

AIR CONDITIONER

Floor type

DESIGN & TECHNICAL MANUAL

For Cold Climate Region

INDOOR



AGU9RLF
AGU12RLF
AGU15RLF

OUTDOOR



AOU9RLFFH
AOU12RLFFH
AOU15RLFFH

FUJITSU GENERAL LIMITED

Notices:

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

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Part 1. INDOOR UNIT

FLOOR TYPE:

AGU9RLF

AGU12RLF

AGU15RLF

1. Specifications

Type				Floor type			
				Inverter, Heat pump			
Model name				AGU9RLF	AGU12RLF	AGU15RLF	
Power supply				208/230 V~ 60 Hz			
Power supply intake				Outdoor unit			
Available voltage range				187—253 V			
Capacity	Cooling	Rated	kW	2.64	3.52	4.16	
			Btu/h	9,000	12,000	14,200	
		Min.—Max.	kW	0.90—3.80	0.90—4.20	0.90—5.20	
	Heating		Btu/h	3,100—13,000	3,100—14,300	3,100—17,700	
		Rated	kW	3.52	4.69	5.28	
			Btu/h	12,000	16,000	18,000	
	Min.—Max.		kW	0.90—5.50	0.90—5.70	0.90—6.10	
			Btu/h	3,100—18,800	3,100—19,500	3,100—20,800	
		Heating (17°F)*1	Rated	kW	2.2	3.11	3.4
			Btu/h	7,500	10,600	11,600	
	Max.		kW	4.1	4.4	5.57	
			Btu/h	14,000	15,000	19,000	
Heating (5°F)*2		Rated	kW	3.93		5.3	
			Btu/h	13,400		18,100	
	Max.	kW	4.17	4.41	5.56		
		Btu/h	14,220	15,050	18,960		
Input power	Cooling	Rated	kW	0.56	0.91	1.13	
		Min.—Max.		0.20—2.05		0.18—2.16	
	Heating	Rated		0.88	1.44	1.58	
		Min.—Max.		0.20—2.62		0.18—3.30	
	Heating (17°F)*1	Rated		0.78	1.19	1.30	
		Max.		1.97	2.32	3.04	
	Heating (5°F)*2	Rated		2.06		2.87	
		Max.		2.25	2.32	3.06	
Current	Cooling	Rated	A	2.9	4.2	5.1	
	Heating			4.1	6.7	7.0	
EER2	Cooling		kW/kW	4.71	3.87	3.68	
			Btu/h	16.0	13.1	12.5	
COP2	Heating		kW/kW	4.00	3.24	3.34	
			Btu/h	13.6	11.1	11.3	
SEER2	Cooling		Btu/h	26.0	22.7	20.3	
HSPF2	Heating		Btu/h	11.6	11.0	10.5	
Power factor	Cooling		%	84.0	94.2	96.3	
	Heating			93.3	93.4	98.1	
Moisture removal			pints/h (L/h)	2.7 (1.3)	3.8 (1.8)	4.4 (2.1)	
Maximum operating current*3		Cooling	A	10.3	10.3	10.8	
		Heating		11.8	11.8	14.8	
Fan	Airflow rate	Cooling	HIGH	CFM (m³/h)	336 (570)		383 (650)
			MED		271 (460)		306 (520)
			LOW		212 (360)		235 (400)
			QUIET		159 (270)		159 (270)
		Heating	HIGH		353 (600)		383 (650)
			MED		283 (480)		306 (520)
			LOW		218 (370)		230 (390)
			QUIET		159 (270)		159 (270)
	Type × Qty			Cross flow fan × 2			
	Motor output			16 × 2			
Sound pressure level*4	Cooling	HIGH	dB (A)	40		44	
		MED		35		38	
		LOW		29		31	
		QUIET		23		23	
	Heating	HIGH		40		43	
		MED		35		37	
		LOW		29		29	
		QUIET		23		23	
Heat exchanger type	Dimensions (H × W × D)		in (mm)	14-7/8 × 21-5/8 × 1-1/16 (378 × 550 × 26.6)			
	Fin pitch		FPI	21			
	Rows × Stages			2 × 18			
	Pipe type			Copper tube			
	Fin type			Aluminum			
Enclosure	Material			Polystyrene			
	Color			White			
Dimensions (H × W × D)	Net		in	Approximate color of Munsell N 9.25/			
			mm	23-5/8 × 29-1/8 × 7-7/8			
	Gross		in	600 × 740 × 200			
			mm	27-9/16 × 32-5/16 × 12-3/16			
	Weight	Net	lb (kg)	700 × 820 × 310			
Gross		31 (14)		37 (17)			
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)			
		Gas		Ø3/8 (Ø9.52)		Ø1/2 (Ø12.70)	
	Method				Flare		
Operation range	Cooling		°F (°C)	64 to 90 (18 to 32)			
			%RH	80 or less			
	Heating		°F (°C)	60 to 88 (16 to 30)			
Remote controller type				Wireless (Wired [option])			
Drain hose	Material			PP + LLDPE			
	Size		in (mm)	Ø9/16 (Ø13.8) (I.D.), Ø5/8 to Ø11/16 (Ø15.8 to Ø16.7) (O.D.)			

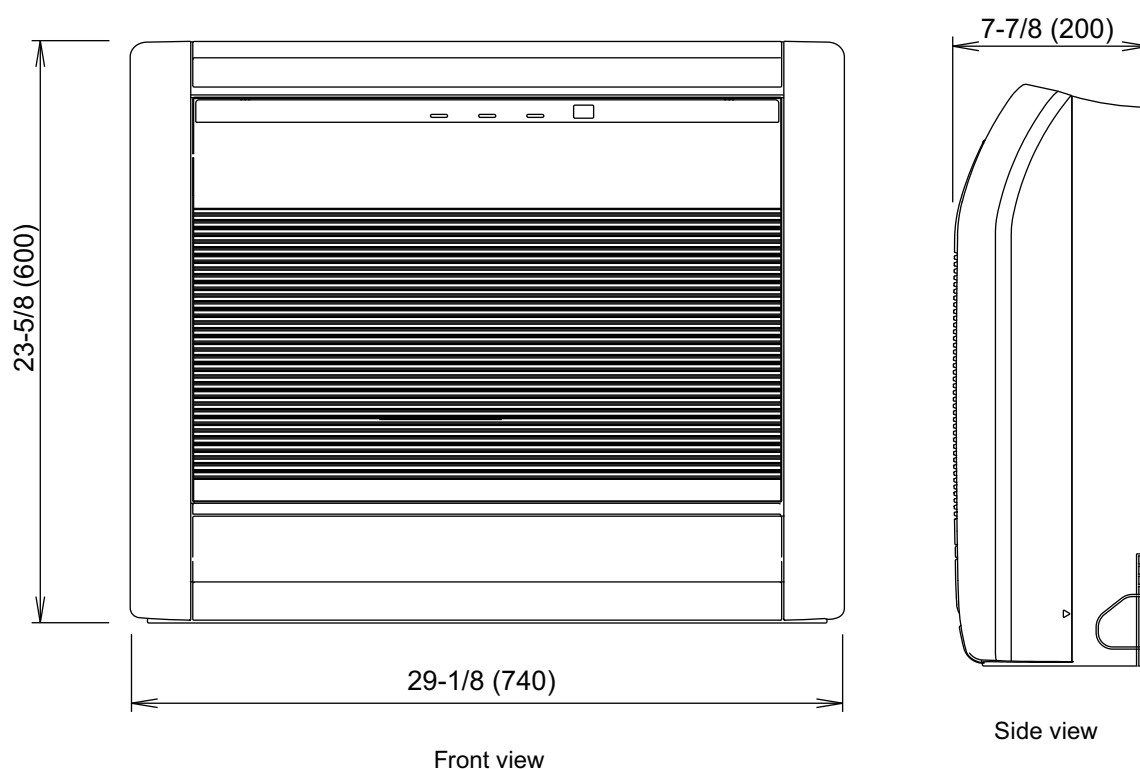
Type	Floor type		
	Inverter, Heat pump		
Model name	AGU9RLF	AGU12RLF	AGU15RLF
NOTES: <ul style="list-style-type: none"> Specifications are based on the following conditions: <ul style="list-style-type: none"> Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FDB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FDB (23.9°CWB). Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FDB (15°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FDB (6.11°CWB). *1: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FDB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FDB (-9.44°CWB). *2: Heating (5°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FDB (15.56°CWB), and outdoor temperature of 5°FDB (-15.0°CDB)/4°FDB (-15.56°CWB). Test conditions are based on AHRI 210/240 2023. Pipe length: 24 ft (7.5 m.) Height difference: 0 m. (Between outdoor unit and indoor unit.) Protective function might work when using it outside the operation range. *3: Maximum current is maximum value when operated within the operation range. *4: Sound pressure level: <ul style="list-style-type: none"> Measured values in 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. 			

M condition											
Model name				AGU9RLF		AGU12RLF		AGU15RLF			
Capacity	Cooling	Rated	kW	2.64		3.52		4.16			
			Btu/h	9,000		12,000		14,200			
		Min.—Max.	kW	0.90—3.80		0.90—4.20		0.90—5.20			
			Btu/h	3,100—13,000		3,100—14,300		3,100—17,700			
		Heating	Rated	kW	3.52		4.69		5.28		
				Btu/h	12,000		16,000		18,000		
	Min.—Max.		kW	0.90—5.50		0.90—5.70		0.90—6.10			
			Btu/h	3,100—18,800		3,100—19,500		3,100—20,800			
	Heating (17°F)*	Rated	kW	2.2		3.11		3.4			
			Btu/h	7,500		10,600		11,600			
		Max.	kW	4.1		4.4		5.57			
			Btu/h	14,000		15,000		19,000			
Input power		Cooling	Rated	kW	0.56		0.91		1.13		
			Min.—Max.		0.20—2.05		0.18—2.16				
	Heating	Rated	0.88		1.44		1.58				
		Min.—Max.	0.20—2.62		0.18—3.30						
	Heating (17°F)*	Rated	0.78		1.19		1.30				
		Max.	1.97		2.32		3.04				
	Current	Cooling	Rated		A	2.9		4.2		5.1	
		Heating				4.1		6.7		7.0	
EER	Cooling		kW/kW	4.71		3.87		3.68			
			Btu/h	16.0		13.1		12.5			
COP	Heating		kW/kW	4.00		3.24		3.34			
			Btu/h	13.6		11.1		11.3			
SEER	Cooling		Btu/h	26.0		22.7		20.3			
HSPF	Heating		Btu/h	12.4		11.3		11.0			
Power factor	Cooling		%	84.0		94.2		96.3			
	Heating			93.3		93.4		98.1			
NOTES:											
Specifications are based on the following conditions:											
• Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FWB (23.9°CWB).											
• Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).											
• *: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FWB (-9.44°CWB).											
• Test conditions are based on AHRI 210/240 2017.											
• Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)											

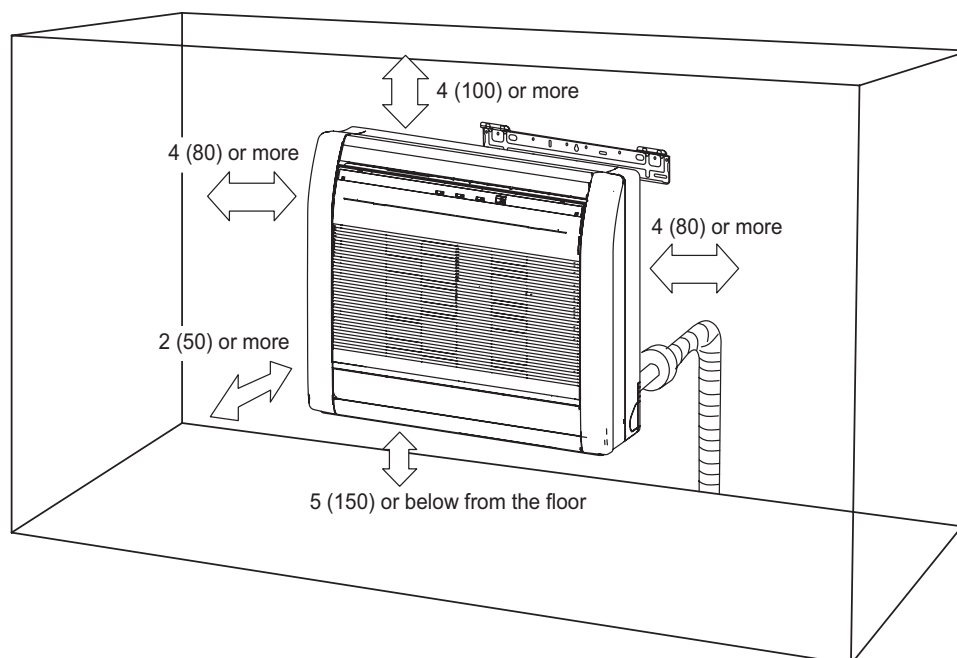
2. Dimensions

2-1. Models: AGU9RLF, AGU12RLF, and AGU15RLF

Unit: in (mm)

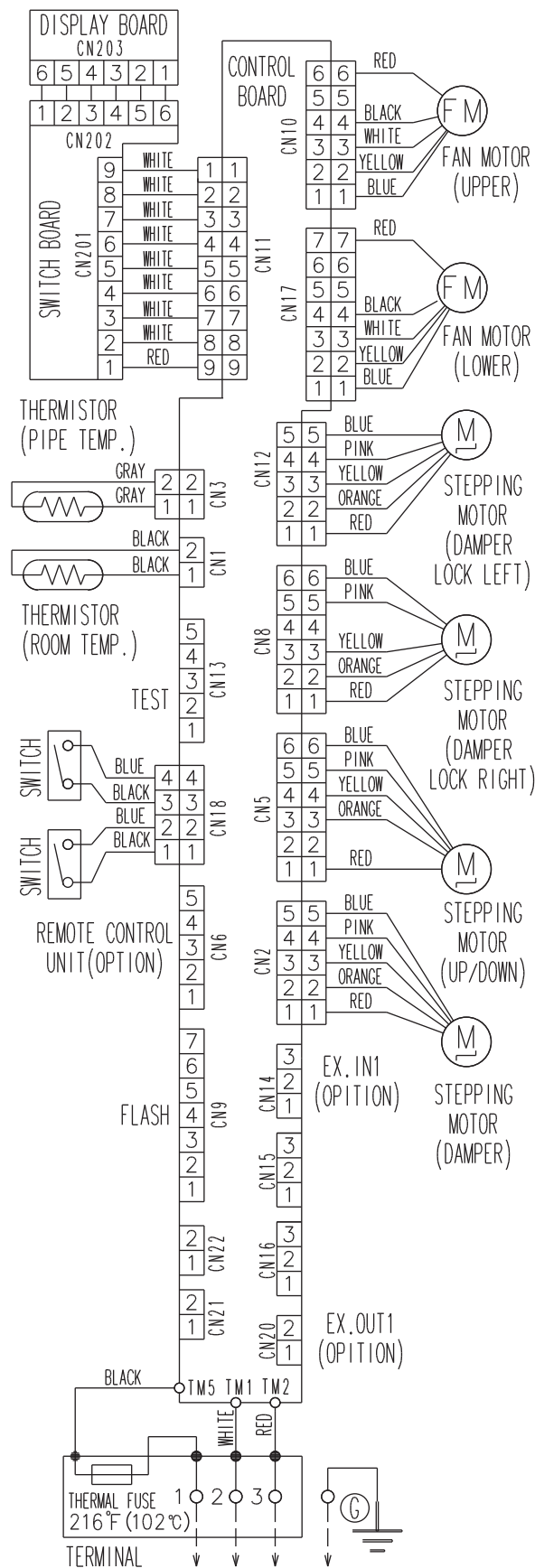


■ Installation space



3. Wiring diagrams

3-1. Models: AGU9RLF, AGU12RLF, and AGU15RLF



4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

For cooling capacity: Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

For heating capacity: Total Capacity (TC) and Input Power (IP)

