Refrigerant R410A

INVERTER

AIR CONDITIONER

Floor type

DESIGN & TECHNICAL MANUAL

INDOOR

AGU9RLF
AGU12RLF
AGU15RLF

OUTDOOR

AOU9RLFF
AOU12RLFF
AOU15RLFF

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

FLOOR TYPE :
AGU9RLF
AGU12RLF
AGU15RLF

CONTENTS

1. INDOOR UNIT

1. FEATURES

■ MODEL
AGU9RLF / AOU9RLFF
AGU12RLF / AOU12RLFF
AGU15RLF / AOU15RLFF

■ FEATURES

● Energy Efficiency

	MODEL		
	AGU9RLF	AGU12RLF	AGU15RLF
Seasonal Energy Efficiency Ratio (SEER)	26.0	22.7	20.3
Heating Seasonal Performance Factor (HSPF)	12.6	11.6	11.2

MEASUREMENT CONDITIONS
ANSI/ASHRAE STANDARD 37-1988

● 2-Fan & Wide airflow
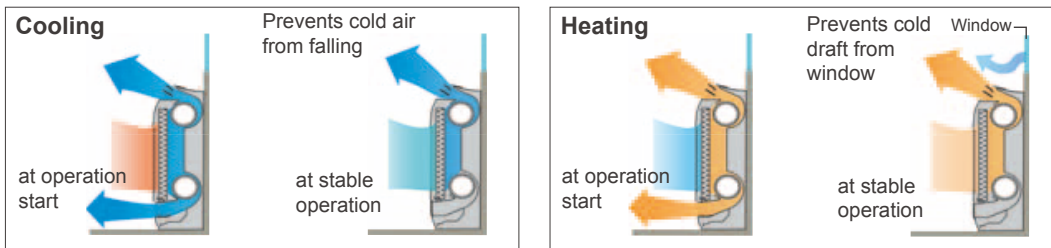
● Low outdoor air temperature correspondence

Corresponds to heating operation at -5 °F(-21°C) outdoor air temperature
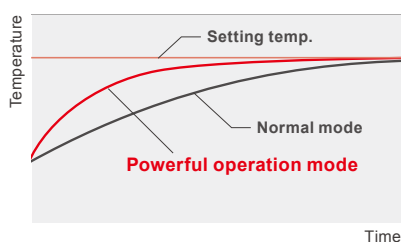
Heating
-5 to 75 °F
(-21 to 24°C)

● Powerful heating

Heating capacity was improved at low outdoor temperature. This new model can operate even at -5°F (-21°C) low outdoor temperature.
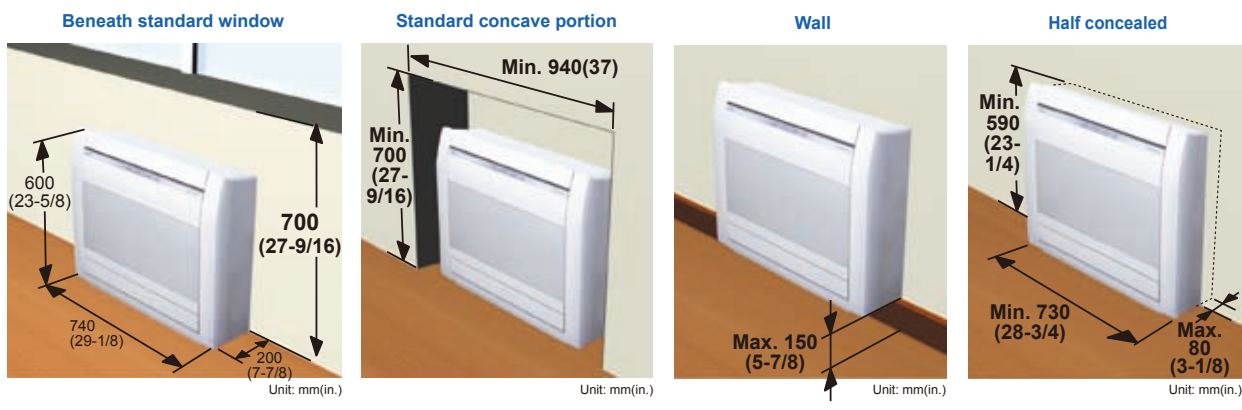
● Powerful operation

Continuous operation by maximum air flow and maximum compressor speed after a certain period of time allows the temperature to reach the setting temp. quickly.
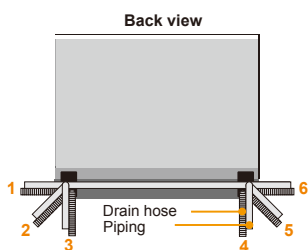
● Flexible & easy installation

Piping space is wide and connection work is easy.

Beneath standard window

600
(23-5/8)

700
(27-9/16)

740
(29-1/8)

200
(7-7/8)

Unit: mm(in.)

Standard concave portion

Min. 940(37)

Min.
700
(27-
9/16)

Unit: mm(in.)

Wall

Max. 150
(5-7/8)

Unit: mm(in.)

Half concealed

Min.
590
(23-
1/4)

Min. 730
(28-3/4)

Max.
80
(3-1/8)

Unit: mm(in.)

Choice of 6-direction drain & piping connection

Back view

1
2
3
4
5
6

Drain hose
Piping

Space is wide and piping work is easy

Front view

Large piping
bend R

Fan motor
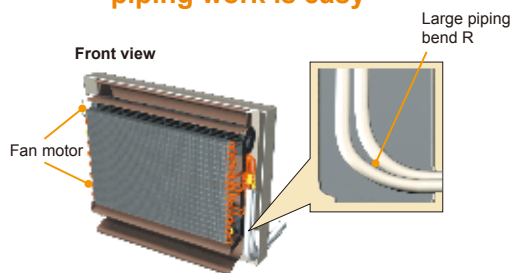
● Super quiet operation

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

● MIN. HEAT Operation *Only available with Wireless RC.

The room temperature can be set to go no lower than 50°F (10°C),
thus ensuring that the room does not get too cold when not occupied

Caution)
• When the room temperature is higher than 50°F (10°C), "**MIN. HEAT**" operation does not start. Operation starts and maintains the room temperature at 50°F (10°C) when the temperature drops below 50°F (10°C).

• When "**MIN. HEAT**" operation stops, the room set temperature quickly returns to the preset temperature.

"MIN. HEAT"
Button ON

Indoor unit
operation START

68°F
(20°C)

50°F
(10°C)
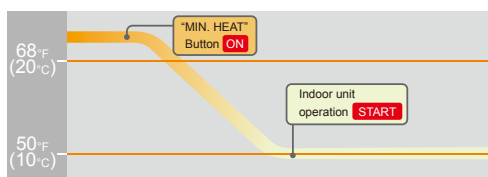
● Economy operation

Limits the maximum operation current, and the power consumption is cut down and the maximum load is suppressed.

Setting
temperature

Normal operation

Economy operation
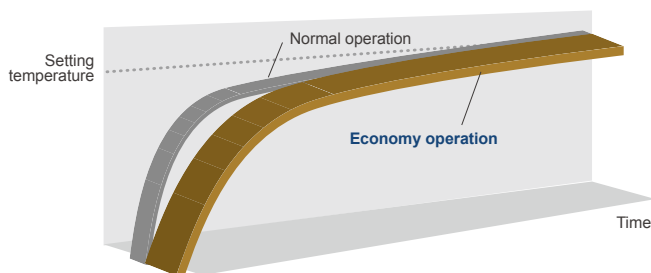
Time

● **Air conditioner filter feature**

Apple-catechin filter   Long-life ion deodorization filter

- (01 - 03) -

2. WIRELESS REMOTE CONTROLLER

■ FEATURES

✳4 mode timer setup available (ON / OFF / PROGRAM / SLEEP).

✳Easy operation.

✳Easy to change custom code (max. 4 custom codes) by button operation.

● **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 timer 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).

Timer setting

60min.

2°F (1°C)

4°F (2°C)
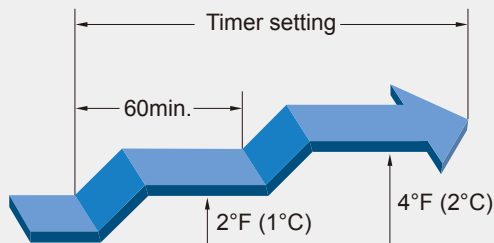
Heating operation

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).

2°F (1°C)

4°F (2°C)

6°F (3°C)

8°F (4°C)

30min.

60min.

90min.

Timer setting
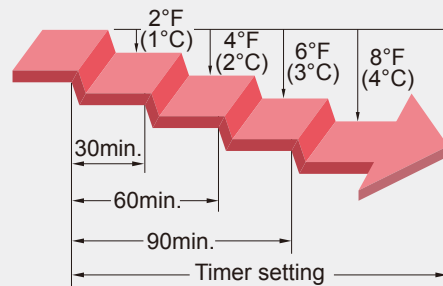
● **Simple function setting**

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

● **Switching remote controller custom code**

Mixed-up

I.U. I.U. I.U. I.U.

After code change

A   B   C   D

I.U. I.U. I.U. I.U.

Ⓐ Ⓑ Ⓒ Ⓓ
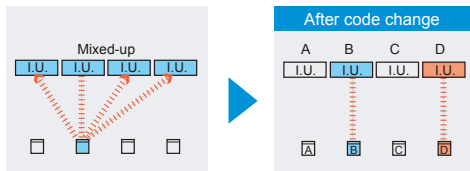
• Code selector switch eliminates unit
  being wrongly switched.
  (Up to 4 custom codes can be set.)

*I.U.=Indoor unit

● **To change the temperature unit**

Easy to change the temperature unit (°F ↔ °C) by button operation.

■ FUNCTIONS

Signal transmitter

MIN. HEAT button

TEMP. button

POWERFUL button

Start/Stop button

FUJITSU

MODE button

FAN button

ECONOMY button

SWING button

SET button

ON
TIMER ON button

OFF
TIMER OFF button

SELECT
TIMER SELECT button

SLEEP
TIMER SLEEP button

CANCEL
TIMER CANCEL button

RESET button

°C / °F switching button

CLOCK ADJUST button

Display panel

Mode indicator

Temperature indicator

Transmit indicator

Fan Speed indicator

Swing indicator

Send indicator

Clock & Timer indicator

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.

■ SPECIFICATION

DIMENSIONS [H × W × D]: in. (mm)	8-1/16 (205) × 2-3/8 (61) × 11/16 (17)
WEIGHT oz. (g)	4.3 (122)
ACCESSORY	Holder

NOTE: Some button operations may not be available for all units or systems.
For details, refer to the operation manual.

3. SPECIFICATIONS

Type					FLOOR TYPE		
					INVERTER HEAT PUMP		
Model name					AGU9RLF	AGU12RLF	AGU15RLF
Power source					208 / 230 V ~ 60 Hz		
Available voltage range					187 - 253 V		
Capacity	Cooling	Rated		kW	2.64	3.52	4.16
				Btu/h	9000	12000	14,200
		Min. - Max.		kW	0.90 - 3.80	0.90 - 4.20	0.90 - 5.20
				Btu/h	3100 - 13,000	3100 - 14,300	3100 - 17,700
	Heating	Rated		kW	3.52	4.69	5.28
				Btu/h	12000	16000	18000
		Min. - Max.		kW	0.90 - 5.50	0.90 - 5.70	0.90 - 6.10
				Btu/h	3100 - 18,800	3100 - 19,500	3100 - 20,800
Input power	Cooling	Rated	kW		0.56	0.91	1.13
		Min. - Max.			0.20 - 2.05	0.20 - 2.05	0.18 - 2.16
	Heating	Rated			0.88	1.44	1.58
		Min. - Max.			0.20 - 2.62	0.20 - 2.62	0.18 - 3.30
Current	Cooling	Rated	A		2.9	4.2	5.1
	Heating				4.1	6.7	7.0
EER	Cooling		kW/kW		4.71	3.87	3.68
			Btu/hW		16.0	13.1	12.5
COP	Heating		kW/kW		4.00	3.27	3.34
			Btu/hW		13.6	11.1	11.3
SEER	Cooling		Btu/hW		26.0	22.7	20.3
HSPF	Heating		Btu/hW		12.6	11.6	11.2
Power factor	Cooling		%		84	94	96
	Heating				93	93	98
Moisture removal			pints/h (l/h)		2.7 (1.3)	3.8 (1.8)	4.4 (2.1)
Maximum operating current *1	Cooling		A		9.3	9.3	9.8
	Heating				10.8	10.8	13.8
Fan	Airflow rate	Cooling	High	CFM (m³/h)	336 (570)		383 (650)
			Med		271 (460)		306 (520)
			Low		212 (360)		235 (400)
			Quiet		159 (270)		159 (270)
		Heating	High		353 (600)		383 (650)
			Med		283 (480)		306 (520)
			Low		218 (370)		230 (390)
			Quiet		159 (270)		159 (270)
	Type × Q'ty				Cross flow fan × 2		
	Motor output		W		16 × 2		
Sound pressure level *2	Cooling	High	dB (A)		40		44
		Med			35		38
		Low			29		31
		Quiet			23		23
	Heating	High			40		43
		Med			35		37
		Low			29		29
		Quiet			23		23
Heat exchanger type	Dimensions (H × W × D)		in. (mm)		14-7/8 × 21-5/8 × 1-1/16 (378 × 550 × 26.6)		
	Fin pitch		FPI		21		
	Rows × Stages				2 × 18		
	Pipe type				Copper		
	Fin type				Aluminum		
Enclosure	Material				Polystyrene		
	Color				White		
					Approximate color of MUNSELL N9.25/		
Dimensions (H × W × D)	Net		inch		23-5/8 × 29-1/8 × 7-7/8		
			mm		600 × 740 × 200		
	Gross		inch		27-9/16 × 32-5/16 × 12-3/16		
			mm		700 × 820 × 310		
Weight	Net		lbs. (kg)		31 (14)		
	Gross				37 (17)		
Connection pipe	Size	Liquid	in. (mm)		Ø1/4 (Ø6.35)		
		Gas			Ø3/8 (Ø9.52)		Ø1/2 (Ø12.70)
	Method				Flare		
Operation range	Cooling		°F (°C)		64 to 90 (18 to 32)		
			%RH		80 or less		
	Heating		°F (°C)		60 to 88 (16 to 30)		
Remote controller type					Wireless		
Drain hose	Material				PP + LLDPE		
	Size		in.(mm)		Ø9/16(Ø13.8) (I.D.), Ø5/8 to Ø11/16(Ø15.8 to Ø16.7) (O.D.)		

