AIR CONDITIONER

Wall Mounted type

Refrigerant R410A

INVERTER

DESIGN & TECHNICAL MANUAL

for Extra Cold Climate Area

INDOOR

ASU9RLS3
ASU12RLS3
ASU15RLS3

OUTDOOR

AOU9RLS3H
AOU12RLS3H
AOU15RLS3H

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

WALL MOUNTED TYPE :

ASU9RLS3
ASU12RLS3
ASU15RLS3

DTR_AS115E_01
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WALL MOUNTED TYPE
ASU9-15RLS3

CONTENTS

1. INDOOR UNIT

WALL MOUNTED TYPE
ASU9-15RLS3

1. FEATURES

■ MODEL

ASU9RLS3 / AOU9RLS3H
ASU12RLS3 / AOU12RLS3H
ASU15RLS3 / AOU15RLS3H

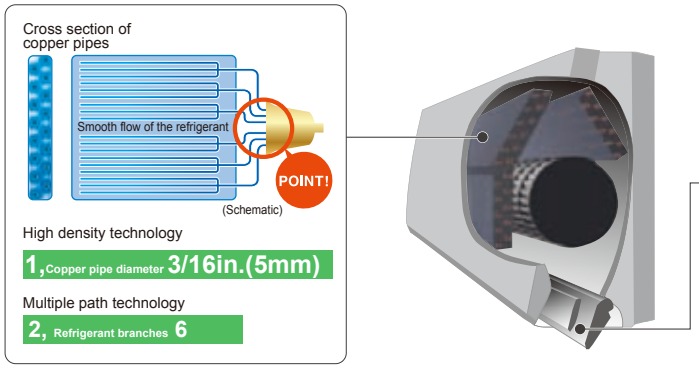
■ FEATURES

● Energy efficiency

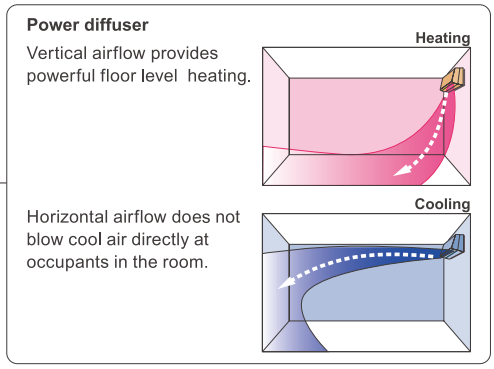
	Extra Cold Climate Area Model		
	ASU9RLS3	ASU12RLS3	ASU15RLS3
Seasonal Energy Efficiency Ratio (SEER)	33.0	29.3	25.3
Heating Seasonal Performance Factor (HSPF)	14.0	13.8	13.3

MEASUREMENT CONDITIONS
ANSI/ASHRAE STANDARD 37-1988

● High efficient design



● More comfortable airflow



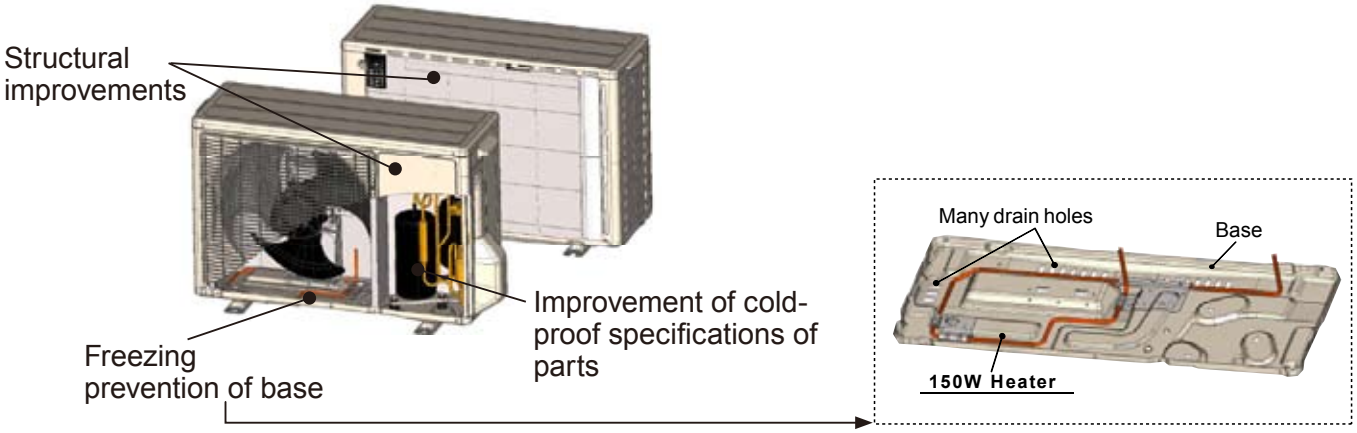
● Low outdoor air temperature correspondence

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

Heating
-15 to 75°F (-26 to 24°C)

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

Extra cold climate area model

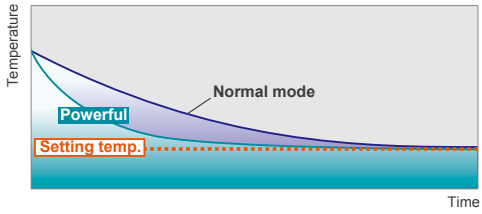


WALL MOUNTED TYPE
ASU9-15RLS3

● 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.

Example : Cooling operation



● Energy saving Program *Only available with Wireless RC.

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.

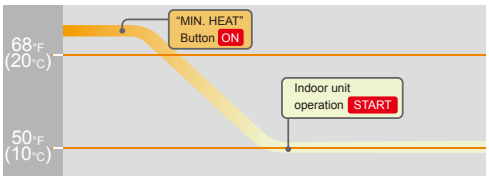
Energy saving operation by detecting someone's movement

● 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

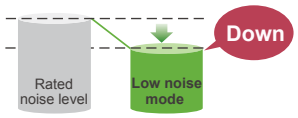
Caution)

- 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.



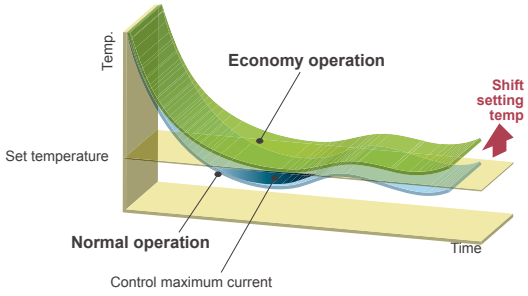
● Outdoor unit low noise *Only available with Wireless RC.

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

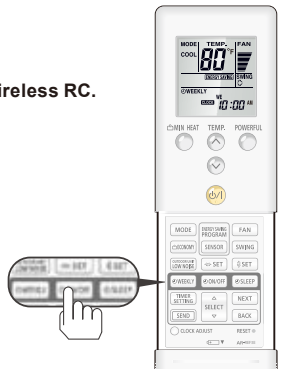


- Economy operation is energy saving, as the set temperature of indoor unit is shifted by 2°F (1°C) and the maximum electric value of the outdoor unit is suppressed.

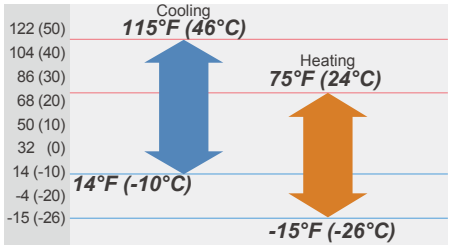
WALL MOUNTED TYPE
ASU9-15RLS3

● 5 Mode timer (ON/OFF/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



WALL MOUNTED TYPE
ASU9-15RLS3

2. WIRELESS REMOTE CONTROLLER

■ FEATURES

- ∗ 5 Mode timer setup available (ON / OFF / Weekly / Program / Sleep).
- ∗ Easy operation.
- ∗ Easy to change custom code (max. 4 custom codes) by button operation.

● Built-in timers

Select from 5 Mode timer programs (ON / OFF / 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

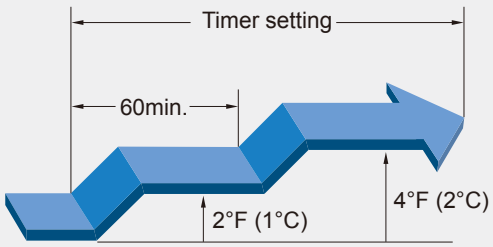
The program timer operates the on and off timer once within a 24 hour period.

● 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.

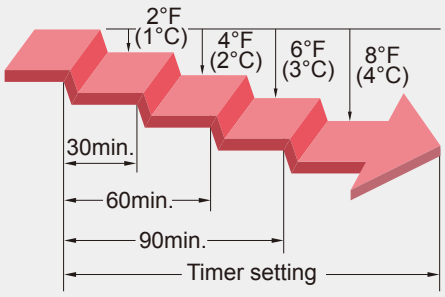
Cooling operation/dry operation

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

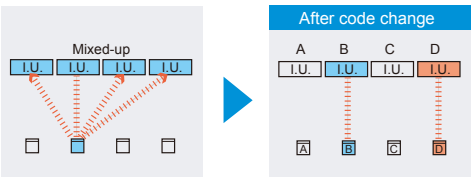
When the sleep timer is set, the set temperature automatically drops 2°F (1°C) every 30 minutes. The set temperature can drop to a maximum of 8°F (4°C).



● Simple function setting

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

● Switching remote controller custom code



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

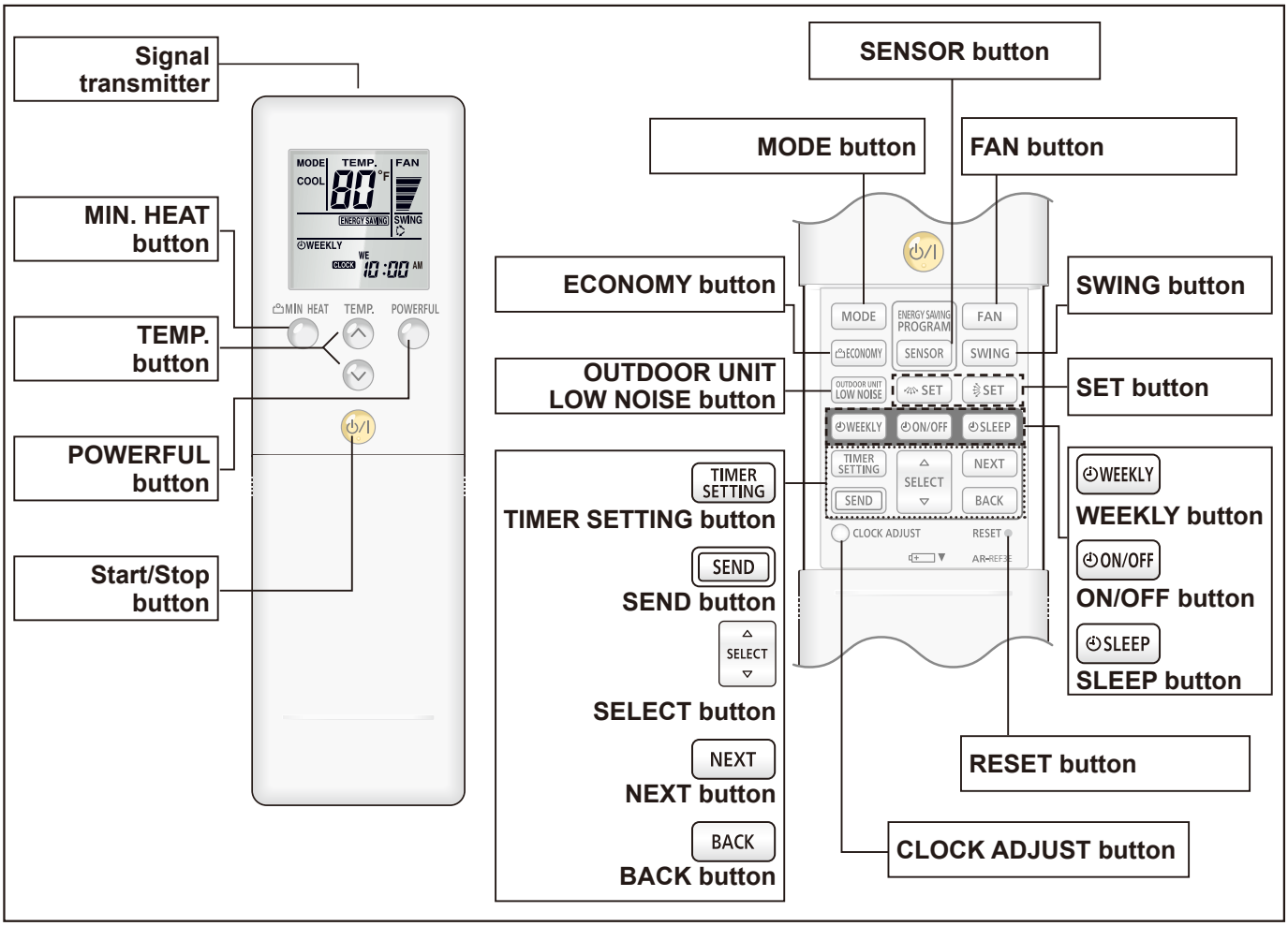
*I.U.=Indoor unit

● To change the temperature unit

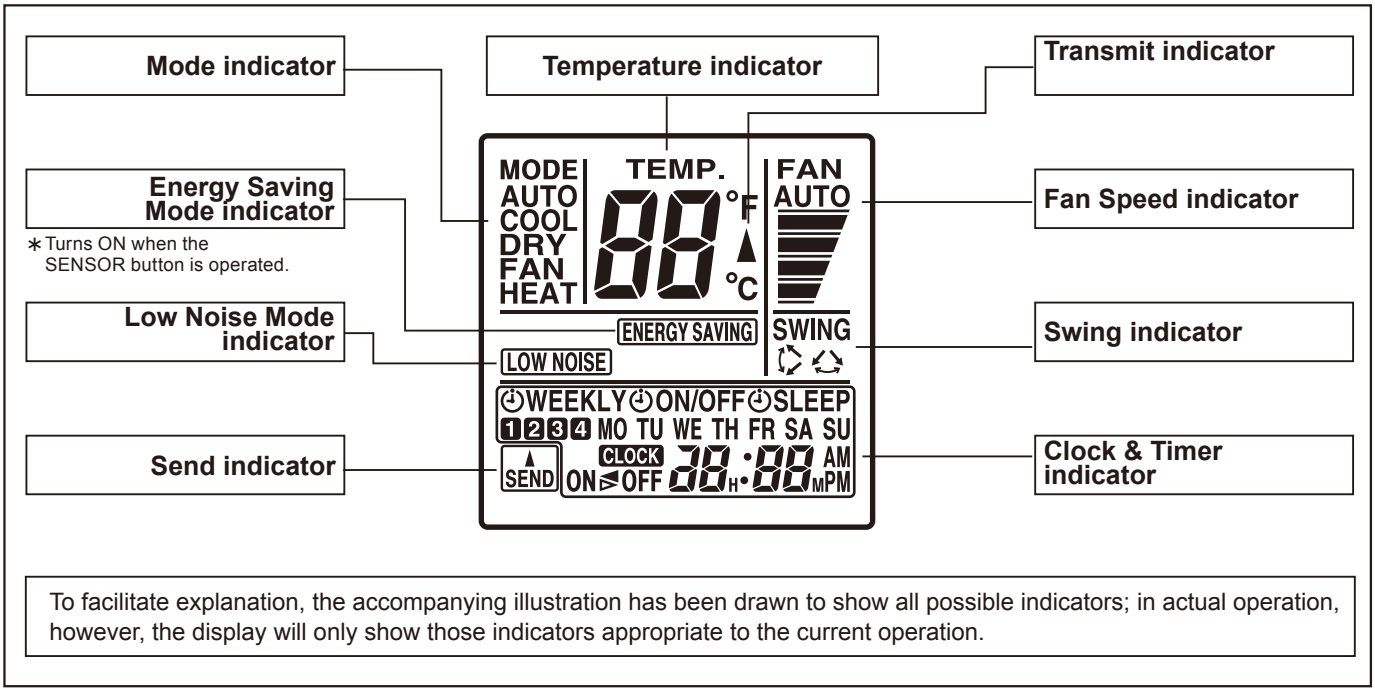
Easy to change the temperature unit (°F ↔ °C) by button operation.