4-1. Cooling capacity

■ Model: AGU9RLF

AFR	CFM	336
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		Indoor temperature																		
		°FDB			64			70			75			80			85			90
Outdoor temperature	°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
			kW			kW			kW			kW			kW			kW		
	15		7.84	6.74	0.20	8.86	6.73	0.21	9.34	7.43	0.21	10.00	7.79	0.21	10.69	7.98	0.21	11.02	8.86	0.21
	23		7.52	6.44	0.22	8.50	6.44	0.23	8.96	7.10	0.23	9.59	7.45	0.23	10.25	7.62	0.24	10.57	8.47	0.24
	32		7.11	6.23	0.22	8.04	6.22	0.23	8.47	6.86	0.23	9.07	7.20	0.23	9.70	7.37	0.24	9.99	8.19	0.24
	41		6.89	6.07	0.23	7.79	6.06	0.24	8.21	6.68	0.24	8.79	7.01	0.24	9.40	7.17	0.25	9.69	7.97	0.25
	50		6.87	6.04	0.22	7.76	6.03	0.23	8.18	6.65	0.23	8.76	6.98	0.23	9.36	7.14	0.24	9.65	7.94	0.24
	59		6.11	5.44	0.24	6.90	5.44	0.25	7.27	6.00	0.25	7.79	6.29	0.25	8.33	6.44	0.26	8.58	7.15	0.26
	67		6.88	6.10	0.26	7.77	6.09	0.27	8.20	6.72	0.27	8.78	7.05	0.27	9.38	7.21	0.28	9.67	8.02	0.28
77		7.79	6.88	0.44	8.80	6.87	0.45	9.28	7.58	0.45	9.93	7.95	0.45	10.62	8.14	0.46	10.95	9.04	0.46	
87		7.36	6.49	0.49	8.32	6.48	0.50	8.77	7.15	0.51	9.39	7.50	0.51	10.04	7.67	0.52	10.35	8.53	0.52	
95		7.06	6.23	0.54	7.97	6.22	0.55	8.41	6.86	0.55	9.00	7.20	0.56	9.62	7.37	0.57	9.92	8.19	0.57	
104		6.54	5.77	0.56	7.39	5.76	0.57	7.79	6.35	0.57	8.34	6.67	0.58	8.92	6.82	0.59	9.19	7.58	0.59	
115		6.43	5.69	0.57	7.27	5.68	0.58	7.66	6.26	0.59	8.20	6.57	0.59	8.77	6.73	0.60	9.04	7.48	0.60	

AFR	m ³ /h	570
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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
		kW			kW			kW			kW			kW			kW		
	-10.0	2.30	1.98	0.20	2.60	1.97	0.21	2.74	2.18	0.21	2.93	2.28	0.21	3.13	2.34	0.21	3.23	2.60	0.21
	-5.0	2.20	1.89	0.22	2.49	1.89	0.23	2.62	2.08	0.23	2.81	2.18	0.23	3.00	2.23	0.24	3.10	2.48	0.24
	0.0	2.08	1.83	0.22	2.36	1.82	0.23	2.48	2.01	0.23	2.66	2.11	0.23	2.84	2.16	0.24	2.93	2.40	0.24
	5.0	2.02	1.78	0.23	2.28	1.78	0.24	2.41	1.96	0.24	2.58	2.06	0.24	2.75	2.10	0.25	2.84	2.34	0.25
	10.0	2.01	1.77	0.22	2.27	1.77	0.23	2.40	1.95	0.23	2.57	2.05	0.23	2.74	2.09	0.24	2.83	2.33	0.24
15.0	1.79	1.60	0.24	2.02	1.59	0.25	2.13	1.76	0.25	2.28	1.84	0.25	2.44	1.89	0.26	2.52	2.10	0.26	
19.4	2.02	1.79	0.26	2.28	1.79	0.27	2.40	1.97	0.27	2.57	2.07	0.27	2.75	2.11	0.28	2.83	2.35	0.28	
25.0	2.28	2.02	0.44	2.58	2.01	0.45	2.72	2.22	0.45	2.91	2.33	0.45	3.11	2.38	0.46	3.21	2.65	0.46	
30.6	2.16	1.90	0.49	2.44	1.90	0.50	2.57	2.09	0.51	2.75	2.20	0.51	2.94	2.25	0.52	3.03	2.50	0.52	
35.0	2.07	1.83	0.54	2.34	1.82	0.55	2.46	2.01	0.55	2.64	2.11	0.56	2.82	2.16	0.57	2.91	2.40	0.57	
40.0	1.92	1.69	0.56	2.17	1.69	0.57	2.28	1.86	0.57	2.44	1.95	0.58	2.61	2.00	0.59	2.69	2.22	0.59	
46.0	1.89	1.67	0.57	2.13	1.66	0.58	2.25	1.84	0.59	2.40	1.93	0.59	2.57	1.97	0.60	2.65	2.19	0.60	

Model: AGU12RLF

AFR				CFM				336											
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
		kW			kW			kW			kW			kW			kW		
	15	10.08	8.23	0.30	11.39	8.22	0.30	12.01	9.06	0.31	12.86	9.51	0.31	13.74	9.73	0.31	14.17	10.81	0.32
	23	9.57	7.90	0.34	10.81	7.89	0.34	11.40	8.70	0.34	12.21	9.13	0.35	13.05	9.35	0.35	13.45	10.39	0.35
	32	9.27	7.55	0.36	10.48	7.54	0.37	11.05	8.31	0.37	11.83	8.72	0.38	12.64	8.93	0.38	13.04	9.92	0.38
	41	9.06	7.46	0.38	10.24	7.45	0.39	10.79	8.22	0.39	11.55	8.62	0.40	12.35	8.82	0.40	12.73	9.80	0.40
	50	9.03	7.40	0.39	10.21	7.39	0.40	10.76	8.15	0.40	11.52	8.55	0.41	12.31	8.75	0.41	12.70	9.73	0.41
	59	8.20	6.92	0.37	9.27	6.92	0.38	9.77	7.63	0.38	10.46	8.01	0.39	11.18	8.19	0.39	11.52	9.10	0.39
	67	9.18	7.71	0.42	10.37	7.70	0.43	10.93	8.50	0.44	11.70	8.91	0.44	12.51	9.12	0.45	12.90	10.14	0.45
	77	10.40	8.70	0.71	11.76	8.69	0.72	12.39	9.58	0.73	13.27	10.06	0.74	14.18	10.29	0.74	14.62	11.44	0.75
	87	9.82	8.23	0.80	11.10	8.22	0.82	11.70	9.07	0.82	12.52	9.52	0.83	13.39	9.74	0.84	13.80	10.82	0.85
	95	9.41	7.87	0.88	10.63	7.86	0.89	11.21	8.67	0.90	12.00	9.10	0.91	12.83	9.31	0.92	13.22	10.35	0.93
	104	8.74	7.31	0.91	9.87	7.30	0.93	10.41	8.05	0.94	11.14	8.45	0.95	11.91	8.65	0.96	12.28	9.61	0.96
115	8.57	7.19	0.92	9.69	7.18	0.94	10.22	7.92	0.95	10.94	8.31	0.96	11.69	8.51	0.97	12.05	9.45	0.97	
AFR				m³/h				570											

AFR			m³/h					570											
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
		kW			kW			kW			kW			kW			kW		
	-10.0	2.95	2.41	0.30	3.34	2.41	0.30	3.52	2.66	0.31	3.77	2.79	0.31	4.03	2.85	0.31	4.15	3.17	0.32
	-5.0	2.80	2.32	0.34	3.17	2.31	0.34	3.34	2.55	0.34	3.58	2.68	0.35	3.82	2.74	0.35	3.94	3.04	0.35
	0.0	2.72	2.21	0.36	3.07	2.21	0.37	3.24	2.44	0.37	3.47	2.56	0.38	3.71	2.62	0.38	3.82	2.91	0.38
	5.0	2.65	2.19	0.38	3.00	2.18	0.39	3.16	2.41	0.39	3.39	2.53	0.40	3.62	2.59	0.40	3.73	2.87	0.40
	10.0	2.65	2.17	0.39	2.99	2.17	0.40	3.15	2.39	0.40	3.38	2.51	0.41	3.61	2.56	0.41	3.72	2.85	0.41
	15.0	2.40	2.03	0.37	2.72	2.03	0.38	2.86	2.24	0.38	3.06	2.35	0.39	3.28	2.40	0.39	3.38	2.67	0.39
	19.4	2.69	2.26	0.42	3.04	2.26	0.43	3.20	2.49	0.44	3.43	2.61	0.44	3.67	2.67	0.45	3.78	2.97	0.45
	25.0	3.05	2.55	0.71	3.45	2.55	0.72	3.63	2.81	0.73	3.89	2.95	0.74	4.16	3.02	0.74	4.29	3.35	0.75
	30.6	2.88	2.41	0.80	3.25	2.41	0.82	3.43	2.66	0.82	3.67	2.79	0.83	3.92	2.85	0.84	4.05	3.17	0.85
	35.0	2.76	2.31	0.88	3.12	2.30	0.89	3.28	2.54	0.90	3.52	2.67	0.91	3.76	2.73	0.92	3.88	3.03	0.93
	40.0	2.56	2.14	0.91	2.89	2.14	0.93	3.05	2.36	0.94	3.27	2.48	0.95	3.49	2.53	0.96	3.60	2.82	0.96
46.0	2.51	2.11	0.92	2.84	2.10	0.94	2.99	2.32	0.95	3.21	2.44	0.96	3.43	2.49	0.97	3.53	2.77	0.97	

Model: AGU15RLF

AFR				CFM				383											
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
		kW			kW			kW			kW			kW			kW		
	15	12.17	9.38	0.40	13.75	9.37	0.41	14.49	10.33	0.41	15.52	10.84	0.42	16.59	11.09	0.42	17.10	12.33	0.42
	23	11.85	9.06	0.43	13.39	9.05	0.44	14.12	9.98	0.44	15.11	10.47	0.45	16.16	10.71	0.45	16.65	11.91	0.45
	32	11.53	8.77	0.44	13.03	8.75	0.45	13.74	9.66	0.45	14.71	10.13	0.46	15.72	10.37	0.46	16.21	11.52	0.46
	41	11.40	8.71	0.45	12.88	8.70	0.46	13.58	9.59	0.46	14.54	10.07	0.47	15.54	10.30	0.47	16.02	11.45	0.47
	50	11.37	8.68	0.47	12.85	8.67	0.48	13.55	9.56	0.48	14.50	10.03	0.49	15.51	10.26	0.49	15.98	11.41	0.49
	59	10.71	8.62	0.48	12.10	8.61	0.49	12.76	9.50	0.49	13.66	9.97	0.50	14.60	10.20	0.50	15.05	11.33	0.50
	67	11.59	9.12	0.61	13.10	9.11	0.62	13.81	10.05	0.62	14.79	10.54	0.63	15.81	10.78	0.64	16.29	11.99	0.64
77	12.30	9.64	0.90	13.90	9.63	0.91	14.65	10.62	0.92	15.69	11.14	0.93	16.77	11.40	0.94	17.29	12.67	0.95	
87	11.63	9.11	1.00	13.14	9.10	1.02	13.85	10.04	1.03	14.83	10.53	1.04	15.85	10.78	1.05	16.34	11.98	1.06	
95	11.13	8.74	1.09	12.58	8.73	1.11	13.26	9.62	1.12	14.20	10.10	1.13	15.18	10.33	1.14	15.65	11.48	1.15	
104	9.89	7.75	1.14	11.17	7.74	1.16	11.78	8.53	1.17	12.61	8.96	1.18	13.48	9.16	1.19	13.90	10.18	1.20	
115	9.33	7.31	1.15	10.54	7.30	1.17	11.12	8.05	1.18	11.90	8.45	1.19	12.72	8.65	1.20	13.11	9.61	1.21	
AFR				m³/h				650											

AFR			m³/h						650											
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	
		kW			kW			kW			kW			kW			kW			
	-10.0	3.57	2.75	0.40	4.03	2.74	0.41	4.25	3.03	0.41	4.55	3.18	0.42	4.86	3.25	0.42	5.01	3.61	0.42	
	-5.0	3.47	2.65	0.43	3.92	2.65	0.44	4.14	2.92	0.44	4.43	3.07	0.45	4.73	3.14	0.45	4.88	3.49	0.45	
	0.0	3.38	2.57	0.44	3.82	2.57	0.45	4.03	2.83	0.45	4.31	2.97	0.46	4.61	3.04	0.46	4.75	3.38	0.46	
	5.0	3.34	2.55	0.45	3.78	2.55	0.46	3.98	2.81	0.46	4.26	2.95	0.47	4.55	3.02	0.47	4.70	3.35	0.47	
	10.0	3.33	2.54	0.47	3.77	2.54	0.48	3.97	2.80	0.48	4.25	2.94	0.49	4.54	3.01	0.49	4.68	3.34	0.49	
	15.0	3.14	2.53	0.48	3.55	2.52	0.49	3.74	2.78	0.49	4.00	2.92	0.50	4.28	2.99	0.50	4.41	3.32	0.50	
19.4	3.40	2.67	0.61	3.84	2.67	0.62	4.05	2.94	0.62	4.33	3.09	0.63	4.63	3.16	0.64	4.78	3.51	0.64		
25.0	3.60	2.83	0.90	4.07	2.82	0.91	4.29	3.11	0.92	4.60	3.27	0.93	4.92	3.34	0.94	5.07	3.71	0.95		
30.6	3.41	2.67	1.00	3.85	2.67	1.02	4.06	2.94	1.03	4.35	3.09	1.04	4.65	3.16	1.05	4.79	3.51	1.06		
35.0	3.26	2.56	1.09	3.69	2.56	1.11	3.89	2.82	1.12	4.16	2.96	1.13	4.45	3.03	1.14	4.59	3.37	1.15		
40.0	2.90	2.27	1.14	3.27	2.27	1.16	3.45	2.50	1.17	3.70	2.62	1.18	3.95	2.69	1.19	4.07	2.98	1.20		
46.0	2.73	2.14	1.15	3.09	2.14	1.17	3.26	2.36	1.18	3.49	2.48	1.19	3.73	2.53	1.20	3.84	2.82	1.21		

4-2. Heating capacity

■ Model: AGU9RLF

AFR	CFM	353
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Outdoor temperature			Indoor temperature							
	°FDB	°FDB	60		65		70		75	
		°FWB	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW	
	-15	-17	12.09	1.97	11.70	2.02	11.31	2.07	10.91	2.13
	-5	-7	13.47	2.04	13.04	2.10	12.60	2.15	12.16	2.21
	5	3	15.20	2.14	14.72	2.19	14.22	2.25	13.72	2.31
	14	12	15.41	2.21	14.92	2.27	14.42	2.33	13.91	2.39
	23	19	15.62	2.16	15.13	2.22	14.61	2.28	14.10	2.34
	32	28	15.81	1.96	15.31	2.01	14.79	2.07	14.28	2.12
	41	37	18.47	1.72	17.88	1.76	17.28	1.82	16.68	1.87
	47	43	20.09	1.74	19.46	1.78	18.80	1.84	18.14	1.89
	50	47	22.20	1.74	21.50	1.79	20.77	1.85	20.05	1.90
	59	50	23.02	1.75	22.30	1.80	21.54	1.86	20.79	1.91

AFR	m ³ /h	600
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Outdoor temperature			Indoor temperature							
	°CDB	°CDB	15.6		18.3		21.1		23.9	
		°CWB	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW	
	-26.1	-27.0	3.54	1.97	3.43	2.02	3.31	2.07	3.20	2.13
	-20.6	-21.7	3.95	2.04	3.82	2.10	3.69	2.15	3.56	2.21
	-15.0	-16.1	4.45	2.14	4.31	2.19	4.17	2.25	4.02	2.31
	-10.0	-11.1	4.52	2.21	4.37	2.27	4.23	2.33	4.08	2.39
	-5.0	-7.2	4.58	2.16	4.43	2.22	4.28	2.28	4.13	2.34
	0.0	-2.2	4.63	1.96	4.49	2.01	4.34	2.07	4.18	2.12
	5.0	2.8	5.41	1.72	5.24	1.76	5.06	1.82	4.89	1.87
	8.3	6.1	5.88	1.74	5.69	1.78	5.50	1.84	5.31	1.89
	10.0	8.3	6.51	1.74	6.30	1.79	6.09	1.85	5.88	1.90
	15.0	10.0	6.75	1.75	6.53	1.80	6.31	1.86	6.09	1.91

