



AIR CONDITIONER

Wall Mounted type

DESIGN & TECHNICAL MANUAL

for Extra Cold Climate Area

INDOOR



ASU9RLS2
ASU12RLS2
ASU15RLS2

OUTDOOR



AOU9RLS2H
AOU12RLS2H
AOU15RLS2H

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

WALL MOUNTED TYPE :

ASU9RLS2

ASU12RLS2

ASU15RLS2

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1. FEATURES

MODEL

ASU9RLS2 / AOU9RLS2H
ASU12RLS2 / AOU12RLS2H
ASU15RLS2 / AOU15RLS2H



FEATURES

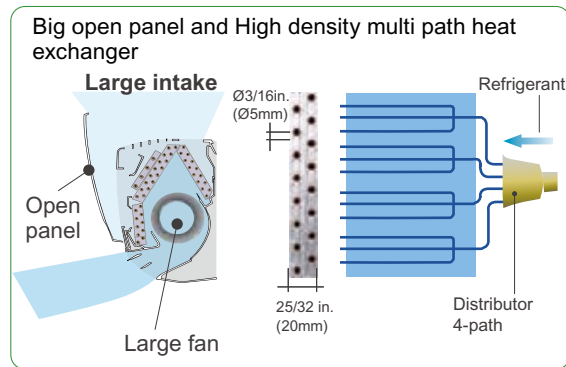
Energy efficiency

	Extra Cold Climate Area Model		
	ASU9RLS2	ASU12RLS2	ASU15RLS2
Seasonal Energy Efficiency Ratio (SEER)	27.2	25.0	21.5
Heating Seasonal Performance Factor (HSPF)	8.8	9.3	10.3

MEASUREMENT CONDITIONS
ANSI/ASHRAE STANDARD 37-1988

Thin & Slim design

Thin and slim design is realized by $\varnothing 3/16$ in. ($\varnothing 5$ mm) heat exchanger and high efficiency wind blower.



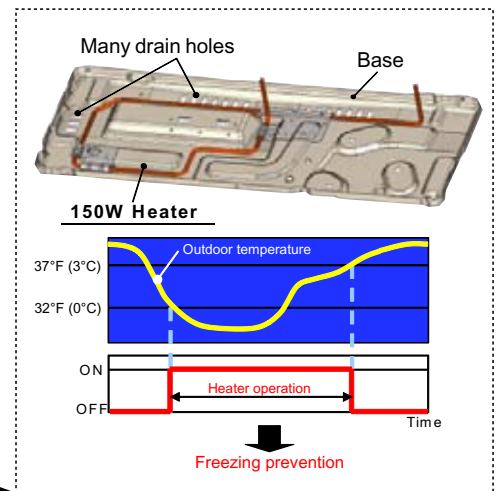
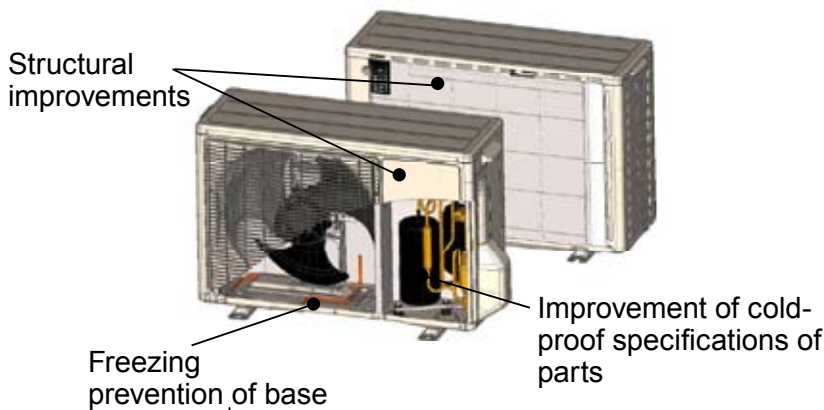
Low outdoor air temperature correspondence

Corresponds to heating operation at -15°F (-26°C) outdoor air temperature (AOU9, 12, 15RLS2H)

Heating
-15 to 75°F <small>(-26 to 24°C)</small>

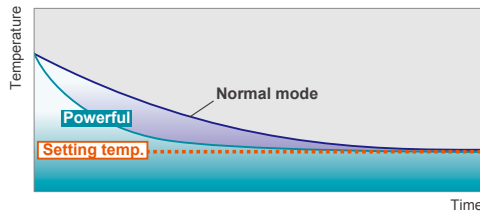
Specification improvement to allow operation under extremely low outdoor temperature -15°F (-26°C) without trouble

Extra cold climate area model



● **Powerful operation** *Only available with Wireless RC.

20 minutes continuous operation by maximum airflow and maximum compressor speed is possible. Rapid cooling and heating makes the room comfortable quickly.



● **Energy saving Program**

Human sensor catches movements of people in a room, and operates with lower capacity when the room is empty. When people come back to the room, it automatically returns to previous operating mode.

Energy saving operation by detecting someone's movement

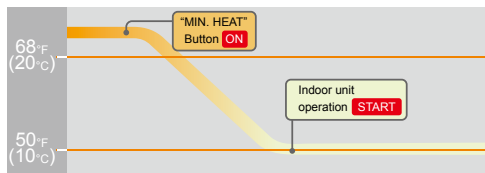


● **MIN. HEAT Operation** *Only available with Wireless RC.

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

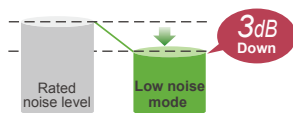
Caution)

- When the room temperature is higher than 50°F (10°C), "MIN. HEAT" operation will 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.



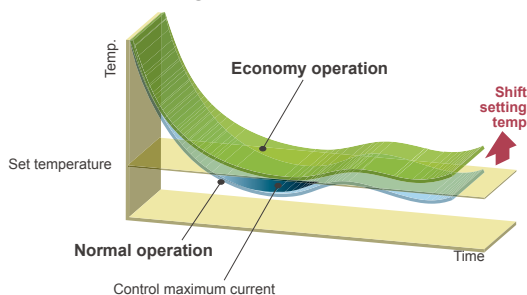
● **Outdoor unit low noise** *Only available with Wireless RC.

When air-conditioner operates in large capacity, operation noise of outdoor unit will be suppressed. In case of room temperature being close to setting temperature, operation noise might not decrease.



● **Economy operation**

Example : Cooling operation

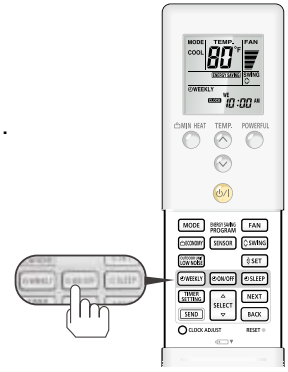
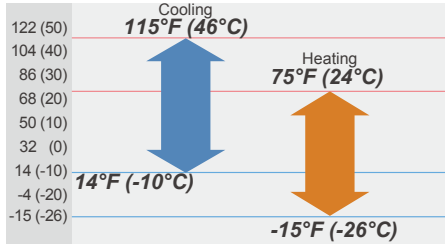


- Economy operation is energy saving, as the set temperature of indoor unit is shifted by 2°F (1°C) and the maximum electric value of the outdoor unit is suppressed.

● **3 Mode timer (Weekly/Program/Sleep)** *Only available with Wireless RC.

Weekly timer can be easily set by wireless remote controller.
ON, OFF can be set up to 4 times in 1 day and up to 28 times in 1 week.
For other modes, program timer and sleep timer can be also selected by one push.

● **Low outdoor air temperature correspondence**



2. WIRELESS REMOTE CONTROLLER

FEATURES



- * 3 Mode timer setup available (Weekly / Program / Sleep).
- * Easy operation.
- * Easy to change signal code (max. 4 units) by button operation.

● Simple function setting

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

● Built-in timers

Select from Three different timer programs (Weekly / Program / Sleep).

● Weekly timer

Weekly timer can be easily set by wireless remote controller.
ON, OFF can be set up to 4 times in 1 day and up to 28 times in 1 week.

● Program timer

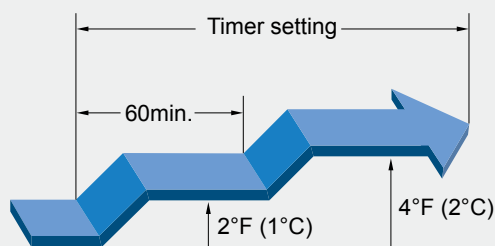
The program timer operates the on and off timer once within a 24 hour period.

● 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.

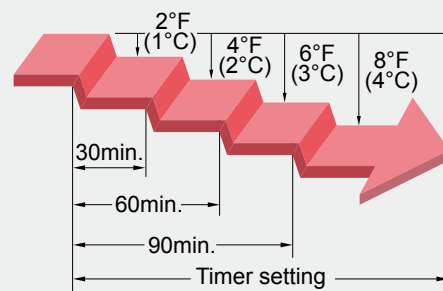
Cooling operation/dry operation

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).

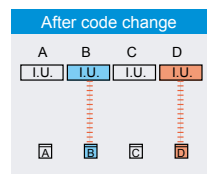
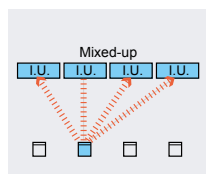


Heating operation

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

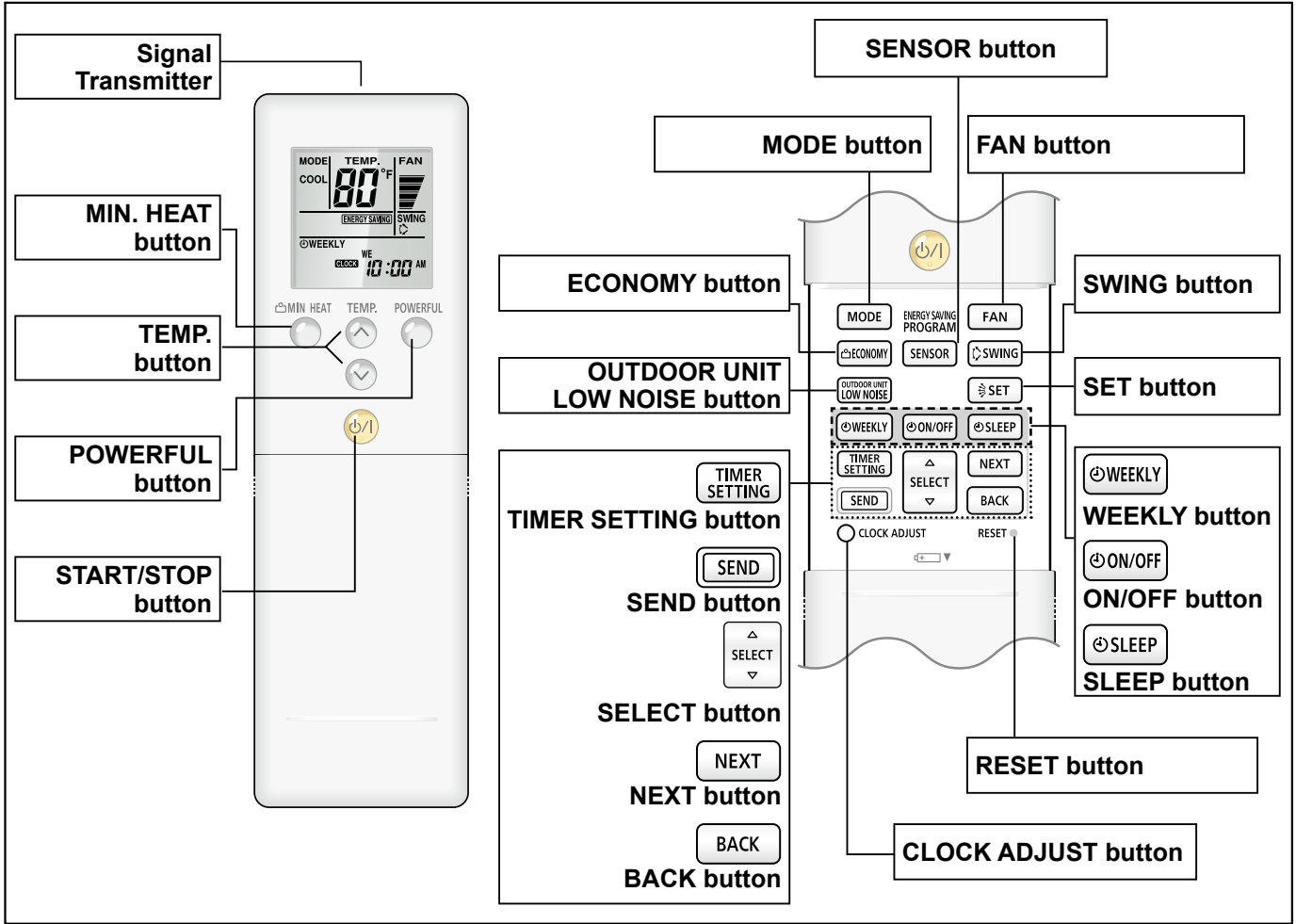


- Code selector switch eliminates unit being wrongly switched. (Up to 4 codes can be set.)
- *I.U.=Indoor unit

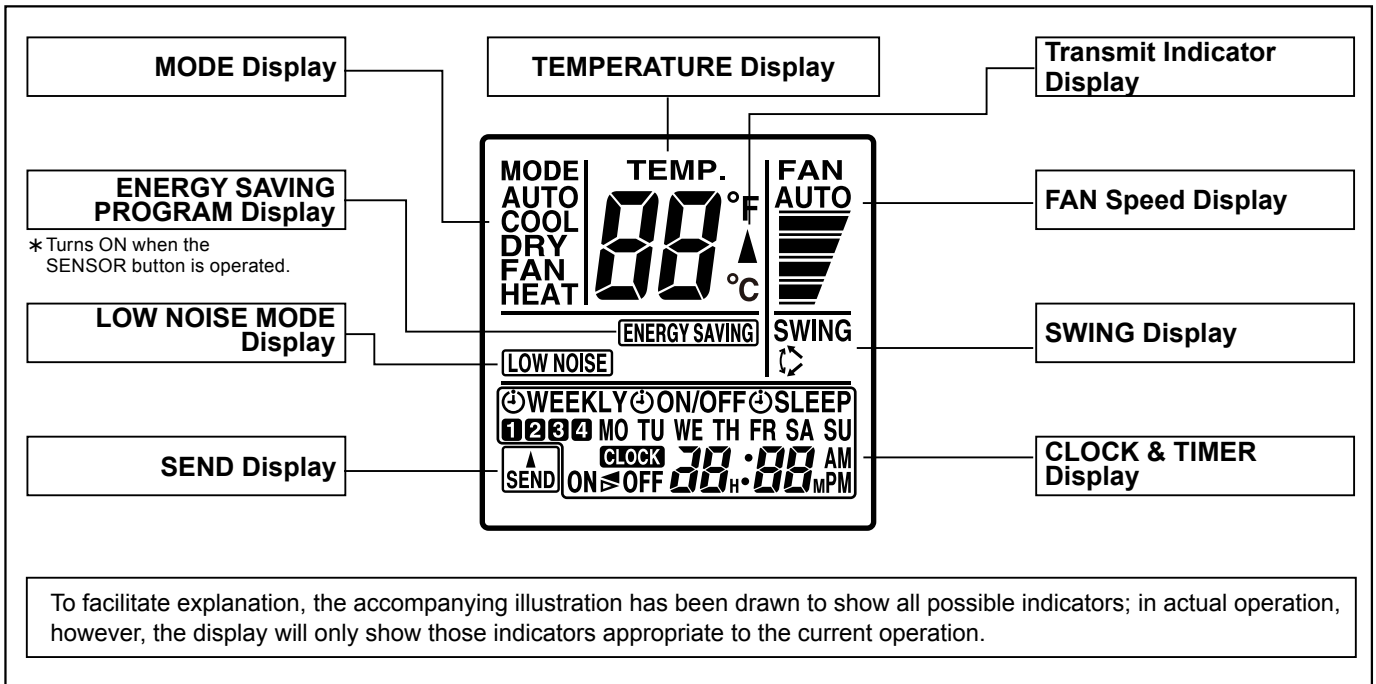
● To change the temperature unit

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

FUNCTIONS



Display panel



SPECIFICATION

DIMENSIONS [H × W × D]: in. (mm)	8-1/16 (205) × 2-13/32 (61) × 21/32 (17)
WEIGHT oz. (g)	4.3 (122)
ACCESSORY	Holder