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 : 24ft.(7.5m), Height difference:0 m. (Outdoor unit-Indoor unit)
The protective function might work when using it outside the operation range.
*1: The maximum current is the maximum value when operated within the operation range.
*2: These are the measured values in the manufacturer's anechoic chamber.
   Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

4. DIMENSIONS

■ MODEL : AGU9RLF, AGU12RLF, AGU15RLF

Unit: in. (mm)

7-7/8 (200)

23-5/8 (600)

29-1/8 (740)

Front view

Side view

■ INSTALLATION PLACE

4 (100) or more

4 (80) or more

4 (80) or more

2 (50) or more

5 (150) or below from the floor
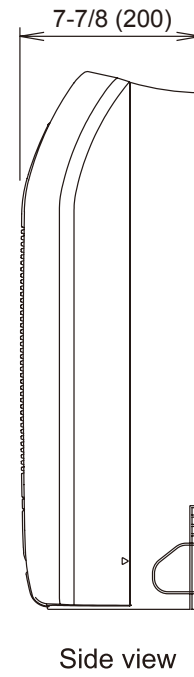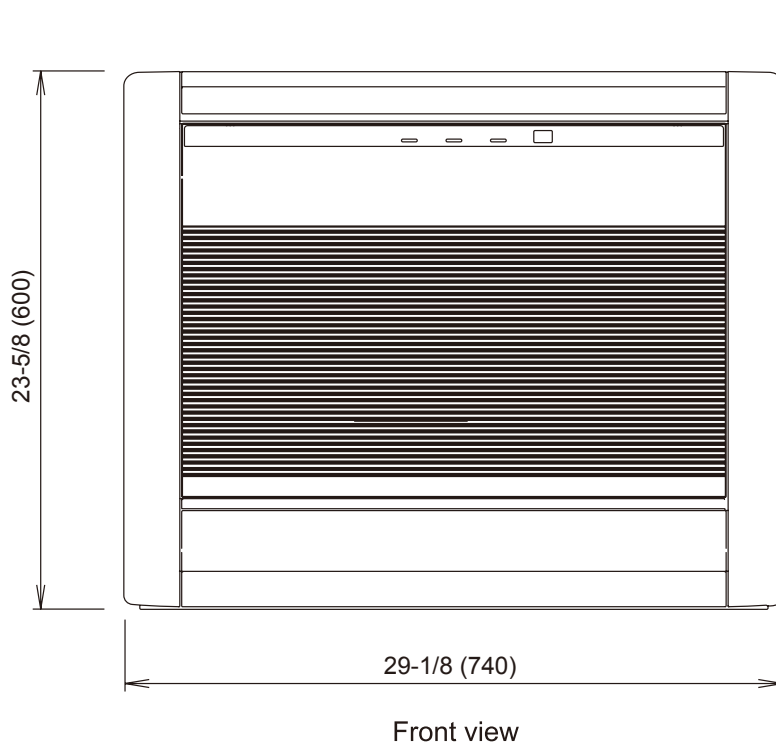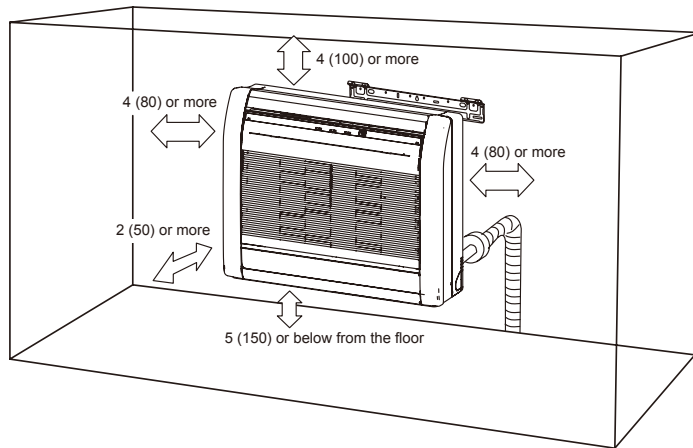
5. WIRING DIAGRAMS

■ MODEL : AGU9RLF, AGU12RLF, AGU15RLF

6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL : AGU9RLF

AFR	336

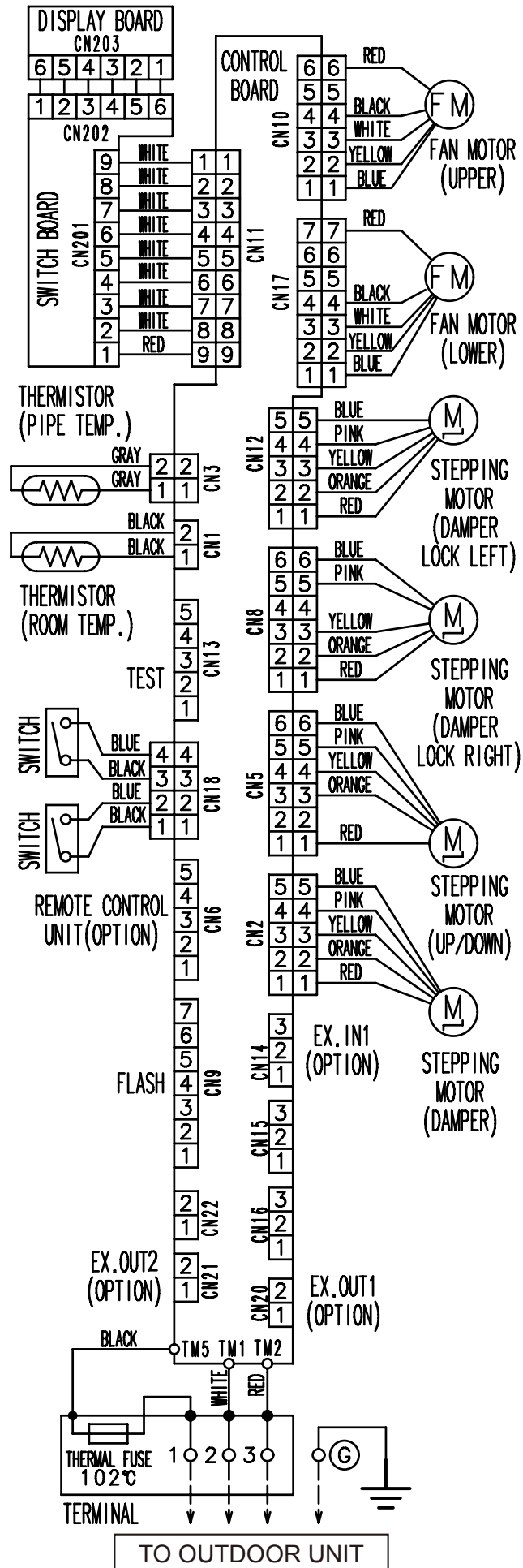|		Indoor temperature																	
	°FDB	64			70			75			80			85			90		
	°FWB	54			60			63			67			71			73		
°FDB		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
15		7.84	6.74	0.20	8.86	6.73	0.21	9.34	7.43	0.21	10.00	7.79	0.21	10.69	7.98	0.21	11.02	8.86	0.21
23		7.52	6.44	0.22	8.50	6.44	0.23	8.96	7.10	0.23	9.59	7.45	0.23	10.25	7.62	0.24	10.57	8.47	0.24
32		7.11	6.23	0.22	8.04	6.22	0.23	8.47	6.86	0.23	9.07	7.20	0.23	9.70	7.37	0.24	9.99	8.19	0.24
41		6.89	6.07	0.23	7.79	6.06	0.24	8.21	6.68	0.24	8.79	7.01	0.24	9.40	7.17	0.25	9.69	7.97	0.25
50		6.87	6.04	0.22	7.76	6.03	0.23	8.18	6.65	0.23	8.76	6.98	0.23	9.36	7.14	0.24	9.65	7.94	0.24
59		6.11	5.44	0.24	6.90	5.44	0.25	7.27	6.00	0.25	7.79	6.29	0.25	8.33	6.44	0.26	8.58	7.15	0.26
67		6.88	6.10	0.26	7.77	6.09	0.27	8.20	6.72	0.27	8.78	7.05	0.27	9.38	7.21	0.28	9.67	8.02	0.28
77		7.79	6.88	0.44	8.80	6.87	0.45	9.28	7.58	0.45	9.93	7.95	0.45	10.62	8.14	0.46	10.95	9.04	0.46
87		7.36	6.49	0.49	8.32	6.48	0.50	8.77	7.15	0.51	9.39	7.50	0.51	10.04	7.67	0.52	10.35	8.53	0.52
95		7.06	6.23	0.54	7.97	6.22	0.55	8.41	6.86	0.55	9.00	7.20	0.56	9.62	7.37	0.57	9.92	8.19	0.57
104		6.54	5.77	0.56	7.39	5.76	0.57	7.79	6.35	0.57	8.34	6.67	0.58	8.92	6.82	0.59	9.19	7.58	0.59
115		6.43	5.69	0.57	7.27	5.68	0.58	7.66	6.26	0.59	8.20	6.57	0.59	8.77	6.73	0.60	9.04	7.48	0.60

Note: The leftmost column label is "Outdoor temperature".

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
SHC : Sensible Heat Capacity (kBtu/h)
IP : Input Power (kW)

AFR	9.5

		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		
°CDB		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
-10.0		2.30	1.98	0.20	2.60	1.97	0.21	2.74	2.18	0.21	2.93	2.28	0.21	3.13	2.34	0.21	3.23	2.60	0.21
-5.0		2.20	1.89	0.22	2.49	1.89	0.23	2.62	2.08	0.23	2.81	2.18	0.23	3.00	2.23	0.24	3.10	2.48	0.24
0.0		2.08	1.83	0.22	2.36	1.82	0.23	2.48	2.01	0.23	2.66	2.11	0.23	2.84	2.16	0.24	2.93	2.40	0.24
5.0		2.02	1.78	0.23	2.28	1.78	0.24	2.41	1.96	0.24	2.58	2.06	0.24	2.75	2.10	0.25	2.84	2.34	0.25
10.0		2.01	1.77	0.22	2.27	1.77	0.23	2.40	1.95	0.23	2.57	2.05	0.23	2.74	2.09	0.24	2.83	2.33	0.24
15.0		1.79	1.60	0.24	2.02	1.59	0.25	2.13	1.76	0.25	2.28	1.84	0.25	2.44	1.89	0.26	2.52	2.10	0.26
19.4		2.02	1.79	0.26	2.28	1.79	0.27	2.40	1.97	0.27	2.57	2.07	0.27	2.75	2.11	0.28	2.83	2.35	0.28
25.0		2.28	2.02	0.44	2.58	2.01	0.45	2.72	2.22	0.45	2.91	2.33	0.45	3.11	2.38	0.46	3.21	2.65	0.46
30.6		2.16	1.90	0.49	2.44	1.90	0.50	2.57	2.09	0.51	2.75	2.20	0.51	2.94	2.25	0.52	3.03	2.50	0.52
35.0		2.07	1.83	0.54	2.34	1.82	0.55	2.46	2.01	0.55	2.64	2.11	0.56	2.82	2.16	0.57	2.91	2.40	0.57
40.0		1.92	1.69	0.56	2.17	1.69	0.57	2.28	1.86	0.57	2.44	1.95	0.58	2.61	2.00	0.59	2.69	2.22	0.59
46.0		1.89	1.67	0.57	2.13	1.66	0.58	2.25	1.84	0.59	2.40	1.93	0.59	2.57	1.97	0.60	2.65	2.19	0.60

Note: The leftmost column label is "Outdoor temperature".

AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
IP : Input Power (kW)

■ MODEL : AGU12RLF

AFR	336

		Indoor temperature																	
	°FDB		64			70			75			80			85			90	
	°FWB		54			60			63			67			71			73	
	°FDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	15	10.08	8.23	0.30	11.39	8.22	0.30	12.01	9.06	0.31	12.86	9.51	0.31	13.74	9.73	0.31	14.17	10.81	0.32
	23	9.57	7.90	0.34	10.81	7.89	0.34	11.40	8.70	0.34	12.21	9.13	0.35	13.05	9.35	0.35	13.45	10.39	0.35
	32	9.27	7.55	0.36	10.48	7.54	0.37	11.05	8.31	0.37	11.83	8.72	0.38	12.64	8.93	0.38	13.04	9.92	0.38
	41	9.06	7.46	0.38	10.24	7.45	0.39	10.79	8.22	0.39	11.55	8.62	0.40	12.35	8.82	0.40	12.73	9.80	0.40
Outdoor temperature	50	9.03	7.40	0.39	10.21	7.39	0.40	10.76	8.15	0.40	11.52	8.55	0.41	12.31	8.75	0.41	12.70	9.73	0.41
	59	8.20	6.92	0.37	9.27	6.92	0.38	9.77	7.63	0.38	10.46	8.01	0.39	11.18	8.19	0.39	11.52	9.10	0.39
	67	9.18	7.71	0.42	10.37	7.70	0.43	10.93	8.50	0.44	11.70	8.91	0.44	12.51	9.12	0.45	12.90	10.14	0.45
	77	10.40	8.70	0.71	11.76	8.69	0.72	12.39	9.58	0.73	13.27	10.06	0.74	14.18	10.29	0.74	14.62	11.44	0.75
	87	9.82	8.23	0.80	11.10	8.22	0.82	11.70	9.07	0.82	12.52	9.52	0.83	13.39	9.74	0.84	13.80	10.82	0.85
	95	9.41	7.87	0.88	10.63	7.86	0.89	11.21	8.67	0.90	12.00	9.10	0.91	12.83	9.31	0.92	13.22	10.35	0.93
	104	8.74	7.31	0.91	9.87	7.30	0.93	10.41	8.05	0.94	11.14	8.45	0.95	11.91	8.65	0.96	12.28	9.61	0.96
	115	8.57	7.19	0.92	9.69	7.18	0.94	10.22	7.92	0.95	10.94	8.31	0.96	11.69	8.51	0.97	12.05	9.45	0.97

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
SHC : Sensible Heat Capacity (kBtu/h)
IP : Input Power (kW)

AFR	9.5

		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	
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	-10.0	2.95	2.41	0.30	3.34	2.41	0.30	3.52	2.66	0.31	3.77	2.79	0.31	4.03	2.85	0.31	4.15	3.17	0.32
	-5.0	2.80	2.32	0.34	3.17	2.31	0.34	3.34	2.55	0.34	3.58	2.68	0.35	3.82	2.74	0.35	3.94	3.04	0.35
	0.0	2.72	2.21	0.36	3.07	2.21	0.37	3.24	2.44	0.37	3.47	2.56	0.38	3.71	2.62	0.38	3.82	2.91	0.38
	5.0	2.65	2.19	0.38	3.00	2.18	0.39	3.16	2.41	0.39	3.39	2.53	0.40	3.62	2.59	0.40	3.73	2.87	0.40
Outdoor temperature	10.0	2.65	2.17	0.39	2.99	2.17	0.40	3.15	2.39	0.40	3.38	2.51	0.41	3.61	2.56	0.41	3.72	2.85	0.41
	15.0	2.40	2.03	0.37	2.72	2.03	0.38	2.86	2.24	0.38	3.06	2.35	0.39	3.28	2.40	0.39	3.38	2.67	0.39
	19.4	2.69	2.26	0.42	3.04	2.26	0.43	3.20	2.49	0.44	3.43	2.61	0.44	3.67	2.67	0.45	3.78	2.97	0.45
	25.0	3.05	2.55	0.71	3.45	2.55	0.72	3.63	2.81	0.73	3.89	2.95	0.74	4.16	3.02	0.74	4.29	3.35	0.75
	30.6	2.88	2.41	0.80	3.25	2.41	0.82	3.43	2.66	0.82	3.67	2.79	0.83	3.92	2.85	0.84	4.05	3.17	0.85
	35.0	2.76	2.31	0.88	3.12	2.30	0.89	3.28	2.54	0.90	3.52	2.67	0.91	3.76	2.73	0.92	3.88	3.03	0.93
	40.0	2.56	2.14	0.91	2.89	2.14	0.93	3.05	2.36	0.94	3.27	2.48	0.95	3.49	2.53	0.96	3.60	2.82	0.96
	46.0	2.51	2.11	0.92	2.84	2.10	0.94	2.99	2.32	0.95	3.21	2.44	0.96	3.43	2.49	0.97	3.53	2.77	0.97

AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
IP : Input Power (kW)

■ MODEL : AGU15RLF

AFR	383

		Indoor temperature																	
	°FDB	64			70			75			80			85			90		
	°FWB	54			60			63			67			71			73		
	°FDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
Outdoor temperature	15	12.17	9.38	0.40	13.75	9.37	0.41	14.49	10.33	0.41	15.52	10.84	0.42	16.59	11.09	0.42	17.10	12.33	0.42
	23	11.85	9.06	0.43	13.39	9.05	0.44	14.12	9.98	0.44	15.11	10.47	0.45	16.16	10.71	0.45	16.65	11.91	0.45
	32	11.53	8.77	0.44	13.03	8.75	0.45	13.74	9.66	0.45	14.71	10.13	0.46	15.72	10.37	0.46	16.21	11.52	0.46
	41	11.40	8.71	0.45	12.88	8.70	0.46	13.58	9.59	0.46	14.54	10.07	0.47	15.54	10.30	0.47	16.02	11.45	0.47
	50	11.37	8.68	0.47	12.85	8.67	0.48	13.55	9.56	0.48	14.50	10.03	0.49	15.51	10.26	0.49	15.98	11.41	0.49
	59	10.71	8.62	0.48	12.10	8.61	0.49	12.76	9.50	0.49	13.66	9.97	0.50	14.60	10.20	0.50	15.05	11.33	0.50
	67	11.59	9.12	0.61	13.10	9.11	0.62	13.81	10.05	0.62	14.79	10.54	0.63	15.81	10.78	0.64	16.29	11.99	0.64
	77	12.30	9.64	0.90	13.90	9.63	0.91	14.65	10.62	0.92	15.69	11.14	0.93	16.77	11.40	0.94	17.29	12.67	0.95
	87	11.63	9.11	1.00	13.14	9.10	1.02	13.85	10.04	1.03	14.83	10.53	1.04	15.85	10.78	1.05	16.34	11.98	1.06
	95	11.13	8.74	1.09	12.58	8.73	1.11	13.26	9.62	1.12	14.20	10.10	1.13	15.18	10.33	1.14	15.65	11.48	1.15
	104	9.89	7.75	1.14	11.17	7.74	1.16	11.78	8.53	1.17	12.61	8.96	1.18	13.48	9.16	1.19	13.90	10.18	1.20
	115	9.33	7.31	1.15	10.54	7.30	1.17	11.12	8.05	1.18	11.90	8.45	1.19	12.72	8.65	1.20	13.11	9.61	1.21

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
SHC : Sensible Heat Capacity (kBtu/h)
IP : Input Power (kW)

AFR	10.8

		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		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
Outdoor temperature	-10.0	3.57	2.75	0.40	4.03	2.74	0.41	4.25	3.03	0.41	4.55	3.18	0.42	4.86	3.25	0.42	5.01	3.61	0.42
	-5.0	3.47	2.65	0.43	3.92	2.65	0.44	4.14	2.92	0.44	4.43	3.07	0.45	4.73	3.14	0.45	4.88	3.49	0.45
	0.0	3.38	2.57	0.44	3.82	2.57	0.45	4.03	2.83	0.45	4.31	2.97	0.46	4.61	3.04	0.46	4.75	3.38	0.46
	5.0	3.34	2.55	0.45	3.78	2.55	0.46	3.98	2.81	0.46	4.26	2.95	0.47	4.55	3.02	0.47	4.70	3.35	0.47
	10.0	3.33	2.54	0.47	3.77	2.54	0.48	3.97	2.80	0.48	4.25	2.94	0.49	4.54	3.01	0.49	4.68	3.34	0.49
	15.0	3.14	2.53	0.48	3.55	2.52	0.49	3.74	2.78	0.49	4.00	2.92	0.50	4.28	2.99	0.50	4.41	3.32	0.50
	19.4	3.40	2.67	0.61	3.84	2.67	0.62	4.05	2.94	0.62	4.33	3.09	0.63	4.63	3.16	0.64	4.78	3.51	0.64
	25.0	3.60	2.83	0.90	4.07	2.82	0.91	4.29	3.11	0.92	4.60	3.27	0.93	4.92	3.34	0.94	5.07	3.71	0.95
	30.6	3.41	2.67	1.00	3.85	2.67	1.02	4.06	2.94	1.03	4.35	3.09	1.04	4.65	3.16	1.05	4.79	3.51	1.06
	35.0	3.26	2.56	1.09	3.69	2.56	1.11	3.89	2.82	1.12	4.16	2.96	1.13	4.45	3.03	1.14	4.59	3.37	1.15
	40.0	2.90	2.27	1.14	3.27	2.27	1.16	3.45	2.50	1.17	3.70	2.62	1.18	3.95	2.69	1.19	4.07	2.98	1.20
	46.0	2.73	2.14	1.15	3.09	2.14	1.17	3.26	2.36	1.18	3.49	2.48	1.19	3.73	2.53	1.20	3.84	2.82	1.21

AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
IP : Input Power (kW)

6-2. HEATING CAPACITY

This table is created using the maximum capacity.

■ MODEL: AGU9RLF

AFR	353

			Indoor temperature							
		°FDB	60		65		70		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
	-5	-7	12.55	1.94	12.15	2.00	11.74	2.06	11.33	2.13
	5	3	14.38	2.04	13.92	2.11	13.45	2.17	12.98	2.24
	14	12	14.96	2.07	14.48	2.14	14.00	2.20	13.51	2.27
	23	19	15.46	2.00	14.97	2.06	14.47	2.12	13.96	2.19
	32	28	15.89	1.77	15.39	1.82	14.87	1.88	14.35	1.94
	41	37	18.47	1.72	17.88	1.76	17.28	1.82	16.68	1.87
	47	43	20.09	1.74	19.46	1.78	18.80	1.84	18.14	1.89
	50	47	22.20	1.74	21.50	1.79	20.77	1.85	20.05	1.90
	59	50	23.02	1.75	22.30	1.80	21.54	1.86	20.79	1.91

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
IP : Input Power (kW)

AFR	10.0

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
	-20.6	-21.7	3.68	1.94	3.56	2.00	3.44	2.06	3.32	2.13
	-15.0	-16.1	4.21	2.04	4.08	2.11	3.94	2.17	3.80	2.24
	-10.0	-11.1	4.38	2.07	4.25	2.14	4.10	2.20	3.96	2.27
	-5.0	-7.2	4.53	2.00	4.39	2.06	4.24	2.12	4.09	2.19
	0.0	-2.2	4.66	1.77	4.51	1.82	4.36	1.88	4.21	1.94
	5.0	2.8	5.41	1.72	5.24	1.76	5.06	1.82	4.89	1.87
	8.3	6.1	5.88	1.74	5.69	1.78	5.50	1.84	5.31	1.89
	10.0	8.3	6.51	1.74	6.30	1.79	6.09	1.85	5.88	1.90
	15.0	10.0	6.75	1.75	6.53	1.80	6.31	1.86	6.09	1.91

AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
IP : Input Power (kW)

■ MODEL: AGU12RLF

AFR	353

			Indoor temperature							
		°FDB	60		65		70		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
	-5	-7	14.25	1.94	13.80	2.00	13.33	2.06	12.87	2.13
	5	3	16.08	2.04	15.58	2.11	15.05	2.17	14.52	2.24
	14	12	16.31	2.07	15.79	2.14	15.26	2.20	14.72	2.27
	23	19	16.53	2.00	16.01	2.06	15.46	2.12	14.92	2.19
	32	28	16.73	1.77	16.20	1.82	15.66	1.88	15.11	1.94
	41	37	19.23	1.72	18.62	1.76	17.99	1.82	17.36	1.87
	47	43	20.84	1.74	20.18	1.78	19.50	1.84	18.82	1.89
	50	47	23.02	1.74	22.30	1.79	21.54	1.85	20.79	1.90
	59	50	23.86	1.75	23.10	1.80	22.32	1.86	21.54	1.91

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
IP : Input Power (kW)

AFR	10.0

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
	-20.6	-21.7	4.18	1.94	4.04	2.00	3.91	2.06	3.77	2.13
	-15.0	-16.1	4.71	2.04	4.57	2.11	4.41	2.17	4.26	2.24
	-10.0	-11.1	4.78	2.07	4.63	2.14	4.47	2.20	4.32	2.27
	-5.0	-7.2	4.84	2.00	4.69	2.06	4.53	2.12	4.37	2.19
	0.0	-2.2	4.90	1.77	4.75	1.82	4.59	1.88	4.43	1.94
	5.0	2.8	5.64	1.72	5.46	1.76	5.27	1.82	5.09	1.87
	8.3	6.1	6.09	1.74	5.90	1.78	5.70	1.84	5.50	1.89
	10.0	8.3	6.75	1.74	6.54	1.79	6.31	1.85	6.09	1.90
	15.0	10.0	6.99	1.75	6.77	1.80	6.54	1.86	6.31	1.91

AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
IP : Input Power (kW)

■ MODEL : AGU15RLF

AFR	383

			Indoor temperature							
		°FDB	60		65		70		75	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-5	-7	17.12	2.77	16.58	2.85	16.02	2.94	15.46	3.03
	5	3	18.95	2.87	18.35	2.95	17.73	3.04	17.11	3.13
	14	12	20.07	2.79	19.44	2.87	18.78	2.96	18.12	3.05
	23	19	20.92	2.59	20.26	2.67	19.57	2.75	18.89	2.83
	32	28	21.34	2.20	20.67	2.26	19.97	2.33	19.27	2.40
	41	37	21.93	1.96	21.24	2.01	20.52	2.07	19.81	2.13
	47	43	22.23	1.90	21.53	1.95	20.80	2.01	20.07	2.07
	50	47	24.55	1.97	23.78	2.02	22.97	2.08	22.17	2.14
	59	50	25.46	1.98	24.65	2.03	23.82	2.09	22.99	2.15

AFR : Air Flow Rate (CFM)
TC : Total Capacity (kBtu/h)
IP : Input Power (kW)

AFR	10.8

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-20.6	-21.7	5.02	2.77	4.86	2.85	4.69	2.94	4.53	3.03
	-15.0	-16.1	5.55	2.87	5.38	2.95	5.20	3.04	5.01	3.13
	-10.0	-11.1	5.88	2.79	5.70	2.87	5.50	2.96	5.31	3.05
	-5.0	-7.2	6.13	2.59	5.94	2.67	5.74	2.75	5.54	2.83
	0.0	-2.2	6.26	2.20	6.06	2.26	5.85	2.33	5.65	2.40
	5.0	2.8	6.43	1.96	6.23	2.01	6.02	2.07	5.80	2.13
	8.3	6.1	6.52	1.90	6.31	1.95	6.10	2.01	5.88	2.07
	10.0	8.3	7.20	1.97	6.97	2.02	6.73	2.08	6.50	2.14
	15.0	10.0	7.46	1.98	7.23	2.03	6.98	2.09	6.74	2.15

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

7. FAN PERFORMANCE AND CAPACITY

7-1. AIR VELOCITY DISTRIBUTION

■ MODEL : AGU9RLF, AGU12RLF, AGU15RLF
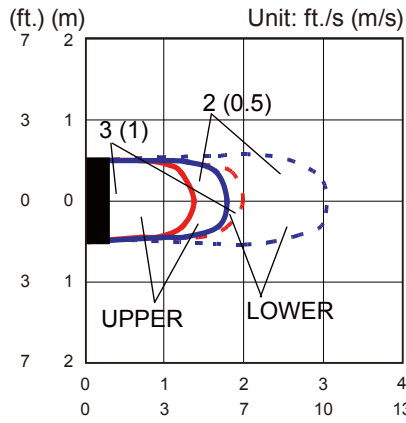
Unit: ft./s (m/s)

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

3 (1)
2 (0.5)
UPPER   LOWER

Conditions:
Fan speed: HIGH
Operation mode: FAN
Fan select: UPPER & LOWER
───────── : UPPER FAN
- - - - - - : LOWER FAN

Unit: ft./s (m/s)
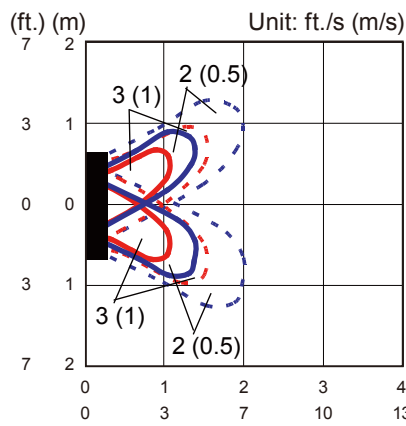
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left
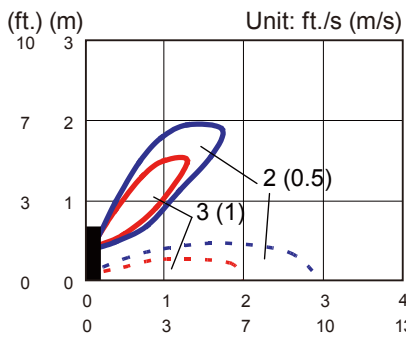
3 (1)
2 (0.5)
3 (1)
2 (0.5)

Unit: ft./s (m/s)

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

2 (0.5)
3 (1)

Unit: ft./s (m/s)
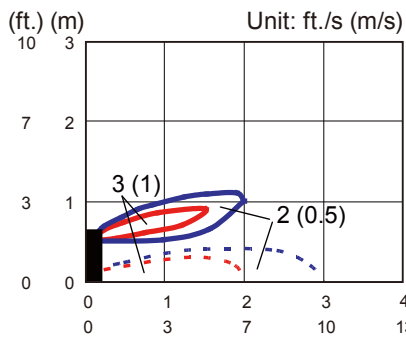
Top view
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center

3 (1)
2 (0.5)

7-2. AIRFLOW

■ MODEL : AGU9RLF, AGU12RLF

● Cooling

Fan speed	Number of rotations [r.p.m] (UPPER/LOWER)	Airflow	
HIGH	1190/1000	m³/h	570
		l/s	158
		CFM	336
MED	1000/850	m³/h	460
		l/s	128
		CFM	271
LOW	820/690	m³/h	360
		l/s	100
		CFM	212
QUIET	660/560	m³/h	270
		l/s	75
		CFM	159

