



AIR CONDITIONER

Wall Mounted type

DESIGN & TECHNICAL MANUAL

INDOOR



ASU18RLF
ASU24RLF

OUTDOOR



AOU18RLXFW
AOU24RLXFW

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

WALL MOUNTED TYPE :

ASU18RLF

ASU24RLF

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1. INDOOR UNIT

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1. FEATURE

■ MODEL ASU18RLF ASU24RLF



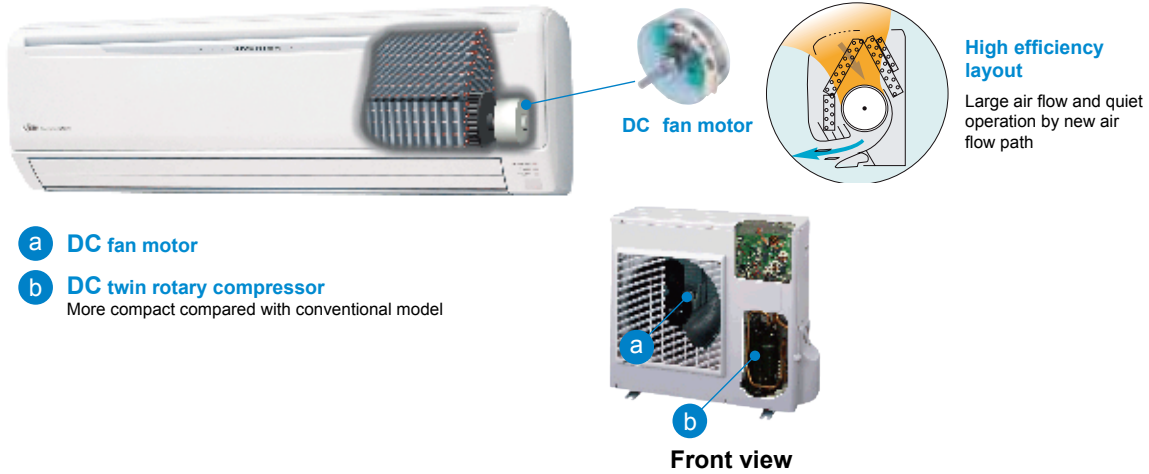
■ FEATURES

● High energy performance

		MODEL	
		ASU18RLF	ASU24RLF
Seasonal Energy Efficiency Ratio (SEER)	BTU/hW	19.2	18.0
Heating Seasonal Performance Factor (HSPF)		10.0	10.0
Energy Efficient Ratio (EER)		13.3	12.5

MEASUREMENT CONDITIONS
ANSI/ASHRAE STANDARD 37-1988

● ALL DC



- a DC fan motor
- b DC twin rotary compressor
More compact compared with conventional model

● Super quiet

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

● Easy maintenance

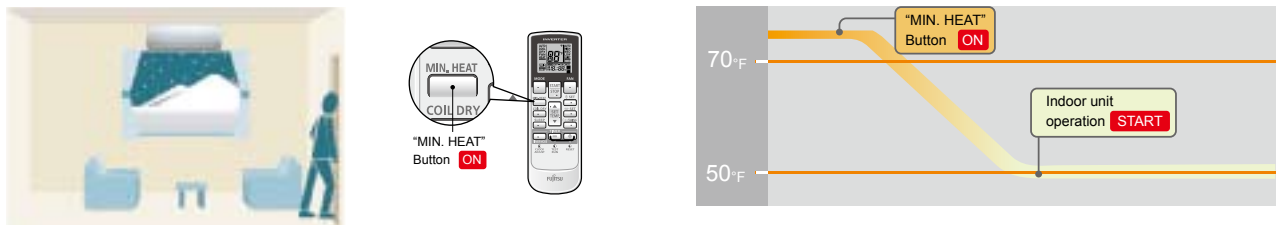
Easy maintenance and always clean. Troublesome maintenance has been made easy.
Since the front panel is easy to remove, maintenance is also easy.

● MIN. HEAT Operation

The room temperature can be set to go no lower than 50°F, thus ensuring that the room does not get too cold when not occupied

Caution)

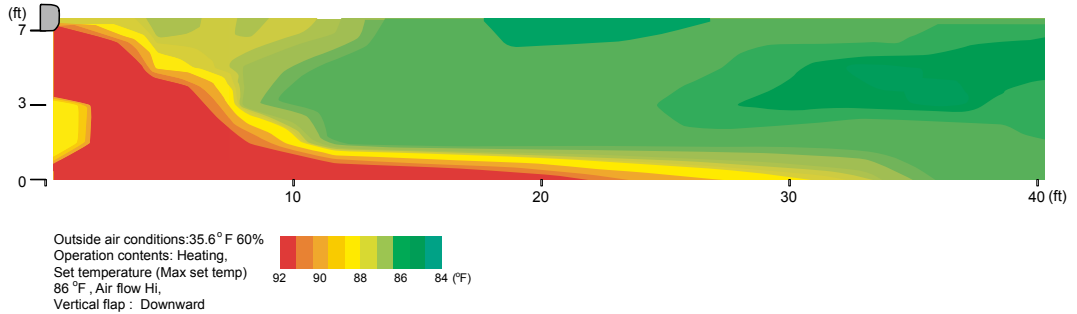
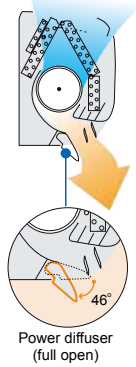
- When the room temperature is higher than 50°F, "MIN. HEAT" operation does not start. Operation starts and maintains the room temperature at 50°F when the temperature drops below 50°F.



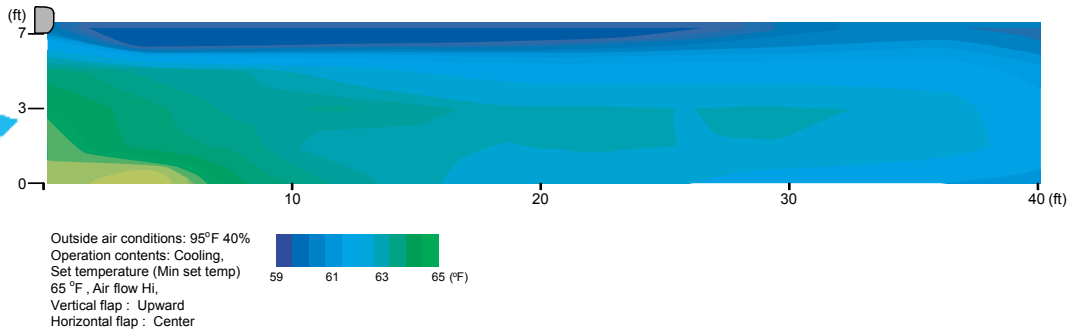
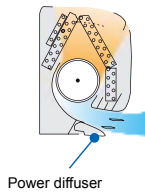
● **Power diffuser**

Adoption of large power diffuser

“Strong vertical air flow” provides powerful floor level heating.



“Healthy horizontal air flow” does not blow cool air directly at the occupants in the room.



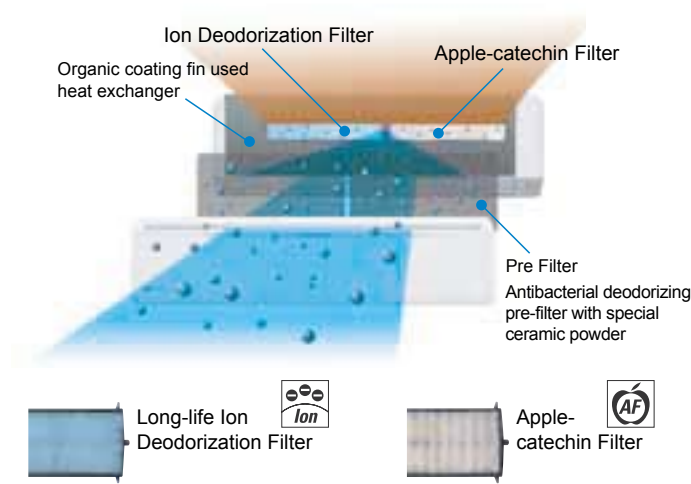
● **Low ambient outdoor temperature design (24Model)**

Low ambient outdoor temperature design

Cooling	0 to 115 °F
Heating	0 to 75 °F

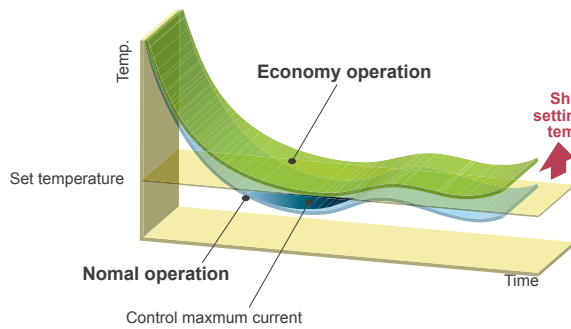
● **Corresponds to maximum 164feet (50m) long piping**

● Air conditioner filter features



● Economy operation

Example : Cooling operation



- Economy operation is energy saving, as the set temperature of indoor unit is shifted by 2°F and the maximum electric value of the outdoor unit is suppressed.

● Blue fin heat exchanger

Corrosion-resistance of the heat exchanger even in coastal areas has been improved by blue fin treatment of the outdoor unit heat exchanger.



2. WIRELESS REMOTE CONTROLLER

FEATURES



- Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- Can be used jointly with wired remote controllers .
- Easy to change custom code (4 patterns).

● Built-in timers

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

● Program timer

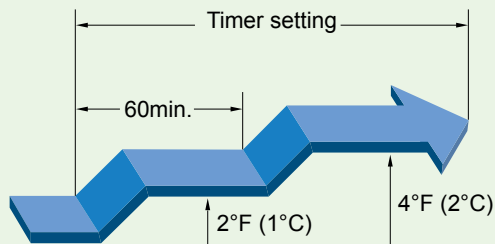
The program timer operates the ON and OFF timer once within a 24 hour period.

● 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.

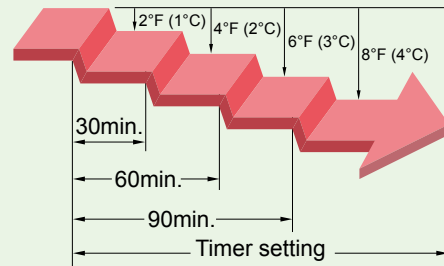
Cooling operation / dry operation

When the sleep timer is set, the set temperature automatically rises 2°F (1°C) every hour. The set temperature can rise up to a maximum of 4°F (2°C).

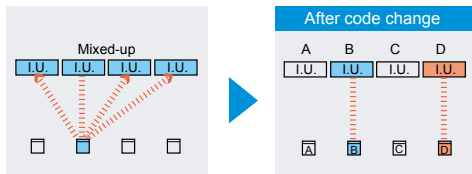


Heating operation

When the sleep timer is set, the set temperature automatically drops 2°F (1°C) every 30 minutes. The set temperature can drop to a maximum of 8°F (4°C).



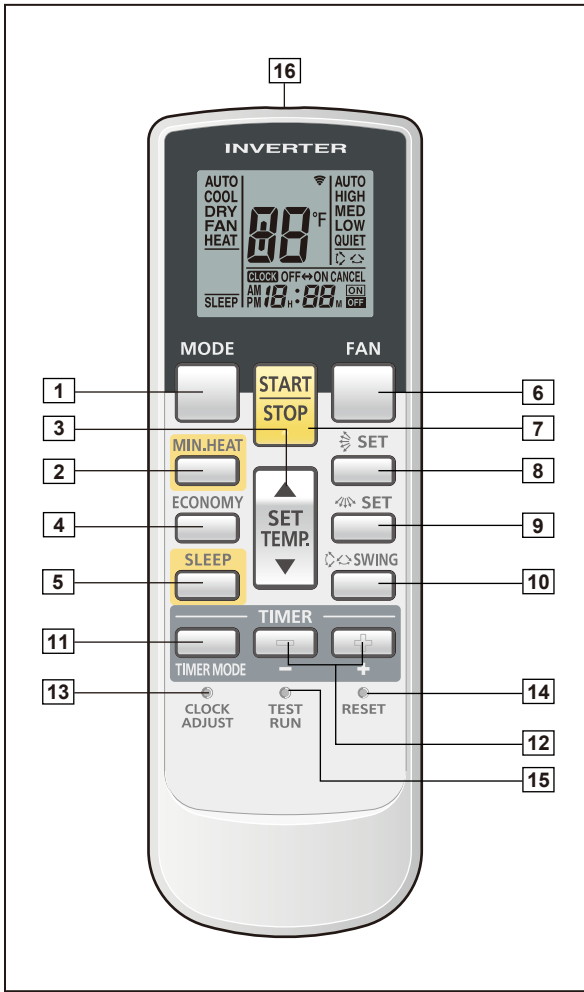
● Switching remote controller signal code



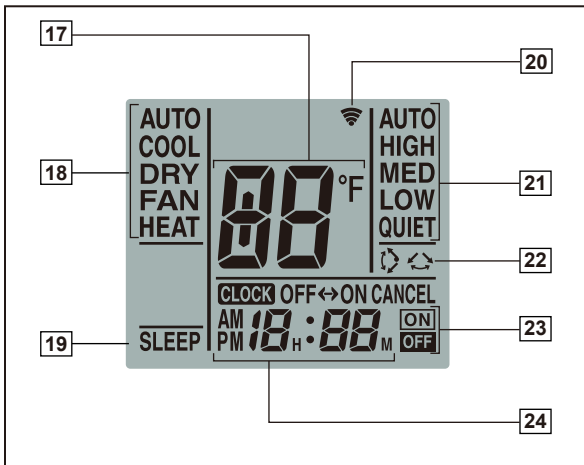
- Code selector switch eliminates unit being wrongly switched.
(Up to 4 codes can be set.)

