

AIR CONDITIONER  
**Ceiling type**

# DESIGN & TECHNICAL MANUAL

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INDOOR



AB\*G30LRTE  
AB\*G36LRTE

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OUTDOOR



AO\*G30LETL  
AO\*G36LETL

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**FUJITSU GENERAL LIMITED**

# 1. INDOOR UNIT

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**CEILING TYPE :**

**AB\*G30LRTE**

**AB\*G36LRTE**

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## 1. INDOOR UNIT

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# 1. FEATURES

## ■ MODEL

AB\*G30LRTE / AO\*G30LETL

AB\*G36LRTE / AO\*G36LETL



## ■ FEATURES

### ● Energy efficiency class

|         | MODEL      |            |
|---------|------------|------------|
|         | AB*G30LRTE | AB*G36LRTE |
| Cooling | A++        | A+         |
| Heating | A+         | A+         |

### ● Quiet operation

Air flow mode can be set in 4 steps and more detailed air flow setting is possible.

30 type: 32 dB / 36 type: 32 dB at operation in the Quiet mode.

### ● Filter sign

Dirtying of filter is detected by air conditioner operating time and the user is informed.

### ● Economy operation

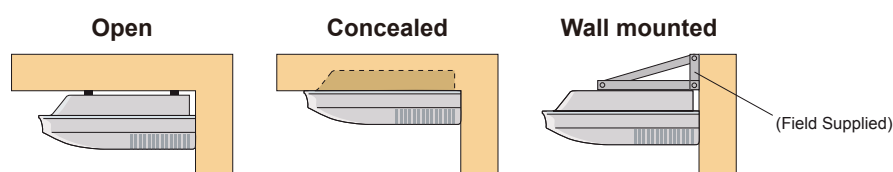
The power consumption can be reduced.

### ● Wired/wireless simultaneous use possible

Wired remote controller and wireless remote controller can be simultaneously used.

### ● Flexible installation

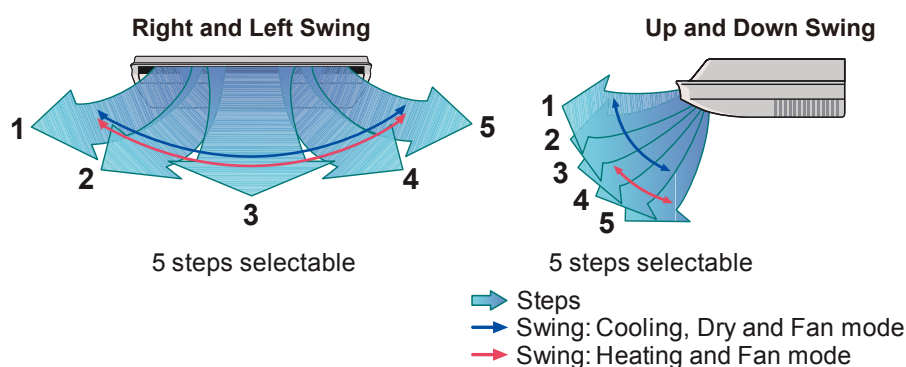
A high installation of the construction of the ceiling and degree of freedom corresponding to height is possible.



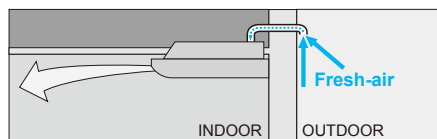
### ● Double auto swing

Combination of up/down and right/left air direction swing allows three-dimensional air direction control.

Since up/down air direction flaps operate automatically, according to the operating mode of the unit, it is possible to set the air direction based on the operating mode.



## ● Fresh-air intake



## ■ FUNCTION SETTINGS

### ● Ceiling switching function (standard/high ceiling)

Also delivers air to high ceilings by selecting the mode and raising the air flow according to the height of the ceiling.

Standard ... Operates at normal air flow.

Mode 1 ... Air flow becomes greater than normal.

### ● Auto restart

The units restart automatically when the current was returned even when there was a power interruption during operation.

### ● Room temperature sensor switching

Switches from room temperature judgment by room temperature sensor attached to indoor unit body to room temperature judgment by room temperature sensor attached to wired remote controller.

### ● Cooling room temperature correction

### ● Heating room temperature correction

## 2. WIRELESS REMOTE CONTROLLER

### ■ FEATURES



- \* 4 mode timer setup available (ON / OFF / PROGRAM / SLEEP).
- \* Four kinds of timers. Easy operation.
- \* Easy to change signal code (max. 4 units) by button operation.

#### ● Simple function setting

Setting of the air conditioner selection function is performed by remote controller.

#### ● Built-in timers

Select from four different timer programs (On/Off/Program/Sleep).

#### ● Program timer

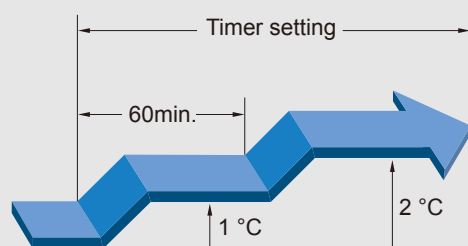
The program timer operates the ON and OFF timer once within a 24 hour period.

#### ● Sleep timer

The sleep timer function automatically corrects the temperature thermostat setting according to the time setting to prevent excessive cooling and heating while sleeping.

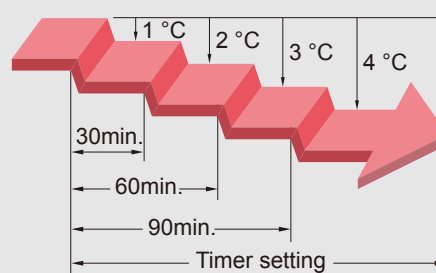
##### Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises 1°C every hour. The set temperature can rise up to a maximum of 2°C.

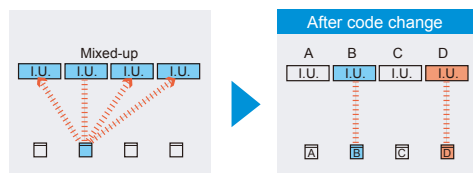


##### Heating operation

When the sleep timer is set, the set temperature automatically drops 1°C every 30 minutes. The set temperature can drop to a maximum of 4°C.



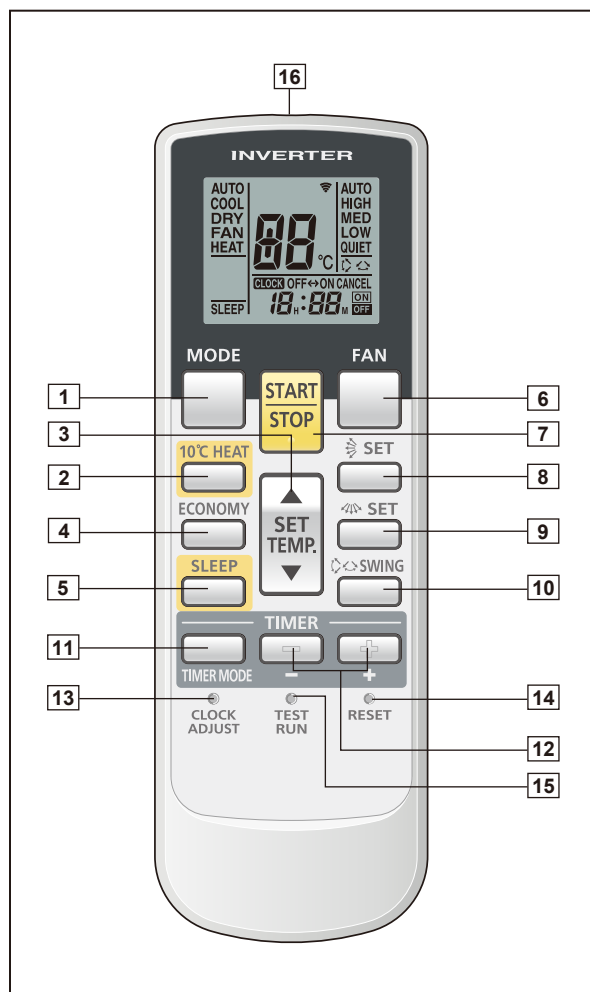
#### ● Switching remote controller signal code



- Code selector switch eliminates unit being wrongly switched.  
(Up to 4 codes can be set.)

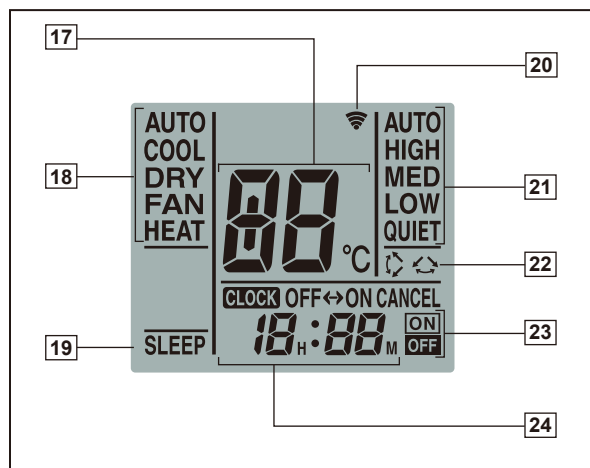
\*I.U.=Indoor unit

## FUNCTIONS



- 1 **MODE button**  
Selects the operating mode (AUTO, COOL, DRY, FAN, HEAT). / Start / end R.C. signal code change. (Max 4 types)
- 2 **10°C HEAT button**
- 3 **SET TEMP. button (▲ / ▼)**  
Sets the indoor temp. / Sets R.C. signal code.
- 4 **ECONOMY button**
- 5 **SLEEP button**  
Pressed to select sleep timer.
- 6 **FAN button**  
Selects the fan speed (AUTO, HIGH, MED, LOW, QUIET).
- 7 **START/STOP button**  
Pressed to start and stop operation.
- 8 **SET button (Vertical)**  
Air flow direction vertical set button.
- 9 **SET button (Horizontal)**  
Air flow direction horizontal set button.
- 10 **SWING button**  
Air flow direction swing button.
- 11 **TIMER MODE button**  
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)
- 12 **TIMER SET (⊕ / ⊖) button**  
Sets the current time and on-off time.
- 13 **CLOCK ADJUST button**  
Sets the current time.
- 14 **RESET button**  
Used when replacing batteries.
- 15 **TEST RUN button**  
Used when testing the air conditioner after installation.

Display panel



- 16 **Signal transmitter**
- 17 **Temperature set display**
- 18 **Operating mode display**
- 19 **Sleep display**
- 20 **Transmit indicator**
- 21 **Fan speed display**
- 22 **Swing display**
- 23 **Timer mode display**
- 24 **Clock display**

Note: Functions will be different due to type of indoor unit.  
For details, please see operation manual.

## SPECIFICATION

|           |                |                    |
|-----------|----------------|--------------------|
| SIZE      | (H × W × D mm) | 170 × 56 × 19      |
| WEIGHT    | (g)            | 85 (w/o batteries) |
| ACCESSORY |                | Holder             |

### 3. SPECIFICATIONS

| Type                        |                      |                        |               |                             | CEILING MODEL                                   |            |  |
|-----------------------------|----------------------|------------------------|---------------|-----------------------------|-------------------------------------------------|------------|--|
|                             |                      |                        |               |                             | INVERTER HEATPUMP                               |            |  |
| Model name                  |                      |                        |               |                             | AB*G30LRTE                                      | AB*G36LRTE |  |
| Power source                |                      |                        |               |                             | 230V~ 50Hz                                      |            |  |
| Available voltage range     |                      |                        |               |                             | 198-264V~ 50Hz                                  |            |  |
| Capacity                    | Cooling              | Rated                  | kW            | 8.50                        | 9.40                                            |            |  |
|                             |                      |                        | Btu/h         | 29000                       | 32100                                           |            |  |
|                             |                      | Min.-Max.              | kW            | 2.80 -10.00                 | 2.80 -11.20                                     |            |  |
|                             |                      |                        | Btu/h         | 9500 -34100                 | 9500 -38200                                     |            |  |
|                             | Heating              | Rated                  | kW            | 10.00                       | 11.20                                           |            |  |
|                             |                      |                        | Btu/h         | 34100                       | 38200                                           |            |  |
|                             |                      | Min.-Max.              | kW            | 2.70 -11.20                 | 2.70 -12.70                                     |            |  |
|                             |                      |                        | Btu/h         | 9200 -38200                 | 9200 -43300                                     |            |  |
| Input power                 | Cooling              | Rated                  | kW            | 2.65                        | 2.93                                            |            |  |
|                             |                      | Max.                   |               | 3.88                        | 4.22                                            |            |  |
|                             | Heating              | Rated                  |               | 2.77                        | 3.02                                            |            |  |
|                             |                      | Max.                   |               | 3.88                        | 4.56                                            |            |  |
| Current                     | Cooling              | Rated                  | A             | 11.6                        | 12.8                                            |            |  |
|                             | Heating              | Rated                  |               | 12.2                        | 13.2                                            |            |  |
| EER                         |                      | Cooling                | kW/kW         | 3.21                        | 3.21                                            |            |  |
| COP                         |                      | Heating                |               | 3.61                        | 3.71                                            |            |  |
| Moisture removal            |                      |                        | l/h (pints/h) | 2.5(5.3)                    | 3.0 (6.3)                                       |            |  |
| Maximum operating current * |                      | Cooling                | Max.          | 17.0                        | 18.5                                            |            |  |
|                             |                      | Heating                |               | 17.0                        | 20.0                                            |            |  |
| Fan                         | Airflow rate         | Cooling                | High          | m³/h                        | 1660                                            | 1900       |  |
|                             |                      |                        | Med           |                             | 1500                                            |            |  |
|                             |                      |                        | Low           |                             | 1200                                            |            |  |
|                             |                      |                        | Quiet         |                             | 1000                                            |            |  |
|                             |                      | Heating                | High          |                             | 1660                                            | 1900       |  |
|                             |                      |                        | Med           |                             | 1500                                            |            |  |
|                             |                      |                        | Low           |                             | 1200                                            |            |  |
|                             |                      |                        | Quiet         |                             | 1000                                            |            |  |
|                             | Type × Q'ty          |                        |               | Sirocco × 4                 |                                                 |            |  |
|                             | Motor output         |                        | W             | 120                         |                                                 |            |  |
|                             | Sound pressure level |                        | Cooling       | High                        | 45                                              | 47         |  |
|                             |                      |                        |               | Med                         | 43                                              |            |  |
| Low                         |                      |                        |               | 37                          |                                                 |            |  |
| Quiet                       |                      |                        |               | 32                          |                                                 |            |  |
| Heating                     |                      |                        | High          | 45                          | 47                                              |            |  |
|                             |                      |                        | Med           | 43                          |                                                 |            |  |
|                             |                      |                        | Low           | 37                          |                                                 |            |  |
|                             |                      |                        | Quiet         | 32                          |                                                 |            |  |
| Heat exchanger type         |                      | Dimensions (H × W × D) |               | mm                          | 252 × 1350 × 39.9                               |            |  |
|                             |                      | Fin pitch              |               |                             | 1.45                                            |            |  |
|                             |                      | Rows x Stages          |               |                             | 3 × 12                                          |            |  |
|                             |                      | Pipe type              |               |                             | Copper                                          |            |  |
|                             |                      | Fin type               |               |                             | Aluminium                                       |            |  |
| Enclosure                   |                      | Material               |               |                             | ABS                                             |            |  |
|                             |                      | Colour                 |               |                             | WHITE<br>Approximate colour of MUNSELL N 9.25 / |            |  |
| Dimensions<br>(H×W×D)       | Net                  |                        | mm            | 240 × 1660 × 700            |                                                 |            |  |
|                             | Gross                |                        |               | 318 × 1800 × 790            |                                                 |            |  |
| Weight                      | Net                  |                        |               | kg                          | 46                                              |            |  |
|                             | Gross                |                        |               |                             | 58                                              |            |  |
| Connection pipe             | Size                 | Liquid                 | mm            | Ø 9.52 (Ø 3 / 8 in.)        |                                                 |            |  |
|                             |                      | Gas                    |               | Ø15.88 (Ø 5 / 8 in.)        |                                                 |            |  |
|                             | Method               |                        |               | Flare                       |                                                 |            |  |
| Operation range             |                      | Cooling                | °C            | 18 to 32                    |                                                 |            |  |
|                             |                      |                        | %RH           | 80 or less                  |                                                 |            |  |
|                             |                      | Heating                | °C            | 16 to 30                    |                                                 |            |  |
| Remote controller type      |                      |                        |               |                             | Wireless                                        |            |  |
| Drain port                  | Material             |                        |               | ABS                         |                                                 |            |  |
|                             | Size                 |                        | mm            | Ø 22.0 (I.D.), Ø25.6 (O.D.) |                                                 |            |  |

**Note :**

Specifications are based on the following conditions.

