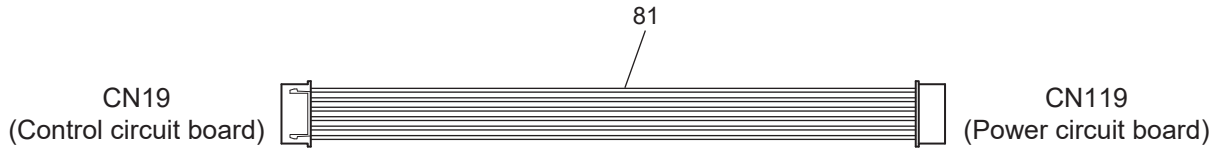
<Standard screws>

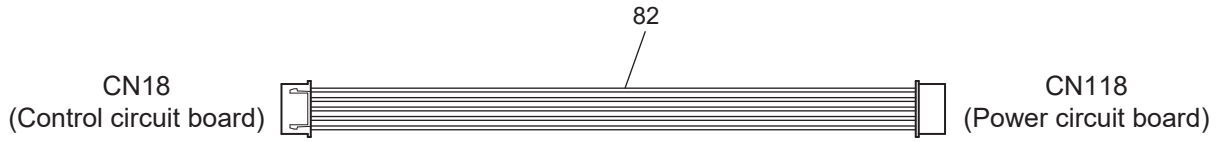
Symbol	Screw name
b	PTT screw 4x8
f	PPT screw 3x8
g	PT screw 4x8
h	PPT screw 4x20

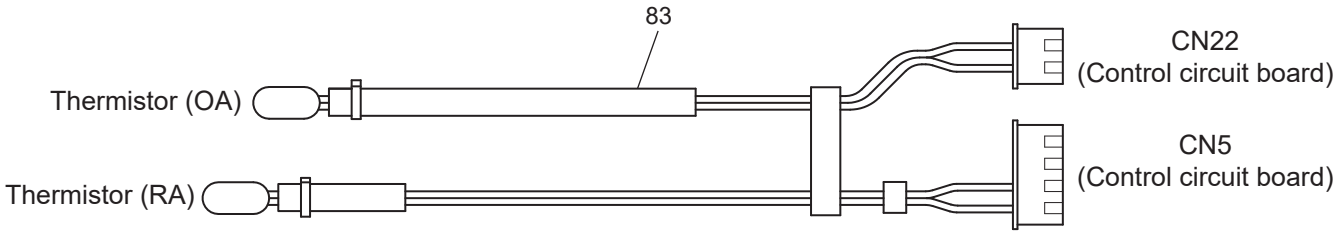


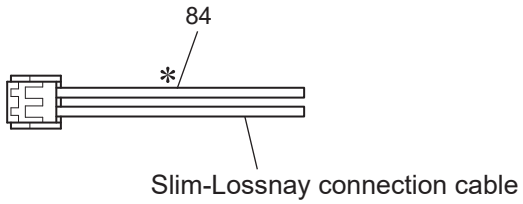
LGH-F300RVX-E

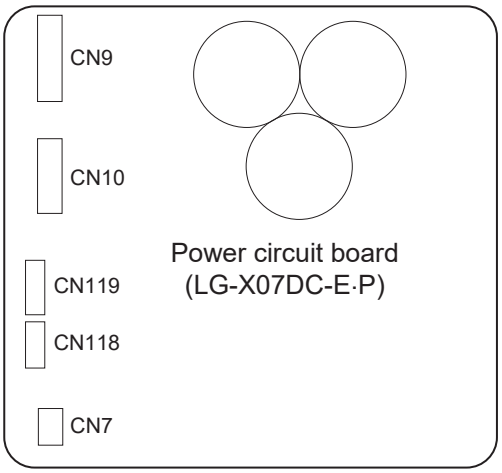
No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
51	Control box cover	W50 019 707	1		
52	Circuit board	W50 004 174	1	⚠	LG-X07DC-E･C
53	PCB fix plate	W50 004 381	1		
54	Sub control base	W50 019 705	1		
55	Circuit board	W50 004 173	1	⚠	LG-X07DC-E･P
56	PCB case	W50 004 383	1		
57	Reactor	W50 004 179	1	⚠	AC10A
58	Bush	W00 000 278	1		
59	Cord bush	W00 000 277	1		
60	Control base	W50 019 704	1		
61	PT screw 4x8 BS	W00 000 011	2		
62	Lock washer (4)	W00 000 082	2		
63	Terminal block	W45 602 242	1	⚠	3P
64	Terminal block	W36 002 213	1	⚠	With the lead wires
65	Side plate	W50 019 706	1		
66	Cord bush	W00 000 270	3		
67	Cord band	W00 000 258	1		

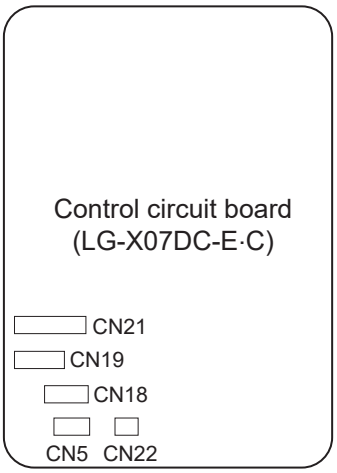










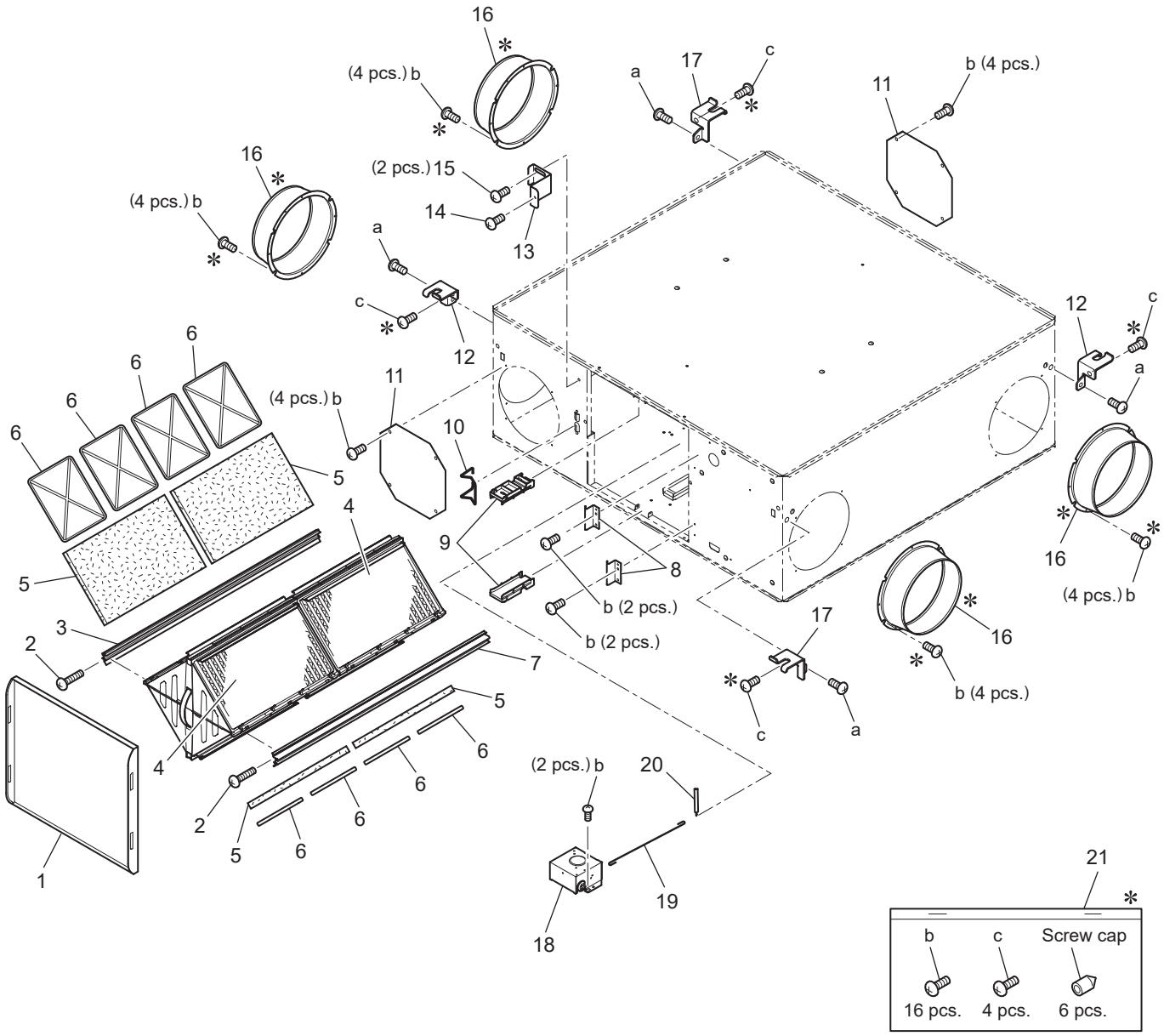


* shows accessory parts.