3. SPECIFICATIONS

Type				WALL MOUNTED				
				INVERTER HEAT PUMP				
Model name				ASU9RLS2	ASU12RLS2	ASU15RLS2		
Power source				208 / 230V ~ 60Hz				
Available voltage range				187 - 253V ~ 60Hz				
Capacity	Cooling	Rated	kW	2.64	3.52	4.25		
			Btu/h	9000	12000	14500		
		Min - Max	kW	0.90 - 3.60	0.90 - 4.00	0.90 - 5.40		
	Heating	Rated	kW	3.52	4.69	5.28		
			Btu/h	12000	16000	18000		
		Min - Max	kW	0.90 - 6.45	0.90 - 6.50	0.90 - 7.00		
Input power	Cooling	Rated	kW	0.56	0.87	1.21		
				Max	0.90	1.08	1.93	
		Heating		Rated	0.80	1.20	1.35	
	Max			1.99	2.00	2.26		
	Current	Cooling		Rated	A	2.7	4.0	5.5
		Heating			3.7	5.5	6.1	
EER	Cooling		kW/kW	4.71	4.05	3.51		
			Btu/hW	16.1	13.8	12.0		
COP	Heating		kW/kW	4.40	3.91	3.91		
			Btu/hW	15.0	13.3	13.3		
SEER	Cooling		Btu/hW	27.2	25.0	21.5		
HSPF	Heating		Btu/hW	8.8	9.3	10.3		
Power factor	Cooling		%	90	95	96		
	Heating			94	95	96		
Moisture removal			pints/h (l/h)	2.7 (1.3)	3.8 (1.8)	4.4 (2.1)		
Maximum operating current *			Cooling	A	9.4	9.9		
			Heating		11.9	14.9		
Fan	Airflow rate	Cooling	CFM (m ³ /h)	High	500 (850)	529 (900)		
				Med	394 (670)	435 (740)		
				Low	324 (550)	335 (570)		
				Quiet	194 (330)	229 (390)		
		Heating		High	500 (850)	559 (950)		
				Med	418 (710)	435 (740)		
				Low	324 (550)	353 (600)		
				Quiet	194 (330)	253 (430)		
	Type × Q'ty			Cross flow fan × 1				
	Motor output			W				
Sound pressure level	Cooling	dB (A)	High	43	45			
			Med	37	40			
			Low	32	33			
			Quiet	21	25			
	Heating		High	43	45			
			Med	38	40			
			Low	32	34			
			Quiet	21	27			
Heat exchanger type	Dimensions (H × W × D)		in. (mm)	Main : 12-19/32 × 27-5/32 × 25/32 (320 × 690 × 20) Sub : 3-5/16 × 27-5/32 × 17/32 (84 × 690 × 13.3)				
	Fin pitch		FPI	Main : 23 Sub : 18				
	Rows × Stages			Main : 2 × 20 Sub : 1 × 4				
	Pipe type			Copper				
	Fin type			Aluminum				
Enclosure	Material		Polystyrene					
	Color		White Approximate color of MUNSSELL N9.3/					
Dimensions (H × W × D)	Net		inch	11 - 3/32 × 34 - 1/4 × 7 - 9/32				
			mm	282 × 870 × 185				
	Gross		inch	9 - 23/32 × 36 - 7/32 × 14 - 11/16				
			mm	247 × 920 × 373				
Weight	Net		lbs. (kg)	21 (9.5)				
			Gross	27 (12)				
Connection pipe	Size	Liquid	in. (mm)	Ø1/4 (Ø6.35)				
		Gas		Ø3/8 (9.52)	Ø1/2 (12.7)			
	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		PE					
	Size		in.(mm)	Ø17/32 (Ø13.8) (I.D.) Ø5/8 to Ø21/32 (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.7in (7.5m), Height difference:0 m. (Outdoor unit-Indoor unit)

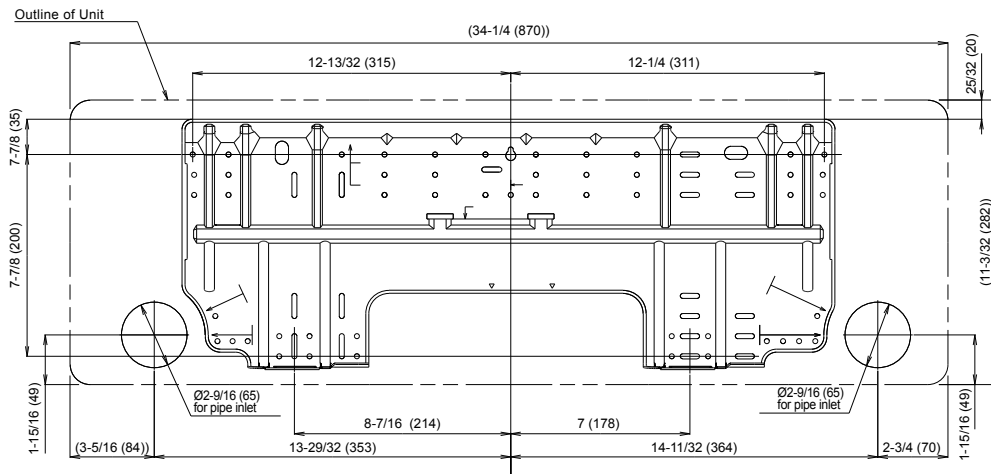
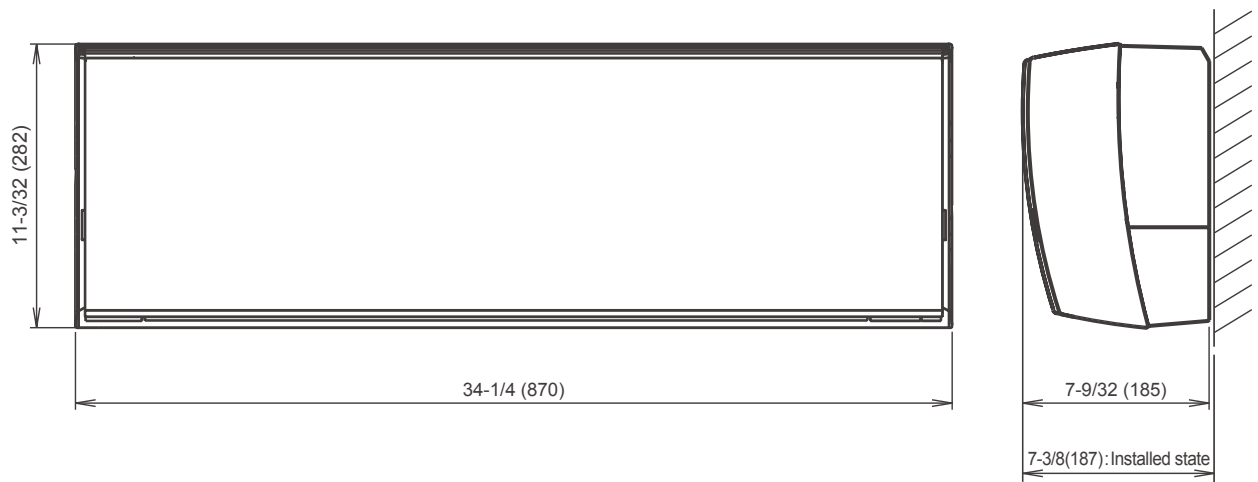
The protective function might work when using it outside the operation range.

*: The maximum current is the maximum value when operated within the operation range.

4. DIMENSIONS

■ MODEL: ASU9RLS2, ASU12RLS2, ASU15RLS2

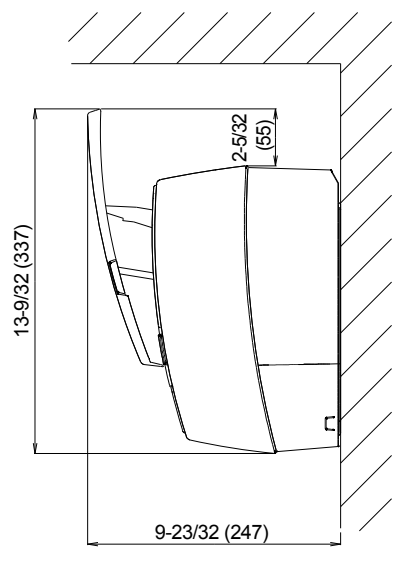
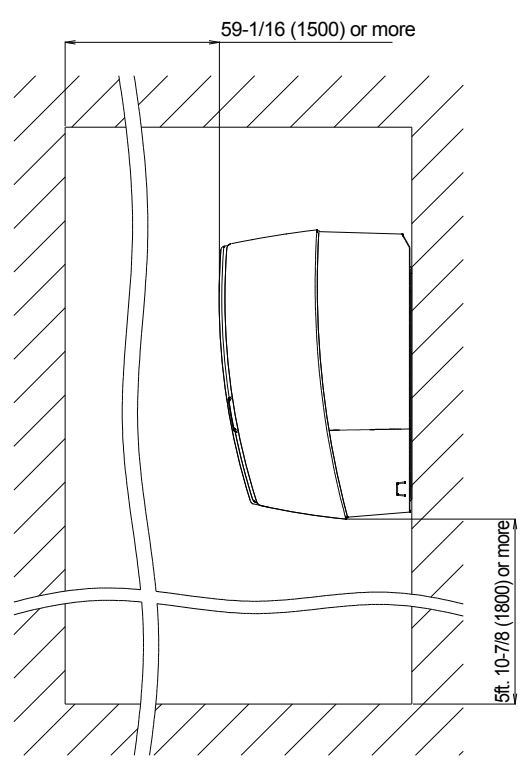
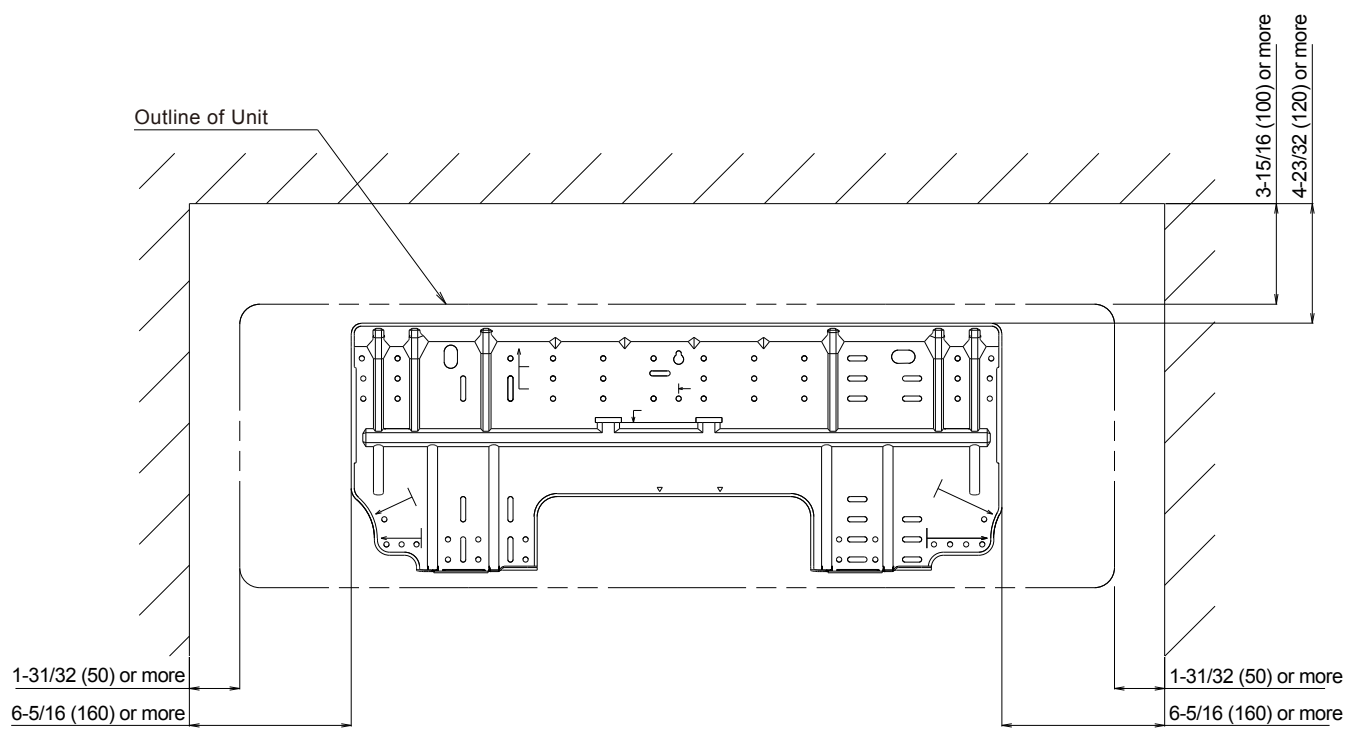
Unit : in. (mm)



		ASU9RLS2	ASU12RLS2	ASU15LS2
Refrigerant pipe flare connection	Liquid	Ø 1/4 in. (Ø 6.35 mm)		
	Gas	Ø 3/8 in. (Ø 9.52 mm)	Ø 1/2 in. (Ø 12.7 mm)	
Drain hose connection	Drain hose	(Ø 17/32 in. (I.D.), Ø 5/8 to Ø 21/32 in. (O.D.) [Ø 13.8 mm (I.D.), Ø 15.8 to 16.7 mm (O.D.)]		

