

# LOSSNAY ENERGY RECOVERY VENTILATOR HANDBOOK

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## MODELS

**LGH-F300RVX2-E**

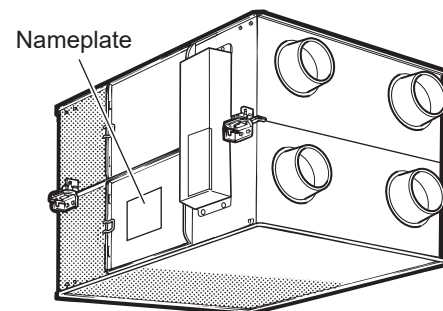
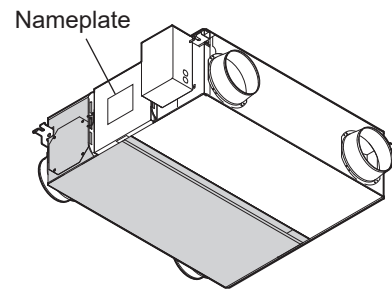
**LGH-F380RVX2-E**

**LGH-F470RVX2-E**

**LGH-F600RVX2-E**

**LGH-F940RVX2-E**

**LGH-F1200RVX2-E**



**Remote controller** (Optional)

**PZ-62DR-EA**

**PZ-43SMF-E**

**Filter** (For replacement)

**PZ-50RF<sub>9</sub>-E**

**PZ-65RF<sub>9</sub>-E**

**PZ-80RF<sub>9</sub>-E**

**PZ-100RF<sub>9</sub>-E**

**Warning:**









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



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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.

|  <b>Warning</b>   |  | Improper handling of the product may result in serious injury or death.  |  |
|--|--|--|--|
| <p>◇ <b>Electric shock</b></p> <p>If you must inspect the circuitry while the power is on, do not touch the live parts.</p> <p>(Failure to observe this warning may result in electric shock.)</p>   |  <p>Caution against electric shock</p>        | <p>◇ <b>Turn off the power supply</b></p> <p>Be sure to shut off the power supply isolator before disassembling the unit for repair.</p> <p>(Failure to observe this warning may result in electric shock.)</p>  |  <p>Be sure to follow this instruction.</p>   |
| <p>◇ <b>Modification is prohibited</b></p> <p>Do not modify the unit.</p> <p>(Failure to observe this warning may result in electric shock, fire and/or injury.)</p>   |  <p>Prohibited</p>                            | <p>◇ <b>Use proper parts and tools</b></p> <p>For repair, be sure to use the parts listed in the parts catalog of the applicable model and use the proper tools.</p> <p>(Failure to observe this warning may result in electric shock, fire and/or injury.)</p>                          |  <p>Be sure to follow this instruction.</p>   |
| <p>◇ <b>Proper electric work</b></p> <p>Qualified electricians shall conduct electric work in accordance with your local electric work regulations and the installation manuals.</p> <p>(Improper connection or wiring installation may result in electric shock and/or fire.)</p> |  <p>Be sure to follow this instruction.</p> | <p>◇ <b>Replace damaged and/or degraded parts</b></p> <p>Be sure to replace the power cord and lead wires if they are damaged and/or degraded.</p> <p>(Failure to observe this warning may result in electric shock and/or fire.)</p>  |  <p>Be sure to follow this instruction.</p> |
|  |  | <p>◇ <b>Check insulation</b></p> <p>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.</p> <p>(Inadequate insulation may result in electric shock.)</p> |  <p>Be sure to follow this instruction.</p> |

|  <b>Caution</b>   |   | Improper handling of the product may result in injury or damage to properties including buildings and equipment.  |  |
|--|---|---|--|
| <p>◇ <b>Caution for injury</b></p> <p>Do not work at a location where you do not have a sure footing.</p> <p>(Failure to observe this caution may result in a fall.)</p> |  <p>Prohibited</p> | <p>◇ <b>Wear gloves</b></p> <p>Wear gloves when servicing.</p> <p>(Failure to observe this caution may result in injury to your hands from sharp metal or other edges.)</p> |  <p>Be sure to follow this instruction.</p> |

## Notes for servicing

- Inspect the earth condition, and repair it if it is incomplete. Make sure that a power supply isolator and an over-load 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-F300RVX2-E  | LGH-F300RVX-E  | <ul style="list-style-type: none"> <li>Filter grade was changed from MERV4 to MERV7.</li> <li>New control circuit board</li> </ul> |
| LGH-F380RVX2-E  | —              |  |
| LGH-F470RVX2-E  | LGH-F470RVX-E  |  |
| LGH-F600RVX2-E  | LGH-F600RVX-E  |  |
| LGH-F940RVX2-E  | —              |  |
| LGH-F1200RVX2-E | LGH-F1200RVX-E |  |
| PZ-62DR-EA      | PZ-61DR-E      |  |

## 3. Specifications

|  |   |
|--|---|
| Model name   | LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E, LGH-F940RVX2-E, LGH-F1200RVX2-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 (MERV7)  |
| 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 10 min OFF, 60 min ON<br>5°F (-15°C) or less: Sensing 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      | Input power (W) | Air volume |       | Specific Fan power | Static pressure |                      | Exchange efficiency (%) |                  |          | Noise (dB) | Dia. of the centrifugal fan (Inch (mm)) | Weight |      |         |
|-----------------|-----------------|------------|-------|--------------------|-----------------|----------------------|-------------------------|------------------|----------|------------|---|--------|------|---------|
|                 |                 | (CFM)      | (CMH) |                    | (W/CFM)         | (InH <sub>2</sub> O) | (Pa)                    | Tempe-<br>rature | Enthalpy |            |   | (lbs)  | (kg) |         |
|                 |                 |            |       |                    |                 |                      |                         |                  | Heating  |            |   |        |      | Cooling |
| LGH-F300RVX2-E  | 235             | 300        | 510   | 0.78               | 1.00            | 250                  | 65.5                    | 63.0             | 50.0     | 37.0       | 8 3/4 (220)                             | 75     | 34   |         |
| LGH-F380RVX2-E  | 340             | 380        | 646   | 0.89               | 0.86            | 215                  | 65.0                    | 61.0             | 49.0     | 38.0       | 9 5/8 (245)                             | 90     | 41   |         |
| LGH-F470RVX2-E  | 425             | 470        | 799   | 0.91               | 1.00            | 250                  | 69.0                    | 64.0             | 51.0     | 40.0       | 9 5/8 (245)                             | 110    | 50   |         |
| LGH-F600RVX2-E  | 515             | 600        | 1019  | 0.86               | 0.86            | 215                  | 67.0                    | 64.0             | 50.0     | 41.0       | 9 5/8 (245)                             | 123    | 56   |         |
| LGH-F940RVX2-E  | 850             | 940        | 1597  | 0.91               | 1.00            | 250                  | 69.0                    | 64.0             | 51.0     | 43.0       | 9 5/8 (245)                             | 225    | 102  |         |
| LGH-F1200RVX2-E | 1030            | 1200       | 2039  | 0.86               | 0.86            | 215                  | 67.0                    | 64.0             | 50.0     | 43.0       | 9 5/8 (245)                             | 251    | 114  |         |

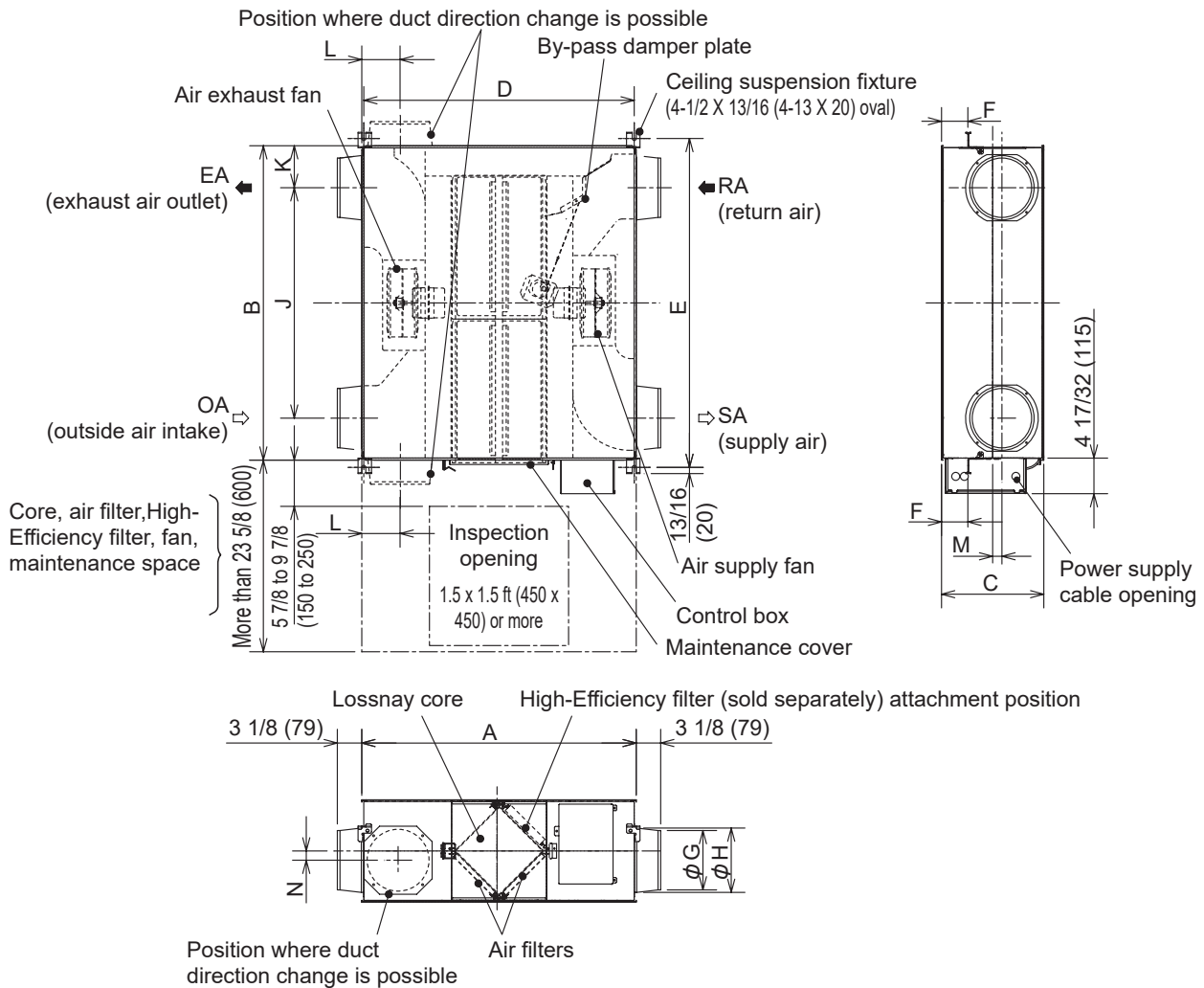
- \* The above values apply during energy recovery ventilation when the fan speed is set to Fan speed 4 at the rating pressure loss and 230 V / 60 Hz.
- \* For the specifications at the other frequency or voltages, see the spec. sheets.
- \* The values given in the table for the noise level reflect the 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 ISO 16494:2014, therefore characteristic values are measured by chamber method.
- \* On-site commissioning measurements by pitot tube method could be as much 20% different from ISO 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-62DR-EA   | PZ-43SMF-E   |
|--------------------------------------|--|--|
| Power supply requirement             | 12 V DC (Supplied from Lossnay unit)   |  |
| Power consumption                    | 0.3 W  |  |
| Transmission cable                   | Non polarized 2-core cable (AWG 22 (0.3 mm <sup>2</sup> ) 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 104°F (0 to 40°C)<br>Humidity: 30% to 90% relative humidity (no condensation) |  |
| Size                                 | 4 22/32 x 4 22/32 x 3/4 inch<br>(120 x 120 x 19 mm)  | 4 22/32 x 2 3/4 x 19/32 inch<br>(120 x 70 x 15 mm) |
| Weight                               | 9/16 lbs (0.25 kg)   | 7/32 lbs (0.10 kg)                                 |

## 4. Outside dimensions

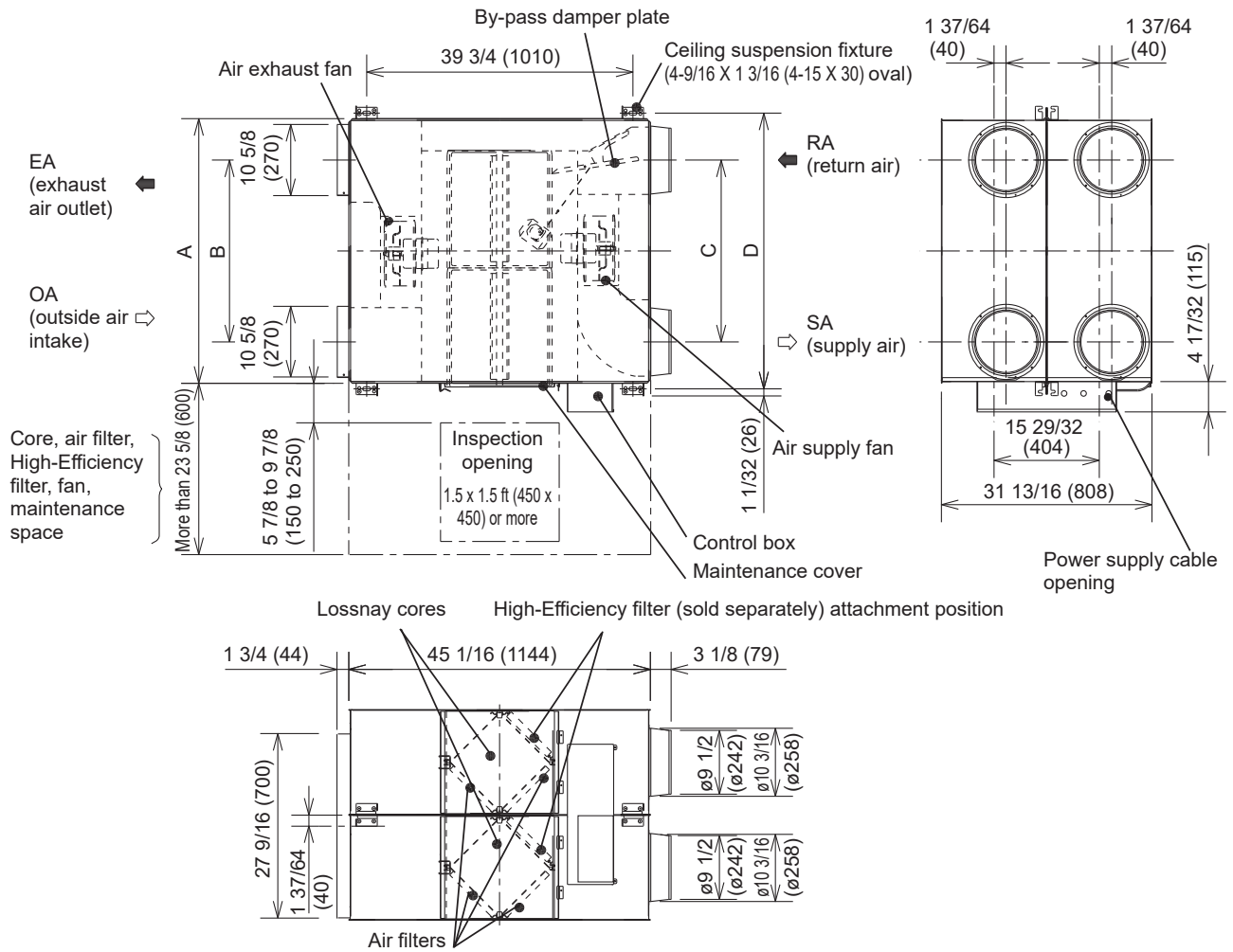
LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E



| 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            |                 |
| LGH-F300RVX2-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)  | 29 3/8 (745)  | 5 5/16 (135.5) | 4 7/8 (124) | 1 3/16 (30)  | 75 (34)         |
| LGH-F380RVX2-E | 35 3/4 (908)   | 37 9/16 (954) | 15 29/32 (404) | 35 15/64 (895)                   | 39 13/32 (1001) | 2 3/4 (70)   | 7 7/8 (200)      | 7 9/16 (192)           | 8 3/16 (208)  | 27 1/4 (692)  | 5 5/32 (131)   | 4 7/8 (124) | 0            | 90 (41)         |
| LGH-F470RVX2-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) | 27 3/16 (690) | 6 3/16 (157)   | 6 1/2 (165) | 1 37/64 (40) | 110 (50)        |
| LGH-F600RVX2-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) | 36 1/8 (917)  | 6 3/16 (157)   | 6 1/2 (165) | 1 37/64 (40) | 123 (56)        |

Unit: Inch (mm)

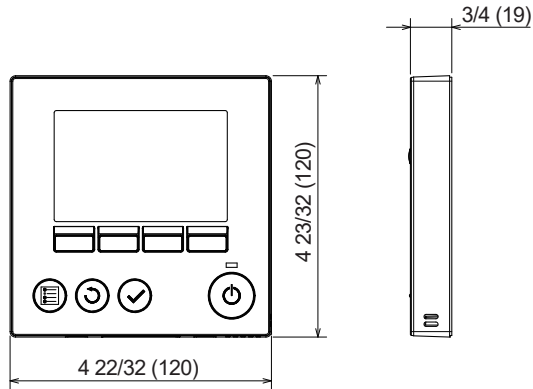
LGH-F940RVX2-E, LGH-F1200RVX2-E



| Model           | A                | B                | C                | D                 | Weight<br>lbs (kg) |
|-----------------|------------------|------------------|------------------|-------------------|--------------------|
| LGH-F940RVX2-E  | 39 1/2<br>(1004) | 27 3/16<br>(690) | 27 3/16<br>(690) | 41 9/64<br>(1045) | 225<br>(102)       |
| LGH-F1200RVX2-E | 48 1/2<br>(1231) | 36 1/8<br>(917)  | 36 1/8<br>(917)  | 50 1/8<br>(1272)  | 251<br>(114)       |

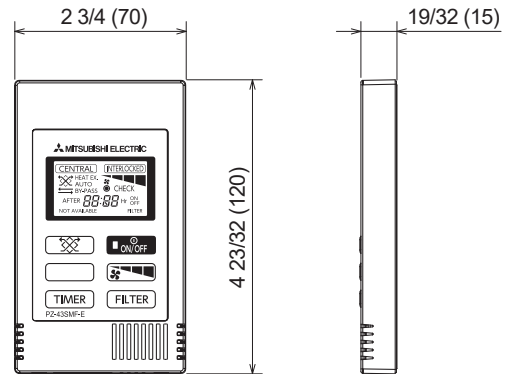
Unit: Inch (mm)

PZ-62DR-EA



Unit: Inch (mm)

PZ-43SMF-E



Unit: Inch (mm)

PZ-50RF<sub>9</sub>-E, PZ-65RF<sub>9</sub>-E, PZ-80RF<sub>9</sub>-E, PZ-100RF<sub>9</sub>-E



| Model                    | Dimension        |                  |               | The number of filters per set |         | Applicable model |
|--------------------------|------------------|------------------|---------------|-------------------------------|---------|------------------|
|                          | A                | B                | C             | Supply                        | Exhaust |                  |
| PZ-50RF <sub>9</sub> -E  | 18 1/2<br>(470)  | 7 13/64<br>(183) | 25/32<br>(20) | 2                             | 2       | LGH-F300RVX2-E   |
| PZ-65RF <sub>9</sub> -E  | 17 3/64<br>(433) | 8 37/64<br>(218) | 25/32<br>(20) | 2                             | 2       | LGH-F380RVX2-E   |
| PZ-80RF <sub>9</sub> -E  | 17 3/4<br>(451)  | 9 9/16<br>(243)  | 25/32<br>(20) | 2                             | 2       | LGH-F470RVX2-E   |
|                          |                  |                  |               | 4                             | 4       | LGH-F940RVX2-E   |
| PZ-100RF <sub>9</sub> -E | 22 1/4<br>(565)  | 9 9/16<br>(243)  | 25/32<br>(20) | 2                             | 2       | LGH-F600RVX2-E   |
|                          |                  |                  |               | 4                             | 4       | LGH-F1200RVX2-E  |

Notes:

- Each Lossnay unit is provided with one set of the filters. (Two sets for LGH-F940RVX2-E and LGH-F1200RVX2-E)

Unit: Inch (mm)

# 5. Electrical wiring diagrams

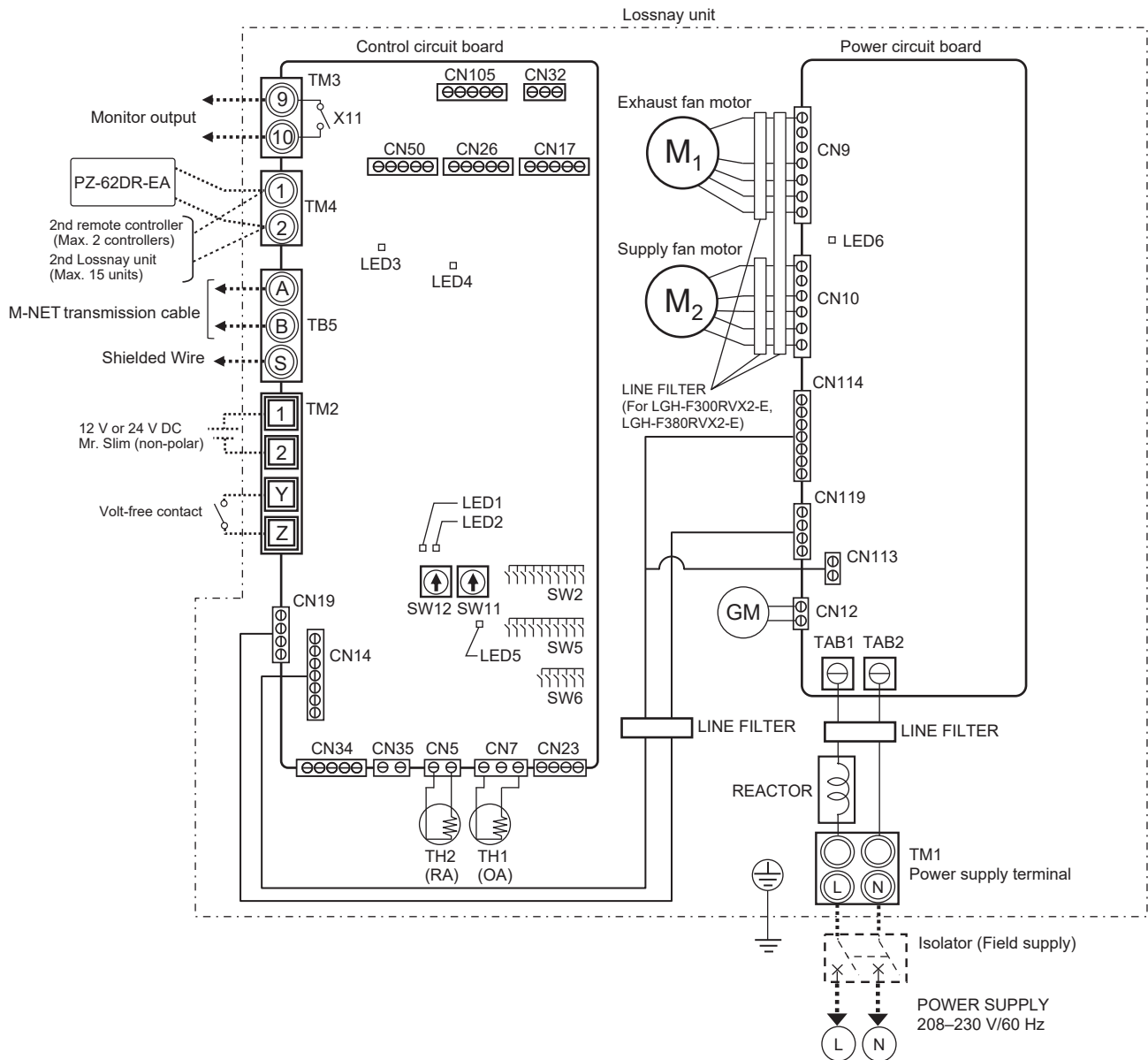
LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E

\* Wiring for TM1, TM2, TM3, TM4, and TB5 shown in dotted lines are field work.

\* Be sure to connect the earth wire.

\* An all pole electric leakage isolator must be installed.

\* Always use an isolator for the main power connection.



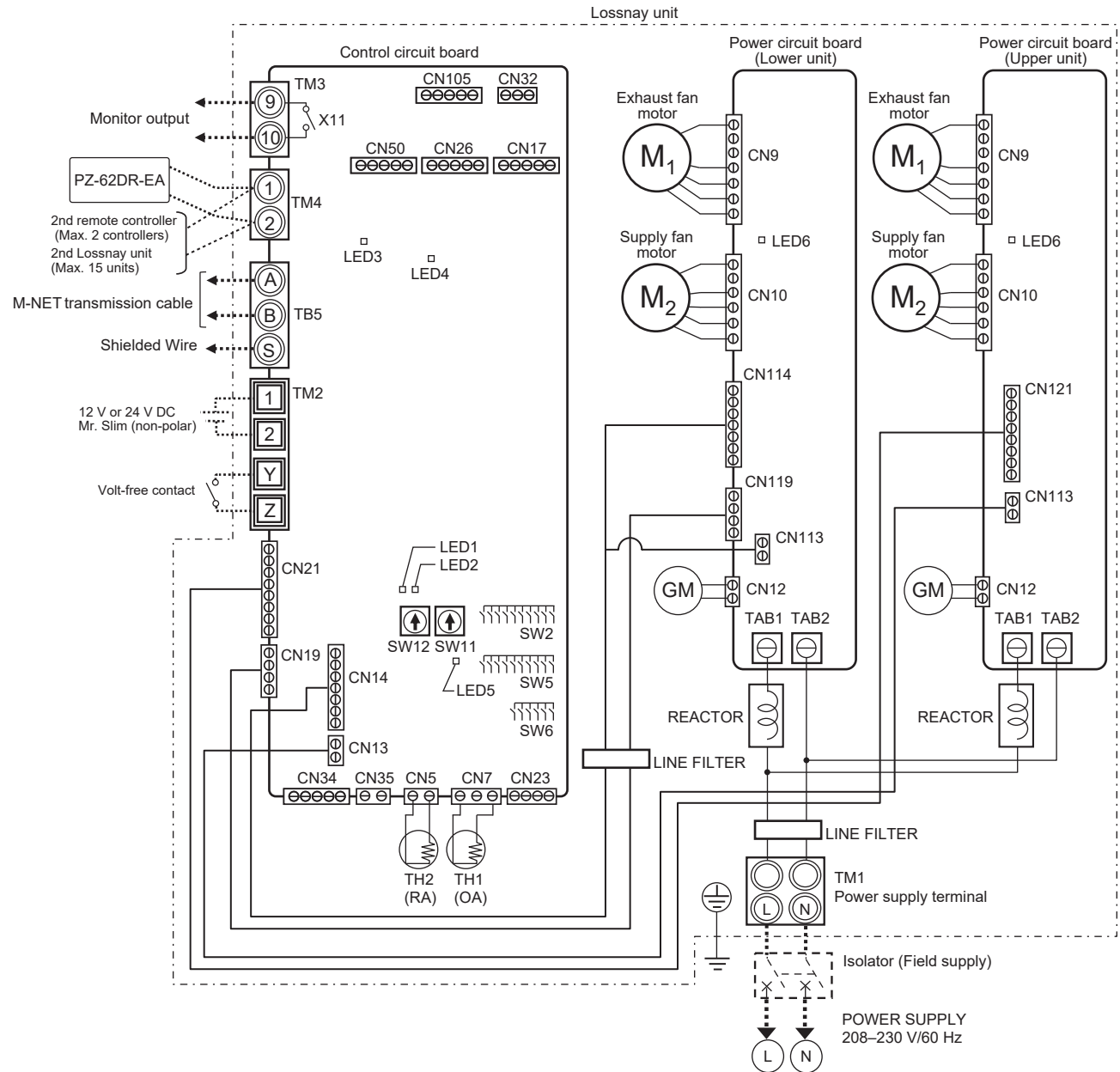
| Definition of symbols                                      |   |   |  |  |
|--|---|---|--|--|
| M1: Motor for exhaust fan                                  | CN5: Connector (Thermistor RA)                                  | CN34: Connector (CO <sub>2</sub> sensor output)   |  |  |
| M2: Motor for supply fan                                   | CN7: Connector (Thermistor OA)                                  | CN35: Connector (CO <sub>2</sub> sensor input)  |  |  |
| GM: Motor for Bypass damper                                | CN9: Connector (Fan motor)                                      | CN50: Connector (Optional components: External monitor output)  |  |  |
| TH1: Thermistor for outdoor air                            | CN10: Connector (Fan motor)                                     | CN105: Connector (For IT communication)   |  |  |
| TH2: Thermistor for return air                             | CN12: Connector (Damper motor)                                  | SW11: Address setting rotary switch (ones digit)  |  |  |
| SW2, 5: Switch (Function selection)                        | CN17: Connector (Fan speed 1/2/3/4)                             | SW12: Address setting rotary switch (tens digit)  |  |  |
| SW6: Switch (Model selection)                              | CN14: Connector   | LED1: Inspection indicator lamp   |  |  |
| TM1: Terminal block (Power supply)                         | CN113: Connector  | LED2: M-NET indicator lamp  |  |  |
| TM2: Terminal block (External control input)               | CN114: Connector  | LED3: Remote controller power supply indicator lamp   |  |  |
| TM3: Terminal block (Monitor output)                       | CN119: Connector  | LED4, LED6: Power supply indicator lamp   |  |  |
| TM4: Terminal block (Remote controller transmission cable) | CN23: Connector (CO <sub>2</sub> sensor power supply)           | LED5: CO <sub>2</sub> sensor power supply indicator lamp (When the CO <sub>2</sub> sensor is connected) |  |  |
| TB5: Terminal block (M-NET transmission cable)             | CN26: Connector (Bypass switching/CO <sub>2</sub> sensor input) |   |  |  |
| TAB1, TAB2: Connector (Power supply)                       | CN32: Connector (Remote control selection)                      |   |  |  |
| X11: Relay contact   |   |   |  |  |

Select proper isolator according to the electrical current information in the chart below.

| Model                                    |        | LGH-F300RVX2-E | LGH-F380RVX2-E | LGH-F470RVX2-E | LGH-F600RVX2-E |
|--|--------|----------------|----------------|----------------|----------------|
| Maximum current when operating [A]       |        | 3.40           | 3.10           | 4.05           | 4.15           |
| Inrush current after power supply ON [A] | 10 ms  | 6.1            |                |                |                |
|  | 100 ms | 3.6            |                |                |                |

# LGH-F940RVX2-E, LGH-F1200RVX2-E

- \* Wiring for TM1, TM2, TM3, TM4, and TB5 shown in dotted lines are field work.
- \* Be sure to connect the earth wire.
- \* An all pole electric leakage isolator must be installed.
- \* Always use an isolator for the main power connection.



