

AIR CONDITIONER

**Wall mounted type**

# DESIGN & TECHNICAL MANUAL

---

---

INDOOR



ASYG18KLCA  
ASYG24KLCA

---

OUTDOOR



AOYG18KLCA



AOYG24KLCA

---

**FUJITSU GENERAL LIMITED**

**Notices:**

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

# CONTENTS

---

<b>Part 1. INDOOR UNIT</b> .....	<b>1</b>
<b>1. Specifications</b> .....	<b>2</b>
<b>2. Dimensions</b> .....	<b>4</b>
2-1. Models: ASYG18KLCA and ASYG24KLCA.....	4
<b>3. Wiring diagrams</b> .....	<b>6</b>
3-1. Models: ASYG18KLCA and ASYG24KLCA.....	6
<b>4. Capacity table</b> .....	<b>7</b>
4-1. Cooling capacity.....	7
4-2. Heating capacity.....	8
<b>5. Fan performance</b> .....	<b>9</b>
5-1. Air velocity distributions.....	9
5-2. Airflow.....	11
<b>6. Operation noise (sound pressure)</b> .....	<b>13</b>
6-1. Noise level curve.....	13
6-2. Sound level check point.....	14
<b>7. Safety devices</b> .....	<b>15</b>
<b>8. Remote controller</b> .....	<b>16</b>
8-1. Wireless remote controller.....	16
<b>9. Function settings</b> .....	<b>18</b>
9-1. Function settings by using remote controller.....	18
9-2. Custom code setting for wireless remote controller.....	22
<b>10. Accessories</b> .....	<b>23</b>
10-1. Models: ASYG18KLCA and ASYG24KLCA.....	23

## CONTENTS (continued)

---

<b>Part 2. OUTDOOR UNIT</b> .....	<b>25</b>
<b>1. Specifications</b> .....	<b>26</b>
<b>2. Dimensions</b> .....	<b>27</b>
2-1. Model: AOYG18KLCA .....	27
2-2. Model: AOYG24KLCA .....	28
<b>3. Installation space</b> .....	<b>29</b>
3-1. Models: AOYG18KLCA and AOYG24KLCA .....	29
<b>4. Refrigerant circuit</b> .....	<b>32</b>
4-1. Model: AOYG18KLCA .....	32
4-2. Model: AOYG24KLCA .....	33
<b>5. Wiring diagrams</b> .....	<b>34</b>
5-1. Model: AOYG18KLCA .....	34
5-2. Model: AOYG24KLCA .....	34
<b>6. Capacity compensation rate for pipe length and height difference</b> .....	<b>35</b>
6-1. Model: AOYG18KLCA .....	35
6-2. Model: AOYG24KLCA .....	36
<b>7. Additional charge calculation</b> .....	<b>37</b>
7-1. Model: AOYG18KLCA .....	37
7-2. Model: AOYG24KLCA .....	37
<b>8. Airflow</b> .....	<b>38</b>
8-1. Model: AOYG18KLCA .....	38
8-2. Model: AOYG24KLCA .....	38
<b>9. Operation noise (sound pressure)</b> .....	<b>39</b>
9-1. Noise level curve.....	39
9-2. Sound level check point .....	40
<b>10. Electrical characteristics</b> .....	<b>41</b>
<b>11. Safety devices</b> .....	<b>42</b>
<b>12. Accessories</b> .....	<b>43</b>
12-1.Models: AOYG18KLCA and AOYG24KLCA .....	43

# **Part 1. INDOOR UNIT**

---

**WALL MOUNTED TYPE:**

**ASYG18KLCA**

**ASYG24KLCA**

# 1. Specifications

Type				Wall mounted		
				Inverter heat pump		
Model name				ASYG18KLCA	ASYG24KLCA	
Power supply				230 V ~ 50 Hz		
Available voltage range				198—264 V		
Capacity	Cooling	Rated	kW	5.20	7.10	
			Btu/h	17,700	24,200	
		Min.—Max.	kW	0.9—5.5	0.9—7.7	
			Btu/h	3,000—18,700	3,000—26,200	
	Heating	Rated	kW	6.30	8.00	
			Btu/h	21,400	27,200	
		Min.—Max.	kW	0.6—7.6	0.9—9.0	
			Btu/h	2,000—25,900	3,000—30,700	
Input power	Cooling	Rated	kW	1.685	2.42	
				Min.—Max.	0.14—2.09	0.18—2.74
	Heating	Rated	kW	1.800	2.225	
				Min.—Max.	0.10—1.93	0.15—2.66
	Fan	HIGH	W	32	57	
				MED	25	34
				LOW	16	17
				QUIET	10	10
	Current	Cooling	Rated	A	7.5	10.9
					Heating	8.0
EER	Cooling	kW/kW		3.09	2.93	
COP	Heating	kW/kW		3.50	3.60	
Sensible capacity	Cooling	kW		3.93	4.92	
Power factor	Cooling	%		98.0		
	Heating	%		98.0		
Moisture removal			L/h (pints/h)	1.9 (3.3)	3.1 (5.5)	
Maximum operating current *1		Cooling	A	9.5	13.5	
		Heating		13.5	17.5	
Fan	Airflow rate	Cooling	m <sup>3</sup> /h	HIGH	865	1,040
				MED	780	880
				LOW	665	685
				QUIET	555	555
		Heating	HIGH	995	1,040	
			MED	810		
			LOW	700	695	
			QUIET	590	585	
	Type × Q'ty		Crossflow fan × 1			
	Motor output		W		61	
Sound pressure level *2		Cooling	dB (A)	HIGH	47	51
				MED	44	45
				LOW	40	38
				QUIET	35	33
		Heating	HIGH	50	52	
			MED	45	45	
			LOW	41	41	
			QUIET	37	37	
Heat exchanger type		Dimensions (H × W × D)		mm		
		Fin pitch		Main: 384 × 630 × 20.0 Sub: 126 × 630 × 13.30		
		Rows × Stages		Man: 1.1, Sub: 1.4 Main: 2 × 24, Sub: 1 × 6		
		Pipe type		Copper tube		
		Fin type		Aluminum		
Enclosure		Material		Polystyrene		
		Color		White Approximate color of Munsell N 9.25/		
Dimensions (H × W × D)		Net	mm	293 × 790 × 249		
		Gross		320 × 840 × 375		
Weight		Net	kg	9.5	10.0	
		Gross		12.0	12.5	
Connection pipe		Size	Liquid Gas	mm (in)	Ø 6.35 (Ø 1/4)	Ø 6.35 (Ø 1/4)
					Method	Ø 9.52 (Ø 3/8)      Ø 12.70 (Ø 1/2)
Drain hose		Material		Flare PP+HDPE		
		Tip diameter		mm		
Operation range		Cooling	°C	18 to 32		
			%RH	80 or less		
Remote controller type		Heating	°C	16 to 30		
			Wireless			

## NOTES:

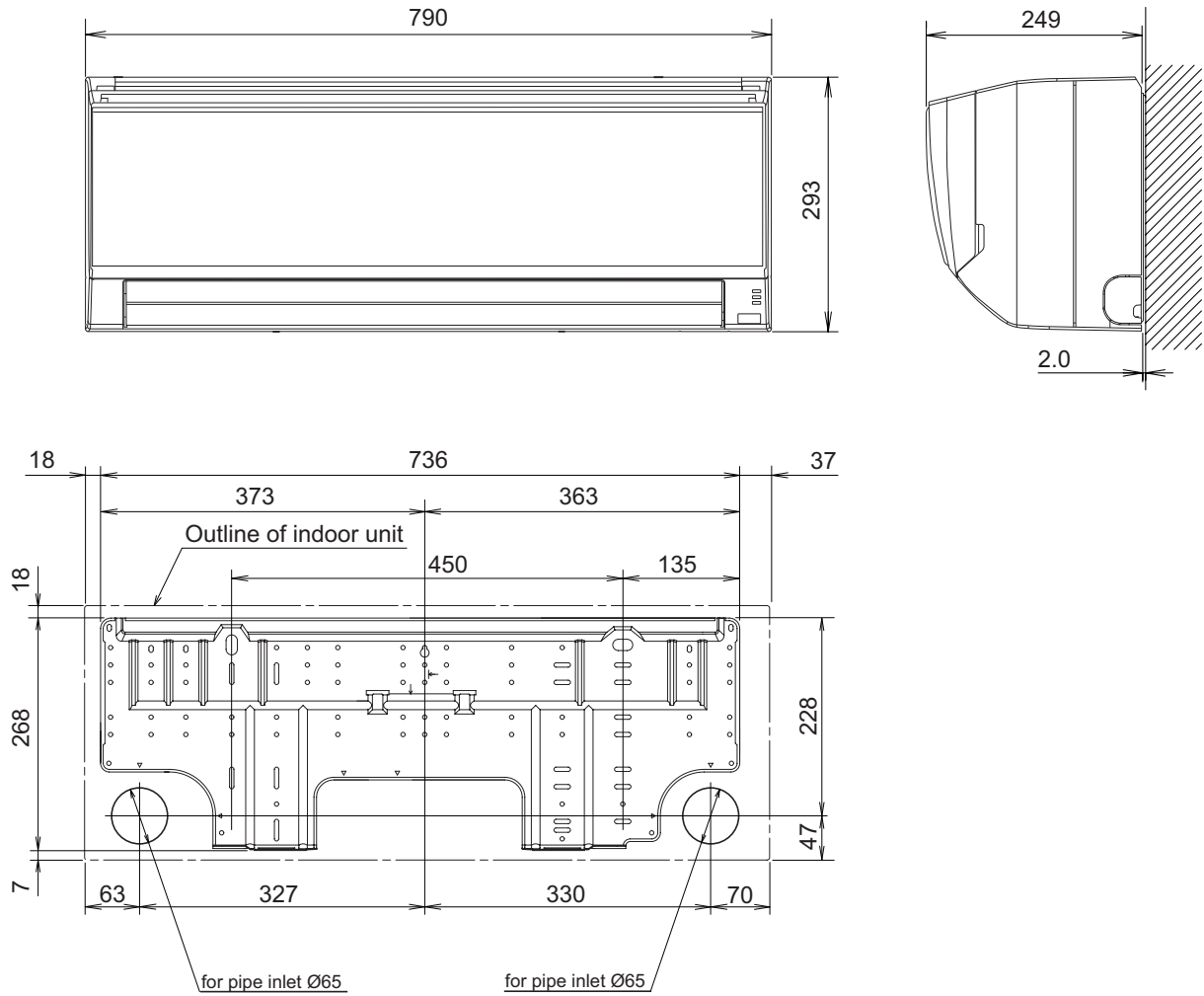
- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB
  - Pipe length: 5 m, Height difference: 0 m (Between outdoor unit and indoor unit)
- Protective function might work when using it outside the operation range.
- \*1: Maximum current is maximum value when operated within the operation range.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Specifications for ErP Lot10					
Model name		ASYG18KLCA		ASYG24KLCA	
Energy efficiency class	Cooling			A <sup>++</sup>	
	Heating (Average)			A <sup>+</sup>	
Pdesign	Cooling	kW	5.2 (35 °C)	7.1 (35 °C)	
	Heating (Average)		4.8 (-10 °C)	7.1 (-10 °C)	
SEER	Cooling	kWh/kWh	7.20	7.10	
SCOP	Heating (Average)		4.30	4.00	
Annual energy consumption	QCE	kWh/a	253	350	
	QHE (Average)		1,563	2,485	
Sound power level	Cooling	HIGH	dB (A)	60	64
	Heating			65	65

## 2. Dimensions

### 2-1. Models: ASYG18KLCA and ASYG24KLCA

Unit: mm

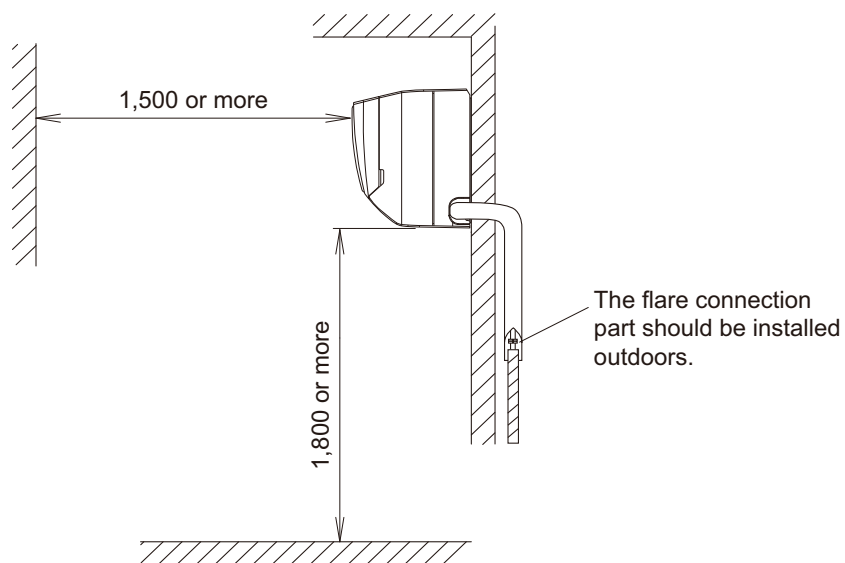
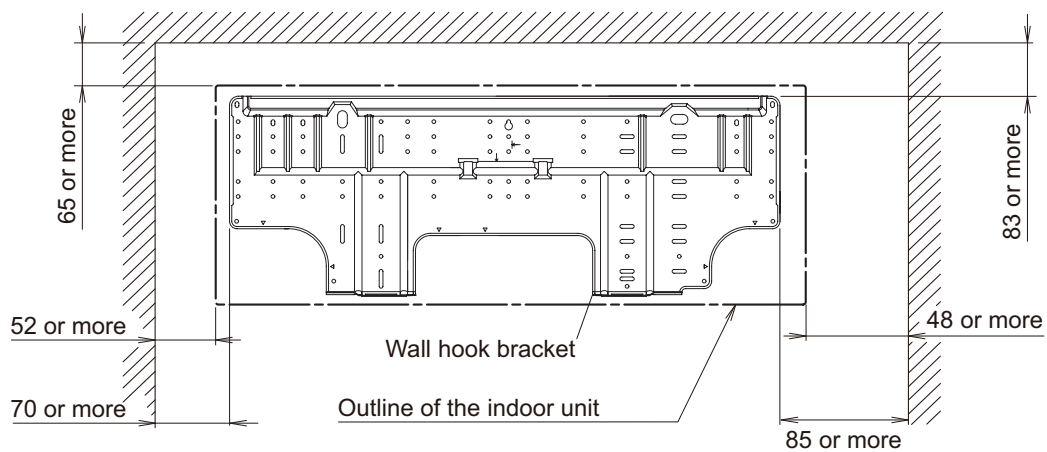