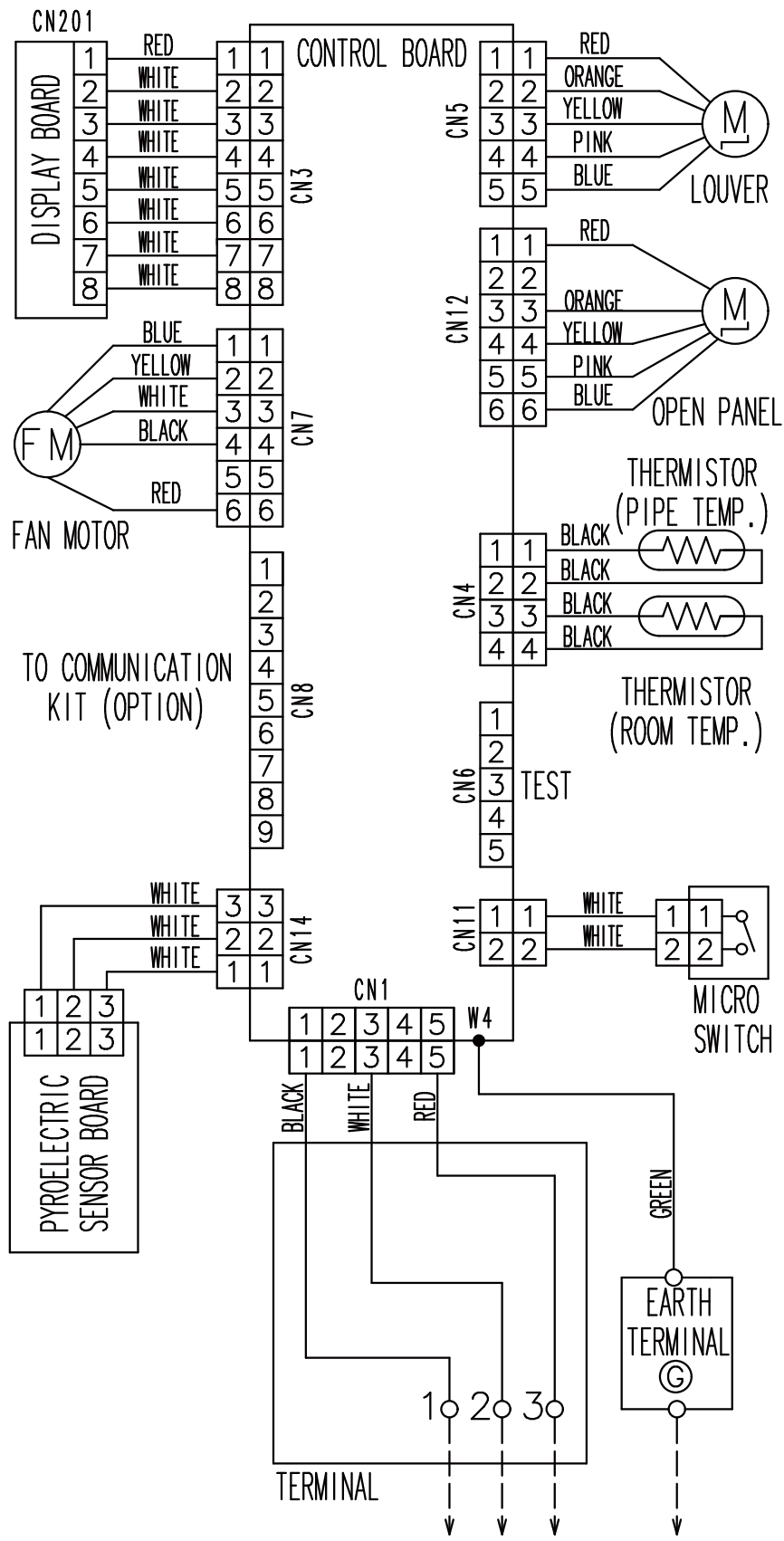
■ INSTALLATION PLACE

Unit : in. (mm)



5. WIRING DIAGRAMS

MODEL: ASU9RLS2, ASU12RLS2, ASU15RLS2



6. CAPACITY TABLE

6-1. COOLING CAPACITY

MODEL: ASU9RLS2

AFR	500
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Outdoor temperature	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		
67	8.4	8.1	0.38	9.4	8.1	0.39	10.3	8.9	0.40	10.7	9.6	0.40	11.3	9.5	0.40	11.9	10.2	0.41			
77	8.0	7.7	0.44	8.9	7.7	0.44	9.8	8.4	0.45	10.2	9.1	0.45	10.8	9.1	0.46	11.4	9.6	0.46			
87	7.6	7.3	0.49	8.4	7.3	0.49	9.3	8.0	0.50	9.6	8.6	0.50	10.2	8.6	0.51	10.8	9.1	0.51			
95	7.1	6.8	0.54	7.9	6.9	0.55	8.7	7.5	0.56	9.0	8.1	0.56	9.5	8.0	0.57	10.1	8.6	0.57			
104	6.0	6.1	0.50	6.7	6.1	0.51	7.4	6.7	0.52	7.6	7.2	0.52	8.1	7.2	0.53	8.5	7.6	0.53			
115	5.5	5.6	0.50	6.2	5.7	0.51	6.8	6.2	0.52	7.0	6.7	0.52	7.4	6.6	0.53	7.8	7.1	0.53			

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

AFR	14.2
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Outdoor temperature	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		
19.4	2.47	2.37	0.38	2.75	2.38	0.39	3.03	2.60	0.40	3.13	2.80	0.40	3.31	2.79	0.40	3.50	2.98	0.41			
25.0	2.35	2.25	0.44	2.62	2.26	0.44	2.89	2.47	0.45	2.98	2.66	0.45	3.15	2.65	0.46	3.33	2.83	0.46			
30.6	2.22	2.12	0.49	2.48	2.14	0.49	2.73	2.33	0.50	2.81	2.52	0.50	2.98	2.51	0.51	3.15	2.67	0.51			
35.0	2.08	2.00	0.54	2.32	2.01	0.55	2.56	2.19	0.56	2.64	2.37	0.56	2.80	2.36	0.57	2.95	2.51	0.57			
40.0	1.76	1.78	0.50	1.96	1.79	0.51	2.16	1.95	0.52	2.23	2.11	0.52	2.36	2.10	0.53	2.50	2.24	0.53			
46.0	1.62	1.65	0.50	1.81	1.66	0.51	1.99	1.81	0.52	2.05	1.96	0.52	2.18	1.95	0.53	2.30	2.08	0.53			

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

MODEL: ASU12RLS2

AFR	500
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Outdoor temperature	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		
67	11.2	9.7	0.60	12.5	9.7	0.61	13.8	10.6	0.61	14.2	11.5	0.62	15.1	11.4	0.62	15.9	12.2	0.63			
77	10.7	9.2	0.68	11.9	9.3	0.69	13.1	10.1	0.70	13.5	10.9	0.70	14.3	10.9	0.71	15.2	11.6	0.72			
87	10.1	8.7	0.76	11.3	8.8	0.77	12.4	9.5	0.78	12.8	10.3	0.78	13.6	10.3	0.79	14.3	10.9	0.80			
95	9.5	8.2	0.84	10.6	8.2	0.85	11.6	9.0	0.87	12.0	9.7	0.87	12.7	9.7	0.88	13.4	10.3	0.89			
104	8.0	7.3	0.78	8.9	7.3	0.79	9.8	8.0	0.80	10.1	8.6	0.81	10.8	8.6	0.82	11.4	9.2	0.83			
115	7.4	6.8	0.78	8.2	6.8	0.79	9.1	7.4	0.81	9.3	8.0	0.81	9.9	8.0	0.82	10.5	8.5	0.83			

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

AFR	14.2
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Outdoor temperature	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		
19.4	3.29	2.84	0.60	3.67	2.86	0.61	4.04	3.12	0.61	4.17	3.37	0.62	4.42	3.35	0.62	4.67	3.57	0.63			
25.0	3.13	2.70	0.68	3.49	2.71	0.69	3.85	2.96	0.70	3.97	3.20	0.70	4.20	3.18	0.71	4.44	3.39	0.72			
30.6	2.96	2.55	0.76	3.30	2.56	0.77	3.64	2.80	0.78	3.75	3.02	0.78	3.98	3.01	0.79	4.20	3.21	0.80			
35.0	2.78	2.40	0.84	3.09	2.41	0.85	3.41	2.63	0.87	3.52	2.84	0.87	3.73	2.83	0.88	3.94	3.01	0.89			
40.0	2.35	2.14	0.78	2.62	2.15	0.79	2.88	2.34	0.80	2.97	2.53	0.81	3.15	2.52	0.82	3.33	2.69	0.83			
46.0	2.16	1.98	0.78	2.41	1.99	0.79	2.66	2.17	0.81	2.74	2.35	0.81	2.90	2.34	0.82	3.07	2.49	0.83			

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

MODEL: ASU15RLS2

AFR	529
-----	-----

		Indoor temperature																				
		°FDB			64			70			75			80			85			90		
		°FWB			54			60			63			67			71			73		
Outdoor temperature	°FDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP			
	67	13.5	10.7	0.84	15.0	10.8	0.86	16.6	11.8	0.87	17.1	12.7	0.87	18.1	12.7	0.88	19.1	13.5	0.89			
	77	12.9	10.2	0.95	14.3	10.3	0.96	15.8	11.2	0.98	16.3	12.1	0.98	17.2	12.1	0.99	18.2	12.9	1.00			
	87	12.2	9.7	1.06	13.6	9.8	1.07	15.0	10.6	1.09	15.4	11.5	1.10	16.4	11.5	1.11	17.3	12.2	1.12			
	95	11.5	9.1	1.17	12.8	9.2	1.19	14.1	10.0	1.20	14.5	10.8	1.21	15.4	10.8	1.22	16.2	11.5	1.23			
	104	10.1	8.0	1.15	11.2	8.1	1.17	12.4	8.8	1.19	12.7	9.5	1.19	13.5	9.5	1.20	14.3	10.1	1.22			
	115	9.2	7.3	1.13	10.2	7.3	1.15	11.3	8.0	1.17	11.6	8.6	1.17	12.3	8.6	1.19	13.0	9.2	1.20			

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

AFR	15.0
-----	------

		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	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP			
	19.4	3.95	3.15	0.84	4.40	3.17	0.86	4.85	3.45	0.87	5.00	3.73	0.87	5.30	3.71	0.88	5.60	3.96	0.89			
	25.0	3.77	3.00	0.95	4.20	3.02	0.96	4.63	3.29	0.98	4.77	3.55	0.98	5.05	3.54	0.99	5.34	3.77	1.00			
	30.6	3.57	2.84	1.06	3.98	2.86	1.07	4.39	3.12	1.09	4.52	3.37	1.10	4.79	3.36	1.11	5.07	3.58	1.12			
	35.0	3.36	2.67	1.17	3.74	2.69	1.19	4.12	2.93	1.20	4.25	3.17	1.21	4.50	3.15	1.22	4.76	3.36	1.23			
	40.0	2.95	2.35	1.15	3.29	2.36	1.17	3.62	2.58	1.19	3.73	2.78	1.19	3.96	2.77	1.20	4.18	2.95	1.22			
	46.0	2.69	2.14	1.13	2.99	2.15	1.15	3.30	2.35	1.17	3.40	2.53	1.17	3.61	2.52	1.19	3.81	2.69	1.20			

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

6-2. HEATING CAPACITY

MODEL: ASU9RLS2

AFR	500
-----	-----

		Indoor temperature								
		°FDB		60		65		70		75
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-17	11.6	2.10	11.4	2.14	11.1	2.18	10.5	2.26
	-5	-7	14.7	2.12	14.3	2.16	14.0	2.20	13.3	2.28
	5	3	16.1	2.13	15.7	2.17	15.4	2.21	14.6	2.30
	14	12	16.8	2.06	16.4	2.10	16.0	2.14	15.2	2.22
	23	19	18.3	1.99	17.9	2.03	17.5	2.07	16.6	2.15
	32	28	18.8	1.93	18.4	1.97	17.9	2.00	17.0	2.08
	41	37	21.3	1.85	20.8	1.89	20.3	1.93	19.3	2.00
	47	43	23.1	1.91	22.6	1.95	22.0	1.99	20.9	2.07
	50	47	25.5	1.94	24.9	1.98	24.3	2.02	23.1	2.10
59	50	26.5	1.95	25.8	1.99	25.2	2.03	23.9	2.11	

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

AFR	14.2
-----	------

		Indoor temperature								
		°CDB		15.6		18.3		21.1		23.9
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
	-26.1	-27.0	3.41	2.10	3.33	2.14	3.25	2.18	3.09	2.26
	-20.6	-21.7	4.31	2.12	4.20	2.16	4.10	2.20	3.90	2.28
	-15.0	-16.1	4.73	2.13	4.61	2.17	4.50	2.21	4.28	2.30
	-10.0	-11.1	4.91	2.06	4.80	2.10	4.68	2.14	4.45	2.22
	-5.0	-7.2	5.38	1.99	5.25	2.03	5.12	2.07	4.86	2.15
	0.0	-2.2	5.52	1.93	5.39	1.97	5.26	2.00	5.00	2.08
	5.0	2.8	6.25	1.85	6.10	1.89	5.95	1.93	5.65	2.00
	8.3	6.1	6.77	1.91	6.61	1.95	6.45	1.99	6.13	2.07
	10.0	8.3	7.48	1.94	7.30	1.98	7.13	2.02	6.77	2.10
15.0	10.0	7.75	1.95	7.57	1.99	7.38	2.03	7.02	2.11	

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

MODEL: ASU12RLS2

AFR	500
-----	-----

		Indoor temperature								
		°FDB		60		65		70		75
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-17	12.4	2.15	12.1	2.19	11.8	2.23	11.2	2.31
	-5	-7	15.8	2.17	15.4	2.21	15.0	2.25	14.3	2.33
	5	3	17.6	2.17	17.2	2.21	16.8	2.25	15.9	2.34
	14	12	18.3	2.09	17.8	2.13	17.4	2.17	16.5	2.25
	23	19	20.0	2.02	19.5	2.06	19.0	2.10	18.1	2.17
	32	28	20.6	1.95	20.1	1.99	19.6	2.03	18.6	2.10
	41	37	22.5	1.86	21.9	1.90	21.4	1.94	20.3	2.02
	47	43	23.2	1.92	22.7	1.96	22.1	2.00	21.0	2.08
	50	47	25.6	1.94	25.0	1.98	24.4	2.02	23.2	2.10
59	50	26.6	1.95	25.9	1.99	25.3	2.03	24.0	2.11	

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

AFR	14.2
-----	------

		Indoor temperature								
		°CDB		15.6		18.3		21.1		23.9
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
	-26.1	-27.0	3.62	2.15	3.54	2.19	3.45	2.23	3.28	2.31
	-20.6	-21.7	4.63	2.17	4.52	2.21	4.41	2.25	4.19	2.33
	-15.0	-16.1	5.16	2.17	5.03	2.21	4.91	2.25	4.66	2.34
	-10.0	-11.1	5.36	2.09	5.23	2.13	5.10	2.17	4.85	2.25
	-5.0	-7.2	5.86	2.02	5.72	2.06	5.58	2.10	5.30	2.17
	0.0	-2.2	6.03	1.95	5.88	1.99	5.74	2.03	5.45	2.10
	5.0	2.8	6.58	1.86	6.43	1.90	6.27	1.94	5.96	2.02
	8.3	6.1	6.80	1.92	6.64	1.96	6.48	2.00	6.15	2.08
	10.0	8.3	7.52	1.94	7.34	1.98	7.16	2.02	6.80	2.10
15.0	10.0	7.79	1.95	7.60	1.99	7.42	2.03	7.05	2.11	