*I.U.=Indoor unit

FUNCTIONS



Display panel



- 1 MODE button**
Selects the operating mode (AUTO, COOL, DRY, FAN, HEAT).
/Start / end R.C. custom code change. (Max 4 types)
- 2 MIN.HEAT button**
- 3 Set temp. button (▲ / ▼)**
Set remote controller custom code buttons
Sets the indoor temp./ Sets R.C. custom code.
- 4 ECONOMY button**
- 5 SLEEP button**
Pressed to select sleep timer.
- 6 FAN button**
Selects the fan speed (AUTO, HIGH, MED, LOW, QUIET).
- 7 START/STOP button**
Pressed to start and stop operation.
- 8 SET button (Vertical)**
Air flow direction vertical set button.
- 9 SET button (Horizontal)**
Air flow direction horizontal set button.
- 10 SWING button**
Air flow direction swing button.
- 11 TIMER MODE button**
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)
- 12 TIMER SET (+ / -) button**
Sets the current time and on-off time.
- 13 CLOCK ADJUST button**
Sets the current time.
- 14 RESET button**
Used when replacing batteries.
- 15 TEST RUN button**
Used when testing the air conditioner after installation.
- 16 Signal transmitter**
- 17 Temperature set display**
- 18 Operating mode display**
- 19 Sleep display**
- 20 Transmit indicator**
- 21 Fan speed display**
- 22 Swing display**
- 23 Timer mode display**
- 24 Clock display**

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

3. SPECIFICATIONS

Type				WALL MOUNTED INVERTER HEAT PUMP	
Model name				ASU18RLF	ASU24RLF
Power source				208/230V ~ 60Hz	
Available voltage range				187-253V ~ 60Hz	
Capacity	Cooling	Rated	kW	5.28	6.44
			BTU/h	18,000	22,000
		Min-Max	kW	2.05 - 6.74	2.90 - 8.00
			BTU/h	7,000 - 23,000	9,900 - 27,300
	Heating	Rated	kW	6.30	8.10
			BTU/h	21,600	27,600
Min-Max		kW	2.05 - 8.50	2.20 - 10.61	
		BTU/h	7,000 - 29,000	7,500 - 36,200	
Input power	Cooling	kW	Rated	1.35	1.76
			Max	3.01	3.42
	Heating		Rated	1.80	2.38
			Max	3.23	3.53
Current	Cooling	A	Rated	6.2	7.9
			Max	13.5	15.0
	Heating		Rated	8.0	10.5
			Max	14.5	15.5
EER	Cooling	kW/kW	3.90	3.66	
		BTU/hW	13.3	12.5	
COP	Heating	kW/kW	3.50	3.40	
		BTU/hW	12.0	11.6	
SEER	Cooling	BTU/hW	19.2	18.0	
HSPF	Heating	BTU/hW	10.0	10.0	
POWER FACTOR	Cooling	%	95	97	
	Heating	%	98	99	
Moisture removal			pints/h (l/h)	5.9 (2.8)	6.3 (3.0)
Fan	Airflow rate	Cooling	High	541 (920)	659 (1,120)
			Med	435 (740)	530 (900)
			Low	365 (620)	435 (740)
			Quiet	306 (520)	365 (620)
		Heating	High	541 (920)	677 (1,150)
			Med	435 (740)	530 (900)
			Low	365 (620)	435 (740)
			Quiet	318 (540)	365 (620)
	Type × Q'ty			Cross flow fan × 1	
	Motor output			W	64
Sound pressure level	Cooling	dB(A)	High	43	49
			Med	37	42
			Low	33	37
			Quiet	28	33
	Heating		High	44	49
			Med	37	42
			Low	33	37
			Quiet	28	33
Heat exchanger type	Dimensions (H × W × D)		in. (mm)	Main:15-7/8 x 33-3/4 x 1-1/16 (378×832×26.6) Sub: 3-5/16 x 33-3/4 x 17/32 (84×832×13.3)	
	Fin pitch		FPI	Main:21, Sub:18	
	Rows x Stages			Main:2×18, Sub:1×4	
	Pipe type			Copper	
	Fin type			Aluminium	
Enclosure	Material			Polystyrene	
	Color			WHITE Approximate color of MUNSELL N9.25/	
Dimensions (H×W×D)	Net	mm		320×998×228	
		inch		12-5/8×39-1/4×9	
	Gross	mm		319×1090×429	
		inch		12-3/5×42-15/16×16-7/8	
Weight	Net	lb.(kg)		31 (14)	
	Gross	lb.(kg)		40 (18)	
Connection pipe	Size	Liquid	in. (mm)	Ø 3/8 (Ø 9.52)	
		Gas		Ø 5/8 (Ø 15.88)	
	Method			Flare	
Operation range	Cooling	°F (°C)		64 to 90 (18 to 32)	
		%RH		80 or less	
	Heating	°F (°C)		88 (30) or less	
Remote controller type				Wireless	
Drain pipe	Material			PVC	
	Size		mm (Reference in.)	Outer diameter: 28 (1-3/32) Inner diameter: 16 (5/8)	

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F (26.67°C)DB / 67°F (19.44°C)WB, and outdoor temperature of 95°F (35°C)DB / 75°F (23.9°C)WB.

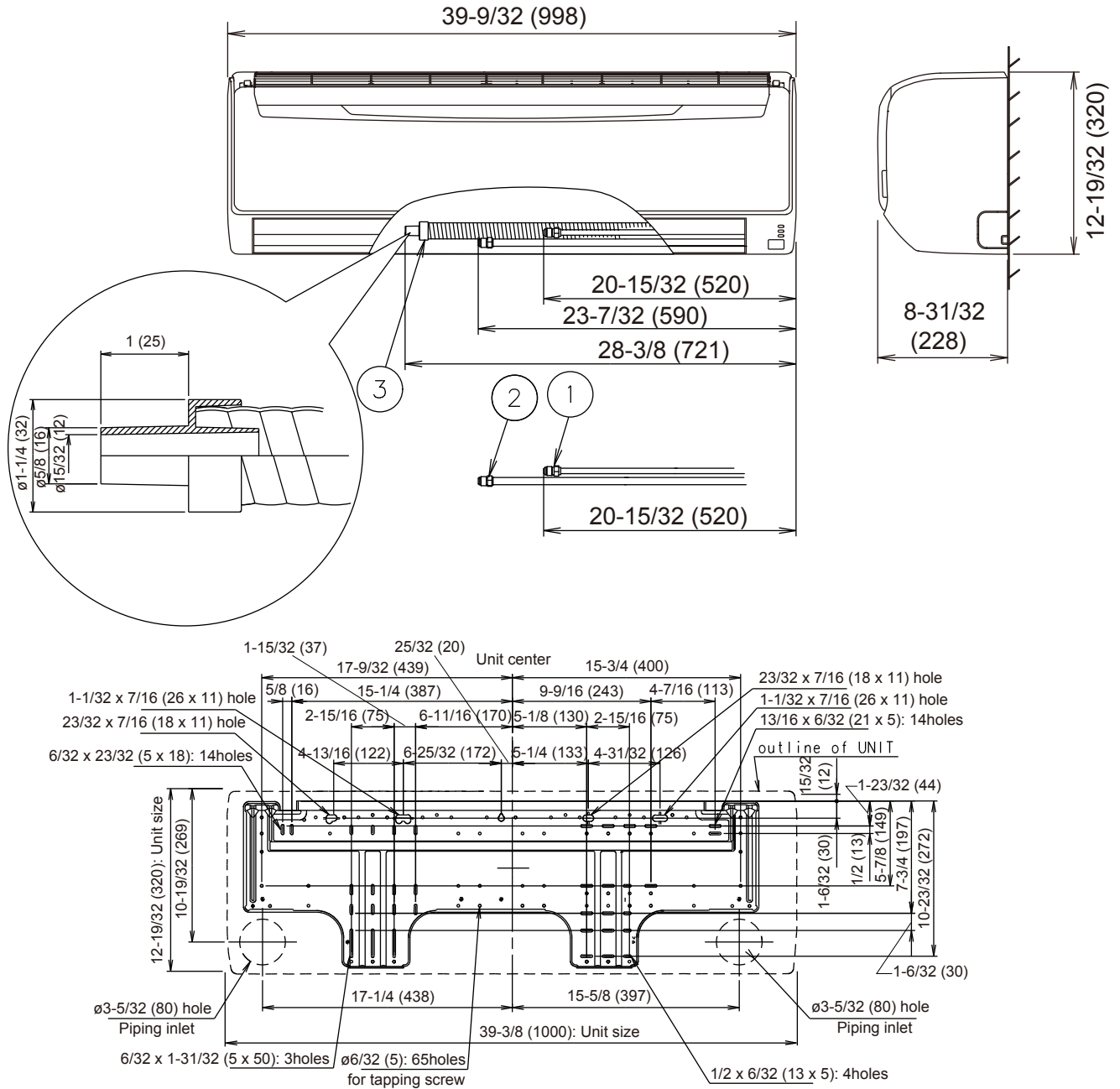
Heating : Indoor temperature of 70°F (21.11°C)DB / 59°F (15°C)WB, and outdoor temperature of 47°F (8.33°C)DB / 43°F (6.11°C)WB.

Pipe length : 24.6ft(7.5m) [Outdoor unit - Indoor unit], Height difference : 0ft. (0m) [Outdoor unit - Indoor unit]

4. DIMENSIONS

MODEL: ASU18RLF, ASU24RLF

Unit : in (mm)



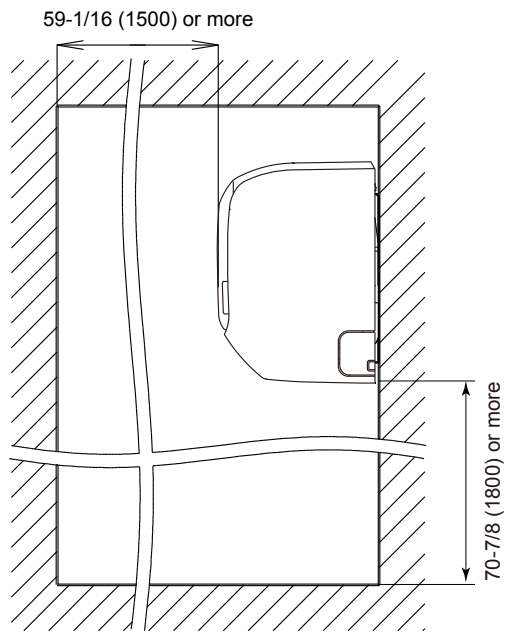
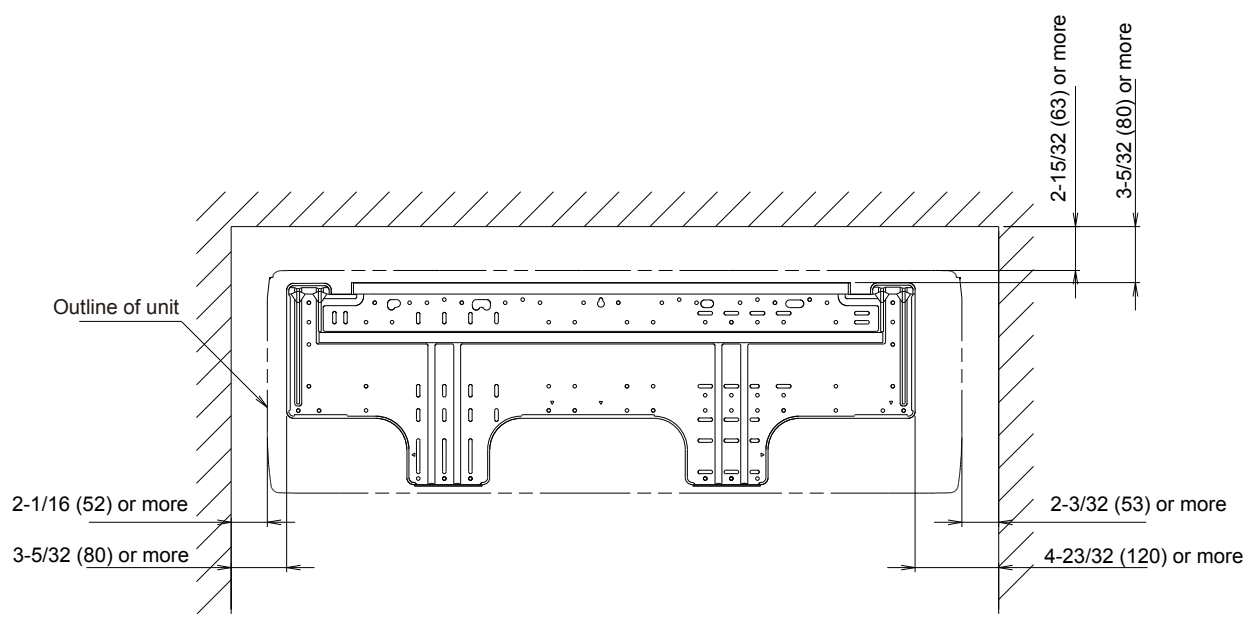
			ASU18RLF	ASU24RLF
①	Refrigerant pipe flare connection	Liquid	*ø 1/4 in. (6.35 mm)	*ø 1/4 in. (6.35 mm)
②		Gas	*ø 1/2 in. (12.70 mm)	ø 5/8 in. (15.88 mm)
③	Drain hose connection	Drain hose	I.D. 15/32 in. (12 mm) , O.D. 5/8 in. (16 mm) Drain hose : L=26-3/8 in. (670mm)	

* When connecting to a connection pipe, an adapter provided as accessory along with the outdoor unit is required.