Cooling : Indoor temperature of 27 °CDB / 19 °CWB.and outdoor temperature of 35 °CDB/24 °CWB.

Heating : Indoor temperature of 20 °CDB / 15 °CWB.and outdoor temperature of 7 °CDB/6 °CWB.

Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

The protective function might work when using outside the operation range.

\*The maximum current is the maximum value when operated with in the operation range.

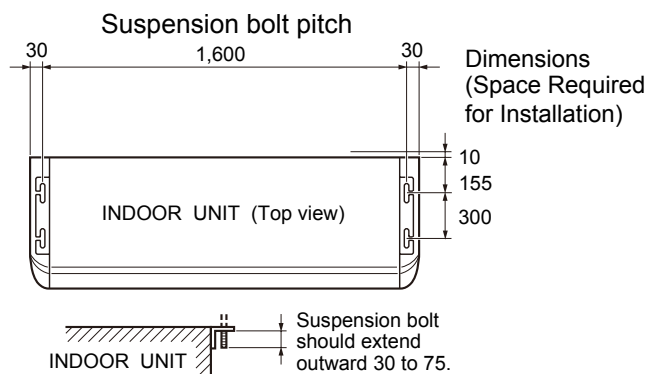
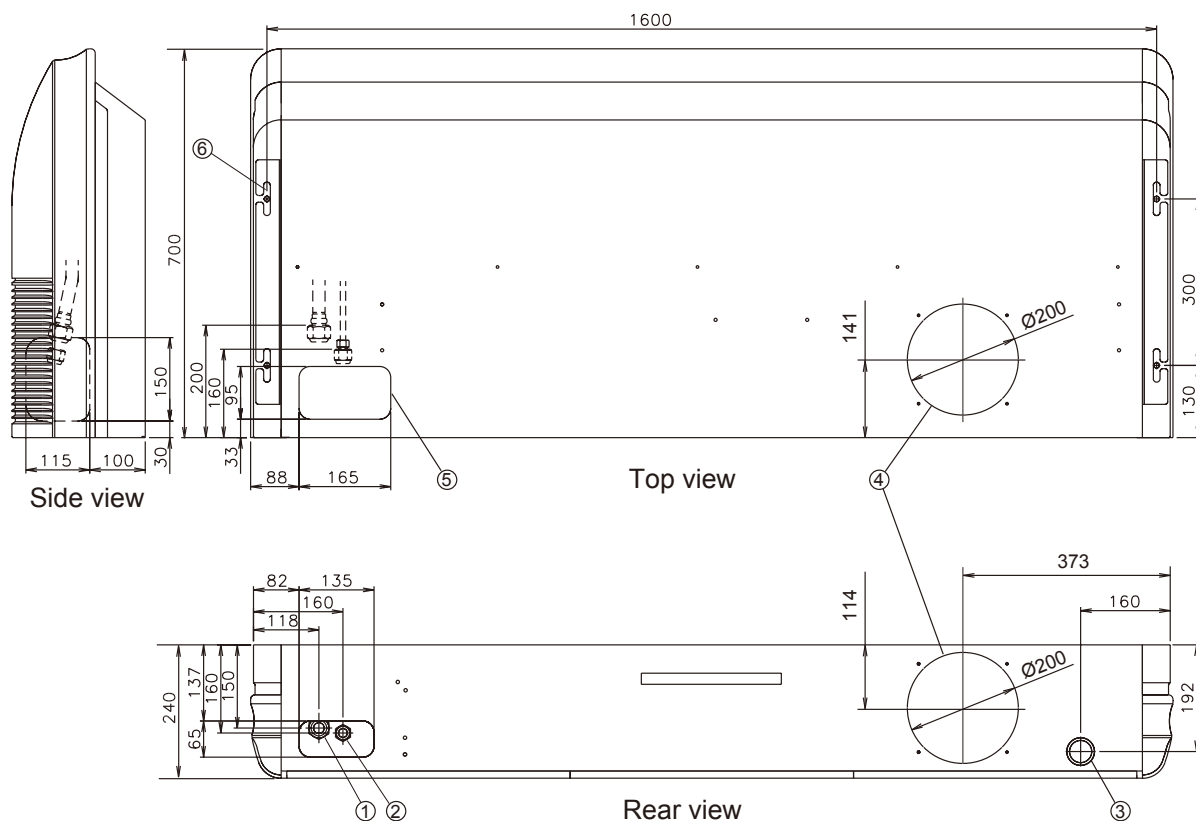
Drain hose should be field supplied.

|                           |  |                   |         |            |    |            |    |  |
|---------------------------|--|-------------------|---------|------------|----|------------|----|--|
| Model name                |  |                   |         | AB*G30LRTE |    | AB*G36LRTE |    |  |
| Energy efficiency class   |  | Cooling           |         | A++        |    | A+         |    |  |
|                           |  | Heating (Average) |         | A+         |    | A+         |    |  |
| Pdesign                   |  | Cooling           | kW      | 8.5        |    | 9.4        |    |  |
|                           |  | Heating (Average) |         | 8.0        |    | 8.7        |    |  |
| SEER                      |  | Cooling           | kWh/kWh | 6.10       |    | 6.00       |    |  |
| SCOP                      |  | Heating (Average) |         | 4.20       |    | 4.10       |    |  |
| Annual energy consumption |  | QCE               |         | 487        |    | 548        |    |  |
|                           |  | QHE (Average)     |         | 2662       |    | 2965       |    |  |
| Sound power level         |  | Cooling           | High    | dB (A)     | 57 |            | 60 |  |
|                           |  | Heating           |         |            | 60 |            | 61 |  |

## 4. DIMENSIONS

### ■ MODEL: AB\*G30LRTE, AB\*G36LRTE

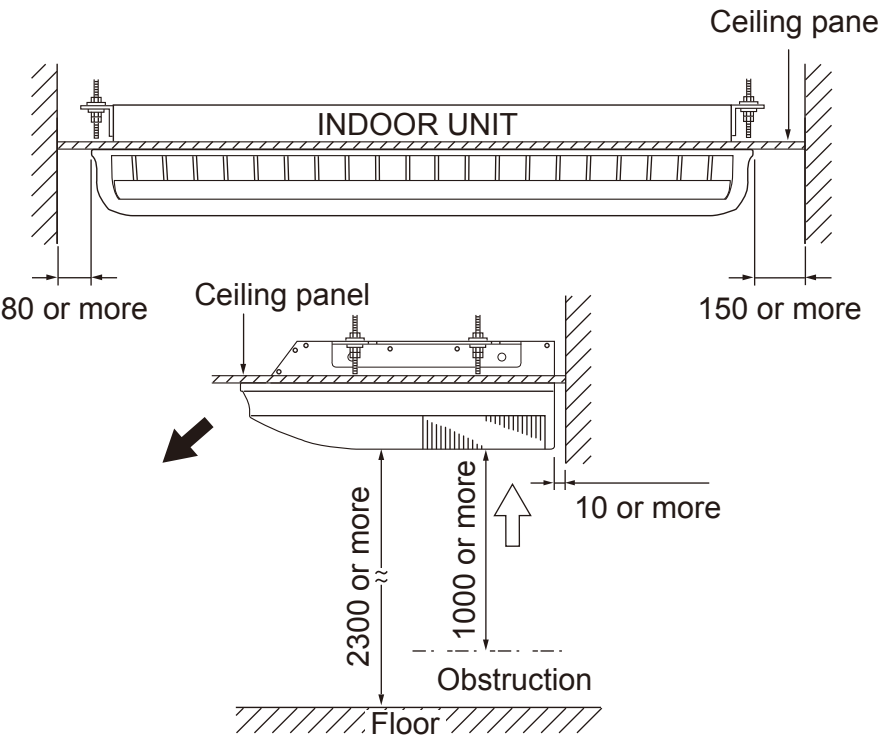
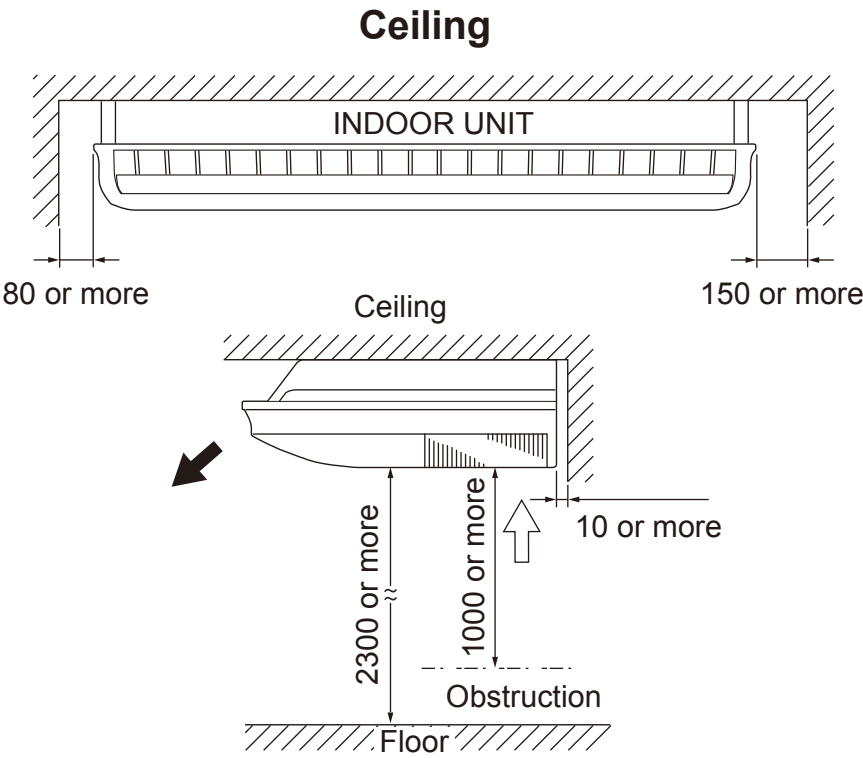
(Unit : mm)



- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection
- ④ Knock out hole for fresh air
- ⑤ Knock out hole for refrigerant piping
- ⑥ Hole for lifting bolt (Use M10 screw bolt)

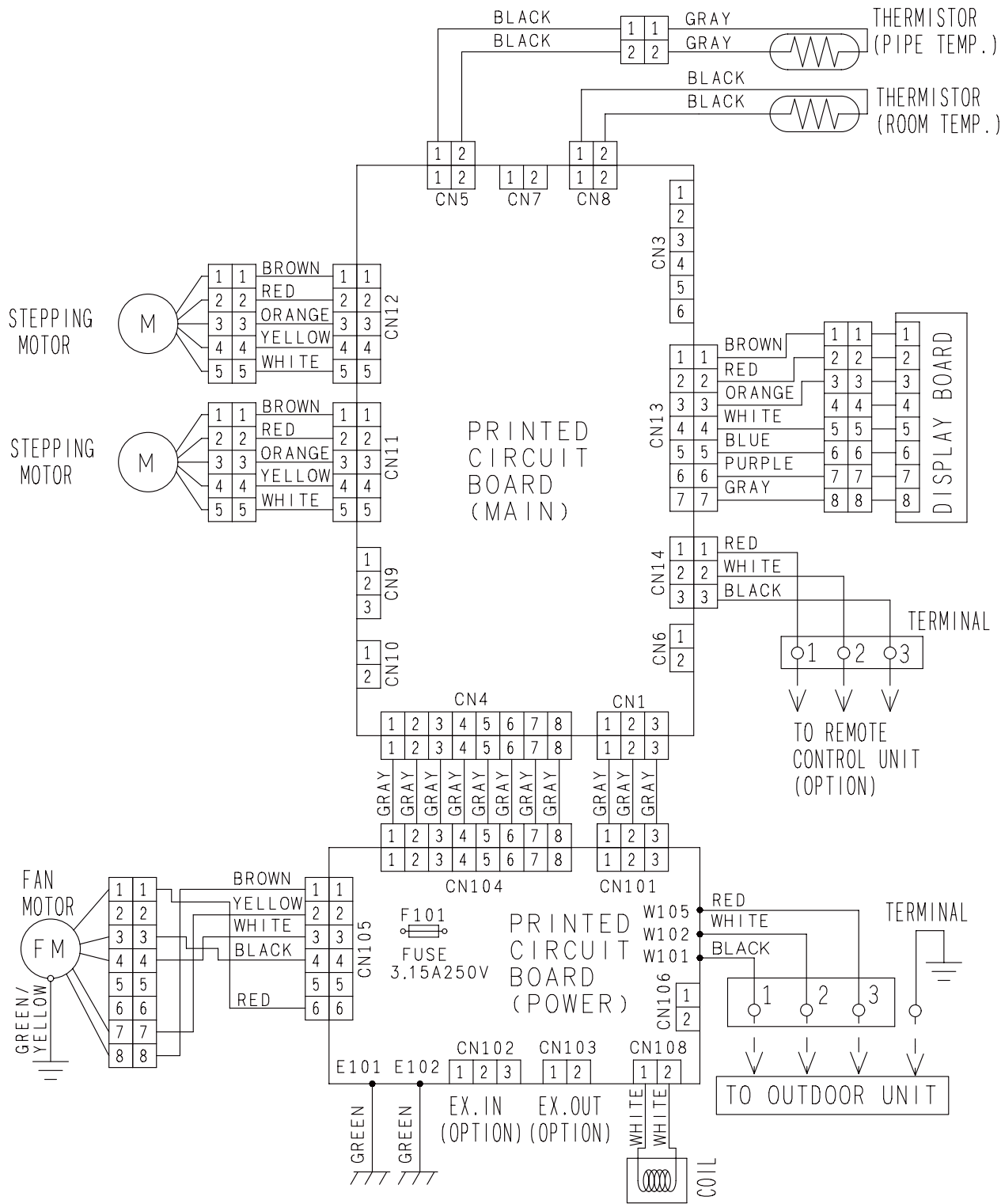
## ■ INSTALLATION PLACE

(Unit : mm)



# 5. WIRING DIAGRAMS

## ■ MODEL: AB\*G30LRTE, AB\*G36LRTE



## 6. CAPACITY TABLE

### 6-1. COOLING CAPACITY

This table is created using the maximum capacity.