WALL MOUNTED TYPE
ASU9-15RLS3

■ FUNCTIONS



Display panel



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

■ 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

WALL MOUNTED TYPE
ASU9-15RLS3

3. SPECIFICATIONS

Type					WALL MOUNTED INVERTER HEAT PUMP		
Model name					ASU9RLS3	ASU12RLS3	ASU15RLS3
Power source					208 / 230V ~ 60Hz		
Available voltage range					188 - 253V		
Capacity	Cooling	Rated		kW	2.64	3.52	4.25
				Btu/h	9,000	12,000	14,500
		Min - Max		kW	0.90 - 3.60	0.90 - 4.00	0.90 - 5.40
				Btu/h	3,100 - 12,000	3,100 - 13,600	3,100 - 18,400
	Heating	Rated		kW	3.52	4.69	5.28
				Btu/h	12,000	16,000	18,000
		Min - Max		kW	0.90 - 6.45	0.90 - 6.48	0.90 - 7.00
				Btu/h	3,100 - 22,000	3,100 - 22,100	3,100 - 23,900
Input power	Cooling	Rated		kW	0.50	0.79	1.04
		Max			0.85	0.99	1.56
	Heating	Rated			0.66	1.01	1.15
		Max			1.93	1.94	2.19
Current	Cooling	Rated		A	2.5	3.8	4.8
	Heating				3.3	4.7	5.2
EER		Cooling		kW/kW	5.28	4.46	4.09
				Btu/hW	18.0	15.2	13.9
COP		Heating		kW/kW	5.33	4.64	4.59
				Btu/hW	18.2	15.8	15.7
SEER		Cooling		Btu/hW	33.0	29.3	25.3
HSPF		Heating		Btu/hW	14.0	13.8	13.3
Power factor		Cooling		%	87	90	94
		Heating			87	93	96
Moisture removal				pints/h (l/h)	2.6 (1.2)	2.7 (1.3)	4.0 (1.9)
Maximum operating current *1		Cooling		A	9.4	9.4	9.9
		Heating			11.9	11.9	14.9
Fan	Airflow rate	Cooling	High	CFM (m^3/h)	489(830)		547(930)
			Med		400(680)		459(780)
			Low		341(580)		371(630)
			Quiet		224(380)		259(440)
		Heating	High		489(830)		547(930)
			Med		400(680)		459(780)
			Low		341(580)		371(630)
			Quiet		224(380)		294(500)
	Type × Q'ty				Cross flow fan × 1		
	Motor output			W	61		
Sound pressure level *2		Cooling	High	dB (A)	42		45
			Med		37		40
			Low		32		34
			Quiet		23		26
		Heating	High		41		45
			Med		35		39
			Low		31		33
			Quiet		23		27
Heat exchanger type		Dimensions (H × W × D)		in. (mm)	Main : 15-1/8 × 28-3/8 × 1-3/16 (384 × 720 × 30) Sub : 3-5/16 × 28-3/8 × 1/2 (84 × 720 × 13.3) 4-15/16 × 28-3/8 × 1/2 (126 × 720 × 13.3)		
		Fin pitch		FPI	Main : 21 Sub : 18		
		Rows × Stages			Main : 3 × 24 Sub : 1 × 10		
		Pipe type			Copper		
		Fin type			Aluminum		
Enclosure		Material			Polystyrene		
		Color			White Approximate color of MUNSELL 5PB 9.25/0.5		
Dimensions (H × W × D)	Net			inch	11 - 5/8 × 37 × 10 - 5/8		
				mm	295 × 940 × 270		
	Gross			inch	14 - 3/8 × 40 - 15/16 × 14		
				mm	365 × 1,040 × 355		
Weight	Net			lbs. (kg)	31 (14.0)		
	Gross				37 (17.0)		
Connection pipe	Size	Liquid		in. (mm)	Ø1/4 (Ø6.35)		
		Gas			Ø3/8 (Ø9.52)		Ø1/2 (Ø12.7)
	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				PP+LLDPF		
	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.7in (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.

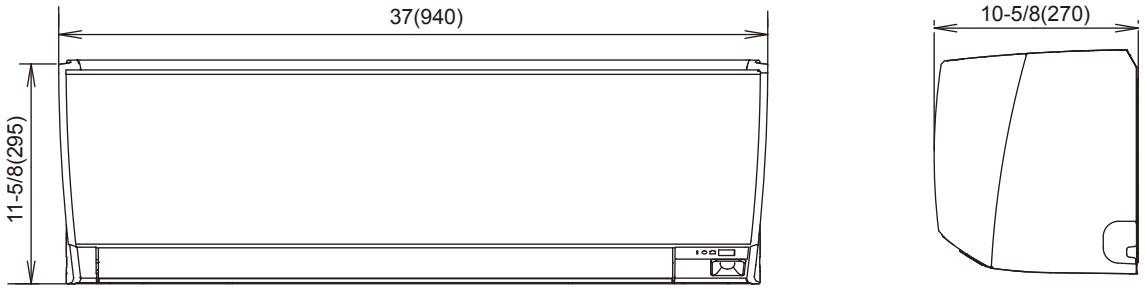
*2: These are the measured values in the manufacturer's anechoic chamber.
Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

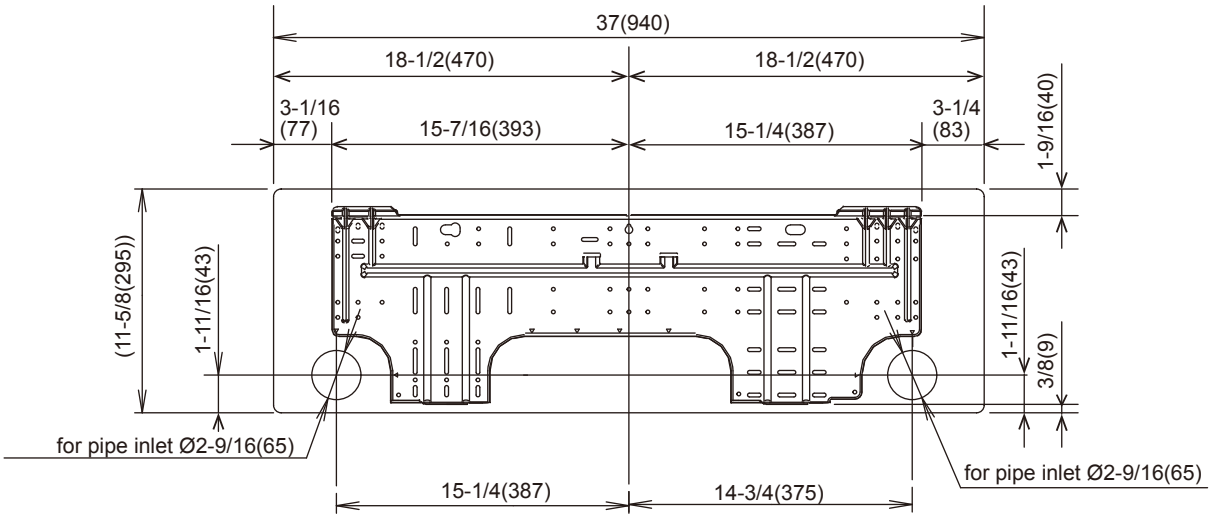
WALL MOUNTED TYPE
ASU9-15RLS3

4. DIMENSIONS

■ MODEL: ASU9RLS3, ASU12RLS3, ASU15RLS3

Unit : in. (mm)



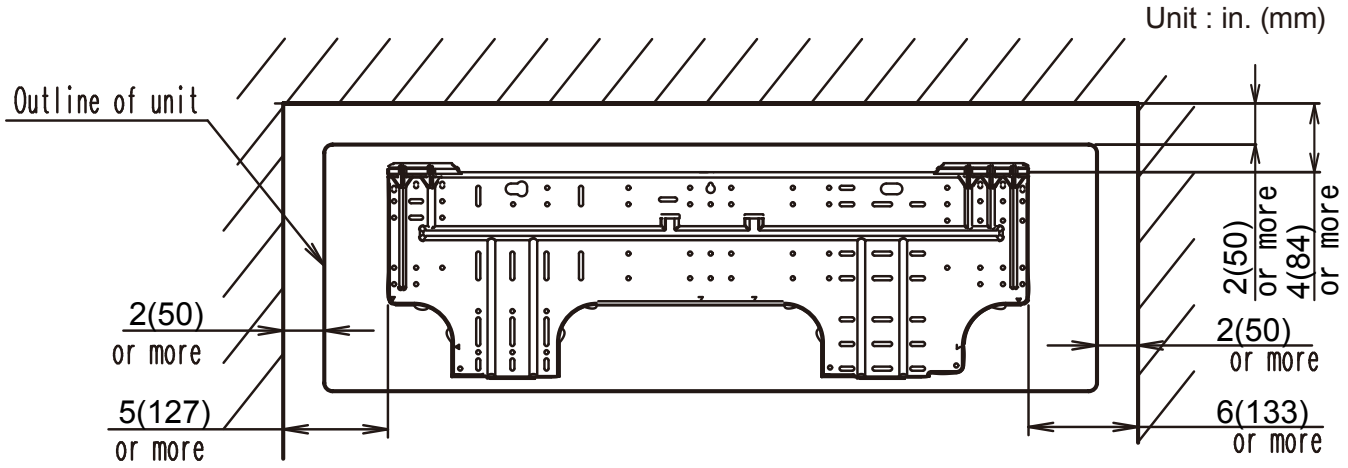


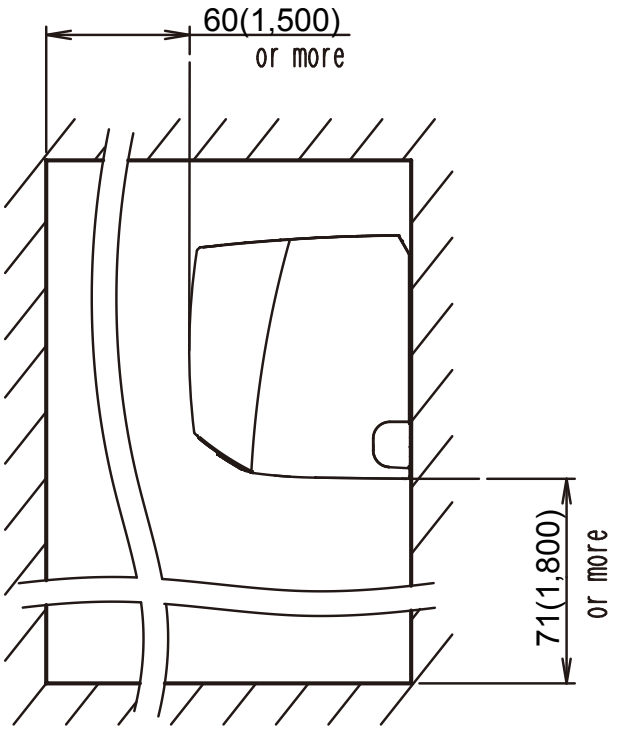
		ASU9RLS3	ASU12RLS3	ASU15RLS3
Refrigerant pipe flare connection	Liquid	Ø 1/4 in. (Ø 6.35 mm)		
	Gas	Ø 3/8 in. (Ø 9.52 mm)		Ø 1/2 in. (Ø 12.7 mm)
Drain hose connection	Drain hose	(Ø 9/16 in. (I.D.), Ø 5/8 to Ø 11/16 in. (O.D.) [Ø 13.8 mm (I.D.), Ø 15.8 to 16.7 mm (O.D.)]		

WALL MOUNTED TYPE
ASU9-15RLS3

■ INSTALLATION PLACE

Unit : in. (mm)

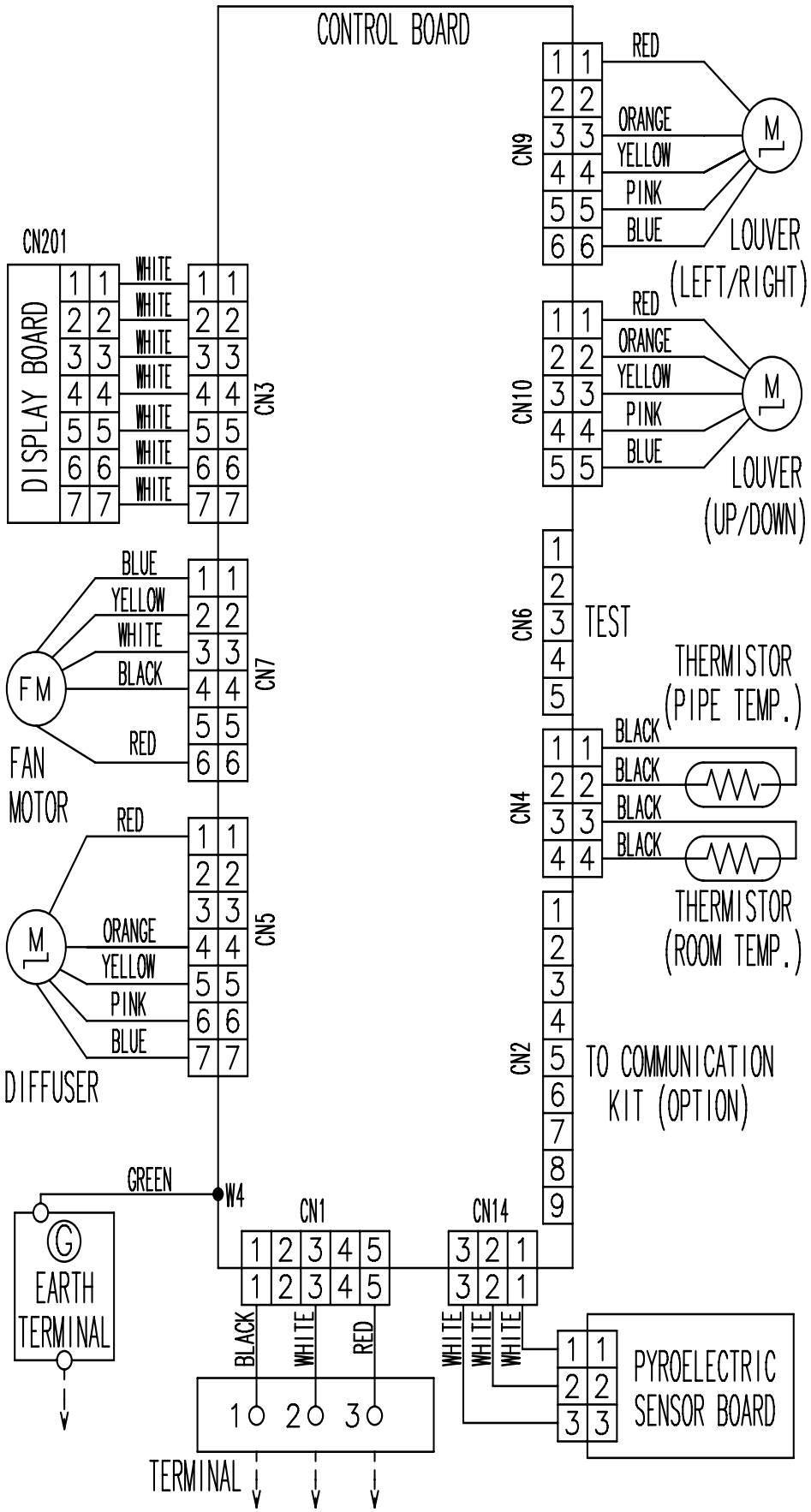




WALL MOUNTED TYPE
ASU9-15RLS3

5. WIRING DIAGRAMS

■ MODEL: ASU9RLS3, ASU12RLS3, ASU15RLS3



WALL MOUNTED TYPE
ASU9-15RLS3

6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL: ASU9RLS3

AFR	489

		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
	15	8.33	8.06	0.19	9.29	8.11	0.19	10.25	8.87	0.20	10.57	9.53	0.20	11.17	9.50	0.20	11.81	10.07	0.21
	23	8.16	7.88	0.22	9.09	7.91	0.22	10.03	8.65	0.23	10.35	9.31	0.22	10.94	9.28	0.22	11.56	9.91	0.23
	32	7.99	7.69	0.22	8.90	7.75	0.23	9.81	8.45	0.24	10.13	9.16	0.23	10.70	9.09	0.23	11.32	9.68	0.24
	41	7.81	7.58	0.24	8.71	7.61	0.24	9.60	8.28	0.25	9.90	8.97	0.24	10.47	8.90	0.24	11.07	9.50	0.25
	50	7.64	7.36	0.22	8.51	7.41	0.22	9.38	8.07	0.24	9.68	8.76	0.23	10.24	8.70	0.23	10.83	9.26	0.24
	59	7.47	7.24	0.27	8.32	7.27	0.27	9.16	7.91	0.28	9.46	8.57	0.28	10.01	8.51	0.28	10.58	9.08	0.28
	67	8.42	8.15	0.34	9.38	8.18	0.35	10.33	8.94	0.36	10.67	9.63	0.36	11.28	9.59	0.36	11.93	10.18	0.37
	77	8.01	7.74	0.39	8.93	7.77	0.39	9.85	8.49	0.40	10.16	9.15	0.40	10.74	9.11	0.41	11.35	9.73	0.41
	87	7.57	7.29	0.44	8.45	7.36	0.44	9.31	8.01	0.45	9.58	8.67	0.45	10.16	8.63	0.46	10.74	9.18	0.46
	95	7.09	6.88	0.48	7.91	6.91	0.49	8.73	7.53	0.50	9.00	8.15	0.50	9.55	8.12	0.51	10.06	8.63	0.51
	104	6.00	5.67	0.45	6.68	6.16	0.46	7.36	6.71	0.46	7.60	7.26	0.46	8.05	7.22	0.47	8.52	7.70	0.47
	115	5.52	5.33	0.45	6.17	5.71	0.46	6.78	6.22	0.46	6.99	6.74	0.46	7.43	6.71	0.47	7.84	7.15	0.47