			ASU18RLF	ASU24RLF
Connection pipe	Liquid		ø 3/8 in. (ø 9.52 mm)	
	Gas		ø 5/8 in. (ø 15.88 mm)	

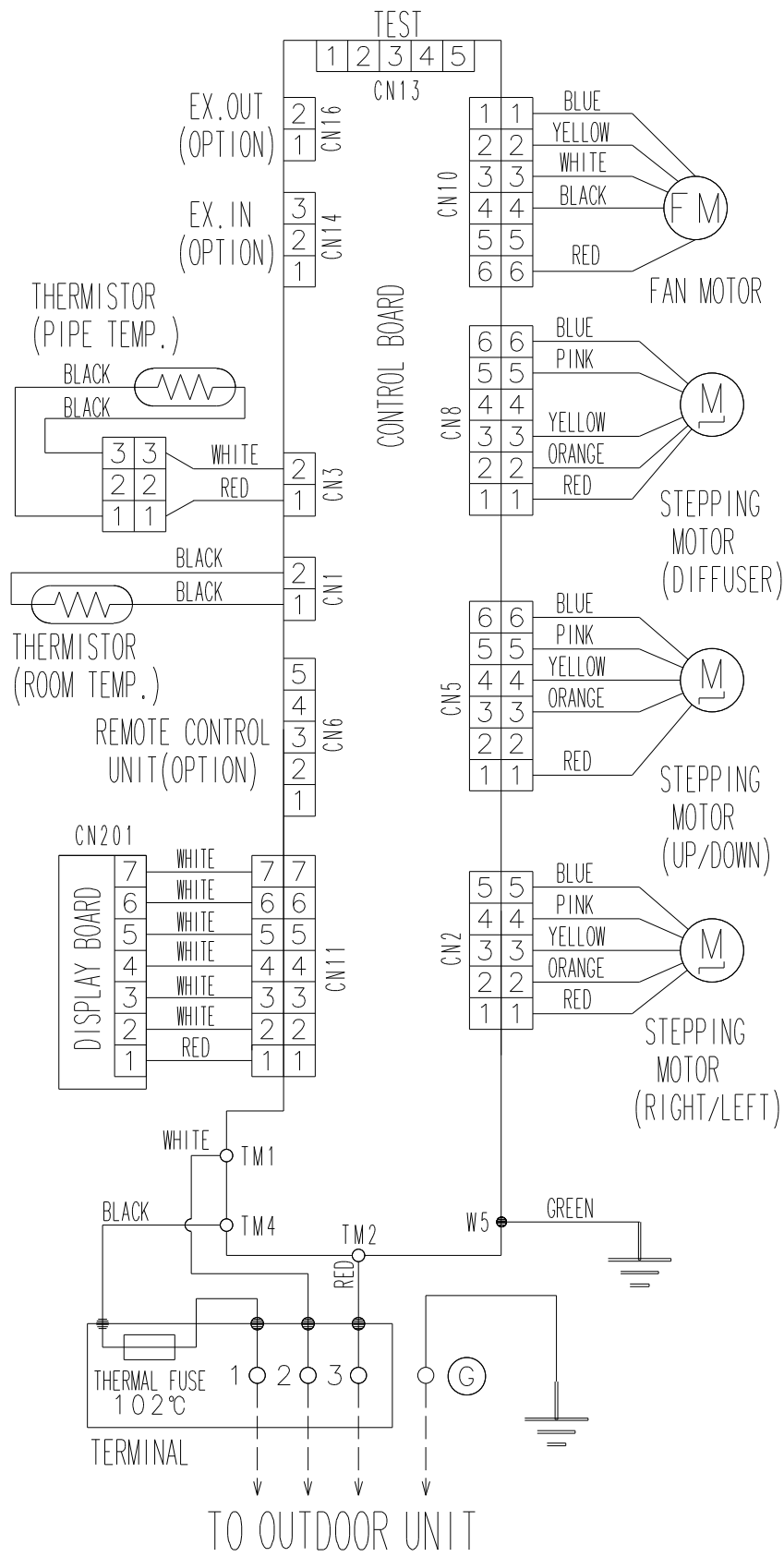
■ INSTALLATION PLACE

Unit : in (mm)



5. WIRING DIAGRAMS

MODEL: ASU18RLF, ASU24RLF



6. CAPACITY TABLE

6-1. COOLING CAPACITY

MODEL: ASU18RLF

AFR	541
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		Indoor temperature																				
		°FDB			64			70			75			80			85			90		
		°FWB			54			60			63			67			71			73		
Outdoor temperature	°FDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI			
	59	17.36	11.16	0.78	19.34	11.23	0.79	21.31	12.24	0.80	21.97	13.22	0.81	23.29	13.17	0.81	24.61	14.03	0.82			
	67	16.66	10.86	0.92	18.56	10.93	0.93	20.46	11.92	0.95	21.09	12.87	0.95	22.36	12.82	0.96	23.63	13.66	0.97			
	77	15.92	10.55	1.06	17.73	10.61	1.07	19.54	11.57	1.09	20.15	12.50	1.09	21.35	12.45	1.11	22.56	13.26	1.12			
	87	15.11	10.22	1.19	16.83	10.28	1.21	18.55	11.21	1.23	19.12	12.10	1.23	20.27	12.05	1.25	21.42	12.84	1.26			
	95	14.23	9.86	1.30	15.85	9.92	1.32	17.47	10.82	1.34	18.00	11.68	1.35	19.10	11.64	1.36	20.18	12.39	1.38			
	104	13.57	9.60	1.45	15.11	9.65	1.47	16.66	10.53	1.49	17.17	11.37	1.50	18.20	11.32	1.51	19.23	12.06	1.53			
	115	12.39	9.13	1.62	13.80	9.19	1.65	15.21	10.02	1.67	15.68	10.82	1.68	16.62	10.78	1.70	17.56	11.48	1.72			

AFR : Air flow rate (CFM)
 TC : Total capacity (kBTU)
 SHC : Sensible Heat capacity (kBTU)
 PI : Power Input (kW)

AFR	15.3
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		Indoor temperature																				
		°CDB			17.8			21.1			23.9			26.7			29.4			32.2		
		°CWB			12.2			15.6			17.7			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI			
	15.0	5.09	3.27	0.78	5.67	3.29	0.79	6.25	3.59	0.80	6.44	3.88	0.81	6.83	3.86	0.81	7.21	4.11	0.82			
	19.4	4.88	3.18	0.92	5.44	3.20	0.93	6.00	3.49	0.95	6.18	3.77	0.95	6.55	3.76	0.96	6.92	4.00	0.97			
	25.0	4.66	3.09	1.06	5.20	3.11	1.07	5.73	3.39	1.09	5.90	3.66	1.09	6.26	3.65	1.11	6.61	3.89	1.12			
	30.6	4.43	2.99	1.19	4.93	3.01	1.21	5.44	3.28	1.23	5.61	3.55	1.23	5.94	3.53	1.25	6.28	3.76	1.26			
	35.0	4.17	2.89	1.30	4.65	2.91	1.32	5.12	3.17	1.34	5.28	3.42	1.35	5.60	3.41	1.36	5.91	3.63	1.38			
	40.0	3.98	2.81	1.45	4.43	2.83	1.47	4.88	3.09	1.49	5.03	3.33	1.50	5.34	3.32	1.51	5.64	3.54	1.53			
	46.1	3.63	2.68	1.62	4.04	2.69	1.65	4.46	2.94	1.67	4.59	3.17	1.68	4.87	3.16	1.70	5.15	3.37	1.72			

AFR : Air flow rate (m³/min)
 TC : Total capacity (kW)
 SHC : Sensible Heat capacity (kW)
 PI : Power Input (kW)

MODEL: ASU24RLF

AFR	659
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		Indoor temperature																				
		°FDB			64			70			75			80			85			90		
		°FWB			54			60			63			67			71			73		
Outdoor temperature	°FDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI			
	59	18.62	11.32	0.82	20.74	11.39	0.83	22.86	12.42	0.84	23.57	13.41	0.85	24.99	13.36	0.85	26.40	14.23	0.86			
	67	17.91	11.06	0.95	19.95	11.13	0.97	21.99	12.14	0.98	22.67	13.11	0.99	24.03	13.06	1.00	25.39	13.91	1.01			
	77	19.30	11.57	1.37	21.50	11.64	1.39	23.70	12.69	1.41	24.43	13.71	1.42	25.90	13.65	1.43	27.37	14.54	1.44			
	87	18.37	11.23	1.53	20.46	11.30	1.55	22.56	12.32	1.58	23.25	13.30	1.58	24.65	13.25	1.60	26.04	14.12	1.61			
	95	17.36	10.87	1.70	19.34	10.93	1.72	21.31	11.93	1.75	22.00	12.88	1.76	23.29	12.83	1.78	24.61	13.66	1.80			
	104	16.23	10.48	1.86	18.07	10.54	1.89	19.92	11.50	1.92	20.54	12.42	1.93	21.77	12.37	1.95	23.00	13.17	1.97			
	115	12.35	9.23	1.56	13.76	9.28	1.58	15.17	10.12	1.61	15.64	10.93	1.61	16.58	10.89	1.63	17.52	11.60	1.65			

AFR : Air flow rate (CFM)
 TC : Total capacity (kBTU)
 SHC : Sensible Heat capacity (kBTU)
 PI : Power Input (kW)

AFR	18.7
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		Indoor temperature																				
		°CDB			17.8			21.1			23.9			26.7			29.4			32.2		
		°CWB			12.2			15.6			17.7			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI			
	15.0	5.46	3.32	0.82	6.08	3.34	0.83	6.70	3.64	0.84	6.91	3.93	0.85	7.32	3.91	0.85	7.74	4.17	0.86			
	19.4	5.25	3.24	0.95	5.85	3.26	0.97	6.44	3.56	0.98	6.64	3.84	0.99	7.04	3.83	1.00	7.44	4.08	1.01			
	25.0	5.66	3.39	1.37	6.30	3.41	1.39	6.95	3.72	1.41	7.16	4.02	1.42	7.59	4.00	1.43	8.02	4.26	1.44			
	30.6	5.38	3.29	1.53	6.00	3.31	1.55	6.61	3.61	1.58	6.82	3.90	1.58	7.22	3.88	1.60	7.63	4.14	1.61			
	35.0	5.09	3.19	1.70	5.67	3.20	1.72	6.25	3.50	1.75	6.44	3.77	1.76	6.83	3.76	1.78	7.21	4.00	1.80			
	40.0	4.76	3.07	1.86	5.30	3.09	1.89	5.84	3.37	1.92	6.02	3.64	1.93	6.38	3.62	1.95	6.74	3.86	1.97			
	46.1	3.62	2.70	1.56	4.03	2.72	1.58	4.45	2.97	1.61	4.58	3.20	1.61	4.86	3.19	1.63	5.13	3.40	1.65			

AFR : Air flow rate (m³/min)
 TC : Total capacity (kW)
 SHC : Sensible Heat capacity (kW)
 PI : Power Input (kW)

6-2. HEATING CAPACITY

■ MODEL: ASU18RLF

AFR	541
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Outdoor temperature		Indoor temperature											
		°FDB		60		65		70		72		75	
		°FDB	°FWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
5	3	18.8	2.50	18.4	2.55	17.9	2.60	17.5	2.65	17.0	2.70		
14	12	21.3	2.67	20.8	2.73	20.3	2.78	19.8	2.84	19.3	2.89		
23	19	24.7	2.86	24.1	2.92	23.5	2.98	22.9	3.04	22.3	3.10		
32	28	27.5	2.87	26.8	2.93	26.2	2.99	25.5	3.05	24.9	3.11		
41	37	29.3	2.84	28.6	2.90	27.9	2.96	27.2	3.02	26.5	3.08		
47	43	30.5	2.87	29.7	2.93	29.0	2.99	28.3	3.05	27.6	3.11		
50	47	31.0	2.85	30.3	2.91	29.5	2.97	28.8	3.03	28.0	3.09		
59	50	29.2	2.48	28.5	2.53	27.8	2.58	27.2	2.63	26.5	2.68		

AFR : Air flow rate (CFM)
TC : Total capacity (kBTU)
PI : Power Input (kW)

AFR	15.3
-----	------

Outdoor temperature		Indoor temperature											
		°CDB		15.6		18.3		21.1		21.2		23.9	
		°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-15	-16	5.52	2.50	5.39	2.55	5.26	2.60	5.13	2.65	5.00	2.70		
-10	-11	6.24	2.67	6.09	2.73	5.95	2.78	5.80	2.84	5.65	2.89		
-5	-7	7.24	2.86	7.07	2.92	6.89	2.98	6.72	3.04	6.55	3.10		
0	-2	8.05	2.87	7.86	2.93	7.67	2.99	7.48	3.05	7.29	3.11		
5	3	8.59	2.84	8.38	2.90	8.18	2.96	7.98	3.02	7.77	3.08		
7	6	8.93	2.87	8.71	2.93	8.50	2.99	8.29	3.05	8.08	3.11		
10	8	9.08	2.85	8.87	2.91	8.65	2.97	8.43	3.03	8.22	3.09		
15	10	8.57	2.48	8.37	2.53	8.16	2.58	7.96	2.63	7.75	2.68		

AFR : Air flow rate (m³/min)
TC : Total capacity (kW)
PI : Power Input (kW)

■ MODEL: ASU24RLF

AFR	677
-----	-----

Outdoor temperature		Indoor temperature											
		°FDB		60		65		70		72		75	
		°FDB	°FWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
5	3	25.3	3.30	24.7	3.37	24.1	3.44	23.5	3.51	22.9	3.58		
14	12	27.5	3.32	26.9	3.39	26.2	3.46	25.6	3.53	24.9	3.60		
23	19	30.8	3.27	30.0	3.34	29.3	3.41	28.6	3.48	27.8	3.55		
32	28	33.8	3.27	33.0	3.33	32.2	3.40	31.4	3.47	30.6	3.54		
41	37	36.9	3.29	36.0	3.36	35.1	3.43	34.3	3.49	33.4	3.56		
47	43	38.0	3.25	37.1	3.32	36.2	3.38	35.3	3.45	34.4	3.52		
50	47	38.7	3.24	37.8	3.31	36.9	3.37	35.9	3.44	35.0	3.51		
59	50	36.9	2.85	36.0	2.91	35.1	2.97	34.2	3.03	33.4	3.09		

AFR : Air flow rate (CFM)
TC : Total capacity (kBTU)
PI : Power Input (kW)

AFR	19.2
-----	------

Outdoor temperature		Indoor temperature											
		°CDB		15.6		18.3		21.1		21.2		23.9	
		°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
-15	-16	7.40	3.30	7.23	3.37	7.05	3.44	6.87	3.51	6.70	3.58		
-10	-11	8.07	3.32	7.88	3.39	7.69	3.46	7.50	3.53	7.30	3.60		
-5	-7	9.02	3.27	8.81	3.34	8.59	3.41	8.38	3.48	8.16	3.55		
0	-2	9.91	3.27	9.67	3.33	9.44	3.40	9.20	3.47	8.97	3.54		
5	3	10.81	3.29	10.55	3.36	10.30	3.43	10.04	3.49	9.78	3.56		
7	6	11.13	3.25	10.87	3.32	10.60	3.38	10.34	3.45	10.07	3.52		
10	8	11.34	3.24	11.07	3.31	10.80	3.37	10.53	3.44	10.26	3.51		
15	10	10.80	2.85	10.55	2.91	10.29	2.97	10.03	3.03	9.78	3.09		

