

November 2010

No. OCH468  
REVISED EDITION-C


# TECHNICAL & SERVICE MANUAL

[Model name]  
<Outdoor unit>

MXZ-8B48NA

[Service Ref.]

**MXZ-8B48NA**  
**MXZ-8B48NAR1**

<Branch box>

PAC-AKA51BC

PAC-AKA31BC

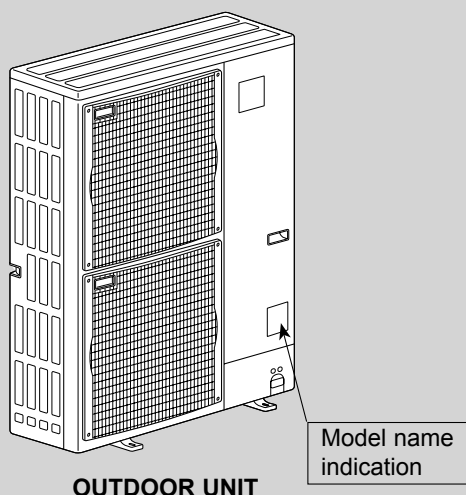
(Indispensable optional parts  
for MXZ-8B48NA)

## Revision:

- Switch setting on page 68 has been modified in REVISED EDITION-C.
- Some descriptions have been modified.
- Please void OCH468 REVISED EDITION-B.

## NOTE:

- This service manual describes technical data of outdoor unit and branch box. As for indoor units, refer to its service manual.
- RoHS compliant products have <G> mark on the spec name plate.



OUTDOOR UNIT

BRANCH BOX

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**PARTS CATALOG (OCB468)**

# 1

## TECHNICAL CHANGE

**MXZ-8B48NA**



**MXZ-8B48NAR1**

- THERMISTOR has been changed. (Discharge thermistor → Compressor thermistor)

# 2

## SAFETY PRECAUTION

### 2-1. ALWAYS OBSERVE FOR SAFETY

**Before obtaining access to terminal, all supply circuit must be disconnected.**

### 2-2. CAUTIONS RELATED TO NEW REFRIGERANT

Cautions for units utilizing refrigerant R410A

**Use new refrigerant pipes.**

**Make sure that the inside and outside of refrigerant piping is clean and it has no contaminants such as sulfur, oxides, dirt, shaving particles, etc, which are hazard to refrigerant cycle. In addition, use pipes with specified thickness.**

Contamination inside refrigerant piping can cause deterioration of refrigerant oil etc.

**Store the piping to be used indoors during installation, and both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)**

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

**The refrigerant oil applied to flare and flange connections must be ester oil, ether oil or alkylbenzene oil in a small amount.**

If large amount of mineral oil enters, that can cause deterioration of refrigerant oil etc.

**Charge refrigerant from liquid phase of gas cylinder.**

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

**Do not use refrigerant other than R410A.**

If other refrigerant (R22 etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil etc.

**Use a vacuum pump with a reverse flow check valve.**

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil etc.

**Use the following tools specifically designed for use with R410A refrigerant.**

The following tools are necessary to use R410A refrigerant.

| Tools for R410A   |                                       |
|-------------------|---------------------------------------|
| Gauge manifold    | Flare tool                            |
| Charge hose       | Size adjustment gauge                 |
| Gas leak detector | Vacuum pump adaptor                   |
| Torque wrench     | Electronic refrigerant charging scale |

**Handle tools with care.**

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

**Do not use a charging cylinder.**

If a charging cylinder is used, the composition of refrigerant will change and the efficiency will be lowered.

**Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.**

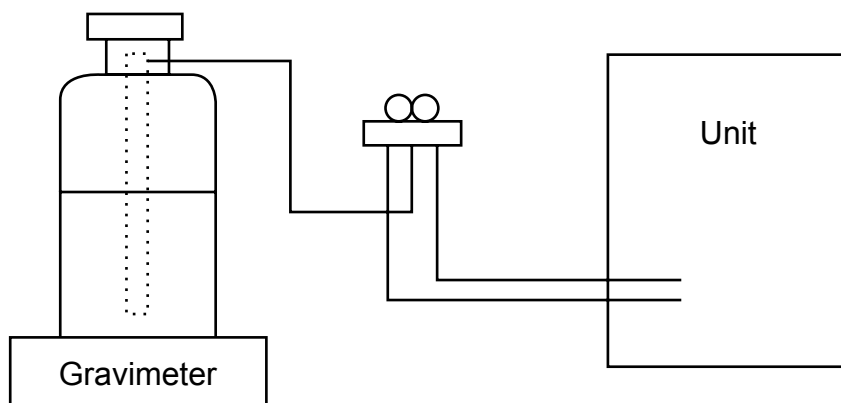
## [1] Cautions for service

- (1) Perform service after recovering the refrigerant left in unit completely.
- (2) Do not release refrigerant in the air.
- (3) After completing service, charge the cycle with specified amount of refrigerant.
- (4) When performing service, install a filter drier simultaneously.  
Be sure to use a filter drier for new refrigerant.

## [2] Additional refrigerant charge

### When charging directly from cylinder

- Check that cylinder for R410A on the market is syphon type.
- Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



## [3] Service tools

- (1) Use the below service tools as exclusive tools for R410A refrigerant.

| No. | Tool name                      | Specifications                                       |
|-----|--------------------------------|------------------------------------------------------|
| ①   | Gauge manifold                 | ·Only for R410A                                      |
|     |                                | ·Use the existing fitting specifications. (UNF1/2)   |
|     |                                | ·Use high-tension side pressure of 5.3MPa·G or over. |
| ②   | Charge hose                    | ·Only for R410A                                      |
|     |                                | ·Use pressure performance of 5.09MPa·G or over.      |
| ③   | Electronic scale               | —                                                    |
| ④   | Gas leak detector              | ·Use the detector for R134a, R407C or R410A.         |
| ⑤   | Adaptor for reverse flow check | ·Attach on vacuum pump.                              |
| ⑥   | Refrigerant charge base        | —                                                    |
| ⑦   | Refrigerant cylinder           | ·Only for R410A    ·Top of cylinder (Pink)           |
|     |                                | ·Cylinder with syphon                                |
| ⑧   | Refrigerant recovery equipment | —                                                    |

## 2-3. Cautions for refrigerant piping work

New refrigerant R410A is adopted for replacement inverter series. Although the refrigerant piping work for R410A is same as for R22, exclusive tools are necessary so as not to mix with different kind of refrigerant. Furthermore as the working pressure of R410A is 1.6 times higher than that of R22, their sizes of flared sections and flare nuts are different.

### ① Thickness of pipes

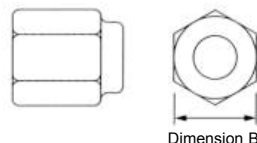
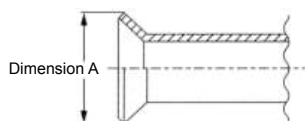
Because the working pressure of R410A is higher compared to R22, be sure to use refrigerant piping with thickness shown below. (Never use pipes of 0.7 mm [7/256 inch] or below.)

Diagram below: Piping diameter and thickness

| Nominal dimensions[inch] | Outside diameter (mm) | Thickness (mm) [inch] |             |
|--------------------------|-----------------------|-----------------------|-------------|
|                          |                       | R410A                 | R22         |
| 1/4                      | 6.35                  | 0.8 [1/32]            | 0.8 [1/32]  |
| 3/8                      | 9.52                  | 0.8 [1/32]            | 0.8 [1/32]  |
| 1/2                      | 12.70                 | 0.8 [1/32]            | 0.8 [1/32]  |
| 5/8                      | 15.88                 | 1.0 [5/128]           | 1.0 [5/128] |
| 3/4                      | 19.05                 | —                     | 1.0 [5/128] |

### ② Dimensions of flare cutting and flare nut

The component molecules in HFC refrigerant are smaller compared to conventional refrigerants. In addition to that, R410A is a refrigerant, which has higher risk of leakage because its working pressure is higher than that of other refrigerants. Therefore, to enhance airtightness and intensity, flare cutting dimension of copper pipe for R410A has been specified separately from the dimensions for other refrigerants as shown below. The dimension B of flare nut for R410A also has partly been changed to increase intensity as shown below. Set copper pipe correctly referring to copper pipe flaring dimensions for R410A below. For 1/2 and 5/8 inch, the dimension B changes. Use torque wrench corresponding to each dimension.



Flare cutting dimensions (mm) [inch]

| Nominal dimensions[inch] | Outside diameter | Dimension A (mm) [inch] |      |
|--------------------------|------------------|-------------------------|------|
|                          |                  | R410A                   | R22  |
| 1/4                      | 6.35             | 9.1 [11/32-23/64]       | 9.0  |
| 3/8                      | 9.52             | 13.2 [1/2-33/64]        | 13.0 |
| 1/2                      | 12.70            | 16.6 [41/64-21/32]      | 16.2 |
| 5/8                      | 15.88            | 19.7 [49/64-25/32]      | 19.4 |
| 3/4                      | 19.05            | —                       | 23.3 |

Flare nut dimensions (mm) [inch]

| Nominal dimensions[inch] | Outside diameter[inch] | Dimension B   |      |
|--------------------------|------------------------|---------------|------|
|                          |                        | R410A         | R22  |
| 1/4                      | 6.35                   | 17.0 [43/64]  | 17.0 |
| 3/8                      | 9.52                   | 22.0 [7/8]    | 22.0 |
| 1/2                      | 12.70                  | 26.0 [1-3/64] | 24.0 |
| 5/8                      | 15.88                  | 29.0 [1-9/64] | 27.0 |
| 3/4                      | 19.05                  | —             | 36.0 |

### ③ Tools for R410A (The following table shows whether conventional tools can be used or not.)

| Tools and materials                                      | Use                                                                                                             | R410A tools                                                                              | Can R22 tools be used?                               | Can R407C tools be used?                                    |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------|
| Gauge manifold                                           | Air purge, refrigerant charge and operation check                                                               | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Charge hose                                              |                                                                                                                 | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Gas leak detector                                        | Gas leak check                                                                                                  | Tool for HFC refrigerant                                                                 | ×                                                    | ○                                                           |
| Refrigerant recovery equipment                           | Refrigerant recovery                                                                                            | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Refrigerant cylinder                                     | Refrigerant charge                                                                                              | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Applied oil                                              | Apply to flared section                                                                                         | Ester oil, ether oil and alkylbenzene oil (minimum amount)                               | ×                                                    | Ester oil, ether oil: ○<br>Alkylbenzene oil: minimum amount |
| Safety charger                                           | Prevent compressor malfunction when charging refrigerant by spraying liquid refrigerant                         | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Charge valve                                             | Prevent gas from blowing out when detaching charge hose                                                         | Tool exclusive for R410A                                                                 | ×                                                    | ×                                                           |
| Vacuum pump                                              | Vacuum drying and air purge                                                                                     | Tools for other refrigerants can be used if equipped with adopter for reverse flow check | △ (Usable if equipped with adopter for reverse flow) | △ (Usable if equipped with adopter for reverse flow)        |
| Flare tool                                               | Flaring work of piping                                                                                          | Tools for other refrigerants can be used by adjusting flaring dimension                  | △ (Usable by adjusting flaring dimension)            | △ (Usable by adjusting flaring dimension)                   |
| Bender                                                   | Bend the pipes                                                                                                  | Tools for other refrigerants can be used                                                 | ○                                                    | ○                                                           |
| Pipe cutter                                              | Cut the pipes                                                                                                   | Tools for other refrigerants can be used                                                 | ○                                                    | ○                                                           |
| Welder and nitrogen gas cylinder                         | Weld the pipes                                                                                                  | Tools for other refrigerants can be used                                                 | ○                                                    | ○                                                           |
| Refrigerant charging scale                               | Refrigerant charge                                                                                              | Tools for other refrigerants can be used                                                 | ○                                                    | ○                                                           |
| Vacuum gauge or thermistor vacuum gauge and vacuum valve | Check the degree of vacuum. (Vacuum valve prevents back flow of oil and refrigerant to thermistor vacuum gauge) | Tools for other refrigerants can be used                                                 | ○                                                    | ○                                                           |
| Charging cylinder                                        | Refrigerant charge                                                                                              | Tool exclusive for R410A                                                                 | ×                                                    | —                                                           |

× : Prepare a new tool. (Use the new tool as the tool exclusive for R410A.)

△ : Tools for other refrigerants can be used under certain conditions.

○ : Tools for other refrigerants can be used.

# 3

## OVERVIEW OF UNITS

### 3-1. CONSTRUCTION OF SYSTEM

| MXZ-8B48NA, MXZ-8B48NAR1                |                                              |                                                                             |
|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------|
| Outdoor unit                            | Rated capacity (kBTU/h)<br>(Cooling/Heating) | 48/54                                                                       |
|                                         | MAX. capacity (kBTU/h)<br>(Cooling/Heating)  | 54/60                                                                       |
|                                         | 6HP                                          |                                                                             |
|                                         | R410A                                        |                                                                             |
| Indoor unit<br>that can be<br>connected | Capacity                                     | Type 06 ~ Type 24                                                           |
|                                         | Number of units                              | 2 ~ 8 units                                                                 |
|                                         | Total system wide capacity                   | 22.2 ~ 130 % of outdoor unit MAX. Cooling capacity (12 kBTU/h ~ 70.2kBTU/h) |
| Branch box<br>that can be<br>connected  | Number of units                              | 1 ~ 2 units                                                                 |



| Connectable indoor unit lineup (Heat pump inverter type) |                        |                          |                         |    |    |    |        |    |
|----------------------------------------------------------|------------------------|--------------------------|-------------------------|----|----|----|--------|----|
| Model type                                               |                        | Model name               | Capacity class [kBTU/h] |    |    |    |        |    |
|                                                          |                        |                          | 06                      | 09 | 12 | 15 | 18(17) | 24 |
| Wall<br>mounted                                          | Deluxe                 | MSZ-FE09/12, MSZ-FD09/12 |                         | ●  | ●  |    | ●      |    |
|                                                          | Standard               | MSZ-GE06/09/12/15/18/24  | ●                       | ●  | ●  | ●  | ●      | ●  |
|                                                          |                        | MSZ-GA24                 |                         |    |    |    |        | ●  |
|                                                          |                        | MSZ-A09/12/15/17/24      |                         | ●  | ●  | ●  | ●      | ●  |
| Ceiling<br>concealed                                     | Low static pressure    | SEZ-KD09/12/15/18        |                         | ●  | ●  | ●  | ●      |    |
|                                                          | Middle static pressure | PEAD-A24AA               |                         |    |    |    |        | ●  |
| 4-way ceiling cassette                                   | Standard               | PLA-A12/18/24BA          |                         |    | ●  |    | ●      | ●  |
| Floor standing                                           |                        | MFZ-KA09/12/18NA         |                         | ●  | ●  |    | ●      |    |

<NOTE> When connecting MSZ-FE18NA model, joint pipe is necessary for both liquid and gas pipes.



| Branch box                                                   | PAC-AKA51BC                  | PAC-AKA31BC                  |
|--------------------------------------------------------------|------------------------------|------------------------------|
| Number of branches<br>(Indoor unit that<br>can be connected) | 5 branches<br>(MAX. 5 units) | 3 branches<br>(MAX. 3 units) |

※ Max. 2 branch boxes can be connected to 1 outdoor unit.



| 2- branch pipe (joint) : Optional parts                                |             |                   |
|------------------------------------------------------------------------|-------------|-------------------|
| In case of using 1- branch box                                         | No need     |                   |
| In case of using 2- branch boxes                                       | Model name  | Connection method |
|                                                                        | MSDD-50AR-E | flare             |
|                                                                        | MSDD-50BR-E | brazing           |
| ※ According to the connection method, you can choose the favorite one. |             |                   |

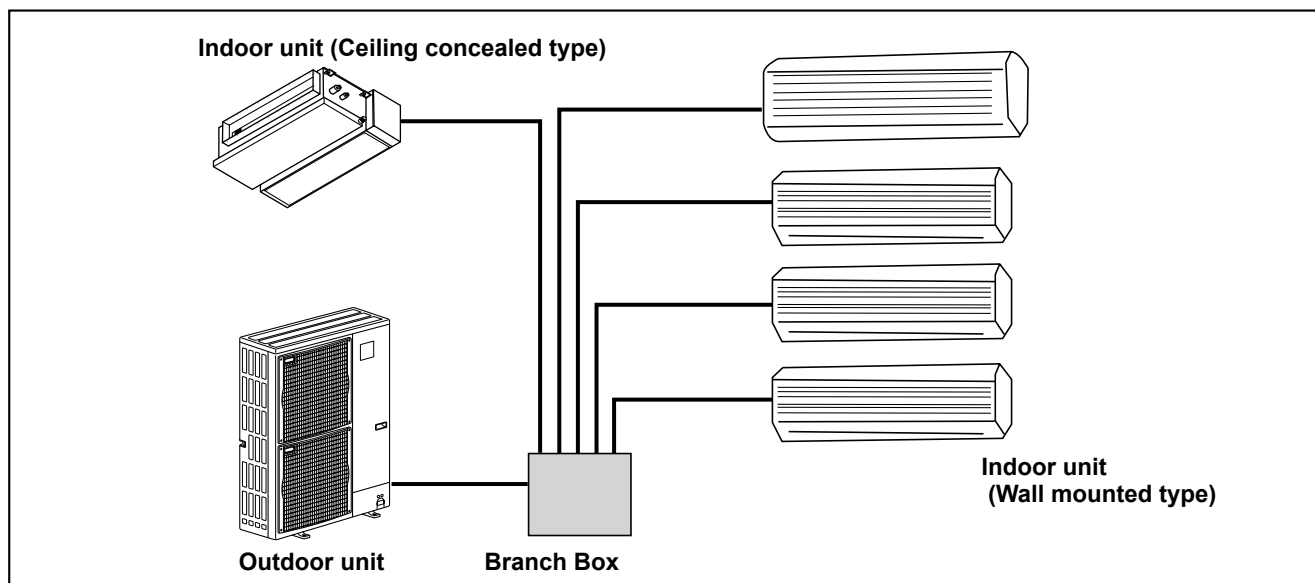


|        |                                                                       |
|--------|-----------------------------------------------------------------------|
| Option | Optional accessories of indoor units and outdoor units are available. |
|--------|-----------------------------------------------------------------------|

## 3-2. SYSTEM OUTLINE

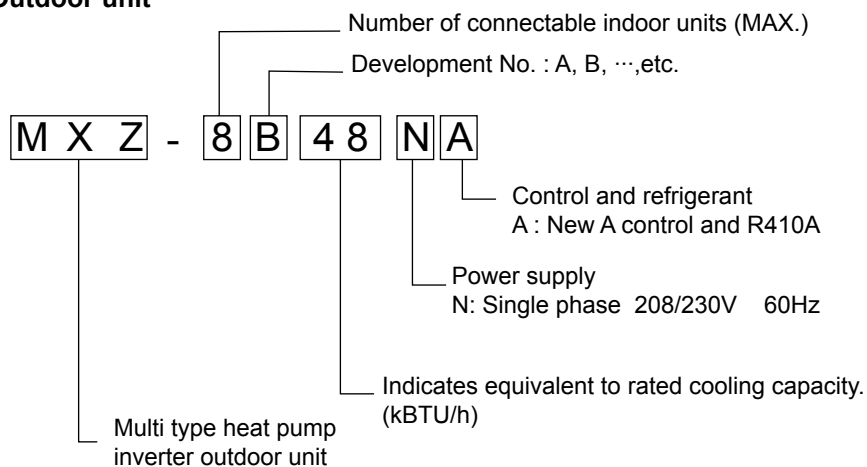
The additional connection of the Branch Box together with employment of the compact trunk-looking outdoor unit can successfully realize a long distance piping for big houses. Equipped with a microcomputer, the Branch Box can translate the transmission signal of indoor units to achieve the optimum control.

### 3-2-1. System example

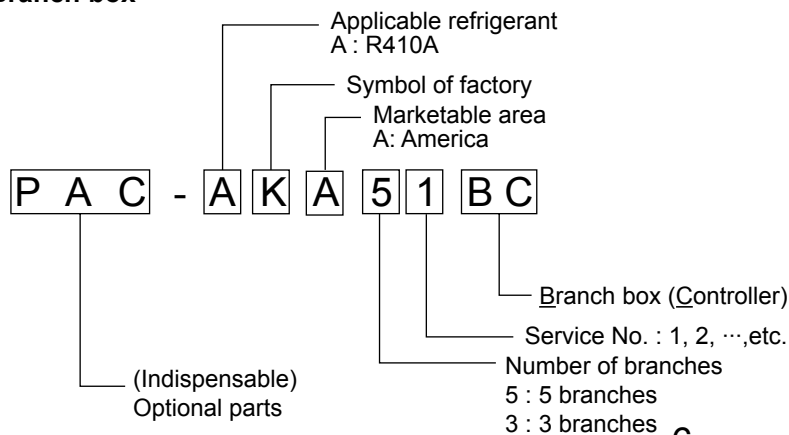


### 3-2-2. Method for identifying

#### ■ Outdoor unit

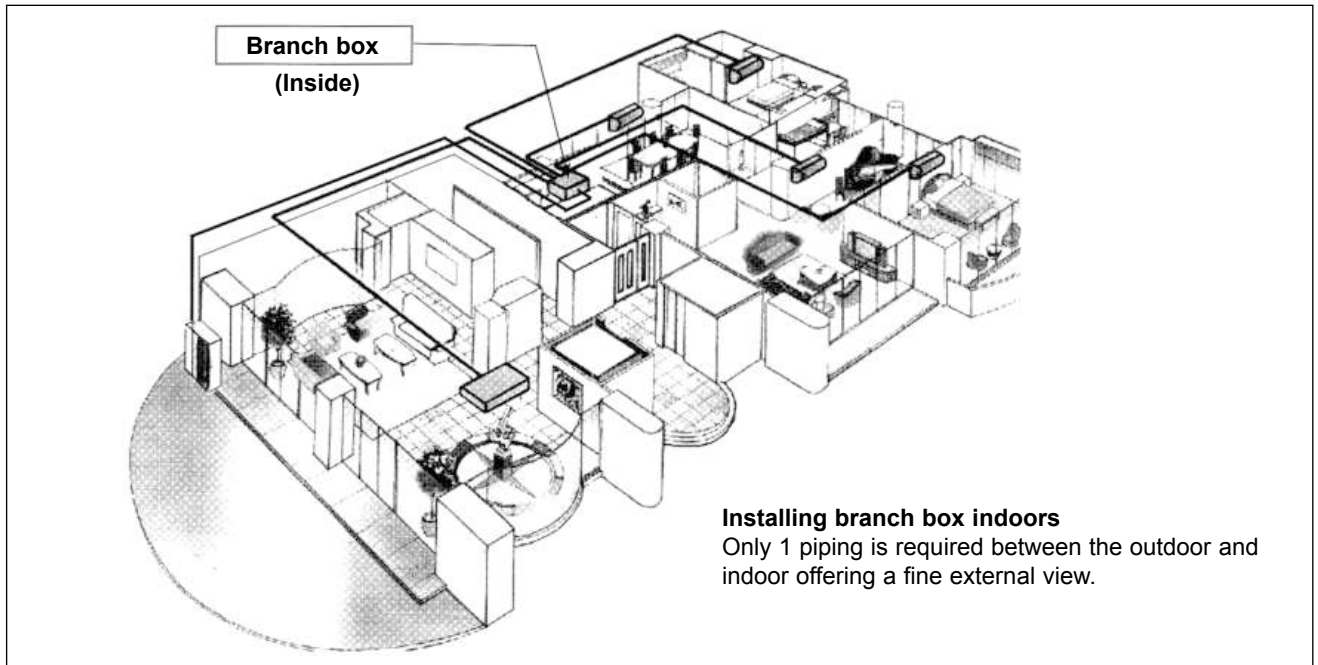


#### ■ Branch box

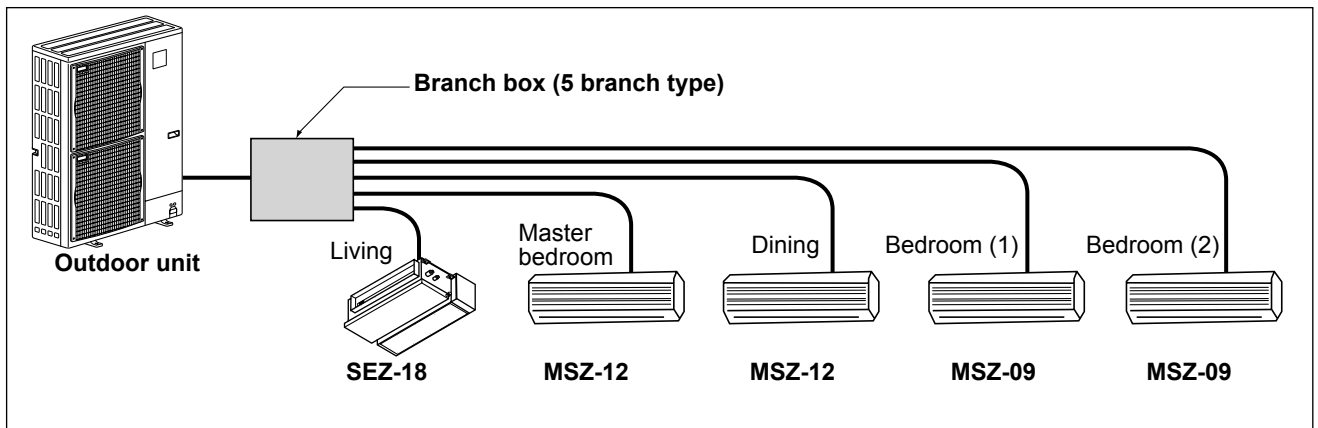


### 3-3. TYPICAL COMBINATION EXAMPLE

Branch box is located **INSIDE** of condominium



#### ■ System example of 5 indoor units



#### ■ Verification

The rated capacity should be determined by observing the table below. The unit's quantities are limited in 2 to 8 units. For the next step, make sure that the selected total rated capacity is in a range of 12 ~ 70.2 kBTU/h.

The total indoor unit capacity should be within the outdoor units. (=54.0 kBTU/h is preferred).

Combination of excessive indoor units and an outdoor unit may reduce the capacity of each indoor unit.

The rated indoor capacity is as the table below.

**Example:**

$$\begin{array}{rcl}
 \text{SEZ-18} & = & 18 \\
 & + & \\
 \text{MSZ-12} & = & 12 \\
 & + & \\
 \text{MSZ-12} & = & 12 \\
 & + & \\
 \text{MSZ-09} & = & 9 \\
 & + & \\
 \text{MSZ-09} & = & 9 \\
 \hline
 & & \left. \begin{array}{l} \text{Total rated capacity} \\ 60 \leq 70.2 \text{ kBTU/h} \end{array} \right\}
 \end{array}$$

|                                   |    |    |    |    |    |    |
|-----------------------------------|----|----|----|----|----|----|
| Indoor unit type (capacity class) | 06 | 09 | 12 | 15 | 18 | 24 |
| Rated capacity (cooling) (kBTU/h) | 6  | 9  | 12 | 15 | 18 | 24 |

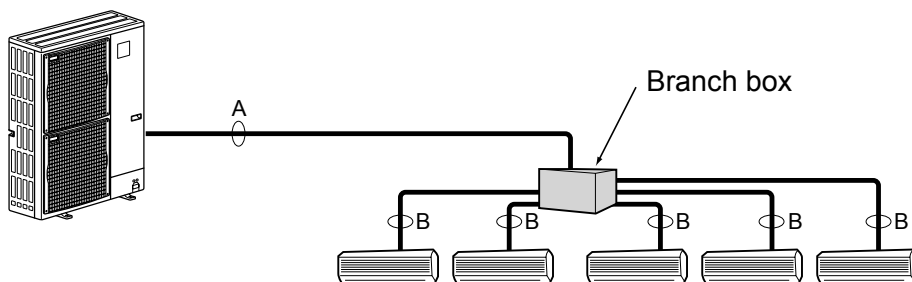
### 3-4. SIMPLIFIED PIPING SYSTEM

#### Piping connection size

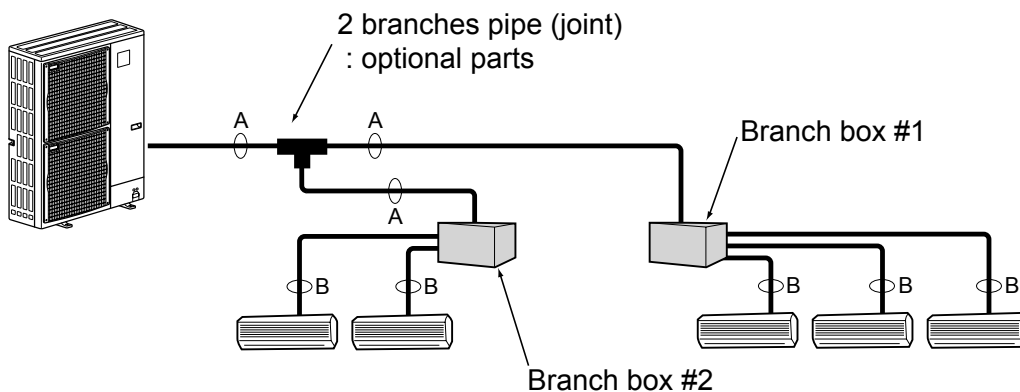
|        | A                       | B                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Liquid | φ9.52 mm<br>(3/8 inch)  | The piping connection size differs according to the type and capacity of indoor units.<br>Match the piping connection size of branch box with indoor unit.<br>If the piping connection size of branch box does not match the piping connection size of indoor unit, use optional different-diameter (deformed) joints to the branch box side.<br>(Connect deformed joint directly to the branch box side.) |
| Gas    | φ15.88 mm<br>(5/8 inch) |                                                                                                                                                                                                                                                                                                                                                                                                            |

Flare connection employed. (No brazing!)

- In case of using 1-branch box  
Flare connection employed (No brazing)



- In case of using 2-branch boxes



- Installation procedure (2 branch pipe (joint))  
Refer to the installation manuals of MSDD-50AR-E and MSDD-50BR-E.

## SPECIFICATIONS

• Outdoor unit : MXZ-8B48NA/MXZ-8B48NAR1

|                     |                                                                                                                                       |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Conversion formula: | $\text{kcal/h} = \text{kW} \times 860$<br>$\text{Btu/h} = \text{kW} \times 3412$<br>$\text{CFM} = \text{m}^3/\text{min} \times 35.31$ |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|

| Service Ref.         |                                 |                                    |                            | MXZ-8B48NA, MXZ-8B48NAR1                         |                                                                                                                   |                                |  |
|----------------------|---------------------------------|------------------------------------|----------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------|--|
| Standard performance | Indoor type                     |                                    |                            | Non-Ducted                                       | Mix                                                                                                               | Ducted                         |  |
|                      | Cooling                         | Capacity Rated / Max (*1)          |                            | Btu/h                                            |                                                                                                                   |                                |  |
|                      |                                 | Rated power consumption (*1)       |                            | W                                                |                                                                                                                   |                                |  |
|                      |                                 | EER                                |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
|                      |                                 | SEER                               |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
|                      | Heating                         | Capacity Rated / Max 47 °F (*1)    |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
|                      |                                 | Capacity 17 °F *2                  |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
|                      |                                 | Rated power consumption 47 °F (*1) |                            | W                                                |                                                                                                                   |                                |  |
|                      |                                 | COP 47 °F (*1)                     |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
|                      |                                 | HSPF IV / V                        |                            | Btu/Wh                                           |                                                                                                                   |                                |  |
| OUTDOOR UNIT         | Connectable indoor units (Max.) |                                    |                            | 8                                                |                                                                                                                   |                                |  |
|                      | Max. Connectable Capacity       |                                    |                            | 70200 Btu/Wh (130% of Outdoor Unit Max Capacity) |                                                                                                                   |                                |  |
|                      | Power supply                    |                                    |                            | 208/230, 1, 60                                   |                                                                                                                   |                                |  |
|                      | Breaker Size / Max. fuse size   |                                    |                            | 50A / 52A                                        |                                                                                                                   |                                |  |
|                      | Min. circuit ampacity           |                                    |                            | 32A                                              |                                                                                                                   |                                |  |
|                      | Sound level (Cool/Heat)         |                                    | dB                         | 54 / 55                                          |                                                                                                                   |                                |  |
|                      | External finish                 |                                    |                            | Munsell 3Y 7.8/1.1                               |                                                                                                                   |                                |  |
|                      | Refrigerant control             |                                    |                            | Linear Expansion Valve                           |                                                                                                                   |                                |  |
|                      | Compressor                      |                                    |                            | Hermetic                                         |                                                                                                                   |                                |  |
|                      |                                 |                                    |                            | Model                                            |                                                                                                                   | ANB33FDSMT                     |  |
|                      |                                 |                                    |                            | Motor output                                     | kW                                                                                                                | 2.9                            |  |
|                      |                                 |                                    |                            | Starting method                                  |                                                                                                                   | Inverter                       |  |
|                      | Heat exchanger                  |                                    |                            | Plate fin coil                                   |                                                                                                                   |                                |  |
|                      | Fan                             |                                    | Fan (drive) × No.          |                                                  | Propeller fan × 2                                                                                                 |                                |  |
|                      |                                 |                                    | Fan motor output           | kW                                               | 0.086 + 0.086                                                                                                     |                                |  |
|                      |                                 |                                    | Airflow                    | m³/min (CFM)                                     | 100 (3,530)                                                                                                       |                                |  |
|                      | Dimensions<br>(H × W × D)       |                                    | W                          | mm (in.)                                         | 980 (37-13/32)                                                                                                    |                                |  |
|                      |                                 |                                    | D                          | mm (in.)                                         | 330+30 (13+1-3/16)                                                                                                |                                |  |
|                      |                                 |                                    | H                          | mm (in.)                                         | 1,350 (53-5/32)                                                                                                   |                                |  |
|                      | Weight                          |                                    | kg (lbs)                   | 126 (278)                                        |                                                                                                                   |                                |  |
|                      | Refrigerant                     |                                    |                            | R410A                                            |                                                                                                                   |                                |  |
|                      |                                 |                                    |                            | Charge                                           | kg (lbs)                                                                                                          | 8.5 (18.7)                     |  |
|                      |                                 |                                    |                            | Oil / Model                                      | L (oz)                                                                                                            | 2.3 (73) / FV50S               |  |
|                      | Protection devices              |                                    | High pressure protection   |                                                  | HP switch                                                                                                         |                                |  |
|                      |                                 |                                    | Compressor protection      |                                                  | Discharge thermo, Over current detection (MXZ-8B48NA)<br>Compressor thermo, Over current detection (MXZ-8B48NAR1) |                                |  |
|                      |                                 |                                    | Fan motor protection       |                                                  | Overheating / Voltage protection                                                                                  |                                |  |
|                      |                                 |                                    | Guaranteed operation range |                                                  | (cool)                                                                                                            | -5 ~ 46 °C DB (23 ~ 115 °F DB) |  |
|                      |                                 |                                    | (heat)                     | -15 ~ 21 °C DB (5 ~ 70 °F DB)                    |                                                                                                                   |                                |  |
| REFRIGERANT PIPING   | Total Piping length (Max.)      |                                    | m (ft)                     | 115 (377)                                        |                                                                                                                   |                                |  |
|                      | Farthest                        |                                    | m (ft)                     | 70 (300)                                         |                                                                                                                   |                                |  |
|                      | Max. Height difference          |                                    | m (ft)                     | 30 (98) (*3)                                     |                                                                                                                   |                                |  |
|                      | Chargeless length               |                                    | m (ft)                     | 40 (131)                                         |                                                                                                                   |                                |  |
|                      | Piping diameter                 | Liquid                             | φmm (in.)                  | φ9.52 (3/8)                                      |                                                                                                                   |                                |  |
|                      |                                 | Gas                                | φmm (in.)                  | φ15.88 (5/8)                                     |                                                                                                                   |                                |  |
|                      | Connection method               |                                    | Indoor side                |                                                  | Flared                                                                                                            |                                |  |
|                      |                                 |                                    | Outdoor side               |                                                  | Flared                                                                                                            |                                |  |

(\*1) Rating conditions      Cooling Indoor    : D.B.26.7°C / W.B.19.4°C (D.B.80°F / W.B.67 °F)

Outdoor : D.B.35.0°C (95°F)

Heating Indoor : D.B.21.1°C (70°F)

Outdoor : D.B.8.3°C / W.B.6.1°C (D.B.47°F / W.B.43°F)

(\*2) Conditions Heating Indoor : D.B.21.1°C (70°F)

Outdoor : D.B. - 8.3°C / W.B. - 9.4°C (D.B.17°F / W.B.15°F)

(\*3) 20m (66ft) : In case of installing outdoor unit lower than indoor unit.

Note : Refer to the service manual of indoor unit for the indoor units specifications.

