



AIR CONDITIONER

Multi : 2rooms type

DESIGN & TECHNICAL DATA

INDOOR



AS*A07LBCM
AS*A09LBCM
AS*A12LBCM

OUTDOOR



AO*A14LAC2

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

WALL MOUNTED TYPE :

AS*A07LBCM

AS*A09LBCM

AS*A12LBCM

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1-1. FEATURE

■ MODEL

INDOOR UNIT
AS*A07LBCM AS*A09LBCM AS*A12LBCM

OUTDOOR UNIT
AO*A14LAC2


■ INDOOR UNIT CONNECTION PATTERN

CONNECTION PATTERN	When 2 indoor units are connected(Btu/h)	
	NO.1 Indoor unit	NO.2 Indoor unit
1	7,000	7,000
2	7,000	9,000
3	7,000	12,000
4	9,000	9,000
5	9,000	12,000

1-1-1. SELECT FUNCTION

1-1-1-1. INDOOR UNIT

■ MODEL: AS*A07L, AS*A09L, AS*A12L

● Auto restart

When the air conditioner power was temporarily turned off by a power failure etc.
It restarts automatically after the power recovers.(Operated by setting before the power failure.)

● Remote control unit signal code setting

The Remote control unit signal code can be changed by four patterns.

● 10 °C heating operation

Operates in the 10°C heating mode so that the room does not become too cold even when you are absent during the winter,etc.

1-2. WIRELESS REMOTE CONTROLLER

FEATURES



- * Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- * Four kinds of timers. Easy operation.
- * Easy to change transmission code (4 patterns) 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

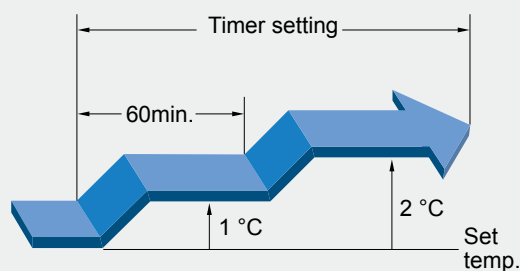
The program timer operates the ON and OFF timer once within a 24 hour period.

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.

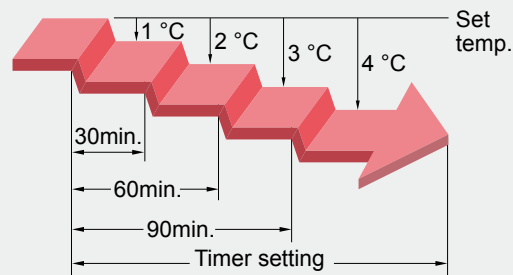
Cooling operation/dry operation

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.

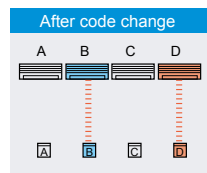
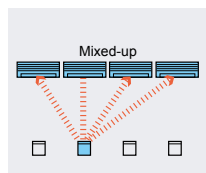


Heating operation

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.



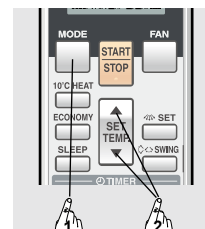
Simultaneously operation



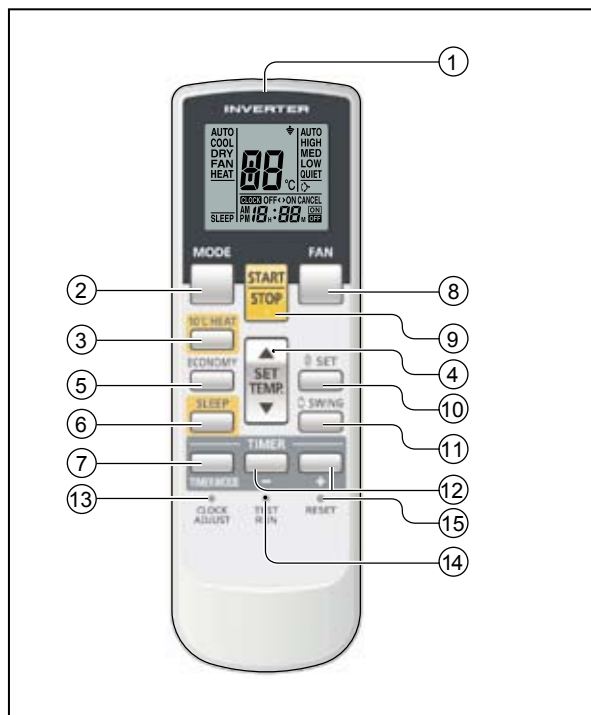
- Code selector switch eliminates unit being wrongly switched. (Up to 4 codes can be set.)

- Wide and precise transmitting range.

1. Press the MODE button for more than five seconds to start the code change.
2. Press the ▲ or ▼ button to select the desired code.
A → B → C → D
3. Press the MODE button again to end the code change.



FUNCTIONS



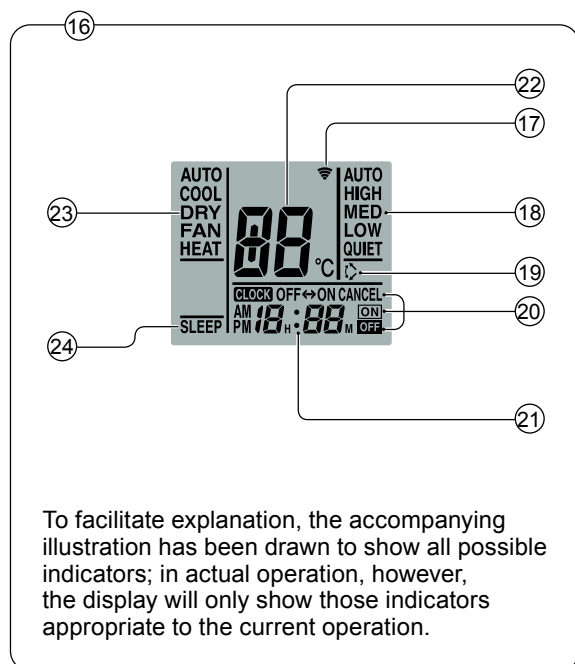
- 1 Signal Transmitter
- 2 MODE button
- 3 10°C HEAT button
- 4 SET TEMP. button
- 5 ECONOMY button (▲ / ▼)
- 6 SLEEP button
- 7 TIMER MODE button
- 8 FAN button
- 9 START/STOP button
- 10 SET button
- 11 SWING button
- 12 TIMER SET (+ / -) button
- 13 CLOCK ADJUST button
- 14 TEST RUN button

•This button is used when installing the air conditioner, and should not be used under normal conditions, as it will cause the indoor unit's thermostat function to operate incorrectly.

•If this button is pressed during normal operation, the indoor unit will switch to test operation mode, and the Indoor Unit's OPERATION Indicator Lamp and TIMER Indicator Lamp will begin to flash simultaneously.

•To stop the test operation mode, press the SRART/STOP button to stop the air conditioner.

Display panel



To facilitate explanation, the accompanying illustration has been drawn to show all possible indicators; in actual operation, however, the display will only show those indicators appropriate to the current operation.

- 15 RESET button
- 16 Remote Control Unit Display
- 17 Transmit Indicator
- 18 Fan Speed Display
- 19 SWING Display
- 20 Timer Mode Display
- 21 Clock Display
- 22 Temperature SET Display
- 23 Operation Mode Display
- 24 SLEEP Display

SPECIFICATION

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

1-3. SPECIFICATIONS

TYPE				MULTI SATTELITE SYSTEM MODELS		
				INVERTER HEATPUMP		
Model name				AS*A07LBCM	AS*A09LBCM	AS*A12LBCM
Power source				230V ~ 50Hz		
Available voltage range				198-264V ~ 50Hz		
Capacity	Cooling	Rated	kW	2.1	2.5	3.5
			BTU/h	7200	8500	11900
		Min-Max	kW	1.2-2.7	1.2-3.2	1.2-3.7
	BTU/h		4000-9200	4000-10900	4000-12600	
	Heating	Rated	kW	2.7	3.3	4.0
			BTU/h	9200	11300	13700
Min-Max		kW	0.9-3.3	0.9-4.2	0.9-4.8	
	BTU/h	3000-11300	3000-14300	3000-16400		
Moisture removal			l/h (pints/h)	0.5(1.1)	0.9(1.9)	1.2 (2.5)
Fan	Airflow rate	Cooling	High	620		750
			Med	550		610
			Low	440		440
			Quiet	300		300
		Heating	High	620		750
			Med	550		610
			Low	480		480
			Quiet	310		310
	Type x Q'ty		Cross flow Fan x1			
	Motor output		W			
Sound pressure level	Cooling	High	38	38	43	
		Med	36	36	38	
		Low	33	33	33	
		Quiet	21	21	21	
	Heating	High	38	38	43	
		Med	36	36	38	
		Low	33	33	33	
		Quiet	21	21	21	
Heat exchanger type	Dimensions (H x W x D)	mm	630x256x20			
	Fin pitch	1.1				
	Rows x Stages	2x16				
	Pipe type	Copper				
	Fin type	Aluminium				
Enclosure	Material	Polystyrene				
	Colour	WHITE (Approximate colour of MUNSELL N9.25/)				
Dimensions (HxWxD)	Net	mm	260x790x198			
	Gross	259x840x328				
Weight	Net	kg(lb.)	7.5 (17)			
	Gross	10 (22)				
Connection pipe	Size	Liquid	mm	Ø6.35(1/4in.)		
		Gas	Ø9.52 (3/8in.)			
	Method	Flare				
Operation range	Cooling	°C	18 to 32			
		%RH	80 or less			
	Heating	°C	16 to 30			
Remote controller type				Wireless		
Drain pipe	Material	PP+LLDPE				
	Size	mm	Outer diameter 21 / Inner diameter13.6			

Note :

Specifications are based on the following conditions.

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

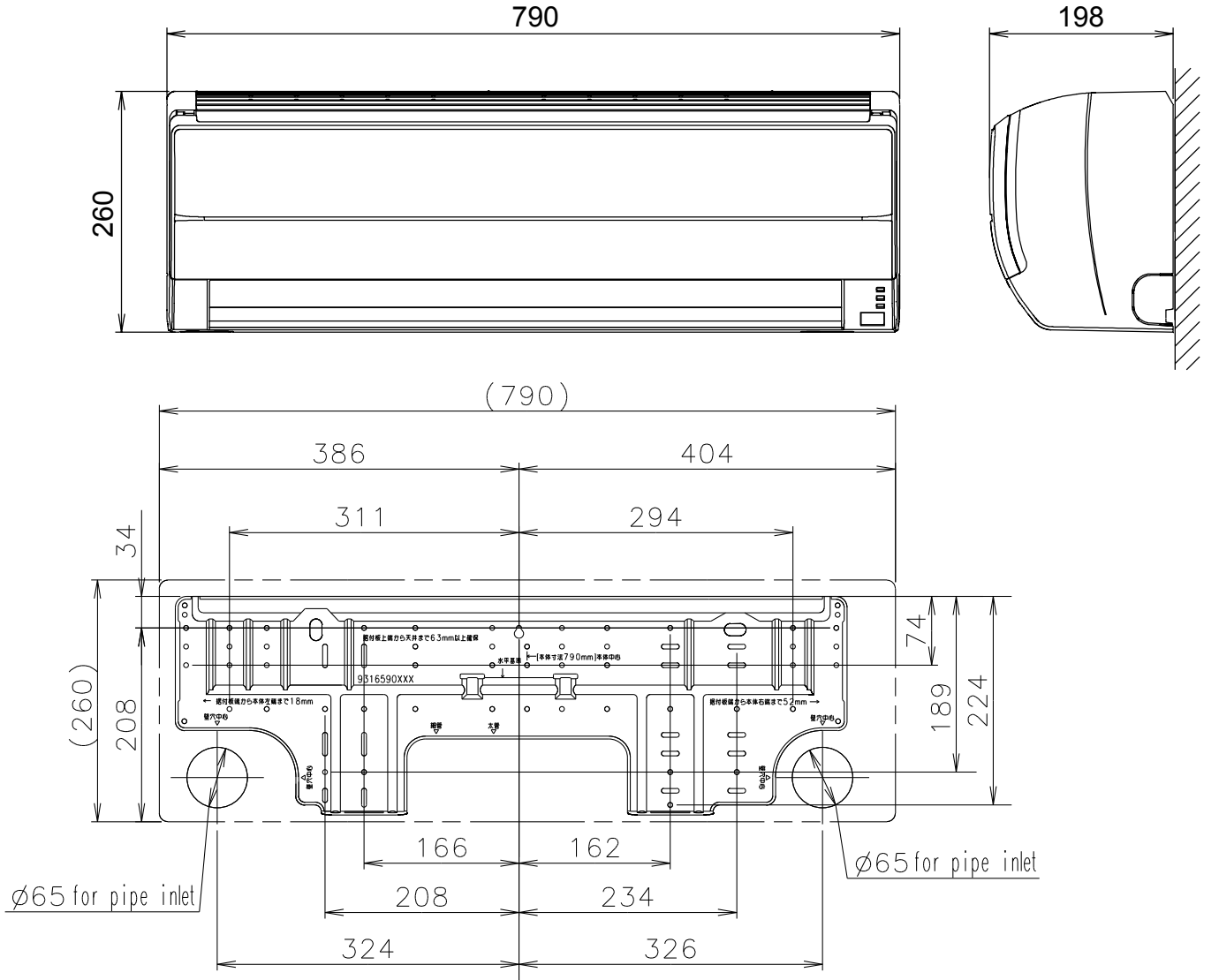
Heating : Indoor temperature of 20 °CDB / 15 °CWB.and outdoor temperature of 7 °CDB/6 °CWB.