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

AFR	13.8

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			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
	-10.0	2.44	2.36	0.19	2.72	2.38	0.19	3.00	2.60	0.20	3.10	2.79	0.20	3.27	2.78	0.20	3.46	2.95	0.21
	-5.0	2.39	2.31	0.22	2.67	2.32	0.22	2.94	2.53	0.23	3.03	2.73	0.22	3.21	2.72	0.22	3.39	2.90	0.23
	0.0	2.34	2.25	0.22	2.61	2.27	0.23	2.88	2.48	0.24	2.97	2.68	0.23	3.14	2.67	0.23	3.32	2.84	0.24
	5.0	2.29	2.22	0.24	2.55	2.23	0.24	2.81	2.43	0.25	2.90	2.63	0.24	3.07	2.61	0.24	3.25	2.79	0.25
	10.0	2.24	2.16	0.22	2.49	2.17	0.22	2.75	2.37	0.24	2.84	2.57	0.23	3.00	2.55	0.23	3.17	2.71	0.24
	15.0	2.19	2.12	0.27	2.44	2.13	0.27	2.69	2.32	0.28	2.77	2.51	0.28	2.93	2.49	0.28	3.10	2.66	0.28
	19.4	2.47	2.39	0.34	2.75	2.40	0.35	3.03	2.62	0.36	3.13	2.82	0.36	3.31	2.81	0.36	3.50	2.98	0.37
	25.0	2.35	2.27	0.39	2.62	2.28	0.39	2.89	2.49	0.40	2.98	2.68	0.40	3.15	2.67	0.41	3.33	2.85	0.41
	30.6	2.22	2.14	0.44	2.48	2.16	0.44	2.73	2.35	0.45	2.81	2.54	0.45	2.98	2.53	0.46	3.15	2.69	0.46
	35.0	2.08	2.02	0.48	2.32	2.03	0.49	2.56	2.21	0.50	2.64	2.39	0.50	2.80	2.38	0.51	2.95	2.53	0.51
	40.0	1.76	1.66	0.45	1.96	1.80	0.46	2.16	1.97	0.46	2.23	2.13	0.46	2.36	2.12	0.47	2.50	2.26	0.47
	46.0	1.62	1.56	0.45	1.81	1.67	0.46	1.99	1.82	0.46	2.05	1.98	0.46	2.18	1.97	0.47	2.30	2.10	0.47

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

WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU12RLS3

AFR	489

		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
	15	10.34	9.52	0.28	11.53	9.58	0.28	12.72	10.47	0.29	13.11	11.30	0.29	13.87	11.21	0.29	14.67	11.96	0.30
	23	10.26	9.44	0.33	11.44	9.47	0.33	12.62	10.34	0.35	13.01	11.19	0.34	13.77	11.12	0.34	14.56	11.85	0.35
	32	10.18	9.35	0.36	11.36	9.39	0.36	12.52	10.27	0.38	12.91	11.09	0.37	13.67	11.03	0.38	14.45	11.78	0.39
	41	10.10	9.30	0.39	11.27	9.37	0.39	12.42	10.21	0.41	12.81	11.02	0.40	13.57	10.98	0.40	14.34	11.68	0.41
	50	10.03	9.21	0.40	11.18	9.25	0.40	12.32	10.10	0.42	12.71	10.92	0.41	13.47	10.86	0.41	14.23	11.60	0.42
	59	9.95	9.16	0.41	11.10	9.23	0.41	12.22	10.05	0.44	12.61	10.85	0.42	13.37	10.81	0.43	14.12	11.50	0.44
	67	11.22	10.32	0.54	12.51	10.40	0.55	13.77	11.34	0.55	14.22	12.25	0.56	15.07	12.18	0.56	15.92	12.98	0.57
	77	10.67	9.82	0.62	11.90	9.85	0.63	13.13	10.76	0.64	13.53	11.63	0.64	14.32	11.56	0.64	15.14	12.32	0.65
	87	10.09	9.27	0.69	11.25	9.31	0.70	12.41	10.18	0.71	12.78	10.98	0.71	13.57	10.94	0.72	14.32	11.67	0.73
	95	9.48	8.72	0.76	10.53	8.76	0.77	11.63	9.56	0.79	12.00	10.32	0.79	12.72	10.29	0.80	13.43	10.94	0.81
	104	8.01	7.78	0.71	8.93	7.82	0.72	9.82	8.51	0.73	10.13	9.20	0.74	10.74	9.16	0.74	11.35	9.78	0.75
	115	7.36	7.20	0.71	8.22	7.23	0.72	9.07	7.89	0.74	9.34	8.54	0.74	9.89	8.51	0.74	10.47	9.05	0.75

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

AFR	13.8

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			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
	-10.0	3.03	2.79	0.28	3.38	2.81	0.28	3.73	3.07	0.29	3.84	3.31	0.29	4.07	3.29	0.29	4.30	3.50	0.30
	-5.0	3.01	2.77	0.33	3.35	2.78	0.33	3.70	3.03	0.35	3.81	3.28	0.34	4.04	3.26	0.34	4.27	3.47	0.35
	0.0	2.98	2.74	0.36	3.33	2.75	0.36	3.67	3.01	0.38	3.78	3.25	0.37	4.01	3.23	0.38	4.23	3.45	0.39
	5.0	2.96	2.73	0.39	3.30	2.75	0.39	3.64	2.99	0.41	3.75	3.23	0.40	3.98	3.22	0.40	4.20	3.42	0.41
	10.0	2.94	2.70	0.40	3.28	2.71	0.40	3.61	2.96	0.42	3.73	3.20	0.41	3.95	3.18	0.41	4.17	3.40	0.42
	15.0	2.92	2.68	0.41	3.25	2.71	0.41	3.58	2.94	0.44	3.70	3.18	0.42	3.92	3.17	0.43	4.14	3.37	0.44
	19.4	3.29	3.03	0.54	3.67	3.05	0.55	4.04	3.32	0.55	4.17	3.59	0.56	4.42	3.57	0.56	4.67	3.80	0.57
	25.0	3.13	2.88	0.62	3.49	2.89	0.63	3.85	3.15	0.64	3.97	3.41	0.64	4.20	3.39	0.64	4.44	3.61	0.65
	30.6	2.96	2.72	0.69	3.30	2.73	0.70	3.64	2.98	0.71	3.75	3.22	0.71	3.98	3.21	0.72	4.20	3.42	0.73
	35.0	2.78	2.56	0.76	3.09	2.57	0.77	3.41	2.80	0.79	3.52	3.03	0.79	3.73	3.02	0.80	3.94	3.21	0.81
	40.0	2.35	2.28	0.71	2.62	2.29	0.72	2.88	2.49	0.73	2.97	2.70	0.74	3.15	2.68	0.74	3.33	2.87	0.75
	46.0	2.16	2.11	0.71	2.41	2.12	0.72	2.66	2.31	0.74	2.74	2.50	0.74	2.90	2.49	0.74	3.07	2.65	0.75

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

WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU15RLS3

AFR	547

		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
	15	12.72	9.80	0.36	14.18	10.92	0.36	15.63	12.04	0.38	16.10	12.40	0.37	17.04	13.13	0.37	18.02	13.88	0.38
	23	12.53	9.62	0.39	13.95	10.72	0.39	15.38	11.82	0.41	15.85	12.18	0.40	16.78	12.90	0.40	17.75	13.63	0.42
	32	12.33	9.49	0.40	13.73	10.57	0.41	15.14	11.65	0.43	15.60	12.01	0.42	16.52	12.72	0.42	17.47	13.45	0.43
	41	12.13	9.34	0.41	13.51	10.41	0.41	14.89	11.47	0.43	15.35	11.82	0.42	16.26	12.52	0.42	17.19	13.24	0.44
	50	11.93	9.18	0.42	13.29	10.23	0.42	14.65	11.27	0.45	15.10	11.62	0.43	16.00	12.31	0.44	16.91	13.01	0.45
	59	11.73	9.01	0.45	13.07	10.04	0.45	14.41	11.07	0.48	14.85	11.41	0.46	15.74	12.10	0.46	16.64	12.78	0.48
	67	13.48	11.10	0.72	15.01	11.17	0.74	16.55	12.15	0.75	17.06	13.14	0.75	18.08	13.07	0.76	19.11	13.95	0.76
	77	12.86	10.57	0.82	14.33	10.64	0.83	15.80	11.59	0.84	16.27	12.50	0.84	17.23	12.47	0.85	18.22	13.28	0.86
	87	12.18	10.00	0.91	13.58	10.07	0.92	14.98	10.99	0.94	15.42	11.87	0.95	16.34	11.84	0.95	17.30	12.61	0.96
	95	11.46	9.40	1.01	12.76	9.48	1.02	14.06	10.32	1.03	14.50	11.17	1.04	15.35	11.10	1.05	16.24	11.84	1.06
	104	10.06	8.28	0.99	11.22	8.31	1.01	12.35	9.09	1.02	12.73	9.79	1.02	13.51	9.76	1.03	14.26	10.39	1.05
	115	9.18	7.54	0.97	10.20	7.57	0.99	11.26	8.28	1.01	11.60	8.91	1.01	12.32	8.88	1.02	13.00	9.48	1.03

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

AFR	15.5

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			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
	-10.0	3.73	2.87	0.36	4.15	3.20	0.36	4.58	3.53	0.38	4.72	3.63	0.37	5.00	3.85	0.37	5.28	4.07	0.38
	-5.0	3.67	2.82	0.39	4.09	3.14	0.39	4.51	3.46	0.41	4.65	3.57	0.40	4.92	3.78	0.40	5.20	4.00	0.42
	0.0	3.61	2.78	0.40	4.02	3.10	0.41	4.44	3.42	0.43	4.57	3.52	0.42	4.84	3.73	0.42	5.12	3.94	0.43
	5.0	3.56	2.74	0.41	3.96	3.05	0.41	4.37	3.36	0.43	4.50	3.46	0.42	4.77	3.67	0.42	5.04	3.88	0.44
	10.0	3.50	2.69	0.42	3.90	3.00	0.42	4.29	3.30	0.45	4.43	3.41	0.43	4.69	3.61	0.44	4.96	3.81	0.45
	15.0	3.44	2.64	0.45	3.83	2.94	0.45	4.22	3.24	0.48	4.35	3.34	0.46	4.61	3.54	0.46	4.88	3.75	0.48
	19.4	3.95	3.25	0.72	4.40	3.27	0.74	4.85	3.56	0.75	5.00	3.85	0.75	5.30	3.83	0.76	5.60	4.09	0.76
	25.0	3.77	3.10	0.82	4.20	3.12	0.83	4.63	3.40	0.84	4.77	3.66	0.84	5.05	3.65	0.85	5.34	3.89	0.86
	30.6	3.57	2.93	0.91	3.98	2.95	0.92	4.39	3.22	0.94	4.52	3.48	0.95	4.79	3.47	0.95	5.07	3.70	0.96
	35.0	3.36	2.76	1.01	3.74	2.78	1.02	4.12	3.02	1.03	4.25	3.27	1.04	4.50	3.25	1.05	4.76	3.47	1.06
	40.0	2.95	2.43	0.99	3.29	2.44	1.01	3.62	2.66	1.02	3.73	2.87	1.02	3.96	2.86	1.03	4.18	3.05	1.05
	46.0	2.69	2.21	0.97	2.99	2.22	0.99	3.30	2.43	1.01	3.40	2.61	1.01	3.61	2.60	1.02	3.81	2.78	1.03

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

WALL MOUNTED TYPE
ASU9-15RLS3

6-2. HEATING CAPACITY

■ MODEL: ASU9RLS3

AFR	487

			Indoor temperature							
		°FDB	60		65		70		75	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-17	11.6	2.15	11.4	2.19	11.1	2.23	10.5	2.31
	-5	-7	14.7	2.16	14.3	2.20	14.0	2.24	13.3	2.32
	5	3	16.1	2.17	15.7	2.21	15.4	2.25	14.6	2.34
	14	12	16.8	2.13	16.4	2.17	16.0	2.22	15.2	2.30
	23	19	18.3	2.10	17.9	2.14	17.5	2.18	16.6	2.26
	32	28	18.8	2.06	18.4	2.10	17.9	2.14	17.0	2.22
	41	37	21.3	1.88	20.8	1.92	20.3	1.95	19.3	2.03
	47	43	23.1	1.85	22.6	1.89	22.0	1.93	20.9	2.01
	50	47	25.5	1.84	24.9	1.88	24.3	1.91	23.1	1.99
	59	50	26.5	1.63	25.8	1.67	25.2	1.70	23.9	1.77

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

AFR	13.8

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-26.1	-27.0	3.41	2.15	3.33	2.19	3.25	2.23	3.09	2.31
	-20.6	-21.7	4.31	2.16	4.20	2.20	4.10	2.24	3.90	2.32
	-15.0	-16.1	4.73	2.17	4.61	2.21	4.50	2.25	4.28	2.34
	-10.0	-11.1	4.91	2.13	4.80	2.17	4.68	2.22	4.45	2.30
	-5.0	-7.2	5.38	2.10	5.25	2.14	5.12	2.18	4.86	2.26
	0.0	-2.2	5.52	2.06	5.39	2.10	5.26	2.14	5.00	2.22
	5.0	2.8	6.25	1.88	6.10	1.92	5.95	1.95	5.65	2.03
	8.3	6.1	6.77	1.85	6.61	1.89	6.45	1.93	6.13	2.01
	10.0	8.3	7.48	1.84	7.30	1.88	7.13	1.91	6.77	1.99
	15.0	10.0	7.75	1.63	7.57	1.67	7.38	1.70	7.02	1.77

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

■ MODEL: ASU12RLS3

AFR	487

			Indoor temperature							
		°FDB	60		65		70		75	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-17	12.4	2.15	12.1	2.19	11.8	2.23	11.2	2.31
	-5	-7	15.8	2.16	15.4	2.20	15.0	2.24	14.3	2.32
	5	3	17.4	2.17	17.0	2.21	16.6	2.25	15.8	2.34
	14	12	18.3	2.13	17.8	2.18	17.4	2.22	16.5	2.30
	23	19	20.0	2.10	19.5	2.14	19.0	2.18	18.1	2.26
	32	28	20.6	2.07	20.1	2.11	19.6	2.15	18.6	2.23
	41	37	22.5	1.88	21.9	1.92	21.4	1.96	20.3	2.04
	47	43	23.2	1.86	22.7	1.90	22.1	1.94	21.0	2.02
	50	47	25.6	1.85	25.0	1.89	24.4	1.93	23.2	2.00
	59	50	26.6	1.64	25.9	1.68	25.3	1.71	24.0	1.78

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

AFR	13.8

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-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	2.16	4.52	2.20	4.41	2.24	4.19	2.32
	-15.0	-16.1	5.11	2.17	4.99	2.21	4.86	2.25	4.62	2.34
	-10.0	-11.1	5.36	2.13	5.23	2.18	5.10	2.22	4.85	2.30
	-5.0	-7.2	5.86	2.10	5.72	2.14	5.58	2.18	5.30	2.26
	0.0	-2.2	6.03	2.07	5.88	2.11	5.74	2.15	5.45	2.23
	5.0	2.8	6.58	1.88	6.43	1.92	6.27	1.96	5.96	2.04
	8.3	6.1	6.80	1.86	6.64	1.90	6.48	1.94	6.15	2.02
	10.0	8.3	7.52	1.85	7.34	1.89	7.16	1.93	6.80	2.00
	15.0	10.0	7.79	1.64	7.60	1.68	7.42	1.71	7.05	1.78

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

WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU15RLS3

AFR	547

			Indoor temperature							
		°FDB	60		65		70		75	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-17	17.1	2.77	16.7	2.82	16.3	2.88	15.5	2.98
	-5	-7	19.6	2.78	19.1	2.84	18.6	2.89	17.7	3.00
	5	3	22.0	2.79	21.5	2.85	21.0	2.90	19.9	3.01
	14	12	22.7	2.68	22.2	2.73	21.6	2.78	20.5	2.89
	23	19	23.3	2.56	22.8	2.61	22.2	2.66	21.1	2.76
	32	28	24.0	2.45	23.4	2.49	22.9	2.54	21.7	2.64
	41	37	24.7	2.18	24.1	2.22	23.5	2.27	22.3	2.36
	47	43	25.1	2.10	24.5	2.15	23.9	2.19	22.7	2.28
	50	47	26.1	1.97	25.5	2.01	24.9	2.05	23.6	2.13
	59	50	27.2	1.75	26.5	1.79	25.9	1.82	24.6	1.89