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

MODEL: ASU15RLS2

AFR	559
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Outdoor temperature		Indoor temperature									
		°FDB		60		65		70		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
-15	-17	15.8	2.23	15.4	2.28	15.0	2.32	14.3	2.41		
-5	-7	17.6	2.26	17.1	2.31	16.7	2.35	15.9	2.44		
5	3	19.3	2.29	18.9	2.34	18.4	2.38	17.5	2.47		
14	12	20.7	2.33	20.2	2.38	19.7	2.42	18.7	2.51		
23	19	21.6	2.43	21.1	2.48	20.5	2.53	19.5	2.63		
32	28	21.8	2.63	21.3	2.68	20.7	2.73	19.7	2.83		
41	37	23.8	2.32	23.2	2.37	22.7	2.42	21.5	2.52		
47	43	25.1	2.17	24.5	2.21	23.9	2.26	22.7	2.35		
50	47	27.7	1.94	27.1	1.98	26.4	2.02	25.1	2.10		
59	50	28.7	1.95	28.0	1.99	27.4	2.03	26.0	2.11		

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

AFR	15.8
-----	------

Outdoor temperature		Indoor temperature									
		°CDB		16		18		20		24	
		°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
-26.1	-27.0	4.62	2.23	4.51	2.28	4.40	2.32	4.18	2.41		
-20.6	-21.7	5.15	2.26	5.02	2.31	4.90	2.35	4.66	2.44		
-15.0	-16.1	5.67	2.29	5.54	2.34	5.40	2.38	5.13	2.47		
-10.0	-11.1	6.06	2.33	5.92	2.38	5.78	2.42	5.49	2.51		
-5.0	-7.2	6.32	2.43	6.17	2.48	6.02	2.53	5.72	2.63		
0.0	-2.2	6.38	2.63	6.23	2.68	6.08	2.73	5.77	2.83		
5.0	2.8	6.97	2.32	6.81	2.37	6.64	2.42	6.31	2.52		
8.3	6.1	7.35	2.17	7.18	2.21	7.00	2.26	6.65	2.35		
10.0	8.3	8.12	1.94	7.93	1.98	7.74	2.02	7.35	2.10		
15.0	10.0	8.42	1.95	8.22	1.99	8.02	2.03	7.62	2.11		

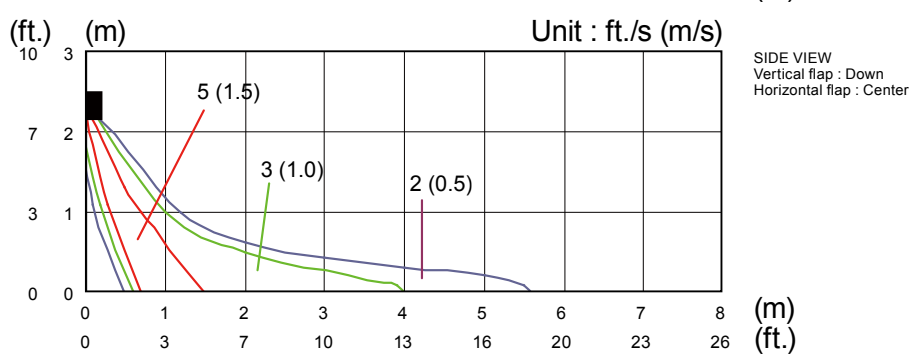
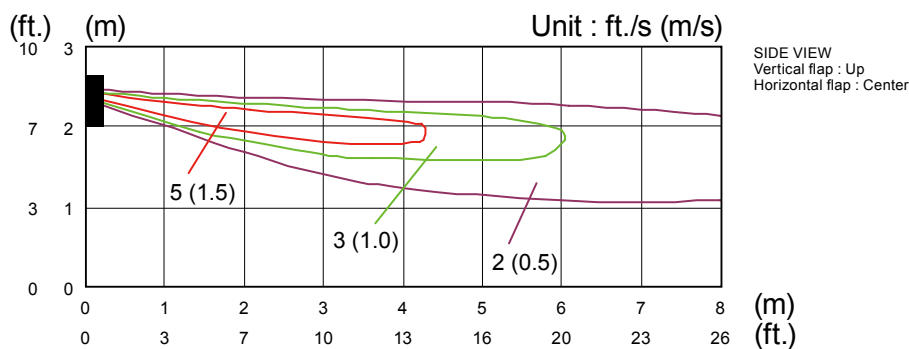
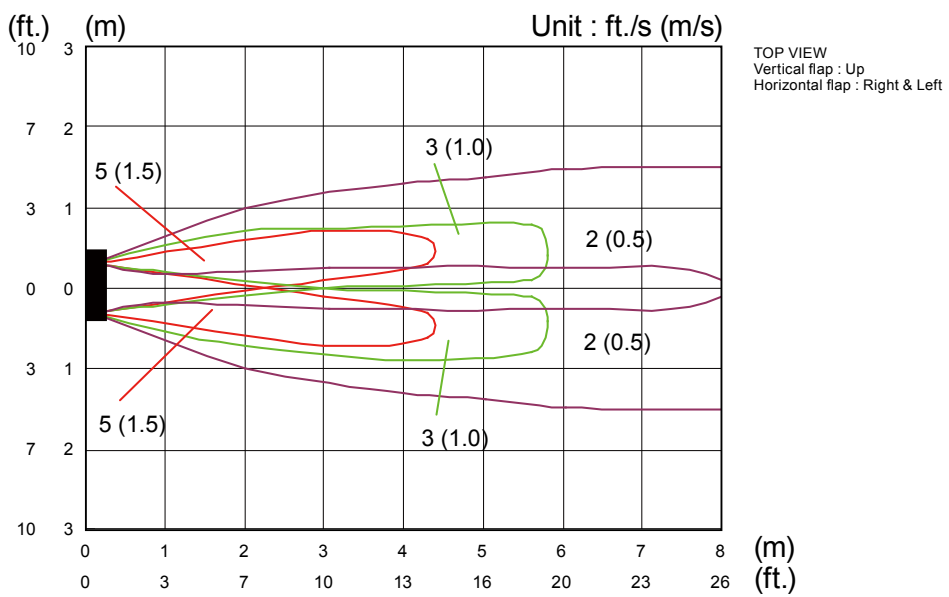
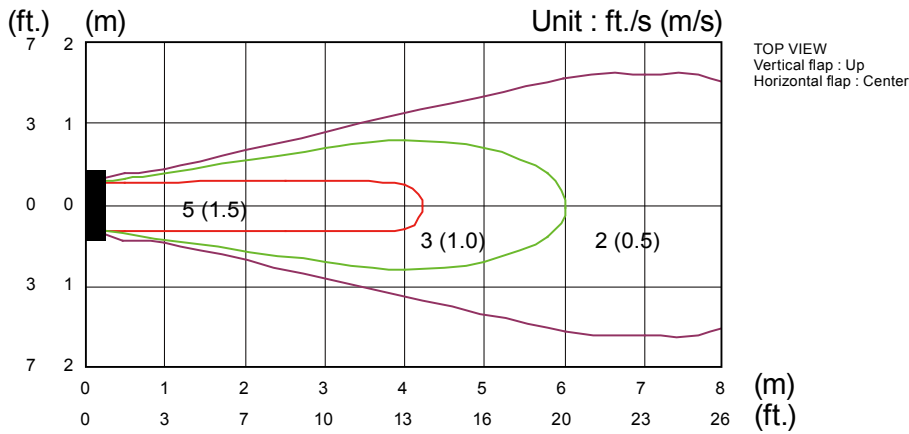
AFR : Air Flow Rate (m³/min)
TC : Total Capacity (kW)
IP : Input Power (kW)

7. FAN PERFORMANCE

7-1. AIR VELOCITY DISTRIBUTION

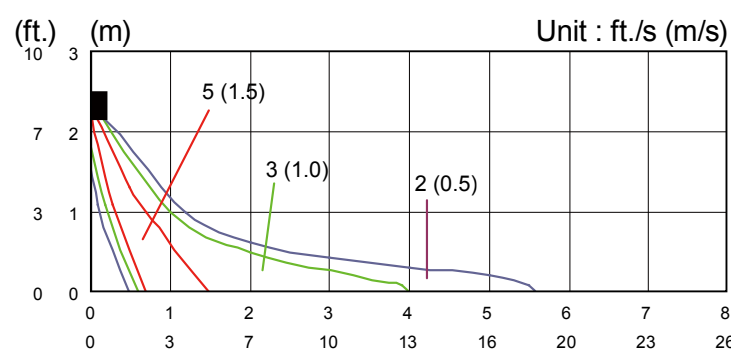
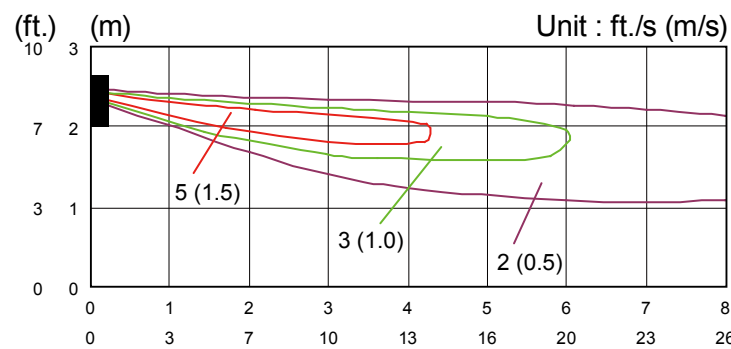
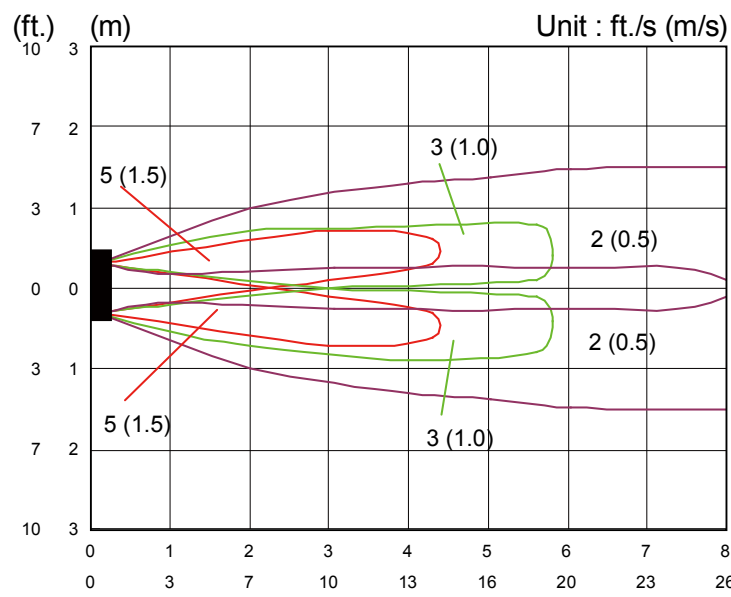
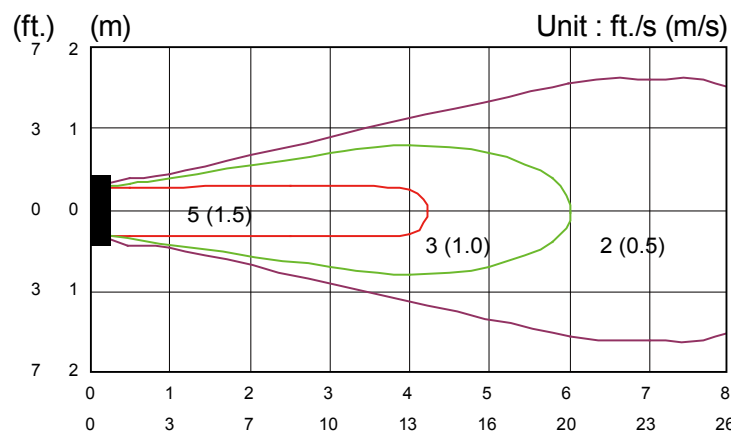
■ MODEL: ASU9RLS2, ASU12RLS2

Note:
Fan speed : High
Operation mode : FAN



Note:
Fan speed : High
Operation mode : FAN

MODEL: ASU15RLS2



7-2. AIRFLOW

■ MODEL: ASU9RLS2, ASU12RLS2

● Cooling

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1370	850	m ³ /h
		236	l/s
		500	CFM
MED	1120	670	m ³ /h
		186	l/s
		394	CFM
LOW	960	550	m ³ /h
		153	l/s
		324	CFM
QUIET	650	330	m ³ /h
		92	l/s
		194	CFM

● Heating

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1370	850	m ³ /h
		236	l/s
		500	CFM
MED	1180	710	m ³ /h
		197	l/s
		418	CFM
LOW	960	550	m ³ /h
		153	l/s
		324	CFM
QUIET	650	330	m ³ /h
		92	l/s
		194	CFM

■ MODEL: ASU15RLS2

● Cooling

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1440	900	m ³ /h
		250	l/s
		529	CFM
MED	1220	740	m ³ /h
		206	l/s
		435	CFM
LOW	980	570	m ³ /h
		158	l/s
		335	CFM
QUIET	740	390	m ³ /h
		108	l/s
		229	CFM

● Heating

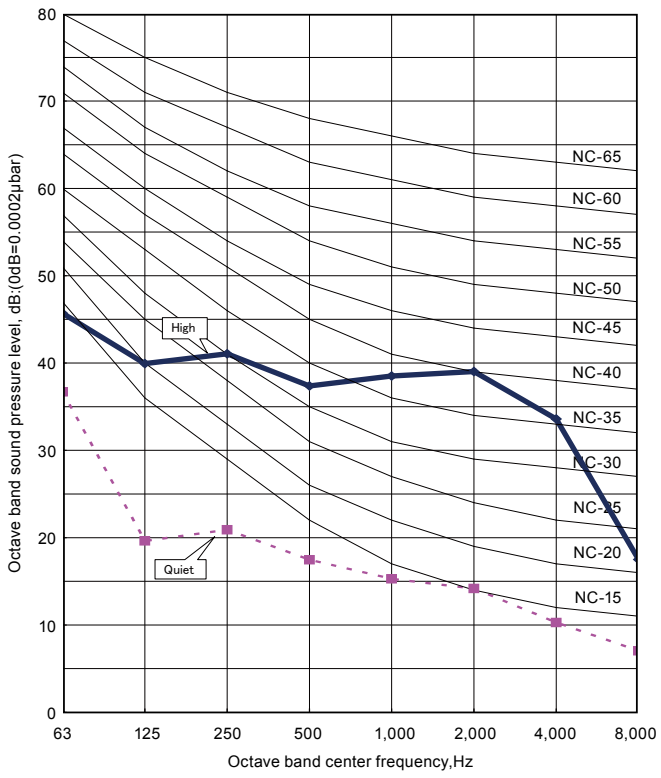
Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1510	950	m ³ /h
		264	l/s
		559	CFM
MED	1220	740	m ³ /h
		206	l/s
		435	CFM
LOW	1030	600	m ³ /h
		167	l/s
		353	CFM
QUIET	790	430	m ³ /h
		119	l/s
		253	CFM