LGH-F300RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
81	Lead wire	W36 002 214	1	⚠	CN19-CN119
82	Lead wire	W36 002 215	1	⚠	CN18-CN118
83	Thermistor	W50 013 170	1	⚠	OA･RA set
84	Lead wire	W50 004 231	1	⚠	100mm

LGH-F470RVX-E



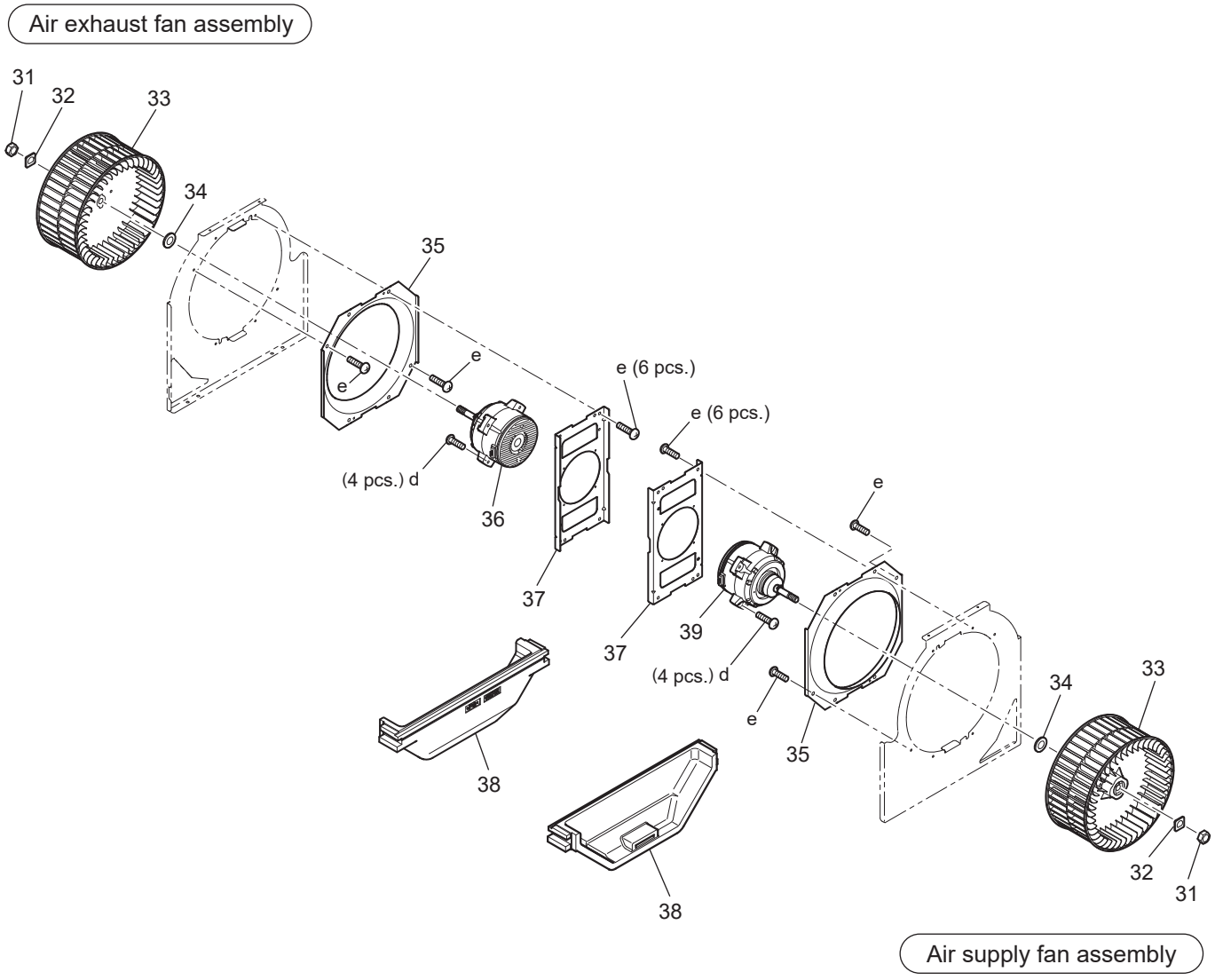
<Standard screws>

Symbol	Screw name
a	PT screw 6x12
b	PTT screw 4x8
c	PT screw 5x10

* shows accessory parts.

LGH-F470RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Maintenance cover	W50 013 711	1		
2	Special screw M4	W00 000 101	2		
3	Core guide L	W50 013 384	1		
4	Lossnay core	W50 004 720	2	⚠	With the filter stoppers
5	Filter	W50 003 738	4	⚠	
6	Filter stopper	W50 016 711	8		
7	Core guide R	W50 013 391	1		
8	Fix piece	W50 013 722	2		
9	Lead support	W50 013 706	2		
10	Hinge	W50 004 344	1		
11	Cover	W50 003 708	2		
12	Hanger L	W36 002 380	2		
13	Fix piece	W50 004 731	1		
14	Special screw 4x8	W00 000 089	4		
15	Special screw 4x8	W00 000 098	2		
16	Flange	W50 003 610	4		
17	Hanger R	W50 004 380	2		
18	GM assembly	W50 019 261	1	⚠	AC220･240V
19	Rod	W50 004 150	1		
20	Pull spring	W50 013 157	1		
21	Screws in bag	W50 013 051	1		