• **Branch box : PAC-AKA51BC PAC-AKA31BC**

| Model name                         |                        |        |          | PAC-AKA51BC                                      |  | PAC-AKA31BC             |  |
|------------------------------------|------------------------|--------|----------|--------------------------------------------------|--|-------------------------|--|
| Connectable number of indoor units |                        |        |          | MAX. 5                                           |  | MAX. 3                  |  |
| Power supply (from outdoor unit)   |                        |        |          | Single phase, 208/230V, 60Hz                     |  |                         |  |
| Input                              |                        |        | kW       | 0.003                                            |  |                         |  |
| Running current                    |                        |        | A        | 0.05                                             |  |                         |  |
| External finish                    |                        |        |          | Galvanized sheets                                |  |                         |  |
| Drain hose size (on site)          |                        |        | mm (in.) | O.D.20 (O.D. 3/4)                                |  |                         |  |
| Dimensions                         | Width                  |        | mm (in.) | 450 (17 - 3/4)                                   |  |                         |  |
|                                    | Depth                  |        | mm (in.) | 280 (11)                                         |  |                         |  |
|                                    | Height                 |        | mm (in.) | 198 (7 - 3/4)                                    |  |                         |  |
| Weight                             |                        |        | kg (lbs) | 9.6 (21)                                         |  | 8.4 (19)                |  |
| Piping connection (Flare)          | Branch (indoor side) * | Liquid | mm (in.) | ϕ6.35 (1/4) × 5 {A,B,C,D,E}                      |  | ϕ6.35 (1/4) × 3 {A,B,C} |  |
|                                    |                        | Gas    | mm (in.) | ϕ9.52 (3/8) × 4 {A,B,C,D},<br>ϕ12.7 (1/2) × 1{E} |  | ϕ9.52 (3/8) × 3 {A,B,C} |  |
|                                    | Main (outdoor side)    | Liquid | mm (in.) | ϕ9.52 (3/8)                                      |  |                         |  |
|                                    |                        | Gas    | mm (in.) | ϕ15.88 (5/8)                                     |  |                         |  |
| Wiring                             | To indoor unit         |        |          | Each 3-wire, plus earth wire                     |  |                         |  |
|                                    | To outdoor unit        |        |          | 3-wire, plus earth wire                          |  |                         |  |

\* The piping connection size differs according to the type and capacity of indoor units. Match the piping connection size for indoor and branch box. If the piping connection size of branch box does not match the piping connection size of indoor units, use optional different-diameter (deformed) joints to the branch box side. (Connect deformed joint directly to the branch box side.)

## 5-1. CAPACITY AND CHARACTERISTICS

Note:

- Cooling capacity is based on D.B. 26.7 °C / W.B. 19.4 °C (D.B. 80 °F / W.B. 67 °F) (indoor temperature), D.B. 35 °C (D.B. 95 °F) (outdoor temperature).
- Heating capacity is based on D.B. 21.1 °C (D.B. 70 °F) (indoor temperature), D.B. 8.3 °C / W.B. 6.1 °C (D.B. 47 °F / W.B. 43 °F) (outdoor temperature).

The rated capacities below show the rise in the indoor unit connection capacity when operating frequency is constant. Values for changes in capacity are fixed after accounting for variations in operating frequency and should be used as reference values.

- Please refer not to the table below but to "Installation manual" for the breaker selection.**

### (1) Cooling mode

#### <Cooling>

| Indoor unit combinations |        |        | Capacity of each unit (BTU/h) |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|-------------------------------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit A                        | Unit B | Unit C |                              |                        | 208V                     | 230V |
| 06                       | -      | -      | 6000                          | -      | -      | 6000                         | 900                    | 4.4                      | 4.0  |
| 09                       | -      | -      | 9000                          | -      | -      | 9000                         | 1180                   | 5.8                      | 5.2  |
| 12                       | -      | -      | 12000                         | -      | -      | 12000                        | 1410                   | 6.9                      | 6.2  |
| 15                       | -      | -      | 15000                         | -      | -      | 15000                        | 1590                   | 7.8                      | 7.0  |
| 18                       | -      | -      | 18000                         | -      | -      | 18000                        | 1780                   | 8.7                      | 7.8  |
| 24                       | -      | -      | 24000                         | -      | -      | 24000                        | 2290                   | 11.2                     | 10.1 |
| 06                       | 06     | -      | 6000                          | 6000   | -      | 12000                        | 1410                   | 6.9                      | 6.2  |
| 06                       | 09     | -      | 6000                          | 9000   | -      | 15000                        | 1590                   | 7.8                      | 7.0  |
| 06                       | 12     | -      | 6000                          | 12000  | -      | 18000                        | 1780                   | 8.7                      | 7.8  |
| 06                       | 15     | -      | 6000                          | 15000  | -      | 21000                        | 2040                   | 9.9                      | 9.0  |
| 06                       | 18     | -      | 6000                          | 18000  | -      | 24000                        | 2290                   | 11.2                     | 10.1 |
| 06                       | 24     | -      | 6000                          | 24000  | -      | 30000                        | 2780                   | 13.6                     | 12.3 |
| 09                       | 09     | -      | 9000                          | 9000   | -      | 18000                        | 1780                   | 8.7                      | 7.8  |
| 09                       | 12     | -      | 9000                          | 12000  | -      | 21000                        | 2040                   | 9.9                      | 9.0  |
| 09                       | 15     | -      | 9000                          | 15000  | -      | 24000                        | 2290                   | 11.2                     | 10.1 |
| 09                       | 18     | -      | 9000                          | 18000  | -      | 27000                        | 2540                   | 12.4                     | 11.2 |
| 09                       | 24     | -      | 9000                          | 24000  | -      | 33000                        | 3010                   | 14.7                     | 13.3 |
| 12                       | 12     | -      | 12000                         | 12000  | -      | 24000                        | 2290                   | 11.2                     | 10.1 |
| 12                       | 15     | -      | 12000                         | 15000  | -      | 27000                        | 2540                   | 12.4                     | 11.2 |
| 12                       | 18     | -      | 12000                         | 18000  | -      | 30000                        | 2780                   | 13.6                     | 12.3 |
| 12                       | 24     | -      | 12000                         | 24000  | -      | 36000                        | 3390                   | 16.5                     | 14.9 |
| 15                       | 15     | -      | 15000                         | 15000  | -      | 30000                        | 2780                   | 13.6                     | 12.3 |
| 15                       | 18     | -      | 15000                         | 18000  | -      | 33000                        | 3010                   | 14.7                     | 13.3 |
| 15                       | 24     | -      | 15000                         | 24000  | -      | 39000                        | 3910                   | 19.1                     | 17.2 |
| 18                       | 18     | -      | 18000                         | 18000  | -      | 36000                        | 3390                   | 16.5                     | 14.9 |
| 18                       | 24     | -      | 18000                         | 24000  | -      | 42000                        | 4510                   | 22.0                     | 19.9 |
| 24                       | 24     | -      | 24000                         | 24000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 06     | 6000                          | 6000   | 6000   | 18000                        | 1780                   | 8.7                      | 7.8  |
| 06                       | 06     | 09     | 6000                          | 6000   | 9000   | 21000                        | 2040                   | 9.9                      | 9.0  |
| 06                       | 06     | 12     | 6000                          | 6000   | 12000  | 24000                        | 2290                   | 11.2                     | 10.1 |
| 06                       | 06     | 15     | 6000                          | 6000   | 15000  | 27000                        | 2540                   | 12.4                     | 11.2 |
| 06                       | 06     | 18     | 6000                          | 6000   | 18000  | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 06     | 24     | 6000                          | 6000   | 24000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 09     | 09     | 6000                          | 9000   | 9000   | 24000                        | 2290                   | 11.2                     | 10.1 |
| 06                       | 09     | 12     | 6000                          | 9000   | 12000  | 27000                        | 2540                   | 12.4                     | 11.2 |
| 06                       | 09     | 15     | 6000                          | 9000   | 15000  | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 09     | 18     | 6000                          | 9000   | 18000  | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 09     | 24     | 6000                          | 9000   | 24000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 12     | 12     | 6000                          | 12000  | 12000  | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 12     | 15     | 6000                          | 12000  | 15000  | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 12     | 18     | 6000                          | 12000  | 18000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 12     | 24     | 6000                          | 12000  | 24000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 15     | 15     | 6000                          | 15000  | 15000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 15     | 18     | 6000                          | 15000  | 18000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 15     | 24     | 6000                          | 15000  | 24000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 18     | 18     | 6000                          | 18000  | 18000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 18     | 24     | 6000                          | 18000  | 24000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 24     | 24     | 6000                          | 24000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |



<Cooling>

| Indoor unit combinations |        |        |        | Capacity of each unit (BTU/h) |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|-------------------------------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit A                        | Unit B | Unit C | Unit D |                              |                        | 208V                     | 230V |
| 09                       | 09     | 09     | -      | 9000                          | 9000   | 9000   | -      | 27000                        | 2540                   | 12.4                     | 11.2 |
| 09                       | 09     | 12     | -      | 9000                          | 9000   | 12000  | -      | 30000                        | 2780                   | 13.6                     | 12.3 |
| 09                       | 09     | 15     | -      | 9000                          | 9000   | 15000  | -      | 33000                        | 3010                   | 14.7                     | 13.3 |
| 09                       | 09     | 18     | -      | 9000                          | 9000   | 18000  | -      | 36000                        | 3390                   | 16.5                     | 14.9 |
| 09                       | 09     | 24     | -      | 9000                          | 9000   | 24000  | -      | 42000                        | 4510                   | 22.0                     | 19.9 |
| 09                       | 12     | 12     | -      | 9000                          | 12000  | 12000  | -      | 33000                        | 3010                   | 14.7                     | 13.3 |
| 09                       | 12     | 15     | -      | 9000                          | 12000  | 15000  | -      | 36000                        | 3390                   | 16.5                     | 14.9 |
| 09                       | 12     | 18     | -      | 9000                          | 12000  | 18000  | -      | 39000                        | 3910                   | 19.1                     | 17.2 |
| 09                       | 12     | 24     | -      | 9000                          | 12000  | 24000  | -      | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 15     | 15     | -      | 9000                          | 15000  | 15000  | -      | 39000                        | 3910                   | 19.1                     | 17.2 |
| 09                       | 15     | 18     | -      | 9000                          | 15000  | 18000  | -      | 42000                        | 4510                   | 22.0                     | 19.9 |
| 09                       | 15     | 24     | -      | 9000                          | 15000  | 24000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 09                       | 18     | 18     | -      | 9000                          | 18000  | 18000  | -      | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 18     | 24     | -      | 9000                          | 18000  | 24000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 24     | 24     | -      | 8530                          | 22740  | 22740  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 12                       | 12     | 12     | -      | 12000                         | 12000  | 12000  | -      | 36000                        | 3390                   | 16.5                     | 14.9 |
| 12                       | 12     | 15     | -      | 12000                         | 12000  | 15000  | -      | 39000                        | 3910                   | 19.1                     | 17.2 |
| 12                       | 12     | 18     | -      | 12000                         | 12000  | 18000  | -      | 42000                        | 4510                   | 22.0                     | 19.9 |
| 12                       | 12     | 24     | -      | 12000                         | 12000  | 24000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 12                       | 15     | 15     | -      | 12000                         | 15000  | 15000  | -      | 42000                        | 4510                   | 22.0                     | 19.9 |
| 12                       | 15     | 18     | -      | 12000                         | 15000  | 18000  | -      | 45000                        | 5190                   | 25.3                     | 22.9 |
| 12                       | 15     | 24     | -      | 12000                         | 15000  | 24000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 12                       | 18     | 18     | -      | 12000                         | 18000  | 18000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 12                       | 18     | 24     | -      | 12000                         | 18000  | 24000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 12                       | 24     | 24     | -      | 10800                         | 21600  | 21600  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 15                       | 15     | 15     | -      | 15000                         | 15000  | 15000  | -      | 45000                        | 5190                   | 25.3                     | 22.9 |
| 15                       | 15     | 18     | -      | 15000                         | 15000  | 18000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 15                       | 15     | 24     | -      | 15000                         | 15000  | 24000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 15                       | 18     | 18     | -      | 15000                         | 18000  | 18000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 15                       | 18     | 24     | -      | 14210                         | 17050  | 22740  | -      | 54000                        | 4940                   | 24.1                     | 21.8 |
| 15                       | 24     | 24     | -      | 12860                         | 20570  | 20570  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 18                       | 18     | 18     | -      | 18000                         | 18000  | 18000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 18                       | 18     | 24     | -      | 16200                         | 16200  | 21600  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 18                       | 24     | 24     | -      | 14730                         | 19640  | 19640  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06     | 06     | 06     | 6000                          | 6000   | 6000   | 6000   | 24000                        | 2290                   | 11.2                     | 10.1 |
| 06                       | 06     | 06     | 09     | 6000                          | 6000   | 6000   | 9000   | 27000                        | 2540                   | 12.4                     | 11.2 |
| 06                       | 06     | 06     | 12     | 6000                          | 6000   | 6000   | 12000  | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 06     | 06     | 15     | 6000                          | 6000   | 6000   | 15000  | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 06     | 06     | 18     | 6000                          | 6000   | 6000   | 18000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06     | 06     | 24     | 6000                          | 6000   | 6000   | 24000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 09     | 09     | 6000                          | 6000   | 9000   | 9000   | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 06     | 09     | 12     | 6000                          | 6000   | 9000   | 12000  | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 06     | 09     | 15     | 6000                          | 6000   | 9000   | 15000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06     | 09     | 18     | 6000                          | 6000   | 9000   | 18000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06     | 09     | 24     | 6000                          | 6000   | 9000   | 24000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 12     | 12     | 6000                          | 6000   | 12000  | 12000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06     | 12     | 15     | 6000                          | 6000   | 12000  | 15000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06     | 12     | 18     | 6000                          | 6000   | 12000  | 18000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 12     | 24     | 6000                          | 6000   | 12000  | 24000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 15     | 15     | 6000                          | 6000   | 15000  | 15000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 15     | 18     | 6000                          | 6000   | 15000  | 18000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 15     | 24     | 6000                          | 6000   | 15000  | 24000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06     | 18     | 18     | 6000                          | 6000   | 18000  | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 18     | 24     | 6000                          | 6000   | 18000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 24     | 24     | 5400                          | 5400   | 21600  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |

**<Cooling>**

| Indoor unit combinations |        |        |        | Capacity of each unit (BTU/h) |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|-------------------------------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit A                        | Unit B | Unit C | Unit D |                              |                        | 208V                     | 230V |
| 06                       | 09     | 09     | 09     | 6000                          | 9000   | 9000   | 9000   | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 09     | 09     | 12     | 6000                          | 9000   | 9000   | 12000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 09     | 09     | 15     | 6000                          | 9000   | 9000   | 15000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 09     | 09     | 18     | 6000                          | 9000   | 9000   | 18000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 09     | 09     | 24     | 6000                          | 9000   | 9000   | 24000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 09     | 12     | 12     | 6000                          | 9000   | 12000  | 12000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 09     | 12     | 15     | 6000                          | 9000   | 12000  | 15000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 09     | 12     | 18     | 6000                          | 9000   | 12000  | 18000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 09     | 12     | 24     | 6000                          | 9000   | 12000  | 24000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09     | 15     | 15     | 6000                          | 9000   | 15000  | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 09     | 15     | 18     | 6000                          | 9000   | 15000  | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 09     | 15     | 24     | 6000                          | 9000   | 15000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 09     | 18     | 18     | 6000                          | 9000   | 18000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09     | 18     | 24     | 5680                          | 8530   | 17050  | 22740  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09     | 24     | 24     | 5140                          | 7710   | 20570  | 20570  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 12     | 12     | 12     | 6000                          | 12000  | 12000  | 12000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 12     | 12     | 15     | 6000                          | 12000  | 12000  | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 12     | 12     | 18     | 6000                          | 12000  | 12000  | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 12     | 12     | 24     | 6000                          | 12000  | 12000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 12     | 15     | 15     | 6000                          | 12000  | 15000  | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 12     | 15     | 18     | 6000                          | 12000  | 15000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 12     | 15     | 24     | 5680                          | 11370  | 14210  | 22740  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 12     | 18     | 18     | 6000                          | 12000  | 18000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 12     | 18     | 24     | 5400                          | 10800  | 16200  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 12     | 24     | 24     | 4910                          | 9820   | 19640  | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 15     | 15     | 15     | 6000                          | 15000  | 15000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 15     | 15     | 18     | 6000                          | 15000  | 15000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 15     | 15     | 24     | 5400                          | 13500  | 13500  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 15     | 18     | 18     | 5680                          | 14210  | 17050  | 17050  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 15     | 18     | 24     | 5140                          | 12860  | 15430  | 20570  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 15     | 24     | 24     | 4700                          | 11740  | 18780  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 18     | 18     | 18     | 5400                          | 16200  | 16200  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 18     | 18     | 24     | 4910                          | 14730  | 14730  | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09     | 09     | 09     | 9000                          | 9000   | 9000   | 9000   | 36000                        | 3390                   | 16.5                     | 14.9 |
| 09                       | 09     | 09     | 12     | 9000                          | 9000   | 9000   | 12000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 09                       | 09     | 09     | 15     | 9000                          | 9000   | 9000   | 15000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 09                       | 09     | 09     | 18     | 9000                          | 9000   | 9000   | 18000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 09     | 09     | 24     | 9000                          | 9000   | 9000   | 24000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 09     | 12     | 12     | 9000                          | 9000   | 12000  | 12000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 09                       | 09     | 12     | 15     | 9000                          | 9000   | 12000  | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 09     | 12     | 18     | 9000                          | 9000   | 12000  | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 09                       | 09     | 12     | 24     | 9000                          | 9000   | 12000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09     | 15     | 15     | 9000                          | 9000   | 15000  | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 09                       | 09     | 15     | 18     | 9000                          | 9000   | 15000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 09     | 15     | 24     | 8530                          | 8530   | 14210  | 22740  | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 09     | 18     | 18     | 9000                          | 9000   | 18000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09     | 18     | 24     | 8100                          | 8100   | 16200  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09     | 24     | 24     | 7360                          | 7360   | 19640  | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 12     | 12     | 12     | 9000                          | 12000  | 12000  | 12000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 12     | 12     | 15     | 9000                          | 12000  | 12000  | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 09                       | 12     | 12     | 18     | 9000                          | 12000  | 12000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 12     | 12     | 24     | 8530                          | 11370  | 11370  | 22740  | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 12     | 15     | 15     | 9000                          | 12000  | 15000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 12     | 15     | 18     | 9000                          | 12000  | 15000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 12     | 15     | 24     | 8100                          | 10800  | 13500  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 12     | 18     | 18     | 8530                          | 11370  | 17050  | 17050  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 12     | 18     | 24     | 7710                          | 10290  | 15430  | 20570  | 54000                        | 4220                   | 20.6                     | 18.6 |

<Cooling>

| Indoor unit combinations |        |        |        |        | Capacity of each unit (BTU/h) |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|--------|-------------------------------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit E | Unit A                        | Unit B | Unit C | Unit D | Unit E |                              |                        | 208V                     | 230V |
| 09                       | 12     | 24     | 24     | -      | 7040                          | 9390   | 18780  | 18780  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 15     | 15     | 15     | -      | 9000                          | 15000  | 15000  | 15000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 15     | 15     | 18     | -      | 8530                          | 14210  | 14210  | 17050  | -      | 54000                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 15     | 15     | 24     | -      | 7710                          | 12860  | 12860  | 20570  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 15     | 18     | 18     | -      | 8100                          | 13500  | 16200  | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 15     | 18     | 24     | -      | 7360                          | 12270  | 14730  | 19640  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 18     | 18     | 18     | -      | 7710                          | 15430  | 15430  | 15430  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 18     | 18     | 24     | -      | 7040                          | 14090  | 14090  | 18780  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 12                       | 12     | 12     | 12     | -      | 12000                         | 12000  | 12000  | 12000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 12                       | 12     | 12     | 15     | -      | 12000                         | 12000  | 12000  | 15000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 12                       | 12     | 12     | 18     | -      | 12000                         | 12000  | 12000  | 18000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 12                       | 12     | 12     | 24     | -      | 10800                         | 10800  | 10800  | 21600  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 12                       | 12     | 15     | 15     | -      | 12000                         | 12000  | 15000  | 15000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 12                       | 12     | 15     | 18     | -      | 11370                         | 11370  | 14210  | 17050  | -      | 54000                        | 4940                   | 24.1                     | 21.8 |
| 12                       | 12     | 15     | 24     | -      | 10290                         | 10290  | 12860  | 20570  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 12                       | 12     | 18     | 18     | -      | 10800                         | 10800  | 16200  | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 12                       | 12     | 18     | 24     | -      | 9820                          | 9820   | 14730  | 19640  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 12                       | 15     | 15     | 15     | -      | 11370                         | 14210  | 14210  | 14210  | -      | 54000                        | 4940                   | 24.1                     | 21.8 |
| 12                       | 15     | 15     | 18     | -      | 10800                         | 13500  | 13500  | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 12                       | 15     | 15     | 24     | -      | 9820                          | 12270  | 12270  | 19640  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 12                       | 15     | 18     | 18     | -      | 10290                         | 12860  | 15430  | 15430  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 12                       | 15     | 18     | 24     | -      | 9390                          | 11740  | 14090  | 18780  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 12                       | 18     | 18     | 18     | -      | 9820                          | 14730  | 14730  | 14730  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 15                       | 15     | 15     | 15     | -      | 13500                         | 13500  | 13500  | 13500  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 15                       | 15     | 15     | 18     | -      | 12860                         | 12860  | 12860  | 15430  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 15                       | 15     | 15     | 24     | -      | 11740                         | 11740  | 11740  | 18780  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 15                       | 15     | 18     | 18     | -      | 12270                         | 12270  | 14730  | 14730  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 15                       | 18     | 18     | 18     | -      | 11740                         | 14090  | 14090  | 14090  | -      | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06     | 06     | 06     | 06     | 6000                          | 6000   | 6000   | 6000   | 6000   | 30000                        | 2780                   | 13.6                     | 12.3 |
| 06                       | 06     | 06     | 06     | 09     | 6000                          | 6000   | 6000   | 6000   | 9000   | 33000                        | 3010                   | 14.7                     | 13.3 |
| 06                       | 06     | 06     | 06     | 12     | 6000                          | 6000   | 6000   | 6000   | 12000  | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06     | 06     | 06     | 15     | 6000                          | 6000   | 6000   | 6000   | 15000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06     | 06     | 06     | 18     | 6000                          | 6000   | 6000   | 6000   | 18000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 06     | 06     | 24     | 6000                          | 6000   | 6000   | 6000   | 24000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 06     | 09     | 09     | 6000                          | 6000   | 6000   | 9000   | 9000   | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06     | 06     | 09     | 12     | 6000                          | 6000   | 6000   | 9000   | 12000  | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06     | 06     | 09     | 15     | 6000                          | 6000   | 6000   | 9000   | 15000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 06     | 09     | 18     | 6000                          | 6000   | 6000   | 9000   | 18000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 06     | 09     | 24     | 6000                          | 6000   | 6000   | 9000   | 24000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06     | 06     | 12     | 12     | 6000                          | 6000   | 6000   | 12000  | 12000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 06     | 12     | 15     | 6000                          | 6000   | 6000   | 12000  | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 06     | 12     | 18     | 6000                          | 6000   | 6000   | 12000  | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 06     | 12     | 24     | 6000                          | 6000   | 6000   | 12000  | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 06     | 15     | 15     | 6000                          | 6000   | 6000   | 15000  | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 06     | 15     | 18     | 6000                          | 6000   | 6000   | 15000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06     | 06     | 15     | 24     | 5680                          | 5680   | 5680   | 14210  | 22740  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06     | 06     | 18     | 18     | 6000                          | 6000   | 6000   | 18000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 06     | 18     | 24     | 5400                          | 5400   | 5400   | 16200  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06     | 06     | 24     | 24     | 4910                          | 4910   | 4910   | 19640  | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06     | 09     | 09     | 09     | 6000                          | 6000   | 9000   | 9000   | 9000   | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06     | 09     | 09     | 12     | 6000                          | 6000   | 9000   | 9000   | 12000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06     | 09     | 09     | 15     | 6000                          | 6000   | 9000   | 9000   | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 09     | 09     | 18     | 6000                          | 6000   | 9000   | 9000   | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 09     | 09     | 24     | 6000                          | 6000   | 9000   | 9000   | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 09     | 12     | 12     | 6000                          | 6000   | 9000   | 12000  | 12000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06     | 09     | 12     | 15     | 6000                          | 6000   | 9000   | 12000  | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 09     | 12     | 18     | 6000                          | 6000   | 9000   | 12000  | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |

**<Cooling>**

| Indoor unit combinations |        |        |        |        | Capacity of each unit (BTU/h) |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|--------|-------------------------------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit E | Unit A                        | Unit B | Unit C | Unit D | Unit E |                              |                        | 208V                     | 230V |
| 06                       | 06     | 09     | 12     | 24     | 5680                          | 5680   | 8530   | 11370  | 22740  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06     | 09     | 15     | 15     | 6000                          | 6000   | 9000   | 15000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06     | 09     | 15     | 18     | 6000                          | 6000   | 9000   | 15000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 09     | 15     | 24     | 5400                          | 5400   | 8100   | 13500  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06     | 09     | 18     | 18     | 5680                          | 5680   | 8530   | 17050  | 17050  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06     | 09     | 18     | 24     | 5140                          | 5140   | 7710   | 15430  | 20570  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06     | 09     | 24     | 24     | 4700                          | 4700   | 7040   | 18780  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06     | 12     | 12     | 12     | 6000                          | 6000   | 12000  | 12000  | 12000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06     | 12     | 12     | 15     | 6000                          | 6000   | 12000  | 12000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06     | 12     | 12     | 18     | 6000                          | 6000   | 12000  | 12000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 12     | 12     | 24     | 5400                          | 5400   | 10800  | 10800  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06     | 12     | 15     | 15     | 6000                          | 6000   | 12000  | 15000  | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06     | 12     | 15     | 18     | 5680                          | 5680   | 11370  | 14210  | 17050  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06     | 12     | 15     | 24     | 5140                          | 5140   | 10290  | 12860  | 20570  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06     | 12     | 18     | 18     | 5400                          | 5400   | 10800  | 16200  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06     | 12     | 18     | 24     | 4910                          | 4910   | 9820   | 14730  | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06     | 15     | 15     | 15     | 5680                          | 5680   | 14210  | 14210  | 14210  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06     | 15     | 15     | 18     | 5400                          | 5400   | 13500  | 13500  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06     | 15     | 15     | 24     | 4910                          | 4910   | 12270  | 12270  | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06     | 15     | 18     | 18     | 5140                          | 5140   | 12860  | 15430  | 15430  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06     | 15     | 18     | 24     | 4700                          | 4700   | 11740  | 14090  | 18780  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06     | 18     | 18     | 18     | 4910                          | 4910   | 14730  | 14730  | 14730  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09     | 09     | 09     | 09     | 6000                          | 9000   | 9000   | 9000   | 9000   | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 09     | 09     | 09     | 12     | 6000                          | 9000   | 9000   | 9000   | 12000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 09     | 09     | 09     | 15     | 6000                          | 9000   | 9000   | 9000   | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 09     | 09     | 09     | 18     | 6000                          | 9000   | 9000   | 9000   | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09     | 09     | 09     | 24     | 5680                          | 8530   | 8530   | 8530   | 22740  | 54010                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09     | 09     | 12     | 12     | 6000                          | 9000   | 9000   | 12000  | 12000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 09     | 09     | 12     | 15     | 6000                          | 9000   | 9000   | 12000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09     | 09     | 12     | 18     | 6000                          | 9000   | 9000   | 12000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 09     | 09     | 12     | 24     | 5400                          | 8100   | 8100   | 10800  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09     | 09     | 15     | 15     | 6000                          | 9000   | 9000   | 15000  | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 09     | 09     | 15     | 18     | 5680                          | 8530   | 8530   | 14210  | 17050  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09     | 09     | 15     | 24     | 5140                          | 7710   | 7710   | 12860  | 20570  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09     | 09     | 18     | 18     | 5400                          | 8100   | 8100   | 16200  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09     | 09     | 18     | 24     | 4910                          | 7360   | 7360   | 14730  | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09     | 12     | 12     | 12     | 6000                          | 9000   | 12000  | 12000  | 12000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09     | 12     | 12     | 15     | 6000                          | 9000   | 12000  | 12000  | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 09     | 12     | 12     | 18     | 5680                          | 8530   | 11370  | 11370  | 17050  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09     | 12     | 12     | 24     | 5140                          | 7710   | 10290  | 10290  | 20570  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09     | 12     | 15     | 15     | 5680                          | 8530   | 11370  | 14210  | 14210  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09     | 12     | 15     | 18     | 5400                          | 8100   | 10800  | 13500  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09     | 12     | 15     | 24     | 4910                          | 7360   | 9820   | 12270  | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09     | 12     | 18     | 18     | 5140                          | 7710   | 10290  | 15430  | 15430  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09     | 12     | 18     | 24     | 4700                          | 7040   | 9390   | 14090  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09     | 15     | 15     | 15     | 5400                          | 8100   | 13500  | 13500  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09     | 15     | 15     | 18     | 5140                          | 7710   | 12860  | 12860  | 15430  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09     | 15     | 15     | 24     | 4700                          | 7040   | 11740  | 11740  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09     | 15     | 18     | 18     | 4910                          | 7360   | 12270  | 14730  | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09     | 18     | 18     | 18     | 4700                          | 7040   | 14090  | 14090  | 14090  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 12     | 12     | 12     | 12     | 6000                          | 12000  | 12000  | 12000  | 12000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 12     | 12     | 12     | 15     | 5680                          | 11370  | 11370  | 11370  | 14210  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 12     | 12     | 12     | 18     | 5400                          | 10800  | 10800  | 10800  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 12     | 12     | 12     | 24     | 4910                          | 9820   | 9820   | 9820   | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 12     | 12     | 15     | 15     | 5400                          | 10800  | 10800  | 13500  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 12     | 12     | 15     | 18     | 5140                          | 10290  | 10290  | 12860  | 15430  | 54010                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 12     | 12     | 15     | 24     | 4700                          | 9390   | 9390   | 11740  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |

<Cooling>

| Indoor unit combinations |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F |                              |                        | 208V                     | 230V |
| 06                       | 12 | 12 | 18 | 18 | -  | 4910                          | 9820   | 9820   | 14730  | 14730  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 12 | 15 | 15 | 15 | -  | 5140                          | 10290  | 12860  | 12860  | 12860  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 12 | 15 | 15 | 18 | -  | 4910                          | 9820   | 12270  | 12270  | 14730  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 12 | 15 | 18 | 18 | -  | 4700                          | 9390   | 11740  | 14090  | 14090  | -      | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 15 | 15 | 15 | 15 | -  | 4910                          | 12270  | 12270  | 12270  | 12270  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 15 | 15 | 15 | 18 | -  | 4700                          | 11740  | 11740  | 11740  | 14090  | -      | 54010                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 09 | 09 | 09 | -  | 9000                          | 9000   | 9000   | 9000   | 9000   | -      | 45000                        | 5190                   | 25.3                     | 22.9 |
| 09                       | 09 | 09 | 09 | 12 | -  | 9000                          | 9000   | 9000   | 9000   | 12000  | -      | 48000                        | 5900                   | 28.8                     | 26.0 |
| 09                       | 09 | 09 | 09 | 15 | -  | 9000                          | 9000   | 9000   | 9000   | 15000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 09 | 09 | 09 | 18 | -  | 9000                          | 9000   | 9000   | 9000   | 18000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09 | 09 | 09 | 24 | -  | 8100                          | 8100   | 8100   | 8100   | 21600  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 09 | 12 | 12 | -  | 9000                          | 9000   | 9000   | 12000  | 12000  | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 09                       | 09 | 09 | 12 | 15 | -  | 9000                          | 9000   | 9000   | 12000  | 15000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09 | 09 | 12 | 18 | -  | 8530                          | 8530   | 8530   | 11370  | 17050  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 09 | 09 | 12 | 24 | -  | 7710                          | 7710   | 7710   | 10290  | 20570  | -      | 53990                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 09 | 15 | 15 | -  | 8530                          | 8530   | 8530   | 14210  | 14210  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 09 | 09 | 15 | 18 | -  | 8100                          | 8100   | 8100   | 13500  | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 09 | 15 | 24 | -  | 7360                          | 7360   | 7360   | 12270  | 19640  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 09 | 18 | 18 | -  | 7710                          | 7710   | 7710   | 15430  | 15430  | -      | 53990                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 09 | 18 | 24 | -  | 7040                          | 7040   | 7040   | 14090  | 18780  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 12 | 12 | 12 | -  | 9000                          | 9000   | 12000  | 12000  | 12000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09 | 12 | 12 | 15 | -  | 8530                          | 8530   | 11370  | 11370  | 14210  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 09 | 12 | 12 | 18 | -  | 8100                          | 8100   | 10800  | 10800  | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 12 | 12 | 24 | -  | 7360                          | 7360   | 9820   | 9820   | 19640  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 12 | 15 | 15 | -  | 8100                          | 8100   | 10800  | 13500  | 13500  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 12 | 15 | 18 | -  | 7710                          | 7710   | 10290  | 12860  | 15430  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 12 | 15 | 24 | -  | 7040                          | 7040   | 9390   | 11740  | 18780  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 12 | 18 | 18 | -  | 7360                          | 7360   | 9820   | 14730  | 14730  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 15 | 15 | 15 | -  | 7710                          | 7710   | 12860  | 12860  | 12860  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 15 | 15 | 18 | -  | 7360                          | 7360   | 12270  | 12270  | 14730  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 15 | 18 | 18 | -  | 7040                          | 7040   | 11740  | 14090  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 12 | 12 | 12 | 12 | -  | 8530                          | 11370  | 11370  | 11370  | 11370  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 12 | 12 | 12 | 15 | -  | 8100                          | 10800  | 10800  | 10800  | 13500  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 12 | 12 | 12 | 18 | -  | 7710                          | 10290  | 10290  | 10290  | 15430  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 12 | 12 | 12 | 24 | -  | 7040                          | 9390   | 9390   | 9390   | 18780  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 12 | 12 | 15 | 15 | -  | 7710                          | 10290  | 10290  | 12860  | 12860  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 12 | 12 | 15 | 18 | -  | 7360                          | 9820   | 9820   | 12270  | 14730  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 12 | 12 | 18 | 18 | -  | 7040                          | 9390   | 9390   | 14090  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 12 | 15 | 15 | 15 | -  | 7360                          | 9820   | 12270  | 12270  | 12270  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 12 | 15 | 15 | 18 | -  | 7040                          | 9390   | 11740  | 11740  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 15 | 15 | 15 | 15 | -  | 7040                          | 11740  | 11740  | 11740  | 11740  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 12                       | 12 | 12 | 12 | 12 | -  | 10800                         | 10800  | 10800  | 10800  | 10800  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 12                       | 12 | 12 | 12 | 15 | -  | 10290                         | 10290  | 10290  | 10290  | 12860  | -      | 54020                        | 4220                   | 20.6                     | 18.6 |
| 12                       | 12 | 12 | 12 | 18 | -  | 9820                          | 9820   | 9820   | 9820   | 14730  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 12                       | 12 | 12 | 15 | 15 | -  | 9820                          | 9820   | 9820   | 12270  | 12270  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 12                       | 12 | 12 | 15 | 18 | -  | 9390                          | 9390   | 9390   | 11740  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 12                       | 12 | 15 | 15 | 15 | -  | 9390                          | 9390   | 11740  | 11740  | 11740  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 36000                        | 3390                   | 16.5                     | 14.9 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 6000                          | 6000   | 6000   | 6000   | 6000   | 9000   | 39000                        | 3910                   | 19.1                     | 17.2 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 6000                          | 6000   | 6000   | 6000   | 6000   | 12000  | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 6000                          | 6000   | 6000   | 6000   | 6000   | 15000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06 | 06 | 06 | 06 | 18 | 6000                          | 6000   | 6000   | 6000   | 6000   | 18000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 06 | 06 | 24 | 6000                          | 6000   | 6000   | 6000   | 6000   | 24000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 6000                          | 6000   | 6000   | 6000   | 9000   | 9000   | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 6000                          | 6000   | 6000   | 6000   | 9000   | 12000  | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 6000                          | 6000   | 6000   | 6000   | 9000   | 15000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 06 | 09 | 18 | 6000                          | 6000   | 6000   | 6000   | 9000   | 18000  | 51000                        | 5620                   | 27.4                     | 24.8 |