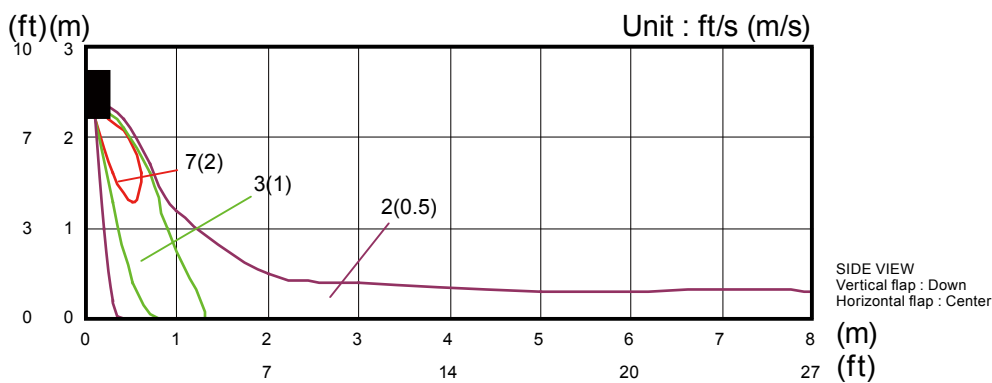
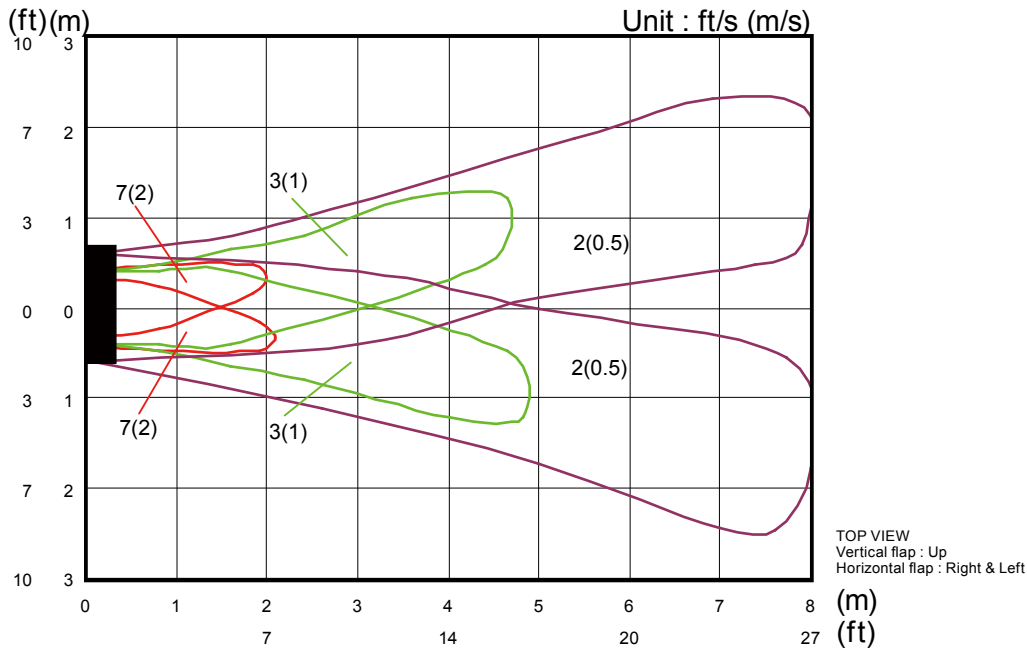
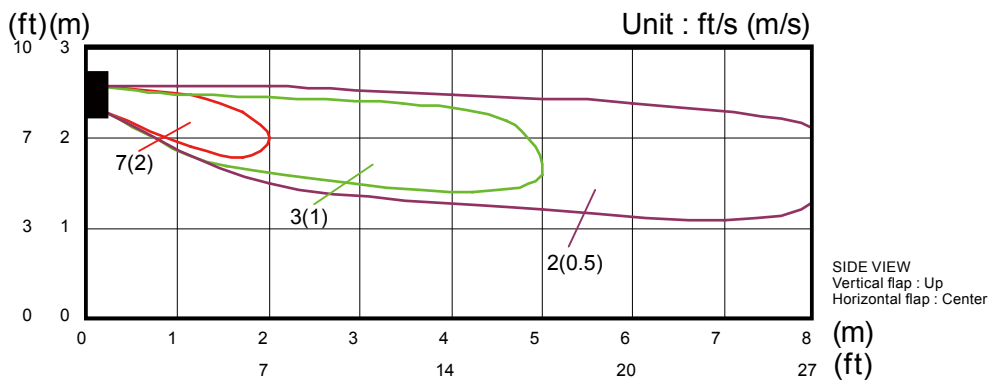
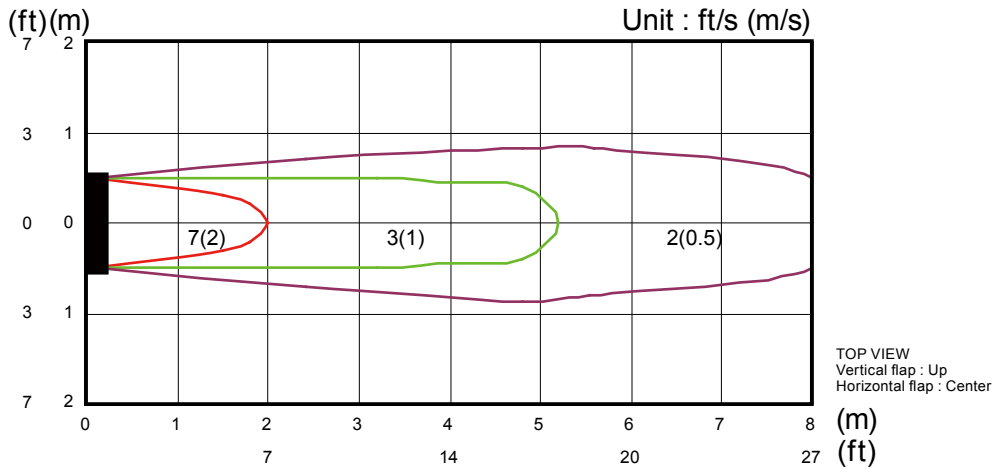
AFR : Air flow rate (m³/min)
TC : Total capacity (kW)
PI : Power Input (kW)

7. FAN PERFORMANCE

7-1. AIR VELOCITY DISTRIBUTION

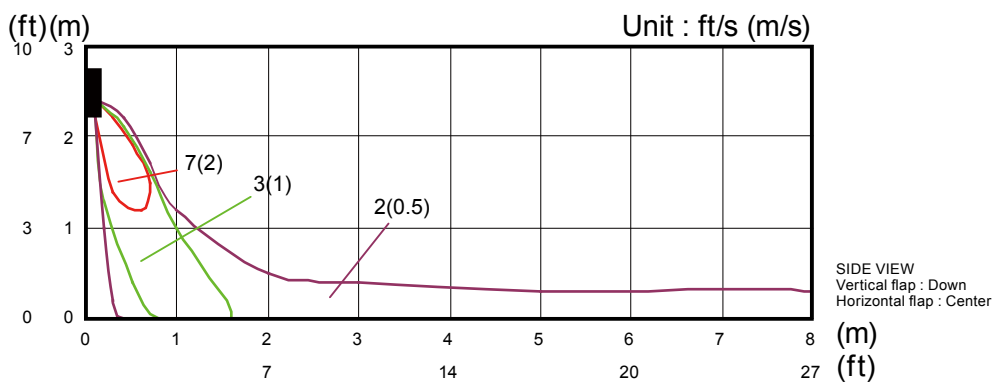
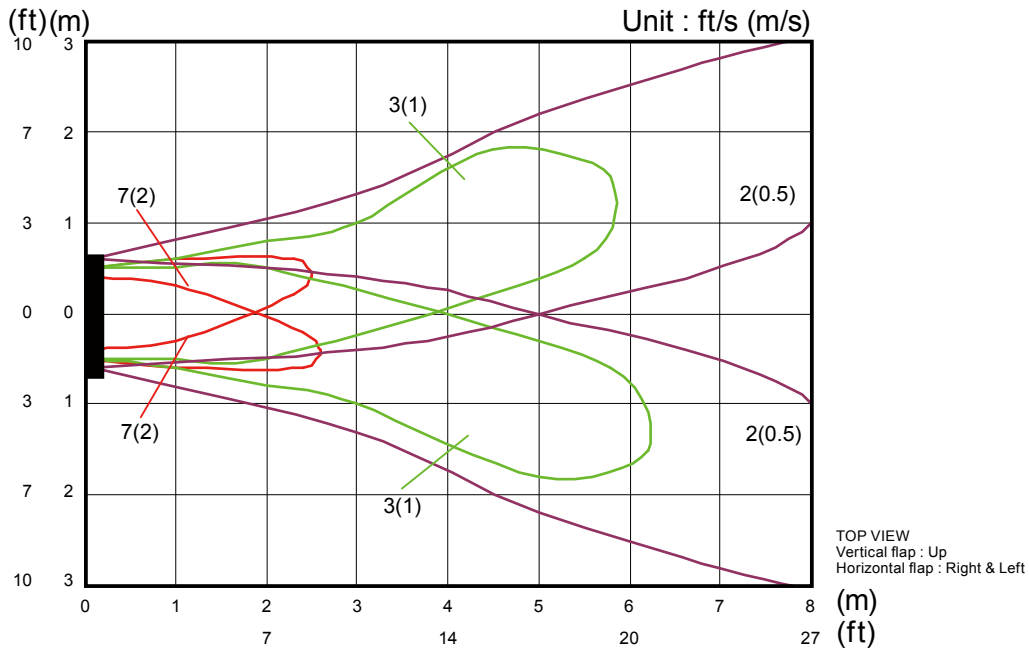
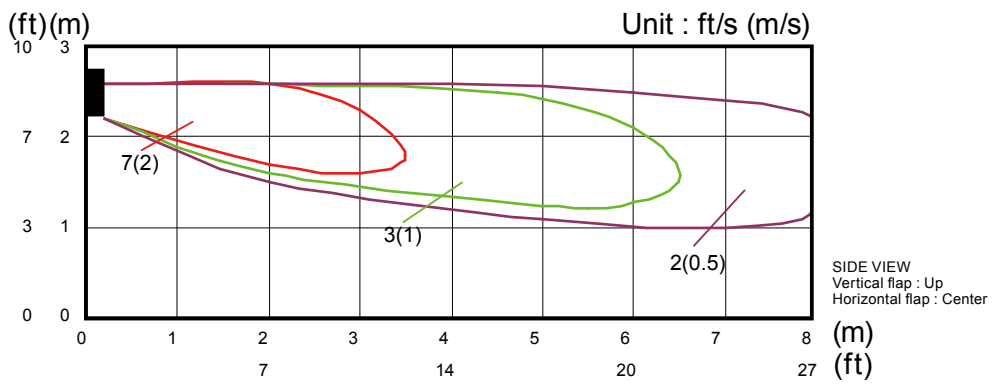
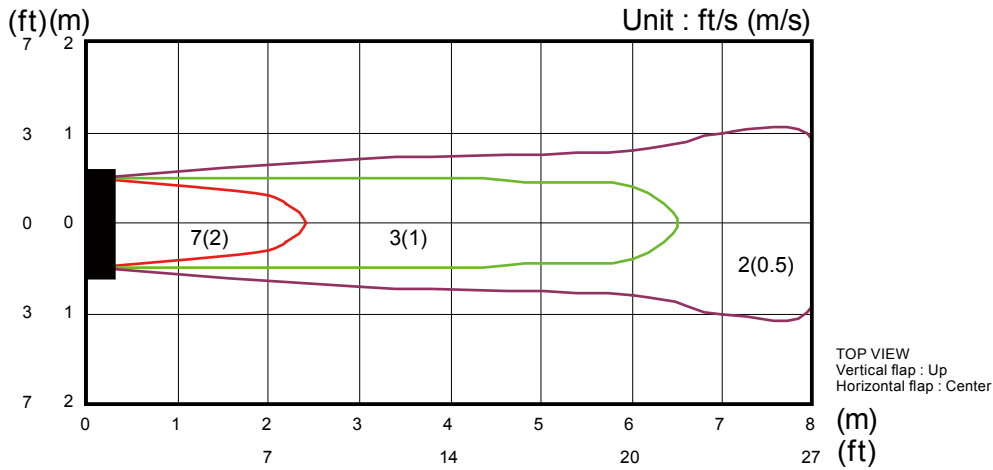
■ MODEL: ASU18RLF

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



MODEL: ASU24RLF

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



7-2. AIR FLOW

■ MODEL: ASU18RLF

● Cooling

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1260	920	m ³ /h
		256	l/s
		541	CFM
MED	1020	740	m ³ /h
		206	l/s
		435	CFM
LOW	900	620	m ³ /h
		172	l/s
		365	CFM
QUIET	770	520	m ³ /h
		144	l/s
		306	CFM

● Heating

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1260	920	m ³ /h
		256	l/s
		541	CFM
MED	1020	740	m ³ /h
		206	l/s
		435	CFM
LOW	900	620	m ³ /h
		172	l/s
		365	CFM
QUIET	790	540	m ³ /h
		150	l/s
		318	CFM

■ MODEL: ASU24RLF

● Cooling

Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1480	1120	m ³ /h
		311	l/s
		659	CFM
MED	1220	900	m ³ /h
		250	l/s
		530	CFM
LOW	1020	740	m ³ /h
		206	l/s
		435	CFM
QUIET	900	620	m ³ /h
		172	l/s
		365	CFM