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

AFR	15.5

			Indoor temperature							
		°CDB	15.6		18.3		21.1		23.9	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-26.1	-27.0	5.01	2.77	4.89	2.82	4.77	2.88	4.53	2.98
	-20.6	-21.7	5.73	2.78	5.60	2.84	5.46	2.89	5.19	3.00
	-15.0	-16.1	6.46	2.79	6.31	2.85	6.15	2.90	5.84	3.01
	-10.0	-11.1	6.65	2.68	6.49	2.73	6.33	2.78	6.02	2.89
	-5.0	-7.2	6.84	2.56	6.68	2.61	6.52	2.66	6.19	2.76
	0.0	-2.2	7.04	2.45	6.87	2.49	6.70	2.54	6.37	2.64
	5.0	2.8	7.23	2.18	7.06	2.22	6.88	2.27	6.54	2.36
	8.3	6.1	7.35	2.10	7.18	2.15	7.00	2.19	6.65	2.28
	10.0	8.3	7.66	1.97	7.47	2.01	7.29	2.05	6.93	2.13
	15.0	10.0	7.97	1.75	7.78	1.79	7.59	1.82	7.21	1.89

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

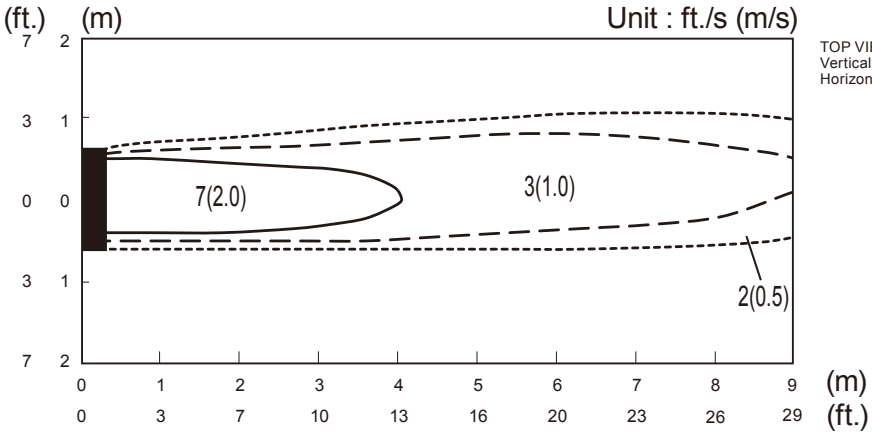
WALL MOUNTED TYPE
ASU9-15RLS3

7. FAN PERFORMANCE

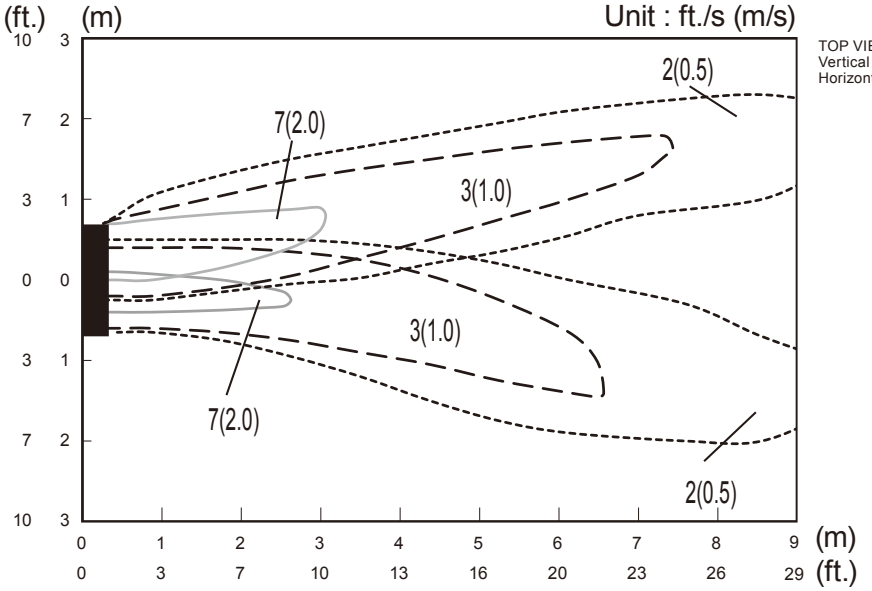
7-1. AIR VELOCITY DISTRIBUTION

■ MODEL: ASU9RLS3, ASU12RLS3

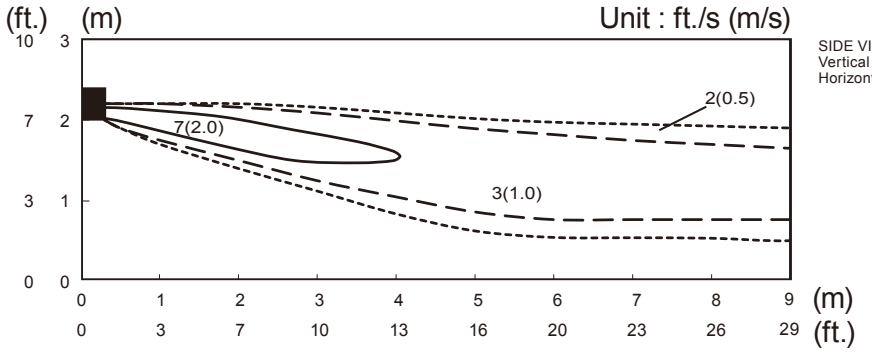
Conditions:
Fan speed : High
Operation mode : FAN



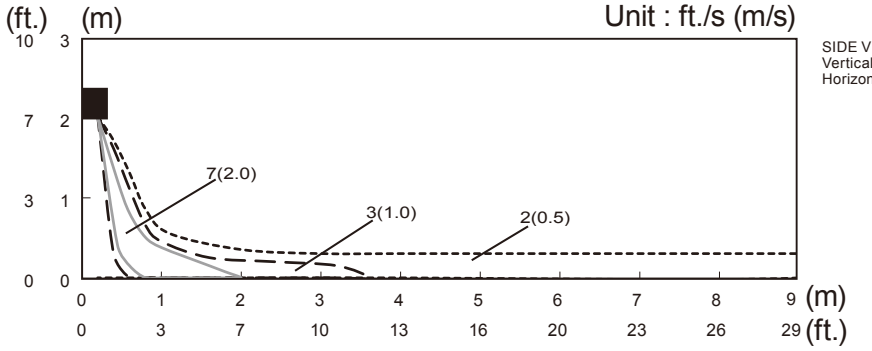
TOP VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



TOP VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



SIDE VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center

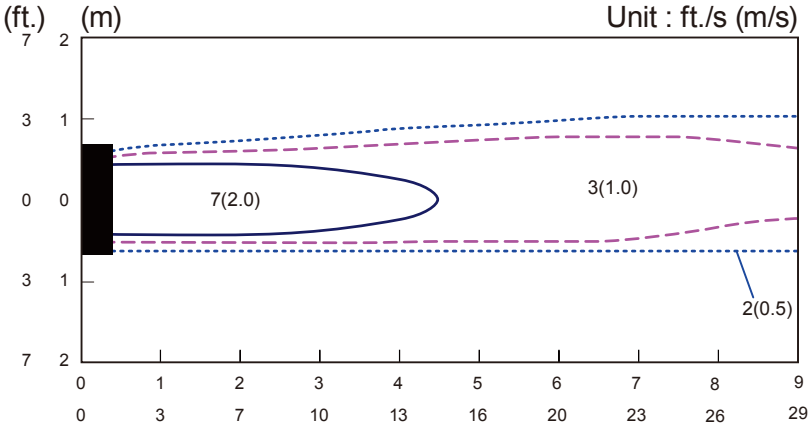


SIDE VIEW
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

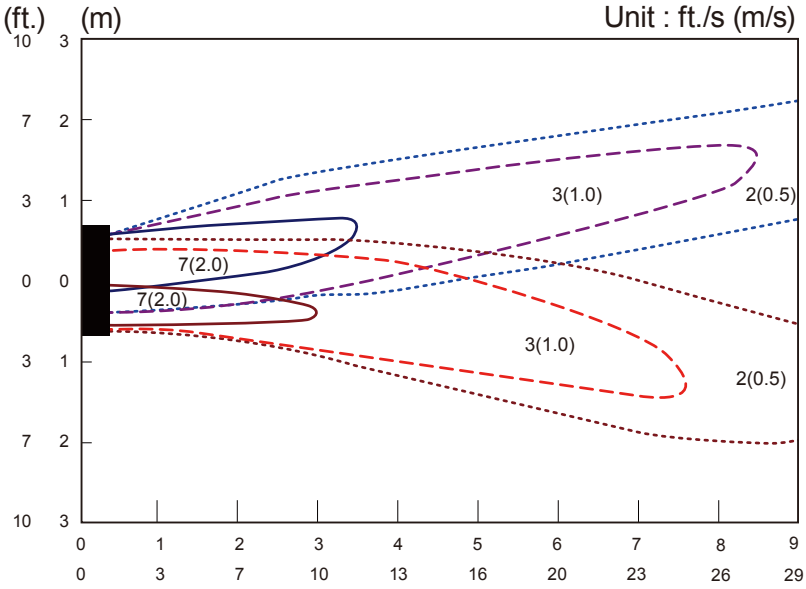
WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU15RLS3

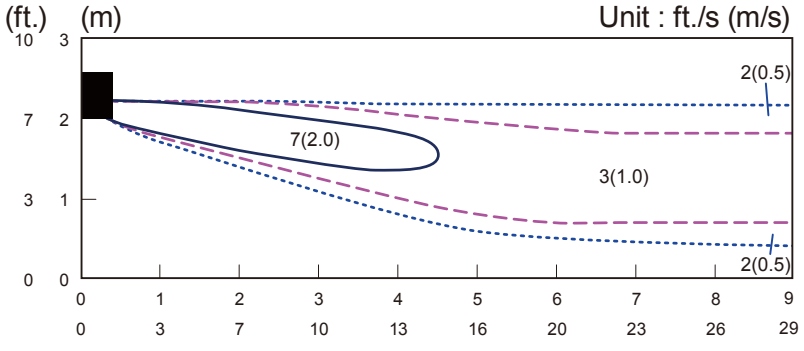
Conditions:
Fan speed : High
Operation mode : FAN



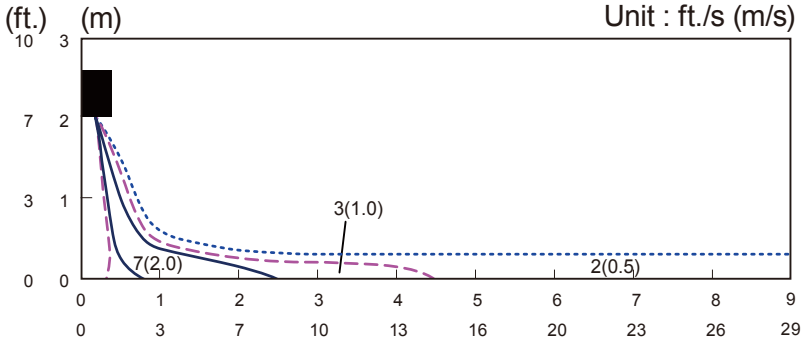
TOP VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



TOP VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Right & Left



SIDE VIEW
Vertical airflow direction louver : Up
Horizontal airflow direction louver : Center



SIDE VIEW
Vertical airflow direction louver : Down
Horizontal airflow direction louver : Center

WALL MOUNTED TYPE
ASU9-15RLS3

7-2. AIRFLOW

■ MODEL: ASU9RLS3, ASU12RLS3

● Cooling

Fan speed	Airflow	
HIGH	830	m^3/h
	231	l/s
	489	CFM
MED	680	m^3/h
	189	l/s
	400	CFM
LOW	580	m^3/h
	161	l/s
	341	CFM
QUIET	380	m^3/h
	106	l/s
	224	CFM

● Heating

Fan speed	Airflow	
HIGH	830	m^3/h
	231	l/s
	489	CFM
MED	680	m^3/h
	189	l/s
	400	CFM
LOW	580	m^3/h
	161	l/s
	341	CFM
QUIET	380	m^3/h
	106	l/s
	224	CFM

WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU15RLS3

● Cooling

Fan speed	Airflow	
HIGH	930	m^3/h
	258	l/s
	547	CFM
MED	780	m^3/h
	217	l/s
	459	CFM
LOW	630	m^3/h
	175	l/s
	371	CFM
QUIET	440	m^3/h
	122	l/s
	259	CFM

● Heating

Fan speed	Airflow	
HIGH	930	m^3/h
	258	l/s
	547	CFM
MED	780	m^3/h
	217	l/s
	459	CFM
LOW	630	m^3/h
	175	l/s
	371	CFM
QUIET	500	m^3/h
	139	l/s
	294	CFM