8. OPERATION NOISE

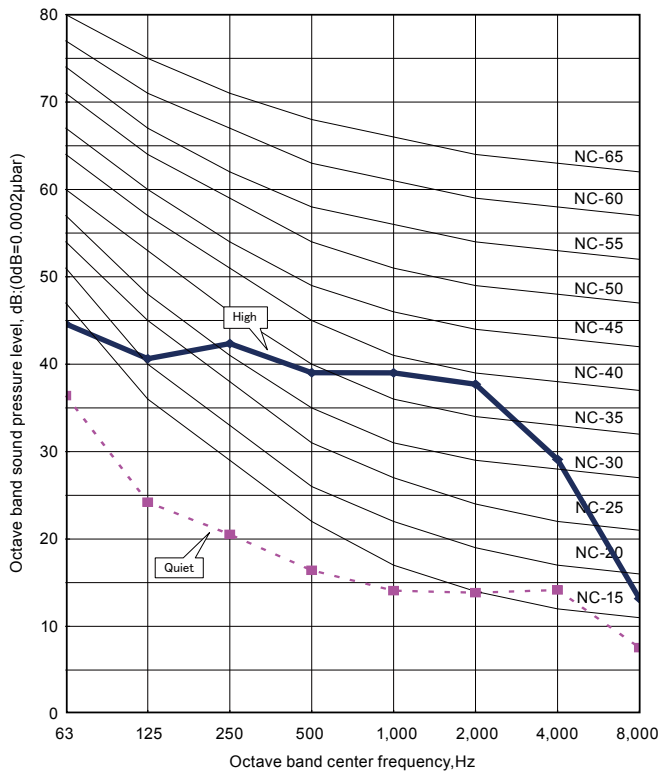
8-1. NOISE LEVEL CURVE

MODEL: ASU9RLS2, ASU12RLS2

● Cooling

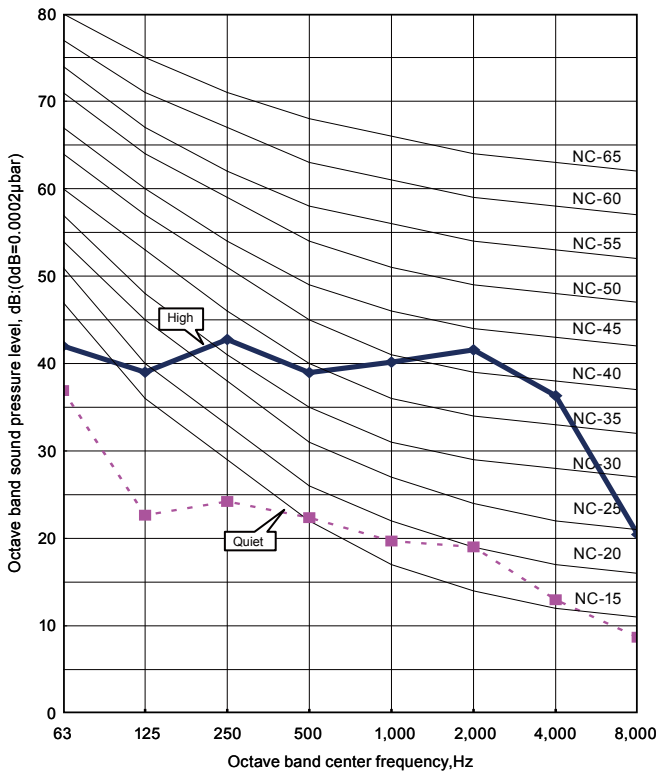


● Heating

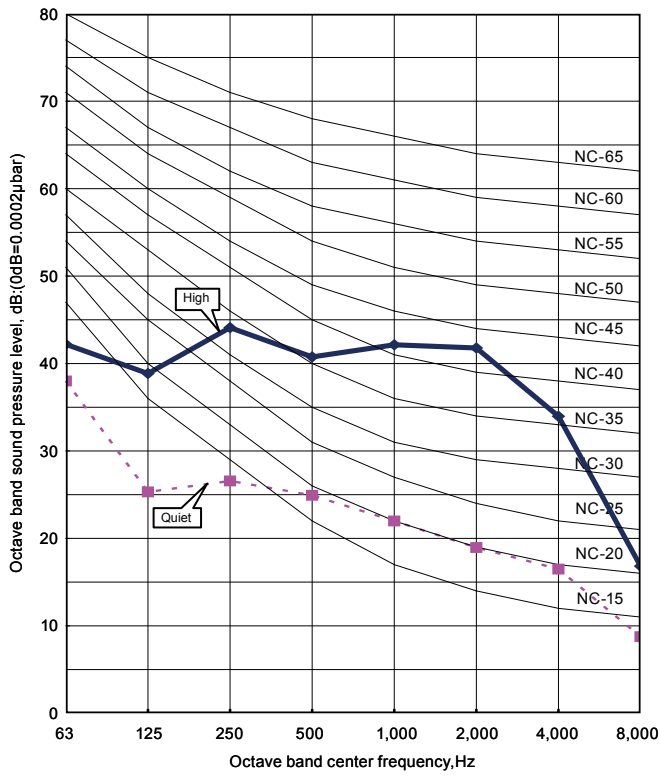


MODEL: ASU15RLS2

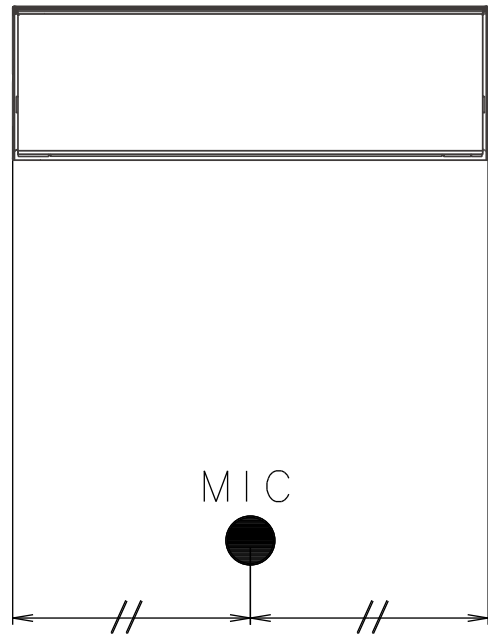
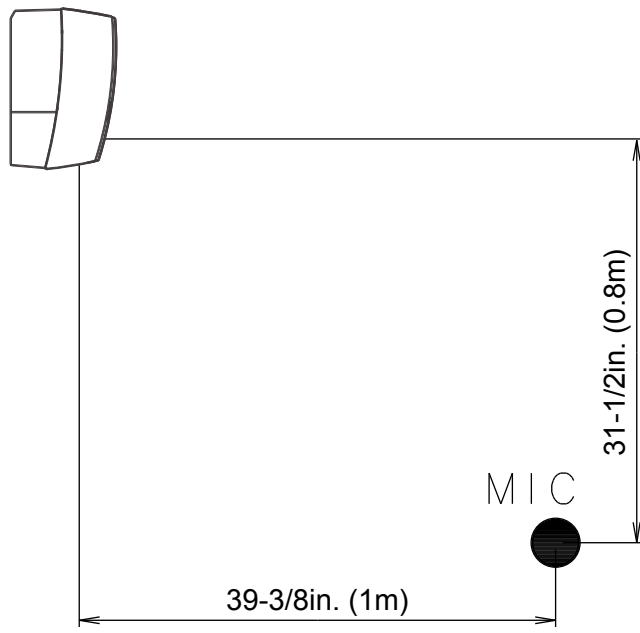
● Cooling



● Heating



8-2. SOUND LEVEL CHECK POINT



9. ELECTRIC CHARACTERISTICS

Model name			ASU9RLS2	ASU12RLS2	ASU15RLS2
Power supply	Voltage	V	208 / 230 ~		
	Frequency	Hz	60		
Max. operating current		A	0.4		
*1) Wiring Spec.	Connection cable	AWG	14		
	Limited wiring length	ft. (m)	69 (21)		

*1) Wiring Spec.

Selected Sample

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

10. SAFETY DEVICES

	Protection form	Model
		ASU9RLS2 ASU12RLS2 ASU15RLS2
Circuit protection	Current fuse (PCB)	250V 3.15A
Terminal protection	Current (thermal) fuse	250V 3A
Fan motor protection	Thermal protector program	OFF: 320±45 °F (160±25 °C) ON: 230±45 °F (110±25 °C)

11. EXTERNAL INPUT & OUTPUT

Connector	INPUT	OUTPUT	REMARKS
CNA01	Control input	-	See external input/output settings for details.
CNB01	-	Operation status output	
CNB02	-	Error status output	

11-1. EXTERNAL INPUT

■ CONTROL INPUT (Operation/Stop or Forced stop)

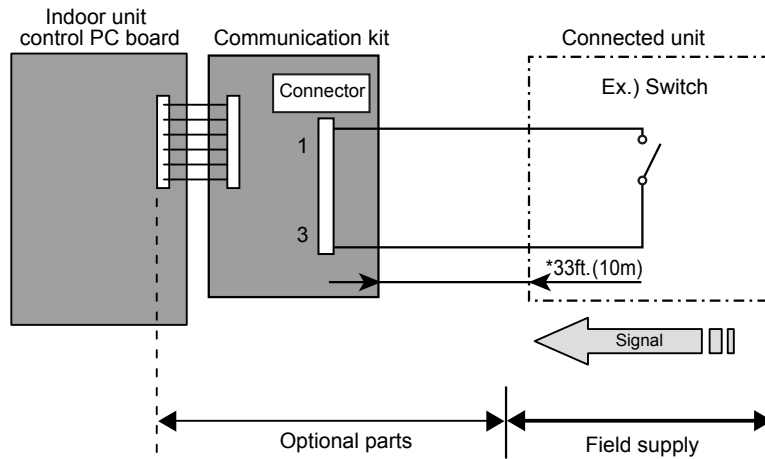
The air conditioner can be remotely operated by means of the following on-site work.

"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.

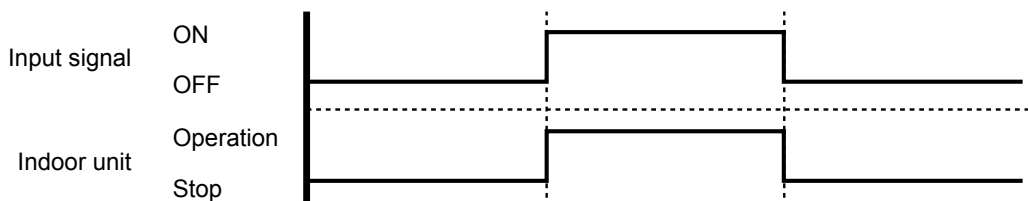
Unit operation	Initial setting after power is ON	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	75°F (24°C)	Temperature at previous operation
Air flow mode	AUTO	Mode at previous operation
Up-down air direction (swing)	Standard air direction (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

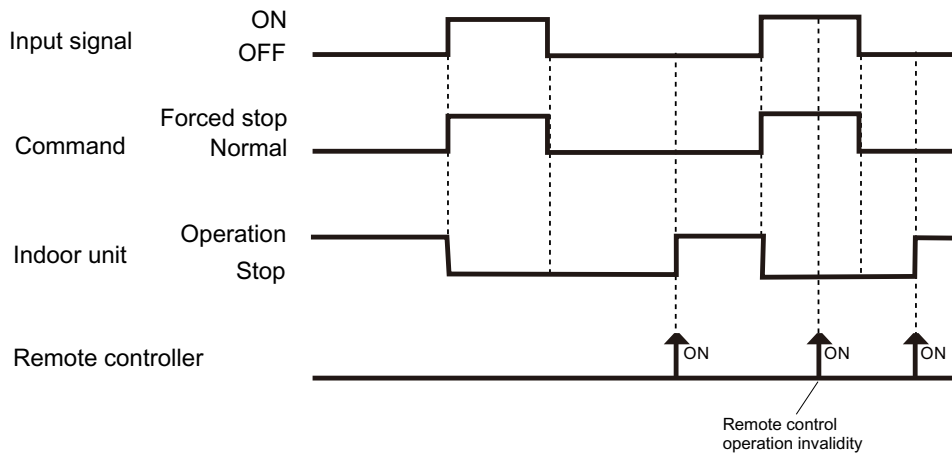


* Make the distance from the PC board to the connected unit within 33ft.(10m).
Contact capacity : 24VDC or more, 10mA or more.
Please use non-polar relays and switches.

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



● When function setting is in "Forced stop" mode



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-TWBXF

*For operating the EXTERNAL function, the Compact wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).

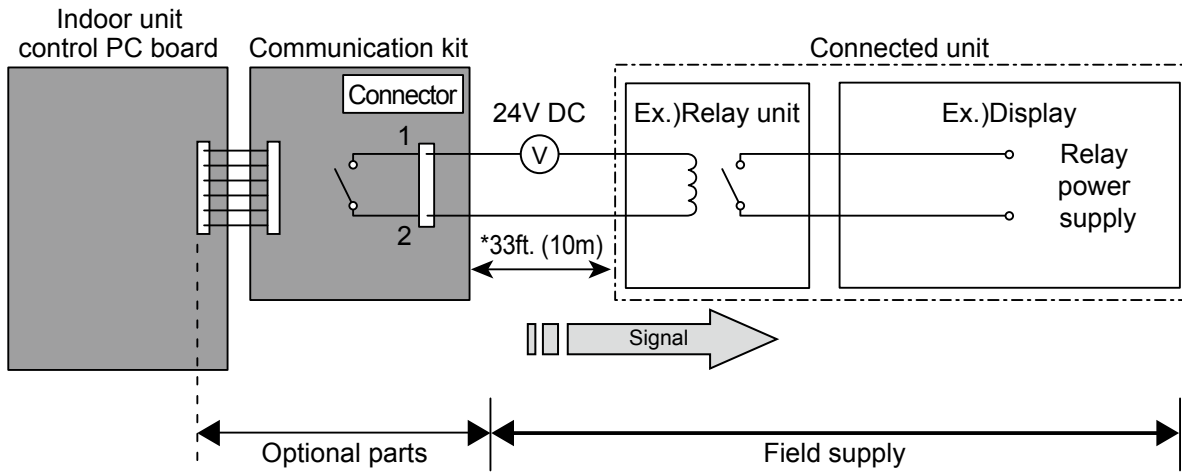


11-2. EXTERNAL OUTPUT

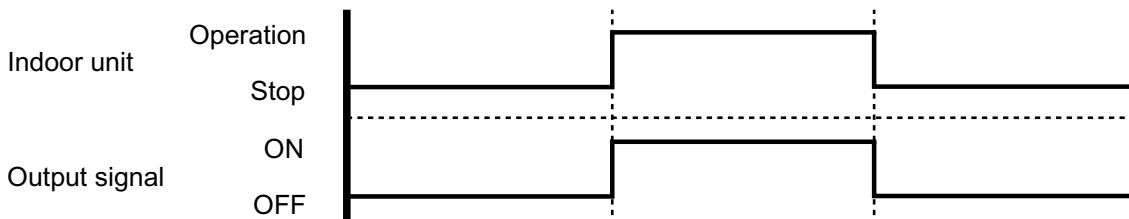
■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

● Circuit diagram example



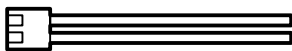
* Make the distance from the PC board to the connected unit within 33ft.(10m).
Relay spec. : Max.24VDC, 10mA to less than 500mA.