● Heating

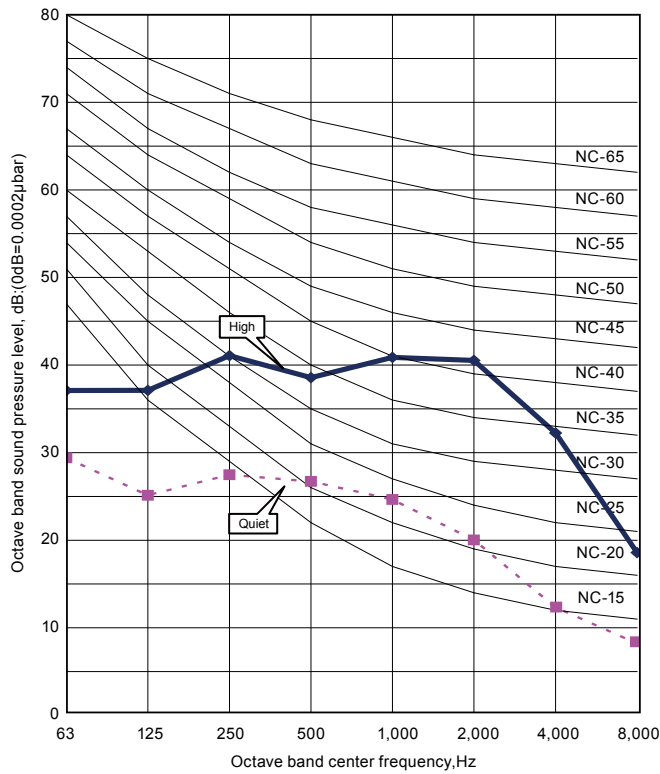
Fan speed	Number of rotations (r.p.m.)	Air flow	
HIGH	1530	1150	m ³ /h
		319	l/s
		677	CFM
MED	1220	900	m ³ /h
		250	l/s
		530	CFM
LOW	1020	740	m ³ /h
		206	l/s
		435	CFM
QUIET	900	620	m ³ /h
		172	l/s
		365	CFM

8. OPERATION NOISE

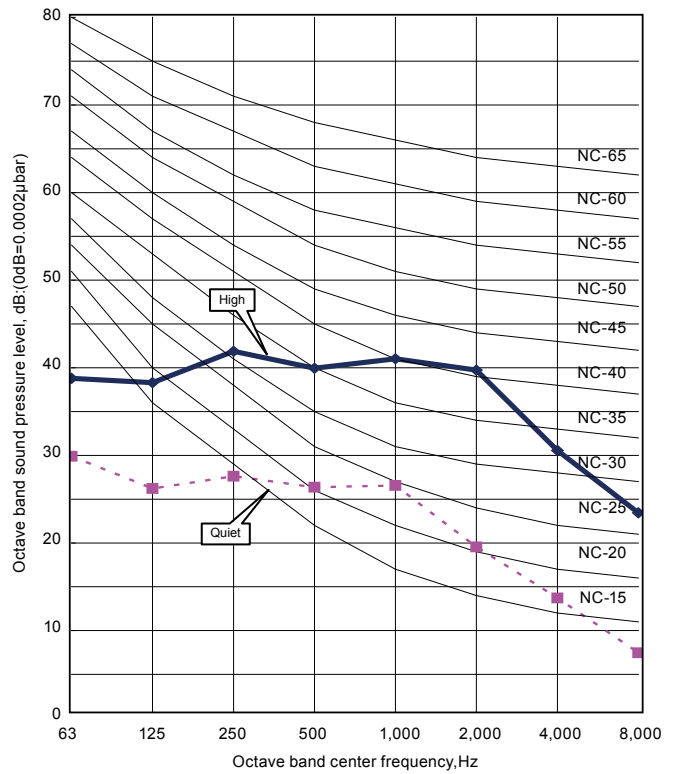
8-1. NOISE LEVEL CURVE

MODEL: ASU18RLF

● Cooling

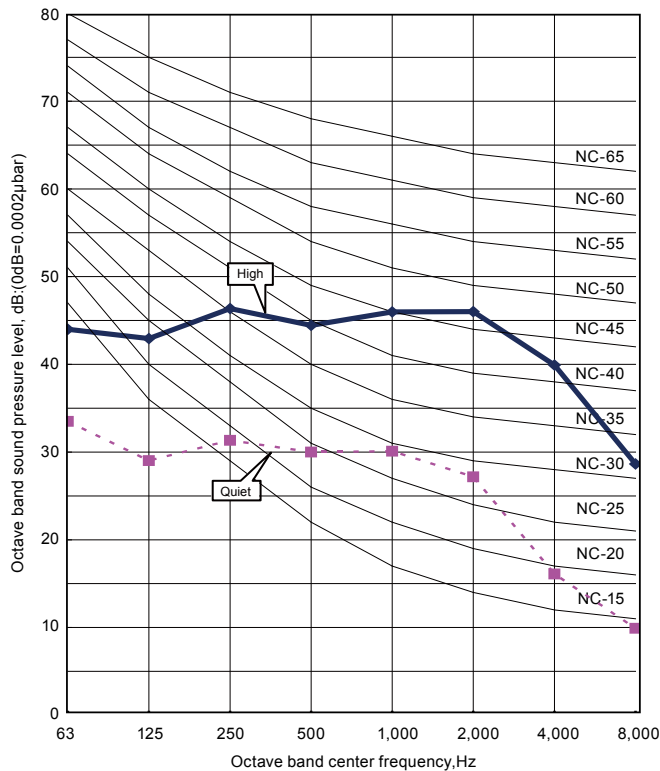


● Heating

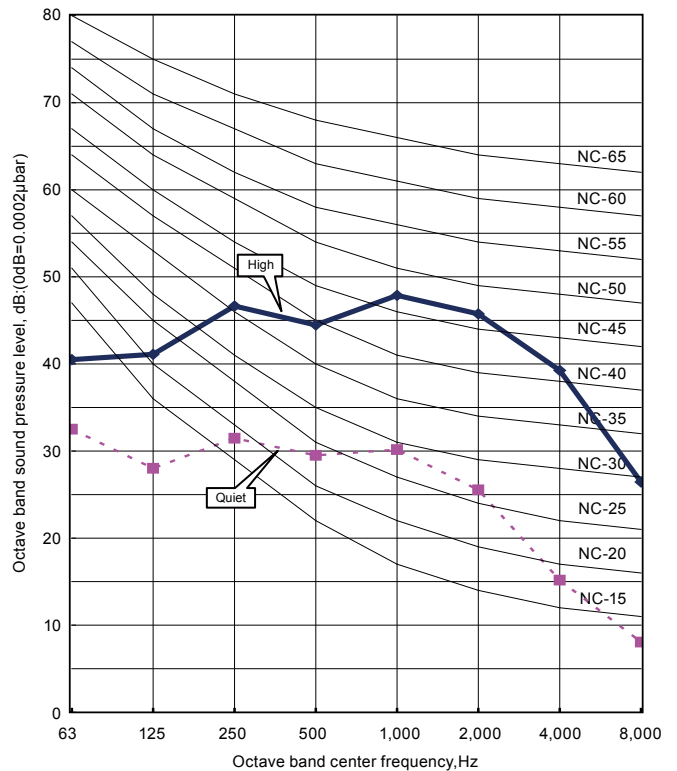


MODEL: ASU24RLF

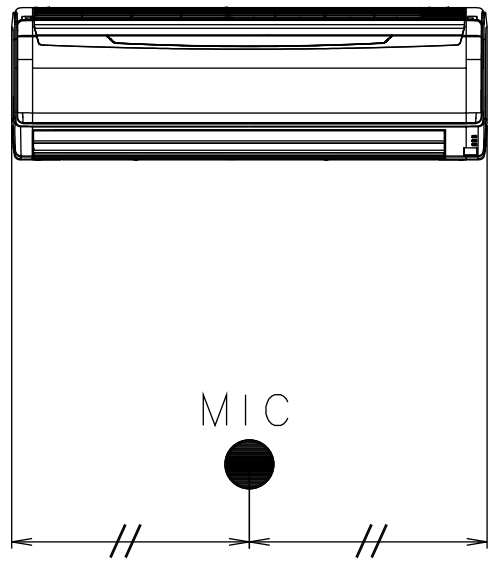
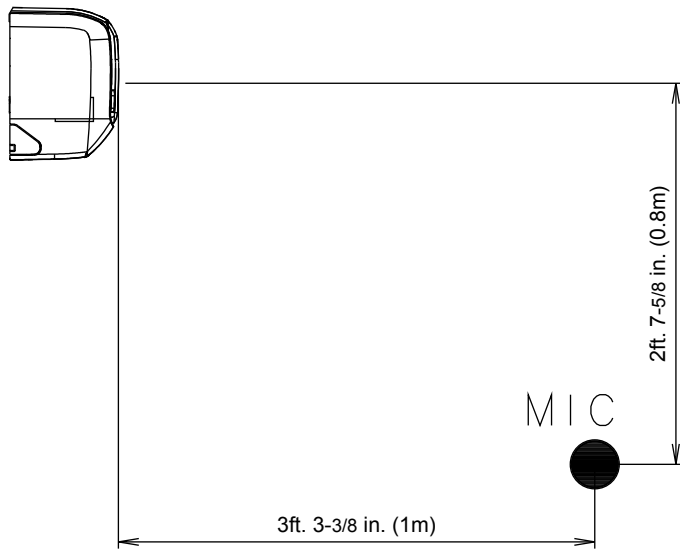
● Cooling



● Heating



8-2. SOUND LEVEL CHECK POINT



9. ELECTRIC CHARACTERISTICS

Model Name			ASU18RLF	ASU24RLF
Power Supply	Voltage	V	208 / 230 ~	
	Frequency	Hz	60	
Max. Operating Current		A	0.3	
*1)Wiring Spec.	Connection Cable	AWG	14	
	Limited wiring length	ft. (m)	167 (50)	

*1) Wiring Spec.

Selected Sample

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

10. SAFETY DEVICES

	Protection form	Model	
		ASU18RLF	ASU24RLF
Circuit protection	Current fuse (PCB)	3.15A 250V	
Terminal protection	Current fuse	3A 250V	
Fan motor protection	Thermal protection program	212 ⁺²⁷ ₋₁₈ °F (100 ⁺¹⁵ ₋₁₀ °C) OFF 203 ⁺⁹ ₋₁₈ °F (95 ⁺⁵ ₋₁₀ °C) ON	

11. EXTERNAL INPUT & OUTPUT

Connector	INPUT	OUTPUT	REMARKS
CN14	Control input	-	See external input/output settings for details.
CN16	-	Operation status output	

11-1. EXTERNAL INPUT

■ CONTROL INPUT (Operation/Stop or Forced stop)

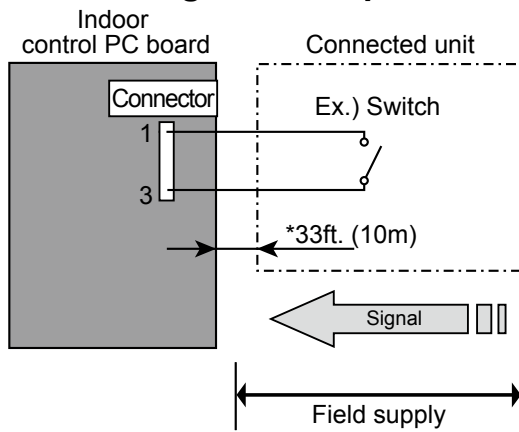
The air conditioner can be remotely operated by means of the following on-site work.

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

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

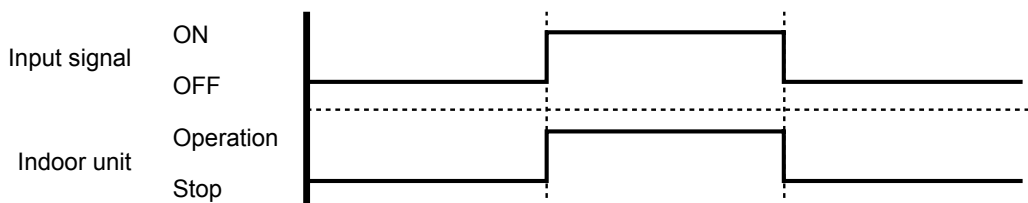
	Initial starting after power turned on	Starting other than at the left
Operation mode	Auto changeover	Mode at previous operation
Set temperature	76°F (24°C)	Temperature at previous operation
Air flow mode	AUTO	Mode at previous operation
Up-down air direction (swing)	Standard air direction (swing OFF)	Air direction at previous operation
Left-right air direction (swing)	Standard air direction (swing OFF)	Air direction at previous operation

● Circuit diagram example

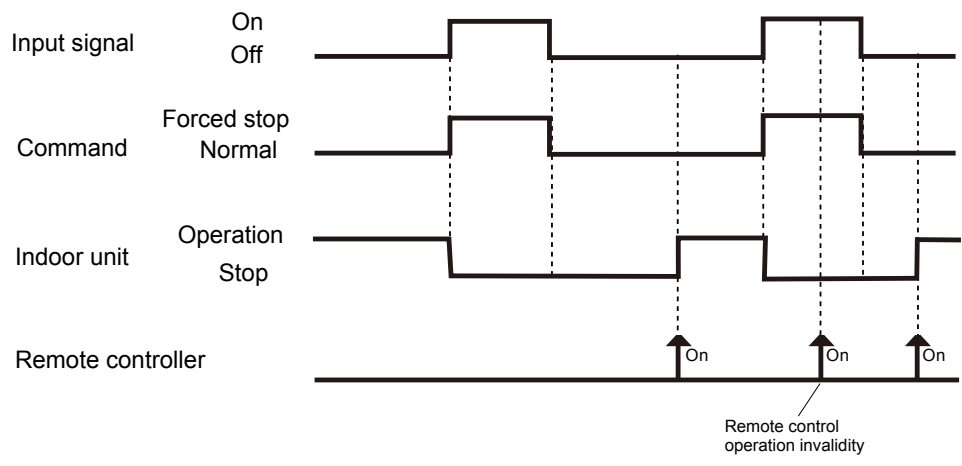


* Make the distance from the PC board to the connected unit within 33ft. (10m).
Contact capacity : 24VDC or more, 10mA or more.
Please use the non-polar relays and switches.