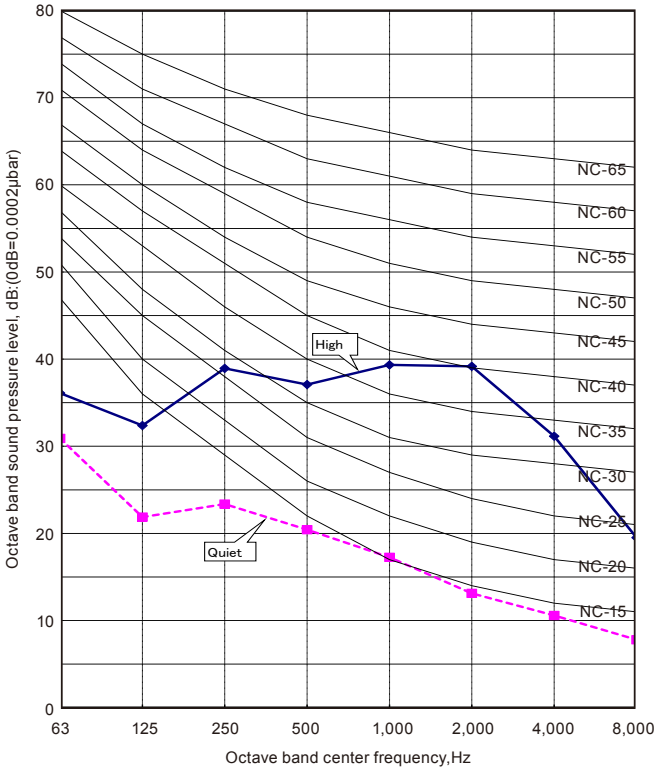
WALL MOUNTED TYPE
ASU9-15RLS3

8. OPERATION NOISE

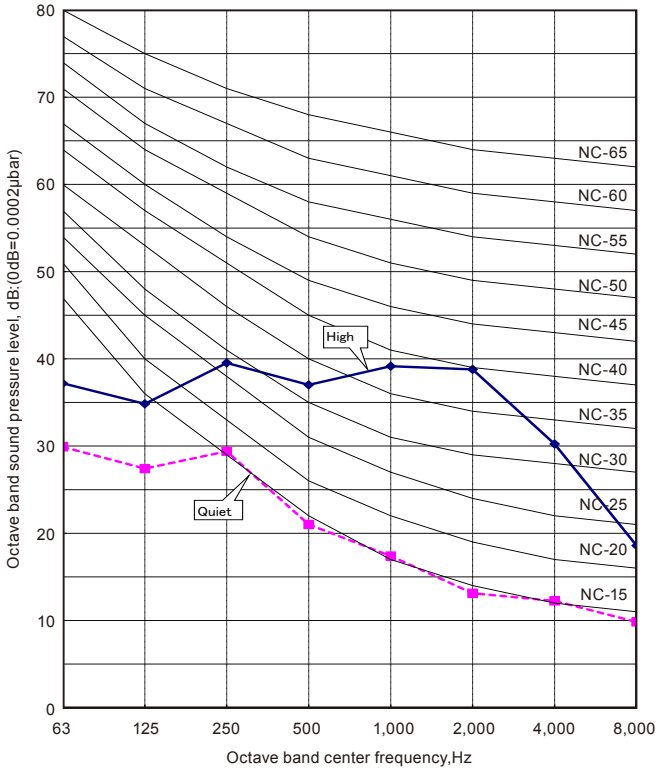
8-1. NOISE LEVEL CURVE

■ MODEL: ASU9RLS3

● Cooling

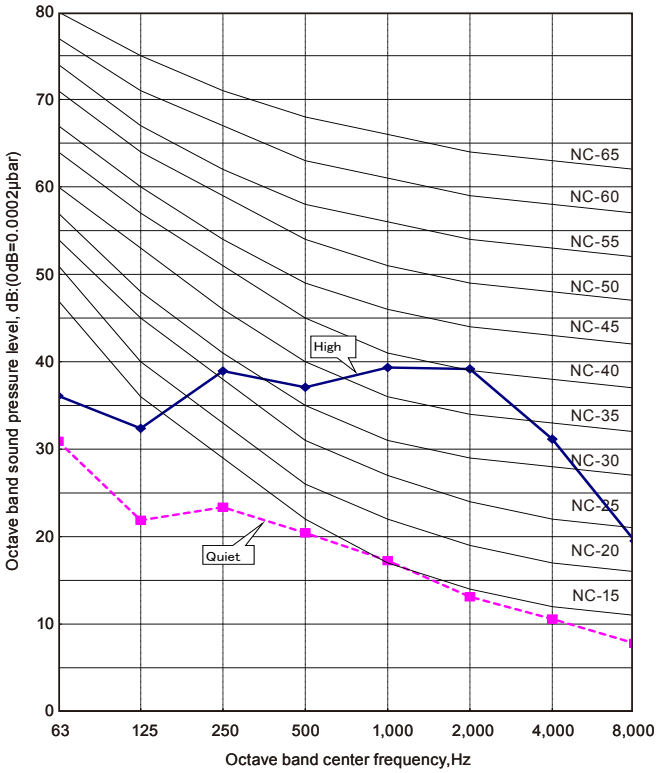


● Heating

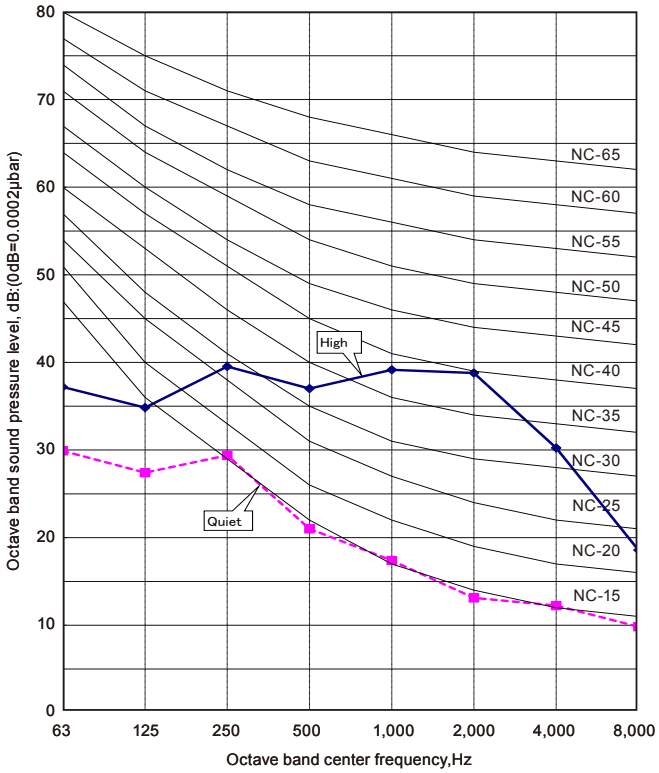


■ MODEL: ASU12RLS3

● Cooling



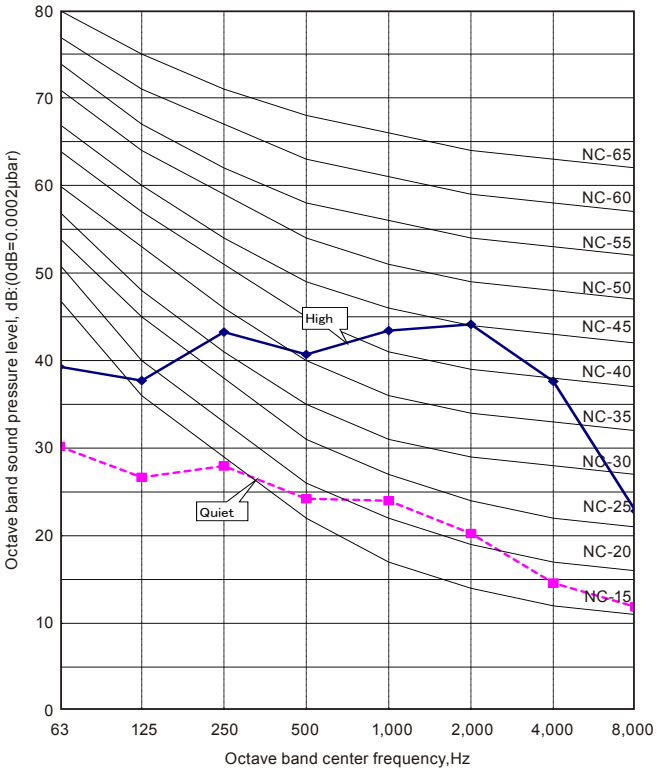
● Heating



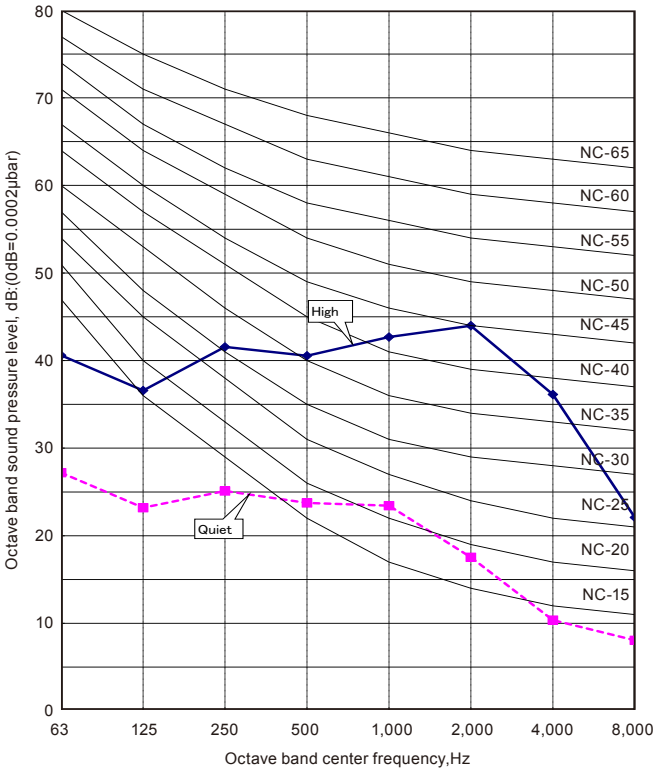
WALL MOUNTED TYPE
ASU9-15RLS3

■ MODEL: ASU15RLS3

● Cooling

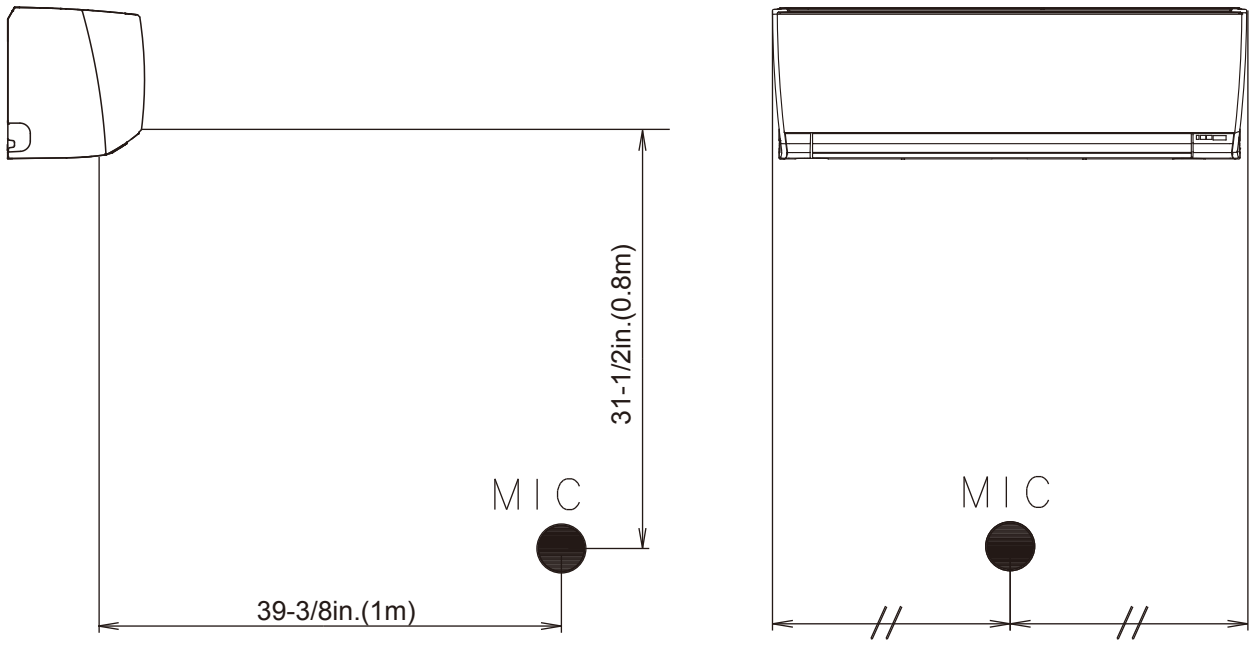


● Heating



WALL MOUNTED TYPE
ASU9-15RLS3

8-2. SOUND LEVEL CHECK POINT



WALL MOUNTED TYPE
ASU9-15RLS3

9. SAFETY DEVICES

	Protection form	Model
		ASU9RLS3 ASU12RLS3 ASU15RLS3
Circuit protection	Current fuse (PCB)	250V 3.15A
Fan motor protection	Thermal protector program	OFF: 302±27 °F (150±15 °C) ON: 248±27 °F (120±15 °C)

WALL MOUNTED TYPE
ASU9-15RLS3

10. 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	

10-1. EXTERNAL INPUT

■ CONTROL INPUT (Operation/Stop or Forced stop)

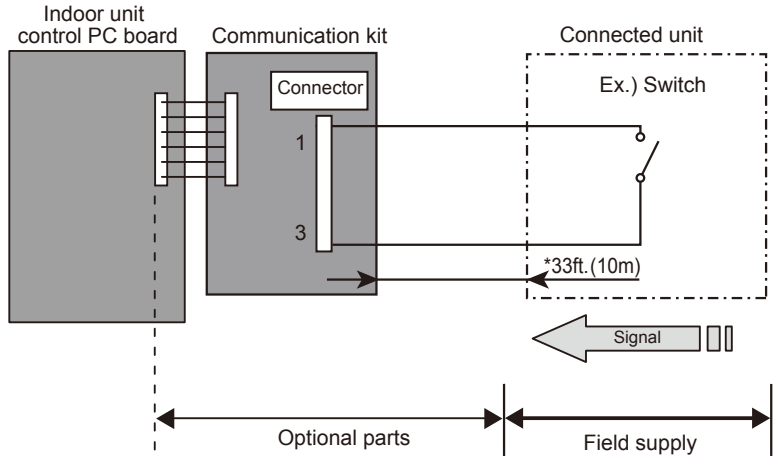
The air conditioner can be remotely operated by means of the following on-site work.

"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.

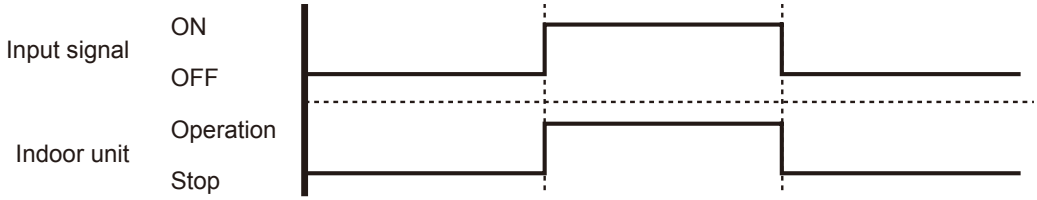
Unit operation	Initial setting after power is ON	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	75°F (24°C)	Temperature at previous operation
Air flow mode	AUTO	Mode at previous operation
Air direction (swing)	Standard air direction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

● Circuit diagram example



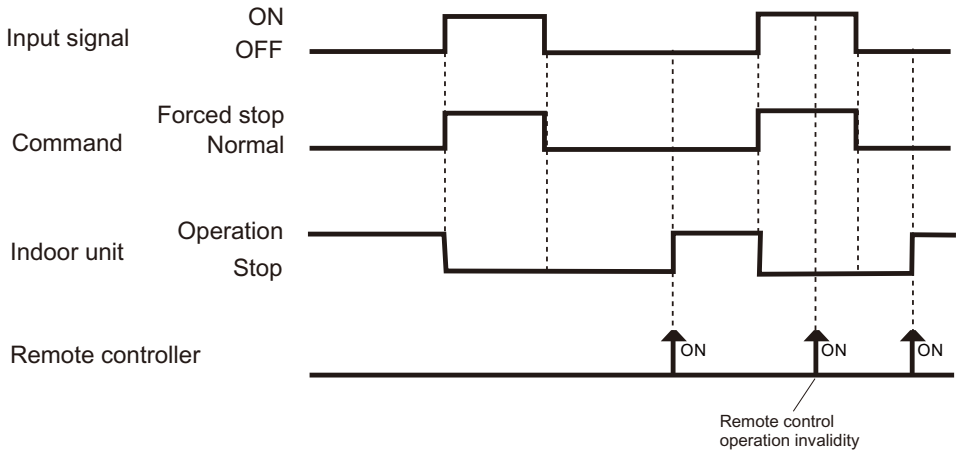
* Make the distance from the PC board to the connected unit within 33ft.(10m).
Contact capacity : 24VDC or more, 10mA or more.
Please use non-polar relays and switches.

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



WALL MOUNTED TYPE
ASU9-15RLS3

● When function setting is in "Forced stop" mode



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-TWBXF1

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

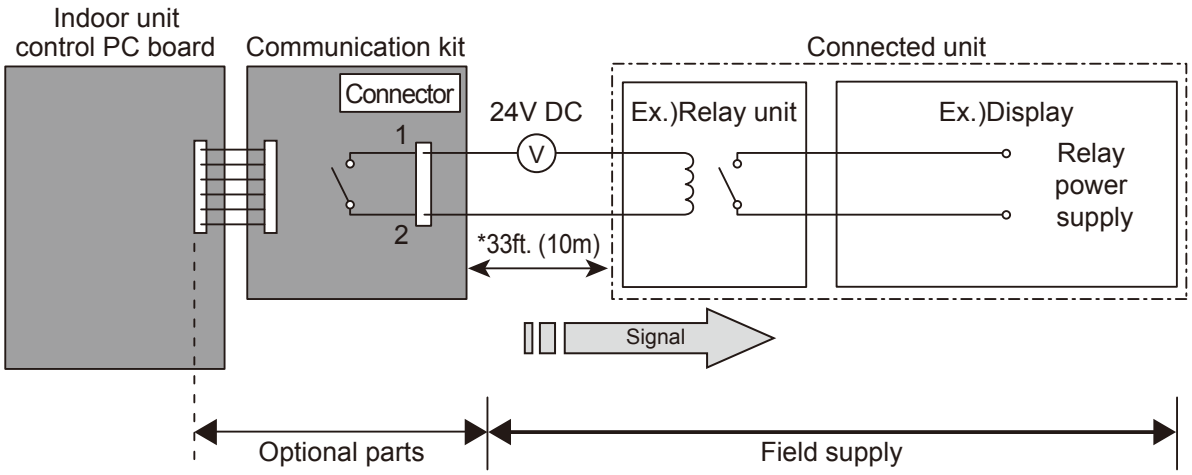
WALL MOUNTED TYPE
ASU9-15RLS3

10-2. EXTERNAL OUTPUT

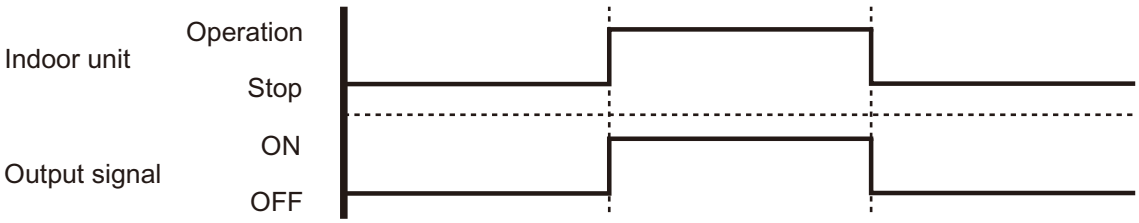
■ OPERATION STATUS OUTPUT

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-TWBXF1

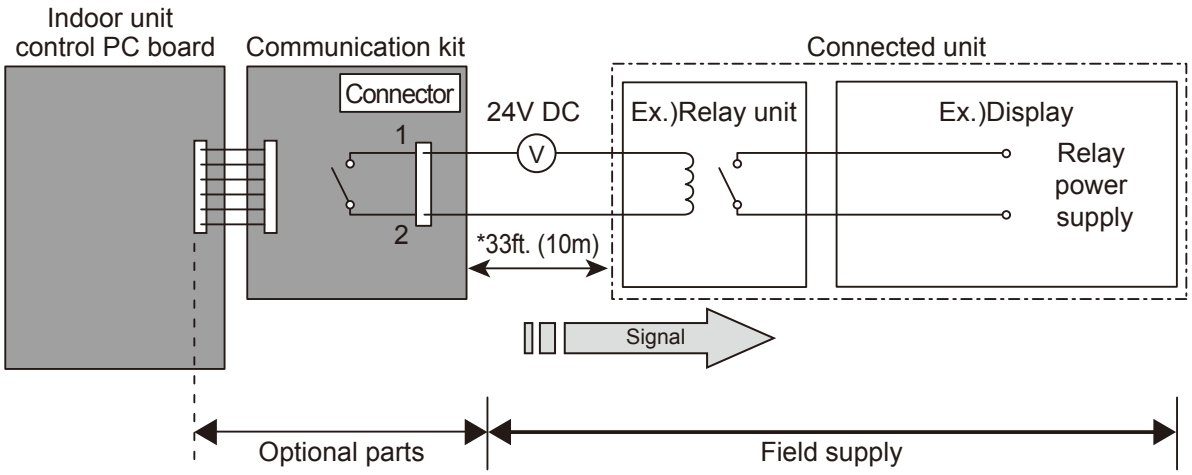
*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).