#### ■ MODEL: AB\*G30LRTE

|     |      |
|-----|------|
| AFR | 27.7 |
|-----|------|

|                     |      | Indoor temperature |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |
|---------------------|------|--------------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
|                     |      | 18                 |      |      | 21    |      |      | 23    |      |      | 25    |      |      | 27    |      |      | 29    |      |      | 32    |      |      |
|                     |      | °CDB               |      |      | °CWB  |      |      | 12    |      |      | 15    |      |      | 16    |      |      | 18    |      |      | 19    |      |      |
| Outdoor temperature | °CDB | TC                 | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   |
|                     | -15  | 8.60               | 6.53 | 1.32 | 9.59  | 6.57 | 1.35 | 9.91  | 7.14 | 1.35 | 10.57 | 7.17 | 1.37 | 10.89 | 7.74 | 1.37 | 11.55 | 7.71 | 1.39 | 12.20 | 8.21 | 1.40 |
|                     | -10  | 8.38               | 6.44 | 1.71 | 9.33  | 6.48 | 1.73 | 9.65  | 7.05 | 1.74 | 10.28 | 7.07 | 1.76 | 10.60 | 7.64 | 1.77 | 11.24 | 7.61 | 1.79 | 11.87 | 8.10 | 1.80 |
|                     | 0    | 7.96               | 6.33 | 2.19 | 8.87  | 6.37 | 2.23 | 9.17  | 6.92 | 2.24 | 9.77  | 6.94 | 2.26 | 10.08 | 7.50 | 2.27 | 10.68 | 7.47 | 2.29 | 11.29 | 7.96 | 2.32 |
|                     | 5    | 7.85               | 6.17 | 2.24 | 8.75  | 6.21 | 2.28 | 9.04  | 6.75 | 2.29 | 9.64  | 6.77 | 2.31 | 9.94  | 7.32 | 2.33 | 10.54 | 7.29 | 2.35 | 11.13 | 7.76 | 2.37 |
|                     | 10   | 7.82               | 6.27 | 2.27 | 8.71  | 6.31 | 2.30 | 9.00  | 6.86 | 2.31 | 9.60  | 6.88 | 2.34 | 9.89  | 7.43 | 2.35 | 10.49 | 7.40 | 2.37 | 11.08 | 7.89 | 2.39 |
|                     | 15   | 8.20               | 6.31 | 2.47 | 9.13  | 6.35 | 2.51 | 9.44  | 6.90 | 2.52 | 10.07 | 6.92 | 2.54 | 10.38 | 7.48 | 2.56 | 11.00 | 7.45 | 2.58 | 11.62 | 7.93 | 2.61 |
|                     | 20   | 9.45               | 6.90 | 3.00 | 10.53 | 6.94 | 3.05 | 10.89 | 7.55 | 3.06 | 11.61 | 7.57 | 3.09 | 11.97 | 8.18 | 3.11 | 12.68 | 8.14 | 3.14 | 13.40 | 8.67 | 3.17 |
|                     | 25   | 9.12               | 6.77 | 3.34 | 10.16 | 6.81 | 3.39 | 10.51 | 7.40 | 3.41 | 11.20 | 7.42 | 3.44 | 11.55 | 8.02 | 3.46 | 12.24 | 7.99 | 3.49 | 12.93 | 8.51 | 3.53 |
|                     | 30   | 8.71               | 6.67 | 3.35 | 9.70  | 6.71 | 3.40 | 10.03 | 7.30 | 3.42 | 10.69 | 7.32 | 3.45 | 11.02 | 7.91 | 3.47 | 11.68 | 7.88 | 3.51 | 12.34 | 8.39 | 3.54 |
|                     | 35   | 7.90               | 6.31 | 3.36 | 8.80  | 6.34 | 3.41 | 9.10  | 6.90 | 3.43 | 9.70  | 6.92 | 3.47 | 10.00 | 7.47 | 3.48 | 10.60 | 7.44 | 3.52 | 11.20 | 7.93 | 3.55 |
|                     | 40   | 6.03               | 5.20 | 2.98 | 6.72  | 5.23 | 3.03 | 6.95  | 5.68 | 3.04 | 7.41  | 5.70 | 3.07 | 7.63  | 6.16 | 3.09 | 8.09  | 6.13 | 3.12 | 8.55  | 6.53 | 3.15 |
|                     | 46   | 5.39               | 5.10 | 2.92 | 6.01  | 5.13 | 2.97 | 6.21  | 5.58 | 2.99 | 6.62  | 5.59 | 3.02 | 6.82  | 6.04 | 3.03 | 7.23  | 6.02 | 3.06 | 7.64  | 6.41 | 3.09 |

#### ■ MODEL: AB\*G36LRTE

|     |      |
|-----|------|
| AFR | 31.7 |
|-----|------|

|                     |      | Indoor temperature |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |
|---------------------|------|--------------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
|                     |      | 18                 |      |      | 21    |      |      | 23    |      |      | 25    |      |      | 27    |      |      | 29    |      |      | 32    |      |      |
|                     |      | °CDB               |      |      | °CWB  |      |      | 12    |      |      | 15    |      |      | 16    |      |      | 18    |      |      | 19    |      |      |
| Outdoor temperature | °CDB | TC                 | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   | TC    | SHC  | IP   |
|                     | -15  | 8.73               | 6.97 | 1.32 | 9.72  | 7.02 | 1.34 | 10.05 | 7.63 | 1.35 | 10.72 | 7.65 | 1.36 | 11.05 | 8.26 | 1.37 | 11.71 | 8.23 | 1.39 | 12.37 | 8.77 | 1.40 |
|                     | -10  | 8.49               | 6.76 | 1.71 | 9.46  | 6.80 | 1.74 | 9.78  | 7.39 | 1.75 | 10.43 | 7.41 | 1.77 | 10.75 | 8.01 | 1.78 | 11.40 | 7.97 | 1.79 | 12.04 | 8.49 | 1.81 |
|                     | 0    | 8.15               | 6.72 | 2.20 | 9.08  | 6.76 | 2.24 | 9.39  | 7.35 | 2.25 | 10.01 | 7.37 | 2.27 | 10.31 | 7.96 | 2.28 | 10.93 | 7.93 | 2.31 | 11.55 | 8.45 | 2.33 |
|                     | 5    | 8.04               | 6.54 | 2.24 | 8.95  | 6.58 | 2.28 | 9.26  | 7.16 | 2.29 | 9.87  | 7.18 | 2.31 | 10.17 | 7.75 | 2.33 | 10.78 | 7.72 | 2.35 | 11.39 | 8.23 | 2.37 |
|                     | 10   | 8.01               | 6.65 | 2.26 | 8.92  | 6.69 | 2.30 | 9.22  | 7.28 | 2.31 | 9.83  | 7.30 | 2.33 | 10.13 | 7.88 | 2.35 | 10.74 | 7.85 | 2.37 | 11.35 | 8.37 | 2.39 |
|                     | 15   | 8.43               | 6.70 | 2.47 | 9.39  | 6.74 | 2.50 | 9.71  | 7.33 | 2.52 | 10.35 | 7.35 | 2.54 | 10.67 | 7.94 | 2.56 | 11.31 | 7.90 | 2.58 | 11.95 | 8.42 | 2.61 |
|                     | 20   | 9.82               | 7.34 | 3.00 | 10.94 | 7.38 | 3.05 | 11.31 | 8.03 | 3.06 | 12.06 | 8.05 | 3.10 | 12.43 | 8.69 | 3.11 | 13.18 | 8.66 | 3.14 | 13.92 | 9.23 | 3.17 |
|                     | 25   | 9.38               | 7.13 | 3.34 | 10.45 | 7.18 | 3.39 | 10.80 | 7.80 | 3.41 | 11.52 | 7.83 | 3.44 | 11.87 | 8.45 | 3.46 | 12.59 | 8.42 | 3.49 | 13.30 | 8.97 | 3.53 |
|                     | 30   | 9.20               | 7.05 | 4.06 | 10.25 | 7.09 | 4.13 | 10.60 | 7.71 | 4.15 | 11.30 | 7.74 | 4.19 | 11.65 | 8.36 | 4.21 | 12.35 | 8.32 | 4.25 | 13.05 | 8.86 | 4.30 |
|                     | 35   | 8.85               | 7.03 | 4.05 | 9.86  | 7.08 | 4.11 | 10.19 | 7.69 | 4.13 | 10.86 | 7.72 | 4.17 | 11.20 | 8.33 | 4.19 | 11.87 | 8.30 | 4.24 | 12.54 | 8.84 | 4.28 |
|                     | 40   | 6.61               | 5.89 | 3.07 | 7.37  | 5.93 | 3.12 | 7.62  | 6.44 | 3.14 | 8.12  | 6.46 | 3.17 | 8.37  | 6.98 | 3.18 | 8.87  | 6.95 | 3.22 | 9.38  | 7.41 | 3.25 |
|                     | 46   | 5.95               | 5.91 | 2.95 | 6.62  | 5.94 | 2.99 | 6.85  | 6.46 | 3.01 | 7.30  | 6.48 | 3.04 | 7.53  | 7.00 | 3.05 | 7.98  | 6.97 | 3.09 | 8.43  | 7.42 | 3.12 |

AFR : Air Flow Rate (m<sup>3</sup>/min)  
TC : Total Capacity (kW)  
SHC : Sensible Heat Capacity (kW)  
IP : Input Power (kW)

## 6-2. HEATING CAPACITY

This table is created using the maximum capacity.

### ■ MODEL: AB\*G30LRTE

|     |      |
|-----|------|
| AFR | 27.7 |
|-----|------|

|                     |      | Indoor temperature |       |      |       |      |       |      |       |      |       |      |
|---------------------|------|--------------------|-------|------|-------|------|-------|------|-------|------|-------|------|
|                     |      | °CDB               | 16    |      | 18    |      | 20    |      | 22    |      | 24    |      |
| Outdoor temperature | °CDB | °CWB               | TC    | IP   | TC    | IP   | TC    | IP   | TC    | IP   | TC    | IP   |
|                     | -15  | -16                | 8.22  | 3.38 | 8.02  | 3.45 | 7.83  | 3.52 | 7.63  | 3.59 | 7.44  | 3.67 |
|                     | -10  | -11                | 8.79  | 3.39 | 8.58  | 3.46 | 8.37  | 3.53 | 8.16  | 3.60 | 7.95  | 3.67 |
|                     | -5   | -7                 | 9.54  | 3.40 | 9.31  | 3.47 | 9.08  | 3.54 | 8.86  | 3.61 | 8.63  | 3.69 |
|                     | 0    | -2                 | 10.11 | 3.41 | 9.87  | 3.48 | 9.63  | 3.55 | 9.39  | 3.62 | 9.15  | 3.69 |
|                     | 5    | 3                  | 11.22 | 3.37 | 10.96 | 3.44 | 10.69 | 3.51 | 10.42 | 3.58 | 10.16 | 3.65 |
|                     | 7    | 6                  | 11.76 | 3.34 | 11.48 | 3.41 | 11.20 | 3.48 | 10.92 | 3.55 | 10.64 | 3.62 |
|                     | 10   | 8                  | 12.12 | 3.27 | 11.83 | 3.34 | 11.54 | 3.40 | 11.25 | 3.47 | 10.97 | 3.54 |
|                     | 15   | 10                 | 10.86 | 2.56 | 10.60 | 2.61 | 10.34 | 2.67 | 10.08 | 2.72 | 9.82  | 2.76 |
|                     | 20   | 15                 | 10.85 | 2.26 | 10.59 | 2.30 | 10.33 | 2.35 | 10.07 | 2.40 | 9.81  | 2.43 |
|                     | 24   | 18                 | 11.31 | 2.27 | 11.04 | 2.31 | 10.77 | 2.36 | 10.50 | 2.41 | 10.23 | 2.45 |

### ■ MODEL: AB\*G36LRTE

|     |      |
|-----|------|
| AFR | 31.7 |
|-----|------|

|                     |      | Indoor temperature |       |      |       |      |       |      |       |      |       |      |
|---------------------|------|--------------------|-------|------|-------|------|-------|------|-------|------|-------|------|
|                     |      | °CDB               | 16    |      | 18    |      | 20    |      | 22    |      | 24    |      |
| Outdoor temperature | °CDB | °CWB               | TC    | IP   | TC    | IP   | TC    | IP   | TC    | IP   | TC    | IP   |
|                     | -15  | -16                | 9.17  | 3.97 | 8.95  | 4.05 | 8.73  | 4.13 | 8.51  | 4.22 | 8.29  | 4.30 |
|                     | -10  | -11                | 9.88  | 4.02 | 9.65  | 4.10 | 9.41  | 4.19 | 9.18  | 4.27 | 8.94  | 4.35 |
|                     | -5   | -7                 | 10.56 | 4.04 | 10.31 | 4.12 | 10.06 | 4.21 | 9.81  | 4.29 | 9.56  | 4.38 |
|                     | 0    | -2                 | 11.81 | 4.06 | 11.53 | 4.15 | 11.25 | 4.23 | 10.97 | 4.32 | 10.69 | 4.40 |
|                     | 5    | 3                  | 12.95 | 3.97 | 12.64 | 4.05 | 12.33 | 4.14 | 12.02 | 4.22 | 11.72 | 4.30 |
|                     | 7    | 6                  | 13.34 | 3.46 | 13.02 | 3.53 | 12.70 | 3.61 | 12.38 | 3.68 | 12.07 | 3.75 |
|                     | 10   | 8                  | 13.75 | 3.34 | 13.42 | 3.41 | 13.09 | 3.47 | 12.77 | 3.54 | 12.44 | 3.61 |
|                     | 15   | 10                 | 12.18 | 2.59 | 11.89 | 2.65 | 11.60 | 2.70 | 11.31 | 2.76 | 11.02 | 2.80 |
|                     | 20   | 15                 | 12.17 | 2.28 | 11.88 | 2.33 | 11.59 | 2.38 | 11.30 | 2.43 | 11.01 | 2.46 |
|                     | 24   | 18                 | 12.71 | 2.26 | 12.41 | 2.31 | 12.10 | 2.36 | 11.80 | 2.40 | 11.50 | 2.44 |

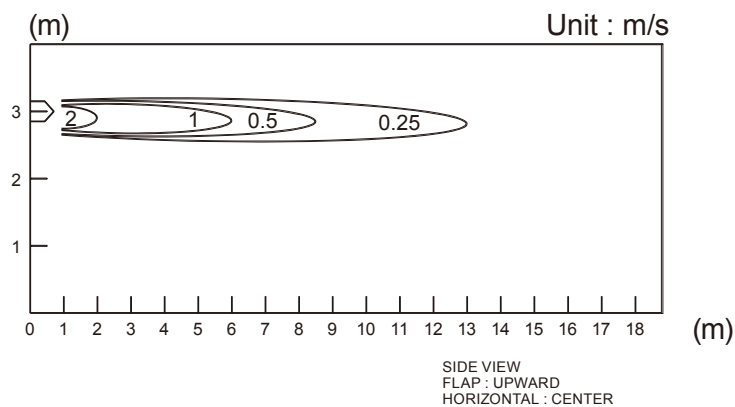
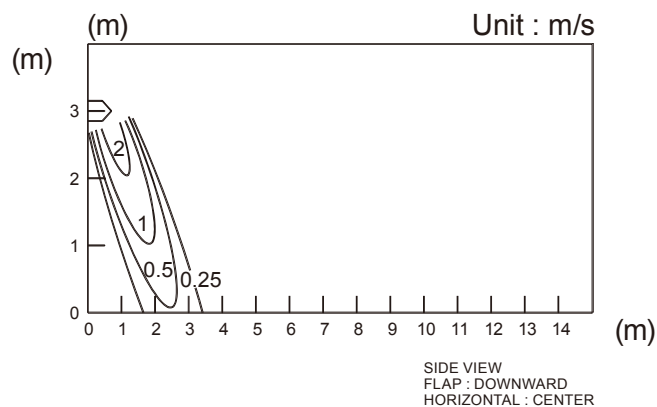
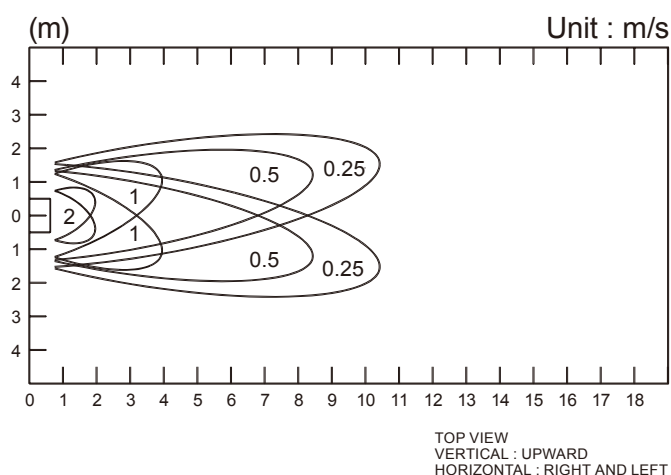
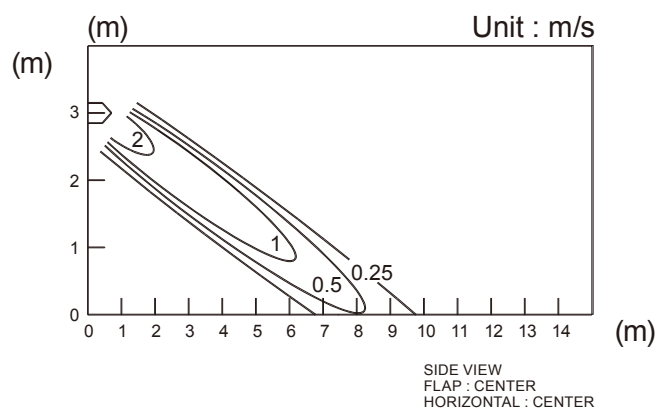
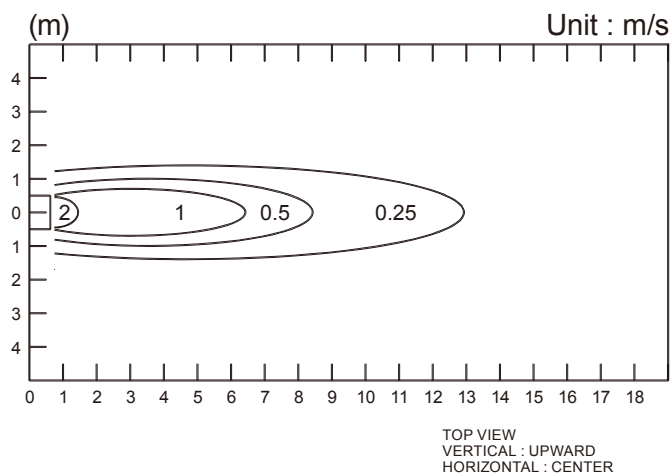
AFR : Air Flow Rate (m<sup>3</sup>/min)  
TC : Total Capacity (kW)  
IP : Input Power (kW)