● When function setting is "Operation/Stop" mode



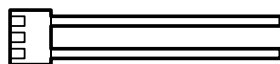
● When function setting is "Forced stop" mode



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZX

Wire (External input) : UTY-XWZX

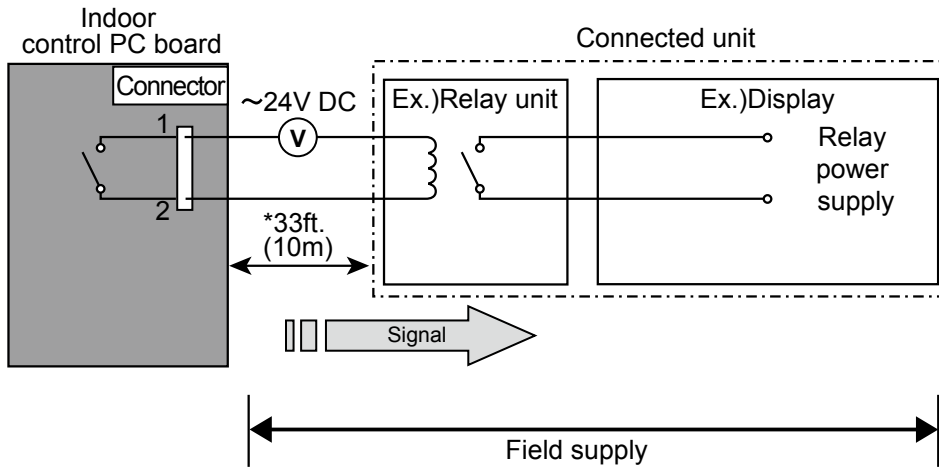


11-2. EXTERNAL OUTPUT

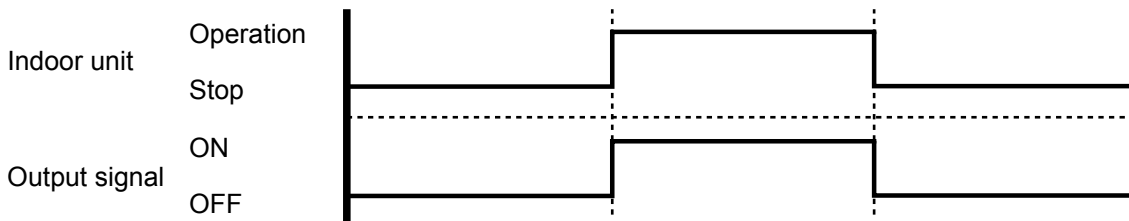
■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

● Circuit diagram example



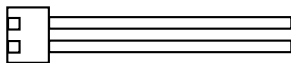
* Make the distance from the PC board to the connected unit within 33ft. (10m).
Relay spec. : Max.24VDC, 10mA to less than 500mA.



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZX

Wire (External input) : UTY-XWZX



12. FUNCTION SETTING

12-1. INDOOR UNIT (Setting by remote controller)

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

■ FUNCTION SETTING METHOD (for Wireless remote controller)

Entering the Function Setting Mode

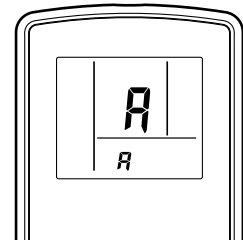
- While pressing the FAN button and SET TEMP. (▲) simultaneously, press the RESET button to enter the function setting mode.

STEP 1

Setting the Remote controller Signal Code

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



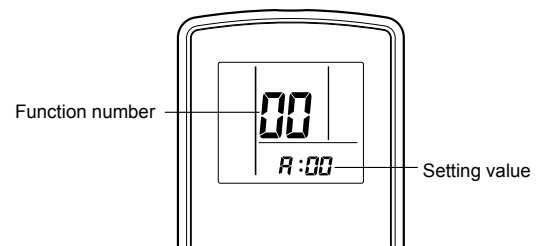
The air conditioner signal code is set to A prior to shipment.

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

STEP 2

Selecting the Function Number and Setting Value

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



⚠ CAUTION

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

FUNCTION DETAILS

	Functions	Wall mounted
1)	Filter sign	●
2)	Cooler room temperature correction	●
3)	Heater room temperature correction	●
4)	Auto restart	●
5)	Indoor room temperature sensor switching function	●
6)	Remote controller signal code	●
7)	External input control	●

1) Filter sign

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

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Standard	11	00
	Long interval		01
	Short interval		02
	No indication		03

The filter sign interval time is different according to Indoor unit type as follows.

Setting description	Wall mounted
Standard	400 hours
Long interval	1000 hours
Short interval	200 hours

2) Cooler room temperature correction

Depending on the installed environment, the room temperature sensor may require a correction.

The settings may be selected as shown in the table below.

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Standard	30	00
	Slightly lower control		01
	Lower control		02
	Warmer control		03

3) 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

4) Auto restart

Enable or disable automatic system restart after a power outage.

(◆... Factory setting)

Setting description	Function number	Setting value
◆ Yes	40	00
No		01

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

5) Indoor room temperature sensor switching function

(Only for Wired remote controller)

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

(◆... Factory setting)

Setting description	Function number	Setting value
◆ No	42	00
Yes		01

*If setting value is "00" :
Room temperature is controlled by the indoor unit temperature sensor.

*If setting value is "01" :
Room temperature is controlled by either indoor unit temperature sensor or remote controller unit sensor.

6) Remote controller signal code

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

(◆... Factory setting)

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

7) External input control

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

(◆... Factory setting)

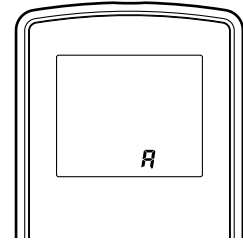
Setting description	Function number	Setting value
◆ Operation/Stop mode	46	00
(Setting forbidden)		01
Forced stop mode		02

■ REMOTE CONTROLLER SIGNAL CODE SETTING

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

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

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



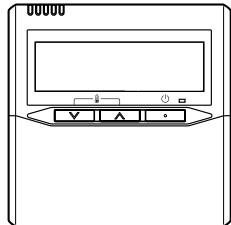
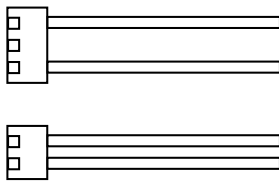


If no buttons are pressed within 30 seconds after the signal code is displayed, the system returns to the original clock display. In this case, start again from step 1.

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

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

13. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Apple-catechin filter	UTR-FA13-1	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-FA13-2	The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra fine-particle ceramic.
	Wired remote controller	UTY-RNNUM	Unit control is performed by wired remote controller.
	External connect kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PC board.

2. OUTDOOR UNIT

SINGLE TYPE :

AOU18RLXFW

AOU24RLXFW

CONTENTS

2. OUTDOOR UNIT

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1. SPECIFICATIONS

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

Type				INVERTER HEAT PUMP	
Model name				AOU18RLXFW	AOU24RLXFW
Power source				208/230V ~ 60Hz	
Available voltage range				187-253V ~ 60Hz	
Starting current			A	8.0	10.5
Fan	Airflow rate	Cooling	CFM (m ³ /h)	1,489 (2,530)	2,001 (3,400)
		Heating		1,489 (2,530)	2,119 (3,600)
	Type × Q'ty		Propeller fan×1		
	Motor output		W	100	
Sound pressure level		Cooling	dB(A)	47	54
		Heating		50	55
Heat exchanger type		Dimensions (H × W × D)	in.	31-7/16 x 35-7/16 x 1-7/16	
			mm	798 x 900 x 36.4	
		Fin pitch	FPI	20	
		Rows x Stages		2 × 38	
		Pipe type		Copper	
		Fin Type		Aluminium	
Compressor	Type × Q'ty			Rotary x 1	
	Motor output		W	2,100	
Refrigerant		Type		R410A	
		Charge	lb.oz.	4lb.10.1oz.	
			kg	2.1	
Refrigerant oil		Type		POE (RB68)	
Enclosure		Material		Steel	
		Color		BEIGE Approximate color of MUNSELL 10YR 7.5/1.0	
Dimensions (H×W×D)	Net		mm	830 x 900 x 330	
			inch	32-3/4 x 35-3/8 x 13	
	Gross		mm	970 x 1050 x 445	
			inch	38-1/4 x 41-1/2 x 17-1/2	
Weight	Net		lb.(kg)	135(61)	
	Gross			150(68)	
Connection pipe	Size	Liquid	in.	Ø3/8 (Ø9.52)	
		Gas	(mm)	Ø5/8 (Ø15.88)	
	Method			Flare	
	Max. length		ft.	164 (50) [chargeless:66(20)]	
	Max. height difference		(m)	98 (30)	
Operation range		Cooling	°F	14 to115 (-10 to 46)	0 to 115 (-18 to 46)
		Heating	(°C)	5 to 75 (-15 to 24)	0 to 75 (-18 to 24)

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 80°F(26.67°C)DB / 67°F(19.44°C)WB, and outdoor temperature of 95°F(35°C)DB/75°F(23.9°C)WB.

Heating : Indoor temperature of 70°F(21.11°C)DB / 59°F(15°C)WB, and outdoor temperature of 47°F(8.33°C)DB/43°F(6.11°C)WB.

Pipe length : 24.6ft(7.5m) [Outdoor unit - Indoor unit], Height difference : 0ft. (0m) [Outdoor unit - Indoor unit]

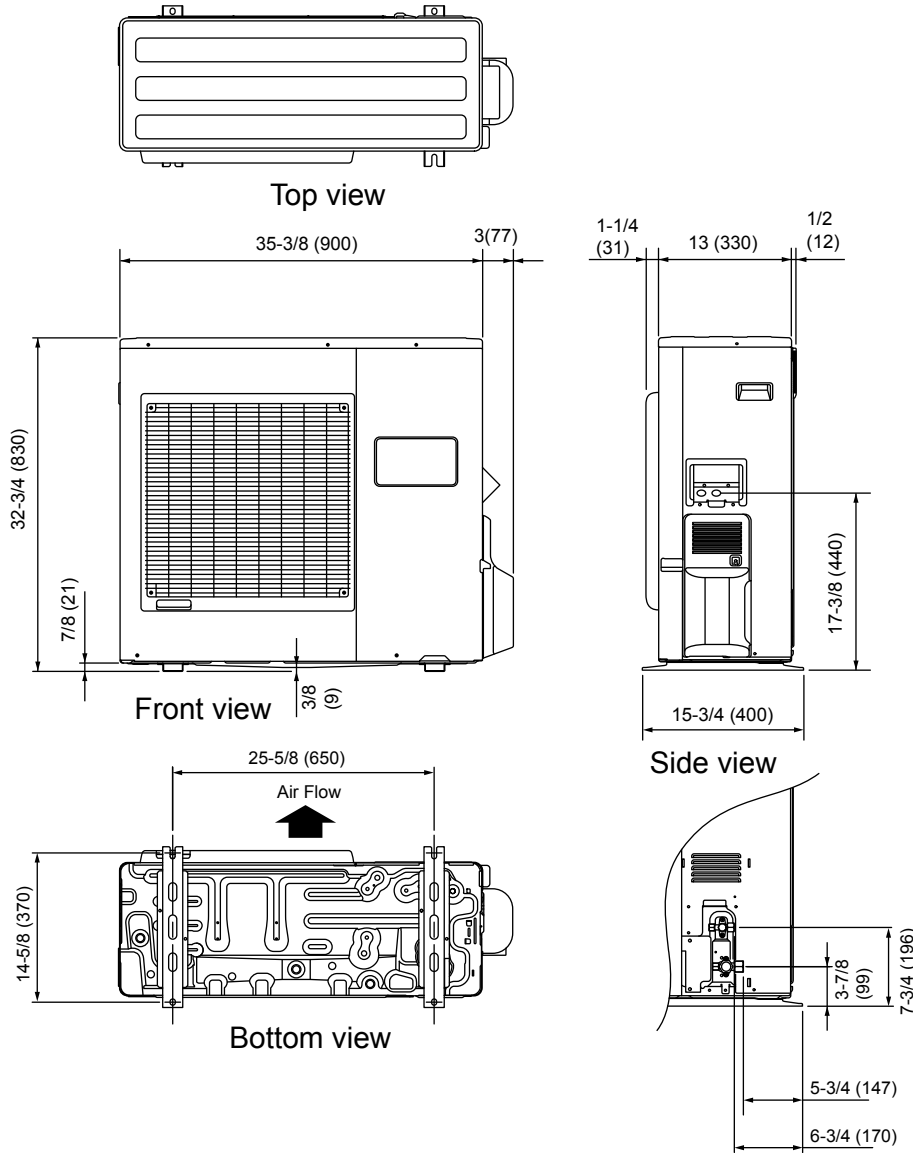
2. DIMENSIONS

■ MODEL: AOU18RLXFW, AOU24RLXFW

Unit : in.(mm)

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

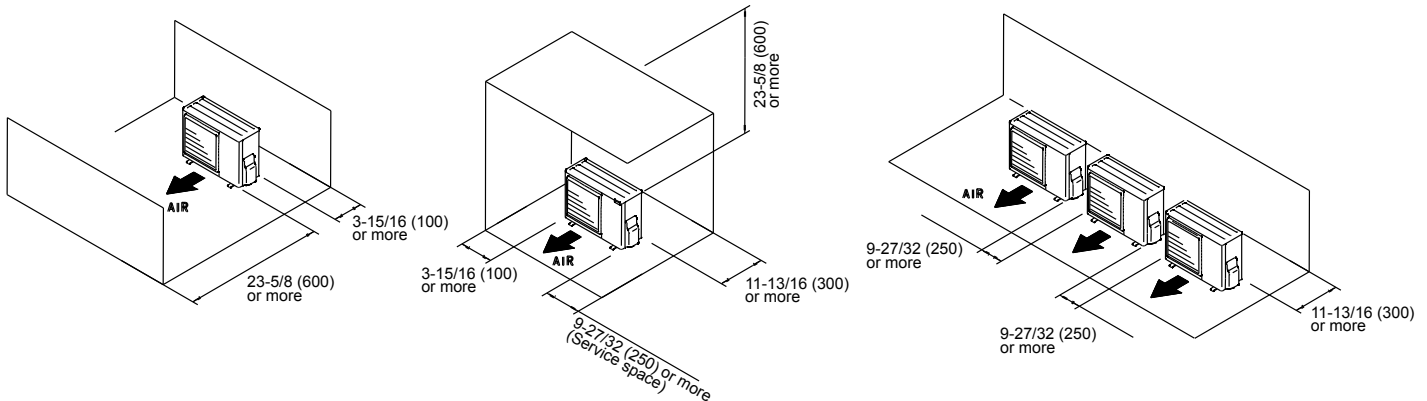


■ INSTALLATION PLACE

When there are obstacles at the back or front sides.