WALL MOUNTED TYPE
ASU9-15RLS3

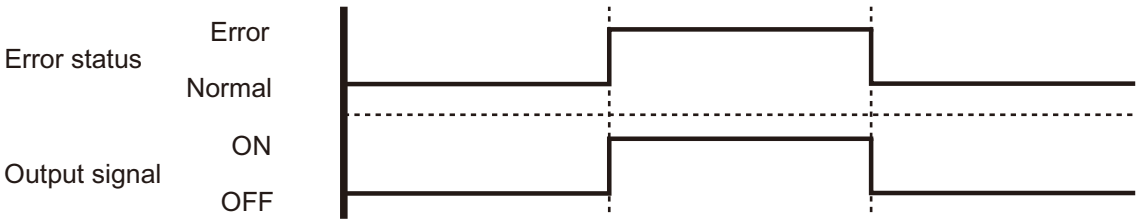
■ ERROR STATUS OUTPUT

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-TWBXF1

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

WALL MOUNTED TYPE
ASU9-15RLS3

11. FUNCTION SETTINGS

11-1. 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 custom code of the indoor unit and the custom code of the 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.

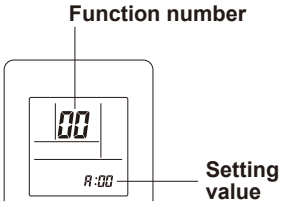
Selecting the Function Number and Setting Value

(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, in the order listed to confirm the settings.
Please confirm that the beep sounds.



(5) Next, please press START/STOP (⏻ / I) 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 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.

WALL MOUNTED TYPE
ASU9-15RLS3

■ FUNCTION DETAILS

	Functions
1)	Filter sign
2)	Room temperature control for indoor unit sensor
3)	Auto restart
4)	Room temperature sensor switching
5)	Remote controller custom code
6)	External input control
7)	Room temperature sensor switching (Aux.)
8)	Indoor unit fan control for energy saving for cooling
9)	Room temperature control for wired remote controller sensor
10)	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) 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)		
		03	-2°F (-1.0°C)		
		04	-3°F (-1.5°C)		
		05	-4°F (-2.0°C)	More Cooling Less Heating	
		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)		
		11	+2°F (+1.0°C)		
		12	+3°F (+1.5°C)		
		13	+4°F (+2.0°C)	Less Cooling More Heating	
		14	+5°F (+2.5°C)		
		15	+6°F (+3.0°C)		
		16	+7°F (+3.5°C)		
		17	+8°F (+4.0°C)		

WALL MOUNTED TYPE
ASU9-15RLS3

3) 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.

4) 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.

5) 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	

6) 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	

7) 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	

WALL MOUNTED TYPE
ASU9-15RLS3

8) Indoor unit fan control for energy saving for cooling

Enable or disable 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.

9) 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)	
		03	-2°F (-1.0°C)	
		04	-3°F (-1.5°C)	
		05	-4°F (-2.0°C)	More Cooling
		06	-5°F (-2.5°C)	Less Heating
		07	-6°F (-3.0°C)	
		08	-7°F (-3.5°C)	
		09	-8°F (-4.0°C)	
		10	+1°F (+0.5°C)	
		11	+2°F (+1.0°C)	
		12	+3°F (+1.5°C)	
		13	+4°F (+2.0°C)	Less Cooling
		14	+5°F (+2.5°C)	More Heating
		15	+6°F (+3.0°C)	
		16	+7°F (+3.5°C)	
		17	+8°F (+4.0°C)	

WALL MOUNTED TYPE
ASU9-15RLS3

10) 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.

WALL MOUNTED TYPE
ASU9-15RLS3

■ REMOTE CONTROLLER CUSTOM CODE SETTING

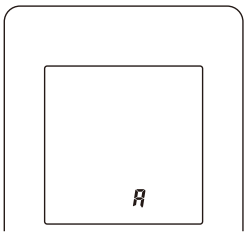
Use the following steps to select the custom code of the remote controller. (Note that the air conditioner cannot receive a signal if the air conditioner has not been set for the matching custom code.)

(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 custom code (initially set to A).

(3) Press the SET TEMP. (∧ / ∨) buttons to change the custom code between A → b → c → 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.

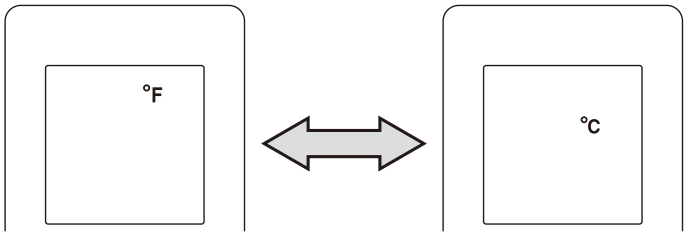
■ REMOTE CONTROLLER TEMPERATURE UNIT

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)

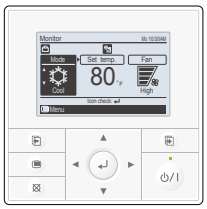
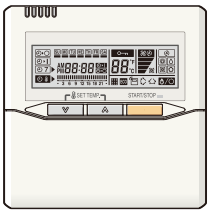
(3) With either of pressing the START/STOP button or no additional button operation for 30 seconds in step 2., the temperature unit currently selected will be set.



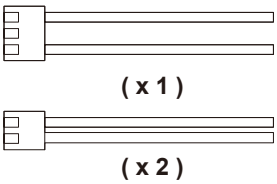
WALL MOUNTED TYPE
ASU9-15RLS3

12. OPTIONAL PARTS

12-1. 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.

12-2. OTHERS

Exterior	Parts name	Model No.	Summary
	Communication kit	UTY-TWBXF1	Use to connect with optional devices and air conditioner PC board.
 (x 1) (x 2)	External connect kit	UTY-XWZXZ5	Required when external device is connected. *Optional communication kit is necessary for installation.

2. OUTDOOR UNIT

SINGLE TYPE :

AOU9RLS3H
AOU12RLS3H
AOU15RLS3H

DTR_AO201E_01
2015.01.23

CONTENTS

2. OUTDOOR UNIT

OUTDOOR UNIT
AOU9-15RLS3H

1. SPECIFICATIONS

Type				INVERTER HEAT PUMP		
Model name				AOU9RLS3H	AOU12RLS3H	AOU15RLS3H
Power source				208 / 230V ~ 60Hz		
Available voltage range				188 - 253V		
Starting current			A	3.3	4.7	5.2
Fan	Airflow rate	Cooling	CFM (m^3/h)	989 (1,680)		1,206 (2,050)
		Heating		1,082 (1,840)		
	Type × Q'ty			Propeller fan × 1		
	Motor output		W	49		
Sound pressure level		Cooling	dB (A)	42	43	49
		Heating		47		50
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		1,000
Refrigerant	Type			R410A		
	Charge		lbs.oz.	2lbs.14oz.		3lbs.1oz.
			kg	1.30		1.40
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 - 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)	86 (39)		88 (40)
	Gross			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)		
	Max. height difference			49 (15)		
Operation range		Cooling	°F (°C)	14 to 115 (-10 to 46)		
		Heating		-15 to 75 (-26 to 24)		

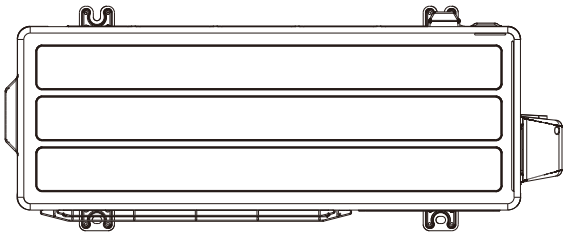
Note :
Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F (26.67°C) DB / 67°F (19.44°C) WB, and outdoor temperature of 95°F (35°C) DB / 75°F (23.9°C) WB.
Heating : Indoor temperature of 70°F (21.11°C) DB / 59°F (15°C) WB, and outdoor temperature of 47°F (8.33°C) 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.

OUTDOOR UNIT
AOU9-15RLS3H

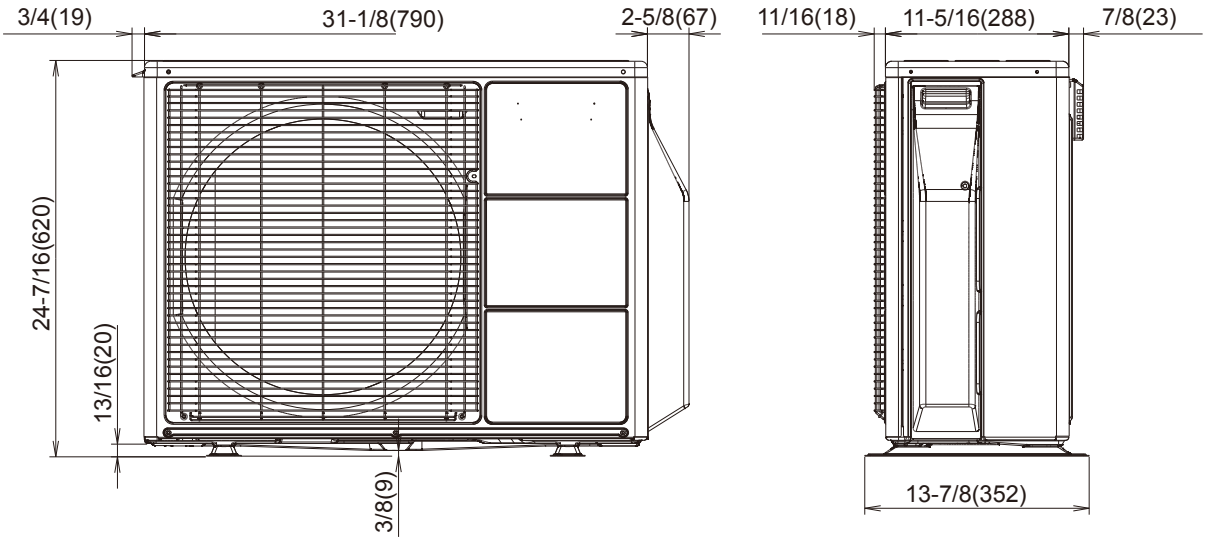
2. DIMENSIONS

■ MODEL: AOU9RLS3H, AOU12RLS3H, AOU15RLS3H

Unit : in. (mm)

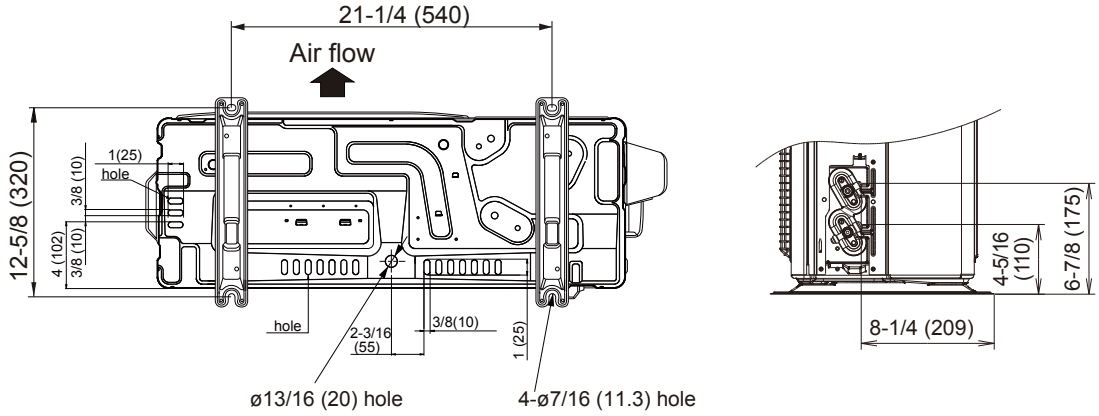


Top view



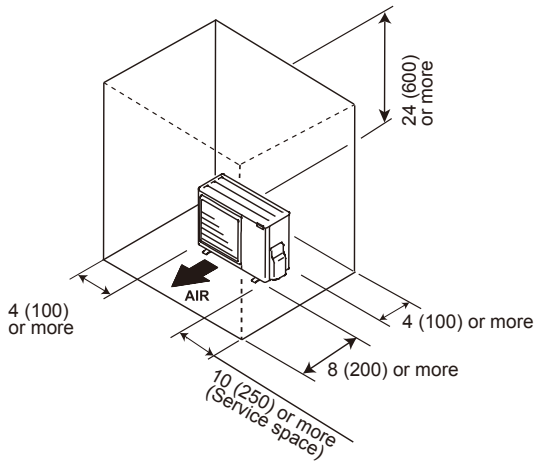
Front view

Side view



Bottom view

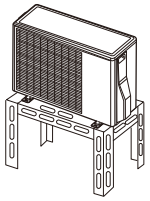
■ INSTALLATION PLACE



⚠ CAUTION

•When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold weather. (Reverse cycle model only)

•In areas with heavy snowfall, if the intake and outlet of outdoor unit is blocked with snow, it might become difficult to get warm and it is likely to cause breakdown. Please construct a canopy and a pedestal or place the unit on a high stand (local configured).

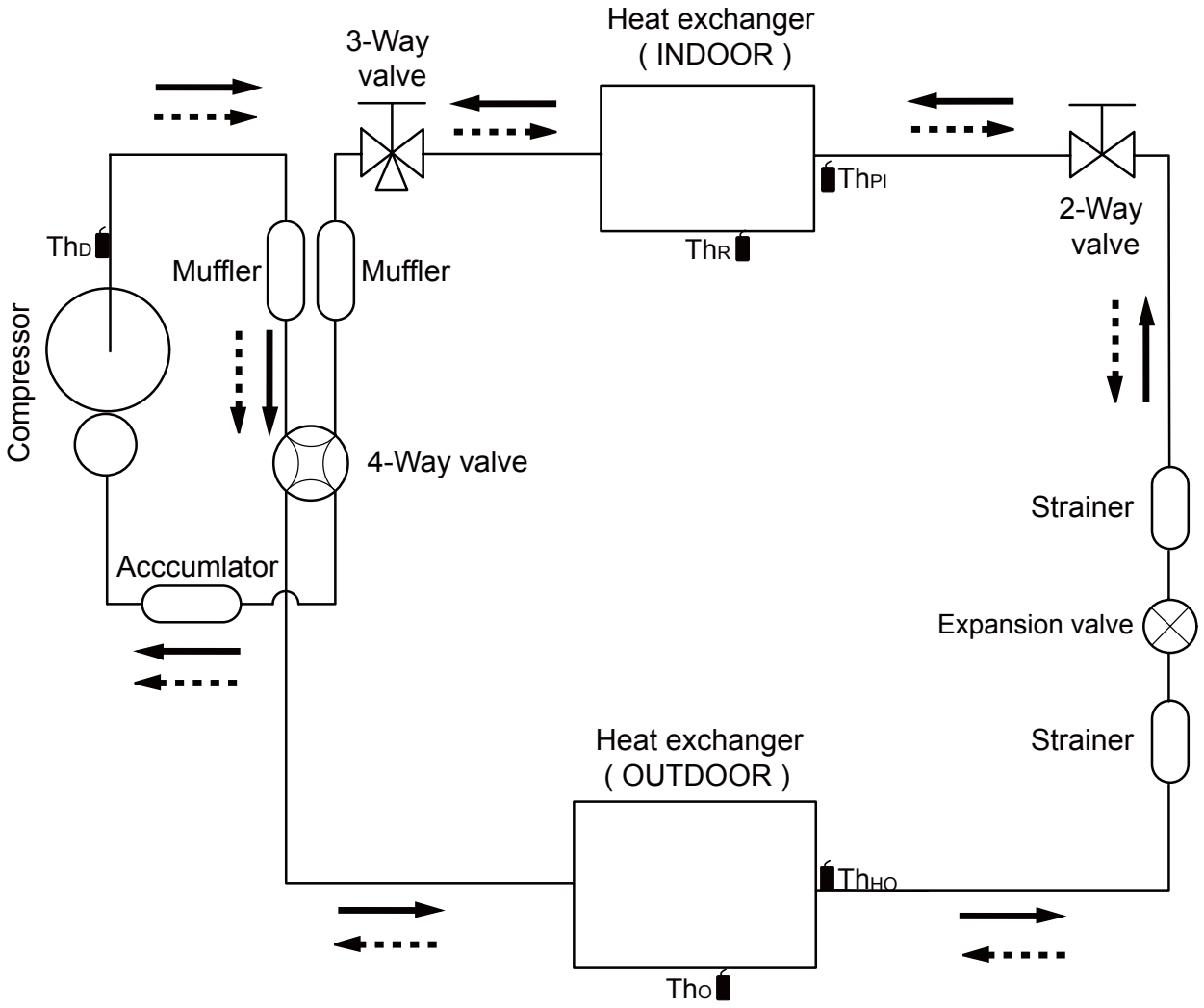


•Height above the floor level should be 50 mm or more.

