

AIRSTAGE

AIR CONDITIONER

Floor type

FUJITSU

REFRIGERANT **R32**
INVERTER

DESIGN & TECHNICAL MANUAL

INDOOR



AGUH09KUAS
AGUH12KUAS
AGUH15KUAS

OUTDOOR



AOUH09KUBS1



AOUH12KUBS1

GENERAL Inc.

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- 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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CONTENTS

Part 1. INDOOR UNIT	1
1. Specifications	2
2. Wireless LAN control	4
2-1. System requirement	4
3. Dimensions	5
3-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS	5
4. Wiring diagrams	8
4-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS	8
5. Capacity table	9
5-1. Cooling capacity	9
5-2. Heating capacity	12
6. Fan performance	14
6-1. Air velocity distributions	14
6-2. Airflow	15
7. Operation noise (sound pressure)	18
7-1. Noise level curve	18
7-2. Sound level check point	19
8. Safety devices	20
9. External input and output	21
9-1. External input	22
9-2. External output	23
9-3. Combination of external input and output	24
9-4. Details of control input function	25
9-5. Details of control output function	29
10. Group connection	50
11. Function settings	51
11-1. Function settings by using remote controller	51
12. Accessories	61
12-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS	61
13. Optional parts	62
13-1. Controllers	62
13-2. Others	63

CONTENTS (continued)

Part 2. OUTDOOR UNIT65

1. Specifications	66
1-1. Model: AOUH09KUBS1	66
1-2. Model: AOUH12KUBS1	67
2. Dimensions	68
2-1. Model: AOUH09KUBS1	68
2-2. Model: AOUH12KUBS1	69
3. Installation space	70
3-1. Models: AOUH09KUBS1 and AOUH12KUBS1	70
4. Refrigerant circuit	73
4-1. Model: AOUH09KUBS1	73
4-2. Model: AOUH12KUBS1	74
5. Wiring diagrams	75
5-1. Model: AOUH09KUBS1	75
5-2. Model: AOUH12KUBS1	75
6. Capacity compensation rate for pipe length and height difference.....	76
6-1. Model: AOUH09KUBS1	76
6-2. Model: AOUH12KUBS1	77
7. Additional charge calculation	78
7-1. Model: AOUH09KUBS1	78
7-2. Model: AOUH12KUBS1	78
8. Airflow	79
8-1. Model: AOUH09KUBS1	79
8-2. Model: AOUH12KUBS1 (combination with AGUH12KUAS)	79
8-3. Model: AOUH12KUBS1 (combination with AGUH15KUAS)	79
9. Operation noise (sound pressure).....	80
9-1. Noise level curve.....	80
9-2. Sound level check point	81
10. Electrical characteristics	82
11. Safety devices	83
12. Accessories	84
12-1.Models: AOUH09KUBS1 and AOUH12KUBS1	84

Part 1. INDOOR UNIT

FLOOR TYPE:

AGUH09KUAS

AGUH12KUAS

AGUH15KUAS

1. Specifications

Type				Floor				
				Inverter, Heat pump				
Model name				AGUH09KUAS	AGUH12KUAS	AGUH15KUAS		
Power supply intake				Outdoor unit				
System power supply		Voltage		208/230				
		Frequency		60				
		Available voltage range		187—253				
Indoor unit power supply (from outdoor unit)				208/230				
Capacity	Cooling		Rated	kW	2.64	3.52	4.16	
				Btu/h	9,000	12,000	14,200	
			Min.—Max.	kW	0.91—3.80	0.91—4.20	0.91—5.19	
	Heating	47°FDB (Outdoor temp.)	Rated	Btu/h	3,100—13,000	3,100—14,300	3,100—17,700	
				kW	3.52	4.69	5.28	
			Min.—Max.	Btu/h	12,000	16,000	18,000	
				kW	0.91—4.69	0.91—5.28	0.91—5.57	
			17°FDB (Outdoor temp.) ^{*1}	Rated	Btu/h	3,100—16,000	3,100—18,000	3,100—19,000
					kW	2.26	3.08	3.46
		Max.		Btu/h	7,700	10,500	11,800	
				kW	3.17	4.81	4.99	
		5°FDB (Outdoor temp.) ^{*2}		Rated	Btu/h	10,800	16,400	17,000
					kW	2.96	4.54	4.63
			Max.	Btu/h	10,100	15,500	15,800	
				kW	2.96	4.54	4.63	
		Btu/h	10,100	15,500	15,800			
Input power	Cooling		Rated	kW	0.59	0.89	1.13	
			Max.		1.15	1.25	1.80	
	Heating	47°FDB (Outdoor temp.)	Rated		0.90	1.38	1.55	
			Max.		1.75	1.63	1.69	
		17°FDB (Outdoor temp.) ^{*1}	Rated		0.80	1.10	1.25	
			Max.		1.60	2.30	2.20	
		5°FDB (Outdoor temp.) ^{*2}	Rated		1.525	2.340	2.290	
			Max.		1.525	2.340	2.290	
	Fan		HIGH		W	21		27
			MED			16		18
			LOW			12		13
			QUIET			10		
Current		Cooling Heating	Rated	A	3.1	4.0	5.1	
					4.4	6.1	6.8	
EER2		Cooling		Btu/hW	15.25	13.50	12.55	
COP2		Heating		kW/kW	3.92	3.40		
SEER2		Cooling		Btu/hW	26	25	24	
HSPF2		Heating			11.3	11.2	10.95	
Power factor		Cooling		%	82.7	96.7	96.3	
		Heating			88.9	98.4	99.1	
Moisture removal				pints/h (L/h)	3.6 (1.7)	4.6 (2.2)	5.7 (2.7)	
Maximum operating current ^{*3}		Cooling		A	6.4	10.2		
		Heating			8.9	11.7		
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)			
		Heating	HIGH		353 (600)		383 (650)	
			MED		283 (480)		306 (520)	
			LOW		218 (370)		230 (390)	
			QUIET		159 (270)			
	Type × Qty		Crossflow fan × 2					
	Motor output		W		16 × 2			
Sound pressure level ^{*4}		Cooling	HIGH	dB (A)	41		45	
			MED		36		39	
			LOW		30		32	
			QUIET		22			
		Heating	HIGH		41		44	
			MED		36		38	
			LOW		30			
			QUIET		22			
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			
					Approximate color of Munsell 9PB 9.1/0.2			
Dimensions (H × W × D)	Net		in (mm)	23-5/8 × 29-1/8 × 7-7/8 (600 × 740 × 200)				
Gross	27-9/16 × 32-5/16 × 12-3/16 (700 × 820 × 310)							
Weight	Net		lb (kg)	31 (14.0)				
	Gross			39 (17.5)				
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)				
		Gas		Ø3/8 (Ø9.52)				
Method				Flare				
Material				Polypropylene + Linear low-density polyethylene				
Drain hose	Tip diameter		in (mm)	I.D.: Ø17/32 (Ø13.8)				
				O.D.: Ø5/8 to Ø21/32 (Ø15.8 to Ø16.7)				
Operation range		Cooling	°F (°C)	64 to 90 (18 to 32)				
			%RH	80 or less				
		Heating	°F (°C)	60 to 86 (16 to 30)				
Remote controller type (Option)				Wireless, Wired, Mobile app ^{*5} (AIRSTAGE Mobile)				

Type	Floor		
	Inverter, Heat pump		
Model name	AGUH09KUAS	AGUH12KUAS	AGUH15KUAS
NOTES: - Specifications are based on the following conditions: - Cooling: Indoor temperature of 80°FDB/67°F WB (26.67°CDB/19.44°CWB), and outdoor temperature of 95°FDB/75°F WB (35°CDB/23.9°CWB). - Heating: Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 47°FDB/43°F WB (8.33°CDB/6.11°CWB). *1: Heating (17°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 17°FDB/15°F WB (-8.33°CDB/-9.44°CWB). *2: Heating (5°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 5°FDB/4°F WB (-15.0°CDB/-15.56°CWB). - Test conditions are based on AHRI 210/240 2023. - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.) - Protective function might work when using it outside the operation range. *3: Maximum current: - The maximum value when operated within the operation range. - The total current of indoor unit and outdoor unit. *4: Sound pressure level: - 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. *5: Available on Google Play™ store or on App Store®.			

2. Wireless LAN control

By installing mobile app on a smart device, several functions can be controlled from outside the house.

2-1. System requirement

Before using this function, prepare the following items:

- **Wireless router:**

Wireless LAN standard	IEEE802.11b/g/n
Frequency bands*	• U.S.A., Canada: 2.4 GHz (1ch—11ch) • Other countries: 2.4 GHz (1ch—13ch)
Network security standard	• Open • WEP • WPA (PSK) • WPA2 Personal (PSK) • WPS for same-LAN registration

*: Usable only in the country or region where you purchased the product.

To check whether your wireless router complies with the network security standards listed above, refer to the operation manual.

- **Smartphone:**

App-compliant operating system	iOS	Check the latest version of supported OS at Google Play store or App Store.
	Android™	

- **AIRSTAGE Mobile (mobile application):**

Mobile app is available on Google Play store or on App Store.

After installation of mobile app, user registration is required. For user registration and setup information, refer to Setting Manual attached with the product.

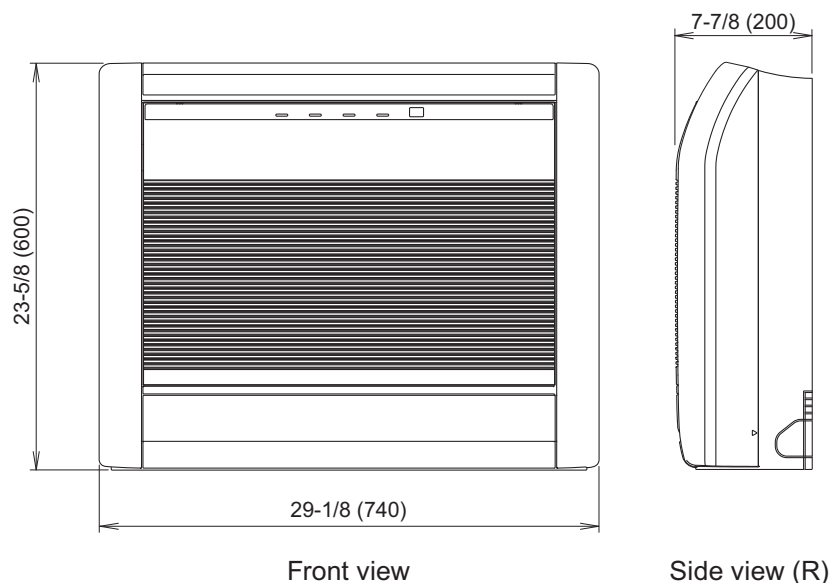
For the latest version of the wireless LAN control manuals, refer to the following web site.

<https://www.generalww.com/global/support/>

3. Dimensions

3-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS

Unit: in (mm)



■ Installation space

⚠ WARNING

- Minimum room area is corrected by multiplying by an altitude adjustment factor (AF) based on for building site ground level altitude (H_{alt}) in meters.

H_{alt}	0	200	400	600	800	1,000	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
AF	1.00	1.00	1.00	1.00	1.02	1.05	1.07	1.10	1.12	1.15	1.18	1.21	1.25	1.28	1.32	1.36	1.40

- The appliance shall not be installed in an unventilated space, if that space is smaller than minimum installation area.
- Risk of fire:** This unit is equipped with a refrigerant leak detection system for safety and with electrically powered safety measures. To be effective, the unit must be electrically powered at all times after installation, other than when servicing.
- If the ducted air conditioner is used to condition more than one room, then the minimum installation area on table below shall apply to the smallest room.
- Regarding the installation area for safety measures, if the desired minimum ceiling height is less than 7.2 ft (2.2 m), the minimum installation area must be recalculated accordingly.
- When the safety measure is enabled, the safety-measure-compatible installation area will be applied.

- For details on the safety measure settings, refer to ["Contents of function setting"](#) on page 51. The following tables show the minimum floor area required for the installation in ceiling height of 7.2 ft (2.2 m) or higher.

Without safety measures (UL 60335-2-40)

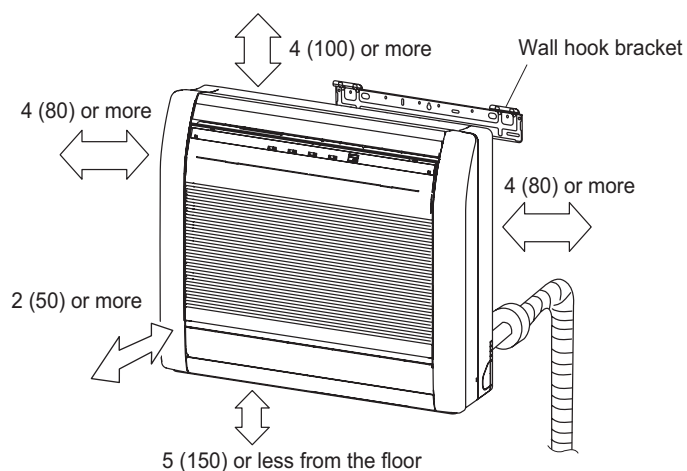
Amount of refrigerant charge: M [lb (kg)]	Minimum room area [ft ² (m ²)]
M ≤ 4.05 (1.836)	—
4.05 (1.836) < M ≤ 4.19 (1.90)	222.79 (20.70)
4.19 (1.90) < M ≤ 4.41 (2.00)	234.51 (21.79)
4.41 (2.00) < M ≤ 4.63 (2.10)	246.24 (22.88)
4.63 (2.10) < M ≤ 4.85 (2.20)	257.97 (23.97)
4.85 (2.20) < M ≤ 5.07 (2.30)	269.69 (25.06)
5.07 (2.30) < M ≤ 5.29 (2.40)	281.42 (26.15)
5.29 (2.40) < M ≤ 5.51 (2.50)	293.14 (27.24)
5.51 (2.50) < M ≤ 5.73 (2.60)	304.87 (28.33)
5.73 (2.60) < M ≤ 5.95 (2.70)	316.59 (29.42)
5.95 (2.70) < M ≤ 6.17 (2.80)	328.32 (30.51)
6.17 (2.80) < M ≤ 6.39 (2.90)	340.04 (31.60)
6.39 (2.90) < M ≤ 6.61 (3.00)	351.77 (32.68)
6.61 (3.00) < M ≤ 6.83 (3.10)	363.50 (33.77)
6.83 (3.10) < M ≤ 7.05 (3.20)	375.22 (34.86)
7.05 (3.20) < M ≤ 7.28 (3.30)	386.95 (35.95)
7.28 (3.30) < M ≤ 7.50 (3.40)	398.67 (37.04)
7.50 (3.40) < M ≤ 7.72 (3.50)	410.40 (38.13)
7.72 (3.50) < M ≤ 7.94 (3.60)	422.12 (39.22)
7.94 (3.60) < M ≤ 8.16 (3.70)	433.85 (40.31)
8.16 (3.70) < M ≤ 8.38 (3.80)	445.57 (41.40)
8.38 (3.80) < M ≤ 8.60 (3.90)	457.30 (42.49)
8.60 (3.90) < M ≤ 8.82 (4.00)	469.02 (43.58)

With safety measures (UL 60335-2-40)

Amount of refrigerant charge: M [lb (kg)]	Minimum room area [ft ² (m ²)]
M ≤ 4.05 (1.836)	—
4.05 (1.836) < M ≤ 4.19 (1.90)	60.76 (5.65)
4.19 (1.90) < M ≤ 4.41 (2.00)	63.96 (5.95)
4.41 (2.00) < M ≤ 4.63 (2.10)	67.16 (6.24)
4.63 (2.10) < M ≤ 4.85 (2.20)	70.36 (6.54)
4.85 (2.20) < M ≤ 5.07 (2.30)	73.56 (6.84)
5.07 (2.30) < M ≤ 5.29 (2.40)	76.75 (7.14)
5.29 (2.40) < M ≤ 5.51 (2.50)	79.95 (7.43)
5.51 (2.50) < M ≤ 5.73 (2.60)	83.15 (7.73)
5.73 (2.60) < M ≤ 5.95 (2.70)	86.35 (8.03)
5.95 (2.70) < M ≤ 6.17 (2.80)	89.55 (8.32)
6.17 (2.80) < M ≤ 6.39 (2.90)	92.74 (8.62)
6.39 (2.90) < M ≤ 6.61 (3.00)	95.94 (8.92)
6.61 (3.00) < M ≤ 6.83 (3.10)	99.14 (9.21)
6.83 (3.10) < M ≤ 7.05 (3.20)	102.34 (9.51)
7.05 (3.20) < M ≤ 7.28 (3.30)	105.53 (9.81)
7.28 (3.30) < M ≤ 7.50 (3.40)	108.73 (10.11)
7.50 (3.40) < M ≤ 7.72 (3.50)	111.93 (10.40)
7.72 (3.50) < M ≤ 7.94 (3.60)	115.13 (10.70)
7.94 (3.60) < M ≤ 8.16 (3.70)	118.33 (11.00)
8.16 (3.70) < M ≤ 8.38 (3.80)	121.52 (11.29)
8.38 (3.80) < M ≤ 8.60 (3.90)	124.72 (11.59)
8.60 (3.90) < M ≤ 8.82 (4.00)	127.92 (11.89)

Keep the distance between the wall hook bracket or indoor unit and the surrounding walls as indicated in the following figure.

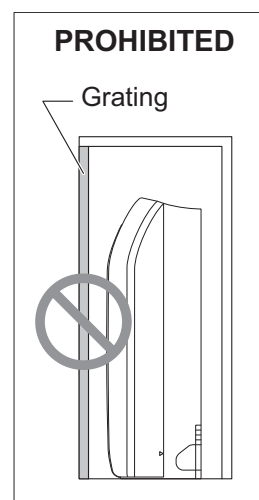
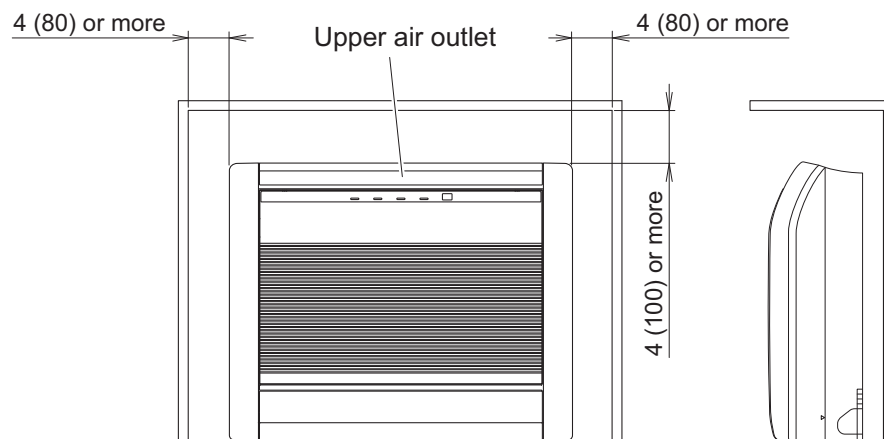
Unit: in (mm)



Notice in a wall-concealed installation:

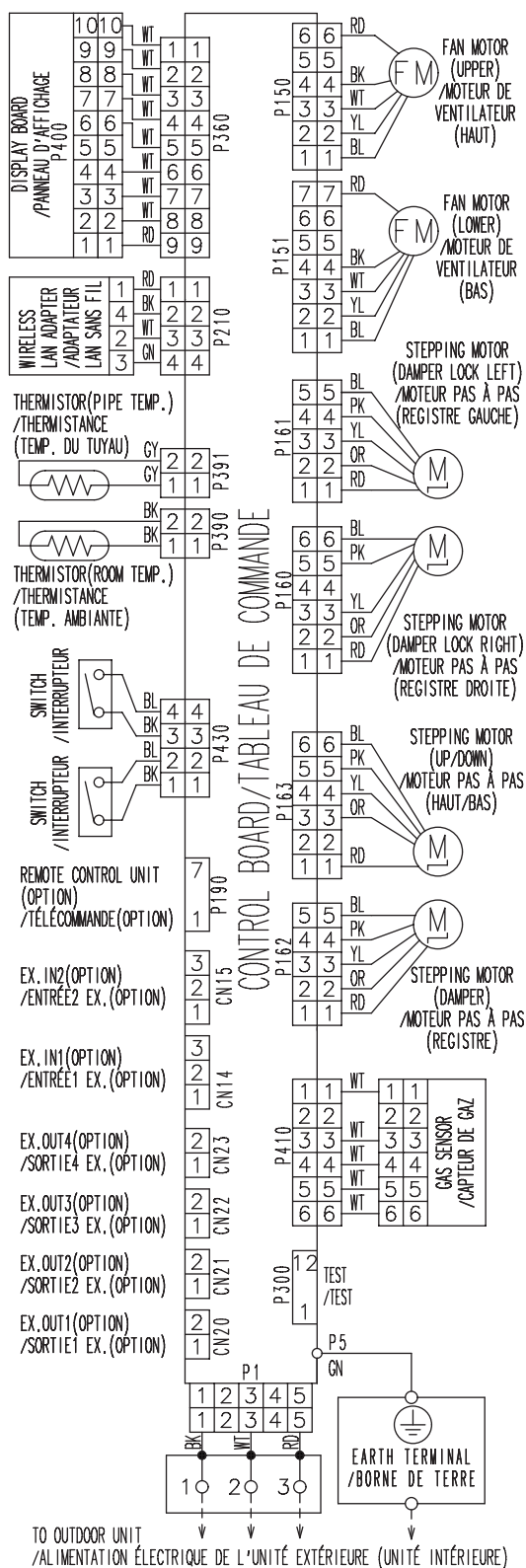
In a wall-concealed installation, change the function setting number 23 to “Fixed” (02) to restrict the movement of the upper air outlet so that the airflow is only towards the horizontal direction.

If the discharged air accumulates in the concealed space, the room will not be properly heated or cooled. Therefore, be sure to change this setting.