■ Model: AGU12RLF

AFR	CFM	353
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Outdoor temperature			Indoor temperature							
	°FDB	°FDB	60		65		70		75	
		°FWB	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW	
	-15	-17	12.79	2.00	12.39	2.05	11.97	2.11	11.55	2.17
	-5	-7	14.25	2.09	13.80	2.15	13.33	2.21	12.87	2.28
	5	3	16.08	2.19	15.58	2.26	15.05	2.32	14.52	2.39
	14	12	16.31	2.22	15.79	2.29	15.26	2.35	14.72	2.42
	23	19	16.53	2.15	16.01	2.21	15.46	2.27	14.92	2.34
	32	28	16.73	1.92	16.20	1.97	15.66	2.03	15.11	2.09
	41	37	19.23	1.72	18.62	1.76	17.99	1.82	17.36	1.87
	47	43	20.84	1.74	20.18	1.78	19.50	1.84	18.82	1.89
	50	47	23.02	1.74	22.30	1.79	21.54	1.85	20.79	1.90
	59	50	23.86	1.75	23.10	1.80	22.32	1.86	21.54	1.91

AFR	m ³ /h	600
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Outdoor temperature			Indoor temperature							
	°CDB	°CDB	15.6		18.3		21.1		23.9	
		°CWB	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW	
	-26.1	-27.0	3.75	2.00	3.63	2.05	3.51	2.11	3.38	2.17
	-20.6	-21.7	4.18	2.09	4.04	2.15	3.91	2.21	3.77	2.28
	-15.0	-16.1	4.71	2.19	4.57	2.26	4.41	2.32	4.26	2.39
	-10.0	-11.1	4.78	2.22	4.63	2.29	4.47	2.35	4.32	2.42
	-5.0	-7.2	4.84	2.15	4.69	2.21	4.53	2.27	4.37	2.34
	0.0	-2.2	4.90	1.92	4.75	1.97	4.59	2.03	4.43	2.09
	5.0	2.8	5.64	1.72	5.46	1.76	5.27	1.82	5.09	1.87
	8.3	6.1	6.09	1.74	5.90	1.78	5.70	1.84	5.50	1.89
	10.0	8.3	6.75	1.74	6.54	1.79	6.31	1.85	6.09	1.90
	15.0	10.0	6.99	1.75	6.77	1.80	6.54	1.86	6.31	1.91

Model: AGU15RLF

FLOOR TYPE
AGU9-15RLFFLOOR TYPE
AGU9-15RLF

AFR		CFM		383							
			Indoor temperature								
		°FDB	60		65		70		75		
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		
	-15	-17	16.84	2.78	16.31	2.85	15.76	2.93	15.21	3.01	
	-5	-7	18.83	2.86	18.24	2.93	17.62	3.01	17.00	3.10	
	5	3	20.26	2.90	19.62	2.98	18.96	3.06	18.29	3.15	
	14	12	20.80	2.85	20.14	2.93	19.46	3.01	18.78	3.09	
	23	19	20.92	2.80	20.26	2.87	19.57	2.95	18.89	3.03	
	32	28	21.34	2.49	20.67	2.55	19.97	2.62	19.27	2.69	
	41	37	21.93	1.96	21.24	2.01	20.52	2.07	19.81	2.13	
	47	43	22.23	1.90	21.53	1.95	20.80	2.01	20.07	2.07	
	50	47	24.55	1.97	23.78	2.02	22.97	2.08	22.17	2.14	
	59	50	25.46	1.98	24.65	2.03	23.82	2.09	22.99	2.15	

AFR		m³/h		650							
			Indoor temperature								
		°CDB	15.6		18.3		21.1		23.9		
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		
	-26.1	-27.0	4.94	2.78	4.78	2.85	4.62	2.93	4.46	3.01	
	-20.6	-21.7	5.52	2.86	5.35	2.93	5.16	3.01	4.98	3.10	
	-15.0	-16.1	5.94	2.90	5.75	2.98	5.56	3.06	5.36	3.15	
	-10.0	-11.1	6.10	2.85	5.90	2.93	5.70	3.01	5.50	3.09	
	-5.0	-7.2	6.13	2.80	5.94	2.87	5.74	2.95	5.54	3.03	
	0.0	-2.2	6.26	2.49	6.06	2.55	5.85	2.62	5.65	2.69	
	5.0	2.8	6.43	1.96	6.23	2.01	6.02	2.07	5.80	2.13	
8.3	6.1	6.52	1.90	6.31	1.95	6.10	2.01	5.88	2.07		
10.0	8.3	7.20	1.97	6.97	2.02	6.73	2.08	6.50	2.14		
15.0	10.0	7.46	1.98	7.23	2.03	6.98	2.09	6.74	2.15		

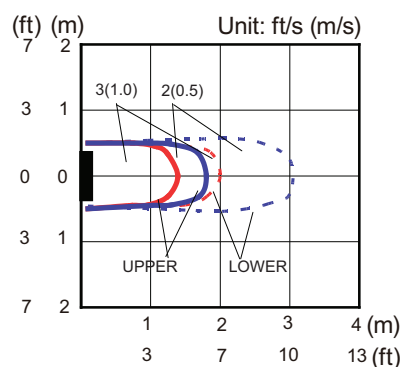
5. Fan performance

5-1. Air velocity distributions

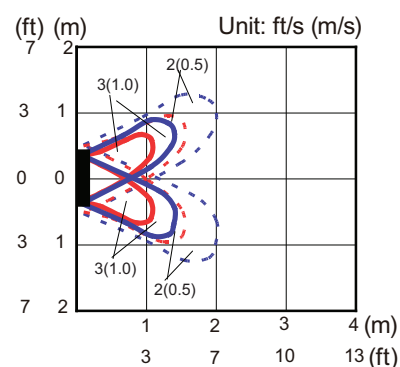
■ Models: AGU9RLF, AGU12RLF, and AGU15RLF

Measuring conditions	Fan speed	Operation mode	Fan select
	HIGH	FAN	Upper and lower

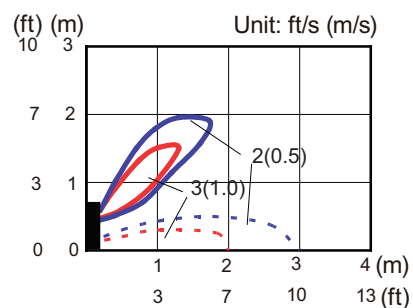
Top view
Horizontal louver: Up
Vertical louver: Center



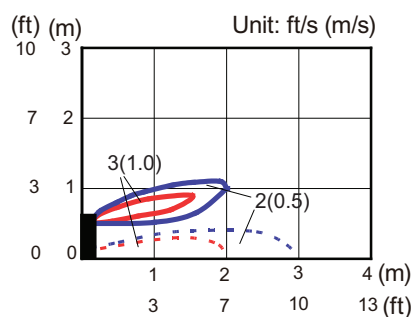
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



Side view
Horizontal louver: Down
Vertical louver: Center



5-2. Airflow

■ Models: AGU9RLF and AGU12RLF

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	570
	l/s	158
	CFM	336
MED	m ³ /h	460
	l/s	128
	CFM	271
LOW	m ³ /h	360
	l/s	100
	CFM	212
QUIET	m ³ /h	270
	l/s	75
	CFM	159

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	600
	l/s	167
	CFM	353
MED	m ³ /h	480
	l/s	133
	CFM	283
LOW	m ³ /h	370
	l/s	103
	CFM	218
QUIET	m ³ /h	270
	l/s	75
	CFM	159

■ Model: AGU15RLF

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	650
	l/s	181
	CFM	383
MED	m ³ /h	520
	l/s	144
	CFM	306
LOW	m ³ /h	400
	l/s	111
	CFM	235
QUIET	m ³ /h	270
	l/s	75
	CFM	159

● Heating

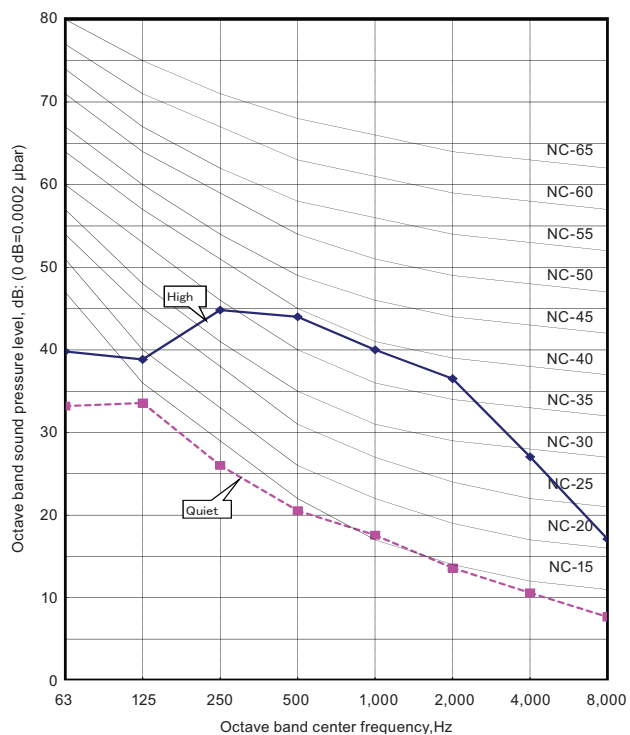
Fan speed	Airflow	
HIGH	m ³ /h	650
	l/s	181
	CFM	383
MED	m ³ /h	520
	l/s	144
	CFM	306
LOW	m ³ /h	390
	l/s	108
	CFM	230
QUIET	m ³ /h	270
	l/s	75
	CFM	159