•To obtain better operation efficiency, when the outdoor unit is installed, be sure to open the front and left side.

3. REFRIGERANT CIRCUIT

■ MODEL: AOU9RLS3H, AOU12RLS3H

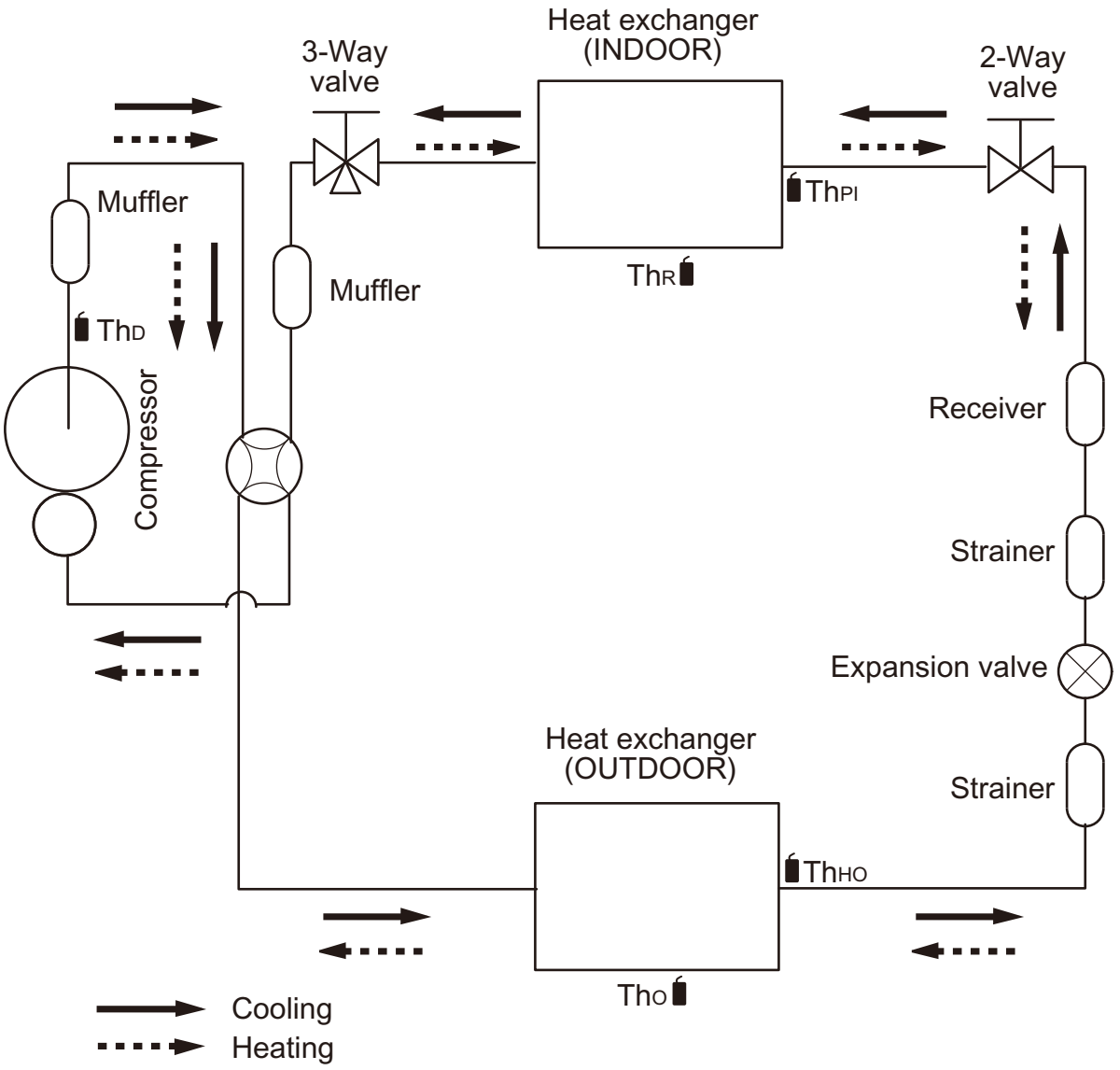


ThD Thermistor (Discharge Temp.)
ThO Thermistor (Outdoor Temp.)
ThHO Thermistor (Heat Exchanger Out Temp.)
ThR Thermistor (Room Temp.)
ThPI Thermistor (Pipe Temp.)

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

OUTDOOR UNIT
AOU9-15RLS3H

■ MODEL: AOU15RLS3H

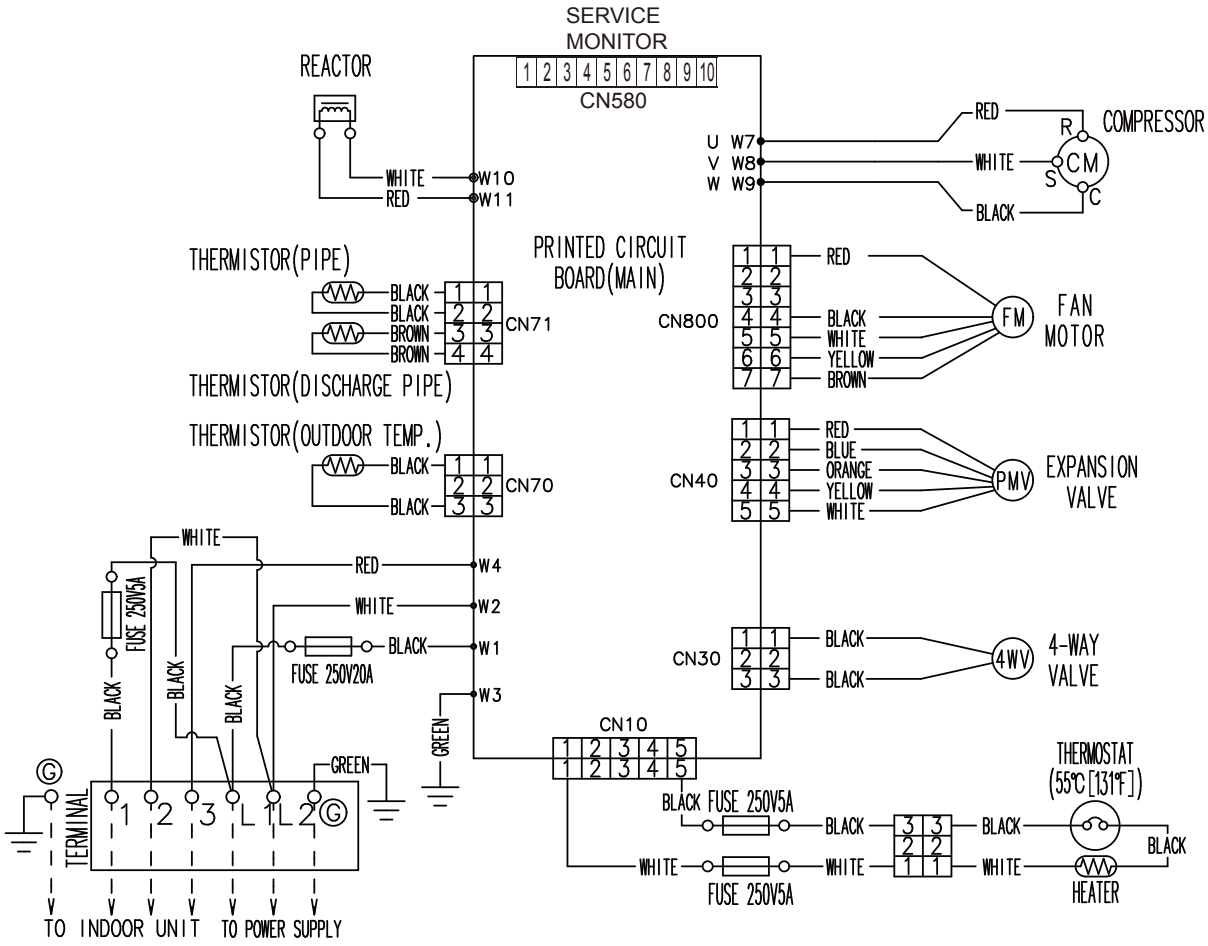


ThD Thermistor (Discharge Temp.)
ThO Thermistor (Outdoor Temp.)
ThHO Thermistor (Heat Exchanger Out Temp.)
ThR Thermistor (Room Temp.)
ThPI Thermistor (Pipe Temp.)

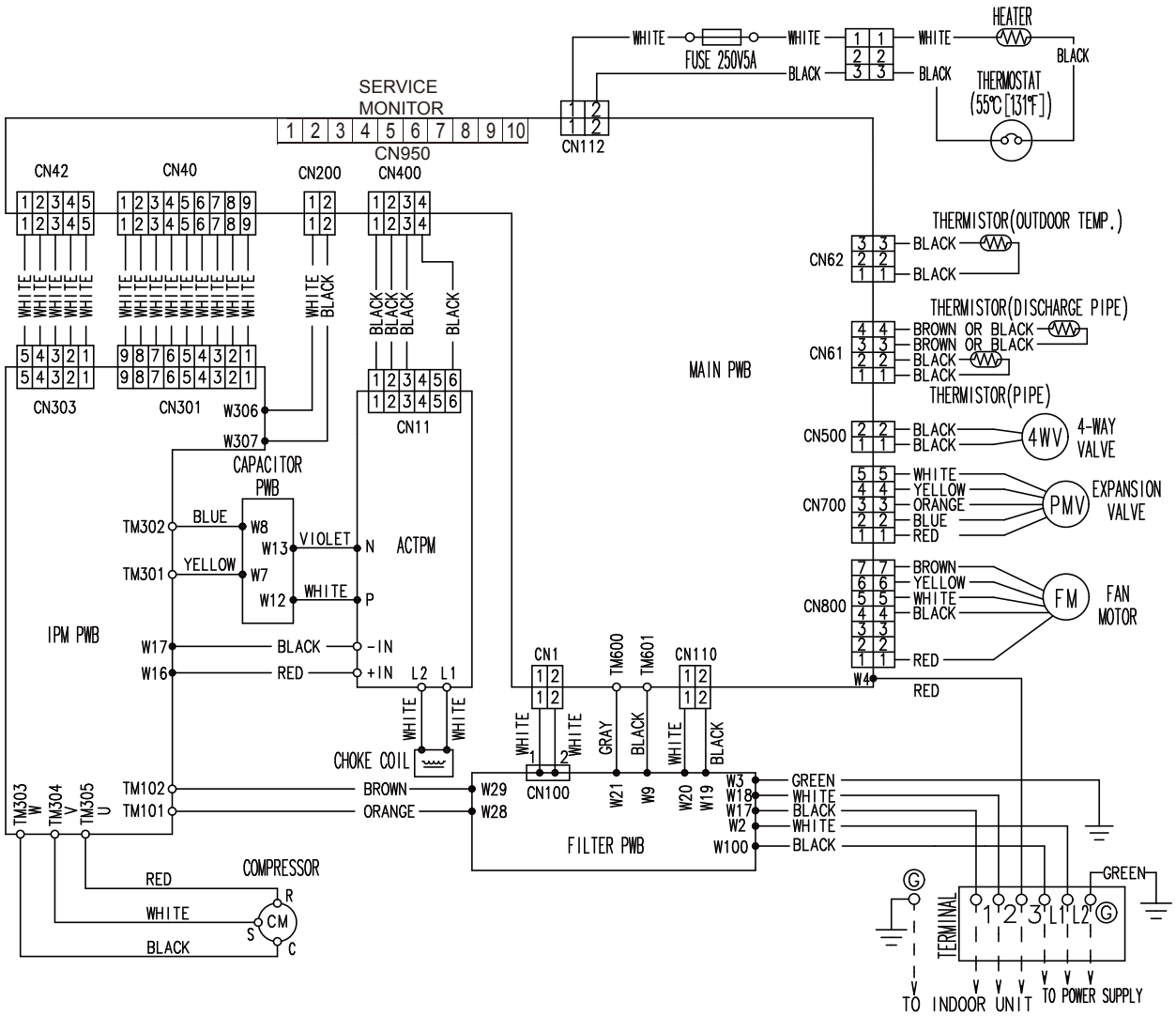
Refrigerant pipe diameter
Liquid: 1/4” (6.35 mm)
Gas: 1/2” (12.70 mm)

4. WIRING DIAGRAMS

■ MODEL: AOU9RLS3H, AOU12RLS3H



■ MODEL: AOU15RLS3H



OUTDOOR UNIT
AOU9-15RLS3H

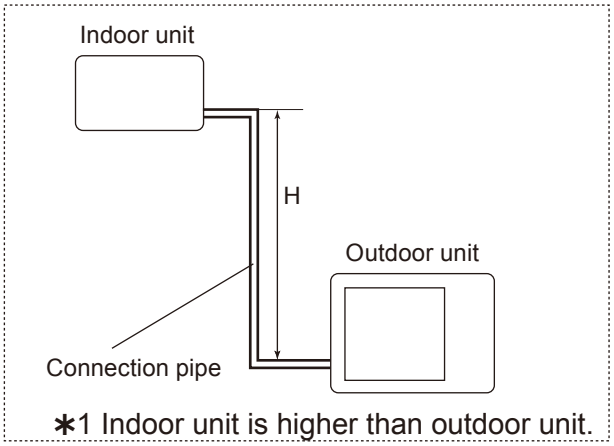
5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

■ MODEL: AOU9RLS3H, AOU12RLS3H

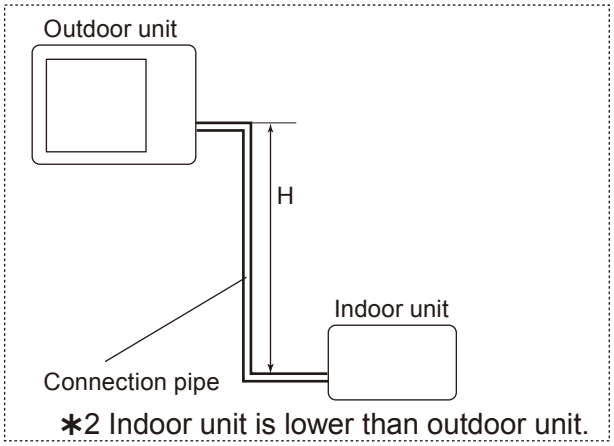
COOLING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	∗1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.877	0.874
		10m	33ft.	-	-	0.956	0.891	0.888
		7.5m	25ft.	-	0.988	0.960	0.895	0.892
		5m	17ft.	1.017	0.992	0.964	0.899	0.895
		0m	0ft.	1.025	1.000	0.971	0.906	0.902
	∗2 Indoor unit is lower than outdoor unit	-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
		0m	0ft.	1.017	1.000	0.981	0.933	0.925
	∗2 Indoor unit is lower than outdoor unit	-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



∗1 Indoor unit is higher than outdoor unit.



∗2 Indoor unit is lower than outdoor unit.