4. Wiring diagrams

4-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS



COLOR	English/French	OR	ORANGE/ORANGE	BL	BLUE/BLEU
BK	BLACK/NOIR	YL	YELLOW/JAUNE	PK	PINK/ROSE
WT	WHITE/BLANC	GN	GREEN/VERT	GY	GRAY/GRIS
RD	RED/ROUGE				

5. 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)

5-1. Cooling capacity

■ Model: AGUH09KUAS

AFR			CFM						336											
			Indoor temperature																	
			64			70			75			80			85			90		
			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	
		kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW	
	-5	7.79	7.05	0.36	8.67	7.13	0.36	8.98	7.74	0.36	9.86	8.38	0.36	10.47	8.34	0.37	11.03	8.90	0.37	
	5	7.72	6.99	0.35	8.59	7.07	0.37	8.90	7.67	0.37	9.77	8.31	0.37	10.37	8.27	0.37	10.93	8.83	0.38	
	14	7.67	6.94	0.37	8.54	7.01	0.37	8.85	7.61	0.37	9.71	8.24	0.37	10.31	8.20	0.39	10.87	8.76	0.39	
	32	7.54	6.82	0.37	8.43	6.87	0.38	8.70	7.47	0.38	9.56	8.08	0.38	10.13	8.04	0.38	10.71	8.56	0.40	
	41	7.47	6.43	0.38	8.33	6.47	0.39	8.60	7.04	0.39	9.45	7.60	0.39	10.03	7.60	0.39	10.58	8.08	0.41	
	50	7.34	6.04	0.39	8.16	6.08	0.39	8.46	6.60	0.39	9.28	7.17	0.40	9.83	7.13	0.40	10.41	7.60	0.40	
	59	7.17	5.82	0.40	7.98	5.87	0.40	8.26	6.39	0.40	9.06	6.91	0.41	9.62	6.87	0.41	10.17	7.34	0.41	
	67	7.37	6.47	0.40	8.22	6.51	0.41	8.52	7.08	0.41	9.34	7.65	0.42	9.90	7.61	0.42	10.46	8.15	0.43	
	77	7.54	6.56	0.46	8.39	6.60	0.46	8.67	7.17	0.46	9.52	7.78	0.47	10.10	7.73	0.47	10.67	8.26	0.48	
	87	7.57	6.43	0.52	8.46	6.47	0.53	8.74	7.04	0.54	9.60	7.65	0.55	10.17	7.60	0.55	10.75	8.08	0.55	
	95	7.10	6.17	0.57	7.92	6.17	0.58	8.19	6.74	0.58	9.00	7.30	0.59	9.55	7.26	0.60	10.10	7.73	0.60	
	104	6.04	5.23	0.61	6.72	5.27	0.62	6.96	5.73	0.63	7.65	6.20	0.64	8.12	6.16	0.64	8.56	6.59	0.65	
	115	5.56	4.83	0.50	6.18	4.86	0.50	6.41	5.27	0.50	7.03	5.71	0.51	7.44	5.68	0.52	7.88	6.06	0.52	
122	5.25	4.55	0.50	5.83	4.58	0.50	6.06	4.96	0.50	6.64	5.37	0.51	7.02	5.34	0.52	7.44	5.70	0.52		

AFR			m³/h						570													
			Indoor temperature																			
		°CDB			17.0			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			
		kW			kW			kW			kW			kW			kW					
	-20.6	2.28	2.07	0.36	2.54	2.09	0.36	2.63	2.27	0.36	2.89	2.46	0.36	3.07	2.44	0.37	3.23	2.61	0.37			
	-15.0	2.26	2.05	0.35	2.52	2.07	0.37	2.61	2.25	0.37	2.86	2.43	0.37	3.04	2.42	0.37	3.20	2.59	0.38			
	-10.0	2.25	2.03	0.37	2.50	2.06	0.37	2.59	2.23	0.37	2.85	2.42	0.37	3.02	2.40	0.39	3.18	2.57	0.39			
	0.0	2.21	2.00	0.37	2.47	2.01	0.38	2.55	2.19	0.38	2.80	2.37	0.38	2.97	2.36	0.38	3.14	2.51	0.40			
	5.0	2.19	1.88	0.38	2.44	1.90	0.39	2.52	2.06	0.39	2.77	2.23	0.39	2.94	2.23	0.39	3.10	2.37	0.41			
	10.0	2.15	1.77	0.39	2.39	1.78	0.39	2.48	1.94	0.39	2.72	2.10	0.40	2.88	2.09	0.40	3.05	2.23	0.40			
	15.0	2.10	1.71	0.40	2.34	1.72	0.40	2.42	1.87	0.40	2.66	2.02	0.41	2.82	2.01	0.41	2.98	2.15	0.41			
	19.4	2.16	1.90	0.40	2.41	1.91	0.41	2.50	2.08	0.41	2.74	2.24	0.42	2.90	2.23	0.42	3.06	2.39	0.43			
	25.0	2.21	1.92	0.46	2.46	1.94	0.46	2.54	2.10	0.46	2.79	2.28	0.47	2.96	2.27	0.47	3.13	2.42	0.48			
	30.0	2.22	1.88	0.52	2.48	1.90	0.53	2.56	2.06	0.54	2.81	2.24	0.55	2.98	2.23	0.55	3.15	2.37	0.55			
35.0	2.08	1.81	0.57	2.32	1.81	0.58	2.40	1.97	0.58	2.64	2.14	0.59	2.80	2.13	0.60	2.96	2.27	0.60				
40.0	1.77	1.53	0.61	1.97	1.54	0.62	2.04	1.68	0.63	2.24	1.82	0.64	2.38	1.81	0.64	2.51	1.93	0.65				
46.1	1.63	1.42	0.50	1.81	1.43	0.50	1.88	1.54	0.50	2.06	1.67	0.51	2.18	1.66	0.52	2.31	1.77	0.52				
50.0	1.54	1.33	0.50	1.71	1.34	0.50	1.77	1.45	0.50	1.94	1.58	0.51	2.06	1.57	0.52	2.18	1.67	0.52				

Model: AGUH12KUAS

AFR			CFM						336														
			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			
			kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW	kBtu		kW			
	-5		10.54	7.82	0.38	11.72	7.85	0.38	12.14	8.55	0.38	13.32	9.27	0.39	14.19	9.29	0.39	14.92	9.82	0.39			
	5		10.45	7.76	0.39	11.62	7.79	0.39	12.04	8.47	0.40	13.20	9.19	0.40	14.06	9.21	0.41	14.79	9.73	0.41			
	14		10.37	7.70	0.40	11.53	7.73	0.40	11.94	8.41	0.40	13.11	9.12	0.41	13.96	9.14	0.41	14.67	9.66	0.41			
	32		10.20	7.55	0.42	11.36	7.61	0.42	11.74	8.26	0.43	12.91	8.94	0.43	13.68	8.91	0.44	14.47	9.48	0.44			
	41		10.13	7.49	0.43	11.26	7.55	0.43	11.67	8.20	0.44	12.81	8.88	0.44	13.58	8.85	0.45	14.37	9.42	0.45			
	50		10.03	7.43	0.44	11.19	7.49	0.44	11.57	8.14	0.45	12.71	8.80	0.45	13.48	8.77	0.46	14.23	9.36	0.46			
	59		9.96	7.40	0.45	11.09	7.43	0.46	11.46	8.08	0.46	12.61	8.77	0.46	13.38	8.71	0.47	14.13	9.27	0.47			
	67		10.62	7.61	0.58	11.84	7.64	0.58	12.23	8.32	0.59	13.45	9.02	0.60	14.27	8.97	0.60	15.07	9.57	0.61			
	77		10.68	7.90	0.67	11.91	7.96	0.69	12.32	8.65	0.69	13.53	9.39	0.70	14.33	9.33	0.71	15.15	9.95	0.72			
	87		10.10	7.49	0.77	11.26	7.52	0.78	11.64	8.17	0.78	12.78	8.85	0.79	13.55	8.83	0.80	14.33	9.39	0.81			
	95		9.49	7.01	0.86	10.58	7.07	0.87	10.92	7.70	0.88	12.00	8.32	0.89	12.73	8.29	0.90	13.31	8.74	0.91			
	104		8.02	6.27	0.94	8.91	6.30	0.95	9.21	6.86	0.97	10.13	7.43	0.98	10.75	7.40	0.99	11.36	7.87	1.00			
	115		7.37	5.82	0.74	8.22	5.85	0.74	8.50	6.36	0.75	9.34	6.89	0.76	9.90	6.86	0.77	10.48	7.31	0.78			
122		6.97	5.51	0.74	7.78	5.54	0.74	8.04	6.02	0.75	8.85	6.52	0.76	9.36	6.50	0.77	9.91	6.92	0.78				

AFR			m³/h						570											
			Indoor temperature																	
			17.0			21.1			23.9			26.7			29.4			32.2		
			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
			kW			kW			kW			kW			kW			kW		
	-20.6		3.09	2.29	0.38	3.44	2.30	0.38	3.56	2.51	0.38	3.90	2.72	0.39	4.16	2.72	0.39	4.37	2.88	0.39
	-15.0		3.06	2.27	0.39	3.41	2.28	0.39	3.53	2.48	0.40	3.87	2.69	0.40	4.12	2.70	0.41	4.33	2.85	0.41
	-10.0		3.04	2.26	0.40	3.38	2.26	0.40	3.50	2.46	0.40	3.84	2.67	0.41	4.09	2.68	0.41	4.30	2.83	0.41
	0.0		2.99	2.21	0.42	3.33	2.23	0.42	3.44	2.42	0.43	3.78	2.62	0.43	4.01	2.61	0.44	4.24	2.78	0.44
	5.0		2.97	2.19	0.43	3.30	2.21	0.43	3.42	2.40	0.44	3.75	2.60	0.44	3.98	2.60	0.45	4.21	2.76	0.45
	10.0		2.94	2.18	0.44	3.28	2.19	0.44	3.39	2.39	0.45	3.72	2.58	0.45	3.95	2.57	0.46	4.17	2.74	0.46
	15.0		2.92	2.17	0.45	3.25	2.18	0.46	3.36	2.37	0.46	3.70	2.57	0.46	3.92	2.55	0.47	4.14	2.72	0.47
	19.4		3.11	2.23	0.58	3.47	2.24	0.58	3.58	2.44	0.59	3.94	2.64	0.60	4.18	2.63	0.60	4.42	2.80	0.61
	25.0		3.13	2.32	0.67	3.49	2.33	0.69	3.61	2.53	0.69	3.97	2.75	0.70	4.20	2.73	0.71	4.44	2.92	0.72
	30.0		2.96	2.19	0.77	3.30	2.20	0.78	3.41	2.39	0.78	3.75	2.60	0.79	3.97	2.59	0.80	4.20	2.75	0.81
	35.0		2.78	2.06	0.86	3.10	2.07	0.87	3.20	2.26	0.88	3.52	2.44	0.89	3.73	2.43	0.90	3.90	2.56	0.91
	40.0		2.35	1.84	0.94	2.61	1.85	0.95	2.70	2.01	0.97	2.97	2.18	0.98	3.15	2.17	0.99	3.33	2.31	1.00
	46.1		2.16	1.71	0.74	2.41	1.72	0.74	2.49	1.86	0.75	2.74	2.02	0.76	2.90	2.01	0.77	3.07	2.14	0.78
50.0		2.04	1.62	0.74	2.28	1.62	0.74	2.36	1.76	0.75	2.59	1.91	0.76	2.74	1.90	0.77	2.91	2.03	0.78	

Model: AGUH15KUAS

AFR			CFM									383								
°FDB			Indoor temperature																	
			64			70			75			80			85			90		
			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	
		kBtu		kW		kBtu		kW		kBtu		kW		kBtu		kW		kBtu		kW
	-5	12.48	9.25	0.48	13.87	9.29	0.48	14.37	10.11	0.48	15.76	10.97	0.50	16.79	10.99	0.50	17.65	11.61	0.50	
	5	12.37	9.17	0.50	13.75	9.21	0.50	14.24	10.02	0.51	15.62	10.87	0.51	16.64	10.89	0.52	17.50	11.51	0.52	
	14	12.27	9.10	0.51	13.65	9.14	0.51	14.13	9.95	0.51	15.51	10.79	0.53	16.51	10.81	0.53	17.36	11.42	0.53	
	32	12.07	8.93	0.53	13.45	9.00	0.53	13.89	9.77	0.54	15.28	10.58	0.54	16.19	10.54	0.55	17.12	11.21	0.55	
	41	11.99	8.86	0.54	13.32	8.93	0.54	13.81	9.70	0.56	15.16	10.51	0.56	16.07	10.47	0.57	17.00	11.14	0.57	
	50	11.87	8.79	0.56	13.24	8.86	0.56	13.69	9.63	0.57	15.04	10.40	0.57	15.95	10.37	0.58	16.84	11.07	0.58	
	59	11.79	8.75	0.58	13.12	8.79	0.59	13.57	9.56	0.59	14.92	10.37	0.59	15.83	10.30	0.60	16.72	10.96	0.60	
	67	12.56	9.01	0.73	14.02	9.04	0.74	14.47	9.84	0.75	15.92	10.67	0.76	16.88	10.61	0.76	17.84	11.31	0.78	
	77	12.64	9.35	0.86	14.09	9.42	0.88	14.58	10.23	0.88	16.01	11.11	0.89	16.96	11.03	0.90	17.93	11.77	0.91	
	87	11.95	8.86	0.98	13.32	8.89	0.99	13.77	9.66	0.99	15.12	10.47	1.00	16.03	10.44	1.02	16.96	11.11	1.03	
	95	11.22	8.29	1.09	12.52	8.36	1.11	12.92	9.10	1.12	14.20	9.84	1.13	15.06	9.80	1.14	15.75	10.33	1.15	
	104	9.49	7.42	1.20	10.54	7.45	1.21	10.90	8.12	1.23	11.99	8.79	1.24	12.72	8.75	1.26	13.45	9.31	1.27	
	115	8.72	6.89	0.93	9.73	6.92	0.95	10.05	7.52	0.96	11.05	8.15	0.97	11.71	8.12	0.98	12.40	8.65	0.99	
122	8.25	6.52	0.93	9.21	6.55	0.95	9.51	7.12	0.96	10.47	7.72	0.97	11.08	7.68	0.98	11.73	8.18	0.99		

AFR			m³/h									650								
			Indoor temperature																	
			°CDB			21.1			23.9			26.7			29.4			32.2		
			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	
		kW			kW			kW			kW			kW			kW			
	-20.6	3.66	2.71	0.48	4.07	2.72	0.48	4.21	2.96	0.48	4.62	3.21	0.50	4.92	3.22	0.50	5.17	3.40	0.50	
	-15.0	3.63	2.69	0.50	4.03	2.70	0.50	4.17	2.94	0.51	4.58	3.19	0.51	4.88	3.19	0.52	5.13	3.37	0.52	
	-10.0	3.60	2.67	0.51	4.00	2.68	0.51	4.14	2.91	0.51	4.55	3.16	0.53	4.84	3.17	0.53	5.09	3.35	0.53	
	0.0	3.54	2.62	0.53	3.94	2.64	0.53	4.07	2.86	0.54	4.48	3.10	0.54	4.75	3.09	0.55	5.02	3.29	0.55	
	5.0	3.51	2.60	0.54	3.90	2.62	0.54	4.05	2.84	0.56	4.44	3.08	0.56	4.71	3.07	0.57	4.98	3.26	0.57	
	10.0	3.48	2.57	0.56	3.88	2.60	0.56	4.01	2.82	0.57	4.41	3.05	0.57	4.67	3.04	0.58	4.93	3.24	0.58	
	15.0	3.46	2.56	0.58	3.85	2.57	0.59	3.98	2.80	0.59	4.37	3.04	0.59	4.64	3.02	0.60	4.90	3.21	0.60	
	19.4	3.68	2.64	0.73	4.11	2.65	0.74	4.24	2.88	0.75	4.66	3.13	0.76	4.95	3.11	0.76	5.23	3.32	0.78	
	25.0	3.70	2.74	0.86	4.13	2.76	0.88	4.27	3.00	0.88	4.69	3.25	0.89	4.97	3.23	0.90	5.25	3.45	0.91	
	30.0	3.50	2.60	0.98	3.90	2.61	0.99	4.04	2.83	0.99	4.43	3.07	1.00	4.70	3.06	1.02	4.97	3.25	1.03	
	35.0	3.29	2.43	1.09	3.67	2.45	1.11	3.79	2.67	1.12	4.16	2.88	1.13	4.41	2.87	1.14	4.61	3.03	1.15	
40.0	2.78	2.17	1.20	3.09	2.18	1.21	3.19	2.38	1.23	3.51	2.57	1.24	3.73	2.56	1.26	3.94	2.73	1.27		
46.1	2.56	2.02	0.93	2.85	2.03	0.95	2.95	2.20	0.96	3.24	2.39	0.97	3.43	2.38	0.98	3.63	2.53	0.99		
50.0	2.42	1.91	0.93	2.70	1.92	0.95	2.79	2.09	0.96	3.07	2.26	0.97	3.25	2.25	0.98	3.44	2.40	0.99		

5-2. Heating capacity

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

■ Model: AGUH09KUAS

AFR			CFM				353					
Indoor temperature												
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
	-5	-7	9.47	1.34	9.21	1.37	9.00	1.39	8.79	1.42	8.57	1.45
	5	3	10.58	1.47	10.34	1.49	10.10	1.53	9.70	1.55	9.59	1.58
	14	12	11.25	1.48	11.00	1.50	10.70	1.54	10.37	1.56	10.19	1.59
	17	15	11.50	1.49	11.22	1.52	10.98	1.56	10.69	1.59	10.43	1.62
	23	19	12.08	1.52	11.77	1.55	11.51	1.59	11.22	1.62	10.94	1.65
	32	28	13.71	1.57	13.38	1.60	13.05	1.64	12.72	1.67	12.41	1.70
	41	37	15.18	1.63	14.82	1.67	14.45	1.70	14.09	1.74	13.74	1.78
47	43	16.79	1.68	16.41	1.72	16.00	1.75	15.60	1.78	15.18	1.82	
50	47	17.30	1.59	16.88	1.63	16.50	1.66	16.09	1.69	15.66	1.72	
59	50	16.77	1.33	16.37	1.36	15.97	1.39	15.58	1.42	15.16	1.44	

AFR		m³/h						600					
Indoor temperature													
		°CDB	15.6		18.3		21.1		22.0		23.9		
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		kW		
	-20.6	-21.7	2.78	1.34	2.70	1.37	2.64	1.39	2.58	1.42	2.51	1.45	
	-15.0	-16.1	3.10	1.47	3.03	1.49	2.96	1.53	2.84	1.55	2.81	1.58	
	-10.0	-11.1	3.30	1.48	3.22	1.50	3.14	1.54	3.04	1.56	2.99	1.59	
	-8.3	-9.4	3.37	1.49	3.29	1.52	3.22	1.56	3.13	1.59	3.06	1.62	
	-5.0	-7.2	3.54	1.52	3.45	1.55	3.37	1.59	3.29	1.62	3.21	1.65	
	0.0	-2.2	4.02	1.57	3.92	1.60	3.82	1.64	3.73	1.67	3.64	1.70	
	5.0	2.8	4.45	1.63	4.34	1.67	4.23	1.70	4.13	1.74	4.03	1.78	
	8.3	6.1	4.92	1.68	4.81	1.72	4.69	1.75	4.57	1.78	4.45	1.82	
	10.0	8.3	5.07	1.59	4.95	1.63	4.84	1.66	4.72	1.69	4.59	1.72	
	15.0	10.0	4.92	1.33	4.80	1.36	4.68	1.39	4.56	1.42	4.44	1.44	

■ Model: AGUH12KUAS

AFR			CFM				353					
Indoor temperature												
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC kBtu	IP kW	TC kBtu	IP kW	TC kBtu	IP kW	TC kBtu	IP kW	TC kBtu	IP kW
	-5	-7	14.66	2.19	14.31	2.25	13.96	2.29	13.63	2.33	13.26	2.38
	5	3	16.25	2.25	15.89	2.30	15.50	2.34	14.87	2.38	14.70	2.43
	14	12	17.17	2.21	16.79	2.26	16.37	2.30	15.87	2.34	15.54	2.39
	17	15	17.54	2.12	17.13	2.17	16.66	2.21	16.27	2.26	15.88	2.30
	23	19	18.10	1.95	17.67	1.99	17.22	2.04	16.79	2.08	16.38	2.12
	32	28	18.29	1.80	17.87	1.84	17.42	1.88	16.99	1.92	16.55	1.96
	41	37	18.51	1.66	18.07	1.70	17.62	1.73	17.18	1.76	16.73	1.81
	47	43	18.90	1.57	18.45	1.59	18.00	1.63	17.55	1.66	17.10	1.69
	50	47	19.50	1.48	19.02	1.51	18.54	1.54	18.09	1.57	17.63	1.59
59	50	18.85	1.23	18.41	1.27	17.97	1.29	17.53	1.32	17.06	1.33	

AFR			m³/h				600					
Indoor temperature												
		°CDB	15.6		18.3		21.1		22.0		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-20.6	-21.7	4.30	2.19	4.19	2.25	4.09	2.29	3.99	2.33	3.89	2.38
	-15.0	-16.1	4.76	2.25	4.66	2.30	4.54	2.34	4.36	2.38	4.31	2.43
	-10.0	-11.1	5.03	2.21	4.92	2.26	4.80	2.30	4.65	2.34	4.55	2.39
	-8.3	-9.4	5.14	2.12	5.02	2.17	4.88	2.21	4.77	2.26	4.65	2.30
	-5.0	-7.2	5.30	1.95	5.18	1.99	5.05	2.04	4.92	2.08	4.80	2.12
	0.0	-2.2	5.36	1.80	5.24	1.84	5.10	1.88	4.98	1.92	4.85	1.96
	5.0	2.8	5.43	1.66	5.29	1.70	5.16	1.73	5.03	1.76	4.90	1.81
	8.3	6.1	5.54	1.57	5.41	1.59	5.28	1.63	5.14	1.66	5.01	1.69
10.0	8.3	5.71	1.48	5.57	1.51	5.43	1.54	5.30	1.57	5.17	1.59	
15.0	10.0	5.52	1.23	5.40	1.27	5.27	1.29	5.14	1.32	5.00	1.33	