<Standard screws>

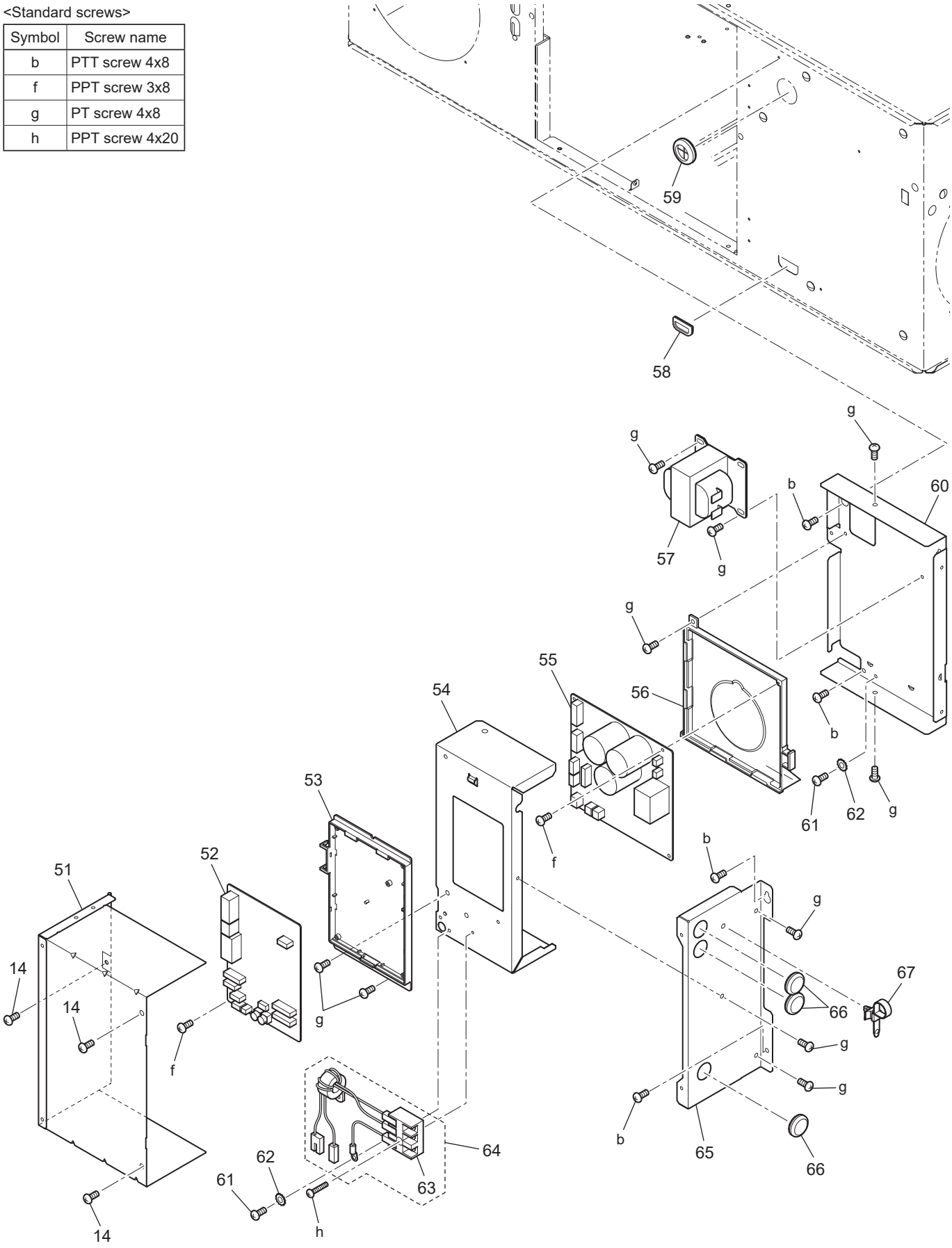
Symbol	Screw name
d	PTT screw 4x25
e	PTT screw 5x10

LGH-F470RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Special nut (M12)	W00 000 117	2		Left-handed
32	Tab washer	W50 004 730	2		
33	Centrifugal fan	W50 004 482	2	⚠	φ 245
34	Washer (12)	W00 000 123	2		
35	Inlet ring	W50 004 725	2		
36	DC motor (EA)	W50 019 456	1	⚠	
37	Motor fix plate	W50 004 736	2		
38	Separator	W50 013 487	2		
39	DC motor (SA)	W50 019 455	1	⚠	

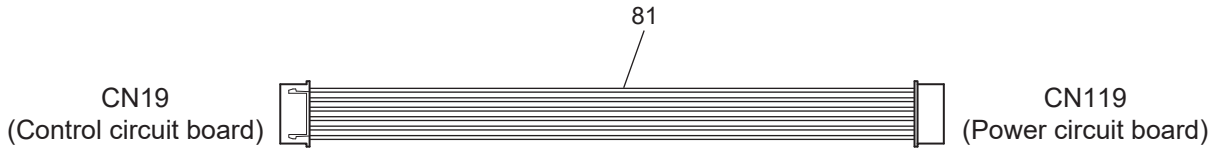
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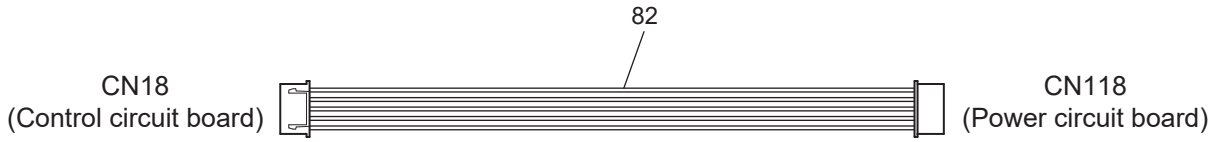
Symbol	Screw name
b	PTT screw 4x8
f	PPT screw 3x8
g	PT screw 4x8
h	PPT screw 4x20

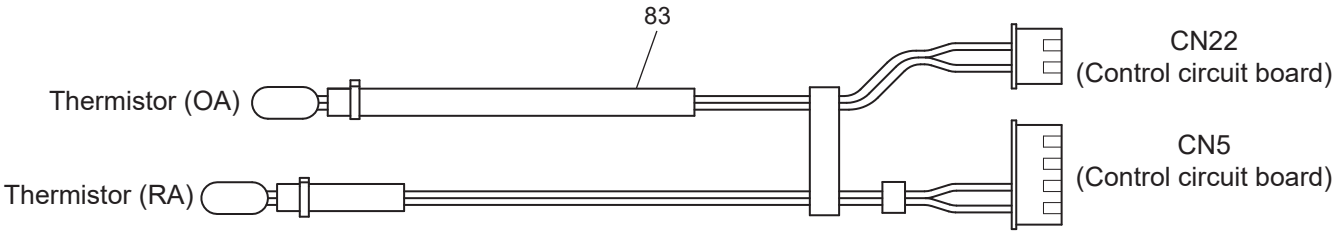


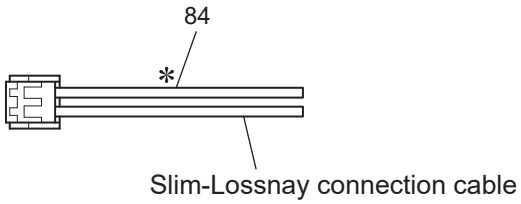
LGH-F470RVX-E

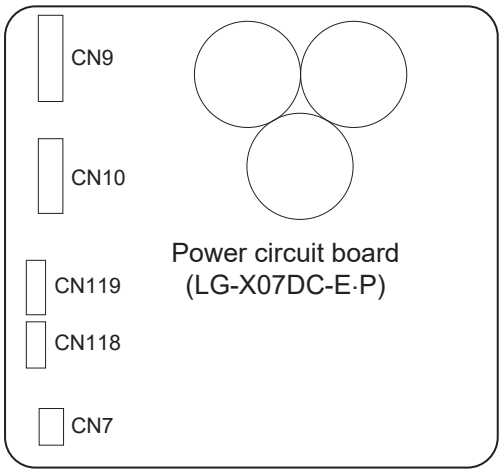
No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
51	Control box cover	W50 019 707	1		
52	Circuit board	W50 004 174	1	⚠	LG-X07DC-E･C
53	PCB fix plate	W50 004 381	1		
54	Sub control base	W50 019 705	1		
55	Circuit board	W50 004 173	1	⚠	LG-X07DC-E･P
56	PCB case	W50 004 383	1		
57	Reactor	W50 004 180	1		AC6.5A
58	Bush	W00 000 278	1		
59	Cord bush	W00 000 277	1		
60	Control base	W50 019 704	1		
61	PT screw 4x8 BS	W00 000 011	2		
62	Lock washer (4)	W00 000 082	2		
63	Terminal block	W45 602 242	1	⚠	3P
64	Terminal block	W50 019 213	1	⚠	With the lead wires
65	Side plate	W50 019 706	1		
66	Cord bush	W00 000 270	3		
67	Cord band	W00 000 258	1		