6. Operation noise (sound pressure)

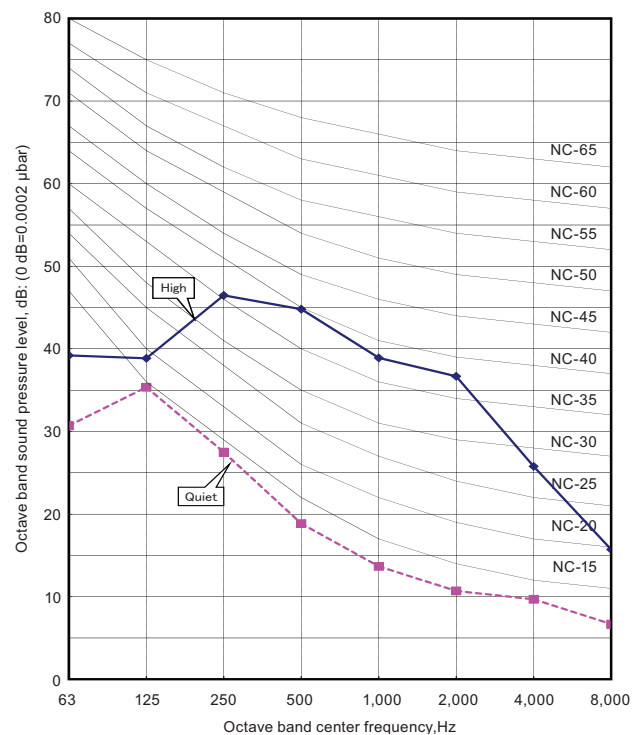
6-1. Noise level curve

■ Model: AGU9RLF

● Cooling

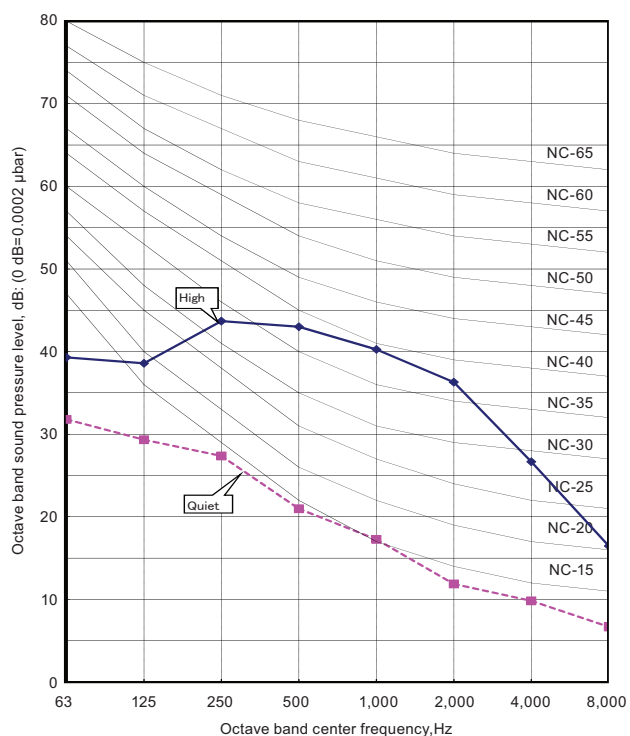


● Heating

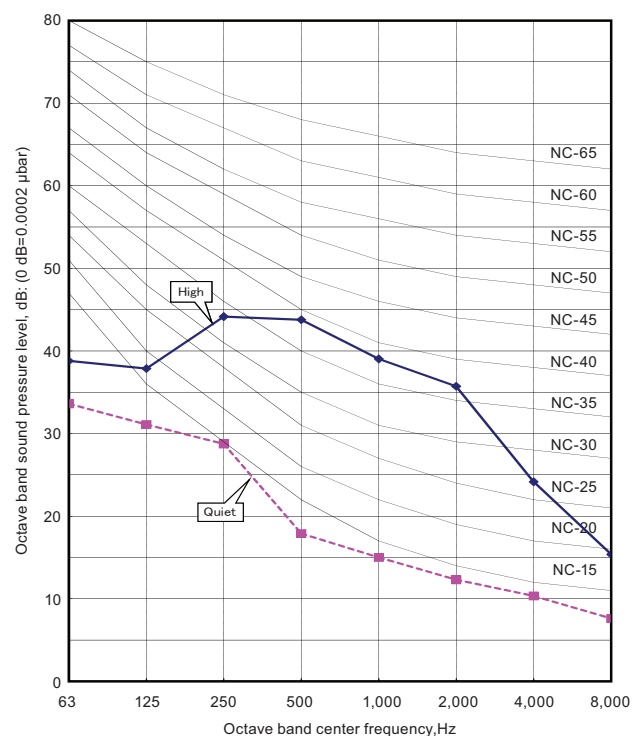


■ Model: AGU12RLF

● Cooling

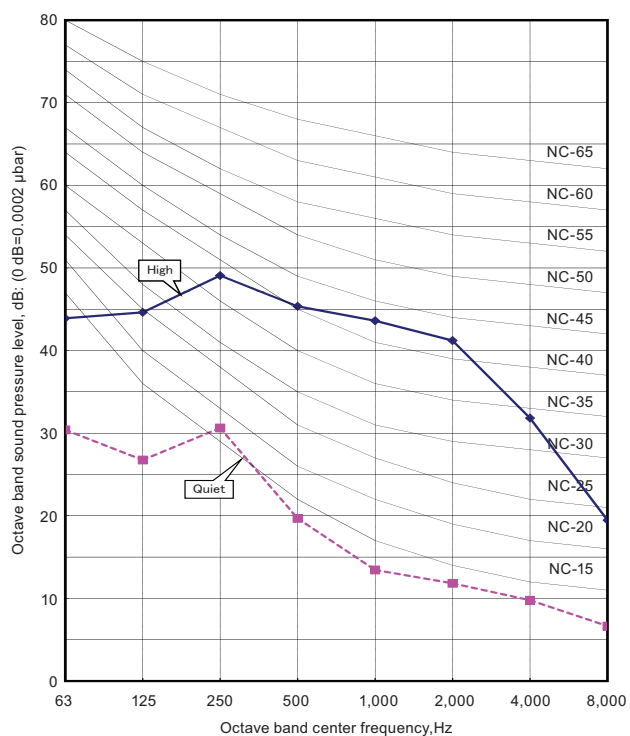


● Heating

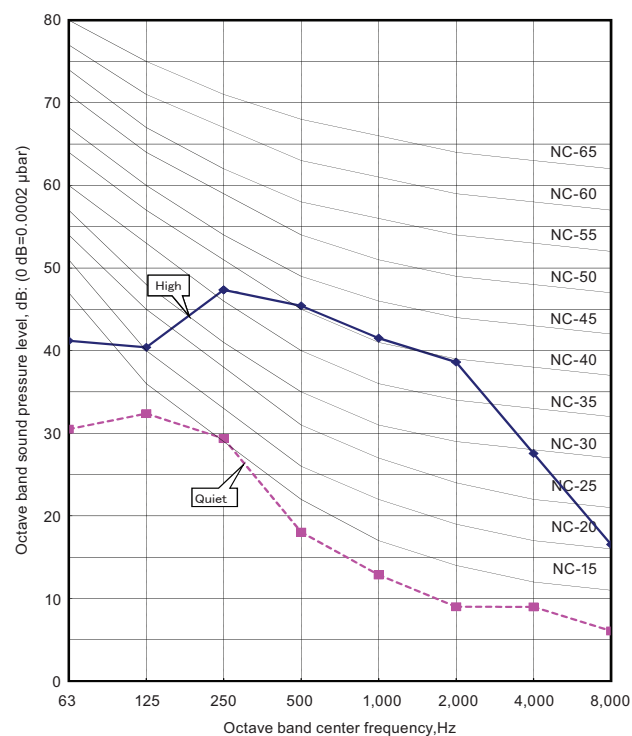


Model: AGU15RLF

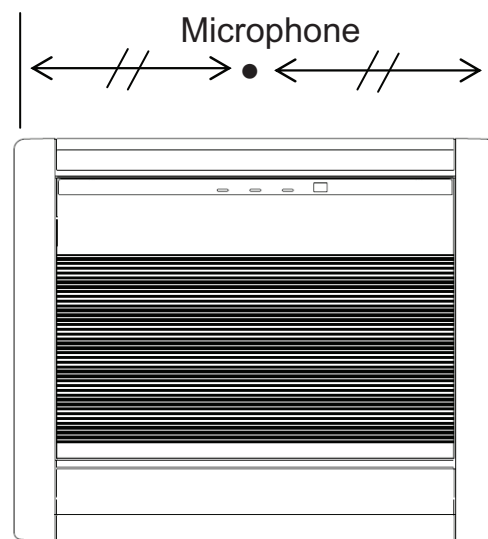
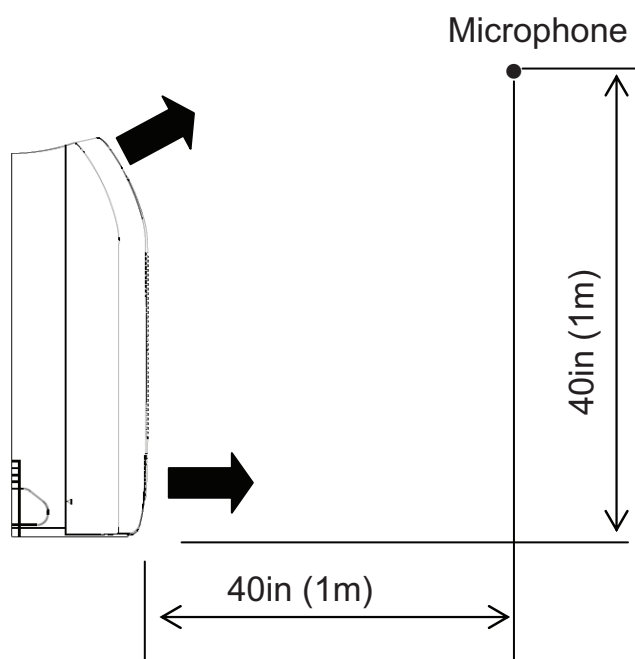
Cooling



Heating



6-2. Sound level check point



7. Safety devices

Type of protection	Protection form		Model		
			AGU9RLF	AGU12RLF	AGU15RLF
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A		
Terminal protection	Current (thermal) fuse		250 V, 3 A, 216°F (102°C)		
Fan motor protection	Thermal protector program	Activate	302 ±27°F (150 ±15°C) Fan motor stop		
		Reset	248 ±27°F (120 ±15°C) Fan motor restart		

*PCB: Printed Circuit Board

8. External input and output

With using external input and output functions, this product can be operated inter-connectedly with an external device.

Connector	Input	Output	Remarks
CN14	Control input (Operation/Stop)	—	See external input/output settings for details.
CN20	—	Operation status output	
CN21	—	Error status output	

8-1. External input

- "Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 492 ft (150 m).
- The wire connection should be separate from the power cable line.

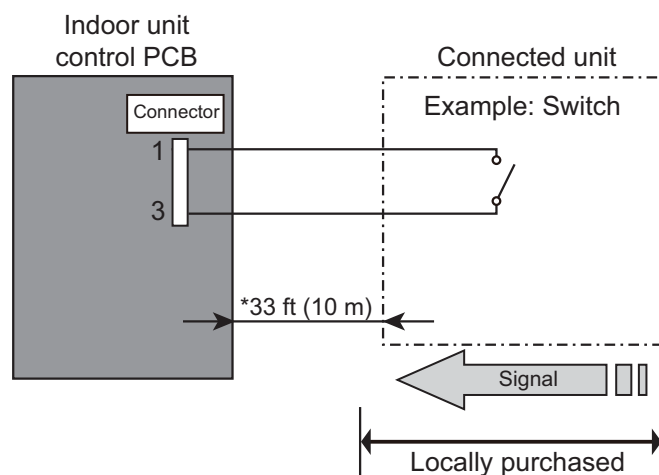
■ Control input (Operation/Stop or Forced stop)

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

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 PCB and turning it on.

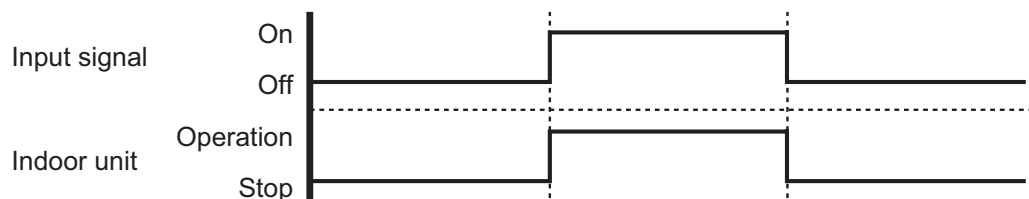
Unit operation	Initial setting after power is on	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	76 °F (24 °C)	Temperature at previous operation
Airflow mode	AUTO	Mode at previous operation
Air direction (swing)	Standard air direction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

● Circuit diagram example

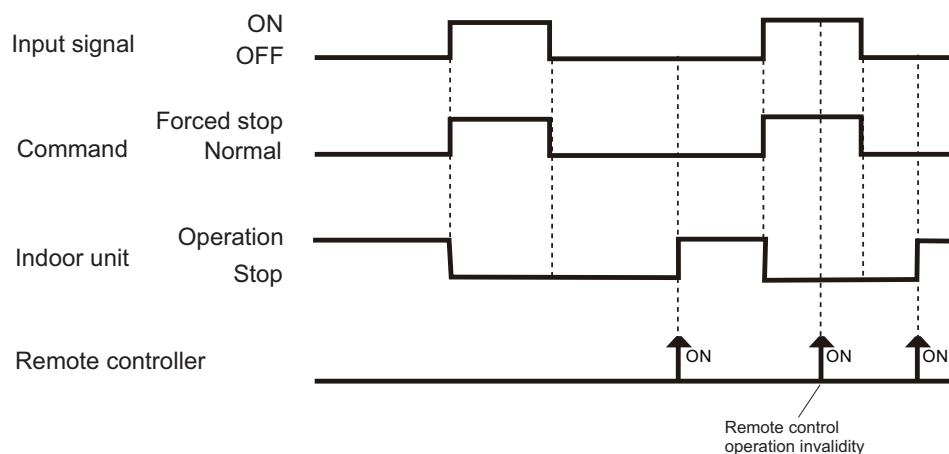


- Contact capacity: DC 24 V or more, 10 mA or more.
- *: Make the distance from the PCB to the connected unit within 33 ft (10 m).
- Use non-polar relays and switches.

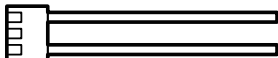
● When function setting is "Operation/Stop" mode



● When function setting is "Forced stop" mode



● Optional part

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ5	External input wire 

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

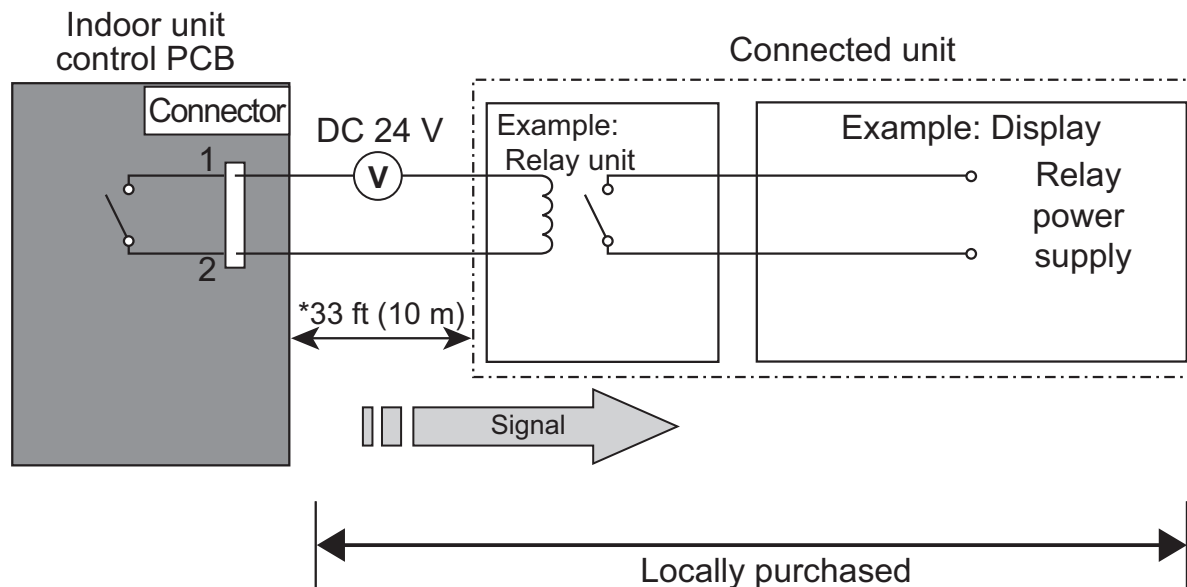
8-2. External output

With using external output function, operating status of this product can be transmitted to the external device, and also, this product can be inter-connected with the external device.

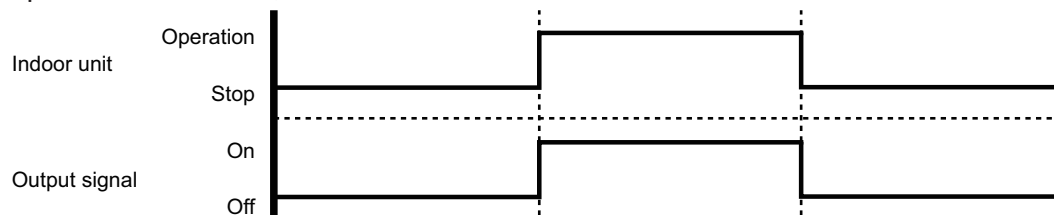
■ Operation status output

Air conditioner operation status signal can be output.

- **Circuit diagram example:**



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



- **Optional part:**

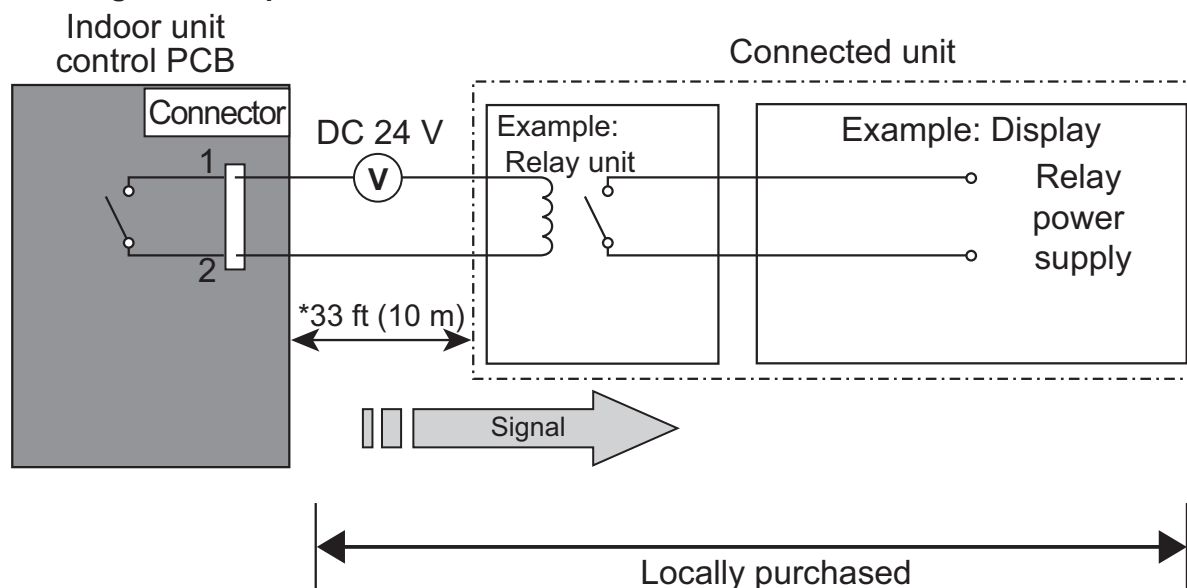
Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ5	External output wire

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

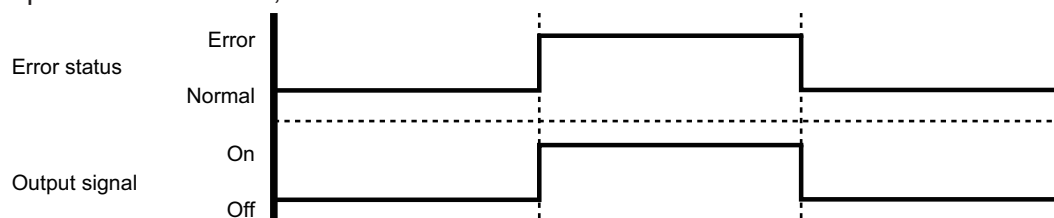
■ Error status output

Air conditioner error status signal can be output.