Model: AGUH15KUAS

AFR			CFM				383					
Indoor temperature												
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
	-5	-7	14.94	2.15	14.59	2.20	14.23	2.24	13.89	2.28	13.52	2.33
	5	3	16.56	2.20	16.20	2.25	15.80	2.29	15.16	2.33	14.98	2.38
	14	12	17.74	2.08	17.35	2.12	16.92	2.16	16.39	2.20	16.05	2.24
	17	15	18.20	2.03	17.78	2.07	17.29	2.12	16.89	2.16	16.48	2.20
	23	19	18.92	1.95	18.47	1.99	18.01	2.03	17.55	2.07	17.13	2.12
	32	28	19.17	1.82	18.73	1.86	18.25	1.90	17.81	1.94	17.35	1.98
	41	37	19.45	1.71	18.98	1.75	18.51	1.77	18.05	1.81	17.57	1.85
47	43	19.95	1.62	19.48	1.65	19.00	1.69	18.53	1.72	18.05	1.76	
50	47	20.58	1.47	20.08	1.51	19.57	1.53	19.10	1.56	18.61	1.58	
59	50	20.57	1.28	20.09	1.31	19.60	1.34	19.13	1.37	18.61	1.38	

AFR		m³/h						650					
Indoor temperature													
		°CDB	15.6		18.3		21.1		22.0		23.9		
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		kW		
	-20.6	-21.7	4.38	2.15	4.28	2.20	4.17	2.24	4.07	2.28	3.96	2.33	
	-15.0	-16.1	4.85	2.20	4.75	2.25	4.63	2.29	4.44	2.33	4.39	2.38	
	-10.0	-11.1	5.20	2.08	5.08	2.12	4.96	2.16	4.80	2.20	4.70	2.24	
	-8.3	-9.4	5.33	2.03	5.21	2.07	5.07	2.12	4.95	2.16	4.83	2.20	
	-5.0	-7.2	5.54	1.95	5.41	1.99	5.28	2.03	5.14	2.07	5.02	2.12	
	0.0	-2.2	5.62	1.82	5.49	1.86	5.35	1.90	5.22	1.94	5.08	1.98	
	5.0	2.8	5.70	1.71	5.56	1.75	5.42	1.77	5.29	1.81	5.15	1.85	
	8.3	6.1	5.85	1.62	5.71	1.65	5.57	1.69	5.43	1.72	5.29	1.76	
	10.0	8.3	6.03	1.47	5.88	1.51	5.74	1.53	5.60	1.56	5.45	1.58	
	15.0	10.0	6.03	1.28	5.89	1.31	5.75	1.34	5.61	1.37	5.46	1.38	

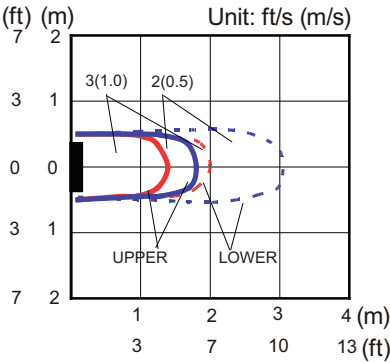
6. Fan performance

6-1. Air velocity distributions

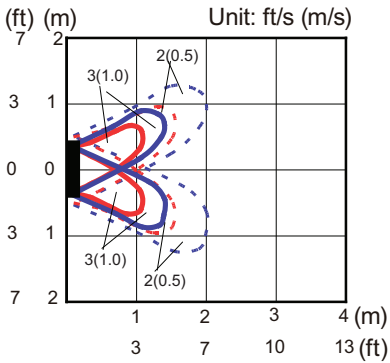
■ Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS

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

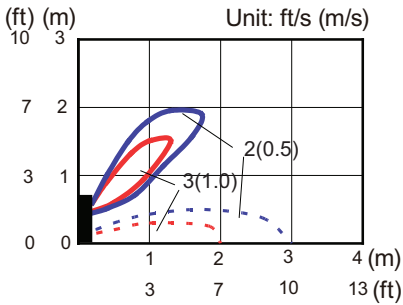
Top view
Horizontal louver: Up
Vertical louver: Center



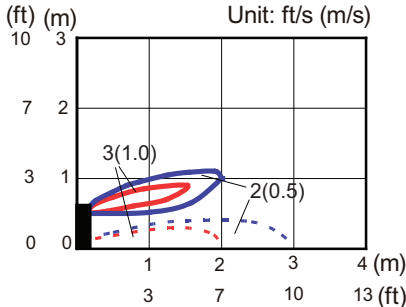
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



Side view
Horizontal louver: Down
Vertical louver: Center



6-2. Airflow

■ Model: AGUH09KUAS

● 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: AGUH12KUAS

● 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: AGUH15KUAS

● 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

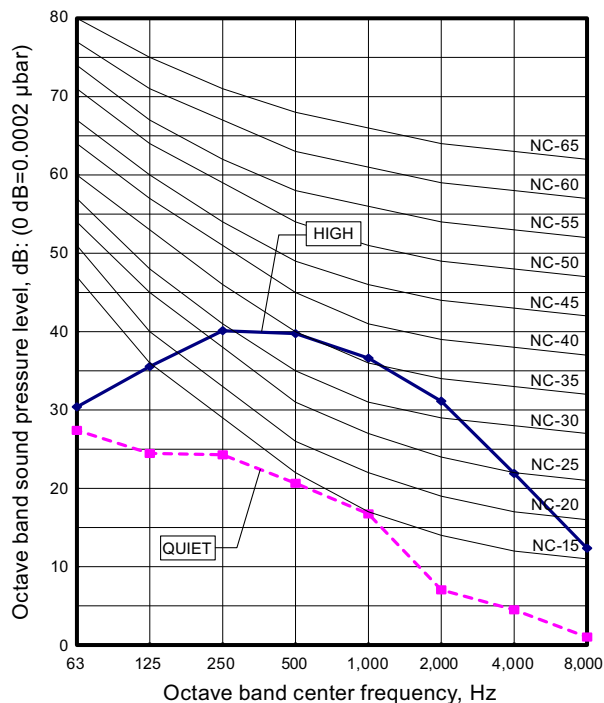
Fan speed	Airflow	
HIGH	m ³ /h	650
	l/s	181
	CFM	383
MED	m ³ /h	520
	l/s	144
	CFM	306
LOW	m ³ /h	390
	l/s	108
	CFM	230
QUIET	m ³ /h	270
	l/s	75
	CFM	159

7. Operation noise (sound pressure)

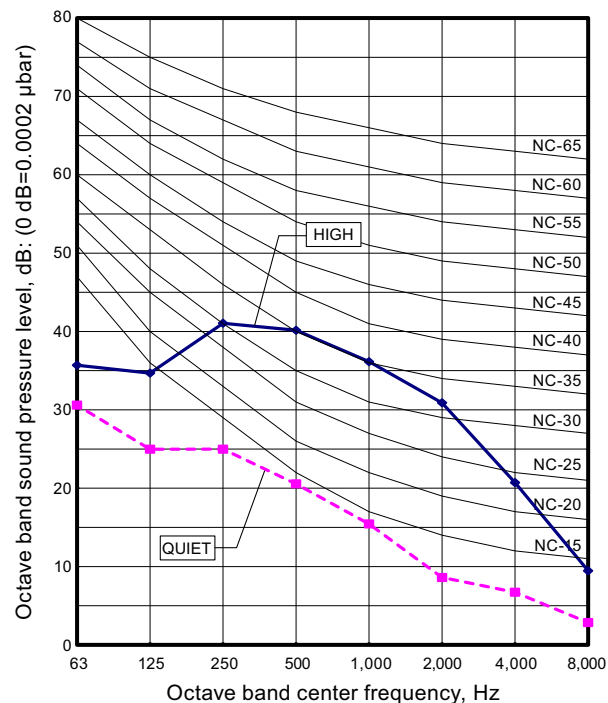
7-1. Noise level curve

Model: AGUH09KUAS

● Cooling

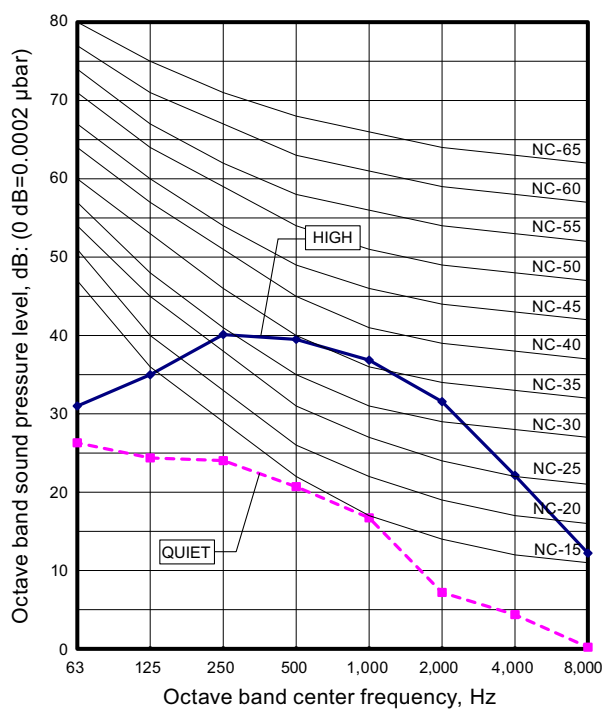


● Heating

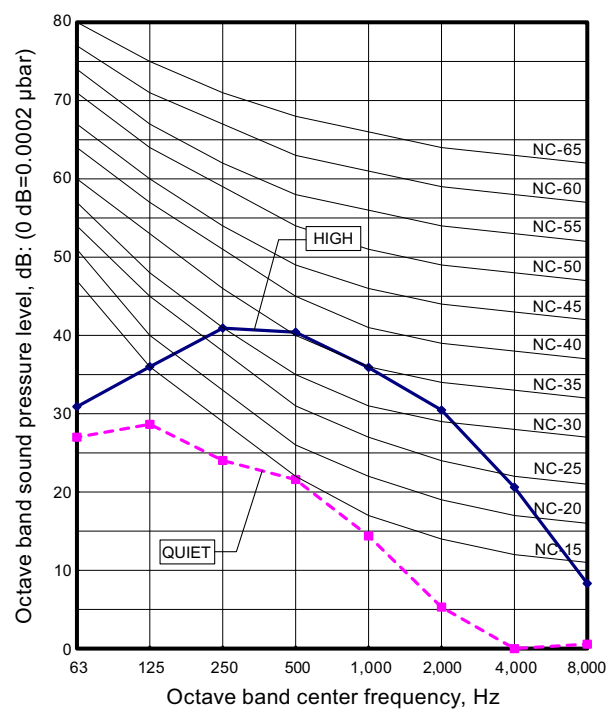


Model: AGUH12KUAS

● Cooling

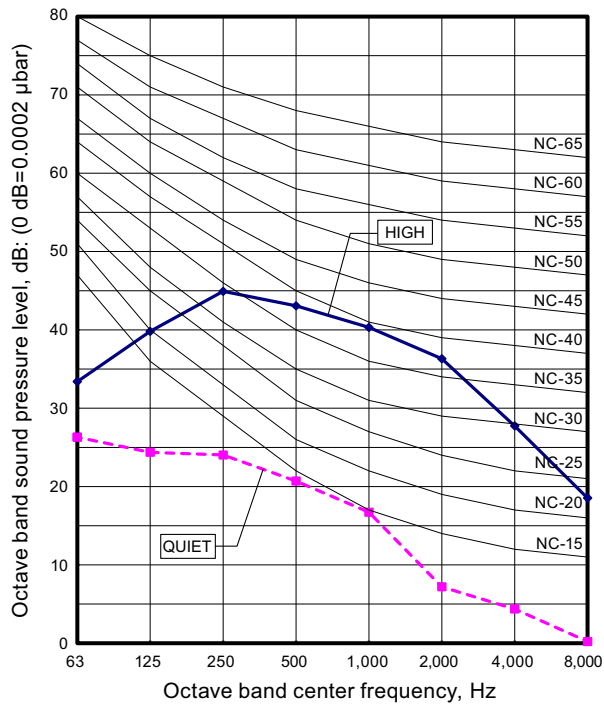


● Heating

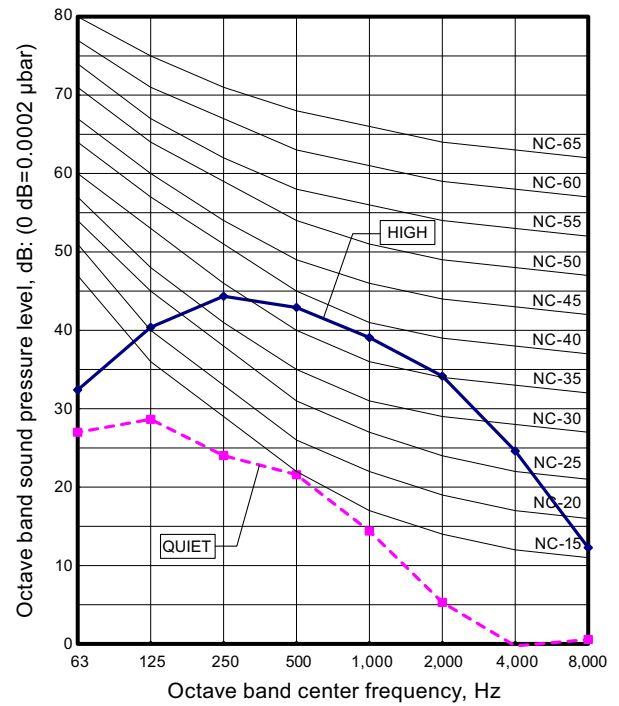


Model: AGUH15KUAS

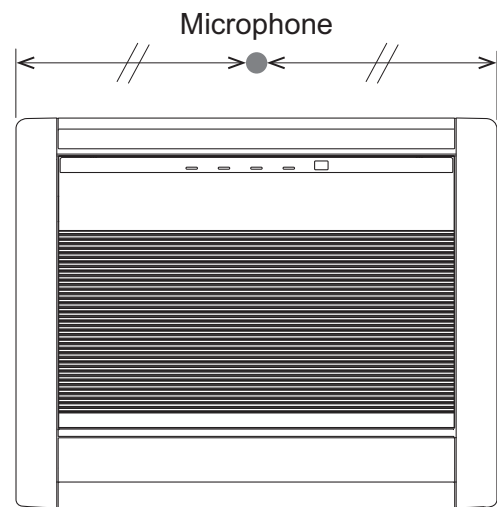
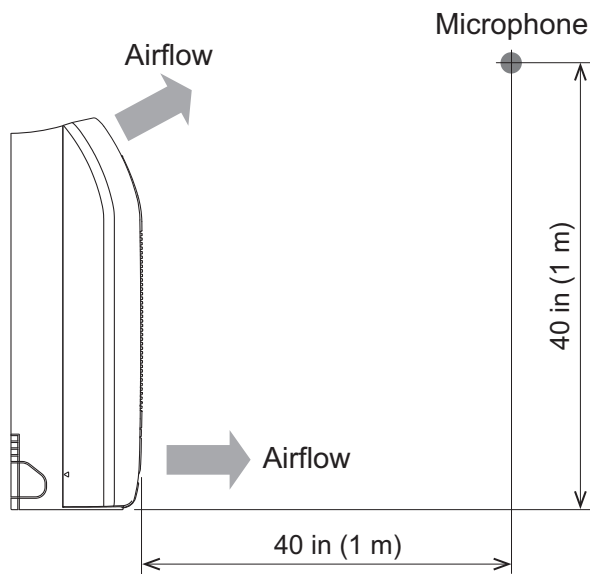
● Cooling



● Heating



7-2. Sound level check point

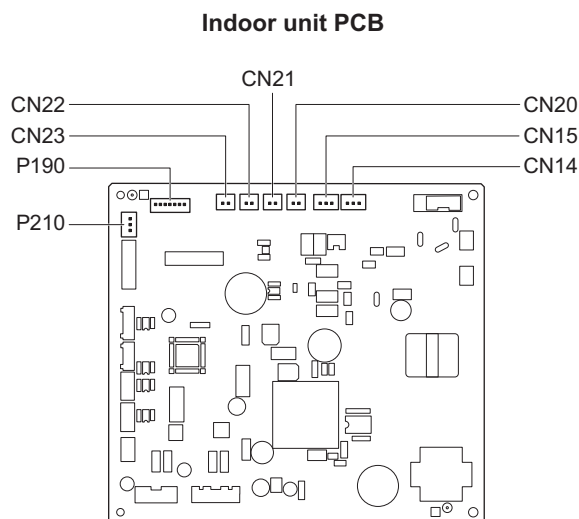


8. Safety devices

Type of protection	Protection form		Model
			AGUH09-15KUAS
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A
Fan motor protection	Thermal protection program	Activate	More than 257°F (125°C) Fan motor stop
		Reset	212°F (100°C) or less Fan motor restart

*PCB: Printed Circuit Board

9. External input and output



Connecting point		Input/Output	Function	Input select	Input signal
Indoor unit PCB	CN14	Input	Operation/Stop	Dry contact	Edge
			Forced stop		
	Ventilation fan status				
	Forced thermostat off				
	Mechanical cooling off				
	Mechanical cooling on				
	CN20/CN21/ CN22/CN23	Output	Operation/Stop	—	—
			Error status		
			Indoor unit fan operation status		
			External heater output		
			Alarm		
			Ventilation		
			Cooling thermostat on		
			Cooling HIGH/LOW		
Heating thermostat on					
R.C. output					

NOTE: For details of the switching function, refer to ["Combination of external input and output"](#) on page 24.

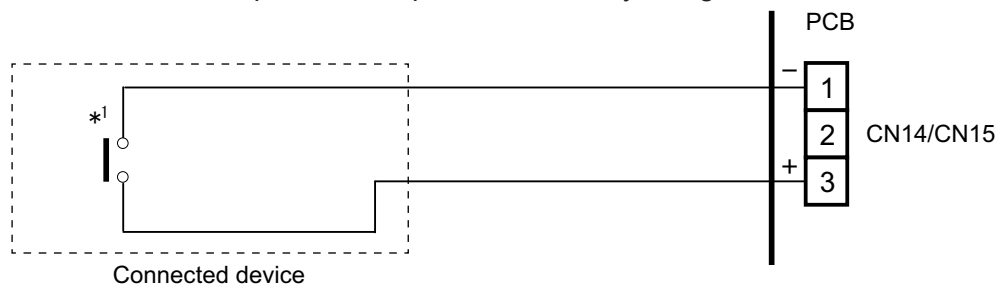
9-1. External input

With using external input function, some functions on this product can be controlled from an external device.

- "Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable (22 AWG) should be used. Maximum length of cable is 492 ft (150 m).
- Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed.
- The wire connection should be separate from the power cable line.

Indoor unit

Indoor unit functions such as Operation/Stop can be done by using indoor unit connectors.

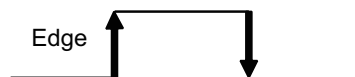


*1: The switch can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

Input signal type

Indoor unit

Input signal type is only "Edge".



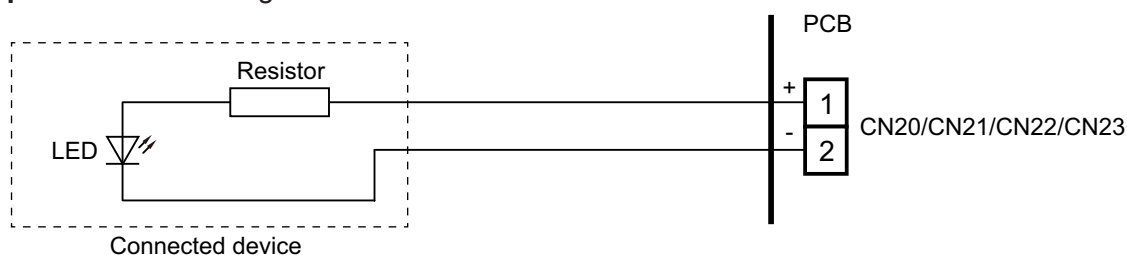
9-2. External output

Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

Indoor unit

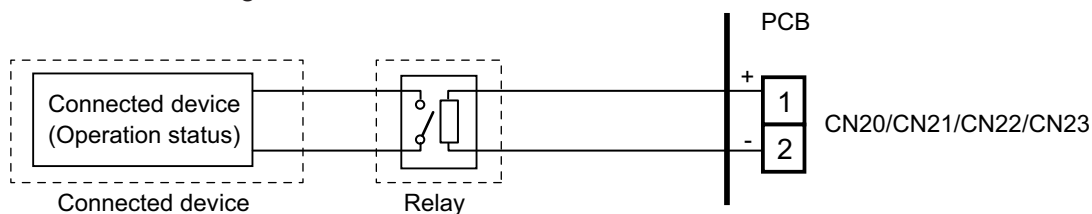
- A twisted pair cable (22AWG) should be used. Maximum length of cable is 82 ft (25 m).
- Output voltage: High DC 12 V $\pm$ 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to ["Combination of external input and output"](#) on page 24.
- **When indicator or other components are connected directly**

Example: Function setting 60 is set to "00"



- **When connecting with a device equipped with a power supply**

Example: Function setting 60 is set to "00"



9-3. Combination of external input and output

By combining the function setting of the indoor unit, you can select various combinations of functions.