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-TWBXF

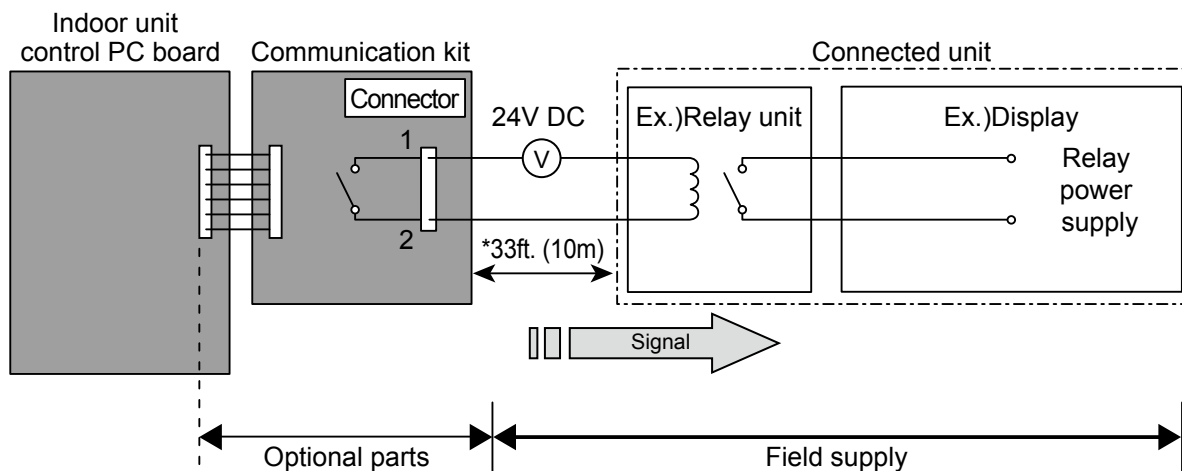
*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).



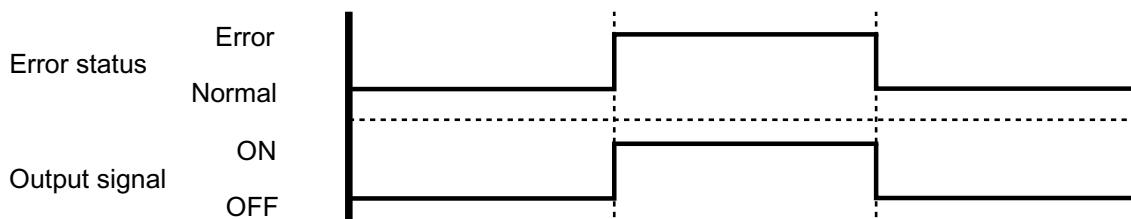
■ ERROR STATUS OUTPUT

An air conditioner error status signal can be output.

● Circuit diagram example



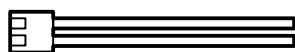
* Make the distance from the PC board to the connected unit within 33ft.(10m).
Relay spec. : Max.24VDC, 10mA to less than 500mA.



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-TWBXF

*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (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 or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

■ PREPARATION

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

■ FUNCTION SETTING METHOD (for Wireless remote controller)

Perform the "FUNCTION SETTING" according to the installation conditions using the remote controller.

⚠ CAUTION
Confirm whether the wiring work for Outdoor unit has been finished.
Confirm that the cover for the electrical enclosure on the outdoor unit is in place.

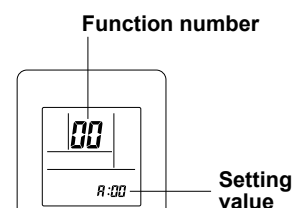
- This procedure changes to the function settings used to control the indoor unit according to the installation conditions. Incorrect settings can cause the indoor unit to malfunction.
- After the power is turned on, perform the "FUNCTION SETTING" according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function Number or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.
- Refer to the installation manual enclosed with the remote control unit when the wired remote control unit (option) is used.
- Adjust the signal code of the indoor unit and the signal code of the remote controller.

Entering the Function Setting Mode

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

Selecting the Function Number and Setting Value

- (1) Press the SET TEMP. (Λ / ∨) buttons to select the function number.
(Press the 10°C 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. (Λ / ∨) buttons to select the setting value.
(Press the 10°C HEAT button to switch between the left and right digits.)
- (4) Press the MODE button, in the order listed to confirm the settings.
Please confirm that the beep sounds.
- (5) Next, please press START/STOP (⏻ / ⏪) button. Please confirm that the beep sounds.
- (6) Press the RESET button to cancel the function setting mode.
- (7) After completing the FUNCTION SETTING, be sure to turn off the power and turn it on again.



⚠ CAUTION
After turning off the power, wait 10 seconds or more before turning it on again. The Function Setting will not become active unless the power is turned off then on again.

FUNCTION DETAILS

Functions	Compact 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	Compact 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 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 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 using the remote controller, or external input device.

5) Indoor room temperature sensor switching function

(Only for Wired remote controller)

The following settings are needed when using 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.

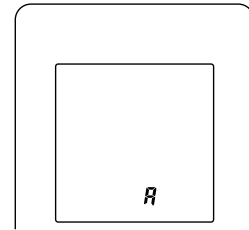
(◆... Factory setting)

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 5 seconds to display the current signal code (initially set to **A**).
- (3) Press the SET TEMP. (▲ / ▼) buttons 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.

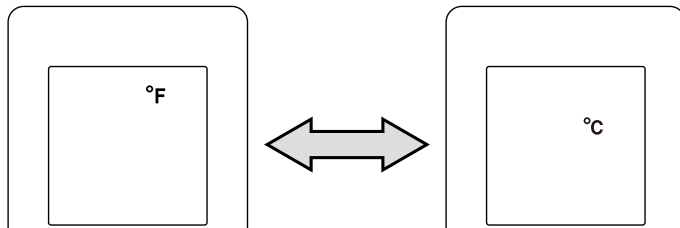


- If no buttons are pressed within 30 seconds after the signal code is displayed, the system returns to the original clock display. In this case, start again from step 1.
- The air conditioner signal code is set to A prior to shipment.

■ REMOTE CONTROLLER TEMPERATURE UNIT

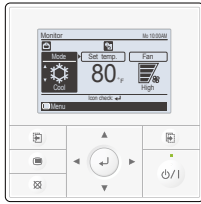
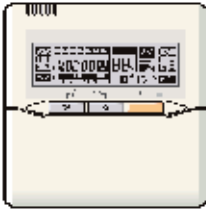

To change the temperature unit:

- (1) Press the TEMP. (Up) button (▲) for at least 5 seconds to display the current temperature unit. (Factory setting: °F)
- (2) Press the TEMP. buttons (▲ / ▼) to switch the temperature unit. (°F ↔ °C)
- (3) With either of pressing the START/STOP button or no additional button operation for 30 seconds in step 2., the temperature unit currently selected will be set.


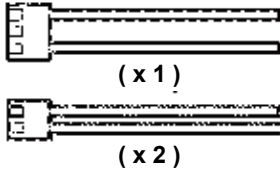


13. OPTIONAL PARTS

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. *Optional communication kit is necessary for installation
	Wired remote controller	UTY-RNNUM	The room temperature can be controlled by detecting the temperature accurately with built-in thermo sensor. *Optional communication kit is necessary for installation.
	Simple remote controller	UTY-RSNUM	Compact remote controller concentrates on the basic functions such as Start/Stop, Fan Control, Temperature Setting and Operation mode. *Optional communication kit is necessary for installation.

13-2. OTHERS

Exterior	Parts name	Model No.	Summary
	Communication kit	UTY-TWBXF	Use to connect with optional devices and air conditioner PC board.
	External connect kit	UTY-XWZXZ5	Required when external device is connected. *Optional communication kit is necessary for installation.

2. OUTDOOR UNIT

SINGLE TYPE :

AOU9RLS2H

AOU12RLS2H

AOU15RLS2H

CONTENTS

2. OUTDOOR UNIT

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1. SPECIFICATIONS

OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

Type				INVERTER HEAT PUMP			
Model name				AOU9RLS2H	AOU12RLS2H	AOU15RLS2H	
Power source				208 / 230V ~ 60Hz			
Available voltage range				187 - 253V ~ 60Hz			
Starting current				A	3.7	5.5	6.1
Fan	Airflow rate	Cooling	CFM (m ³ /h)	1082 (1840)	1206 (2050)		
		Heating		1082 (1840)			
	Type × Q'ty		Propeller fan × 1				
	Motor output		W	115			
Sound pressure level		Cooling	dB (A)	48	49	51	
		Heating		49	50	51	
Heat exchanger type		Dimensions (H × W × D)		in.	23-5/32 × 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 (Global Warming Potential)			R410A (1975)			
	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 - 1/2 × 31 - 3/32 × 11 - 11/32			
			mm	620 × 790 × 290			
	Gross		in.	28 - 1/16 × 37-7/32 × 15 - 9/16			
			mm	713 × 945 × 395			
Weight	Net		lbs.(kg)	86 (39)		88 (40)	
	Gross			93 (42)		95 (43)	
Connention 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)			
Max. height difference		49 (15)					
Operation range		Cooling	°F (°C)	14 to 115 (-10 to 46)			
		Heating		-15 to 75 (-26 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.7in (7.5m), Height difference:0 m. (Outdoor unit - Indoor unit)

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

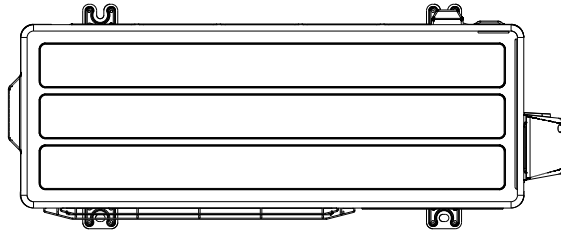
2. DIMENSIONS

MODEL: AOU9RLS2H, AOU12RLS2H, AOU15RLS2H

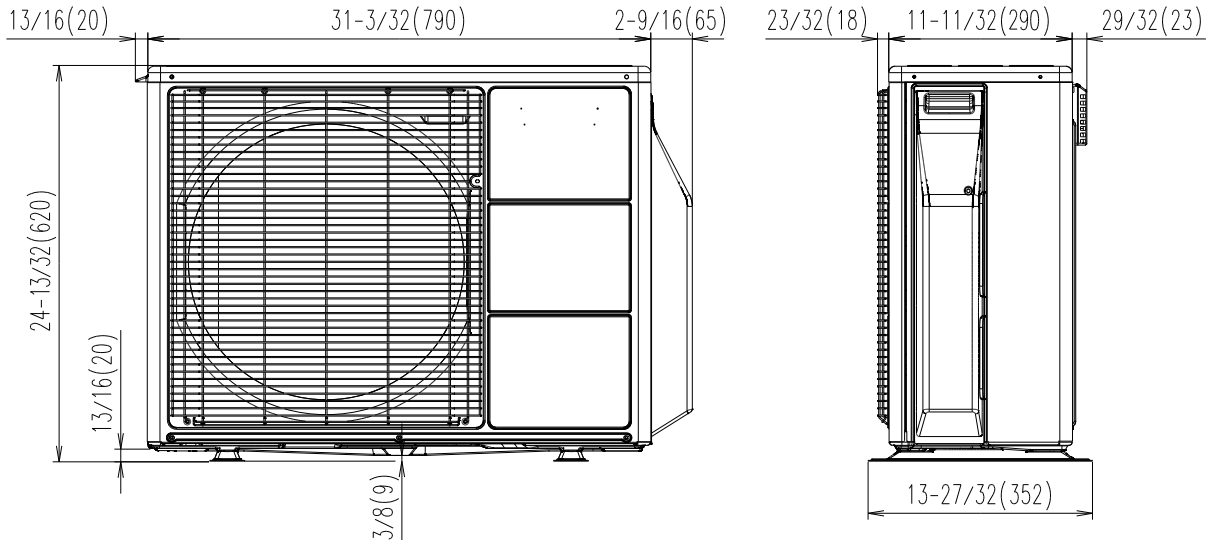
Unit : in. (mm)

OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

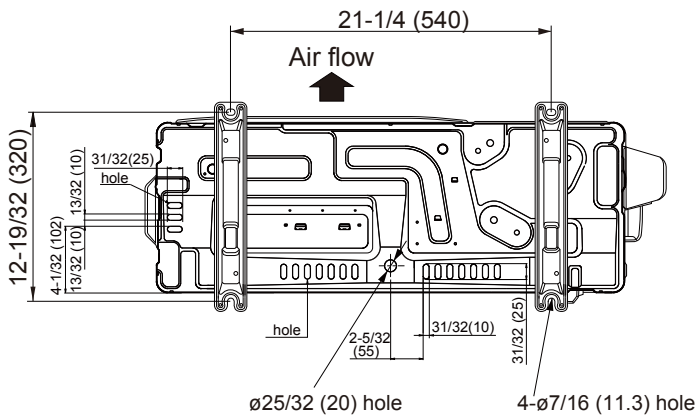


Top view

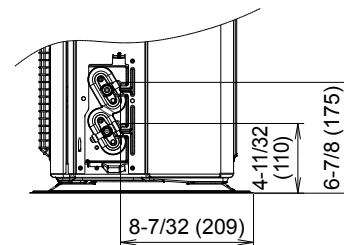


Front view

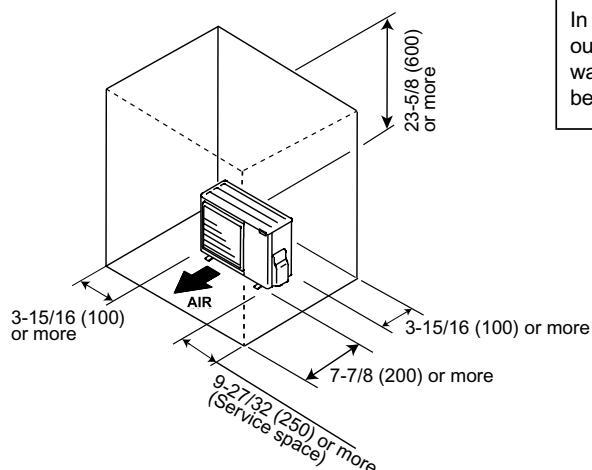
Side view



Bottom view

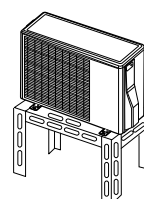


INSTALLATION PLACE



CAUTION

In areas with heavy snowfall, if the intake and outlet of the outdoor unit is blocked with snow, it may be difficult to warm up and likely to cause breakdown. In such condition, be sure to construct a canopy or baffle board stand.