| Definition of symbols                                      |   |   |
|--|---|---|
| M1: Motor for exhaust fan                                  | CN7: Connector (Thermistor OA)                                  | CN32: Connector (Remote control selection)  |
| M2: Motor for supply fan                                   | CN9: Connector (Fan motor)                                      | CN34: Connector (CO <sub>2</sub> sensor output)   |
| GM: Motor for Bypass damper                                | CN10: Connector (Fan motor)                                     | CN35: Connector (CO <sub>2</sub> sensor input)  |
| TH1: Thermistor for outdoor air                            | CN12: Connector (Damper motor)                                  | CN50: Connector (Optional components: External monitor output)  |
| TH2: Thermistor for return air                             | CN17: Connector (Fan speed 1/2/3/4)                             | CN105: Connector (For IT communication)   |
| SW2, 5: Switch (Function selection)                        | CN13: Connector   | SW11: Address setting rotary switch (ones digit)  |
| SW6: Switch (Model selection)                              | CN14: Connector   | SW12: Address setting rotary switch (tens digit)  |
| TM1: Terminal block (Power supply)                         | CN113: Connector  | LED1: Inspection indicator lamp   |
| TM2: Terminal block (External control input)               | CN114: Connector  | LED2: M-NET indicator lamp  |
| TM3: Terminal block (Monitor output)                       | CN19: Connector   | LED3: Remote controller power supply indicator lamp   |
| TM4: Terminal block (Remote controller transmission cable) | CN119: Connector  | LED4, LED6: Power supply indicator lamp   |
| TB5: Terminal block (M-NET transmission cable)             | CN113: Connector  | LED5: CO <sub>2</sub> sensor power supply indicator lamp (When the CO <sub>2</sub> sensor is connected) |
| TAB1, TAB2: Connector (Power supply)                       | CN121: Connector  |   |
| X11: Relay contact   | CN23: Connector (CO <sub>2</sub> sensor power supply)           |   |
| CN5: Connector (Thermistor RA)                             | CN26: Connector (Bypass switching/CO <sub>2</sub> sensor input) |   |

Select proper isolator according to the electrical current information in the chart below.

| Model                                    | LGH-F940RVX2-E | LGH-F1200RVX2-E |
|--|----------------|-----------------|
| Maximum current when operating [A]       | 8.10           | 8.30            |
| Inrush current after power supply ON [A] | 10 ms          | 12.2            |
|  | 100 ms         | 7.2             |

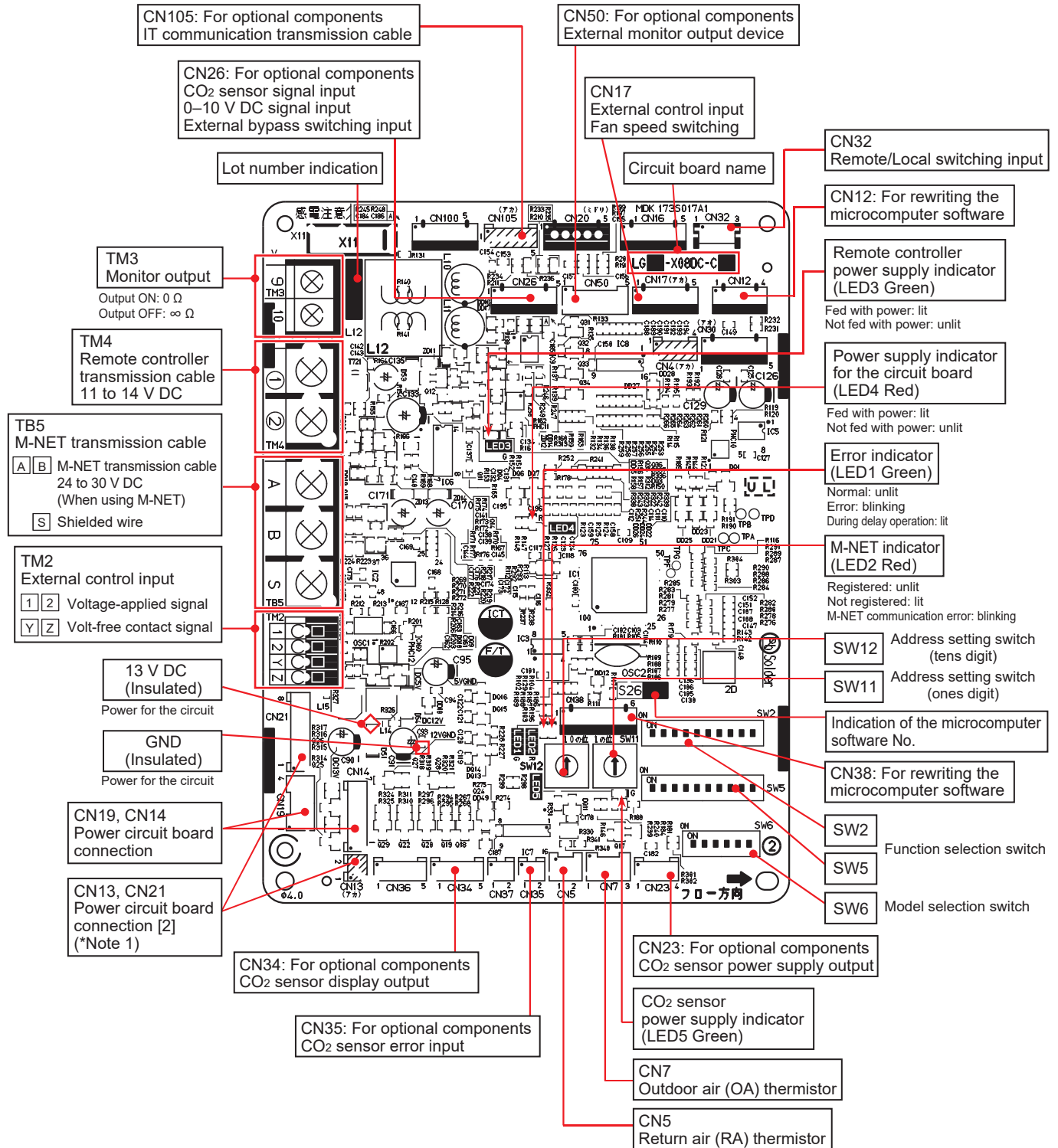
## 6. Circuit board diagrams

### ● Circuit board diagrams and check points

#### (1) Control circuit board

##### Caution:

Before servicing (including replacing the circuit boards), be sure to turn off the power supply isolator and check that all the LEDs on the control circuit board and power circuit board are not lit. A large-capacity electrolytic capacitor on the circuit board may carry voltage for several minutes after the isolator is turned off.



\*Note 1:

The connection is available only for the following models.  
LGH-F940RVX2-E, LGH-F1200RVX2-E



## (2) Power circuit board

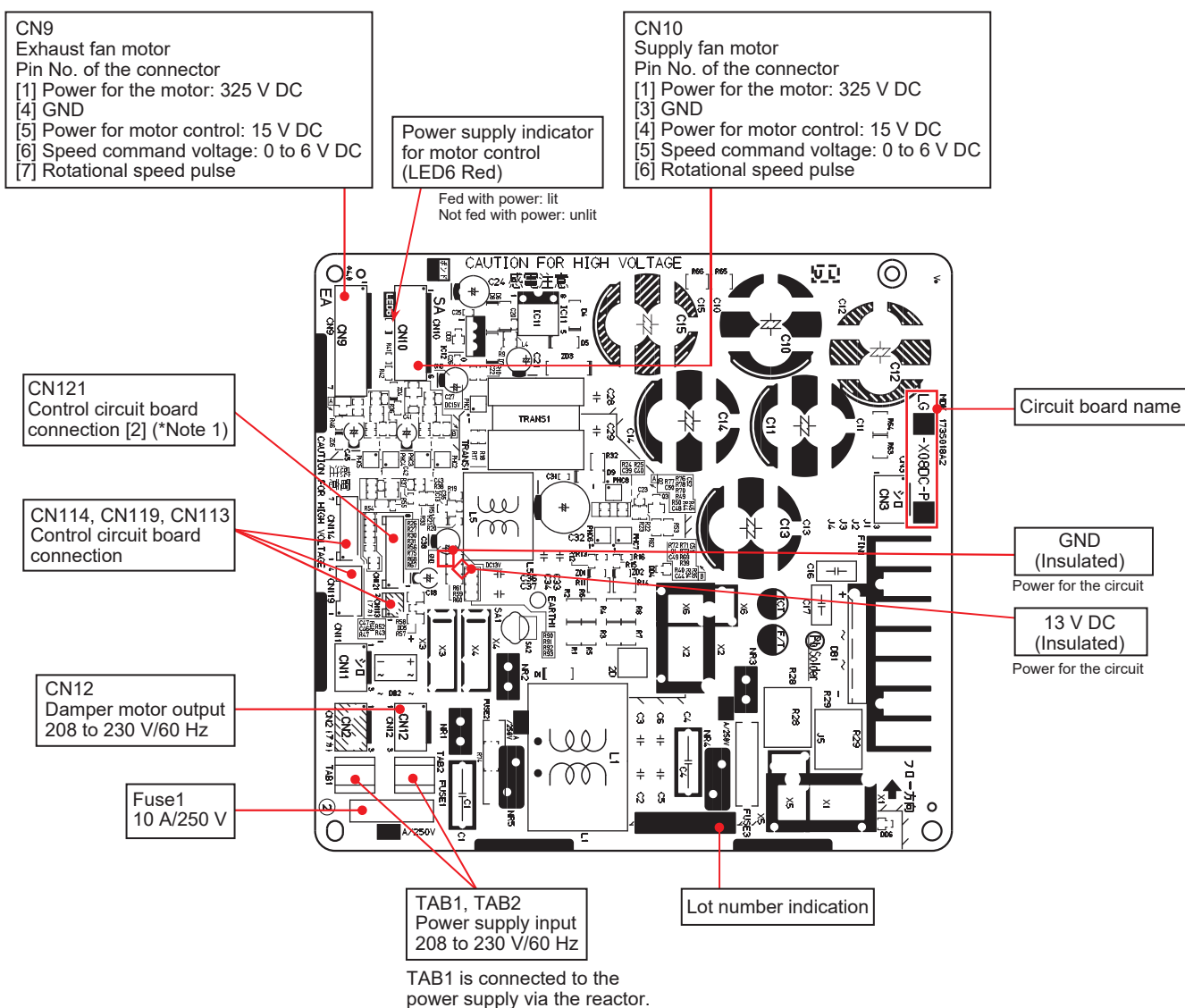
There are three types of the power circuit board. The type of the power circuit board varies depending on the model of the Lossnay unit.

When replacing the circuit board, use the applicable circuit board according to the table below.

| Power circuit board | Lossnay unit   |
|---------------------|--|
| LG-X08DC-P4         | LGH-F300RVX2-E, LGH-F380RVX2-E                       |
| LG-X08DC-P6         | LGH-F470RVX2-E, LGH-F600RVX2-E                       |
| LG-X08DC-P5         | LGH-F940RVX2-E, LGH-F1200RVX2-E                      |
| LG-X08DC-P6         | (Equipped with two types of the power circuit board) |

### Caution:

**The power circuit consists of live parts. The power circuit board is not insulated from the power line, except for the connection part with the control circuit board. Before servicing (including replacing the circuit boards), be sure to turn off the power supply isolator and check that all the LEDs on the control circuit board and power circuit board are not lit. A large-capacity electrolytic capacitor on the circuit board may carry voltage for several minutes after the isolator is turned off.**



\*Note 1:

The connection is available only for the following models.  
LGH-F940RVX2-E, LGH-F1200RVX2-E



## 7. Troubleshooting

### ■ Work precautions

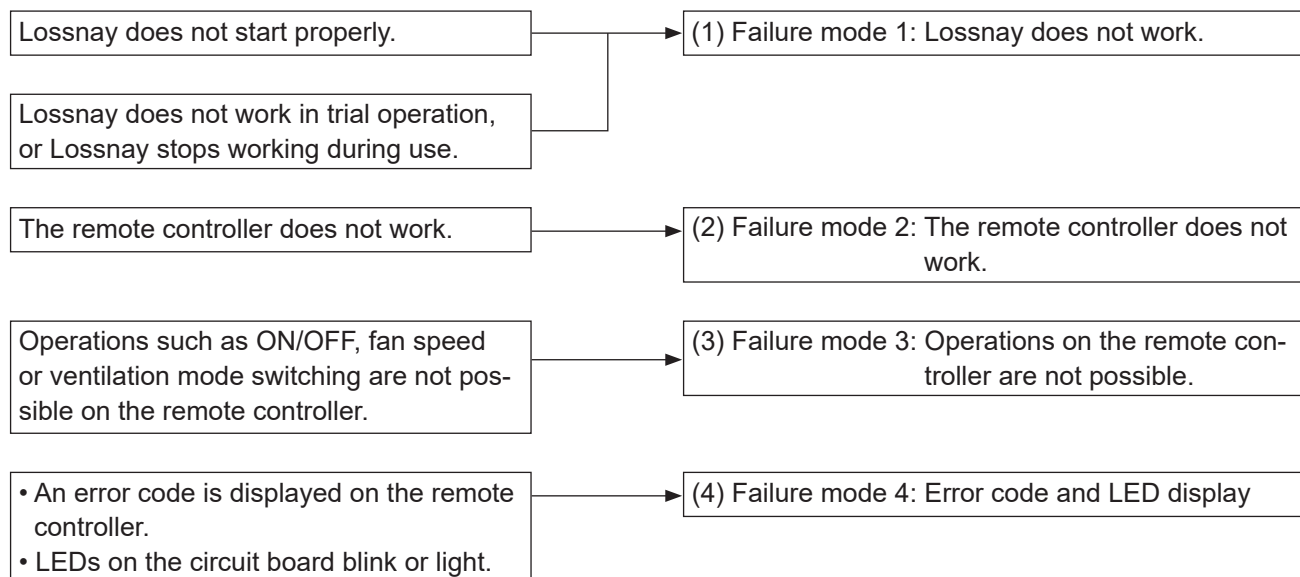
- Before starting the service, the power supply isolator must be turned off. Pay sufficient attention to avoid electric shock or injury.
- When removing or touching the cables, circuit boards or other parts, be sure to turn off the power supply isolator.
- Even after the power supply isolator is turned 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 failure is considered to be a cause, check closely for any broken section on the copper foil patterns, burning or discoloration of parts.
- If the circuit board is replaced, make sure that the switch settings on the new board are the same as the old board.
- Be sure to connect the power supply wires correctly.
- 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 Heat recovery Ventilator | LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E, LGH-F940RVX2-E, LGH-F1200RVX2-E |
| Lossnay Remote Controller        | PZ-62DR-EA, PZ-43SMF-E  |

| No. | Preliminary check item        | Details  |
|-----|-------------------------------|--|
| 1   | Product information           | <ul style="list-style-type: none"> <li>• Model name of the product</li> <li>• Serial number of the product, manufacturing lot number of the circuit board</li> <li>• Microcomputer software version marked on the circuit board</li> </ul>   |
| 2   | Fault status                  | <ul style="list-style-type: none"> <li>• Fault status (For example, the fan does not operate.)</li> <li>• Error code display on the remote controller</li> <li>• Operation setting of the remote controller (ventilation mode setting, fan speed setting, etc.)</li> </ul>                         |
| 3   | Frequency of fault occurrence | <ul style="list-style-type: none"> <li>• Frequency of fault occurrence (frequency of date and time of occurrence, regularity of occurrence, etc.)</li> <li>• Operating time up to fault occurrence</li> <li>• Date of start of use, date of fault occurrence</li> </ul>                            |
| 4   | Timing of fault occurrence    | <ul style="list-style-type: none"> <li>• Remote controller operation performed before fault occurrence</li> <li>• Operating status, etc.</li> </ul>  |
| 5   | System settings               | <ul style="list-style-type: none"> <li>• Function selection switch settings and address setting of the product</li> <li>• Model name and address setting of the Lossnay remote controller or system controller, etc.</li> <li>• Function settings on PZ-62DR-EA when PZ-62DR-EA is used</li> </ul> |
| 6   | System drawings               | <ul style="list-style-type: none"> <li>• System Configuration</li> <li>• Wiring</li> <li>• Record of the Lossnay function setting statuses</li> </ul>  |



## 7-2 Check Details

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

#### ● Initial Check Items

Check the following details if Lossnay does not work.

#### [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)?<br>208–230 V/60 Hz                          | Supply the specified 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, and TAB2)?                                      | Connect the lead wires securely.  |
| 7   | Is there a faulty connection to the reactor?   | Connect the lead wires securely.  |
| 8   | Are the power supply indicator lamps (LED4 on the control circuit board and LED6 on the power circuit board, red) lit? | The LED lights while power is supplied.<br>If not lit, check the above items. |

[2] Transmission cables (remote controller transmission cable, M-NET transmission cable, external input/output signal cable, and connection cable for IT communication appliances)

| 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 in. (5 cm) away from transmission cables?   | Wire the power supply cable at least 2 in. (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 in. (5 cm) away from the other communication cables?   | Wire the cables at least 2 in. (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 (with address number 1 or the smallest number other than 0). |

Table 2-1

M-NET transmission cable specifications

|                          |                                |
|--------------------------|--------------------------------|
| Cable                    | M-NET transmission cable       |
| Type                     | Shielded cable CVVS, MVVS      |
| Number of cores          | 2-core cable                   |
| Cable diameter           | AWG 16 (1.25 mm <sup>2</sup> ) |
| Max. extension (Note 1)  | 219 yd. (200 m)                |
| Total extension (Note 2) | 547 yd. (500 m)                |
| 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-62DR-EA or PZ-43SMF-E transmission cable |
| Type            | Sheathed cable                              |
| Number of cores | 2-core cable                                |
| Cable diameter  | AWG 22 (0.3 mm <sup>2</sup> )               |
| 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) (Note 4) | TM2 [Y] [Z]                                | Level/pulse (Note 1)      | Twisted lead AWG 20 (0.5 mm <sup>2</sup> ) to AWG 15 (1.5 mm <sup>2</sup> )   | 547 yd. (500 m) |
| External control input (12 V DC, 24 V DC) (Note 4)  | TM2 [1] [2]                                | Level/pulse (Note 1)      | Twisted lead AWG 20 (0.5 mm <sup>2</sup> ) to AWG 15 (1.5 mm <sup>2</sup> )   | (Note 2)        |
| Mr. Slim indoor unit control signal                 | TM2 [1] [2]                                | Serial signal             | Slim-Lossnay connection cable (Accessory parts) AWG 20 (0.5 mm <sup>2</sup> ) to AWG 15 (1.5 mm <sup>2</sup> ) sheathed PVC cable | 55 yd. (50 m)   |
| Remote/local switching (Note 4)                     | CN32 [1] [3]                               | Level                     | Remote ON/OFF adaptor   | 11 yd. (10 m)   |
| Remote ON/OFF input (Note 4)                        | CN32 [1] [2]                               | (Volt-free contact)       | (PAC-SE55RA-E or PAC-715AD)   |                 |
| Fan speed 4 input (volt-free contact) (Note 3)      | CN17 [1] [2]                               | Level (Volt-free contact) | Remote display adaptor (PAC-SA88HA-E or PAC-725AD)  |                 |
| Fan speed 3 input (volt-free contact) (Note 3)      | CN17 [1] [3]                               |                           |   |                 |
| Fan speed 2 input (volt-free contact) (Note 3)      | CN17 [1] [4]                               |                           |   |                 |
| Fan speed 1 input (volt-free contact) (Note 3)      | CN17 [1] [5]                               |                           |   |                 |
| Bypass mode input (volt-free contact) (Note 3)      | CN26 [1] [2]                               |                           |   |                 |
| Fan speed switching input (0 to 10 V DC) (Note 3)   | CN26 [4] [5]                               | Analog                    |   |                 |

## &lt;Caution&gt;

- In the group with the multiple Lossnay units, input the signals to the main Lossnay (with address number 1 or the smallest number other than 0).

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

Level signal Volt-free contact, 12 V DC, 24 V DC

Pulse signal Volt-free contact, 12 V DC, 24 V DC, the duration of ON and OFF should be 200 msec. or more

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.

(Note 3) In the group with the multiple Lossnay units, make sure that:

- Connect the signal cables only to the main Lossnay unit when controlling the all Lossnay units together using PZ-62DR-EA.
- Connect the signal cables to each Lossnay unit when controlling the Lossnay units individually without using PZ-62DR-EA.
- The optional CO<sub>2</sub> sensor (PZ-70CSW-E, PZ-70CSB-E) cannot be used together.

(Note 4) In the group with the multiple Lossnay units, input the signal only to the main Lossnay unit (with address number 1 or the smallest number other than 0).

### [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 in. (5 cm) away from signal cables?           | Wire the power supply cable at least 2 in. (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 (SW5-1 and 5-2) on the circuit board correctly, or set the function settings (No. 12 to 16) of PZ-62DR-EA correctly. |

Table 3-1 Monitor output specifications

|                       |  |
|-----------------------|--|
| Terminal block        | TM3 [9] [10]   |
| Function Name         | Operation monitor (Factory default setting) (Note 1) |
| 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                                       |

(Note 1) Output can be changed with function settings.

### [4] Function setting




| No. | Check Item   | Corrective action   |
|-----|--|---|
| 1   | Is the main Lossnay (and its address setting) set correctly?   | Check the address setting switches (SW11, SW12) on the circuit board.<br>When controlling with external input signals without connecting to MELANS, set one of the units in the group as the main Lossnay (with address number 1 or the smallest number other than 0).<br>Connect the signal cables to the main Lossnay unit. |
| 2   | Are the function selection switches on the circuit board set correctly to suit the required application?   | Set the function selection switches (SW2, SW5) on the circuit board correctly.  |
| 3   | Is the applicable model used as the Lossnay remote controller?   | Use PZ-62DR-EA or PZ-43SMF-E.<br>(The air conditioner remote controller including PAR-40MAA cannot be used.)  |
| 4   | When PZ-62DR-EA is used, are the function selections set correctly to suit the required application?   | Set the function selections correctly.<br>After setting the functions with PZ-62DR-EA, operating the model selection switch (SW6) or address setting switches (SW11, SW12) on the control circuit board resets the settings to the initial settings.  |
| 5   | For a function that can be set with both PZ-62DR-EA and the function selection switches on the control circuit board, was the function set with the function selection switches after the function is set with PZ-62DR-EA? | Set the function again with PZ-62DR-EA.<br>For the function that can be set with both PZ-62DR-EA and the function selection switches, after the function was set with PZ-62DR-EA, setting with the function selection switches is disabled.   |

[5] LED Indications on the circuit boards

| No. | LED             | Contents                                       | Check Item   | Corrective action   |
|-----|-----------------|--|--|---|
| 1   | LED1<br>(green) | Lossnay unit error indicator                   | Blinking: Starting up, error occurred                            | In the case of an error, 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<br>(red)   | M-NET System error indicator                   | Blinking: Error occurred   | See Failure Mode 4.   |
|     |                 |  | Lit: No M-NET connection information                             | When not using M-NET, it is normal. When using M-NET, perform group registration with the system controller.  |
|     |                 |  | Unlit: Other than above  | It is normal.   |
| 3   | LED3<br>(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 group with multiple Lossnay units.                     |
|     |                 |  | Unlit: Power not supplied to the remote controller (Sub Lossnay) |   |
| 4   | LED4<br>(red)   | Power supply indicator (control circuit board) | Check that this LED is lit.                                      | The LED lights while power is supplied to the control circuit board.<br>(Do not touch the circuit board when the LED is lit to avoid electric shock.) |
| 5   | LED6<br>(red)   | Power supply indicator (power circuit board)   | Check that this LED is lit.                                      | The LED lights while power is supplied to the power circuit board.<br>(Do not touch the circuit board when the LED is lit to avoid electric shock.)   |

● Individual function check items




[6] If Lossnay does not work in the trial operation, 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 are disconnected.                                       | Check the connector (CN9) for the exhaust fan motor and the connector (CN10) for the supply fan motor.<br>*Before connecting or disconnecting the motor connectors (CN9, CN10), turn off the power supply isolator, and check that the all LEDs on the circuit board are not lit.  |
|     |  | The connectors between the control circuit board and power circuit board are disconnected.                     | Check the connector connections.<br>Control circuit board: CN14, CN19, (CN21)*<br>Power circuit board: CN114, CN119, (CN121)*<br>*Only for LGH-F940/1200 types.  |
|     |  | Fan motor failure  | If the fan can be turned manually, replace the DC motor of the fan.<br>Check the resistance between the motor leads.<br>(See (6) Motor resistance table (page 39).)<br>If the measured value is significantly different from the values specified in the table, replace the DC motor of the fan.   |
|     |  | Circuit board failure  | If LED6 located between CN9 and CN10 on the power circuit board is not lit, check power supply to TAB1 and TAB2. If no error is found with power supply, replace the power circuit board.<br>If the problem persists, replace the DC motor of the fan.   |
|     |  | Power with the rated voltage is not supplied to the product.   | Check the power supply voltage.  |
| 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-62DR-EA is used, it displays the icon “  ” that indicates the protective operation is in-progress. For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.  |
|     |  | The Lossnay unit is set to the delay operation.  | When PZ-62DR-EA is used, it displays the icon “  ” that indicates the delay operation is in-progress. When PZ-43SMF-E is used, it displays the icon “  ” and the timer duration.<br>LED1 (green) on the control circuit board lights.<br>Lossnay operates in 30 minutes (or 15 minutes) after the interlocked air conditioner is operated to run.<br>Check the function selection switch (SW2-3) on the circuit board or the function setting (No. 9) of PZ-62DR-EA. |
|     |  | The interlocked air conditioner (Mr. Slim indoor unit or City Multi indoor unit) is stopped due to defrosting. | The supply fan has been stopped to prevent cold air from blowing out. When the air conditioner starts operating, the fan operation is started automatically.   |
|     |  | The ventilation switching damper is operating.   | The fan stops while the ventilation switching damper is operating.<br>Also, the fan may stop temporarily to check the damper operation regularly.  |



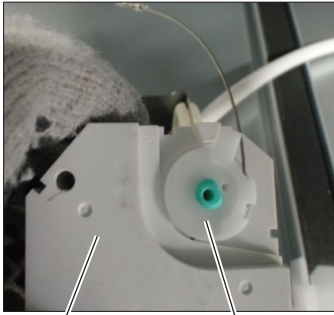
| No. | Problem  | Factor   | Corrective action   |
|-----|--|--|---|
| 3   | [When wall-mounted type CO <sub>2</sub> sensor PZ-70CSW-E is used]<br>The LED display lamps of the CO <sub>2</sub> sensor do not light even though the trial operation switch (SW2-1) on the Lossnay circuit board is turned ON. | CO <sub>2</sub> sensor setting is set incorrectly.   | Check the setting.<br>• When the function setting (No. 66) of PZ-62DR-EA is set to "0", the function selection switches (SW5-6 to SW5-8) on the Lossnay circuit board should be: SW5-6 ON, SW5-7 OFF, SW5-8 OFF<br>• When the function setting (No. 66) of PZ-62DR-EA is set to other than "0", set it to "5".  |
|     |  | The connectors between the LED circuit board (of the CO <sub>2</sub> sensor) and control circuit board (of the Lossnay unit) are disconnected. | Check the connector connections.<br>LED circuit board: CN100<br>Control circuit board: CN34<br>For details about the CO <sub>2</sub> sensor PZ-70CSW-E, see its Installation and Instruction Manual.  |
|     |  | The lead wires connecting the LED circuit board (of the CO <sub>2</sub> sensor) and control circuit board (of the Lossnay unit) are broken.    | Measure the voltage between the pins of connector (CN100) with the trial operation switch (SW2-1) ON. When the values shown below are detected, the lead wires are not broken.<br>• Between the pins 1 and 2 of CN100, voltage is applied in a cycle of 20-second 0 V and 10-second 12 V DC.<br>• Between the pins 1 and 3 of CN100, voltage is applied in a cycle of 20-second 0 V and 10-second 12 V DC.<br>• Between the pins 1 and 4 of CN100, voltage is applied in a cycle of 20-second 0 V and 10-second 12 V DC.<br>When extending the CO <sub>2</sub> sensor wiring cables, check that they are properly connected.<br>For details about the CO <sub>2</sub> sensor PZ-70CSW-E, see its Installation and Instruction Manual. |
|     |  | LED circuit board failure  | If the problem persists, replace the wall-mounted type CO <sub>2</sub> sensor. For details about the CO <sub>2</sub> sensor PZ-70CSW-E, see its Installation and Instruction Manual.  |
| 4   | [When wall-mounted type CO <sub>2</sub> sensor PZ-70CSW-E is used]<br>CO <sub>2</sub> concentration display of PZ-62DR-EA does not change even though the number of persons in a room is changed.                                | Ventilation air volume by the Lossnay unit is large enough or too small against the change in the number of persons in a room.                 | In this case, CO <sub>2</sub> concentration displayed value may be always low or high.  |
|     |  | The lead wires connecting the CO <sub>2</sub> sensor circuit board and Lossnay control circuit board are broken.                               | If the lead wire to pin 3 of the connector on the CO <sub>2</sub> sensor circuit board is broken, detected CO <sub>2</sub> concentration value may be fixed.<br>When extending the CO <sub>2</sub> sensor wiring cables, check that they are properly connected.<br>For details about the CO <sub>2</sub> sensor PZ-70CSW-E, see its Installation and Instruction Manual.   |
|     |  | The lead wires connecting the LED circuit board (of the CO <sub>2</sub> sensor) and control circuit board (of the Lossnay unit) are broken.    | Check the connector connections.<br>LED circuit board: CN100<br>Control circuit board: CN34<br>When extending the CO <sub>2</sub> sensor wiring cables, check that they are properly connected.<br>For details about the CO <sub>2</sub> sensor PZ-70CSW-E, see its Installation and Instruction Manual.  |
| 5   | 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.<br>Check the function settings (No. 12 to 16) of PZ-62DR-EA. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |



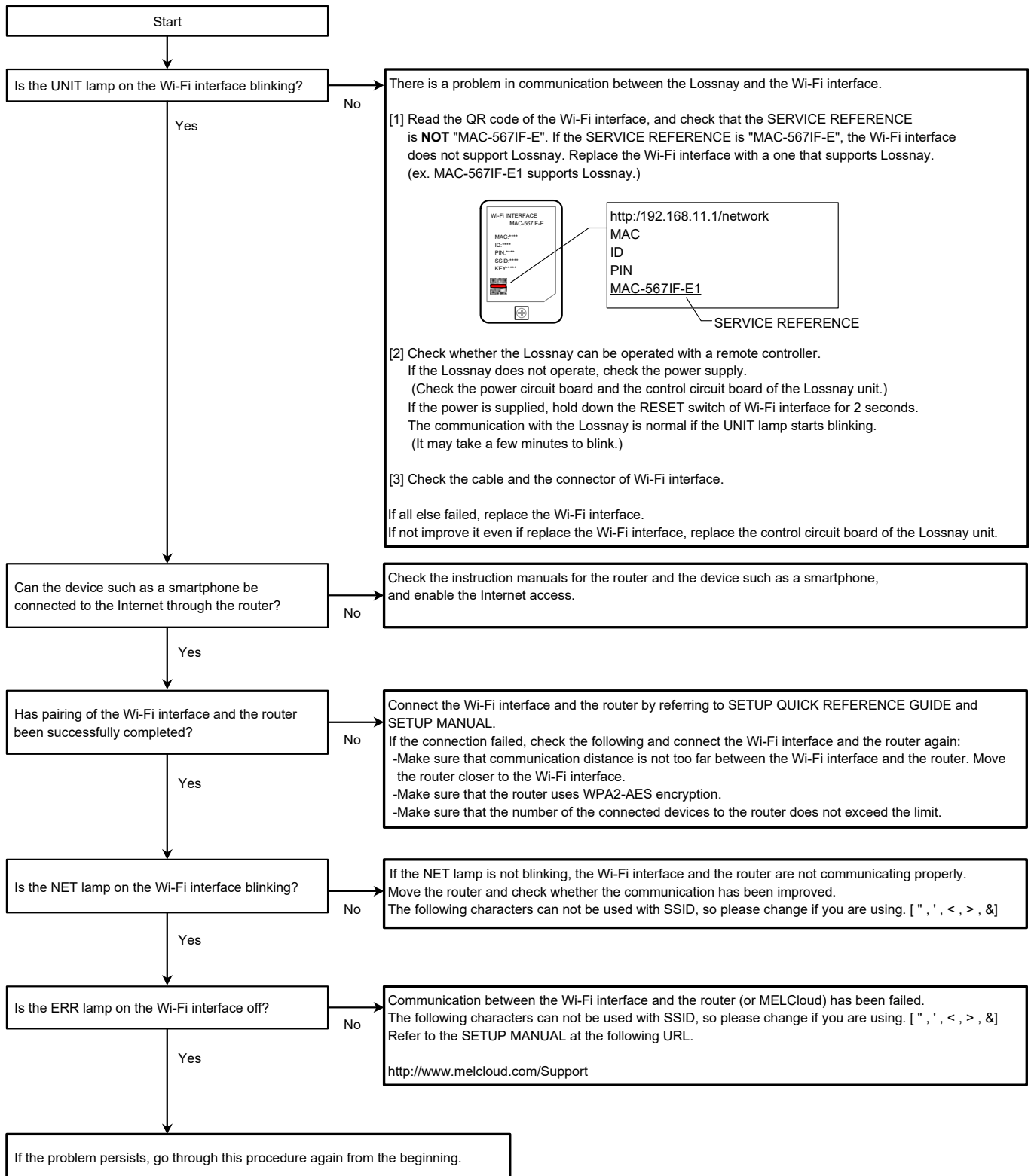
| No. | Problem   | Factor   | Corrective action   |
|-----|---|--|---|
| 6   | Even though the remote controller is operated to change the fan speed, the fan speed does not change.         | The indoor negative pressure setting or the indoor positive pressure setting is set.       | Check the function selection switches (SW2-4 and SW2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-62DR-EA.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |   | The external fan speed input is set. (CN17)  | When PZ-62DR-EA is used, it displays the icon “  ”. Check the fan speed switching input (CN17).  |
|     |   | The external fan speed input is set. (CN26)  | When PZ-62DR-EA is used, it displays the icon “  ”. Check the function selection switches (SW5-6, SW5-7, and SW5-8) on the circuit board or the function setting (No. 66) of PZ-62DR-EA.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |
|     |   | The system is operating in the protective mode (intermittent operation).                   | When PZ-62DR-EA is used, it displays the icon “  ” that indicates the protective operation is in-progress. For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.   |
|     |   | Airflow setting is performed with PZ-62DR-EA.  | Check the “Airflow” screen or the function settings (No. 73 to 78, 87, and 88) of PZ-62DR-EA.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
| 7   | 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).  |
| 8   | 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.<br>(See Chapter 8. (8) Setting status record (page 52).)  |
| 9   | 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 (CN12) on the power circuit board.  |
|     |   | Mechanical failure   | Remove the rod of the damper board, and check that the damper board can be moved by hand. If the damper board cannot be moved, check for obstacles that are obstructing the movement of the damper board.   |
|     |   | 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 (CN12) from the power circuit board and check the voltage value between the pins of CN12 when the trial operation switch (SW2-1) is turned ON.<br>If there is no voltage value, replace the power circuit board.   |
|     |   |  | If the problem persists, replace the damper motor (GM assembly).  |
|     |   | Poor connection of the connectors  | Check the connector connections.<br>Control circuit board: CN14, (CN13)*<br>Power circuit board: CN113, (CN113 (Upper unit))*<br>*Only for LGH-F940/1200 types.   |

| No. | Problem  | Factor  | Corrective action   |
|-----|--|---|---|
| 10  | 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 Heat 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |  | The Lossnay unit is performing the Night-purge operation.   | When PZ-62DR-EA is used, The ventilation mode cannot be changed during the Night-purge operation. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)                                  |
|     |  | 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 Heat recovery mode.   |
| 11  | The ventilation mode cannot be switched when Lossnay is operating in the automatic mode.                           | Temperature condition for Heat recovery mode or Bypass mode is not satisfied.   | Check the temperature map.<br>For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.   |
|     |  | 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 Heat 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |  | 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 Heat 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 Heat recovery mode.   |
| 12  | 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
|     |  | 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 52).)   |
|     |  | The indoor negative pressure setting or the indoor positive pressure setting is set.  | Check the function selection switches (SW2-4 and SW2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-62DR-EA. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |
|     |  | 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.   |
|     |  | Airflow setting is performed with PZ-62DR-EA.   | Check the "Airflow" screen or the function settings (No. 73 to 78, 87, and 88) of PZ-62DR-EA. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)                                      |

| No. | Problem  | Factor  | Corrective action   |
|-----|--|---|---|
| 13  | 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).<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
|     |  | The signal (0 to 10 V DC) is input to the fan speed switching input (CN26 [4] [5]).   | Check the fan speed switching input (CN26 [4] [5]).<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
|     |  | Function setting (No. 8) of PZ-62DR-EA "Max. fan speed setting during the first 30 minutes" is enabled.                           | Lossnay operates at maximum fan speed for 30 minutes when operation starts.<br>While this function is working, the icon "🌀" and selected fan speed are displayed on the screen of PZ-62DR-EA.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |
|     |  | The indoor negative pressure setting or the indoor positive pressure setting is set.  | Check the function selection switches (SW2-4 and SW2-5) on the circuit board or the function settings (No. 6 and 7) of PZ-62DR-EA.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 14  | The Night-purge operation cannot be stopped with PZ-62DR-EA.   | Usual ON/OFF button operation cannot stop the Night-purge operation.  | Press the ON/OFF button once to display the operation screen, and then press the ON/OFF button again.   |
| 15  | 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.<br>For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.                                      |
|     |  | The Night-purge schedule is not set.  | Check the setting of PZ-62DR-EA or the system controller that supports Night-purge operation.<br>For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.  |
| 16  | 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.<br>For details, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.   |
|     |  | 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-62DR-EA 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)                                      |
| 17  | The Lossnay unit does not operate with the MELCloud application.<br>(When the Wi-Fi interface is used) | The connection cable for the Wi-Fi interface is too close to the power supply cable or the other communication cables.            | Wire the connection cable for the Wi-Fi interface at least 2 in. (5 cm) away from the power supply cable or the other communication cables.   |
|     |  | The system configuration is not appropriate.  | Refer to the notes for the system configuration, for example, on leaflets supplied with the Lossnay unit.   |
|     |  | If the above does not solve the problem   | See <Fig. 6-1 Check of Wi-Fi interface> (page 25).  |

| No. | Problem   | Factor  | Corrective action   |
|-----|---|---|---|
| 18  | When the supply fan is stopped, the exhaust fan operates at the higher fan speed than the fan speed set with the remote controller. | The Lossnay unit is operating in the protective mode (intermittent operation). (Outdoor temperature is 23°F (-5°C) or lower.) | During the intermittent operation, the exhaust fan operates at fan speed 4.   |
| 19  | Abnormal noise comes from the damper motor  | Mis-assembling of the damper motor  | <p>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.</p>  <p style="text-align: center;">Damper motor      Pulley</p> |
|     |   | Damper motor failure  | If no error is found around the pulley and wire, replace the GM assembly.   |

<Fig. 6-1 Check of Wi-Fi interface>



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

If the remote controller does not work, check the following items.

### [1] PZ-62DR-EA

| No. | Problem   | Factor   | Corrective action   |
|-----|---|--|---|
| 1   | Nothing is displayed on the remote controller.<br>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-62DR-EA controllers are connected.  | Only up to two PZ-62DR-EA 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 (with address number 1 or the smallest number other than 0). | Only one Lossnay unit can be set as the main Lossnay in one group.                                      |
| 2   | The remote controller continues to display "Please Wait".<br>Error code "6831" is displayed.    | The remote controller is starting up.  | The remote controller displays "Please Wait" during start-up for maximum three 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-62DR-EA 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 old model remote controller (TZ-61DR-E) is connected.  | Use PZ-62DR-EA remote controller.   |
|     |   | 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 (with address number 1 or the smallest number other than 0). | Only one Lossnay unit can be set as the main Lossnay in one group.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |



| No. | Problem   | Factor  | Corrective action  |
|-----|---|---|--|
| 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.                             |
| 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-62DR-EA is used together.  | PZ-43SMF-E and PZ-62DR-EA cannot be used together.   |
| 5   | Operations with the remote controller are not possible.   | The function selection switch (SW5-9) on the circuit board is set to ON.  | When PZ-43SMF-E is used, set the function selection switch (SW5-9) to OFF.                                   |

### (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, check the following items.

| No. | Check item   | Notes   |
|-----|--|---|
| 1   | Are the function selection switches (SW2, SW5) and model selection switch (SW6) 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-62DR-EA 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-62DR-EA is used, are icons and characters displayed on the PZ-62DR-EA screen?  | Based on the icon and characters, you can check statuses such as the timer operation, Night-purge, and protective operation. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
| 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-62DR-EA.   |
| 5   | Is the external input used?  | If the interlock mode is set to "External input given priority" (function setting (No. 19) is set to "3") and if the external device is operating, the stop operation by PZ-62DR-EA is prohibited. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |
|     |  | If the Remote/Local switching (CN32) is set to remote, the start/stop operation by the Lossnay remote controller is prohibited. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |  | Priority is given to the operation by the fan speed switching input and Bypass mode switching input. (CN17, CN26) (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 6   | Is the Wi-Fi interface connected?  | When the Lossnay unit is operated with the MELCloud application, the Lossnay unit operates according to the latter signal.  |

● **Individual check items**

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

[1] PZ-62DR-EA

| 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.  |
| 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, is not set to the address with the smallest number in the group, or the address is duplicated. | Lossnay unit with the smallest address number in the group will be set as the main Lossnay automatically. Do not assign the same address number to the other Lossnay units.  |
| 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |   | 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
| 4   | Even though the function settings (No. 37 and/or 39) of PZ-62DR-EA are set to "1", the indoor temperature and/or supply air temperature are not displayed.                          | The Lossnay unit is performing the Bypass mode ventilation.  | The indoor temperature and/or supply air temperature are not displayed during the Bypass mode. In addition, this function is available only when "Sensor value" is set to "Yes" (Display) by the remote controller PZ-62DR-EA. |
| 5   | Even though the function settings (No. 36, 37 and/or 39) of PZ-62DR-EA are set to "1", the outdoor temperature, indoor temperature and/or supply air temperature are not displayed. | The setting of PZ-62DR-EA is not correct.  | Select "Yes" at "Sensor value" menu of PZ-62DR-EA. For details, see the Installation Manual of PZ-62DR-E.  |



| No. | Problem  | Factor   | Corrective action   |
|-----|--|--|---|
| 6   | Even though the function settings (No. 36, 37 and/or 39) of PZ-62DR-EA are set to "1", "LO" or "HI" is displayed on the remote controller. | The indoor, outdoor, and/or supply air temperature are outside the display range.  | <ul style="list-style-type: none"> <li>• Outdoor temperature display range: 35.6°F (2°C) to 96.8°F (36°C)</li> <li>• Indoor temperature display range: 48.2°F (9°C) to 98.6 °F (37°C)</li> <li>• Calculated supply air temperature display range: 48.2°F (9°C) to 98.6 °F (37°C)</li> </ul> If the temperature exceeds the display range, "HI" will be displayed, and if less than the display range, "LO" will be displayed. |
| 7   | CO <sub>2</sub> concentration is not displayed on PZ-62DR-EA.  | With the function setting No. 38, CO <sub>2</sub> concentration indication setting is set to "0: N/A".                     | Set the function setting No. 38 to "1: Available on the screen of PZ-62DR-EA". (See the PZ-62DR-E Installation manual and the Lossnay Installation Instructions.)   |
|     |  | The detected CO <sub>2</sub> concentration is outside the display range.   | Detectable CO <sub>2</sub> concentration range: 300 to 2000 ppm<br>If the concentration exceeds 2000 ppm, "2000" will be displayed, and if less than 400 ppm, "LO" will be displayed.   |
|     |  | The CO <sub>2</sub> sensor is in warm-up operation. (For 15 minutes after power is supplied to the CO <sub>2</sub> sensor) | PZ-62DR-EA does not display CO <sub>2</sub> concentration while the CO <sub>2</sub> sensor is in warm-up operation.<br>(It displays "--- ppm" during warm-up operation.)  |

[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).<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
|     |  | The Lossnay unit is set to the delay operation.   | When PZ-62DR-EA is used, it displays the icon "⌚" that indicates the delay operation is in-progress.<br>LED1 (green) on the control circuit board lights.<br>The Lossnay unit starts operation in 30 minutes (or 15 minutes) after starting operation by the air conditioner or external signal.<br>Check the function selection switch (SW2-3) on the circuit board or the function setting (No. 9) of PZ-62DR-EA. (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.) |
|     |  | The interlock mode of the Lossnay unit is set to "ON Interlock" or "OFF Interlock".                                     | Check the interlock mode setting.<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|     |  | In a group with multiple Lossnay units, no Lossnay unit is set to the main Lossnay.                                     | When externally controlling multiple Lossnay units without using M-NET (and address setting), set one Lossnay unit as the main Lossnay to input external control signal. (Set its address to the smallest number in the group, or set it to 1 and then set the other units address to 0.)  |
|     |  | In a group with 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.  |

[3] System controller

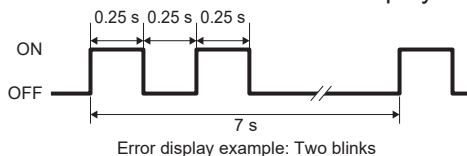
| No. | Problem   | Factor   | Corrective action  |
|-----|---|--|--|
| 1   | The group of Lossnay cannot be set with the system controller.  | The power of the Lossnay unit is not ON.   | Check the items described in (1) [1].  |
|     |   | M-NET transmission cable is connected to the remote controller 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 (SW11 and SW12) 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)       |
|     |   | 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 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 Operating/Installation Instructions or PZ-62DR-E Instruction Book.  |
| 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-62DR-EA 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 address of the Lossnay unit, which is set as the main Lossnay, is not set to the smallest number in the group.   | Lossnay unit with the smallest address number in the group will be set as the main Lossnay automatically.<br>Do not assign the same address number to the other Lossnay units. |

[4] When the Wi-Fi interface is connected to the Lossnay unit

| No. | Problem   | Factor   | Corrective action   |
|-----|---|--|---|
| 1   | The Lossnay unit does not operate with the MELCloud application. (When the Wi-Fi interface is used) | The connection cable for the Wi-Fi interface is too close to the power supply cable or the other communication cables. | Wire the connection cable for the Wi-Fi interface at least 2 in. (5 cm) away from the power supply cable or the other communication cables. |
|     |   | The system configuration is not appropriate.   | Refer to the notes for the system configuration, for example, on leaflets supplied with the Lossnay unit.                                   |
|     |   | If the above does not solve the problem  | See <Fig. 6-1 Check of Wi-Fi interface> (page 25).  |

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

An error code displayed on the remote controller (PZ-62DR-EA, 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 list

| Error Code | LED1 (green) | LED2 (red) | Symptom               | Cause   | Corrective action   |
|------------|--------------|------------|-----------------------|---|---|
| 0900       | —            | —          | Trial operation       | The trial operation switch (SW2-1) on the circuit board is set to "ON".   | Check the trial operation switch. (See the Lossnay Operating/ Installation Instructions or PZ-62DR-E Instruction Book.)                       |
| 3126       | 8 blinks     | —          | External device error | When the terminals (TM3 [9] [10]) or Lossnay signal output terminal PZ-4GS-E are set for pre-heater output (the function setting No. 12 of PZ-62DR-EA is set to "6", and No. 13 to 16 are set to "5"), the following conditions were satisfied. <ul style="list-style-type: none"> <li>• Outdoor air temperature detected by OA thermistor stays at 158°F (70°C) or higher for one minute.</li> <li>• Outdoor air temperature detected by OA thermistor exceeds 59°F (15°C) within 15 minutes after the pre-heater output starts.</li> <li>• Outdoor air temperature is still -4°F (-20°C) or lower 5 minutes after the pre-heater output starts.</li> </ul> Causes of the above phenomena are described below. | See below.  |
|            |              |            |                       | The pre-heater is connected to the wrong terminal.  | Connect the pre-heater to the terminals (TM3 [9] [10]). (See the Lossnay Operating/ Installation Instructions or PZ-62DR-E Instruction Book.) |
|            |              |            |                       | 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.                              |
|            |              |            |                       | Pre-heater failure  | Replace the pre-heater.   |
|            |              |            |                       | Pre-heater relay failure  | Replace the relay for the pre-heater.   |
|            |              |            |                       | Circuit board failure   | First, replace the control circuit board.<br>If the problem persists, then replace the power circuit board.                                   |

| Error Code | LED1 (green)             | LED2 (red) | Symptom  | Cause   | Corrective action  |
|------------|--------------------------|------------|--|---|--|
| 4101       | 11 blinks                | —          | Overcurrent error of the remote controller terminal  | Shorting between the remote controller terminals  | Check the remote controller wiring.  |
|            |                          |            |  | The group contains two or more Lossnay units with the same address.   | Set unique addresses to these units.   |
|            |                          |            |  | 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 control circuit board.   |
|            |                          |            |  | Remote controller failure   | Replace the remote controller.   |
| 4116       | 1 blink or 6 blinks (*1) | —          | Abnormal rotation of the supply fan motor (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.   |
|            |                          |            |  | <For LGH-F300 to 600 types><br>Faulty connection of the connectors (CN19–CN119) between the control circuit board and power circuit board   | Check the connector connections (CN19–CN119).  |
|            |                          |            |  | <For LGH-F940 and 1200 types><br>Faulty connection of the connectors (CN19–CN119) between the control circuit board and power circuit board (lower unit)<br>(CN21–CN121) between the control circuit board and power circuit board (upper unit) | Check the connector connections (CN19–CN119) and (CN21–CN121).   |
|            |                          |            |  | The model selection switch (SW6) is not set correctly.  | Make the SW6 setting appropriate for the model.<br>(See Chapter 8. (8) Setting status record (page 52).) |
|            |                          |            |  | 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   | Replace the fan motor.<br>(See page 19.)   |
|            |                          |            |  | Circuit board failure   | Replace the power circuit board.   |

(\*1) 1 blink for LGH-F300 to 600 types

1 or 6 blinks for LGH-F940 and 1200 types

| Error Code | LED1 (green)              | LED2 (red) | Symptom   | Cause   | Corrective action  |
|------------|---------------------------|------------|---|---|--|
| 4116       | 2 blinks or 7 blinks (*2) | —          | Abnormal rotation of the exhaust fan motor (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.  |
|            |                           |            |   | <For LGH-F300 to 600 types><br>Faulty connection of the connectors (CN19–CN119) between the control circuit board and power circuit board   | Check the connector connections (CN19–CN119).  |
|            |                           |            |   | <For LGH-F940 and 1200 types><br>Faulty connection of the connectors (CN19–CN119) between the control circuit board and power circuit board (lower unit)<br>(CN21–CN121) between the control circuit board and power circuit board (upper unit) | Check the connector connections (CN19–CN119) and (CN21–CN121).   |
|            |                           |            |   | The model selection switch (SW6) is not set correctly.  | Make the SW6 setting appropriate for the model.<br>(See Chapter 8. (8) Setting status record (page 52).)   |
|            |                           |            |   | 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   | Replace the fan motor.<br>(See page 19.)   |
|            |                           |            |   | Circuit board failure   | Replace the power circuit board.   |
|            |                           |            |   | When operation is stopped, the exhaust fan rotates due to outside wind.   | Prevent the outside wind from intruding.   |
| 5101       | 4 blinks                  | —          | Outdoor air (OA) thermistor related error   | Faulty connection of the thermistor connector (CN7) on the control circuit board  | Check the connector (CN7) connection.  |
|            |                           |            |   | Thermistor failure  | Disconnect the connector (CN7), and check the resistance of the thermistor.<br>If the equivalent thermistor resistance differs greatly from the ambient temperatures, replace the thermistor.<br>(See (5) Temperatures and thermistor resistance table (page 39).) |

(\*2) 2 blinks for LGH-F300 to 600 types  
2 or 7 blinks for LGH-F940 and 1200 types

| Error Code | LED1 (green) | LED2 (red) | Symptom  | Cause   | Corrective action   |
|------------|--------------|------------|--|---|---|
| 5102       | 5 blinks     | —          | Return 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.<br>If the equivalent thermistor resistance differs greatly from the ambient temperatures, replace the thermistor. (See (5) Temperatures and thermistor resistance table (page 39).) |
| 5501       | 12 blinks    | —          | CO <sub>2</sub> sensor error (Optional components: PZ-70CSW-E, PZ-70CSB-E) | The connectors for the CO <sub>2</sub> sensor are disconnected.   | Check the connector connections (CN34 (only for PZ-70CSW-E), CN23, CN26, and CN35) on the control circuit board.  |
|            |              |            |  | CO <sub>2</sub> sensor failure  | Check the CO <sub>2</sub> sensor wiring according to the PZ-70CSW-E/ PZ-70CSB-E Installation and Instruction Manual. If the problem persists even after correcting the wiring, replace the CO <sub>2</sub> sensor.  |
|            |              |            |  | Even though the CO <sub>2</sub> sensor is not connected, CO <sub>2</sub> sensor setting (the function selection switches (SW5-6 to SW5-8) on the circuit board or the function setting (No. 66) of PZ-62DR-EA) is set as shown below.<br>• “PZ-70CSW-E connected” (SW5-6: ON, SW5-7 and SW5-8: OFF, or No.66: 5)<br>• “PZ-70CSB-E connected” (SW5-6 and SW5-7: ON, SW5-8: OFF, or No.66: 7) | When the CO <sub>2</sub> sensor is not connected, set the function selection switches (SW5-6 to SW5-8) on the circuit board to OFF, or the function setting (No. 66) of PZ-62DR-EA to “1: No external fan speed control input”.                                 |
| 6201       | —            | —          | PZ-62DR-EA circuit board failure   | Remote controller failure   | Replace the PZ-62DR-EA remote controller.   |
| 6202       | —            | —          | PZ-62DR-EA circuit board failure   | Clock function of the remote controller is not working properly.  | Replace the PZ-62DR-EA remote controller.   |
| 6600       | —            | 6 blinks   | Multiple address error   | The system contains two or more units (*3) with the same address in the same M-NET transmission cable line.   | Find the units (*3) with the same address, and set unique addresses to these units.   |

(\*3) 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  |
|------------|--------------|------------|--|---|--|
| 6602       | —            | 2 blinks   | Transmission error (transmission processor hardware error) | Faulty connection of the M-NET transmission cable   | Check the items described in (1) [2].  |
|            |              |            |  | <ul style="list-style-type: none"> <li>• Wiring was performed with power still supplied to the M-NET transmission cable.</li> <li>• Accidental communication error</li> </ul> | Restart the system after completing wiring.<br>If the error re-occurs, check for noise on the transmission cable.<br>If the above does not correct the problem, replace the Lossnay control circuit board. |
|            |              |            |  | Power is supplied to the same transmission cable from two or more power supply units.<br>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-62DR-EA is connected to the terminals (TB5 [A] [B]).   | Connect PZ-62DR-EA to the terminals (TM4 [1] [2]).<br>(See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)   |
|            |              |            |  | Malfunction of the unit (*3) where an error occurs  | Check the unit (*3) where the error occurs.  |
| 6603       | —            | 5 blinks   | Transmission error (transmission bus busy)                 | Faulty connection of the M-NET transmission cable   | Check the items described in (1) [2].  |
|            |              |            |  | <ul style="list-style-type: none"> <li>• Wiring was performed with power still supplied to the M-NET transmission cable.</li> <li>• Accidental communication error</li> </ul> | Restart the system after completing wiring.<br>If the error re-occurs, check for noise on the transmission cable.<br>If the above does not correct the problem, replace the Lossnay control circuit board. |
|            |              |            |  | Power is supplied to the same transmission cable from two or more power supply units.<br>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-62DR-EA is connected to the terminals (TB5 [A] [B]).   | Connect PZ-62DR-EA to the terminals (TM4 [1] [2]). (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
|            |              |            |  | Malfunction of the unit (*3) where an error occurs  | Check the unit (*3) where the error occurs.  |

(\*3) 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  |
|------------|--------------|------------|--|--|--|
| 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].  |
|            |              |            |  | <ul style="list-style-type: none"> <li>• Wiring was performed with power still supplied to the M-NET transmission cable.</li> <li>• Accidental communication error</li> </ul>                                  | Restart the system after completing wiring.<br>If the error re-occurs, check for noise on the transmission cable.<br>If the above does not correct the problem, replace the Lossnay control circuit board. |
|            |              |            |  | Malfunction of the unit (*3) where an error occurs   | Check the unit (*3) 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-62DR-EA is connected to the terminals (TB5 [A] [B]).  | Connect PZ-62DR-EA to the terminals (TM4 [1] [2]). (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 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.<br><ul style="list-style-type: none"> <li>• Max. extension: 219 yd. (200 m)</li> <li>• Total extension: 547 yd. (500 m)</li> </ul> | Check the wiring length of the transmission cable.   |
|            |              |            |  | PZ-62DR-EA is connected to the terminals (TB5 [A] [B]).  | Connect PZ-62DR-EA to the terminals (TM4 [1] [2]). (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 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 in. (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.   |
|            |              |            |  | PZ-43SMF-E is connected to the terminals (TB5 [A] [B]).  | Connect PZ-43SMF-E to the terminals (TM4 [1] [2]). (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |

(\*3) 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  |
|------------|--------------|------------|---|--|--|
| 6831       | 9 blinks     | —          | PZ-62DR-EA communication error (no reception)                   | Faulty connection of the PZ-62DR-EA 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 control circuit board or PZ-62DR-EA remote controller. |
|            |              |            |   | PZ-62DR-EA is connected to the terminals (TB5 [A] [B]).  | Connect PZ-62DR-EA to the terminals (TM4 [1] [2]). (See the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.)  |
| 6832       | 9 blinks     | —          | PZ-62DR-EA communication error (synchronization recovery error) | Faulty connection of the PZ-62DR-EA 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 control circuit board or PZ-62DR-EA remote controller. |
| 6833       | 9 blinks     | —          | PZ-62DR-EA communication error (hardware error)                 | Faulty connection of the PZ-62DR-EA 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 control circuit board or PZ-62DR-EA remote controller. |
| 6834       | 9 blinks     | —          | PZ-62DR-EA communication error (start bit detection error)      | Faulty connection of the PZ-62DR-EA 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 control circuit board or PZ-62DR-EA remote controller. |
| 7113       | 10 blinks    | —          | Function setting error  | The group contains two or more Lossnay units with the same address.  | Set unique addresses to these units.   |
|            |              |            |   | 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 52).)  |
|            |              |            |   | Improper power circuit board is used. The applicable circuit boards must be used as shown below.<br>LGH-F300 and 380 types:<br>LG-X08DC-P4<br>LGH-F470 and 600 types:<br>LG-X08DC-P6<br>LGH-F940 and 1200 types:<br>LG-X08DC-P6 (Lower unit)<br>LG-X08DC-P5 (Upper unit) | Check that the applicable power circuit board is connected.  |

## (5) Temperatures and thermistor resistance table

| Temperature |      | Resistance | Temperature |      | Resistance | Temperature |      | Resistance | Temperature |      | Resistance | Temperature |      | Resistance |
|-------------|------|------------|-------------|------|------------|-------------|------|------------|-------------|------|------------|-------------|------|------------|
| (°F)        | (°C) | value (kΩ) | (°F)        | (°C) | value (kΩ) | (°F)        | (°C) | value (kΩ) | (°F)        | (°C) | value (kΩ) | (°F)        | (°C) | value (kΩ) |
| -22         | -30  | 64.2 to ∞  | 19.4        | -7   | 19.4       | 46.4        | 8    | 9.9        | 73.4        | 23   | 5.4        | 100.4       | 38   | 3.1        |
| ⋮           | ⋮    | ⋮          | 21.2        | -6   | 18.5       | 48.2        | 9    | 9.5        | 75.2        | 24   | 5.2        | 102.2       | 39   | 3.0        |
| -4.0        | -20  | 37.2       | 23.0        | -5   | 17.7       | 50.0        | 10   | 9.1        | 77.0        | 25   | 5.0        | 104.0       | 40   | 2.9        |
| -2.2        | -19  | 35.3       | 24.8        | -4   | 16.9       | 51.8        | 11   | 8.7        | 78.8        | 26   | 4.8        | 105.8       | 41   | 2.8        |
| -0.4        | -18  | 33.5       | 26.6        | -3   | 16.1       | 53.6        | 12   | 8.4        | 80.6        | 27   | 4.6        | 107.6       | 42   | 2.7        |
| 1.4         | -17  | 31.8       | 28.4        | -2   | 15.4       | 55.4        | 13   | 8.0        | 82.4        | 28   | 4.5        | 109.4       | 43   | 2.6        |
| 3.2         | -16  | 30.2       | 30.2        | -1   | 14.7       | 57.2        | 14   | 7.7        | 84.2        | 29   | 4.3        | 111.2       | 44   | 2.5        |
| 5.0         | -15  | 28.7       | 32.0        | 0    | 14.0       | 59.0        | 15   | 7.4        | 86.0        | 30   | 4.2        | 113.0       | 45   | 2.5        |
| 6.8         | -14  | 27.3       | 33.8        | 1    | 13.4       | 60.8        | 16   | 7.1        | 87.8        | 31   | 4.0        | 114.8       | 46   | 2.4        |
| 8.6         | -13  | 26.0       | 35.6        | 2    | 12.8       | 62.6        | 17   | 6.8        | 89.6        | 32   | 3.9        | 116.6       | 47   | 2.3        |
| 10.4        | -12  | 24.7       | 37.4        | 3    | 12.3       | 64.4        | 18   | 6.6        | 91.4        | 33   | 3.7        | 118.4       | 48   | 2.2        |
| 12.2        | -11  | 23.6       | 39.2        | 4    | 11.8       | 66.2        | 19   | 6.3        | 93.2        | 34   | 3.6        | 120.2       | 49   | 2.2        |
| 14.0        | -10  | 22.4       | 41.0        | 5    | 11.3       | 68.0        | 20   | 6.1        | 95.0        | 35   | 3.5        | 122.0       | 50   | 2.1        |
| 15.8        | -9   | 21.4       | 42.8        | 6    | 10.8       | 69.8        | 21   | 5.8        | 96.8        | 36   | 3.3        | ⋮           | ⋮    | ⋮          |
| 17.6        | -8   | 20.4       | 44.6        | 7    | 10.3       | 71.6        | 22   | 5.6        | 98.6        | 37   | 3.2        | 194         | 90   | 0 to 0.7   |

\* Measure the return air (RA) thermistor resistance across pin No. 1 and 2 of CN5, and the outdoor air (OA) thermistor resistance across pin No. 1 and 3 of CN7.