## ■ Installation space requirement

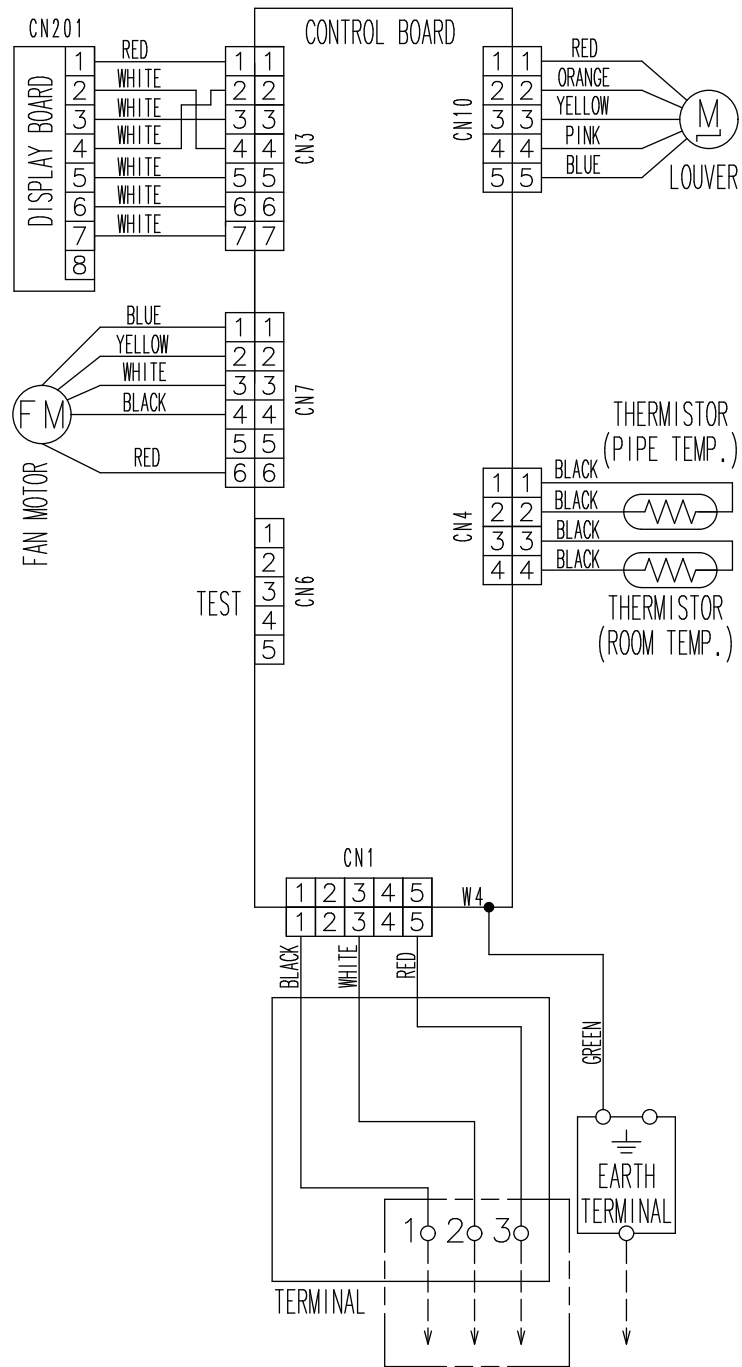
Provide sufficient installation space for product safety.

Unit: mm



### 3. Wiring diagrams

#### 3-1. Models: ASYG18KLCA and ASYG24KLCA



## 4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

**For cooling capacity:** Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

**For heating capacity:** Total Capacity (TC) and Input Power (IP)

### 4-1. Cooling capacity

#### ■ Model: ASYG18KLCA

AFR		m <sup>3</sup> /h																		865				
Outdoor temperature	Indoor temperature																							
	°CDB			18			21			23			25			27			29			32		
	°CWB			12			15			16			18			19			21			23		
	°CDB			TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	kW			kW			kW			kW			kW			kW			kW			kW		
-10	3.20	2.79	1.99	3.51	3.05	2.01	3.61	3.15	2.03	3.84	3.35	2.05	3.96	3.45	2.07	4.22	3.68	2.09	4.50	3.92	2.11			
-5	2.94	2.69	1.99	3.22	2.94	2.01	3.31	3.03	2.03	3.52	3.22	2.05	3.63	3.32	2.07	3.87	3.54	2.09	4.13	3.77	2.11			
0	2.67	2.59	1.99	2.93	2.83	2.01	3.02	2.91	2.03	3.21	3.10	2.05	3.31	3.20	2.07	3.52	3.41	2.09	3.76	3.63	2.11			
5	3.49	2.96	1.95	3.82	3.24	1.97	3.93	3.34	1.99	4.18	3.55	2.02	4.31	3.66	2.04	4.60	3.90	2.06	4.90	4.16	2.08			
10	3.24	2.85	1.98	3.54	3.11	2.00	3.65	3.21	2.02	3.88	3.41	2.04	4.00	3.52	2.06	4.26	3.75	2.08	4.55	4.00	2.10			
15	4.80	3.47	1.19	5.25	3.80	1.20	5.41	3.91	1.22	5.75	4.16	1.23	5.93	4.29	1.24	6.32	4.57	1.25	6.74	4.87	1.26			
20	4.61	3.39	1.34	5.05	3.71	1.36	5.20	3.82	1.37	5.53	4.06	1.39	5.70	4.19	1.40	6.08	4.46	1.41	6.48	4.76	1.43			
25	4.58	3.36	1.33	5.01	3.68	1.35	5.16	3.79	1.36	5.49	4.03	1.37	5.66	4.16	1.39	6.03	4.43	1.40	6.43	4.72	1.41			
30	4.39	3.27	1.47	4.81	3.58	1.49	4.95	3.69	1.51	5.27	3.92	1.52	5.43	4.04	1.54	5.78	4.31	1.55	6.17	4.59	1.57			
35	4.21	3.18	1.62	4.60	3.48	1.63	4.74	3.59	1.65	5.04	3.81	1.67	5.20	3.93	1.69	5.54	4.19	1.70	5.91	4.46	1.72			
40	3.55	2.98	1.34	3.88	3.26	1.35	4.00	3.36	1.37	4.25	3.57	1.38	4.39	3.68	1.39	4.67	3.92	1.41	4.98	4.18	1.42			
46	2.47	2.47	0.98	2.70	2.70	0.99	2.78	2.78	1.00	2.96	2.96	1.01	3.05	3.05	1.02	3.25	3.25	1.03	3.46	3.46	1.04			

#### ■ Model: ASYG24KLCA

AFR		m <sup>3</sup> /h																		1,040				
Outdoor temperature	Indoor temperature																							
	°CDB			18			21			23			25			27			29			32		
	°CWB			12			15			16			18			19			21			23		
	°CDB			TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	kW			kW			kW			kW			kW			kW			kW			kW		
-10	6.01	4.00	2.32	6.58	4.38	2.34	6.78	4.51	2.37	7.21	4.80	2.39	7.43	4.94	2.41	7.92	5.27	2.44	8.44	5.62	2.46			
-5	5.57	3.82	2.48	6.10	4.18	2.50	6.29	4.30	2.53	6.69	4.58	2.55	6.89	4.72	2.58	7.34	5.03	2.61	7.83	5.36	2.63			
0	5.14	3.64	2.64	5.62	3.98	2.66	5.79	4.10	2.69	6.16	4.36	2.72	6.35	4.49	2.75	6.77	4.79	2.77	7.21	5.11	2.80			
5	5.96	4.02	2.31	6.53	4.40	2.34	6.73	4.54	2.36	7.15	4.83	2.38	7.37	4.97	2.41	7.86	5.30	2.43	8.38	5.65	2.46			
10	5.63	3.95	2.46	6.16	4.32	2.48	6.35	4.45	2.51	6.75	4.73	2.53	6.96	4.88	2.56	7.42	5.20	2.59	7.91	5.54	2.61			
15	6.65	4.40	1.61	7.27	4.81	1.62	7.50	4.96	1.64	7.97	5.27	1.66	8.22	5.43	1.67	8.76	5.79	1.69	9.33	6.17	1.71			
20	6.45	4.29	1.81	7.06	4.69	1.83	7.28	4.83	1.85	7.74	5.14	1.87	7.98	5.30	1.89	8.50	5.65	1.90	9.06	6.02	1.92			
25	6.31	4.23	1.92	6.91	4.62	1.94	7.12	4.76	1.96	7.57	5.07	1.98	7.81	5.22	2.00	8.32	5.57	2.02	8.87	5.93	2.04			
30	6.03	4.10	2.12	6.60	4.49	2.14	6.80	4.63	2.17	7.23	4.92	2.19	7.45	5.07	2.21	7.94	5.40	2.23	8.47	5.76	2.25			
35	5.74	3.98	2.32	6.28	4.36	2.35	6.48	4.49	2.37	6.89	4.77	2.40	7.10	4.92	2.42	7.57	5.24	2.44	8.07	5.59	2.47			
40	5.33	3.85	2.09	5.84	4.21	2.11	6.02	4.34	2.14	6.40	4.61	2.16	6.59	4.75	2.18	7.03	5.07	2.20	7.49	5.40	2.22			
46	3.98	3.31	1.59	4.35	3.62	1.61	4.49	3.73	1.63	4.77	3.97	1.64	4.92	4.09	1.66	5.24	4.36	1.68	5.59	4.65	1.69			

## 4-2. Heating capacity

NOTE: Values mentioned in the table are calculated based on the maximum capacity.

### Model: ASYG18KLCA

AFR	m <sup>3</sup> /h	995
-----	-------------------	-----

			Indoor temperature											
			16		18		20		22		24			
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP		
Outdoor temperature	°CDB	°CWB	kW		kW		kW		kW		kW			
	-15	-16	4.29	1.49	4.18	1.52	4.07	1.55	3.96	1.58	3.85	1.61		
	-10	-11	4.97	1.60	4.84	1.63	4.71	1.65	4.58	1.70	4.45	1.73		
	-5	-7	5.74	1.73	5.59	1.77	5.44	1.77	5.29	1.84	5.14	1.87		
	0	-2	6.67	1.88	6.49	1.92	6.32	1.93	6.14	2.00	5.97	2.04		
	5	3	7.41	2.01	7.21	2.05	7.02	2.09	6.83	2.13	6.63	2.17		
	7	6	8.09	2.09	7.88	2.13	7.67	2.18	7.46	2.22	7.25	2.26		
	10	8	8.47	2.17	8.25	2.21	8.03	2.24	7.81	2.31	7.59	2.35		
	15	10	8.46	2.00	8.24	2.04	8.02	2.09	7.80	2.12	7.57	2.16		
	20	15	7.85	1.56	7.64	1.59	7.44	1.63	7.23	1.66	7.03	1.69		
24	18	8.24	1.55	8.03	1.59	7.81	1.62	7.59	1.65	7.38	1.68			