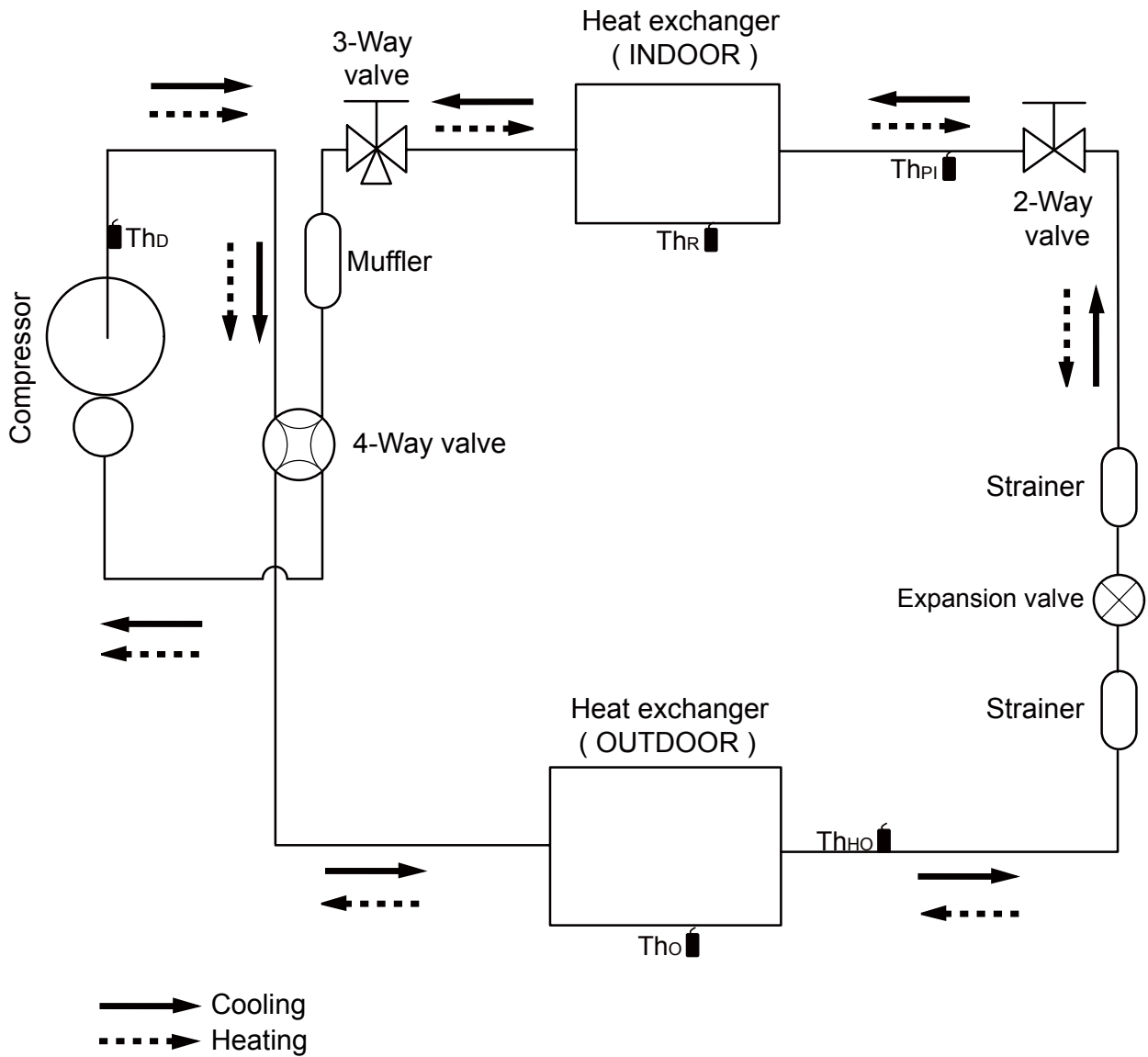
If the space is larger than is stated, the condition will be the same as those without any no obstacles.






3. REFRIGERANT CIRCUIT

■ MODEL: AOU9RLS2H, AOU12RLS2H, AOU15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H



- Th_D  : Thermistor (Discharge Temp.)
- Th_O  : Thermistor (Outdoor Temp.)
- Th_{HO}  : Thermistor (Heat Exchanger Out Temp.)
- Th_R  : Thermistor (Room Temp.)
- Th_{PI}  : Thermistor (Pipe Temp.)

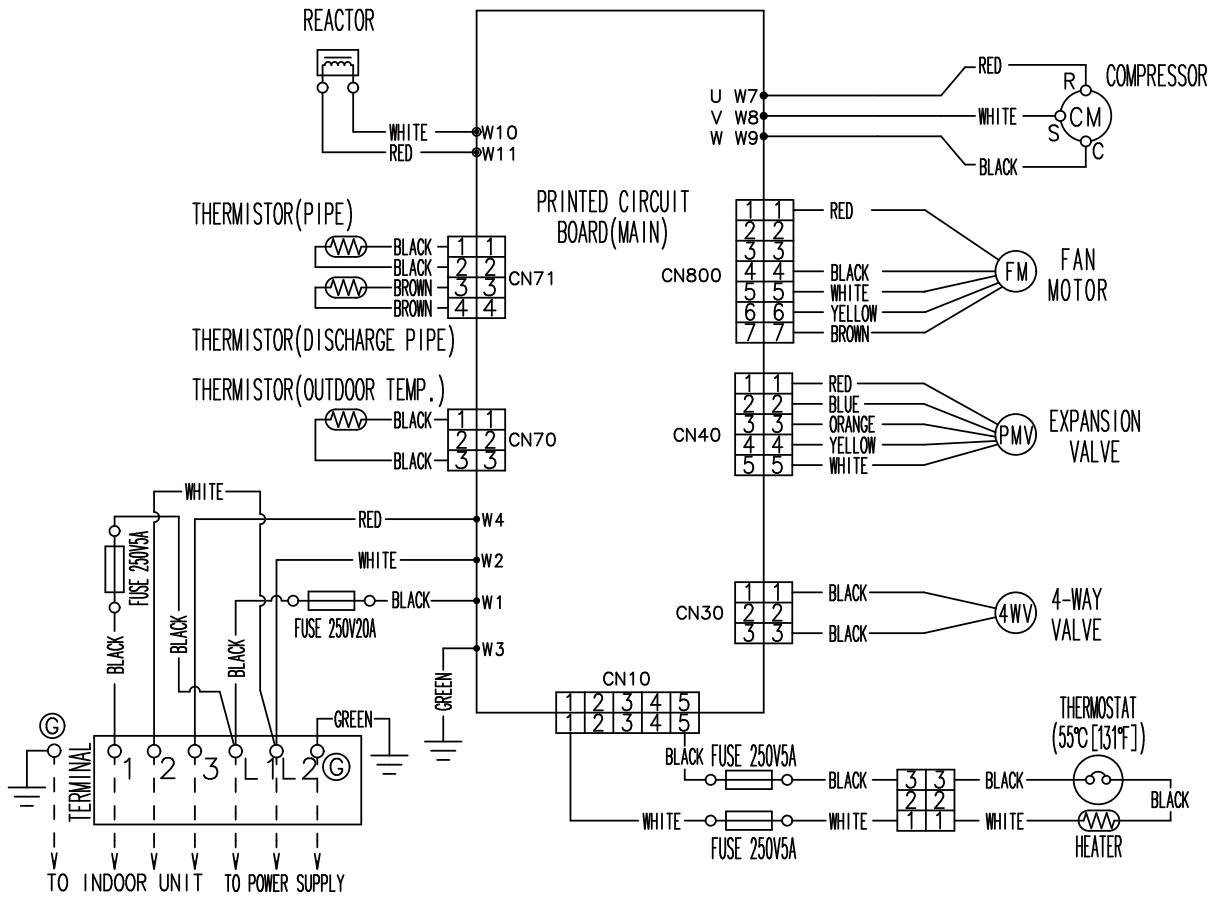
Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 3/8" (9.52 mm) : 9/12RLS2H
 1/2" (12.70 mm) : 15RLS2H

4. WIRING DIAGRAMS

MODEL: AOU9RLS2H, AOU12RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

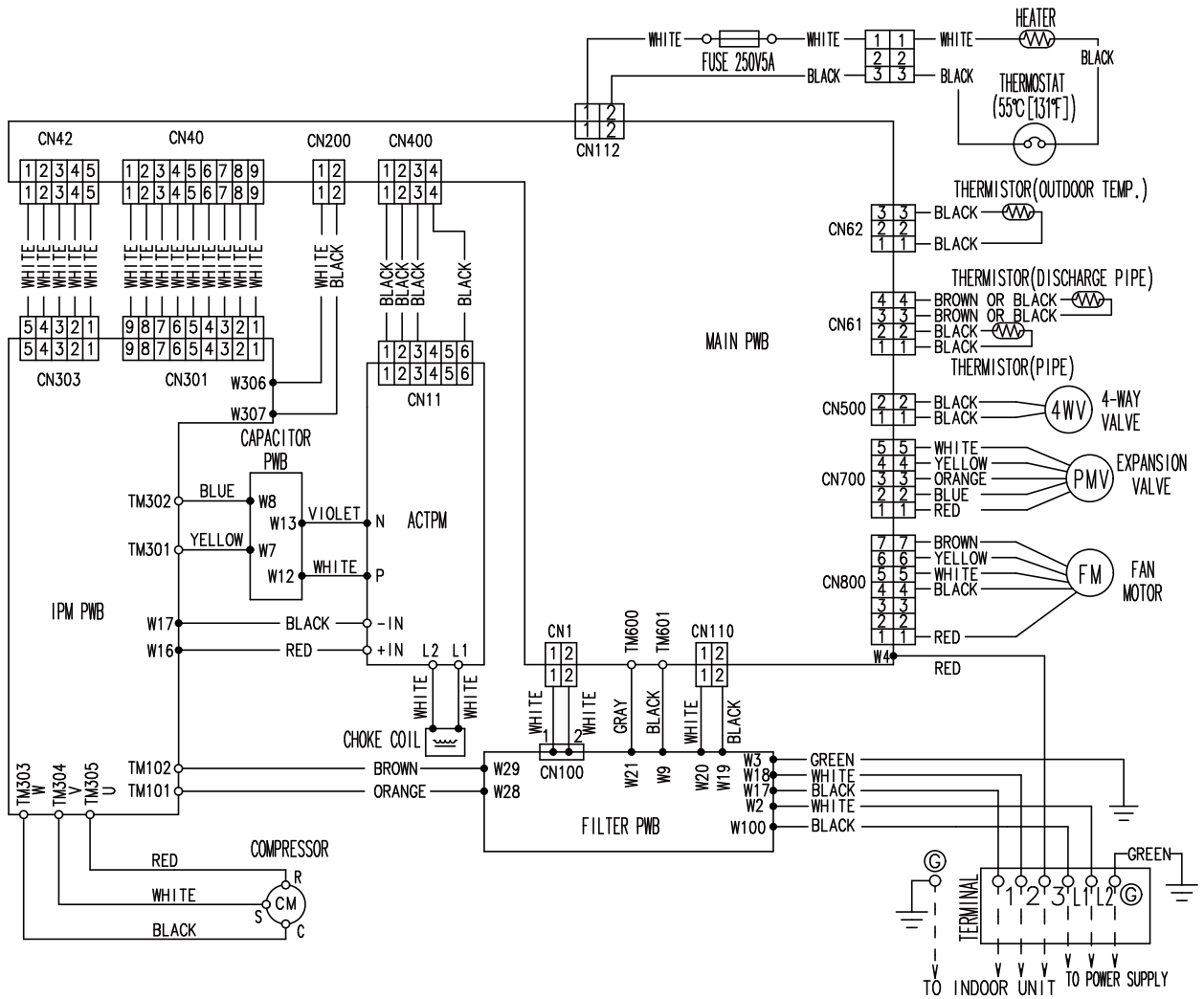
OUTDOOR UNIT
AOU9-15RLS2H



MODEL: AOU15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H



5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

MODEL: AOU9RLS2H, AOU12RLS2H

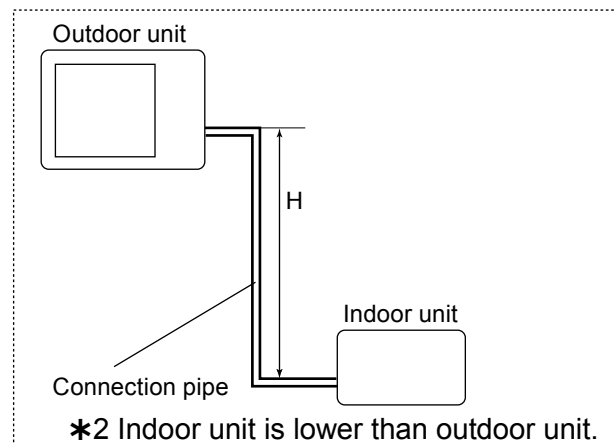
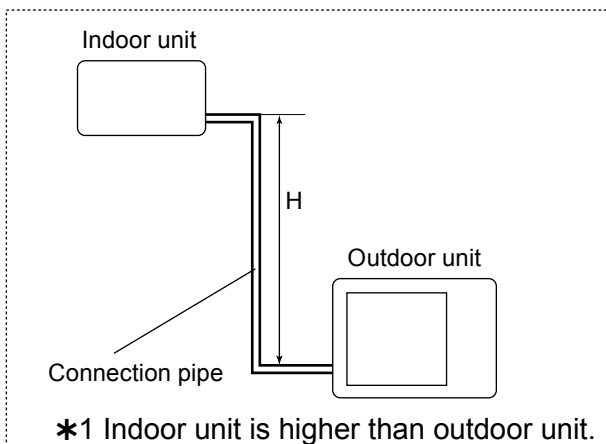
OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

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.	-	-	-	0.877	0.874
		10m	33ft.	-	-	0.956	0.891	0.888
		7.5m	25ft.	-	0.988	0.960	0.895	0.892
		5m	17ft.	1.017	0.992	0.964	0.899	0.895
	*2 Indoor unit is lower than outdoor unit	0m	0ft.	1.025	1.000	0.971	0.906	0.902
		-5m	-17ft.	1.025	1.000	0.971	0.906	0.902
		-7.5m	-25ft.	-	1.000	0.971	0.906	0.902
		-10m	-33ft.	-	-	0.971	0.906	0.902
		-15m	-50ft.	-	-	-	0.906	0.902

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.	-	-	-	0.933	0.925
		10m	33ft.	-	-	0.981	0.933	0.925
		7.5m	25ft.	-	1.000	0.981	0.933	0.925
		5m	17ft.	1.017	1.000	0.981	0.933	0.925
	*2 Indoor unit is lower than outdoor unit	0m	0ft.	1.017	1.000	0.981	0.933	0.925
		-5m	-17ft.	1.012	0.995	0.976	0.928	0.920
		-7.5m	-25ft.	-	0.993	0.974	0.926	0.918
		-10m	-33ft.	-	-	0.971	0.923	0.916
		-15m	-50ft.	-	-	-	0.914	0.906