Combination examples of external input and output are as follows:

Function setting	Situation	External input		External output								
		CN14	CN15	CN20	CN21	CN22	CN23					
		Input 1	Input 2	Output 1	Output 2	Output 3	Output 4					
60-00	Thermostat off by external input	Operation/ Stop mode 1 (R.C. enabled) (46-00) or Forced stop (46-02) or Operation/ Stop mode 2 (R.C. disabled) (46-03)	Forced thermostat off	Operation/ Stop	Error status	Indoor unit fan operation status	External heater output					
60-01	Fresh air conditioner for external control module		Mechanical cooling off	Cooling thermostat on		Cooling HIGH/LOW		R.C. output				
60-02	Economizer 1 Cooling 1 output		Forced thermostat off									
60-03	Economizer 2 Cooling 2 output (No error output)		Mechanical cooling on	Heating thermostat on	Error status	Indoor unit fan operation status	Cooling HIGH/LOW					
60-04	Economizer 3 Cooling 2 output (No heater output)							Operation/ Stop				
60-05	Humidifier 1 (No operation status output)		Forced thermostat off	Cooling thermostat on	Heating thermostat on	R.C. output	External heater output					
60-06	Humidifier 2 (No heater output)						Heating thermostat on					
60-07	Humidifier 3 + Fresh air conditioner for external module		Mechanical cooling off	Forced thermostat off	Error status	Indoor unit fan operation status	External heater output					
60-08	Economizer 1 + Humidifier 1 Cooling 1 output		Forced thermostat off					Operation/ Stop	Indoor unit fan operation status	Error status		
60-09	Thermostat off by external input Error output			Error status	Indoor unit fan operation status	Error status						
60-10	Thermostat off by external input Indoor unit fan operation output						Error status				Indoor unit fan operation status	Error status
60-11	Thermostat off by external input Heater 1 output											
60-13*1	Refrigerant Leak Detection Alarm		Error status					Indoor unit fan operation status	Error status			

Function setting	Situation	External input		External output			
		CN14	CN15	CN20	CN21	CN22	CN23
		Input 1	Input 2	Output 1	Output 2	Output 3	Output 4
60-14* ²	Refrigerant Leak Detection Ventilation	Ventilation fan status	Operation/Stop mode 1 (R.C. enabled) (46-00) or Forced stop (46-02) or	Ventilation	Operation/Stop	Error status	Indoor unit fan operation status
60-15* ²	Refrigerant Leak Detection Alarm + Ventilation		Operation/Stop mode 2 (R.C. disabled) (46-03)		Alarm		

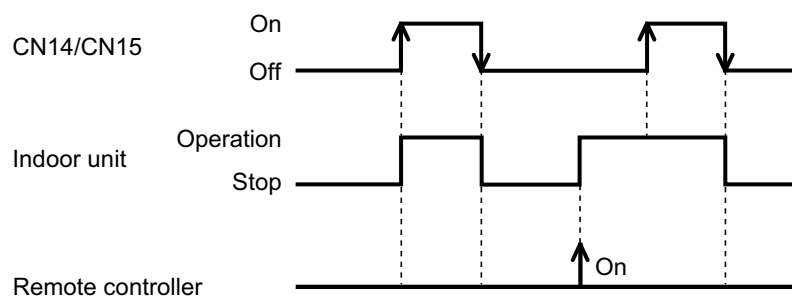
*1: Works only when the function setting number 81 is set at "02" or "04".

*2: Works only when the function setting number 81 is set at "04".

9-4. Details of control input function

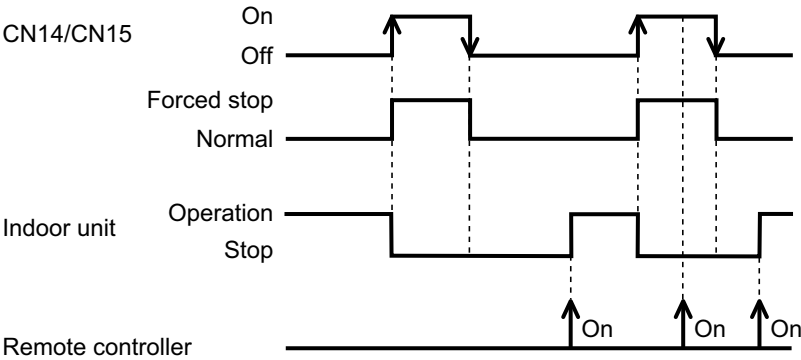
■ Operation/Stop mode 1

Function setting		External input		Input signal	Command
46-00	60-00	Input of indoor unit	CN14	Off → On	Operation
	60-01				
	60-02				
	60-03				
	60-04				
	60-05				
	60-06			On → Off	Stop
	60-07				
	60-08				
	60-09				
	60-10				
	60-11				
	60-13				
	60-14		CN15	Off → On	Operation
	60-15			On → Off	Stop



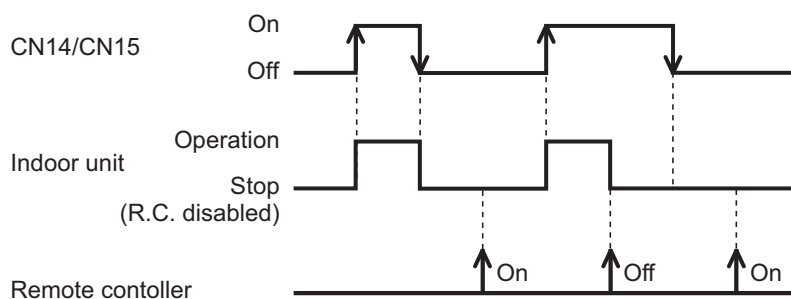
■ Forced stop

Function setting		External input		Input signal	Command
46-02	60-00	Input of indoor unit	CN14	Off → On	Forced stop
	60-01				
	60-02				
	60-03				
	60-04				
	60-05				
	60-06			On → Off	Normal
	60-07				
	60-08				
	60-09				
	60-10				
	60-11				
	60-13				
	60-14		CN15	Off → On	Forced stop
	60-15			On → Off	Normal



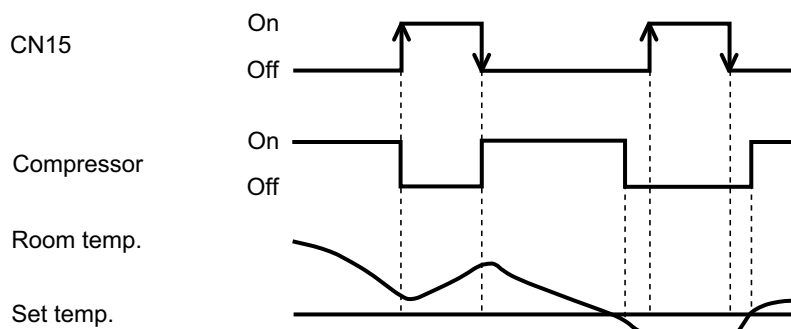
■ Operation/Stop mode 2

Function setting		External input		Input signal	Command
46-03	60-00	Input of indoor unit	CN14	Off → On	Operation
	60-01				
	60-02				
	60-03				
	60-04				
	60-05				
	60-06			On → Off	Stop (R.C. disabled)
	60-07				
	60-08				
	60-09				
	60-10				
	60-11				
	60-13				
	60-14		CN15	Off → On	Operation
	60-15			On → Off	Stop (R.C. disabled)



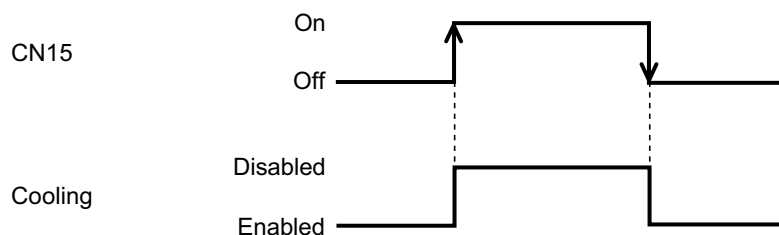
■ Forced thermostat off

Function setting		External input		Input signal	Command
	60-00	Input of indoor unit	CN15	Off → On	Thermostat off
	60-02				
	60-05				
	60-06				
	60-08			On → Off	Normal operation
	60-09				
	60-10				
	60-11				
	60-13				



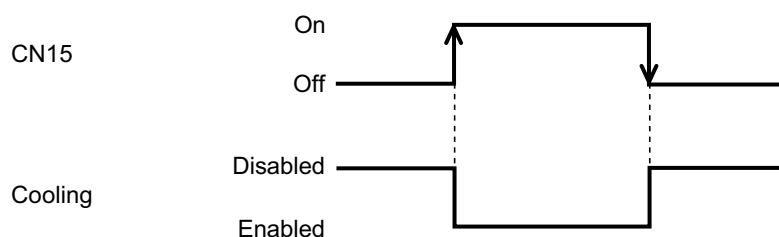
■ Mechanical cooling off

Function setting	External input		Input signal	Command
60-01 60-07	Input of indoor unit	CN15	Off → On	Cooling off (Cooling disabled)
			On → Off	Normal operation (Cooling enabled)



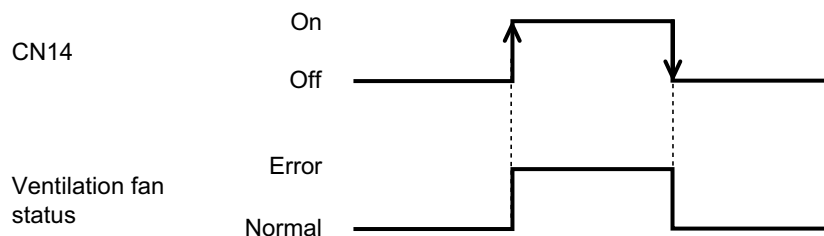
■ Mechanical cooling on

Function setting	External input		Input signal	Command
60-03 60-04	Input of indoor unit	CN15	Off → On	Normal operation (Cooling enabled)
			On → Off	Cooling off (Cooling disabled)



■ Ventilation fan status

Function setting	External input		Input signal	Command
60-14 60-15	Input of indoor unit	CN14	Off → On	Ventilation fan status error detected
			On → Off	Ventilation fan status normal

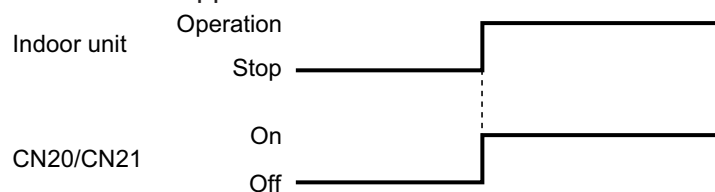


9-5. Details of control output function

■ Operation/Stop status

Function setting	External output		Output signal	Command
60-00 60-06	Output of indoor unit	CN20	Off → On	Operation
			On → Off	Stop
60-09 60-10 60-11 60-13 60-14		CN21	Off → On	Operation
			On → Off	Stop

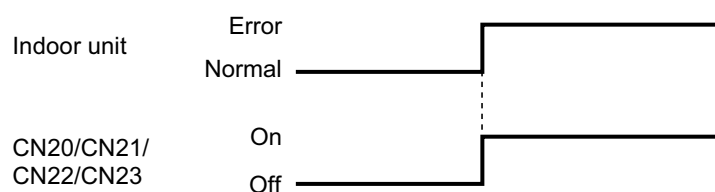
The output is low when the unit is stopped.



■ Error status

Function setting	External output		Output signal	Command
60-09	Output of indoor unit	CN20	Off → On	Error
			On → Off	Normal
60-00 60-01 60-02 60-04 60-05 60-06 60-07		CN21	Off → On	Error
			On → Off	Normal
60-10 60-13 60-14 60-15		CN22	Off → On	Error
			On → Off	Normal
60-11		CN23	Off → On	Error
			On → Off	Normal

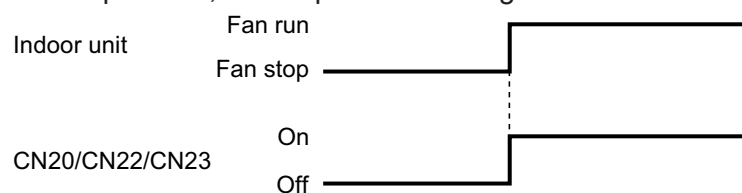
The output is on when an error occurs on the indoor unit.



Indoor unit fan operation status

Function setting	External output		Input signal	Command
60-10	Output of indoor unit	CN20	Off → On	Fan run
			On → Off	Fan stop
60-00		CN22	Off → On	Fan run
60-01				
60-05				
60-06			On → Off	Fan stop
60-09		CN23	Off → On	Fan run
60-11				
60-13			On → Off	Fan stop
60-14				
60-15				

The output is on when the indoor unit fan is in operation, and is off when the fan stops or during cold air prevention. In dry mode operation, the output is off during thermostat off.

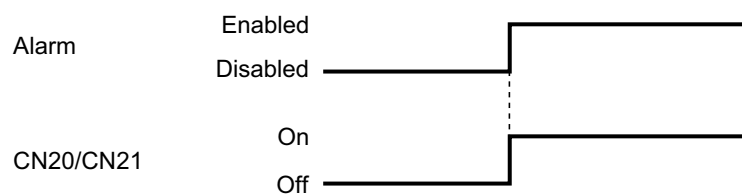


Alarm

Function setting	External output		Output signal	Command
60-13* ¹	Output of indoor unit	CN20	Off → On	Alarm enabled
			On → Off	Alarm disabled
60-15* ²		CN21	Off → On	Alarm enabled
			On → Off	Alarm disabled

*¹: Works only when the function setting number 81 is set at "02" or "04".

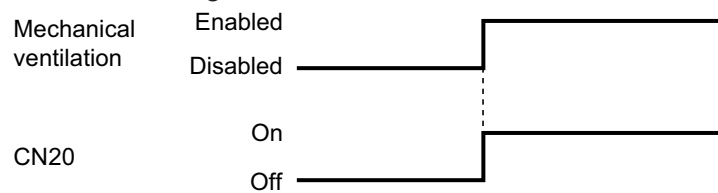
*²: Works only when the function setting number 81 is set at "04".



■ Mechanical ventilation

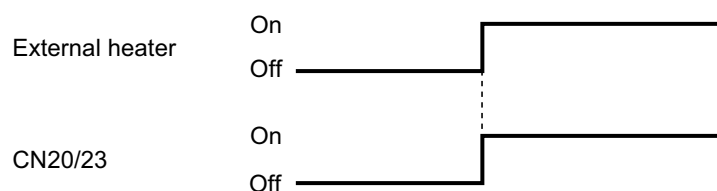
Function setting	External output		Output signal	Command
60-14*	Output of indoor unit	CN20	Off → On	Ventilation enabled
60-15*			On → Off	No ventilation

*: Works only when the function setting number 81 is set at "04".



■ External heater output

Function setting	External output		Output signal	Command
60-11	Output of indoor unit	CN20	Off → On	External heater on
			On → Off	External heater off
60-00		CN23	Off → On	External heater on
60-01				
60-02				
60-03				
60-05			On → Off	External heater off
60-07				
60-08				
60-09				
60-10				



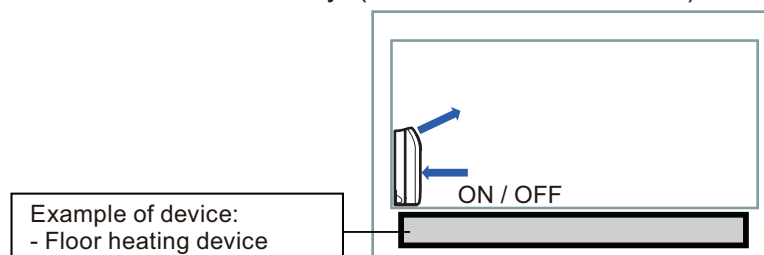
Control	Primary heater	Auxiliary heater	Function setting
			Indoor unit
			Control switching external heaters No. 61
Auxiliary heater control 1	Heat pump	External device*	61-00
Auxiliary heater control 2	Heat pump	External device	61-01
Heat pump prohibition control	External device	None	61-02
Auxiliary heater control by outdoor temperature 1	Heat pump	External device	61-03
Auxiliary heater control by outdoor temperature 2	Heat pump	External device	61-04
Auxiliary heater control by outdoor temperature 3	Heat pump	External device	61-05
Auxiliary heat pump control	External device	Heat pump	61-06
Auxiliary heat pump control by outdoor temperature 1	External device	Heat pump	61-07
Auxiliary heat pump control by outdoor temperature 2	External device	Heat pump	61-08
Auxiliary heat pump control by outdoor temperature 3	External device	Heat pump	61-09

NOTES:

- After turning off the heater, 3 minutes of standby time is required by next power-on of the heater.
- *: External device means Hot water, Electrical heater, etc.

● Installation configuration of individual connection

External heating device is installed individually. (No use of indoor unit fan)

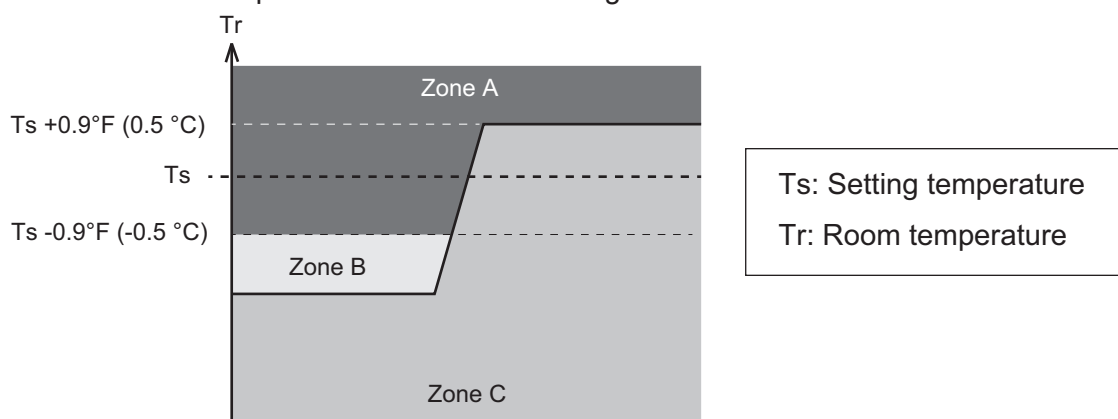


⚠ WARNING

- Design and install an external heater appropriately, with consideration for its protection and local codes.
- Inappropriate designing and installation of external heater may cause a fire by emitted heat from the external heater.
- Fujitsu General Ltd. is not responsible for inappropriate designing or installation of external heating device.

● Auxiliary equipment control by room temperature

Auxiliary equipment control is switchable by room temperature. Auxiliary equipment switching is performed for each room temperature divided to following 3 zones.



Zone	Application	When temperature dropping		When temperature rising	
		Primary	Auxiliary	Primary	Auxiliary
A	Both of primary and auxiliary equipment is unnecessary.	Off	Off	Off	Off
B	Primary heater only. When room temperature stays in zone B for a long time, auxiliary equipment also operates.	On	Off ^{*1}	—	—
C	Auxiliary equipment also operates.	On	On ^{*2}	On	On ^{*2}

^{*1}: For standby time for auxiliary equipment operation, refer to indoor unit function number 71 in "[Contents of function setting](#)" on page 51.

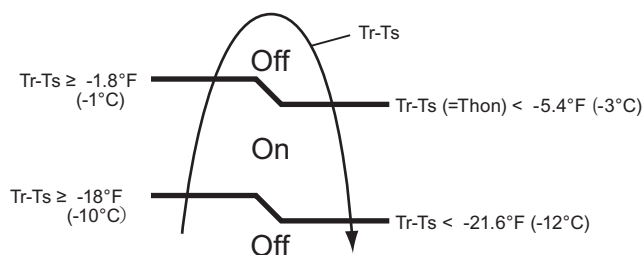
^{*2}: When indoor unit function number 61 is set to "00", auxiliary equipment operates according to the following conditions.

- $T_s - T_r > 21.6\text{ }^{\circ}\text{F} (-12.0\text{ }^{\circ}\text{C})$: Auxiliary equipment turn off.
- $T_s - T_r > 18.0\text{ }^{\circ}\text{F} (-10.0\text{ }^{\circ}\text{C})$: Auxiliary equipment turn on.

● Auxiliary heater control 1

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off - Fan stop protection

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".



Tr: Room temperature
Ts: Set temperature
Thon: Heater on temperature

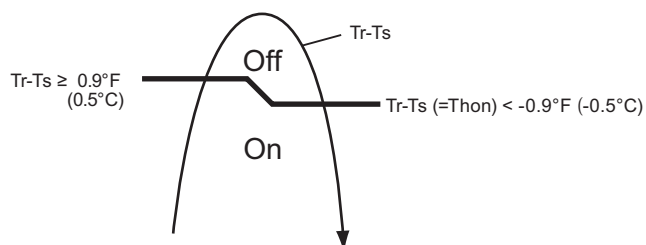
Example: When set temperature (Ts) is 72°F (22°C) (Factory setting),

- and room temperature (Tr) increases above 53.6°F (12°C), signal output is on.
- and room temperature (Tr) increases above 69.8°F (21°C), signal output is off.
- and room temperature (Tr) decreases below 66.2°F (19°C), signal output is on.
- and room temperature (Tr) decreases below 50°F (10°C), signal output is off.

● Auxiliary heater control 2

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off - Fan stop protection

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".



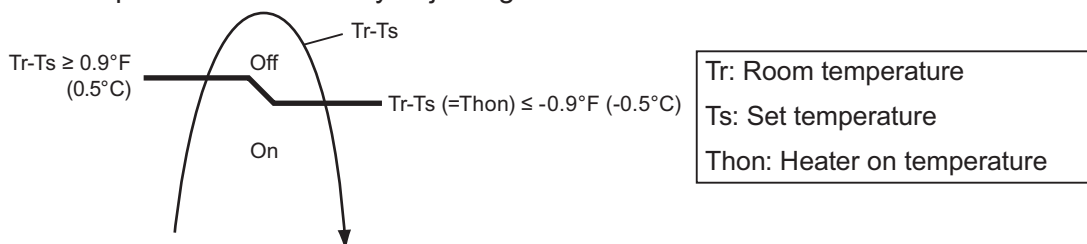
Tr: Room temperature
Ts: Set temperature
Thon: Heater on temperature

● Heat pump prohibition control

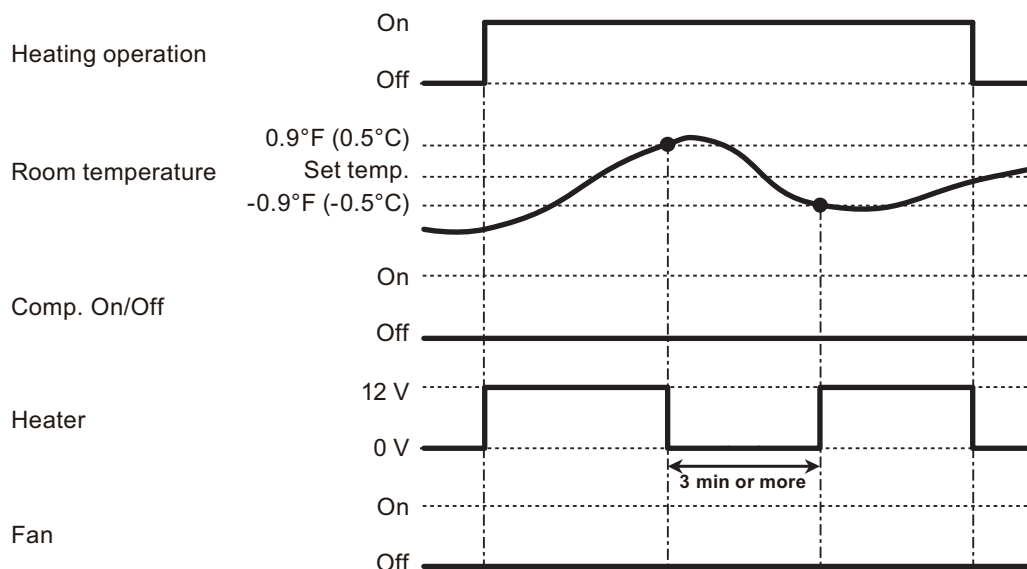
Perform heating by external heater only. Indoor unit is continuous thermostat off.