Pipe length : 7.5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

1-4. DIMENSIONS

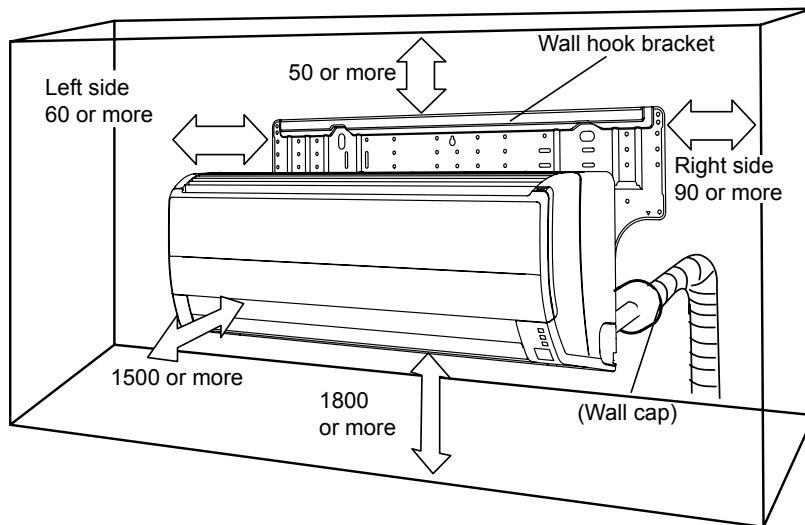
MODEL: AS*A07L, AS*A09L, AS*A12L

(Unit : mm)



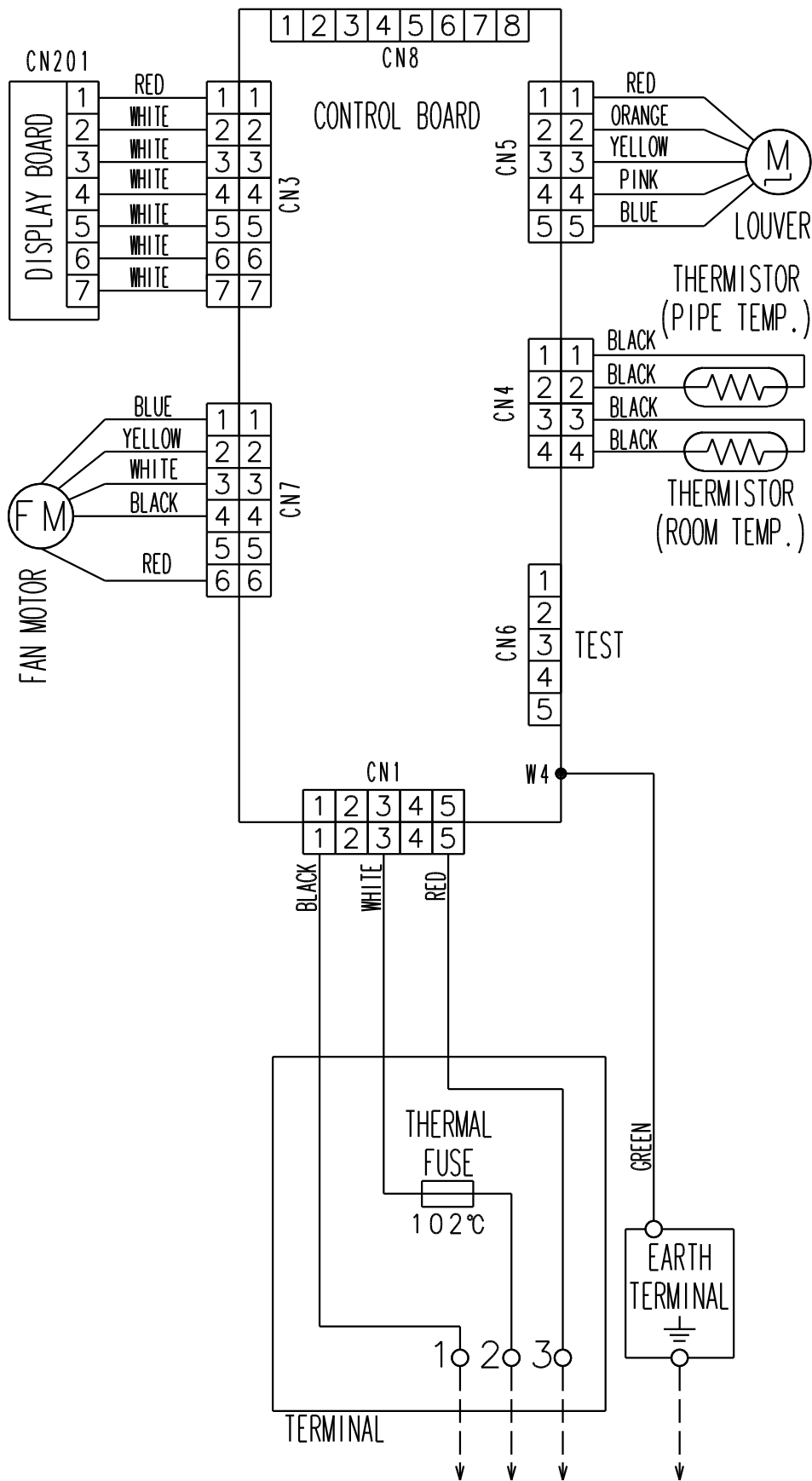
INSTALLATION PLACE

(Unit : mm)



1-5. WIRING DIAGRAMS

■ MODEL: AS*A07L, AS*A09L, AS*A12L



1-6. CAPACITY TABLE

1-6-1. COMBINATIONS

■ MODEL: AO*A14L2

● COOLING [230V 50Hz , Indoor unit : Wall mounted type]

	indoor model for each room			Cooling capacity for each indoor unit Rated (kW)		Cooling capacity for each indoor unit Max (kW)		Total cooling capacity (kW)			Total Input (kW)			Annual energy consumption, (KW/h)	EER (W/W)	Class
	room 1	room 2	total	room 1	room 2	room 1	room 2	min	rated	max	min	rated	max			
min 14 kBTU max 21 kBTU	7	-	7	2.10	-	2.70	-	1.20	2.10	2.70	0.30	0.59	0.76	295	3.56	A
	9	-	9	2.50	-	3.20	-	1.20	2.50	3.20	0.30	0.65	1.03	325	3.85	A
	12	-	12	3.50	-	3.70	-	1.20	3.50	3.70	0.30	1.04	1.21	520	3.37	A
	7	7	14	2.00	2.00	2.20	2.20	1.40	4.00	4.40	0.35	1.09	1.40	545	3.67	A
	7	9	16	1.95	2.05	2.05	2.35	1.40	4.00	4.40	0.35	1.09	1.40	545	3.67	A
	7	12	19	1.65	2.35	1.90	2.70	1.40	4.00	4.60	0.35	1.05	1.47	525	3.81	A
	9	9	18	2.00	2.00	2.25	2.25	1.40	4.00	4.50	0.35	1.09	1.43	545	3.67	A
	9	12	21	1.70	2.30	2.05	2.65	1.40	4.00	4.70	0.35	1.05	1.47	525	3.81	A

NOTES

•Cooling capacity is based on 27°CDB/19°CWB (indoor temperature) ,35°CDB (outdoor temperature).

•The total ability to connected a indoor unit is up to 21000BTU.

•It is impossible to connect the indoor unit for one room only.

● HEATING [230V 50Hz , Indoor unit : Wall mounted type]

	indoor model for each room			Heating capacity for each indoor unit Rated (kW)		Heating capacity for each indoor unit Max (kW)		Total heating capacity (kW)			Total Input (kW)			Annual energy consumption, (KW/h)	COP (W/W)	Class
	room 1	room 2	total	room 1	room 2	room 1	room 2	min	rated	max	min	rated	max			
min 14 kBTU max 21 kBTU	7	-	7	2.70	-	3.30	-	0.90	2.70	3.30	0.25	0.64	0.89	320	4.22	A
	9	-	9	3.30	-	4.20	-	0.90	3.30	4.20	0.25	0.87	1.37	435	3.79	A
	12	-	12	4.00	-	4.80	-	0.90	4.00	4.80	0.25	1.13	1.59	565	3.54	A
	7	7	14	2.20	2.20	2.70	2.70	1.10	4.40	5.40	0.25	1.03	1.78	515	4.27	A
	7	9	16	2.15	2.25	2.55	2.85	1.10	4.40	5.40	0.25	1.03	1.78	515	4.27	A
	7	12	19	1.95	2.45	2.60	2.90	1.10	4.40	5.50	0.25	1.02	1.76	510	4.31	A
	9	9	18	2.20	2.20	2.70	2.70	1.10	4.40	5.40	0.25	1.03	1.78	515	4.27	A
	9	12	21	2.00	2.40	2.65	2.85	1.10	4.40	5.50	0.25	1.02	1.76	510	4.31	A

NOTES

•Heating capacity is based on 20°CDB (indoor temperature) ,7°CDB/6°CWB (outdoor temperature).

•The total ability to connected a indoor unit is up to 21000BTU.

•It is impossible to connect the indoor unit for one room only.

1-6-2. COOLING CAPACITY

This table is created using the maximum capacity.

■ MODEL : AO*A14L2

● INDOOR UNIT : 7000BTU

		Indoor temperature																		
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB		
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB		
7	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		10	1.62	0.35	1.80	0.36	1.87	0.36	1.99	0.36	2.05	0.36	2.17	0.37	2.23	0.37	2.30	0.37	2.30	0.37
		15	1.51	0.40	1.68	0.40	1.74	0.40	1.85	0.41	1.91	0.41	2.03	0.41	2.08	0.42	2.14	0.42	2.14	0.42
		20	1.74	0.46	1.94	0.47	2.01	0.47	2.14	0.48	2.21	0.48	2.34	0.48	2.41	0.49	2.47	0.49	2.47	0.49
		25	1.79	0.47	2.00	0.47	2.06	0.47	2.20	0.48	2.27	0.48	2.40	0.49	2.47	0.49	2.54	0.49	2.54	0.49
		30	2.16	0.75	2.41	0.76	2.49	0.76	2.65	0.77	2.73	0.77	2.90	0.78	2.98	0.78	3.06	0.78	3.06	0.78
		35	2.13	0.73	2.38	0.74	2.46	0.75	2.62	0.76	2.70	0.76	2.86	0.77	2.94	0.77	3.02	0.77	3.02	0.77
		40	2.01	0.82	2.24	0.83	2.32	0.83	2.47	0.84	2.55	0.85	2.70	0.85	2.78	0.86	2.86	0.86	2.86	0.86
		46	1.93	0.93	2.15	0.95	2.23	0.95	2.37	0.96	2.45	0.97	2.59	0.98	2.67	0.98	2.74	0.98	2.74	0.98

● INDOOR UNIT : 9000BTU

		Indoor temperature																		
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB		
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB		
9	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		10	1.78	0.45	1.99	0.46	2.06	0.46	2.19	0.47	2.26	0.47	2.39	0.47	2.46	0.48	2.53	0.48	2.53	0.48
		15	1.65	0.50	1.84	0.51	1.91	0.51	2.03	0.52	2.09	0.52	2.22	0.52	2.28	0.53	2.35	0.53	2.35	0.53
		20	2.44	0.75	2.72	0.76	2.81	0.76	2.99	0.77	3.09	0.77	3.27	0.78	3.36	0.78	3.46	0.79	3.46	0.79
		25	2.46	0.75	2.74	0.76	2.84	0.77	3.02	0.77	3.12	0.78	3.30	0.78	3.40	0.79	3.49	0.79	3.49	0.79
		30	2.66	0.91	2.96	0.93	3.06	0.93	3.26	0.94	3.36	0.95	3.57	0.96	3.67	0.96	3.77	0.97	3.77	0.97
		35	2.53	0.99	2.82	1.01	2.91	1.01	3.10	1.02	3.20	1.03	3.39	1.04	3.49	1.04	3.58	1.05	3.58	1.05
		40	2.38	1.11	2.65	1.13	2.74	1.13	2.92	1.15	3.01	1.15	3.19	1.16	3.28	1.17	3.37	1.17	3.37	1.17
		46	2.23	1.06	2.49	1.08	2.57	1.09	2.74	1.10	2.82	1.10	2.99	1.11	3.08	1.12	3.16	1.12	3.16	1.12

● INDOOR UNIT : 12000BTU

		Indoor temperature																		
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB		
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB		
12	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		10	2.60	0.71	2.89	0.72	2.99	0.73	3.19	0.73	3.29	0.74	3.48	0.75	3.58	0.75	3.68	0.75	3.68	0.75
		15	2.65	0.65	2.95	0.66	3.05	0.66	3.25	0.67	3.35	0.67	3.55	0.68	3.65	0.68	3.75	0.69	3.75	0.69
		20	3.06	0.93	3.41	0.94	3.52	0.94	3.75	0.95	3.87	0.96	4.10	0.97	4.22	0.97	4.33	0.98	4.33	0.98
		25	2.90	1.02	3.23	1.04	3.34	1.04	3.56	1.05	3.67	1.06	3.89	1.07	4.00	1.07	4.11	1.08	4.11	1.08
		30	3.09	1.05	3.44	1.06	3.56	1.07	3.79	1.08	3.91	1.08	4.15	1.09	4.26	1.10	4.38	1.11	4.38	1.11
		35	2.92	1.17	3.26	1.19	3.37	1.19	3.59	1.20	3.70	1.21	3.92	1.22	4.03	1.23	4.14	1.23	4.14	1.23
		40	2.64	1.17	2.94	1.19	3.04	1.20	3.24	1.21	3.34	1.22	3.54	1.23	3.64	1.24	3.74	1.24	3.74	1.24
		46	2.37	1.06	2.64	1.08	2.73	1.08	2.91	1.10	3.00	1.10	3.18	1.11	3.27	1.12	3.36	1.12	3.36	1.12