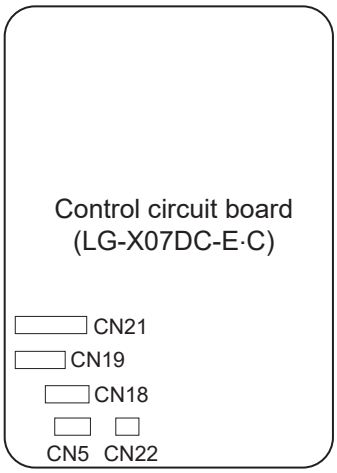










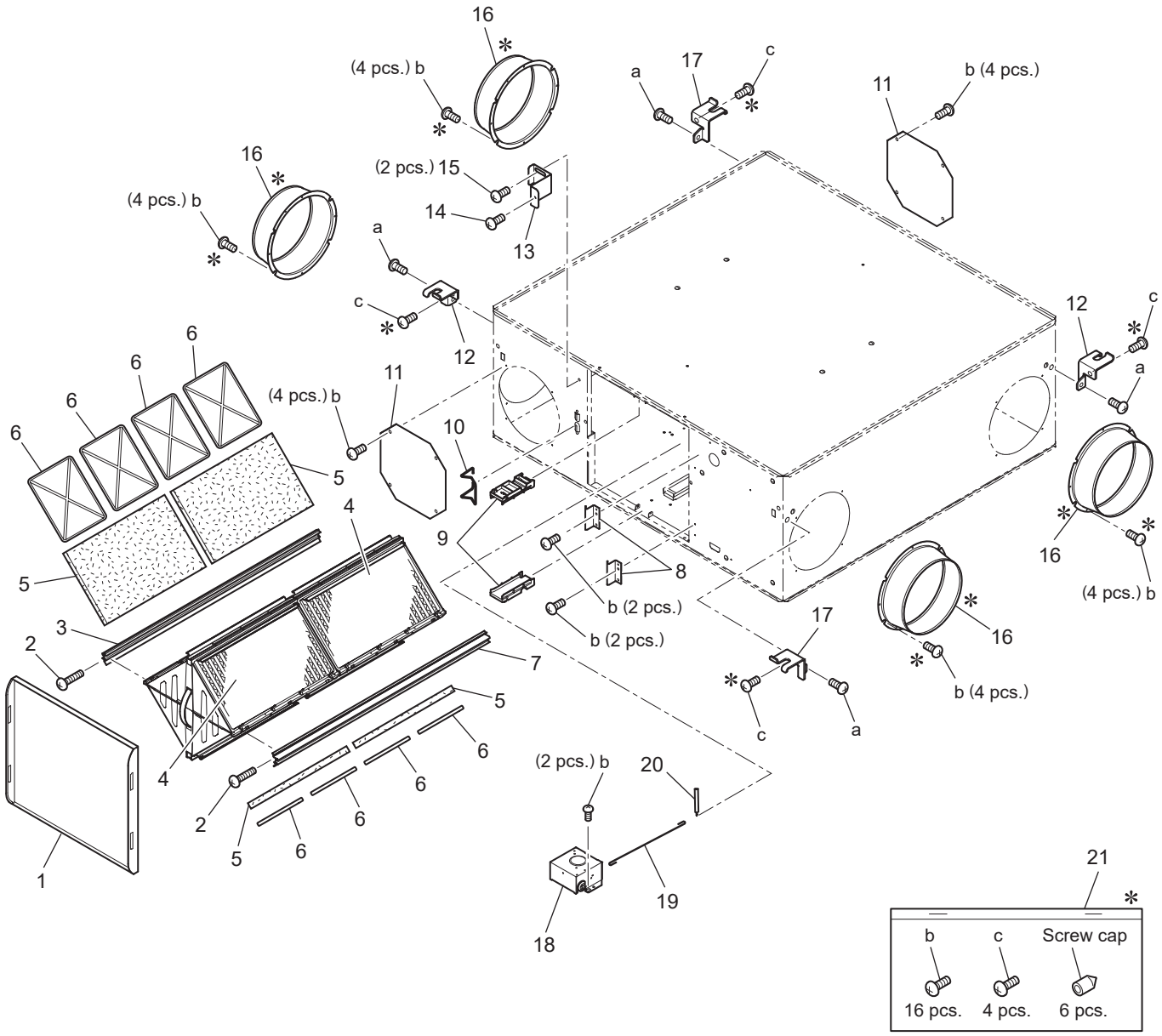


* shows accessory parts.

LGH-F470RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
81	Lead wire	W36 002 214	1	⚠	CN19-CN119
82	Lead wire	W36 002 215	1	⚠	CN18-CN118
83	Thermistor	W50 013 170	1	⚠	OA･RA set
84	Lead wire	W50 004 231	1	⚠	100mm

LGH-F600RVX-E



<Standard screws>

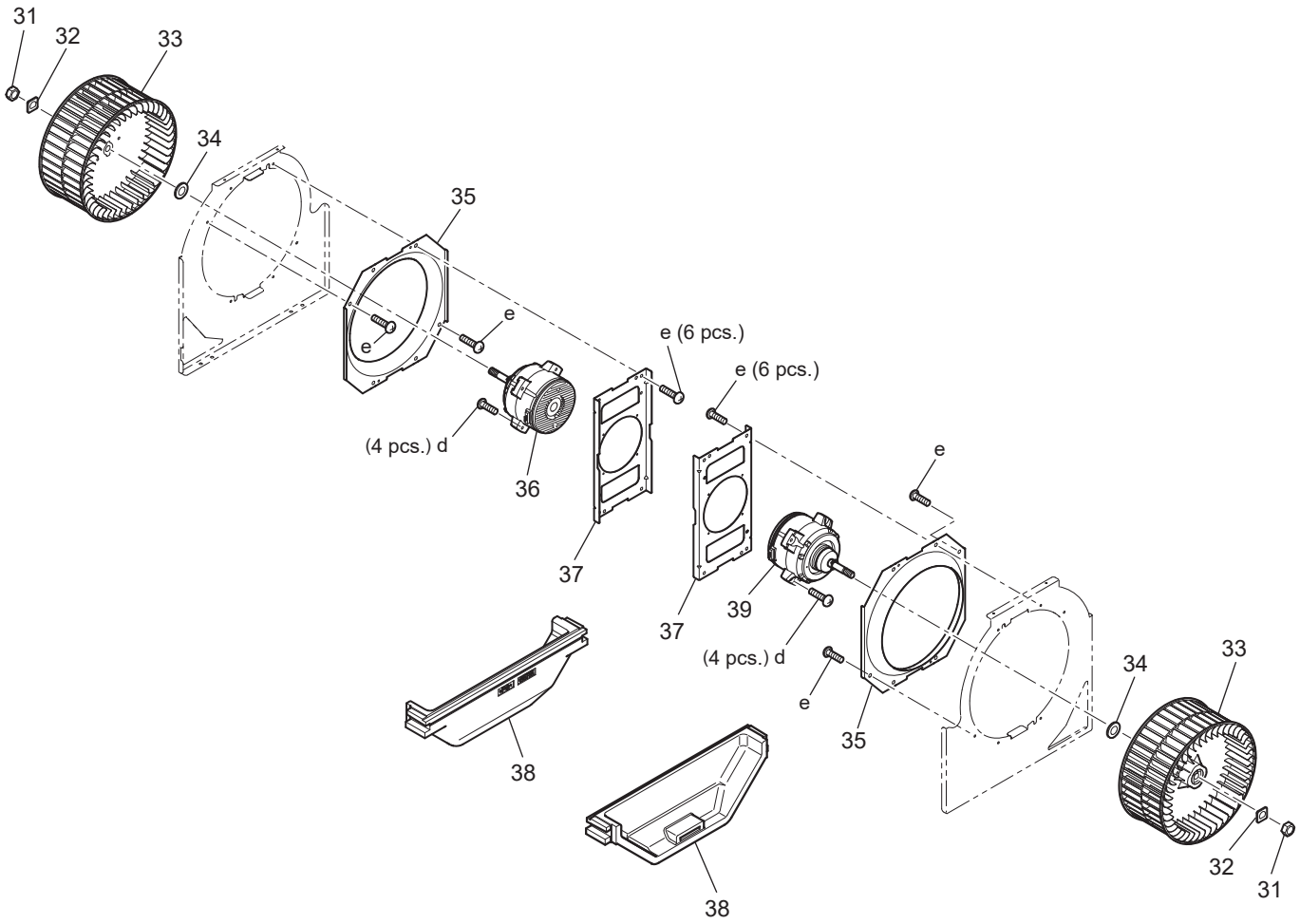
Symbol	Screw name
a	PT screw 6x12
b	PTT screw 4x8
c	PT screw 5x10

* shows accessory parts.