# <Cooling>

| Indoor unit combinations |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F |                              |                        | 208V                     | 230V |
| 06                       | 06 | 06 | 06 | 09 | 24 | 5680                          | 5680   | 5680   | 5680   | 8530   | 22740  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 6000                          | 6000   | 6000   | 6000   | 12000  | 12000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 6000                          | 6000   | 6000   | 6000   | 12000  | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 06 | 12 | 18 | 6000                          | 6000   | 6000   | 6000   | 12000  | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 12 | 24 | 5400                          | 5400   | 5400   | 5400   | 10800  | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 15 | 15 | 6000                          | 6000   | 6000   | 6000   | 15000  | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 15 | 18 | 5680                          | 5680   | 5680   | 5680   | 14210  | 17050  | 53980                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 06 | 15 | 24 | 5140                          | 5140   | 5140   | 5140   | 12860  | 20570  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 18 | 18 | 5400                          | 5400   | 5400   | 5400   | 16200  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 18 | 24 | 4910                          | 4910   | 4910   | 4910   | 14730  | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 6000                          | 6000   | 6000   | 9000   | 9000   | 9000   | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 6000                          | 6000   | 6000   | 9000   | 9000   | 12000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 6000                          | 6000   | 6000   | 9000   | 9000   | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 09 | 09 | 18 | 6000                          | 6000   | 6000   | 9000   | 9000   | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 09 | 09 | 24 | 5400                          | 5400   | 5400   | 8100   | 8100   | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 6000                          | 6000   | 6000   | 9000   | 12000  | 12000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 09 | 12 | 15 | 6000                          | 6000   | 6000   | 9000   | 12000  | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 09 | 12 | 18 | 5680                          | 5680   | 5680   | 8530   | 11370  | 17050  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 09 | 12 | 24 | 5140                          | 5140   | 5140   | 7710   | 10290  | 20570  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 09 | 15 | 15 | 5680                          | 5680   | 5680   | 8530   | 14210  | 14210  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 09 | 15 | 18 | 5400                          | 5400   | 5400   | 8100   | 13500  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 09 | 15 | 24 | 4910                          | 4910   | 4910   | 7360   | 12270  | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 09 | 18 | 18 | 5140                          | 5140   | 5140   | 7710   | 15430  | 15430  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 09 | 18 | 24 | 4700                          | 4700   | 4700   | 7040   | 14090  | 18780  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 6000                          | 6000   | 6000   | 12000  | 12000  | 12000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 12 | 12 | 15 | 5680                          | 5680   | 5680   | 11370  | 11370  | 14210  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 12 | 12 | 18 | 5400                          | 5400   | 5400   | 10800  | 10800  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 12 | 12 | 24 | 4910                          | 4910   | 4910   | 9820   | 9820   | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 12 | 15 | 15 | 5400                          | 5400   | 5400   | 10800  | 13500  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 12 | 15 | 18 | 5140                          | 5140   | 5140   | 10290  | 12860  | 15430  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 12 | 15 | 24 | 4700                          | 4700   | 4700   | 9390   | 11740  | 18780  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 12 | 18 | 18 | 4910                          | 4910   | 4910   | 9820   | 14730  | 14730  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 15 | 15 | 15 | 5140                          | 5140   | 5140   | 12860  | 12860  | 12860  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 15 | 15 | 18 | 4910                          | 4910   | 4910   | 12270  | 12270  | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 15 | 18 | 18 | 4700                          | 4700   | 4700   | 11740  | 14090  | 14090  | 54020                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 6000                          | 6000   | 9000   | 9000   | 9000   | 9000   | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 6000                          | 6000   | 9000   | 9000   | 9000   | 12000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 09 | 09 | 09 | 15 | 6000                          | 6000   | 9000   | 9000   | 9000   | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 09 | 09 | 09 | 18 | 5680                          | 5680   | 8530   | 8530   | 8530   | 17050  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 09 | 09 | 09 | 24 | 5140                          | 5140   | 7710   | 7710   | 7710   | 20570  | 53980                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 6000                          | 6000   | 9000   | 9000   | 12000  | 12000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 09 | 09 | 12 | 15 | 5680                          | 5680   | 8530   | 8530   | 11370  | 14210  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 09 | 09 | 12 | 18 | 5400                          | 5400   | 8100   | 8100   | 10800  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 09 | 09 | 12 | 24 | 4910                          | 4910   | 7360   | 7360   | 9820   | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 09 | 15 | 15 | 5400                          | 5400   | 8100   | 8100   | 13500  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 09 | 09 | 15 | 18 | 5140                          | 5140   | 7710   | 7710   | 12860  | 15430  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 09 | 15 | 24 | 4700                          | 4700   | 7040   | 7040   | 11740  | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 09 | 18 | 18 | 4910                          | 4910   | 7360   | 7360   | 14730  | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 12 | 12 | 12 | 5680                          | 5680   | 8530   | 11370  | 11370  | 11370  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 09 | 12 | 12 | 15 | 5400                          | 5400   | 8100   | 10800  | 10800  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 09 | 12 | 12 | 18 | 5140                          | 5140   | 7710   | 10290  | 10290  | 15430  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 12 | 12 | 24 | 4700                          | 4700   | 7040   | 9390   | 9390   | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 12 | 15 | 15 | 5140                          | 5140   | 7710   | 10290  | 12860  | 12860  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 12 | 15 | 18 | 4910                          | 4910   | 7360   | 9820   | 12270  | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 12 | 18 | 18 | 4700                          | 4700   | 7040   | 9390   | 14090  | 14090  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 15 | 15 | 15 | 4910                          | 4910   | 7360   | 12270  | 12270  | 12270  | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 15 | 15 | 18 | 4700                          | 4700   | 7040   | 11740  | 11740  | 14090  | 54010                        | 3680                   | 17.9                     | 16.2 |

<Cooling>

| Indoor unit combinations |    |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G |                              |                        | 208V                     | 230V |
| 06                       | 06 | 12 | 12 | 12 | 12 | -  | 5400                          | 5400   | 10800  | 10800  | 10800  | 10800  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 12 | 12 | 12 | 15 | -  | 5140                          | 5140   | 10290  | 10290  | 10290  | 12860  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 12 | 12 | 12 | 18 | -  | 4910                          | 4910   | 9820   | 9820   | 9820   | 14730  | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 12 | 12 | 15 | 15 | -  | 4910                          | 4910   | 9820   | 9820   | 12270  | 12270  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 12 | 12 | 15 | 18 | -  | 4700                          | 4700   | 9390   | 9390   | 11740  | 14090  | -      | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 12 | 15 | 15 | 15 | -  | 4700                          | 4700   | 9390   | 11740  | 11740  | 11740  | -      | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 09 | 09 | 09 | 09 | -  | 6000                          | 9000   | 9000   | 9000   | 9000   | 9000   | -      | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 09 | 09 | 09 | 09 | 12 | -  | 6000                          | 9000   | 9000   | 9000   | 9000   | 12000  | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 09 | 09 | 09 | 09 | 15 | -  | 5680                          | 8530   | 8530   | 8530   | 8530   | 14210  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09 | 09 | 09 | 09 | 18 | -  | 5400                          | 8100   | 8100   | 8100   | 8100   | 16200  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09 | 09 | 09 | 09 | 24 | -  | 4910                          | 7360   | 7360   | 7360   | 7360   | 19640  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09 | 09 | 09 | 12 | 12 | -  | 5680                          | 8530   | 8530   | 8530   | 11370  | 11370  | -      | 54010                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 09 | 09 | 09 | 12 | 15 | -  | 5400                          | 8100   | 8100   | 8100   | 10800  | 13500  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09 | 09 | 09 | 12 | 18 | -  | 5140                          | 7710   | 7710   | 7710   | 10290  | 15430  | -      | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09 | 09 | 09 | 12 | 24 | -  | 4700                          | 7040   | 7040   | 7040   | 9390   | 18780  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 09 | 09 | 15 | 15 | -  | 5140                          | 7710   | 7710   | 7710   | 12860  | 12860  | -      | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09 | 09 | 09 | 15 | 18 | -  | 4910                          | 7360   | 7360   | 7360   | 12270  | 14730  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09 | 09 | 09 | 18 | 18 | -  | 4700                          | 7040   | 7040   | 7040   | 14090  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 09 | 12 | 12 | 12 | -  | 5400                          | 8100   | 8100   | 10800  | 10800  | 10800  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09 | 09 | 12 | 12 | 15 | -  | 5140                          | 7710   | 7710   | 10290  | 10290  | 12860  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09 | 09 | 12 | 12 | 18 | -  | 4910                          | 7360   | 7360   | 9820   | 9820   | 14730  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09 | 09 | 12 | 15 | 15 | -  | 4910                          | 7360   | 7360   | 9820   | 12270  | 12270  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09 | 09 | 12 | 15 | 18 | -  | 4700                          | 7040   | 7040   | 9390   | 11740  | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 09 | 15 | 15 | 15 | -  | 4700                          | 7040   | 7040   | 11740  | 11740  | 11740  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 12 | 12 | 12 | 12 | -  | 5140                          | 7710   | 10290  | 10290  | 10290  | 10290  | -      | 54010                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09 | 12 | 12 | 12 | 15 | -  | 4910                          | 7360   | 9820   | 9820   | 9820   | 12270  | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 09 | 12 | 12 | 12 | 18 | -  | 4700                          | 7040   | 9390   | 9390   | 9390   | 14090  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 12 | 12 | 15 | 15 | -  | 4700                          | 7040   | 9390   | 9390   | 11740  | 11740  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 12 | 12 | 12 | 12 | 12 | -  | 4910                          | 9820   | 9820   | 9820   | 9820   | 9820   | -      | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 12 | 12 | 12 | 12 | 15 | -  | 4700                          | 9390   | 9390   | 9390   | 9390   | 11740  | -      | 54000                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 09 | 09 | 09 | 09 | -  | 9000                          | 9000   | 9000   | 9000   | 9000   | 9000   | -      | 54000                        | 5400                   | 26.3                     | 23.8 |
| 09                       | 09 | 09 | 09 | 09 | 12 | -  | 8530                          | 8530   | 8530   | 8530   | 8530   | 11370  | -      | 54020                        | 4940                   | 24.1                     | 21.8 |
| 09                       | 09 | 09 | 09 | 09 | 15 | -  | 8100                          | 8100   | 8100   | 8100   | 8100   | 13500  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 09 | 09 | 09 | 18 | -  | 7710                          | 7710   | 7710   | 7710   | 7710   | 15430  | -      | 53980                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 09 | 09 | 09 | 24 | -  | 7040                          | 7040   | 7040   | 7040   | 7040   | 18780  | -      | 53980                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 09 | 09 | 12 | 12 | -  | 8100                          | 8100   | 8100   | 8100   | 10800  | 10800  | -      | 54000                        | 4550                   | 22.2                     | 20.1 |
| 09                       | 09 | 09 | 09 | 12 | 15 | -  | 7710                          | 7710   | 7710   | 7710   | 10290  | 12860  | -      | 53990                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 09 | 09 | 12 | 18 | -  | 7360                          | 7360   | 7360   | 7360   | 9820   | 14730  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 09 | 09 | 15 | 15 | -  | 7360                          | 7360   | 7360   | 7360   | 12270  | 12270  | -      | 53980                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 09 | 09 | 15 | 18 | -  | 7040                          | 7040   | 7040   | 7040   | 11740  | 14090  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 09 | 12 | 12 | 12 | -  | 7710                          | 7710   | 7710   | 10290  | 10290  | 10290  | -      | 54000                        | 4220                   | 20.6                     | 18.6 |
| 09                       | 09 | 09 | 12 | 12 | 15 | -  | 7360                          | 7360   | 7360   | 9820   | 9820   | 12270  | -      | 53990                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 09 | 12 | 12 | 18 | -  | 7040                          | 7040   | 7040   | 9390   | 9390   | 14090  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 09 | 12 | 15 | 15 | -  | 7040                          | 7040   | 7040   | 9390   | 11740  | 11740  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 09 | 12 | 12 | 12 | 12 | -  | 7360                          | 7360   | 9820   | 9820   | 9820   | 9820   | -      | 54000                        | 3930                   | 19.2                     | 17.3 |
| 09                       | 09 | 12 | 12 | 12 | 15 | -  | 7040                          | 7040   | 9390   | 9390   | 9390   | 11740  | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 09                       | 12 | 12 | 12 | 12 | 12 | -  | 7040                          | 9390   | 9390   | 9390   | 9390   | 9390   | -      | 53990                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 42000                        | 4510                   | 22.0                     | 19.9 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 9000   | 45000                        | 5190                   | 25.3                     | 22.9 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 12000  | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 15000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 18 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 18000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 24 | 5400                          | 5400   | 5400   | 5400   | 5400   | 5400   | 21600  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 6000                          | 6000   | 6000   | 6000   | 6000   | 9000   | 9000   | 48000                        | 5900                   | 28.8                     | 26.0 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 6000                          | 6000   | 6000   | 6000   | 6000   | 9000   | 12000  | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 15 | 6000                          | 6000   | 6000   | 6000   | 6000   | 9000   | 15000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 18 | 5680                          | 5680   | 5680   | 5680   | 5680   | 8530   | 17050  | 53980                        | 4940                   | 24.1                     | 21.8 |

# <Cooling>

| Indoor unit combinations |    |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit Input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G |                              |                        | 208V                     | 230V |
| 06                       | 06 | 06 | 06 | 06 | 09 | 24 | 5140                          | 5140   | 5140   | 5140   | 5140   | 7710   | 20570  | 53980                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 6000                          | 6000   | 6000   | 6000   | 6000   | 12000  | 12000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 15 | 5680                          | 5680   | 5680   | 5680   | 5680   | 11370  | 14210  | 53980                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 18 | 5400                          | 5400   | 5400   | 5400   | 5400   | 10800  | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 24 | 4910                          | 4910   | 4910   | 4910   | 4910   | 9820   | 19640  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 15 | 5400                          | 5400   | 5400   | 5400   | 5400   | 13500  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 18 | 5140                          | 5140   | 5140   | 5140   | 5140   | 12860  | 15430  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 24 | 4700                          | 4700   | 4700   | 4700   | 4700   | 11740  | 18780  | 54020                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 18 | 18 | 4910                          | 4910   | 4910   | 4910   | 4910   | 14730  | 14730  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 6000                          | 6000   | 6000   | 6000   | 9000   | 9000   | 9000   | 51000                        | 5620                   | 27.4                     | 24.8 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 12 | 6000                          | 6000   | 6000   | 6000   | 9000   | 9000   | 12000  | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 15 | 5680                          | 5680   | 5680   | 5680   | 8530   | 8530   | 14210  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 18 | 5400                          | 5400   | 5400   | 5400   | 8100   | 8100   | 16200  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 24 | 4910                          | 4910   | 4910   | 4910   | 7360   | 7360   | 19640  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 12 | 5680                          | 5680   | 5680   | 5680   | 8530   | 11370  | 11370  | 53990                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 15 | 5400                          | 5400   | 5400   | 5400   | 8100   | 10800  | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 18 | 5140                          | 5140   | 5140   | 5140   | 7710   | 10290  | 15430  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 24 | 4700                          | 4700   | 4700   | 4700   | 7040   | 9390   | 18780  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 15 | 5140                          | 5140   | 5140   | 5140   | 7710   | 12860  | 12860  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 18 | 4910                          | 4910   | 4910   | 4910   | 7360   | 12270  | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 09 | 18 | 18 | 4700                          | 4700   | 4700   | 4700   | 7040   | 14090  | 14090  | 54020                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 12 | 5400                          | 5400   | 5400   | 5400   | 10800  | 10800  | 10800  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 15 | 5140                          | 5140   | 5140   | 5140   | 10290  | 10290  | 12860  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 18 | 4910                          | 4910   | 4910   | 4910   | 9820   | 9820   | 14730  | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 15 | 4910                          | 4910   | 4910   | 4910   | 9820   | 12270  | 12270  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 18 | 4700                          | 4700   | 4700   | 4700   | 9390   | 11740  | 14090  | 54020                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 06 | 15 | 15 | 15 | 4700                          | 4700   | 4700   | 4700   | 11740  | 11740  | 11740  | 54020                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 6000                          | 6000   | 6000   | 9000   | 9000   | 9000   | 9000   | 54000                        | 5400                   | 26.3                     | 23.8 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 12 | 5680                          | 5680   | 5680   | 8530   | 8530   | 8530   | 11370  | 54000                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 15 | 5400                          | 5400   | 5400   | 8100   | 8100   | 8100   | 13500  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 18 | 5140                          | 5140   | 5140   | 7710   | 7710   | 7710   | 15430  | 53980                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 24 | 4700                          | 4700   | 4700   | 7040   | 7040   | 7040   | 18780  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 12 | 5400                          | 5400   | 5400   | 8100   | 8100   | 10800  | 10800  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 15 | 5140                          | 5140   | 5140   | 7710   | 7710   | 10290  | 12860  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 18 | 4910                          | 4910   | 4910   | 7360   | 7360   | 9820   | 14730  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 15 | 4910                          | 4910   | 4910   | 7360   | 7360   | 12270  | 12270  | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 18 | 4700                          | 4700   | 4700   | 7040   | 7040   | 11740  | 14090  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 12 | 5140                          | 5140   | 5140   | 7710   | 10290  | 10290  | 10290  | 54000                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 15 | 4910                          | 4910   | 4910   | 7360   | 9820   | 9820   | 12270  | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 18 | 4700                          | 4700   | 4700   | 7040   | 9390   | 9390   | 14090  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 09 | 12 | 15 | 15 | 4700                          | 4700   | 4700   | 7040   | 9390   | 11740  | 11740  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 12 | 4910                          | 4910   | 4910   | 9820   | 9820   | 9820   | 9820   | 54010                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 15 | 4700                          | 4700   | 4700   | 9390   | 9390   | 9390   | 11740  | 54010                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 5680                          | 5680   | 8530   | 8530   | 8530   | 8530   | 8530   | 54010                        | 4940                   | 24.1                     | 21.8 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 12 | 5400                          | 5400   | 8100   | 8100   | 8100   | 8100   | 10800  | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 15 | 5140                          | 5140   | 7710   | 7710   | 7710   | 7710   | 12860  | 53980                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 18 | 4910                          | 4910   | 7360   | 7360   | 7360   | 7360   | 14730  | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 12 | 5140                          | 5140   | 7710   | 7710   | 7710   | 10290  | 10290  | 53990                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 15 | 4910                          | 4910   | 7360   | 7360   | 7360   | 9820   | 12270  | 53990                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 18 | 4700                          | 4700   | 7040   | 7040   | 7040   | 9390   | 14090  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 09 | 09 | 15 | 15 | 4700                          | 4700   | 7040   | 7040   | 7040   | 11740  | 11740  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 12 | 4910                          | 4910   | 7360   | 7360   | 9820   | 9820   | 9820   | 54000                        | 3930                   | 19.2                     | 17.3 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 15 | 4700                          | 4700   | 7040   | 7040   | 9390   | 9390   | 11740  | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 06 | 09 | 12 | 12 | 12 | 12 | 4700                          | 4700   | 7040   | 9390   | 9390   | 9390   | 9390   | 54000                        | 3680                   | 17.9                     | 16.2 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 09 | 5400                          | 8100   | 8100   | 8100   | 8100   | 8100   | 8100   | 54000                        | 4550                   | 22.2                     | 20.1 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 12 | 5140                          | 7710   | 7710   | 7710   | 7710   | 7710   | 10290  | 53980                        | 4220                   | 20.6                     | 18.6 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 15 | 4910                          | 7360   | 7360   | 7360   | 7360   | 7360   | 12270  | 53980                        | 3930                   | 19.2                     | 17.3 |



<Cooling>

| Indoor unit combinations |    |    |    |    |    |    |      | Capacity of each unit (BTU/h) |        |        |        |        |        |        |        | Total<br>rated<br>capacity<br>(BTU/h) | Outdoor<br>unit<br>Input<br>(W) | Outdoor unit<br>current (A) |      |
|--------------------------|----|----|----|----|----|----|------|-------------------------------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|---------------------------------|-----------------------------|------|
| Unit                     |    |    |    |    |    |    |      |                               |        |        |        |        |        |        |        |                                       |                                 | 208V                        | 230V |
| A                        | B  | C  | D  | E  | F  | G  | H    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G | Unit H |                                       |                                 |                             |      |
| 06                       | 09 | 09 | 09 | 09 | 09 | 18 | -    | 4700                          | 7040   | 7040   | 7040   | 7040   | 7040   | 14090  | -      | 53990                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 09 | 09 | 09 | 09 | 12 | 12 | -    | 4910                          | 7360   | 7360   | 7360   | 7360   | 9820   | 9820   | -      | 53990                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 09 | 09 | 09 | 09 | 12 | 15 | -    | 4700                          | 7040   | 7040   | 7040   | 7040   | 9390   | 11740  | -      | 53990                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 09 | 09 | 09 | 12 | 12 | 12 | -    | 4700                          | 7040   | 7040   | 7040   | 9390   | 9390   | 9390   | -      | 53990                                 | 3680                            | 17.9                        | 16.2 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 09 | -    | 7710                          | 7710   | 7710   | 7710   | 7710   | 7710   | 7710   | -      | 53970                                 | 4220                            | 20.6                        | 18.6 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 12 | -    | 7360                          | 7360   | 7360   | 7360   | 7360   | 7360   | 9820   | -      | 53980                                 | 3930                            | 19.2                        | 17.3 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 15 | -    | 7040                          | 7040   | 7040   | 7040   | 7040   | 7040   | 11740  | -      | 53980                                 | 3680                            | 17.9                        | 16.2 |
| 09                       | 09 | 09 | 09 | 09 | 12 | 12 | -    | 7040                          | 7040   | 7040   | 7040   | 7040   | 9390   | 9390   | -      | 53980                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 06   | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 48000                                 | 5900                            | 28.8                        | 26.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 09   | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 9000   | 51000                                 | 5620                            | 27.4                        | 24.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 12   | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 12000  | 54000                                 | 5400                            | 26.3                        | 23.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 15   | 5680                          | 5680   | 5680   | 5680   | 5680   | 5680   | 5680   | 14210  | 53970                                 | 4930                            | 24.0                        | 21.7 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 18   | 5400                          | 5400   | 5400   | 5400   | 5400   | 5400   | 5400   | 16200  | 54000                                 | 4550                            | 22.2                        | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 24   | 4910                          | 4910   | 4910   | 4910   | 4910   | 4910   | 4910   | 19640  | 54010                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 09   | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 9000   | 9000   | 54000                                 | 5400                            | 26.3                        | 23.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 12   | 5680                          | 5680   | 5680   | 5680   | 5680   | 5680   | 8530   | 11370  | 53980                                 | 4940                            | 24.1                        | 21.8 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 15   | 5400                          | 5400   | 5400   | 5400   | 5400   | 5400   | 8100   | 13500  | 54000                                 | 4550                            | 22.2                        | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 18   | 5140                          | 5140   | 5140   | 5140   | 5140   | 5140   | 7710   | 15430  | 53980                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 24   | 4700                          | 4700   | 4700   | 4700   | 4700   | 4700   | 7040   | 18780  | 54020                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 12   | 5400                          | 5400   | 5400   | 5400   | 5400   | 5400   | 10800  | 10800  | 54000                                 | 4550                            | 22.2                        | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 15   | 5140                          | 5140   | 5140   | 5140   | 5140   | 5140   | 10290  | 12860  | 53990                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 18   | 4910                          | 4910   | 4910   | 4910   | 4910   | 4910   | 9820   | 14730  | 54010                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 15   | 4910                          | 4910   | 4910   | 4910   | 4910   | 4910   | 12270  | 12270  | 54000                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 18   | 4700                          | 4700   | 4700   | 4700   | 4700   | 4700   | 11740  | 14090  | 54030                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 09   | 5680                          | 5680   | 5680   | 5680   | 5680   | 8530   | 8530   | 8530   | 53990                                 | 4940                            | 24.1                        | 21.8 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 12   | 5400                          | 5400   | 5400   | 5400   | 5400   | 8100   | 8100   | 10800  | 54000                                 | 4550                            | 22.2                        | 20.1 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 15   | 5140                          | 5140   | 5140   | 5140   | 5140   | 7710   | 7710   | 12860  | 53980                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 18   | 4910                          | 4910   | 4910   | 4910   | 4910   | 7360   | 7360   | 14730  | 54000                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 12   | 5140                          | 5140   | 5140   | 5140   | 5140   | 7710   | 10290  | 10290  | 53990                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 15   | 4910                          | 4910   | 4910   | 4910   | 4910   | 7360   | 9820   | 12270  | 54000                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 18   | 4700                          | 4700   | 4700   | 4700   | 4700   | 7040   | 9390   | 14090  | 54020                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 15 | 15   | 4700                          | 4700   | 4700   | 4700   | 4700   | 7040   | 11740  | 11740  | 54020                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 12   | 4910                          | 4910   | 4910   | 4910   | 4910   | 9820   | 9820   | 9820   | 54010                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 15   | 4700                          | 4700   | 4700   | 4700   | 4700   | 9390   | 9390   | 11740  | 54020                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 09   | 5400                          | 5400   | 5400   | 5400   | 8100   | 8100   | 8100   | 8100   | 54000                                 | 4550                            | 22.2                        | 20.1 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 12   | 5140                          | 5140   | 5140   | 5140   | 7710   | 7710   | 7710   | 10290  | 53980                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 15   | 4910                          | 4910   | 4910   | 4910   | 7360   | 7360   | 7360   | 12270  | 53990                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 18   | 4700                          | 4700   | 4700   | 4700   | 7040   | 7040   | 7040   | 14090  | 54010                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 12 | 12   | 4910                          | 4910   | 4910   | 4910   | 7360   | 7360   | 9820   | 9820   | 54000                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 15 | 4700 | 4700                          | 4700   | 4700   | 7040   | 7040   | 9390   | 11740  | 54010  | 3680                                  | 17.9                            | 16.2                        |      |
| 06                       | 06 | 06 | 06 | 09 | 12 | 12 | 12   | 4700                          | 4700   | 4700   | 4700   | 7040   | 9390   | 9390   | 9390   | 54010                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 09   | 5140                          | 5140   | 5140   | 7710   | 7710   | 7710   | 7710   | 7710   | 53970                                 | 4220                            | 20.6                        | 18.6 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 12   | 4910                          | 4910   | 4910   | 7360   | 7360   | 7360   | 7360   | 9820   | 53990                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 15   | 4700                          | 4700   | 4700   | 7040   | 7040   | 7040   | 7040   | 11740  | 54000                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 12 | 12   | 4700                          | 4700   | 4700   | 7040   | 7040   | 7040   | 9390   | 9390   | 54000                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 09   | 4910                          | 4910   | 7360   | 7360   | 7360   | 7360   | 7360   | 7360   | 53980                                 | 3930                            | 19.2                        | 17.3 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 12   | 4700                          | 4700   | 7040   | 7040   | 7040   | 7040   | 7040   | 9390   | 53990                                 | 3680                            | 17.9                        | 16.2 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 09 | 09   | 4700                          | 7040   | 7040   | 7040   | 7040   | 7040   | 7040   | 7040   | 53980                                 | 3680                            | 17.9                        | 16.2 |

**(2) Heating mode**  
**<Heating>**

| Indoor unit combinations |        |        | Capacity of each unit (BTU/h) |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|-------------------------------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit A                        | Unit B | Unit C |                              |                        | 208V                     | 230V |
| 06                       | -      | -      | 7200                          | -      | -      | 7200                         | 720                    | 3.5                      | 3.2  |
| 09                       | -      | -      | 10900                         | -      | -      | 10900                        | 1100                   | 5.4                      | 4.9  |
| 12                       | -      | -      | 14400                         | -      | -      | 14400                        | 1450                   | 7.1                      | 6.4  |
| 15                       | -      | -      | 18000                         | -      | -      | 18000                        | 1810                   | 8.8                      | 8.0  |
| 18                       | -      | -      | 21600                         | -      | -      | 21600                        | 2180                   | 10.7                     | 9.6  |
| 24                       | -      | -      | 28800                         | -      | -      | 28800                        | 2960                   | 14.5                     | 13.1 |
| 06                       | 06     | -      | 7200                          | 7200   | -      | 14400                        | 1450                   | 7.1                      | 6.4  |
| 06                       | 09     | -      | 7200                          | 10900  | -      | 18100                        | 1820                   | 8.9                      | 8.0  |
| 06                       | 12     | -      | 7200                          | 14400  | -      | 21600                        | 2180                   | 10.7                     | 9.6  |
| 06                       | 15     | -      | 7200                          | 18000  | -      | 25200                        | 2570                   | 12.6                     | 11.4 |
| 06                       | 18     | -      | 7200                          | 21600  | -      | 28800                        | 2960                   | 14.5                     | 13.1 |
| 06                       | 24     | -      | 7200                          | 28800  | -      | 36000                        | 3770                   | 18.4                     | 16.7 |
| 09                       | 09     | -      | 10900                         | 10900  | -      | 21800                        | 2200                   | 10.7                     | 9.7  |
| 09                       | 12     | -      | 10900                         | 14400  | -      | 25300                        | 2580                   | 12.6                     | 11.4 |
| 09                       | 15     | -      | 10900                         | 18000  | -      | 28900                        | 2970                   | 14.5                     | 13.1 |
| 09                       | 18     | -      | 10900                         | 21600  | -      | 32500                        | 3370                   | 16.5                     | 14.9 |
| 09                       | 24     | -      | 10900                         | 28800  | -      | 39700                        | 4190                   | 20.5                     | 18.5 |
| 12                       | 12     | -      | 14400                         | 14400  | -      | 28800                        | 2960                   | 14.5                     | 13.1 |
| 12                       | 15     | -      | 14400                         | 18000  | -      | 32400                        | 3360                   | 16.4                     | 14.8 |
| 12                       | 18     | -      | 14400                         | 21600  | -      | 36000                        | 3770                   | 18.4                     | 16.7 |
| 12                       | 24     | -      | 14400                         | 28800  | -      | 43200                        | 4480                   | 21.9                     | 19.8 |
| 15                       | 15     | -      | 18000                         | 18000  | -      | 36000                        | 3770                   | 18.4                     | 16.7 |
| 15                       | 18     | -      | 18000                         | 21600  | -      | 39600                        | 4180                   | 20.4                     | 18.5 |
| 15                       | 24     | -      | 18000                         | 28800  | -      | 46800                        | 4680                   | 22.9                     | 20.7 |
| 18                       | 18     | -      | 21600                         | 21600  | -      | 43200                        | 4480                   | 21.9                     | 19.8 |
| 18                       | 24     | -      | 21600                         | 28800  | -      | 50400                        | 4870                   | 23.8                     | 21.5 |
| 24                       | 24     | -      | 28800                         | 28800  | -      | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 06     | 7200                          | 7200   | 7200   | 21600                        | 2180                   | 10.7                     | 9.6  |
| 06                       | 06     | 09     | 7200                          | 7200   | 10900  | 25300                        | 2580                   | 12.6                     | 11.4 |
| 06                       | 06     | 12     | 7200                          | 7200   | 14400  | 28800                        | 2960                   | 14.5                     | 13.1 |
| 06                       | 06     | 15     | 7200                          | 7200   | 18000  | 32400                        | 3360                   | 16.4                     | 14.8 |
| 06                       | 06     | 18     | 7200                          | 7200   | 21600  | 36000                        | 3770                   | 18.4                     | 16.7 |
| 06                       | 06     | 24     | 7200                          | 7200   | 28800  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 09     | 09     | 7200                          | 10900  | 10900  | 29000                        | 2980                   | 14.6                     | 13.2 |
| 06                       | 09     | 12     | 7200                          | 10900  | 14400  | 32500                        | 3370                   | 16.5                     | 14.9 |
| 06                       | 09     | 15     | 7200                          | 10900  | 18000  | 36100                        | 3780                   | 18.5                     | 16.7 |
| 06                       | 09     | 18     | 7200                          | 10900  | 21600  | 39700                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09     | 24     | 7200                          | 10900  | 28800  | 46900                        | 4690                   | 22.9                     | 20.7 |
| 06                       | 12     | 12     | 7200                          | 14400  | 14400  | 36000                        | 3770                   | 18.4                     | 16.7 |
| 06                       | 12     | 15     | 7200                          | 14400  | 18000  | 39600                        | 4180                   | 20.4                     | 18.5 |
| 06                       | 12     | 18     | 7200                          | 14400  | 21600  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 12     | 24     | 7200                          | 14400  | 28800  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 15     | 15     | 7200                          | 18000  | 18000  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 15     | 18     | 7200                          | 18000  | 21600  | 46800                        | 4680                   | 22.9                     | 20.7 |
| 06                       | 15     | 24     | 7200                          | 18000  | 28800  | 54000                        | 5050                   | 24.7                     | 22.3 |
| 06                       | 18     | 18     | 7200                          | 21600  | 21600  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 18     | 24     | 7200                          | 21600  | 28800  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 24     | 24     | 6670                          | 26670  | 26670  | 60010                        | 4850                   | 23.7                     | 21.4 |

# <Heating>

| Indoor unit combinations |        |        |        | Capacity of each unit (BTU/h) |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|-------------------------------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit A                        | Unit B | Unit C | Unit D |                              |                        | 208V                     | 230V |
| 09                       | 09     | 09     | -      | 10900                         | 10900  | 10900  | -      | 32700                        | 3390                   | 16.6                     | 15.0 |
| 09                       | 09     | 12     | -      | 10900                         | 10900  | 14400  | -      | 36200                        | 3790                   | 18.5                     | 16.7 |
| 09                       | 09     | 15     | -      | 10900                         | 10900  | 18000  | -      | 39800                        | 4200                   | 20.5                     | 18.6 |
| 09                       | 09     | 18     | -      | 10900                         | 10900  | 21600  | -      | 43400                        | 4500                   | 22.0                     | 19.9 |
| 09                       | 09     | 24     | -      | 10900                         | 10900  | 28800  | -      | 50600                        | 4890                   | 23.9                     | 21.6 |
| 09                       | 12     | 12     | -      | 10900                         | 14400  | 14400  | -      | 39700                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 12     | 15     | -      | 10900                         | 14400  | 18000  | -      | 43300                        | 4490                   | 21.9                     | 19.8 |
| 09                       | 12     | 18     | -      | 10900                         | 14400  | 21600  | -      | 46900                        | 4690                   | 22.9                     | 20.7 |
| 09                       | 12     | 24     | -      | 10900                         | 14400  | 28800  | -      | 54100                        | 5060                   | 24.7                     | 22.4 |
| 09                       | 15     | 15     | -      | 10900                         | 18000  | 18000  | -      | 46900                        | 4690                   | 22.9                     | 20.7 |
| 09                       | 15     | 18     | -      | 10900                         | 18000  | 21600  | -      | 50500                        | 4880                   | 23.8                     | 21.6 |
| 09                       | 15     | 24     | -      | 10900                         | 18000  | 28800  | -      | 57700                        | 5220                   | 25.5                     | 23.1 |
| 09                       | 18     | 18     | -      | 10900                         | 21600  | 21600  | -      | 54100                        | 5060                   | 24.7                     | 22.4 |
| 09                       | 18     | 24     | -      | 10670                         | 21140  | 28190  | -      | 60000                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 24     | 24     | -      | 9550                          | 25230  | 25230  | -      | 60010                        | 4610                   | 22.5                     | 20.4 |
| 12                       | 12     | 12     | -      | 14400                         | 14400  | 14400  | -      | 43200                        | 4480                   | 21.9                     | 19.8 |
| 12                       | 12     | 15     | -      | 14400                         | 14400  | 18000  | -      | 46800                        | 4680                   | 22.9                     | 20.7 |
| 12                       | 12     | 18     | -      | 14400                         | 14400  | 21600  | -      | 50400                        | 4870                   | 23.8                     | 21.5 |
| 12                       | 12     | 24     | -      | 14400                         | 14400  | 28800  | -      | 57600                        | 5210                   | 25.5                     | 23.0 |
| 12                       | 15     | 15     | -      | 14400                         | 18000  | 18000  | -      | 50400                        | 4870                   | 23.8                     | 21.5 |
| 12                       | 15     | 18     | -      | 14400                         | 18000  | 21600  | -      | 54000                        | 5050                   | 24.7                     | 22.3 |
| 12                       | 15     | 24     | -      | 14120                         | 17650  | 28240  | -      | 60010                        | 5120                   | 25.0                     | 22.6 |
| 12                       | 18     | 18     | -      | 14400                         | 21600  | 21600  | -      | 57600                        | 5210                   | 25.5                     | 23.0 |
| 12                       | 18     | 24     | -      | 13330                         | 20000  | 26670  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 12                       | 24     | 24     | -      | 12000                         | 24000  | 24000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 15                       | 15     | 15     | -      | 18000                         | 18000  | 18000  | -      | 54000                        | 5050                   | 24.7                     | 22.3 |
| 15                       | 15     | 18     | -      | 18000                         | 18000  | 21600  | -      | 57600                        | 5210                   | 25.5                     | 23.0 |
| 15                       | 15     | 24     | -      | 16670                         | 16670  | 26670  | -      | 60010                        | 4850                   | 23.7                     | 21.4 |
| 15                       | 18     | 18     | -      | 17650                         | 21180  | 21180  | -      | 60010                        | 5120                   | 25.0                     | 22.6 |
| 15                       | 18     | 24     | -      | 15790                         | 18950  | 25260  | -      | 60000                        | 4610                   | 22.5                     | 20.4 |
| 15                       | 24     | 24     | -      | 14290                         | 22860  | 22860  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 18                       | 18     | 18     | -      | 20000                         | 20000  | 20000  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 18                       | 18     | 24     | -      | 18000                         | 18000  | 24000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 18                       | 24     | 24     | -      | 16360                         | 21820  | 21820  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06     | 06     | 06     | 7200                          | 7200   | 7200   | 7200   | 28800                        | 2960                   | 14.5                     | 13.1 |
| 06                       | 06     | 06     | 09     | 7200                          | 7200   | 7200   | 10900  | 32500                        | 3370                   | 16.5                     | 14.9 |
| 06                       | 06     | 06     | 12     | 7200                          | 7200   | 7200   | 14400  | 36000                        | 3770                   | 18.4                     | 16.7 |
| 06                       | 06     | 06     | 15     | 7200                          | 7200   | 7200   | 18000  | 39600                        | 4180                   | 20.4                     | 18.5 |
| 06                       | 06     | 06     | 18     | 7200                          | 7200   | 7200   | 21600  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 06     | 06     | 24     | 7200                          | 7200   | 7200   | 28800  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06     | 09     | 09     | 7200                          | 7200   | 10900  | 10900  | 36200                        | 3790                   | 18.5                     | 16.7 |
| 06                       | 06     | 09     | 12     | 7200                          | 7200   | 10900  | 14400  | 39700                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06     | 09     | 15     | 7200                          | 7200   | 10900  | 18000  | 43300                        | 4490                   | 21.9                     | 19.8 |
| 06                       | 06     | 09     | 18     | 7200                          | 7200   | 10900  | 21600  | 46900                        | 4690                   | 22.9                     | 20.7 |
| 06                       | 06     | 09     | 24     | 7200                          | 7200   | 10900  | 28800  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 06     | 12     | 12     | 7200                          | 7200   | 14400  | 14400  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 06     | 12     | 15     | 7200                          | 7200   | 14400  | 18000  | 46800                        | 4680                   | 22.9                     | 20.7 |
| 06                       | 06     | 12     | 18     | 7200                          | 7200   | 14400  | 21600  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06     | 12     | 24     | 7200                          | 7200   | 14400  | 28800  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 15     | 15     | 7200                          | 7200   | 18000  | 18000  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06     | 15     | 18     | 7200                          | 7200   | 18000  | 21600  | 54000                        | 5050                   | 24.7                     | 22.3 |
| 06                       | 06     | 15     | 24     | 7060                          | 7060   | 17650  | 28240  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06     | 18     | 18     | 7200                          | 7200   | 21600  | 21600  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 18     | 24     | 6670                          | 6670   | 20000  | 26670  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06     | 24     | 24     | 6000                          | 6000   | 24000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |

# <Heating>

| Indoor unit combinations |        |        |        | Capacity of each unit (BTU/h) |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|-------------------------------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit A                        | Unit B | Unit C | Unit D |                              |                        | 208V                     | 230V |
| 06                       | 09     | 09     | 09     | 7200                          | 10900  | 10900  | 10900  | 39900                        | 4210                   | 20.6                     | 18.6 |
| 06                       | 09     | 09     | 12     | 7200                          | 10900  | 10900  | 14400  | 43400                        | 4500                   | 22.0                     | 19.9 |
| 06                       | 09     | 09     | 15     | 7200                          | 10900  | 10900  | 18000  | 47000                        | 4700                   | 23.0                     | 20.8 |
| 06                       | 09     | 09     | 18     | 7200                          | 10900  | 10900  | 21600  | 50600                        | 4890                   | 23.9                     | 21.6 |
| 06                       | 09     | 09     | 24     | 7200                          | 10900  | 10900  | 28800  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 09     | 12     | 12     | 7200                          | 10900  | 14400  | 14400  | 46900                        | 4690                   | 22.9                     | 20.7 |
| 06                       | 09     | 12     | 15     | 7200                          | 10900  | 14400  | 18000  | 50500                        | 4880                   | 23.8                     | 21.6 |
| 06                       | 09     | 12     | 18     | 7200                          | 10900  | 14400  | 21600  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 09     | 12     | 24     | 7050                          | 10670  | 14090  | 28190  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09     | 15     | 15     | 7200                          | 10900  | 18000  | 18000  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 09     | 15     | 18     | 7200                          | 10900  | 18000  | 21600  | 57700                        | 5220                   | 25.5                     | 23.1 |
| 06                       | 09     | 15     | 24     | 6660                          | 10080  | 16640  | 26630  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 09     | 18     | 18     | 7050                          | 10670  | 21140  | 21140  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09     | 18     | 24     | 6310                          | 9550   | 18920  | 25230  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09     | 24     | 24     | 5710                          | 8640   | 22830  | 22830  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 12     | 12     | 12     | 7200                          | 14400  | 14400  | 14400  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 12     | 12     | 15     | 7200                          | 14400  | 14400  | 18000  | 54000                        | 5050                   | 24.7                     | 22.3 |
| 06                       | 12     | 12     | 18     | 7200                          | 14400  | 14400  | 21600  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 12     | 12     | 24     | 6670                          | 13330  | 13330  | 26670  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 12     | 15     | 15     | 7200                          | 14400  | 18000  | 18000  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 12     | 15     | 18     | 7060                          | 14120  | 17650  | 21180  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 12     | 15     | 24     | 6320                          | 12630  | 15790  | 25260  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 12     | 18     | 18     | 6670                          | 13330  | 20000  | 20000  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 12     | 18     | 24     | 6000                          | 12000  | 18000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 12     | 24     | 24     | 5450                          | 10910  | 21820  | 21820  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 15     | 15     | 15     | 7060                          | 17650  | 17650  | 17650  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 15     | 15     | 18     | 6670                          | 16670  | 16670  | 20000  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 15     | 15     | 24     | 6000                          | 15000  | 15000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 15     | 18     | 18     | 6320                          | 15790  | 18950  | 18950  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 15     | 18     | 24     | 5710                          | 14290  | 17140  | 22860  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 15     | 24     | 24     | 5220                          | 13040  | 20870  | 20870  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 18     | 18     | 18     | 6000                          | 18000  | 18000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 18     | 18     | 24     | 5450                          | 16360  | 16360  | 21820  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09     | 09     | 09     | 10900                         | 10900  | 10900  | 10900  | 43600                        | 4520                   | 22.1                     | 20.0 |
| 09                       | 09     | 09     | 12     | 10900                         | 10900  | 10900  | 14400  | 47100                        | 4710                   | 23.0                     | 20.8 |
| 09                       | 09     | 09     | 15     | 10900                         | 10900  | 10900  | 18000  | 50700                        | 4900                   | 23.9                     | 21.7 |
| 09                       | 09     | 09     | 18     | 10900                         | 10900  | 10900  | 21600  | 54300                        | 5080                   | 24.8                     | 22.4 |
| 09                       | 09     | 09     | 24     | 10630                         | 10630  | 10630  | 28100  | 59990                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 09     | 12     | 12     | 10900                         | 10900  | 14400  | 14400  | 50600                        | 4890                   | 23.9                     | 21.6 |
| 09                       | 09     | 12     | 15     | 10900                         | 10900  | 14400  | 18000  | 54200                        | 5070                   | 24.8                     | 22.4 |
| 09                       | 09     | 12     | 18     | 10900                         | 10900  | 14400  | 21600  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 09                       | 09     | 12     | 24     | 10060                         | 10060  | 13290  | 26580  | 59990                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09     | 15     | 15     | 10900                         | 10900  | 18000  | 18000  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 09                       | 09     | 15     | 18     | 10650                         | 10650  | 17590  | 21110  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 09     | 15     | 24     | 9530                          | 9530   | 15740  | 25190  | 59990                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 09     | 18     | 18     | 10060                         | 10060  | 19940  | 19940  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09     | 18     | 24     | 9060                          | 9060   | 17950  | 23930  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09     | 24     | 24     | 8240                          | 8240   | 21760  | 21760  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 12     | 12     | 12     | 10900                         | 14400  | 14400  | 14400  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 09                       | 12     | 12     | 15     | 10900                         | 14400  | 14400  | 18000  | 57700                        | 5220                   | 25.5                     | 23.1 |
| 09                       | 12     | 12     | 18     | 10670                         | 14090  | 14090  | 21140  | 59990                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 12     | 12     | 24     | 9550                          | 12610  | 12610  | 25230  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 12     | 15     | 15     | 10670                         | 14090  | 17620  | 17620  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 12     | 15     | 18     | 10080                         | 13310  | 16640  | 19970  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 12     | 15     | 24     | 9070                          | 11980  | 14980  | 23970  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 12     | 18     | 18     | 9550                          | 12610  | 18920  | 18920  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 12     | 18     | 24     | 8640                          | 11410  | 17120  | 22830  | 60000                        | 4190                   | 20.5                     | 18.5 |

# <Heating>

| Indoor unit combinations |        |        |        |        | Capacity of each unit (BTU/h) |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|--------|--------|--------|--------|-------------------------------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit A                   | Unit B | Unit C | Unit D | Unit E | Unit A                        | Unit B | Unit C | Unit D | Unit E |                              |                        | 208V                     | 230V |
| 09                       | 12     | 24     | 24     | -      | 7890                          | 10420  | 20840  | 20840  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 15     | 15     | 15     | -      | 10080                         | 16640  | 16640  | 16640  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 15     | 15     | 18     | -      | 9550                          | 15770  | 15770  | 18920  | -      | 60010                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 15     | 15     | 24     | -      | 8640                          | 14270  | 14270  | 22830  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 15     | 18     | 18     | -      | 9070                          | 14980  | 17980  | 17980  | -      | 60010                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 15     | 18     | 24     | -      | 8250                          | 13620  | 16340  | 21790  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 18     | 18     | 18     | -      | 8640                          | 17120  | 17120  | 17120  | -      | 60000                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 18     | 18     | 24     | -      | 7890                          | 15630  | 15630  | 20840  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 12                       | 12     | 12     | 12     | -      | 14400                         | 14400  | 14400  | 14400  | -      | 57600                        | 5210                   | 25.5                     | 23.0 |
| 12                       | 12     | 12     | 15     | -      | 14120                         | 14120  | 14120  | 17650  | -      | 60010                        | 5120                   | 25.0                     | 22.6 |
| 12                       | 12     | 12     | 18     | -      | 13330                         | 13330  | 13330  | 20000  | -      | 59990                        | 4850                   | 23.7                     | 21.4 |
| 12                       | 12     | 12     | 24     | -      | 12000                         | 12000  | 12000  | 24000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 12                       | 12     | 15     | 15     | -      | 13330                         | 13330  | 16670  | 16670  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 12                       | 12     | 15     | 18     | -      | 12630                         | 12630  | 15790  | 18950  | -      | 60000                        | 4610                   | 22.5                     | 20.4 |
| 12                       | 12     | 15     | 24     | -      | 11430                         | 11430  | 14290  | 22860  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 12                       | 12     | 18     | 18     | -      | 12000                         | 12000  | 18000  | 18000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 12                       | 12     | 18     | 24     | -      | 10910                         | 10910  | 16360  | 21820  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 12                       | 15     | 15     | 15     | -      | 12630                         | 15790  | 15790  | 15790  | -      | 60000                        | 4610                   | 22.5                     | 20.4 |
| 12                       | 15     | 15     | 18     | -      | 12000                         | 15000  | 15000  | 18000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 12                       | 15     | 15     | 24     | -      | 10910                         | 13640  | 13640  | 21820  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 12                       | 15     | 18     | 18     | -      | 11430                         | 14290  | 17140  | 17140  | -      | 60000                        | 4190                   | 20.5                     | 18.5 |
| 12                       | 15     | 18     | 24     | -      | 10430                         | 13040  | 15650  | 20870  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 12                       | 18     | 18     | 18     | -      | 10910                         | 16360  | 16360  | 16360  | -      | 59990                        | 4010                   | 19.6                     | 17.7 |
| 15                       | 15     | 15     | 15     | -      | 15000                         | 15000  | 15000  | 15000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 15                       | 15     | 15     | 18     | -      | 14290                         | 14290  | 14290  | 17140  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 15                       | 15     | 15     | 24     | -      | 13040                         | 13040  | 13040  | 20870  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 15                       | 15     | 18     | 18     | -      | 13640                         | 13640  | 16360  | 16360  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 15                       | 18     | 18     | 18     | -      | 13040                         | 15650  | 15650  | 15650  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06     | 06     | 06     | 06     | 7200                          | 7200   | 7200   | 7200   | 7200   | 36000                        | 3770                   | 18.4                     | 16.7 |
| 06                       | 06     | 06     | 06     | 09     | 7200                          | 7200   | 7200   | 7200   | 10900  | 39700                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06     | 06     | 06     | 12     | 7200                          | 7200   | 7200   | 7200   | 14400  | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 06     | 06     | 06     | 15     | 7200                          | 7200   | 7200   | 7200   | 18000  | 46800                        | 4680                   | 22.9                     | 20.7 |
| 06                       | 06     | 06     | 06     | 18     | 7200                          | 7200   | 7200   | 7200   | 21600  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06     | 06     | 06     | 24     | 7200                          | 7200   | 7200   | 7200   | 28800  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 06     | 09     | 09     | 7200                          | 7200   | 7200   | 10900  | 10900  | 43400                        | 4500                   | 22.0                     | 19.9 |
| 06                       | 06     | 06     | 09     | 12     | 7200                          | 7200   | 7200   | 10900  | 14400  | 46900                        | 4690                   | 22.9                     | 20.7 |
| 06                       | 06     | 06     | 09     | 15     | 7200                          | 7200   | 7200   | 10900  | 18000  | 50500                        | 4880                   | 23.8                     | 21.6 |
| 06                       | 06     | 06     | 09     | 18     | 7200                          | 7200   | 7200   | 10900  | 21600  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 06     | 06     | 09     | 24     | 7050                          | 7050   | 7050   | 10670  | 28190  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06     | 06     | 12     | 12     | 7200                          | 7200   | 7200   | 14400  | 14400  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06     | 06     | 12     | 15     | 7200                          | 7200   | 7200   | 14400  | 18000  | 54000                        | 5050                   | 24.7                     | 22.3 |
| 06                       | 06     | 06     | 12     | 18     | 7200                          | 7200   | 7200   | 14400  | 21600  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 06     | 12     | 24     | 6670                          | 6670   | 6670   | 13330  | 26670  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06     | 06     | 15     | 15     | 7200                          | 7200   | 7200   | 18000  | 18000  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06     | 06     | 15     | 18     | 7060                          | 7060   | 7060   | 17650  | 21180  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06     | 06     | 15     | 24     | 6320                          | 6320   | 6320   | 15790  | 25260  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06     | 06     | 18     | 18     | 6670                          | 6670   | 6670   | 20000  | 20000  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06     | 06     | 18     | 24     | 6000                          | 6000   | 6000   | 18000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06     | 06     | 24     | 24     | 5450                          | 5450   | 5450   | 21820  | 21820  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06     | 09     | 09     | 09     | 7200                          | 7200   | 10900  | 10900  | 10900  | 47100                        | 4710                   | 23.0                     | 20.8 |
| 06                       | 06     | 09     | 09     | 12     | 7200                          | 7200   | 10900  | 10900  | 14400  | 50600                        | 4890                   | 23.9                     | 21.6 |
| 06                       | 06     | 09     | 09     | 15     | 7200                          | 7200   | 10900  | 10900  | 18000  | 54200                        | 5070                   | 24.8                     | 22.4 |
| 06                       | 06     | 09     | 09     | 18     | 7200                          | 7200   | 10900  | 10900  | 21600  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 06     | 09     | 09     | 24     | 6650                          | 6650   | 10060  | 10060  | 26580  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06     | 09     | 12     | 12     | 7200                          | 7200   | 10900  | 14400  | 14400  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 06     | 09     | 12     | 15     | 7200                          | 7200   | 10900  | 14400  | 18000  | 57700                        | 5220                   | 25.5                     | 23.1 |
| 06                       | 06     | 09     | 12     | 18     | 7050                          | 7050   | 10670  | 14090  | 21140  | 60000                        | 5120                   | 25.0                     | 22.6 |

# <Heating>

| Indoor unit combinations |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|-------------------------------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E |                              |                        | 208V                     | 230V |
| 06                       | 06 | 09 | 12 | 24 | 6310                          | 6310   | 9550   | 12610  | 25230  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 15 | 15 | 7050                          | 7050   | 10670  | 17620  | 17620  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 09 | 15 | 18 | 6660                          | 6660   | 10080  | 16640  | 19970  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 09 | 15 | 24 | 5990                          | 5990   | 9070   | 14980  | 23970  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 09 | 18 | 18 | 6310                          | 6310   | 9550   | 18920  | 18920  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 18 | 24 | 5710                          | 5710   | 8640   | 17120  | 22830  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 24 | 24 | 5210                          | 5210   | 7890   | 20840  | 20840  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 12 | 12 | 12 | 7200                          | 7200   | 14400  | 14400  | 14400  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06 | 12 | 12 | 15 | 7060                          | 7060   | 14120  | 14120  | 17650  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 12 | 12 | 18 | 6670                          | 6670   | 13330  | 13330  | 20000  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 12 | 12 | 24 | 6000                          | 6000   | 12000  | 12000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 12 | 15 | 15 | 6670                          | 6670   | 13330  | 16670  | 16670  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 12 | 15 | 18 | 6320                          | 6320   | 12630  | 15790  | 18950  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 12 | 15 | 24 | 5710                          | 5710   | 11430  | 14290  | 22860  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 12 | 18 | 18 | 6000                          | 6000   | 12000  | 18000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 12 | 18 | 24 | 5450                          | 5450   | 10910  | 16360  | 21820  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 15 | 15 | 15 | 6320                          | 6320   | 15790  | 15790  | 15790  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 15 | 15 | 18 | 6000                          | 6000   | 15000  | 15000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 15 | 15 | 24 | 5450                          | 5450   | 13640  | 13640  | 21820  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 15 | 18 | 18 | 5710                          | 5710   | 14290  | 17140  | 17140  | 59990                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 15 | 18 | 24 | 5220                          | 5220   | 13040  | 15650  | 20870  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 18 | 18 | 18 | 5450                          | 5450   | 16360  | 16360  | 16360  | 59980                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 09 | 09 | 09 | 7200                          | 10900  | 10900  | 10900  | 10900  | 50800                        | 4910                   | 24.0                     | 21.7 |
| 06                       | 09 | 09 | 09 | 12 | 7200                          | 10900  | 10900  | 10900  | 14400  | 54300                        | 5080                   | 24.8                     | 22.4 |
| 06                       | 09 | 09 | 09 | 15 | 7200                          | 10900  | 10900  | 10900  | 18000  | 57900                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 09 | 09 | 09 | 18 | 7020                          | 10630  | 10630  | 10630  | 21070  | 59980                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09 | 09 | 09 | 24 | 6290                          | 9520   | 9520   | 9520   | 25150  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 09 | 12 | 12 | 7200                          | 10900  | 10900  | 14400  | 14400  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 09 | 09 | 12 | 15 | 7040                          | 10650  | 10650  | 14070  | 17590  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09 | 09 | 12 | 18 | 6650                          | 10060  | 10060  | 13290  | 19940  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 09 | 09 | 12 | 24 | 5980                          | 9060   | 9060   | 11970  | 23930  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 15 | 15 | 6650                          | 10060  | 10060  | 16620  | 16620  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 09 | 09 | 15 | 18 | 6300                          | 9530   | 9530   | 15740  | 18890  | 59990                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 09 | 15 | 24 | 5700                          | 8630   | 8630   | 14250  | 22800  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 09 | 18 | 18 | 5980                          | 9060   | 9060   | 17950  | 17950  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 18 | 24 | 5440                          | 8240   | 8240   | 16320  | 21760  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 12 | 12 | 12 | 7050                          | 10670  | 14090  | 14090  | 14090  | 59990                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09 | 12 | 12 | 15 | 6660                          | 10080  | 13310  | 13310  | 16640  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 09 | 12 | 12 | 18 | 6310                          | 9550   | 12610  | 12610  | 18920  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 12 | 12 | 24 | 5710                          | 8640   | 11410  | 11410  | 22830  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 12 | 15 | 15 | 6310                          | 9550   | 12610  | 15770  | 15770  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 12 | 15 | 18 | 5990                          | 9070   | 11980  | 14980  | 17980  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 12 | 15 | 24 | 5450                          | 8250   | 10900  | 13620  | 21790  | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 12 | 18 | 18 | 5710                          | 8640   | 11410  | 17120  | 17120  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 12 | 18 | 24 | 5210                          | 7890   | 10420  | 15630  | 20840  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 15 | 15 | 15 | 5990                          | 9070   | 14980  | 14980  | 14980  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 15 | 15 | 18 | 5710                          | 8640   | 14270  | 14270  | 17120  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 15 | 15 | 24 | 5210                          | 7890   | 13030  | 13030  | 20840  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 15 | 18 | 18 | 5450                          | 8250   | 13620  | 16340  | 16340  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 18 | 18 | 18 | 5210                          | 7890   | 15630  | 15630  | 15630  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 12 | 12 | 12 | 12 | 6670                          | 13330  | 13330  | 13330  | 13330  | 59990                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 12 | 12 | 12 | 15 | 6320                          | 12630  | 12630  | 12630  | 15790  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 12 | 12 | 12 | 18 | 6000                          | 12000  | 12000  | 12000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 12 | 12 | 12 | 24 | 5450                          | 10910  | 10910  | 10910  | 21820  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 12 | 12 | 15 | 15 | 6000                          | 12000  | 12000  | 15000  | 15000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 12 | 12 | 15 | 18 | 5710                          | 11430  | 11430  | 14290  | 17140  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 12 | 12 | 15 | 24 | 5220                          | 10430  | 10430  | 13040  | 20870  | 59990                        | 3840                   | 18.8                     | 17.0 |

# <Heating>

| Indoor unit combinations |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F |                              |                        | 208V                     | 230V |
| 06                       | 12 | 12 | 18 | 18 | -  | 5450                          | 10910  | 10910  | 16360  | 16360  | -      | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 12 | 15 | 15 | 15 | -  | 5710                          | 11430  | 14290  | 14290  | 14290  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 12 | 15 | 15 | 18 | -  | 5450                          | 10910  | 13640  | 13640  | 16360  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 12 | 15 | 18 | 18 | -  | 5220                          | 10430  | 13040  | 15650  | 15650  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 15 | 15 | 15 | 15 | -  | 5450                          | 13640  | 13640  | 13640  | 13640  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 15 | 15 | 15 | 18 | -  | 5220                          | 13040  | 13040  | 13040  | 15650  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 09 | 09 | 09 | -  | 10900                         | 10900  | 10900  | 10900  | 10900  | -      | 54500                        | 5100                   | 24.9                     | 22.5 |
| 09                       | 09 | 09 | 09 | 12 | -  | 10900                         | 10900  | 10900  | 10900  | 14400  | -      | 58000                        | 5240                   | 25.6                     | 23.2 |
| 09                       | 09 | 09 | 09 | 15 | -  | 10620                         | 10620  | 10620  | 10620  | 17530  | -      | 60010                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 09 | 09 | 09 | 18 | -  | 10030                         | 10030  | 10030  | 10030  | 19880  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09 | 09 | 09 | 24 | -  | 9030                          | 9030   | 9030   | 9030   | 23870  | -      | 59990                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 09 | 12 | 12 | -  | 10630                         | 10630  | 10630  | 14050  | 14050  | -      | 59990                        | 5120                   | 25.0                     | 22.6 |
| 09                       | 09 | 09 | 12 | 15 | -  | 10050                         | 10050  | 10050  | 13270  | 16590  | -      | 60010                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09 | 09 | 12 | 18 | -  | 9520                          | 9520   | 9520   | 12580  | 18860  | -      | 60000                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 09 | 09 | 12 | 24 | -  | 8620                          | 8620   | 8620   | 11380  | 22770  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 09 | 15 | 15 | -  | 9520                          | 9520   | 9520   | 15720  | 15720  | -      | 60000                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 09 | 09 | 15 | 18 | -  | 9050                          | 9050   | 9050   | 14940  | 17930  | -      | 60020                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 09 | 15 | 24 | -  | 8230                          | 8230   | 8230   | 13580  | 21740  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 09 | 18 | 18 | -  | 8620                          | 8620   | 8620   | 17080  | 17080  | -      | 60020                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 09 | 18 | 24 | -  | 7870                          | 7870   | 7870   | 15600  | 20790  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 12 | 12 | 12 | -  | 10060                         | 10060  | 13290  | 13290  | 13290  | -      | 59990                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09 | 12 | 12 | 15 | -  | 9530                          | 9530   | 12590  | 12590  | 15740  | -      | 59980                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 09 | 12 | 12 | 18 | -  | 9060                          | 9060   | 11970  | 11970  | 17950  | -      | 60010                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 12 | 12 | 24 | -  | 8240                          | 8240   | 10880  | 10880  | 21760  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 12 | 15 | 15 | -  | 9060                          | 9060   | 11970  | 14960  | 14960  | -      | 60010                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 12 | 15 | 18 | -  | 8630                          | 8630   | 11400  | 14250  | 17100  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 12 | 15 | 24 | -  | 7880                          | 7880   | 10410  | 13010  | 20820  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 12 | 18 | 18 | -  | 8240                          | 8240   | 10880  | 16320  | 16320  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 15 | 15 | 15 | -  | 8630                          | 8630   | 14250  | 14250  | 14250  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 15 | 15 | 18 | -  | 8240                          | 8240   | 13600  | 13600  | 16320  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 15 | 18 | 18 | -  | 7880                          | 7880   | 13010  | 15610  | 15610  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 12 | 12 | 12 | 12 | -  | 9550                          | 12610  | 12610  | 12610  | 12610  | -      | 59990                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 12 | 12 | 12 | 15 | -  | 9070                          | 11980  | 11980  | 11980  | 14980  | -      | 59990                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 12 | 12 | 12 | 18 | -  | 8640                          | 11410  | 11410  | 11410  | 17120  | -      | 59990                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 12 | 12 | 12 | 24 | -  | 7890                          | 10420  | 10420  | 10420  | 20840  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 12 | 12 | 15 | 15 | -  | 8640                          | 11410  | 11410  | 14270  | 14270  | -      | 60000                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 12 | 12 | 15 | 18 | -  | 8250                          | 10900  | 10900  | 13620  | 16340  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 12 | 12 | 18 | 18 | -  | 7890                          | 10420  | 10420  | 15630  | 15630  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 12 | 15 | 15 | 15 | -  | 8250                          | 10900  | 13620  | 13620  | 13620  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 12 | 15 | 15 | 18 | -  | 7890                          | 10420  | 13030  | 13030  | 15630  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 15 | 15 | 15 | 15 | -  | 7890                          | 13030  | 13030  | 13030  | 13030  | -      | 60010                        | 3840                   | 18.8                     | 17.0 |
| 12                       | 12 | 12 | 12 | 12 | -  | 12000                         | 12000  | 12000  | 12000  | 12000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 12                       | 12 | 12 | 12 | 15 | -  | 11430                         | 11430  | 11430  | 11430  | 14290  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 12                       | 12 | 12 | 12 | 18 | -  | 10910                         | 10910  | 10910  | 10910  | 16360  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 12                       | 12 | 12 | 15 | 15 | -  | 10910                         | 10910  | 10910  | 13640  | 13640  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 12                       | 12 | 12 | 15 | 18 | -  | 10430                         | 10430  | 10430  | 13040  | 15650  | -      | 59980                        | 3840                   | 18.8                     | 17.0 |
| 12                       | 12 | 15 | 15 | 15 | -  | 10430                         | 10430  | 13040  | 13040  | 13040  | -      | 59980                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 7200                          | 7200   | 7200   | 7200   | 7200   | 7200   | 43200                        | 4480                   | 21.9                     | 19.8 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 7200                          | 7200   | 7200   | 7200   | 7200   | 10900  | 46900                        | 4690                   | 22.9                     | 20.7 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 7200                          | 7200   | 7200   | 7200   | 7200   | 14400  | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 7200                          | 7200   | 7200   | 7200   | 7200   | 18000  | 54000                        | 5050                   | 24.7                     | 22.3 |
| 06                       | 06 | 06 | 06 | 06 | 18 | 7200                          | 7200   | 7200   | 7200   | 7200   | 21600  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06 | 06 | 06 | 06 | 24 | 6670                          | 6670   | 6670   | 6670   | 6670   | 26670  | 60020                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 7200                          | 7200   | 7200   | 7200   | 10900  | 10900  | 50600                        | 4890                   | 23.9                     | 21.6 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 7200                          | 7200   | 7200   | 7200   | 10900  | 14400  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 7200                          | 7200   | 7200   | 7200   | 10900  | 18000  | 57700                        | 5220                   | 25.5                     | 23.1 |
| 06                       | 06 | 06 | 06 | 09 | 18 | 7050                          | 7050   | 7050   | 7050   | 10670  | 21140  | 60010                        | 5120                   | 25.0                     | 22.6 |

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| Indoor unit combinations |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F |                              |                        | 208V                     | 230V |
| 06                       | 06 | 06 | 06 | 09 | 24 | 6310                          | 6310   | 6310   | 6310   | 9550   | 25230  | 60020                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 7200                          | 7200   | 7200   | 7200   | 14400  | 14400  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 7060                          | 7060   | 7060   | 7060   | 14120  | 17650  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 06 | 12 | 18 | 6670                          | 6670   | 6670   | 6670   | 13330  | 20000  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 12 | 24 | 6000                          | 6000   | 6000   | 6000   | 12000  | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 15 | 15 | 6670                          | 6670   | 6670   | 6670   | 16670  | 16670  | 60020                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 15 | 18 | 6320                          | 6320   | 6320   | 6320   | 15790  | 18950  | 60020                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 06 | 15 | 24 | 5710                          | 5710   | 5710   | 5710   | 14290  | 22860  | 59990                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 18 | 18 | 6000                          | 6000   | 6000   | 6000   | 18000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 18 | 24 | 5450                          | 5450   | 5450   | 5450   | 16360  | 21820  | 59980                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 7200                          | 7200   | 7200   | 10900  | 10900  | 10900  | 54300                        | 5080                   | 24.8                     | 22.4 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 7200                          | 7200   | 7200   | 10900  | 10900  | 14400  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 7040                          | 7040   | 7040   | 10650  | 10650  | 17590  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 09 | 09 | 18 | 6650                          | 6650   | 6650   | 10060  | 10060  | 19940  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 09 | 09 | 24 | 5980                          | 5980   | 5980   | 9060   | 9060   | 23930  | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 7050                          | 7050   | 7050   | 10670  | 14090  | 14090  | 60000                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 09 | 12 | 15 | 6660                          | 6660   | 6660   | 10080  | 13310  | 16640  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 09 | 12 | 18 | 6310                          | 6310   | 6310   | 9550   | 12610  | 18920  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 09 | 12 | 24 | 5710                          | 5710   | 5710   | 8640   | 11410  | 22830  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 09 | 15 | 15 | 6310                          | 6310   | 6310   | 9550   | 15770  | 15770  | 60020                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 09 | 15 | 18 | 5990                          | 5990   | 5990   | 9070   | 14980  | 17980  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 09 | 15 | 24 | 5450                          | 5450   | 5450   | 8250   | 13620  | 21790  | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 09 | 18 | 18 | 5710                          | 5710   | 5710   | 8640   | 17120  | 17120  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 09 | 18 | 24 | 5210                          | 5210   | 5210   | 7890   | 15630  | 20840  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 6670                          | 6670   | 6670   | 13330  | 13330  | 13330  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 12 | 12 | 15 | 6320                          | 6320   | 6320   | 12630  | 12630  | 15790  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 12 | 12 | 18 | 6000                          | 6000   | 6000   | 12000  | 12000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 12 | 12 | 24 | 5450                          | 5450   | 5450   | 10910  | 10910  | 21820  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 12 | 15 | 15 | 6000                          | 6000   | 6000   | 12000  | 15000  | 15000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 12 | 15 | 18 | 5710                          | 5710   | 5710   | 11430  | 14290  | 17140  | 59990                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 12 | 15 | 24 | 5220                          | 5220   | 5220   | 10430  | 13040  | 20870  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 12 | 18 | 18 | 5450                          | 5450   | 5450   | 10910  | 16360  | 16360  | 59980                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 15 | 15 | 15 | 5710                          | 5710   | 5710   | 14290  | 14290  | 14290  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 15 | 15 | 18 | 5450                          | 5450   | 5450   | 13640  | 13640  | 16360  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 15 | 18 | 18 | 5220                          | 5220   | 5220   | 13040  | 15650  | 15650  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 7200                          | 7200   | 10900  | 10900  | 10900  | 10900  | 58000                        | 5240                   | 25.6                     | 23.2 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 7020                          | 7020   | 10630  | 10630  | 10630  | 14050  | 59980                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 09 | 09 | 09 | 15 | 6640                          | 6640   | 10050  | 10050  | 10050  | 16590  | 60020                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 09 | 09 | 09 | 18 | 6290                          | 6290   | 9520   | 9520   | 9520   | 18860  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 09 | 09 | 24 | 5690                          | 5690   | 8620   | 8620   | 8620   | 22770  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 6650                          | 6650   | 10060  | 10060  | 13290  | 13290  | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 09 | 09 | 12 | 15 | 6300                          | 6300   | 9530   | 9530   | 12590  | 15740  | 59990                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 09 | 12 | 18 | 5980                          | 5980   | 9060   | 9060   | 11970  | 17950  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 09 | 09 | 12 | 24 | 5440                          | 5440   | 8240   | 8240   | 10880  | 21760  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 09 | 15 | 15 | 5980                          | 5980   | 9060   | 9060   | 14960  | 14960  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 09 | 09 | 15 | 18 | 5700                          | 5700   | 8630   | 8630   | 14250  | 17100  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 09 | 15 | 24 | 5200                          | 5200   | 7880   | 7880   | 13010  | 20820  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 09 | 18 | 18 | 5440                          | 5440   | 8240   | 8240   | 16320  | 16320  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 12 | 12 | 12 | 6310                          | 6310   | 9550   | 12610  | 12610  | 12610  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 12 | 12 | 15 | 5990                          | 5990   | 9070   | 11980  | 11980  | 14980  | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 09 | 12 | 12 | 18 | 5710                          | 5710   | 8640   | 11410  | 11410  | 17120  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 12 | 12 | 24 | 5210                          | 5210   | 7890   | 10420  | 10420  | 20840  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 12 | 15 | 15 | 5710                          | 5710   | 8640   | 11410  | 14270  | 14270  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 12 | 15 | 18 | 5450                          | 5450   | 8250   | 10900  | 13620  | 16340  | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 12 | 18 | 18 | 5210                          | 5210   | 7890   | 10420  | 15630  | 15630  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 15 | 15 | 15 | 5450                          | 5450   | 8250   | 13620  | 13620  | 13620  | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 15 | 15 | 18 | 5210                          | 5210   | 7890   | 13030  | 13030  | 15630  | 60000                        | 3840                   | 18.8                     | 17.0 |

# <Heating>

| Indoor unit combinations |    |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    |    |                               |        |        |        |        |        |        |                              |                        |                          |      |
| A                        | B  | C  | D  | E  | F  | G  | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G |                              |                        | 208V                     | 230V |
| 06                       | 06 | 12 | 12 | 12 | 12 | -  | 6000                          | 6000   | 12000  | 12000  | 12000  | 12000  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 12 | 12 | 12 | 15 | -  | 5710                          | 5710   | 11430  | 11430  | 11430  | 14290  | -      | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 12 | 12 | 12 | 18 | -  | 5450                          | 5450   | 10910  | 10910  | 10910  | 16360  | -      | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 12 | 12 | 15 | 15 | -  | 5450                          | 5450   | 10910  | 10910  | 13640  | 13640  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 12 | 12 | 15 | 18 | -  | 5220                          | 5220   | 10430  | 10430  | 13040  | 15650  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 12 | 15 | 15 | 15 | -  | 5220                          | 5220   | 10430  | 13040  | 13040  | 13040  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 09 | 09 | 09 | 09 | -  | 7000                          | 10600  | 10600  | 10600  | 10600  | 10600  | -      | 60000                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 09 | 09 | 09 | 09 | 12 | -  | 6630                          | 10030  | 10030  | 10030  | 10030  | 13250  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 09 | 09 | 09 | 09 | 15 | -  | 6280                          | 9510   | 9510   | 9510   | 9510   | 15700  | -      | 60020                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 09 | 09 | 09 | 18 | -  | 5970                          | 9030   | 9030   | 9030   | 9030   | 17900  | -      | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 09 | 09 | 24 | -  | 5430                          | 8220   | 8220   | 8220   | 8220   | 21710  | -      | 60020                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 09 | 09 | 12 | 12 | -  | 6290                          | 9520   | 9520   | 9520   | 12580  | 12580  | -      | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 09 | 09 | 09 | 12 | 15 | -  | 5980                          | 9050   | 9050   | 9050   | 11950  | 14940  | -      | 60020                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 09 | 12 | 18 | -  | 5690                          | 8620   | 8620   | 8620   | 11380  | 17080  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 09 | 09 | 12 | 24 | -  | 5200                          | 7870   | 7870   | 7870   | 10400  | 20790  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 09 | 09 | 15 | 15 | -  | 5690                          | 8620   | 8620   | 8620   | 14230  | 14230  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 09 | 09 | 15 | 18 | -  | 5430                          | 8230   | 8230   | 8230   | 13580  | 16300  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 09 | 09 | 18 | 18 | -  | 5200                          | 7870   | 7870   | 7870   | 15600  | 15600  | -      | 60010                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 09 | 12 | 12 | 12 | -  | 5980                          | 9060   | 9060   | 11970  | 11970  | 11970  | -      | 60010                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 12 | 12 | 15 | -  | 5700                          | 8630   | 8630   | 11400  | 11400  | 14250  | -      | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 09 | 12 | 12 | 18 | -  | 5440                          | 8240   | 8240   | 10880  | 10880  | 16320  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 09 | 12 | 15 | 15 | -  | 5440                          | 8240   | 8240   | 10880  | 13600  | 13600  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 09 | 12 | 15 | 18 | -  | 5200                          | 7880   | 7880   | 10410  | 13010  | 15610  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 09 | 15 | 15 | 15 | -  | 5200                          | 7880   | 7880   | 13010  | 13010  | 13010  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 12 | 12 | 12 | 12 | -  | 5710                          | 8640   | 11410  | 11410  | 11410  | 11410  | -      | 59990                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 12 | 12 | 12 | 15 | -  | 5450                          | 8250   | 10900  | 10900  | 10900  | 13620  | -      | 60020                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 09 | 12 | 12 | 12 | 18 | -  | 5210                          | 7890   | 10420  | 10420  | 10420  | 15630  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 12 | 12 | 15 | 15 | -  | 5210                          | 7890   | 10420  | 10420  | 13030  | 13030  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 12 | 12 | 12 | 12 | 12 | -  | 5450                          | 10910  | 10910  | 10910  | 10910  | 10910  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 12 | 12 | 12 | 12 | 15 | -  | 5220                          | 10430  | 10430  | 10430  | 10430  | 13040  | -      | 59980                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 09 | 09 | 09 | 09 | -  | 10000                         | 10000  | 10000  | 10000  | 10000  | 10000  | -      | 60000                        | 4850                   | 23.7                     | 21.4 |
| 09                       | 09 | 09 | 09 | 09 | 12 | -  | 9490                          | 9490   | 9490   | 9490   | 9490   | 12540  | -      | 59990                        | 4610                   | 22.5                     | 20.4 |
| 09                       | 09 | 09 | 09 | 09 | 15 | -  | 9020                          | 9020   | 9020   | 9020   | 9020   | 14900  | -      | 60000                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 09 | 09 | 09 | 18 | -  | 8590                          | 8590   | 8590   | 8590   | 8590   | 17030  | -      | 59980                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 09 | 09 | 09 | 24 | -  | 7850                          | 7850   | 7850   | 7850   | 7850   | 20740  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 09 | 09 | 12 | 12 | -  | 9030                          | 9030   | 9030   | 9030   | 11930  | 11930  | -      | 59980                        | 4390                   | 21.4                     | 19.4 |
| 09                       | 09 | 09 | 09 | 12 | 15 | -  | 8610                          | 8610   | 8610   | 8610   | 11370  | 14210  | -      | 60020                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 09 | 09 | 12 | 18 | -  | 8220                          | 8220   | 8220   | 8220   | 10850  | 16280  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 09 | 09 | 15 | 15 | -  | 8220                          | 8220   | 8220   | 8220   | 13570  | 13570  | -      | 60020                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 09 | 09 | 15 | 18 | -  | 7860                          | 7860   | 7860   | 7860   | 12980  | 15580  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 09 | 12 | 12 | 12 | -  | 8620                          | 8620   | 8620   | 11380  | 11380  | 11380  | -      | 60000                        | 4190                   | 20.5                     | 18.5 |
| 09                       | 09 | 09 | 12 | 12 | 15 | -  | 8230                          | 8230   | 8230   | 10870  | 10870  | 13580  | -      | 60010                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 09 | 12 | 12 | 18 | -  | 7870                          | 7870   | 7870   | 10400  | 10400  | 15600  | -      | 60010                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 09 | 12 | 15 | 15 | -  | 7870                          | 7870   | 7870   | 10400  | 13000  | 13000  | -      | 60010                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 09 | 12 | 12 | 12 | 12 | -  | 8240                          | 8240   | 10880  | 10880  | 10880  | 10880  | -      | 60000                        | 4010                   | 19.6                     | 17.7 |
| 09                       | 09 | 12 | 12 | 12 | 15 | -  | 7880                          | 7880   | 10410  | 10410  | 10410  | 13010  | -      | 60000                        | 3840                   | 18.8                     | 17.0 |
| 09                       | 12 | 12 | 12 | 12 | 12 | -  | 7890                          | 10420  | 10420  | 10420  | 10420  | 10420  | -      | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 7200                          | 7200   | 7200   | 7200   | 7200   | 7200   | 7200   | 50400                        | 4870                   | 23.8                     | 21.5 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 7200                          | 7200   | 7200   | 7200   | 7200   | 7200   | 10900  | 54100                        | 5060                   | 24.7                     | 22.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 7200                          | 7200   | 7200   | 7200   | 7200   | 7200   | 14400  | 57600                        | 5210                   | 25.5                     | 23.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 7060                          | 7060   | 7060   | 7060   | 7060   | 7060   | 17650  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 18 | 6670                          | 6670   | 6670   | 6670   | 6670   | 6670   | 20000  | 60020                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 24 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 24000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 7200                          | 7200   | 7200   | 7200   | 7200   | 10900  | 10900  | 57800                        | 5230                   | 25.6                     | 23.1 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 7050                          | 7050   | 7050   | 7050   | 7050   | 10670  | 14090  | 60010                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 15 | 6660                          | 6660   | 6660   | 6660   | 6660   | 10080  | 16640  | 60020                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 18 | 6310                          | 6310   | 6310   | 6310   | 6310   | 9550   | 18920  | 60020                        | 4610                   | 22.5                     | 20.4 |