● INDOOR UNIT : 7000BTU+7000BTU

		Indoor temperature																		
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB		
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB		
7+7	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		10	3.22	0.73	3.59	0.74	3.71	0.74	3.96	0.75	4.08	0.75	4.33	0.76	4.45	0.76	4.57	0.77	4.57	0.77
		15	3.06	0.84	3.41	0.85	3.53	0.85	3.76	0.86	3.88	0.87	4.11	0.87	4.23	0.88	4.34	0.88	4.34	0.88
		20	3.47	1.05	3.87	1.07	4.00	1.07	4.27	1.08	4.40	1.09	4.66	1.10	4.79	1.11	4.93	1.11	4.93	1.11
		25	3.61	0.93	4.03	0.94	4.16	0.95	4.44	0.96	4.57	0.96	4.85	0.97	4.99	0.97	5.12	0.98	5.12	0.98
		30	3.68	1.19	4.10	1.21	4.24	1.21	4.52	1.23	4.66	1.23	4.94	1.24	5.08	1.25	5.22	1.26	5.22	1.26
		35	3.48	1.35	3.87	1.37	4.00	1.38	4.27	1.39	4.40	1.40	4.66	1.41	4.80	1.42	4.93	1.43	4.93	1.43
		40	3.05	1.31	3.39	1.33	3.51	1.34	3.74	1.35	3.86	1.36	4.09	1.37	4.20	1.38	4.32	1.39	4.32	1.39
		46	2.61	1.11	2.90	1.13	3.00	1.14	3.20	1.15	3.30	1.15	3.50	1.17	3.59	1.17	3.69	1.18	3.69	1.18

TC : Total capacity (kW)
PI : Power Input (kW)

● INDOOR UNIT : 7000BTU+9000BTU

		Indoor temperature																	
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB	
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB	
7+9	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
		10	3.39	0.86	3.78	0.87	3.91	0.88	4.16	0.88	4.29	0.89	4.55	0.90	4.68	0.90	4.81	0.91	
		15	3.22	0.98	3.59	0.99	3.71	1.00	3.96	1.01	4.08	1.01	4.32	1.02	4.45	1.03	4.57	1.03	
		20	4.05	0.97	4.51	0.98	4.66	0.99	4.97	1.00	5.12	1.00	5.43	1.01	5.58	1.02	5.74	1.02	
		25	3.91	1.05	4.36	1.06	4.51	1.07	4.80	1.08	4.95	1.09	5.25	1.10	5.40	1.10	5.55	1.11	
		30	3.60	1.16	4.01	1.17	4.15	1.18	4.42	1.19	4.56	1.20	4.83	1.21	4.97	1.22	5.10	1.22	
		35	3.48	1.35	3.87	1.37	4.00	1.38	4.27	1.39	4.40	1.40	4.66	1.41	4.80	1.42	4.93	1.43	
		40	3.05	1.31	3.40	1.33	3.51	1.34	3.74	1.35	3.86	1.36	4.09	1.37	4.21	1.38	4.32	1.39	
46	2.61	1.11	2.90	1.13	3.00	1.14	3.20	1.15	3.30	1.15	3.50	1.16	3.60	1.17	3.70	1.18			

● INDOOR UNIT : 7000BTU+12000BTU

		Indoor temperature																	
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB	
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB	
7+12	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
		10	3.58	1.04	3.99	1.06	4.12	1.07	4.40	1.08	4.53	1.08	4.80	1.09	4.94	1.10	5.08	1.10	
		15	3.72	0.97	4.14	0.99	4.28	0.99	4.57	1.00	4.71	1.01	4.99	1.02	5.13	1.02	5.27	1.03	
		20	4.23	1.01	4.71	1.03	4.87	1.03	5.19	1.04	5.35	1.05	5.67	1.06	5.83	1.07	6.00	1.07	
		25	4.08	1.09	4.55	1.11	4.70	1.11	5.01	1.12	5.17	1.13	5.48	1.14	5.63	1.15	5.79	1.15	
		30	3.85	1.24	4.29	1.26	4.44	1.27	4.73	1.28	4.88	1.29	5.17	1.30	5.32	1.31	5.46	1.31	
		35	3.63	1.42	4.05	1.44	4.19	1.45	4.46	1.46	4.60	1.47	4.88	1.48	5.01	1.49	5.15	1.50	
		40	3.14	1.35	3.50	1.37	3.62	1.38	3.86	1.39	3.98	1.40	4.22	1.41	4.34	1.42	4.46	1.43	
46	2.68	1.16	2.99	1.18	3.09	1.19	3.29	1.20	3.39	1.20	3.60	1.22	3.70	1.22	3.80	1.23			

● INDOOR UNIT : 9000BTU+9000BTU

		Indoor temperature																	
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB	
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB	
9+9	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
		10	3.62	1.02	4.03	1.04	4.17	1.04	4.45	1.05	4.59	1.06	4.86	1.07	5.00	1.07	5.14	1.08	
		15	3.76	0.95	4.19	0.96	4.33	0.97	4.62	0.98	4.76	0.98	5.04	0.99	5.19	1.00	5.33	1.00	
		20	4.14	0.99	4.61	1.01	4.77	1.01	5.08	1.02	5.24	1.03	5.55	1.04	5.71	1.04	5.87	1.05	
		25	4.00	1.07	4.46	1.09	4.61	1.09	4.91	1.10	5.07	1.11	5.37	1.12	5.52	1.13	5.67	1.13	
		30	3.68	1.18	4.10	1.20	4.24	1.20	4.52	1.22	4.66	1.22	4.94	1.24	5.08	1.24	5.22	1.25	
		35	3.55	1.38	3.96	1.40	4.09	1.41	4.36	1.42	4.50	1.43	4.77	1.44	4.90	1.45	5.04	1.46	
		40	3.12	1.34	3.47	1.36	3.59	1.37	3.83	1.38	3.95	1.39	4.18	1.40	4.30	1.41	4.42	1.41	
46	2.67	1.14	2.97	1.15	3.07	1.16	3.27	1.17	3.38	1.18	3.58	1.19	3.68	1.20	3.78	1.20			

● INDOOR UNIT : 9000BTU+12000BTU

		Indoor temperature																	
		°CDB		18°CDB		21°CDB		23°CDB		25°CDB		27°CDB		29°CDB		30°CDB		32°CDB	
		°CWB		12°CWB		15°CWB		16°CWB		18°CWB		19°CWB		21°CWB		22°CWB		23°CWB	
9+12	Outdoor temperature	(°CDB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
		10	4.36	1.07	4.86	1.09	5.03	1.09	5.36	1.10	5.52	1.11	5.85	1.12	6.02	1.13	6.19	1.13	
		15	4.11	1.18	4.58	1.20	4.74	1.20	5.05	1.22	5.21	1.22	5.52	1.23	5.67	1.24	5.83	1.25	
		20	4.32	1.01	4.82	1.02	4.98	1.03	5.31	1.04	5.47	1.05	5.80	1.06	5.96	1.06	6.13	1.07	
		25	4.18	1.09	4.65	1.11	4.81	1.12	5.13	1.13	5.29	1.13	5.61	1.15	5.77	1.15	5.92	1.16	
		30	3.94	1.24	4.39	1.26	4.54	1.27	4.83	1.28	4.98	1.29	5.28	1.30	5.43	1.31	5.58	1.31	
		35	3.71	1.42	4.14	1.44	4.28	1.45	4.56	1.46	4.70	1.47	4.98	1.48	5.12	1.49	5.26	1.50	
		40	3.21	1.35	3.58	1.37	3.70	1.38	3.94	1.39	4.07	1.40	4.31	1.41	4.43	1.42	4.55	1.43	
46	2.74	1.16	3.05	1.18	3.16	1.19	3.36	1.20	3.47	1.20	3.68	1.22	3.78	1.22	3.88	1.23			

TC : Total capacity (kW)
PI : Power Input (kW)

1-6-3.HEATING CAPACITY

This table is created using the maximum capacity.

■ MODEL : AO*A14L2

● INDOOR UNIT : 7000BTU

			Indoor temperature												
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB				
7	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		-15	-16	2.13	0.92	2.08	0.93	2.03	0.95	1.98	0.97	1.93	0.99		
		-10	-11	2.50	0.98	2.44	1.00	2.38	1.02	2.32	1.04	2.26	1.06		
		-5	-7	2.65	0.94	2.59	0.96	2.52	0.98	2.46	1.00	2.40	1.02		
		0	-2	2.88	0.91	2.81	0.93	2.74	0.94	2.67	0.96	2.61	0.98		
		5	3	3.23	0.83	3.15	0.85	3.08	0.86	3.00	0.88	2.92	0.90		
		7	6	3.47	0.85	3.38	0.87	3.30	0.89	3.22	0.91	3.14	0.93		
		10	8	3.62	0.87	3.53	0.89	3.45	0.91	3.36	0.92	3.28	0.94		
		15	10	3.76	0.88	3.67	0.89	3.58	0.91	3.49	0.93	3.40	0.95		
20	15	3.99	0.87	3.89	0.89	3.80	0.91	3.70	0.93	3.61	0.95				

● INDOOR UNIT : 9000BTU

			Indoor temperature												
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB				
9	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		-15	-16	2.56	1.24	2.50	1.27	2.44	1.29	2.38	1.32	2.32	1.34		
		-10	-11	2.94	1.34	2.87	1.37	2.80	1.40	2.73	1.43	2.66	1.46		
		-5	-7	3.17	1.33	3.09	1.36	3.02	1.38	2.94	1.41	2.87	1.44		
		0	-2	3.85	1.30	3.76	1.33	3.66	1.36	3.57	1.38	3.48	1.41		
		5	3	4.14	1.26	4.05	1.29	3.95	1.32	3.85	1.34	3.75	1.37		
		7	6	4.41	1.32	4.31	1.34	4.20	1.37	4.10	1.40	3.99	1.42		
		10	8	4.59	1.35	4.48	1.38	4.37	1.41	4.27	1.44	4.16	1.47		
		15	10	4.76	1.37	4.64	1.40	4.53	1.43	4.42	1.46	4.30	1.49		
20	15	5.05	1.43	4.93	1.46	4.81	1.49	4.69	1.52	4.57	1.55				

● INDOOR UNIT : 12000BTU

			Indoor temperature												
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB				
12	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		-15	-16	2.88	1.57	2.81	1.60	2.75	1.63	2.68	1.66	2.61	1.70		
		-10	-11	3.29	1.71	3.21	1.74	3.14	1.78	3.06	1.81	2.98	1.85		
		-5	-7	3.62	1.83	3.54	1.87	3.45	1.91	3.36	1.95	3.28	1.99		
		0	-2	4.46	1.58	4.35	1.61	4.25	1.65	4.14	1.68	4.03	1.71		
		5	3	4.72	1.47	4.61	1.50	4.50	1.53	4.38	1.56	4.27	1.59		
		7	6	5.04	1.53	4.92	1.56	4.80	1.59	4.68	1.62	4.56	1.65		
		10	8	5.25	1.57	5.13	1.60	5.00	1.63	4.88	1.66	4.75	1.70		
		15	10	5.44	1.59	5.31	1.63	5.18	1.66	5.05	1.69	4.92	1.73		
20	15	5.92	1.66	5.78	1.70	5.63	1.73	5.49	1.76	5.35	1.80				

● INDOOR UNIT : 7000BTU+7000BTU

			Indoor temperature												
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB				
7+7	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI		
		-15	-16	3.08	1.34	3.01	1.37	2.94	1.40	2.86	1.42	2.79	1.45		
		-10	-11	3.57	1.44	3.49	1.47	3.40	1.49	3.32	1.52	3.23	1.55		
		-5	-7	3.99	1.52	3.90	1.55	3.80	1.58	3.71	1.62	3.61	1.65		
		0	-2	4.57	1.64	4.46	1.67	4.35	1.71	4.24	1.74	4.14	1.78		
		5	3	5.24	1.64	5.12	1.67	4.99	1.71	4.87	1.74	4.74	1.77		
		7	6	5.67	1.71	5.54	1.74	5.40	1.78	5.27	1.82	5.13	1.85		
		10	8	5.92	1.74	5.78	1.78	5.63	1.81	5.49	1.85	5.35	1.88		
		15	10	6.59	1.73	6.43	1.76	6.27	1.80	6.11	1.83	5.96	1.87		
20	15	6.86	1.53	6.70	1.56	6.54	1.60	6.37	1.63	6.21	1.66				

TC : Total capacity (kW)
PI : Power Input (kW)

● INDOOR UNIT : 7000BTU+9000BTU

			Indoor temperature										
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB		
7+9	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		-15	-16	3.08	1.34	3.01	1.37	2.94	1.40	2.86	1.42	2.79	1.45
		-10	-11	3.57	1.44	3.49	1.47	3.40	1.49	3.32	1.52	3.23	1.55
		-5	-7	3.99	1.52	3.90	1.55	3.80	1.58	3.71	1.62	3.61	1.65
		0	-2	4.57	1.64	4.46	1.67	4.35	1.71	4.24	1.74	4.14	1.78
		5	3	5.24	1.64	5.12	1.67	4.99	1.71	4.87	1.74	4.74	1.77
		7	6	5.67	1.71	5.54	1.74	5.40	1.78	5.27	1.82	5.13	1.85
		10	8	5.92	1.74	5.78	1.78	5.63	1.81	5.49	1.85	5.35	1.88
		15	10	6.59	1.73	6.43	1.76	6.27	1.80	6.11	1.83	5.96	1.87
20	15	6.86	1.53	6.70	1.56	6.54	1.60	6.37	1.63	6.21	1.66		