● Heating

Fan speed	Number of rotations [r.p.m] (UPPER/LOWER)	Airflow	
HIGH	1240/1040	m³/h	600
		l/s	167
		CFM	353
MED	1040/880	m³/h	480
		l/s	133
		CFM	283
LOW	840/700	m³/h	370
		l/s	103
		CFM	218
QUIET	660/560	m³/h	270
		l/s	75
		CFM	159

■ MODEL : AGU15RLF

● Cooling

Fan speed	Number of rotations [r.p.m] (UPPER/LOWER)	Airflow	
HIGH	1330/1120	m³/h	650
		l/s	181
		CFM	383
MED	1100/930	m³/h	520
		l/s	144
		CFM	306
LOW	890/750	m³/h	400
		l/s	111
		CFM	235
QUIET	660/560	m³/h	270
		l/s	75
		CFM	159

● Heating

Fan speed	Number of rotations [r.p.m] (UPPER/LOWER)	Airflow	
HIGH	1330/1120	m³/h	650
		l/s	181
		CFM	383
MED	1100/930	m³/h	520
		l/s	144
		CFM	306
LOW	860/730	m³/h	390
		l/s	108
		CFM	230
QUIET	660/560	m³/h	270
		l/s	75
		CFM	159

8. OPERATION NOISE (SOUND PRESSURE)

8-1. NOISE LEVEL CURVE

■ MODEL : AGU9RLF

● Cooling
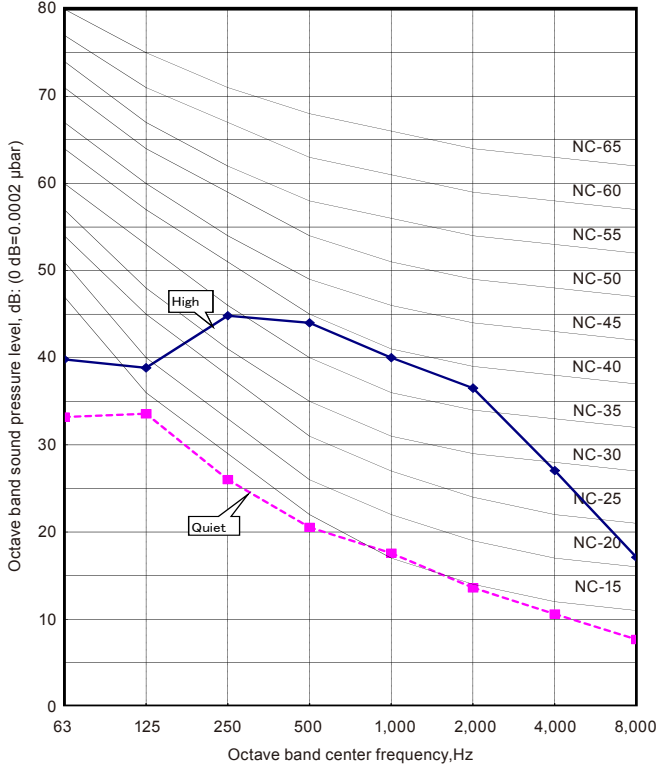
● Heating
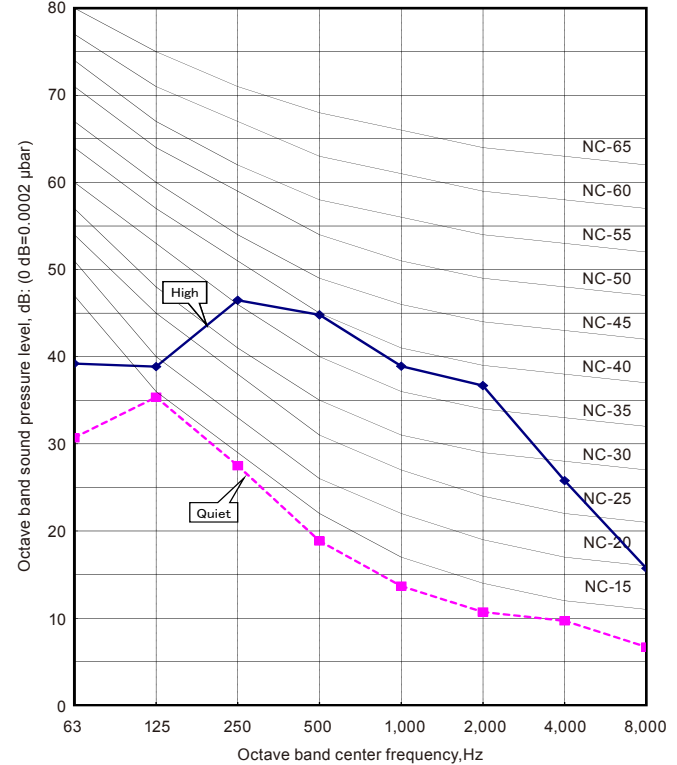
■ MODEL : AGU12RLF

● Cooling
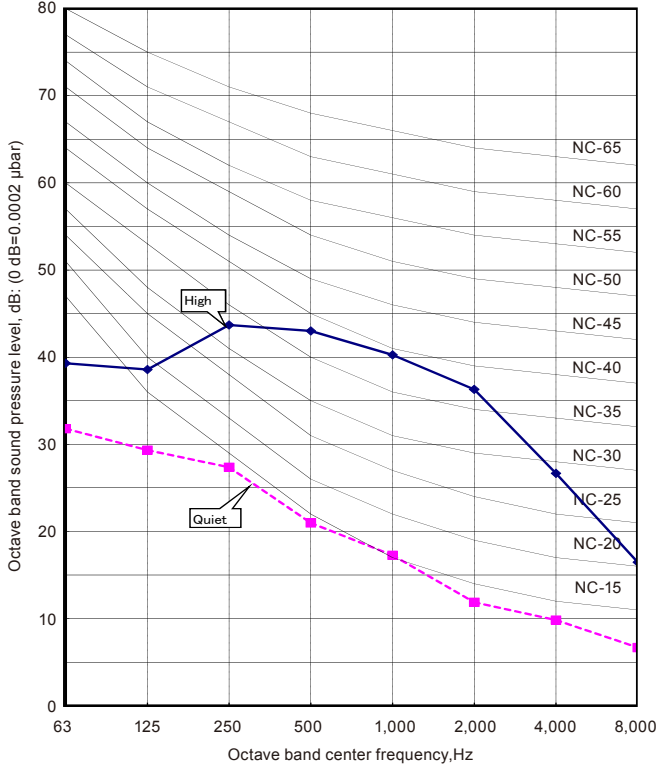
● Heating
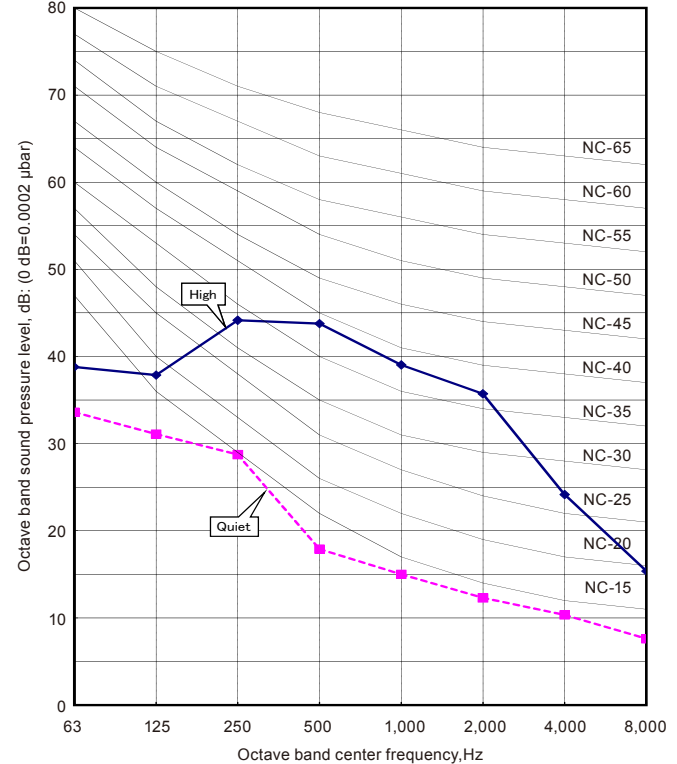
■MODEL : AGU15RLF

●Cooling

Octave band sound pressure level, dB : (0 dB=0.0002 μbar)

Octave band center frequency,Hz

●Heating

Octave band sound pressure level, dB : (0 dB=0.0002 μbar)

Octave band center frequency,Hz

8-2. SOUND LEVEL CHECK POINT

Air Flow

Microphone

Air Flow

39-3/8in. (1m)

39-3/8in. (1m)

Microphone
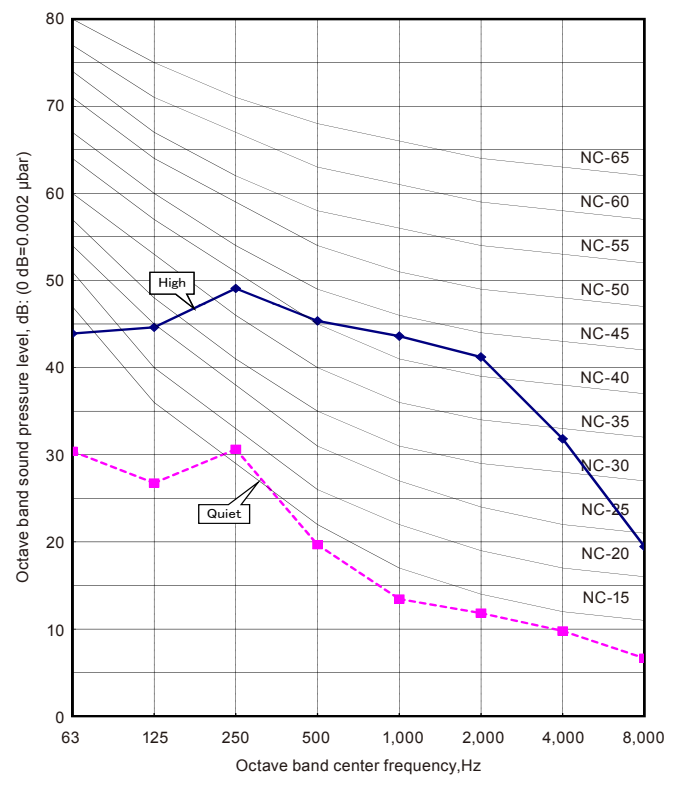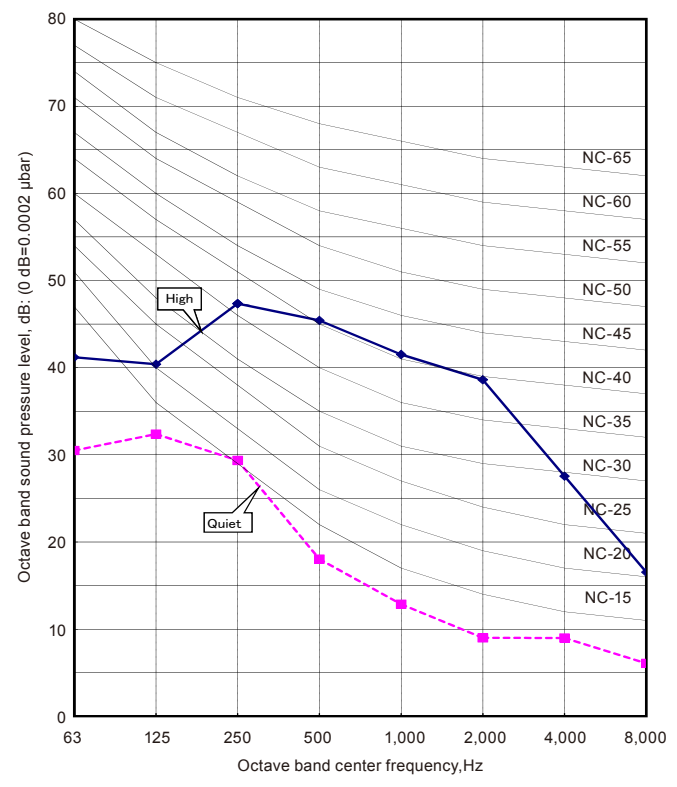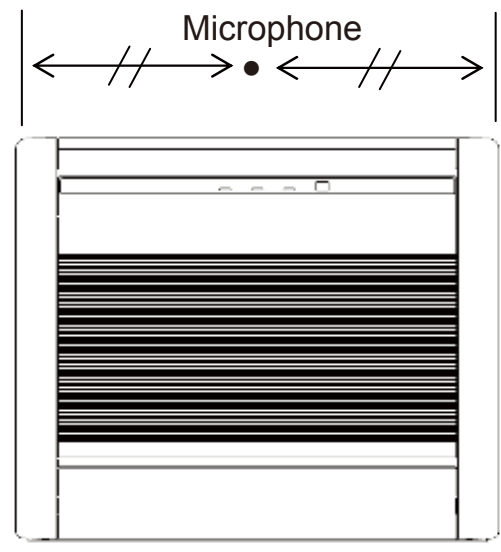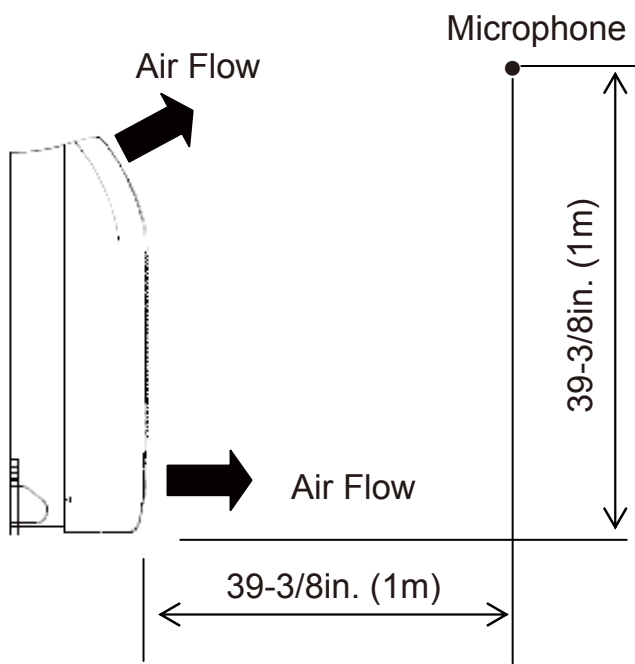
9. ELECTRIC CHARACTERISTICS

Model Name			AGU9RLF	AGU12RLF	AGU15RLF
Power Supply	Voltage	V		208 / 230 ~	
	Frequency	Hz		60	
Max Operating Current		A		0.7	
*)Wiring Spec	Connection Cable	AWG		14	
	Limited wiring length	ft. (m)		69 (21)	

*) Wiring Spec
   Selected Sample
   (Selected based on Japan Electrotechnical Standard and Codes Committee E0005)

10. SAFETY DEVICES

	Protection form	Model		
		AGU9RLF	AGU12RLF	AGU15RLF
Circuit protection	Current fuse (PCB)	250V 3.15A		
Terminal protection	Current (thermal) fuse	250V 3A		
Fan motor protection	Terminal protection program	OFF: 302 ± 27 °F (150 ± 15 °C) ON: 248 ± 27 °F (120 ± 15 °C)		

11. EXTERNAL INPUT & OUTPUT

Connector	INPUT	OUTPUT	REMARKS
CN14	Control input	-	See external input/output settings for details.
CN20	-	Operation status output	
CN21	-	Error 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.