## (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 boards 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

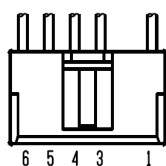
\*Before measuring the resistance, the motor connectors must be disconnected from the circuit board.

<LGH-F300RVX2-E, LGH-F380RVX2-E>

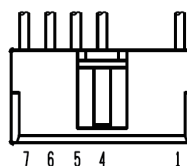
| Pin No.           | Supply fan motor  | 3-1          | 3-4         | 3-5          | 3-6  |
|-------------------|-------------------|--------------|-------------|--------------|------|
|                   | Exhaust fan motor | 4-1          | 4-5         | 4-6          | 4-7  |
| Normal resistance |                   | About 815 kΩ | About 40 kΩ | About 105 kΩ | ∞ kΩ |

<LGH-F470RVX2-E, LGH-F600RVX2-E, LGH-F940RVX2-E, LGH-F1200RVX2-E>

| Pin No.           | Supply fan motor  | 3-1  | 3-4         | 3-5          | 3-6  |
|-------------------|-------------------|------|-------------|--------------|------|
|                   | Exhaust fan motor | 4-1  | 4-5         | 4-6          | 4-7  |
| Normal resistance |                   | ∞ kΩ | About 50 kΩ | About 150 kΩ | ∞ kΩ |



Supply fan motor connector



Exhaust fan motor connector

## 8. Overhauling procedures

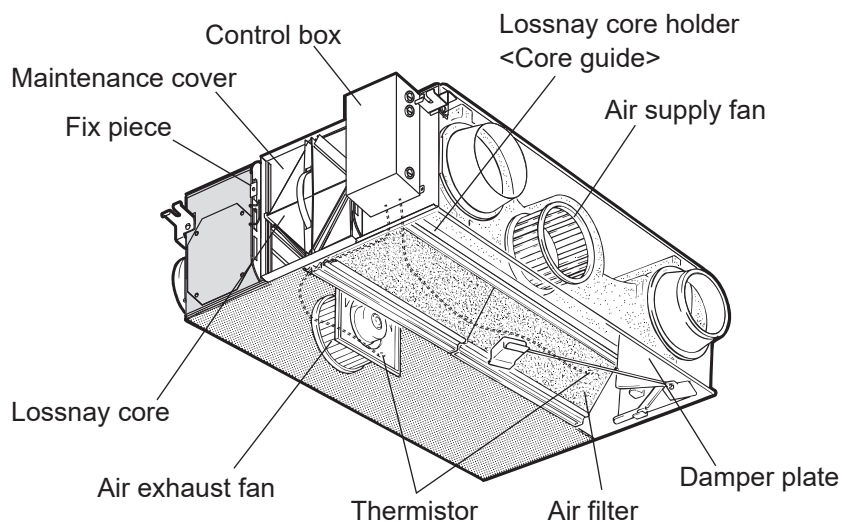
### ■ Work precautions

- 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 or components, follow the instructions described in the troubleshooting.
  - When servicing, always keep proper footing.
  - When servicing, be sure to turn off the power supply isolator. Pay sufficient attention to avoid electric shock or injury.
  - Be sure to connect the power supply wires correctly.
  - Avoid application of abnormal voltage.
  - Pay attention not to drop the parts or components.
  - When the tightening torque for assembling is specified, be sure to tighten to the specified tightening torque.
  - After connecting the lead wires, make sure that they are securely connected.
  - After completing repairs, check that the product operates properly.
- \* **Always wear a pair of gloves when servicing.**

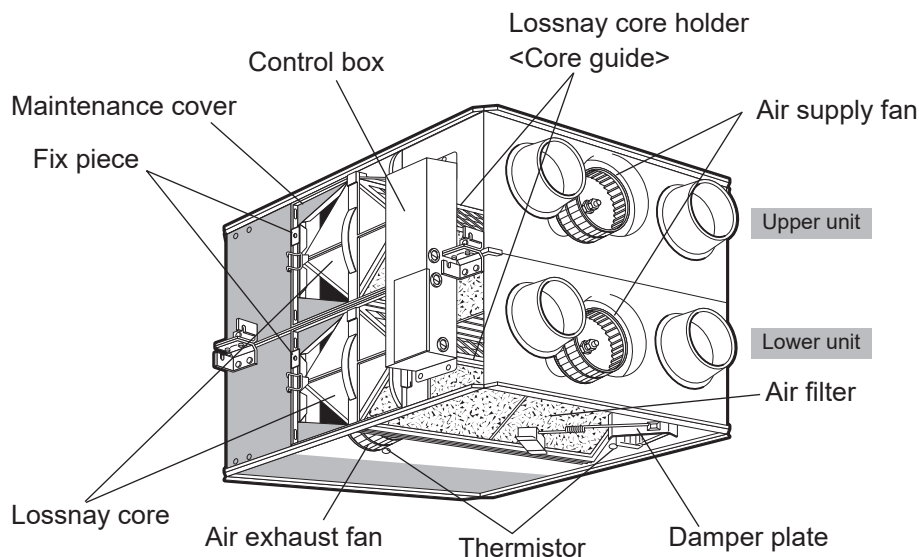
### <External and internal view of the product>

Names within angle brackets < > are part names listed in the parts catalog.

#### Models LGH-F300RVX2-E, LGH-F380RVX2-E, LGH-F470RVX2-E, LGH-F600RVX2-E



#### Model LGH-F940RVX2-E, LGH-F1200RVX2-E



## (1) Turning power off

- [1] Shut down the unit.
- [2] Turn off the power supply isolator.

### Precaution

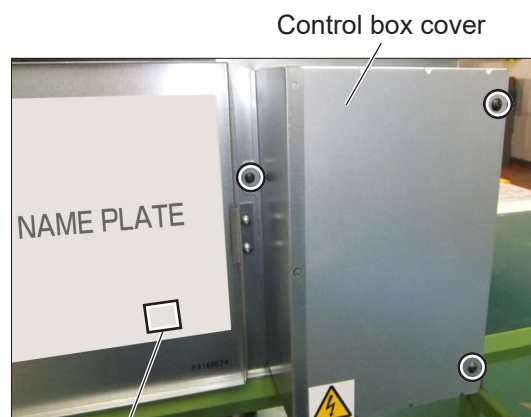
**When servicing, power supply to M-NET must be turned off. Live-line working may cause a circuit board failure.**

## (2) Fan parts

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

**For LGH-F940RVX2-E and LGH-F1200RVX2-E**

See (5) [1] (on page 48) for removing the control box cover.



- [2] Check that LED4 (red) on the circuit board is OFF, and then disconnect the motor connectors (CN9, CN10, indicated by ○) from the power circuit board.

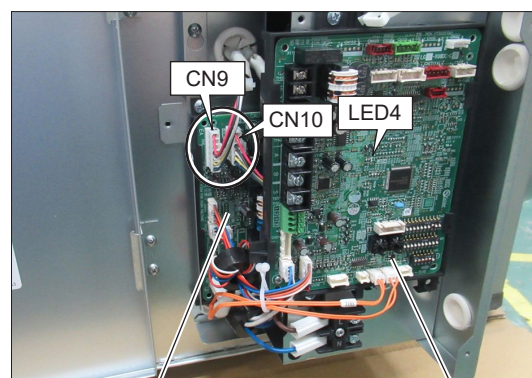
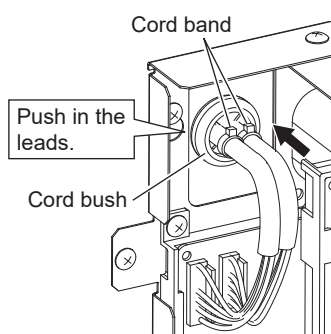
### Precaution

**When disconnecting the motor connectors, make sure that the power supply is turned off and all LEDs are unlit. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.**

### Assembly precaution

**After connecting the motor connectors (CN9, CN10), check the wiring inside the main unit.**

**Push in the motor leads until their cord bands touch the cord bush.**

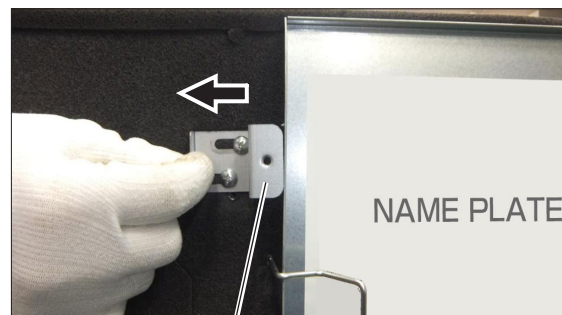


- [3] Remove the black screw (one special screw 4×8, indicated by ○) for the fix piece.





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



Fix piece

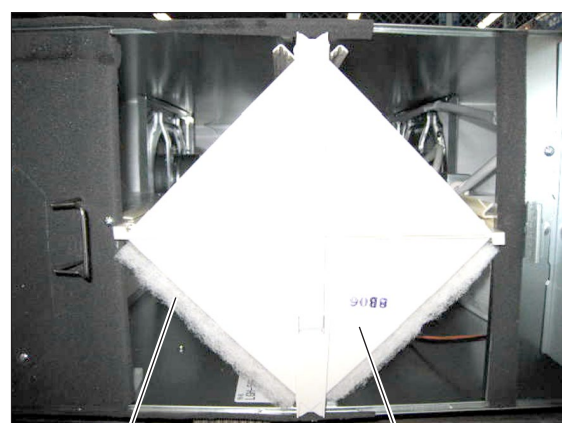
[5] Pull out the hinge, and open the maintenance cover.



Hinge

Maintenance cover

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



Filter

Lossnay core

[7] Remove the screws (one special screw M4, indicated by O), and remove the core guides from the unit.



Core guide L

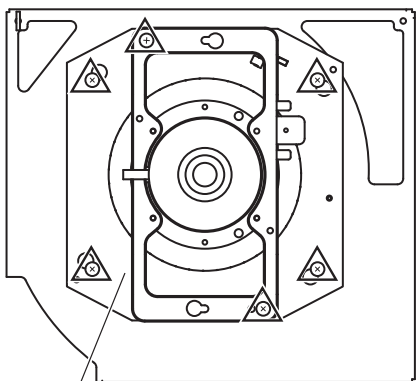
[8] Remove the separator.



Separator

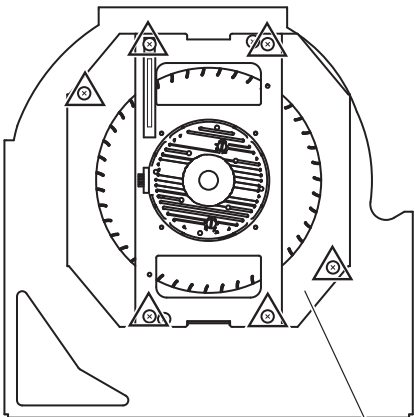
[9] Remove the screws (Six PTT screws 5×10, indicated by △), and draw the fan assembly out from the main unit.

For LGH-F300RVX2-E



Air supply fan assembly

For LGH-F380RVX2-E to LGH-F1200RVX2-E



Air supply fan assembly

\*The figure shows LGH-F470RVX2-E.

**Assembly precaution**

**When attaching the centrifugal fan, tighten the special nut to the specified tightening torque.**

Tightening torque for the special nut

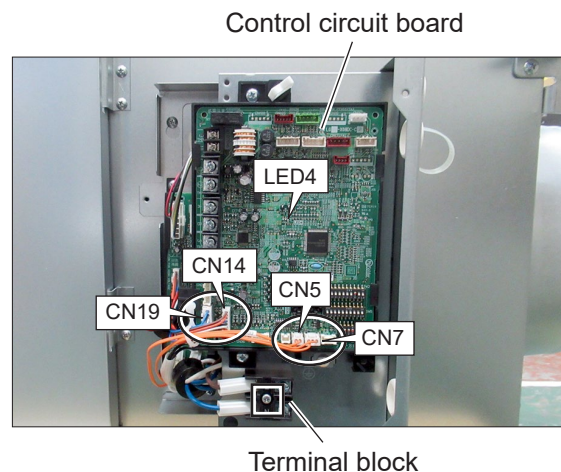
|                                   |                   |                  |
|-----------------------------------|-------------------|------------------|
| LGH-F300RVX2-E                    | Special nut (M8)  | 3.43 ± 0.4 N.m   |
| LGH-F380RVX2-E                    | Special nut (M10) | 7.30 ± 0.5 N.m   |
| LGH-F470RVX2-E to LGH-F1200RVX2-E | Special nut (M12) | 30.87 ± 2.45 N.m |

\* Remove the Air exhaust fan assembly in the same manner as the steps [7] to [9].

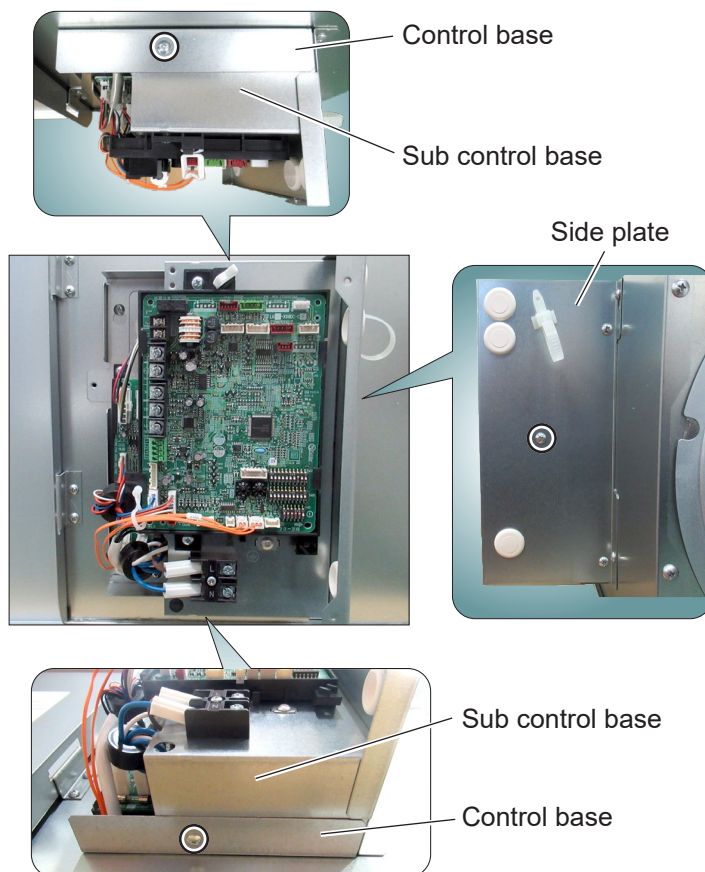


### (3) Terminal block parts

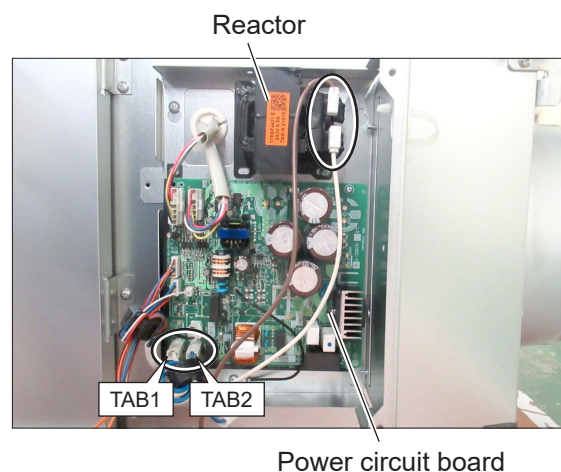
- [1] Remove the control box cover. → See (2) [1].
- [2] Check that LED4 (red) on the control circuit board is OFF, and then disconnect the connectors (indicated by ○) from the control circuit board.
- [3] Remove the screw (one PPT screw 4×20, indicated by □).



- [4] Remove the screws (three PT screws 4×8, indicated by ○), and remove the sub control base.



- [5] Disconnect the connectors (indicated by ○) from the power circuit board and the reactor, and remove the terminal block with the lead wires.

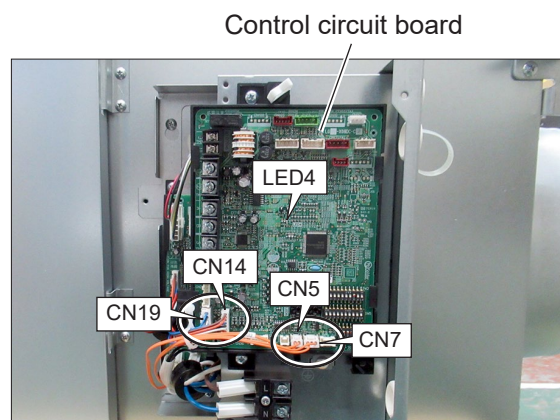


## (4) Control parts (For LGH-F300RVX2-E to LGH-F600RVX2-E)

### Precaution

Before replacing the circuit boards, see (6) Procedures for replacing the circuit boards (page 49).

- [1] Remove the control box cover. → See (2) [1].
- [2] Check that LED4 (red) on the control circuit board is OFF, and then disconnect the connectors (indicated by ○) from the control circuit board.



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



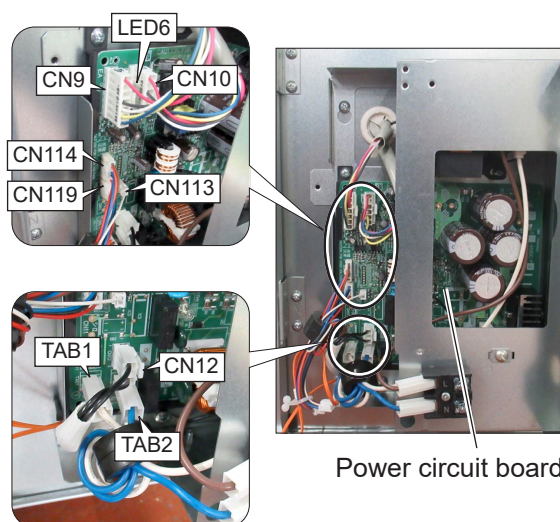
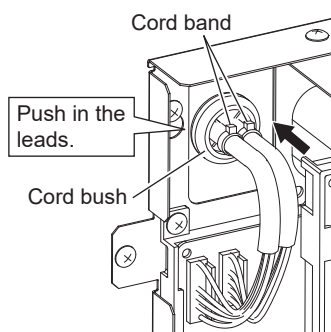
- [4] Disconnect the connectors (indicated by ○) from the power circuit board.

### Precaution

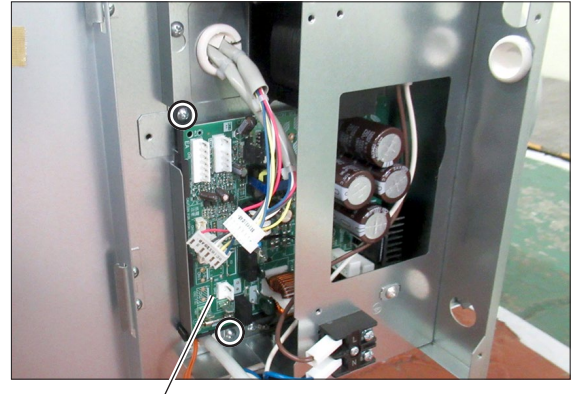
When disconnecting the motor connectors, make sure that the power supply is turned off and all LEDs are unlit. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.

### Assembly precaution

After connecting the motor connectors (CN9, CN10), check the wiring inside the main unit. Push in the motor leads until their cord bands touch the cord bush.

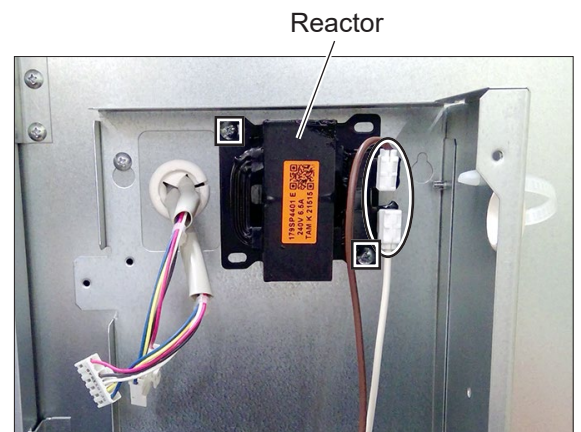


- [5] Remove the screws (two PT screws 4x8, indicated by ○), and slide the power circuit board to remove it.



Power circuit board

- [6] Remove the sub control base. → See (3) [4].
- [7] Disconnect the connectors (indicated by ○) from the reactor.
- [8] Remove the screws (two PT screws 4×8, indicated by □), and remove the reactor.





## (5) Control parts (For LGH-F940RVX2-E and LGH-F1200RVX2-E)

### Precaution

Before replacing the circuit boards, see (6) Procedures for replacing the circuit boards (page 49).

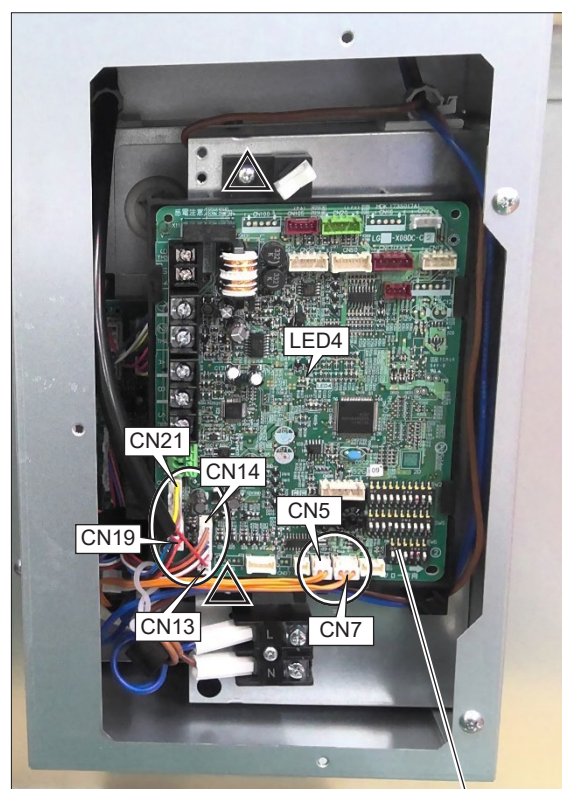
#### ● When removing only the control circuit board

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



Control cover

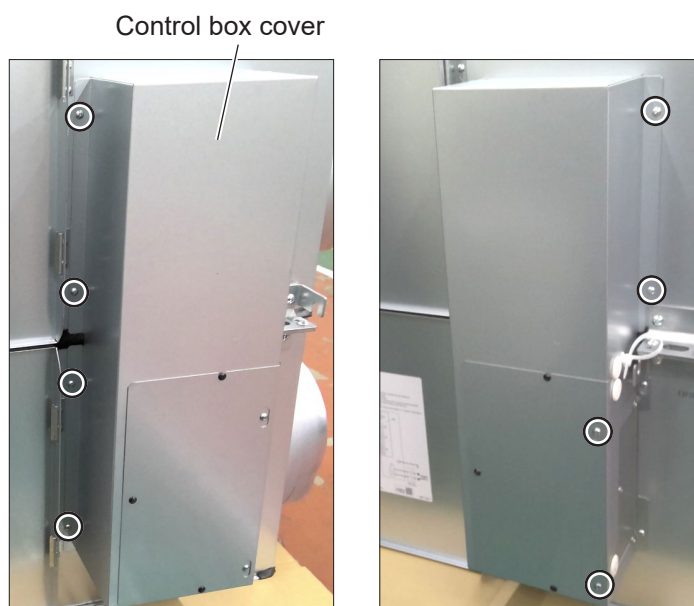
- [2] Check that LED4 (red) on the circuit board is OFF, and then disconnect the connectors (indicated by ○) from the control circuit board.
- [3] Remove the screws (two PT screws 4×8, indicated by △), and remove the control circuit board.



Control circuit board

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

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



- [2] Remove the circuit boards and reactors.

**[Upper unit]**

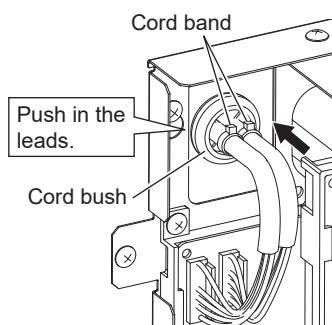
- a. Disconnect the connectors (indicated by ○).

**Precaution**

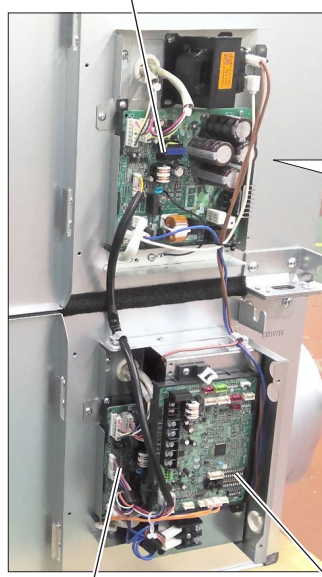
When disconnecting the motor connectors, make sure that the power supply is turned off and all LEDs are unlit. Even when the fan motor is stopped, disconnecting the live-line connectors will cause a motor malfunction.

**Assembly precaution**

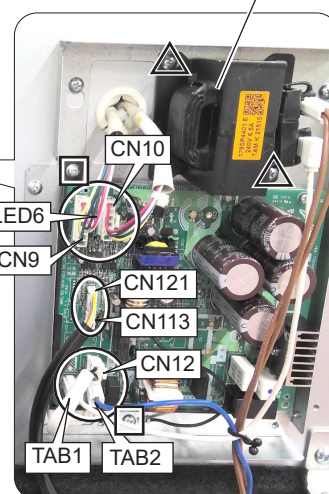
After connecting the motor connectors (CN9, CN10), check the wiring inside the main unit. Push in the motor leads until their cord bands touch the cord bush.



Power circuit board (upper)



Reactor



Power circuit board

Control circuit board

- b. Remove the screws (two PT screws 4×8, indicated by □), and remove the power circuit board (upper).

- c. Remove 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 47).  
 b. Remove the power circuit board. → See (4) [4] and [5] (on pages 45 and 46).  
 c. Remove the reactor. → See (4) [6] to [8] (on page 46).

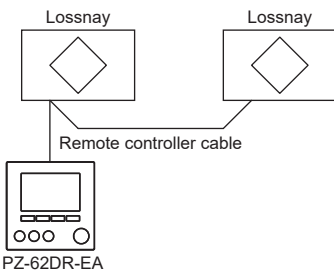
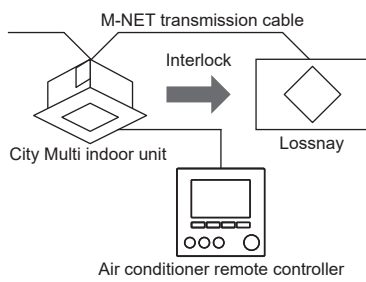
**\* When reassembling**

- 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-62DR-EA is connected, be sure to replace the circuit boards as described in the Steps.