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| Indoor unit combinations |    |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        |        | Total rated capacity (BTU/h) | Outdoor unit input (W) | Outdoor unit current (A) |      |
|--------------------------|----|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|------------------------|--------------------------|------|
| Unit                     |    |    |    |    |    |    | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G |                              |                        | 208V                     | 230V |
| 06                       | 06 | 06 | 06 | 06 | 09 | 24 | 5710                          | 5710   | 5710   | 5710   | 5710   | 8640   | 22830  | 60020                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 6670                          | 6670   | 6670   | 6670   | 6670   | 13330  | 13330  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 15 | 6320                          | 6320   | 6320   | 6320   | 6320   | 12630  | 15790  | 60020                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 18 | 6000                          | 6000   | 6000   | 6000   | 6000   | 12000  | 18000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 24 | 5450                          | 5450   | 5450   | 5450   | 5450   | 10910  | 21820  | 59980                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 15 | 6000                          | 6000   | 6000   | 6000   | 6000   | 15000  | 15000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 18 | 5710                          | 5710   | 5710   | 5710   | 5710   | 14290  | 17140  | 59980                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 15 | 24 | 5220                          | 5220   | 5220   | 5220   | 5220   | 13040  | 20870  | 60010                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 18 | 18 | 5450                          | 5450   | 5450   | 5450   | 5450   | 16360  | 16360  | 59970                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 7020                          | 7020   | 7020   | 7020   | 10630  | 10630  | 10630  | 59970                        | 5120                   | 25.0                     | 22.6 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 12 | 6650                          | 6650   | 6650   | 6650   | 10060  | 10060  | 13290  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 15 | 6300                          | 6300   | 6300   | 6300   | 9530   | 9530   | 15740  | 60000                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 18 | 5980                          | 5980   | 5980   | 5980   | 9060   | 9060   | 17950  | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 24 | 5440                          | 5440   | 5440   | 5440   | 8240   | 8240   | 21760  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 12 | 6310                          | 6310   | 6310   | 6310   | 9550   | 12610  | 12610  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 15 | 5990                          | 5990   | 5990   | 5990   | 9070   | 11980  | 14980  | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 18 | 5710                          | 5710   | 5710   | 5710   | 8640   | 11410  | 17120  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 24 | 5210                          | 5210   | 5210   | 5210   | 7890   | 10420  | 20840  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 15 | 5710                          | 5710   | 5710   | 5710   | 8640   | 14270  | 14270  | 60020                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 09 | 15 | 18 | 5450                          | 5450   | 5450   | 5450   | 8250   | 13620  | 16340  | 60010                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 09 | 18 | 18 | 5210                          | 5210   | 5210   | 5210   | 7890   | 15630  | 15630  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 12 | 6000                          | 6000   | 6000   | 6000   | 12000  | 12000  | 12000  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 15 | 5710                          | 5710   | 5710   | 5710   | 11430  | 11430  | 14290  | 59990                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 06 | 12 | 12 | 18 | 5450                          | 5450   | 5450   | 5450   | 10910  | 10910  | 16360  | 59980                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 15 | 5450                          | 5450   | 5450   | 5450   | 10910  | 13640  | 13640  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 06 | 12 | 15 | 18 | 5220                          | 5220   | 5220   | 5220   | 10430  | 13040  | 15650  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 06 | 15 | 15 | 15 | 5220                          | 5220   | 5220   | 5220   | 13040  | 13040  | 13040  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 6630                          | 6630   | 6630   | 10030  | 10030  | 10030  | 10030  | 60010                        | 4850                   | 23.7                     | 21.4 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 12 | 6290                          | 6290   | 6290   | 9520   | 9520   | 9520   | 12580  | 60010                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 15 | 5980                          | 5980   | 5980   | 9050   | 9050   | 9050   | 14940  | 60030                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 18 | 5690                          | 5690   | 5690   | 8620   | 8620   | 8620   | 17080  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 24 | 5200                          | 5200   | 5200   | 7870   | 7870   | 7870   | 20790  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 12 | 5980                          | 5980   | 5980   | 9060   | 9060   | 11970  | 11970  | 60000                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 15 | 5700                          | 5700   | 5700   | 8630   | 8630   | 11400  | 14250  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 09 | 09 | 12 | 18 | 5440                          | 5440   | 5440   | 8240   | 8240   | 10880  | 16320  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 15 | 5440                          | 5440   | 5440   | 8240   | 8240   | 13600  | 13600  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 09 | 09 | 15 | 18 | 5200                          | 5200   | 5200   | 7880   | 7880   | 13010  | 15610  | 59980                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 12 | 5710                          | 5710   | 5710   | 8640   | 11410  | 11410  | 11410  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 15 | 5450                          | 5450   | 5450   | 8250   | 10900  | 10900  | 13620  | 60020                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 09 | 12 | 12 | 18 | 5210                          | 5210   | 5210   | 7890   | 10420  | 10420  | 15630  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 09 | 12 | 15 | 15 | 5210                          | 5210   | 5210   | 7890   | 10420  | 13030  | 13030  | 60000                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 12 | 5450                          | 5450   | 5450   | 10910  | 10910  | 10910  | 10910  | 59990                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 06 | 12 | 12 | 12 | 15 | 5220                          | 5220   | 5220   | 10430  | 10430  | 10430  | 13040  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 6270                          | 6270   | 9490   | 9490   | 9490   | 9490   | 9490   | 59990                        | 4610                   | 22.5                     | 20.4 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 12 | 5970                          | 5970   | 9030   | 9030   | 9030   | 9030   | 11930  | 59990                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 15 | 5680                          | 5680   | 8610   | 8610   | 8610   | 8610   | 14210  | 60010                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 18 | 5430                          | 5430   | 8220   | 8220   | 8220   | 8220   | 16280  | 60020                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 12 | 5690                          | 5690   | 8620   | 8620   | 8620   | 11380  | 11380  | 60000                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 15 | 5430                          | 5430   | 8230   | 8230   | 8230   | 10870  | 13580  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 09 | 09 | 12 | 18 | 5200                          | 5200   | 7870   | 7870   | 7870   | 10400  | 15600  | 60010                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 09 | 09 | 15 | 15 | 5200                          | 5200   | 7870   | 7870   | 7870   | 13000  | 13000  | 60010                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 12 | 5440                          | 5440   | 8240   | 8240   | 10880  | 10880  | 10880  | 60000                        | 4010                   | 19.6                     | 17.7 |
| 06                       | 06 | 09 | 09 | 12 | 12 | 15 | 5200                          | 5200   | 7880   | 7880   | 10410  | 10410  | 13010  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 06 | 09 | 12 | 12 | 12 | 12 | 5210                          | 5210   | 7890   | 10420  | 10420  | 10420  | 10420  | 59990                        | 3840                   | 18.8                     | 17.0 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 09 | 5950                          | 9010   | 9010   | 9010   | 9010   | 9010   | 9010   | 60010                        | 4390                   | 21.4                     | 19.4 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 12 | 5680                          | 8590   | 8590   | 8590   | 8590   | 8590   | 11350  | 59980                        | 4190                   | 20.5                     | 18.5 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 15 | 5420                          | 8210   | 8210   | 8210   | 8210   | 8210   | 13550  | 60020                        | 4010                   | 19.6                     | 17.7 |



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| Indoor unit combinations |    |    |    |    |    |    |    | Capacity of each unit (BTU/h) |        |        |        |        |        |        |        | Total<br>rated<br>capacity<br>(BTU/h) | Outdoor<br>unit<br>Input<br>(W) | Outdoor unit<br>current (A) |      |
|--------------------------|----|----|----|----|----|----|----|-------------------------------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|---------------------------------|-----------------------------|------|
| Unit                     |    |    |    |    |    |    |    |                               |        |        |        |        |        |        |        |                                       |                                 | 208V                        | 230V |
| A                        | B  | C  | D  | E  | F  | G  | H  | Unit A                        | Unit B | Unit C | Unit D | Unit E | Unit F | Unit G | Unit H |                                       |                                 |                             |      |
| 06                       | 09 | 09 | 09 | 09 | 09 | 18 | -  | 5190                          | 7850   | 7850   | 7850   | 7850   | 7850   | 15560  | -      | 60000                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 09 | 09 | 09 | 09 | 12 | 12 | -  | 5430                          | 8220   | 8220   | 8220   | 8220   | 10850  | 10850  | -      | 60010                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 09 | 09 | 09 | 09 | 12 | 15 | -  | 5190                          | 7860   | 7860   | 7860   | 7860   | 10380  | 12980  | -      | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 09 | 09 | 09 | 12 | 12 | 12 | -  | 5200                          | 7870   | 7870   | 7870   | 10400  | 10400  | 10400  | -      | 60010                                 | 3840                            | 18.8                        | 17.0 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 09 | -  | 8570                          | 8570   | 8570   | 8570   | 8570   | 8570   | 8570   | -      | 59990                                 | 4190                            | 20.5                        | 18.5 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 12 | -  | 8200                          | 8200   | 8200   | 8200   | 8200   | 8200   | 10830  | -      | 60030                                 | 4010                            | 19.6                        | 17.7 |
| 09                       | 09 | 09 | 09 | 09 | 09 | 15 | -  | 7840                          | 7840   | 7840   | 7840   | 7840   | 7840   | 12950  | -      | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 09                       | 09 | 09 | 09 | 09 | 12 | 12 | -  | 7850                          | 7850   | 7850   | 7850   | 7850   | 10370  | 10370  | -      | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 7200                          | 7200   | 7200   | 7200   | 7200   | 7200   | 7200   | 7200   | 57600                                 | 5210                            | 25.5                        | 23.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 09 | 7050                          | 7050   | 7050   | 7050   | 7050   | 7050   | 7050   | 10670  | 60020                                 | 5120                            | 25.0                        | 22.6 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 12 | 6670                          | 6670   | 6670   | 6670   | 6670   | 6670   | 6670   | 13330  | 60020                                 | 4850                            | 23.7                        | 21.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 15 | 6320                          | 6320   | 6320   | 6320   | 6320   | 6320   | 6320   | 15790  | 60030                                 | 4610                            | 22.5                        | 20.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 18 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 6000   | 18000  | 60000                                 | 4390                            | 21.4                        | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 06 | 24 | 5450                          | 5450   | 5450   | 5450   | 5450   | 5450   | 5450   | 21820  | 59970                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 09 | 6650                          | 6650   | 6650   | 6650   | 6650   | 6650   | 10060  | 10060  | 60020                                 | 4850                            | 23.7                        | 21.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 12 | 6310                          | 6310   | 6310   | 6310   | 6310   | 6310   | 9550   | 12610  | 60020                                 | 4610                            | 22.5                        | 20.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 15 | 5990                          | 5990   | 5990   | 5990   | 5990   | 5990   | 9070   | 14980  | 59990                                 | 4390                            | 21.4                        | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 18 | 5710                          | 5710   | 5710   | 5710   | 5710   | 5710   | 8640   | 17120  | 60020                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 09 | 24 | 5210                          | 5210   | 5210   | 5210   | 5210   | 5210   | 7890   | 20840  | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 12 | 6000                          | 6000   | 6000   | 6000   | 6000   | 6000   | 12000  | 12000  | 60000                                 | 4390                            | 21.4                        | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 15 | 5710                          | 5710   | 5710   | 5710   | 5710   | 5710   | 11430  | 14290  | 59980                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 12 | 18 | 5450                          | 5450   | 5450   | 5450   | 5450   | 5450   | 10910  | 16360  | 59970                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 15 | 5450                          | 5450   | 5450   | 5450   | 5450   | 5450   | 13640  | 13640  | 59980                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 06 | 15 | 18 | 5220                          | 5220   | 5220   | 5220   | 5220   | 5220   | 13040  | 15650  | 60010                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 09 | 6290                          | 6290   | 6290   | 6290   | 6290   | 9520   | 9520   | 9520   | 60010                                 | 4610                            | 22.5                        | 20.4 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 12 | 5980                          | 5980   | 5980   | 5980   | 5980   | 9060   | 9060   | 11970  | 59990                                 | 4390                            | 21.4                        | 19.4 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 15 | 5700                          | 5700   | 5700   | 5700   | 5700   | 8630   | 8630   | 14250  | 60010                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 09 | 18 | 5440                          | 5440   | 5440   | 5440   | 5440   | 8240   | 8240   | 16320  | 60000                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 12 | 5710                          | 5710   | 5710   | 5710   | 5710   | 8640   | 11410  | 11410  | 60010                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 15 | 5450                          | 5450   | 5450   | 5450   | 5450   | 8250   | 10900  | 13620  | 60020                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 12 | 18 | 5210                          | 5210   | 5210   | 5210   | 5210   | 7890   | 10420  | 15630  | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 09 | 15 | 15 | 5210                          | 5210   | 5210   | 5210   | 5210   | 7890   | 13030  | 13030  | 60000                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 12 | 5450                          | 5450   | 5450   | 5450   | 5450   | 10910  | 10910  | 10910  | 59980                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 06 | 12 | 12 | 15 | 5220                          | 5220   | 5220   | 5220   | 5220   | 10430  | 10430  | 13040  | 60000                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 09 | 5970                          | 5970   | 5970   | 5970   | 9030   | 9030   | 9030   | 9030   | 60000                                 | 4390                            | 21.4                        | 19.4 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 12 | 5690                          | 5690   | 5690   | 5690   | 8620   | 8620   | 8620   | 11380  | 60000                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 15 | 5430                          | 5430   | 5430   | 5430   | 8230   | 8230   | 8230   | 13580  | 59990                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 09 | 18 | 5200                          | 5200   | 5200   | 5200   | 7870   | 7870   | 7870   | 15600  | 60010                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 12 | 12 | 5440                          | 5440   | 5440   | 5440   | 8240   | 8240   | 10880  | 10880  | 60000                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 06 | 09 | 09 | 12 | 15 | 5200                          | 5200   | 5200   | 5200   | 7880   | 7880   | 10410  | 13010  | 59980                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 06 | 09 | 12 | 12 | 12 | 5210                          | 5210   | 5210   | 5210   | 7890   | 10420  | 10420  | 10420  | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 09 | 5680                          | 5680   | 5680   | 8590   | 8590   | 8590   | 8590   | 8590   | 59990                                 | 4190                            | 20.5                        | 18.5 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 12 | 5430                          | 5430   | 5430   | 8220   | 8220   | 8220   | 8220   | 10850  | 60020                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 09 | 15 | 5190                          | 5190   | 5190   | 7860   | 7860   | 7860   | 7860   | 12980  | 59990                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 06 | 09 | 09 | 09 | 12 | 12 | 5200                          | 5200   | 5200   | 7870   | 7870   | 7870   | 10400  | 10400  | 60010                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 09 | 5410                          | 5410   | 8200   | 8200   | 8200   | 8200   | 8200   | 8200   | 60020                                 | 4010                            | 19.6                        | 17.7 |
| 06                       | 06 | 09 | 09 | 09 | 09 | 09 | 12 | 5190                          | 5190   | 7850   | 7850   | 7850   | 7850   | 7850   | 10370  | 60000                                 | 3840                            | 18.8                        | 17.0 |
| 06                       | 09 | 09 | 09 | 09 | 09 | 09 | 09 | 5170                          | 7830   | 7830   | 7830   | 7830   | 7830   | 7830   | 7830   | 59980                                 | 3840                            | 18.8                        | 17.0 |

## 5-2. CORRECTING COOLING AND HEATING CAPACITY

### 5-2-1. Correcting Changes in Air Conditions

(1) The performance curve charts (Figure 1-1, 1-2, 2-1, 2-2) show the change ratio of capacity and input (power consumption) according to the indoor and outdoor temperature condition when define the rated capacity (total capacity) and rated input under the standard condition in standard piping length (5 m) as "1.0".

• Standard conditions:

|                        |                                                   |
|------------------------|---------------------------------------------------|
| Rated cooling capacity | Indoor D.B. 80°F / W.B. 67°F<br>Outdoor D.B. 95°F |
| Rated heating capacity | Indoor D.B. 70°F<br>Outdoor D.B. 47°F / W.B. 43°F |

• Use the rated capacity and rated power values given in the characteristics table for each indoor unit.

• The capacity is the single value on the side of the outdoor unit;

The capacity on the sides of each indoor unit must be added to obtain the total capacity.

(2) The capacity of each indoor unit may be obtained by multiplying the total capacity obtained in (1) by the ratio between the individual capacity at the rated time and the total capacity at the rated time.

$$\text{Individual capacity under stated conditions} = \text{Total capacity under the stated conditions} \times \frac{\text{Individual capacity at the rated time}}{\text{Total capacity at the rated time}}$$

(3) Capacity correction factor curve

Fig. 1-1  
Cooling capacity

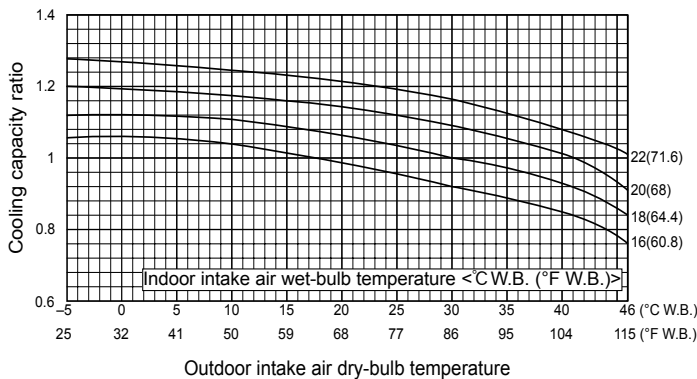


Fig. 1-2  
Cooling input

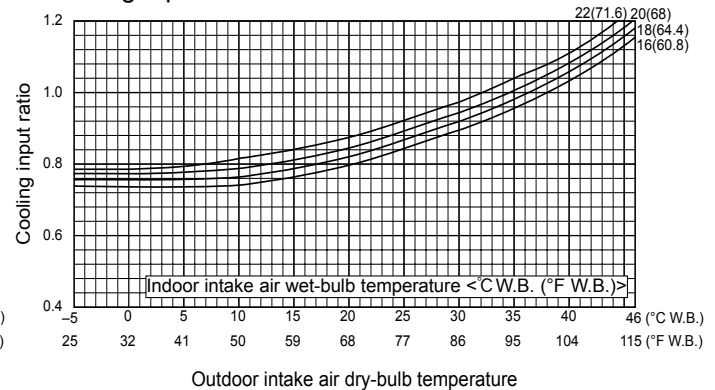


Fig. 2-1  
Heating capacity

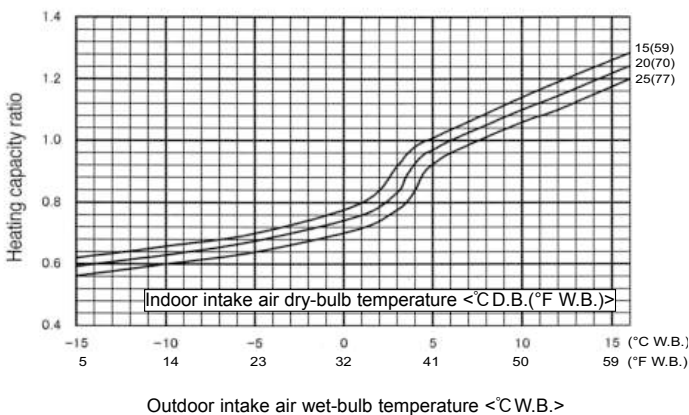
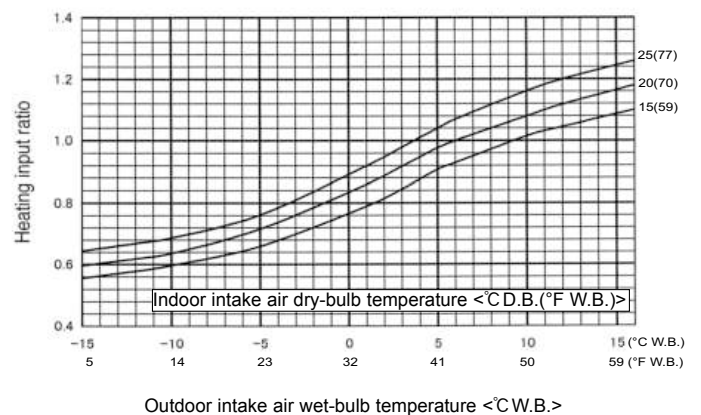


Fig. 2-2  
Heating input



**Note :** These diagrams show the case where the operation frequency of a compressor is fixed.

### 5-2-2. Correcting Capacity for Changes in the Length of Refrigerant Piping

To obtain the ratio (and the corrected piping length) of the outdoor units Max. capacity and the total in-use indoor capacity, first find the capacity ratio corresponding to the standard piping length from Fig.3, Fig.4 and then multiply by the capacity from Fig. 1-1, 1-2, Fig. 2-1, 2-2 to obtain the actual capacity.

#### (1) Capacity correction factor

Fig. 3 Cooling capacity correction curve

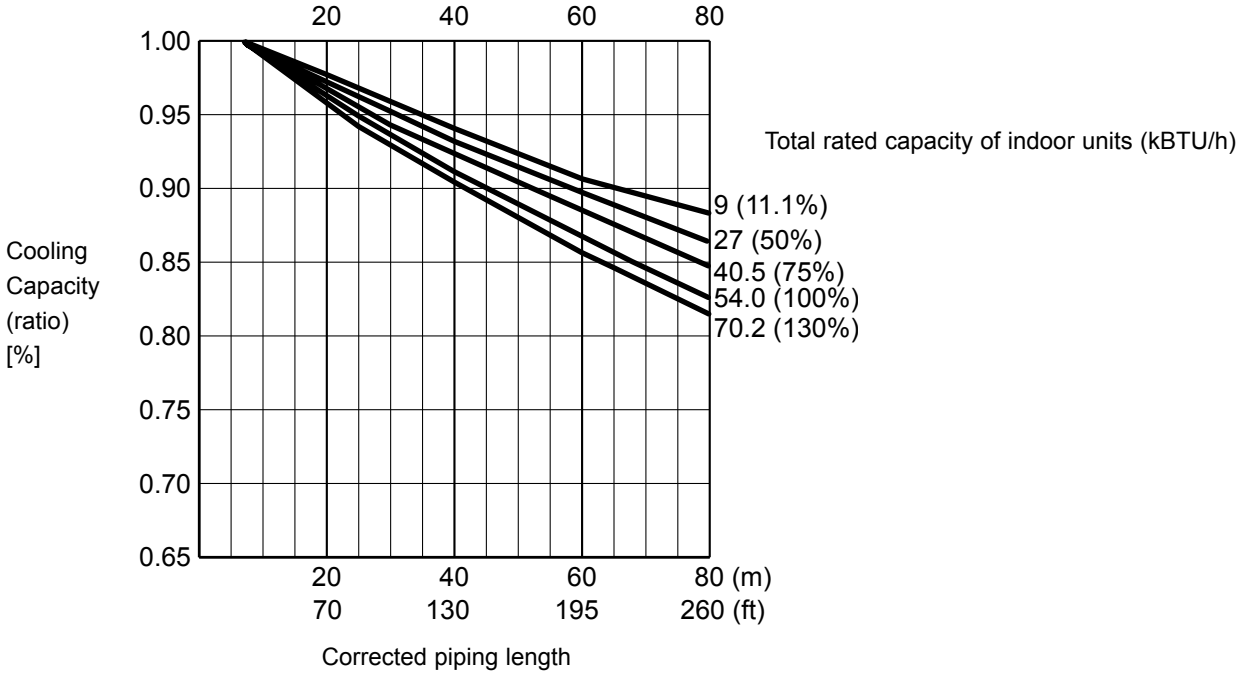
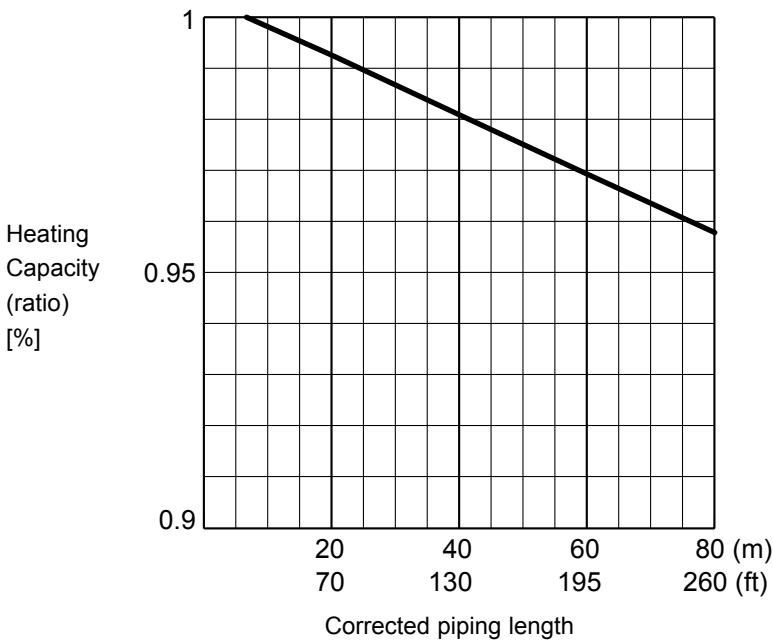


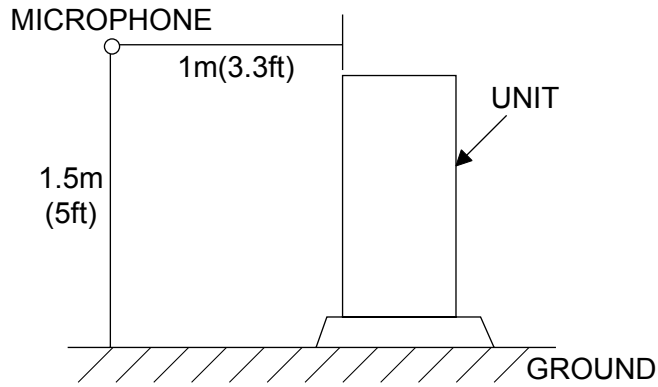
Fig. 4 Heating capacity correction curve



#### (2) Method for Obtaining the Corrected Piping Length

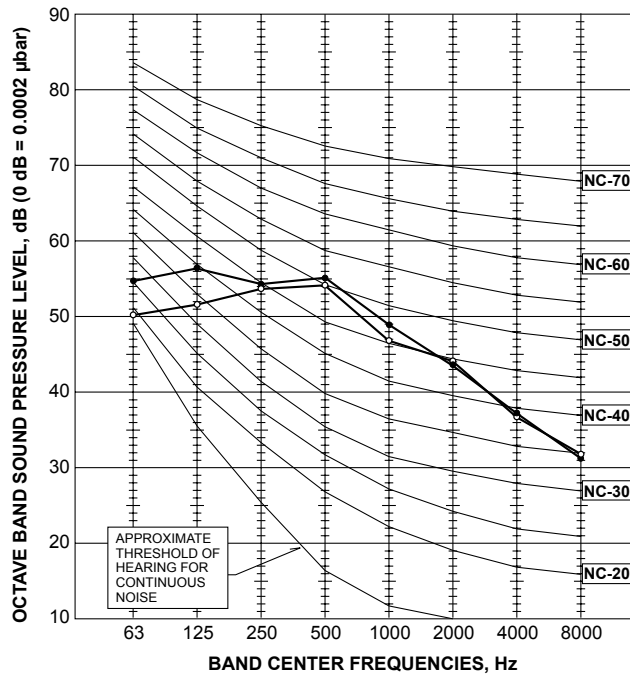
Corrected piping length = (Actual piping length between outdoor unit and the farthest indoor unit) + (0.30 × number of bends in the piping) (m), (ft)

### 5-3. NOISE CRITERION CURVES



**MXZ-8B48NA**  
**MXZ-8B48NAR1**

| MODE    | SPL(dB) | LINE |
|---------|---------|------|
| COOLING | 54      | ○—○  |
| HEATING | 55      | ●—●  |

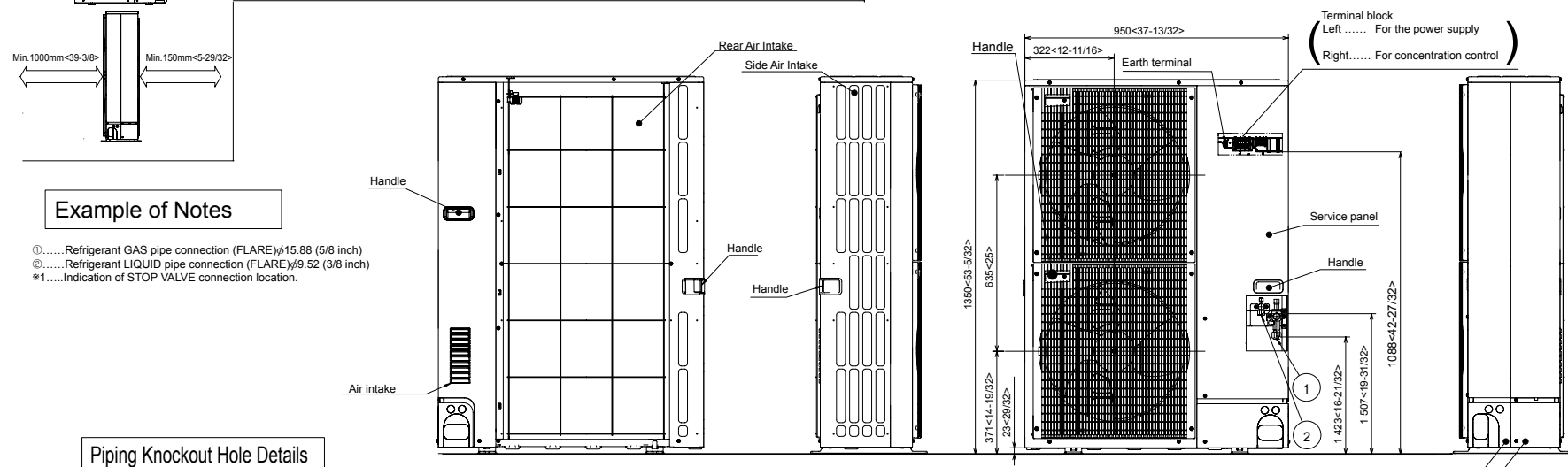
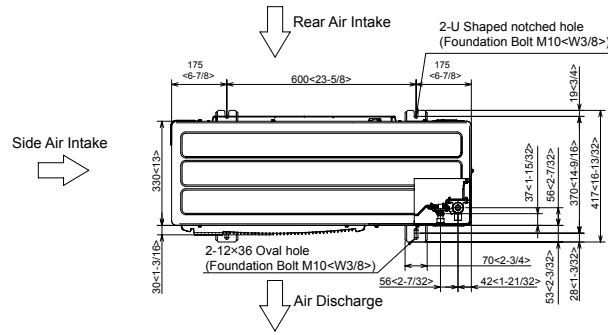
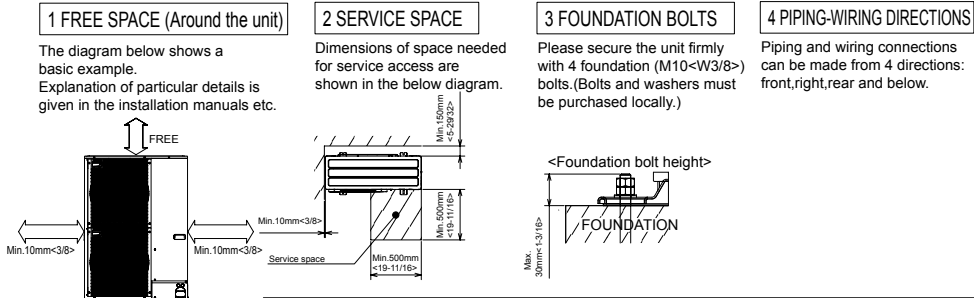


# 6-1. OUTDOOR UNIT

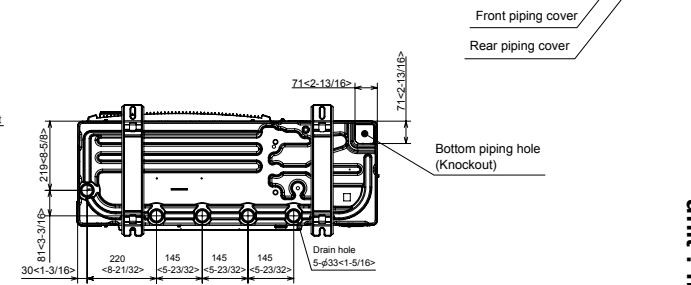
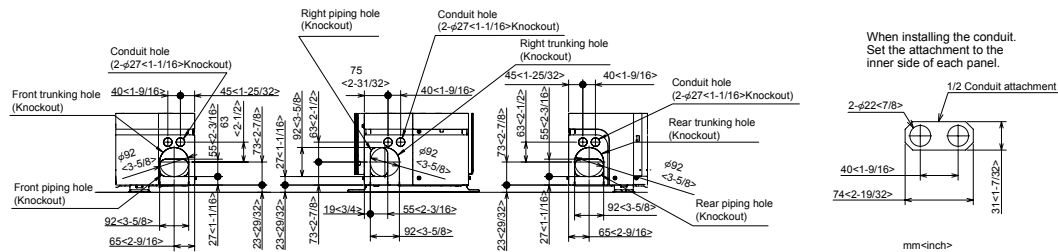
## MXZ-8B48NA

### MXZ-8B48NAR1

unit : mm (inch)