● INDOOR UNIT : 7000BTU+12000BTU

			Indoor temperature										
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB		
7+12	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		-15	-16	3.14	1.33	3.07	1.36	2.99	1.39	2.92	1.42	2.84	1.44
		-10	-11	3.65	1.43	3.57	1.46	3.48	1.49	3.39	1.52	3.30	1.55
		-5	-7	4.07	1.51	3.97	1.54	3.88	1.57	3.78	1.60	3.68	1.63
		0	-2	4.65	1.62	4.54	1.66	4.43	1.69	4.32	1.73	4.21	1.76
		5	3	5.34	1.62	5.21	1.66	5.09	1.69	4.96	1.72	4.83	1.76
		7	6	5.78	1.69	5.64	1.72	5.50	1.76	5.36	1.80	5.23	1.83
		10	8	6.03	1.72	5.88	1.75	5.74	1.79	5.60	1.83	5.45	1.86
		15	10	6.78	1.67	6.62	1.71	6.46	1.74	6.30	1.78	6.14	1.81
20	15	7.10	1.49	6.93	1.52	6.76	1.55	6.59	1.59	6.42	1.62		

● INDOOR UNIT : 9000BTU+9000BTU

			Indoor temperature										
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB		
9+9	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		-15	-16	3.08	1.34	3.01	1.37	2.94	1.40	2.86	1.42	2.79	1.45
		-10	-11	3.57	1.44	3.49	1.47	3.40	1.49	3.32	1.52	3.23	1.55
		-5	-7	3.99	1.52	3.90	1.55	3.80	1.58	3.71	1.62	3.61	1.65
		0	-2	4.57	1.64	4.46	1.67	4.35	1.71	4.24	1.74	4.14	1.78
		5	3	5.24	1.64	5.12	1.67	4.99	1.71	4.87	1.74	4.74	1.77
		7	6	5.67	1.71	5.54	1.74	5.40	1.78	5.27	1.82	5.13	1.85
		10	8	5.92	1.74	5.78	1.78	5.63	1.81	5.49	1.85	5.35	1.88
		15	10	6.59	1.73	6.43	1.76	6.27	1.80	6.11	1.83	5.96	1.87
20	15	6.86	1.53	6.70	1.56	6.54	1.60	6.37	1.63	6.21	1.66		

● INDOOR UNIT : 9000BTU+12000BTU

			Indoor temperature										
			16°CDB		18°CDB		20°CDB		22°CDB		24°CDB		
9+12	Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		-15	-16	3.14	1.33	3.07	1.36	2.99	1.39	2.92	1.42	2.84	1.44
		-10	-11	3.65	1.43	3.57	1.46	3.48	1.49	3.39	1.52	3.30	1.55
		-5	-7	4.07	1.51	3.97	1.54	3.88	1.57	3.78	1.60	3.68	1.63
		0	-2	4.65	1.62	4.54	1.66	4.43	1.69	4.32	1.73	4.21	1.76
		5	3	5.34	1.62	5.21	1.66	5.09	1.69	4.96	1.72	4.83	1.76
		7	6	5.78	1.69	5.64	1.72	5.50	1.76	5.36	1.80	5.23	1.83
		10	8	6.03	1.72	5.88	1.75	5.74	1.79	5.60	1.83	5.45	1.86
		15	10	6.78	1.67	6.62	1.71	6.46	1.74	6.30	1.78	6.14	1.81
20	15	7.10	1.49	6.93	1.52	6.76	1.55	6.59	1.59	6.42	1.62		

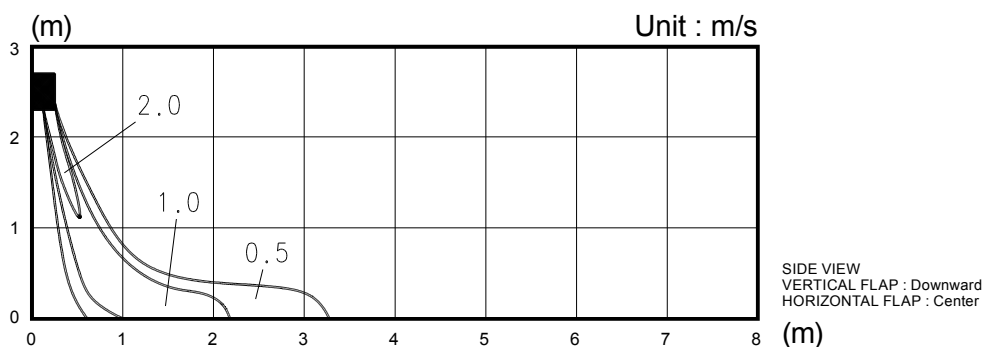
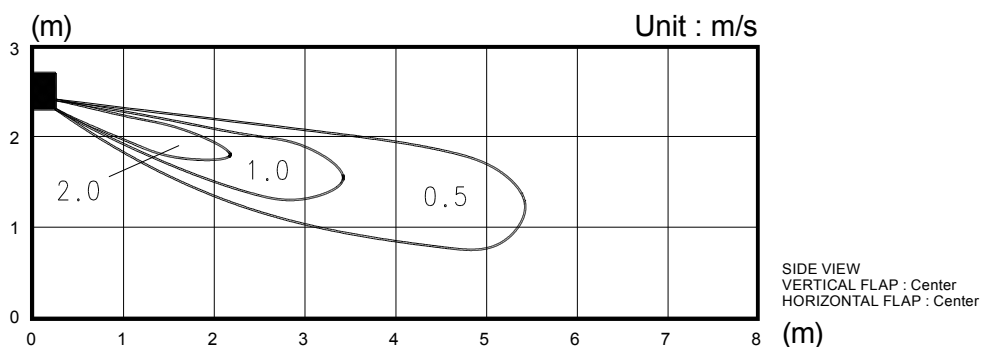
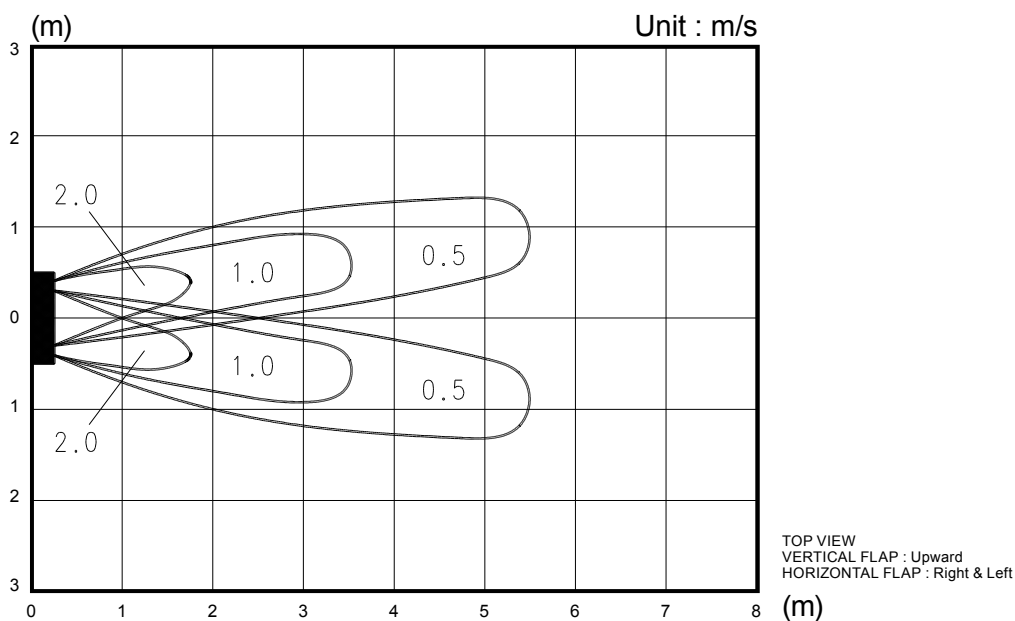
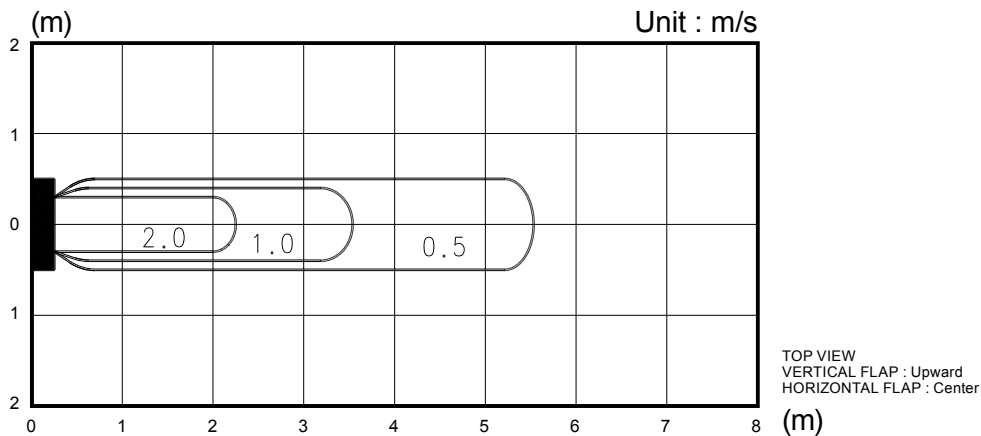
TC : Total capacity (kW)
PI : Power Input (kW)

1-7. FAN PERFORMANCE

1-7-1. AIR VELOCITY DISTRIBUTION

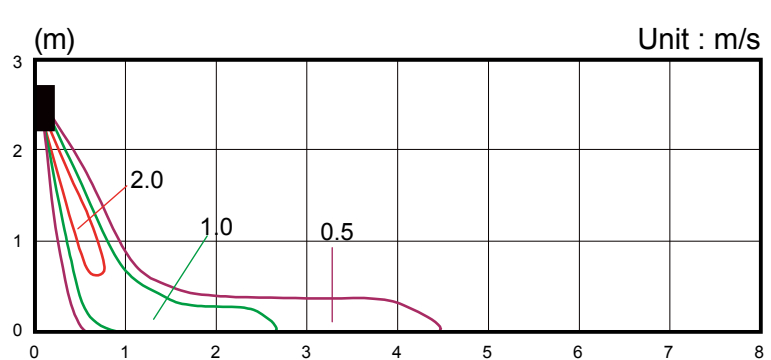
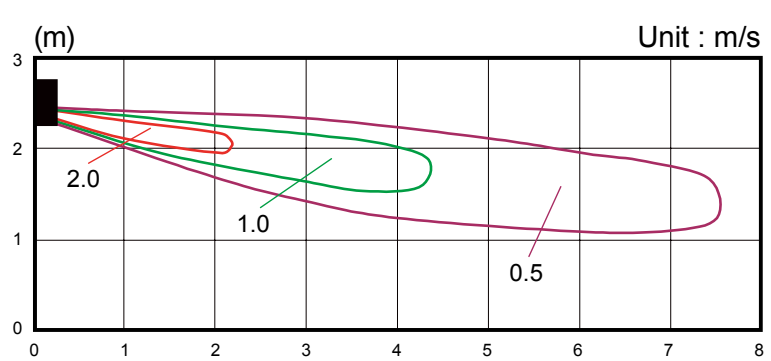
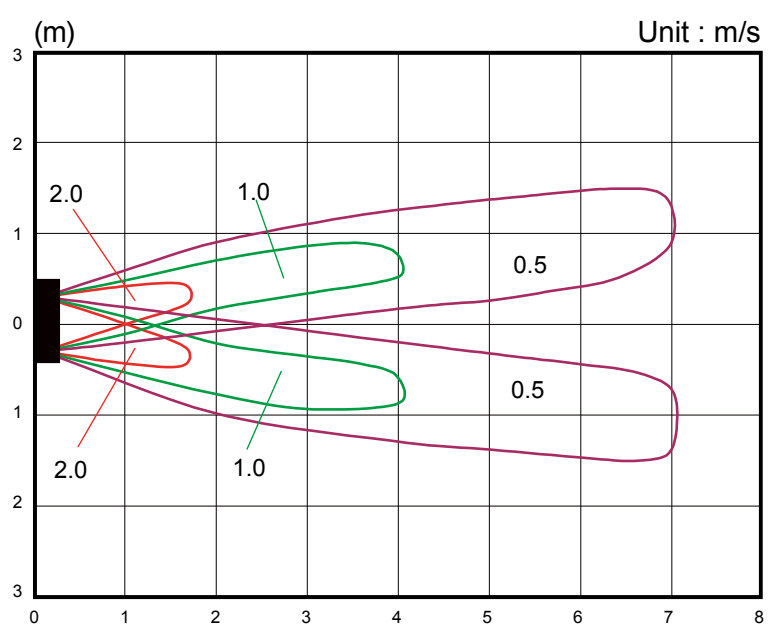
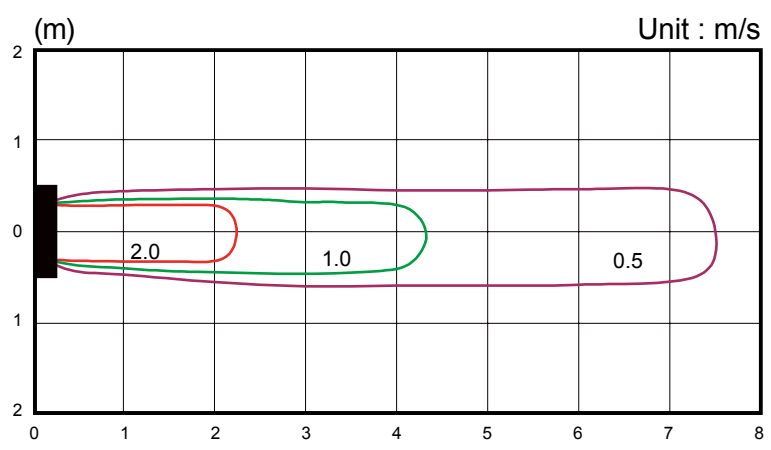
■ MODEL: AS*A07L, AS*A09L