| Step | Details   | Check item            |
|------|---|-----------------------|
| 1    | Check the system configuration.   |                       |
|      | Check if PZ-62DR-EA is connected to the circuit board to be replaced.   | PZ-62DR-EA connection |
|      | The following describes settings required when replacing the circuit boards per the system configuration.<br>Check which system configuration is applicable, and then replace the circuit boards.   | System Configuration  |
|      | <p>(A)</p>  <p>① Setting of the function selection switches on the circuit board<br/>② Setting of the PZ-62DR-EA functions<br/>③ Address setting (when M-NET is used)</p> <p>➔ Go to Step 2.</p>   |                       |
|      | <p>(B)</p>  <p>① Setting of the function selection switches on the circuit board<br/>② Address setting</p> <p>➔ Go to Step 3.</p>   |                       |
| 2    | Check the settings on PZ-62DR-EA.   |                       |
|      | Regarding the settings on PZ-62DR-EA, prepare the data recorded at the time of installation (setting status record, etc.).  | Setting status record |
|      | <p>In the case there is no data recorded at the time of installation, and if the Lossnay unit can be operated with PZ-62DR-EA, use the form in “(8) Setting status record (page 52)” to record the settings on PZ-62DR-EA.</p> <p>To check the settings on PZ-62DR-EA, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.</p> <ul style="list-style-type: none"> <li>• On the function setting screen of PZ-62DR-EA, display the M-NET address of the Lossnay unit for which you wish to check the settings.</li> <li>• The address can be checked by the address setting switches (SW12 and SW11) on the Lossnay circuit board.</li> </ul> |                       |
| 3    | Setting status record of the address setting switches and function selection switches on the circuit board  |                       |
|      | Using the form in “(8) Setting status record (page 52)”, record setting statuses necessary for replacing the circuit board.   | Setting status record |
|      | 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 (SW12 and SW11)   |                       |
|      | [2] Function selection switches (SW2, SW5) and model selection switch (SW6) setting   |                       |
|      | [3] External input (as necessary, record the connection status)   |                       |

| Step   | Details  |  | Check item                  |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|--|--|--|-----------------------------|-------------|--|--------------|--------------------------------|---|---------------------------------|-------------|--|----------------------------|--|--|-------------|--|--------------------------------------|------------------------------|--|--------------------------------------|---|--|--|--|
| 4  | Removing the circuit boards <ul style="list-style-type: none"><li>For the working precautions, see page 40.</li><li>For removing the circuit boards, see (4) Control parts (For LGH-F300RVX2-E to LGH-F600RVX2-E) (page 45) or (5) Control parts (For LGH-F940RVX2-E and LGH-F1200RVX2-E) (page 47).</li></ul> |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| 5  | Attaching the circuit boards   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| [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.<br>a. Address setting (SW12 and SW11)<br>b. Function selection switches (SW2, SW5) and model selection switch (SW6) setting   |  | Address setting                          |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | Function setting                         |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | Model selection                          |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| [2] Attach the power circuit board in the reverse order of the steps for removing. There are three types of the power circuit board. The type of the power circuit board varies depending on the model of the Lossnay unit. When replacing the circuit board, use the applicable circuit board according to the table below.   |  | Circuit board fixing screw (1 pc.)       |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | PCB case fixing screw (1 pc.)            |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | Earth fixing screw (1 pc.)               |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| <table><tr><th>Power circuit board</th><th>Lossnay unit</th></tr><tr><td>LG-X08DC-P4</td><td>LGH-F300RVX2-E, LGH-F380RVX2-E</td></tr><tr><td>LG-X08DC-P6</td><td>LGH-F470RVX2-E, LGH-F600RVX2-E</td></tr><tr><td>LG-X08DC-P5</td><td>LGH-F940RVX2-E, LGH-F1200RVX2-E</td></tr><tr><td>LG-X08DC-P6</td><td>(Equipped with two types of the power circuit board)</td></tr></table>   |  | Power circuit board                      | Lossnay unit                | LG-X08DC-P4 | LGH-F300RVX2-E, LGH-F380RVX2-E                       | LG-X08DC-P6  | LGH-F470RVX2-E, LGH-F600RVX2-E | LG-X08DC-P5   | LGH-F940RVX2-E, LGH-F1200RVX2-E | LG-X08DC-P6 | (Equipped with two types of the power circuit board) |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| Power circuit board  | Lossnay unit   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| LG-X08DC-P4  | LGH-F300RVX2-E, LGH-F380RVX2-E   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| LG-X08DC-P6  | LGH-F470RVX2-E, LGH-F600RVX2-E   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| LG-X08DC-P5  | LGH-F940RVX2-E, LGH-F1200RVX2-E  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| LG-X08DC-P6  | (Equipped with two types of the power circuit board)   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| Be 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*1, TAB2</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>CN12</td><td></td></tr><tr><td>For control circuit board connection</td><td>CN113, CN114, CN119, CN121*2</td><td></td></tr></table>   |  | Connector                                | Symbol on the circuit board | Check       | For power supply connection                          | TAB1*1, TAB2 |                                | For exhaust fan motor connection                    | CN9                             |             | For supply fan motor connection                      | CN10                       |  | For damper motor connection                          | CN12        |  | For control circuit board connection | CN113, CN114, CN119, CN121*2 |  |                                      |   |  |  |  |
| Connector  | Symbol on the circuit board  | Check                                    |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For power supply connection  | TAB1*1, TAB2   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For exhaust fan motor connection   | CN9  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For supply fan motor connection  | CN10   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For damper motor connection  | CN12   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For control circuit board connection   | CN113, CN114, CN119, CN121*2   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| *1 Connect TAB1 to the power supply via the reactor.   |  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| *2 Only LGH-F940RVX2-E and LGH-F1200RVX2-E are equipped with CN121.<br>Lower Unit: CN113, CN114, CN119 Upper Unit: CN113, CN121  |  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| [3] Attach the control circuit board in the reverse order of the steps for removing, and then connect the connectors, remote controller transmission cable, M-NET transmission cable, and external signal cable, etc. Be sure to connect the connectors or terminals listed in the following table. (Connect PZ-62DR-EA or PZ-43SMF-E transmission cable terminal, M-NET transmission cable terminal, and connector/terminal for external signal cable only when they are used.)   |  | Circuit board fixing screw (1 pc.)       |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | PCB fix plate fixing screw (2 pcs.)      |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | Connector connection                     |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | PZ-62DR-EA transmission cable connection |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | M-NET transmission cable connection      |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
|  |  | External signal cable connection         |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| <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>CN7</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>CN13*3, CN14, CN19, CN21*3</td><td></td></tr><tr><td>PZ-62DR-EA 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, CN23, CN26, CN32, CN34, CN35, CN50, CN105</td><td></td></tr></table> |  | Connector and terminal                   | Symbol on the circuit board | Check       | For thermistor connection (outdoor temperature (OA)) | CN7          |                                | For thermistor connection (indoor temperature (RA)) | CN5                             |             | For power circuit board connection                   | CN13*3, CN14, CN19, CN21*3 |  | PZ-62DR-EA or PZ-43SMF-E transmission cable terminal | TM4 [1] [2] |  | M-NET transmission cable terminal    | TB5 [A] [B]                  |  | For external signal cable connection | TM2, TM3, CN17, CN23, CN26, CN32, CN34, CN35, CN50, CN105 |  |  |  |
| Connector and terminal   | Symbol on the circuit board  | Check                                    |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For thermistor connection (outdoor temperature (OA))   | CN7  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For thermistor connection (indoor temperature (RA))  | CN5  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For power circuit board connection   | CN13*3, CN14, CN19, CN21*3   |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| PZ-62DR-EA or PZ-43SMF-E transmission cable terminal   | TM4 [1] [2]  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| M-NET transmission cable terminal  | TB5 [A] [B]  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| For external signal cable connection   | TM2, TM3, CN17, CN23, CN26, CN32, CN34, CN35, CN50, CN105  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| *3 Only LGH-F940RVX2-E and LGH-F1200RVX2-E are equipped with CN13 and CN21.  |  |  |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |
| [4] Reattach the control box cover. <ul style="list-style-type: none"><li>LGH-F300RVX2-E to LGH-F600RVX2-E : Cover screw 3 pieces</li><li>LGH-F940RVX2-E and LGH-F1200RVX2-E : Cover screw 8 pieces</li></ul>  |  | Cover screw (black)                      |                             |             |  |              |                                |   |                                 |             |  |                            |  |  |             |  |                                      |                              |  |                                      |   |  |  |  |



| Step | Details  | Check item       |  |
|------|--|------------------|--|
| 6    | <b>Function setting with PZ-62DR-EA</b><br><br>When PZ-62DR-EA is connected, according to the function status record data prepared in Step 2, set the function settings with PZ-62DR-EA.<br>If PZ-62DR-EA is not connected, skip this step and proceed to Step 7.<br>To perform function settings with PZ-62DR-EA, see the Lossnay Operating/Installation Instructions or PZ-62DR-E Instruction Book.<br><br>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.<br><br><When the address switch setting is other than “00”><br>For all function settings, always select the address of the Lossnay unit which the circuit boards were replaced.<br>Even when there are multiple Lossnay units in the group, do not select “All”.<br><br><When the address switch is “00”><br>Always select “All”.<br><br><b>Note:</b><br><ul style="list-style-type: none"> <li>When changing the settings of the function selection switches and address setting switches on the circuit board after the functions were set with PZ-62DR-EA, reset the function settings according to “(7) Initialization (page 51)”. After resetting the function settings, perform the function settings again in the order of Step 5 [1] and Step 6.</li> <li>If you change the M-NET address after the functions were set with PZ-62DR-EA, the settings with PZ-62DR-EA will be reset. In this case, set the functions again with PZ-62DR-EA.</li> </ul> | Address setting  |  |
|      |  | Function setting |  |
|      |  |                  |  |
| 7    | <b>Restarting the system</b><br><br>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.<br><br>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-62DR-EA function setting.

All function settings which are changed by users are cancelled.

| DIP-SW |         | Setting check | PZ-62DR-EA   |              | 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 · 380 · 470 · 600 · 940 · 1200 ) RVX2-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: ( PZ-62DR-EA · PZ-43SMF-E )

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:

Wi-Fi interface: ( Used · Not used )

Model name:

CO<sub>2</sub> sensor: ( Used · Not used )

Model name: ( PZ-70CSW-E · PZ-70CSB-E · Other manufacturer's sensor )

Monitor output device: ( Used · Not used )

Model name: (PZ-4GS-E)

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                                 | SW5 | ON                       | OFF                                 |
|-----|--------------------------|-------------------------------------|-----|--------------------------|-------------------------------------|
| 1   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

☒ : Factory setting

#### Model selection switch

| SW6 | ON                       | OFF                      |
|-----|--------------------------|--------------------------|
| 1   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6   | <input type="checkbox"/> | <input type="checkbox"/> |

Note: SW6 setting differs according to the model.

| Model           | SW6-1 | SW6-2 | SW6-3 | SW6-4 | SW6-5 | SW6-6 |
|-----------------|-------|-------|-------|-------|-------|-------|
| LGH-F300RVX2-E  | OFF   | OFF   | ON    | OFF   | ON    | OFF   |
| LGH-F380RVX2-E  | ON    | OFF   | ON    | OFF   | ON    | OFF   |
| LGH-F470RVX2-E  | OFF   | ON    | ON    | ON    | ON    | OFF   |
| LGH-F600RVX2-E  | ON    | ON    | ON    | ON    | ON    | OFF   |
| LGH-F940RVX2-E  | OFF   | OFF   | OFF   | ON    | ON    | OFF   |
| LGH-F1200RVX2-E | ON    | OFF   | OFF   | ON    | ON    | OFF   |

☒ : Factory setting

### [3] Function settings

Enter the setting data of the functions set with PZ-62DR-EA.

| Function No. | Setting Data | Function No. | Setting Data | Function No. | Setting Data | Function No. | Setting Data |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1            | (0)          | 30           | (0)          | 52           | (0)          | 75           | (15)         |
| 2            | (0)          | 31           | (5)          | 53           | (6)          | 76           | (5)          |
| 5            | (0)          | 32           | (2)          | 54           | (1)          | 77           | (10)         |
| 6            | (0)          | 33           | (2)          | 55           | (0)          | 78           | (15)         |
| 7            | (0)          | 34           | (0)          | 56           | (0)          | 83           | (3)          |
| 8            | (0)          | 36           | (1)          | 60           | (0)          | 84           | (0)          |
| 9            | (0)          | 37           | (1)          | 61           | (0)          | 85           | (6)          |
| 12           | (0)          | 38           | (1)          | 62           | (0)          | 86           | (0)          |
| 13           | (1)          | 39           | (0)          | 64           | (0)          | 87           | (0)          |
| 14           | (2)          | 40           | (7)          | 65           | (0)          | 88           | (0)          |
| 15           | (3)          | 41           | (0)          | 66           | (0)          | 89           | (4)          |
| 16           | (4)          | 42           | (7)          | 67           | (2)          | 90           | (0)          |
| 17           | (2)          | 43           | (7)          | 68           | (5)          | 91           | (1)          |
| 18           | (0)          | 44           | (5)          | 69           | (0)          | 92           | (1)          |
| 19           | (0)          | 45           | (0)          | 73           | (5)          | 93           | (5)          |
| 28           | (0)          | 46           | (0)          | 74           | (10)         | 100          | (0)          |

( ) : Factory setting



### [4] External input/output

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

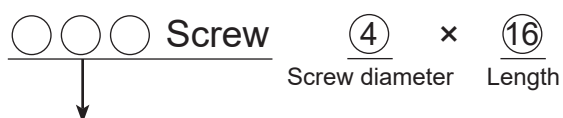
| Terminal or connector on the circuit board | Function Name                                   | Used                     | Not used                 | Connected device |
|--|---|--------------------------|--------------------------|------------------|
| TM2 [1] [2]                                | External control input                          | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| TM2 [Y] [Z]                                | External control input                          | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| TM3 [9] [10]                               | Monitor output                                  | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN17 [1] [2]                               | Fan speed 4 input                               | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN17 [1] [3]                               | Fan speed 3 input                               | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN17 [1] [4]                               | Fan speed 2 input                               | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN17 [1] [5]                               | Fan speed 1 input                               | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN23                                       | Power for the CO <sub>2</sub> sensor            | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN26 [1] [2]                               | Bypass mode input                               | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN26 [4] [5]                               | CO <sub>2</sub> sensor input                    | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN32                                       | Remote/local switching                          | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN34                                       | LED on the CO <sub>2</sub> sensor control       | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN35                                       | Malfunction of the CO <sub>2</sub> sensor input | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN50                                       | Monitor output PZ-4GS-E                         | <input type="checkbox"/> | <input type="checkbox"/> |                  |
| CN105                                      | IT communication                                | <input type="checkbox"/> | <input type="checkbox"/> |                  |

## 9. Parts catalog

### Please note the following when using the parts catalog.

1. When ordering parts, the part number, part name, and the number of parts are 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, use the parts specified in the parts catalog.
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 |

## Changing of control PCB service part No. for LGH-FRVX2-E series.

Because software of this model has been updated and added new function from July 2024 mass-production, control PCB service parts No. will change.


Please confirm the compatibility of service parts No. against product serial No. shown in the below table.

| Service part No. of control PCB |           | Product Serial No. |                  |
|---------------------------------|-----------|--------------------|------------------|
|                                 |           | less than 24070001 | 24070001 or more |
| Previous                        | W50021171 | OK                 | NG*              |
| New                             | W50025171 | OK                 | OK               |

New functions added from July 2024 mass-production.

- Leader follower control
- Constant pressure control
- Making mixed Lossnay group with various series (FRVX2 and FRVXT2)
- Expansion of temperature setting to start pre-heater output  
(Please see manuals for details of each function)

\*Even product Serial No. is 24070001 or more, if these new function is not used in the site, previous control PCB part (W50021171) can be used.



**LOSSNAY**

MODEL **LGH-F600RVX2-E**  
 SERVICE REF. LGH-F600RVX2-E  
**208-230V~ Single Phase 60Hz 4.15A 745W**  
 Minimum ampacity required for the supply circuit conductor 5.19 A  
 Maximum ampere rating of supply circuit fuse 15 A  
 Supply Air Motor 1.37 A 0.42 HP Thermally protected  
 Exhaust Air Motor 1.34 A 0.41 HP Thermally protected  
 Other Load 0.10 A

Conforms to UL STD. 1812  
 Certified to CSA STD. C22.2 No.113

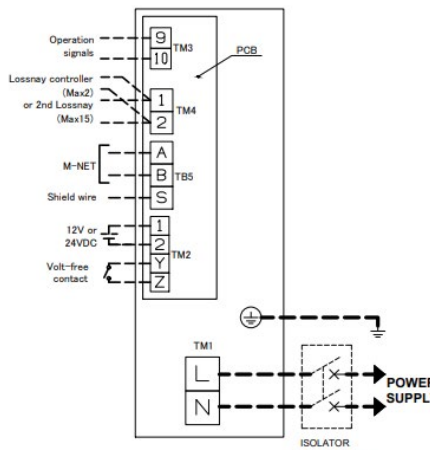
**WARNING**  
 Danger of electric shock, always disconnect power source before servicing  
 Motor Thermally Protected  
 User Copper Conductors Only  
 Not For Outdoor Use

**AVERTISSEMENT**  
 Danger de choc électrique, toujours déconnectez la source du pouvoir avant d'entretenir  
 Le moteur a protégé de façon thermique  
 Utilisez seulement des conducteurs du cuivre  
 Pas pour usage de plein air

**Serial No.** D

**Wiring Diagram**

**NOTE**  
 1. TM1, TM2, TM3, TM4 and TBS shown in dotted lines are field work.  
 Refer to installation manual for details.  
 2. Make sure to connect the ground wire.  
 3. Cut off power supply more than 5 minutes prior to access the electrical parts.  
 4. Make sure to cut M-NET power supply during Lossnay wiring, otherwise it causes malfunction.  
 5. Do not pull out motor connector during power supply on. It causes motor failure.



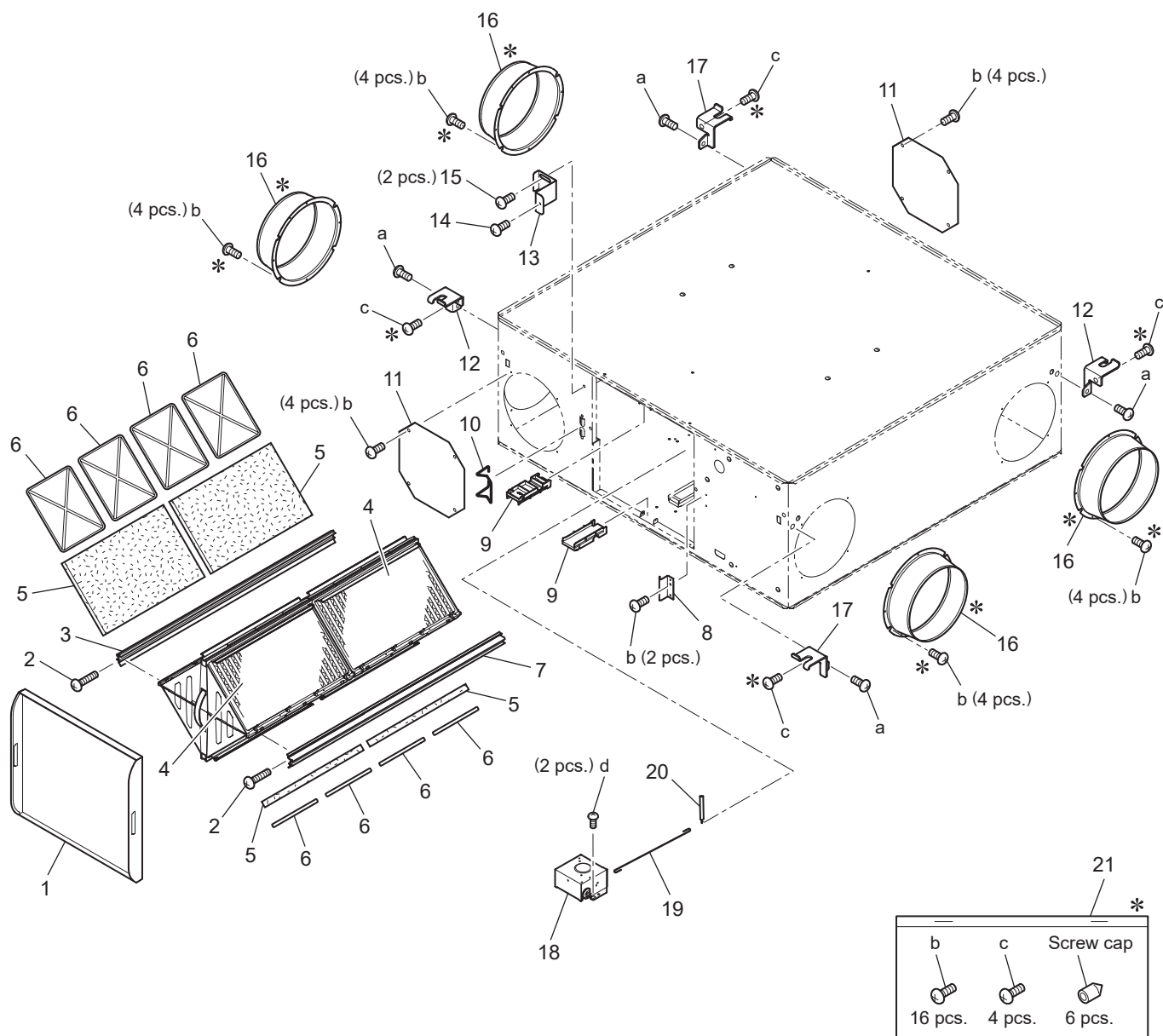
**MADE IN JAPAN**

368P138B3

Serial No. can be found on the name label.

Please check it before starting to replace control pcb.

## Structural parts



### <Standard screws>

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

\* shows accessory parts.

## Structural parts

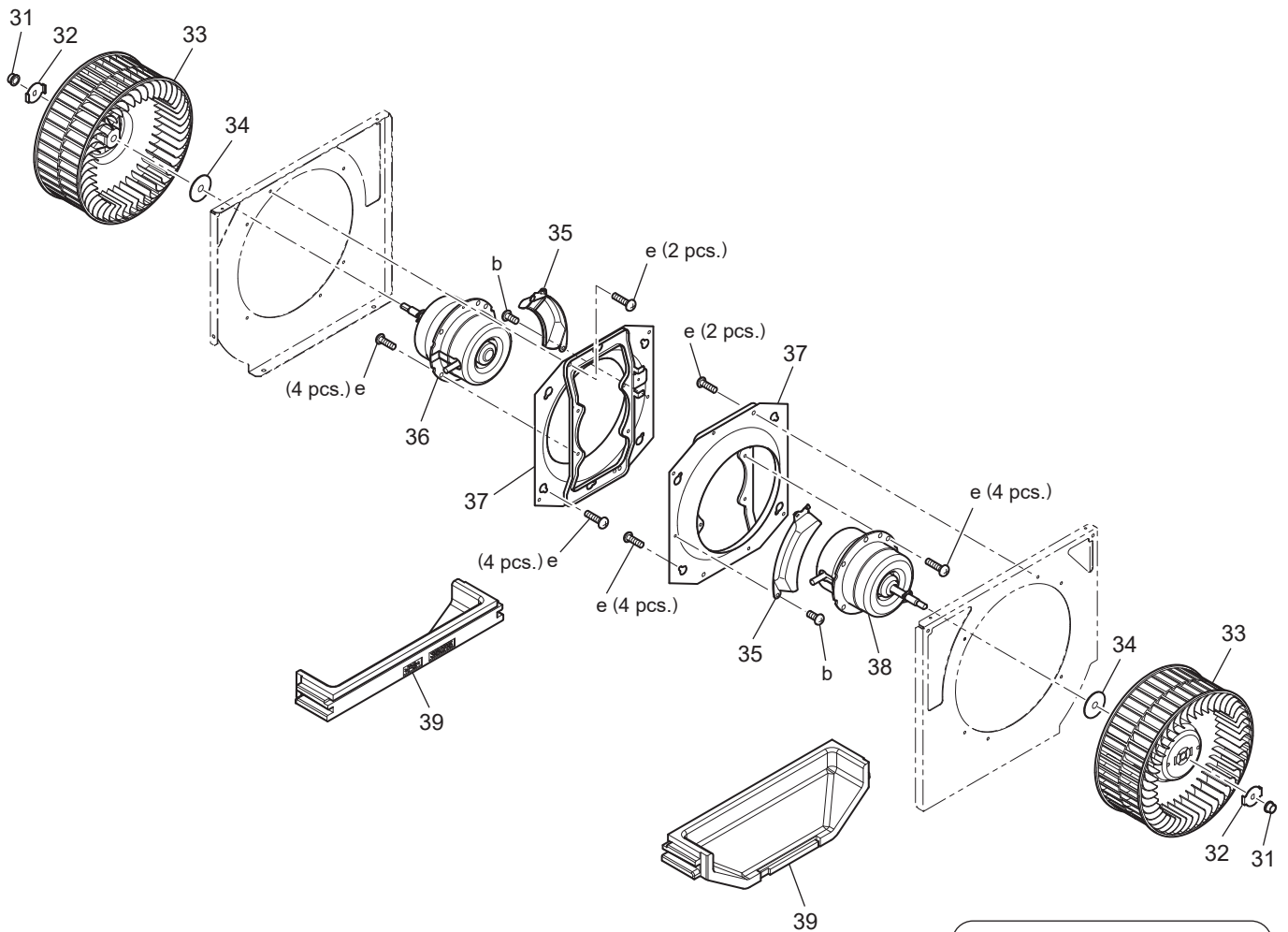
### LGH-F300RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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 023 717 | 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                |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |



## Fan parts

## Air exhaust fan assembly



## Air supply fan assembly

<Standard screws>

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

## Fan parts

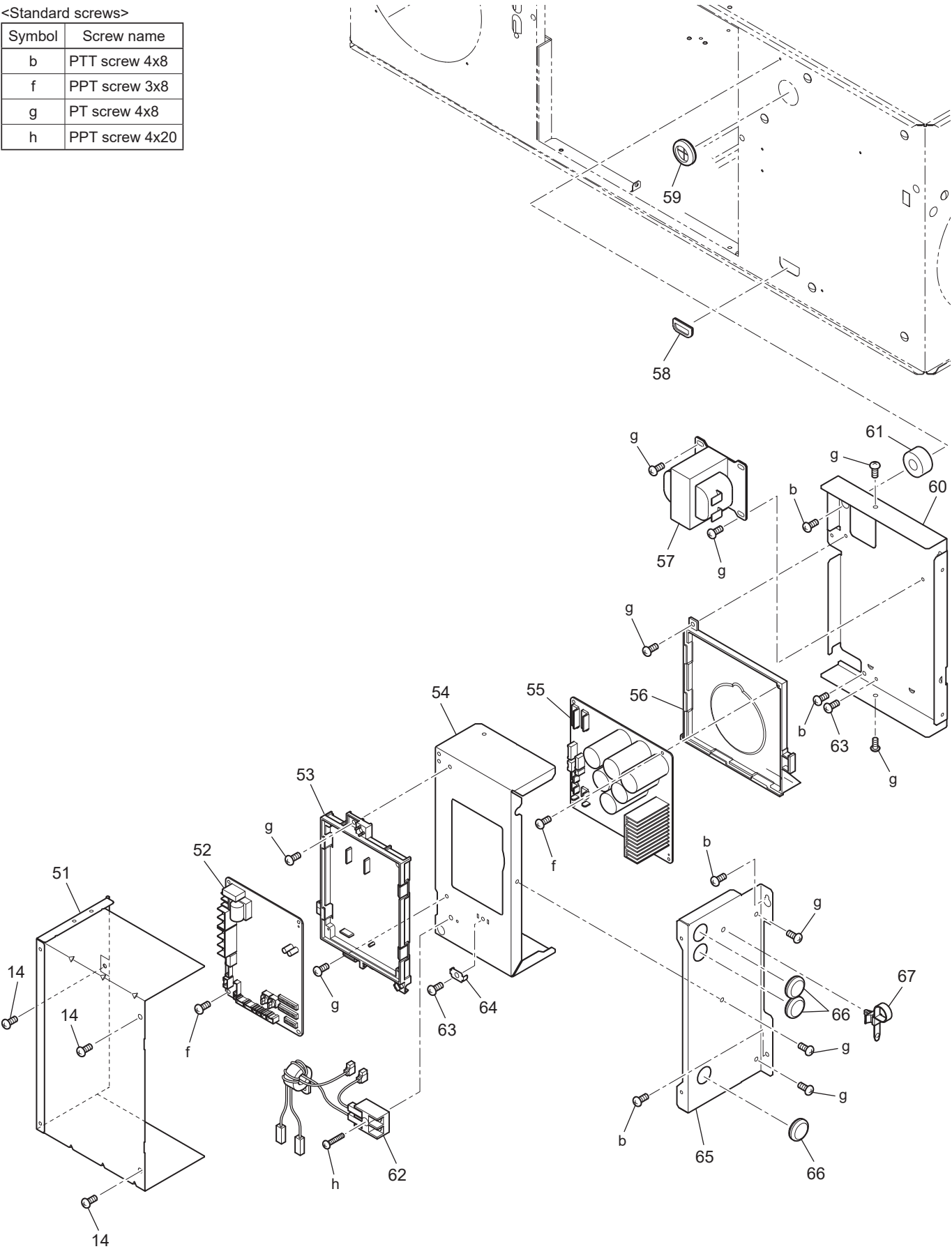
### LGH-F300RVX2-E

| No. | Name of part        | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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                | ⚠                         | Dia. 8 3/4 inch (220 mm)        |
| 34  | Special washer (10) | W50 003 478 | 2                |                           | Outer dia. 1 37/64 inch (40 mm) |
| 35  | Air guide           | W50 013 508 | 2                |                           |                                 |
| 36  | DC motor (EA)       | W50 023 454 | 1                | ⚠                         | With the ferrite core           |
| 37  | Motor fix plate     | W50 013 723 | 2                |                           |                                 |
| 38  | DC motor (SA)       | W50 023 453 | 1                | ⚠                         | With the ferrite core           |
| 39  | Separator           | W50 013 486 | 2                |                           |                                 |
|     |                     |             |                  |                           |                                 |

# Control parts

<Standard screws>

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

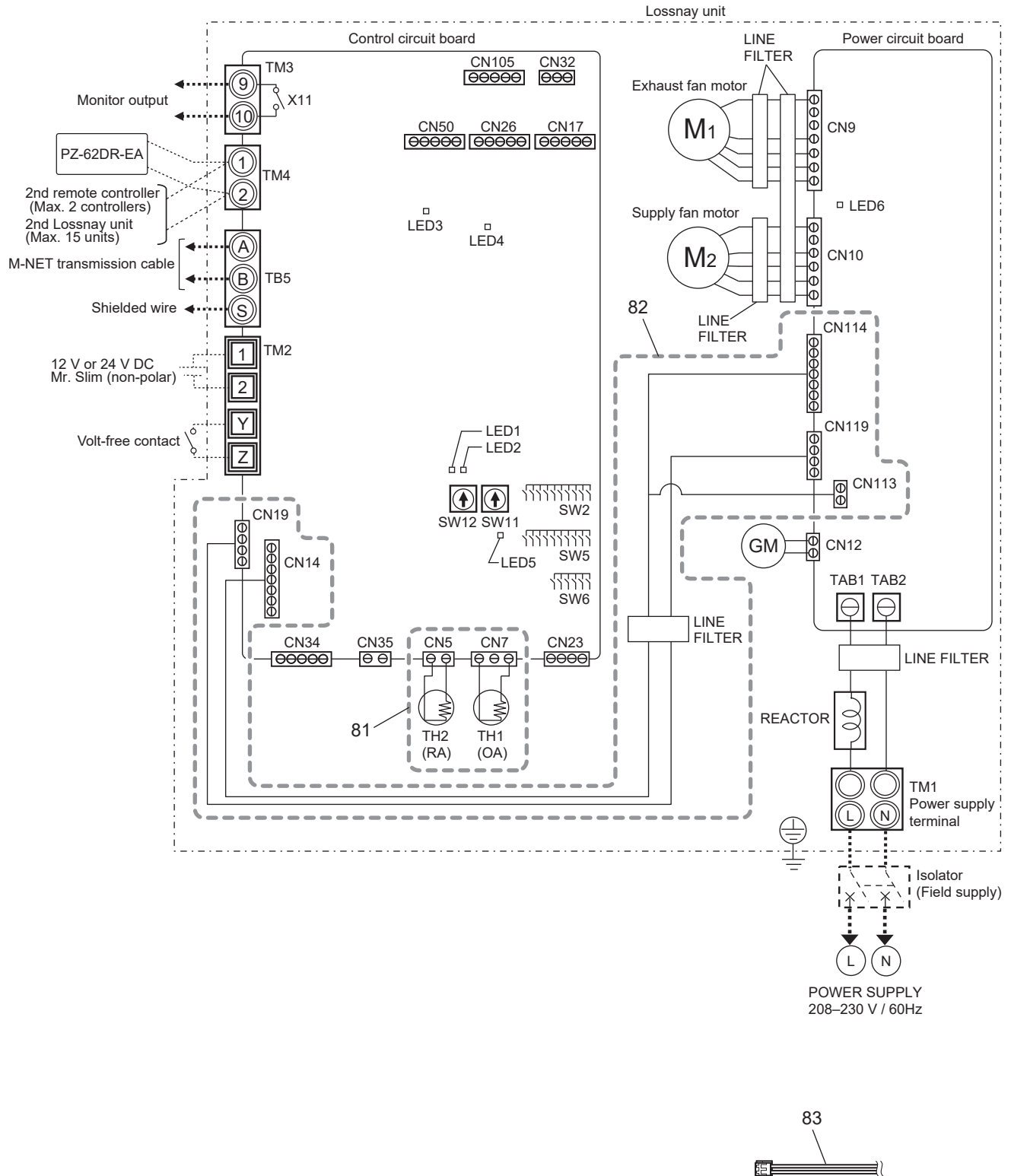


## Control parts

### LGH-F300RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Control box cover | W50 019 707 | 1                |                           |                         |
| 52  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 53  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 54  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 55  | Circuit board     | W50 021 172 | 1                | ⚠                         | Power                   |
| 56  | PCB case          | W50 021 380 | 1                |                           |                         |
| 57  | Reactor           | W50 028 180 | 1                | ⚠                         | White · AC10A           |
| 58  | Bush              | W00 000 278 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 277 | 1                |                           |                         |
| 60  | Control base      | W50 019 704 | 1                |                           |                         |
| 61  | Ferrite core      | W50 023 179 | 1                | ⚠                         |                         |
| 62  | Terminal block    | W50 021 213 | 1                | ⚠                         | 2P, With the lead wires |
| 63  | PT screw 4x8 BS   | W00 000 011 | 2                |                           |                         |
| 64  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 65  | Side plate        | W50 019 706 | 1                |                           |                         |
| 66  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 67  | Cord band         | W00 000 258 | 1                |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts

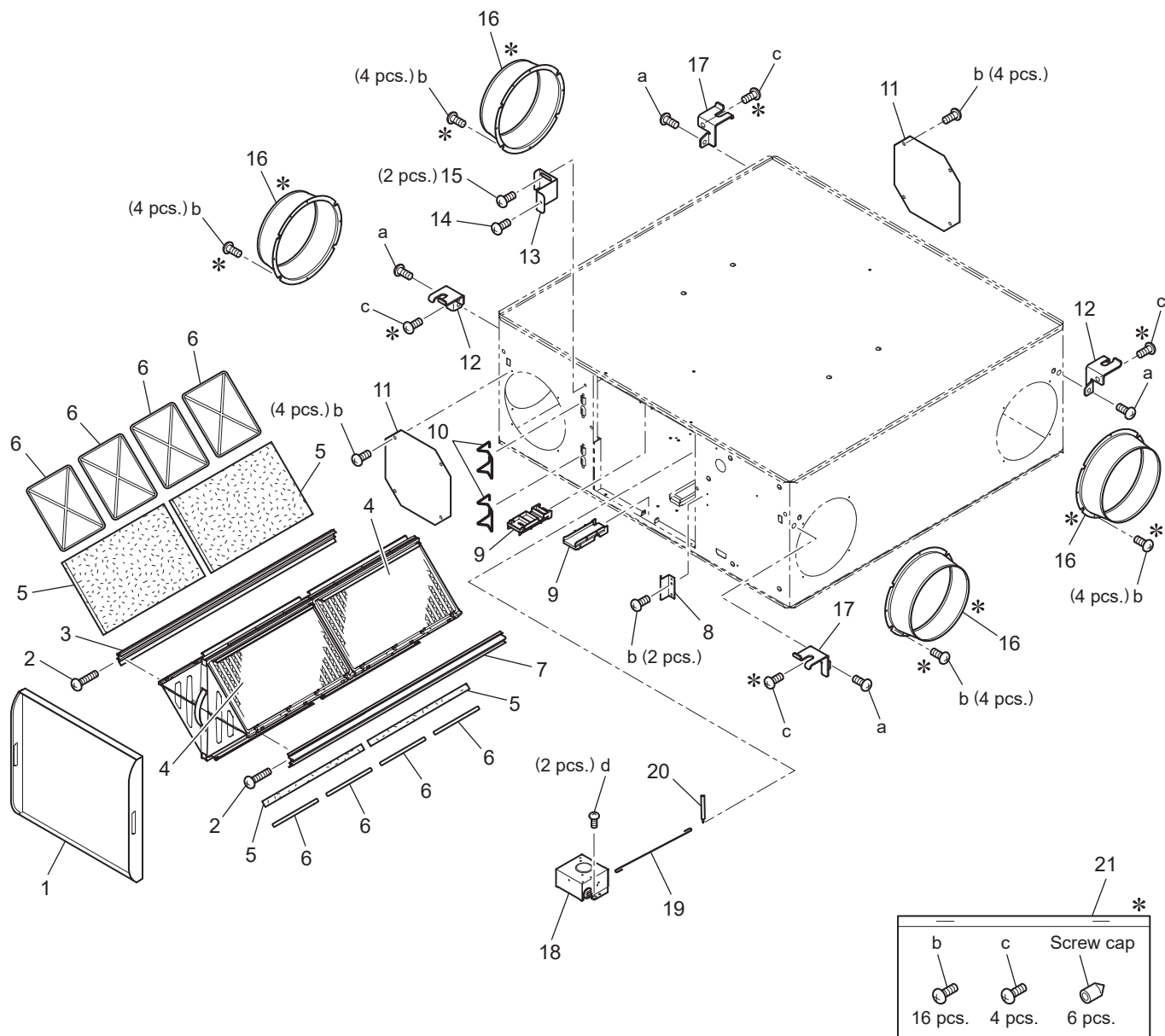


## Wiring parts

### LGH-F300RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Thermistor   | W50 023 167 | 1                | △                         | OA・RA set             |
| 82  | Lead wire    | W50 021 214 | 1                | △                         |                       |
| 83  | Lead wire    | W50 004 231 | 1                | △                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |
|     |              |             |                  |                           |                       |

## Structural parts



### <Standard screws>

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

\* shows accessory parts.