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

Unit operation	Initial setting after power is ON	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	76°F (24°C)	Temperature at previous operation
Airflow mode	AUTO	Mode at previous operation
Air direction (swing)	Standard air direction (swing OFF)	Air direction at previous operation

● Circuit diagram example
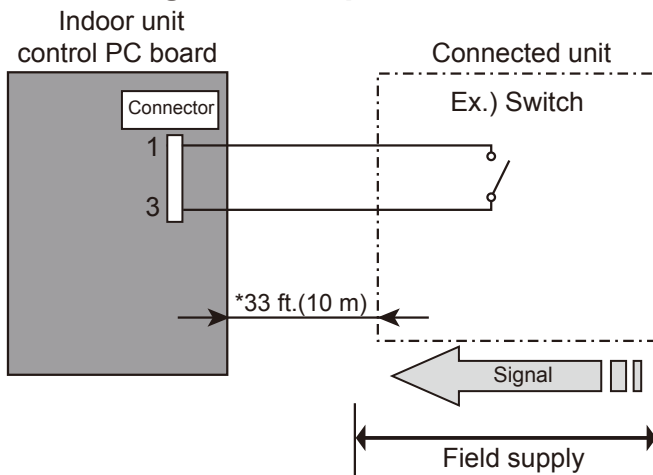
*: Make the distance from the PC board to the connected unit within 33 ft.(10 m).
Contact capacity: DC 24 V or more, 10 mA or more.

● When function setting is in "Operation/Stop" mode
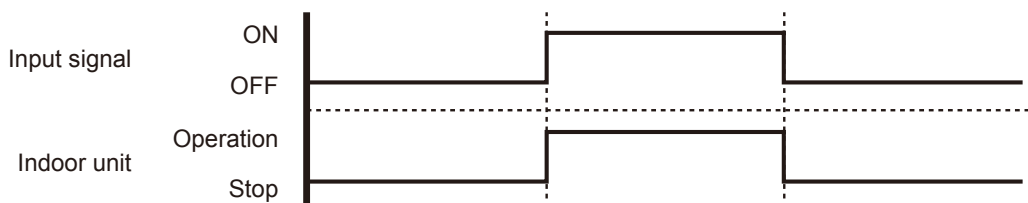
● When function setting is "Forced stop" mode
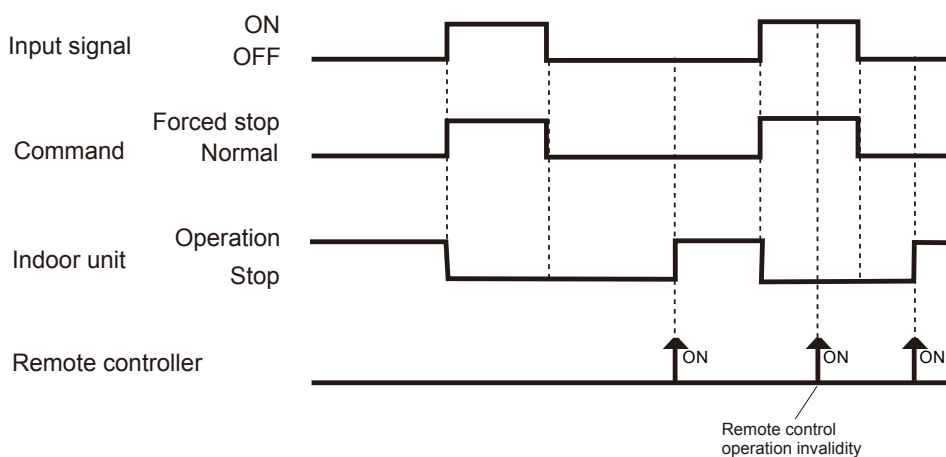
● **Parts (Optional)**

Parts name	Model name
External connect kit	UTY-XWZXZ5

Wire (External input) : UTY-XWZXZ5

11-2. EXTERNAL OUTPUT

■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

● Circuit diagram example

Indoor unit control PC board

Connector

Connected unit

DC 24 V

Ex.)Relay unit

Ex.)Display

1

2

Relay power supply

*33 ft.(10 m)

Signal

Field supply

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

Indoor unit

Operation

Stop

Output signal

ON

OFF
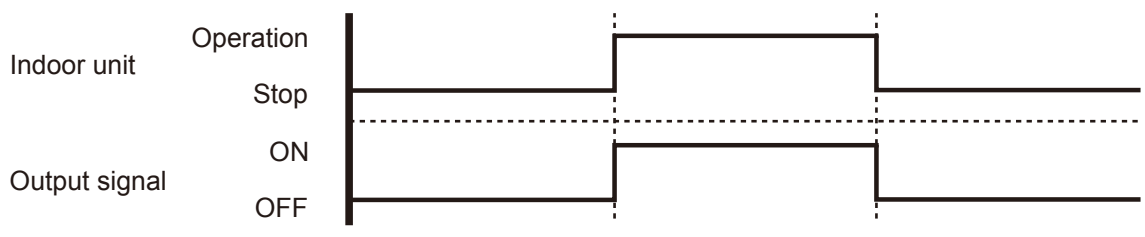
● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5

Wire (External output) : UTY-XWZXZ5

■ ERROR STATUS OUTPUT

An air conditioner error status signal can be output.
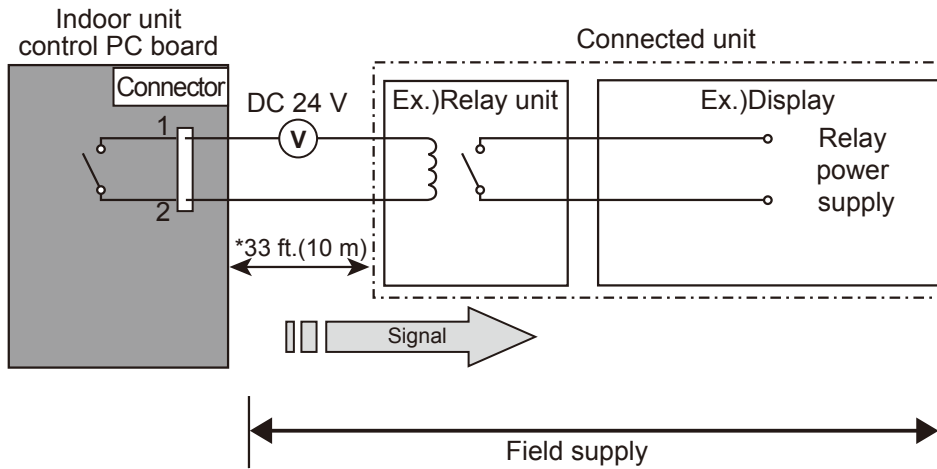
● Circuit diagram example

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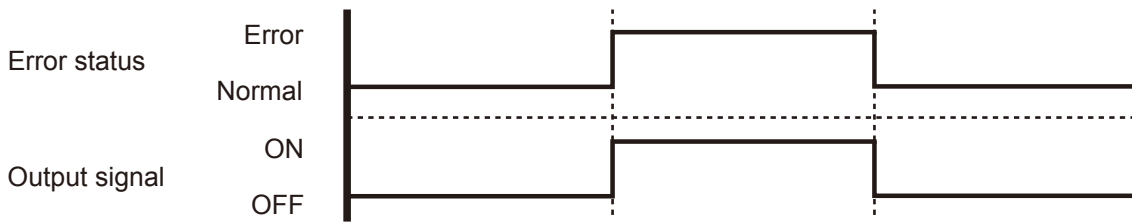
● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5

Wire (External output) : UTY-XWZXZ5

12. FUNCTION SETTINGS

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 to 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 and Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

■ PREPARATION

- Before turning on the power of the indoor unit:
  - Confirm whether the piping air-tight test and vacuuming have been conducted.
  - Reconfirm whether there is no miswiring.
- Turn on the power of the indoor units.

■ FUNCTION SETTING METHOD (for Wireless remote controller)

Entering the Function Setting Mode

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

STEP 1

Setting the Remote controller Custom Code

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

1. Press the SET TEMP. (∧) (∨) button to change the custom code between $A → b → c → d$.
   Match the code on the display to the air conditioner custom code. (initially set to A)
   (If the custom code does not need to be selected, press the MIN. HEAT button and proceed to **STEP 2**.)

2. Press the MODE button and check that the indoor unit can receive signals at the displayed custom code.

3. Press the MIN. HEAT button to accept the custom code, and proceed to **STEP 2**.
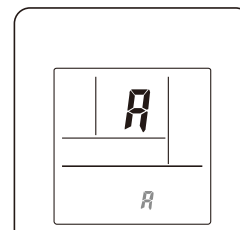
| The air conditioner custom code is set to "A" prior to shipment. |
|---|

The remote controller resets to custom code A when the batteries in the remote controller are replaced. If you use a custom code other than custom code A, reset the custom code after replacing the batteries. If you do not know the air conditioner custom code setting, try each of the custom codes ($A → b → c → d$) 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 MIN. HEAT button to switch between the left and right digits.)

2. Press the POWERFUL button to proceed to setting the value.
   (Press the POWERFUL button again to return to the function number selection.)

3. Press the SET TEMP. (∧) (∨) buttons to select the setting value.
   (Press the MIN. HEAT button to switch between the left and right digits.)

4. Press the MODE button, then the START/STOP button in order to fix the settings.

5. Press the RESET button to end the function setting mode.

6. After completing the Function Setting, be sure to turn off the power and turn it on again.

Function number

Setting value
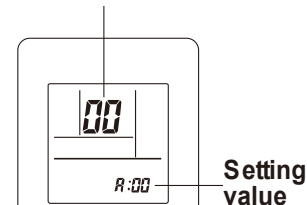
⚠CAUTION
After turning off the power, wait 30 seconds or more before turning on it again. The Function Setting will not become active unless the power is turned off then on again.

■ FUNCTION DETAILS

		Functions
1)	Filter sign	
2)	Vertical airflow direction range control	
3)	Room temperature control for indoor unit sensor	
4)	Auto restart	
5)	Room temperature sensor switching	
6)	Remote controller custom code	
7)	External input control	
8)	Room temperature sensor switching (Aux.)	
9)	Indoor unit fan control for energy saving for cooling	
10)	Room temperature control for wired remote controller sensor	
11)	Heat Insulation condition (building insulation)	

1) Filter sign

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

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

◆... Factory setting)

Function number	Setting value	Setting description	
11	00	Standard (400 hours)	
	01	Long interval (1000 hours)	
	02	Short interval (200 hours)	
	03	No indication	◆

2) Vertical airflow direction range control

In a concealed installation, change the setting to "Fixed" (02) to restrict the movement of the upper air outlet so that the airflow is only towards the horizontal direction.

(◆... Factory setting)

Function number	Setting value	Setting description	
23	00	Standard	◆
	01	(Setting prohibited)	
	02	Fixed (Concealed)	

3) Room temperature control for indoor unit sensor

Refer to Function 95, before performing this setting.

Depending on the installed environment, correction of the room temperature sensor may be required.

Select the appropriate control setting according to the installed environment.

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

 *When Function 95-01(High insulation) is set, the Standard setting "00" will be the same as No correction "01" [0.0°F (0.0°C)].

(◆. . .Factory setting)

Function number		Setting value	Setting description	
30 (For cooling)	31 (For heating)	00	Standard setting*	◆
		01	No correction 0.0°F 0.0°C	
		02	-1°F (-0.5°C)	More cooling Less heating
		03	-2°F (-1.0°C)	
		04	-3°F (-1.5°C)	
		05	-4°F (-2.0°C)	
		06	-5°F (-2.5°C)	
		07	-6°F (-3.0°C)	
		08	-7°F (-3.5°C)	
		09	-8°F (-4.0°C)	
		10	+1°F (+0.5°C)	Less cooling More heating
		11	+2°F (+1.0°C)	
		12	+3°F (+1.5°C)	
		13	+4°F (+2.0°C)	
		14	+5°F (+2.5°C)	
		15	+6°F (+3.0°C)	
		16	+7°F (+3.5°C)	
		17	+8°F (+4.0°C)	

4) Auto restart

Enable or disable automatic restart after a power interruption.

(◆... Factory setting)

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

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

5) Room temperature sensor switching

(Only for wired remote controller)

When using the Wired remote controller temperature sensor, change the setting to "Both" (01).

(◆... Factory setting)

Function number	Setting value	Setting description	
42	00	Indoor unit	◆
	01	Both	

00: Sensor on the indoor unit is active.

01: Sensors on both indoor unit and wired remote controller are active.

*Remote controller sensor must be turned on by using the remote controller.

6) Remote controller custom code

(Only for wireless remote controller)
The indoor unit custom code can be changed.

Select the appropriate custom code.

(◆... Factory setting)

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

7) External input control

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

(◆. . .Factory setting)

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

8) Room temperature sensor switching (Aux.)

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01). This function will only work if the function setting 42 is set at "Both" (01).

(◆. . .Factory setting)

Function number	Setting value	Setting description	
48	00	Both	◆
	01	Wired remote controller	

9) Indoor unit fan control for energy saving for cooling

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

(◆. . .Factory setting)

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

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

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

10) Room temperature control for wired remote controller sensor

Refer to Function 95, before performing this setting.

Depending on the installed environment, correction of the wired remote controller temperature sensor may be required.

Select the appropriate control setting according to the installed environment.

To change this setting, set Function 42 to Both "01".

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

(◆. . .Factory setting)

Function number		Setting value	Setting description	
92 (For cooling)	93 (For heating)	00	No correction 0.0°F 0.0°C	◆
		01	No correction 0.0°F 0.0°C	
		02	-1°F (-0.5°C)	More cooling Less heating
		03	-2°F (-1.0°C)	
		04	-3°F (-1.5°C)	
		05	-4°F (-2.0°C)	
		06	-5°F (-2.5°C)	
		07	-6°F (-3.0°C)	
		08	-7°F (-3.5°C)	
		09	-8°F (-4.0°C)	
		10	+1°F (+0.5°C)	Less cooling More heating
		11	+2°F (+1.0°C)	
		12	+3°F (+1.5°C)	
		13	+4°F (+2.0°C)	
		14	+5°F (+2.5°C)	
		15	+6°F (+3.0°C)	
		16	+7°F (+3.5°C)	
		17	+8°F (+4.0°C)	

11) Heat Insulation condition (building insulation)

Heat insulation conditions differ according to the installed environment.

Standard insulation "00" allows system to rapidly respond to the cooling or heating load changes. High insulation "01" is when the heat insulation structure of the building is high and does not require system to rapidly respond to cooling or heating load changes.