### Model: ASYG24KLCA

AFR	m <sup>3</sup> /h	1,040
-----	-------------------	-------

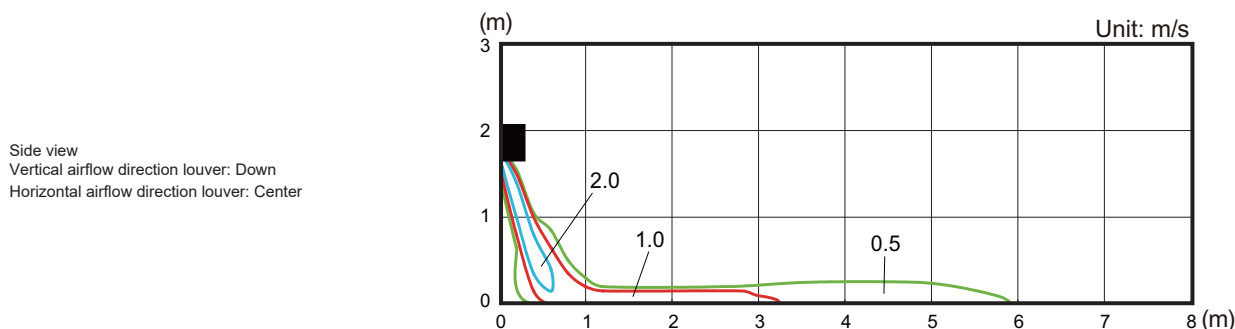
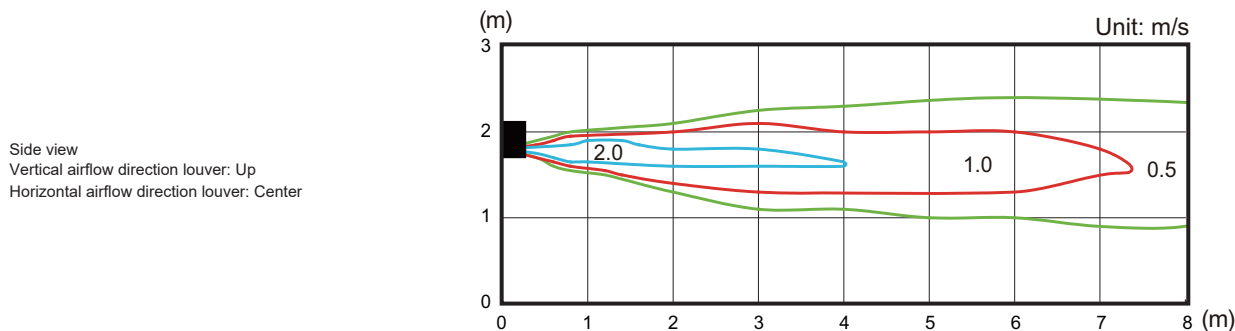
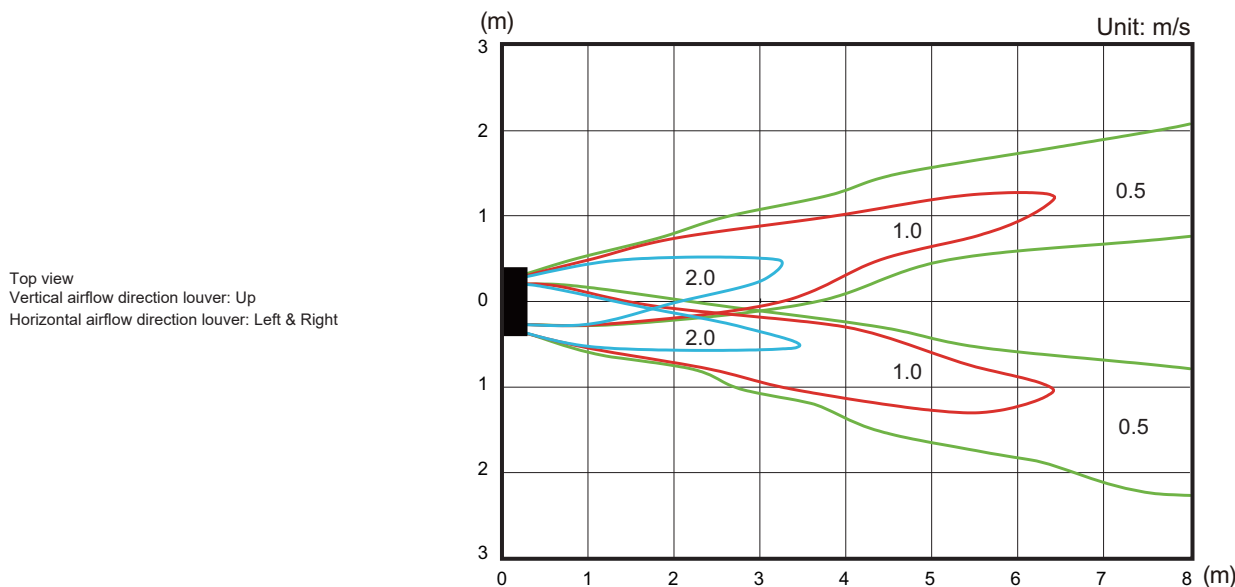
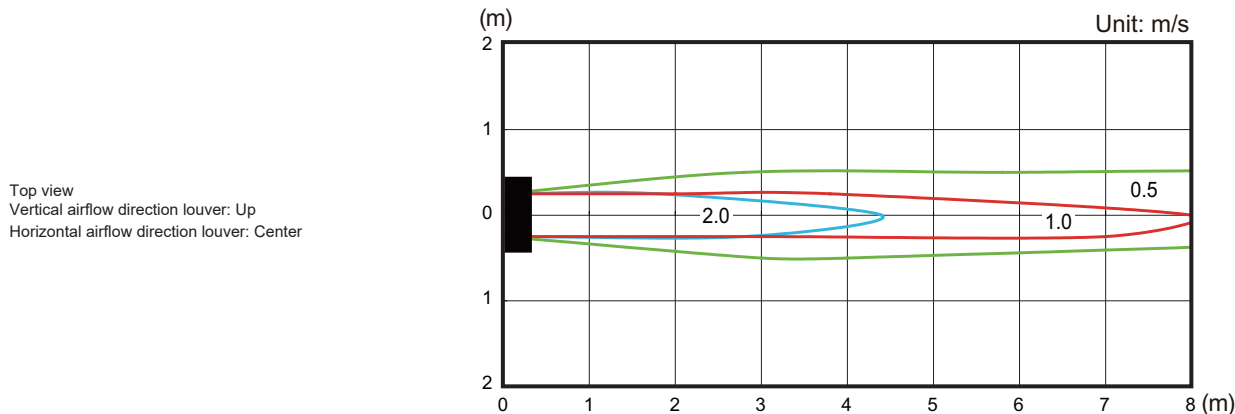
			Indoor temperature											
			16		18		20		22		24			
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP		
Outdoor temperature	°CDB	°CWB	kW		kW		kW		kW		kW			
	-15	-16	6.90	2.74	6.72	2.79	6.54	2.85	6.36	2.90	6.18	2.96		
	-10	-11	7.98	3.08	7.77	3.14	7.56	3.14	7.35	3.27	7.14	3.33		
	-5	-7	8.79	3.25	8.56	3.31	8.33	3.40	8.10	3.45	7.87	3.51		
	0	-2	9.20	3.16	8.96	3.22	8.72	3.31	8.48	3.35	8.24	3.42		
	5	3	9.53	2.89	9.28	2.95	9.03	3.01	8.78	3.07	8.53	3.13		
	7	6	9.50	2.55	9.25	2.60	9.00	2.66	8.75	2.71	8.50	2.76		
	10	8	9.54	2.45	9.29	2.50	9.04	2.59	8.79	2.60	8.54	2.65		
	15	10	9.60	2.24	9.35	2.29	9.10	2.38	8.84	2.38	8.59	2.43		
	20	15	9.66	2.04	9.41	2.08	9.16	2.17	8.90	2.16	8.65	2.20		
24	18	9.71	1.87	9.46	1.91	9.20	1.95	8.95	1.99	8.70	2.03			

# 5. Fan performance

## 5-1. Air velocity distributions

### ■ Model: ASYG18KLCA

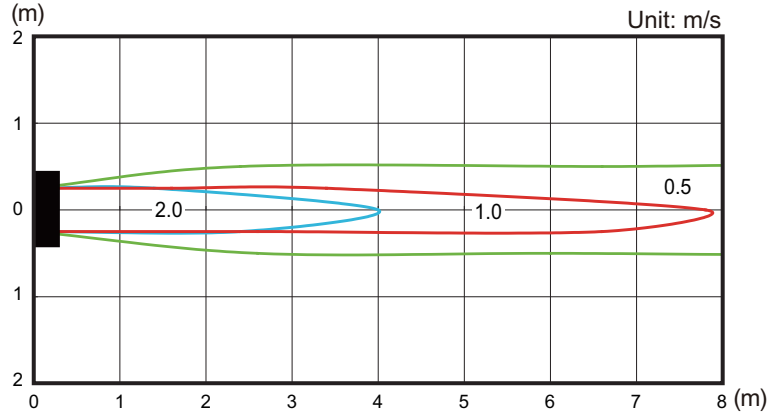
Measuring conditions	Fan speed	Operation mode
	HIGH	FAN



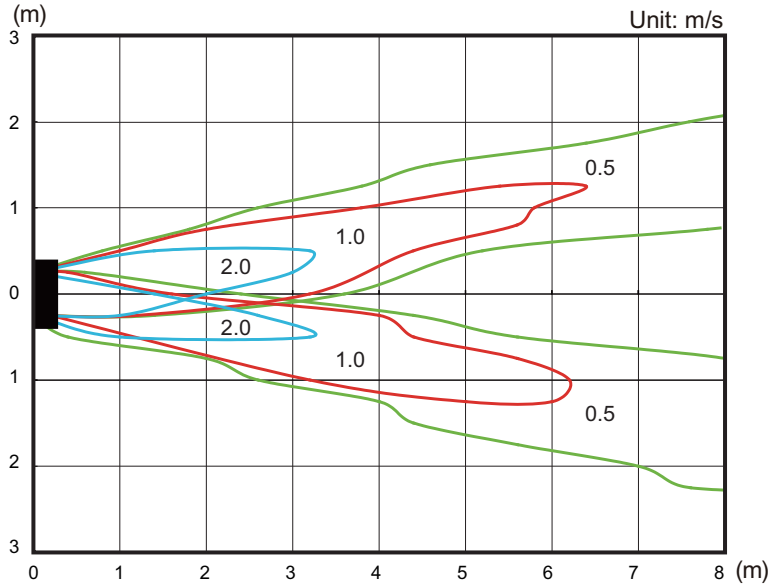
# Model: ASYG24KLCA

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

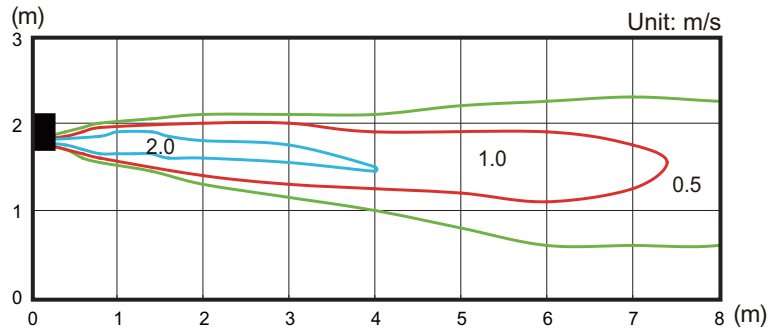
Top view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Center



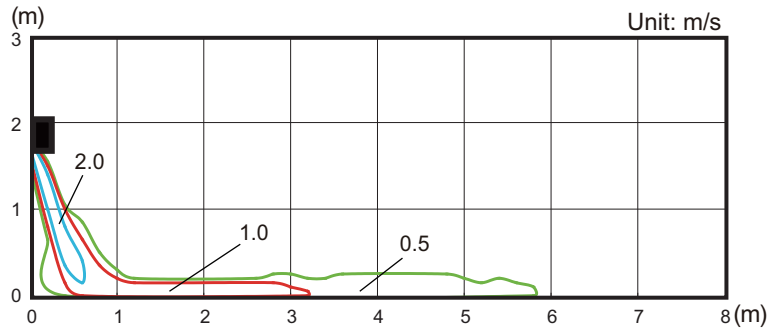
Top view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Left & Right



Side view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Center



Side view  
Vertical airflow direction louver: Down  
Horizontal airflow direction louver: Center



## 5-2. Airflow

### ■ Model: ASYG18KLCA

#### ● Cooling

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	865
	l/s	240
	CFM	509
MED	m <sup>3</sup> /h	780
	l/s	217
	CFM	459
LOW	m <sup>3</sup> /h	665
	l/s	185
	CFM	391
QUIET	m <sup>3</sup> /h	555
	l/s	154
	CFM	327

#### ● Heating

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	995
	l/s	276
	CFM	586
MED	m <sup>3</sup> /h	810
	l/s	225
	CFM	477
LOW	m <sup>3</sup> /h	700
	l/s	194
	CFM	412
QUIET	m <sup>3</sup> /h	590
	l/s	164
	CFM	347

## ■ Model: ASYG24KLCA

### ● Cooling

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	1,040
	l/s	289
	CFM	612
MED	m <sup>3</sup> /h	880
	l/s	244
	CFM	518
LOW	m <sup>3</sup> /h	685
	l/s	190
	CFM	403
QUIET	m <sup>3</sup> /h	555
	l/s	154
	CFM	327

### ● Heating

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	1,040
	l/s	289
	CFM	612
MED	m <sup>3</sup> /h	810
	l/s	225
	CFM	477
LOW	m <sup>3</sup> /h	695
	l/s	192
	CFM	406
QUIET	m <sup>3</sup> /h	585
	l/s	163
	CFM	344