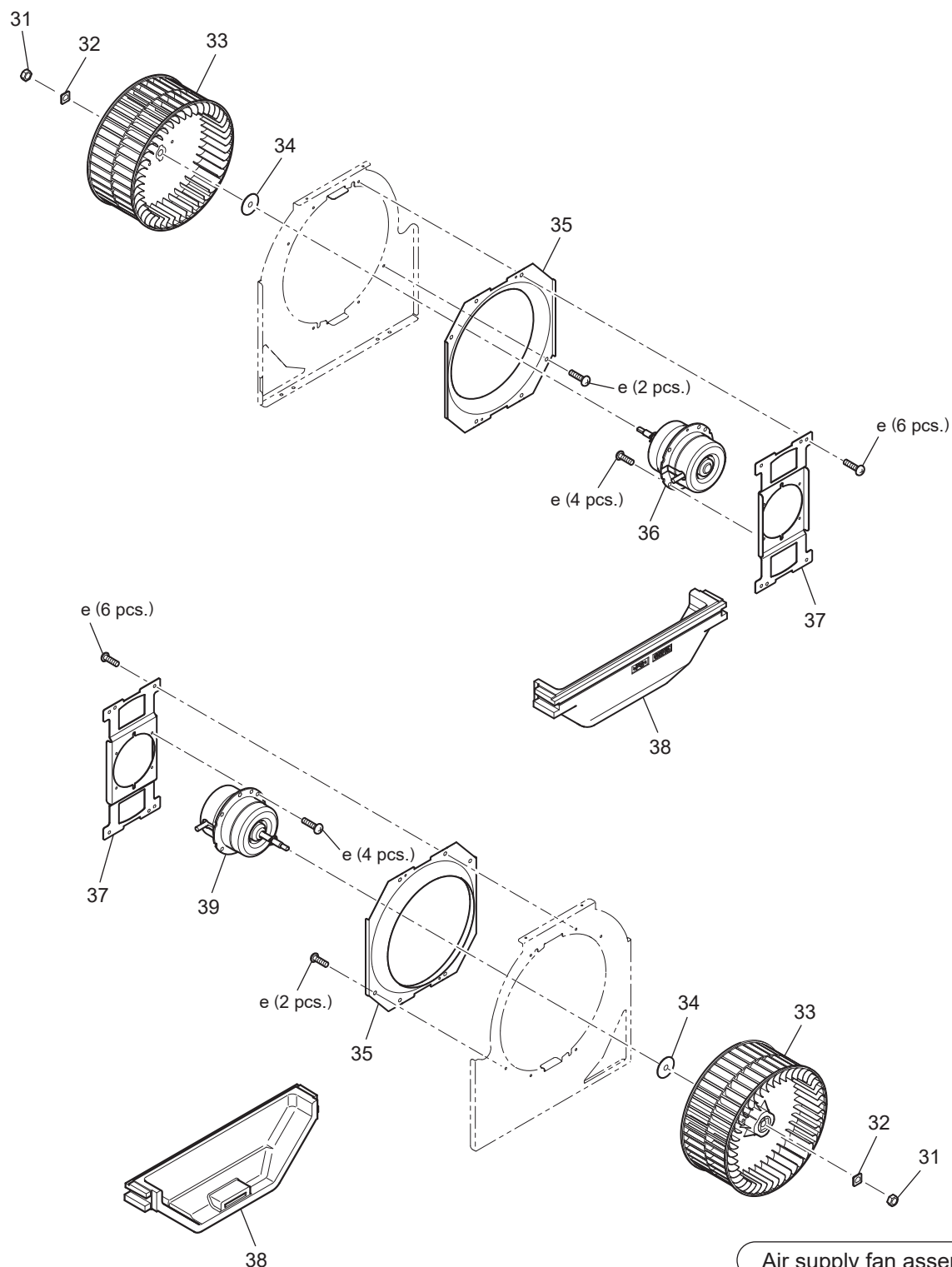
## Structural parts

### LGH-F380RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                  |
|-----|-------------------|-------------|------------------|---------------------------|--------------------------|
| 1   | Maintenance cover | W50 013 710 | 1                |                           |                          |
| 2   | Special screw M4  | W00 000 101 | 2                |                           |                          |
| 3   | Core guide L      | W50 013 383 | 1                |                           |                          |
| 4   | Lossnay core      | W50 023 710 | 2                | ⚠                         | With the filter stoppers |
| 5   | Filter            | W50 023 718 | 4                | ⚠                         |                          |
| 6   | Filter stopper    | W50 023 711 | 8                |                           |                          |
| 7   | Core guide R      | W50 013 390 | 1                |                           |                          |
| 8   | Fix piece         | W50 013 722 | 1                |                           |                          |
| 9   | Lead support      | W50 013 705 | 2                |                           |                          |
| 10  | Hinge             | W50 004 344 | 2                |                           |                          |
| 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 023 260 | 1                | ⚠                         | AC220・240V               |
| 19  | Rod               | W50 013 150 | 1                |                           |                          |
| 20  | Pull spring       | W50 013 157 | 1                |                           |                          |
| 21  | Screws in bag     | W50 013 051 | 1                |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |

# Fan parts

Air exhaust fan assembly



Air supply fan assembly

<Standard screws>

| Symbol | Screw name     |
|--------|----------------|
| e      | PTT screw 5x10 |

## Fan parts

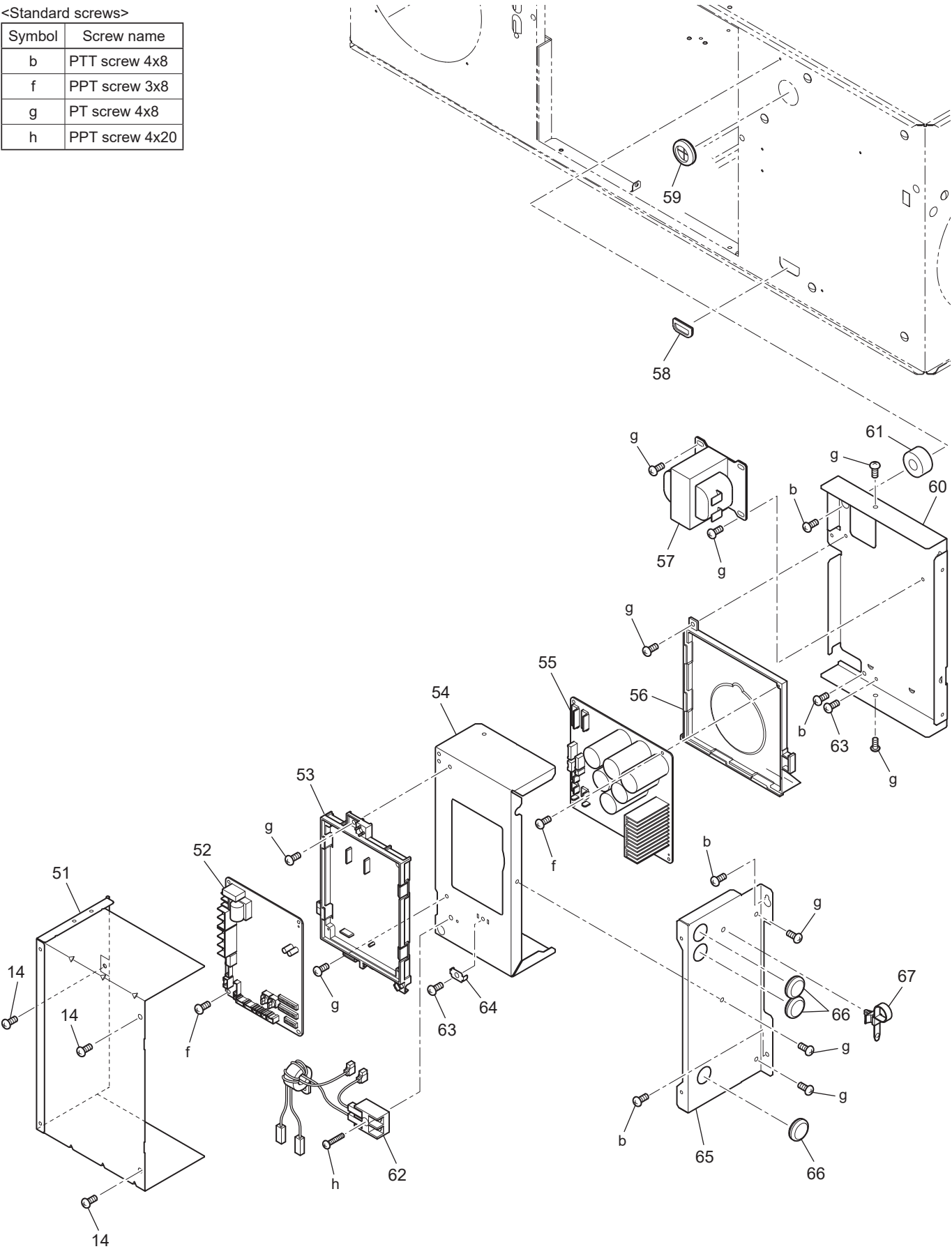
### LGH-F380RVX2-E

| No. | Name of part        | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                         |
|-----|---------------------|-------------|------------------|---------------------------|---------------------------------|
| 31  | Special Nut (M10)   | W00 000 195 | 2                |                           | Left-handed                     |
| 32  | Tab washer          | W50 013 712 | 2                |                           |                                 |
| 33  | Centrifugal fan     | W50 013 482 | 2                | ⚠                         | Dia. 9 5/8 inch (245 mm)        |
| 34  | Special washer (10) | W50 003 478 | 2                |                           | Outer dia. 1 37/64 inch (40 mm) |
| 35  | Inlet ring          | W50 004 725 | 2                |                           |                                 |
| 36  | DC motor (EA)       | W50 023 456 | 1                | ⚠                         | With the ferrite core           |
| 37  | Motor fix plate     | W50 013 724 | 2                |                           |                                 |
| 38  | Separator           | W50 003 488 | 2                |                           |                                 |
| 39  | DC motor (SA)       | W50 023 455 | 1                | ⚠                         | With the ferrite core           |
|     |                     |             |                  |                           |                                 |

# Control parts

<Standard screws>

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

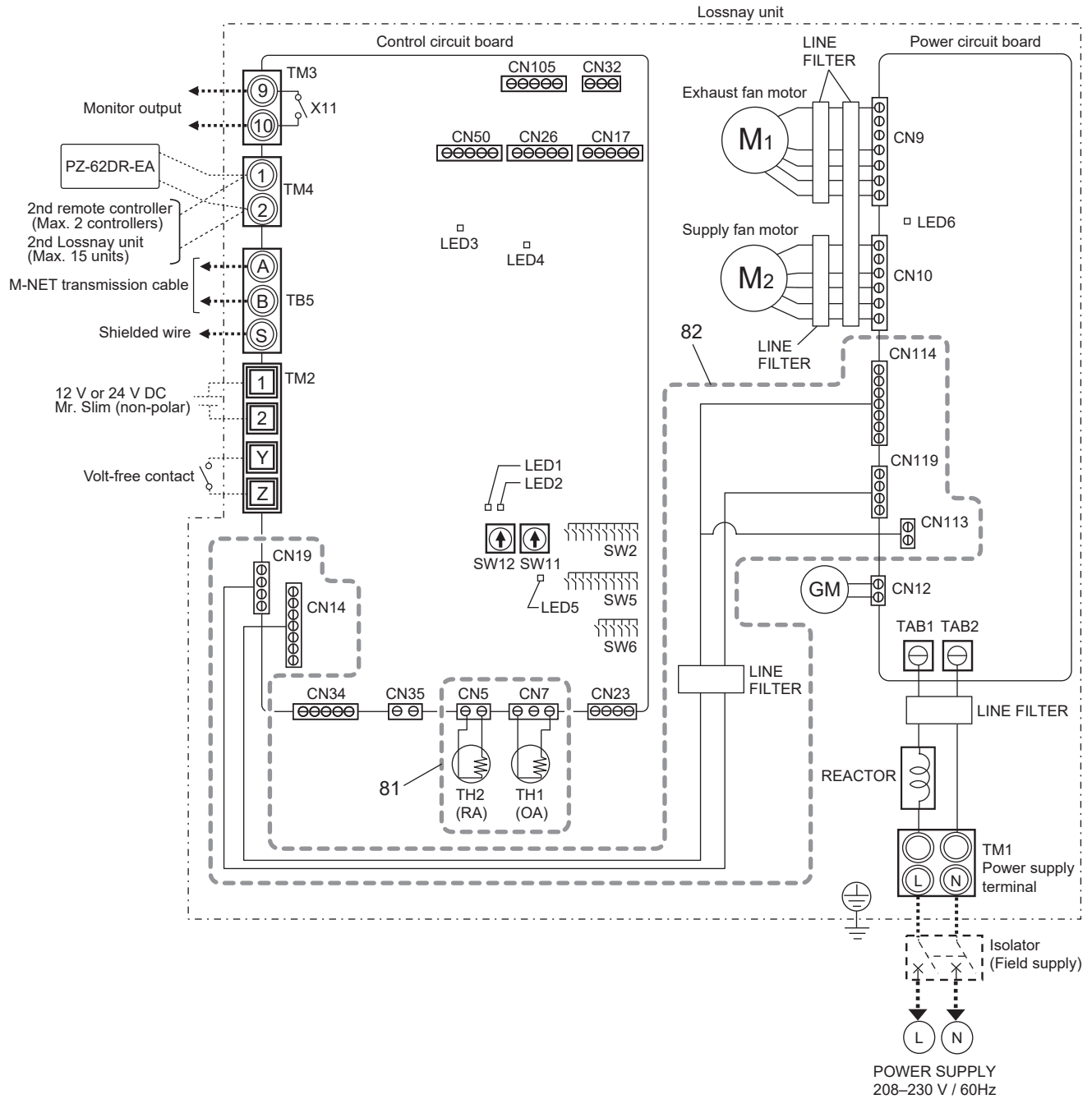


## Control parts

### LGH-F380RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Control box cover | W50 019 707 | 1                |                           |                         |
| 52  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 53  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 54  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 55  | Circuit board     | W50 021 172 | 1                | ⚠                         | Power                   |
| 56  | PCB case          | W50 021 380 | 1                |                           |                         |
| 57  | Reactor           | W50 028 180 | 1                | ⚠                         | White · AC10A           |
| 58  | Bush              | W00 000 278 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 277 | 1                |                           |                         |
| 60  | Control base      | W50 019 704 | 1                |                           |                         |
| 61  | Ferrite core      | W50 023 179 | 1                | ⚠                         |                         |
| 62  | Terminal block    | W50 021 213 | 1                | ⚠                         | 2P, With the lead wires |
| 63  | PT screw 4x8 BS   | W00 000 011 | 2                |                           |                         |
| 64  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 65  | Side plate        | W50 019 706 | 1                |                           |                         |
| 66  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 67  | Cord band         | W00 000 258 | 1                |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts

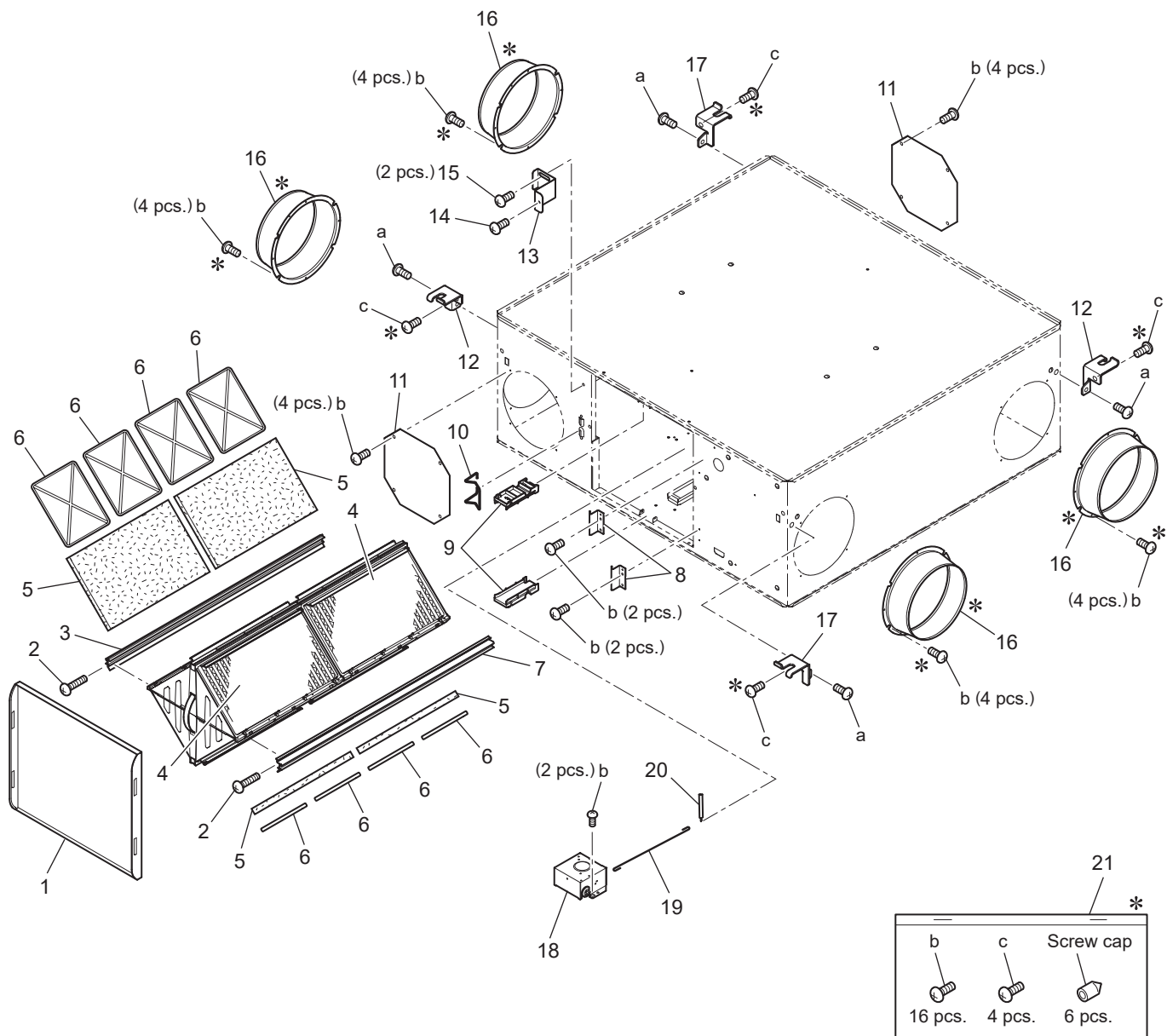


## Wiring parts

LGH-F380RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Thermistor   | W50 023 167 | 1                | △                         | OA・RA set             |
| 82  | Lead wire    | W50 021 214 | 1                | △                         |                       |
| 83  | Lead wire    | W50 004 231 | 1                | △                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |
|     |              |             |                  |                           |                       |

## Structural parts



### <Standard screws>

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

\* shows accessory parts.

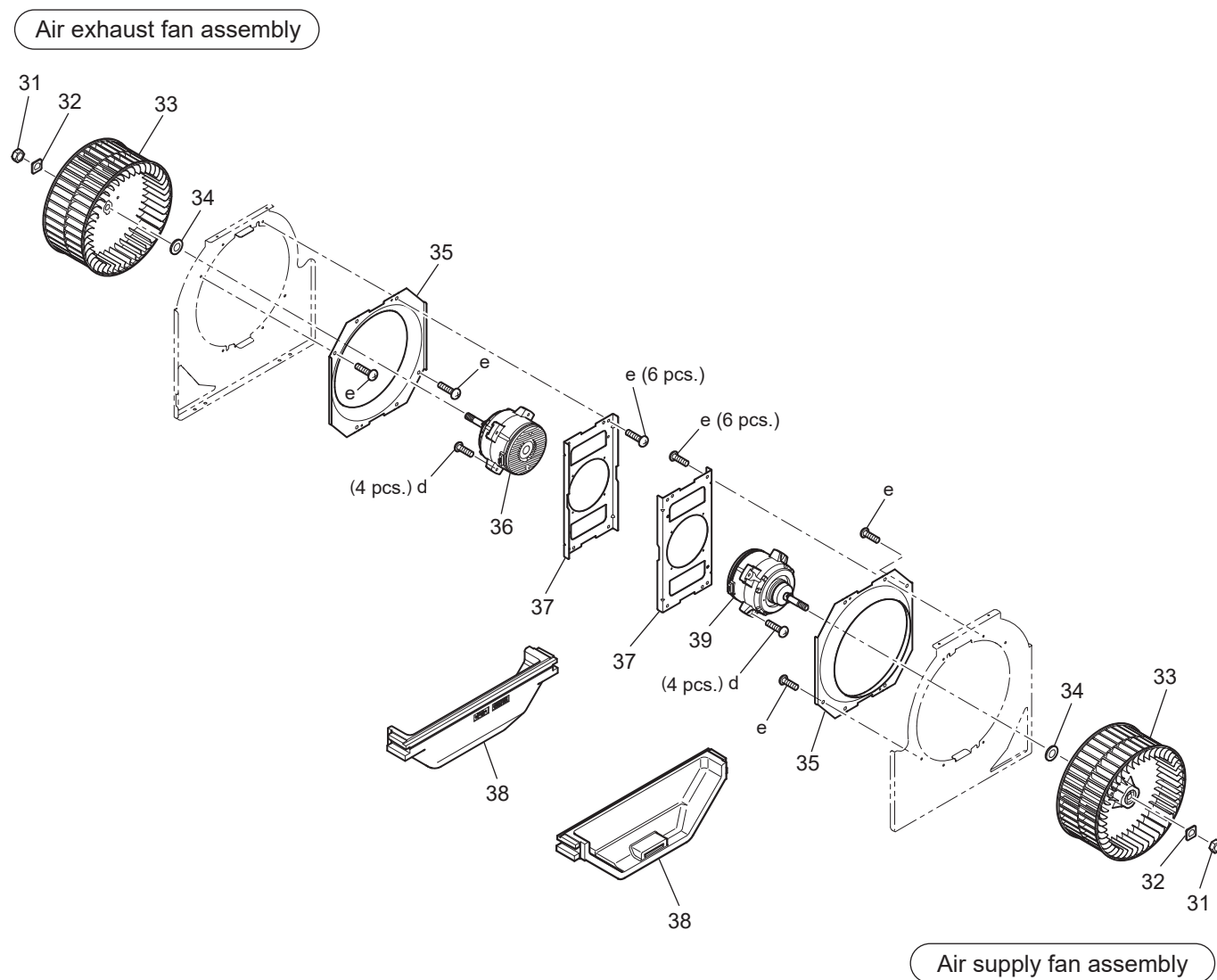


## Structural parts

### LGH-F470RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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 023 719 | 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 023 260 | 1                | ⚠                         | AC220·240V               |
| 19  | Rod               | W50 004 150 | 1                |                           |                          |
| 20  | Pull spring       | W50 013 157 | 1                |                           |                          |
| 21  | Screws in bag     | W50 013 051 | 1                |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |

## Fan parts



<Standard screws>

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

## Fan parts

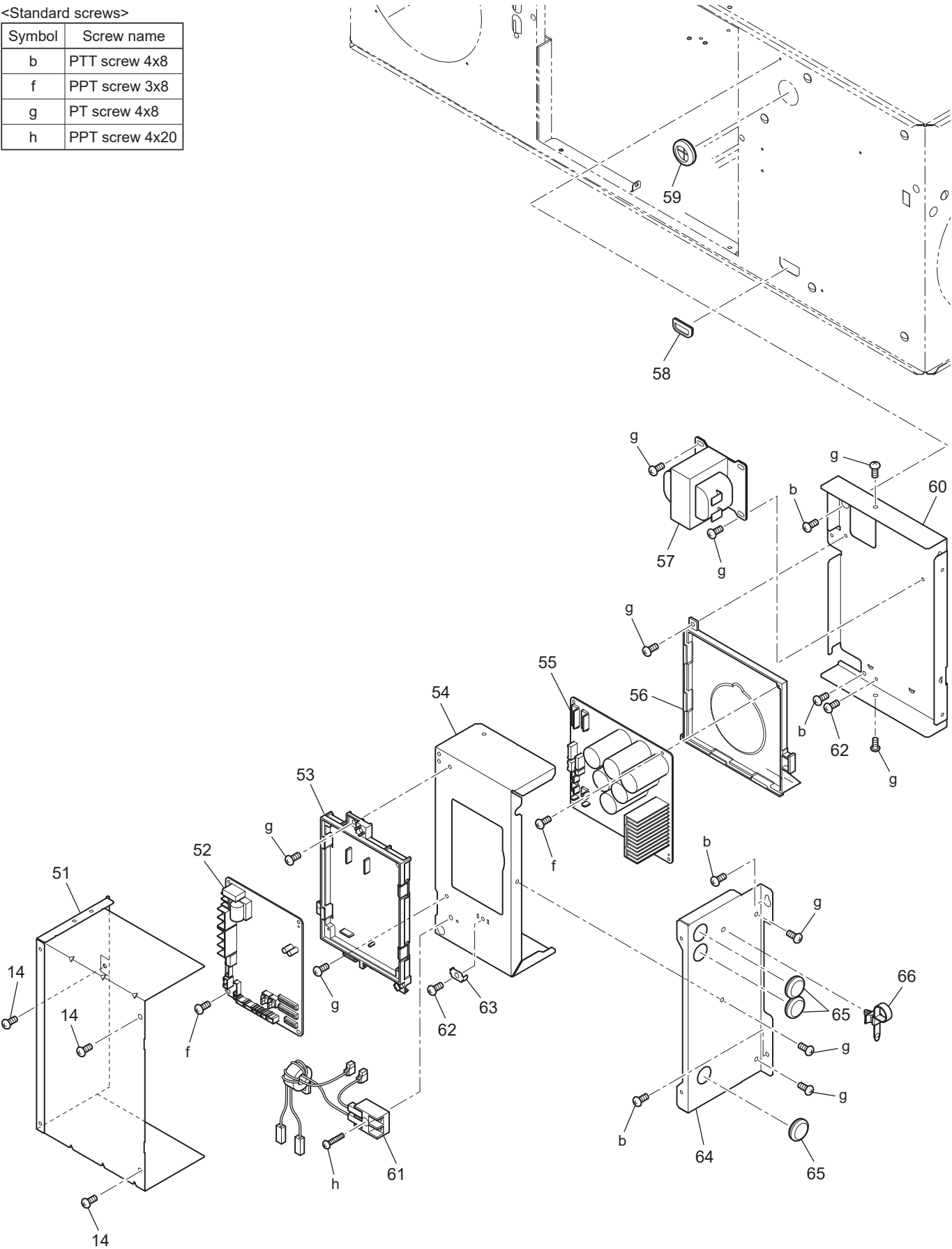
### LGH-F470RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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                | ⚠                         | Dia. 9 5/8 inch (245 mm)      |
| 34  | Washer (12)       | W00 000 123 | 2                |                           | Outer dia. 15/16 inch (24 mm) |
| 35  | Inlet ring        | W50 004 725 | 2                |                           |                               |
| 36  | DC motor (EA)     | W50 023 458 | 1                | ⚠                         |                               |
| 37  | Motor fix plate   | W50 004 736 | 2                |                           |                               |
| 38  | Separator         | W50 013 487 | 2                |                           |                               |
| 39  | DC motor (SA)     | W50 023 457 | 1                | ⚠                         |                               |
|     |                   |             |                  |                           |                               |