When High insulation "01" is selected;

• Overheating (overcooling) is prevented at the start-up.

• All room temp. control settings (Function 30, 31, 92, 93) will reset to No correction [0.0°F (0.0°C)].

(◆. . .Factory setting)

| Function number	Setting value	Setting description	
95	00	Standard insulation	◆
	01	High insulation	

NOTE:

When changing Function 95, perform this setting before other Room temp. control settings (Function 30, 31, 92, 93). IF Function 95 is not set first, Room temperature control settings

(Function 30, 31, 92, 93) will be reset and you must re-do them again.

■ REMOTE CONTROLLER CUSTOM CODE SETTING

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

1. (Note that the air conditioner cannot receive a signal if the air conditioner has not been set for the matching custom code.)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 custom code (initially set to R).

3. Press the SET TEMP. ($\wedge$) ($\vee$) button to change the custom code between $R \to b$ $\to c \to d$.
   Match the code on the display to the air conditioner custom code.

4. Press the MODE button again to return to the clock display. The custom code will be changed.
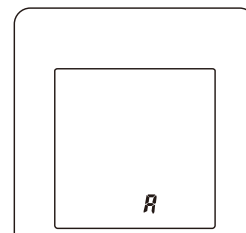
If no buttons are pressed within 30 seconds after the custom code is displayed, the system returns to the original clock display. In this case, start again from step 1.

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

The remote controller resets to custom code A when the batteries in the remote controller are replaced. If you use a custom code other than custom code A, reset the custom code after replacing the batteries. If you do not know the air conditioner custom code setting, try each of the custom codes ($R \to b \to c \to d$) until you find the code which operates the air conditioner.
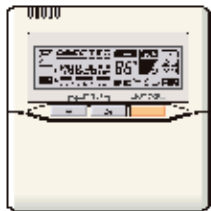
■ REMOTE CONTROLLER TEMPERATURE UNIT
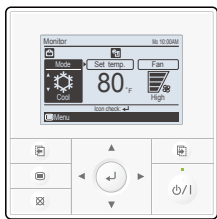
To change the temperature unit:

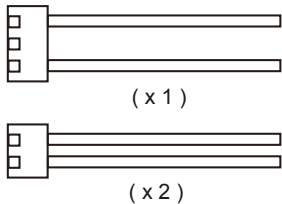• Press the °C / °F switching button to select the preferred temperature unit. (Factory setting is °F.)

13. OPTIONAL PARTS

13-1. CONTROLLER

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTY-RVNUM	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key.
	Wired remote controller	UTY-RNNUM	The room temperature can be controlled by detecting the temperature accurately with built-in thermo sensor.
	Simple remote controller	UTY-RSNUM	Compact remote controller concentrates on the basic functions such as Start/Stop, Fan Control, Temperature Setting and Operation mode.

13-2. OTHERS

Exterior	Parts name	Model No.	Summary
(x 1) (x 2)	External connect kit	UTY-XWZXZ5	Required when external device is connected.

2. OUTDOOR UNIT

SINGLE TYPE :

AOU9RLFF
AOU12RLFF
AOU15RLFF

CONTENTS

2. OUTDOOR UNIT

1. SPECIFICATIONS

Type				INVERTER HEAT PUMP		
Model name				AOU9RLFF	AOU12RLFF	AOU15RLFF
Power sourse				208 / 230V ~ 60Hz		
Available voltage range				187 - 253V ~ 60Hz		
Starting current			A	4.1	6.7	7.0
Fan	Airflow rate	Cooling	CFM (m³/h)	1207 (2050)	1457 (2475)	1457 (2475)
		Heating		1207 (2050)	1207 (2050)	1386 (2355)
	Type × Q'ty			Propeller fan × 1		
	Motor output		W	115		
Sound pressure level	Cooling		dB (A)	49	53	54
	Heating			50	52	54
Heat exchanger type	Dimensions (H × W × D)		in.	23-1/8 × 34-11/16 × 1-7/16		
			mm	588 × 881 × 36.4		
	Fin pitch		FPI	20		
	Rows × Stages			2 × 28		
	Pipe type			Copper		
	Fin Type			Aluminum		
Compressor	Type × Q'ty			Rotary × 1		
	Motor output		W	850		1000
Refrigerant	Type			R410A		
	Charge		lbs.oz.	2lbs.10oz.		2lbs.12oz.
			kg	1.20		1.25
Refrigerant oil	Type			FREOL α68SZ		
Enclosure	Material			Steel		
	Color			Beige Approximate color of MUNSELL 10YR7.5/1.0		
Dimensions (H × W × D)	Net		in.	24-7/16 × 31-1/8 × 11-7/16		
			mm	620 × 790 × 290		
	Gross		in.	28-1/16 × 37-3/16 × 15-9/16		
			mm	713 × 945 × 395		
Weight	Net		lbs.(kg)	84 (38)		86 (39)
	Gross			93 (42)		95 (43)
Connenction pipe	Size	Liquid	in. (mm)	Ø 1/4 (Ø 6.35)		
		Gas		Ø 3/8 (Ø 9.52)		Ø 1/2 (Ø 12.7)
	Method			Flare		
	Pre - charge length		ft. (m)	49 (15)		
	Max. length			66 (20)		
	Min. length			10 (3)		
	Max. height difference			49 (15)		
Operation range	Cooling		°F (°C)	14 to 115 (-10 to 46)		
	Heating			-5 to 75 (-21 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 : 24ft.(7.5m), Height difference:0 m. (Outdoor unit - Indoor unit)
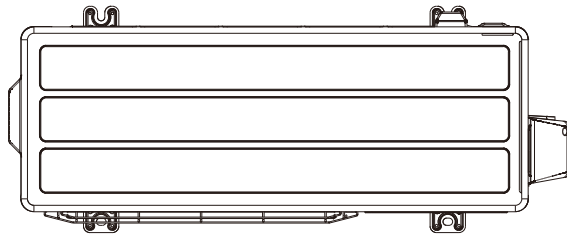The protective function might work when using it outside the operation range.

2. DIMENSIONS

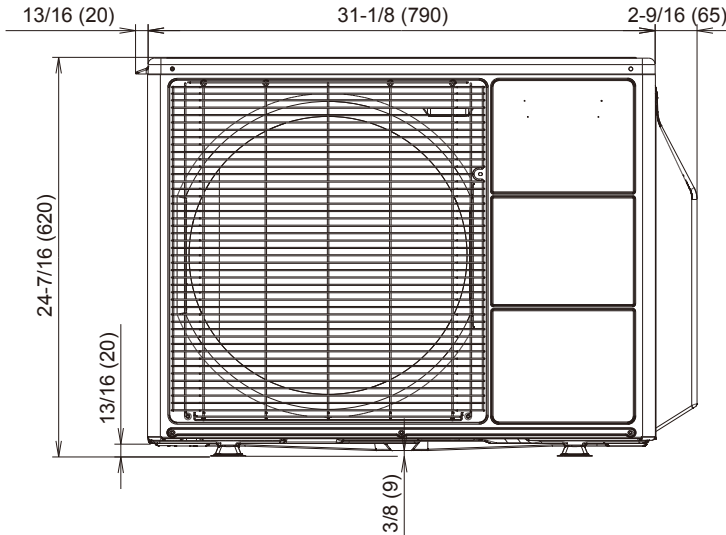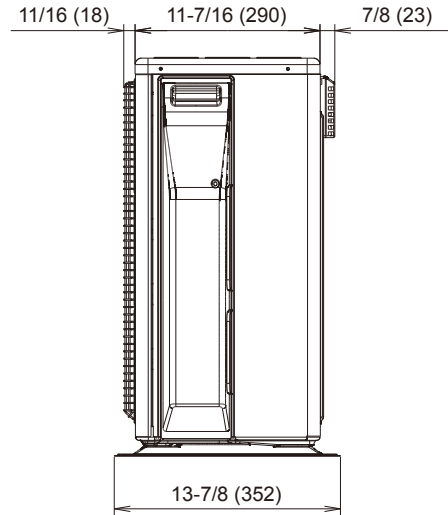## ■ MODEL : AOU9RLFF, AOU12RLFF, AOU15RLFF

Unit: in. (mm)

Top view

13/16 (20)   31-1/8 (790)   2-9/16 (65)   11/16 (18)   11-7/16 (290)   7/8 (23)

24-7/16 (620)

13/16 (20)

3/8 (9)

13-7/8 (352)

Front view

Side view

21-1/4 (540)

Airflow

12-5/8 (320)

Drain pipe mounting place Ø13/16 (20)

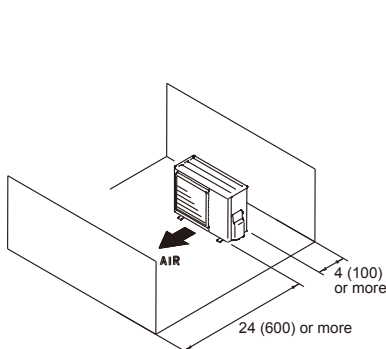4-Ø7/16 (11.3) hole

Bottom view
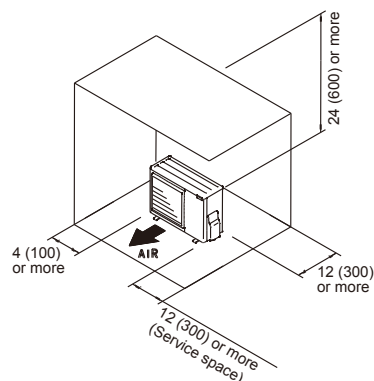
4-5/16 (110)

6-7/8 (175)

8-1/4 (209)
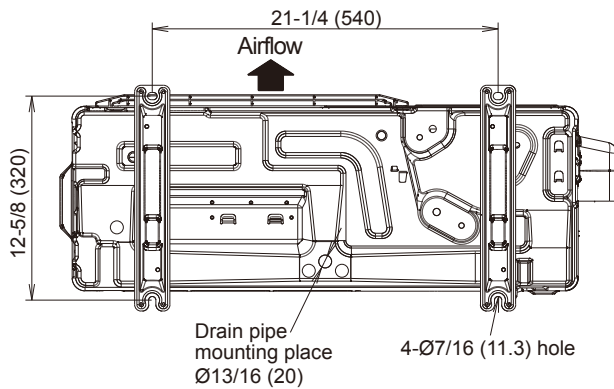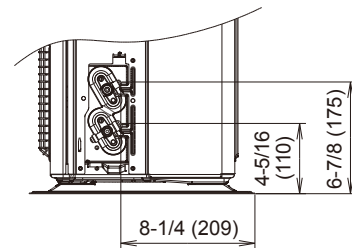
■ INSTALLATION PLACE
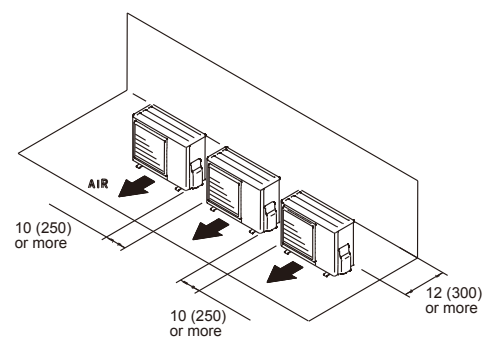
When there are obstacles at the back or front sides.

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

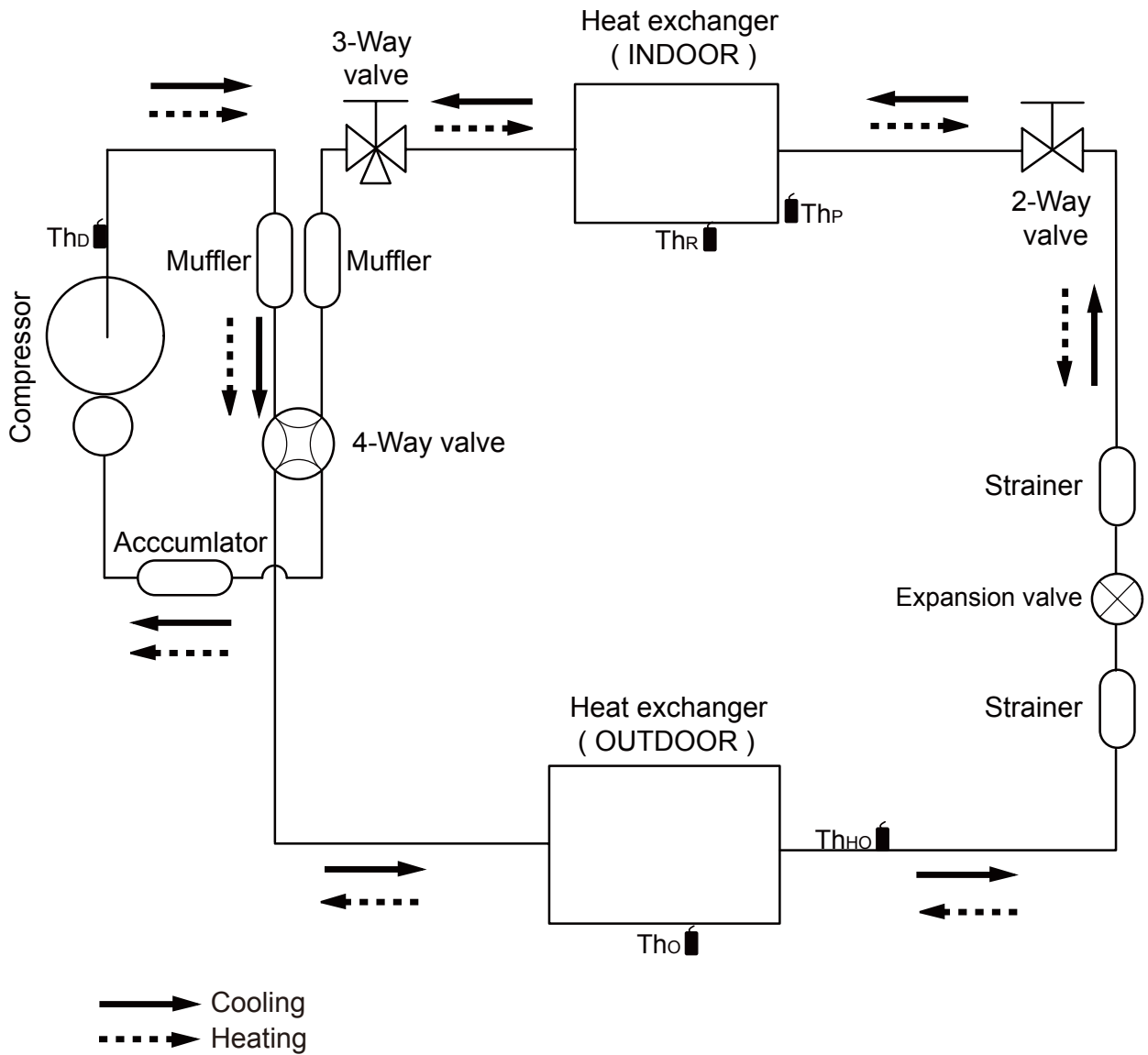When there are obstacles at the back, side with the installation of more than one unit.