Note:
Fan speed : High
Operation mode : FAN
Voltage : 230V



Note:
 Fan speed : High
 Operation mode : FAN
 Voltage : 230V

■ MODEL : AS*A12L



1-7-2. AIR FLOW

■ MODEL: AS*A07L, AS*A09L

● Cooling

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1220	m ³ /h	620
		l/s	172
		CFM	365
MED	1100	m ³ /h	550
		l/s	153
		CFM	324
LOW	920	m ³ /h	440
		l/s	122
		CFM	259
QUIET	680	m ³ /h	300
		l/s	83
		CFM	177

● Heating

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1220	m ³ /h	620
		l/s	172
		CFM	365
MED	1100	m ³ /h	550
		l/s	153
		CFM	324
LOW	980	m ³ /h	480
		l/s	133
		CFM	282
QUIET	700	m ³ /h	310
		l/s	86
		CFM	182

■ MODEL: AS*A12L

● Cooling

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1440	m ³ /h	750
		l/s	208
		CFM	441
MED	1200	m ³ /h	610
		l/s	169
		CFM	359
LOW	920	m ³ /h	440
		l/s	122
		CFM	259
QUIET	680	m ³ /h	300
		l/s	83
		CFM	177

● Heating

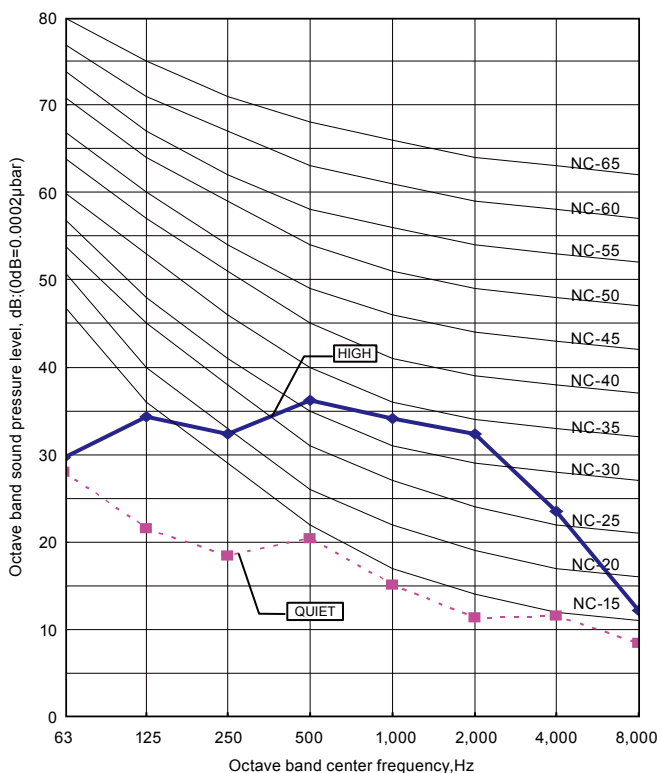
Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1440	m ³ /h	750
		l/s	208
		CFM	441
MED	1200	m ³ /h	610
		l/s	169
		CFM	359
LOW	980	m ³ /h	480
		l/s	133
		CFM	282
QUIET	700	m ³ /h	310
		l/s	86
		CFM	182

1-8. OPERATION NOISE

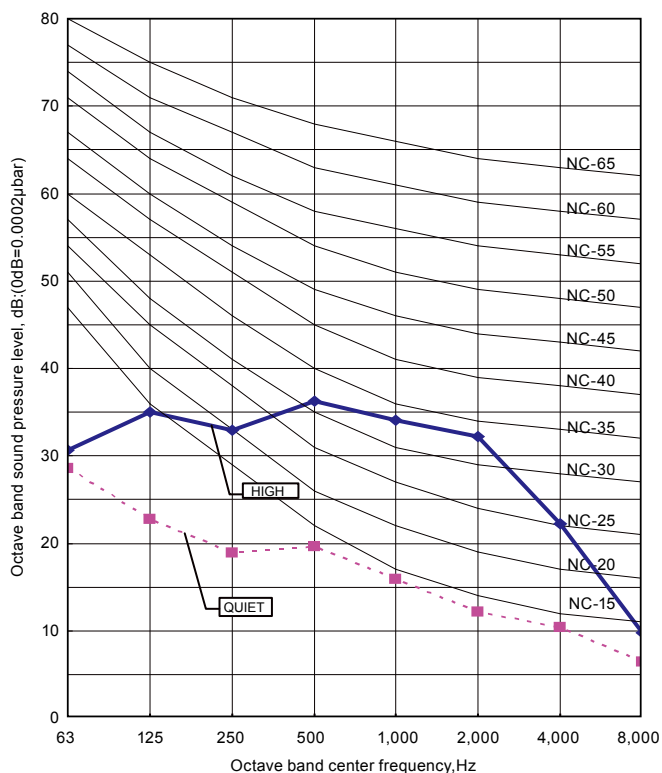
1-8-1. NOISE LEVEL CURVE

MODEL: AS*A07L

● Cooling

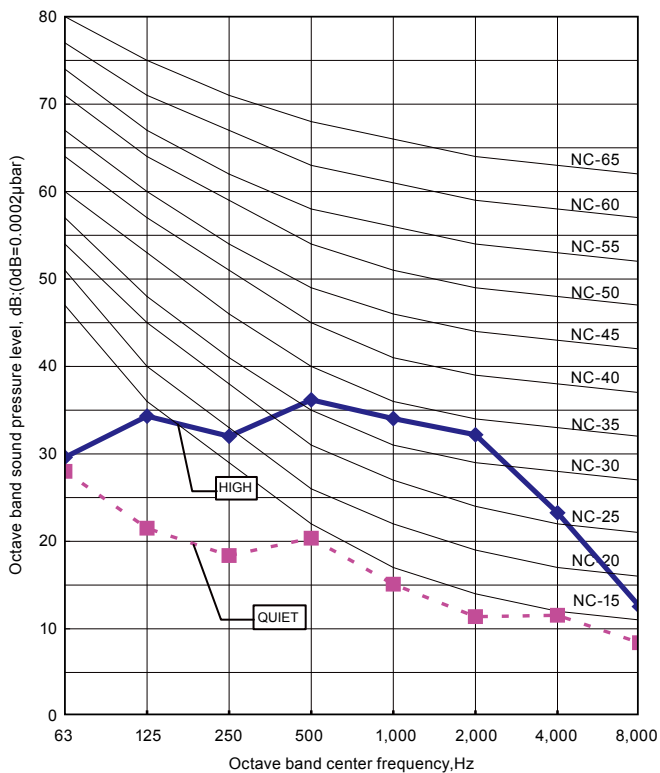


● Heating

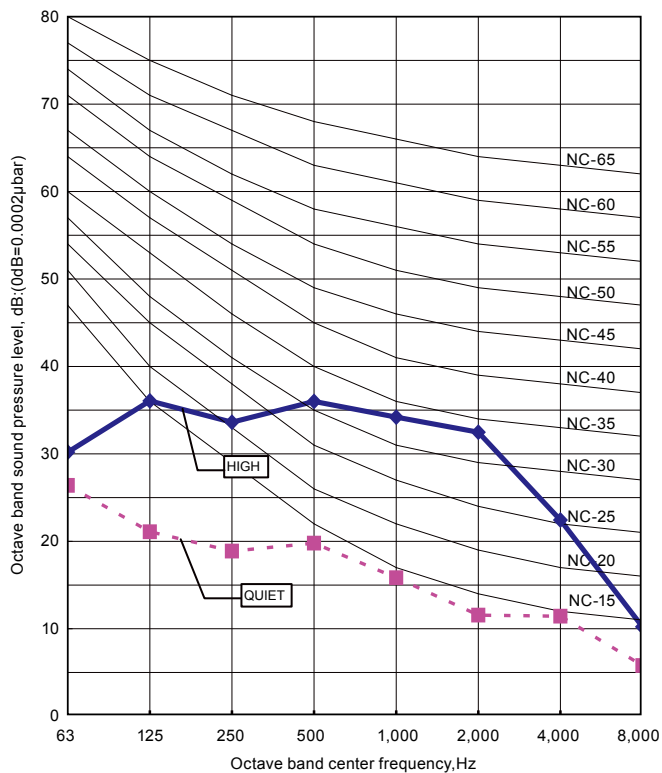


MODEL: AS*A09L

● Cooling

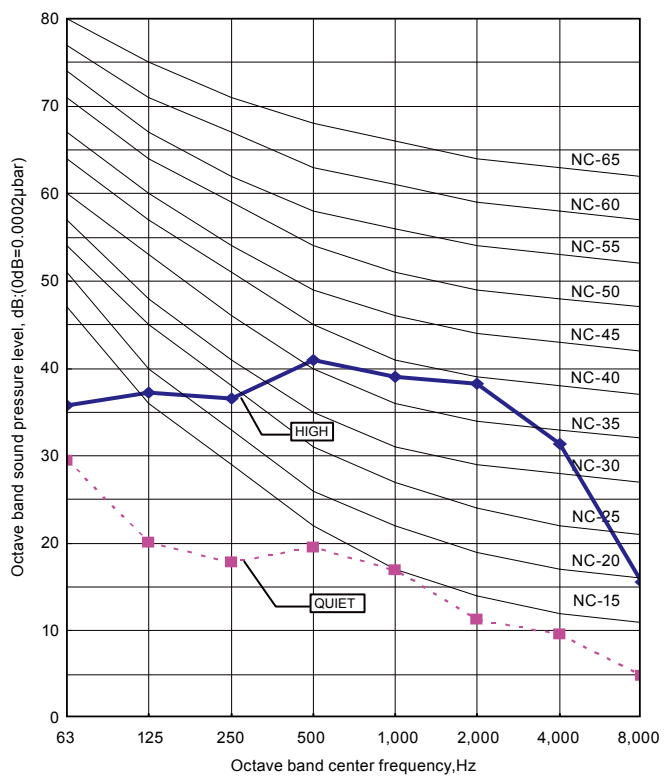


● Heating

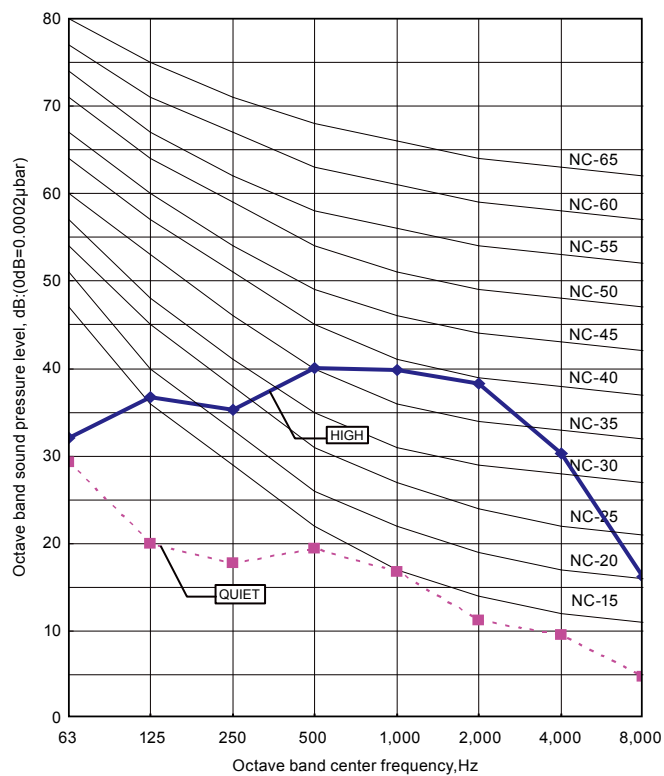


MODEL: AS*A12L

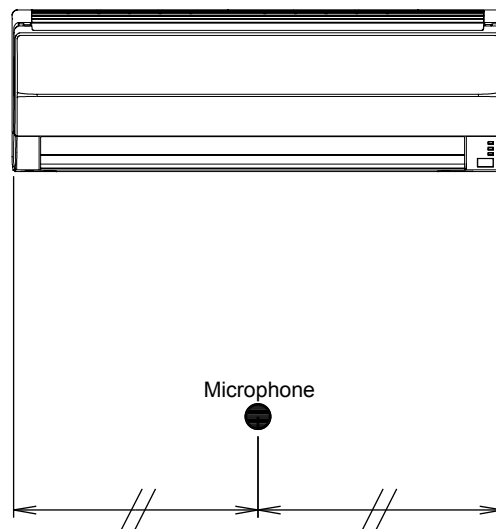
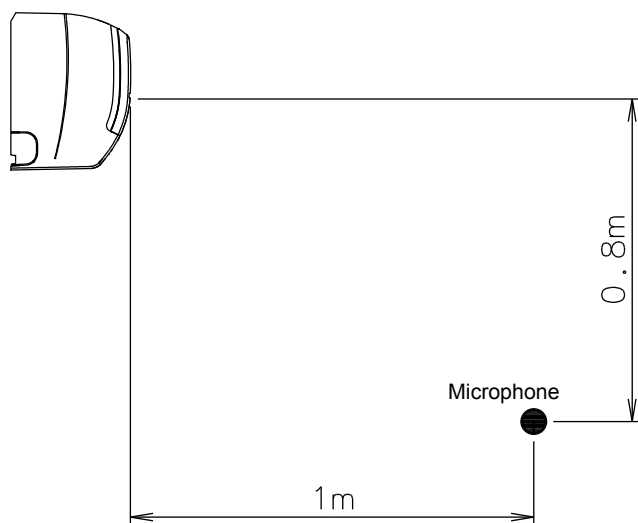
● Cooling



● Heating



1-8-2. SOUND LEVEL CHECK POINT



1-9. ELECTRIC CHARACTERISTICS

Model name			AS*A07L	AS*A09L	AS*A12L
Power supply	Voltage	V	230 ~		
	Frequency	Hz	50		
Max. operating current (Indoor unit)		A	0.5	0.5	0.5
Wiring Spec. (Indoor unit to outdoor unit)	Connection cable	mm ²	1.5		
	Limited wiring length	m	21		