# Control parts

<Standard screws>

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

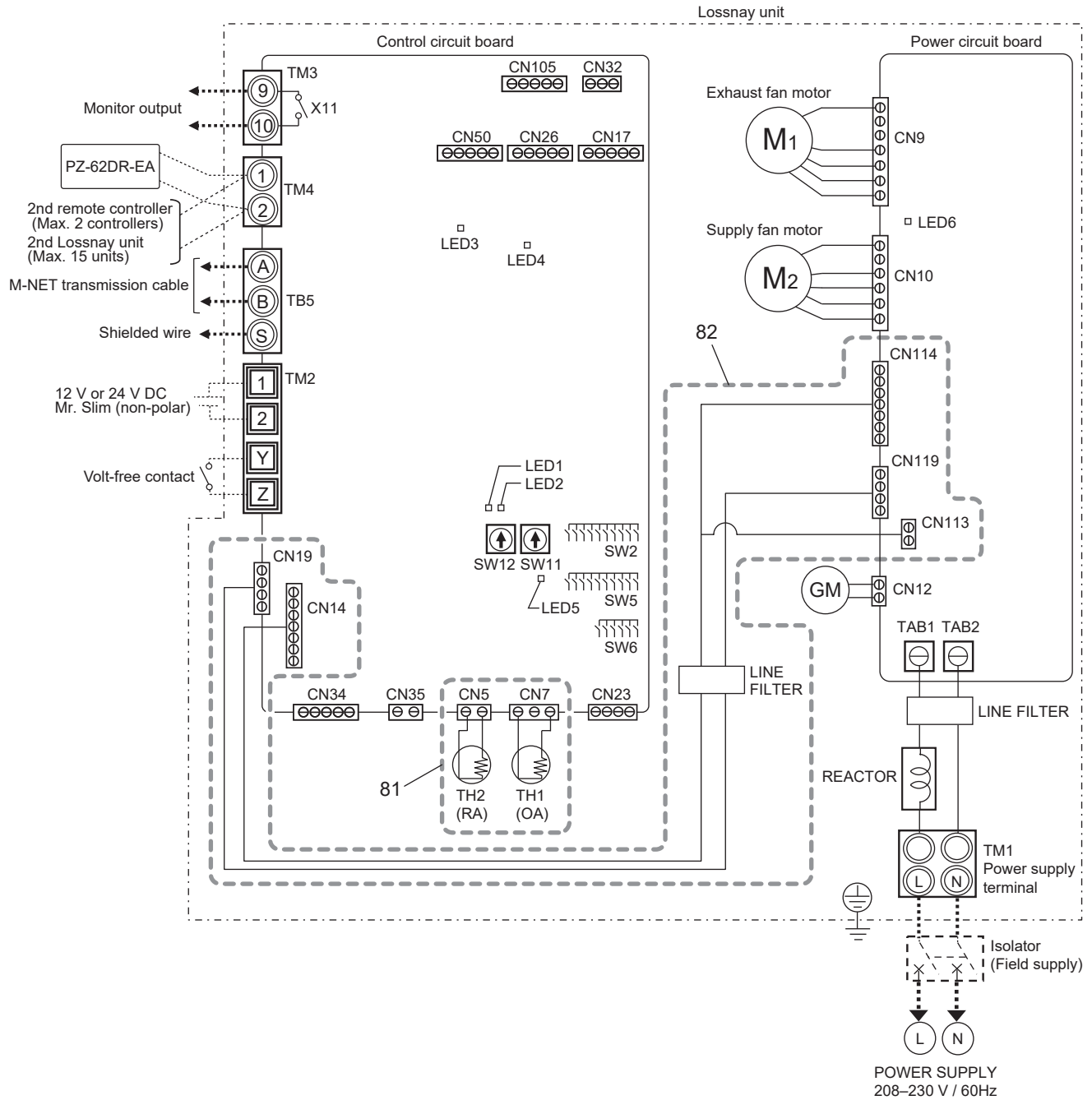


## Control parts

### LGH-F470RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Control box cover | W50 019 707 | 1                |                           |                         |
| 52  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 53  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 54  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 55  | Circuit board     | W50 023 171 | 1                | ⚠                         | Power                   |
| 56  | PCB case          | W50 021 380 | 1                |                           |                         |
| 57  | Reactor           | W50 028 181 | 1                | ⚠                         | White · AC6.5A          |
| 58  | Bush              | W00 000 278 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 277 | 1                |                           |                         |
| 60  | Control base      | W50 019 704 | 1                |                           |                         |
| 61  | Terminal block    | W50 021 213 | 1                | ⚠                         | 2P, With the lead wires |
| 62  | PT screw 4x8 BS   | W00 000 011 | 2                |                           |                         |
| 63  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 64  | Side plate        | W50 019 706 | 1                |                           |                         |
| 65  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 66  | Cord band         | W00 000 258 | 1                |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts

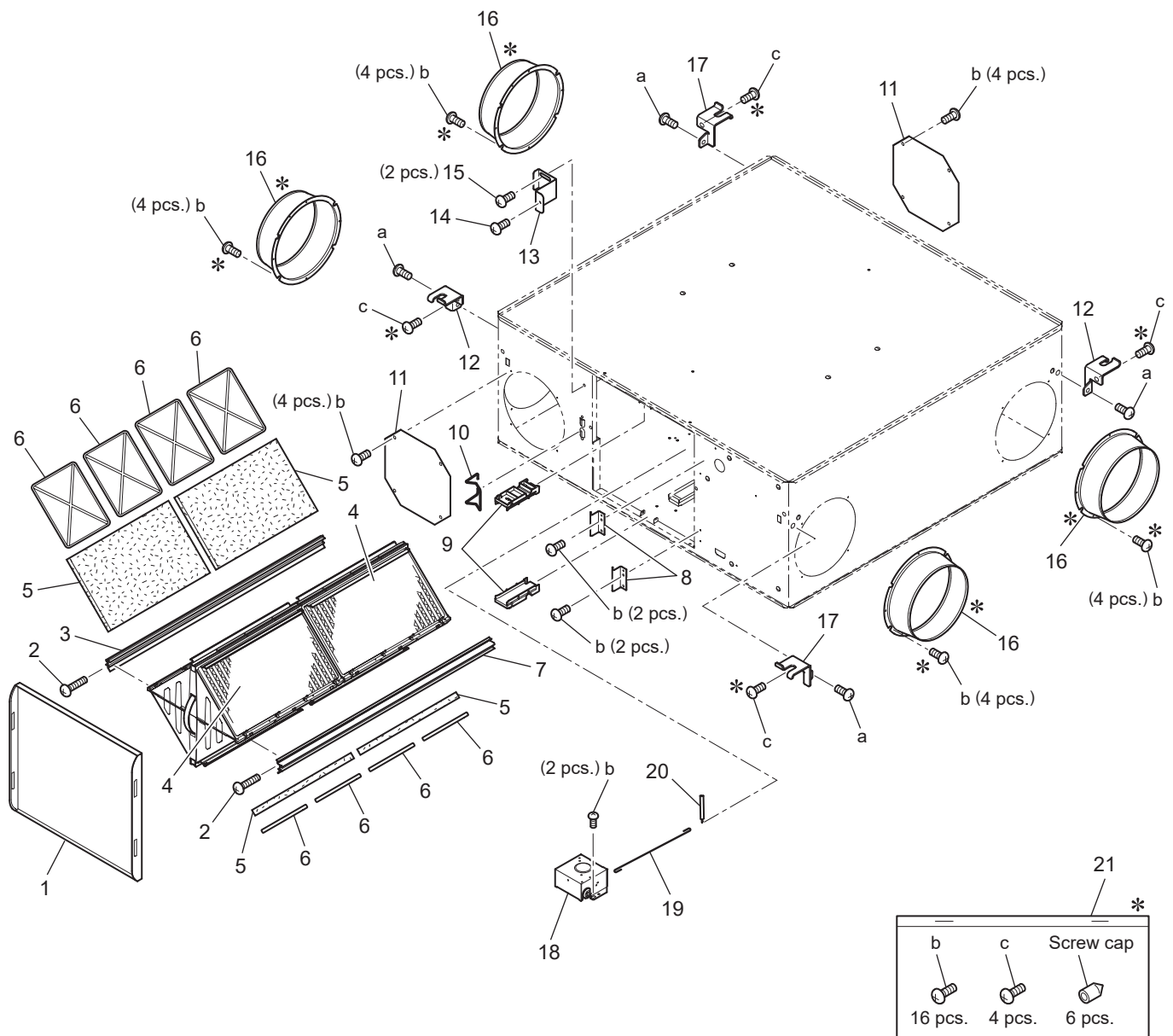


## Wiring parts

LGH-F470RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Thermistor   | W50 023 167 | 1                | ⚠                         | OA・RA set             |
| 82  | Lead wire    | W50 021 214 | 1                | ⚠                         |                       |
| 83  | Lead wire    | W50 004 231 | 1                | ⚠                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |
|     |              |             |                  |                           |                       |

## Structural parts



<Standard screws>

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

\* shows accessory parts.



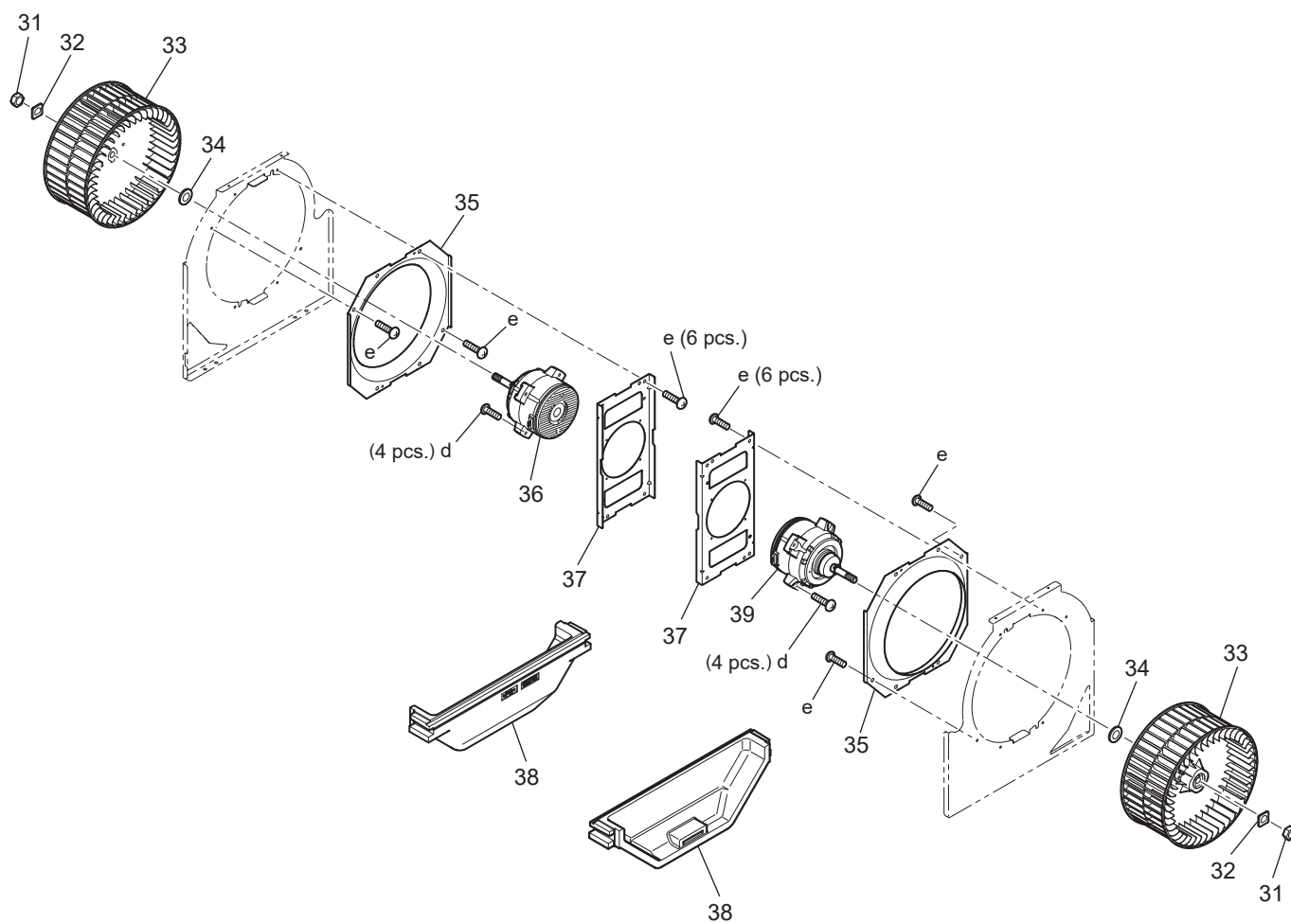
## Structural parts

### LGH-F600RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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 023 720 | 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                |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |
|     |                   |             |                  |                           |                          |

# Fan parts

Air exhaust fan assembly



Air supply fan assembly

<Standard screws>

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

## Fan parts

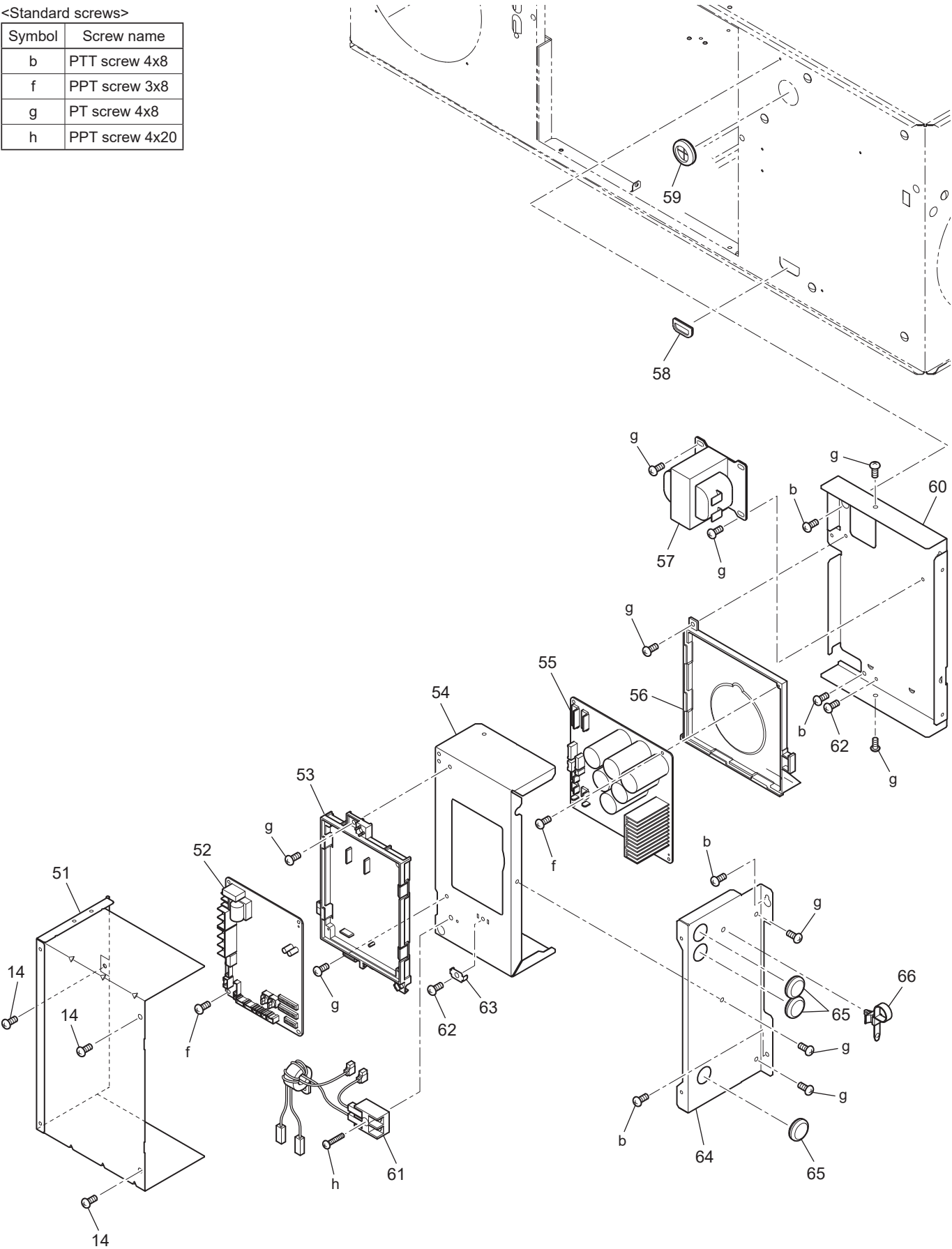
### LGH-F600RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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                | ⚠                         | Dia. 9 5/8 inch (245 mm)      |
| 34  | Washer (12)       | W00 000 123 | 2                |                           | Outer dia. 15/16 inch (24 mm) |
| 35  | Inlet ring        | W50 004 725 | 2                |                           |                               |
| 36  | DC motor (EA)     | W50 023 458 | 1                | ⚠                         |                               |
| 37  | Motor fix plate   | W50 004 736 | 2                |                           |                               |
| 38  | Separator         | W50 013 487 | 2                |                           |                               |
| 39  | DC motor (SA)     | W50 023 457 | 1                | ⚠                         |                               |
|     |                   |             |                  |                           |                               |

# Control parts

<Standard screws>

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

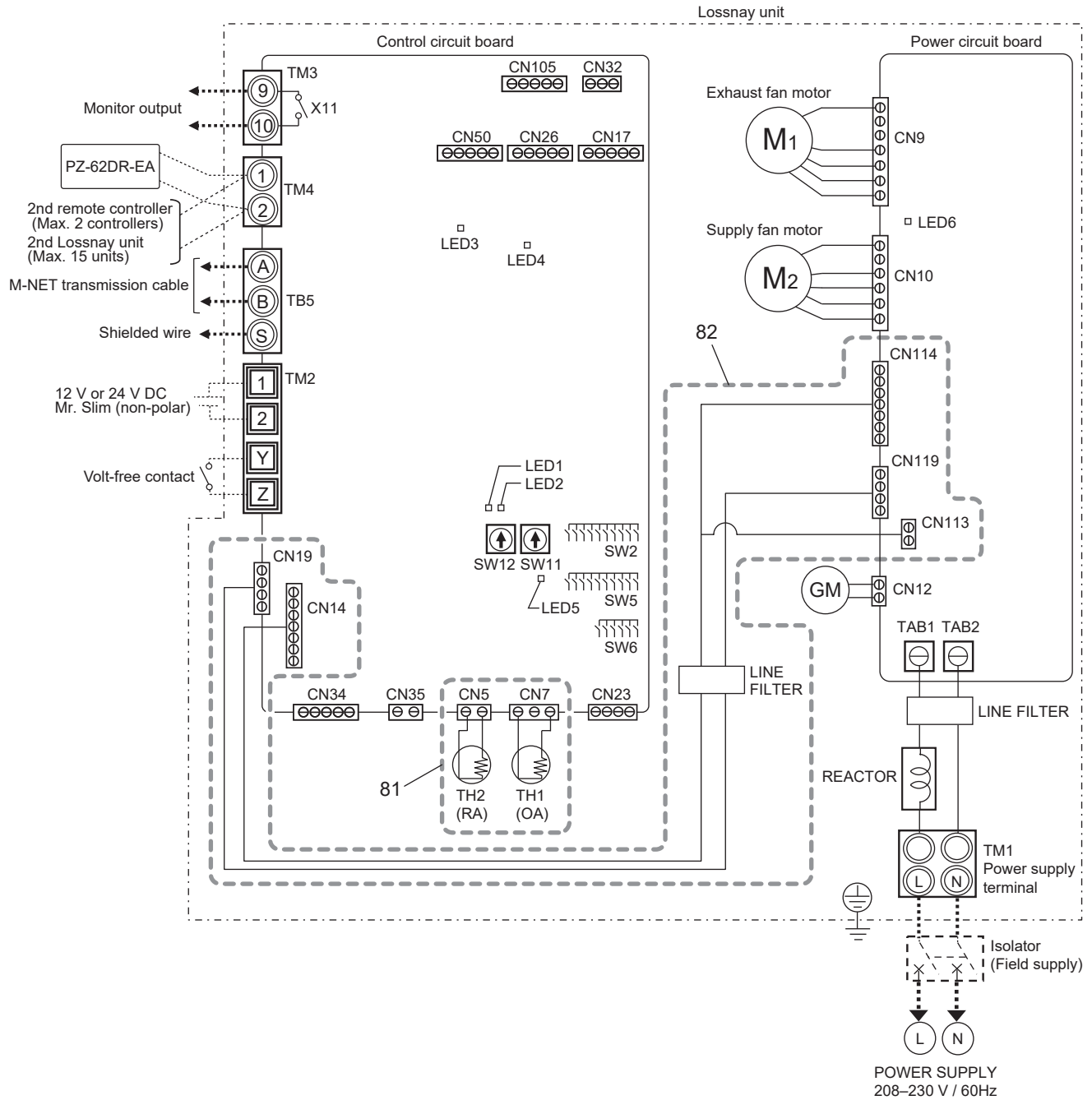


## Control parts

### LGH-F600RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Control box cover | W50 019 707 | 1                |                           |                         |
| 52  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 53  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 54  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 55  | Circuit board     | W50 023 171 | 1                | ⚠                         | Power                   |
| 56  | PCB case          | W50 021 380 | 1                |                           |                         |
| 57  | Reactor           | W50 028 181 | 1                | ⚠                         | White · AC6.5A          |
| 58  | Bush              | W00 000 278 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 277 | 1                |                           |                         |
| 60  | Control base      | W50 019 704 | 1                |                           |                         |
| 61  | Terminal block    | W50 021 213 | 1                | ⚠                         | 2P, With the lead wires |
| 62  | PT screw 4x8 BS   | W00 000 011 | 2                |                           |                         |
| 63  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 64  | Side plate        | W50 019 706 | 1                |                           |                         |
| 65  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 66  | Cord band         | W00 000 258 | 1                |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts

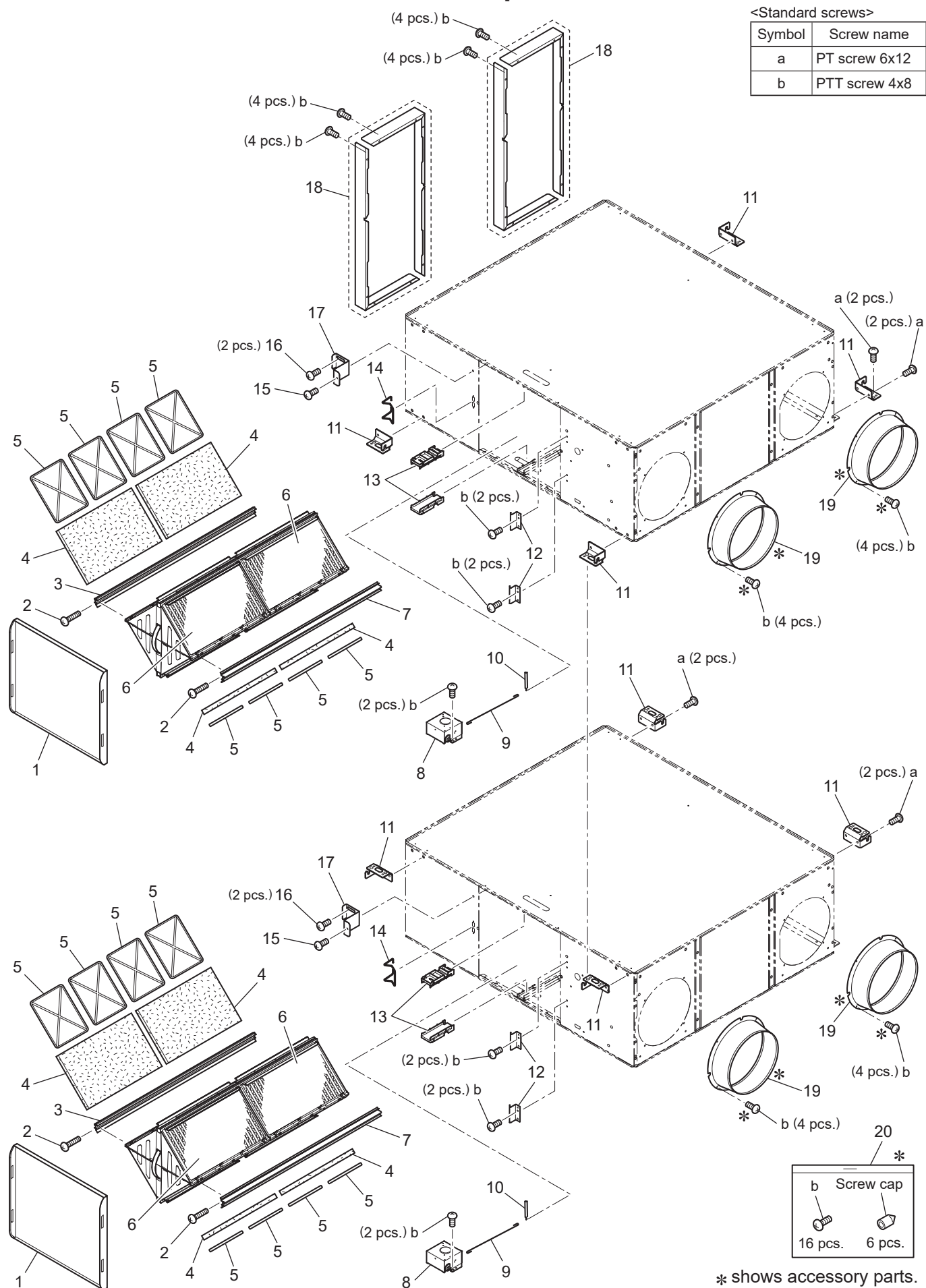


## Wiring parts

LGH-F600RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Thermistor   | W50 023 168 | 1                | △                         | OA・RA set             |
| 82  | Lead wire    | W50 021 214 | 1                | △                         |                       |
| 83  | Lead wire    | W50 004 231 | 1                | △                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |
|     |              |             |                  |                           |                       |

# Structural parts





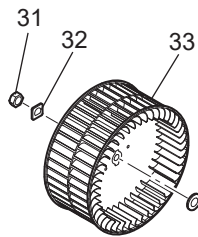
## Structural parts

### LGH-F940RVX2-E

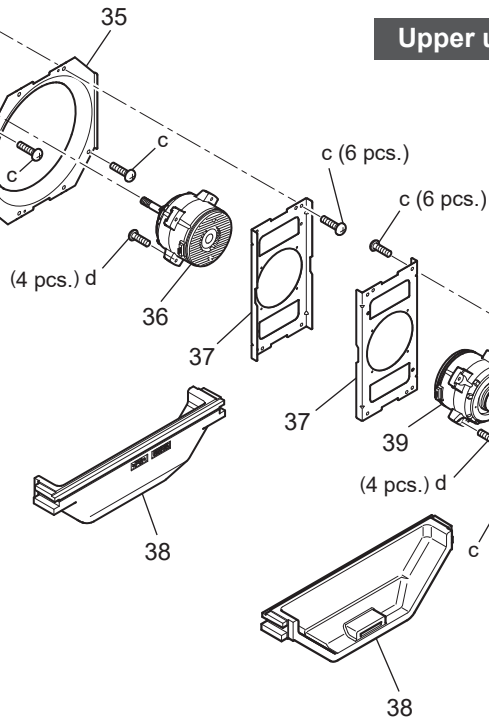
| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                  |
|-----|-------------------|-------------|------------------|---------------------------|--------------------------|
| 1   | Maintenance cover | W50 013 711 | 2                |                           |                          |
| 2   | Special screw M4  | W00 000 101 | 4                |                           |                          |
| 3   | Core guide L      | W50 013 384 | 2                |                           |                          |
| 4   | Filter            | W50 023 719 | 8                | ⚠                         |                          |
| 5   | Filter stopper    | W50 016 711 | 16               |                           |                          |
| 6   | Lossnay core      | W50 004 720 | 4                | ⚠                         | With the filter stoppers |
| 7   | Core guide R      | W50 013 391 | 2                |                           |                          |
| 8   | GM assembly       | W50 023 260 | 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                |                           |                          |

# Fan parts

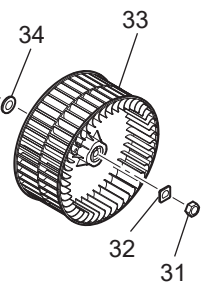
Air exhaust fan assembly



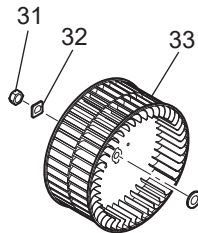
Upper unit



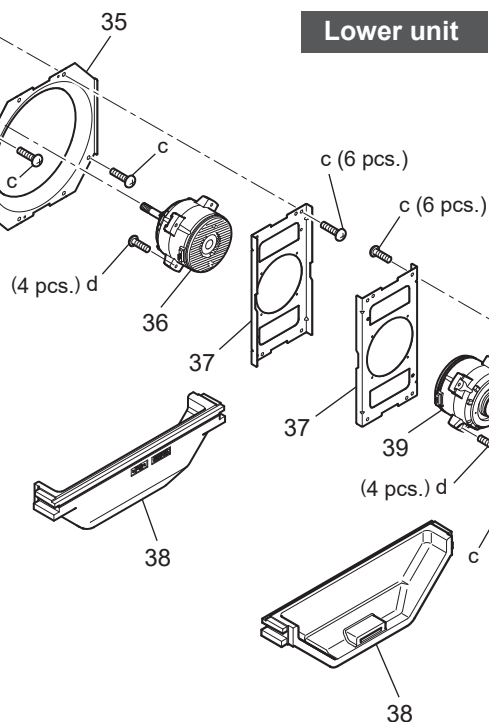
Air supply fan assembly



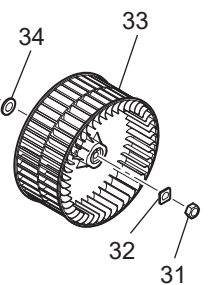
Air exhaust fan assembly



Lower unit



Air supply fan assembly



<Standard screws>

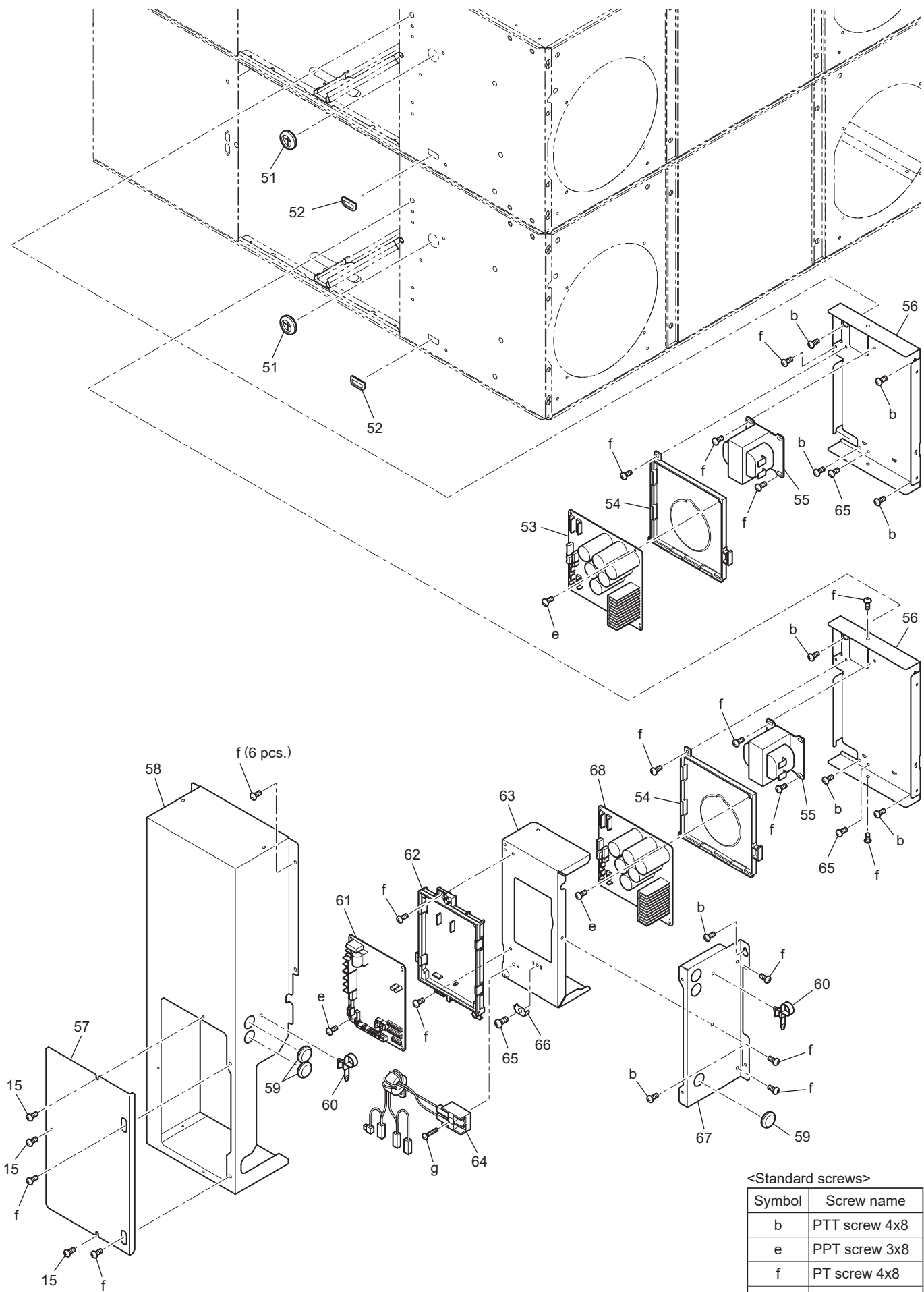
| Symbol | Screw name     |
|--------|----------------|
| c      | PTT screw 5x10 |
| d      | PTT screw 4x25 |