LGH-F600RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Maintenance cover	W50 013 711	1		
2	Special screw M4	W00 000 101	2		
3	Core guide L	W50 013 385	1		
4	Lossnay core	W50 004 721	2	⚠	With the filter stoppers
5	Filter	W50 004 724	4	⚠	
6	Filter stopper	W50 016 711	8		
7	Core guide R	W50 013 392	1		
8	Fix piece	W50 013 722	2		
9	Lead support	W50 013 706	2		
10	Hinge	W50 004 344	1		
11	Cover	W50 003 708	2		
12	Hanger L	W36 002 380	2		
13	Fix piece	W50 004 731	1		
14	Special screw 4x8	W00 000 089	4		
15	Special screw 4x8	W00 000 098	2		
16	Flange	W50 003 610	4		
17	Hanger R	W50 004 380	2		
18	GM assembly	W50 019 262	1	⚠	AC220･240V
19	Rod	W50 004 150	1		
20	Pull spring	W50 013 157	1		
21	Screws in bag	W50 013 051	1		

Air exhaust fan assembly



Air supply fan assembly

<Standard screws>

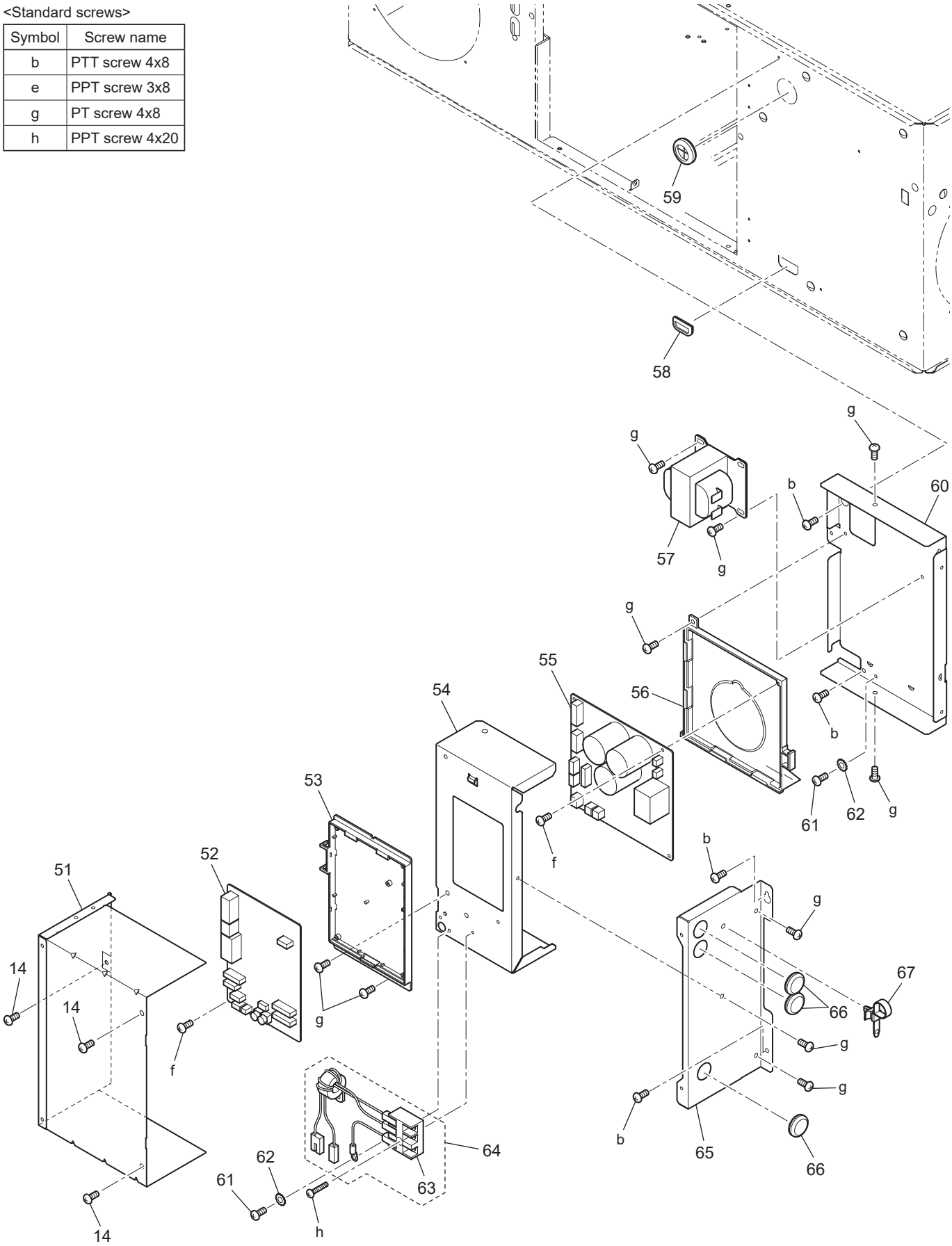
Symbol	Screw name
d	PTT screw 4x25
e	PTT screw 5x10

LGH-F600RVX-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Special nut (M12)	W00 000 117	2		Left-handed
32	Tab washer	W50 004 730	2		
33	Centrifugal fan	W50 004 482	2	⚠	φ 245
34	Washer (12)	W00 000 123	2		
35	Inlet ring	W50 004 725	2		
36	DC motor (EA)	W50 019 456	1	⚠	
37	Motor fix plate	W50 004 736	2		
38	Separator	W50 013 487	2		
39	DC motor (SA)	W50 019 455	1	⚠	

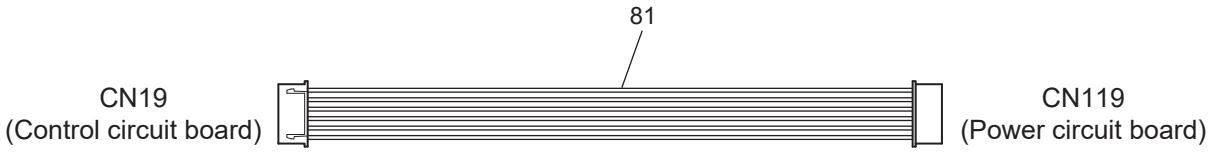
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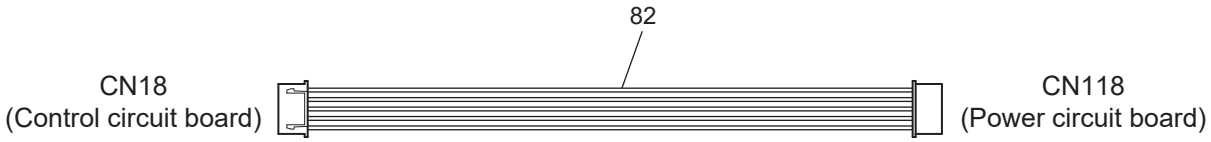
Symbol	Screw name
b	PTT screw 4x8
e	PPT screw 3x8
g	PT screw 4x8
h	PPT screw 4x20