AIR

4 (100) or more

24 (600) or more

24 (600) or more

4 (100) or more

AIR

12 (300) or more

12 (300) or more (Service space)

AIR

10 (250) or more

10 (250) or more

12 (300) or more

3. REFRIGERANT CIRCUIT

■ MODEL : AOU9RLFF, AOU12RLFF

Heat exchanger (INDOOR)

3-Way valve

2-Way valve

Th$_D$

Muffler   Muffler

Th$_R$ Th$_P$

Compressor

4-Way valve

Strainer

Acccumlator

Expansion valve

Strainer

Heat exchanger (OUTDOOR)

Th$_{HO}$

Th$_O$

→ Cooling

····► Heating

Th$_D$: Thermistor (Discharge Temp.)

Th$_O$: Thermistor (Outdoor Temp.)

Th$_{HO}$: Thermistor (Heat Exchanger Out Temp.)

Th$_R$: Thermistor (Room Temp.)

Th$_P$: Thermistor (Pipe Temp.)

Refrigerant pipe diameter
Liquid: 1/4" (6.35 mm)
Gas: 3/8" (9.52 mm): 9/12RLFF

■ MODEL : AOU15RLFF

3-Way valve

Heat exchanger (INDOOR)

ThP

ThR

2-Way valve

ThD

Muffler

Muffler

Compressor

4-Way valve

Strainer

Expansion valve

Strainer

Heat exchanger (OUTDOOR)

ThHO

Tho

→ Cooling

┅┅► Heating

ThD ▌ : Thermistor (Discharge Temp.)

Tho ▌ : Thermistor (Outdoor Temp.)

ThHO ▌ : Thermistor (Heat Exchanger Out Temp.)

ThR ▌ : Thermistor (Room Temp.)

ThP ▌ : Thermistor (Pipe Temp.)

Refrigerant pipe diameter
Liquid: 1/4" (6.35 mm)
Gas: 1/2" (12.70 mm): 15RLFF

4. WIRING DIAGRAMS

■ MODEL: AOU9RLFF, AOU12RLFF

REACTOR

WHITE — W10
RED — W11

THERMISTOR(PIPE)

BLACK 1 1
BLACK 2 2 CN71
BROWN 3 3
BROWN 4 4

THERMISTOR(DISCHARGE PIPE)

THERMISTOR(OUTDOOR TEMP.)

BLACK 1 1
2 2 CN70
BLACK 3 3

PRINTED CIRCUIT BOARD(MAIN)

WHITE
RED — W4
WHITE — W2
FUSE 250V5A
FUSE 250V20A — BLACK — W1
W3
BLACK
BLACK
BLACK
GREEN
GREEN

G TERMINAL
1 2 3 L1 L2 G

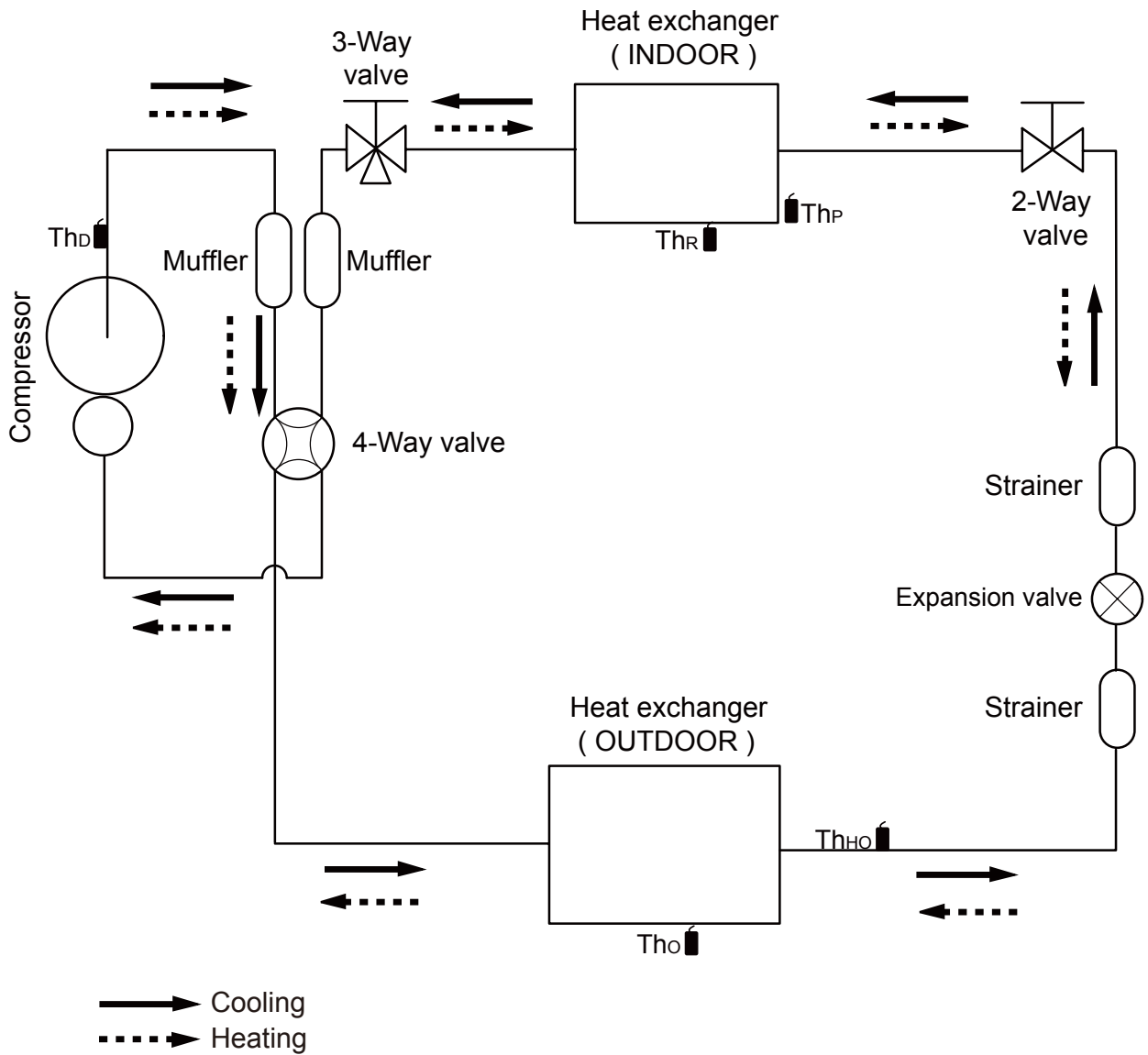TO INDOOR UNIT   TO POWER SUPPLY

RED — R
U W7 — WHITE — CM — COMPRESSOR
V W8 — S
W W9 — BLACK — C

CN800
1 1 RED
2 2
3 3
4 4 BLACK
5 5 WHITE   FM FAN MOTOR
6 6 YELLOW
7 7 BROWN

CN40
1 1 RED
2 2 BLUE
3 3 ORANGE
4 4 YELLOW   PMV EXPANSION VALVE
5 5 WHITE

CN30
1 1 BLACK
2 2   4WV 4-WAY VALVE
3 3 BLACK

- (02 - 05) -

■ MODEL: AOU15RLFF

CN42

| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |

WHITE WHITE WHITE WHITE WHITE

| 5 | 4 | 3 | 2 | 1 |
| 5 | 4 | 3 | 2 | 1 |

CN303

CN40

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE WHITE

| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

CN301

CN200

| 1 | 2 |
| 1 | 2 |

WHITE
BLACK

W306

W307

CN400

| 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 |

BLACK BLACK BLACK BLACK

| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 3 | 4 | 5 | 6 |

CN11

CAPACITOR PWB

TM302 — BLUE — W8
W13 — VIOLET — N — ACTPM
TM301 — YELLOW — W7
W12 — WHITE — P

IPM PWB

W17 — BLACK — −IN
W16 — RED — +IN   L2 L1

TM303 W
TM304 V
TM305 U

TM102 — BROWN — W29
TM101 — ORANGE — W28

CHOKE COIL

WHITE WHITE

CN1
| 1 | 2 |
| 1 | 2 |

WHITE
1
WHITE
2

CN100

TM600   TM601

GRAY   BLACK

W21   W9

CN110
| 1 | 2 |
| 1 | 2 |

WHITE   BLACK

W20   W19

FILTER PWB

W3 — GREEN
W18 — WHITE
W17 — BLACK
W2 — WHITE
W1 — BLACK

FUSE 250V25A

W4 — RED

MAIN PWB

THERMISTOR(OUTDOOR TEMP.)

CN62
| 3 | 3 | BLACK
| 2 | 2 |
| 1 | 1 | BLACK

THERMISTOR(DISCHARGE PIPE)

CN61
| 4 | 4 | BROWN OR BLACK
| 3 | 3 | BROWN OR BLACK
| 2 | 2 | BLACK
| 1 | 1 | BLACK

THERMISTOR(PIPE)

CN500
| 2 | 2 | BLACK
| 1 | 1 | BLACK

4WV 4-WAY VALVE

CN700
| 5 | 5 | WHITE
| 4 | 4 | YELLOW
| 3 | 3 | ORANGE
| 2 | 2 | BLUE
| 1 | 1 | RED

PMV EXPANSION VALVE

CN800
| 7 | 7 | BROWN
| 6 | 6 | YELLOW
| 5 | 5 | WHITE
| 4 | 4 | BLACK
| 3 | 3 |
| 2 | 2 |
| 1 | 1 | RED

FM FAN MOTOR

RED

COMPRESSOR

RED — R
WHITE — S — CM
BLACK — C

GREEN

TERMINAL

| | 1 | 2 | 3 | L1 | L2 | |

GREEN

TO INDOOR UNIT   TO POWER SUPPLY

5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

■ MODEL: AOU9RLFF, AOU12RLFF

COOLING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	*1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.893	0.909
		10m	33ft.	-	-	0.955	0.908	0.924
		7.5m	25ft.	-	0.975	0.959	0.912	0.928
		5m	17ft.	0.992	0.979	0.963	0.916	0.931
		0m	0ft.	1.000	0.987	0.970	0.923	0.939
	*2 Indoor unit is lower than outdoor unit	-5m	-17ft.	1.000	0.987	0.970	0.923	0.939
		-7.5m	-25ft.	-	0.987	0.970	0.923	0.939
		-10m	-33ft.	-	-	0.970	0.923	0.939
		-15m	-50ft.	-	-	-	0.923	0.939

HEATING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	*1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.956	0.938
		10m	33ft.	-	-	1.004	0.956	0.938
		7.5m	25ft.	-	1.013	1.004	0.956	0.938
		5m	17ft.	1.000	1.013	1.004	0.956	0.938
		0m	0ft.	1.000	1.013	1.004	0.956	0.938
	*2 Indoor unit is lower than outdoor unit	-5m	-17ft.	0.995	1.008	0.999	0.951	0.933
		-7.5m	-25ft.	-	1.005	0.997	0.948	0.931
		-10m	-33ft.	-	-	0.994	0.946	0.929
		-15m	-50ft.	-	-	-	0.937	0.919

Height difference H

*1 Indoor unit is higher than outdoor unit.

*2 Indoor unit is lower than outdoor unit.

■ MODEL : AOU15RLFF

COOLING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	*1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.951	0.950
		10m	33ft.	-	-	0.979	0.967	0.966
		7.5m	25ft.	-	0.988	0.983	0.971	0.970
		5m	17ft.	0.994	0.992	0.987	0.975	0.974
		0m	0ft.	1.002	1.000	0.995	0.983	0.982
	*2 Indoor unit is lower than outdoor unit	-5m	-17ft.	1.002	1.000	0.995	0.983	0.982
		-7.5m	-25ft.	-	1.000	0.995	0.983	0.982
		-10m	-33ft.	-	-	0.995	0.983	0.982
		-15m	-50ft.	-	-	-	0.983	0.982

HEATING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	*1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.994	0.979
		10m	33ft.	-	-	1.012	0.994	0.979
		7.5m	25ft.	-	1.000	1.012	0.994	0.979
		5m	17ft.	0.969	1.000	1.012	0.994	0.979
		0m	0ft.	0.969	1.000	1.012	0.994	0.979
	*2 Indoor unit is lower than outdoor unit	-5m	-17ft.	0.964	0.995	1.007	0.989	0.974
		-7.5m	-25ft.	-	0.993	1.004	0.986	0.972
		-10m	-33ft.	-	-	1.002	0.984	0.969
		-15m	-50ft.	-	-	-	0.974	0.959

Height difference H

*1 Indoor unit is higher than outdoor unit.

*2 Indoor unit is lower than outdoor unit.
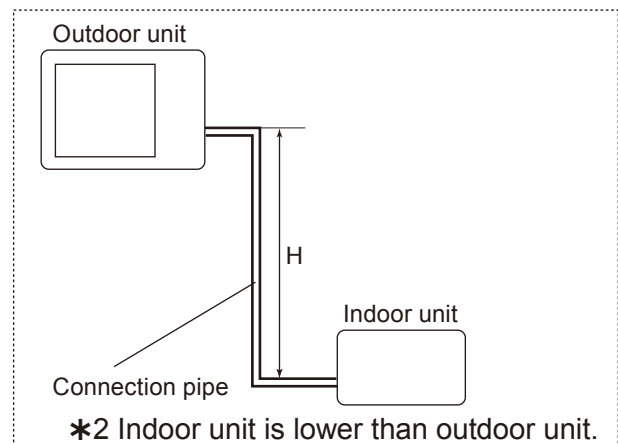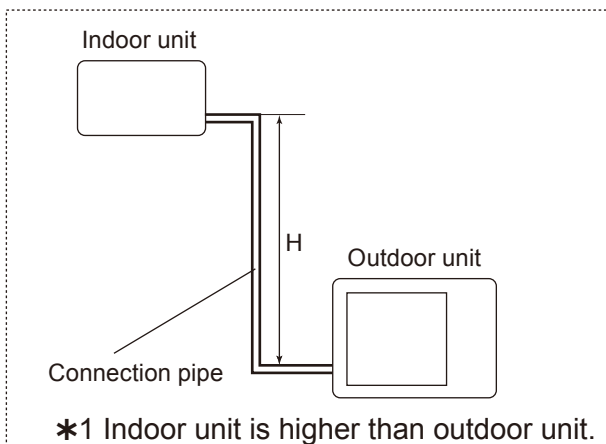
6. ADDITIONAL CHARGE CALCULATION

■ MODEL : AOU9RLFF, AOU12RLFF

Refrigerant type		R410A
Refrigerant amount	lbs. oz.	2lbs.10oz.
	g	1200

● Refrigerant charge

Pipe length	ft.	49 or less	66 (MAX)	0.22oz./ft. (20g/m)
	m	15 or less	20 (MAX)	
Additional charge	oz.	0	+3.5	
	g	0	+100	