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".



• Operation status



NOTE: In following operations, compressor will be on.

- Other than heating
- Test run

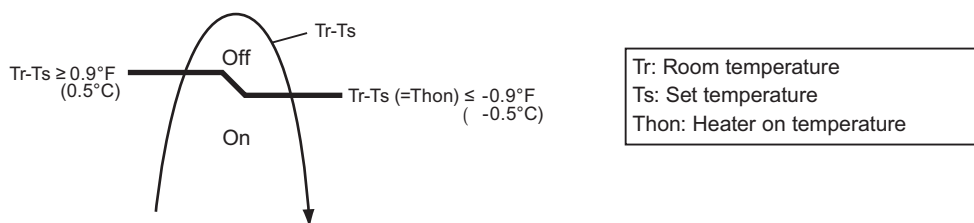
● Auxiliary heater control by outdoor temperature 1

This control selects heat pump or external heater according to the outdoor temperature. When outdoor temperature is high, the heating is performed by using heat pump only.

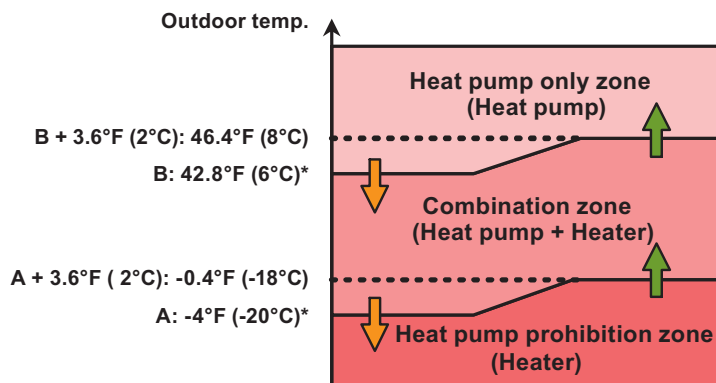
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off - Heat pump only zone

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary A and B: Adjustable individually by function setting number 66 and 67.

• External heater output

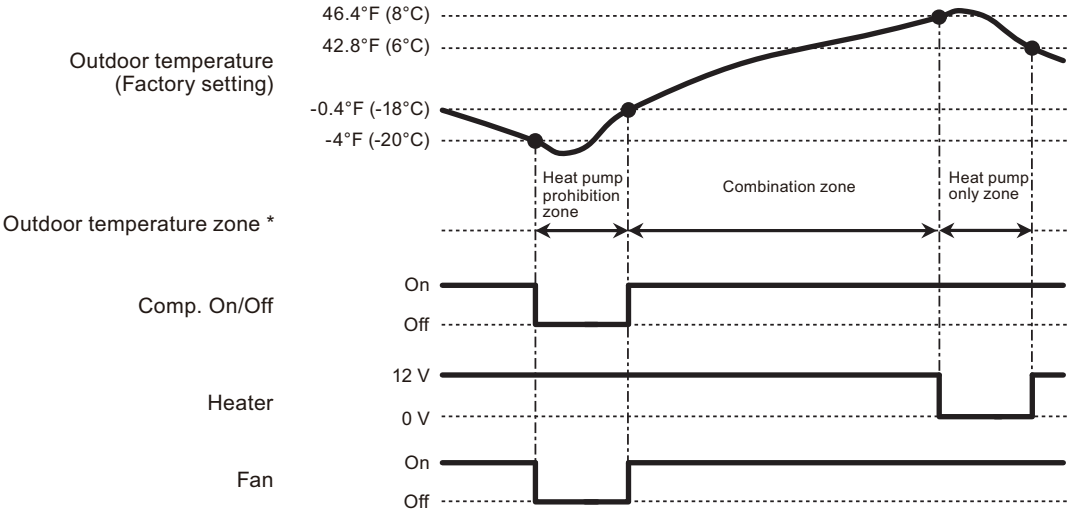


• Outdoor temperature zone



*: Adjustable by function setting 66 and 67

• Operation status



* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

- Other than heating
- Test run

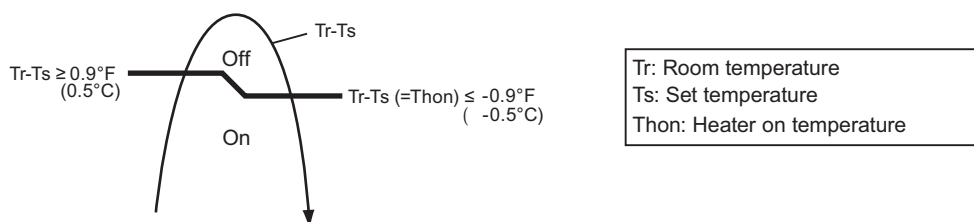
● Auxiliary heater control by outdoor temperature 2

This control selects heat pump or external heater according to the outdoor temperature. Even when outdoor temperature is high, the heating is performed by using both of heat pump and external heater.

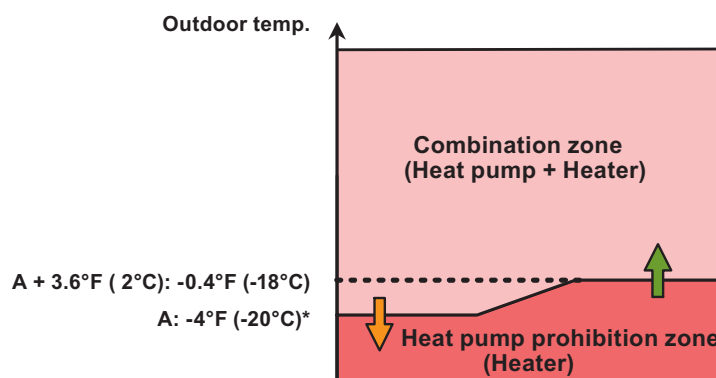
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary A: Adjustable by function setting number 66.

• External heater output

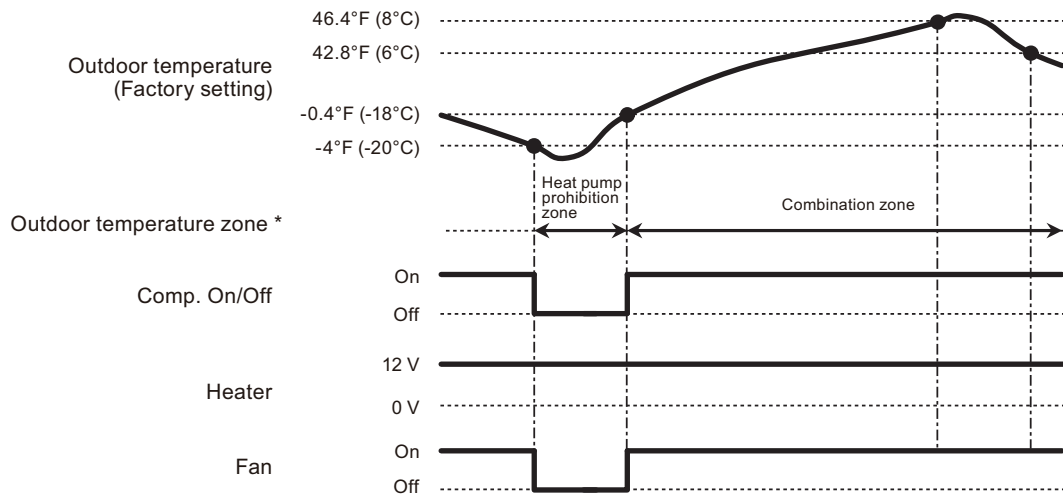


• Outdoor temperature zone



*: Adjustable by function setting 66

- Operation status



* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

- Other than heating
- Test run

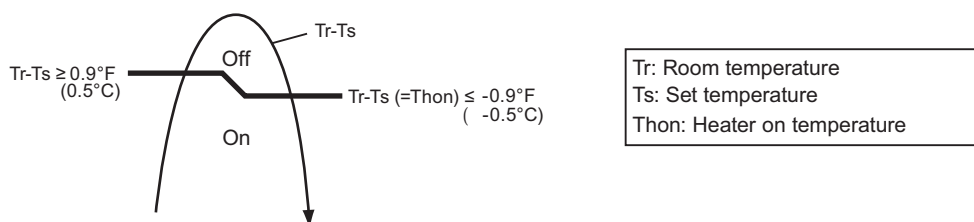
● Auxiliary heater control by outdoor temperature 3

This control selects heat pump or external heater according to the outdoor temperature. Even when outdoor temperature is high, the heating is performed by using both of heat pump and external heater.

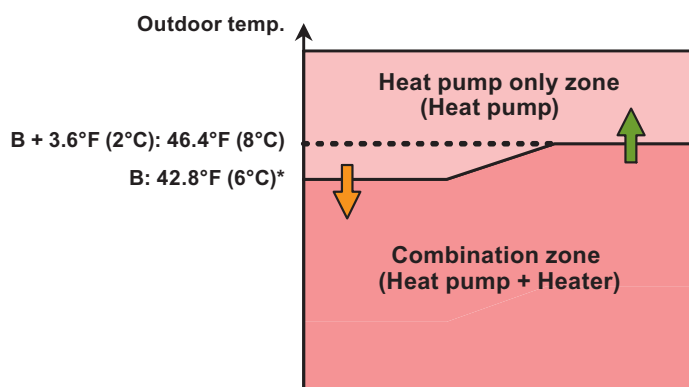
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary B: Adjustable by function setting number 37.

• External heater output

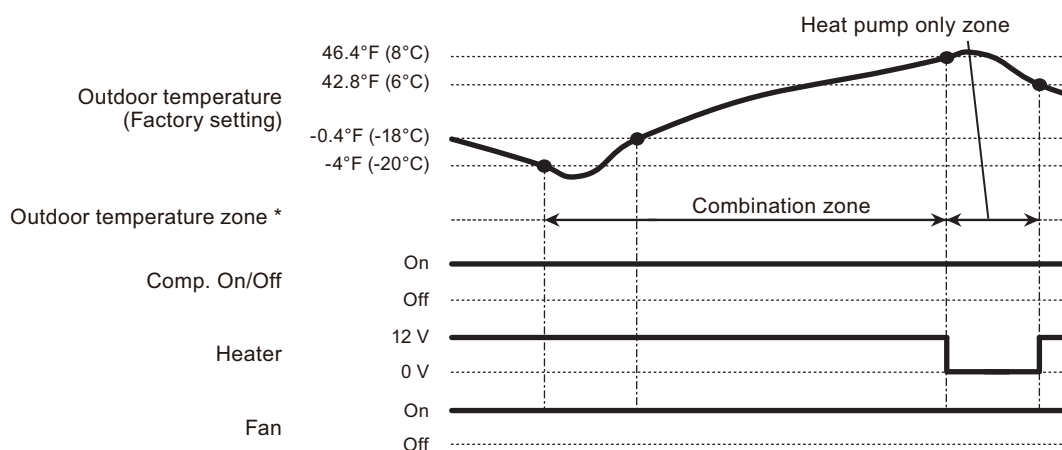


• Outdoor temperature zone



*: Adjustable by function setting 67

• Operation status



* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

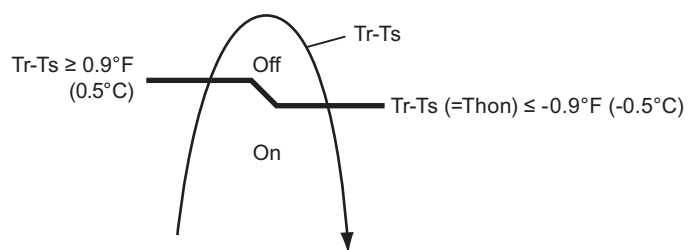
- Other than heating
- Test run

● Auxiliary heat pump control

• External heater output

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

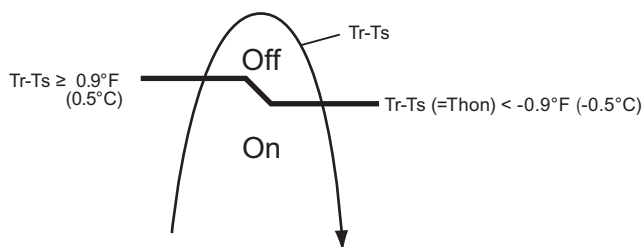
- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) +0.9°F (+0.5°C)



Tr: Room temperature
Ts: Set temperature
Thon: Heater on temperature

• Auxiliary heat pump On/Off

- Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
- All control temperatures will shift by adjusting "Thon".



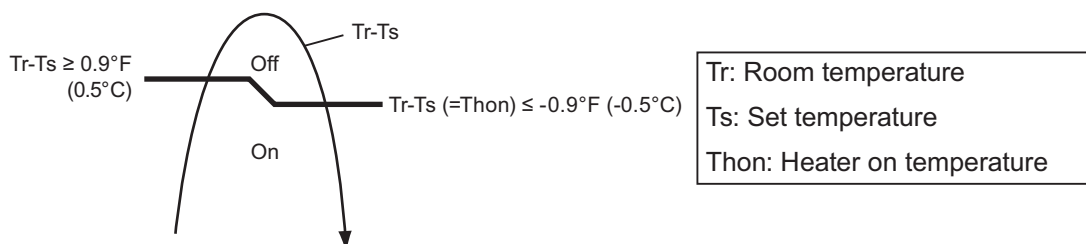
Tr: Room temperature
Ts: Set temperature
Thon: Heater on temperature

● Auxiliary heat pump control by outdoor temperature 1

• External heater output

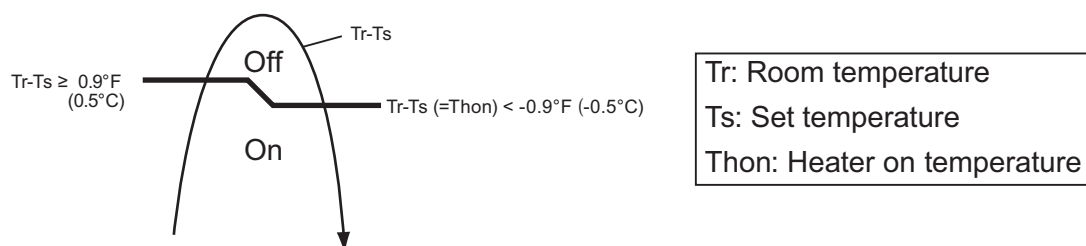
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) +0.9°F (+0.5°C)

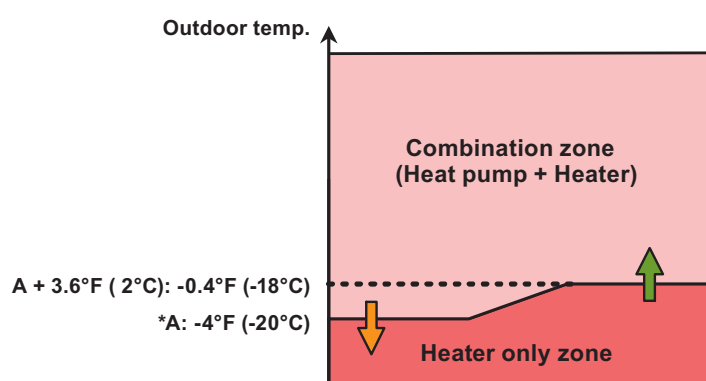


• Auxiliary heat pump On/Off

- Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
- All control temperatures will shift by adjusting “Thon”.

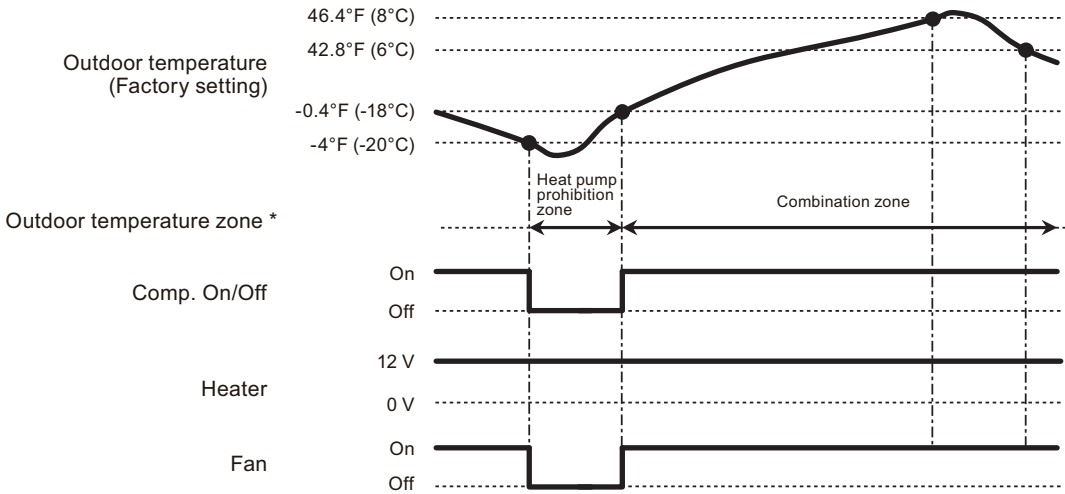


• Outdoor temperature zone



*: Adjustable by function setting 66

• Operation status



* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

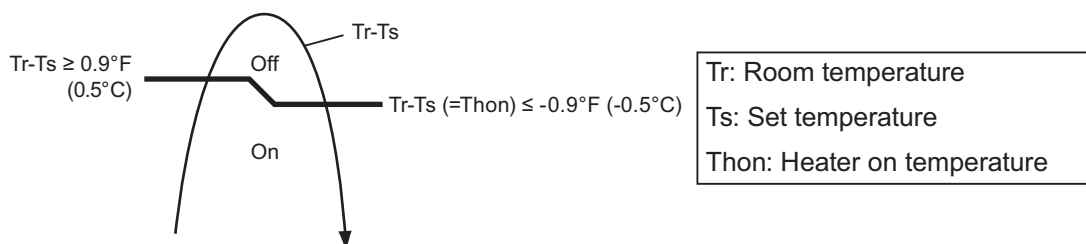
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 2

• External heater output

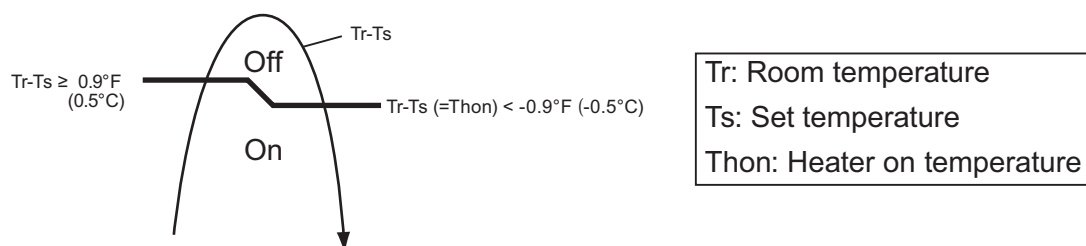
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) +0.9°F (+0.5°C)

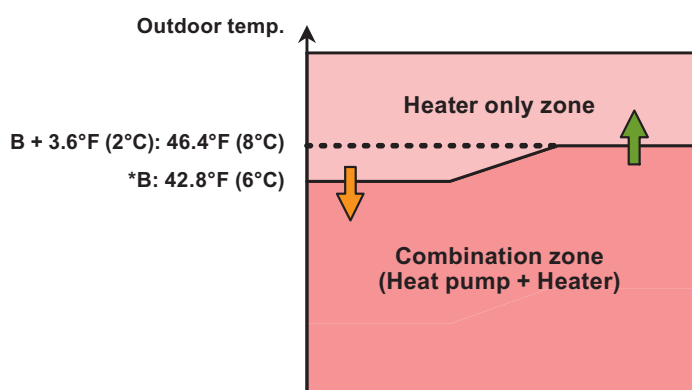


• Auxiliary heat pump On/Off

- Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
- All control temperatures will shift by adjusting “Thon”.