1-10. SAFETY DEVICES

	Protection form	AS*A07L AS*A09L AS*A12L
Circuit protection	Current fuse (PCB)	3.15A 250V
	Thermal fuse (Terminal)	3A 250V 102°C
Fan motor protection	Thermal protector	MAX 120±15°C

1-11. EXTERNAL INPUT & OUTPUT

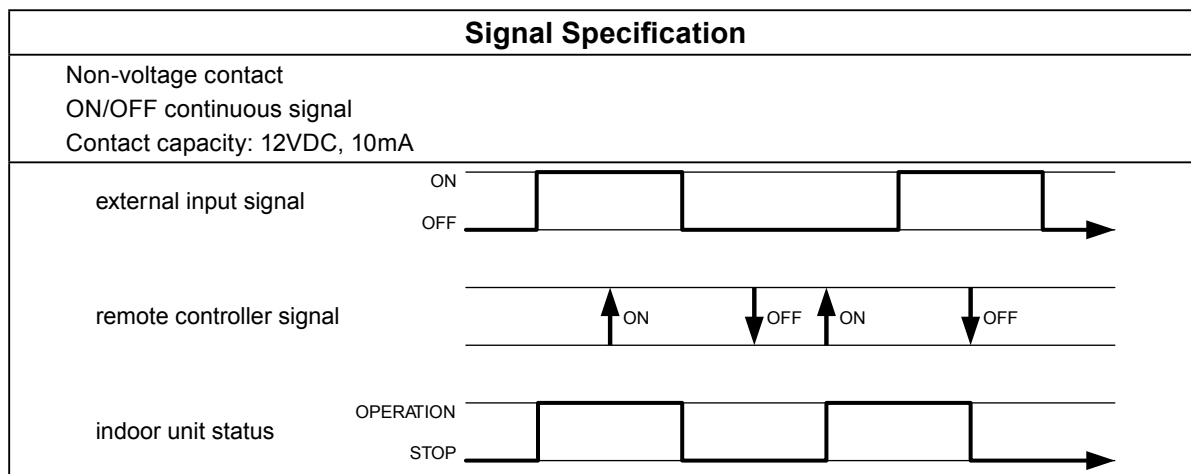
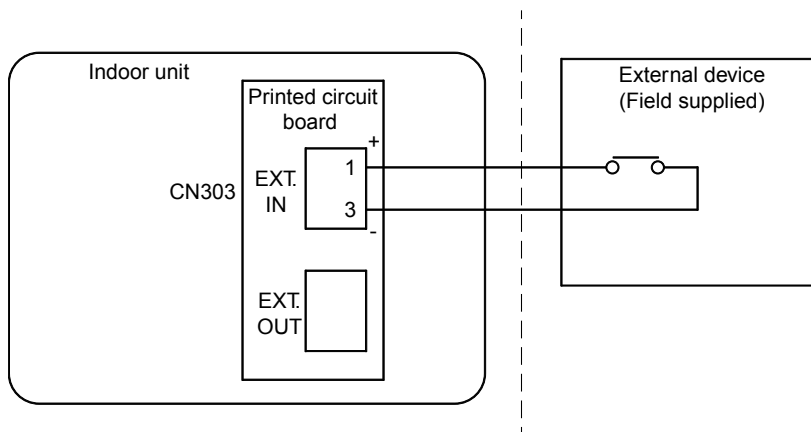
Connector	INPUT	OUTPUT	REMARKS
CN303	CONTROL PERATION (ON / OFF)	-	See external input/output settings for details.
CN304	-	OPERATION DISPLAY	

EXTERNAL INPUT

You can control air conditioner ON/OFF operation by external input.

Note) Only ON / OFF external input can be set up. Use the remote controller to set MODE, AIR FLOW RATE, SET TEMPERATURE and other values. When the air conditioner starts operating, it operates with the settings used when it stopped previously.

[Example]

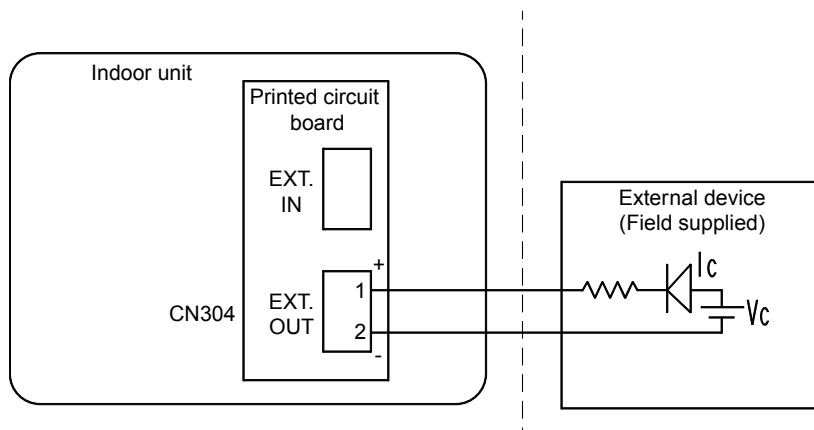


EXTERNAL OUTPUT

You can display air conditioner ON/OFF operation by external output.

Note) Only ON/OFF is output as external output. Regarding MODE, AIR FLOW RATE, SET TEMPERATURE, error signals and others, please check the display on the main unit or the remote controller.

[Example]



Signal Specification	
Non-voltage contact Contact capacity: Max. 24VDC, 10mA to less than 1A	
indoor unit status	OPERATION
	STOP
external output signal	SHORT
	OPEN

1-12. FUNCTION SETTING

- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incor 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 control unit.
- 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.

Entering the Function Setting Mode

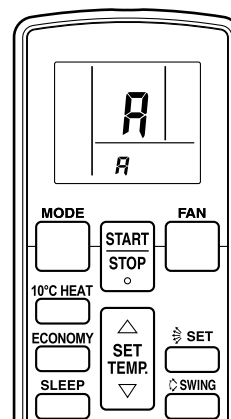
- While pressing the FAN button and SET TEMP. (▲) simultaneously, press the RESET button to enter the function setting mode.

STEP 1

Setting the Remote Control Unit Signal Code

Use the following steps to select the signal code of the remote control unit. (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 SELECTING THE REMOTE CONTROL UNIT SIGNAL CODE.

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.



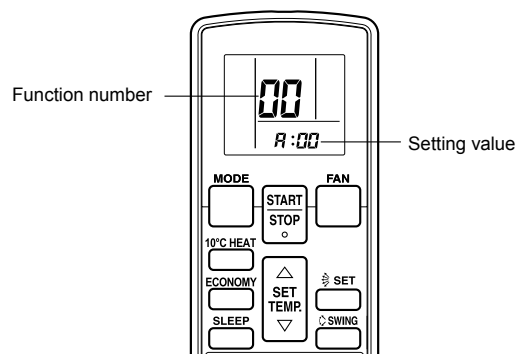
The air conditioner signal code is set to A prior to shipment. Contact your retailer to change the signal code.

The remote control unit resets to signal code A when the batteries in the remote control unit 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 on it again. The FUNCTION SETTING doesn't become effective if it doesn't do so.

- 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.

1-1. Setting the GROUP CONTROL SYSTEM (By Wired remote controller)

A number of indoor units can be operated at the same time using a single remote controller.
Wiring method (indoor unit to remote controller)

(◆ . . .Factory setting)

Setting Description	Function Number	Setting Value
◆ 0	00	00
1		01
2		02
3		03
4		04
5		05
6		06
7		07
8		08
9		09
10		10
11		11
12		12
13		13
14		14
15		15

1-2. Setting the 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
Lower control		01

1-3. Setting the 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

1-4. Setting Other Functions

The following settings are also possible, depending on the operating conditions.

Auto Restart

(◆ . . .Factory setting)

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

Indoor Room Temperature Sensor Switching Function

(Only for Wired remote controller)

(◆ . . . 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 control unit sensor.

Setting the Remoto control Signal Code

The following settings are also possible, depending on the operating conditions.

(◆ . . . Factory setting)

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

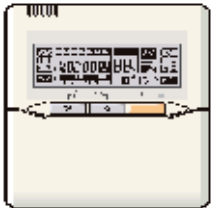
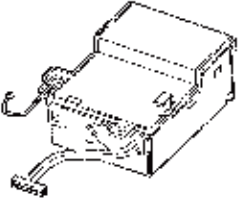
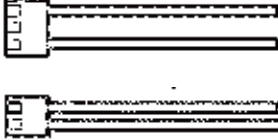


Setting the FAN OFF time correction of intermittent operation indoor fan

The following settings are also possible, depending on the operating conditions.

(◆ . . . Factory setting)

Setting Description	Function Number	Setting Value
◆ Standard	33	00
Short		01
Long 1		02
Long 2		03

1-13. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTB-★UD	Unit control is performed by wired remote controller.
	Communication box kit	UTY-XCBXE	Required when wired remote controller is connected.
	External connect kit	UTY-XWZX	Required when external device is connected.
	Apple-catechin filter	UTR-FA16	Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol ingredient extracted from apples.
	Ion deodorisation filter	UTR-FA16-2	The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra fine-particle ceramic.

2.OUTDOOR UNIT

SINGLE TYPE :

AO*A14LAC2

CONTENTS

2. OUTDOOR UNIT

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2-5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFERENCE	02 - 06
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2-1. SPECIFICATIONS

THE FOLLOWING PERFORMANCE IS A VALUE AT STANDARD COMBINATIONS.

■ STANDARD COMBINATION AO*A14LAC2 : AS*07LBCM, AS*07LBCM

TYPE			INVERTER MULTI MODEL	
MODEL NAME			HEAT PUMP TYPE	
POWER SOURCE			AO*A14LAC2	
AVAILABLE VOLTAGE RANGE			230V ~ 50Hz	
EUROPEAN ENERGY LABEL			Cooling	A
			Heating	A
CAPACITY	COOLING	RATED	kW	4.0
			BTU/h	13600
		MIN.-MAX.	kW	1.4-4.4
	HEATING		BTU/h	4700-15000
		RATED	kW	4.4
		MIN.-MAX.	BTU/h	15000
INPUT POWER	COOLING	RATED	kW	1.09
		MAX.		1.40
	HEATING	RATED		1.03
		MAX.		1.78
CURRENT	COOLING	RATED	A	5.12
		MAX.		6.70
	HEATING	RATED		4.91
		MAX.		8.50
EER	COOLING	RATED	kW/kW	3.67
COP	HEATING		kW/kW	4.27
STARTING CURRENT			A	9.5
FAN	AIR FLOW RATE	COOLING	m ³ /h	1850
		HEATING		1850
		TYPE x Q'ty		Propeller x 1
	MOTOR OUTPUT		W	50
SOUND PRESSURE LEVEL	COOLING		dB(A)	47
	HEATING			49
HEAT EXCHANGER TYPE	DIMENSION (H×W×D)		mm	504×850×36.4
	FIN PITCH		mm	1.4
	ROWS x STAGES			2 x 24
	PIPE TYPE			COPPER
	FIN TYPE			ALUMINIUM
COMPRESSOR	TYPE x Q'ty		DC TWIN ROTARY x 1	
	MOTOR OUTPUT		W	750
REFRIGERANT	TYPE		R410A	
	CHARGE		g	1150
REFRIGERANT OIL	TYPE		POE(VG74)	
ENCLOSURE	MATERIAL		STEEL SHEET	
	COLOUR		BEIGE (Approximate colour of MUNSELL 10YR 7.5/1.0)	
DIMENSIONS H × W × D	NET		mm	540×790×290
	GROSS			648×910×380
WEIGHT	NET		kg	37
	GROSS			41
CONNECTION PIPE	SIZE	LIQUID	mm	Ø6.35(1/4in)× 2
		GAS		Ø9.52(3/8in)× 2
	CONNECTION METHOD		FLARE	
	MAX. LENGTH (total)		m	30
	MAX. LENGTH (each unit)			20
	MIN. LENGTH (each unit)			3
MAX. HEIGHT		15		
OPERATION	COOLING		°C	10 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 : 7.5m, Height difference : 0m.(Outdoor unit - indoor unit)

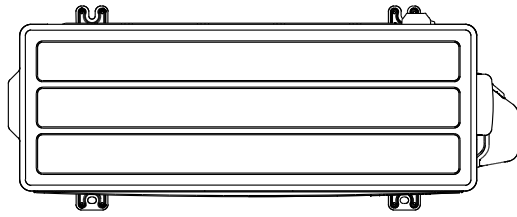
2-2. DIMENSIONS

■ MODEL: AO*A14L2

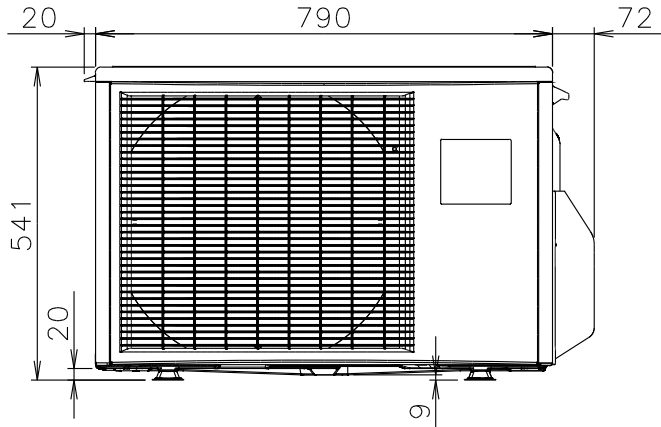
(Unit : mm)