Height difference H



MODEL: AOU15RLS2H

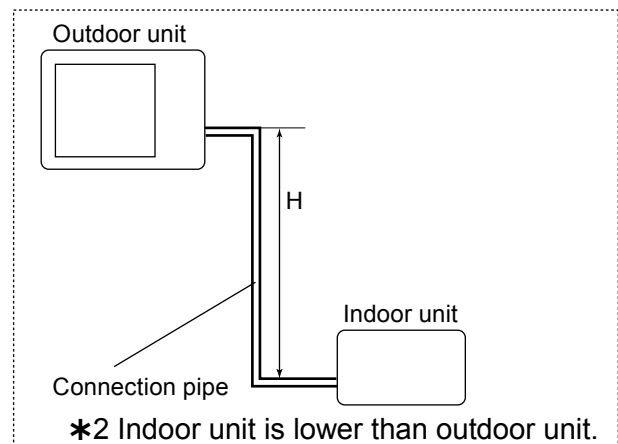
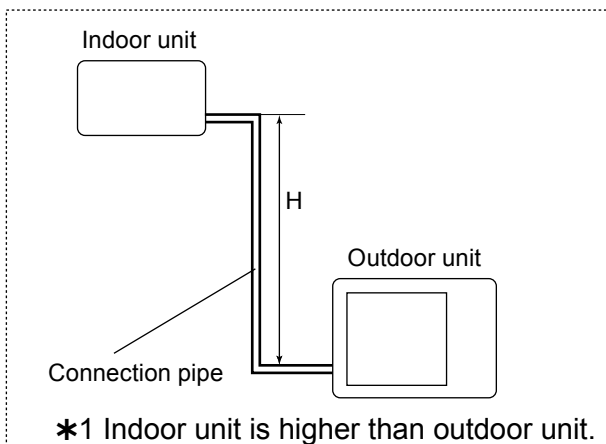
OUTDOOR UNIT
AOU9-15RLS2H

OUTDOOR UNIT
AOU9-15RLS2H

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
	*2 Indoor unit is lower than outdoor unit	0m	0ft.	1.002	1.000	0.995	0.983	0.982
		-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
	*2 Indoor unit is lower than outdoor unit	0m	0ft.	0.969	1.000	1.012	0.994	0.979
		-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



6. ADDITIONAL CHARGE CALCULATION

■ MODEL: AOU9RLS2H, AOU12RLS2H

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: AOU15RLS2H

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: AOU9RLS2H

● Cooling

Number of rotations (r.p.m.)	Airflow	
780	1840	m ³ /h
	510	l/s
	1082	CFM

● Heating

Number of rotations (r.p.m.)	Airflow	
780	1840	m ³ /h
	510	l/s
	1082	CFM

■ MODEL: AOU12RLS2H, AOU15RLS2H

● Cooling

Number of rotations (r.p.m.)	Airflow	
870	2050	m ³ /h
	569	l/s
	1206	CFM

● Heating

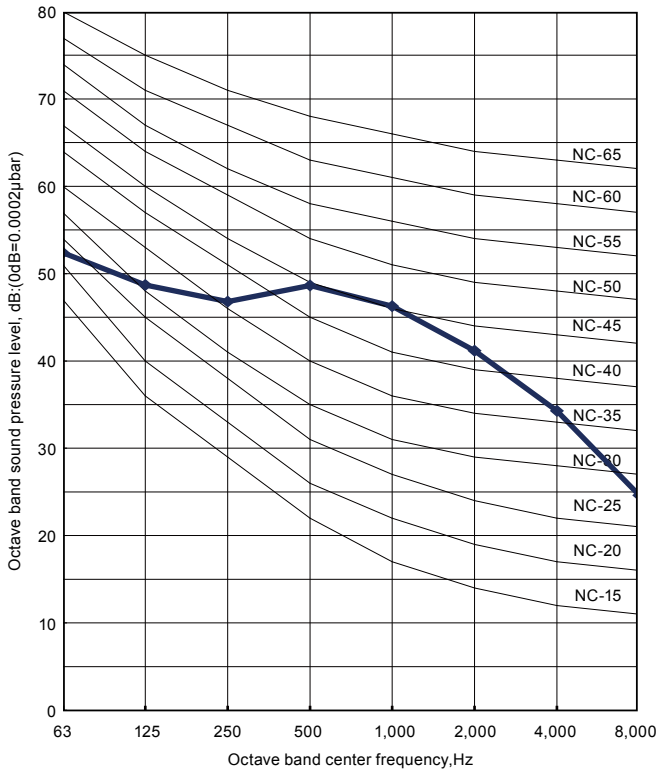
Number of rotations (r.p.m.)	Airflow	
780	1840	m ³ /h
	510	l/s
	1082	CFM

8. OPERATION NOISE

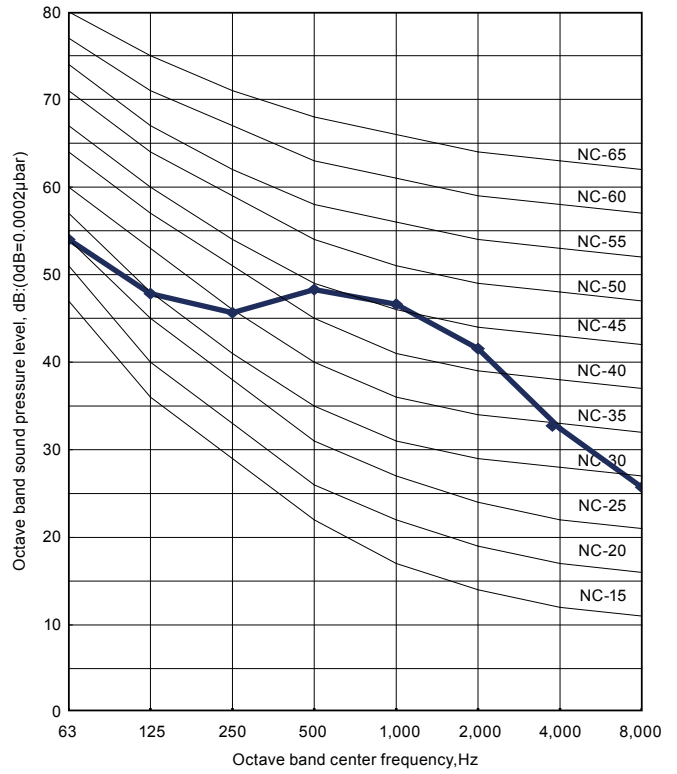
8-1. NOISE LEVEL CURVE

MODEL: AOU9RLS2H

● Cooling

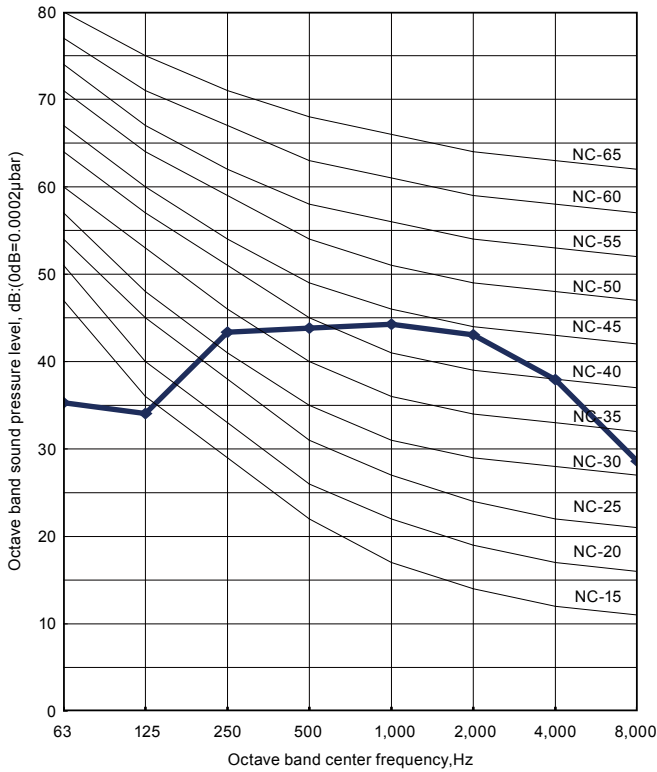


● Heating

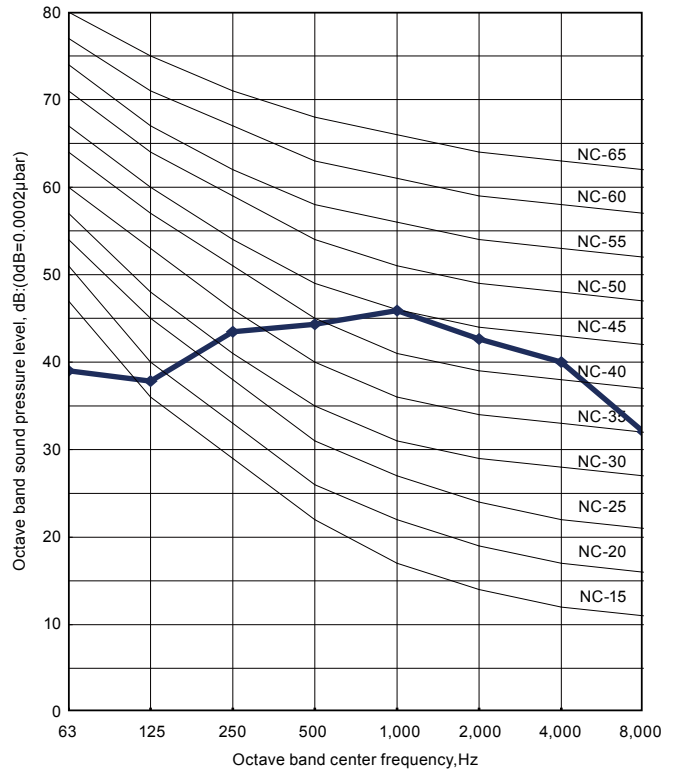


MODEL: AOU12RLS2H

● Cooling



● Heating

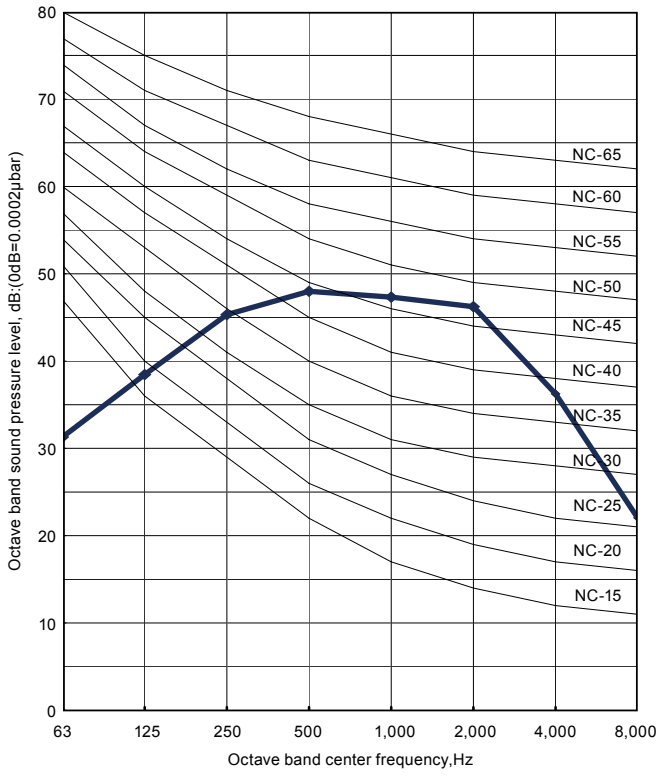


OUTDOOR UNIT
AOU9-15RLS2H

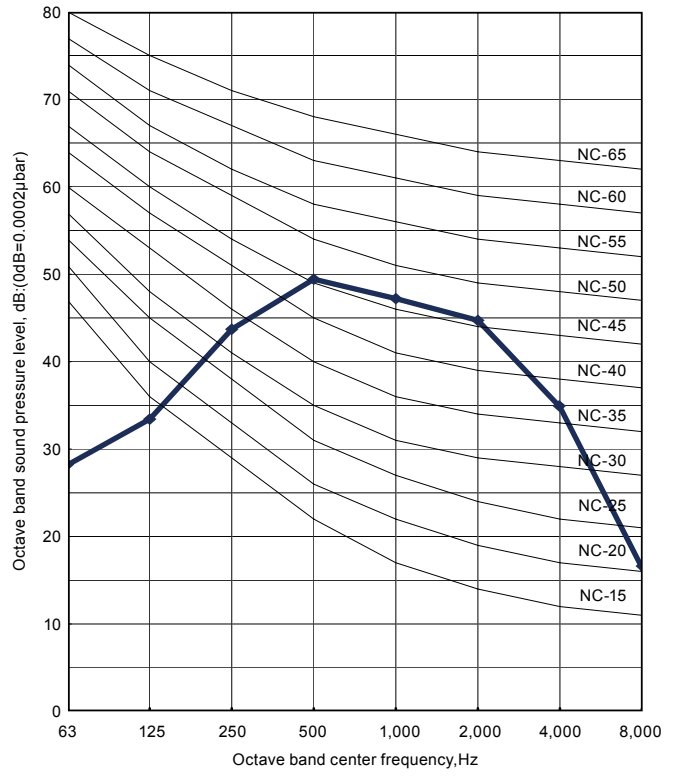
OUTDOOR UNIT
AOU9-15RLS2H

MODEL: AOU15RLS2H

● Cooling

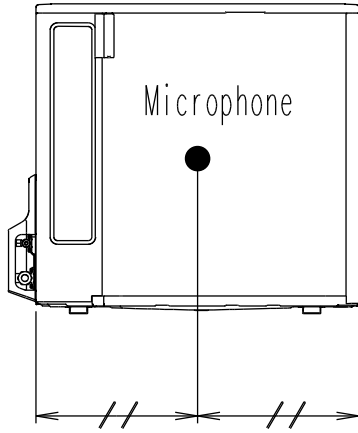
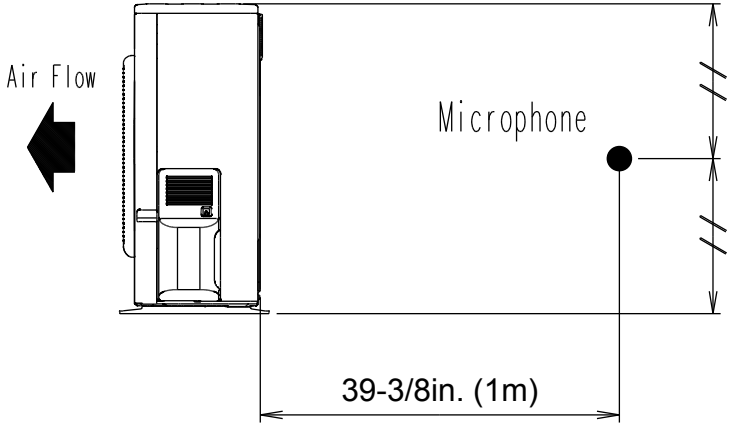


● Heating



8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AOU9-15RLS2H



OUTDOOR UNIT
AOU9-15RLS2H

9. ELECTRIC CHARACTERISTICS

Model name			AOU9RLS2H	AOU12RLS2H	AOU15RLS2H
Power supply	Voltage	V	208 / 230 ~		
	Frequency	Hz	60		
MCA		A	14.5		18.2
Starting Current		A	3.7	5.5	6.1
*1) Wiring Spec.:	MAX. CKT. BKR	A	15		20
	Power Cable	AWG	14		12
	*2) Limited wiring length :	ft. (m)	60 (18)		75 (22)

***1) Wiring Spec.:**

Selected Sample

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

***2) Limited wiring length :**

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

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

MCA : Min Circuit Amp (Calculation based on UL1995)

MAX. CKT. BKR : Maximum Circuit Breaker

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10. SAFETY DEVICES

	Protection form	Model		
		AOU9RLS2H	AOU12RLS2H	AOU15RLS2H
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		

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