• Circuit diagram example:



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



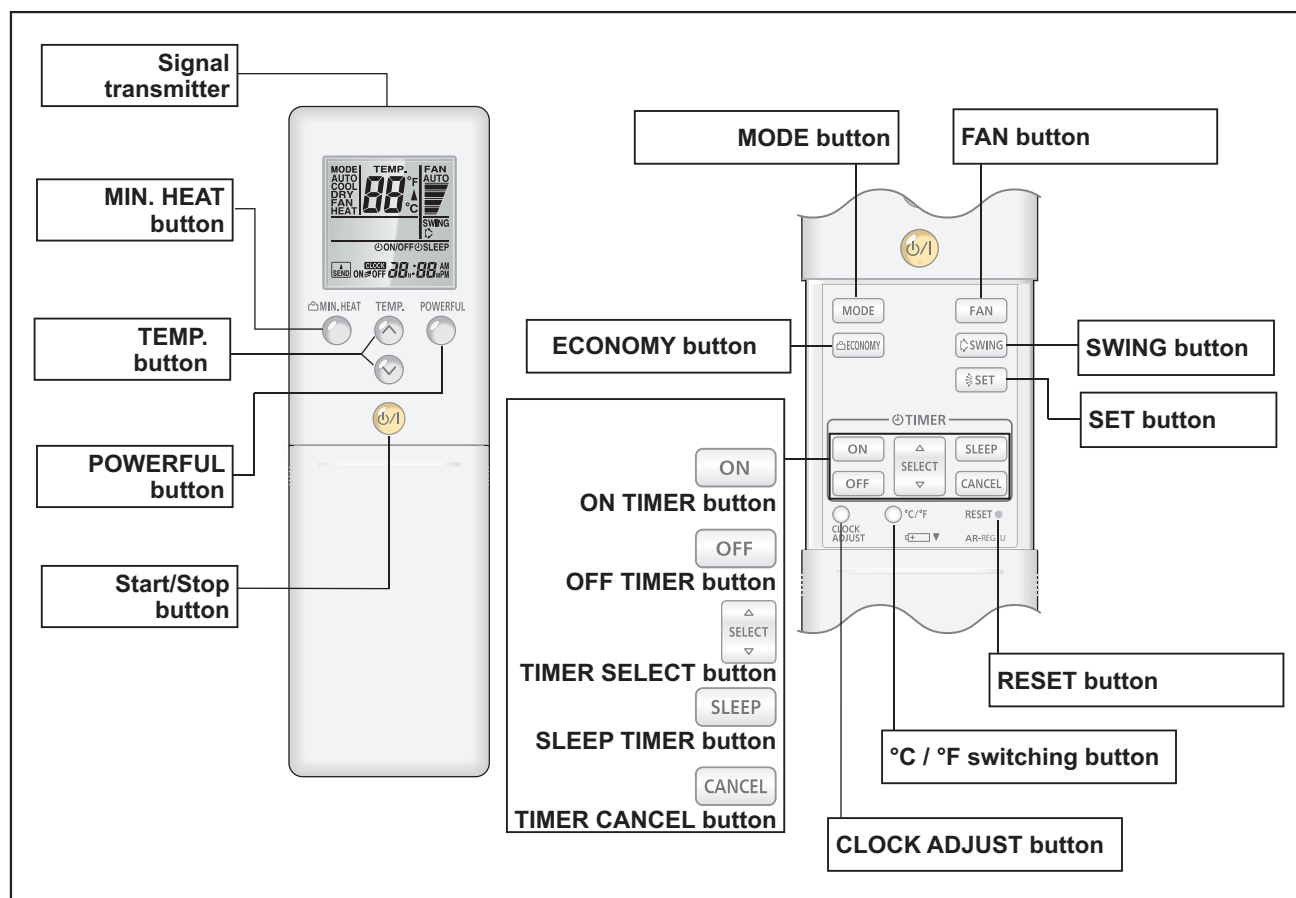
• Optional part:

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ5	External output wire

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

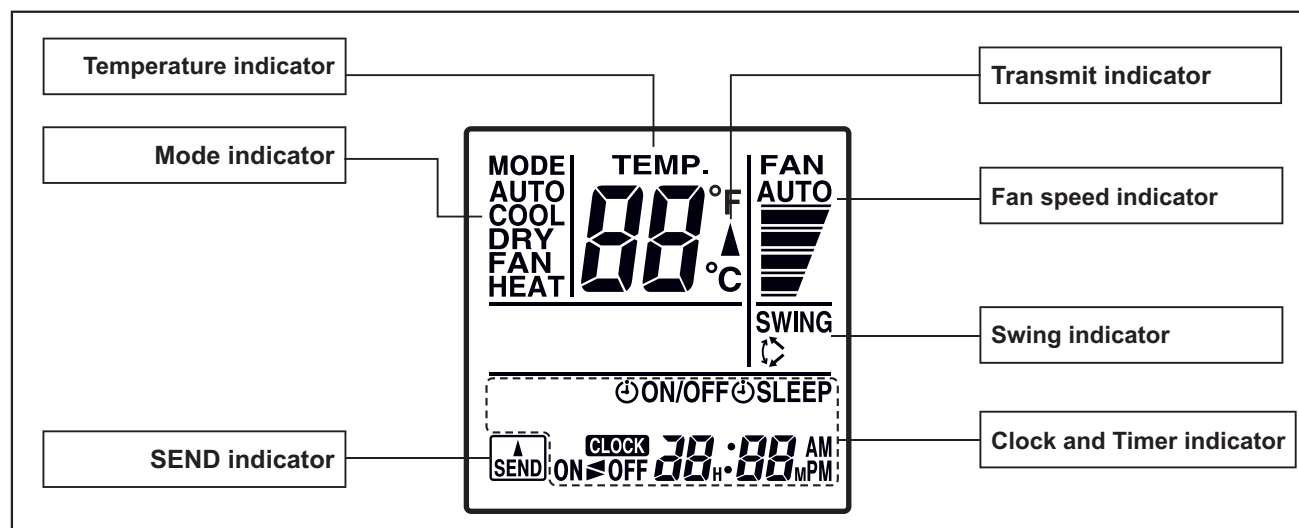
9. Remote controller

9-1. Overview



NOTE: Functions may differ by type of the indoor unit. For details, refer to the operation manual.

Display panel

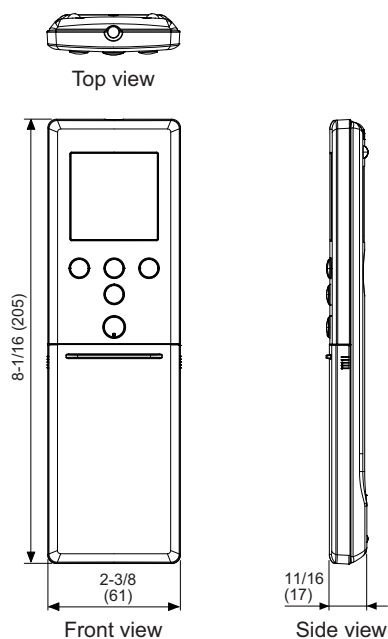


To facilitate explanation, the accompanying illustration has been drawn to show all possible indicators; in actual operation, however, the display will only show those indicators appropriate to the current operation.

9-2. Specifications

● Controller

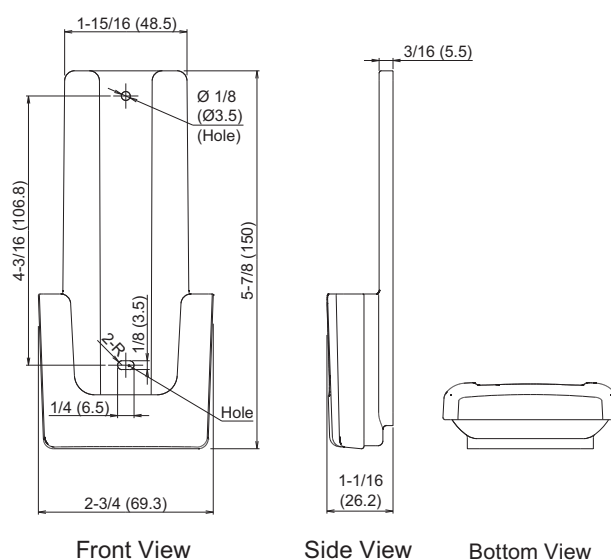
Unit: in (mm)



Size (H × W × D)	in (mm)	$8\frac{1}{16} \times 2\frac{3}{8} \times 1\frac{1}{16}$ (205 × 61 × 17)
Weight	oz (g)	4.3 (122) (without batteries)

● Holder

Unit: in (mm)



Size (H × W × D)	in (mm)	$5\frac{7}{8} \times 2\frac{3}{4} \times 1\frac{1}{16}$ (150 × 69.3 × 26.2)
Weight	oz (g)	1 (27)

10. Function settings

To adjust the functions of this product according to the installation environment, various types of function settings are available.

NOTE: Incorrect settings can cause a product malfunction.

10-1. Function settings by using remote controller

Some function settings can be changed on the remote controller. After confirming the setting procedure and the content of each function setting, select appropriate functions for your installation environment.

■ Setting procedure by using wireless remote controller

The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

Before connecting the power supply of the indoor unit, reconfirm following items:

- Piping air tight test and vacuuming have been performed firmly.
- There is no wiring mistake.

Then, connect the power supply of indoor unit.

Entering function setting mode:

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

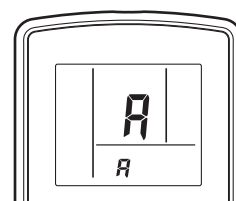
STEP 1: Setting the remote controller custom code

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

The custom codes that are set through this process are applicable only to the signal in the function setting.

For details on how to set the custom codes through the normal process, refer to ["Custom code setting for wireless remote controller"](#) on page 28.

1. Press the SET TEMP. (▲) (▼) buttons to change the custom code between $\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$. Match the code on the display to the air conditioner custom code. (Initially set to \overline{A} .) If the custom code does not need to be selected, press the MIN. HEAT button, and proceed to **STEP 2**.
2. Press the MODE button and check that the indoor unit can receive signals at the displayed custom code.
3. Press the MIN. HEAT button to accept the custom code, and proceed to **STEP 2**.
4. After completing the function setting, be sure to disconnect the power supply and then reconnect it.

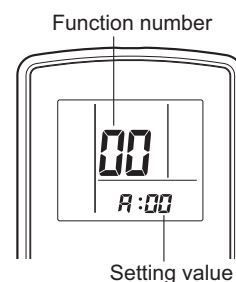


NOTES:

- The air conditioner custom code is set to " \overline{A} " prior to shipment.
- The remote controller resets to custom code " \overline{A} " when the batteries on the remote controller are replaced. If you use a custom code other than code " \overline{A} ", reset the custom code after replacing the batteries.
- If you do not know the air conditioner custom code setting, try each of the custom codes ($\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$) until you find the code that operates the air conditioner.

STEP 2: Selecting the function number and setting value

1. Press the SET TEMP. (▲) (▼) buttons to select the function number. To switch between the left and right digits, press the MIN. HEAT button.
2. Press the POWERFUL button to proceed the setting value. To return the function number selection, press the POWERFUL button again.
3. Press the SET TEMP. (▲) (▼) buttons to select the setting value. To switch between the left and right digits, press the MIN. HEAT button.
4. Press the MODE button, and START/STOP button, in the order listed to confirm the settings.
5. Press the RESET button to cancel the function setting mode.
6. After completing the function setting, be sure to disconnect the power supply and then reconnect it.

**⚠ CAUTION**

After disconnecting the power supply, wait 30 seconds or more before reconnecting it. The function setting will not become active unless the power supply is disconnected and then reconnected.

■ Contents of function setting

Each function setting listed in this section is adjustable in accordance with the installation environment.

NOTE: Setting will not be changed if invalid numbers or setting values are selected.

● Function setting list

	Function no.	Functions
1)	11	Filter sign
2)	23	Vertical airflow direction range control
3)	30/31	Room temperature control for indoor unit sensor
4)	40	Auto restart
5)	42	Room temperature sensor switching
6)	44	Remote controller custom code
7)	46	External input control
8)	48	Room temperature sensor switching (Aux.)
9)	49	Indoor unit fan control for energy saving for cooling
10)	92/93	Room temperature control for wired remote controller sensor
11)	95	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).

Function number	Setting value	Setting description	Factory setting
11	00	Standard (400 hours)	
	01	Long interval (1,000 hours)	
	02	Short interval (200 hours)	
	03	No indication	◆

2) Vertical airflow direction range control

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

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

3) Room temperature control for indoor unit sensor

NOTE: Before performing this setting, refer to Function 95.

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 0.0 °F (0.0 °C)" (01).

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

4) Auto restart

Enables or disables automatic restart after a power interruption.

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

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

5) Room temperature sensor switching

(Only for wired remote controller)

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

Function number	Setting value	Setting description	Factory setting
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.

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

6) Remote controller custom code

(Only for wireless remote controller)

The indoor unit custom code can be changed. Select the appropriate custom code.

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

7) External input control

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

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

8) Room temperature sensor switching (Aux.)

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01).

This function will only work if the function setting 42 is set at "Both" (01).

When the setting value is set to "Both" (00), more suitable control of the room temperature is possible by setting function setting 30 and 31 too.

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

9) Indoor unit fan control for energy saving for cooling

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

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

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

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

10) Room temperature control for wired remote controller sensor

NOTE: Before performing this setting, refer to Function 95.

Depending on the installed environment, correction of the room 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.

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

11) Heat insulation condition (building insulation)

Heat insulation conditions differ according to the installed environment.

"Standard insulation" (00) allows system to rapidly respond to the cooling or heating load changes.

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

When "High insulation" (01) is selected:

- Overheating (overcooling) is prevented at the start-up.
- All room-temperature control settings (Function 30, 31, 92, and 93) will reset to "No correction 0.0 °F (0.0 °C)".

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

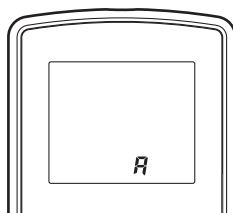
NOTE: When changing Function 95, perform this setting before other room-temperature control settings (Function 30, 31, 92, and 93). If Function 95 is not set first, room-temperature control settings (Function 30, 31, 92, and 93) will be reset and you must re-do them again.

10-2. Custom code setting for wireless remote controller

To interconnect the air conditioner and the wireless remote controller, assignment of the custom code for the wireless remote controller is required.

NOTE: Air conditioner cannot receive a custom code if the air conditioner has not been set for the 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 \overline{A} .)



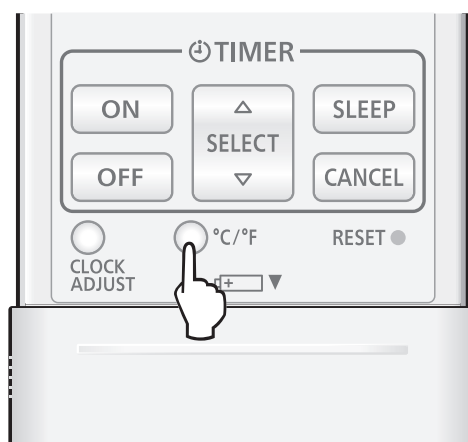
3. Press the SET TEMP. (\blacktriangle or \blacktriangledown) button to change the custom code between $\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$. Match the code on the display to the air conditioner custom code.
4. Press the MODE button again to return to the clock indicator. The custom code will be changed.

NOTES:





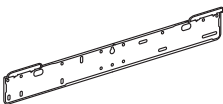




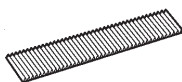

- If no button is pressed within 30 seconds after the custom code is displayed, the system returns to the original clock indicator. In this case, start again from step 1.
- The air conditioner custom code is set to \overline{A} prior to shipment. To change the custom code, contact your retailer.
- The remote controller resets to custom code \overline{A} when the batteries in the remote controller are replaced. If you use a custom code other than code \overline{A} , reset the appropriate custom code after replacing the batteries. If you do not know the assigned code for the air conditioner, try each of the custom code ($\overline{A} \rightarrow \overline{b} \rightarrow \overline{c} \rightarrow \overline{d}$) until you find the code which operates the air conditioner.

10-3. Remote controller temperature unit

To change the displayed temperature unit, press the °C/°F switching button to select the preferred temperature unit. (Factory setting is "°F".)