# 7. FAN PERFORMANCE

## 7-1. AIR VELOCITY DISTRIBUTION

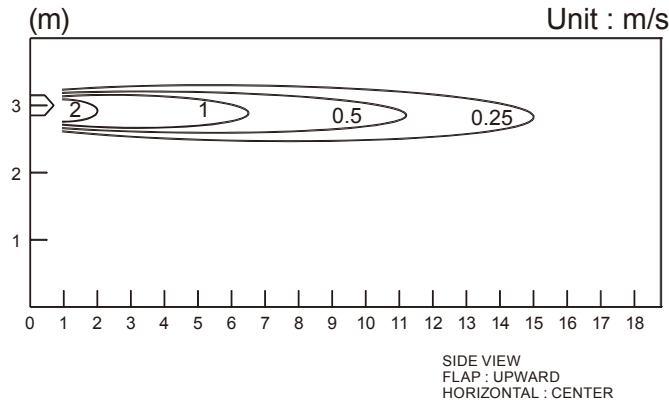
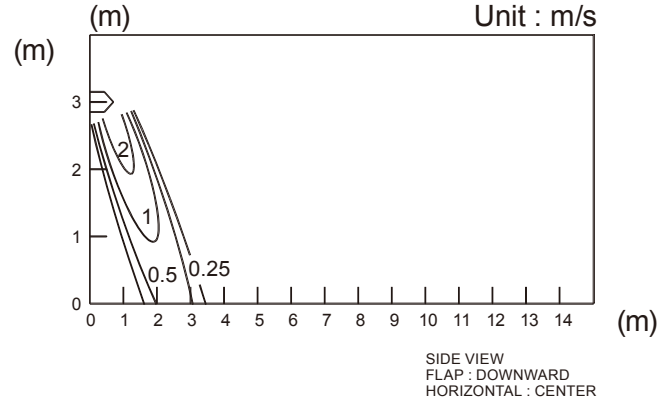
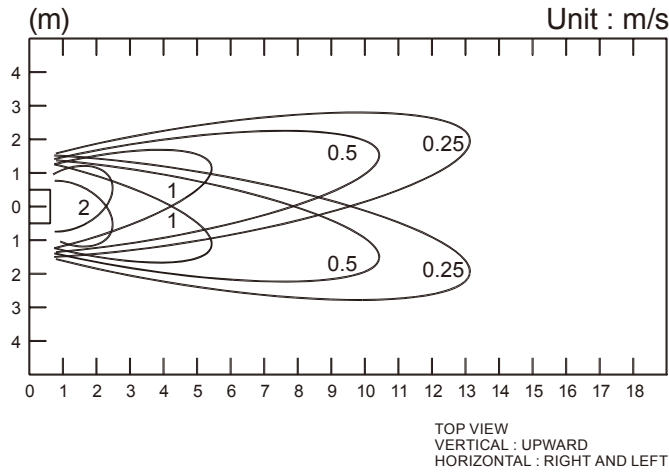
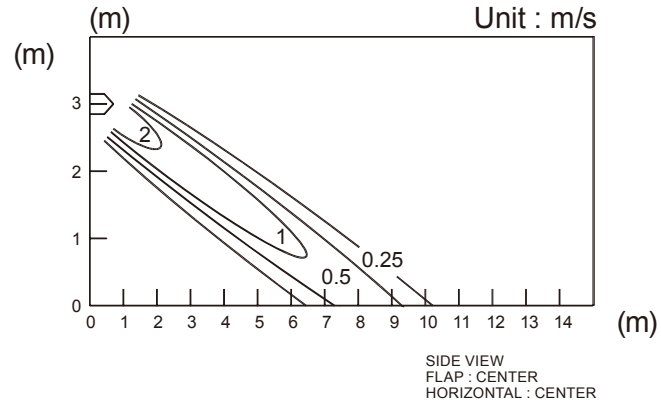
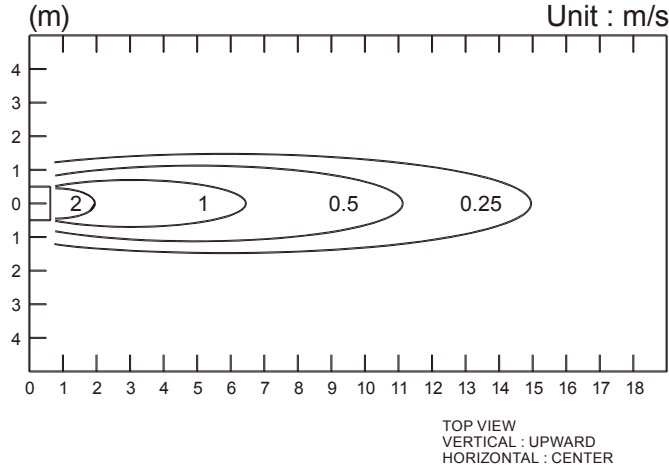
### ■ MODEL: AB\*G30LRTE

Note:  
Condition  
Fan speed : High  
Operation mode : FAN



# MODEL: AB\*G36LRTE

Note:  
Condition  
Fan speed : High  
Operation mode : FAN



## 7-2. AIRFLOW

### ■ MODEL: AB\*G30LRTE

#### ● COOLING

| Fan speed | Number of rotations (r.p.m.) | Airflow           |      |
|-----------|------------------------------|-------------------|------|
| HIGH      | 1000                         | m <sup>3</sup> /h | 1660 |
|           |                              | l/s               | 461  |
|           |                              | CFM               | 977  |
| MED       | 910                          | m <sup>3</sup> /h | 1500 |
|           |                              | l/s               | 417  |
|           |                              | CFM               | 883  |
| LOW       | 750                          | m <sup>3</sup> /h | 1200 |
|           |                              | l/s               | 333  |
|           |                              | CFM               | 706  |
| QUIET     | 650                          | m <sup>3</sup> /h | 1000 |
|           |                              | l/s               | 278  |
|           |                              | CFM               | 589  |

#### ● HEATING

| Fan speed | Number of rotations (r.p.m.) | Airflow           |      |
|-----------|------------------------------|-------------------|------|
| HIGH      | 1000                         | m <sup>3</sup> /h | 1660 |
|           |                              | l/s               | 461  |
|           |                              | CFM               | 977  |
| MED       | 910                          | m <sup>3</sup> /h | 1500 |
|           |                              | l/s               | 417  |
|           |                              | CFM               | 883  |
| LOW       | 750                          | m <sup>3</sup> /h | 1200 |
|           |                              | l/s               | 333  |
|           |                              | CFM               | 706  |
| QUIET     | 650                          | m <sup>3</sup> /h | 1000 |
|           |                              | l/s               | 278  |
|           |                              | CFM               | 589  |

## ■ MODEL: AB\*G36LRTE

### ● COOLING

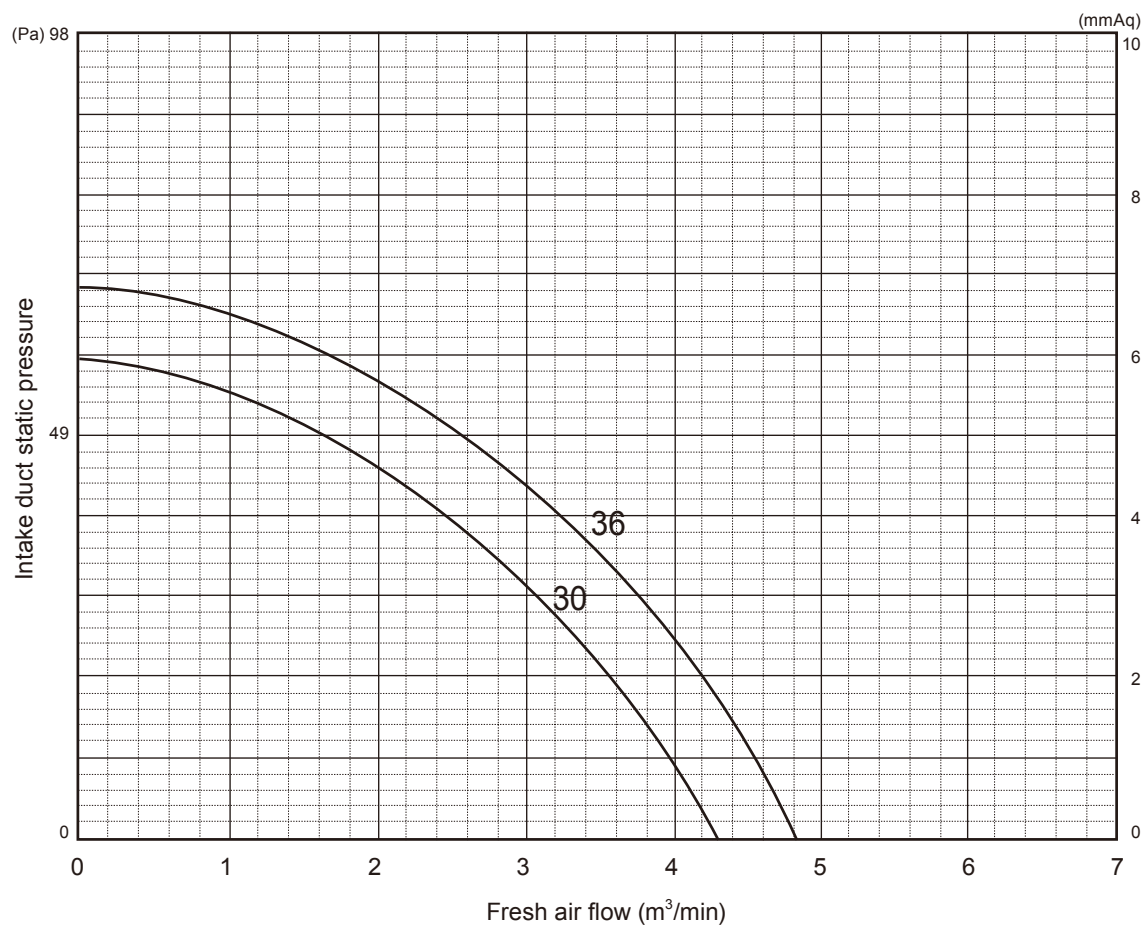
| Fan speed | Number of rotations (r.p.m.) | Airflow           |      |
|-----------|------------------------------|-------------------|------|
| HIGH      | 1100                         | m <sup>3</sup> /h | 1900 |
|           |                              | l/s               | 528  |
|           |                              | CFM               | 1118 |
| MED       | 910                          | m <sup>3</sup> /h | 1500 |
|           |                              | l/s               | 417  |
|           |                              | CFM               | 883  |
| LOW       | 750                          | m <sup>3</sup> /h | 1200 |
|           |                              | l/s               | 333  |
|           |                              | CFM               | 706  |
| QUIET     | 650                          | m <sup>3</sup> /h | 1000 |
|           |                              | l/s               | 278  |
|           |                              | CFM               | 589  |

### ● HEATING

| Fan speed | Number of rotations (r.p.m.) | Airflow           |      |
|-----------|------------------------------|-------------------|------|
| HIGH      | 1100                         | m <sup>3</sup> /h | 1900 |
|           |                              | l/s               | 528  |
|           |                              | CFM               | 1118 |
| MED       | 910                          | m <sup>3</sup> /h | 1500 |
|           |                              | l/s               | 417  |
|           |                              | CFM               | 883  |
| LOW       | 750                          | m <sup>3</sup> /h | 1200 |
|           |                              | l/s               | 333  |
|           |                              | CFM               | 706  |
| QUIET     | 650                          | m <sup>3</sup> /h | 1000 |
|           |                              | l/s               | 278  |
|           |                              | CFM               | 589  |

# 7-3. FRESH AIR CHARACTERISTIC

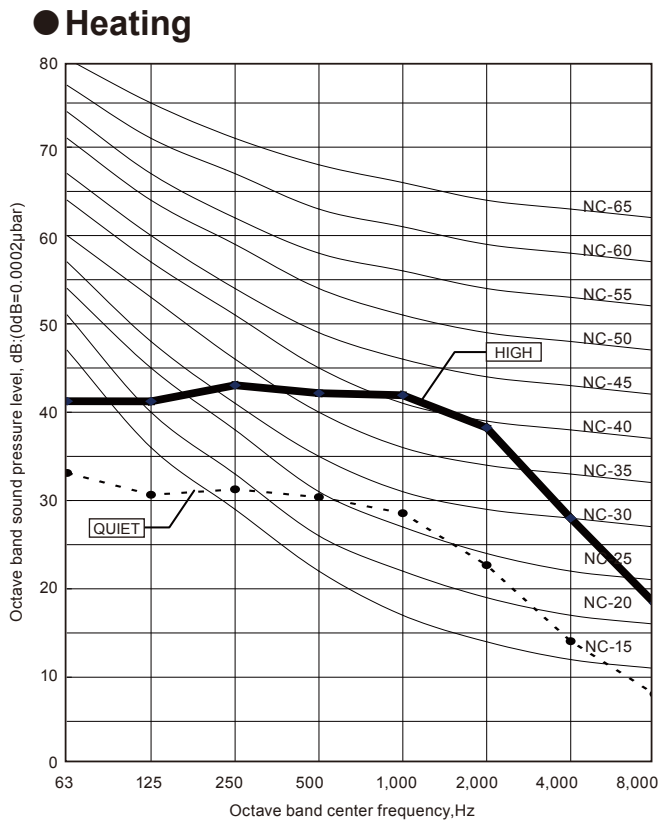
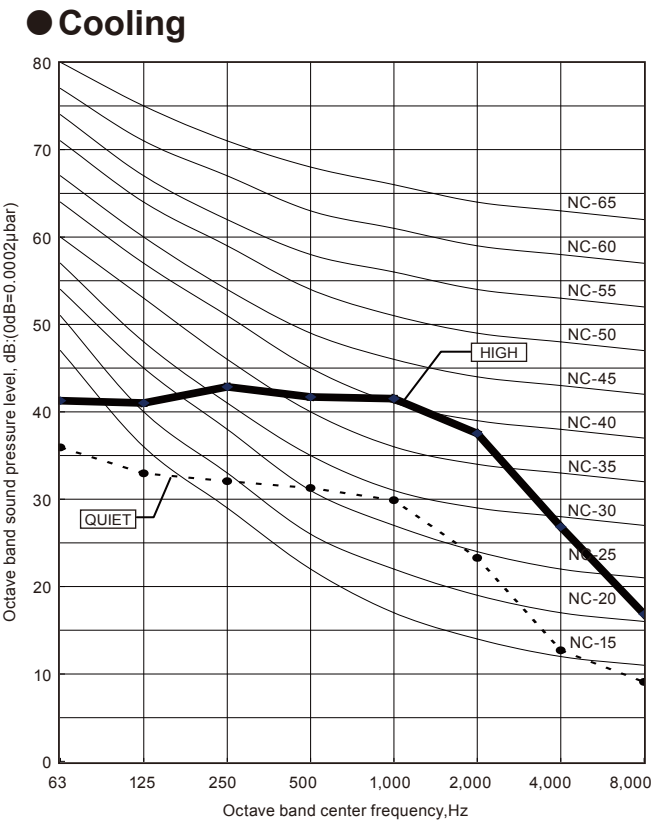
■ MODEL: AB\*G30LRTE, AB\*G36LRTE