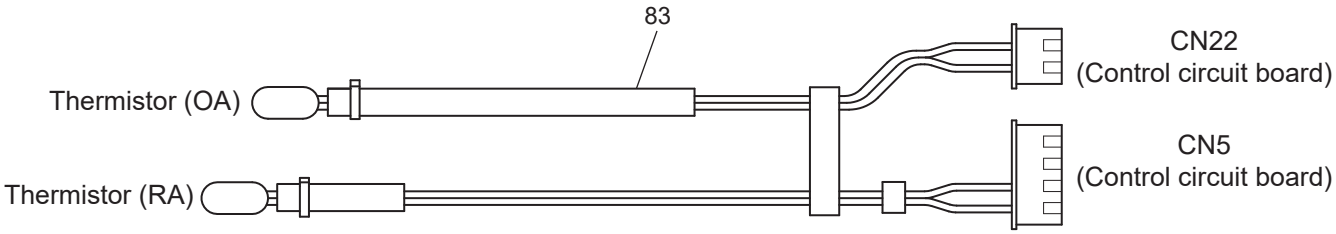


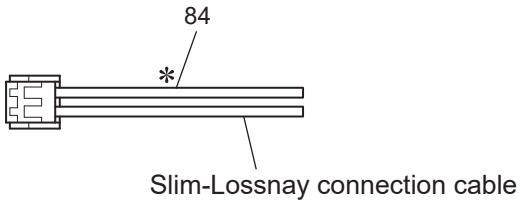
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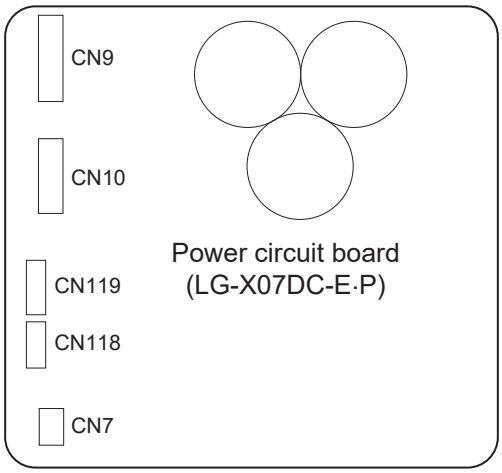
No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
51	Control box cover	W50 019 707	1		
52	Circuit board	W50 004 174	1	⚠	LG-X07DC-E・C
53	PCB fix plate	W50 004 381	1		
54	Sub control base	W50 019 705	1		
55	Circuit board	W50 004 173	1	⚠	LG-X07DC-E・P
56	PCB case	W50 004 383	1		
57	Reactor	W50 004 180	1		AC6.5A
58	Bush	W00 000 278	1		
59	Cord bush	W00 000 277	1		
60	Control base	W50 019 704	1		
61	PT screw 4x8 BS	W00 000 011	2		
62	Lock washer (4)	W00 000 082	2		
63	Terminal block	W45 602 242	1	⚠	3P
64	Terminal block	W50 019 213	1	⚠	With the lead wires
65	Side plate	W50 019 706	1		
66	Cord bush	W00 000 270	3		
67	Cord band	W00 000 258	1		

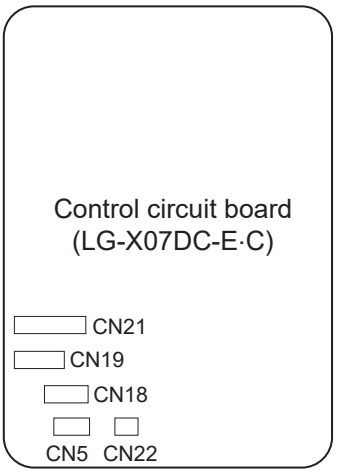










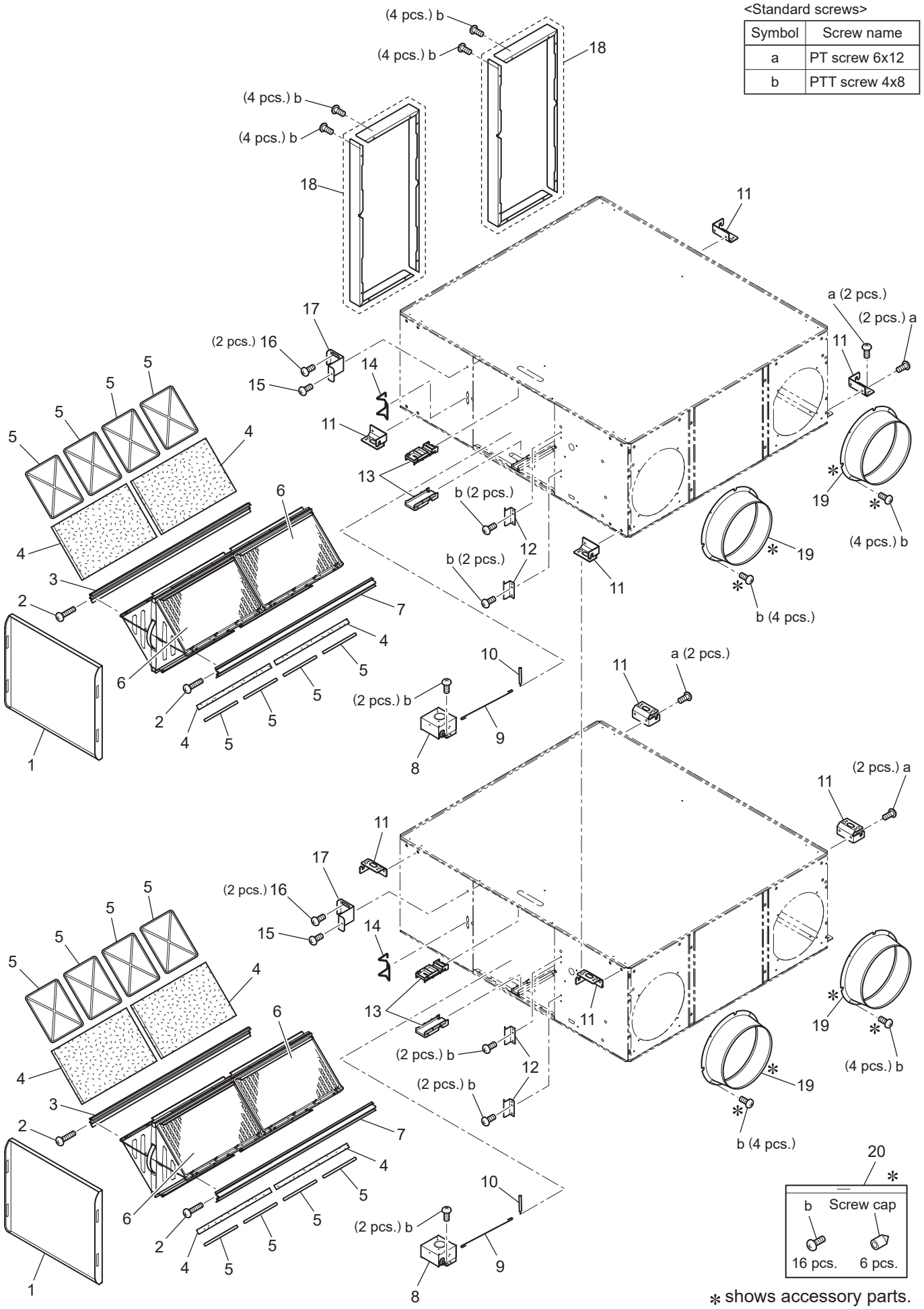


* shows accessory parts.