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

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

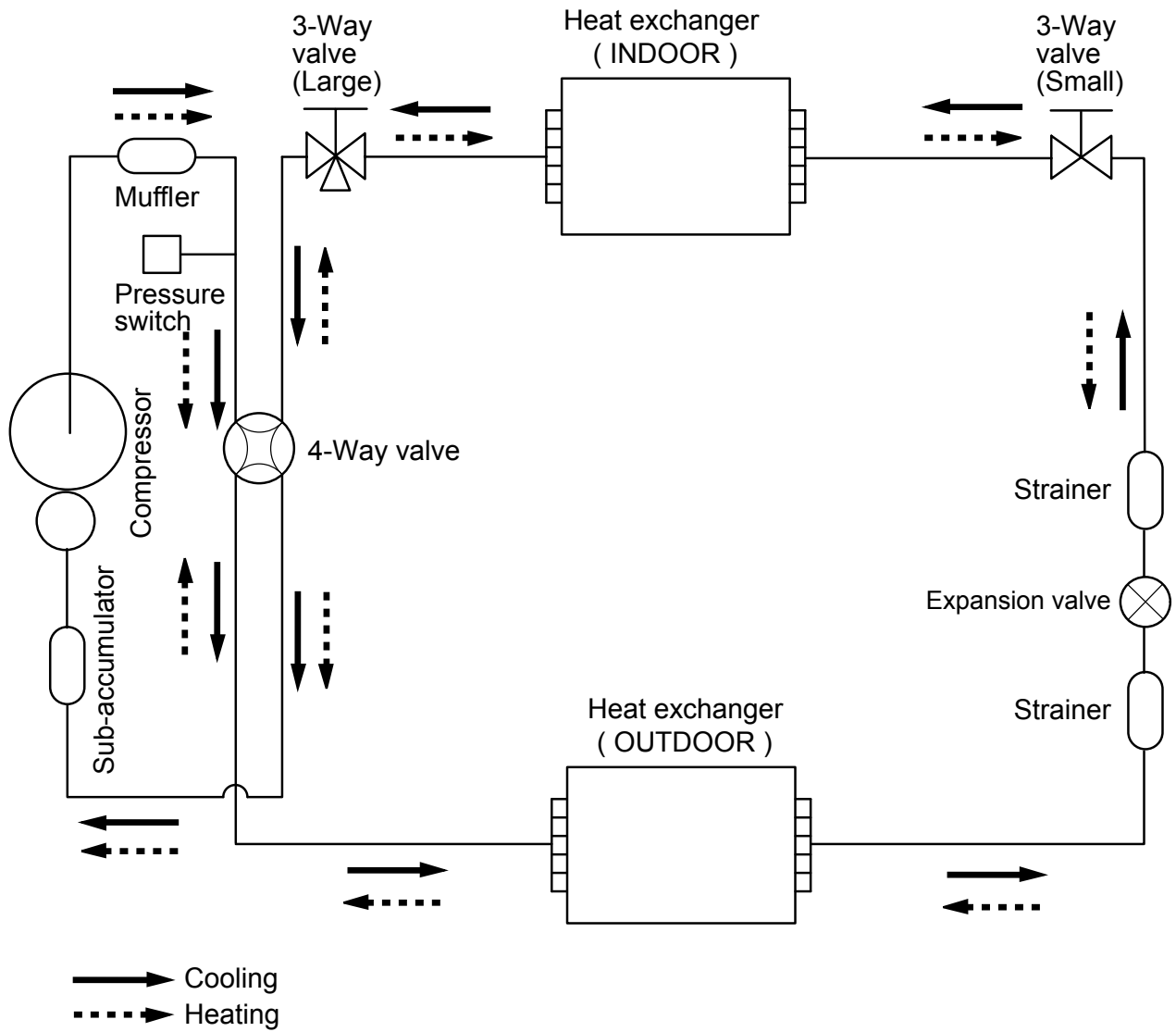


3. REFRIGERANT CIRCUIT

■ MODEL: AOU18RLXFW, AOU24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW



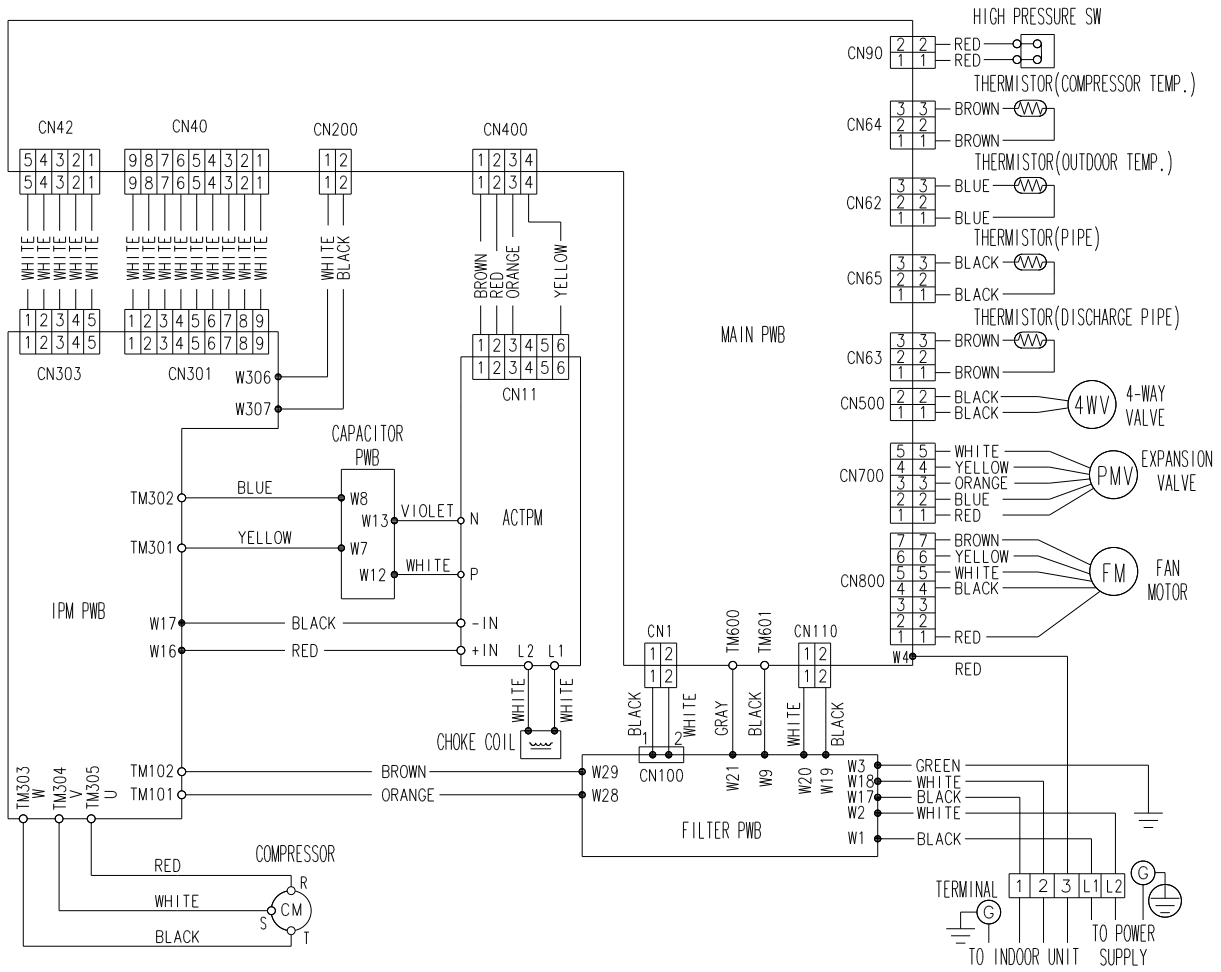
Refrigerant pipe diameter
 Liquid : 3/8" (9.52 mm)
 Gas : 5/8" (15.88 mm)

4. WIRING DIAGRAMS

MODEL: AOU18RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

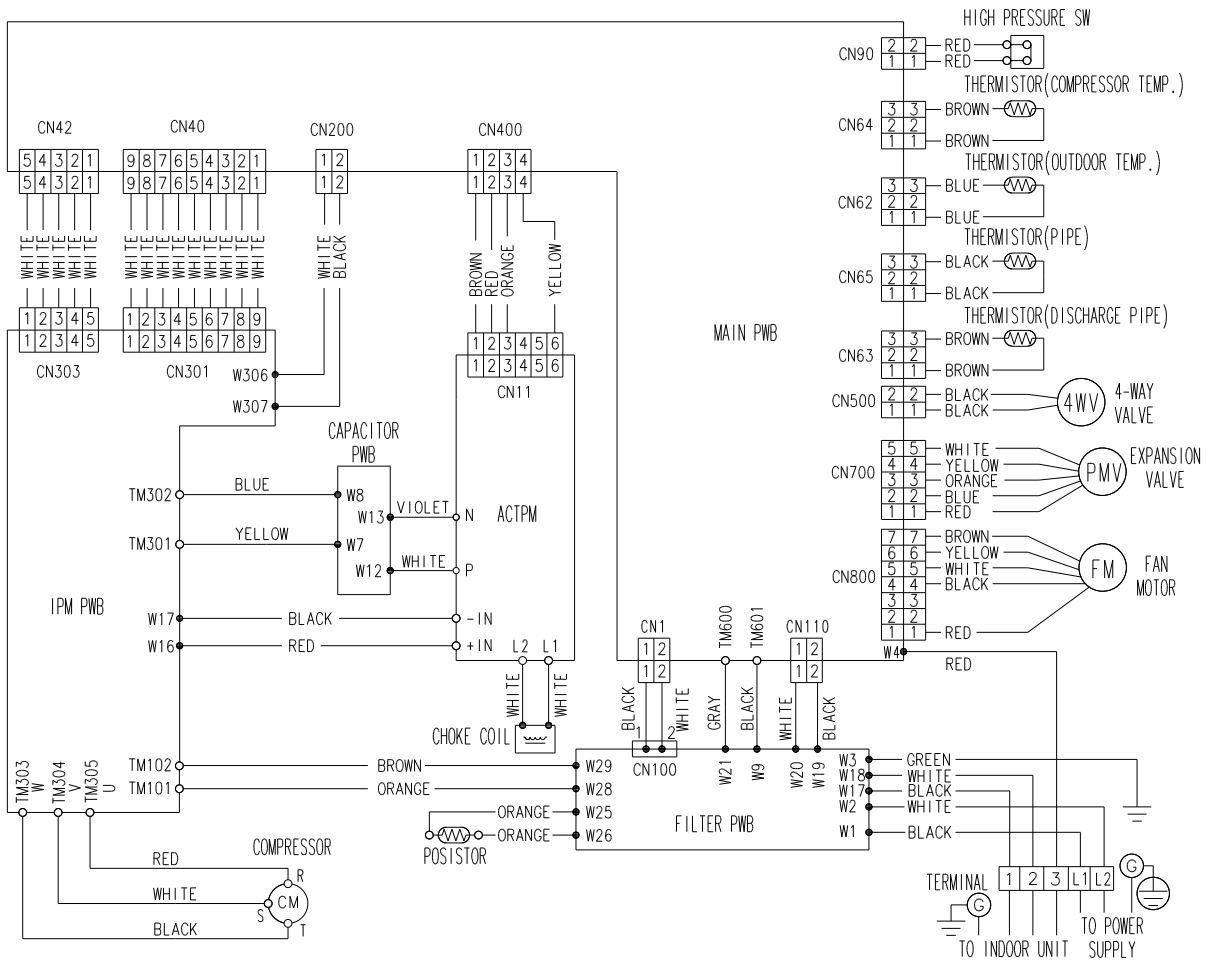
OUTDOOR UNIT
AOU18-24RLXFW



MODEL: AOU24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW



5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

MODEL: AOU18RLXFW, AOU24RLXFW

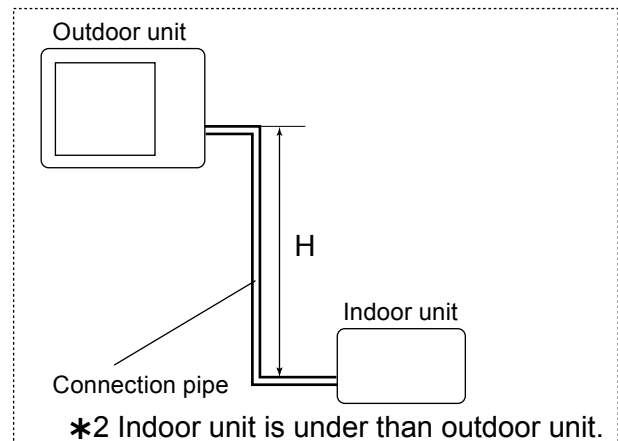
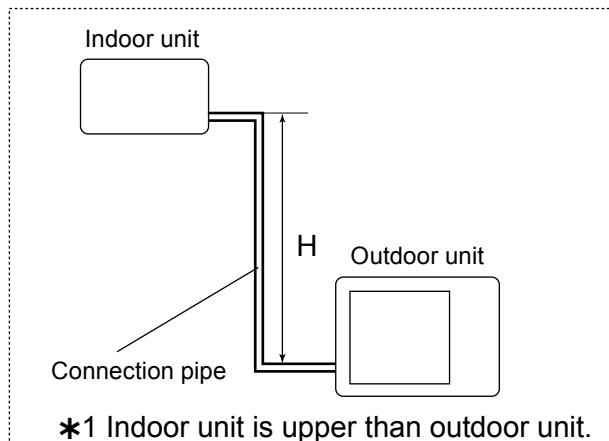
OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