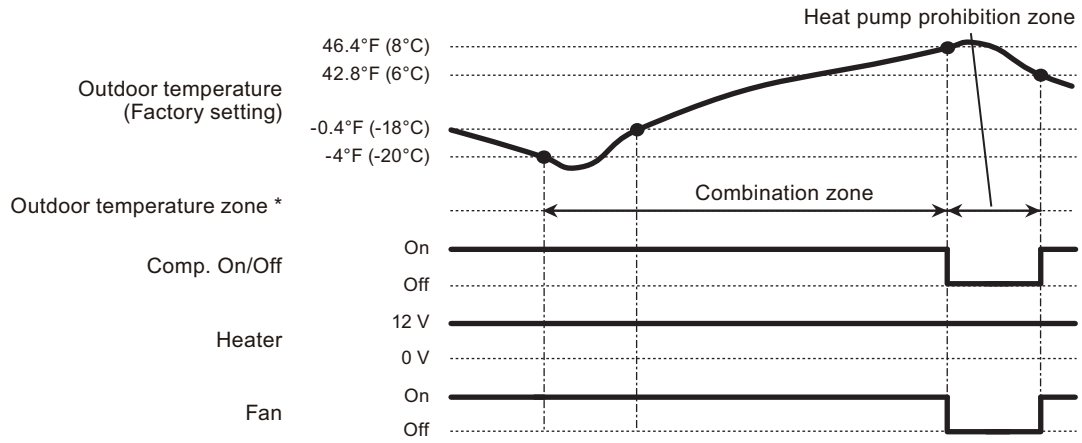


• Outdoor temperature zone



*: Adjustable by function setting 67

- Operation status



* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

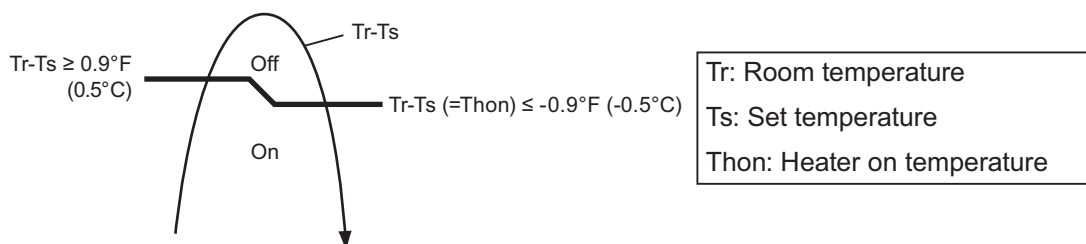
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 3

• External heater output

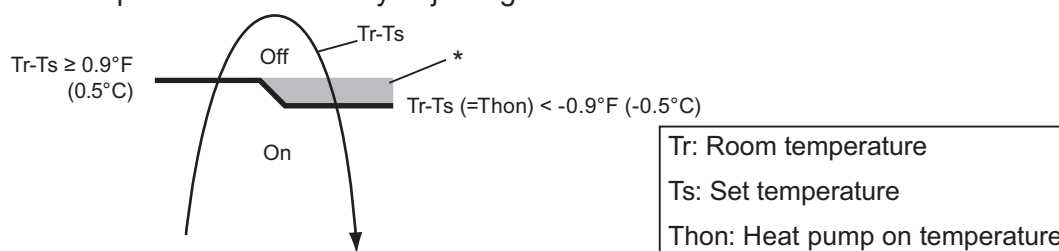
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) +0.9°F (+0.5°C)



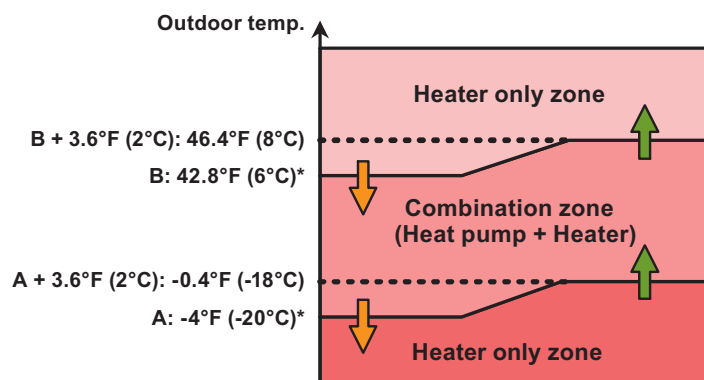
• Auxiliary heat pump On/Off

- Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
- All control temperatures will shift by adjusting “Thon”.



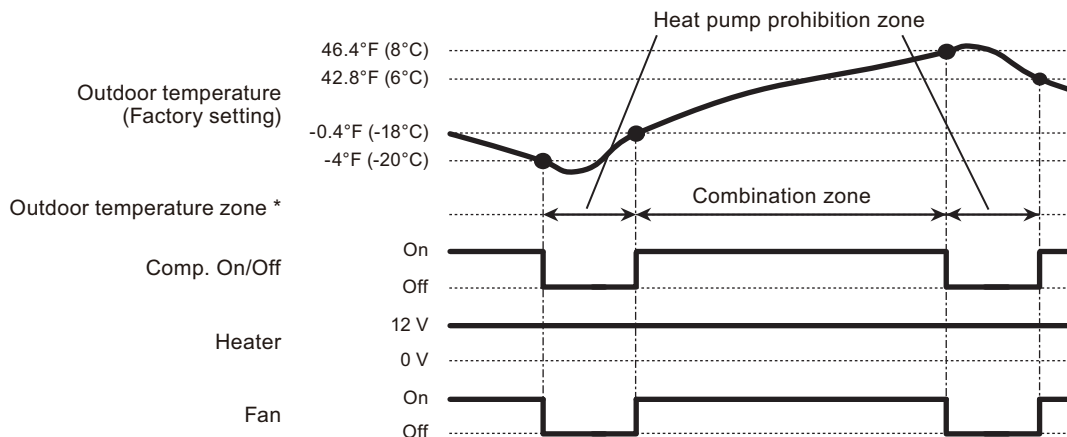
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 66 and 67

• Operation status



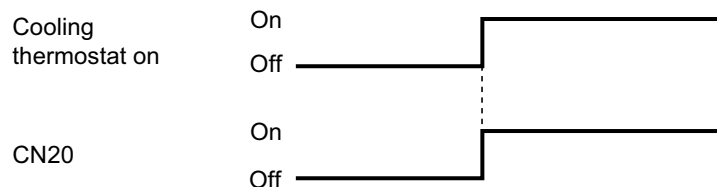
* The outdoor temperature zone transition from one to another will stay in that zone for minimum of 30 min.

NOTE: In following operations, compressor will be on in heat pump prohibition zone.

- Other than heating
- Test run

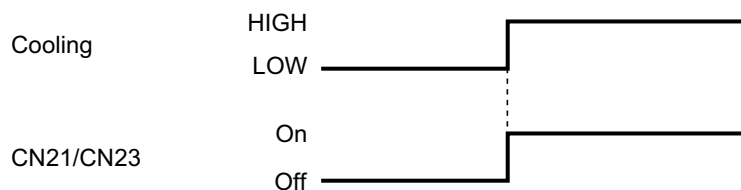
■ Cooling thermostat on

Function setting	External output		Output signal	Command
60-01	Output of indoor unit	CN20	Off → On	Cooling thermostat on
60-02				
60-03			On → Off	Cooling thermostat off
60-04				
60-07				
60-08				



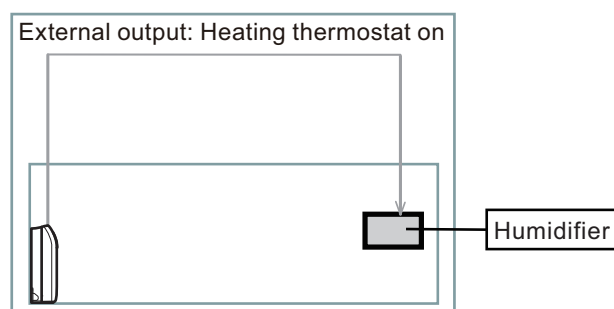
■ Cooling HIGH/LOW

Function setting	External output		Output signal	Command
60-03	Output of indoor unit	CN21	Off → On	Cooling HIGH
			On → Off	Cooling LOW
60-04		CN23	Off → On	Cooling HIGH
			On → Off	Cooling LOW

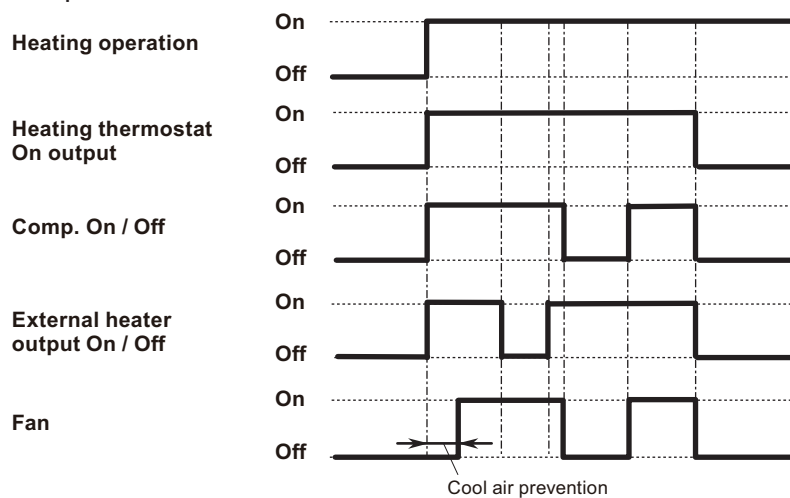


■ Heating thermostat on for humidifier

Function setting	External output		Output signal	Command
60-05	Output of indoor unit	CN20	Off → On	Heating thermostat on
			On → Off	State other than Heating thermostat on
60-08		CN21	Off → On	Heating thermostat on
			On → Off	State other than Heating thermostat on
60-07		CN22	Off → On	Heating thermostat on
			On → Off	State other than Heating thermostat on
60-06		CN23	Off → On	Heating thermostat on
			On → Off	State other than Heating thermostat on

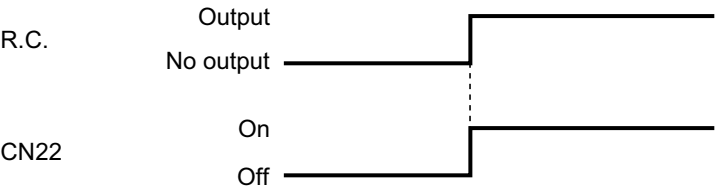


The heating thermostat output will be on when the compressor is on or the external heater is on, and will be off when the compressor and the external heater are off.



■ Remote controller output

Function setting	External output		Output signal	Command
60-02 60-03 60-04 60-08	Output of indoor unit	CN22	Off → On	Follow the output from Wired Remote Controller
			On → Off	No output from Wired Remote Controller



10. Group connection

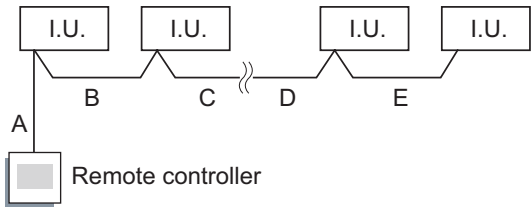
NOTE: Group control cannot be used together with WLAN Adapter.

Installation procedure for group control system:

A number of indoor units can be operated at the same time using a single remote controller.

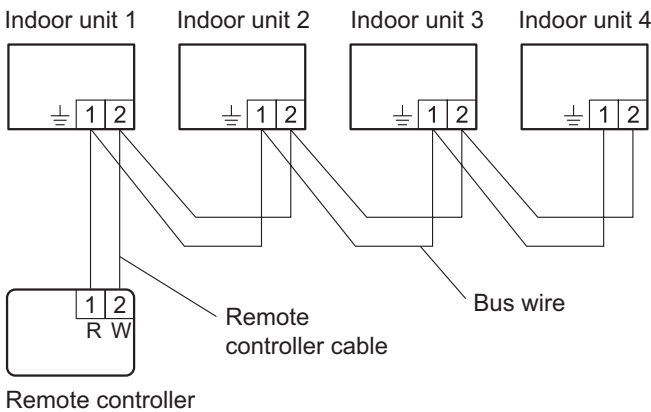
NOTE: When different type of indoor units (such as wall-mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

- 1. Connect up to 16 indoor units in a system.



A, B, C, D, E: Remote controller cable		
Wiring length limitation	UTY-RVRU	$A + B + C + D + E \leq 76.5 \text{ yd (70 m)}$
	Other than UTY-RVRU	$A + B + C + D + E \leq 546.8 \text{ yd (500 m)}$

Example of wiring method



- 2. Automatic address setting
After the remote controller connection in the system, the automatic address setting runs in the initial starting up. Do not change the remote controller address for the indoor unit.

11. 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.

11-1. 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 remote controller

Remote controller is not attached for this product. For details of the installing remote controller, refer to following information.

- Overview information: Operating manual of the remote controller
- Setting procedure: Installation manual of the remote controller

■ 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)	35/36	Room temperature control for wired remote controller sensor
5)	40	Auto restart
6)	42	Room temperature sensor switching
7)	44	Remote controller custom code
8)	46	External input control
9)	48	Room temperature sensor switching (Aux.)
10)	49	Indoor unit fan control for energy saving for cooling
11)	60	Switching functions for external output terminal
12)	61	Control switching of external heaters
13)	62	Operating temperature switching of external heaters
14)	66	Outdoor temperature zone boundary temperature A
15)	67	Outdoor temperature zone boundary temperature B
16)	71	Standby time for auxiliary equipment operation
17)	72	Heat pump backup setting
18)	73	Emergency heat for external output terminal
19)	81	Safety measures setting for refrigerant leakage
20)	84	Wired Remote Controller function extension setting
21)	94	Fixed operation mode switching
22)	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 wall-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.

A concealed installation that covers the unit completely is prohibited. In a wall-concealed installation, do not cover the front side of the unit, especially the upper front.

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

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 of the room temperature sensor is corrected as follows:

Corrected temp. = Temp. of the room temp. sensor - Correction temp. value

Example of correction:

When the temperature of the room temp. sensor is 78°F and the setting value is "03" (-2°F), the corrected temp. will be 80°F (78°F - [-2°F]).

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) Room temperature control for wired remote controller sensor

Before performing this setting, refer to Function 95.

Depending on the installed environment, correction of the wire remote 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.

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

Function number		Setting value	Setting description	Factory setting
35 (For cooling)	36 (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)	

5) 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.

6) 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.

7) 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	

8) 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 1 (Remote controller enabled)	◆
	01	(Setting prohibited)	
	02	Forced stop mode	
	03	Operation/Stop mode 2 (Remote controller disabled)	

9) 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	

10) 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	
	02	Remote controller	◆

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.

02: Enable or disable this function by remote controller setting.

NOTE: Set to “00” or “01” when connecting a remote controller that cannot set the Fan control for energy saving function or connecting a network converter. To confirm if the remote controller has this setting, refer to the operating manual of each remote controller.

11) Switching functions for external output terminal

Functions of the external output terminal can be switched. For details, refer to “External input and output”.

Function number	Setting value	External input		External output				
		CN14	CN15	CN20	CN21	CN22	CN23	
60	00	Operation/ Stop mode 1 (R.C. enabled) (46-00) or Forced stop (46-02) or Operation/ Stop mode 2 (R.C. disabled) (46-03)	Forced thermostat off	Operation/ Stop	Error status	Indoor unit fan operation status	External heater output	
	01		Mechanical cooling off	Cooling thermostat on		R.C. output		Cooling HIGH/LOW
	02		Forced thermostat off					
	03		Mechanical cooling on	Heating thermostat on	Cooling HIGH/LOW	Indoor unit fan operation status	External heater output	
	04				Error status			Heating thermostat on
	05		Forced thermostat off	Operation/ Stop		Heating thermostat on		
	06						Mechanical cooling off	Cooling thermostat on
	07		Forced thermostat off	Error status	Indoor unit fan operation status	External heater output		
	08						Cooling thermostat on	R.C. output
	09							
	10		Heating thermostat on	R.C. output				
	11				Error status	Indoor unit fan operation status	Error status	
	13*1		Alarm	Error status				Indoor unit fan operation status
	14*2	Operation/ Stop mode 1 (R.C. enabled) (46-00) or Forced stop (46-02) or Operation/ Stop mode 2 (R.C. disabled) (46-03)			Ventilation	Alarm	Error status	
	15*2		Ventilation fan status					

*1: Works only when the function setting number 81 is set at “02” or “04”.

*2: Works only when the function setting number 81 is set at “04”.

*1: Works only when the function setting number 81 is set at “02” or “04”.

*2: Works only when the function setting number 81 is set at “04”.

12) Control switching of external heaters

Sets the control method for external heater to be used.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 29.

Function number	Setting value	Setting description	Factory setting
61	00	Auxiliary heater control 1	◆
	01	Auxiliary heater control 2	
	02	Heat pump prohibition control	
	03	Auxiliary heater control by outdoor temperature 1	
	04	Auxiliary heater control by outdoor temperature 2	
	05	Auxiliary heater control by outdoor temperature 3	
	06	Auxiliary heat pump control	
	07	Auxiliary heat pump control by outdoor temperature 1	
	08	Auxiliary heat pump control by outdoor temperature 2	
	09	Auxiliary heat pump control by outdoor temperature 3	

13) Operating temperature switching of external heaters

Sets the temperature conditions when the external heater is ON.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 29.

Function number	Setting value	Setting description				Factory setting
		Setting value of function 61:				
		00		01 to 09		
		Heater: On	Heater: Off	Heater: On	Heater: Off	
62	00	-5.4°F (-3°C)	-1.8°F (-1°C)	-0.9°F (-0.5°C)	0.9°F (0.5°C)	◆
	01	-3.6°F (-2°C)	-1.8°F (-1°C)	-1.8°F (-1°C)	0.9°F (0.5°C)	
	02	-3.6°F (-2°C)	-1.8°F (-1°C)	-3.6°F (-2°C)	0.9°F (0.5°C)	
	03	-5.4°F (-3°C)	-1.8°F (-1°C)	-5.4°F (-3°C)	0.9°F (0.5°C)	
	04	-7.2°F (-4°C)	-1.8°F (-1°C)	-7.2°F (-4°C)	0.9°F (0.5°C)	
	05	-9.0°F (-5°C)	-1.8°F (-1°C)	-9.0°F (-5°C)	0.9°F (0.5°C)	
	06	-5.4°F (-3°C)	-0.9°F (-0.5°C)	-0.9°F (-0.5°C)	0°F (0°C)	
	07	-3.6°F (-2°C)	-0.9°F (-0.5°C)	-1.8°F (-1°C)	0°F (0°C)	
	08	-3.6°F (-2°C)	-0.9°F (-0.5°C)	-3.6°F (-2°C)	0°F (0°C)	
	09	-5.4°F (-3°C)	-0.9°F (-0.5°C)	-5.4°F (-3°C)	0°F (0°C)	
	10	-7.2°F (-4°C)	-0.9°F (-0.5°C)	-7.2°F (-4°C)	0°F (0°C)	
	11	-9.0°F (-5°C)	-0.9°F (-0.5°C)	-9.0°F (-5°C)	0°F (0°C)	
	12	-5.4°F (-3°C)	0°F (0°C)	-0.9°F (-0.5°C)	-0.9°F (-0.5°C)	
	13	-3.6°F (-2°C)	0°F (0°C)	-1.8°F (-1°C)	-0.9°F (-0.5°C)	
	14	-3.6°F (-2°C)	0°F (0°C)	-3.6°F (-2°C)	-0.9°F (-0.5°C)	
	15	-5.4°F (-3°C)	0°F (0°C)	-5.4°F (-3°C)	-0.9°F (-0.5°C)	
	16	-7.2°F (-4°C)	0°F (0°C)	-7.2°F (-4°C)	-0.9°F (-0.5°C)	
	17	-9.0°F (-5°C)	0°F (0°C)	-9.0°F (-5°C)	-0.9°F (-0.5°C)	

14) Outdoor temperature zone boundary temperature A

Setting required if changing of the outdoor temperature setting for heat pump prohibition zone is required when auxiliary heater control by outdoor temperature 1 and 2 are performed on the indoor unit.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 29.

Function number	Setting value	Setting description	Factory setting
66	00	-4.0°F (-20°C)	◆
	01	-0.4°F (-18°C)	
	02	3.2°F (-16°C)	
	03	6.8°F (-14°C)	
	04	10.4°F (-12°C)	
	05	14.0°F (-10°C)	
	06	17.6°F (-8°C)	
	07	21.2°F (-6°C)	
	08	24.8°F (-4°C)	

15) Outdoor temperature zone boundary temperature B

Setting required if changing of the outdoor temperature setting for heat pump only zone is required when auxiliary heater control by outdoor temperature 1 and 3 is performed on the indoor unit.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 29.

Function number	Setting value	Setting description	Factory setting
67	00	42.8°F (6°C)	◆
	01	14.0°F (-10°C)	
	02	17.6°F (-8°C)	
	03	21.2°F (-6°C)	
	04	24.8°F (-4°C)	
	05	28.4°F (-2°C)	
	06	32.0°F (0°C)	
	07	35.6°F (2°C)	
	08	39.2°F (4°C)	
	09	42.8°F (6°C)	
	10	46.4°F (8°C)	
	11	50.0°F (10°C)	
	12	53.6°F (12°C)	
	13	57.2°F (14°C)	
	14	60.8°F (16°C)	
	15	64.4°F (18°C)	

16) Standby time for auxiliary equipment operation

Sets the standby time until the auxiliary equipment operation starts during primary equipment operation.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 29.

Function number	Setting value	Setting description	Factory setting
71	00	Disable	◆
	01	1 minute	
	02	2 minutes	
	•	•	
	•	•	
	•	•	
	98	98 minutes	
	99	99 minutes	

17) Heat pump backup setting

Enables or disables the heat pump backup operation.

Function number	Setting value	Setting description	Factory setting
72	00	Disable	◆
	01	Enable	

18) Emergency heat for external output terminal

Enables or disables emergency heat input.

Function number	Setting value	Setting description	Factory setting
73	00	Disable	◆
	01	Enable	

NOTE: When this function is used, IR Receiver Unit or Wired Remote Controller is necessary.

19) Safety measures setting for refrigerant leakage

Sets the safety measures operation in case of refrigerant leakage.

Function number	Setting value	Setting description	Factory setting
81	00	No safety measure	◆
	01	Air circulation	
	02	Air circulation, Alarm	
	03	(Setting prohibited)	
	04	Air circulation, Alarm, Mechanical ventilation	

To activate the safety measures operation for the indoor unit in case of refrigerant leakage, set the setting value to "01", "02", or "04" (Air circulation).

When the indoor unit detects refrigerant leakage or the refrigerant leakage sensor failure, the indoor unit operates as follows.

- The indoor unit operates the fan at high speed to diffuse the refrigerant, according to *UL60335-2-40*.

NOTE: Remote controller cannot stop this fan operation for safety reasons.

- The indoor unit stops cooling or heating operation. Also, Forced cooling operation is not allowed.
- The indoor unit or the optional Wired Remote Controller indicates error code 45 or A8.

20) Wired Remote Controller function extension setting

Enables the Powerful, Minimum Heat, or Outdoor Unit Low Noise operation when connecting the Wired Remote Controller (UTY-RVRU).

Function number	Setting value	Setting description	Factory setting
84	00	Disable	◆
	01	Enable	

- Refer to the operation manual of the air conditioner to check whether it supports each function.
- All indoor units must have the same setting value in a Group Control system.

21) Fixed operation mode switching

Sets the operation mode to heat pump, heating only, or cooling only.