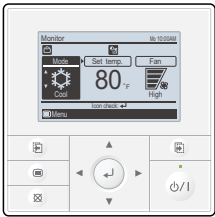
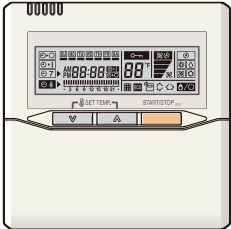



11. Accessories

Part name	Exterior	Qty	Part name	Exterior	Qty
Operating manual		1	Cable tie		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Screw (large)		9
Remote controller		1	Screw (small)		2
Battery		2	Air cleaning filter		2
Remote controller holder		1			


12. Optional parts

12-1. Controllers

Exterior	Part name	Model name	Summary
	Wired Remote Controller	UTY-RVNUM	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. Wire type: Polar 3-wire
	Wired Remote Controller	UTY-RNNUM	Room temperature can be controlled by detecting the temperature accurately with thermo sensor. Wire type: Polar 3-wire
	Simple Remote Controller	UTY-RSNUM	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Polar 3-wire

NOTE: Available functions may differ by the remote controller. For details, refer to the operation manual.

12-2. Others

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZXZ5	Required when external device is connected.

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOU9RLFFH

AOU12RLFFH

AOU15RLFFH

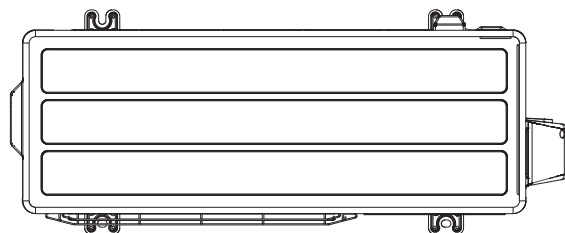
1. Specifications

Type				Inverter, Heat pump		
Model name				AOU9RLFFH	AOU12RLFFH	AOU15RLFFH
Power supply				208/230 V ~ 60 Hz		
Power supply intake				Outdoor unit		
Available voltage range				187—253 V		
Starting current			A	4.1	6.7	7.0
Fan	Airflow rate	Cooling	CFM (m³/h)	1,207 (2,050)	1,457 (2,475)	1,457 (2,475)
		Heating		1,207 (2,050)	1,207 (2,050)	1,386 (2,355)
	Type × Qty			Propeller fan × 1		
Motor output			W	115		
Sound pressure level *1		Cooling	dB (A)	49	53	54
		Heating		50	52	54
Heat exchanger type		Dimensions (H × W × D)	in	23-1/8 × 34-11/16 × 1-7/16		
			mm	588 × 881 × 36.4		
		Fin pitch	FPI	20		
		Rows × Stages		2 × 28		
		Pipe type		Copper		
		Fin type	Type (Material)	Corrugate (Aluminum)		
		Surface treatment	PC Fin			
Compressor	Type	Rotary				
	Motor output		W	850	1,000	
Refrigerant		Type	R410A			
		Charge	lb oz	2 lb 10 oz	2 lb 12 oz	
			g	1,200	1,250	
Refrigerant oil		Type	FREOL α68SZ			
		Amount	in³ (cm³)	21.4 (350)		
Enclosure		Material	Steel sheet			
		Color	Beige Approximate color of Munsell 10YR 7.5/1.0			
Dimensions (H × W × D)	Net		in	24-7/16 × 31-1/8 × 11-7/16		
			mm	620 × 790 × 290		
	Gross		in	28-1/16 × 37-3/16 × 15-9/16		
			mm	713 × 945 × 395		
Weight	Net		lb (kg)	86 (39)	88 (40)	
	Gross			95 (43)		
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)		
		Gas		Ø3/8 (Ø9.52)	Ø1/2 (Ø12.7)	
	Method			Flare		
	Pre-charge length		ft (m)	49 (15)		
	Max. length			66 (20)		
	Min. length			10 (3)		
	Max. height difference			49 (15)		
Operation range		Cooling	°F (°C)	14 to 115 (-10 to 46)		
		Heating		-15 to 75 (-26 to 24)		
NOTES:						
<ul style="list-style-type: none">Specifications are based on the following conditions:<ul style="list-style-type: none">Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FDB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FDB (23.9°CWB).Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FDB (15°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FDB (6.11°CWB).Pipe length: 24 ft (7.5 m), Height difference: 0 m. (Between outdoor unit and indoor unit.)Protective function might work when using it outside the operation range.*1: Sound pressure level<ul style="list-style-type: none">Measured values in 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.						

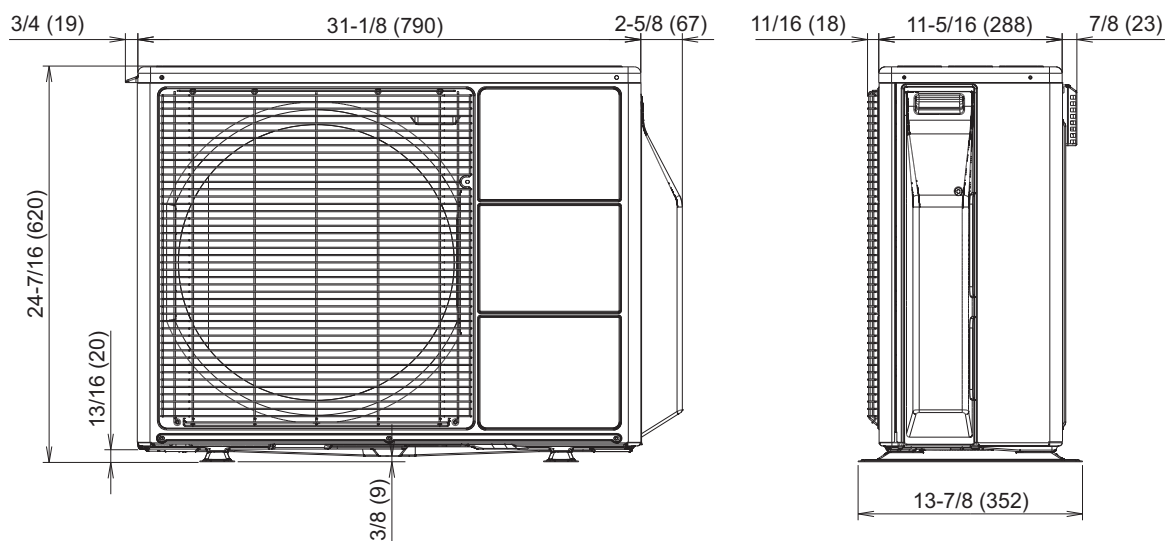
2. Dimensions

2-1. Models: AOU9RLFFH, AOU12RLFFH, and AOU15RLFFH

Unit: in (mm)

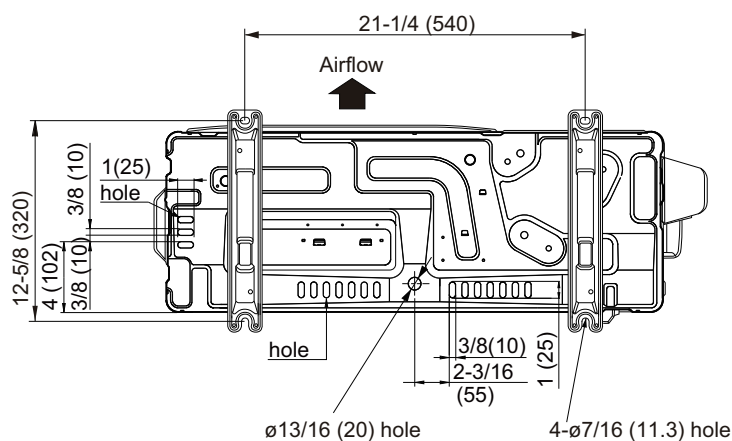
OUTDOOR UNIT
AOU9-15RLFFHOUTDOOR UNIT
AOU9-15RLFFH

Top view

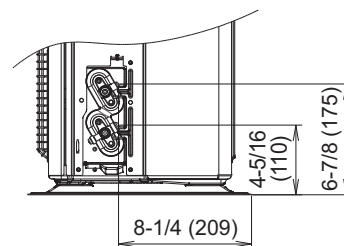


Front view

Side view



Bottom view



3. Installation space

3-1. Models: AOU9RLFFH, AOU12RLFFH, and AOU15RLFFH

■ Space requirement

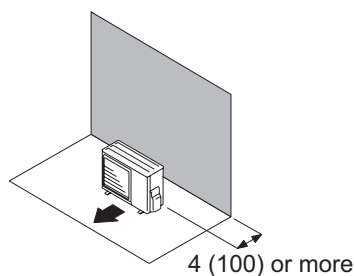
Provide sufficient installation space for product safety.

● Single outdoor unit installation

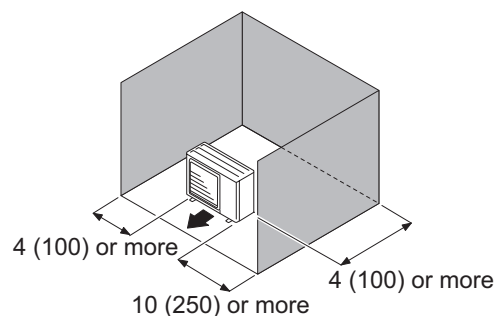
- When the upper space is open:

Unit: in (mm)

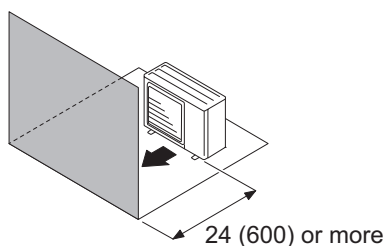
When there are obstacles at the rear only.



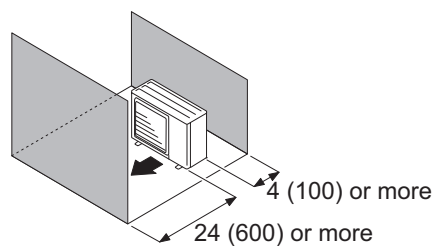
When there are obstacles at the rear and sides.



When there are obstacles at the front only.



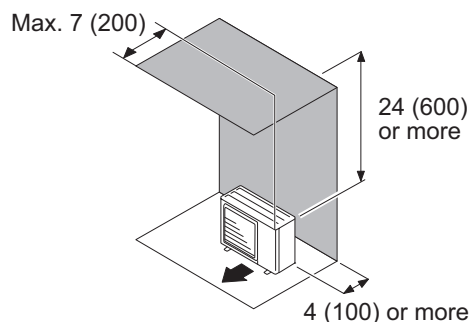
When there are obstacles at the front and rear.



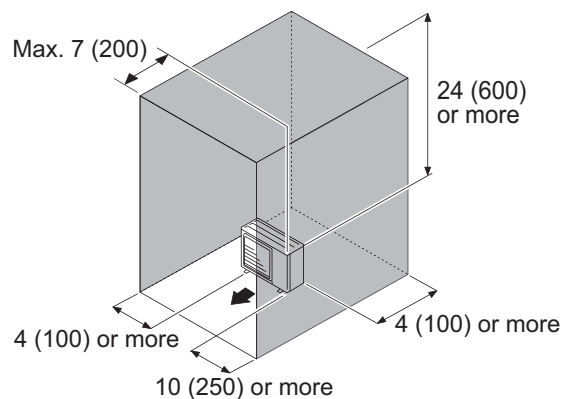
- When there is an obstruction in the upper space:

Unit: in (mm)

When there are obstacles at the rear and above.



When there are obstacles at the rear, sides, and above.

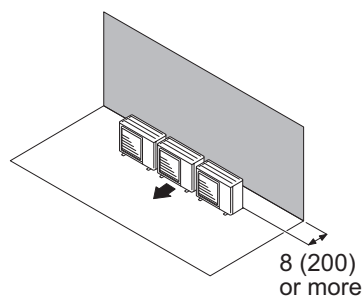


● Multiple outdoor unit installation

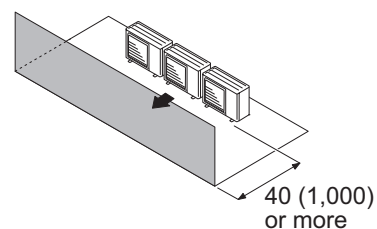
- When the upper space is open:

Unit: in (mm)

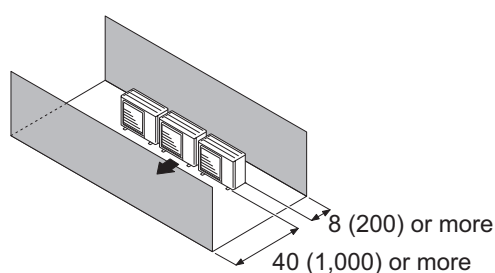
When there are obstacles at the rear only.



When there are obstacles at the front only.



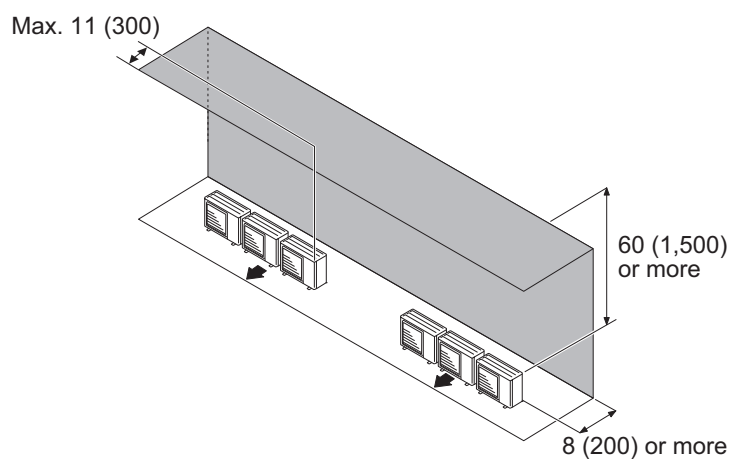
When there are obstacles at the front and rear.



- When there is an obstruction in the upper space:

Unit: in (mm)

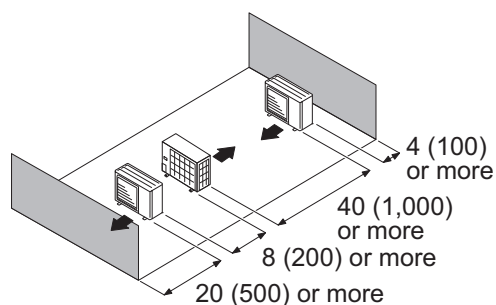
When there are obstacles at the rear and above.