■ MODEL : AOU15RLFF

Refrigerant type		R410A
Refrigerant amount	lbs. oz.	2lbs.12oz.
	g	1250

● Refrigerant charge

Pipe length	ft.	49 or less	66 (MAX)	0.22oz./ft. (20g/m)
	m	15 or less	20 (MAX)	
Additional charge	oz.	0	+3.5	
	g	0	+100	

7. AIRFLOW

■ MODEL：AOU9RLFF

● Cooling

Number of rotations (r.p.m.)	Airflow	
870	m^3/h	2050
	l/s	569
	CFM	1207

● Heating

Number of rotations (r.p.m.)	Airflow	
870	m^3/h	2050
	l/s	569
	CFM	1207

■ MODEL：AOU12RLFF

● Cooling

Number of rotations (r.p.m.)	Airflow	
1050	m^3/h	2475
	l/s	688
	CFM	1457

● Heating

Number of rotations (r.p.m.)	Airflow	
870	m^3/h	2050
	l/s	569
	CFM	1207

■ MODEL: AOU15RLFF

● Cooling

Number of rotations (r.p.m.)	Airflow	
	m^3/h	2475
1050	l/s	688
	CFM	1457

● Heating

Number of rotations (r.p.m.)	Airflow	
	m^3/h	2355
1000	l/s	654
	CFM	1386

8. OPERATION NOISE

8-1. NOISE LEVEL CURVE

■ MODEL : AOU9RLFF

● Cooling
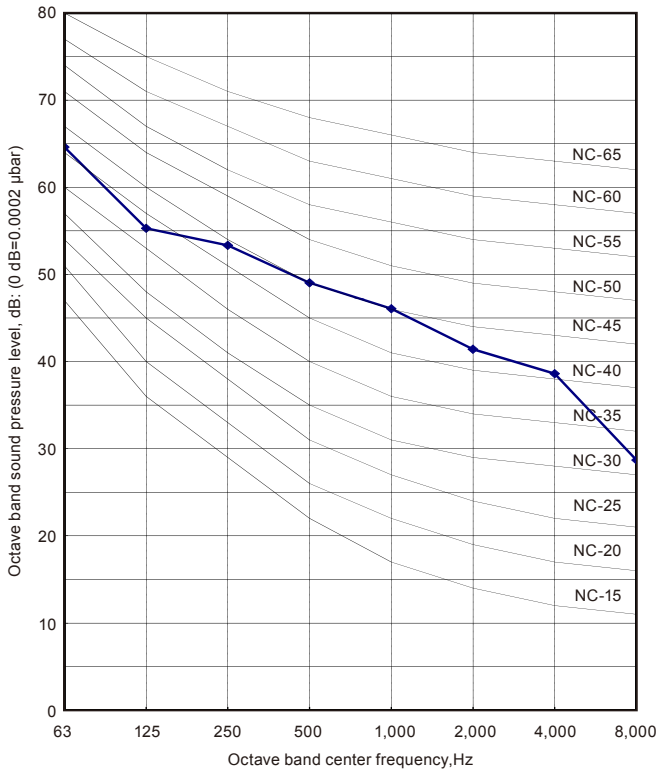
● Heating
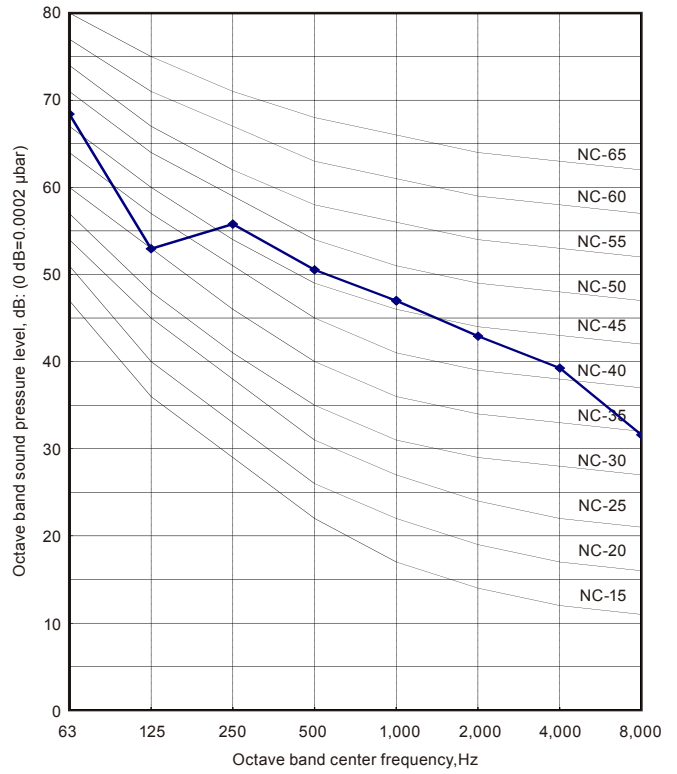
■ MODEL : AOU12RLFF

● Cooling
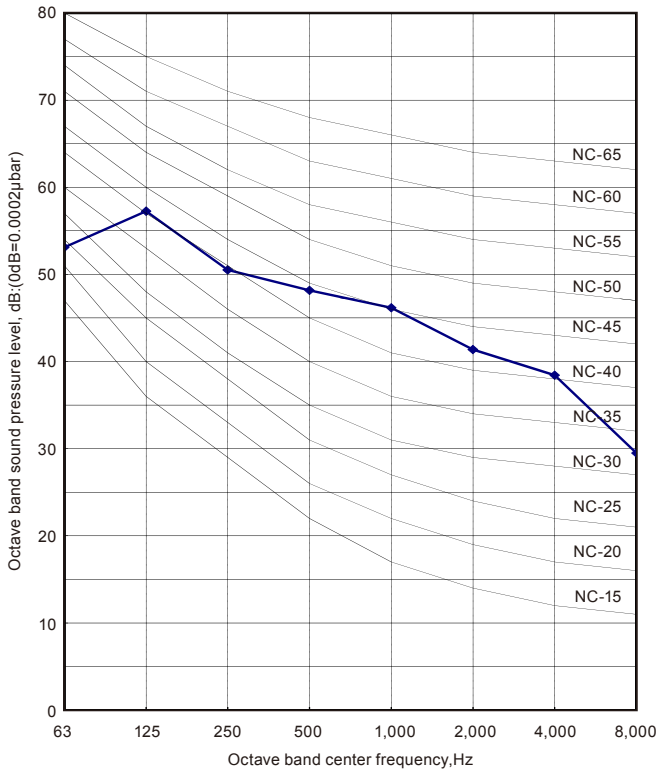
● Heating
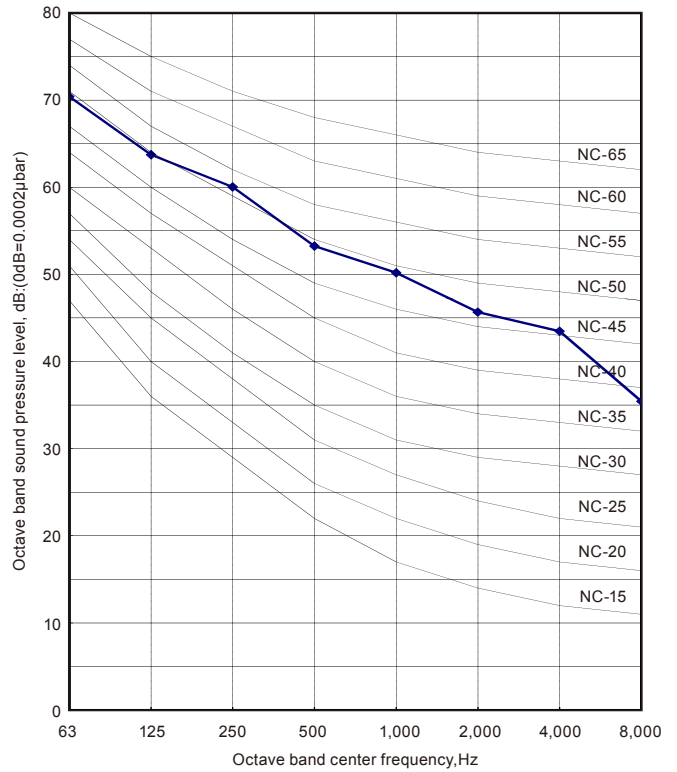
■MODEL : AOU15RLFF

●Cooling

Octave band sound pressure level, dB: (0 dB=0.0002 μbar)

NC-65
NC-60
NC-55
NC-50
NC-45
NC-40
NC-35
NC-30
NC-25
NC-20
NC-15

80
70
60
50
40
30
20
10
0

63   125   250   500   1,000   2,000   4,000   8,000

Octave band center frequency,Hz

●Heating

Octave band sound pressure level, dB: (0 dB=0.0002 μbar)

NC-65
NC-60
NC-55
NC-50
NC-45
NC-40
NC-35
NC-30
NC-25
NC-20
NC-15

80
70
60
50
40
30
20
10
0

63   125   250   500   1,000   2,000   4,000   8,000

Octave band center frequency,Hz

8-2. SOUND LEVEL CHECK POINT

Air Flow

Microphone

39-3/8in. (1m)

Microphone
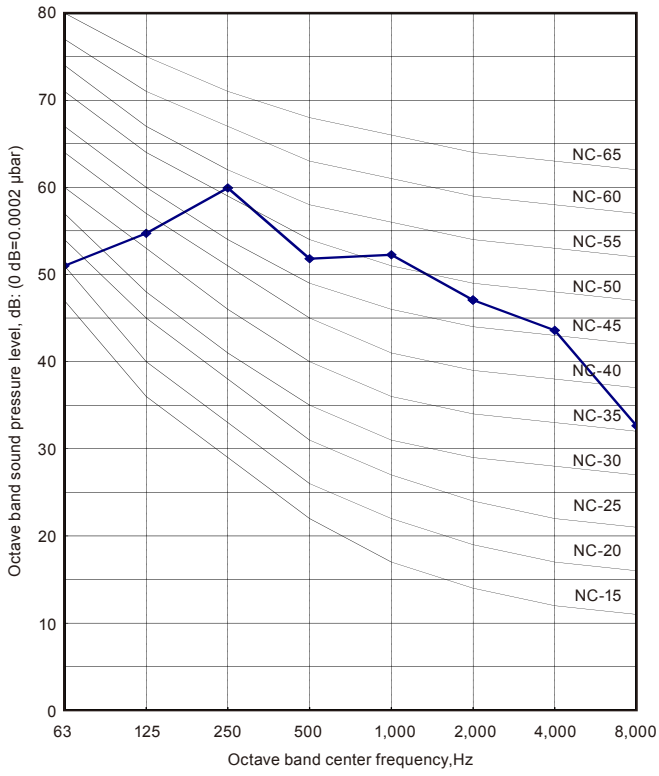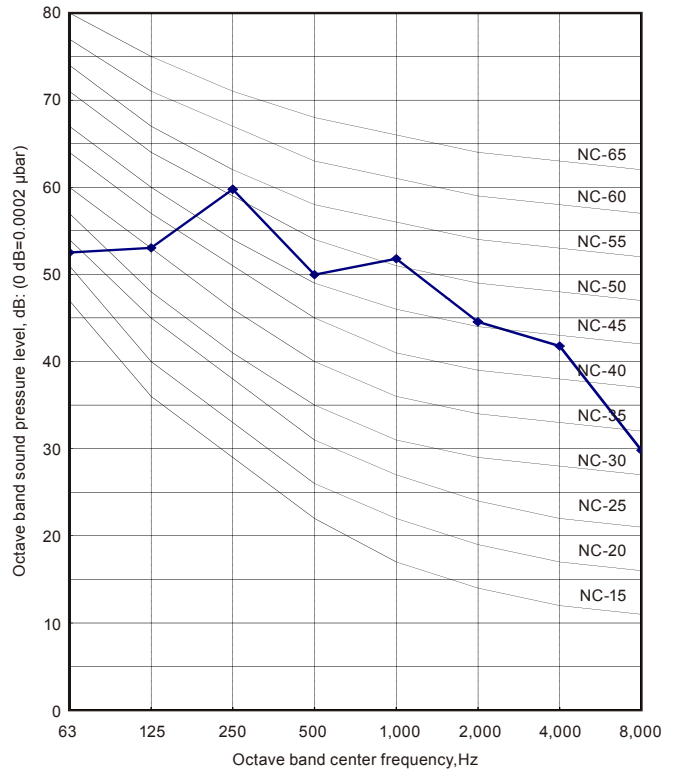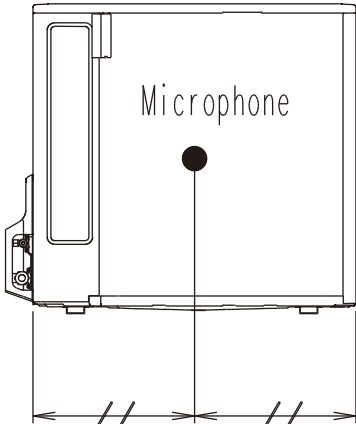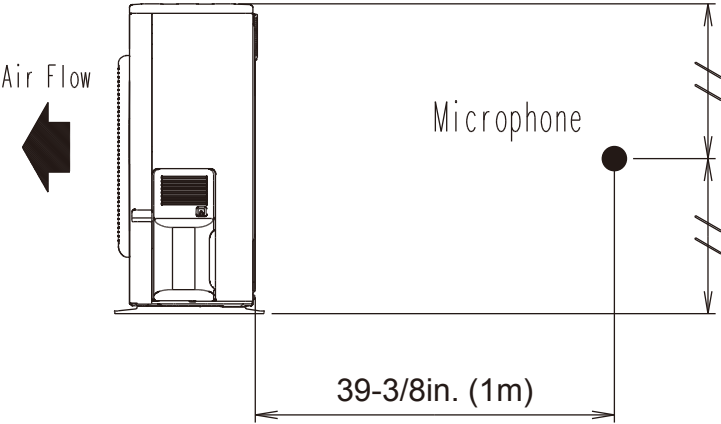
9. ELECTRIC CHARACTERISTICS

Model name			AOU9RLFF	AOU12RLFF	AOU15RLFF
Power supply	Voltage	V	208 / 230 ~		
	Frequency	Hz	60		
MCA		A	10.8		13.8
Starting Current		A	4.1	6.7	7.0
*1) Wiring Spec.:	MAX. CKT. BKR	A	15		20
	Power Cable	AWG	14		12

*1) Wiring Spec.:

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

MCA: Min Circuit Amp(Calculation based on UL1995)
MAX. CKT. BKR: Maximum Circuit Breaker

10. SAFETY DEVICES

	Protection form	Model		
		AOU9RLFF	AOU12RLFF	AOU15RLFF
Circuit protection	Current fuse (Near the terminal)	250V 20A		250V 25A
		250V 5A		
	Current fuse (Main printed circuit board)	250V 15A		250V 10A
		250V 3.15A		250V 3.15A
Fan motor protection	Thermal protection program	OFF: 212 ± 27 °F (100 ± 15 °C) ON: 203 ± 18 °F (95 ± 10 °C)		
Compressor protection	Thermal protection program (Discharge temp.)	OFF: 230 °F (110 °C) ON: After 7 minutes		