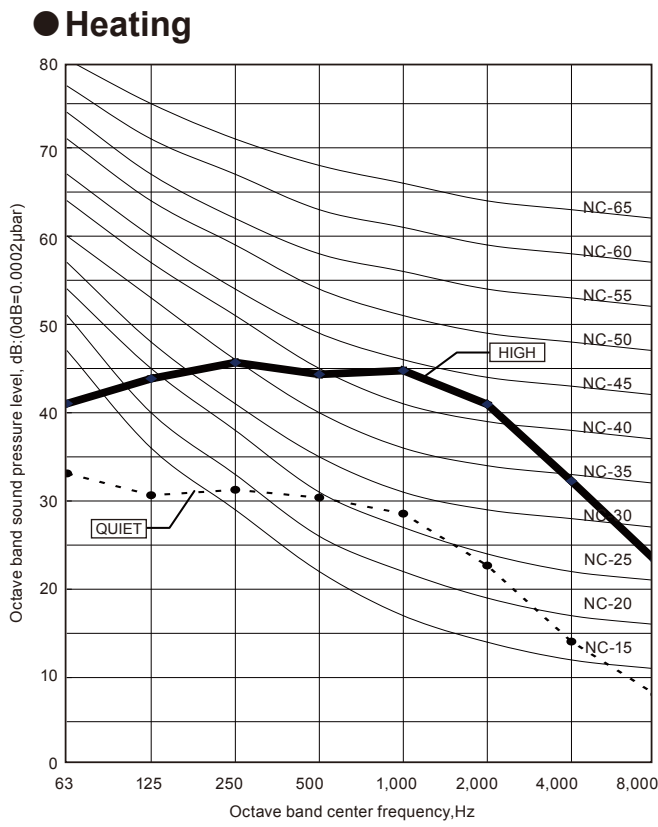
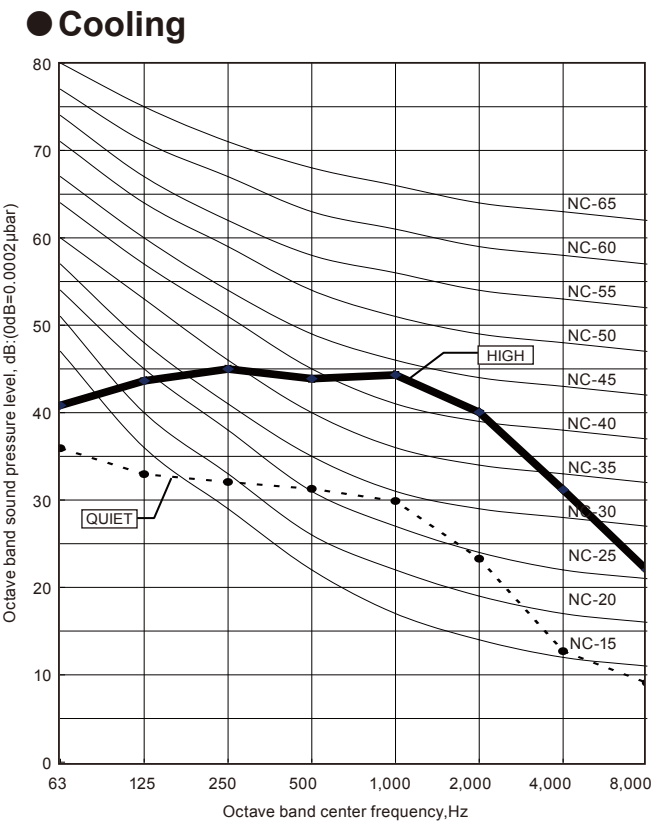
# 8. OPERATION NOISE

## 8-1. NOISE LEVEL CURVE

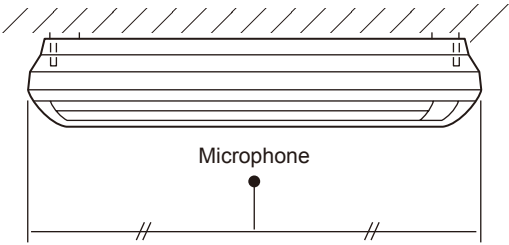
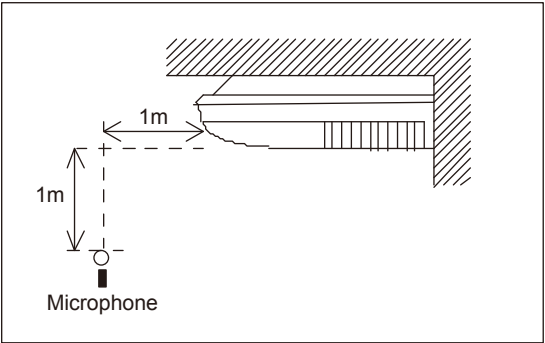
### MODEL: AB\*G30LRTE



### MODEL: AB\*G36LRTE



## 8-2. SOUND LEVEL CHECK POINT



# 9. ELECTRIC CHARACTERISTICS

| Model name                           |                       |                 | AB*G30LRTE | AB*G36LRTE |
|--------------------------------------|-----------------------|-----------------|------------|------------|
| Power supply                         | Voltage               | V               | 230 ~      |            |
|                                      | Frequency             | Hz              | 50         |            |
| Max. operating current (Indoor unit) |                       | A               | 0.7        |            |
| *1) Wiring spec.                     | Connection cable      | mm <sup>2</sup> | 1.5 - 2.5  |            |
|                                      | Limited wiring length | m               | 51         |            |

\*1) Wiring spec.  
Selected Sample  
(Selected based on Japan Electrotechnical Standards and Committee E0005)

## 10. SAFETY DEVICES

|                      | Protection form            | Model                       |            |
|----------------------|----------------------------|-----------------------------|------------|
|                      |                            | AB*G30LRTE                  | AB*G36LRTE |
| Circuit protection   | Current fuse (PCB)         | 250V 3.15A                  |            |
| Fan motor protection | Thermal protection program | 135±15°C OFF<br>115±15°C ON |            |

# 11. EXTERNAL INPUT & OUTPUT

| Connector | INPUT         | OUTPUT                   | REMARKS                                         |
|-----------|---------------|--------------------------|-------------------------------------------------|
| CN102     | Control input | —                        | See external input/output settings for details. |
| CN103     | —             | Operation status output  |                                                 |
| CN6       | —             | Fresh air control output |                                                 |

## 11-1. EXTERNAL INPUT

### ■ CONTROL INPUT (Operation/Stop or Forced stop)

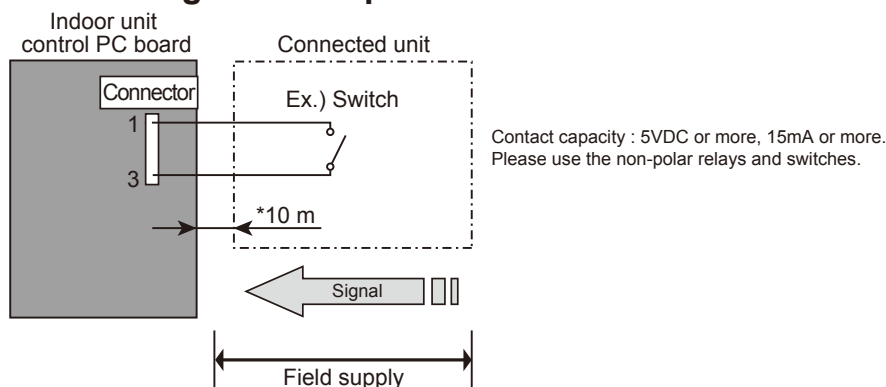
The air conditioner can be remotely operated by means of the following on-site work.

"Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.

Unit operation is started at the following contents by adding the contact input of a commercial ON/OFF switch to a connector on the external control PC board and turning it ON.

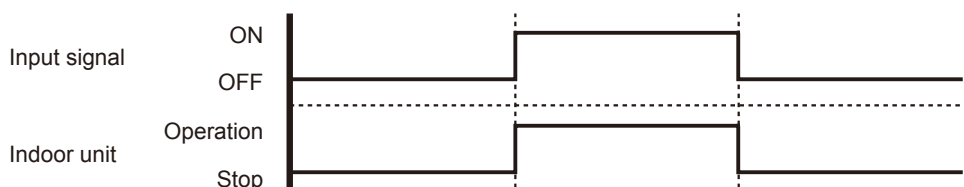
| Unit operation                   | Initial starting after turned power on | Other than initial starting         |
|----------------------------------|----------------------------------------|-------------------------------------|
| Operation mode                   | Auto changeover                        | Mode at previous operation          |
| Set temperature                  | 24°C                                   | Temperature at previous operation   |
| Air flow mode                    | AUTO                                   | Mode at previous operation          |
| Up-down air direction (swing)    | Standard air direction (swing OFF)     | Air direction at previous operation |
| Left-right air direction (swing) | Standard air direction (swing OFF)     | Air direction at previous operation |

### ● Circuit diagram example

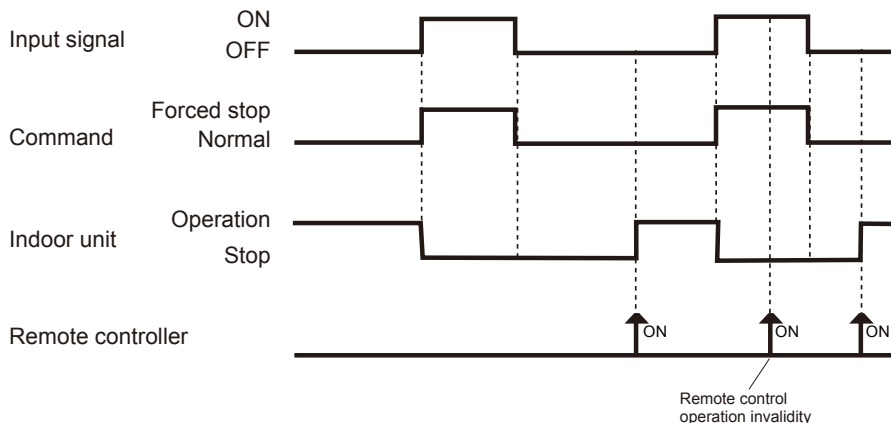


\* Make the distance from the PC board to the connected unit within 10m.

#### ● When function setting is "Operation/Stop" mode



#### ● When function setting is "Forced stop" mode



### ● Parts (Optional)

| Model name |
|------------|
| UTY-XWZX   |

Wire (External input)

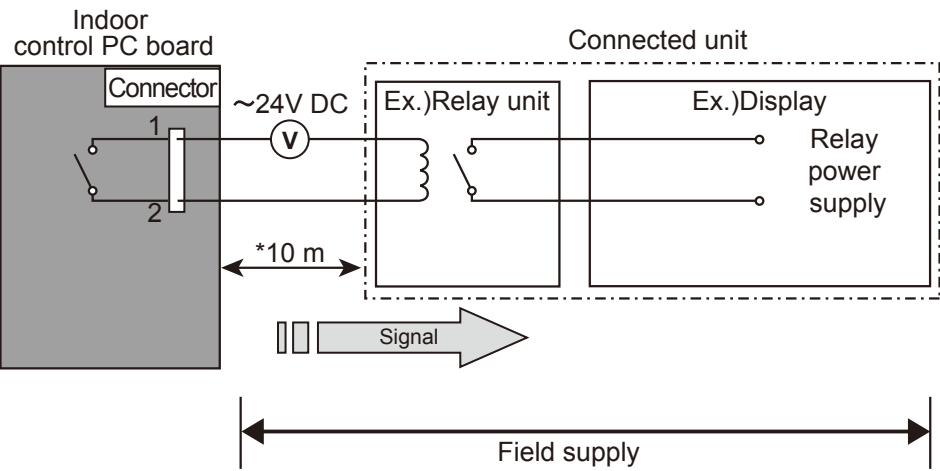


# 11-2. EXTERNAL OUTPUT

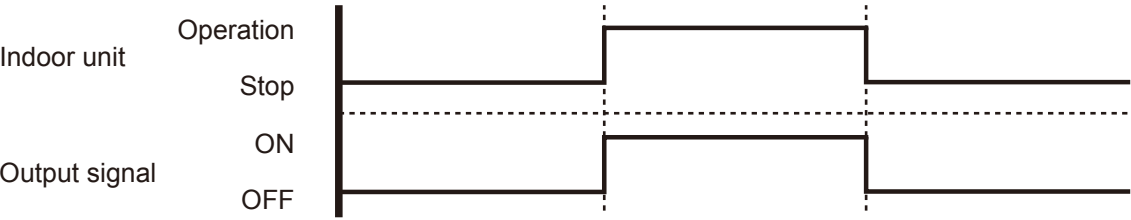
## ■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

### ● Circuit diagram example



\* Make the distance from the PC board to the connected unit within 10m.  
Relay spec. : Max.24VDC, 10mA to less than 500mA.



### ● Parts (Optional)

| Model name |
|------------|
| UTY-XWZX   |

Wire (External output)

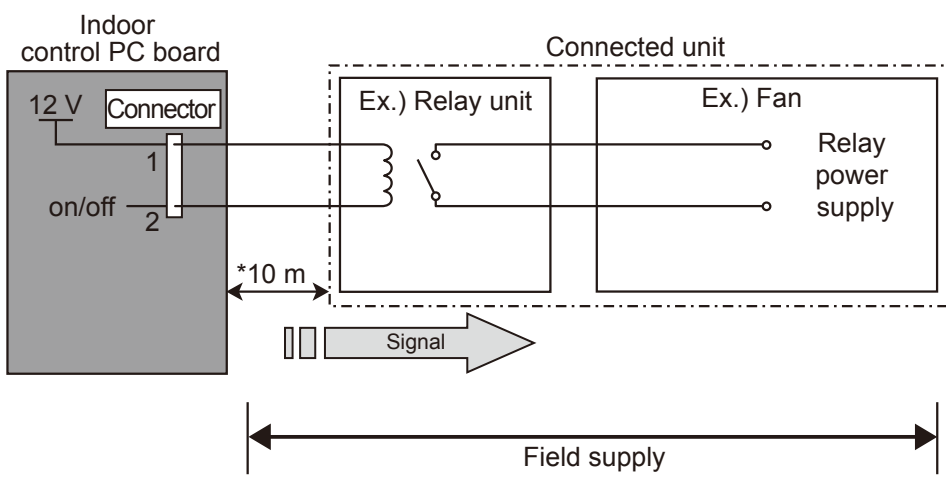


## ■ FRESH AIR CONTROL OUTPUT

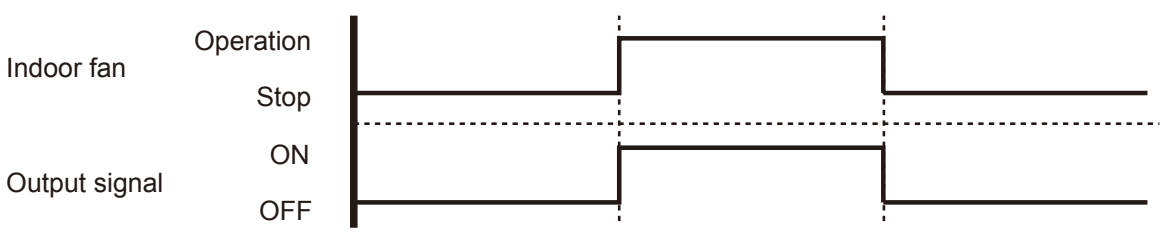
A signal linked to air conditioner indoor fan ON can be output.

\* However, signal becomes OFF during cold air prevention control operation.

### ● Circuit diagram example



\* Make the distance from the PC board to the connected unit within 10m.  
Relay spec. : Rated 12VDC, 50mA or less.



### ● Parts (Optional)

| Model name |
|------------|
| UTD-ECS5A  |

Wire (Fresh air output)



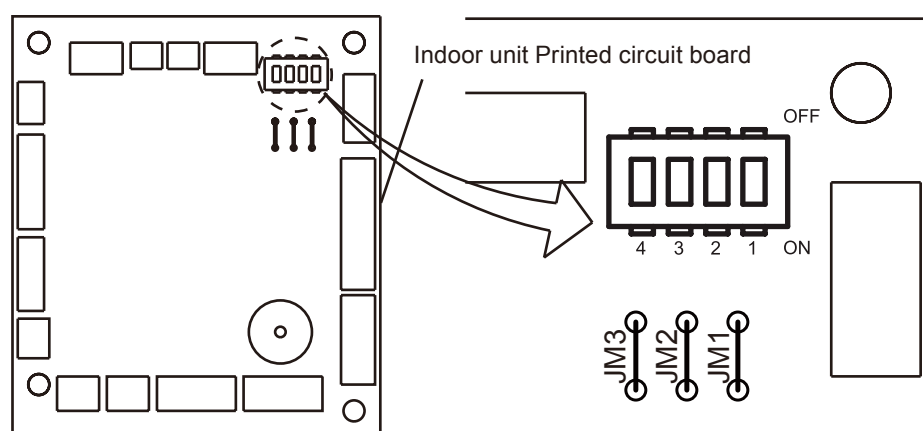
## 12. FUNCTION SETTINGS

### 12-1. INDOOR UNIT

| INDOOR UNIT |     |                                   |
|-------------|-----|-----------------------------------|
| DIP SW      | 1   | Remote controller address setting |
|             | 2   |                                   |
|             | 3   |                                   |
|             | 4   |                                   |
| Jumper Wire | JM1 | Setting forbidden                 |
|             | JM2 |                                   |
|             | JM3 |                                   |

#### ■ SWITCH POSITION

##### MAIN PCB



#### ■ DIP-SW SETTING

##### ● Remote controller address setting

A number of indoor units can be operated at the same time using a wired remote controller. Set the unit number of each indoor unit using the DIP switches on the indoor unit circuit board. (See the following table.)

The DIP switches are normally set to make the unit number 00.