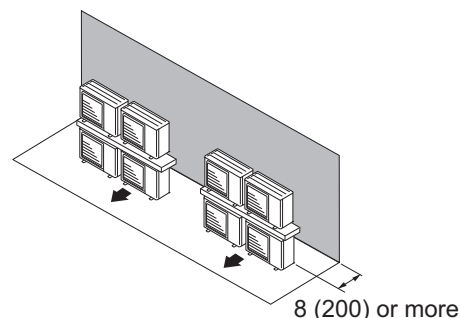
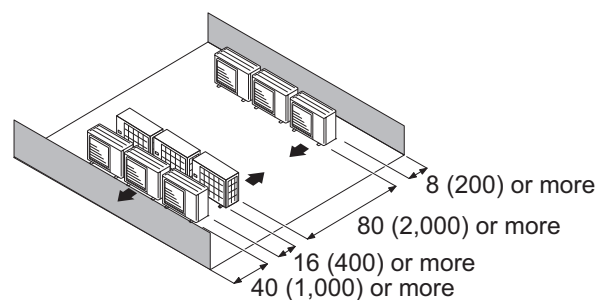
● Outdoor unit installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



Multiple parallel unit arrangement

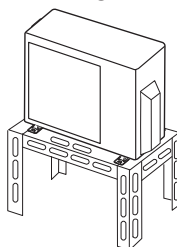


NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- Height above the floor level should be 2 in (50 mm) or more.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

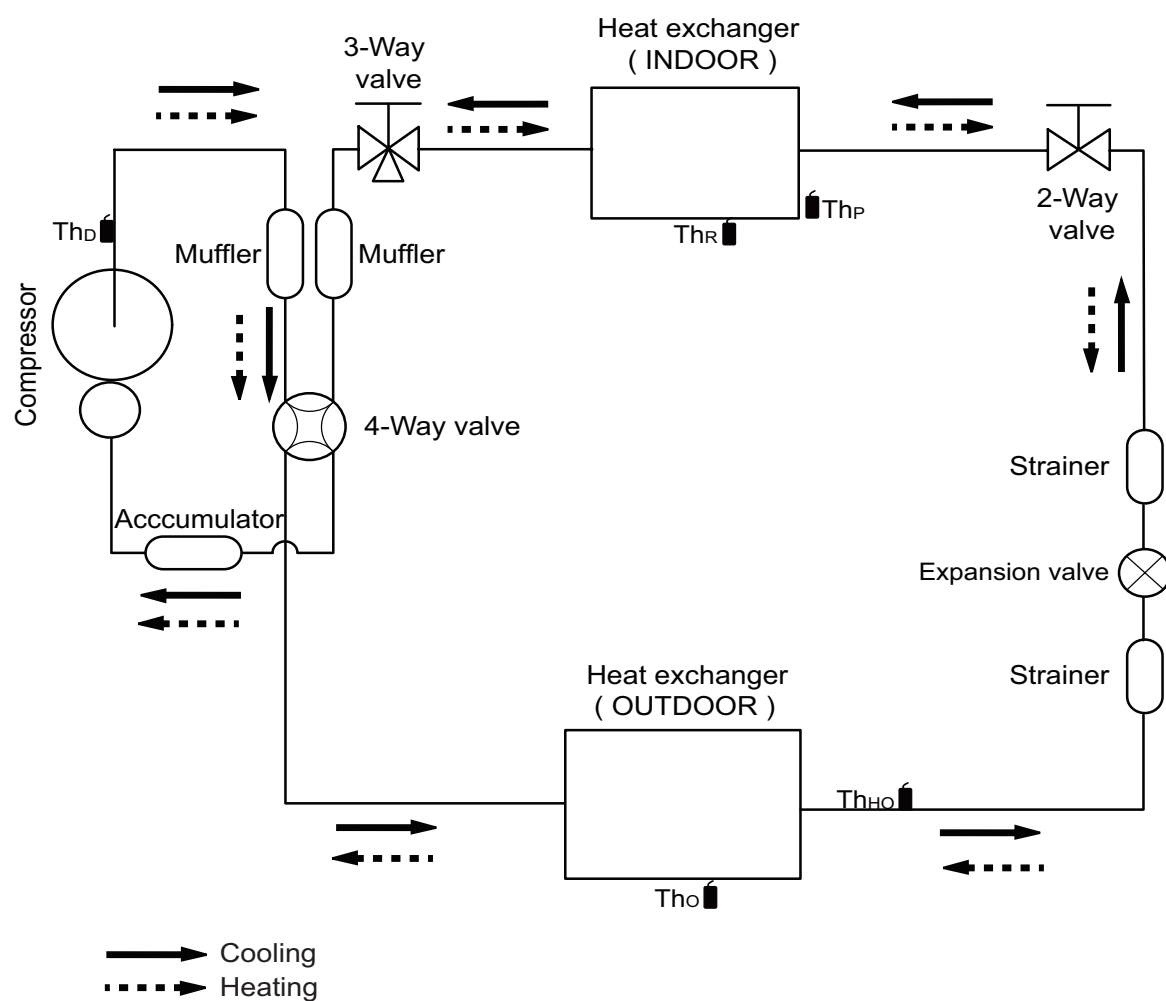
⚠ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 32 °F (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 climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



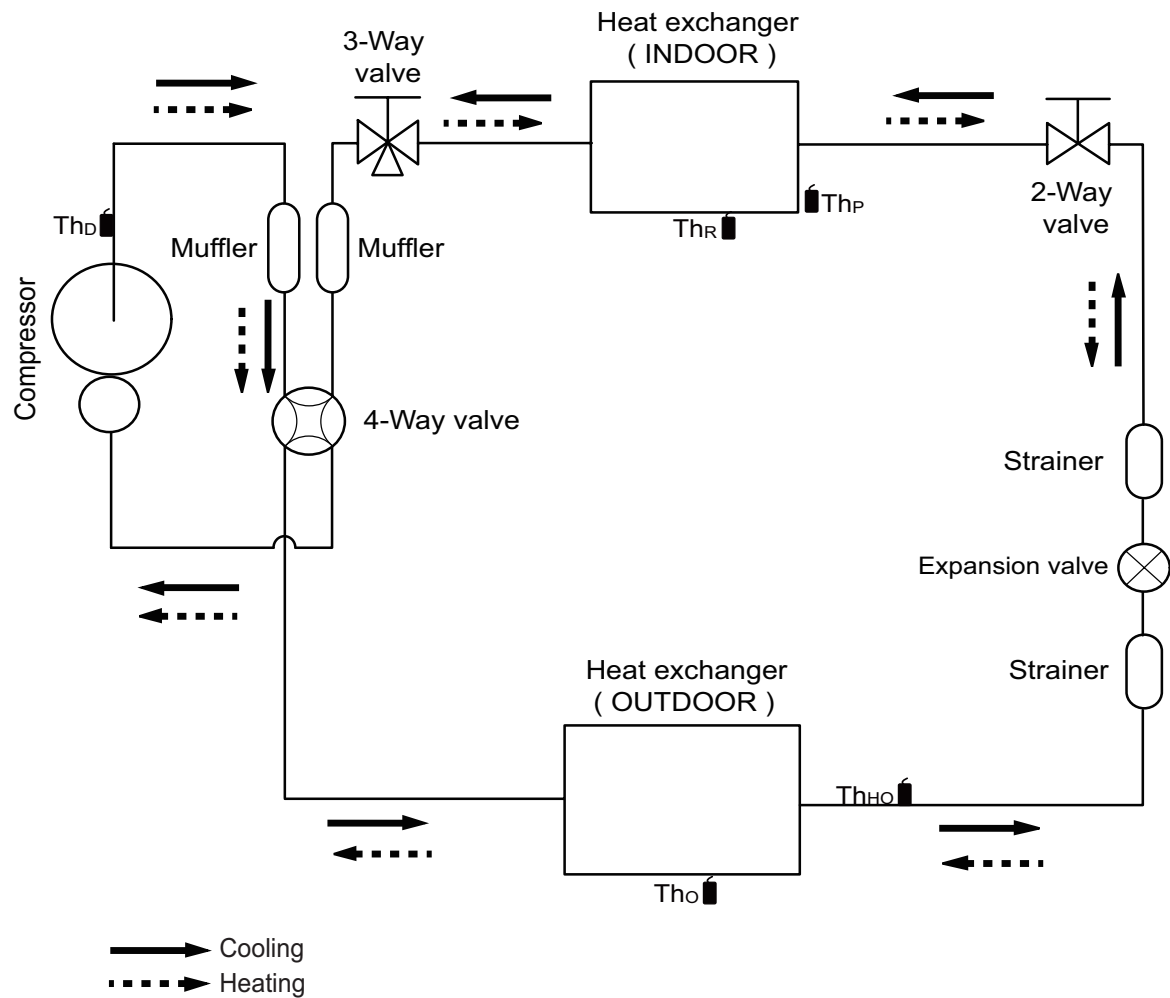
4. Refrigerant circuit

4-1. Models: AOU9RLFFH and AOU12RLFFH



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

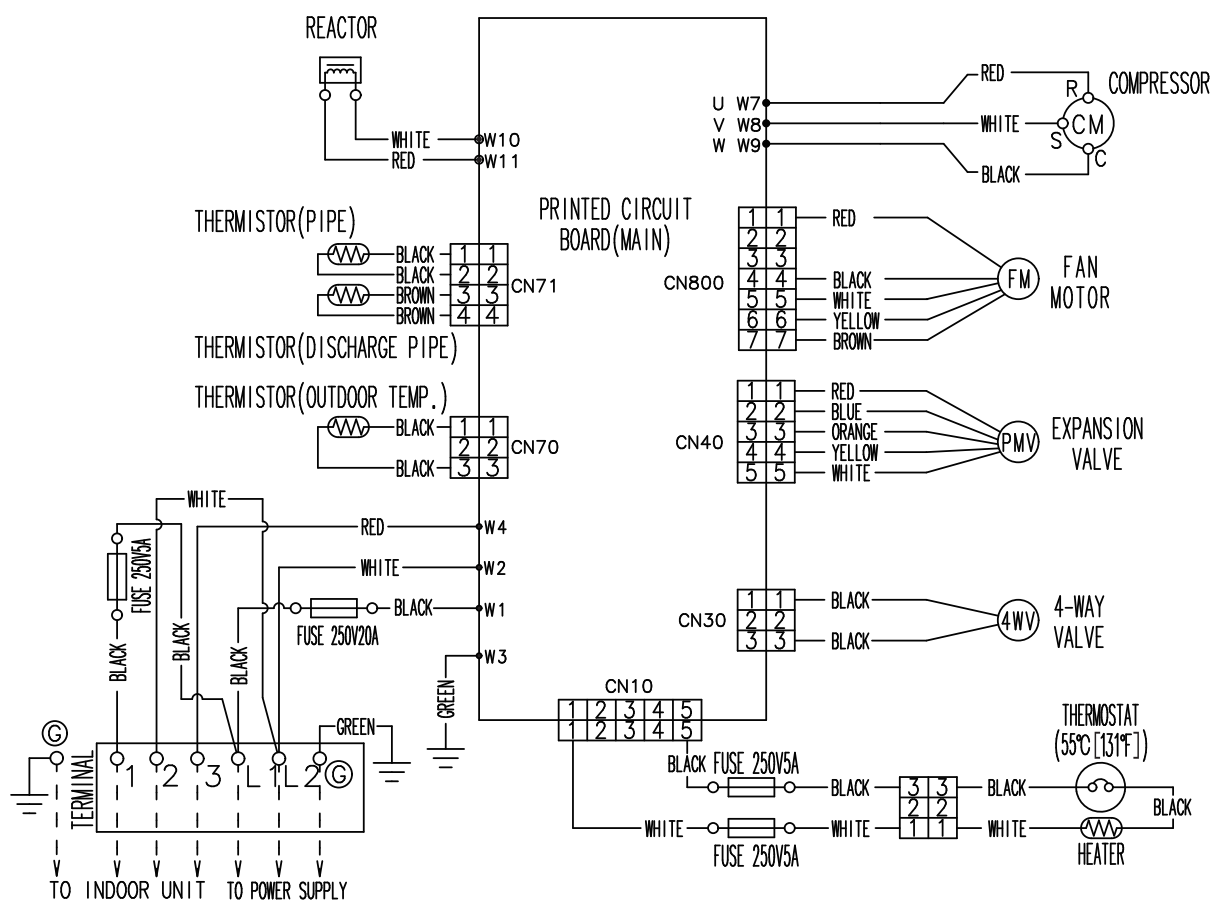
4-2. Model: AOU15RLFFH



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

5. Wiring diagrams

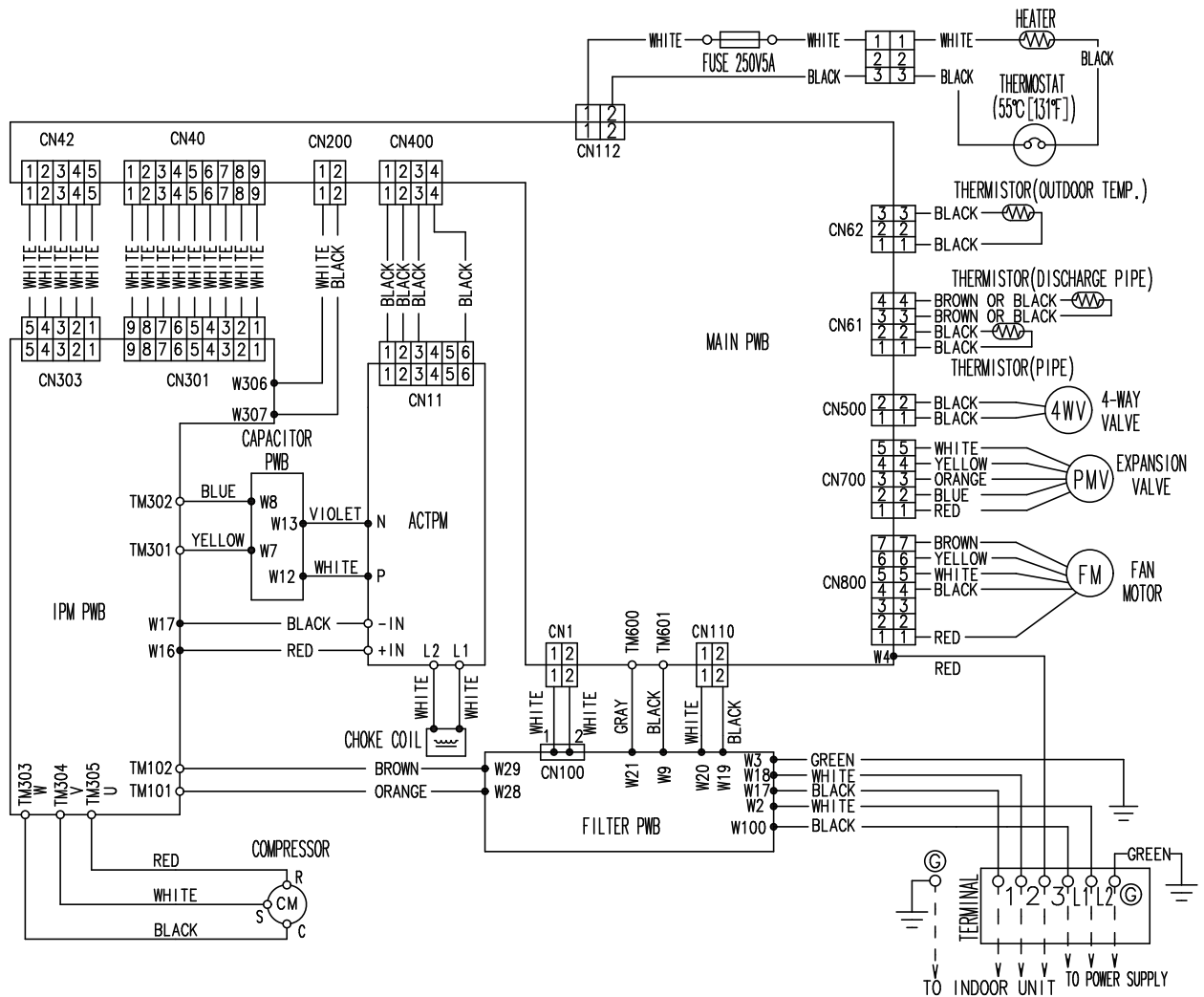
5-1. Models: AOU9RLFFH and AOU12RLFFH



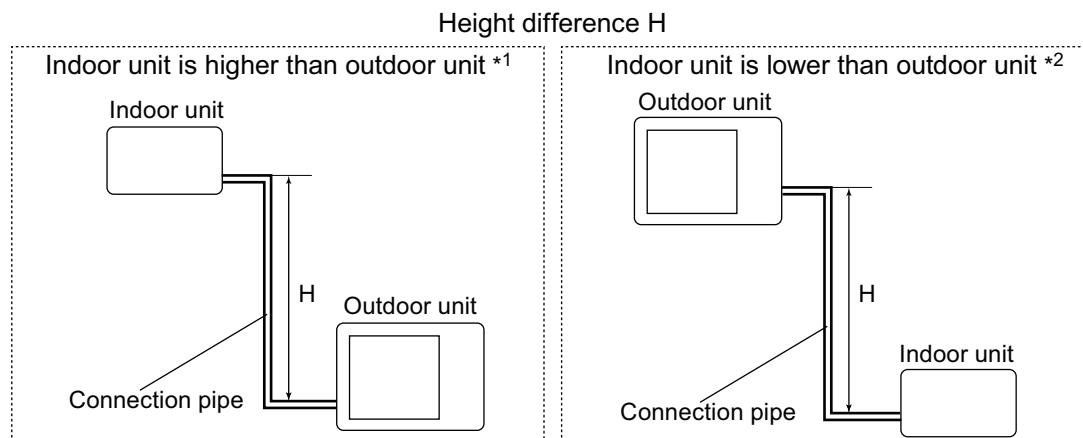
5-2. Model: AOU15RLFFH

OUTDOOR UNIT
AOU9-15RLFFH

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AOU9-15RLFFH



6. Capacity compensation rate for pipe length and height difference



6-1. Models: AOU9RLFFH and AOU12RLFFH

NOTE: Values mentioned in the table are calculated based on the maximum capacity.