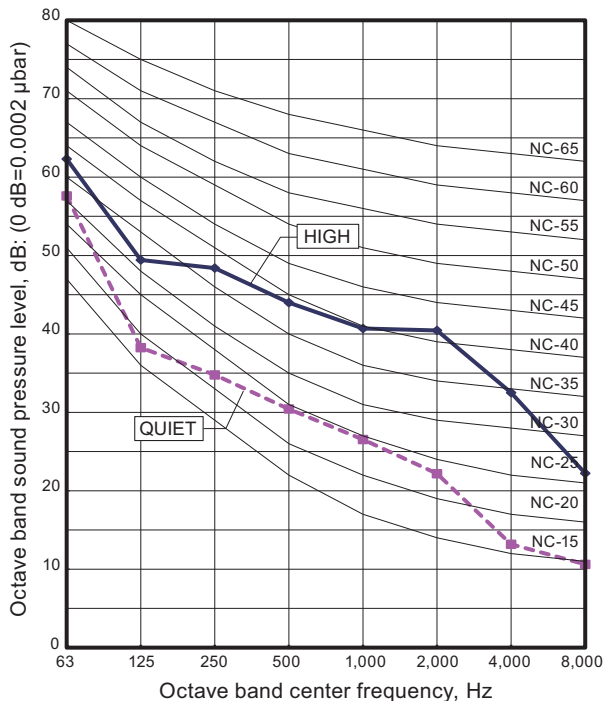


# 6. Operation noise (sound pressure)

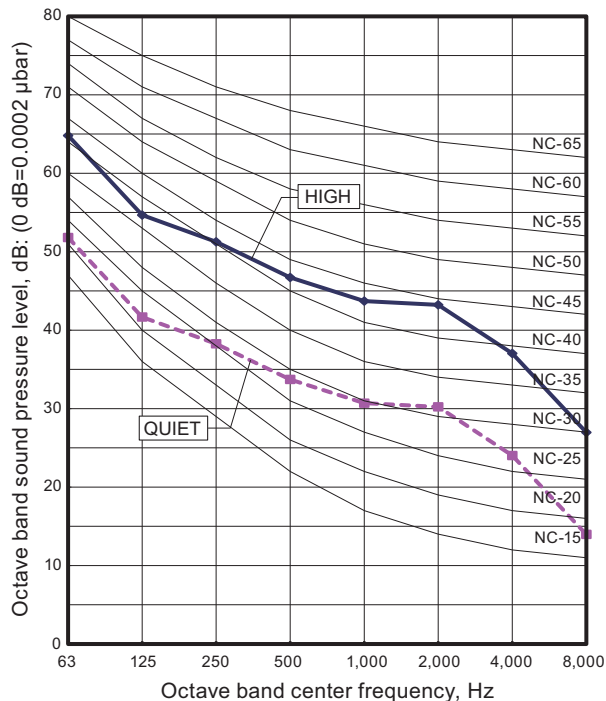
## 6-1. Noise level curve

### Model: ASYG18KLCA

#### Cooling

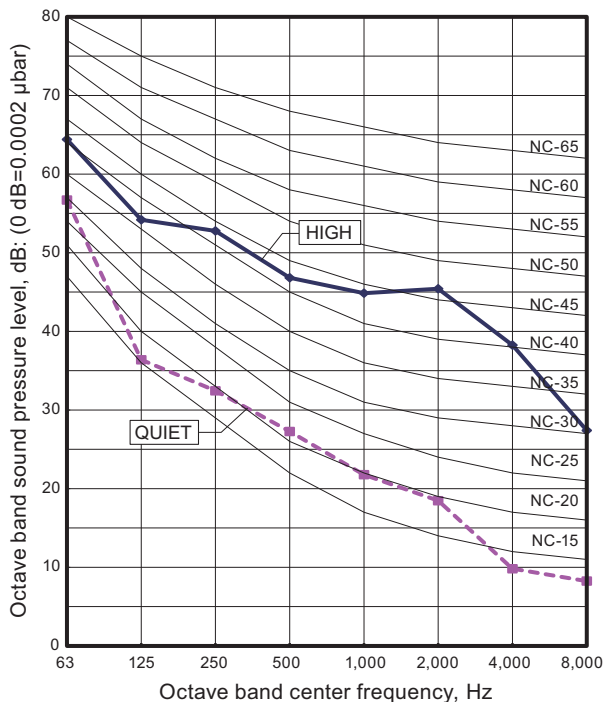


#### Heating

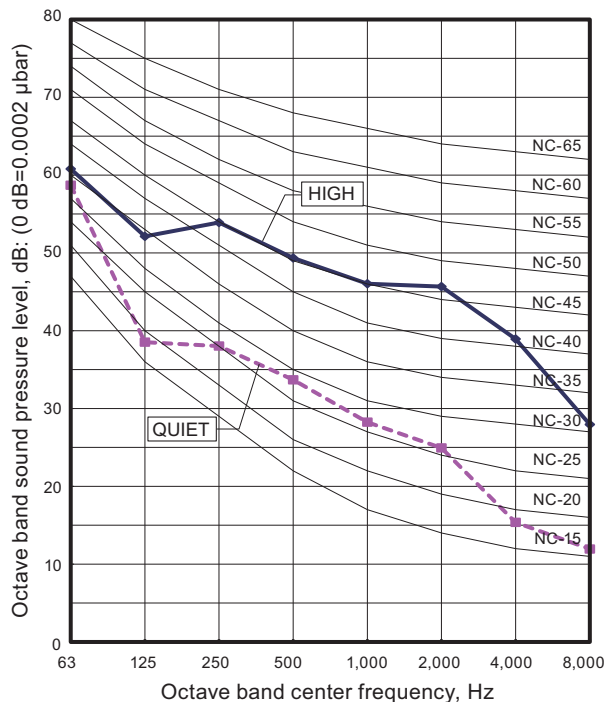


### Model: ASYG24KLCA

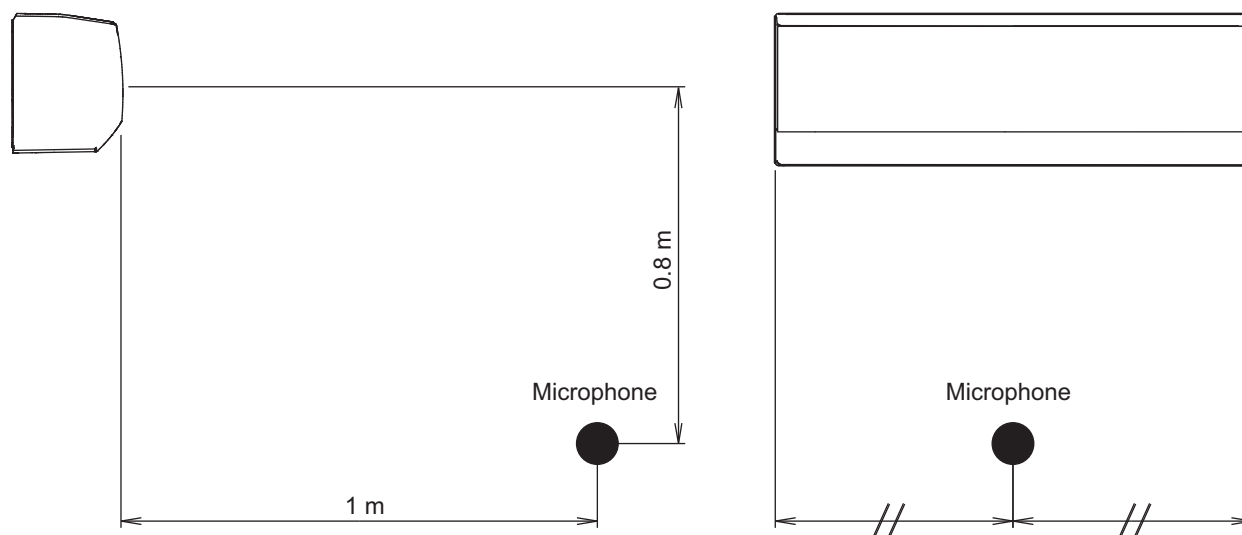
#### Cooling



#### Heating



## 6-2. Sound level check point



**NOTE:** Detailed shape of the actual indoor unit might be slightly different from the one illustrated above.

## 7. Safety devices

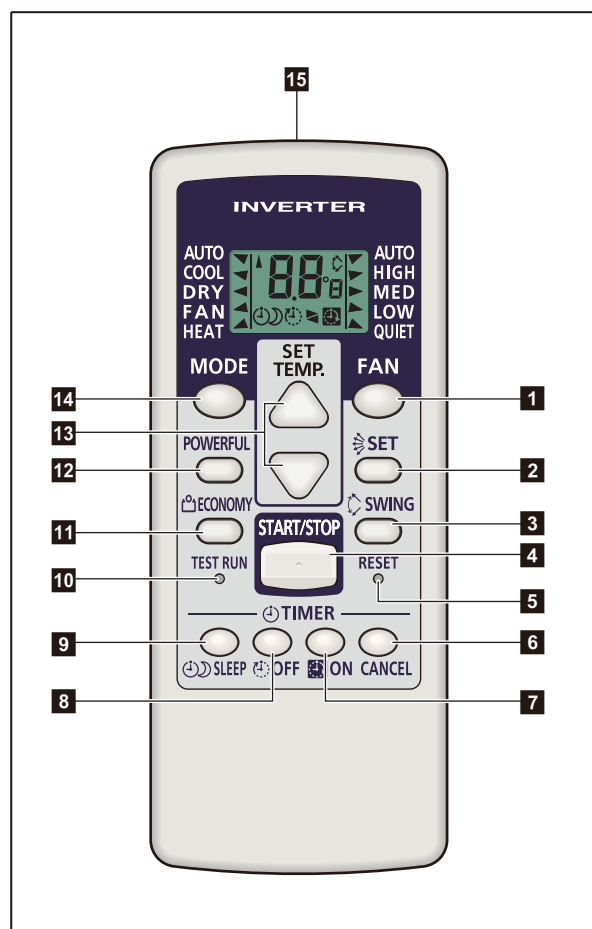
Type of protection	Protection form		Model	
			ASYG18KLCA	ASYG24KLCA
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A	
Fan motor protection	Thermistor protection	Activate	150±15 °C Fan motor stop	
		Reset	120±15 °C Fan motor restart	

\*PCB: Printed Circuit Board

## 8. Remote controller

### 8-1. Wireless remote controller

#### Overview



- 1 FAN button
- 2 SET button
- 3 SWING button
- 4 START/STOP button
- 5 RESET button
- 6 TIMER CANCEL button
- 7 ON TIMER button
- 8 OFF TIMER button
- 9 SLEEP TIMER button
- 10 TEST RUN button
  - Used only when installing the air conditioner, and should not be used under normal conditions, as it will cause the indoor unit's thermostat malfunction.
  - If this button is pressed during normal operation, the indoor unit will switch to test operation mode, and the operation indicator lamp and the timer indicator lamp on the indoor unit will begin to flash simultaneously.
  - To stop the test operation mode, press the START/STOP button. Then, the air conditioner stops the operation.

- 11 ECONOMY button
- 12 POWERFUL button
- 13 SET TEMP. (temperature) (▲ / ▼) button
  - Sets desired temperature.
  - Sets remote controller custom code.

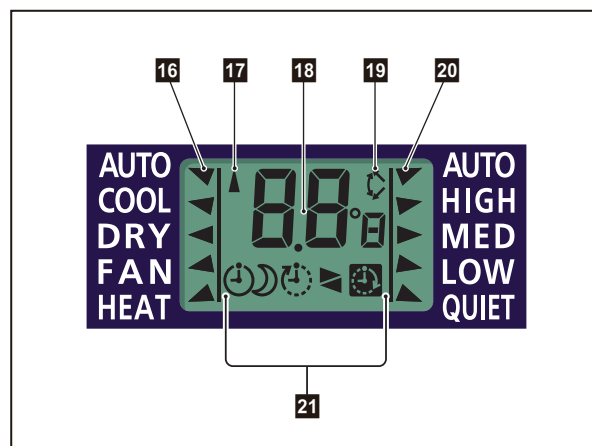
- 14 MODE button
  - Switches operation mode (AUTO, COOL, DRY, FAN, and HEAT).
  - Starts/ends the remote controller custom code (max. 4 types) change.

- 15 Signal transmitter
- 16 Operating mode indicator
- 17 Signal transmit indicator
- 18 Temperature and time indicator
  - Displays set temperature.
  - In timer setting, it displays the timer time. After finishing the timer setting, set temperature will reappear.

- 19 Swing indicator
- 20 Fan speed indicator
- 21 Timer mode indicator

- Sleep timer
- OFF timer
- OFF-ON timer
- ON-OFF timer
- ON timer

#### Display panel

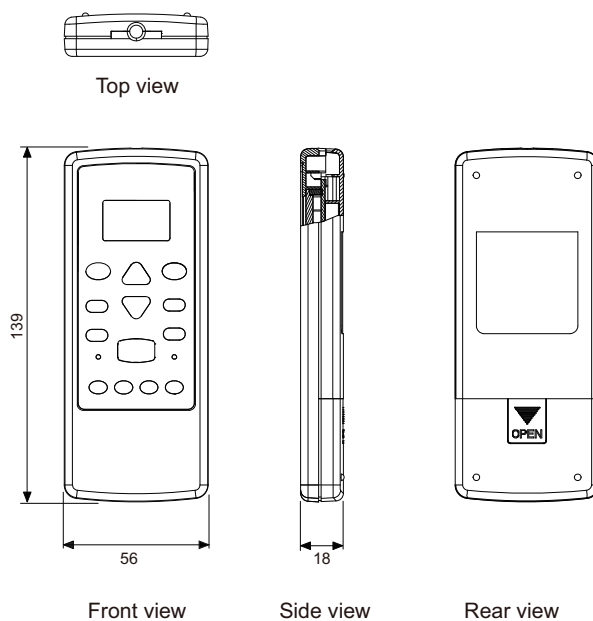


**NOTE:** Functions may differ by type of the indoor unit. For details, refer to the operation manual.

## ■ Specifications

### ● Controller

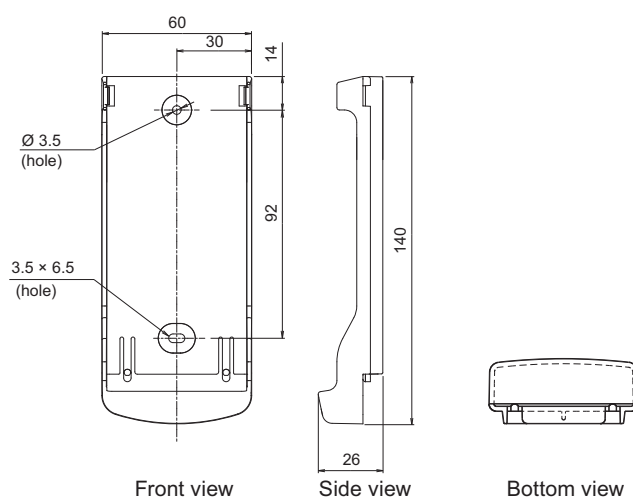
Unit: mm



Size (H × W × D)	mm	139 × 56 × 18
Weight	g	70 (without batteries)

### ● Holder

Unit: mm



Size (H × W × D)	mm	140 × 60.4 × 26.2
Weight	g	25

## 9. Function settings

To adjust the functions of this product according to the installation environment, various types of function settings are available.