(◆...Factory setting)

| Remote controller address | DIP switch No. |     |     |     |
|---------------------------|----------------|-----|-----|-----|
|                           | 1              | 2   | 3   | 4   |
| ◆ 00                      | OFF            | OFF | OFF | OFF |
| 01                        | ON             | OFF | OFF | OFF |
| 02                        | OFF            | ON  | OFF | OFF |
| 03                        | ON             | ON  | OFF | OFF |
| 04                        | OFF            | OFF | ON  | OFF |
| 05                        | ON             | OFF | ON  | OFF |
| 06                        | OFF            | ON  | ON  | OFF |
| 07                        | ON             | ON  | ON  | OFF |
| 08                        | OFF            | OFF | OFF | ON  |
| 09                        | ON             | OFF | OFF | ON  |
| 10                        | OFF            | ON  | OFF | ON  |
| 11                        | ON             | ON  | OFF | ON  |
| 12                        | OFF            | OFF | ON  | ON  |
| 13                        | ON             | OFF | ON  | ON  |
| 14                        | OFF            | ON  | ON  | ON  |
| 15                        | ON             | ON  | ON  | ON  |

## 12-2. INDOOR UNIT (Setting by remote controller)

- The function settings of the control of the indoor unit can be changed by this procedure according to the installation conditions. Incorrect settings can cause the indoor unit malfunction.
- After the power is turned on, perform the “FUNCTION SETTING” according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function Number or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

### ■ PREPARATION

- Turn on the power.
- \* By turning on the power indoor units, so make sure the piping air-tight test and vacuuming have been conducted before turning on the power.
- \* Also check again to make sure no wiring mistakes were made before turning on the power.

### ■ FUNCTION SETTING METHOD (for Wireless remote controller)

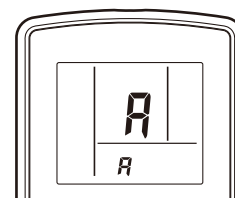
#### Entering the Function Setting Mode

- While pressing the FAN button and SET TEMP. (▲) simultaneously, press the RESET button to enter the function setting mode.

#### STEP 1

##### Setting the Remote controller Signal Code

Use the following steps to select the signal code of the remote controller. (Note that the air conditioner cannot receive a signal code if the air conditioner has not been set for the signal code.) The signal codes that are set through this process are applicable only to the signals in the FUNCTION SETTING. For details on how to set the signal codes through the normal process, refer to REMOTE CONTROLLER SIGNAL CODE SETTING.



1. Press the SET TEMP. (▲) (▼) button to change the signal code between  $A \rightarrow b \rightarrow c \rightarrow d$ . Match the code on the display to the air conditioner signal code. (initially set to  $A$ )  
(If the signal code does not need to be selected, press the MODE button and proceed to STEP 2.)
2. Press the TIMER MODE button and check that the indoor unit can receive signals at the displayed signal code.
3. Press the MODE button to accept the signal code, and proceed to STEP 2.

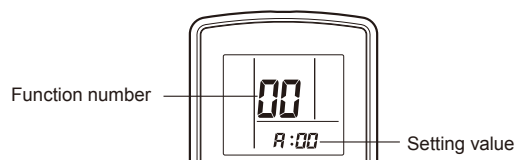
The air conditioner signal code is set to A prior to shipment.

The remote controller resets to signal code A when the batteries in the remote controller are replaced. If you use a signal code other than signal code A, reset the signal code after replacing the batteries.  
If you do not know the air conditioner signal code setting, try each of the signal codes ( $A \rightarrow b \rightarrow c \rightarrow d$ ) until you find the code which operates the air conditioner.

#### STEP 2

##### Selecting the Function Number and Setting Value

1. Press the SET TEMP. (▲) (▼) buttons to select the function number.  
(Press the MODE button to switch between the left and right digits.)
2. Press the FAN button to proceed to setting the value.  
Press the FAN button again to return to the function number selection.)
3. Press the SET TEMP. (▲) (▼) buttons to select the setting value.  
(Press the MODE button to switch between the left and right digits.)
4. Press the TIMER MODE button, and START/STOP button, in the order listed to confirm the settings.
5. Press the RESET button to cancel the function setting mode.
6. After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.



#### ⚠ CAUTION

After turning off the power, wait 10 seconds or more before turning it on again.  
The FUNCTION SETTING doesn't become effective if it doesn't do so.

## ■ CONTENTS OF FUNCTION SETTING

- Follow the instructions in the Local Setup Procedure, which is supplied with the remote control, in accordance with the installed condition.  
After the power is turned on, perform the Function Setting on the remote control.
- The settings may be selected between the following two: Function Number or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

|    |                                                   |
|----|---------------------------------------------------|
| 1) | Filter sign                                       |
| 2) | Ceiling height                                    |
| 3) | Cooler room temperature correction                |
| 4) | Heater room temperature correction                |
| 5) | Auto restart                                      |
| 6) | Indoor room temperature sensor switching function |
| 7) | Remote controller signal code                     |
| 8) | External input control                            |
| 9) | Indoor unit fan control for energy saving         |

### 1) Filter sign

The indoor unit has a sign to inform the user that it is time to clean the filter. Select the time setting for the filter sign display interval in the table below according to the amount of dust or debris in the room. If you do not wish the filter sign to be displayed, select the setting value for "No indication".

(◆. . .Factory setting)

| Setting Description            | Function Number | Setting Value |
|--------------------------------|-----------------|---------------|
| "Standard (2,500 hours)"       | 11              | 00            |
| "Long interval (4,400 hours)"  |                 | 01            |
| "Short interval (1,250 hours)" |                 | 02            |
| ◆ No indication                |                 | 03            |

### 2) Ceiling height

Select the setting values in the table below according to the height of the ceiling.

(◆. . .Factory setting)

| Setting Description         | Function Number | Setting Value |
|-----------------------------|-----------------|---------------|
| ◆ Standard (2.5m to 3.0m)   | 20              | 00            |
| High ceiling (3.0m or more) |                 | 01            |

### 3) Cooler room temperature correction

Depending on the installed environment, the room temperature sensor may require a correction. The settings may be selected as shown in the table below.

(◆. . .Factory setting)

| Setting Description    | Function Number | Setting Value |
|------------------------|-----------------|---------------|
| ◆ Standard             | 30              | 00            |
| Slightly Lower control |                 | 01            |
| Lower control          |                 | 02            |
| Warmer control         |                 | 03            |

### 4) Heater room temperature correction

Depending on the installed environment, the room temperature sensor may require a correction. The settings may be changed as shown in the table below.

(◆. . .Factory setting)

| Setting Description     | Function Number | Setting Value |
|-------------------------|-----------------|---------------|
| ◆ Standard              | 31              | 00            |
| Lower control           |                 | 01            |
| Slightly warmer control |                 | 02            |
| Warmer control          |                 | 03            |

## 5) Auto restart

Enable or disable automatic system restart after a power outage.

(◆...Factory setting)

| Setting Description | Function Number | Setting Value |
|---------------------|-----------------|---------------|
| ◆ Yes               | 40              | 00            |
| No                  |                 | 01            |

- \* Auto restart is an emergency function such as for power failure etc.  
Do not start and stop the indoor unit by this function in normal operation.  
Be sure to operate by the control unit, or external input device.

## 6) Indoor room temperature sensor switching function

(Only for Wired remote controller)

The following settings are needed when use the control by Wired remote controller temperature sensor.

(◆...Factory setting)

| Setting Description | Function Number | Setting Value |
|---------------------|-----------------|---------------|
| ◆ No                | 42              | 00            |
| Yes                 |                 | 01            |

- If setting value is "00",  
room temperature is controlled by the indoor unit temperature sensor.
- If setting value is "01",  
room temperature is controlled by either indoor unit temperature sensor or remote controller unit sensor.

## 7) Remote controller signal code

Change the indoor unit Signal Code, depending on the remote controllers.

(◆...Factory setting)

| Setting Description | Function Number | Setting Value |
|---------------------|-----------------|---------------|
| ◆ A                 | 44              | 00            |
| B                   |                 | 01            |
| C                   |                 | 02            |
| D                   |                 | 03            |

## 8) External input control

"Operation/Stop" mode or "Forced stop" mode can be selected.

(◆...Factory setting)

| Setting Description   | Function Number | Setting Value |
|-----------------------|-----------------|---------------|
| ◆ Operation/Stop mode | 46              | 00            |
| (Setting forbidden)   |                 | 01            |
| Forced stop mode      |                 | 02            |

## 9) Indoor unit fan control for energy saving (Only cooling mode)

Enable or disable indoor unit fan control when the outdoor unit is stopped.

(◆...Factory setting)

| Setting Description | Function Number | Setting Value |
|---------------------|-----------------|---------------|
| No                  | 49              | 00            |
| ◆ Yes               |                 | 01            |

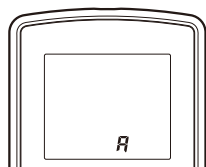
- If setting value is "00":  
When the outdoor unit is stopped, the indoor unit fan operates following the setting on the remote controller continuously.
- If setting value is "01":  
When the outdoor unit is stopped, the indoor unit fan operates at very low speed intermittently.

## ■ REMOTE CONTROLLER SIGNAL CODE SETTING

Use the following steps to select the signal code of the remote controller.

(Note that the air conditioner cannot receive a signal code if the air conditioner has not been set for the signal code.)

1. Press the START/STOP button until only the clock is displayed on the remote controller display.
2. Press the MODE button for at least five seconds to display the current signal code (initially set to  $\overline{A}$ ).
3. Press the SET TEMP. ( $\blacktriangle$ ) ( $\blacktriangledown$ ) button to change the signal code between  $\overline{A} \rightarrow \overline{B} \rightarrow \overline{C} \rightarrow \overline{D}$ .  
Match the code on the display to the air conditioner signal code.
4. Press the MODE button again to return to the clock display. The signal code will be changed.



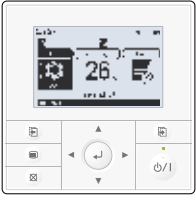
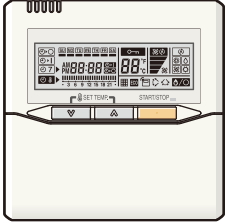
If no buttons are pressed within 30 seconds after the signal code is displayed, the system returns to the original clock display. In this case, start again from step 1.

The air conditioner signal code is set to A prior to shipment. Contact your retailer to change the signal code.

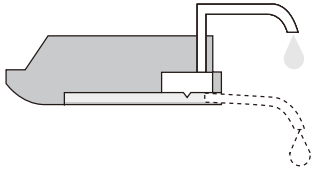
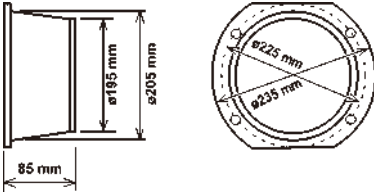
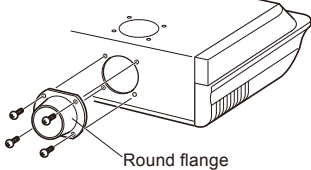
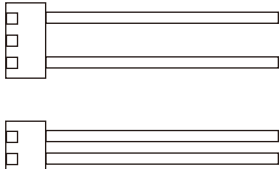
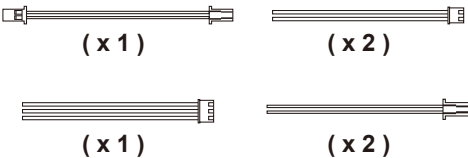
The remote controller resets to signal code A when the batteries in the remote controller are replaced. If you use a signal code other than signal code A, reset the signal code after replacing the batteries.  
If you do not know the air conditioner signal code setting, try each of the signal codes ( $\overline{A} \rightarrow \overline{B} \rightarrow \overline{C} \rightarrow \overline{D}$ .) until you find the code which operates the air conditioner.

# 13. OPTIONAL PARTS

## 13-1. CONTROLLER

| Exterior                                                                           | Parts name               | Model No. | Summary                                                                                                |
|------------------------------------------------------------------------------------|--------------------------|-----------|--------------------------------------------------------------------------------------------------------|
|   | Wired remote controller  | UTY-RVN*M | Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. |
|   | Wired remote controller  | UTY-RNN*M | Unit control is performed by wired remote controller                                                   |
|  | Simple Remote Controller | UTY-RSN*M | Unit control is performed by simple remote controller.                                                 |

## 13-2. OTHERS

| Exterior                                                                            | Parts name           | Model No.  | Summary                                                                                                                                        |
|-------------------------------------------------------------------------------------|----------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Drain Pump unit      | UTR-DPB24T | Optional drain lift-up mechanism allows more flexible installation.                                                                            |
|    | Round flange         | UTD-RF204  | Round flange is used when the fresh air duct is installed.  |
|   | External connect kit | UTY-XWZX   | Use to connect with various peripheral devices and air conditioner PC board.                                                                   |
|  | External control set | UTD-ECS5A  | Use to connect with various peripheral devices and air conditioner PC board.<br>(Set of 6)                                                     |

## **2. OUTDOOR UNIT**

---

**SINGLE TYPE :**

**AO\*G30LETl**

**AO\*G36LETl**

# CONTENTS

## 2. OUTDOOR UNIT

|                                                                              |         |
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# 1. SPECIFICATIONS

|                         |                        |                                 |       |                                                     |                  |
|-------------------------|------------------------|---------------------------------|-------|-----------------------------------------------------|------------------|
| Type                    |                        |                                 |       | INVERTER HEATPUMP                                   |                  |
| Model name              |                        |                                 |       | AO*G30LETL                                          | AO*G36LETL       |
| Power source            |                        |                                 |       | 230V ~ 50Hz                                         |                  |
| Available voltage range |                        |                                 |       | 198-264V ~ 50Hz                                     |                  |
| Starting current        |                        |                                 | A     | 12.2                                                | 13.7             |
| Fan                     | Airflow rate           | Cooling                         | m³/h  | 3600                                                | 3800             |
|                         |                        | Heating                         |       | 3600                                                | 3800             |
|                         | Type × Q'ty            |                                 |       | Propeller × 1                                       |                  |
|                         | Motor output           |                                 | W     | 100                                                 | 100              |
| Sound pressure level    |                        | Cooling                         | dB(A) | 53                                                  | 54               |
|                         |                        | Heating                         |       | 55                                                  | 55               |
| Sound power level       |                        | Cooling                         | dB(A) | 68                                                  | 69               |
|                         |                        | Heating                         |       | 69                                                  | 70               |
| Heat exchanger type     |                        | Dimensions (H × W × D)          | mm    | 798 × 900 × 36.4                                    | 798 × 900 × 36.4 |
|                         |                        | Fin pitch                       |       | 1.30                                                | 1.30             |
|                         |                        | Rows x Stages                   |       | 2 × 38                                              | 2 × 38           |
|                         |                        | Pipe type                       |       | Copper                                              |                  |
|                         |                        | Fin type                        |       | Aluminium                                           |                  |
| Compressor              | Type × Q'ty            |                                 |       | Twin Rotary × 1                                     |                  |
|                         | Motor output           |                                 | W     | 2100                                                |                  |
| Refrigerant             |                        | Type (Global Warming Potential) |       | R410A (1975)                                        |                  |
|                         |                        | Charge                          | g     | 2100                                                |                  |
| Refrigerant oil         |                        | Type                            |       | POE (RB68)                                          |                  |
| Enclosure               |                        | Material                        |       | Steel sheet                                         |                  |
|                         |                        | Colour                          |       | BEIGE<br>Approximate colour of MUNSELL 10YR 7.5/1.0 |                  |
| Dimensions ( H×W×D)     | Net                    |                                 | mm    | 830 × 900 × 330                                     |                  |
|                         | Gross                  |                                 |       | 1000 × 1050 × 445                                   |                  |
| Weight                  | Net                    |                                 | kg    | 61                                                  |                  |
|                         | Gross                  |                                 |       | 69                                                  |                  |
| Connection pipe         | Size                   | Liquid                          | mm    | Ø 9.52 (Ø 3/8 in.)                                  |                  |
|                         |                        | Gas                             |       | Ø 15.88 (Ø 5/8 in.)                                 |                  |
|                         | Method                 |                                 |       | Flare                                               |                  |
|                         | Pre-charge length      |                                 | m     | 20                                                  |                  |
|                         | Max. length            |                                 |       | 50                                                  |                  |
|                         | Max. height difference |                                 |       | 30                                                  |                  |
| Operation range         |                        | Cooling                         | °C    | -15 to 46                                           |                  |
|                         |                        | Heating                         |       | -15 to 24                                           |                  |

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 27 °CDB / 19 °CWB and outdoor temperature of 35 °CDB/24 °CWB.

Heating : Indoor temperature of 20 °CDB / 15 °CWB and outdoor temperature of 7 °CDB/6 °CWB.