COOLING		Pipe length						
		m		5	7.5	10	15	20
			ft	16	24	32	49	65
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.893	0.909
		10	32	—	—	0.955	0.908	0.924
		7.5	24	—	0.975	0.959	0.912	0.928
		5	16	0.992	0.979	0.963	0.916	0.931
		0	0	1.000	0.987	0.970	0.923	0.939
	Indoor unit is lower than outdoor unit *2	-5	-16	1.000	0.987	0.970	0.923	0.939
		-7.5	-24	—	0.987	0.970	0.923	0.939
		-10	-32	—	—	0.970	0.923	0.939
		-15	-49	—	—	—	0.923	0.939

HEATING		Pipe length						
		m		5	7.5	10	15	20
			ft	16	24	32	49	65
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.956	0.938
		10	32	—	—	1.004	0.956	0.938
		7.5	24	—	1.013	1.004	0.956	0.938
		5	16	1.000	1.013	1.004	0.956	0.938
		0	0	1.000	1.013	1.004	0.956	0.938
	Indoor unit is lower than outdoor unit *2	-5	-16	0.995	1.008	0.999	0.951	0.933
		-7.5	-24	—	1.005	0.997	0.948	0.931
		-10	-32	—	—	0.994	0.946	0.929
		-15	-49	—	—	—	0.937	0.919

6-2. Model: AOU15RLFFH

NOTE: Values mentioned in the table are calculated based on the maximum capacity.

COOLING		Pipe length						
		m	ft	5	7.5	10	15	20
				16	24	32	49	65
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.951	0.950
		10	32	—	—	0.979	0.967	0.966
		7.5	24	—	0.988	0.983	0.971	0.970
		5	16	0.994	0.992	0.987	0.975	0.974
	Indoor unit is lower than outdoor unit *2	0	0	1.002	1.000	0.995	0.983	0.982
		-5	-16	1.002	1.000	0.995	0.983	0.982
		-7.5	-24	—	1.000	0.995	0.983	0.982
		-10	-32	—	—	0.995	0.983	0.982
		-15	-49	—	—	—	0.983	0.982

HEATING		Pipe length						
		m	ft	5	7.5	10	15	20
				16	24	32	49	65
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.994	0.979
		10	32	—	—	1.012	0.994	0.979
		7.5	24	—	1.000	1.012	0.994	0.979
		5	16	0.969	1.000	1.012	0.994	0.979
	Indoor unit is lower than outdoor unit *2	0	0	0.969	1.000	1.012	0.994	0.979
		-5	-16	0.964	0.995	1.007	0.989	0.974
		-7.5	-24	—	0.993	1.004	0.986	0.972
		-10	-32	—	—	1.002	0.984	0.969
		-15	-49	—	—	—	0.974	0.959

7. Additional charge calculation

7-1. Models: AOU9RLFFH and AOU12RLFFH

Refrigerant type		R410A
Refrigerant amount	lb oz	2lb 10oz
	g	1,200

■ Refrigerant charge

Total pipe length	ft	49 or less	66 (Max.)	0.22 oz/ft(20 g/m)
	m	15 or less	20 (Max.)	
Additional charge	oz	0	3.5	
	g	0	100	

7-2. Model: AOU15RLFFH

Refrigerant type		R410A
Refrigerant amount	lb oz	2lb 12oz
	g	1,250

■ Refrigerant charge

Total pipe length	ft	49 or less	66 (Max.)	0.22 oz/ft(20 g/m)
	m	15 or less	20 (Max.)	
Additional charge	oz	0	3.5	
	g	0	100	

8. Airflow

8-1. Model: AOU9RLFFH

● Cooling

m ³ /h	2,050
l/s	569
CFM	1,207

● Heating

m ³ /h	2,050
l/s	569
CFM	1,207

8-2. Model: AOU12RLFFH

● Cooling

m ³ /h	2,475
l/s	688
CFM	1,457

● Heating

m ³ /h	2,050
l/s	569
CFM	1,207

8-3. Model: AOU15RLFFH

● Cooling

m ³ /h	2,475
l/s	688
CFM	1,457

● Heating

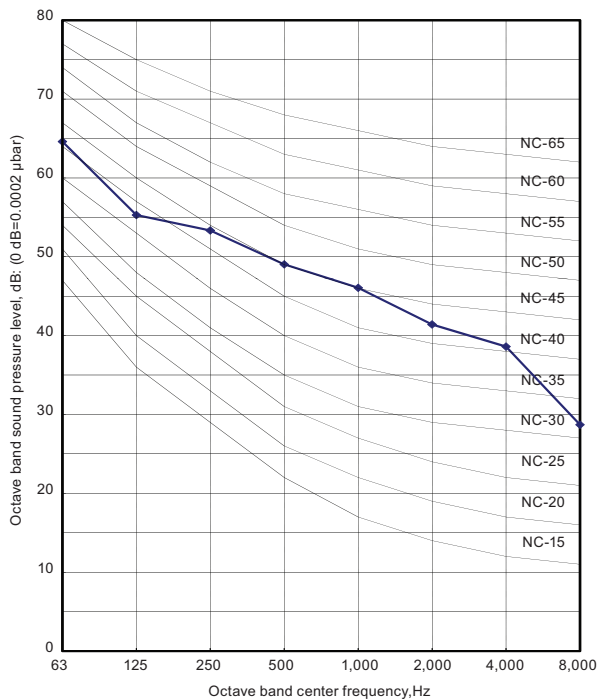
m ³ /h	2,355
l/s	654
CFM	1,386

9. Operation noise (sound pressure)

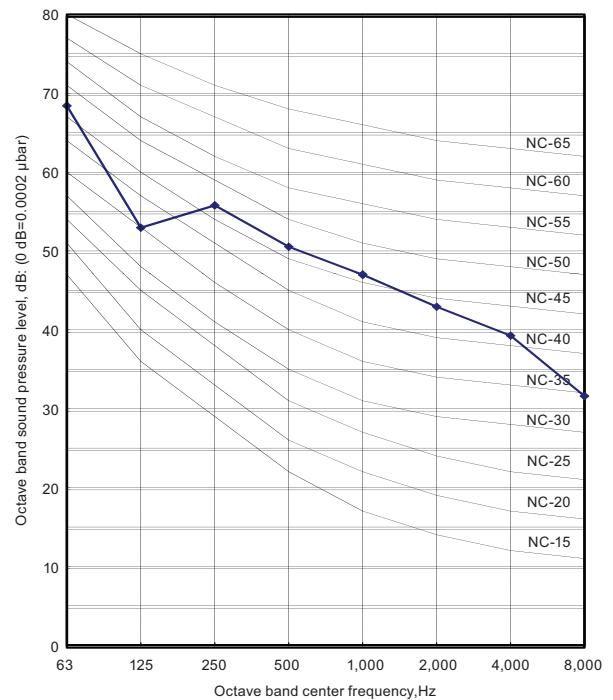
9-1. Noise level curve

Model: AOU9RLFFH

● Cooling

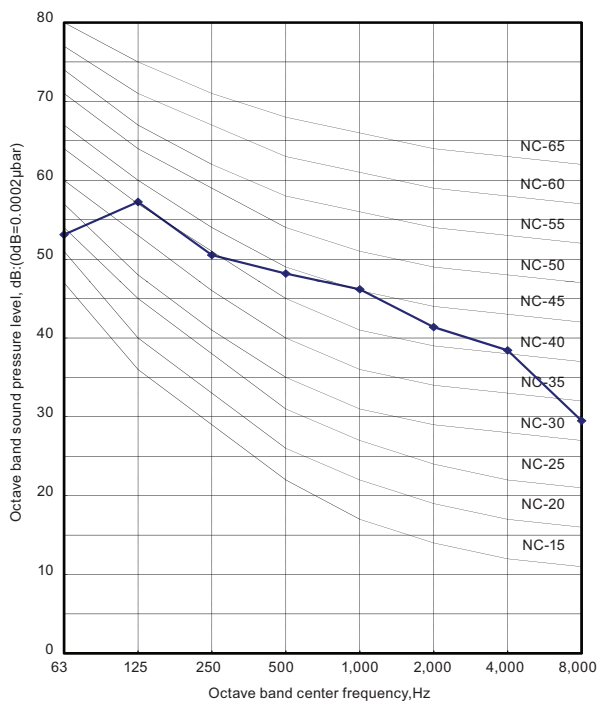


● Heating

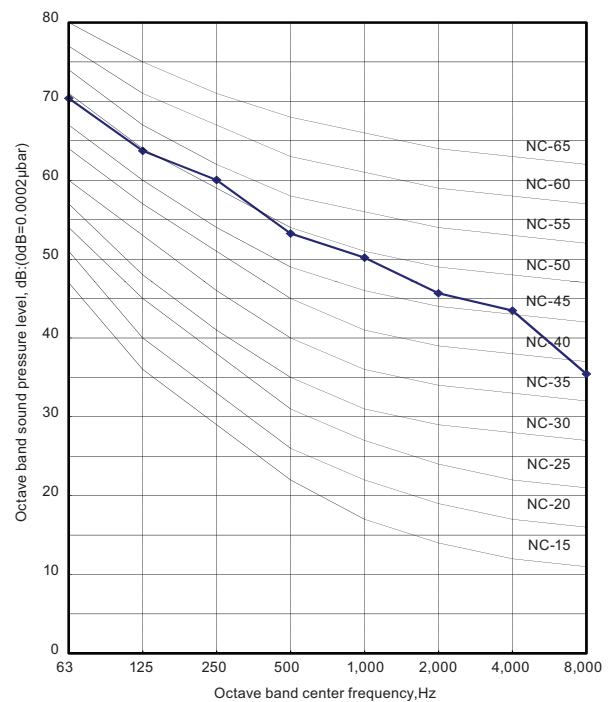


Model: AOU12RLFFH

● Cooling

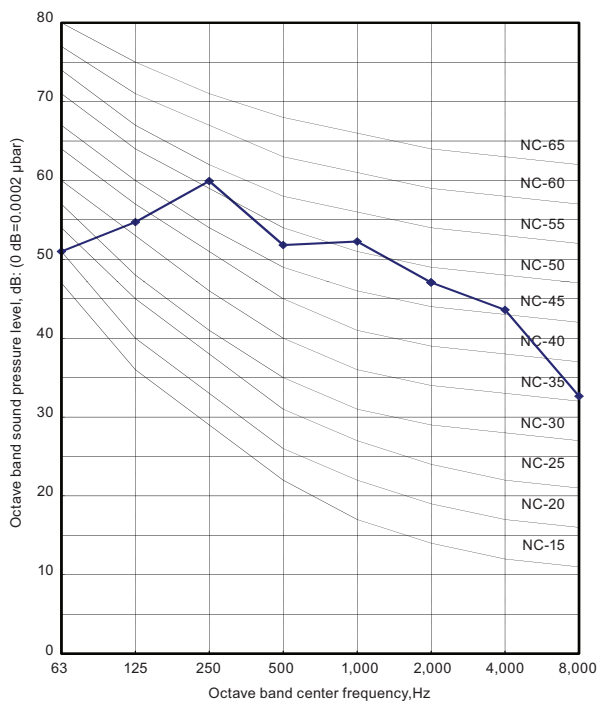


● Heating

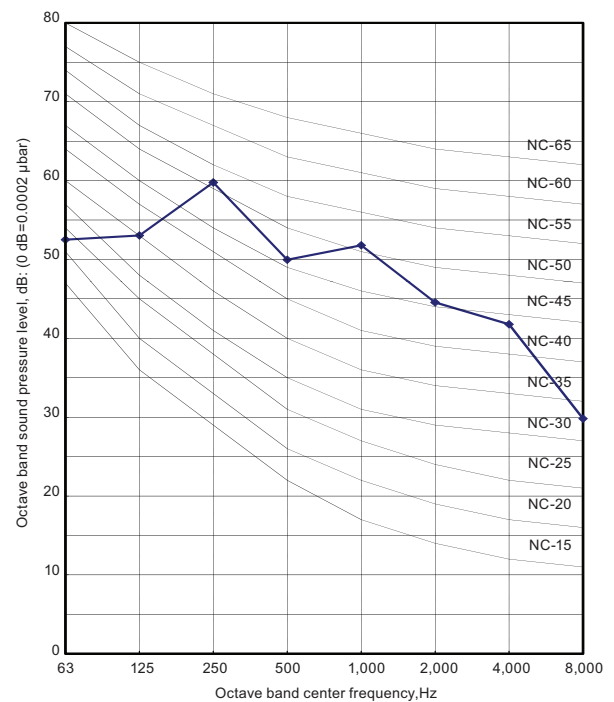


Model: AOU15RLFFH

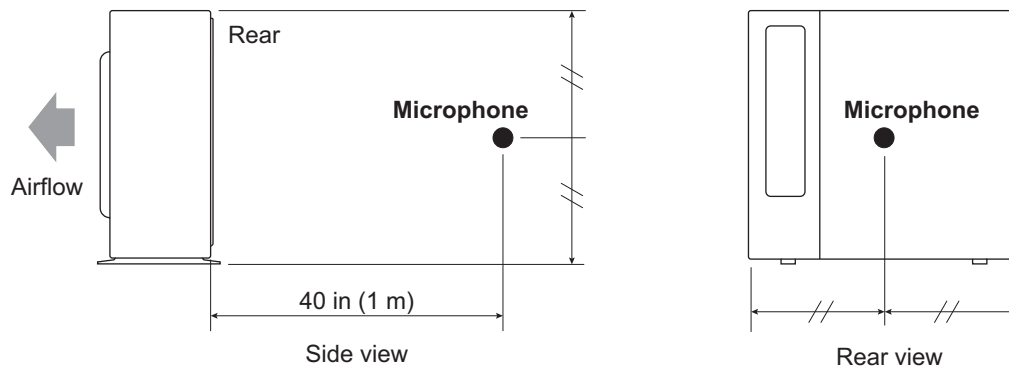
Cooling



Heating



9-2. Sound level check point



NOTE: Detailed shape of the actual outdoor unit might be slightly different from the one illustrated above.

10. Electrical characteristics

Model name			AOU9RLFFH	AOU12RLFFH	AOU15RLFFH
Power supply	Voltage	V	208/230~		
	Frequency	Hz	60		
MCA *1		A	11.8		14.8
Starting current		A	4.1	6.7	7.0
Wiring spec. *2	MAX. CKT. BKR *3		A	15	20
	Power cable		AWG	14	12
	Connection cable *4	Cross-sectional area	AWG	14	
		Limited wiring length	ft (m)	69 (21)	

*1: Minimum Circuit Ampacity (Calculation based on UL1995)

*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

*3: Maximum Circuit Breaker


*4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

11. Safety devices

Type of protection	Protection form		Model		
			AOU9RLFFH	AOU12RLFFH	AOU15RLFFH
Circuit protection	Current fuse (Near the terminal)		250 V, 20 A		250 V, 25 A
			250 V, 5 A		250 V, 25 A
	Current fuse (PCB*)		250 V, 15 A		250 V, 10 A
			250 V, 3.15 A		250 V, 3.15 A
Fan motor protection	Thermal protection program	Activate	212±27 °F (100±15 °C) Fan motor stop		
		Reset	203±18 °F (95±10 °C) Fan motor restart		
Compressor protection	Thermal protection program (Discharge temp.)	Activate	230 °F (110 °C) Compressor stop		
		Reset	After 7 minutes Compressor restart		

*PCB: Printed Circuit Board

12. Accessories

Part name	Exterior	Qty	Part name	Exterior	Qty
Installation manual		1			

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