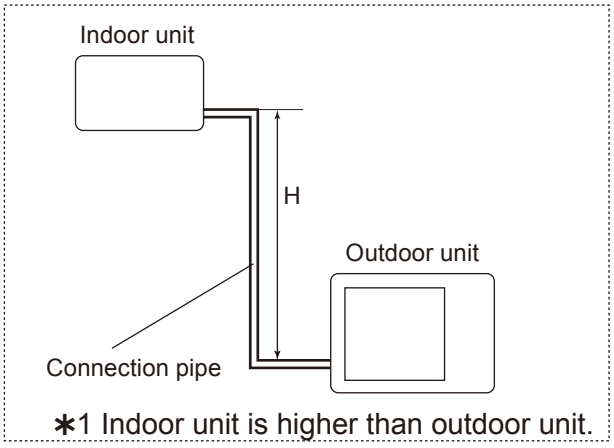
OUTDOOR UNIT
AOU9-15RLS3H

■ MODEL: AOU15RLS3H

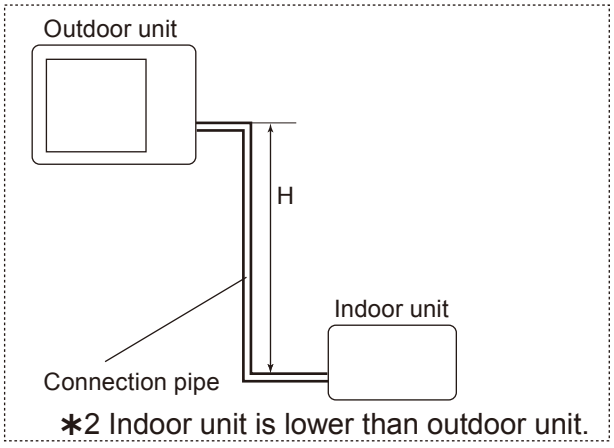
COOLING				Pipe length (m)				
				5m	7.5m	10m	15m	20m
				17ft.	25ft.	33ft.	50ft.	67ft.
Height difference H	∗1 Indoor unit is higher than outdoor unit.	15m	50ft.	-	-	-	0.951	0.950
		10m	33ft.	-	-	0.979	0.967	0.966
		7.5m	25ft.	-	0.988	0.983	0.971	0.970
		5m	17ft.	0.994	0.992	0.987	0.975	0.974
		0m	0ft.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

OUTDOOR UNIT
AOU9-15RLS3H

6. ADDITIONAL CHARGE CALCULATION

■ MODEL: AOU9RLS3H, AOU12RLS3H

Refrigerant type		R410A
Refrigerant amount	lbs. oz.	2lbs.14oz.
	g	1,300

● 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: AOU15RLS3H

Refrigerant type		R410A
Refrigerant amount	lbs. oz.	3lbs.1oz.
	g	1,400

● 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	

OUTDOOR UNIT
AOU9-15RLS3H

7. AIRFLOW

■ MODEL: AOU9RLS3H, AOU12RLS3H

● Cooling

Airflow	
1,680	m^3/h
467	l/s
989	CFM

● Heating

Airflow	
1,840	m^3/h
510	l/s
1,082	CFM

■ MODEL: AOU15RLS3H

● Cooling

Airflow	
2,050	m^3/h
569	l/s
1,206	CFM

● Heating

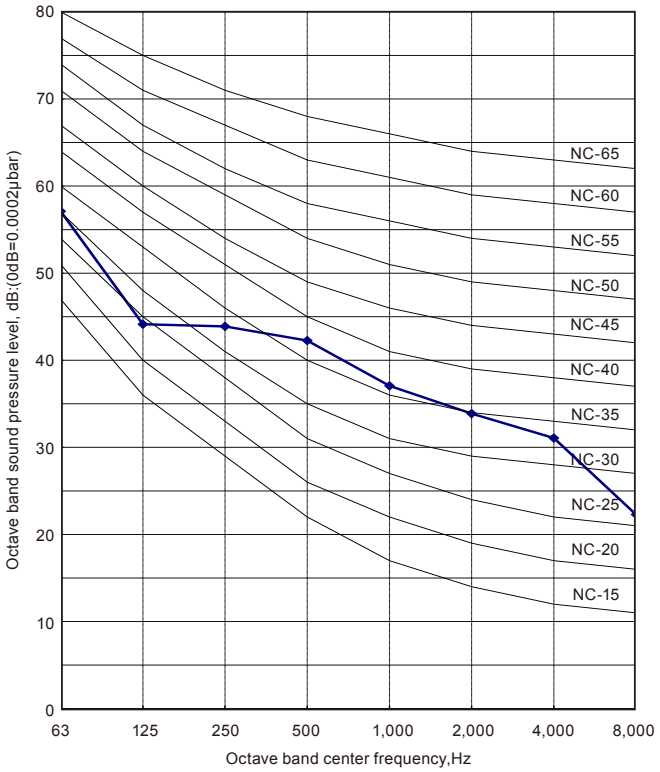
Airflow	
1,840	m^3/h
510	l/s
1,082	CFM

8. OPERATION NOISE

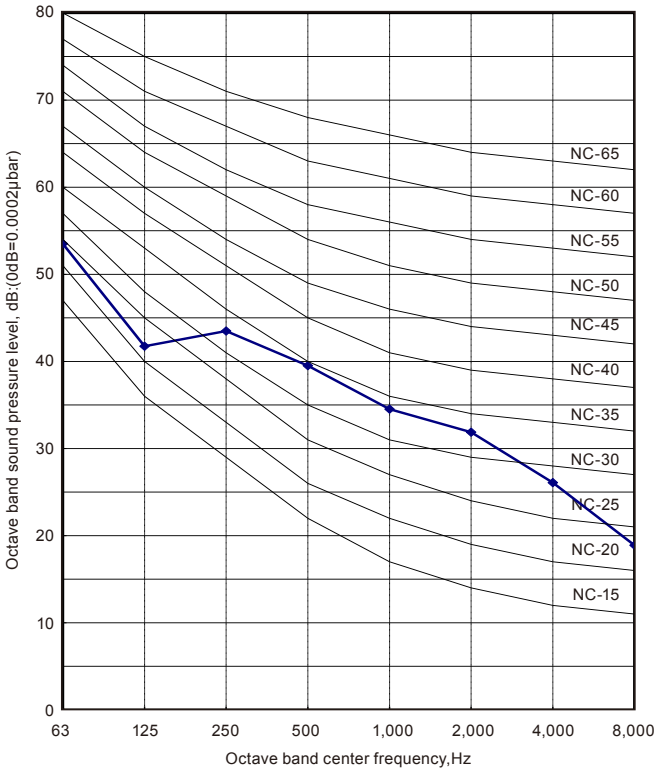
8-1. NOISE LEVEL CURVE

■ MODEL: AOU9RLS3H

● Cooling

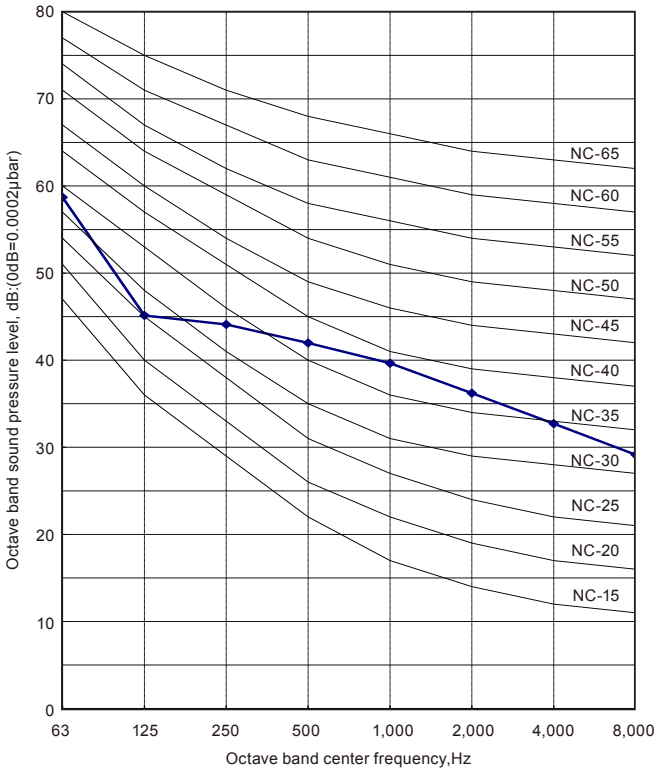


● Heating

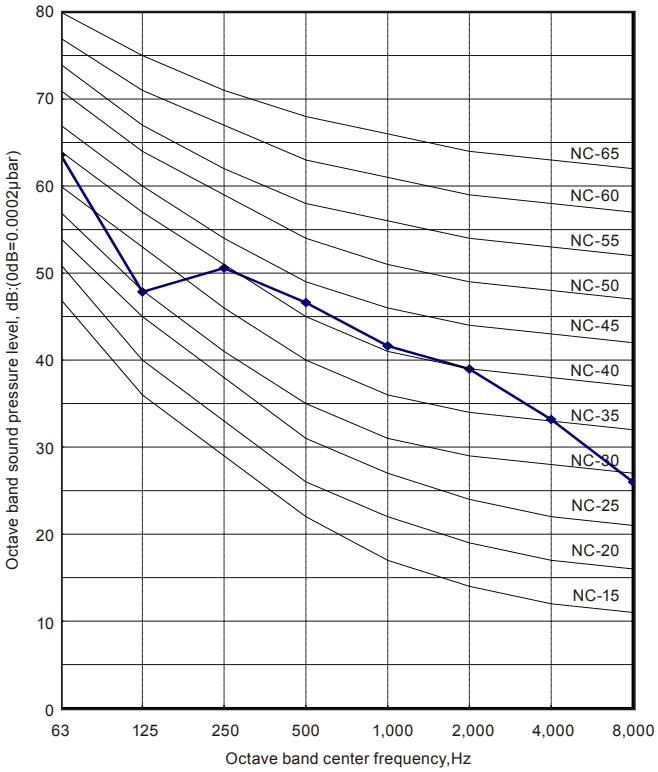


■ MODEL: AOU12RLS3H

● Cooling

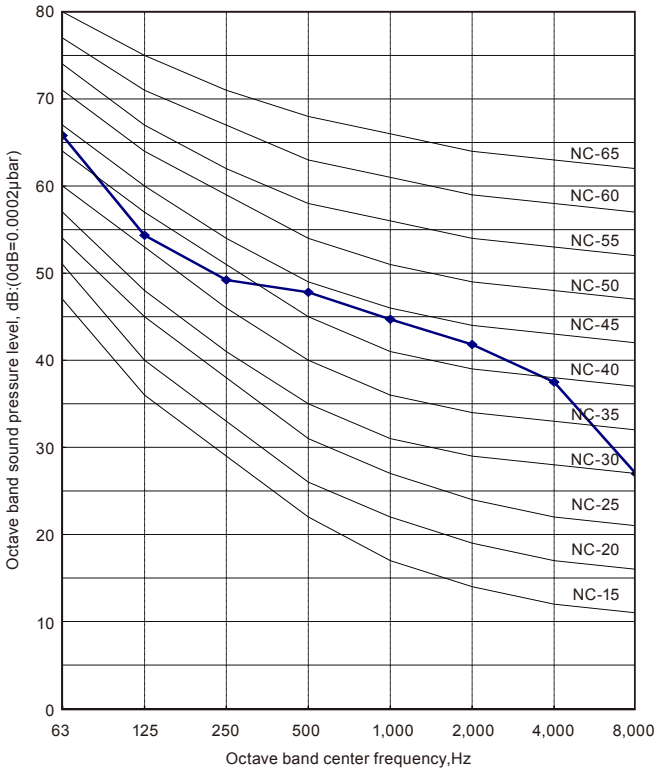


● Heating

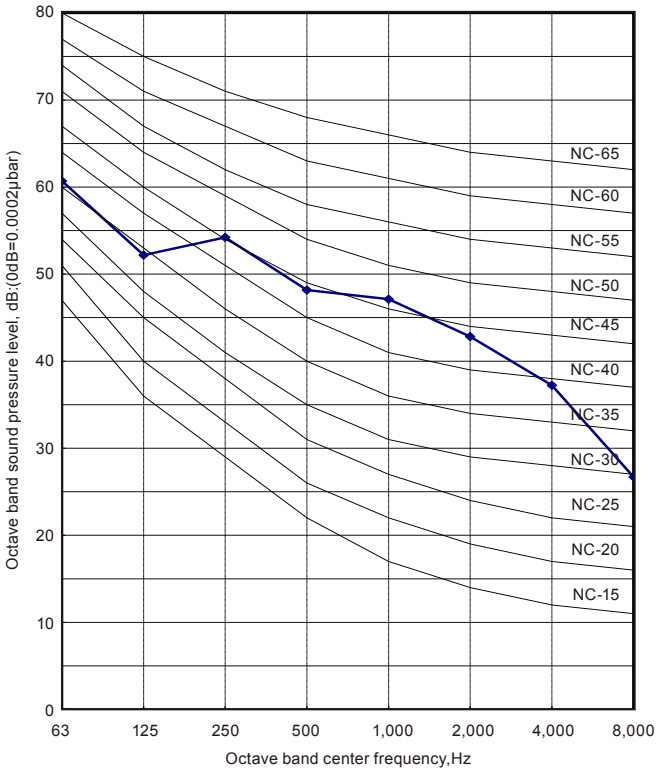


■ MODEL: AOU15RLS3H

● Cooling

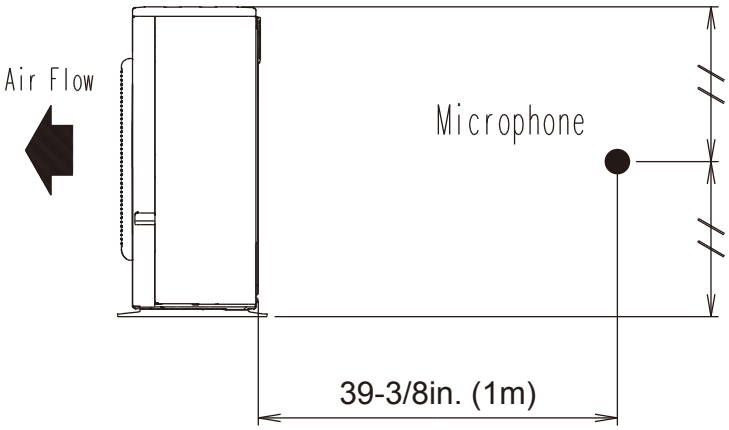


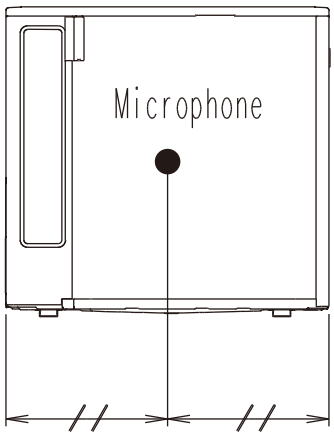
● Heating



OUTDOOR UNIT
AOU9-15RLS3H

8-2. SOUND LEVEL CHECK POINT





OUTDOOR UNIT
AOU9-15RLS3H

9. ELECTRIC CHARACTERISTICS

Model name			AOU9RLS3H	AOU12RLS3H	AOU15RLS3H
Power supply	Voltage	V	208 / 230 ~		
	Frequency	Hz	60		
MCA		A	14.4		18.2
Starting Current		A	3.3	4.7	5.2
Wiring Spec. *1	MAX. CKT. BKR	A	15		20
	Power Cable	AWG	14		12
	Connection cable *2	AWG	14		
	Limited wiring length :	ft. (m)	68 (21)		

*1: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005.

*2: Limit voltage drop to less than 2%. Increase conductor size if voltage drop is 2% or more.

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

OUTDOOR UNIT
AOU9-15RLS3H

10. SAFETY DEVICES

<table>
<tr><td rowspan="2"></td><td rowspan="2">Protection form</td><td colspan="3">Model</td></tr>
<tr><td>AOU9RLS3H</td><td>AOU12RLS3H</td><td>AOU15RLS3H</td></tr>
<tr><td rowspan="5">Circuit protection</td><td rowspan="2">Current fuse
(NEAR THE TERMINAL)</td><td colspan="2">250V 20A</td><td rowspan="2">250V 5A</td></tr>
<tr><td colspan="2">250V 5A</td></tr>
<tr><td rowspan="2">Current fuse
(MAIN PRINTED CIRCUIT BOARD)</td><td colspan="2">250V 15A</td><td>250V 3.15A</td></tr>
<tr><td colspan="2">250V 3.15A</td><td>250V 5A</td></tr>
<tr><td rowspan="2">Current fuse
(FILTER PRINTED CIRCUIT BOARD)</td><td colspan="2" rowspan="2">-</td><td>250V 25A</td></tr>
<tr><td>250V 5A</td></tr>
<tr><td>Fan motor protection</td><td>Thermal protection program</td><td colspan="3">OFF : 212±27 °F (100±15 °C)
ON : 203±18 °F (95±10 °C)</td></tr>
<tr><td>Compressor protection</td><td>Thermal protection program
(Discharge temp.)</td><td colspan="3">OFF : 230 °F (110 °C)
ON : After 7 minutes</td></tr>
</table>

OUTDOOR UNIT
AOU9-15RLS3H