Function number	Setting value	Setting description	Factory setting
94	00	Heat pump	◆
	01	Heating only	
	02	Cooling only	

22) 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:

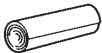
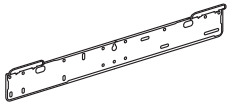
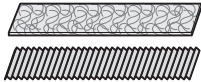
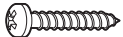
- Overheating (overcooling) is prevented at the start-up.
- All room-temperature control settings (Function 30, 31, 35, and 36) will be reset to “No correction 0.0°F (0.0°C)”.

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, 35, and 36). If Function 95 is not set first, room-temperature control settings (Function 30, 31, 35, and 36) will be reset and you must redo them again.

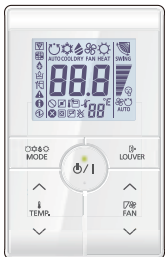
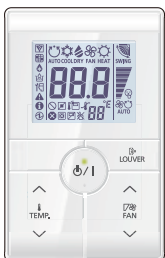
12. Accessories

12-1. Models: AGUH09KUAS, AGUH12KUAS, and AGUH15KUAS

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Cable tie		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Air cleaning filters		1
Self-tapping screw		9			

13. Optional parts

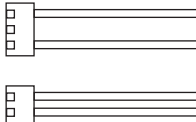
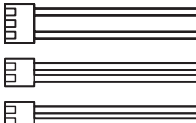
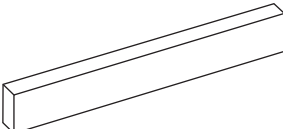
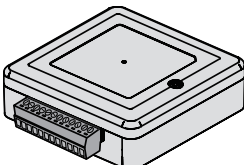
13-1. Controllers

Exterior	Part name	Model name	Summary
	Wired Remote Controller (Touch Panel)	UTY-RVRU	Remote controller that provides the functions you need in a sleek design that uniquely transforms itself to blend with any interior. Optional Communication Kit is necessary for installation. NOTE: When using this controller simultaneously with a wireless remote controller, the Custom Auto mode of this controller is not operable.
	Wired Remote Controller (Touch Panel)	UTY-RNRUZ*	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Optional Communication Kit is necessary for installation. NOTE: When using this controller simultaneously with a wireless remote controller, the Custom Auto mode of this controller is not operable.
	Simple Remote Controller	UTY-RSRY UTY-RSRYZ*	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.
	Simple Remote Controller	UTY-RHRY UTY-RHRYZ*	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting. Optional Communication Kit is necessary for installation.
	Wireless Remote Controller	UTY-LNXUZ1	Unit control is performed by Wireless Remote Controller.

NOTES:

- Available functions may differ by the remote controller. For details, refer to the operation manual.
- When using the group controlling system of the Wired Remote Controller, using WLAN Adapter is prohibited.

13-2. Others

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PCB. Connecting point: CN14/15 or CN20/21/22/23 on Main PCB
	External Connect Kit	UTY-XWZXZ5	Required when external device is connected. Connecting point: CN14/15 or CN20/21/22/23 on Main PCB
	Half Concealed Kit	UTR-STA	Used for the indoor unit installing of half concealed.
	Communication Kit	UTY-TWRXZ3	Use to connect Non-polar 2-core wired remote controller. Connecting point: P190 on Main PCB
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: P210 on Main PCB
	Thermostat Converter	UTY-TTRXZ*	This converter can control Fujitsu General products using a third-party thermostat controller. Optional Communication Kit is necessary for installation. Simultaneous use with Wireless Remote Controller is prohibited.
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system. Optional Communication Kit is necessary for installation.
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Optional Communication Kit is necessary for installation.

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOUH09KUBS1

AOUH12KUBS1

1. Specifications

1-1. Model: AOUH09KUBS1

Type				Inverter, Heat pump		
Model name				AOUH09KUBS1		
Power supply				208/230 V~ 60 Hz		
Power supply intake				Outdoor unit		
Available voltage range				187—253 V		
Starting current			A	4.5		
Fan	Airflow rate	Cooling	CFM (m³/h)	906 (1,540)		
		Heating		906 (1,540)		
	Type × Qty			Propeller fan × 1		
	Motor output		W	23		
Sound pressure level*1		Cooling	dB (A)	45		
		Heating		48		
Heat exchanger type		Dimensions (H × W × D)	in (mm)	Main 1: 19-13/16 × 34-11/16 × 11/16 (504 × 881 × 18.19) Main 2: 19-13/16 × 33-1/2 × 11/16 (504 × 851 × 18.19)		
		Fin pitch	FPI	Main 1: 20 Main 2: 20		
		Rows × Stages		Main 1: 1 × 24 Main 2: 1 × 24		
		Pipe type		Copper tube		
		Fin type	Type (Material)		Aluminum	
			Surface treatment		PC fin	
		Compressor		Type	DC rotary	
				Motor output	W	900
Refrigerant		Type	R32			
		Charge	lb oz	1 lb 14 oz		
			g	850		
Refrigerant oil		Type	POE (RB68A)			
		Amount	in³ (cm³)	20.7 (340)		
Enclosure		Material		Steel sheet		
		Color		Beige Approximate color of Munsell 10YR 7.5/1.0		
Dimensions (H × W × D)		Net	in (mm)	21-5/16 × 31-7/16 × 11-7/16 (542 × 799 × 290)		
		Gross		23-11/16 × 37 × 14-3/4 (602 × 940 × 375)		
Weight		Net	lb (kg)	71 (32)		
		Gross		77 (35)		
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)		
		Gas		Ø3/8 (Ø9.52)		
	Method		Flare			
	Pre-charge length		ft (m)	49 (15)		
	Min. length			17 (5)		
	Max. length			65 (20)		
	Max. height difference			49 (15)		
	Operation range		Cooling	°F (°C)	-5 to 122*2 (-21 to 50*2)	
Heating			-5 to 75 (-21 to 24)			
Drain hose		Material		Low-density polyethylene		
		Tip diameter	in (mm)	I.D.: Ø1/2 (Ø13.0) O.D.: Ø5/8 to Ø11/16 (Ø16.0 to Ø16.7)		
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°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB). – Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.) • Protective function might work when using it outside the operation range. • *1: Sound pressure level – Measured values in manufacturer's semi-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: Suction temperature of the outdoor unit						

1-2. Model: AOUH12KUBS1

Type				Inverter, Heat pump	
Model name				AOUH12KUBS1	
Power supply				208/230 V~ 60 Hz	
Power supply intake				Outdoor unit	
Available voltage range				187—253 V	
Connected indoor unit model				AGUH12KUAS	AGUH15KUAS
Starting current			A	5.8	
Fan	Airflow rate	Cooling	CFM (m³/h)	1,148 (1,950)	1,254 (2,130)
		Heating		1,165 (1,980)	
	Type × Qty				Propeller fan × 1
	Motor output	W			49
Sound pressure level*1		Cooling	dB (A)	45	48
		Heating		49	50
Heat exchanger type		Dimensions (H × W × D)	in (mm)	Main 1: 23-1/8 × 34-11/16 × 11/16 (588 × 881 × 18.19) Main 2: 23-1/8 × 33-1/2 × 11/16 (588 × 851 × 18.19)	
		Fin pitch	FPI	Main 1: 20 Main 2: 20	
		Rows × Stages	Main 1: 1 × 28 Main 2: 1 × 28		
		Pipe type	Copper tube		
		Fin type	Type (Material)	Aluminum	
			Surface treatment	PC fin	
Compressor		Type	DC twin rotary		
		Motor output	W	900	
Refrigerant		Type	R32		
		Charge	lb oz	2 lb 4 oz	
			g	1,020	
Refrigerant oil		Type	RmM68AF		
		Amount	in³ (cm³)	24.4 (400)	
Enclosure		Material	Steel sheet		
		Color	Beige Approximate color of Munsell 10YR 7.5/1.0		
Dimensions (H × W × D)		Net	in (mm)	24-7/8 × 31-7/16 × 11-7/16 (632 × 799 × 290)	
		Gross		27-1/4 × 37 × 14-3/4 (692 × 940 × 375)	
Weight		Net	lb (kg)	84 (38)	
		Gross		93 (42)	
	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)	
		Gas		Ø3/8 (Ø9.52)	
	Method	Flare			
	Connection pipe	Pre-charge length	ft (m)	65 (20)	
Min. length		17 (5)			
Max. length		98 (30)			
Max. height difference		49 (15)			
Operation range		Cooling	°F (°C)	-5 to 122*2 (-21 to 50*2)	
		Heating		-5 to 75 (-21 to 24)	
Drain hose		Material	Low-density polyethylene		
		Tip diameter	in (mm)	I.D.: Ø1/2 (Ø13.0) O.D.: Ø5/8 to Ø11/16 (Ø16.0 to Ø16.7)	

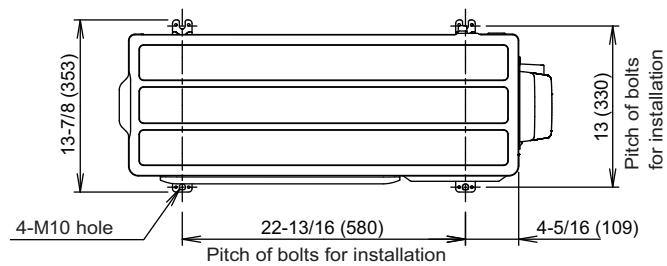
NOTES:

- 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°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).
 - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Sound pressure level
 - Measured values in manufacturer's semi-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: Suction temperature of the outdoor unit

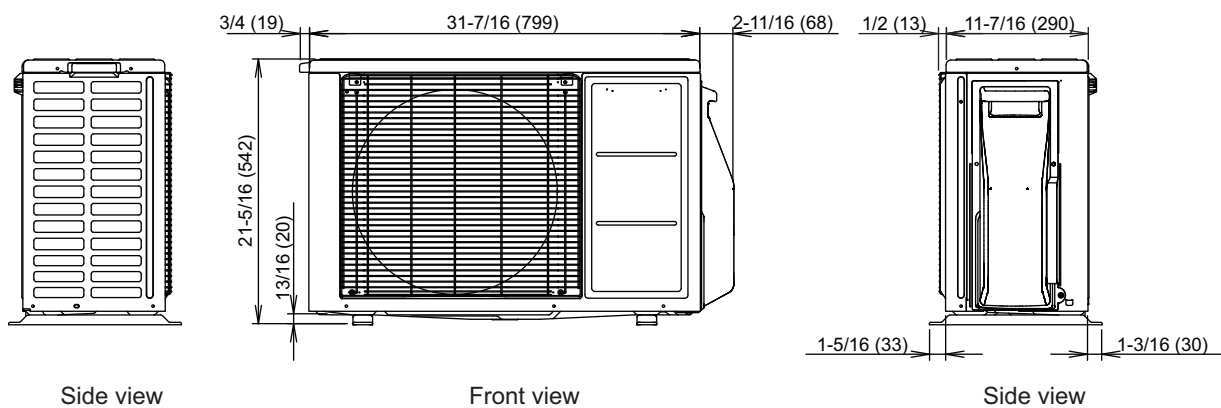
2. Dimensions

2-1. Model: AOUH09KUBS1

Unit: in (mm)



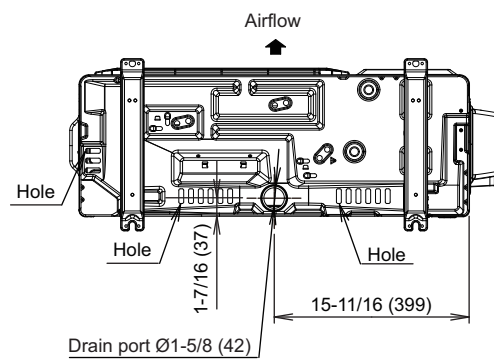
Top view



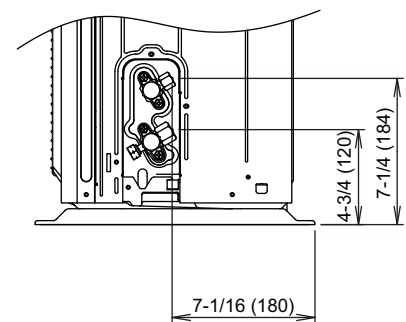
Side view

Front view

Side view



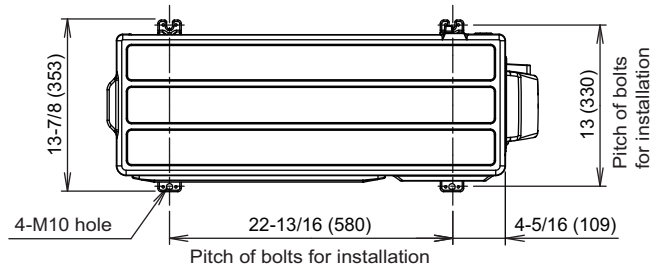
Bottom view



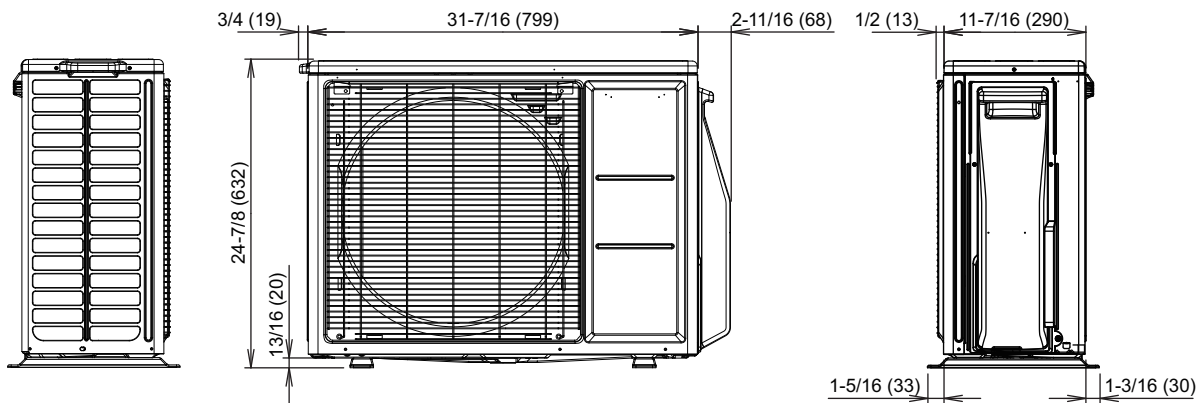
Side view (Valve part)

2-2. Model: AOUH12KUBS1

Unit: in (mm)

OUTDOOR UNIT
AOUH09-12KUBS1OUTDOOR UNIT
AOUH09-12KUBS1

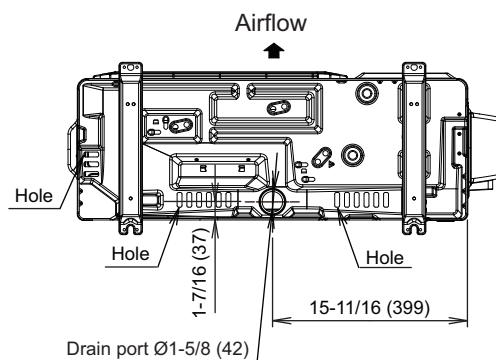
Top view



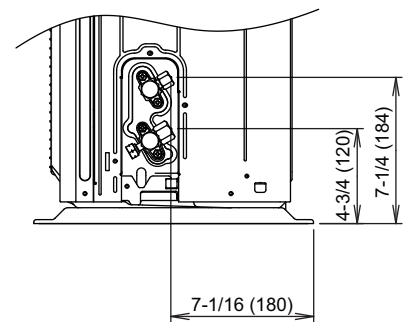
Side view

Front view

Side view



Bottom view



Side view (Valve part)

3. Installation space

3-1. Models: AOUH09KUBS1 and AOUH12KUBS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

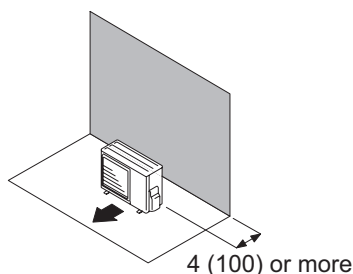
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

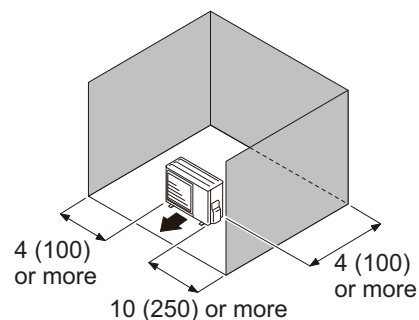
- When the upper space is open:

Unit: in (mm)

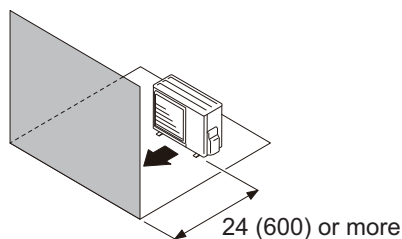
Obstacles at rear only



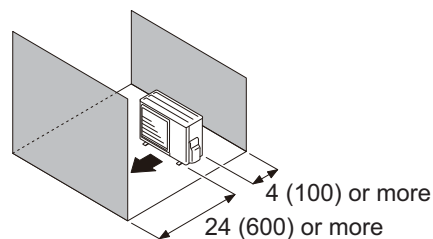
Obstacles at rear and sides



Obstacles at front



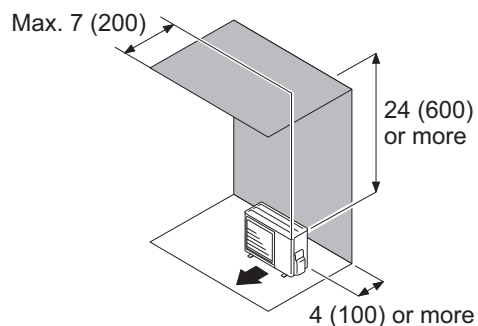
Obstacles at front and rear



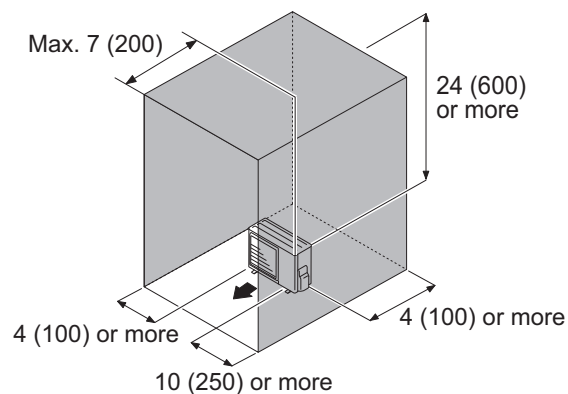
- When an obstruction in the upper space:

Unit: in (mm)

Obstacles at rear and above



Obstacles at rear, sides, and above

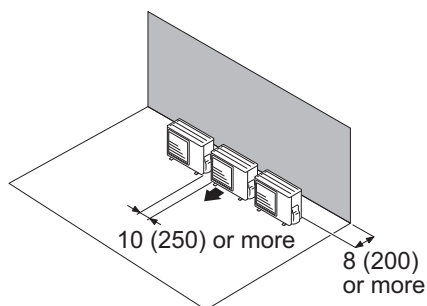


● Multiple outdoor unit installation

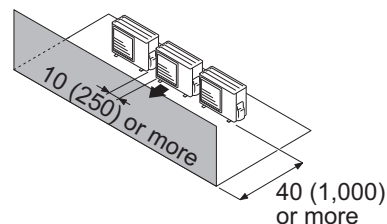
- Provide at least 10 in (250 mm) of space between the outdoor units if multiple units are installed.
- When routing the piping from the side of an outdoor unit, provide space for piping.
- No more than 3 units must be installed side by side.
When 4 units or more are arranged in a line, provide the space as shown in the following example **“When an obstruction in the upper space:”**.
- **When the upper space is open:**

Unit: in (mm)

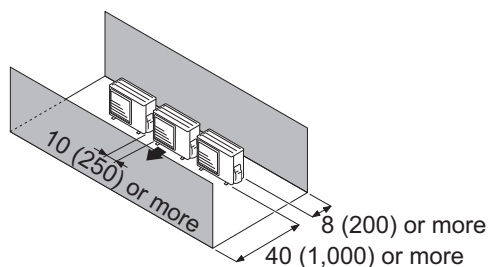
Obstacles at rear only



Obstacles at front only



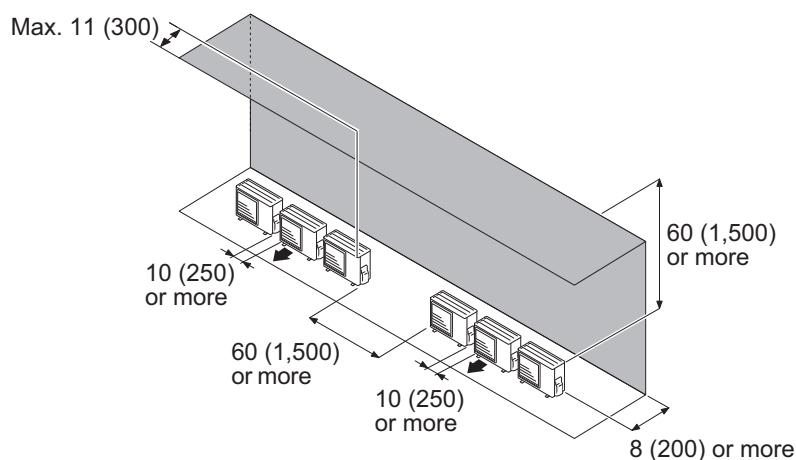
Obstacles at front and rear



- **When an obstruction in the upper space:**

Unit: in (mm)

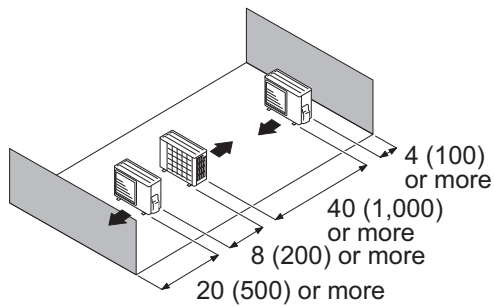
Obstacles at rear and above.