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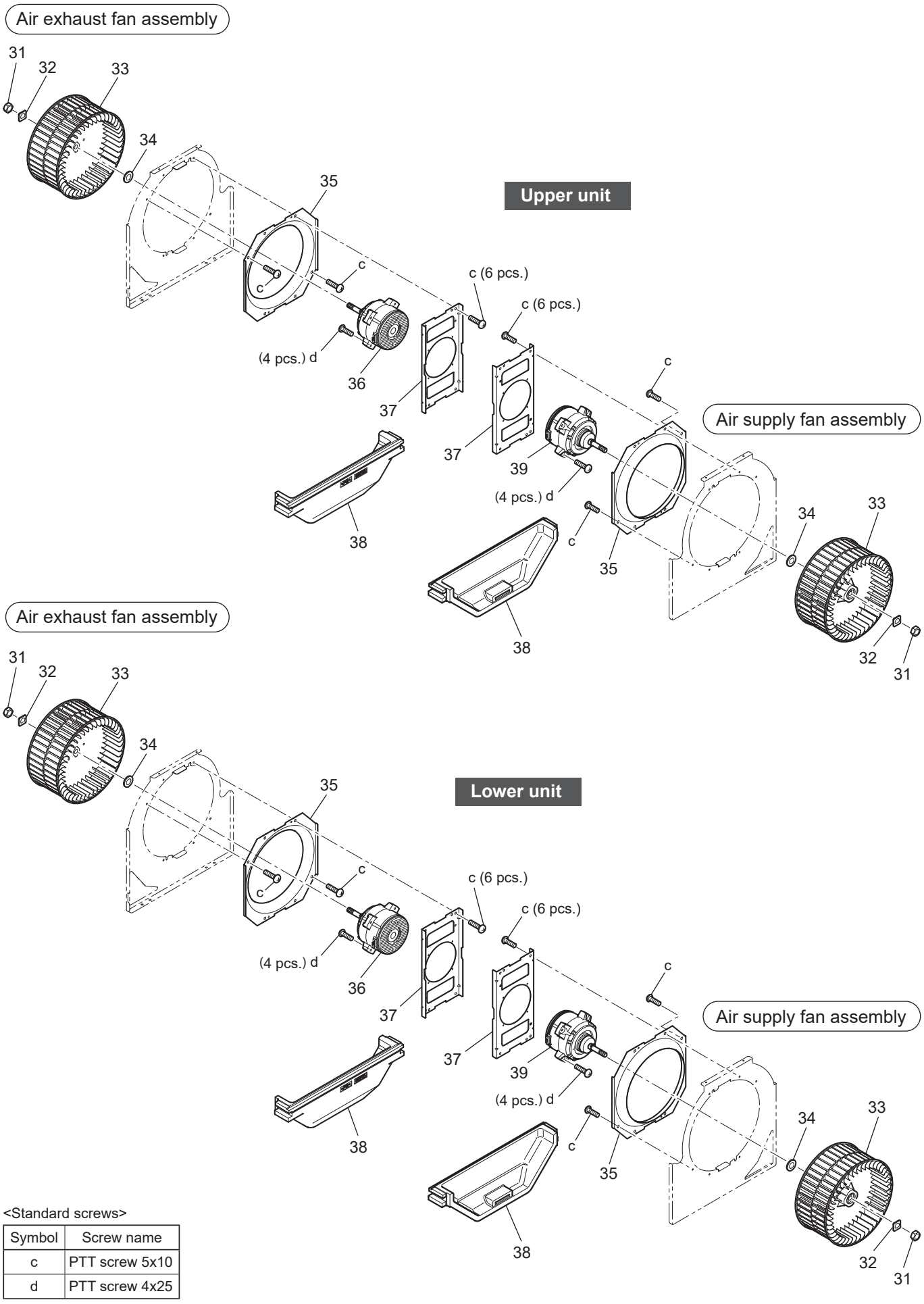
No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
81	Lead wire	W36 002 214	1	⚠	CN19-CN119
82	Lead wire	W36 002 215	1	⚠	CN18-CN118
83	Thermistor	W50 013 171	1	⚠	OA･RA set
84	Lead wire	W50 004 231	1	⚠	100mm

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No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	Maintenance cover	W50 013 711	2		
2	Special screw M4	W00 000 101	4		
3	Core guide L	W50 013 385	2		
4	Filter	W50 004 724	8	⚠	
5	Filter stopper	W50 016 711	16		
6	Lossnay core	W50 004 721	4	⚠	With the filter stoppers
7	Core guide R	W50 013 392	2		
8	GM assembly	W50 019 262	2	⚠	AC220･240V
9	Rod	W50 004 150	2		
10	Pull spring	W50 013 157	2		
11	Hanger	W50 001 382	8		
12	Fix piece	W50 013 722	4		
13	Lead support	W50 013 706	4		
14	Hinge	W50 004 344	2		
15	Special screw 4x8	W00 000 089	5		
16	Special screw 4x8	W00 000 098	4		
17	Fix piece	W50 004 731	2		
18	Flange (A/B)	W50 013 707	2		
19	Flange	W50 003 610	4		
20	Screws in bag	W50 013 052	1		

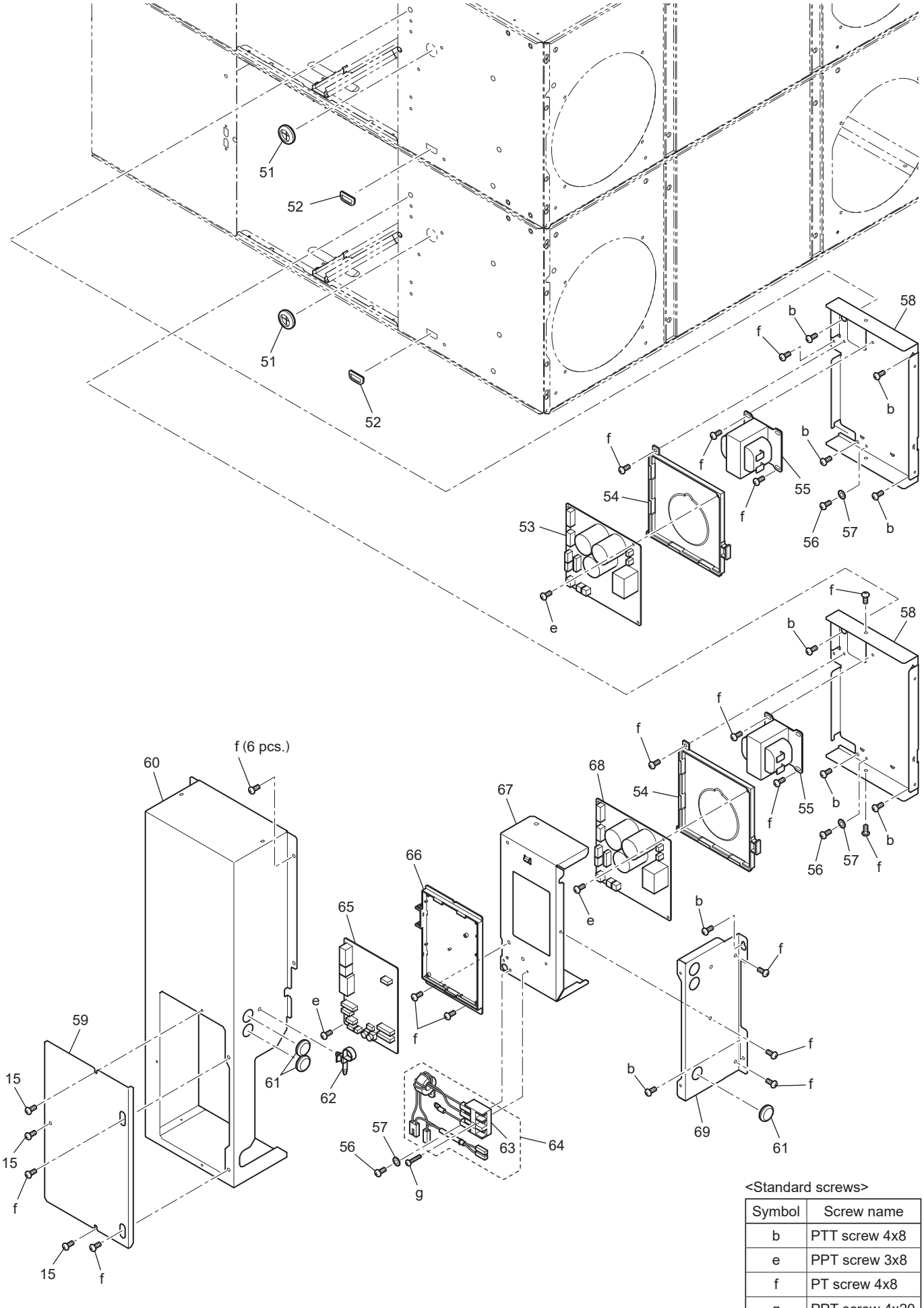


<Standard screws>

Symbol	Screw name
c	PTT screw 5x10
d	PTT screw 4x25

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No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Special nut (M12)	W00 000 117	4		Left-handed
32	Tab washer	W50 004 730	4		
33	Centrifugal fan	W50 004 482	4	⚠	φ 245
34	Washer (12)	W00 000 123	4		
35	Inlet ring	W50 004 725	4		
36	DC motor (EA)	W50 019 456	2	⚠	
37	Motor fix plate	W50 004 736	4		
38	Separator	W50 013 487	4		
39	DC motor (SA)	W50 019 455	2	⚠	