**NOTE:** Incorrect settings can cause a product malfunction.

### 9-1. Function settings by using remote controller

Some function settings can be changed on the remote controller. After confirming the setting procedure and the content of each function setting, select appropriate functions for your installation environment.

#### ■ Setting procedure by using wireless remote controller

The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

**Before connecting the power supply of the indoor unit, reconfirm following items:**

- Piping air tight test and vacuuming have been performed firmly.
- There is no wiring mistake.

**Then, connect the power supply of indoor unit.**

**Entering function setting mode:**

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

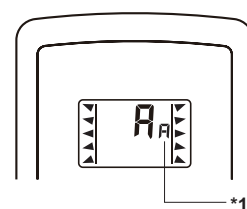
#### STEP 1: Setting the remote controller custom code

Use the following steps to select the custom code of the remote controller. (Note that the air conditioner cannot receive a custom code if the air conditioner has not been set for the custom code.)

The custom codes that are set through this process are applicable only to the signal in the function setting.

For details on how to set the custom codes through the normal process, refer to ["Custom code setting for wireless remote controller"](#) on page 22.

1. Press the SET TEMP. (▲) (▼) buttons to change the custom code between  $\text{A} \rightarrow \text{b} \rightarrow \text{c} \rightarrow \text{d}$ . Match the code on the display to the air conditioner custom code. (Initially set to  $\text{A}$ .) If the custom code does not need to be selected, press the MODE button, and proceed to **STEP 2**.
2. Press the MODE button to accept the custom code, and proceed to **STEP 2**.



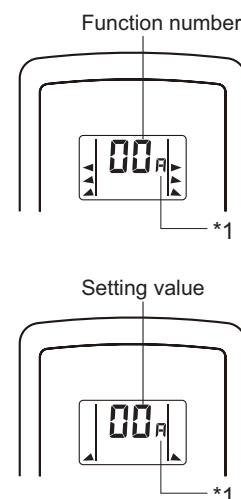
**\*1:** Small  $\text{A}$  is displayed on the right of the custom code during the function setting.


#### NOTES:

- The air conditioner custom code is set to  $\text{A}$  prior to shipment. To change the custom code, contact your retailer.
- The remote controller resets to custom code  $\text{A}$  when the batteries on the remote controller are replaced. If you use a custom code other than code  $\text{A}$ , reset the custom code after replacing the batteries.
- If you do not know the air conditioner custom code setting, try each of the custom codes ( $\text{A} \rightarrow \text{b} \rightarrow \text{c} \rightarrow \text{d}$ ) until you find the code that operates the air conditioner.

**STEP 2: Selecting the function number and setting value**

1. Press the SET TEMP. (▲) (▼) buttons to select the function number. To switch between the left and right digits, press the MODE button.
2. Press the FAN button to proceed the setting value. To return the function number selection, press the FAN button again.
3. Press the SET TEMP. (▲) (▼) buttons to select the setting value. To switch between the left and right digits, press the MODE button.
4. Press the SLEEP button, then after you hear the beep emitted from the indoor unit, the START/STOP button in the order to confirm the settings.
5. Press the RESET button to cancel the function setting mode.
6. After completing the function setting, be sure to disconnect the power supply and then reconnect it.



\*1: Small  is displayed on the right of the custom code during the function setting.

** CAUTION**

After disconnect the power supply, wait 30 seconds or more before reconnecting it. The function setting will not become active unless the power supply is disconnected and then reconnected.

## ■ Contents of function setting

Each function setting listed in this section is adjustable in accordance with the installation environment.

**NOTE:** Setting will not be changed if invalid numbers or setting values are selected.

### ● Function setting list

	Function no.	Functions
1)	11	Filter sign
2)	30/31	Room temperature control for indoor unit sensor
3)	40	Auto restart
4)	44	Remote controller custom code
5)	49	Indoor unit fan control for energy saving for cooling

#### 1) Filter sign

Select appropriate intervals for displaying the filter sign on the indoor unit according to the estimated amount of dust in the air of the room.

If the indication is not required, select "No indication" (03).

Function number	Setting value	Setting description	Factory setting
11	00	Standard (400 hours)	
	01	Long interval (1,000 hours)	
	02	Short interval (200 hours)	
	03	No indication	◆

#### 2) Room temperature control for indoor unit sensor

Depending on the installed environment, correction of the room temperature sensor may be required. Select the appropriate control setting according to the installed environment.

The temperature correction values show the difference from the Standard setting "00" (manufacturer's recommended value).

Function number	Setting value	Setting description	Factory setting		
30 (For cooling)	31 (For heating)	00	Standard setting	◆	
		01	No correction 0.0 °C		
		02	-0.5 °C	More cooling Less heating	
		03	-1.0 °C		
		04	-1.5 °C		
		05	-2.0 °C		
		06	-2.5 °C		
		07	-3.0 °C		
		08	-3.5 °C		
		09	-4.0 °C		
		10	+0.5 °C	Less cooling More heating	
		11	+1.0 °C		
		12	+1.5 °C		
		13	+2.0 °C		
		14	+2.5 °C		
		15	+3.0 °C		
		16	+3.5 °C		
17	+4.0 °C				



**3) Auto restart**

Enables or disables automatic restart after a power interruption.

Function number	Setting value	Setting description	Factory setting
40	00	Enable	◆
	01	Disable	

**NOTE:** Auto restart is an emergency function such as for power outage etc. Do not attempt to use this function in normal operation. Be sure to operate the unit by remote controller or external device.

**4) Remote controller custom code**

(Only for wireless remote controller)

The indoor unit custom code can be changed. Select the appropriate custom code.

Function number	Setting value	Setting description	Factory setting
44	00	A	◆
	01	B	
	02	C	
	03	D	

**5) Indoor unit fan control for energy saving for cooling**

Enables or disables the power-saving function by controlling the indoor unit fan rotation when the outdoor unit is stopped during cooling operation.

Function number	Setting value	Setting description	Factory setting
49	00	Disable	
	01	Enable	◆

00: When the outdoor unit is stopped, the indoor unit fan operates continuously following the setting on the remote controller.

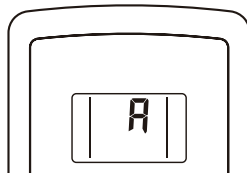
01: When the outdoor unit is stopped, the indoor unit fan operates intermittently at a very low speed.

## 9-2. Custom code setting for wireless remote controller

To interconnect the air conditioner and the wireless remote controller, assignment of the custom code for the wireless remote controller is required.

**NOTE:** Air conditioner cannot receive a custom code if the air conditioner has not been set for the custom code.

1. Press the MODE button for at least 5 seconds to display the current custom code. (Initially set to  $\overline{A}$ .)




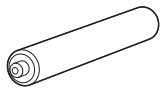
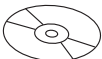


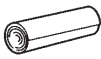
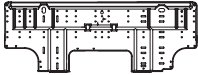



2. Press the SET TEMP. ( $\blacktriangle$  or  $\blacktriangledown$ ) button to change the custom code between  $\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$ . Match the code on the display to the air conditioner custom code.
3. Press the MODE button again. The custom code will be changed.

### NOTES:

- If no button is pressed within 30 seconds after the custom code is displayed, the system returns to the original clock indicator. In this case, start again from step 1.
- The air conditioner custom code is set to  $\overline{A}$  prior to shipment. To change the custom code, contact your retailer.
- The remote controller resets to custom code  $\overline{A}$  when the batteries in the remote controller are replaced. If you use a custom code other than code  $\overline{A}$ , reset the appropriate custom code after replacing the batteries. If you do not know the assigned code for the air conditioner, try each of the custom code ( $\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$ ) until you find the code which operates the air conditioner.

## 10. Accessories

### 10-1. Models: ASYG18KLCA and ASYG24KLCA

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Battery		2
Operating manual (CD-ROM)		1	Remote controller holder		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Tapping screw (large)		5
Remote controller		1	Tapping screw (small)		2



# **Part 2. OUTDOOR UNIT**

---

**SINGLE TYPE:**

**AOYG18KLCA**

**AOYG24KLCA**

# 1. Specifications

Type				Inverter heat pump			
Model name				AOYG18KLCA		AOYG24KLCA	
Power supply				230 V ~ 50 Hz			
Available voltage range				198—264 V			
Starting current				A		8.0	
Fan	Airflow rate	Cooling	m <sup>3</sup> /h	1,830		2,885	
		Heating		2,265		3,030	
	Type × Q'ty	Propeller fan × 1					
Motor output				W		23	
Sound pressure level *1	Cooling	Heating	dB (A)	50		55	
				56		57	
Sound power level	Cooling	Heating	dB (A)	61		65	
				66		67	
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 504 × 881 × 18.19		Main1: 588 × 881 × 18.19	
	Main2: 504 × 851 × 18.19			Main2: 588 × 851 × 18.19			
	Fin pitch		1.3				
	Rows × Stages		2 × 24		Main1: 1 × 28		Main2: 1 × 28
	Pipe type		Copper				
Fin type	Type (Material)		Aluminum				
	Surface treatment		PC fin				
Compressor	Type × Q'ty	W		Twin rotary × 1			
	Motor output	900		1,060			
Refrigerant	Type (Global warming potential)		R32 (675)				
	Charge	g		850		1,100	
Refrigerant oil	Type	FW68S		RmM68AF			
	Amount	cm <sup>3</sup>		350		400	
Enclosure	Material		Steel sheet				
	Color		Beige Approximate color of Munsell 10YR 7.5/1.0				
Dimensions (H × W × D)	Net		mm	542 × 799 × 290		632 × 799 × 290	
	Gross			602 × 940 × 375		692 × 940 × 375	
Weight	Net		kg	33		38	
	Gross			37		42	
Connection pipe	Size	Liquid	mm (in)	Ø 6.35 (Ø 1/4)			
		Gas		Ø 9.52 (Ø 3/8)			
	Method		Flare				
	Pre-charge length		m	15			
	Max. length			25		30	
Max. height difference		20		25			
Operation range	Cooling	Heating	°C	-10 to 46			
				-15 to 24			
Drain pipe	Material		PP+HDPE				
	Tip diameter		mm				
				Ø 13.0 (I. D.), Ø 16.0 to Ø 16.8 (O. D.)			

**NOTES:**

- 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 (Between outdoor unit and indoor unit)
- Protective function might work when using it outside the operation range.
- \*1: Sound pressure level
  - Measured values in manufacturer's anechoic chamber
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

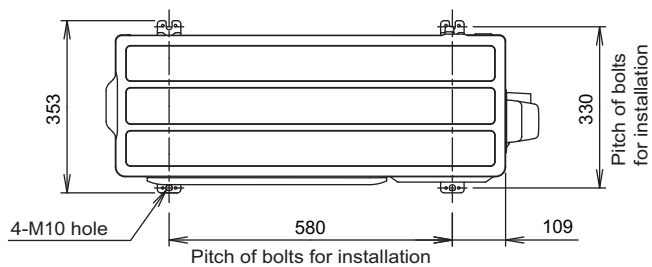
## 2. Dimensions

### 2-1. Model: AOYG18KLCA

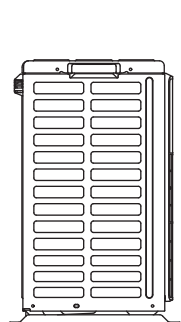
Unit: mm

OUTDOOR UNIT  
AOYG18, 24KLTA

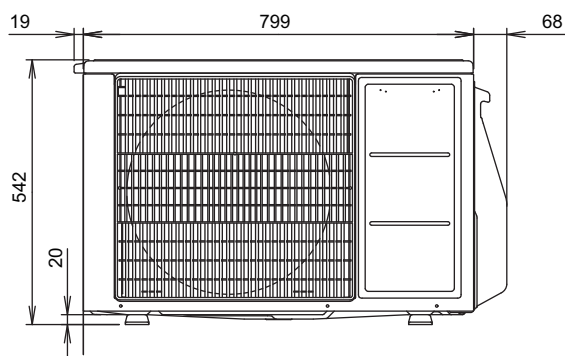
OUTDOOR UNIT  
AOYG18, 24KLTA



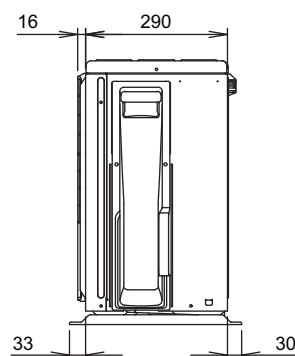
Top view



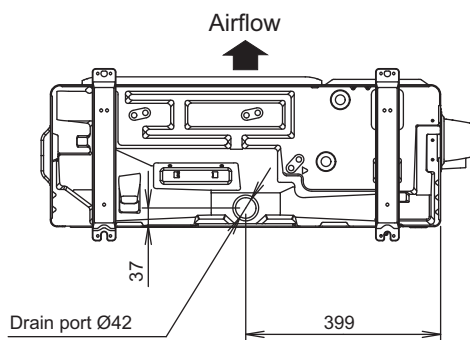
Side view



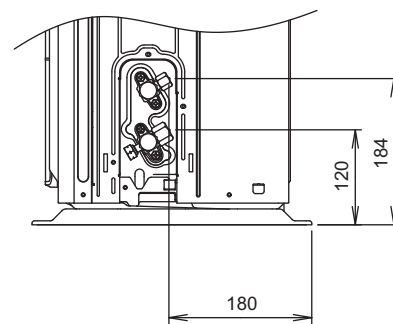
Front view



Side view



Bottom view



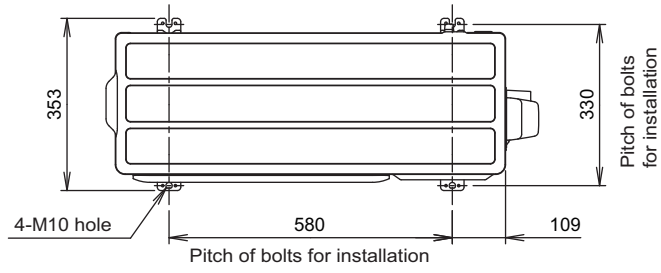
Side view (Valve part)