Piping Knockout Hole Details



## 6-2. BRANCH BOX UNIT PAC-AKA51BC

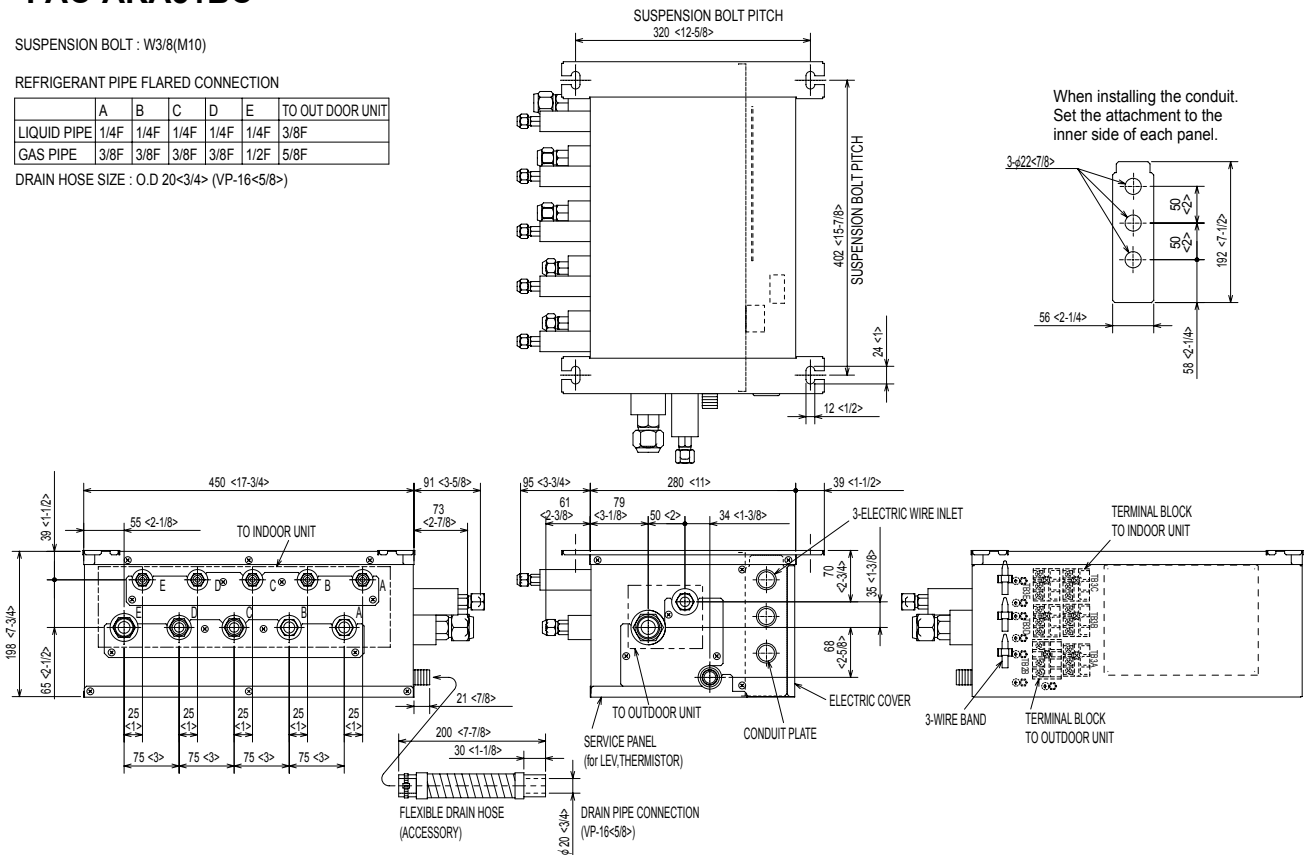
unit : mm (inch)

SUSPENSION BOLT : W3/8(M10)

REFRIGERANT PIPE FLARED CONNECTION

|             | A    | B    | C    | D    | E    | TO OUT DOOR UNIT |
|-------------|------|------|------|------|------|------------------|
| LIQUID PIPE | 1/4F | 1/4F | 1/4F | 1/4F | 1/4F | 3/8F             |
| GAS PIPE    | 3/8F | 3/8F | 3/8F | 3/8F | 1/2F | 5/8F             |

DRAIN HOSE SIZE : O.D 20<3/4> (VP-16<5/8>)



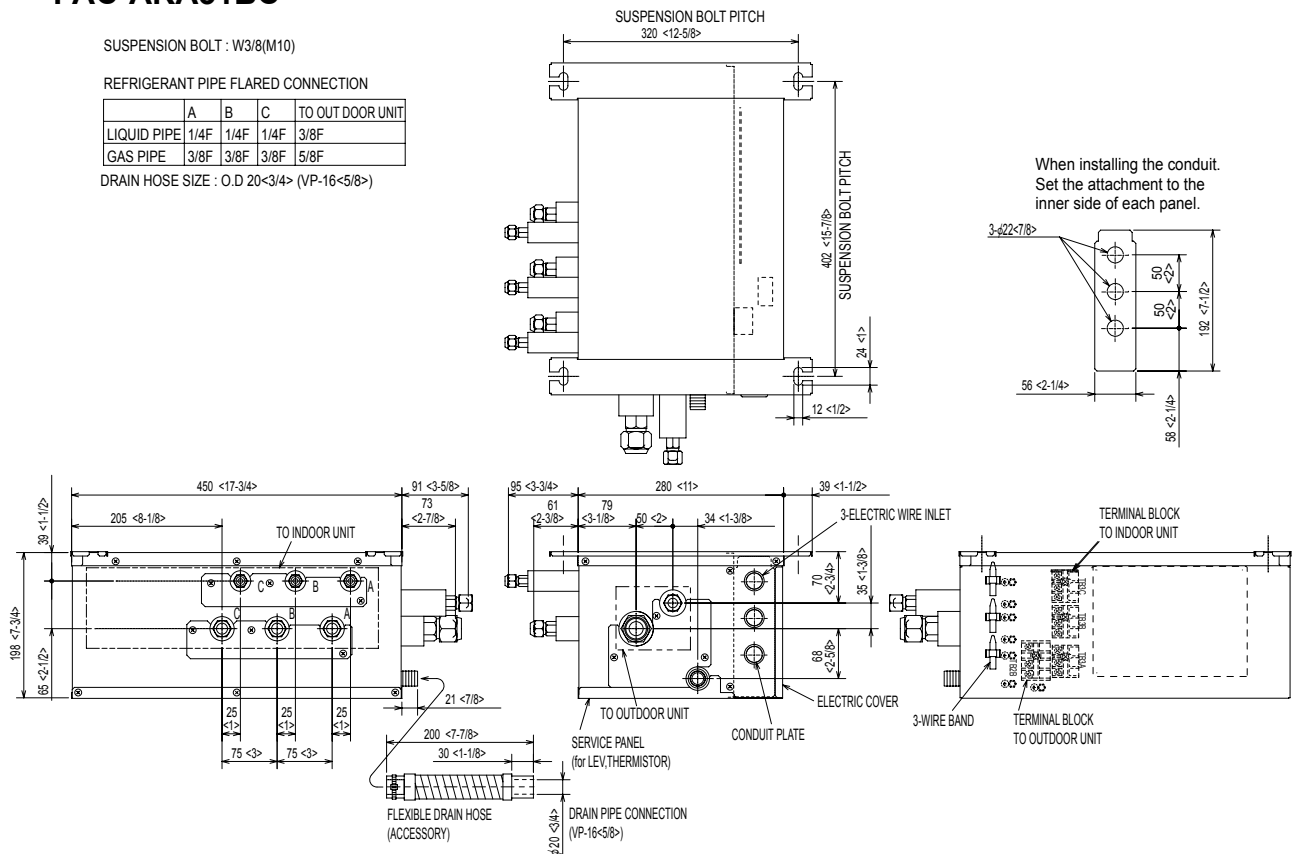
## PAC-AKA31BC

SUSPENSION BOLT : W3/8(M10)

REFRIGERANT PIPE FLARED CONNECTION

|             | A    | B    | C    | TO OUT DOOR UNIT |
|-------------|------|------|------|------------------|
| LIQUID PIPE | 1/4F | 1/4F | 1/4F | 3/8F             |
| GAS PIPE    | 3/8F | 3/8F | 3/8F | 5/8F             |

DRAIN HOSE SIZE : O.D 20<3/4> (VP-16<5/8>)



## 7-1. OUTDOOR UNIT

MXZ-8B48NA

MXZ-8B48NAR1

| SYMBOL   | NAME                               | SYMBOL      | NAME                                                 | SYMBOL    | NAME                                                   |
|----------|------------------------------------|-------------|------------------------------------------------------|-----------|--------------------------------------------------------|
| TB1      | Terminal Block (Power Supply)      | P.B.        | Power Circuit Board                                  | SW7       | Switch (Function Setup)                                |
| TB2      | Terminal Block (Branch Box)        | U/V/W       | Connection Terminal (U/V/W-Phase)                    | SW8       | Switch (Function Setup)                                |
| MC       | Motor for Compressor               | L1          | Connection Terminal (L1-Phase)                       | SW9       | Switch (Function Setup)                                |
| MF1, MF2 | Fan Motors                         | N1          | Connection Terminal (L2-Phase)                       | CN31      | Connector                                              |
| 21S4     | Solenoid Valve (Four-Way Valve)    | P2          | Connection Terminal                                  | CN51      | Connector (Connection for Option)                      |
| 63H      | High Pressure Switch               | N2          | Connection Terminal                                  | SS        | Connector (Connection for Option)                      |
| 63L      | Low Pressure Switch                | DCL1,DCL2   | Connection Terminal (Reactor)                        | CN3S      | Connector (Connection for Option)                      |
| 63HS     | High Pressure Sensor               | IGBT        | Power Module                                         | CN1T      | Connector (Connection for Option)                      |
| SV1,SV2  | Solenoid Valve (Bypass Valve )     | E1,E2,E3,E4 | Connection Terminal (Ground)                         | CNDM      | Connector <Connected for Option (Contact Input)>       |
| TH3      | Thermistor(Outdoor Pipe)           | C.B.        | Controller Circuit Board                             | LED1, 2   | Light Emitting Diode                                   |
| TH4      | Thermistor(Discharge/Compressor )  | SW1         | Switch (Forced Defrost, Defect History Record Reset) | LED3      | Light Emitting Diode (Operation Inspection Indicators) |
| TH6      | Thermistor(Outdoor 2 - Phase Pipe) | SW2         | Switch (Self Diagnosis Switch)                       | F1 ~ F4   | Fuse (T6.3A/250V)                                      |
| TH7      | Thermistor(Outdoor)                | SW4         | Switch (Test Operation )                             | X51 ~ X55 | Relay                                                  |
| DCL      | Reactor                            | SW5         | Switch (Function Switch)                             |           |                                                        |
| CB       | Main Smoothing Capacitor           | SW6         | Switch (Model Select)                                |           |                                                        |

## Operation / Inspection Display

LED3 on the controller board displays the operation and inspection status as follows.  
If LED3 does not light, it indicates that no power is supplied to the board:

| Details                  | Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power turned on          | — ↔ — (blinks)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Normal status            | Operation status display, such as C5, H7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Faulty status (blinking) | 63L connector (red) is open. F3<br>63H connector (yellow) is open. F5<br>2 connectors (63H/63L) are open. F9<br>Branch box/outdoor communication error (Signal receiving error)(Outdoor unit) E8<br>Indoor/branch box communication error (Signal receiving error)(Branch box)<br>Branch box/outdoor communication error (Transmitting error)(Outdoor unit) E9<br>Indoor/branch box communication error (Transmitting error)(Branch box)<br>· Mis-Wiring of indoor-branch box / branch box-outdoor unit connecting wire. EA<br>· Too many indoor units / branch box are in the system.<br>Mis-wiring of indoor-branch box/branch box-outdoor unit connecting wire (converse wiring or disconnection) Eb<br>Startup time over Ec<br>Communication error except for outdoor unit E0 - E7<br>Combination error, undefined error EE, EF<br>Serial communication error Ed<br>Discharge/Compressor temperature fault U2<br>Low-discharge superheating fault, Erroneous connection of refrigerant pipes or the connecting wires U7<br>High pressure fault (63H operates) U1<br>Low pressure fault (63L operates) UL<br>Abnormality of power modules U6<br>Compressor over current shutoff (Start up locked) UF<br>Current sensor fault (P.B.) UH<br>Compressor overcurrent shutoff fault UP<br>Discharge pipe/compressor thermistor (TH4) open or short-circuit U3<br>Outdoor unit thermistors (TH3, TH6, and TH7), 63HS, and branch box thermistors open or short-circuit U4<br>Radiator panel temperature fault U5<br>Abnormality in outdoor fan motor U8<br>Voltage fault, current sensor fault (P.B.) U9<br>Forced compressor stop PA<br>(Overlap malfunction of drain pump in indoor unit and linear expansion valve in branch box) |

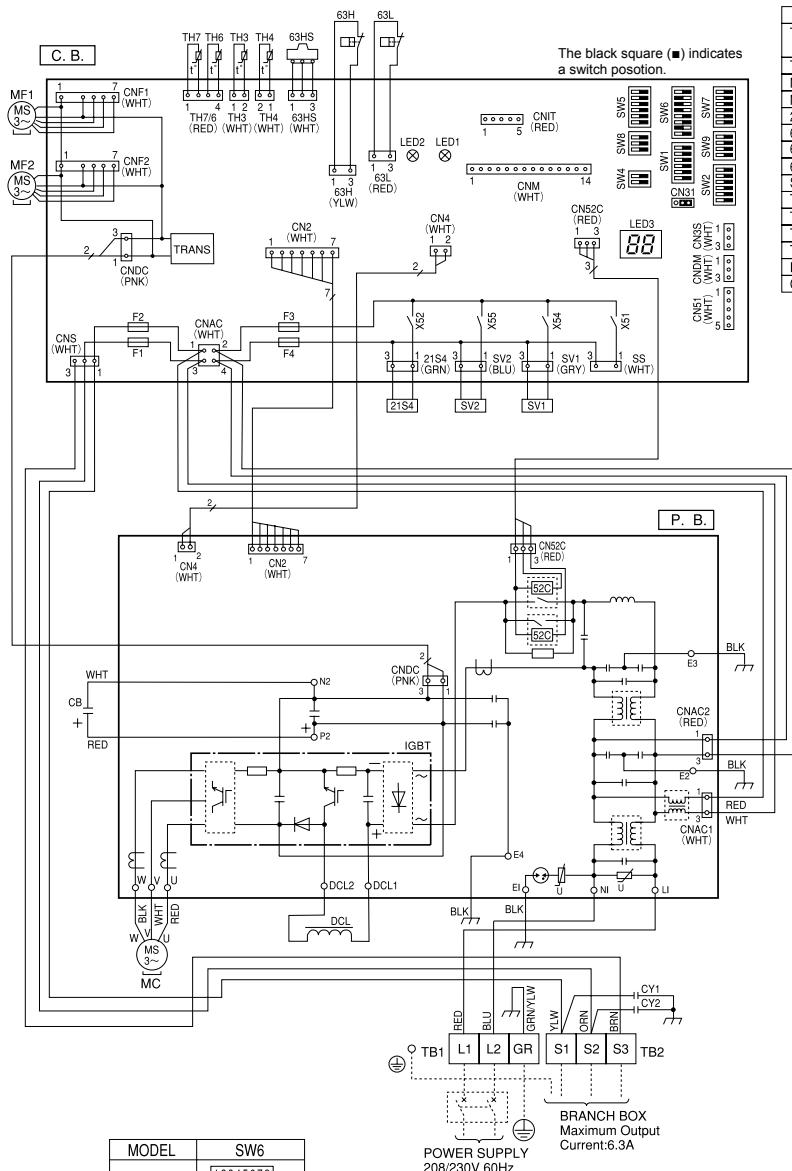
## Caution for electrical work

- Use copper supply wires.

## Cautions when Servicing

- ⚠️WARNING:When the main supply is turned off, the voltage [325 V] in the main capacitor will drop to 20 V in approx. 2 minutes (input voltage : 230 V). when servicing, make sure that LEDs on the outdoor circuit board go out, and then wait for at least 1 minute.
- Components other than the outdoor board may be faulty : Check and take corrective action, referring to the service manual. Do not replace the outdoor board without checking.

36



| MODEL      | SW6                                                |
|------------|----------------------------------------------------|
| MXZ-8B48NA | <div> <div>12345678</div> <div>ON OFF</div> </div> |

The black square (■) indicates a switch position.

## 7-2. BRANCH BOX : PAC-AKA51BC PAC-AKA31BC

Note : " PAC - AKA31 · 51BC " is only for R410A.

| SYMBOL  | NAME                                                                     |
|---------|--------------------------------------------------------------------------|
| B.C     | Branch box controller board                                              |
| F1      | Fuse 250V 6.3A                                                           |
| SW1     | Switch for service                                                       |
| CNM     | Connector                                                                |
| LED1~5  | Light emitting diode                                                     |
| LEV-A~E | Linear expansion valve                                                   |
| TH-A~E  | Thermistor<br>Pipe temp.detection / Gas<br>(32°F / 15kΩ , 77°F / 5.4kΩ ) |
| TB2B    | Terminal block / To outdoor unit                                         |
| TB3A    | Terminal block / To indoor unit - A                                      |
| TB3B    | Terminal block / To indoor unit - B                                      |
| TB3C    | Terminal block / To indoor unit - C                                      |
| TB3D    | Terminal block / To indoor unit - D                                      |
| TB3E    | Terminal block / To indoor unit - E                                      |

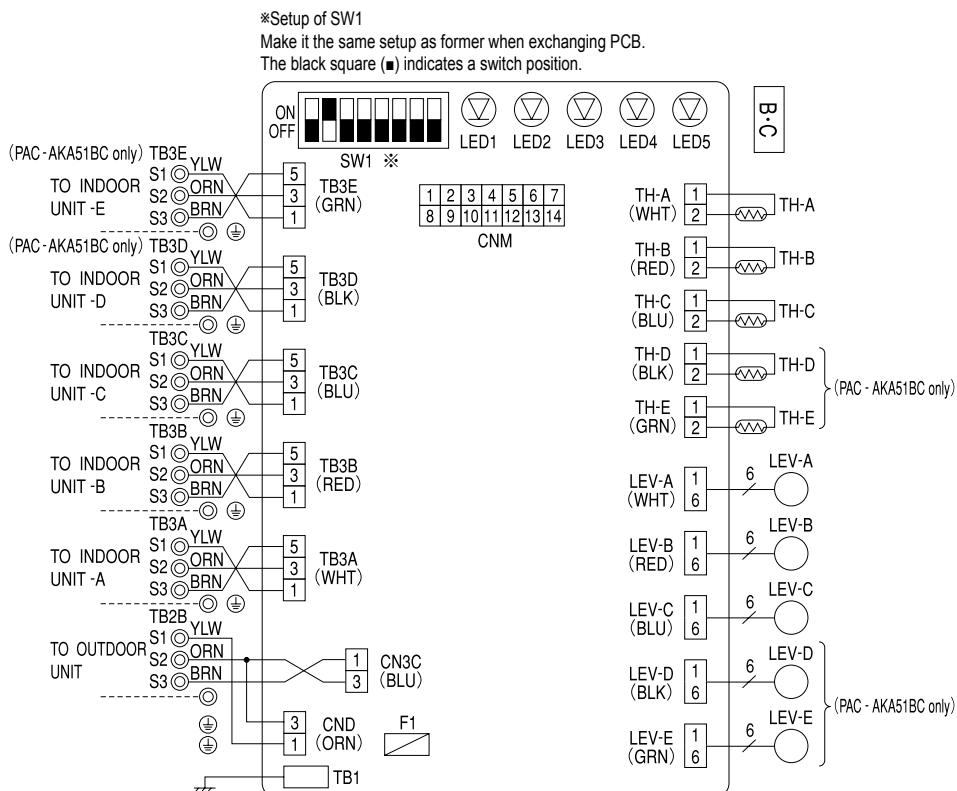
Note

- At servicing for outdoor unit, always follow the wiring diagram of Outdoor unit.
- Symbols used in wiring diagram below are,  
 ◎ : terminal block, □ : connector.  
 3. Caution for electrical work.  
 · Use copper supply wires.

〈Combination of indoor units〉

Enter the location of combined indoor units with model name in each blank below because it is necessary for service and maintenance.

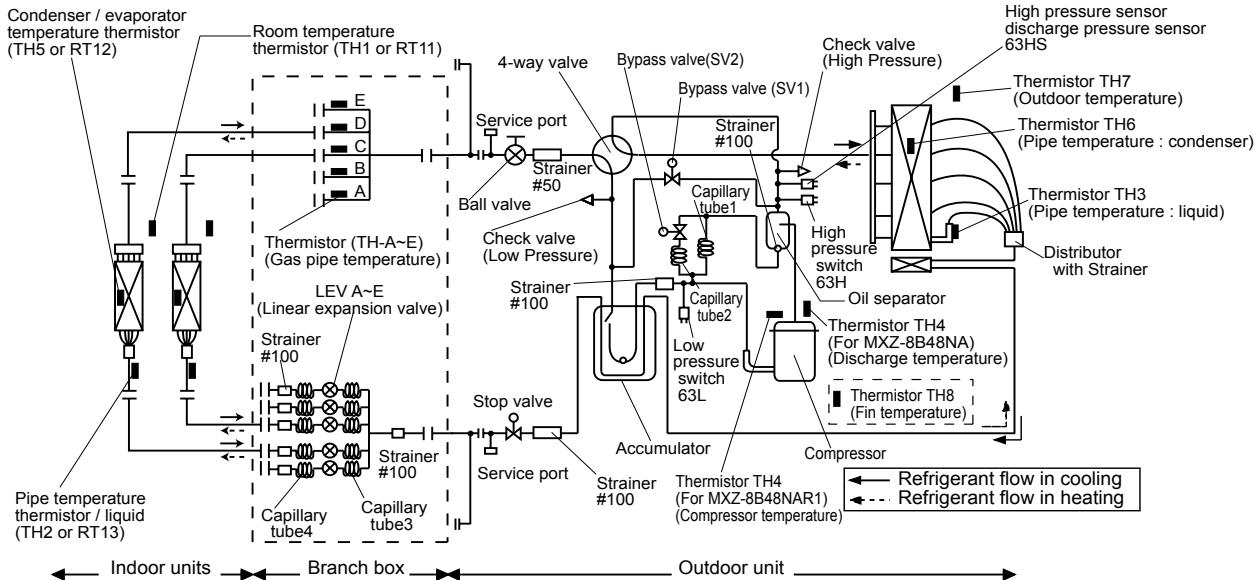
| Indoor unit - A | Indoor unit - B | Indoor unit - C | Indoor unit - D | Indoor unit - E |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 |                 |                 |                 |                 |



## REFRIGERANT SYSTEM DIAGRAM

MXZ-8B48NA

MXZ-8B48NAR1



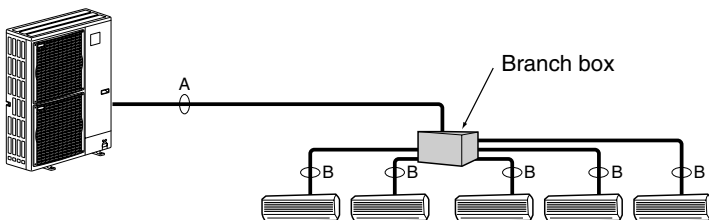
unit : mm (inch)

|              |                            | Capillary tube 1<br>(For return of oil<br>from oil separator)                                  | Capillary tube 2<br>(For SV2)                                                         | Capillary tube 3<br>ahead of LEV<br>(in cooling mode)                                                         | Capillary tube 4<br>behind LEV<br>(in cooling mode)                                                           |
|--------------|----------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Outdoor unit | MXZ-8B48NA<br>MXZ-8B48NAR1 | $\phi 2.5 \times \phi 0.8 \times L1000$<br>( $\phi 0.098 \times \phi 0.031 \times L(39-1/2)$ ) | $\phi 4 \times \phi 2.4 \times L250$<br>( $\phi 0.157 \times \phi 0.094 \times L10$ ) | —                                                                                                             | —                                                                                                             |
| Branch box   | PAC-AKA51BC                | —                                                                                              | —                                                                                     | $(\phi 4 \times \phi 2.4 \times L140) \times 5$<br>( $\phi 0.157 \times \phi 0.094 \times L(5-1/2)) \times 5$ | $(\phi 4 \times \phi 2.2 \times L130) \times 5$<br>( $\phi 0.157 \times \phi 0.087 \times L(5-1/8)) \times 5$ |
|              | PAC-AKA31BC                | —                                                                                              | —                                                                                     | $(\phi 4 \times \phi 2.4 \times L140) \times 3$<br>( $\phi 0.157 \times \phi 0.094 \times L(5-1/2)) \times 3$ | $(\phi 4 \times \phi 2.2 \times L130) \times 3$<br>( $\phi 0.157 \times \phi 0.087 \times L(5-1/8)) \times 3$ |

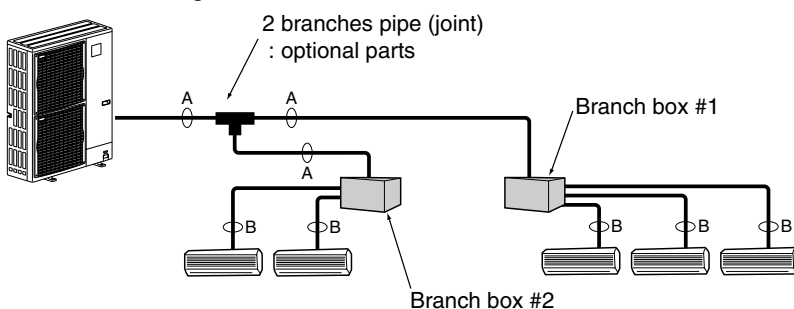
## Piping connection size

|             | A            | B                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Liquid (mm) | $\phi 9.52$  | The pipe connection size differs according to the type and capacity of indoor units. Match the piping connection size of branch box with indoor unit.<br>If the piping connection size of branch box does not match the piping connection size of indoor unit, use optional different-diameter (deformed) joints to the branch box side. (Connect deformed joint directly to the branch box side.) |
| Gas (mm)    | $\phi 15.88$ |                                                                                                                                                                                                                                                                                                                                                                                                    |

- In case of using 1-branch box  
Flare connection employed (No brazing)



- In case of using 2-branch boxes



- installation procedure (2 branch pipe (joint))  
Refer to the installation manuals of MSDD-50AR-E and MSDD-50BR-E.

### 9-1. TROUBLESHOOTING

#### <Error code display by self-diagnosis and actions to be taken for service (summary)>

Present and past error codes are logged and displayed on the wired remote controller and control board of outdoor unit. Actions to be taken for service, which depends on whether or not the trouble is reoccurring at service, are summarized in the table below. Check the contents below before investigating details.

| Unit conditions at service      | Error code    | Actions to be taken for service (summary)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The trouble has reoccurred.     | Displayed     | Judge what is wrong and take a corrective action according to "9-3. SELF-DIAGNOSIS ACTION TABLE".                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                 | Not displayed | Conduct trouble shooting and ascertain the cause of the trouble according to "9-4. TROUBLESHOOTING BY INFERIOR PHENOMENA".                                                                                                                                                                                                                                                                                                                                                                                                   |
| The trouble is not reoccurring. | Logged        | ①Consider the temporary defects such as the work of protection devices in the refrigerant circuit including compressor, poor connection of wiring, noise and etc. Re-check the symptom, and check the installation environment, refrigerant amount, weather when the trouble occurred, matters related to wiring and etc.<br>②Reset error code logs and restart the unit after finishing service.<br>③There is no abnormality concerning of parts such as electrical component, controller board, remote controller and etc. |
|                                 | Not logged    | ①Re-check the abnormal symptom.<br>②Conduct trouble shooting and ascertain the cause of the trouble according to "9-4. TROUBLESHOOTING BY INFERIOR PHENOMENA".<br>③Continue to operate unit for the time being if the cause is not ascertained.<br>④There is no abnormality concerning of parts such as electrical component, controller board, remote controller and etc.                                                                                                                                                   |

## 9-2. CHECK POINTS FOR TEST RUN

### 9-2-1. Before test run

- Turn on the main power switch more than 12 hours before starting operation. Starting operation just after turning on the power switch can severely damage the internal parts. Keep the main power switch turned on during the operation season.
- After completing installation and the wiring and piping of the indoor and outdoor units, check for refrigerant leakage, looseness in the power supply or control wiring, wrong polarity, and no disconnection of one phase in the supply.
- Use a 500-volt M-ohm tester to check that the resistance between the power supply terminals and ground is at least 1 MΩ.
- Do not carry out this test on the control wiring (low voltage circuit) terminals.

**⚠ Warning: Do not use the air conditioner if the insulation resistance is less than 1 MΩ.**

#### Insulation resistance

After installation or after the power source to the unit has been cut for an extended period, the insulation resistance will drop below 1 MΩ due to refrigerant accumulating in the compressor. This is not a malfunction. Perform the following procedures.

1. Remove the wires from the compressor and measure the insulation resistance of the compressor.
2. If the insulation resistance is below 1 MΩ, the compressor is faulty or the resistance dropped due to the accumulation of refrigerant in the compressor.
3. After connecting the wires to the compressor, the compressor will start to warm up after power is supplied. After supplying power for the times indicated below, measure the insulation resistance again.
  - The insulation resistance drops due to accumulation of refrigerant in the compressor. The resistance will rise above 1MΩ after the compressor is warmed up for 4 hours. (The time necessary to warm up the compressor varies according to atmospheric conditions and refrigerant accumulation.)
  - To operate the compressor with refrigerant accumulated in the compressor, the compressor must be warmed up at least 12 hours to prevent breakdown.
4. If the insulation resistance rises above 1 MΩ, the compressor is not faulty.

#### ⚠ Caution:

- **The compressor will not operate unless the power supply phase connection is correct.**
- **Turn on the power at least 12 hours before starting operation.**  
Starting operation immediately after turning on the main power switch can result in severe damage to internal parts. Keep the power switch turned on during the operational season.
- **The followings must be checked as well.**
  - The outdoor unit is not faulty. LED on the control board of the outdoor unit flashes when the outdoor unit is faulty.
  - Both the gas and liquid stop valves are completely open.

### 9-2-2. Test run

(1) Using remote controller

Refer to the indoor unit installation manual.

- Be sure to perform the test run individually for each indoor unit. Make sure each indoor unit operates properly following the installation manual attached to the unit.  
If you perform the test run for indoor units connected all at once, faulty connections of the refrigerant pipes and cables cannot be detected.
- \* The compressor operation is not available for 3 minutes at least after the power is supplied.
- The compressor can emit noise just after turn on the power supply or in case of low outside air temperature.

#### About the restart protective mechanism

Once the compressor stops, the restart preventive device operates so the compressor will not operate for 3 minutes to protect the air conditioner.

## (2) Using SW4 in outdoor unit

**In case of the test run from outdoor unit, all indoor units operate. Therefore, you cannot detect any erroneous connection of refrigerant pipes and the connecting wires. If it aims at detection of any erroneous connection, be sure to carry out the test run from remote controller with reference to "(1) Using remote controller."**

|       |     |                   |
|-------|-----|-------------------|
| SW4-1 | ON  | Cooling operation |
| SW4-2 | OFF |                   |
| SW4-1 | ON  | Heating operation |
| SW4-2 | ON  |                   |

※ After performing the test run, set SW4-1 to OFF.

- A few seconds after the compressor starts, a clanging noise may be heard from the inside of the outdoor unit. The noise is coming from the check valve due to the small difference in pressure in the pipes. The unit is not faulty.

**The test run operation mode cannot be changed by DIP switch SW4-2 during the test run. To change the test run operation mode during the test run, stop the test run by DIP switch SW4-1. After changing the test run operation mode, resume the test run by switch SW4-1.**

**When a test run is started by "Using SW4 in outdoor unit", even if it carries out stop instructions by remote controller, outdoor unit does not stop. A test run is not ended. In this case, please set SW4 in outdoor unit to off.**

- After power is supplied or after an operation stops for a while, a small clicking noise may be heard from the inside of the branch box. The electronic expansion valve is opening and closing. The unit is not faulty.

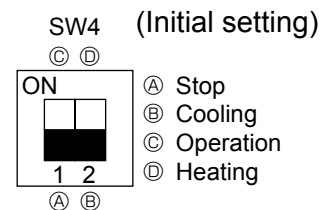
NOTE: Be sure to wait at least 3 minutes after turning on the power supply before setting SW4-1 and SW4-2.

If the DIP switches are set before 3 minutes has elapsed, the test run may not start.

### 9-2-3. Test run by outdoor unit SW4

The setting of test run (ON/OFF) and its operation mode (cooling/heating) can be set by SW4 on the controller board of outdoor unit.

- ① Set operation mode (cooling or heating) by SW4-2.
- ② Start test run by setting SW4-1 to ON ( ⬆ ) with the indicated operation mode of SW4-2.
- ③ Finish test run by setting SW4-1 to OFF ( ⬇ ).
  - Operation mode cannot be changed by SW4-2 during test run.  
Stop test run to change operation mode by SW4-1, and restart test run by SW4-1 after the mode is changed.
  - Test run automatically stops 2 hours later by 2-hour OFF timer function.
  - Test run can be performed by the remote controller.
  - The remote controller display of test run by outdoor unit is the same as that of test run by remote controller.
  - If test run is set with the outdoor unit, the test run is performed for all indoor units.
  - The remote controller operation becomes unavailable once the test run is set with the outdoor unit.



During the test run set with the outdoor unit, operation on/off or operation mode change cannot be performed by the remote controller, and the operation relating to the test run which is made with the outdoor unit will be prior to any other commands from the remote controller. Set the SW4-1 to OFF ( ⬇ ) to finish test run.

Emergency operation is not available for this model.