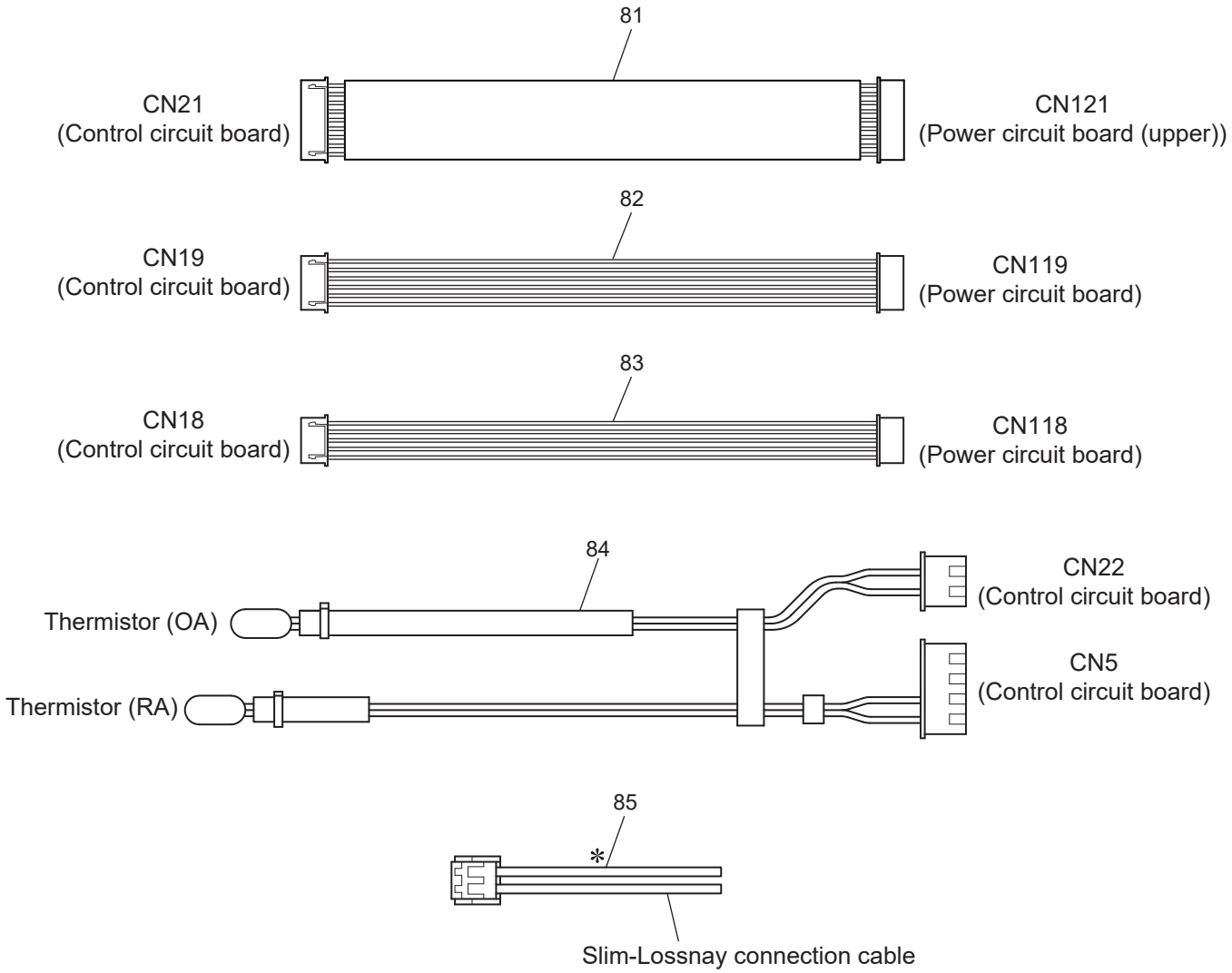


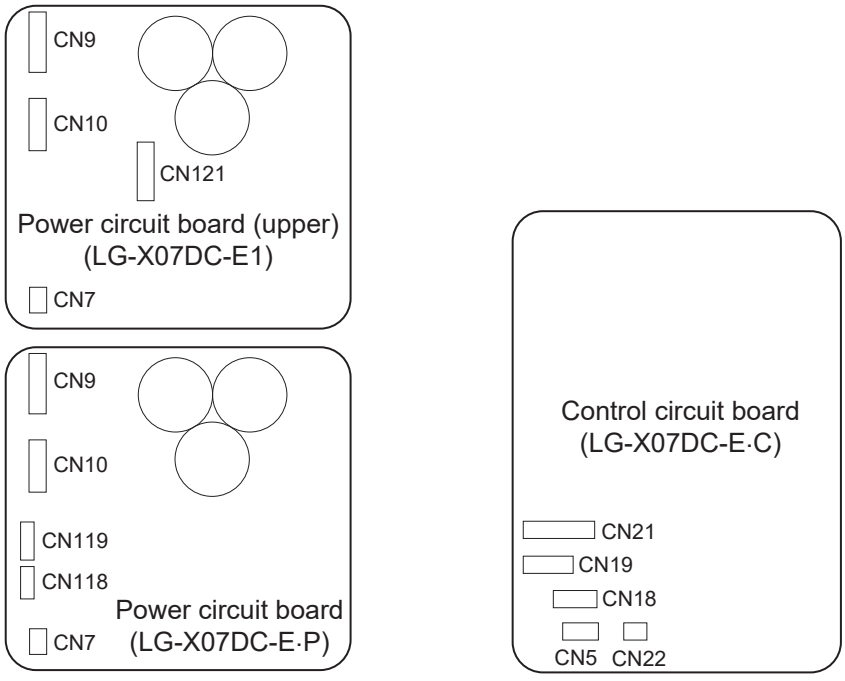
<Standard screws>

Symbol	Screw name
b	PTT screw 4x8
e	PPT screw 3x8
f	PT screw 4x8
g	PPT screw 4x20

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No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
51	Cord bush	W00 000 277	2		
52	Bush	W00 000 278	2		
53	Circuit board	W50 004 172	1	⚠	LG-X07DC-E1
54	PCB case	W50 004 383	2		
55	Reactor	W50 004 181	2	⚠	AC3.5A
56	PT screw 4x8 BS	W00 000 011	3		
57	Lock washer (4)	W00 000 082	3		
58	Control base	W50 019 704	2		
59	Control cover	W50 019 709	1		
60	Control box cover	W50 019 708	1		
61	Cord bush	W00 000 270	3		
62	Cord band	W00 000 258	1		
63	Terminal block	W45 602 242	1	⚠	3P
64	Terminal block	W50 019 214	1	⚠	With the lead wires
65	Circuit board	W50 004 174	1	⚠	LG-X07DC-E･C
66	PCB fix plate	W50 004 381	1		
67	Sub control base	W50 019 705	1		
68	Circuit board	W50 004 173	1	⚠	LG-X07DC-E･P
69	Side plate	W50 019 706	1		





* shows accessory parts.

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No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
81	Lead wire	W50 013 213	1	⚠	CN21-CN121
82	Lead wire	W36 002 214	1	⚠	CN19-CN119
83	Lead wire	W36 002 215	1	⚠	CN18-CN118
84	Thermistor	W50 013 171	1	⚠	OA･RA set
85	Lead wire	W50 004 231	1	⚠	100mm