## Fan parts

### LGH-F940RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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                | ⚠                         | Dia. 9 5/8 inch (245 mm)      |
| 34  | Washer (12)       | W00 000 123 | 4                |                           | Outer dia. 15/16 inch (24 mm) |
| 35  | Inlet ring        | W50 004 725 | 4                |                           |                               |
| 36  | DC motor (EA)     | W50 023 458 | 2                | ⚠                         |                               |
| 37  | Motor fix plate   | W50 004 736 | 4                |                           |                               |
| 38  | Separator         | W50 013 487 | 4                |                           |                               |
| 39  | DC motor (SA)     | W50 023 457 | 2                | ⚠                         |                               |
|     |                   |             |                  |                           |                               |

# Control parts

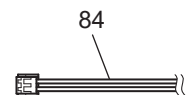
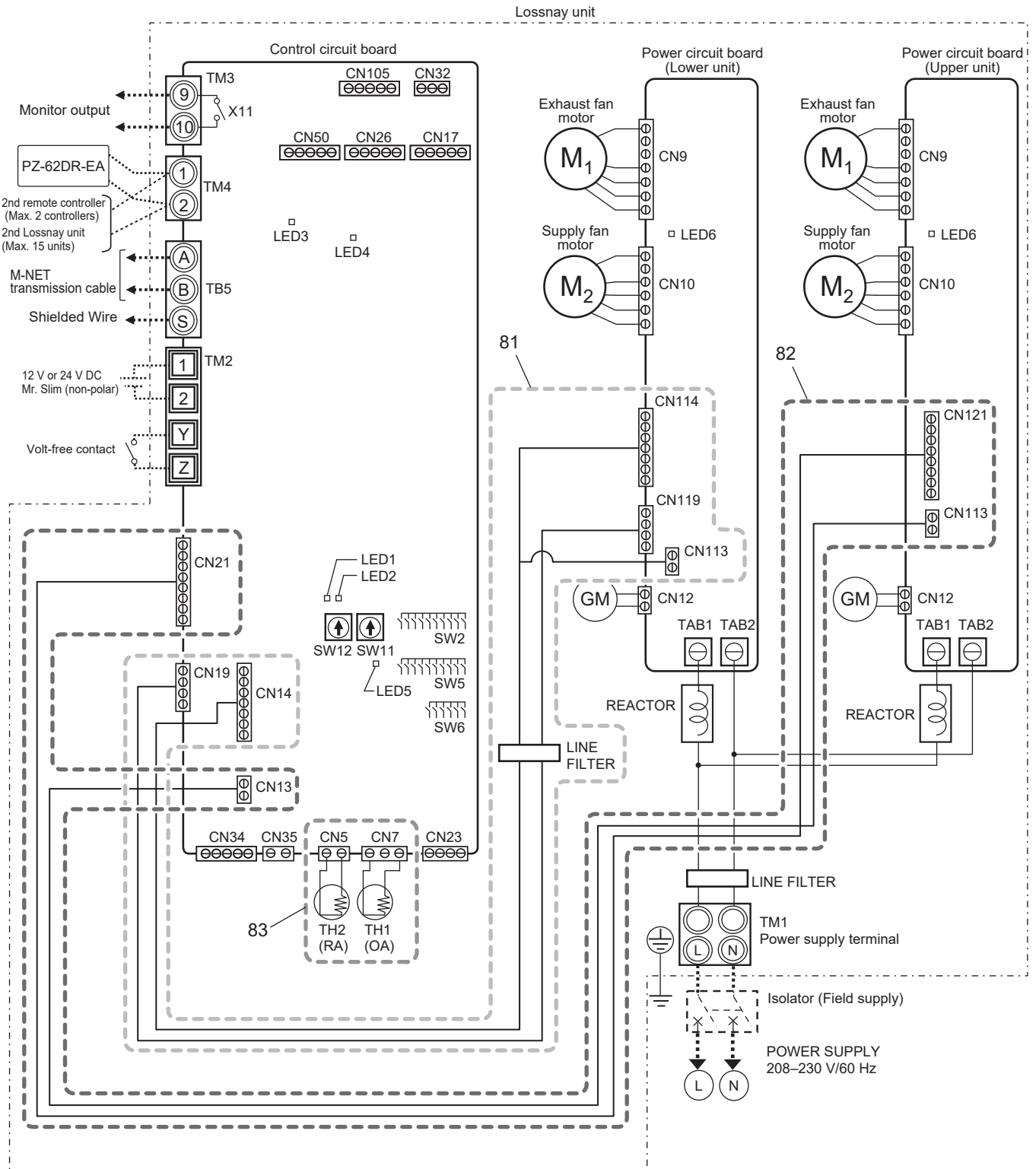


## Control parts

### LGH-F940RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Cord bush         | W00 000 277 | 2                |                           |                         |
| 52  | Bush              | W00 000 278 | 2                |                           |                         |
| 53  | Circuit board     | W50 023 172 | 1                | ⚠                         | Power, Upper            |
| 54  | PCB case          | W50 021 380 | 2                |                           |                         |
| 55  | Reactor           | W50 028 181 | 2                | ⚠                         | White · AC6.5A          |
| 56  | Control base      | W50 019 704 | 2                |                           |                         |
| 57  | Control cover     | W50 019 709 | 1                |                           |                         |
| 58  | Control box cover | W50 019 708 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 60  | Cord band         | W00 000 258 | 2                |                           |                         |
| 61  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 62  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 63  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 64  | Terminal block    | W50 023 214 | 1                | ⚠                         | 2P, With the lead wires |
| 65  | PT screw 4x8 BS   | W00 000 011 | 3                |                           |                         |
| 66  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 67  | Side plate        | W50 019 706 | 1                |                           |                         |
| 68  | Circuit board     | W50 023 171 | 1                | ⚠                         | Power, Lower            |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts



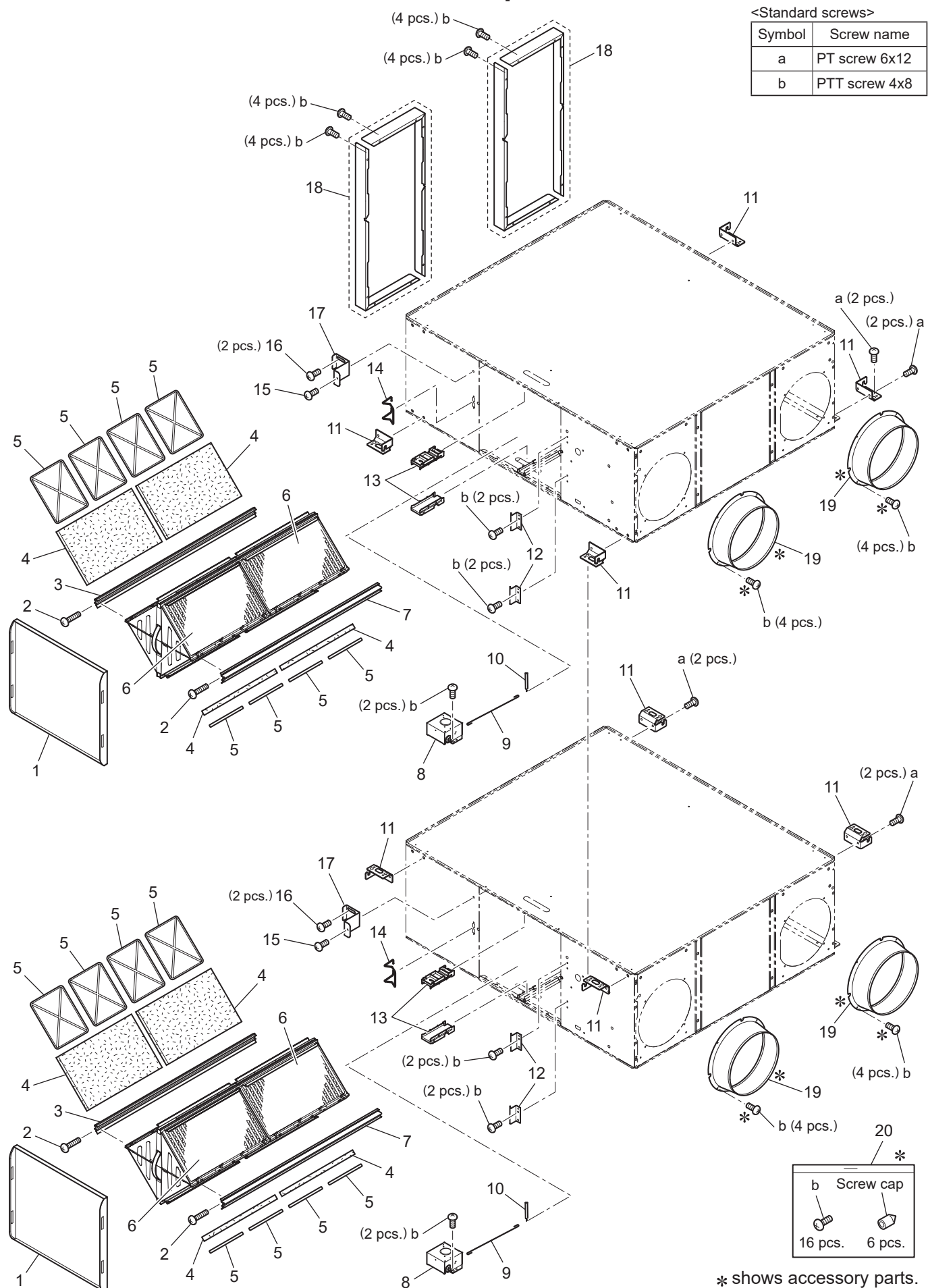
## Wiring parts

LGH-F940RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Lead wire    | W50 023 213 | 1                | ⚠                         |                       |
| 82  | Lead wire    | W50 021 214 | 1                | ⚠                         |                       |
| 83  | Thermistor   | W50 023 167 | 1                | ⚠                         | OA・RA set             |
| 84  | Lead wire    | W50 004 231 | 1                | ⚠                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |



## Structural parts



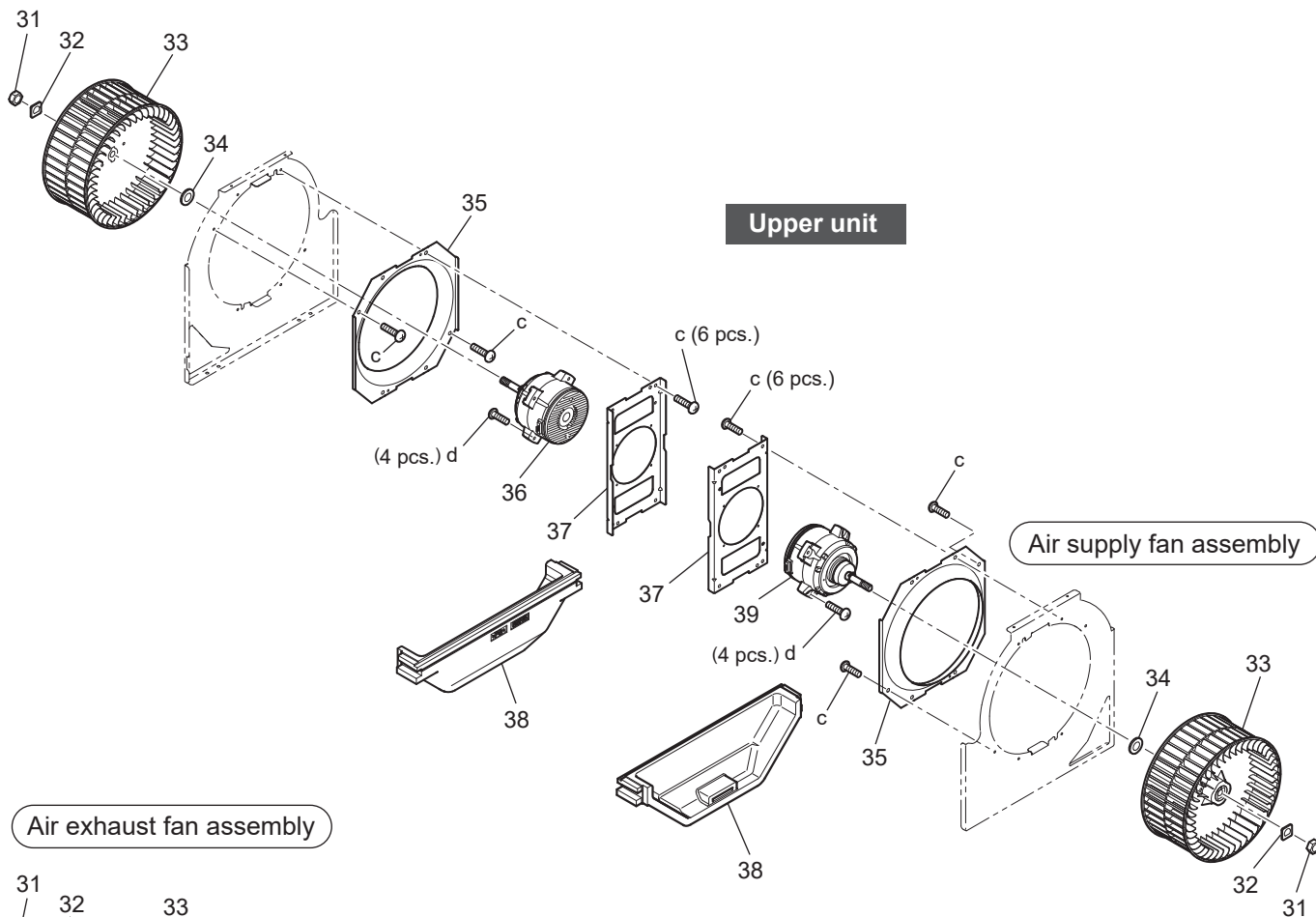
## Structural parts

### LGH-F1200RVX2-E

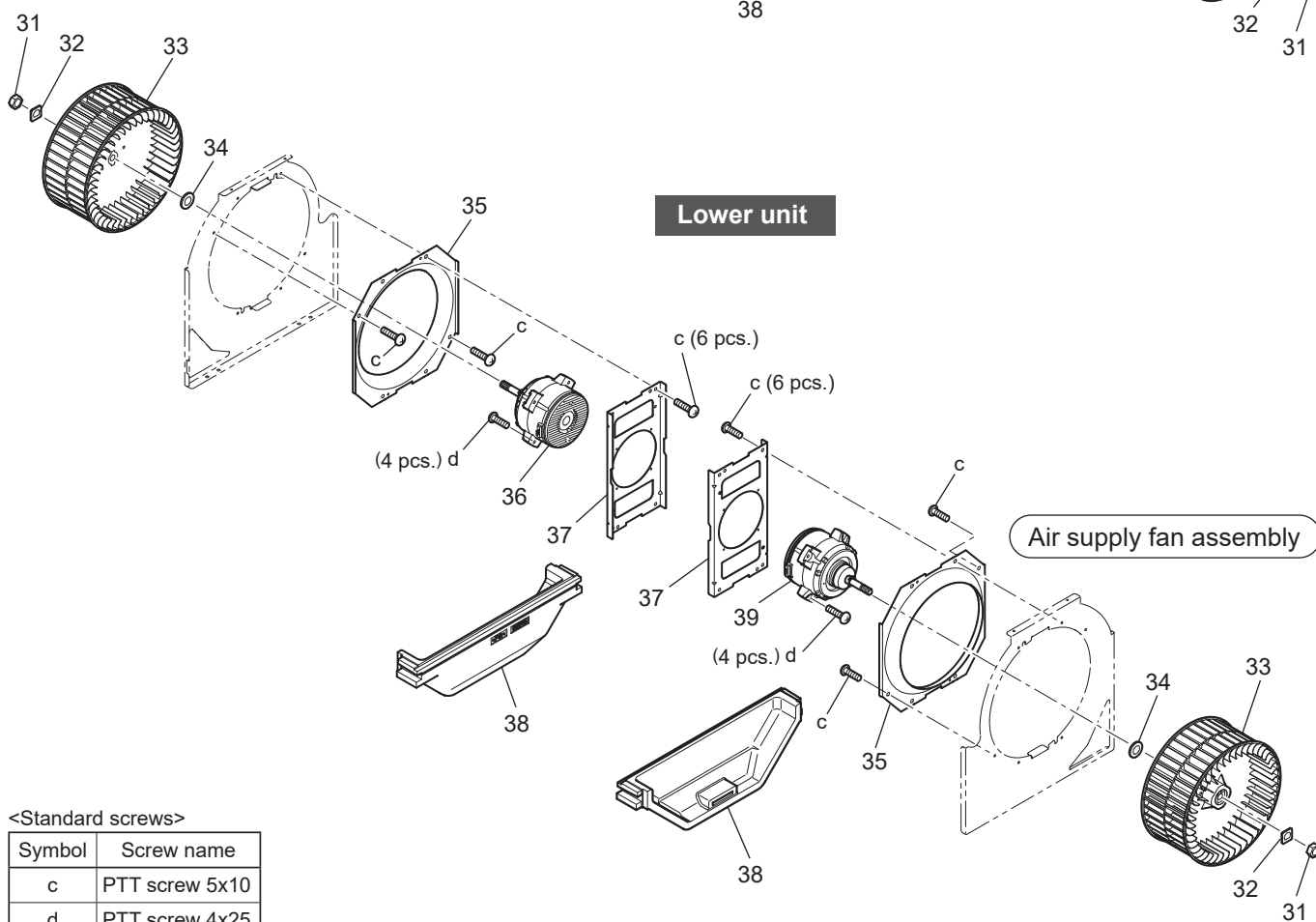
| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                  |
|-----|-------------------|-------------|------------------|---------------------------|--------------------------|
| 1   | Maintenance cover | W50 013 711 | 2                |                           |                          |
| 2   | Special screw M4  | W00 000 101 | 4                |                           |                          |
| 3   | Core guide L      | W50 013 385 | 2                |                           |                          |
| 4   | Filter            | W50 023 720 | 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                |                           |                          |

# Fan parts

Air exhaust fan assembly



Air exhaust fan assembly



<Standard screws>

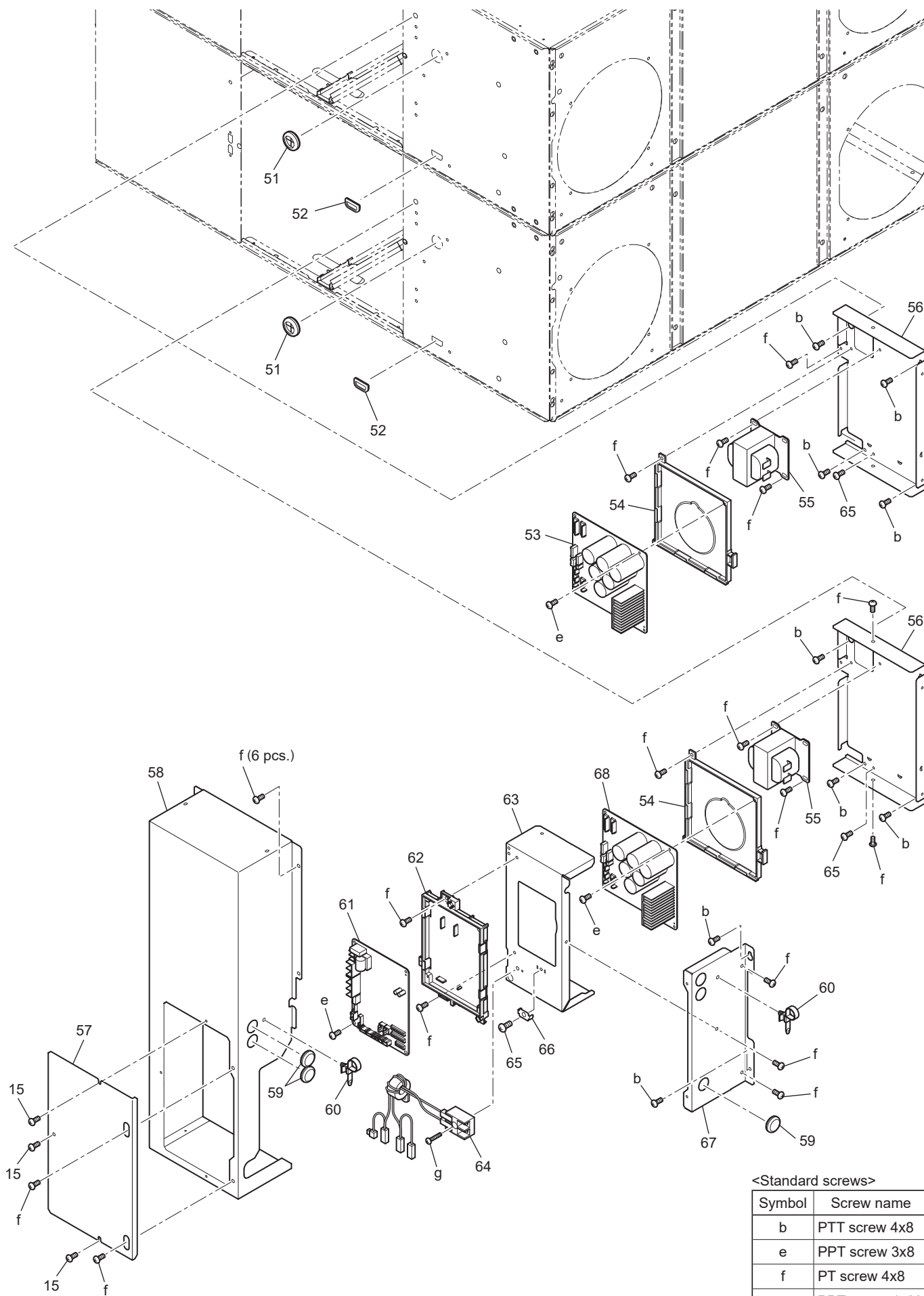
| Symbol | Screw name     |
|--------|----------------|
| c      | PTT screw 5x10 |
| d      | PTT screw 4x25 |

## Fan parts

### LGH-F1200RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>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                | ⚠                         | Dia. 9 5/8 inch (245 mm)      |
| 34  | Washer (12)       | W00 000 123 | 4                |                           | Outer dia. 15/16 inch (24 mm) |
| 35  | Inlet ring        | W50 004 725 | 4                |                           |                               |
| 36  | DC motor (EA)     | W50 023 458 | 2                | ⚠                         |                               |
| 37  | Motor fix plate   | W50 004 736 | 4                |                           |                               |
| 38  | Separator         | W50 013 487 | 4                |                           |                               |
| 39  | DC motor (SA)     | W50 023 457 | 2                | ⚠                         |                               |
|     |                   |             |                  |                           |                               |

## Control parts

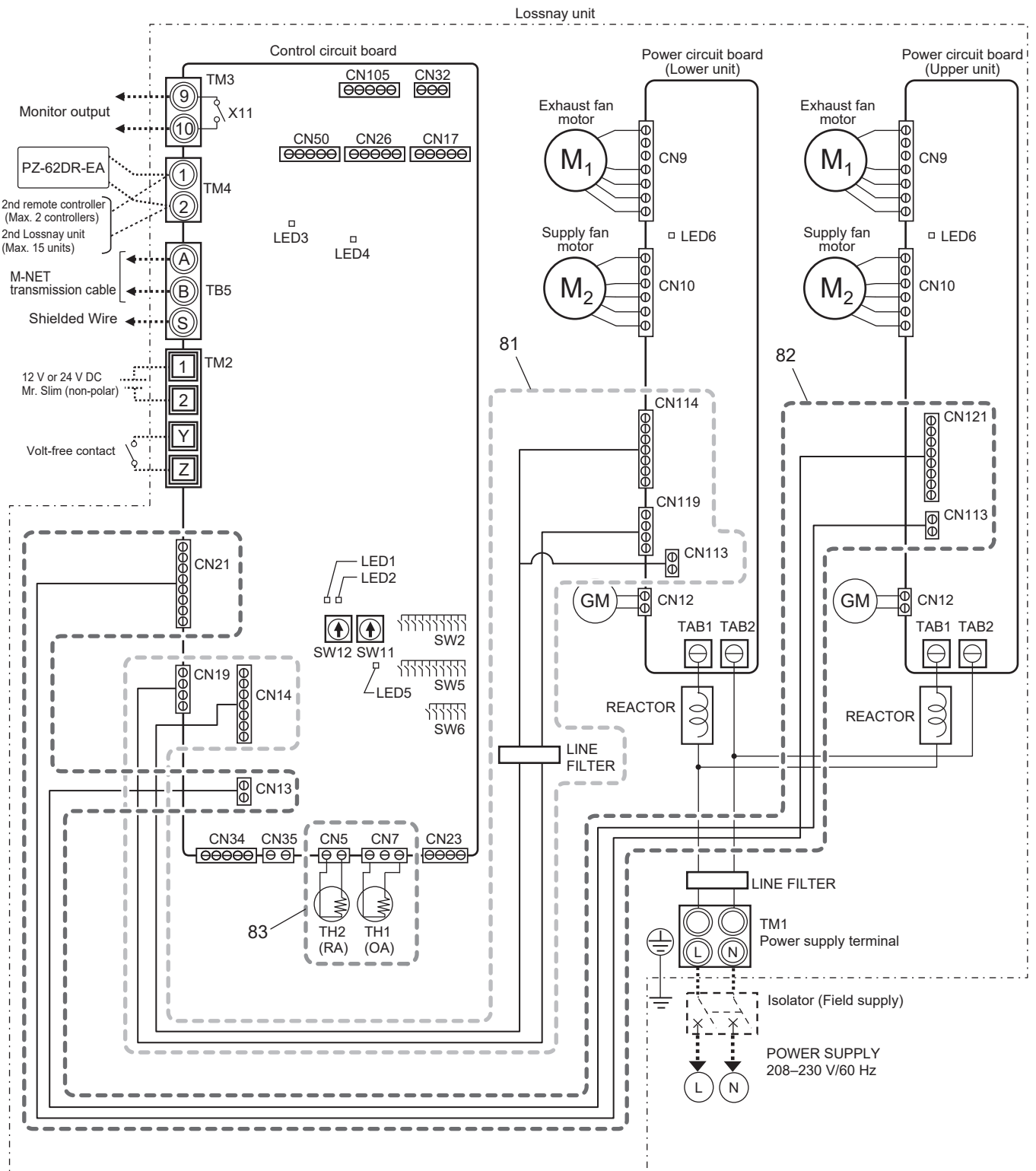


## Control parts

### LGH-F1200RVX2-E

| No. | Name of part      | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks                 |
|-----|-------------------|-------------|------------------|---------------------------|-------------------------|
| 51  | Cord bush         | W00 000 277 | 2                |                           |                         |
| 52  | Bush              | W00 000 278 | 2                |                           |                         |
| 53  | Circuit board     | W50 023 172 | 1                | ⚠                         | Power, Upper            |
| 54  | PCB case          | W50 021 380 | 2                |                           |                         |
| 55  | Reactor           | W50 028 181 | 2                | ⚠                         | White · AC6.5A          |
| 56  | Control base      | W50 019 704 | 2                |                           |                         |
| 57  | Control cover     | W50 019 709 | 1                |                           |                         |
| 58  | Control box cover | W50 019 708 | 1                |                           |                         |
| 59  | Cord bush         | W00 000 270 | 3                |                           |                         |
| 60  | Cord band         | W00 000 258 | 2                |                           |                         |
| 61  | Circuit board     | W50 025 171 | 1                | ⚠                         | Control                 |
| 62  | PCB fix plate     | W50 021 706 | 1                |                           |                         |
| 63  | Sub control base  | W50 021 715 | 1                |                           |                         |
| 64  | Terminal block    | W50 023 214 | 1                | ⚠                         | 2P, With the lead wires |
| 65  | PT screw 4x8 BS   | W00 000 011 | 3                |                           |                         |
| 66  | Earth fix plate   | W82 001 706 | 1                |                           |                         |
| 67  | Side plate        | W50 019 706 | 1                |                           |                         |
| 68  | Circuit board     | W50 023 171 | 1                | ⚠                         | Power, Lower            |
|     |                   |             |                  |                           |                         |
|     |                   |             |                  |                           |                         |

# Wiring parts



## Wiring parts

### LGH-F1200RVX2-E

| No. | Name of part | Parts No.   | Q'ty<br>pcs/unit | Critical<br>for<br>safety | Remarks               |
|-----|--------------|-------------|------------------|---------------------------|-----------------------|
| 81  | Lead wire    | W50 023 213 | 1                | △                         |                       |
| 82  | Lead wire    | W50 021 214 | 1                | △                         |                       |
| 83  | Thermistor   | W50 023 168 | 1                | △                         | OA・RA set             |
| 84  | Lead wire    | W50 004 231 | 1                | △                         | 3 15/16 inch (100 mm) |
|     |              |             |                  |                           |                       |