OUTDOOR UNIT
AO*A14L2

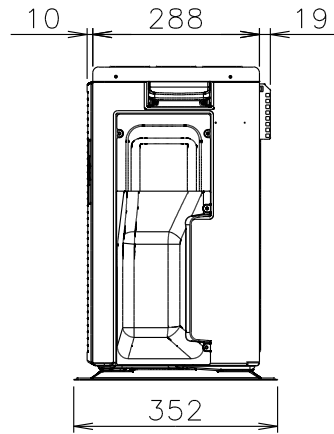
OUTDOOR UNIT
AO*A14L2



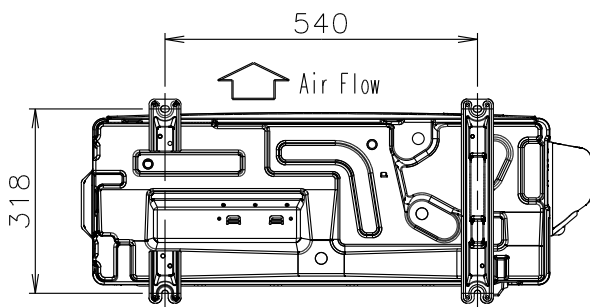
Top view



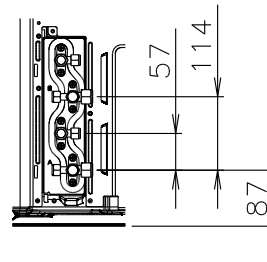
Front view



Side view



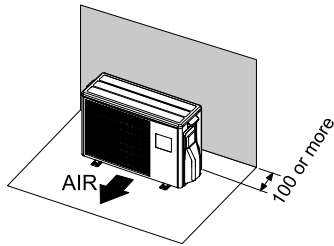
Bottom view



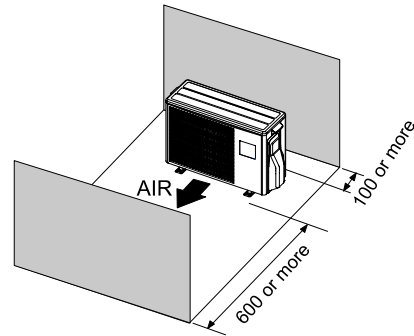
■ INSTALLATION PLACE

(Unit : mm)

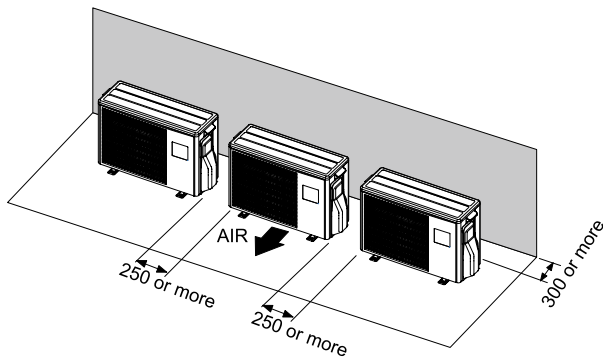
When there are obstacles at the back side.



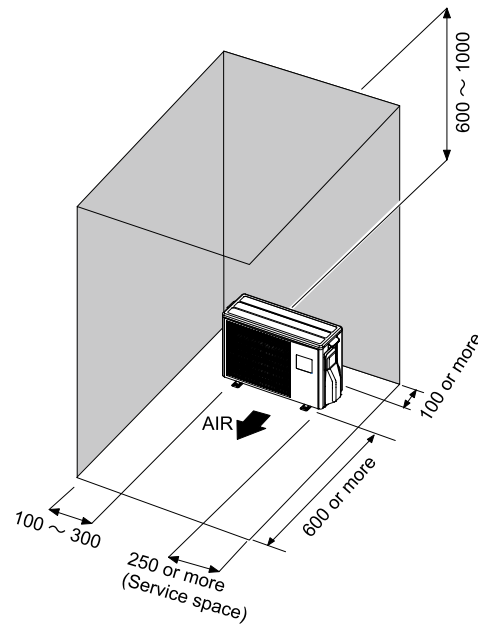
When there are obstacles at the back or front sides.



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.



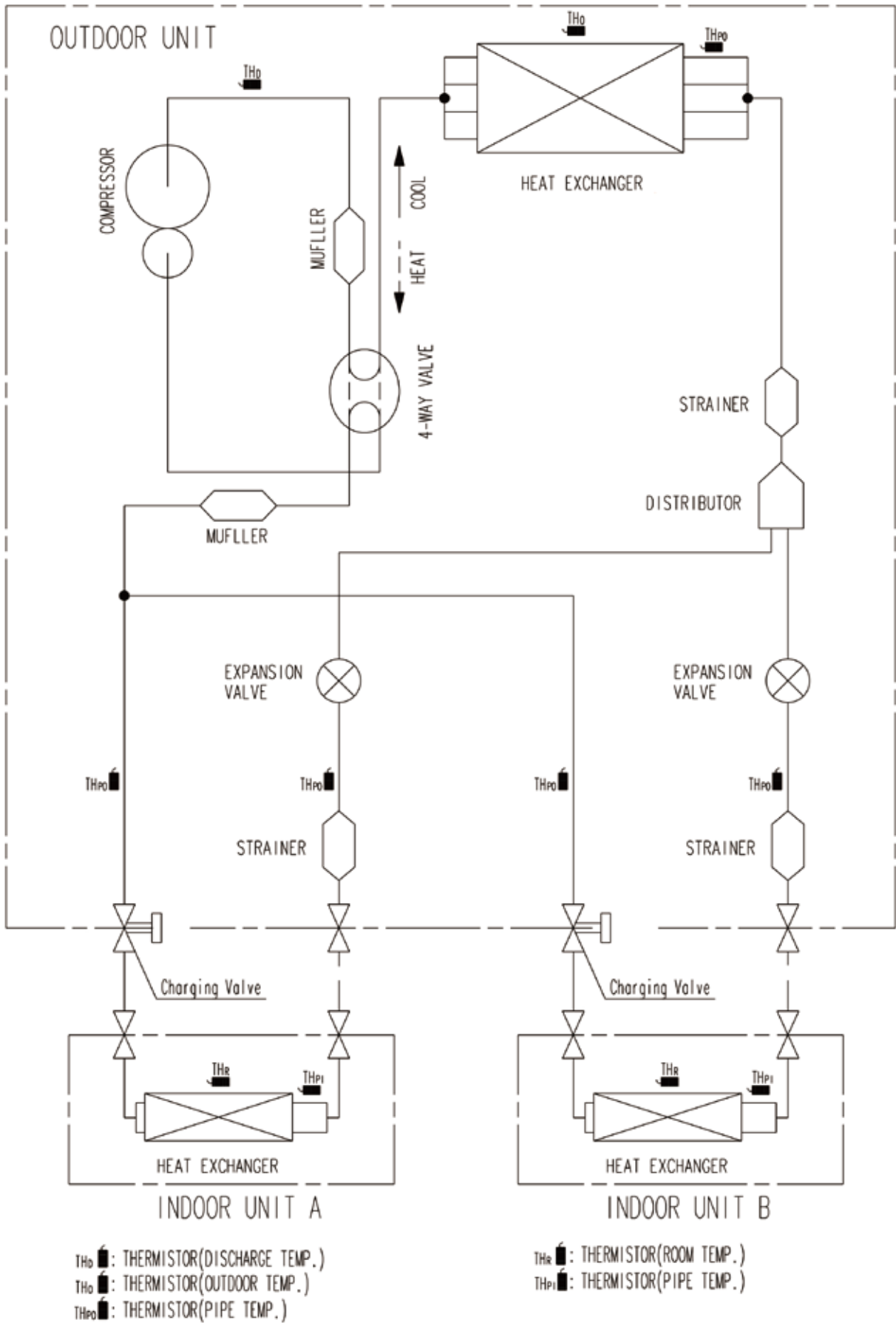
*If the space is larger that is stated, the condition will be the same as that are no obstacles.

2-3. REFRIGERANT CIRCUIT

■ MODEL: AO*A14L2

OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2

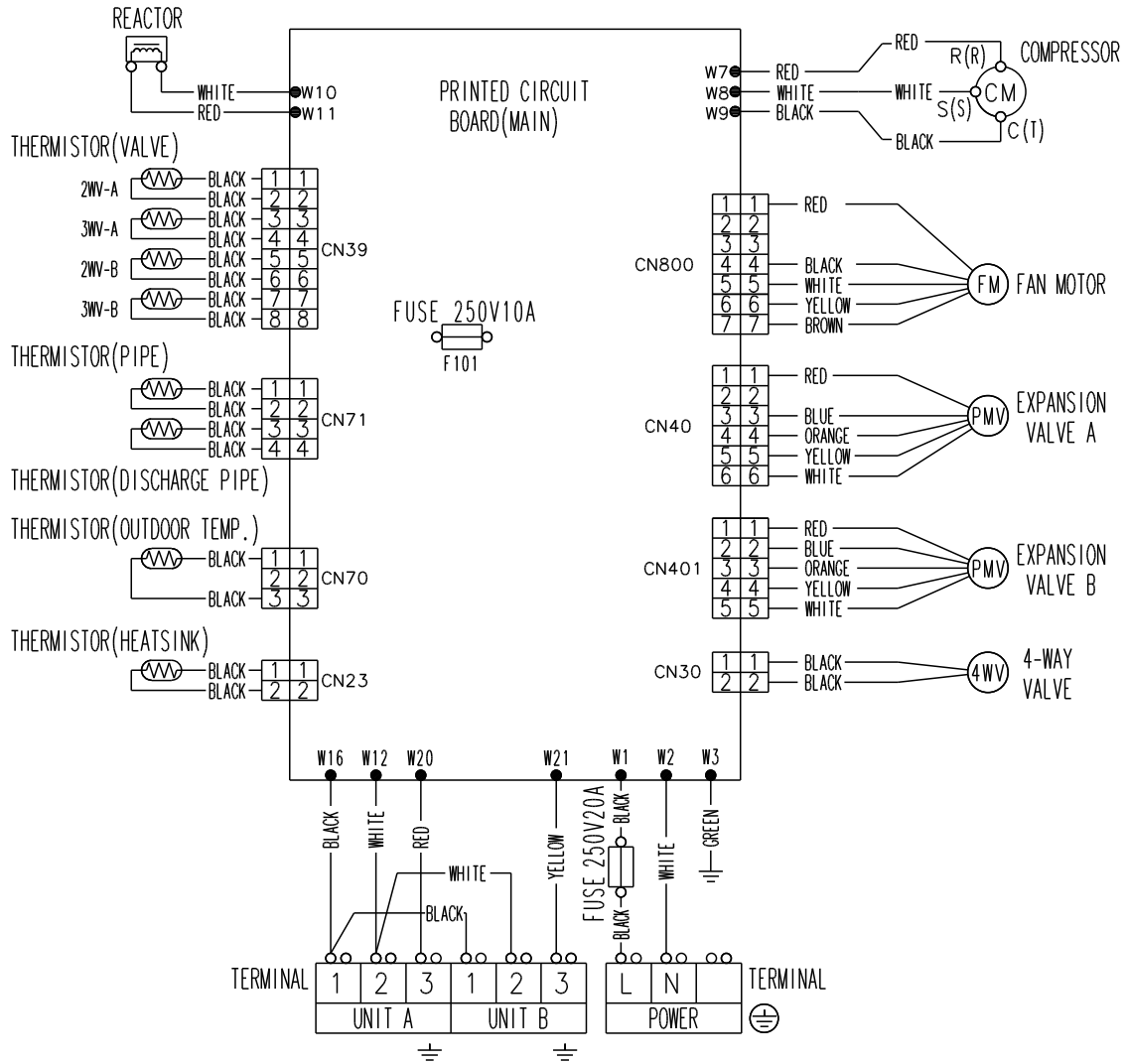


2-4. WIRING DIAGRAMS

MODEL: AO*A14L2

OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2



2-5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

MODEL: INDOOR UNIT 7000BTU(AO*A14L2)

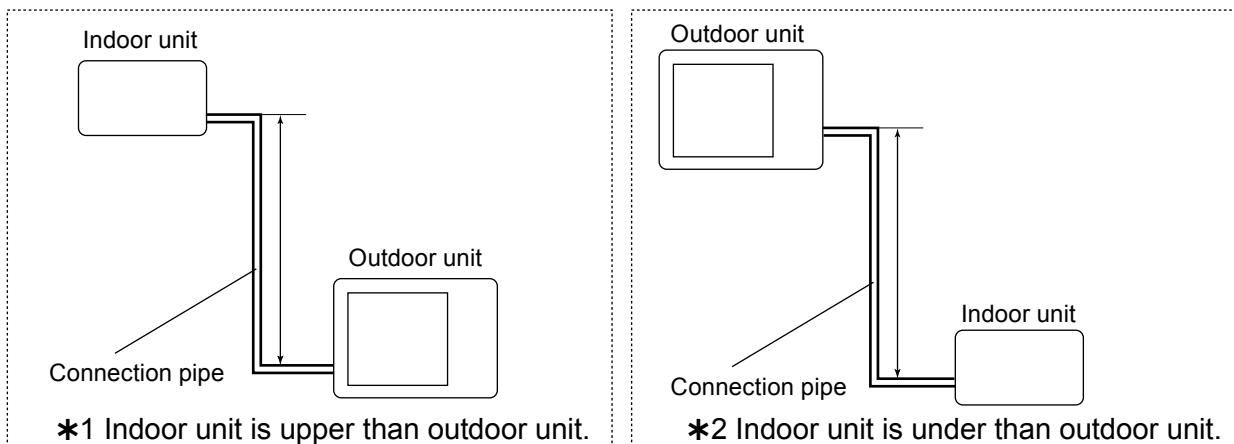
OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2