## 2-2. Model: AOYG24KLCA

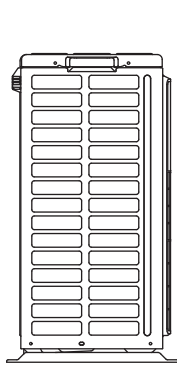
Unit: mm

OUTDOOR UNIT  
AOYG18, 24KLTA

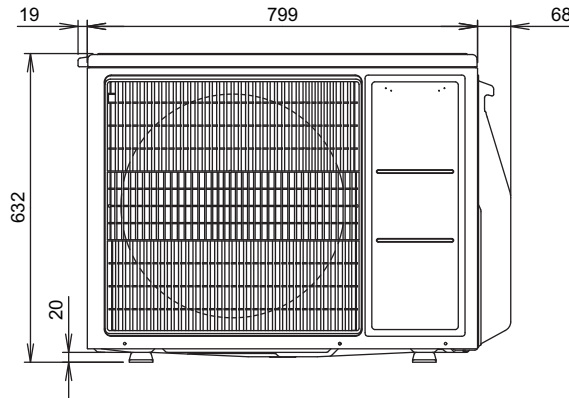
OUTDOOR UNIT  
AOYG18, 24KLTA



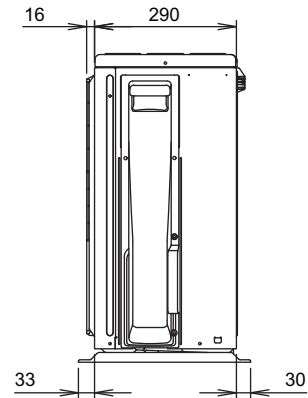
Top view



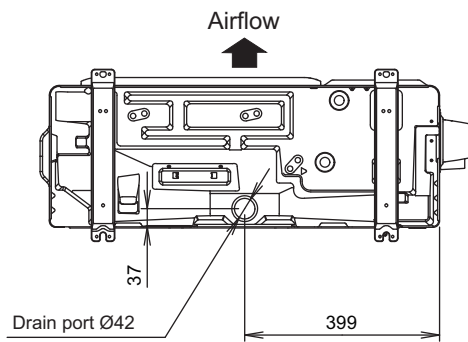
Side view



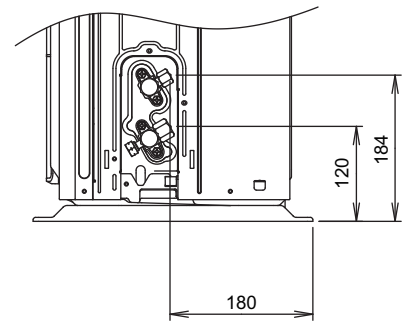
Front view



Side view



Bottom view



Side view (Valve part)



## 3. Installation space

### 3-1. Models: AOYG18KLCA and AOYG24KLCA

#### ■ Space requirement

Provide sufficient installation space for product safety.

#### ⚠ CAUTION

Keep the space shown in the installation examples.

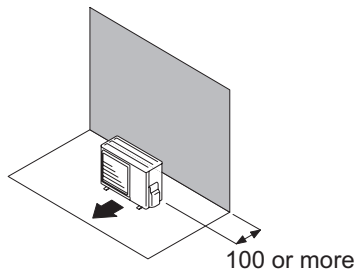
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

#### ● Single outdoor unit installation

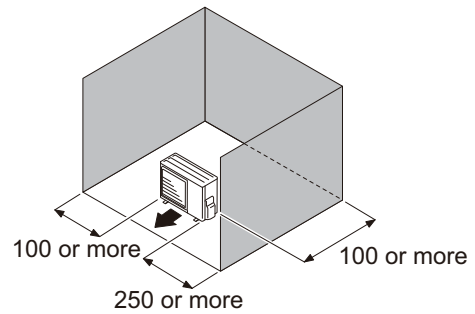
- When the upper space is open:

Unit: mm

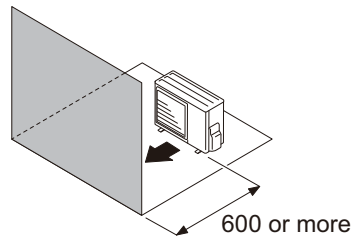
Obstacles at rear only



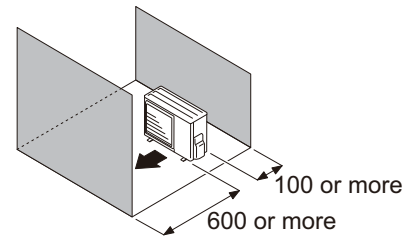
Obstacles at rear and sides



Obstacles at front



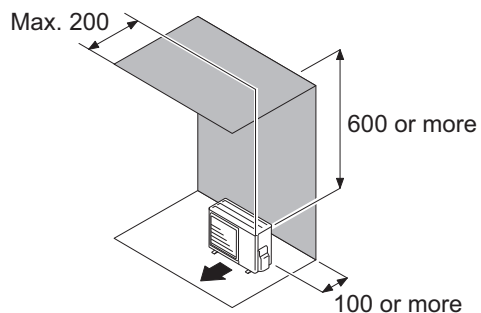
Obstacles at front and rear



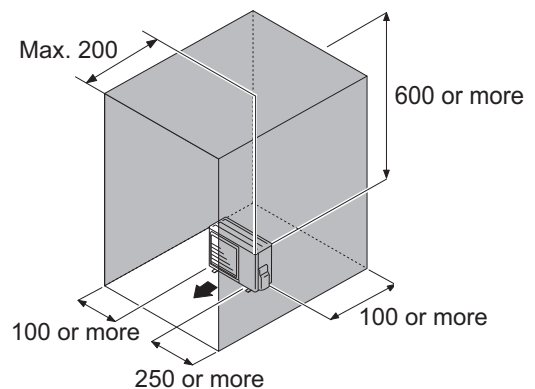
- When an obstruction in the upper space:

Unit: mm

Obstacles at rear and above



Obstacles at rear, sides, and above



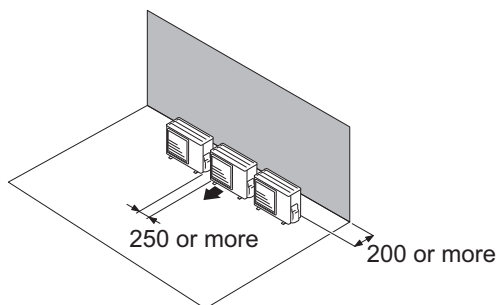
## ● Multiple outdoor unit installation

- Provide at least 250 mm of space between the outdoor units if multiple units are installed.
- When routing the piping from the side of an outdoor unit, provide space for piping.
- No more than 3 units must be installed side by side.  
When 3 units or more are arranged in a line, provide the space as shown in the following example “**When an obstruction in the upper space:**”.

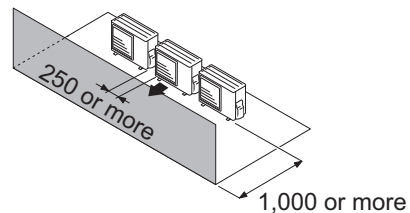
- **When the upper space is open:**

Unit: mm

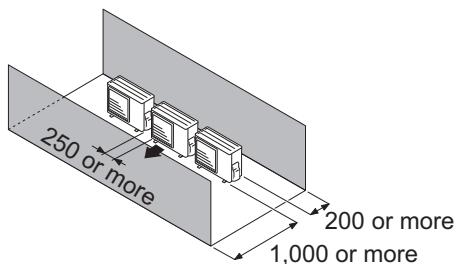
Obstacles at rear only



Obstacles at front only



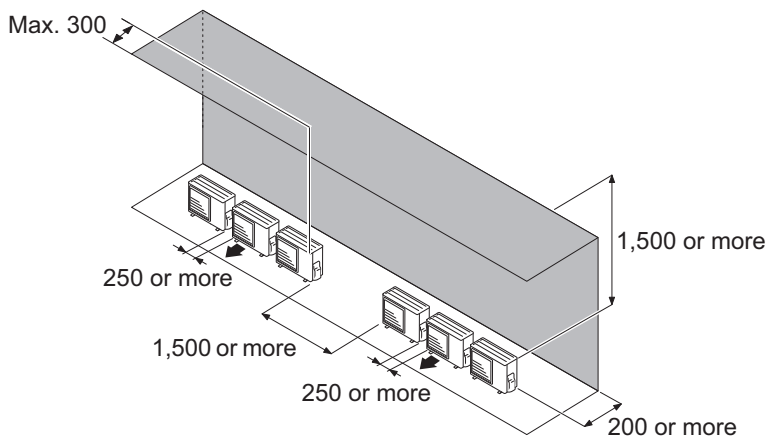
Obstacles at front and rear



- **When an obstruction in the upper space:**

Unit: mm

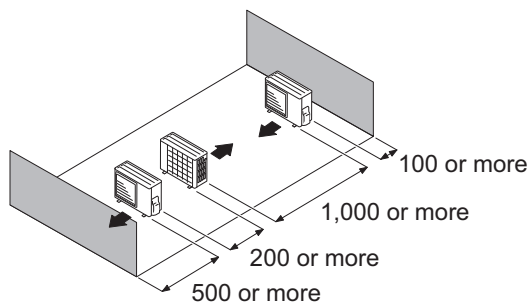
Obstacles at rear and above.



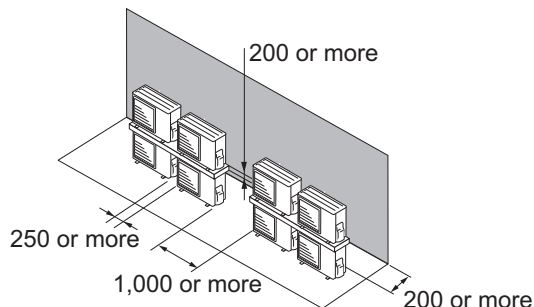
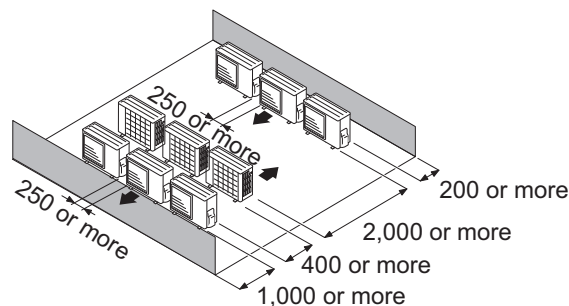
## ● Outdoor units installation in multi-row

Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement

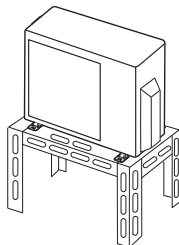


### NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

### ⚠ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.

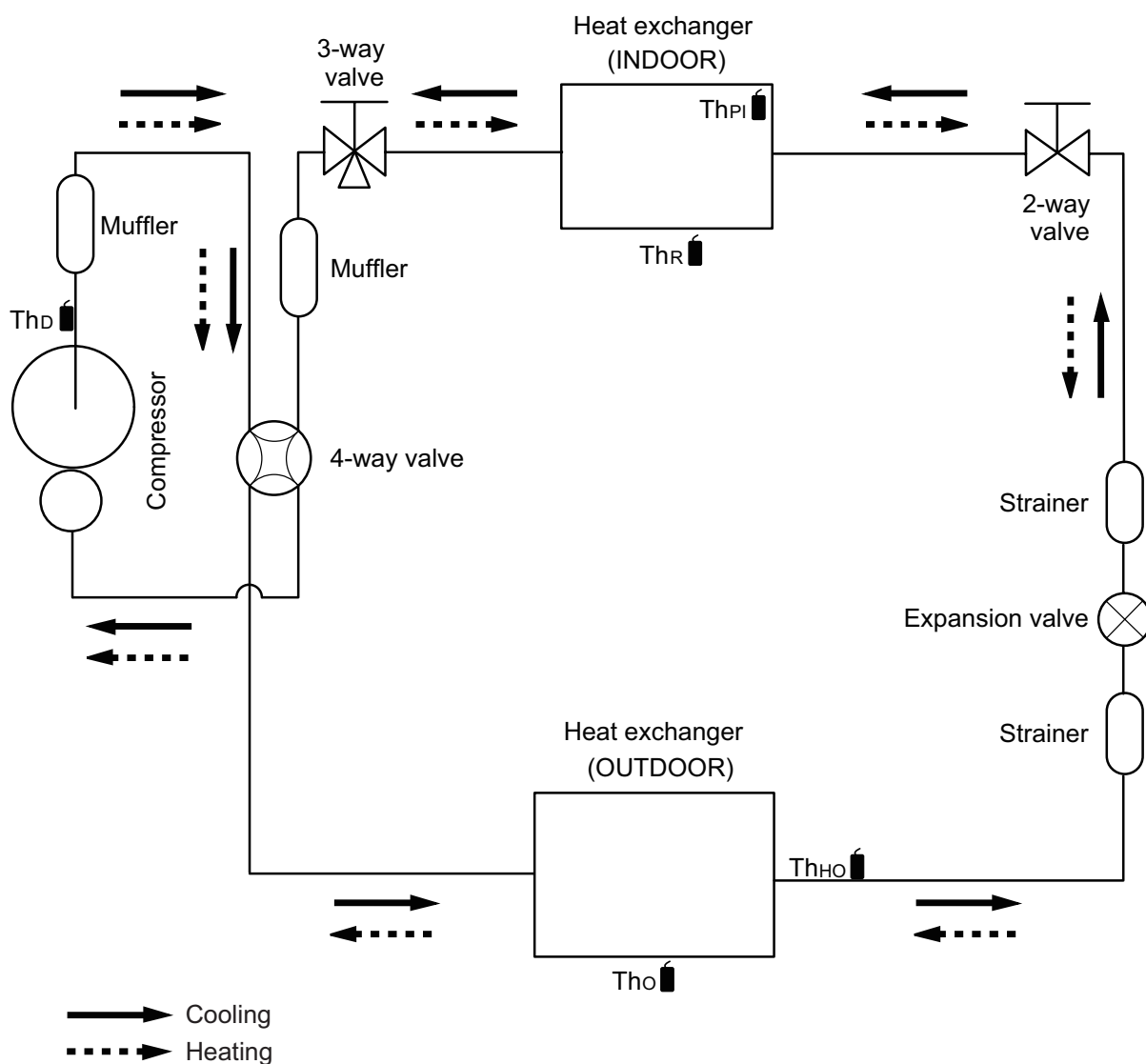


# 4. Refrigerant circuit

## 4-1. Model: AOYG18KLCA

OUTDOOR UNIT  
AOYG18, 24KLTA

OUTDOOR UNIT  
AOYG18, 24KLTA

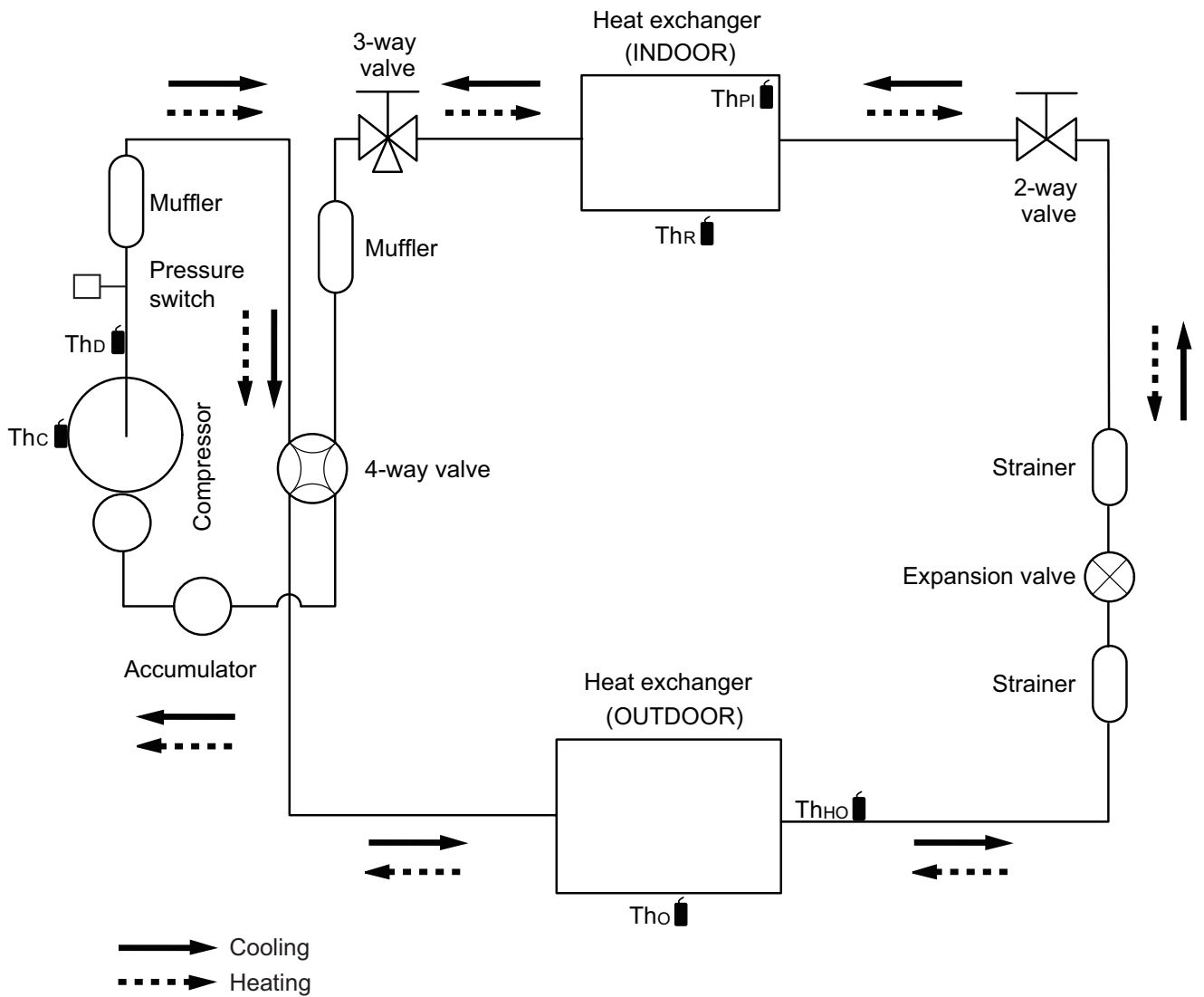


- $Th_D$  : Thermistor (Discharge temperature)
- $Th_O$  : Thermistor (Outdoor temperature)
- $Th_{HO}$  : Thermistor (Heat exchanger out temperature)
- $Th_R$  : Thermistor (Room temperature)
- $Th_{PI}$  : Thermistor (Pipe temperature)

## 4-2. Model: AOYG24KLCA

OUTDOOR UNIT  
AOYG18, 24KLTA

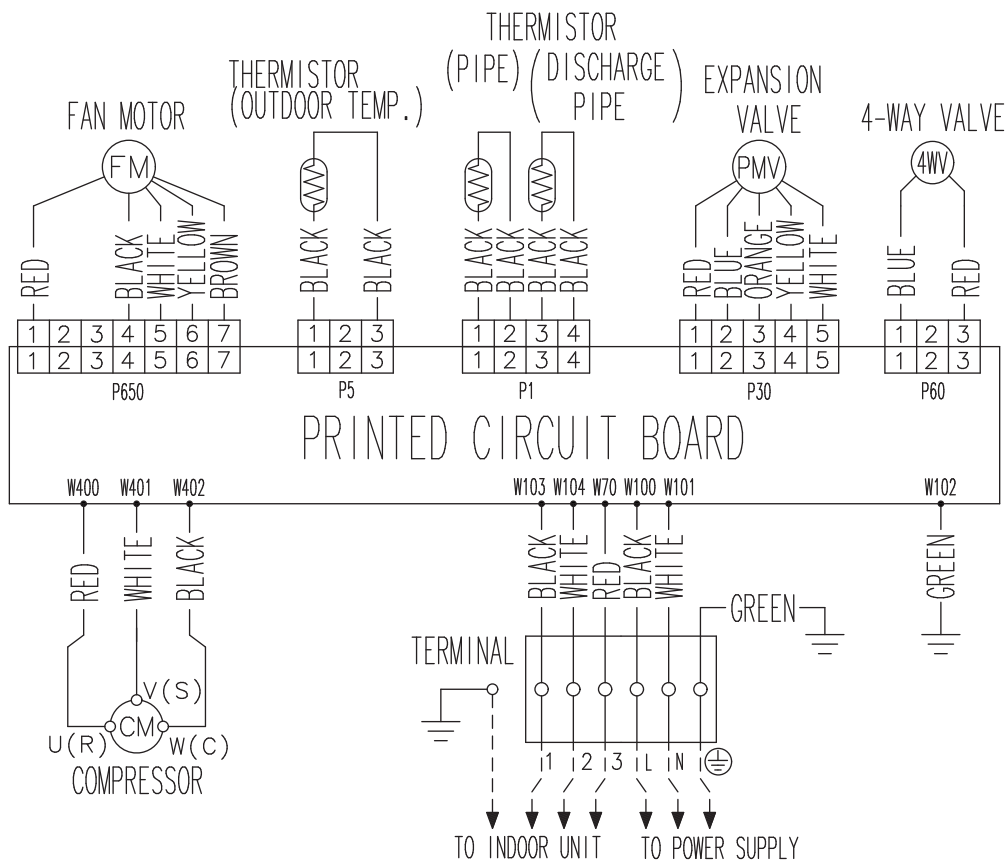
OUTDOOR UNIT  
AOYG18, 24KLTA



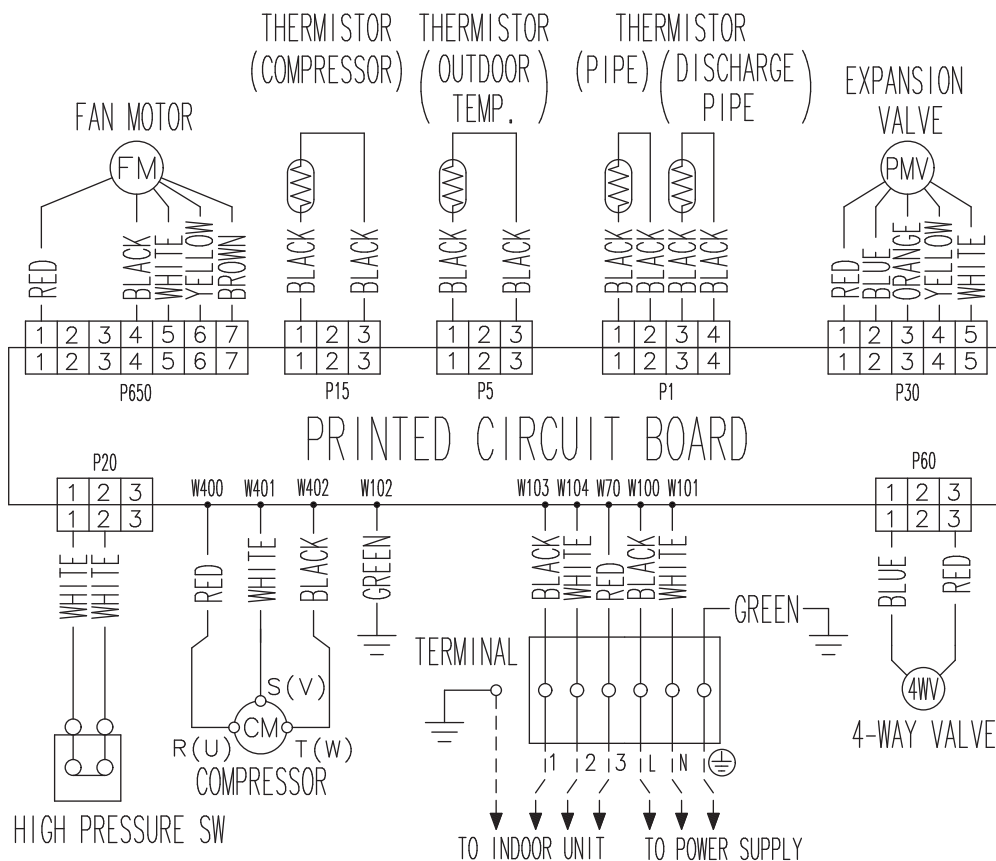
- Thc : Thermistor (Compressor temperature)
- Thd : Thermistor (Discharge temperature)
- Tho : Thermistor (Outdoor temperature)
- Thho : Thermistor (Heat exchanger out temperature)
- ThR : Thermistor (Room temperature)
- ThPI : Thermistor (Pipe temperature)