### 9-3. SELF-DIAGNOSIS ACTION TABLE

<Abnormalities detected when the power is turned on> (Note 1) Refer to indoor unit section for code P and code E.

| Error Code   | Abnormal point and detection method                                                                                                                                                        | Case                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| None         | —                                                                                                                                                                                          | ① No voltage is supplied to terminal block (TB1) of outdoor unit.<br>a) Power supply breaker is turned off.<br>b) Contact failure or disconnection of power supply terminal<br>c) Open phase (L1 or L2 phase)<br>② Electric power is not charged to power supply terminal of outdoor power circuit board.<br>a) Contact failure of power supply terminal<br>b) Open phase on the outdoor power circuit board<br>Disconnection of terminal LI or NI.<br>③ Electric power is not supplied to outdoor controller circuit board.<br>a) Disconnection of connector (CNDC)<br>④ Disconnection of reactor (DCL)<br>⑤ Defective outdoor power circuit board<br>⑥ Defective outdoor controller circuit board | ① Check following items.<br>a) Power supply breaker<br>b) Connection of power supply terminal block.<br>(TB1)<br>c) Connection of power supply terminal block.<br>(TB1)<br>② Check following items.<br>a) Connection of power supply terminal block.<br>(TB1)<br>b) Connection of terminal on outdoor power circuit board.<br>Disconnection of terminal LI or NI.<br>Refer to 9-7.<br>③ Check connection of the connector (CNDC) on the outdoor controller circuit board.<br>Check connection of the connector (CNDC) on the outdoor power circuit board.<br>Refer to 9-7.<br>④ Check connection of reactor. (DCL)<br>Check connection of "DCL1" and "DCL2" on the power circuit board.<br>⑤ Replace outdoor power circuit board.<br>⑥ Replace controller board (When items above are checked but the units cannot be repaired.) |
| F3<br>(5202) | <b>63L connector open</b><br>Abnormal if 63L connector circuit is open for 3 minutes continuously after power supply<br>63L: Low-pressure switch                                           | ① Disconnection or contact failure of 63L connector on outdoor controller circuit board<br>② Disconnection or contact failure of 63L<br>③ 63L is operating due to refrigerant leakage or defective parts.<br>④ Defective outdoor controller circuit board                                                                                                                                                                                                                                                                                                                                                                                                                                           | ① Check connection of 63L connector on outdoor controller circuit board.<br>Refer to 9-7.<br>② Check the 63L side of connecting wire.<br>③ Check refrigerant pressure.<br>Charge additional refrigerant.<br>Check continuity with a tester.<br>Replace the parts if the parts are defective.<br>④ Replace outdoor controller circuit board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| F5<br>(5201) | <b>63H connector open</b><br>Abnormal if 63H connector circuit is open for 3 minutes continuously after power supply<br>63H: High-pressure switch                                          | ① Disconnection or contact failure of 63H connector on outdoor controller circuit board<br>② Disconnection or contact failure of 63H<br>③ 63H is operating due to defective parts.<br>④ Defective outdoor controller circuit board                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ① Check connection of 63H connector on outdoor controller circuit board.<br>Refer to 9-7.<br>② Check the 63H side of connecting wire.<br>③ Check continuity with a tester.<br>Replace the parts if the parts are defective.<br>④ Replace outdoor controller circuit board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| F9<br>(4119) | <b>2 connector open</b><br>Abnormal if both 63H and 63L connector circuits are open for 3 minutes continuously after power supply<br>63H: High-pressure switch<br>63L: Low-pressure switch | ① Disconnection or contact failure of connector (63H,63L) on outdoor controller circuit board.<br>② Disconnection or contact failure of 63H, 63L<br>③ 63H and 63L are operating due to defective parts.<br>④ Defective outdoor controller board                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ① Check connection of connector (63H,63L) on outdoor controller circuit board.<br>Refer to 9-7.<br>② Check the 63H and 63L side of connecting wire.<br>③ Check continuity with a tester.<br>Replace the parts if the parts are defective.<br>④ Replace outdoor controller circuit board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Error Code   | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                            | Case                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EA<br>(6844) | <b>Indoor-branch box/branch box-outdoor unit connector miswiring, excessive number of units</b><br>1. Outdoor/branch box controller circuit board can automatically check the number of connected indoor units. Abnormal if the number cannot be checked automatically due to miswiring of indoor-branch box/branch box-outdoor unit connecting wire and etc. after power is turned on for 4 minutes.                          | ① Contact failure or miswiring of indoor/outdoor unit connecting wire<br>② Diameter or length of indoor-branch box/branch box-outdoor unit connecting wire is out of specified capacity. There are 9 or more indoor units in the system. There are 3 or more branch boxes in the system.<br>③ Defective transmitting receiving circuit of outdoor/branch box controller circuit board<br>④ Defective transmitting receiving circuit of branch box/indoor controller board<br>⑤ Defective branch box/indoor power board<br>⑥ Noise has entered into power supply or indoor-branch box/branch box-outdoor unit connecting wire. | ① Check disconnection or looseness or polarity of indoor-branch box/branch box-outdoor unit connecting wire of indoor and outdoor units.<br>② Check diameter and length of indoor-branch box/branch box-outdoor unit connecting wire. Total wiring length: 55m (outdoor-branch box) (including wiring connecting each branch box unit and between branch box and outdoor unit)<br>Also check if the connection order of flat cable is S1, S2, S3.<br>If the error "EA" is detected, check the number of the indoor units and the branch box in the system.<br>③~⑤ Turn the power off once, and on again to check.<br>Replace outdoor controller circuit board, branch box controller board, indoor controller board or indoor power board if abnormality occurs again.<br>⑥ Check transmission path, and remove the cause. |
| Eb<br>(6845) | <b>Miswiring of indoor-branch box/branch box-outdoor unit connecting wire (converse wiring or disconnection)</b><br>Outdoor/branch box controller circuit board can automatically set the unit number of indoor units. Abnormal if the indoor unit number can not be set within 4 minutes after power on because of miswiring (converse wiring or disconnection) of indoor-branch box/branch box-outdoor unit connecting wire. | ① Contact failure or miswiring of indoor-branch box/branch box-outdoor unit connecting wire<br>② Diameter or length of indoor-branch box/branch box-outdoor unit connecting wire is out of specified capacity.<br>④ Defective transmitting receiving circuit of outdoor/branch box controller circuit board<br>⑤ Defective transmitting receiving circuit of indoor/branch box controller board<br>⑥ Defective indoor/branch box power board<br>⑦ Noise has entered into power supply or indoor-branch box/branch box-outdoor unit connecting wire.                                                                           | * The descriptions above, ①-⑥, are for EA, Eb and EC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| EC<br>(6846) | <b>Start-up time over</b><br>The unit cannot finish start-up process within 4 minutes after power on.                                                                                                                                                                                                                                                                                                                          | ① Contact failure of indoor-branch box/branch box-outdoor unit connecting wire<br>② Diameter or length of indoor-branch box/branch box-outdoor unit connecting wire is out of specified capacity.<br>③ Noise has entered into power supply or indoor-branch box/branch box-outdoor unit connecting wire.                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

<Abnormalities detected while unit is operating>

| Error Code   | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Case                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U1<br>(1302) | <p><b>(1) High-pressure switch (63H) operated</b><br/>Abnormal if high-pressure switch 63H operated (※) during compressor operation.<br/>※ 4.15 MPa [602PSIG]</p> <p>63H: High-pressure switch</p> <p><b>(2) High pressure</b><br/>(High - pressure sensor 63HS detect)</p> <p>① When high-pressure sensor detects 4.31MPa [625PSIG] or more (or over 4.15MPa [602PSIG] for 3 minutes) (1st detection) during the compressor operation, the compressor stops and restarts operation in 3 minutes.</p> <p>② When the sensor detects 4.31MPa [625PSIG] or more (or over 4.15MPa [602PSIG] for 3 minutes) again (2nd detection) within 30 minutes since the compressor has stopped, the compressor stops again and restarts operation in 3 minutes.</p> <p>③ When the sensor detects 4.31MPa [625PSIG] or more (or over 4.15MPa [602PSIG] for 3 minutes) again (3rd detection) within 30 minutes since the compressor has stopped, the compressor stops again and restarts operation in 3 minutes.</p> <p>④ When the sensor detects 4.31MPa [625PSIG] or more (or over 4.15MPa [602PSIG] for 3 minutes) again (4th detection) within 30 minutes after 3rd compressor stops, it stops abnormally. In this time &lt;U1&gt; is displayed.</p> <p>⑤ When the sensor detects 4.31MPa [625PSIG] or more (or over 4.15MPa [602PSIG] for 3 minutes) after 30 minutes since the compressor has stopped (1st or 2nd or 3rd time), it becomes the 1st detection or the same performance as above-mentioned ①.</p> <p>⑥ It is being delay for abnormal stop during 30 minutes since the compressor has stopped. In this time, check delay code &lt;U1&gt; will be displayed.</p> | <p>1) Short cycle of indoor unit<br/>2) Clogged filter of indoor unit<br/>3) Decreased airflow caused by dirt of indoor fan<br/>4) Dirt of indoor heat exchanger<br/>5) Locked indoor fan motor<br/>6) Malfunction of indoor fan motor<br/>7) Defective operation of stop valve (Not fully opened)<br/>8) Clogged or broken pipe<br/>9) Locked outdoor fan motor<br/>10) Malfunction of outdoor fan motor<br/>11) Short cycle of outdoor unit<br/>12) Dirt of outdoor heat exchanger<br/>13) Decreased airflow caused by defective inspection of outside temperature thermistor (It detects lower temperature than actual temperature.)<br/>14) Disconnection or contact failure of connector (63H) on outdoor controller board<br/>15) Disconnection or contact failure of 63H connection<br/>16) Defective outdoor controller board<br/>17) Defective action of linear expansion valve<br/>18) Malfunction of fan driving circuit<br/>19) Solenoid valve (SV1) performance failure (High-pressure cannot be controlled by SV1)<br/>20) High-pressure sensor defective<br/>21) High-pressure sensor input circuit defective in outdoor controller board</p> | <p>1)~6) Check indoor unit and repair defect.</p> <p>7) Check if stop valve is fully open.</p> <p>8) Check piping and repair defect.<br/>9)~12) Check outdoor unit and repair defect.</p> <p>13) Check the detected temperature of outside temperature thermistor on LED display.</p> <p>14)~16) Turn the power off and check F5 is displayed when the power is turned on again.<br/>When F5 is displayed, refer to "Judgment and action" for F5.</p> <p>17) Check linear expansion valve.<br/>Refer to 9-6.<br/>18) Replace outdoor controller board.<br/>19) Check the solenoid valve performance.</p> <p>20) Check the high-pressure sensor.<br/>21) Check the high-pressure sensor.</p> |

| Error Code   | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Case                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U2<br>(1102) | <b>(1) High discharging/compressor temperature</b><br>Abnormal if discharge/compressor temperature thermistor (TH4) exceeds 125°C [257°F] or 110°C [230°F] continuously for 5 minutes.<br>Abnormal if pressure detected by high pressure sensor and converted to saturation temperature exceeds 40°C [104°F] during defrosting and discharge/compressor temperature thermistor (TH4) exceeds 110°C [230°F].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ① Overheated compressor operation caused by shortage of refrigerant<br>② Defective operation of stop valve<br>③ Defective thermistor<br>④ Defective outdoor controller board<br>⑤ Defective action of linear expansion valve                                                                                                                                                                                                                                                                                                                                                                                                   | ① Check intake superheat.<br>Check leakage of refrigerant.<br>Charge additional refrigerant.<br>② Check if stop valve is fully open.<br>③④ Turn the power off and check if U3 is displayed when the power is turned on again.<br>When U3 is displayed, refer to "Judgment and action" for U3.<br>⑤ Check linear expansion valve.<br>Refer to 9-6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|              | <b>(2) Refrigerant shortage abnormality</b><br>① When the conditions of below detecting mode I or II are satisfied (1st detection) during the compressor operation, the compressor stops and restarts operation in 3 minutes.<br><Detecting mode I ><br>When the below conditions are satisfied completely.<br>1. Compressor is operating in HEAT mode.<br>2. Discharge superheat is 70°C [158°F] or more.<br>3. Difference of outer temperature thermistor (TH7) and outdoor piping temp. thermistor (TH3) applies to the formula of (TH7-TH3)<5 degC [9 degF].<br>4. High-pressure pressure sensor is below about 2.04MPa [296PSIG].<br><Detecting mode II ><br>When the below conditions are satisfied completely.<br>1. Compressor is operating.<br>2. When cooling, discharge superheat is 80°C [144°F] or more.<br>When heating, discharge superheat is 90°C [162°F] or more.<br>High pressure sensor is below about 2.32MPa [337PSIG].<br>② When the conditions of detecting mode I and II are satisfied again (2nd detection) within 30 minutes since the compressor has stopped, it stops abnormally. In this time, <U2> is displayed.<br>③ When the conditions of detecting mode I and II are satisfied again after 30 minutes since the compressor has stopped (1st time), it becomes the 1st detection and same performance as above ①.<br>④ It is being delay for abnormal stop during 30 minutes since the compressor has stopped. In this time, check delay code <U2> will be displayed. | ① Gas leakage, Gas shortage<br>② When heating operation, scant refrigerant operation (When heating, airflow or thermo OFF are mixed-operation, it causes a refrigerant shortage operation.)<br>③ Ball valve performance failure (Not fully opened.)<br>④ Error detection of discharge super heat<br>1) High-pressure sensor defective<br>2) Discharge temperature thermistor defective<br>3) Thermistor input circuit defective and high-pressure sensor defective in outdoor controller board<br>⑤ Error detection of TH7/TH3<br>1) Thermistor defective<br>2) Thermistor input circuit defective in outdoor controller board | ① Check the refrigerant amount.<br>② Check the operation condition and refrigerant amount.<br>③ Check the ball valve is fully opened.<br>④ 1) Check the ball valve is fully opened.<br>2) Check the resistance of discharge temperature thermistor.<br>3) According to "Monitoring function for outdoor unit", set the SW2 and check the high-pressure sensor level.<br>According to "Monitoring function for outdoor unit", set the SW2 and check the discharge temp. thermistor level.<br>When the high-pressure sensor and discharge temp. thermistor are normal, if the above mentioned detecting pressure level and temp. are big different from the actual pressure and temp., replace the outdoor controller board.<br>⑤ 1) Check the resistance of thermistor.<br>2) According to "Monitoring function for outdoor unit", set the SW2 and check the outdoor pipe temp. thermistor level.<br>3) According to "Monitoring function for outdoor unit", set the SW2 and check the outer temp. thermistor level. |
| U3<br>(5104) | <b>Open/short circuit of discharge/compressor temperature thermistor (TH4)</b><br>Abnormal if open (3°C [37°F] or less) or short (217°C [423°F] or more) is detected during compressor operation.<br>(Detection is inoperative for 10 minutes of compressor starting process and for 10 minutes after and during defrosting.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ① Disconnection or contact failure of connector (TH4) on the outdoor controller circuit board<br>② Defective thermistor<br>③ Defective outdoor controller circuit board                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ① Check connection of connector (TH4) on the outdoor controller circuit board.<br>Check breaking of the lead wire for thermistor (TH4). Refer to 9-6.<br>② Check resistance value of thermistor (TH4) or temperature by microprocessor.<br>(Thermistor/TH4: Refer to 9-6.)<br>(SW2 on A-Control Service Tool: Refer to 9-8.)<br>③ Replace outdoor controller board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Error Code                                                                           | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Case                                                                                                                                                                                                                                                                         | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|-----------------|------|-----|---------------------------|--------------------------|-----------------------|-----|----------------------|--------------------------|-----------------------|-----|--------------------------------|--------------------------|------------------------|-----------------|--|--|--|----------------------|------------------------------------------------|--------------------------|-----------------------|--|--|
| U4<br>(TH3:5105)<br>(TH7:5106)<br>(TH8:5110)<br>(63HS:5201)<br>(TH-A~E)<br>( :5131 ) | <b>(1) Open/short circuit in the outdoor unit thermistors (TH3, TH7, and TH8) and branch box's thermistors(TH-A~E)</b><br>Abnormal if open or short circuit is detected while the compressor is operating.<br>Open detection of thermistors TH3 is inoperative for 10 seconds to 10 minutes after compressor starting and 10 minutes after recovery from defrosting and during defrosting.<br>*Check which unit has abnormality in its thermistor by switching the mode of SW2. (Refer to 9-8.)<br>Open/short circuit in the branch box thermistor. (TH-A~TH-E)                                                                                                                                                                                                      | ①One or more connectors on outdoor controller circuit board (TH3, TH7 and TH8) and branch box controller board (TH-A~E) have contact failure or disconnection.<br>②Defective thermistor<br><br>③Outdoor controller circuit board is defective.                               | ①Check the connector's contact and the electric wires of thermistor.<br><br>②Check the resistance value of thermistors or the temperatures by referring to the section of "Monitoring function for outdoor unit". (Convert modes by SW2.)<br>③Replace the whole outdoor controller board.                                                                                                                                                                                                                                                                                                                                         |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
|                                                                                      | <table><tr><th colspan="2">Thermistors</th><th rowspan="2">Open detection</th><th rowspan="2">Short detection</th></tr><tr><th>Symbol</th><th>Name</th></tr><tr><td>TH3</td><td>Thermistor &lt;Outdoor pipe&gt;</td><td>– 40°C [– 40°F] or below</td><td>90°C [194°F] or above</td></tr><tr><td>TH7</td><td>Thermistor &lt;Outdoor&gt;</td><td>– 40°C [– 40°F] or below</td><td>90°C [194°F] or above</td></tr><tr><td>TH8</td><td>Internal thermistor &lt;Heatsink&gt;</td><td>– 35°C [– 30°F] or below</td><td>170°C [338°F] or above</td></tr><tr><td colspan="4">Branch box unit</td></tr><tr><td>TH-A~E<br/>(Room A~E)</td><td>Thermistor<br/>(Gas pipe temperature detection)</td><td>– 40°C [– 40°F] or below</td><td>90°C [194°F] or above</td></tr></table> | Thermistors                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Open detection | Short detection | Symbol          | Name | TH3 | Thermistor <Outdoor pipe> | – 40°C [– 40°F] or below | 90°C [194°F] or above | TH7 | Thermistor <Outdoor> | – 40°C [– 40°F] or below | 90°C [194°F] or above | TH8 | Internal thermistor <Heatsink> | – 35°C [– 30°F] or below | 170°C [338°F] or above | Branch box unit |  |  |  | TH-A~E<br>(Room A~E) | Thermistor<br>(Gas pipe temperature detection) | – 40°C [– 40°F] or below | 90°C [194°F] or above |  |  |
|                                                                                      | Thermistors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                              | Open detection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |                 | Short detection |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| Symbol                                                                               | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| TH3                                                                                  | Thermistor <Outdoor pipe>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | – 40°C [– 40°F] or below                                                                                                                                                                                                                                                     | 90°C [194°F] or above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| TH7                                                                                  | Thermistor <Outdoor>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | – 40°C [– 40°F] or below                                                                                                                                                                                                                                                     | 90°C [194°F] or above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| TH8                                                                                  | Internal thermistor <Heatsink>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | – 35°C [– 30°F] or below                                                                                                                                                                                                                                                     | 170°C [338°F] or above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| Branch box unit                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| TH-A~E<br>(Room A~E)                                                                 | Thermistor<br>(Gas pipe temperature detection)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | – 40°C [– 40°F] or below                                                                                                                                                                                                                                                     | 90°C [194°F] or above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
|                                                                                      | <b>(2) High-Pressure sensor (63HS) abnormality</b><br>①When detected pressure in high-pressure sensor is 1MPa [145PSIG] or less during the operation, the compressor stops and restarts operation in 3 minutes.<br>②When the detected pressure is 1MPa [145PSIG] or less at just before of restarting, the compressor stops abnormally. In this time, <U4> is displayed.<br>③For 3 minutes after the compressor stops, the unit delays abnormal stop. Then, the outdoor unit address No. and check delay code <U4> blinks alternately on the 7 SEG digital display.<br>④For 3 minutes after starting compressor, for defrosting or for 3 minutes after recovery from defrosting, abnormality is not determined as abnormality.                                       | ①High-pressure sensor failure<br><br>②Internal pressure decrease by gas leakage<br><br>③Connector contact failure disconnection<br><br>④Controller board input circuit failure                                                                                               | ① Check the high-pressure sensor.<br><br>② Check the internal pressure.<br><br>③ Check the high-pressure sensor.<br><br>④ Check the outdoor controller board                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| U5<br>(4230)                                                                         | <b>Abnormal temperature of heatsink</b><br>Abnormal if heatsink thermistor (TH8) detects temperature indicated 93 °C [200 °F]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ① The outdoor fan motor is locked.<br>② Failure of outdoor fan motor<br>③ Air flow path is clogged.<br>④ Rise of ambient temperature<br><br>⑤ Defective thermistor<br><br>⑥ Defective input circuit of outdoor power circuit board<br>⑦ Failure of outdoor fan drive circuit | ①② Check outdoor fan.<br><br>③ Check air flow path for cooling.<br>④ Check if there is something which causes temperature rise around outdoor unit. (Upper limit of ambient temperature is 46°C [115°F].)<br>Turn off power, and on again to check if U5 is displayed within 30 minutes.<br>If U4 is displayed instead of U5, follow the action to be taken for U4.<br>⑤ Check resistance value of thermistor (TH8) or temperature by microprocessor. (Thermistor/TH8: Refer to 9-6.) (SW2 on A-Control Service Tool: Refer to 9-8.)<br>⑥ Replace outdoor power circuit board.<br><br>⑦ Replace outdoor controller circuit board. |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |
| U6<br>(4250)                                                                         | <b>Abnormality of power module</b><br>Check abnormality by driving power module in case overcurrent is detected. (UF or UP error condition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ① Outdoor stop valve is closed.<br>② Decrease of power supply voltage<br>③ Looseness, disconnection or converse of compressor wiring connection<br>④ Defective compressor<br>⑤ Defective outdoor power circuit board                                                         | ① Open stop valve.<br>② Check facility of power supply.<br>③ Correct the wiring (U·V·W phase) to compressor. Refer to 9-7.<br><br>④ Check compressor referring to 9-6.<br>⑤ Replace outdoor power circuit board.                                                                                                                                                                                                                                                                                                                                                                                                                  |                |                 |                 |      |     |                           |                          |                       |     |                      |                          |                       |     |                                |                          |                        |                 |  |  |  |                      |                                                |                          |                       |  |  |

| Error Code   | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Case                                                                                                                                                                                                                                                                                                                          | Judgment and action                                                                                                                                                                                                                                                                                                                      |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U7<br>(1520) | <p><b>(1) Too low superheat due to low discharge/compressor temperature</b><br/>Abnormal if discharge superheat is continuously detected <math>-15^{\circ}\text{C}</math> [<math>-27^{\circ}\text{F}</math>] or less even though linear expansion valve has minimum open pulse after compressor starts operating for 10 minutes.</p> <p><b>(2) Erroneous connection of refrigerant pipes or the connecting wires</b><br/>Consider the stopping indoor unit abnormal if condenser/evaporator temperature thermistor (TH5 or RT12) detects <math>-5^{\circ}\text{C}</math> [<math>23^{\circ}\text{F}</math>] or below continuously for 5 minutes during a compressor's operation in cooling mode.</p> | <p>① Disconnection or loose connection of discharge/compressor temperature thermistor. (TH4)</p> <p>② Defective holder of discharge/compressor temperature thermistor</p> <p>① Failure in piping/wiring</p> <p>② Pipe (liquid) is clogged or crushed.</p>                                                                     | <p>①② Check the installation conditions of discharge/compressor temperature thermistor (TH4).</p> <p>① Check piping / wiring between branch box and indoor unit.<br/>Refer to "Test run (Using remote controller)".</p> <p>② Check the pipe for refrigerant and change the wrong parts.</p>                                              |
| U8<br>(4400) | <p><b>Outdoor fan motor</b><br/>The outdoor fan motor is considered to be abnormal if the rotational frequency of fan motor is abnormal when detected during operation.<br/>Fan motor rotational frequency is abnormal if;</p> <ul style="list-style-type: none"> <li>• 100 rpm or below detected continuously for 15 seconds at <math>26^{\circ}\text{C}</math> [<math>79^{\circ}\text{F}</math>] or more outside air temperature</li> <li>• 50 rpm or below or 1500 rpm or more detected continuously for 1 minute.</li> </ul>                                                                                                                                                                    | <p>① Failure in the operation of the DC fan motor</p> <p>② Failure in the outdoor circuit controller board</p>                                                                                                                                                                                                                | <p>① Check or replace the DC fan motor.</p> <p>② Check the voltage of the outdoor circuit controller board during operation.</p> <p>③ Replace the outdoor circuit controller board. (when the failure is still indicated even after performing the remedy ① above.)</p>                                                                  |
| U9<br>(4220) | <p><b>Overvoltage or voltage shortage and abnormal synchronous signal to main circuit</b></p> <p>Abnormal if any of followings are detected during compressor operation;</p> <ul style="list-style-type: none"> <li>• Decrease of DC bus voltage to 310V</li> <li>• Instantaneous decrease of DC bus voltage to 200V</li> <li>• Increase of DC bus voltage to 400V</li> <li>• Decrease of input current of outdoor unit to 0.5A only if operation frequency is more than or equal to 40Hz or compressor current is more than or equal to 5A.</li> </ul>                                                                                                                                             | <p>① Decrease of power supply voltage</p> <p>② Disconnection of compressor wiring</p> <p>③ Defective 52C</p> <p>④ Disconnection or loose connection of CNAF</p> <p>⑤ Defective 52C drive circuit of outdoor controller circuit board</p> <p>⑥ Disconnection or loose connection of CN2 on the outdoor power circuit board</p> | <p>① Check the facility of power supply.</p> <p>② Correct the wiring (U·V·W phase) to compressor. Refer to 9-7.</p> <p>③ Replace power circuit board.</p> <p>④ Check CNAF wiring.</p> <p>⑤ Replace outdoor controller circuit board. (12V DC output)</p> <p>⑥ Check CN2 wiring on the outdoor power circuit board.<br/>Refer to 9-7.</p> |
| UF<br>(4100) | <p><b>Compressor overcurrent interruption (When compressor locked)</b><br/>Abnormal if overcurrent of DC bus or compressor is detected within 30 seconds after compressor starts operating.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>① Stop valve is closed.</p> <p>② Decrease of power supply voltage</p> <p>③ Looseness, disconnection or converse of compressor wiring connection</p> <p>④ Defective compressor</p> <p>⑤ Defective outdoor power board</p>                                                                                                   | <p>① Open stop valve.</p> <p>② Check facility of power supply.</p> <p>③ Correct the wiring (U·V·W phase) to compressor.<br/>Refer to 9-7.</p> <p>④ Check compressor.<br/>Refer to 9-6.</p> <p>⑤ Replace outdoor power circuit board.</p>                                                                                                 |
| UH<br>(5300) | <p><b>Current sensor error</b><br/>Abnormal if current sensor detects <math>-1.5\text{A}</math> to <math>1.5\text{A}</math> during compressor operation. (This error is ignored in case of test run mode.)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>① Disconnection of compressor wiring</p> <p>② Defective circuit of current sensor on outdoor power circuit board</p>                                                                                                                                                                                                       | <p>① Correct the wiring (U·V·W phase) to compressor. Refer to 9-7.</p> <p>② Replace outdoor power circuit board.</p>                                                                                                                                                                                                                     |
|              | <p>Abnormal if input current exceeds 38 A or 34A continuously 10 seconds. (Current sensor on noise filter board detects input current)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>① Decrease of power supply voltage</p>                                                                                                                                                                                                                                                                                     | <p>① Check the facility of power supply.</p>                                                                                                                                                                                                                                                                                             |

| Error Code         | Abnormal point and detection method                                                                                                                                                                                                                                       | Case                                                                                                                                                                                                                                                                                                                                                                          | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| UL<br>(1300)       | <b>Low pressure (63L operated)</b><br>Abnormal if 63L is operated (under -0.03MPa [-4.35PSIG]) during compressor operation.<br>63L: Low-pressure switch                                                                                                                   | ① Stop valve of outdoor unit is closed during operation.<br>② Disconnection or loose connection of connector (63L) on outdoor controller board<br>③ Disconnection or loose connection of 63L<br>④ Defective outdoor controller board<br>⑤ Leakage or shortage of refrigerant<br>⑥ Malfunction of linear expansion valve                                                       | ① Check stop valve.<br>②~④ Turn the power off and on again to check if F3 is displayed on restarting.<br>If F3 is displayed, follow the F3 processing direction.<br>⑤ Correct to proper amount of refrigerant.<br>⑥ Check linear expansion valve. Refer to 9-6.                                                                                                                                                                                                                                                                                                                                                                         |
| UP<br>(4210)       | <b>Compressor overcurrent interruption</b><br>Abnormal if overcurrent DC bus or compressor is detected after compressor starts operating for 30 seconds.                                                                                                                  | ① Stop valve of outdoor unit is closed.<br>② Decrease of power supply voltage<br>③ Looseness, disconnection or converse of compressor wiring connection<br>④ Defective fan of indoor/outdoor units<br>⑤ Short cycle of indoor/outdoor units<br>⑥ Defective input circuit of outdoor controller board<br>⑦ Defective compressor                                                | ① Open stop valve.<br>② Check facility of power supply.<br>③ Correct the wiring (U·V·W phase) to compressor. Refer to 9-7.<br>④ Check indoor/outdoor fan.<br>⑤ Solve short cycle.<br>⑥ Replace outdoor controller circuit board.<br>⑦ Check compressor. Refer to 9-6.<br>※ Before the replacement of the outdoor controller circuit board, disconnect the wiring for compressor from the outdoor power circuit board and check the output voltage among phases, U, V, W, during test run. No defect on board if voltage among phases (U-V, V-W and W-U) is same. Make sure to perform the voltage check with same performing frequency. |
| E0<br>(No display) | <b>Remote controller communication error (Signal receiving error)</b><br>(1) Abnormal if any signal from IC of refrigerant address "0" could not be normally received for 3 minutes.<br>(2) Abnormal if sub remote controller could not receive any signal for 2 minutes. | ① Defective communication circuit of remote controller<br>② Defective communication circuit of indoor controller board of refrigerant address "0"<br>③ Noise has entered into transmission line of remote controller.<br>④ All remote controllers are set as "sub" remote controller. In this case, E4 is displayed at outdoor LED, and E0 is displayed at remote controller. | ①~③ Diagnose remote controller. Take actions as follows according to diagnosis result.<br>a) When "RC OK" is displayed, remote controllers have no problem. Turn the power off, and on again to check. If, "PLEASE WAIT" is displayed for 4 minutes or more, replace indoor controller board.<br>b) When "RC NG" is displayed, replace remote controller.<br>c) When "RC E3" or "ERC 00-66" is displayed, noise may be causing abnormality.<br>④ Set a remote controller to main, and the other to sub.<br>※ The descriptions above, ①~③, are for E0 and E3.                                                                            |
| E3<br>(No display) | <b>Remote controller communication error (Transmitting error)</b><br>(1) Abnormal if sub remote controller could not find blank of transmission path for 6 seconds.<br>(2) Abnormal if remote controller could not finish transmitting 30 times continuously.             | ① Defective communication circuit of remote controller<br>② Noise has entered into transmission line of remote controller.<br>③ Two remote controllers are set as "main."<br>(In case of 2 remote controllers)                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| E8<br>(6840)       | <b>Indoor - branch box/branch box - outdoor unit communication error (Signal receiving error) (Branch box/outdoor unit)</b><br>(1) Abnormal if branch box/outdoor controller circuit board could not receive anything normally for 3 minutes.                             | ① Contact failure of indoor/outdoor unit connecting wire<br>② Defective communication circuit of branch box/outdoor controller circuit board<br>③ Defective communication circuit of indoor/branch box controller board<br>④ Noise has entered into indoor-branch box/branch box-outdoor unit connecting wire.                                                                | ① Check disconnection or looseness of indoor-branch box/branch box-outdoor unit connecting wire of indoor or branch box or outdoor units.<br>②~④ Turn the power off, and on again to check. Replace indoor controller board or branch controller board or outdoor controller circuit board if abnormality is displayed again.                                                                                                                                                                                                                                                                                                           |

| Error Code           | Abnormal point and detection method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Case                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Judgment and action                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E9<br>(6841)         | <b>Indoor - branch box/branch box - outdoor unit communication error (Transmitting error) (Branch box/outdoor unit)</b><br>(1) Abnormal if "0" receiving is detected 30 times continuously though branch box/outdoor controller circuit board has transmitted "1".<br>(2) Abnormal if branch box/outdoor controller circuit board could not find blank of transmission path for 3 minutes.                                                                                                                                                                                                                                                                                                                                          | ① Indoor-branch box/branch box-outdoor unit connecting wire has contact failure.<br>② Defective communication circuit of outdoor controller circuit board<br>③ Noise has entered power supply.<br>④ Noise has entered Indoor-branch box/branch box-outdoor unit connecting wire.                                                                                                                                                                                                                                                                              | ① Check disconnection or looseness of indoor-branch box/branch box-outdoor unit connecting wire.<br>②~④ Turn the power off, and on again to check. Replace outdoor controller circuit board if abnormality is displayed again.                                                                                                                                                                                                         |
| EF<br>(6607 or 6608) | <b>Non defined error code</b><br>This code is displayed when non defined error code is received.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ① Noise has entered transmission wire of remote controller.<br>② Noise has entered Indoor-branch box/branch box-outdoor unit connecting wire.<br>③ Model name of remote controller is PAR-S25A.                                                                                                                                                                                                                                                                                                                                                               | ①② Turn the power off, and on again to check. Replace indoor controller board or branch controller board or outdoor controller circuit board if abnormality is displayed again.<br>③ Replace remote controller with MA remote controller.                                                                                                                                                                                              |
| Ed<br>(0403)         | <b>Serial communication error</b><br>1. Abnormal if serial communication between outdoor controller circuit board and outdoor power circuit board is defective.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ① Breaking of wire or contact failure of connector CN2 between the outdoor controller circuit board and the outdoor power circuit board<br>② Breaking of wire or contact failure of connector CN4 between the outdoor controller circuit board and the outdoor power circuit board<br>③ Defective communication circuit of outdoor power circuit board<br>④ Defective communication circuit of outdoor controller circuit board for outdoor power circuit board                                                                                               | ①② Check connection of each connector CN2 and CN4 between the outdoor controller circuit board and the outdoor power circuit board.<br>③ Replace outdoor power circuit board.<br>④ Replace outdoor controller circuit board.                                                                                                                                                                                                           |
| PA<br>(2520)         | <b>Forced compressor stop</b><br>(Overlap malfunction of drain pump in indoor unit and linear expansion valve in branch box.)<br><br>When condition which the outdoor unit is stopped forcibly consists, or the drain sensor detects continuously to go under water 5 times, and also detects "[liquid pipe temperature-suction temperature] ≤ -10°C [-18°F]" for 30 minutes continuously, the indoor unit stops abnormally (however, fan operates by normal control) that indoor unit and excluding [Fan mode or OFF] in same refrigerant system. Also, the outdoor unit which is connected to that indoor unit with refrigerant system stops abnormality (compressor is inhibited to operation). In this time, <PA> is displayed. | ① Drain pump trouble<br>② Drain defective<br>· Drain pump clogging<br>· Drain pipe clogging<br>③ Open circuit of drain sensor side heater<br>④ Contact failure of drain sensor connector<br>⑤ Dew condensation on drain sensor<br>· Drain water descends along lead wire.<br>· Drain water waving due to filter clogging<br>⑥ Indoor controller board defective<br>· Drain pump drive circuit failure<br>· Drain heater output circuit failure<br>⑦ Both of above mentioned ①~⑥ and the linear expansion valve full closed failure happens synchronistically. | ① Check the drain pump. Performance<br>② Please confirm whether water can be drained.<br>③ Confirm the resistance of the drain sensor side heater.<br>④ Check the connector contact failure.<br>⑤ Check the drain sensor leadwire mounted. Check the filter clogging.<br>⑥ If the above mentioned checkpoints has any problem, replace the indoor controller board.<br>⑦ Check whether the indoor linear expansion valve leaks or not. |

## 9-4. TROUBLESHOOTING BY INFERIOR PHENOMENA

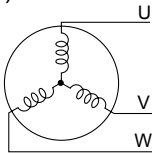
| Phenomena                                                                                                                                                                                                                                                                                                                                                               | Factor                                                                                                                                                                                                                                                                                                         | Countermeasure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Remote controller display works normally and the unit performs cooling operation, however, the capacity cannot be fully obtained. (The air does not cool well.)                                                                                                                                                                                                      | ①Refrigerant shortage<br><br>②Filter clogging<br><br>③Heat exchanger clogging<br><br>④Air duct short cycle                                                                                                                                                                                                     | ① If refrigerant leaks, discharging temperature rises and LEV opening increases. Inspect leakage by checking the temperature and opening.<br>Check pipe connections for gas leakage.<br>② Open intake grille and check the filter. Clean the filter by removing dirt or dust on it.<br>③ If the filter is clogged, indoor pipe temperature rises and discharging pressure increases. Check if heat exchanger is clogged by inspecting discharging pressure.<br>Clean the heat exchanger.<br>④ Remove the blockage.                                                                                                                                                                                                                                                       |
| 2. Remote controller display works normally and the unit performs heating operation, however, the capacity cannot be fully obtained.                                                                                                                                                                                                                                    | ①Linear expansion valve fault<br>Opening cannot be adjusted well due to linear expansion valve fault.<br><br>②Refrigerant shortage<br><br>③Lack of insulation for refrigerant piping<br>④Filter clogging<br><br>⑤Heat exchanger clogging<br><br>⑥Air duct short cycle<br>⑦Bypass circuit of outdoor unit fault | ① Discharging temperature and indoor heat exchanger temperature does not rise. Inspect the failure by checking discharging pressure.<br>Replace linear expansion valve.<br>② If refrigerant leaks, discharging temperature rises and LEV opening increases. Inspect leakage by checking the temperature and opening.<br>Check pipe connections for gas leakage.<br>③ Check the insulation.<br>④ Open intake grille and check the filter. Clean the filter by removing dirt or dust on it.<br>⑤ If the filter is clogged, indoor pipe temperature rises and discharging pressure increases. Check if heat exchanger is clogged by inspecting discharging pressure.<br>Clean the heat exchanger.<br>⑥ Remove the blockage.<br>⑦ Check refrigerant system during operation. |
| 3.①For 3 minutes after temperature adjuster turns off, the compressor will not start operating even if temperature adjuster is turned on.<br>②For 3 minutes after temperature adjuster turns on, the compressor will not stop operating even if temperature adjuster is turned off. (Compressor stops operating immediately when turning off by the remote controller.) | ①②Normal operation<br>(For protection of compressor)                                                                                                                                                                                                                                                           | ①②Normal operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



## 9-6. HOW TO CHECK THE PARTS

### OUTDOOR UNIT : MXZ-8B48NA

### MXZ-8B48NAR1

| Parts name                                                                                                                                                          | Check points                                                                                                                                                                                                                                                                                                                                                           |               |          |             |               |             |               |     |             |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|-------------|---------------|-------------|---------------|-----|-------------|-----|-----|
| Thermistor (TH3)<br><Outdoor pipe><br><br>Thermistor (TH4)<br><Discharge/Compressor><br><br>Thermistor (TH6)<br><2-phase pipe><br><br>Thermistor (TH7)<br><Outdoor> | Disconnect the connector then measure the resistance with a tester.<br>(At the ambient temperature 10℃~30℃ , 50°F~86°F)<br><table><tr><td></td><td>Normal</td><td>Abnormal</td></tr><tr><td>TH4</td><td>160kΩ~410kΩ</td><td rowspan="4">Open or short</td></tr><tr><td>TH3</td><td rowspan="3">4.3kΩ~9.6kΩ</td></tr><tr><td>TH6</td></tr><tr><td>TH7</td></tr></table> |               | Normal   | Abnormal    | TH4           | 160kΩ~410kΩ | Open or short | TH3 | 4.3kΩ~9.6kΩ | TH6 | TH7 |
|                                                                                                                                                                     | Normal                                                                                                                                                                                                                                                                                                                                                                 | Abnormal      |          |             |               |             |               |     |             |     |     |
| TH4                                                                                                                                                                 | 160kΩ~410kΩ                                                                                                                                                                                                                                                                                                                                                            | Open or short |          |             |               |             |               |     |             |     |     |
| TH3                                                                                                                                                                 | 4.3kΩ~9.6kΩ                                                                                                                                                                                                                                                                                                                                                            |               |          |             |               |             |               |     |             |     |     |
| TH6                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                        |               |          |             |               |             |               |     |             |     |     |
| TH7                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                        |               |          |             |               |             |               |     |             |     |     |
| Fan motor(MF1,MF2)                                                                                                                                                  | Refer to next page.                                                                                                                                                                                                                                                                                                                                                    |               |          |             |               |             |               |     |             |     |     |
| Solenoid valve coil<br><Four-way valve><br>(21S4)                                                                                                                   | Measure the resistance between the terminals with a tester.<br>(At the ambient temperature 20℃ , 68°F)<br><table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>1435 ± 150Ω</td><td>Open or short</td></tr></table>                                                                                                                                                  | Normal        | Abnormal | 1435 ± 150Ω | Open or short |             |               |     |             |     |     |
| Normal                                                                                                                                                              | Abnormal                                                                                                                                                                                                                                                                                                                                                               |               |          |             |               |             |               |     |             |     |     |
| 1435 ± 150Ω                                                                                                                                                         | Open or short                                                                                                                                                                                                                                                                                                                                                          |               |          |             |               |             |               |     |             |     |     |
| Motor for compressor<br>(MC)<br>                                                 | Measure the resistance between the terminals with a tester.<br>(Winding temperature 20℃ , 68°F)<br><table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>0.188Ω</td><td>Open or short</td></tr></table>                                                                                                                                                              | Normal        | Abnormal | 0.188Ω      | Open or short |             |               |     |             |     |     |
| Normal                                                                                                                                                              | Abnormal                                                                                                                                                                                                                                                                                                                                                               |               |          |             |               |             |               |     |             |     |     |
| 0.188Ω                                                                                                                                                              | Open or short                                                                                                                                                                                                                                                                                                                                                          |               |          |             |               |             |               |     |             |     |     |
| Solenoid valve coil<br><Bypass valve><br>(SV1)                                                                                                                      | Measure the resistance between the terminals with a tester.<br>(At the ambient temperature 20℃ , 68°F)<br><table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>1327 ± 10Ω</td><td>Open or short</td></tr></table>                                                                                                                                                   | Normal        | Abnormal | 1327 ± 10Ω  | Open or short |             |               |     |             |     |     |
| Normal                                                                                                                                                              | Abnormal                                                                                                                                                                                                                                                                                                                                                               |               |          |             |               |             |               |     |             |     |     |
| 1327 ± 10Ω                                                                                                                                                          | Open or short                                                                                                                                                                                                                                                                                                                                                          |               |          |             |               |             |               |     |             |     |     |
| Solenoid valve coil<br><Bypass valve><br>(SV2)                                                                                                                      | Measure the resistance between the terminals with a tester.<br>(At the ambient temperature 20℃ , 68°F)<br><table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>1450 ± 150Ω</td><td>Open or short</td></tr></table>                                                                                                                                                  | Normal        | Abnormal | 1450 ± 150Ω | Open or short |             |               |     |             |     |     |
| Normal                                                                                                                                                              | Abnormal                                                                                                                                                                                                                                                                                                                                                               |               |          |             |               |             |               |     |             |     |     |
| 1450 ± 150Ω                                                                                                                                                         | Open or short                                                                                                                                                                                                                                                                                                                                                          |               |          |             |               |             |               |     |             |     |     |