COOLING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.934	0.917
		10	-	-	0.976	0.942	0.924
		7.5	-	0.988	0.980	0.946	0.928
		3	1.000	0.992	0.984	0.950	0.932
	0	1.008	1.000	0.991	0.957	0.939	
	*2 Indoor unit is under than outdoor unit	-3	1.008	1.000	0.991	0.957	0.939
		-7.5	-	1.000	0.991	0.957	0.939
		-10	-	-	0.991	0.957	0.939
		-15	-	-	-	0.957	0.939

HEATING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.949	0.915
		10	-	-	0.956	0.949	0.915
		7.5	-	1.000	0.956	0.949	0.915
		3	1.073	1.000	0.956	0.949	0.915
	0	1.073	1.000	0.956	0.949	0.915	
	*2 Indoor unit is under than outdoor unit	-3	1.067	0.995	0.951	0.945	0.910
		-7.5	-	0.993	0.948	0.942	0.908
		-10	-	-	0.946	0.940	0.905
		-15	-	-	-	0.935	0.901

Height difference H



MODEL: INDOOR UNIT 9000BTU(AO*A14L2)

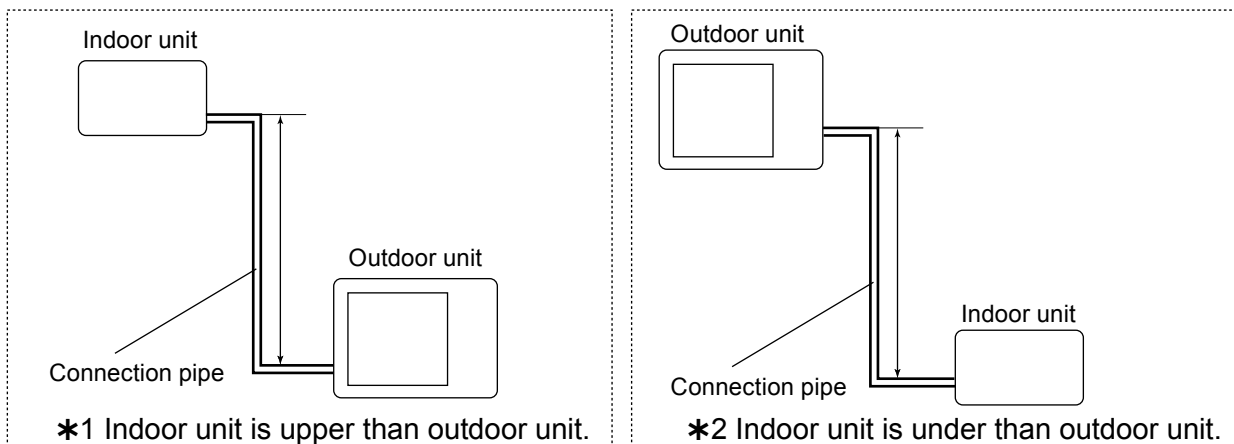
OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2

COOLING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.931	0.911
		10	-	-	0.962	0.938	0.919
		7.5	-	0.988	0.966	0.942	0.922
		3	0.998	0.992	0.969	0.946	0.926
		0	1.006	1.000	0.977	0.954	0.934
	*2 Indoor unit is under than outdoor unit	-3	1.006	1.000	0.977	0.954	0.934
		-7.5	-	1.000	0.977	0.954	0.934
		-10	-	-	0.977	0.954	0.934
		-15	-	-	-	0.954	0.934

HEATING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.951	0.936
		10	-	-	0.968	0.951	0.936
		7.5	-	1.000	0.968	0.951	0.936
		3	1.071	1.000	0.968	0.951	0.936
		0	1.071	1.000	0.968	0.951	0.936
	*2 Indoor unit is under than outdoor unit	-3	1.066	0.995	0.963	0.946	0.931
		-7.5	-	0.993	0.961	0.944	0.929
		-10	-	-	0.958	0.941	0.927
		-15	-	-	-	0.937	0.922

Height difference H



MODEL: INDOOR UNIT 12000BTU(AO*A14L2)

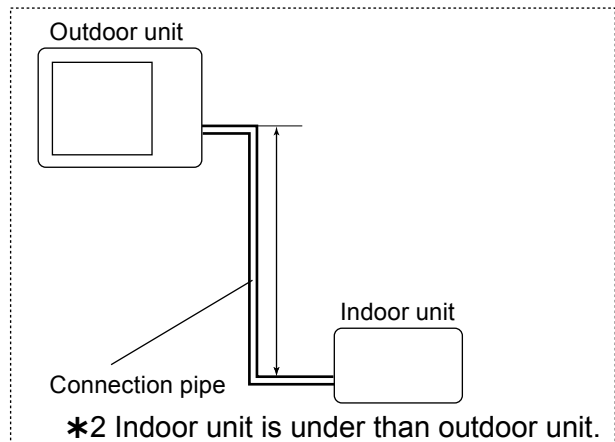
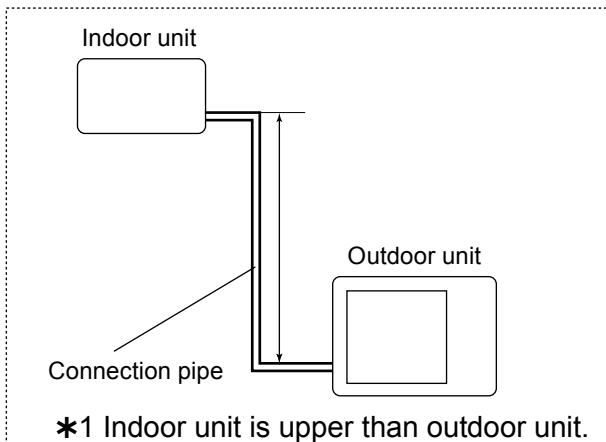
OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2

COOLING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.919	0.884
		10	-	-	0.968	0.926	0.891
		7.5	-	0.988	0.972	0.930	0.895
		3	1.020	0.992	0.976	0.934	0.898
	0		1.028	1.000	0.984	0.941	0.905
	*2 Indoor unit is under than outdoor unit	-3	1.028	1.000	0.984	0.941	0.905
		-7.5	-	1.000	0.984	0.941	0.905
		-10	-	-	0.984	0.941	0.905
		-15	-	-	-	0.941	0.905

HEATING			Pipe length (m)				
			3	7.5	10	15	20
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.954	0.932
		10	-	-	0.984	0.954	0.932
		7.5	-	1.000	0.984	0.954	0.932
		3	1.074	1.000	0.984	0.954	0.932
	0		1.074	1.000	0.984	0.954	0.932
	*2 Indoor unit is under than outdoor unit	-3	1.068	0.995	0.979	0.949	0.927
		-7.5	-	0.993	0.977	0.947	0.925
		-10	-	-	0.974	0.944	0.923
		-15	-	-	-	0.940	0.918

Height difference H



2-6.ADDITIONAL CHARGE CALCULATION

■ MODEL: AO*A14L2

Refrigerant type		R410A
Refrigerant amount	g	1150

● REFRIGERANT CHARGE

Pipe length	m	~20	30	20g/m
Additional charge	g	0 (Chargeless)	+200	

2-7. AIR FLOW

■ MODEL: AO*A14L2

● Cooling

Number of rotations (r.p.m.)	Air flow	
	820	m ³ /h
l/s		514
CFM		1089

● Heating

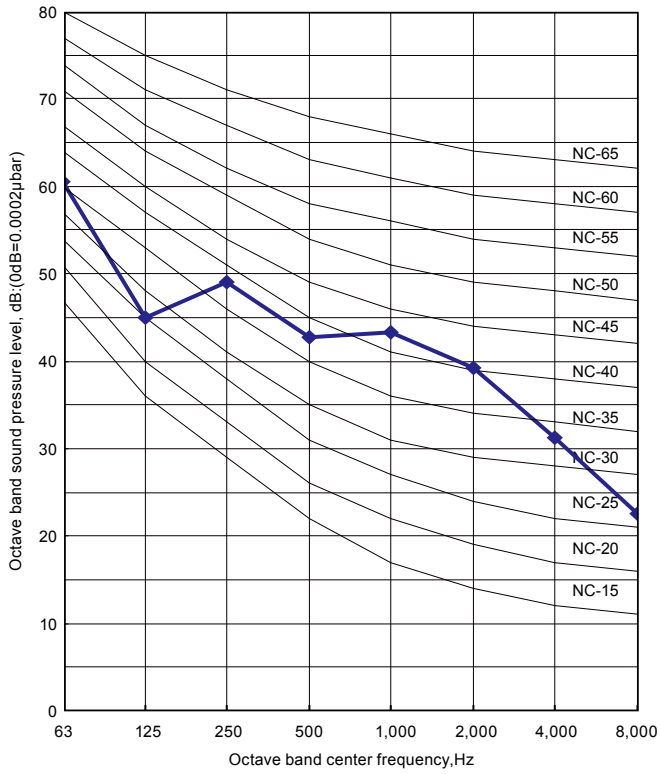
Number of rotations (r.p.m.)	Air flow	
	820	m ³ /h
l/s		514
CFM		1089

2-8. OPERATION NOISE

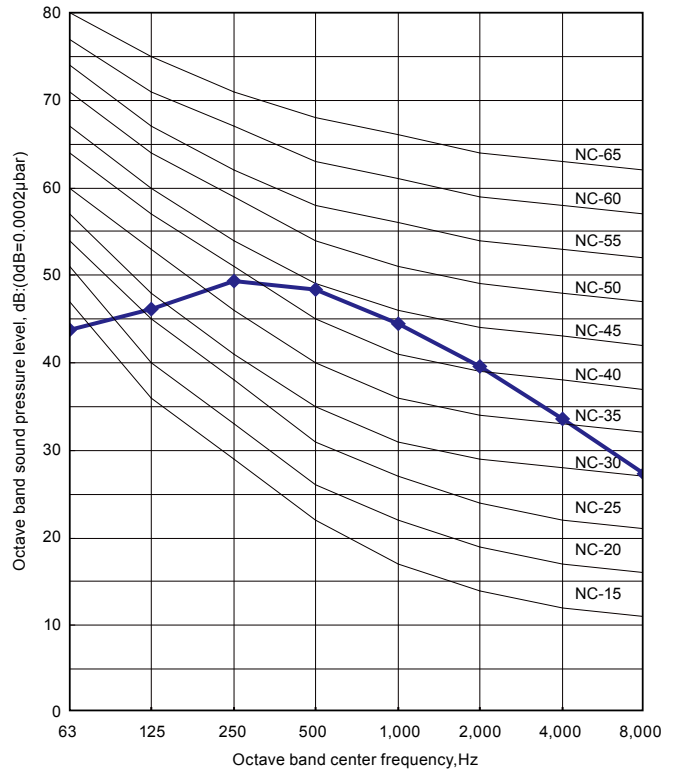
2-8-1. NOISE LEVEL CURVE

■ MODEL: AO*A14L2

● Cooling



● Heating

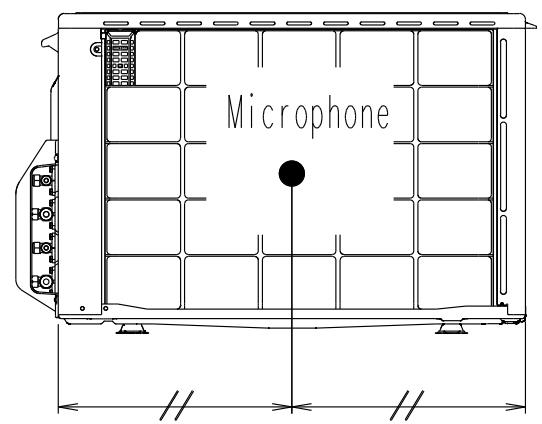
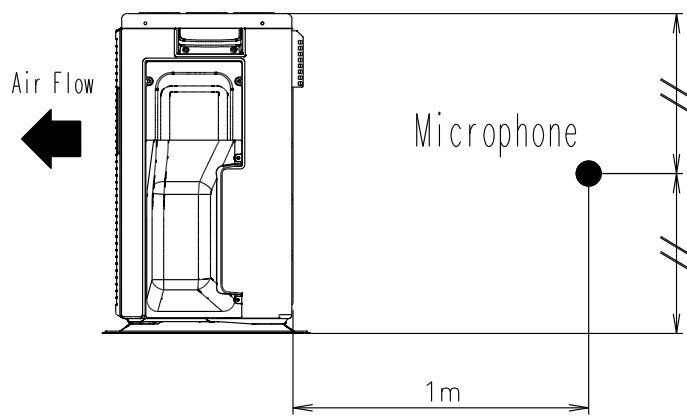


OUTDOOR UNIT
AO*A14L2

OUTDOOR UNIT
AO*A14L2

2-8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AO*A14L2



OUTDOOR UNIT
AO*A14L2

2-9. ELECTRIC CHARACTERISTICS

Model name			AO*A14LAC2
Power supply	Voltage	V	230 ~
	Frequency	Hz	50
Maximum operation current			10
*1) Wiring Specification	Main fuse (Circuit breaker) current	A	15
	Power cable	mm ²	2.5
	*2) Limited wiring length	m	27

*1) Wiring specification :
 selected sample
 (Selected based on Japan Electrotechnical Standard and Codes Committee E0005)

*2) Limited wiring length :
 This is the wiring length in case voltage descent is less than 2%.
 When the wiring length become long, please select the wiring of a more larger diameter.

2-10. SAFETY DEVICES

	Protection form	Model
		AO* A14L2
Circuit protection	Current fuse (MAIN PCB)	5A 250V
	Current fuse (MAIN PCB)	20A 250V
Fan motor protection	Thermal protector	OFF : 100^{+15}_{-10} °C
		ON : 95^{+15}_{-10} °C
Compressor protection	Thermal protection program (DISCHARGE TEMP.)	OFF : 110°C ON : 80°C
Refrigerant circuit protection	Thermal protection program (HEAT EXCHANGER TEMP.)	OFF : 67°C ON : 59°C