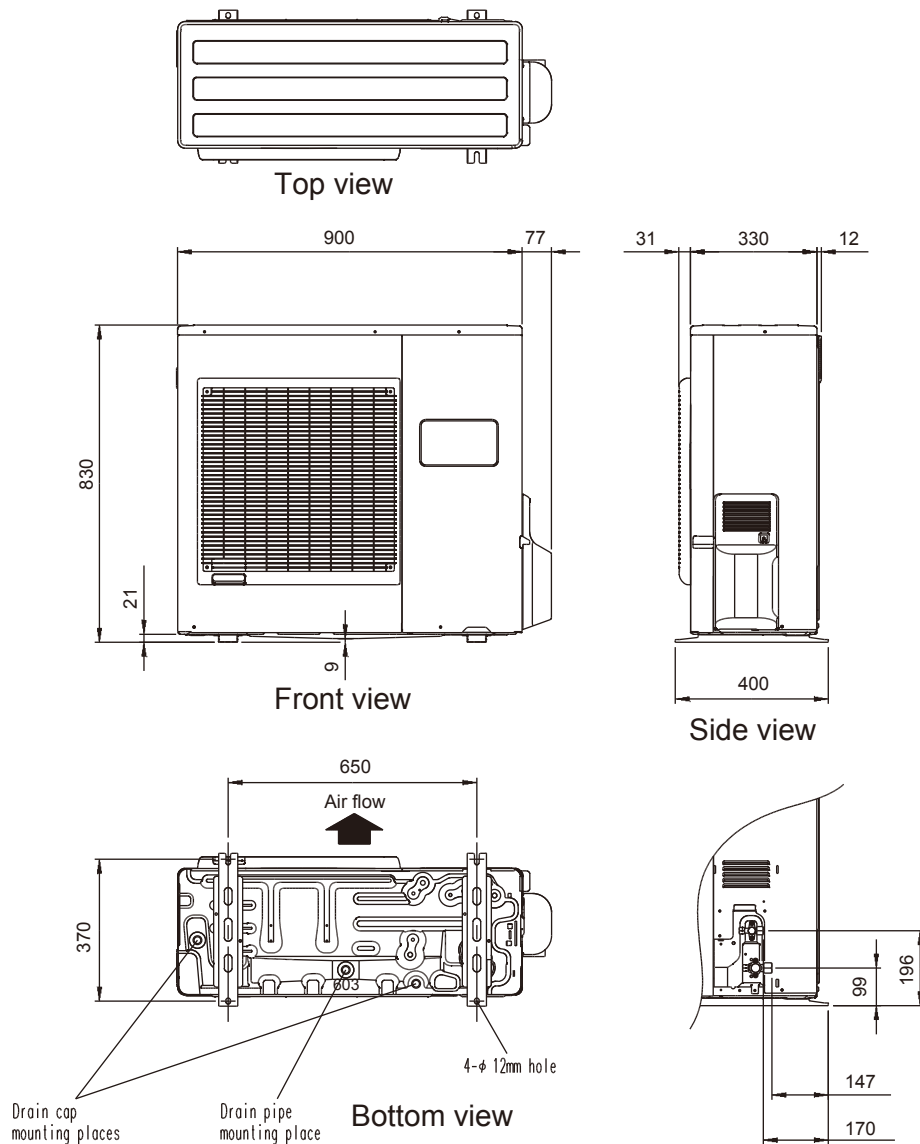
Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

The protective function may work when using it outside the operation range.

## 2. DIMENSIONS

### ■ MODELS: AO\*G30LETL, AO\*G36LETL

(Unit : mm)

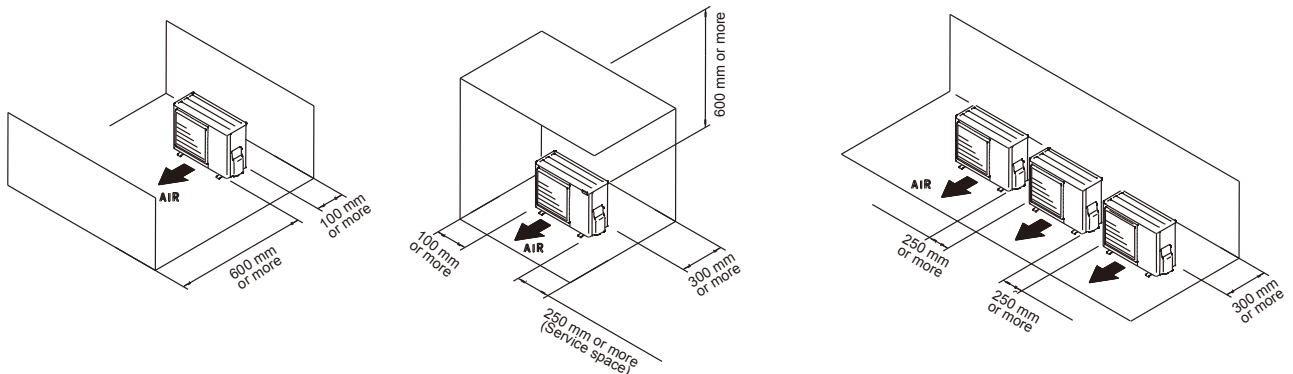


### ■ INSTALLATION PLACE

When there are obstacles at the back or front sides.

When there are obstacles at the back, side(s), and top.

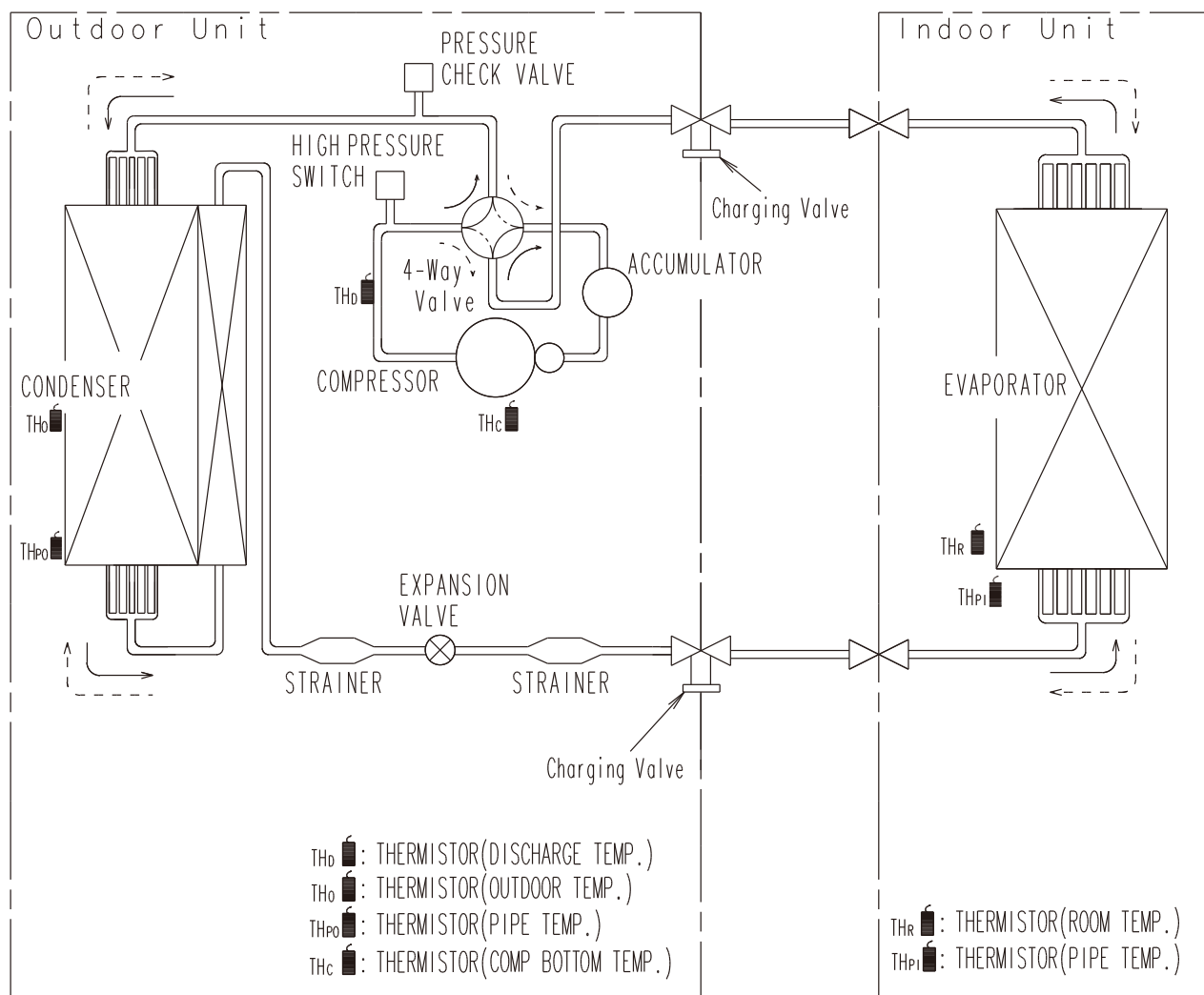
When there are obstacles at the back, side with the installation of more than one unit.



If the space is larger than stated, the condition will be the same as those without any obstacles.

### 3. REFRIGERANT CIRCUIT

■ MODELS: AO\*G30LETL, AO\*G36LETL



Refrigerant direction

→ : Cooling

- - -> : Heating

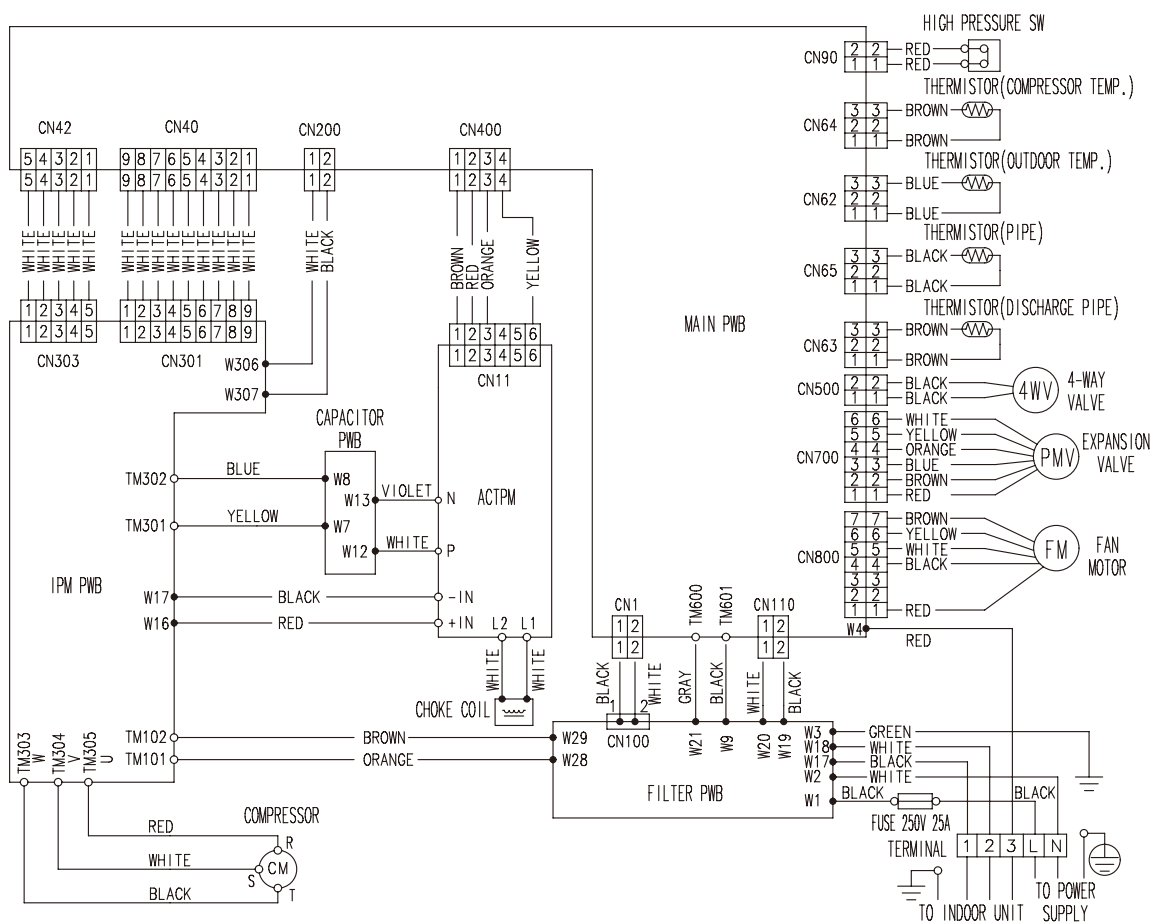
Refrigerant pipe diameter

Liquid : 9.52 mm (3/8")

Gas : 15.88 mm (5/8")

## 4. WIRING DIAGRAMS

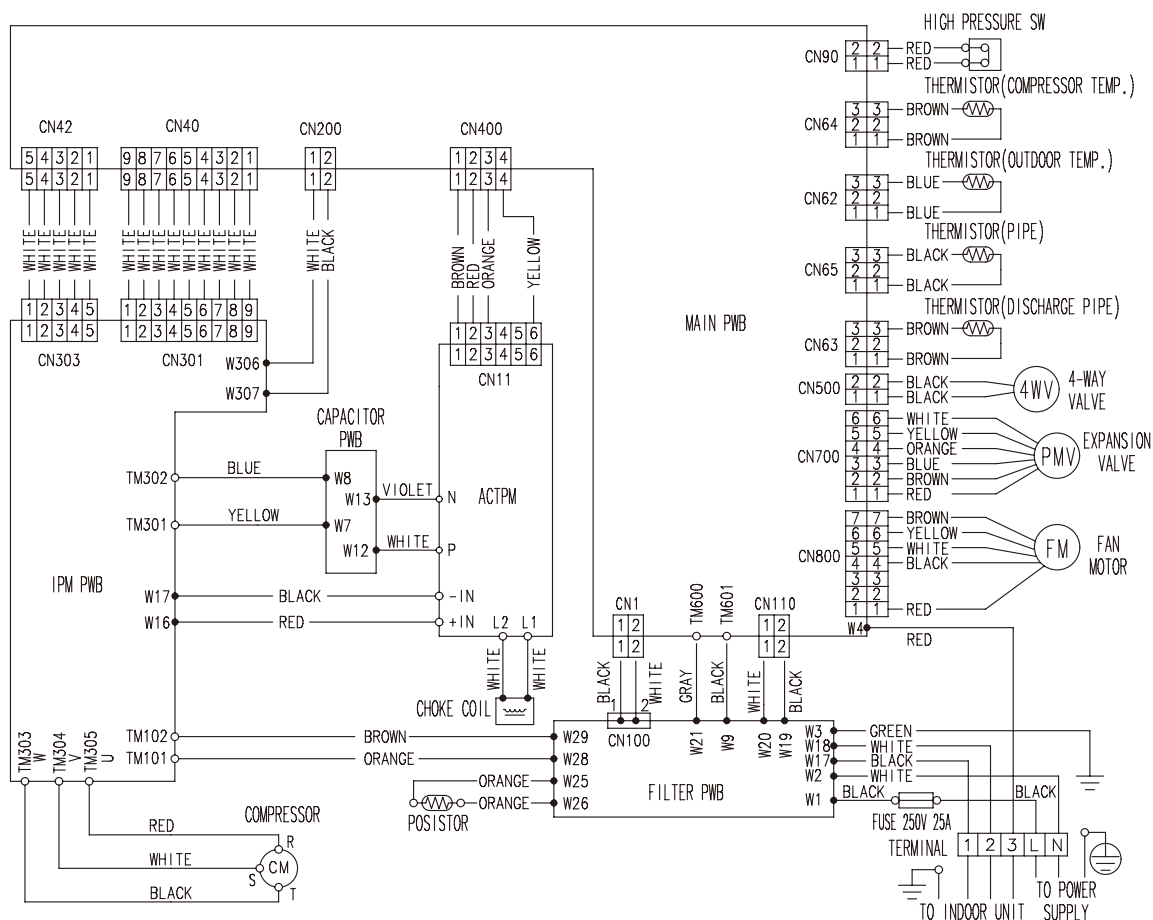
### ■ MODEL: AO\*G30LETL



# MODEL: AO\*G36LETL

OUTDOOR UNIT  
AO\*G30-36LETL

OUTDOOR UNIT  
AO\*G30-36LETL



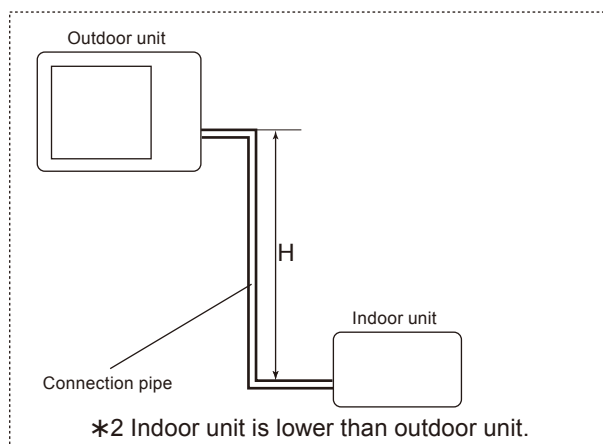
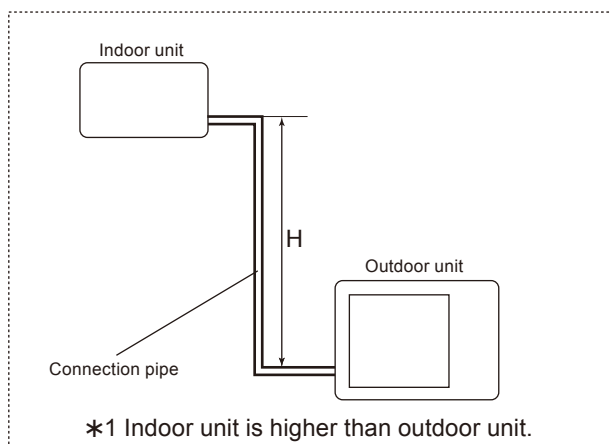
## 5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