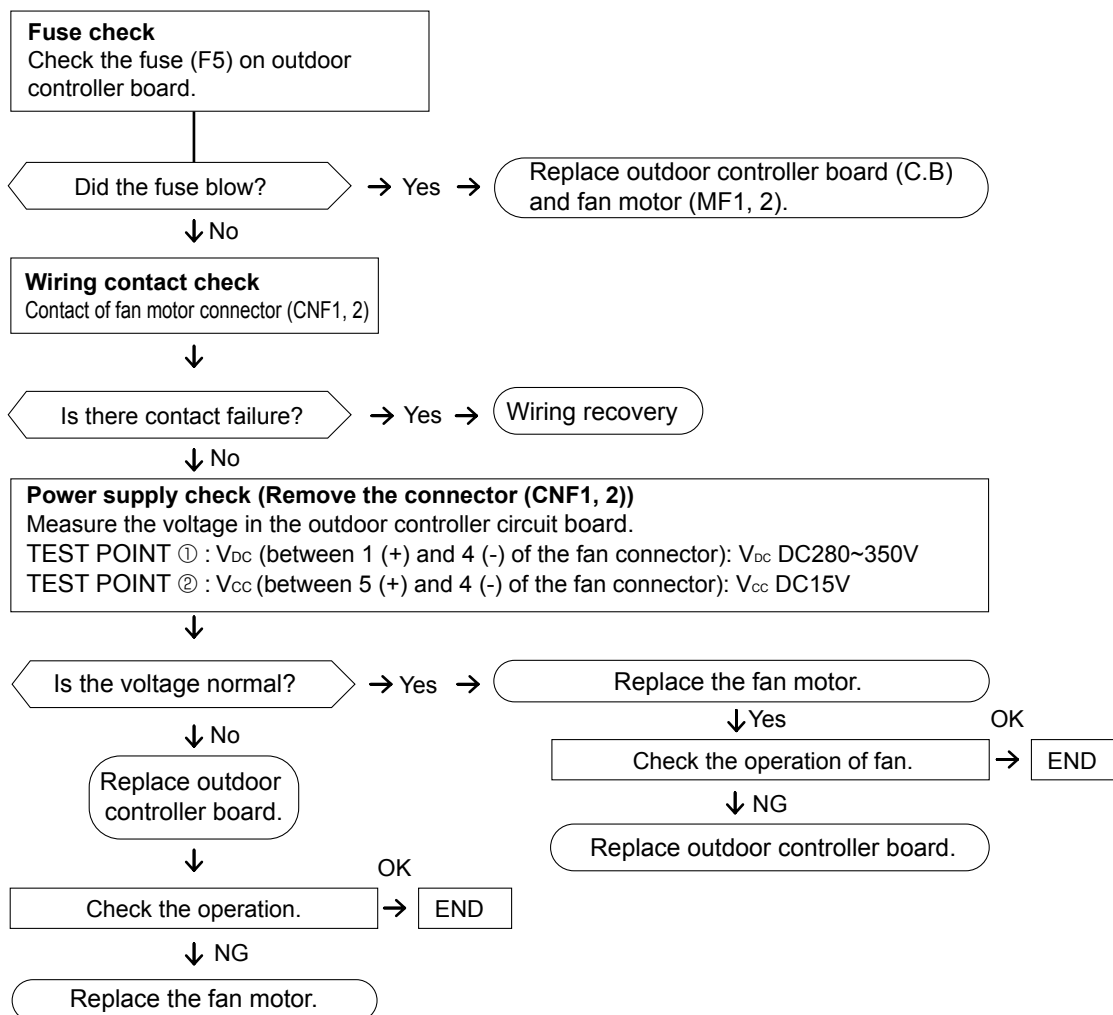
## Check method of DC fan motor (fan motor / outdoor controller circuit board)

### ① Notes

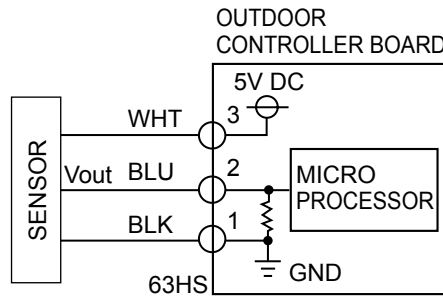
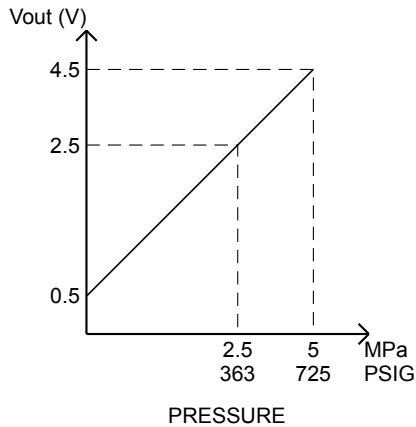
- High voltage is applied to the connector (CNF1, 2) for the fan motor. Pay attention to the service.
- Do not pull out the connector (CNF1, 2) for the motor with the power supply on.  
(It causes trouble of the outdoor controller circuit board and fan motor.)

### ② Self check

Symptom : The outdoor fan cannot turn around.



## <HIGH PRESSURE SENSOR>



③-① : 5V (DC)  
②-① : Output Vout (DC)

## <Thermistor feature chart>

### Low temperature thermistors

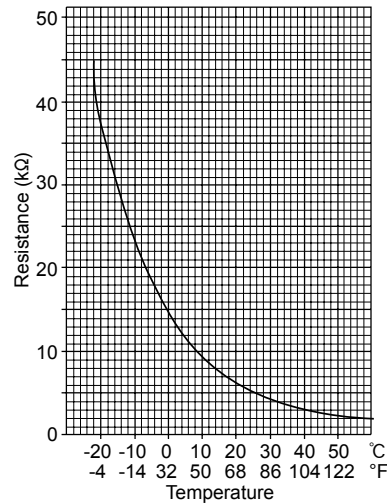
- Thermistor <Outdoor pipe> (TH3)
- Thermistor <2-phase pipe> (TH6)
- Thermistor <Outdoor> (TH7)
- Thermistor <Gas pipe> (TH-A~TH-E).....Branch box

Thermistor R0 = 15kΩ ± 3%

B constant = 3480 ± 2%

$$R_t = 15 \exp\left\{3480 \left( \frac{1}{273+t} - \frac{1}{273} \right)\right\} \quad t : ^\circ\text{C} = (^\circ\text{F} - 32) / 1.8$$

|              |       |
|--------------|-------|
| 0°C [32°F]   | 15kΩ  |
| 10°C [50°F]  | 9.6kΩ |
| 20°C [68°F]  | 6.3kΩ |
| 25°C [77°F]  | 5.2kΩ |
| 30°C [86°F]  | 4.3kΩ |
| 40°C [104°F] | 3.0kΩ |



### High temperature thermistor

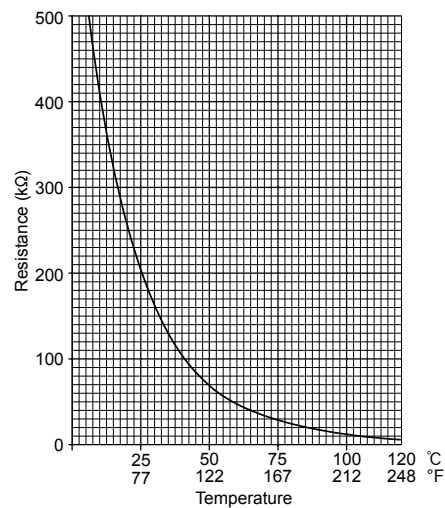
- Thermistor <Discharge/Compressor> (TH4)

Thermistor R120 = 7.465kΩ ± 2%

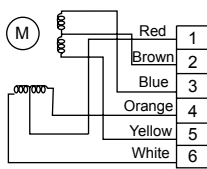
B constant = 4057 ± 2%

$$R_t = 7.465 \exp\left\{4057 \left( \frac{1}{273+t} - \frac{1}{393} \right)\right\} \quad t : ^\circ\text{C} = (^\circ\text{F} - 32) / 1.8$$

|              |       |               |        |
|--------------|-------|---------------|--------|
| 20°C [68°F]  | 250kΩ | 70°C [158°F]  | 34kΩ   |
| 30°C [86°F]  | 160kΩ | 80°C [176°F]  | 24kΩ   |
| 40°C [104°F] | 104kΩ | 90°C [194°F]  | 17.5kΩ |
| 50°C [122°F] | 70kΩ  | 100°C [212°F] | 13.0kΩ |
| 60°C [140°F] | 48kΩ  | 110°C [230°F] | 9.8kΩ  |



**BRANCH BOX : PAC-AKA51BC  
PAC-AKA31BC**

| Parts name                                                                                                                         | Check points                                                                                                                                                                                                                                                                                                                                      |                |              |               |               |          |             |              |                |              |               |         |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|---------------|---------------|----------|-------------|--------------|----------------|--------------|---------------|---------|--|--|--|
| Thermistor (TH-A~E)<br><Gas pipe>                                                                                                  | Disconnect the connector then measure the resistance with a tester.<br>(At the ambient temperature 10℃~30℃ , 50°F~86°F) <table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>4.3kΩ~9.6kΩ</td><td>Open or short</td></tr></table>                                                                                                               | Normal         | Abnormal     | 4.3kΩ~9.6kΩ   | Open or short |          |             |              |                |              |               |         |  |  |  |
| Normal                                                                                                                             | Abnormal                                                                                                                                                                                                                                                                                                                                          |                |              |               |               |          |             |              |                |              |               |         |  |  |  |
| 4.3kΩ~9.6kΩ                                                                                                                        | Open or short                                                                                                                                                                                                                                                                                                                                     |                |              |               |               |          |             |              |                |              |               |         |  |  |  |
| Linear expansion valve<br>( LEV-A~E ) <div></div> | Disconnect the connector then measure the resistance with a tester.<br>(Winding temperature 20℃ , 68°F) <table><tr><td colspan="4">Normal</td><td>Abnormal</td></tr><tr><td>Red - White</td><td>Red - Orange</td><td>Brown - Yellow</td><td>Brown - Blue</td><td rowspan="2">Open or short</td></tr><tr><td colspan="4">46 ± 4Ω</td></tr></table> | Normal         |              |               |               | Abnormal | Red - White | Red - Orange | Brown - Yellow | Brown - Blue | Open or short | 46 ± 4Ω |  |  |  |
| Normal                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                   |                |              | Abnormal      |               |          |             |              |                |              |               |         |  |  |  |
| Red - White                                                                                                                        | Red - Orange                                                                                                                                                                                                                                                                                                                                      | Brown - Yellow | Brown - Blue | Open or short |               |          |             |              |                |              |               |         |  |  |  |
| 46 ± 4Ω                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                   |                |              |               |               |          |             |              |                |              |               |         |  |  |  |

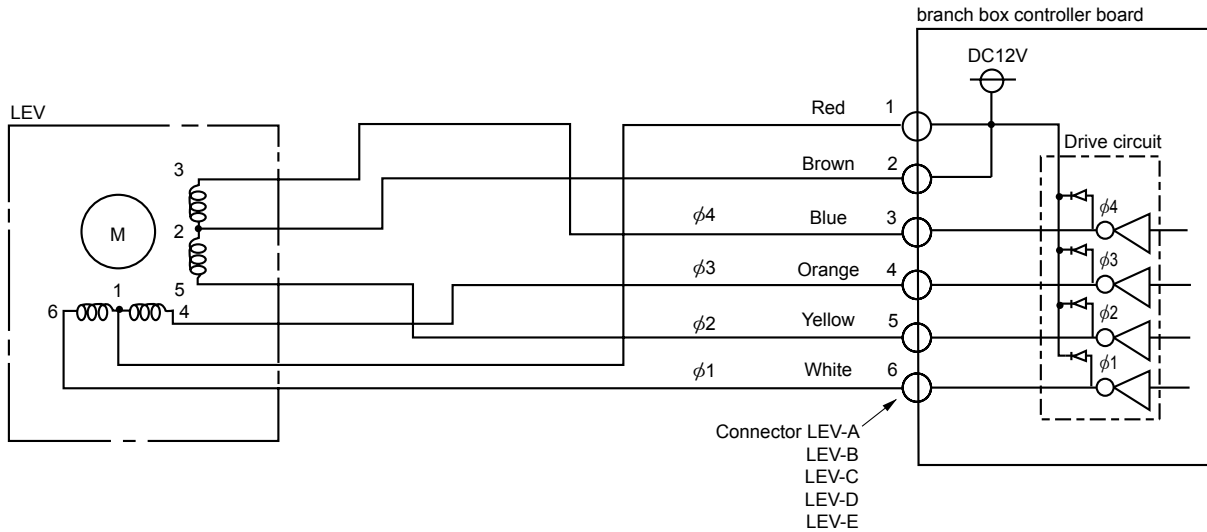
## Linear expansion valve (LEV) in Branch box

### (1) Operation summary of the linear expansion valve

- Linear expansion valve open/close through stepping motor after receiving the pulse signal from the branch box controller board.

- Valve position can be changed in proportion to the number of pulse signal.

<Connection between the branch box controller board and the linear expansion valve>



### <Output pulse signal and the valve operation>

| Output<br>(Phase) | Output |     |     |     |     |     |     |     |
|-------------------|--------|-----|-----|-----|-----|-----|-----|-----|
|                   | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
| $\phi 1$          | ON     | ON  | OFF | OFF | OFF | OFF | OFF | ON  |
| $\phi 2$          | OFF    | ON  | ON  | ON  | OFF | OFF | OFF | OFF |
| $\phi 3$          | OFF    | OFF | OFF | ON  | ON  | ON  | OFF | OFF |
| $\phi 4$          | OFF    | OFF | OFF | OFF | OFF | ON  | ON  | ON  |

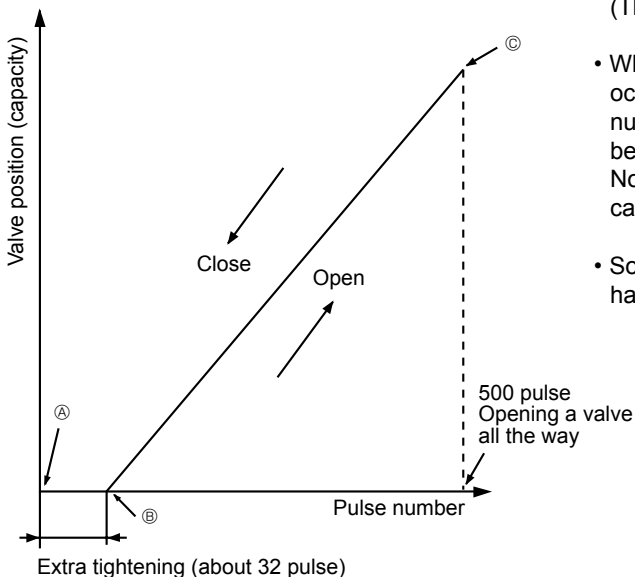
Opening a valve :  $8 \rightarrow 7 \rightarrow 6 \rightarrow 5 \rightarrow 4 \rightarrow 3 \rightarrow 2 \rightarrow 1 \rightarrow 8$

Closing a valve :  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow 6 \rightarrow 7 \rightarrow 8 \rightarrow 1$

The output pulse shifts in above order.

- When linear expansion valve operation stops, all output phase become OFF.

### (2) Linear expansion valve operation

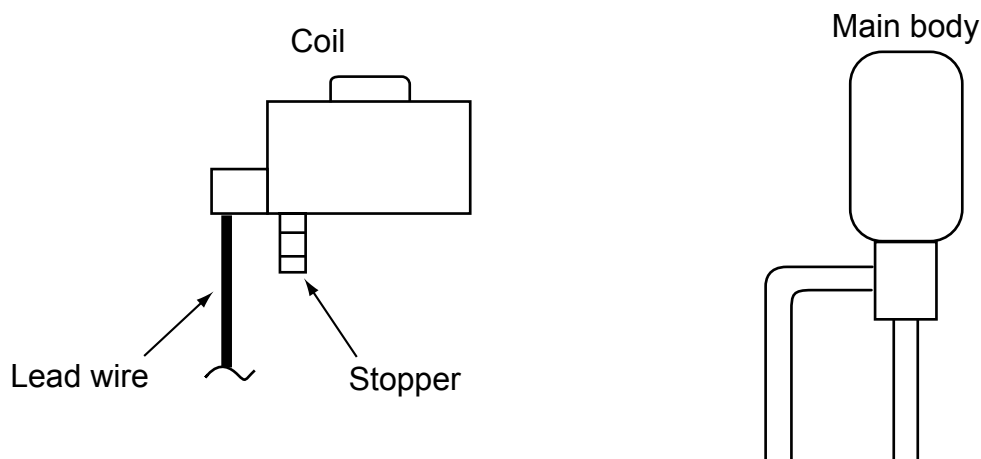


- When the switch is turned on, 700 pulse closing valve signal will be sent till it goes to (A) point in order to define the valve position. (The pulse signal is being sent for about 20 seconds.)
- When the valve moves smoothly, there is no sound or vibration occurring from the linear expansion valve : however, when the pulse number moves from (B) to (A) or when the valve is locked, sound can be heard. No sound is heard when the pulse number moves from (B) to (A) in case coil is burnt out or motor is locked by open-phase.
- Sound can be detected by placing the ear against the screw driver handle while putting the screw driver to the linear expansion valve.

### (3) How to attach and detach the coil of linear expansion valve

#### <Composition>

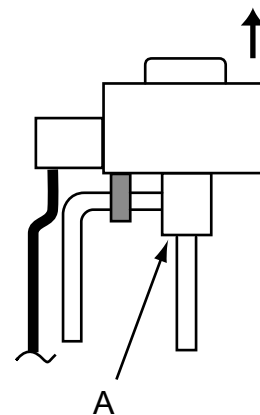
Linear expansion valve is separable into the main body and the coil as shown in the diagram below.



#### <How to detach the coil>

Hold the lower part of the main body (shown as A) firmly so that the main body does not move and detach the coil by pulling it upward.

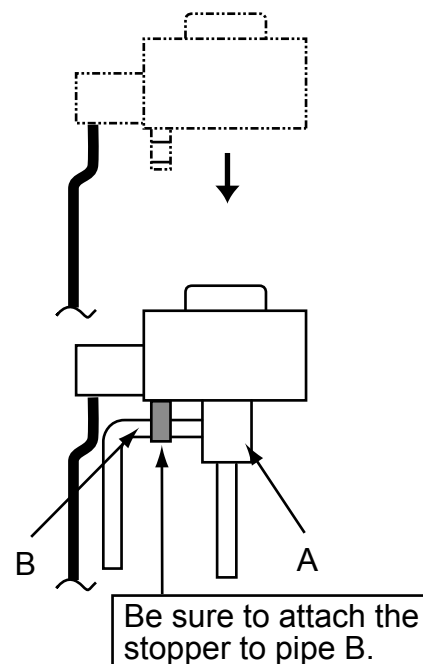
Be sure to detach the coil holding main body firmly. Otherwise pipes can bend due to pressure.



#### <How to attach the coil>

Hold the lower part of the main body (shown as A) firmly so that the main body does not move and attach the coil by inserting it downward into the main body. Then securely attach the coil stopper to pipe B. (At this time, be careful that stress is not added to lead wire and main body is not wound by lead wire.) If the stopper is not firmly attached to pipe B, coil may be detached from the main body and that can cause defective operation of linear expansion valve.

To prevent piping stress, be sure to attach the coil holding the main body of linear expansion valve firmly. Otherwise pipe may break.



## Troubleshooting

| Problem                                                       | Check point                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Corrective measure                                                          |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Locked expansion valve                                        | If the linear expansion valve becomes locked and the motor is still operating, the motor will emit a clicking noise and will not function. This clicking noise indicates an abnormality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Replace the linear expansion valve.                                         |
| Short circuit or broken circuit in expansion valve motor coil | Use an all-purpose electrical meter to measure the resistance between the different coils (red-white, red-orange, brown-yellow, brown-blue). Normal resistance is within a range of $46\Omega \pm 4\%$ .                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Replace the linear expansion valve.                                         |
| Valve does not close completely.                              | In order to check the linear expansion valve, operate 1 indoor unit in the fan mode and another in the cooling mode. Then, use the outdoor multi controller board to operate the monitor and check the pipe temperature of the indoor unit. The linear expansion valve should be fully closed when the fan is operating. The temperature measured by the temperature sensor will drop if there is any leakage.<br>If the measured temperature is significantly lower than that on the remote controller, this indicates that the valve is not closed. It is not necessary to replace the linear expansion valve if the leak of refrigerant is small and does not cause a malfunction. | Replace the linear expansion valve if there is a major leak of refrigerant. |
| Incorrect connection or connection failure                    | ① Check improperly connected connector terminals and the wire colors.<br>② Remove the connector on the controller board side and check electrical conductance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Continuity check of wrong part                                              |

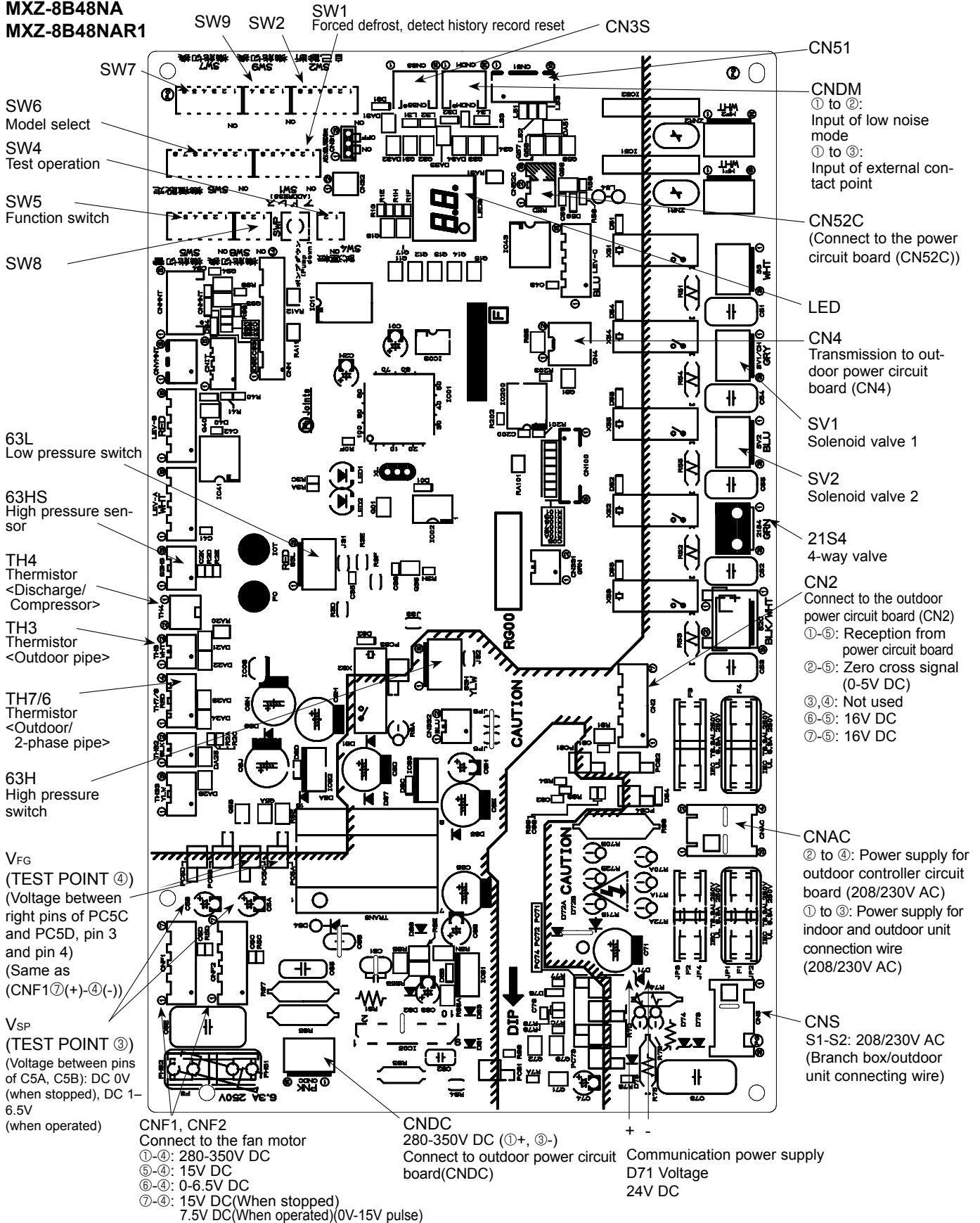
## 9-7. TEST POINT DIAGRAM

### Outdoor controller circuit board

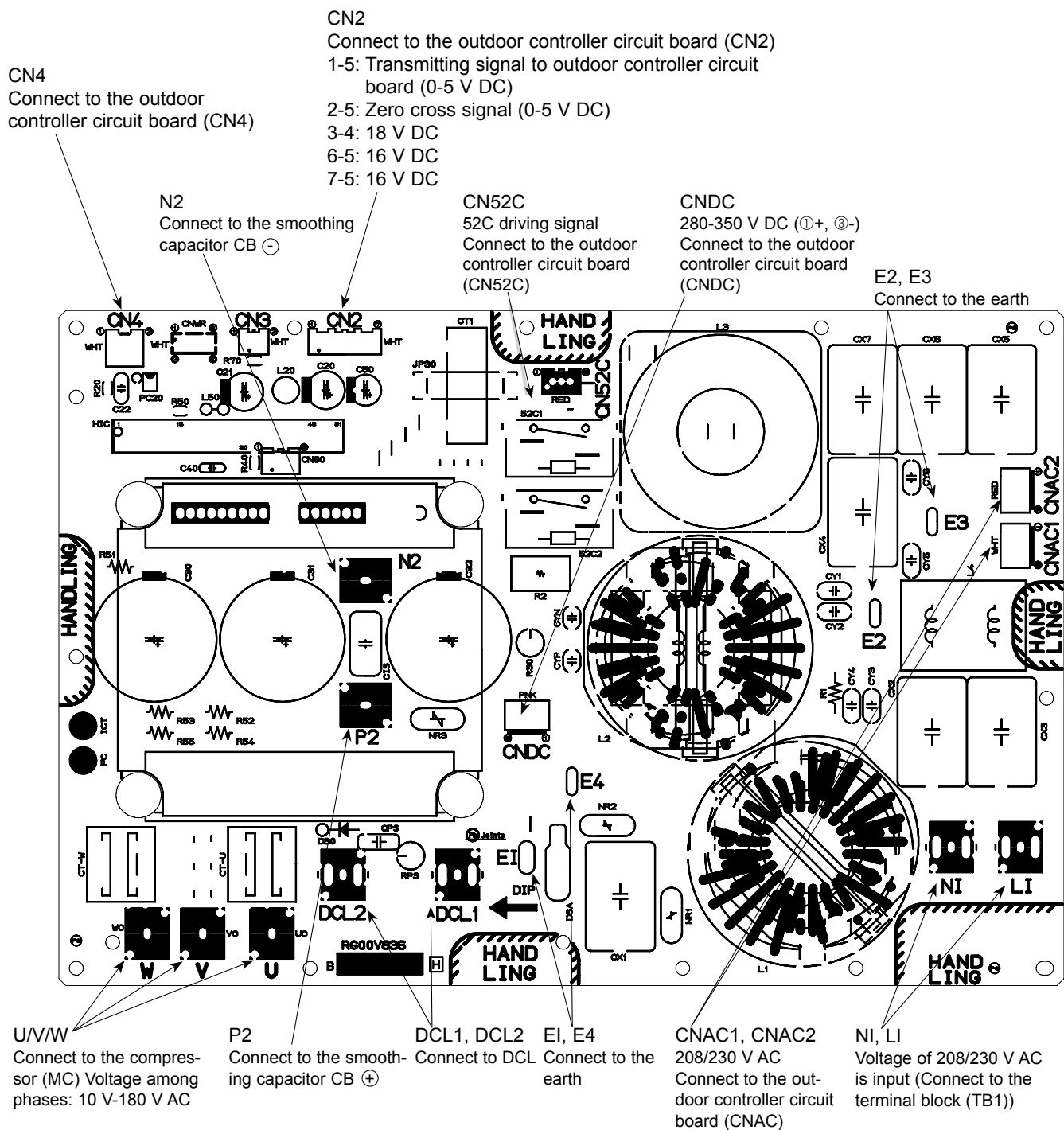
MXZ-8B48NA

MXZ-8B48NAR1

<CAUTION> TEST POINT① is high voltage.



**Outdoor power circuit board**  
**MXZ-8B48NA**  
**MXZ-8B48NAR1**



# Branch box controller board

PAC-AKA51BC

PAC-AKA31BC

TH-A to E Connect to  
Thermistor-A to E  
TH-A to C for PAC-AKA31BC

LED1

Transmission start-up state display

Start-up : LED1 blinks

(0.5sec. : ON, 0.5sec. : OFF)

Start-up completion: LED1 lights

LEV-A to E

Connect to LEV-A to E

LEV-A to C for PAC-AKA31BC

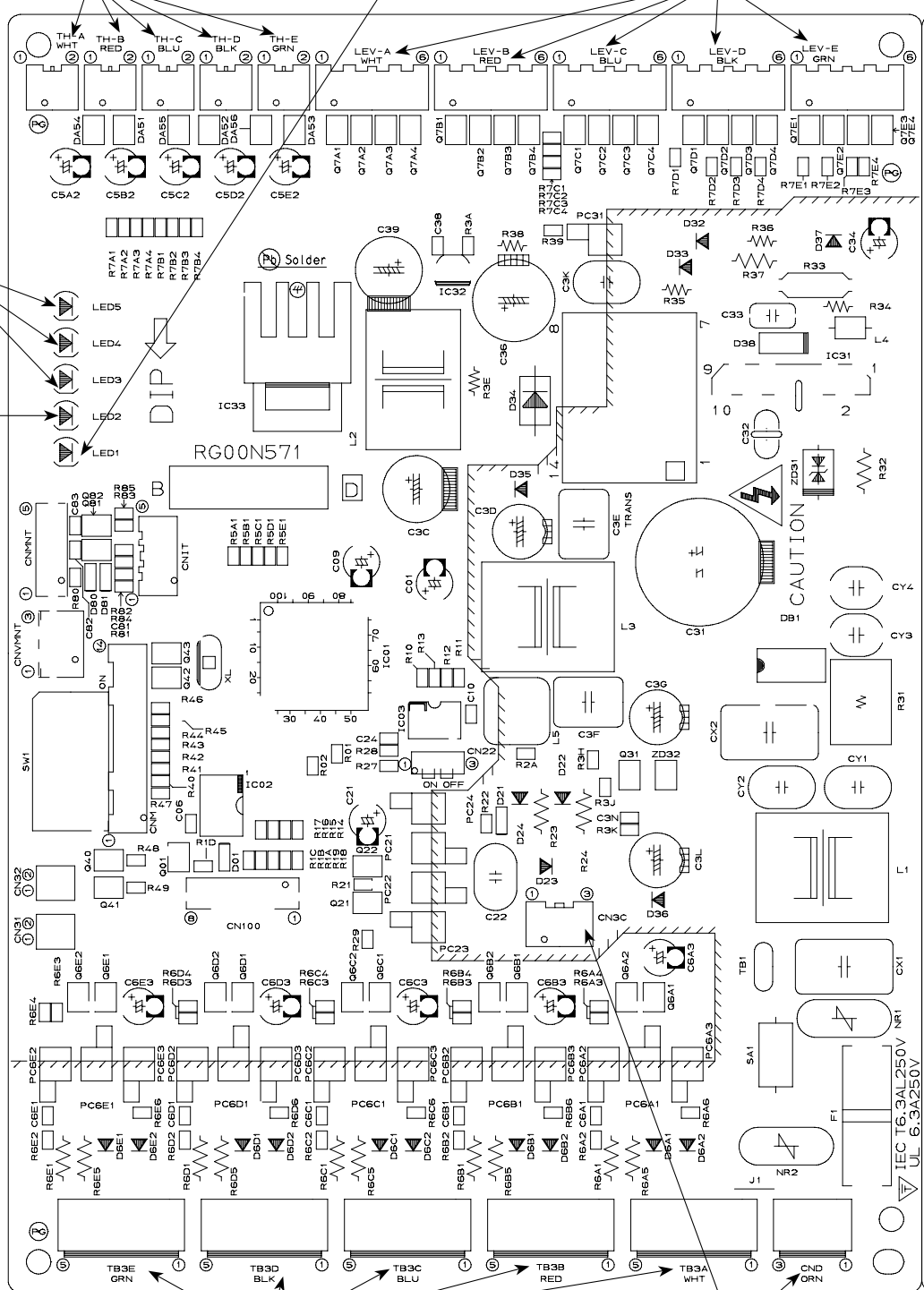
LED3~5  
Not used

LED2  
Transmission  
(Branch box/outdoor)  
Reception state display  
on branch box side

Branch box No.1  
LED2 blinks once.  
(0.1sec. : ON,  
0.9sec. : OFF)

Branch box No.2  
LED2 blinks twice.  
(0.1sec. : ON,  
0.1sec. : OFF  
0.1sec. : ON,  
0.7sec. : OFF)

\*The blinking interval  
might change when  
there are changes in  
states of indoor units.



TB3A to TB3E  
Connect to TB3A to TB3E  
(Branch box / Indoor unit connecting wire)  
TB3A to TB3C for PAC-AKA31BC

CN3C, CND  
Connect to TB2B  
(Branch box / Outdoor unit  
connecting wire)

### (1) Function of switches

**MXZ-8B48NAR1**

The black square (■) indicates a switch position.

Forced defrost should be done as follows.

- ① Change the DIP SW1-1 on the outdoor controller board from OFF to ON.
- ② Forced defrost will start by the above operation ① if these conditions written below are satisfied.
  - Heat mode setting
  - 10 minutes have passed since compressor started operating or previous forced defrost finished.
  - Pipe temperature is less than or equal to 8°C [46 °F].

③ Forced defrost will finish if certain conditions are satisfied.

※ Forced defrost can be done if above conditions are satisfied when DIP SW1-1 is changed from OFF to ON.

After DIP SW1-1 is changed from OFF to ON, there is no problem if DIP SW1-1 is left ON or changed to OFF again. This depends on the service conditions.

**MXZ-8B48NA**
**MXZ-8B48NAR1**

| Type of Switch | Switch | No.  | Function                                                                                                                   | Action by the switch operation                                                                                                               |                     | Effective timing            |
|----------------|--------|------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------|
|                |        |      |                                                                                                                            | ON                                                                                                                                           | OFF                 |                             |
| Dip switch     | SW5    | 1    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 2    | Switching the target sub-cool (Heating mode)                                                                               | Target sub-cool down                                                                                                                         | Normal              | Always                      |
|                |        | 3, 4 | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 5, 6 | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                | SW7    | 1    | Demand switching function                                                                                                  | Capability cut 50%                                                                                                                           | Normal              | Always                      |
|                |        | 2    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 3    | Max. Frequency down                                                                                                        | Active                                                                                                                                       | Normal              | Always                      |
|                |        | 4    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 5    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 6    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                | SW8    | 1    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 2    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                |        | 3    | No function                                                                                                                | —                                                                                                                                            | —                   | —                           |
|                | SW6    | 1    | Model selection                                                                                                            | <div style="text-align: center;">SW6</div> <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">ON</div> </div> |                     |                             |
|                |        | 2    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 3    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 4    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 5    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 6    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 7    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                |        | 8    |                                                                                                                            |                                                                                                                                              |                     |                             |
|                | SW9    | 1    | LEV opening setting function for stopping unit during heating operation                                                    | Changed                                                                                                                                      | Normal              | Always                      |
|                |        | 2    | Switching function of defrosting prohibited time                                                                           | 60 minutes                                                                                                                                   | 30 minutes (Normal) | Always                      |
|                |        | 3    | Switching the Input Current Limit Level                                                                                    | 3 A down                                                                                                                                     | Normal              | Before turning the power on |
|                |        | 4    | During the FAN or COOL mode, and thermo - OFF in heating operation, set the opening of liner expansion valve on branch box | Active                                                                                                                                       | Inactive            | While unit stopping         |

**PAC-AKA51BC, PAC-AKA31BC**

| Type of Switch | Switch | No.   | Function        | Setting                                   |
|----------------|--------|-------|-----------------|-------------------------------------------|
| Dip switch     | SW1    | 1 - 8 | Model selection | <div style="text-align: center;">ON</div> |

**(2) Function of connector MXZ-8B48NA MXZ-8B48NAR1**

| Types     | Connector | Function                           | Action by Pin short operation |               | Effective timing     |
|-----------|-----------|------------------------------------|-------------------------------|---------------|----------------------|
|           |           |                                    | Pin 1-2 Short                 | Pin 2-3 Short |                      |
| Connector | CN31      | LEV opening function (at start-up) | Open a little bit             | Normal        | When power supply ON |