COOLING				Pipe length						
				5m	7.5m	10m	20m	30m	40m	50m
				16ft.	25ft.	33ft.	66ft.	99ft.	131ft.	164ft.
Height difference H	*1 Indoor unit is upper than outdoor unit.	30m	99ft.	-	-	-	-	0.932	0.929	0.924
		20m	66ft.	-	-	-	0.945	0.947	0.945	0.940
		10m	33ft.	-	-	0.984	0.961	0.963	0.960	0.956
		7.5m	25ft.	-	0.988	0.988	0.965	0.967	0.964	0.959
		5m	16ft.	0.990	0.992	0.992	0.968	0.971	0.968	0.963
	*2 Indoor unit is under than outdoor unit	0m	0ft.	0.998	1.000	1.000	0.976	0.979	0.976	0.971
		-5m	-16ft.	0.998	1.000	1.000	0.976	0.979	0.976	0.971
		-7.5m	-25ft.	-	1.000	1.000	0.976	0.979	0.976	0.971
		-10m	-33ft.	-	-	1.000	0.976	0.979	0.976	0.971
		-20m	-66ft.	-	-	-	0.976	0.979	0.976	0.971
-30m	-99ft.	-	-	-	-	0.979	0.976	0.971		

HEATING				Pipe length						
				5m	7.5m	10m	20m	30m	40m	50m
				16ft.	25ft.	33ft.	66ft.	99ft.	131ft.	164ft.
Height difference H	*1 Indoor unit is upper than outdoor unit.	30m	99ft.	-	-	-	-	0.816	0.756	0.686
		20m	66ft.	-	-	-	0.872	0.816	0.756	0.686
		10m	33ft.	-	-	0.991	0.872	0.816	0.756	0.686
		7.5m	25ft.	-	1.000	0.991	0.872	0.816	0.756	0.686
		5m	16ft.	0.986	1.000	0.991	0.872	0.816	0.756	0.686
	*2 Indoor unit is under than outdoor unit	0m	0ft.	0.986	1.000	0.991	0.872	0.816	0.756	0.686
		-5m	-16ft.	0.981	0.995	0.986	0.868	0.812	0.752	0.683
		-7.5m	-25ft.	-	0.993	0.983	0.866	0.810	0.750	0.681
		-10m	-33ft.	-	-	0.981	0.864	0.808	0.748	0.679
		-20m	-66ft.	-	-	-	0.855	0.799	0.740	0.672
-30m	-99ft.	-	-	-	-	0.791	0.733	0.665		

Height difference H



6. ADDITIONAL CHARGE CALCULATION

■ MODEL: AOU18RLXFW, AOU24RLXFW

Refrigerant type		R410A
Refrigerant amount	lb. oz.	4lb. 10.1oz.
	g	2100

● REFRIGERANT CHARGE

Total pipe length	ft.	~66	98	131	164	0.43oz./ft. (40g/m)
	m	~20	30	40	50 (MAX)	
Additional charge	oz.	0 (Chargeless)	14.1	28.2	42.3	
	g	0 (Chargeless)	400	800	1200	

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

7. AIR FLOW

■ MODEL: AOU18RLXFW

● Cooling

Number of rotations (r.p.m.)	Air flow	
	620	2530
703		l/s
1489		CFM

● Heating

Number of rotations (r.p.m.)	Air flow	
	620	2530
703		l/s
1489		CFM

■ MODEL: AOU24RLXFW

● Cooling

Number of rotations (r.p.m.)	Air flow	
	800	3400
944		l/s
2001		CFM

● Heating

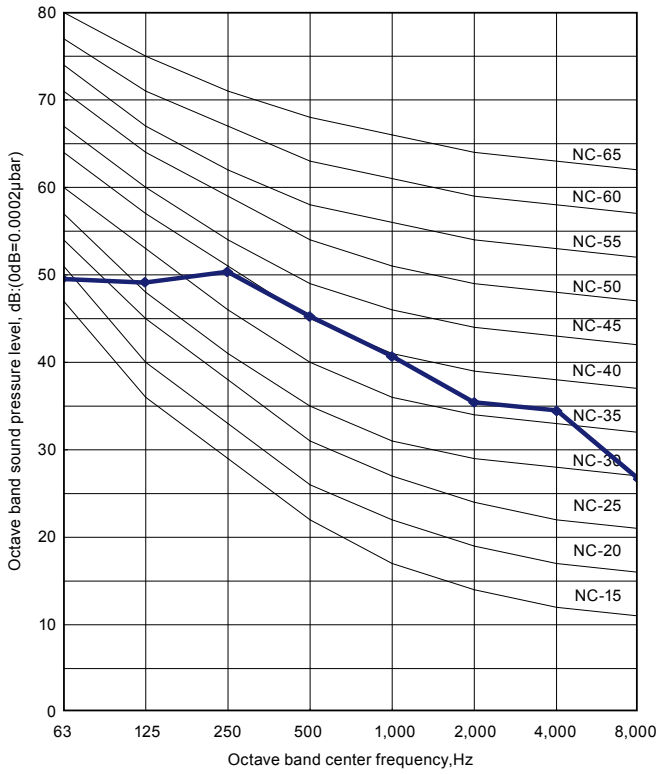
Number of rotations (r.p.m.)	Air flow	
	850	3600
1000		l/s
2119		CFM

8. OPERATION NOISE

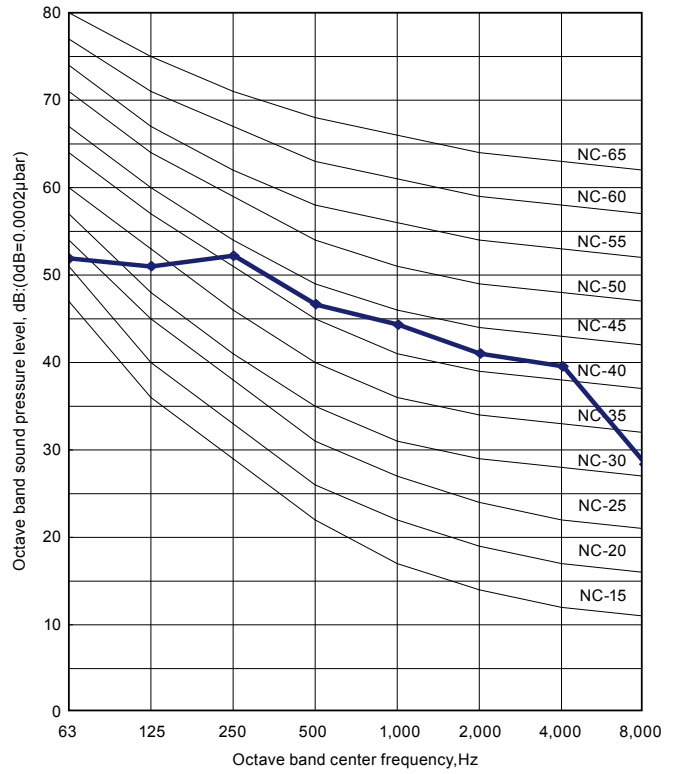
8-1. NOISE LEVEL CURVE

MODEL: AOU18RLXFW

● Cooling

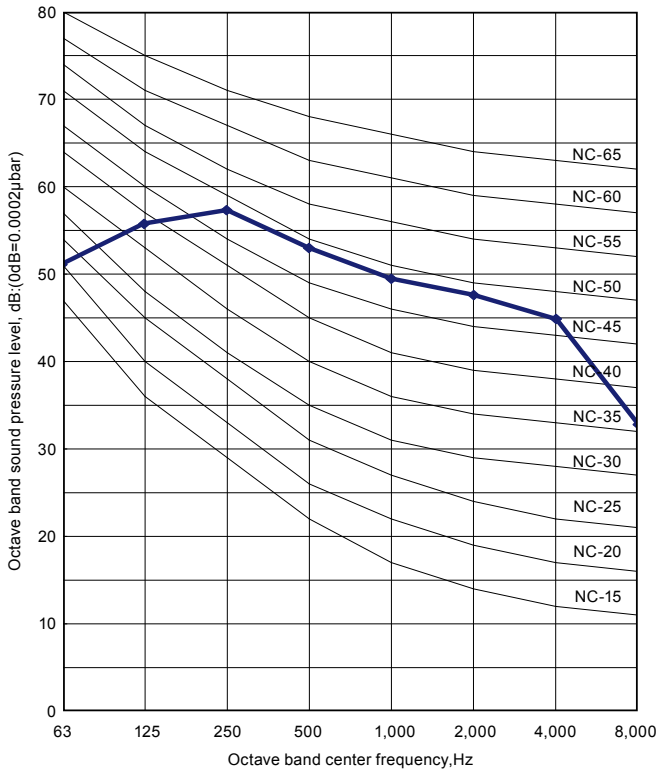


● Heating

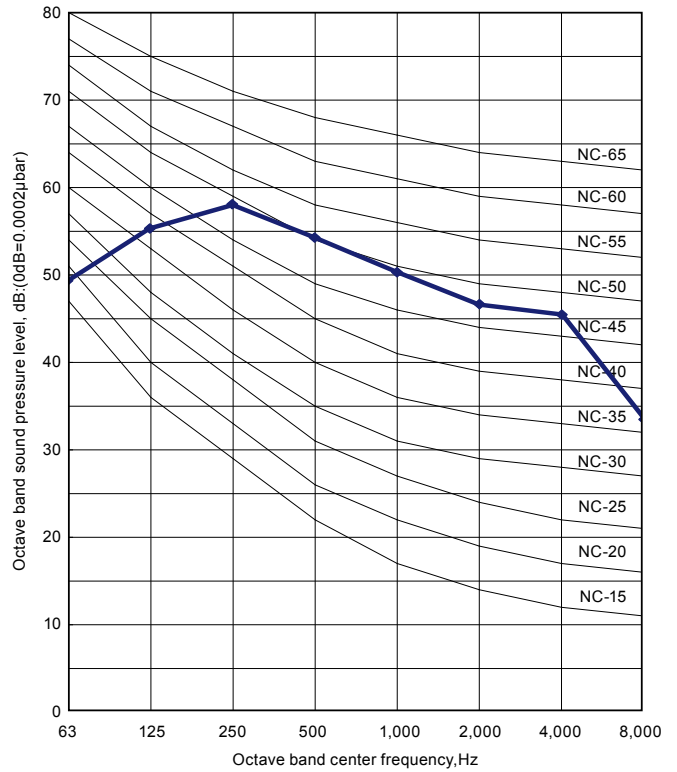


MODEL: AOU24RLXFW

● Cooling



● Heating

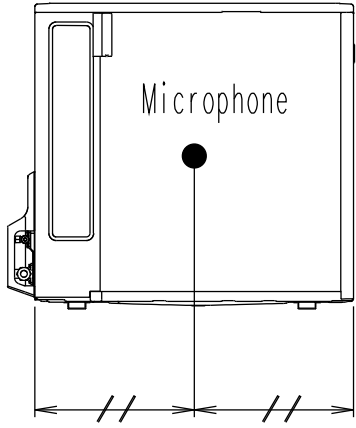
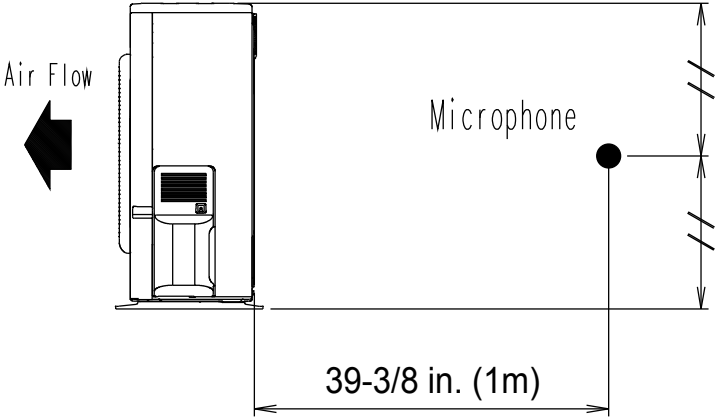


OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AOU18-24RLXFW



OUTDOOR UNIT
AOU18-24RLXFW

9. ELECTRIC CHARACTERISTICS

Model Name			AOU18RLXFW	AOU24RLXFW
Power Supply	Voltage	V	208 / 230~	
	Frequency	Hz	60	
*1) Max. Operating Current		A	14.5	15.5
Starting Current		A	8.0	10.5
*2) Wiring Spec.	Main Fuse (Circuit breaker) Current	A	20	30
	Power Cable	AWG	12	10
	*3) Limited wiring length	ft.(m)	70 (21)	66 (20)

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

*2) Wiring Spec.

Selected Sample

(Selected based on Japan Electrotechnical Standard and Codes Committee E00005)

*3) Limited Wiring Length:

This is the wiring length in case voltage descent is less than 2%.

When the wiring length becomes long, please select the wiring of a more larger diameter.

10. SAFETY DEVICES

OUTDOOR UNIT
AOU18-24RLXFW

OUTDOOR UNIT
AOU18-24RLXFW

	Protection form	Model	
		AOU18RLXFW	AOU24RLXFW
Circuit protection	Current fuse (NEAR THE TERMINAL)	5A 250V	
	Current fuse (MAIN PRINTED CIRCUIT BOARD)	3.15A 250V x 2	
Fan motor protection	Thermal protection program	OFF : 230^{+27}_{-18} °F (110^{+15}_{-10} °C) ON : 221^{+27}_{-18} °F (105^{+15}_{-10} °C)	
High Pressure Protection	Pressure Switch	OFF : 4.2±0.1MPa ON : 3.2±0.15MPa	
Compressor protection	Thermal protection program (COMPRESSOR TEMP.)	OFF : 226°F (108°C) ON : 176°F (80°C)	
	Thermal protection program (DISCHARGE TEMP.)	OFF : 230°F (110°C) ON : After 7 minutes	
	Thermal protection program (OUTDOOR TEMP.) (Cooling / Dry mode)	OFF : 5°F (-15°C) ON : 14°F (-10°C)	OFF : -13°F (-25°C) ON : -4°F (-20°C)