### MODELS: AO\*G30LETL, AO\*G36LETL

| COOLING                 |                                               |      | Pipe length (m) |       |       |       |       |       |       |
|-------------------------|-----------------------------------------------|------|-----------------|-------|-------|-------|-------|-------|-------|
|                         |                                               |      | 5               | 7.5   | 10    | 20    | 30    | 40    | 50    |
| Height difference H (m) | *1<br>Indoor unit is higher than outdoor unit | 30   | -               | -     | -     | -     | 0.908 | 0.894 | 0.876 |
|                         |                                               | 20   | -               | -     | -     | 0.935 | 0.923 | 0.909 | 0.891 |
|                         |                                               | 10   | -               | -     | 0.968 | 0.951 | 0.938 | 0.924 | 0.906 |
|                         |                                               | 7.5  | -               | 0.982 | 0.972 | 0.954 | 0.942 | 0.928 | 0.909 |
|                         |                                               | 5    | 0.992           | 0.986 | 0.976 | 0.958 | 0.946 | 0.932 | 0.913 |
|                         | *2<br>Indoor unit is lower than outdoor unit  | 0    | 1.000           | 0.994 | 0.983 | 0.966 | 0.954 | 0.939 | 0.920 |
|                         |                                               | -5   | 1.000           | 0.994 | 0.983 | 0.966 | 0.954 | 0.939 | 0.920 |
|                         |                                               | -7.5 | -               | 0.994 | 0.983 | 0.966 | 0.954 | 0.939 | 0.920 |
|                         |                                               | -10  | -               | -     | 0.983 | 0.966 | 0.954 | 0.939 | 0.920 |
|                         |                                               | -20  | -               | -     | -     | 0.966 | 0.954 | 0.939 | 0.920 |
|                         |                                               | -30  | -               | -     | -     | -     | 0.954 | 0.939 | 0.920 |

| HEATING                 |                                               |      | Pipe length (m) |       |       |       |       |       |       |
|-------------------------|-----------------------------------------------|------|-----------------|-------|-------|-------|-------|-------|-------|
|                         |                                               |      | 5               | 7.5   | 10    | 20    | 30    | 40    | 50    |
| Height difference H (m) | *1<br>Indoor unit is higher than outdoor unit | 30   | -               | -     | -     | -     | 0.931 | 0.914 | 0.899 |
|                         |                                               | 20   | -               | -     | -     | 0.954 | 0.931 | 0.914 | 0.899 |
|                         |                                               | 10   | -               | -     | 0.990 | 0.954 | 0.931 | 0.914 | 0.899 |
|                         |                                               | 7.5  | -               | 0.991 | 0.990 | 0.954 | 0.931 | 0.914 | 0.899 |
|                         |                                               | 5    | 1.000           | 0.991 | 0.990 | 0.954 | 0.931 | 0.914 | 0.899 |
|                         | *2<br>Indoor unit is lower than outdoor unit  | 0    | 1.000           | 0.991 | 0.990 | 0.954 | 0.931 | 0.914 | 0.899 |
|                         |                                               | -5   | 0.995           | 0.986 | 0.986 | 0.949 | 0.926 | 0.909 | 0.895 |
|                         |                                               | -7.5 | -               | 0.983 | 0.983 | 0.946 | 0.924 | 0.907 | 0.892 |
|                         |                                               | -10  | -               | -     | 0.981 | 0.944 | 0.921 | 0.904 | 0.890 |
|                         |                                               | -20  | -               | -     | -     | 0.935 | 0.912 | 0.895 | 0.881 |
|                         |                                               | -30  | -               | -     | -     | -     | 0.903 | 0.886 | 0.872 |

Height difference H



## 6. ADDITIONAL CHARGE CALCULATION

### ■ MODELS: AO\*G30LETL, AO\*G36LETL

|                    |   |       |
|--------------------|---|-------|
| Refrigerant type   |   | R410A |
| Refrigerant amount | g | 2100  |

#### ● Refrigerant Charge

|                   |   |            |     |     |          |       |
|-------------------|---|------------|-----|-----|----------|-------|
| Total pipe length | m | 20 or less | 30  | 40  | 50 (MAX) | 40g/m |
| Additional charge | g | 0          | 400 | 800 | 1200     |       |

## 7. AIRFLOW

### ■ MODEL: AO\*G30LETL

#### ● COOLING

| Number of rotations (r.p.m) | Airflow           |      |
|-----------------------------|-------------------|------|
| 850                         | m <sup>3</sup> /h | 3600 |
|                             | l/s               | 1000 |
|                             | CFM               | 2119 |

#### ● HEATING

| Number of rotations (r.p.m) | Airflow           |      |
|-----------------------------|-------------------|------|
| 850                         | m <sup>3</sup> /h | 3600 |
|                             | l/s               | 1000 |
|                             | CFM               | 2119 |

### ■ MODEL: AO\*G36LETL

#### ● COOLING

| Number of rotations (r.p.m) | Airflow           |      |
|-----------------------------|-------------------|------|
| 900                         | m <sup>3</sup> /h | 3800 |
|                             | l/s               | 1056 |
|                             | CFM               | 2236 |

#### ● HEATING

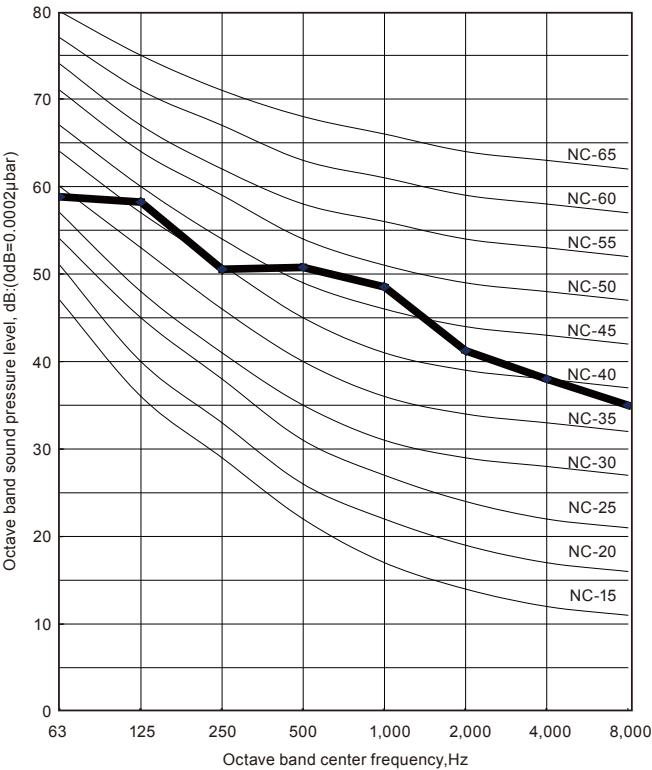
| Number of rotations (r.p.m) | Airflow           |      |
|-----------------------------|-------------------|------|
| 900                         | m <sup>3</sup> /h | 3800 |
|                             | l/s               | 1056 |
|                             | CFM               | 2236 |

# 8. OPERATION NOISE (SOUND PRESSURE)

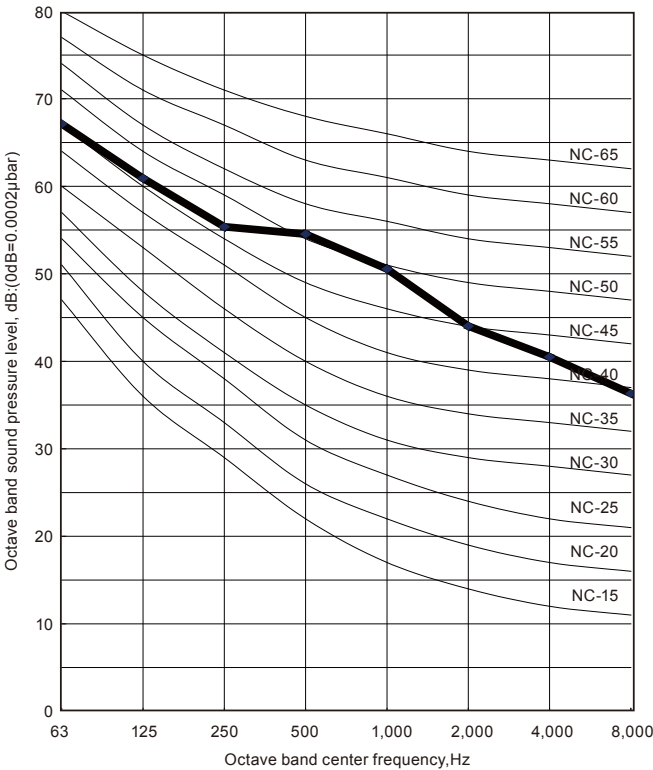
## 8-1. NOISE LEVEL CURVE

### MODEL: AO\*G30LETL

#### COOLING

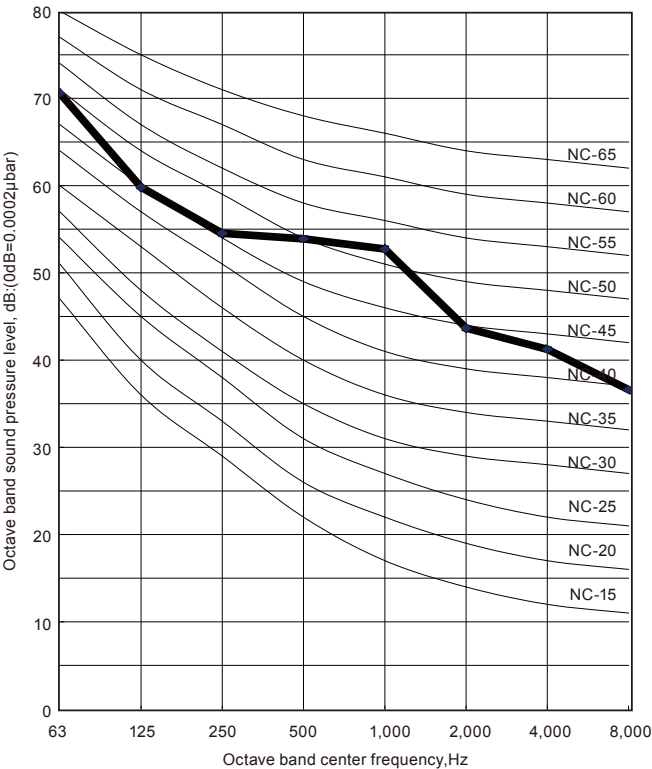


#### HEATING

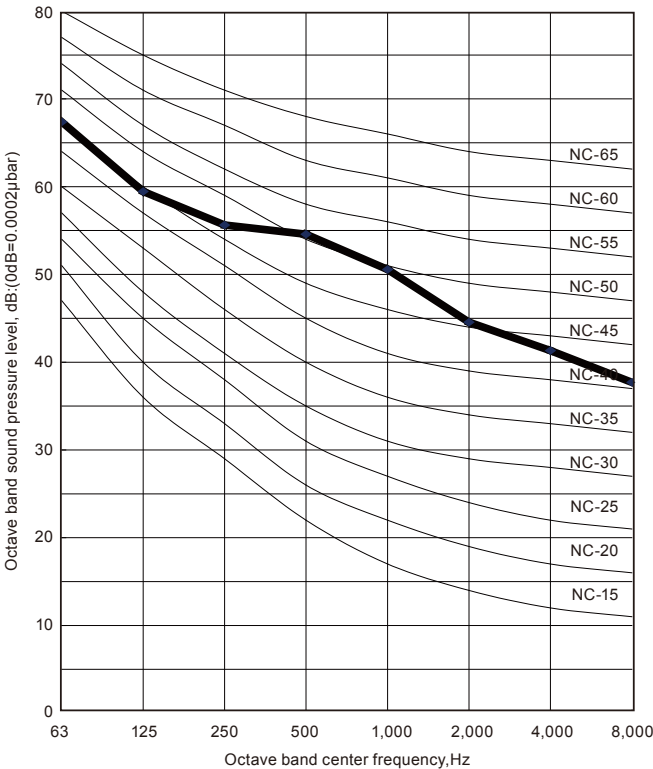


### MODEL: AO\*G36LETL

#### COOLING

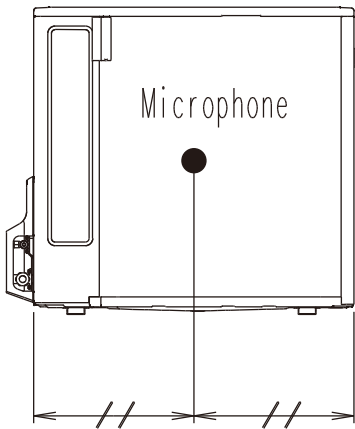
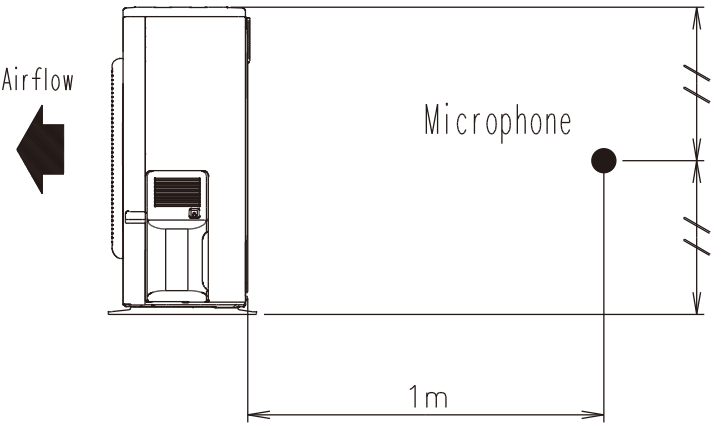


#### HEATING



# 8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT  
AO\*G30-36LET/L



OUTDOOR UNIT  
AO\*G30-36LET/L

## 9. ELECTRIC CHARACTERISTICS

| Model name                 |                                     |                 | AO*G30LETL | AO*G36LETL |
|----------------------------|-------------------------------------|-----------------|------------|------------|
| Power supply               | Voltage                             | V               | 230 ~      |            |
|                            | Frequency                           | Hz              | 50         |            |
| *1) Max. operating current |                                     | A               | 17.0       | 20.0       |
| Starting current           |                                     | A               | 12.2       | 13.7       |
| *2) Wiring spec.           | Main fuse (Circuit breaker) current | A               | 30         |            |
|                            | Power cable                         | mm <sup>2</sup> | 3.5        |            |

\*1) The maximum current is the total current of indoor unit and outdoor unit.

\*2) Wiring spec.

Selected sample

(Selected based on Japan Electrotechnical Standards and Codes Committee E0005)

## 10. SAFETY DEVICES

|                          | Protection form                               | Model                                |            |
|--------------------------|-----------------------------------------------|--------------------------------------|------------|
|                          |                                               | AO*G30LETL                           | AO*G36LETL |
| Circuit protection       | Current fuse (Near the terminal)              | 250V 25A                             |            |
|                          | Current fuse (Filter printed circuit board)   | 250V 10A                             |            |
|                          | Current fuse (Main printed circuit board)     | 250V 3.15A                           |            |
| Fan motor protection     | Thermal protection program                    | OFF : 140±20°C<br>ON : 110±20°C      |            |
| High pressure protection | Pressure switch                               | OFF : 4.2±0.1MPa<br>ON : 3.2±0.15MPa |            |
| Compressor protection    | Thermal protection program (Compressor temp.) | OFF : 120°C<br>ON : 80°C             |            |
|                          | Thermal protection program (Discharge temp.)  | OFF : 110°C<br>ON : After 7 minutes  |            |