## 5. Wiring diagrams

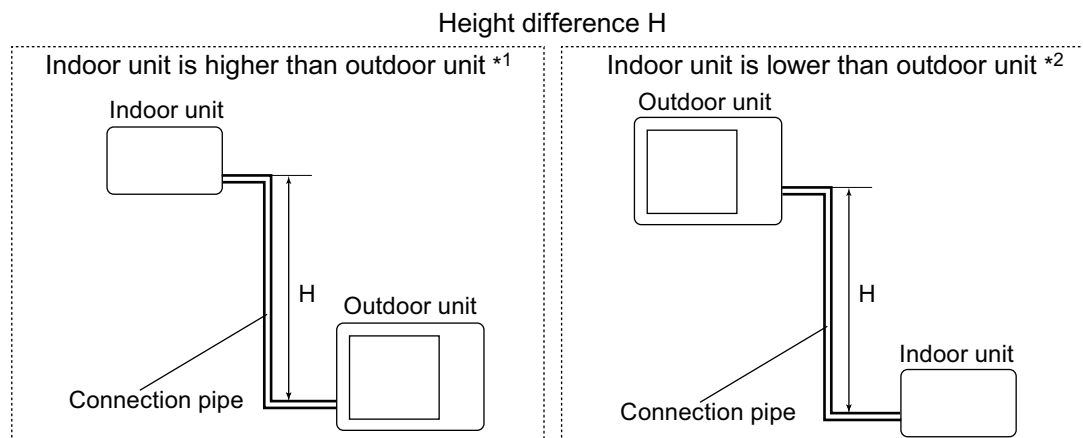
### 5-1. Model: AOYG18KLCA



### 5-2. Model: AOYG24KLCA



## 6. Capacity compensation rate for pipe length and height difference



### 6-1. Model: AOYG18KLCA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

COOLING			Pipe length (m)					
			5	7.5	10	15	20	25
Height difference H (m)	Indoor unit is higher than outdoor unit *1	20	—	—	—	—	0.872	0.848
		15	—	—	—	0.904	0.879	0.854
		10	—	—	0.951	0.919	0.893	0.868
		7.5	—	0.972	0.955	0.923	0.897	0.872
		5	0.992	0.975	0.959	0.925	0.901	0.876
	Indoor unit is lower than outdoor unit *2	0	1.000	0.983	0.967	0.933	0.908	0.883
		-5	1.000	0.983	0.967	0.933	0.908	0.883
		-7.5	—	0.983	0.967	0.933	0.908	0.883
		-10	—	—	0.967	0.933	0.908	0.883
		-15	—	—	—	0.933	0.908	0.883
	-20	—	—	—	—	0.908	0.883	

HEATING			Pipe length (m)					
			5	7.5	10	15	20	25
Height difference H (m)	Indoor unit is higher than outdoor unit *1	20	—	—	—	—	0.863	0.857
		15	—	—	—	0.869	0.863	0.857
		10	—	—	0.934	0.869	0.863	0.857
		7.5	—	0.967	0.934	0.869	0.863	0.857
		5	1.000	0.967	0.934	0.869	0.863	0.857
	Indoor unit is lower than outdoor unit *2	0	1.000	0.967	0.934	0.869	0.863	0.857
		-5	0.995	0.962	0.930	0.864	0.859	0.853
		-7.5	—	0.960	0.928	0.862	0.856	0.850
		-10	—	—	0.926	0.860	0.854	0.848
		-15	—	—	—	0.852	0.846	0.840
	-20	—	—	—	—	0.842	0.836	

## 6-2. Model: AOYG24KLCA

**NOTE:** Values mentioned in the table are calculated based on the maximum capacity.

COOLING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	Indoor unit is higher than outdoor unit *1	25	—	—	—	—	—	0.893	0.877
		20	—	—	—	—	0.917	0.900	0.885
		10	—	—	0.966	0.947	0.932	0.914	0.899
		7.5	—	0.979	0.970	0.951	0.936	0.918	0.903
		5	0.992	0.983	0.974	0.955	0.939	0.922	0.906
	Indoor unit is lower than outdoor unit *2	0	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-5	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-7.5	—	0.991	0.981	0.963	0.946	0.930	0.914
		-10	—	—	0.981	0.963	0.946	0.930	0.914
		-20	—	—	—	—	0.946	0.930	0.914
	-25	—	—	—	—	—	0.930	0.914	

HEATING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	Indoor unit is higher than outdoor unit *1	25	—	—	—	—	—	0.871	0.855
		20	—	—	—	—	0.887	0.871	0.855
		10	—	—	0.952	0.903	0.887	0.871	0.855
		7.5	—	0.976	0.952	0.903	0.887	0.871	0.855
		5	1.000	0.976	0.952	0.903	0.887	0.871	0.855
	Indoor unit is lower than outdoor unit *2	0	1.000	0.976	0.952	0.903	0.887	0.871	0.855
		-5	0.995	0.971	0.947	0.899	0.883	0.866	0.850
		-7.5	—	0.969	0.945	0.897	0.881	0.865	0.849
		-10	—	—	0.942	0.894	0.879	0.863	0.847
		-20	—	—	—	—	0.869	0.854	0.838
	-25	—	—	—	—	—	0.850	0.834	



## 7. Additional charge calculation

### 7-1. Model: AOYG18KLCA

Refrigerant type		R32
Refrigerant amount	g	850

#### ■ Refrigerant charge

Total pipe length	m	15 or less	20	25 (Max.)	20 g/m
Additional charge	g	0	100	200	

### 7-2. Model: AOYG24KLCA

Refrigerant type		R32
Refrigerant amount	g	1,100

#### ■ Refrigerant charge

Total pipe length	m	15 or less	20	25	30 (Max.)	20 g/m
Additional charge	g	0	100	200	300	

## 8. Airflow

### 8-1. Model: AOYG18KLCA

#### ● Cooling

m <sup>3</sup> /h	1,830
l/s	508
CFM	1,077

#### ● Heating

m <sup>3</sup> /h	2,265
l/s	629
CFM	1,333

### 8-2. Model: AOYG24KLCA

#### ● Cooling

m <sup>3</sup> /h	2,885
l/s	801
CFM	1,698

#### ● Heating

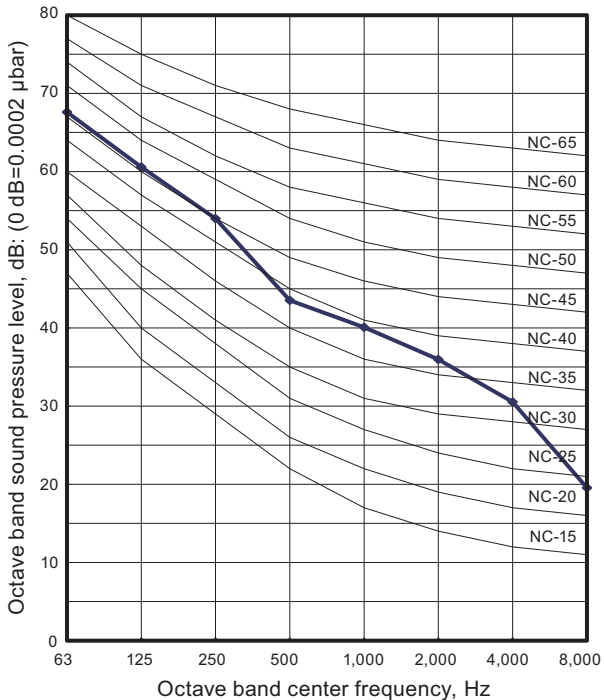
m <sup>3</sup> /h	3,030
l/s	842
CFM	1,783

# 9. Operation noise (sound pressure)

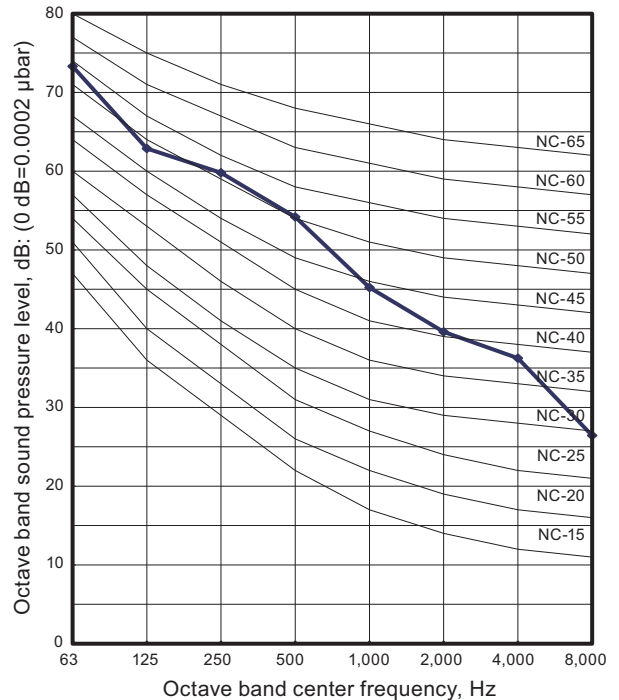
## 9-1. Noise level curve

### Model: AOYG18KLCA

#### Cooling

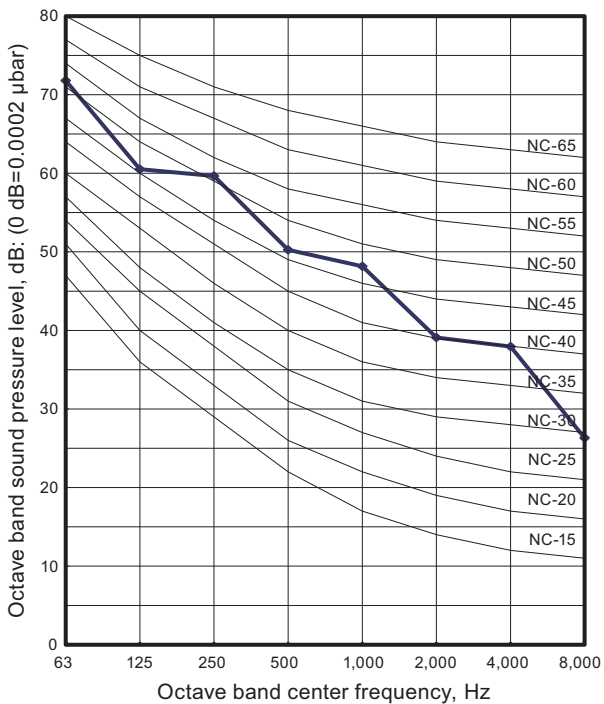


#### Heating

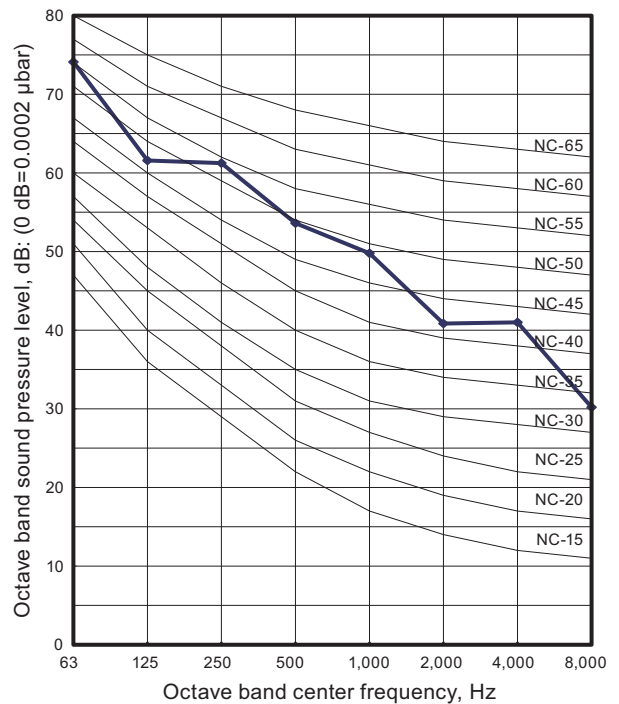


### Model: AOYG24KLCA

#### Cooling



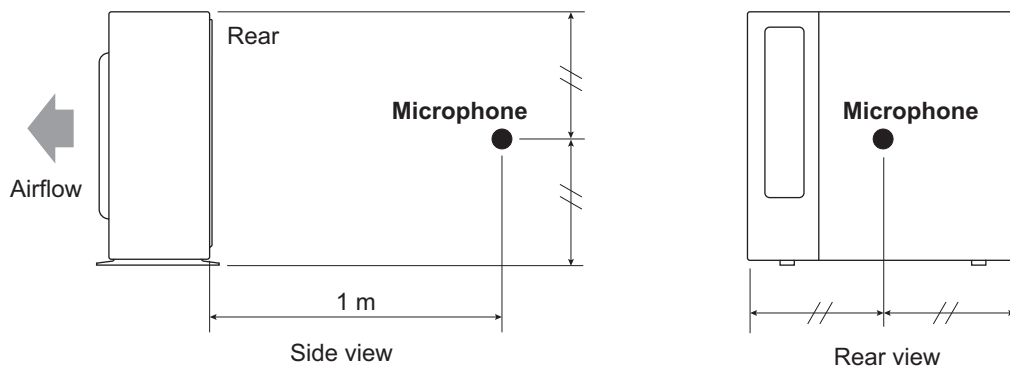
#### Heating



OUTDOOR UNIT  
AOYG18, 24KLTA

OUTDOOR UNIT  
AOYG18, 24KLTA

## 9-2. Sound level check point



**NOTE:** Detailed shape of the actual outdoor unit might be slightly different from the one illustrated above.

## 10. Electrical characteristics

Model name			AOYG18KLCA	AOYG24KLCA	
Power supply	Voltage	V	230 ~		
	Frequency	Hz	50		
Max operating current *1		A	13.5	17.5	
Starting current		A	8.0	10.9	
Wiring spec. *2	Circuit breaker current		A	15	20
	Power cable		mm <sup>2</sup>	1.5	
	Connection cable *3	Cross-sectional area	mm <sup>2</sup>	1.5	
		Limited wiring length	m	26	31

\*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.

\*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.



\*3: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

## 11. Safety devices

Type of protection	Protection form		Model	
			AOYG18KLCA	AOYG24KLCA
Circuit protection	Current fuse (Main PCB)		250 V, 20 A	250 V, 25 A
			250 V, 5 A	
			—	250 V, 3.15 A
Fan motor protection	Terminal protection program	Activate	100±15 °C Fan motor stop	125±10 °C Fan motor stop
		Reset	95±10 °C Fan motor restart	120±10 °C Fan motor restart
Compressor protection	Terminal protection program (Discharge temp.)	Activate	110 °C Compressor stop	115 °C Compressor stop
		Reset	After 7 minutes Compressor restart	After 3 minutes Compressor restart

## 12. Accessories

### 12-1. Models: AOYG18KLCA and AOYG24KLCA

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1