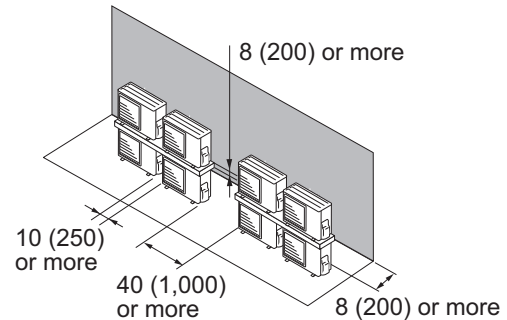
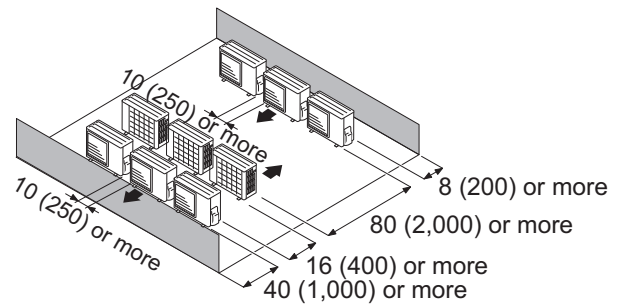
● Outdoor units installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



Multiple parallel unit arrangement

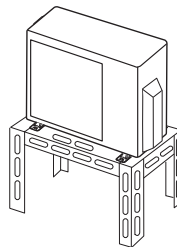


NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

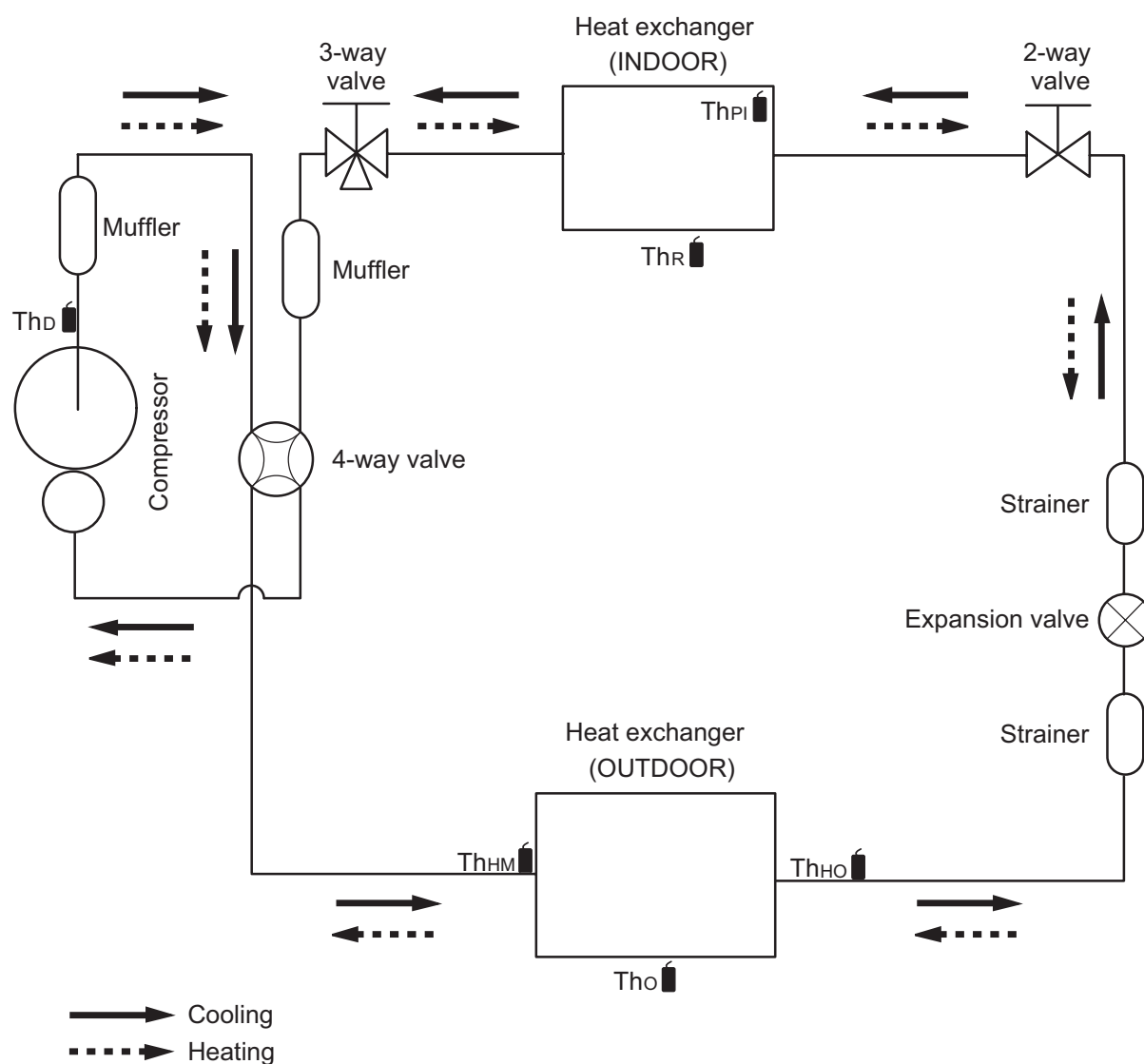
⚠ CAUTION

- 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. Model: AOUE09KUBS1



Th_D : Thermistor (Discharge temperature)

Th_{HM} : Thermistor (Heat exchanger middle temperature)

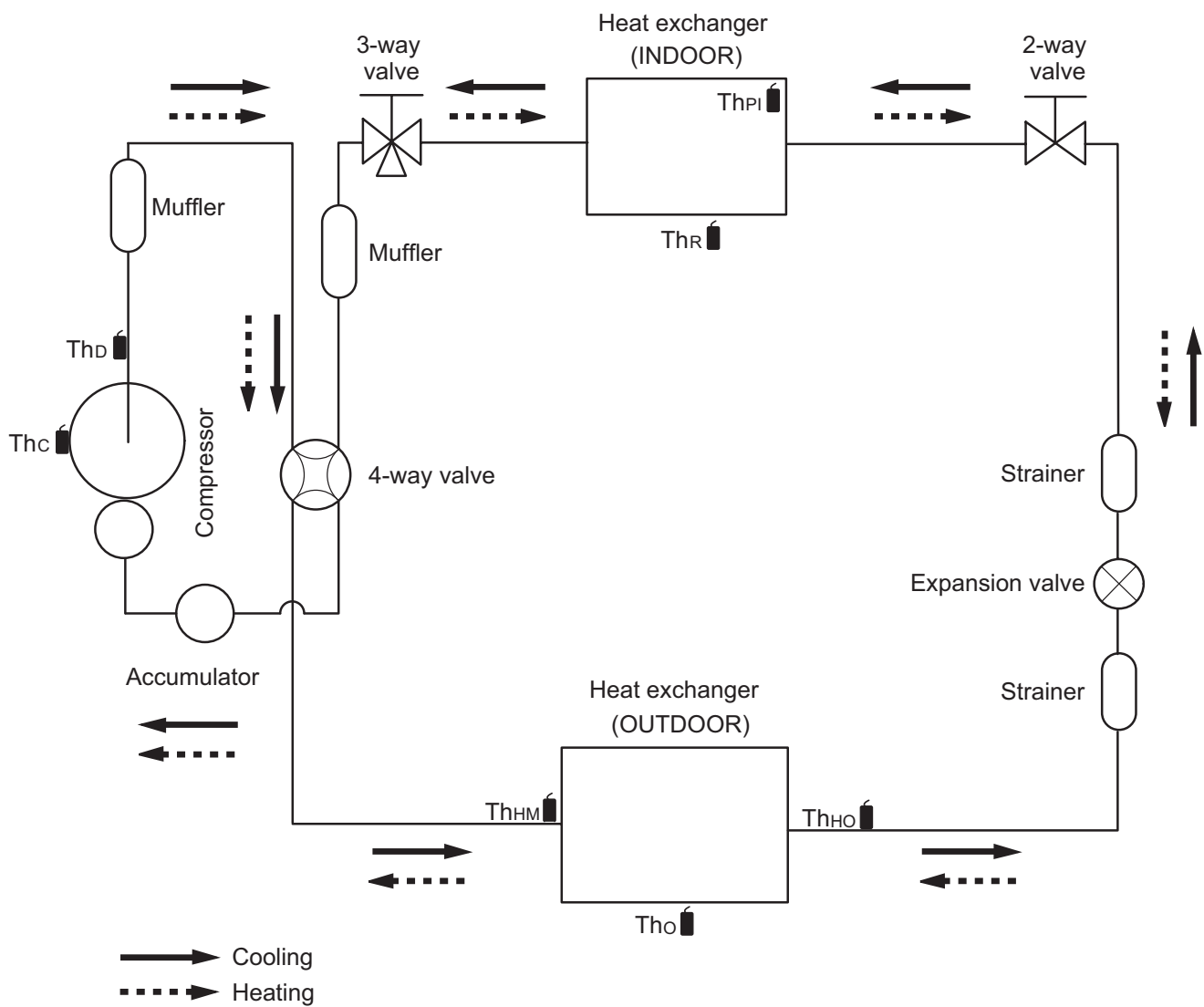
Th_O : Thermistor (Outdoor temperature)

Th_{HO} : Thermistor (Heat exchanger out temperature)

Th_{PI} : Thermistor (Pipe temperature)

Th_R : Thermistor (Room temperature)

4-2. Model: AOUH12KUBS1



Thc : Thermistor (Compressor temperature)

Thd : Thermistor (Discharge temperature)

Thhm : Thermistor (Heat exchanger middle temperature)

Tho : Thermistor (Outdoor temperature)

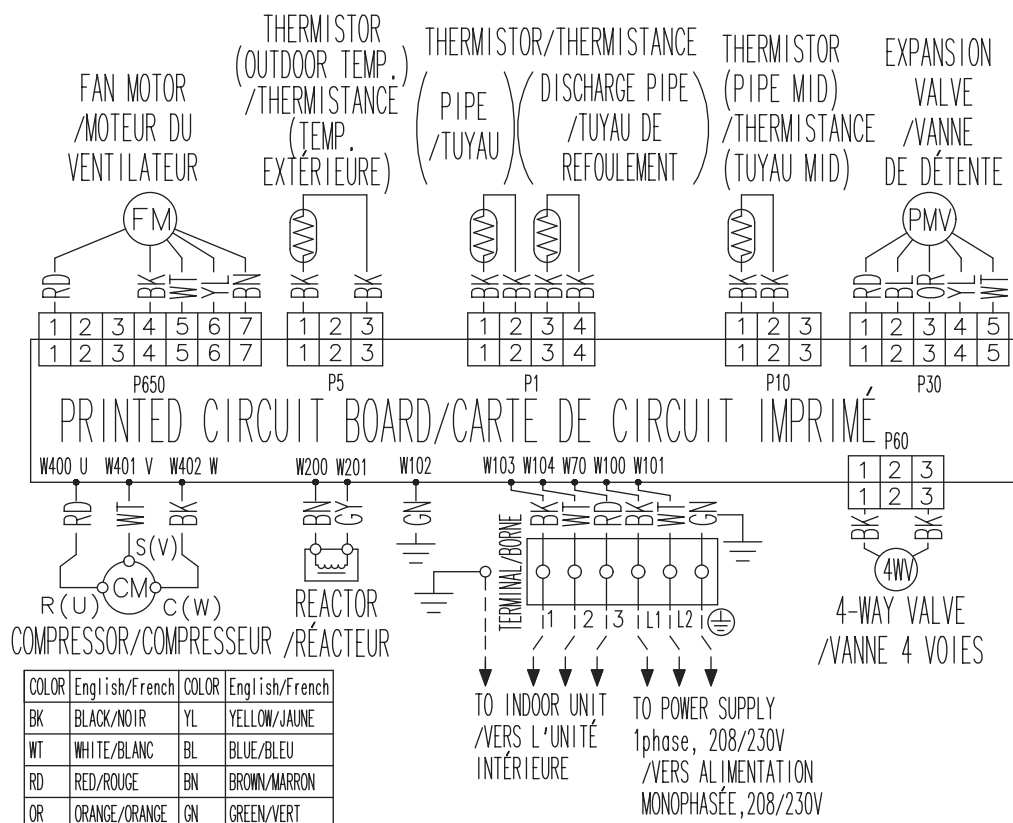
Thho : Thermistor (Heat exchanger out temperature)

Thpi : Thermistor (Pipe temperature)

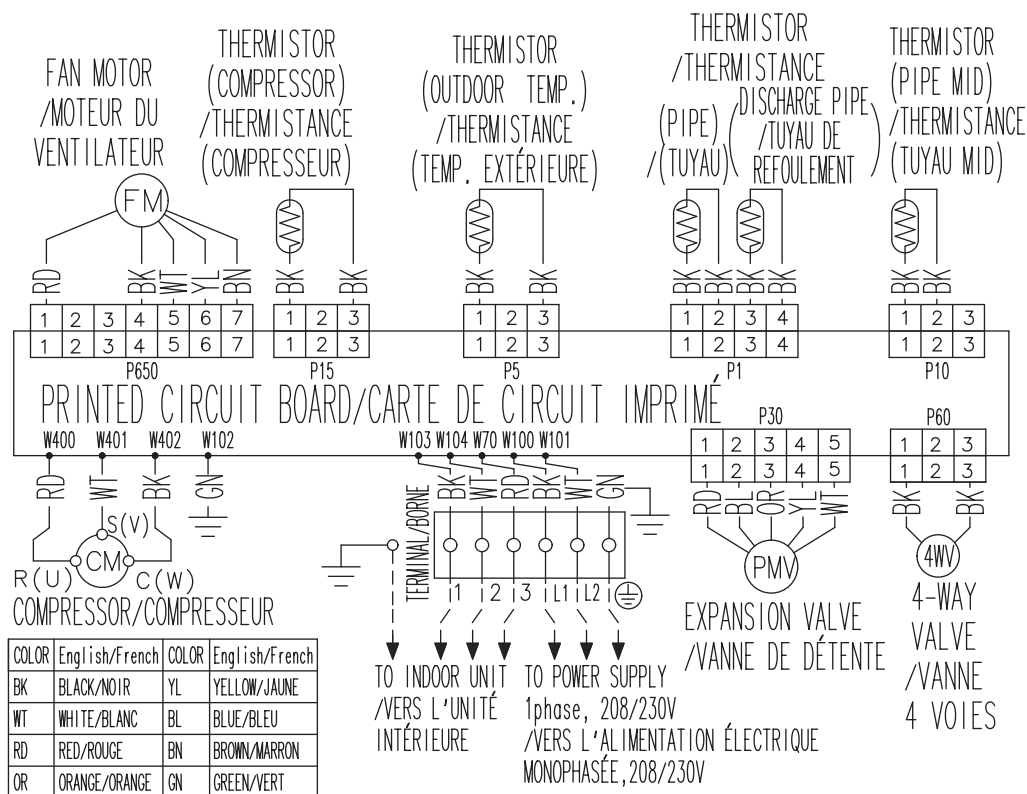
Thr : Thermistor (Room temperature)

5. Wiring diagrams

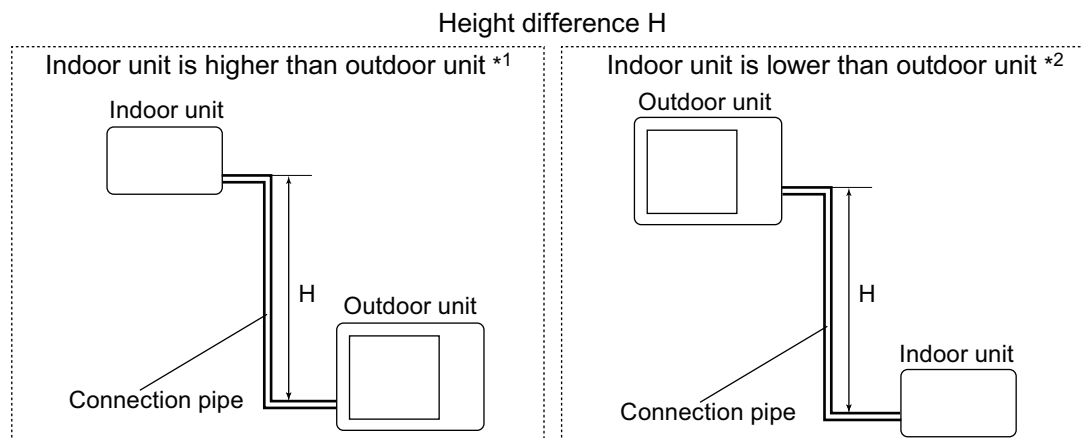
5-1. Model: AOUH09KUBS1



5-2. Model: AOUH12KUBS1



6. Capacity compensation rate for pipe length and height difference



6-1. Model: AOUH09KUBS1

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	25	33	49	66
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.883	0.893
		10	33	—	—	0.956	0.897	0.907
		7.5	25	—	0.988	0.960	0.901	0.910
		5	16	1.021	0.992	0.964	0.904	0.915
	Indoor unit is lower than outdoor unit *2	0	0	1.029	1.000	0.971	0.913	0.922
		-5	-16	1.029	1.000	0.971	0.913	0.922
		-7.5	-25	—	1.000	0.971	0.913	0.922
		-10	-33	—	—	0.971	0.913	0.922
		-15	-49	—	—	—	0.913	0.922

HEATING		Pipe length						
		m		5	7.5	10	15	20
			ft	16	25	33	49	66
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.901	0.884
		10	33	—	—	0.974	0.901	0.884
		7.5	25	—	1.000	0.974	0.901	0.884
		5	16	1.006	1.000	0.974	0.901	0.884
	Indoor unit is lower than outdoor unit *2	0	0	1.006	1.000	0.974	0.901	0.884
		-5	-16	1.001	0.995	0.969	0.896	0.880
		-7.5	-25	—	0.993	0.967	0.894	0.878
		-10	-33	—	—	0.965	0.892	0.876
		-15	-49	—	—	—	0.883	0.867

6-2. Model: AOUH12KUBS1

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

COOLING		Pipe length								
		m		5	7.5	10	15	20	25	30
			ft	16	25	33	49	66	82	98
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.877	0.815	0.811	0.807
		10	33	—	—	0.956	0.891	0.828	0.824	0.820
		7.5	25	—	0.988	0.960	0.895	0.832	0.828	0.824
		5	16	1.017	0.992	0.964	0.899	0.834	0.831	0.827
		0	0	1.025	1.000	0.971	0.906	0.841	0.837	0.833
	Indoor unit is lower than outdoor unit *2	-5	-16	1.025	1.000	0.971	0.906	0.841	0.837	0.833
		-7.5	-25	—	1.000	0.971	0.906	0.841	0.837	0.833
		-10	-33	—	—	0.971	0.906	0.841	0.837	0.833
		-15	-49	—	—	—	0.906	0.841	0.837	0.833

HEATING		Pipe length								
		m		5	7.5	10	15	20	25	30
			ft	16	25	33	49	66	82	98
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.933	0.885	0.877	0.869
		10	33	—	—	0.981	0.933	0.885	0.877	0.869
		7.5	25	—	1.000	0.981	0.933	0.885	0.877	0.869
		5	16	1.017	1.000	0.981	0.933	0.885	0.877	0.869
		0	0	1.017	1.000	0.981	0.933	0.885	0.877	0.869
	Indoor unit is lower than outdoor unit *2	-5	-16	1.012	0.995	0.976	0.928	0.880	0.872	0.864
		-7.5	-25	—	0.993	0.974	0.926	0.878	0.870	0.862
		-10	-33	—	—	0.971	0.923	0.876	0.868	0.861
		-15	-49	—	—	—	0.914	0.867	0.859	0.851

7. Additional charge calculation

7-1. Model: AOUH09KUBS1

Refrigerant type		R32
Factory charge amount	lb oz	1 lb 14 oz
	g	850

■ 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 amount	oz	0	4	
	g	0	100	

7-2. Model: AOUH12KUBS1

Refrigerant type		R32
Factory charge amount	lb oz	2 lb 4 oz
	g	1,020

■ Refrigerant charge

Total pipe length	ft	66 or less	82	98 (Max.)	0.22 oz/ft (20 g/m)
	m	20 or less	25	30 (Max.)	
Additional charge amount	oz	0	4	7	
	g	0	100	200	

8. Airflow

8-1. Model: AOUH09KUBS1

● Cooling

m ³ /h	1,540
l/s	428
CFM	906

● Heating

m ³ /h	1,540
l/s	428
CFM	906

8-2. Model: AOUH12KUBS1 (combination with AGUH12KUAS)

● Cooling

m ³ /h	1,950
l/s	542
CFM	1,148

● Heating

m ³ /h	1,980
l/s	550
CFM	1,165

8-3. Model: AOUH12KUBS1 (combination with AGUH15KUAS)

● Cooling

m ³ /h	2,130
l/s	592
CFM	1,254

● Heating

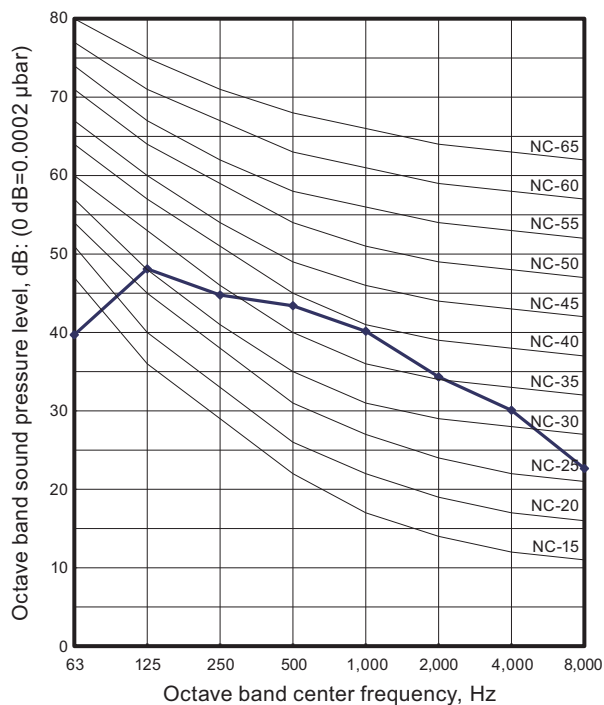
m ³ /h	1,980
l/s	550
CFM	1,165

9. Operation noise (sound pressure)

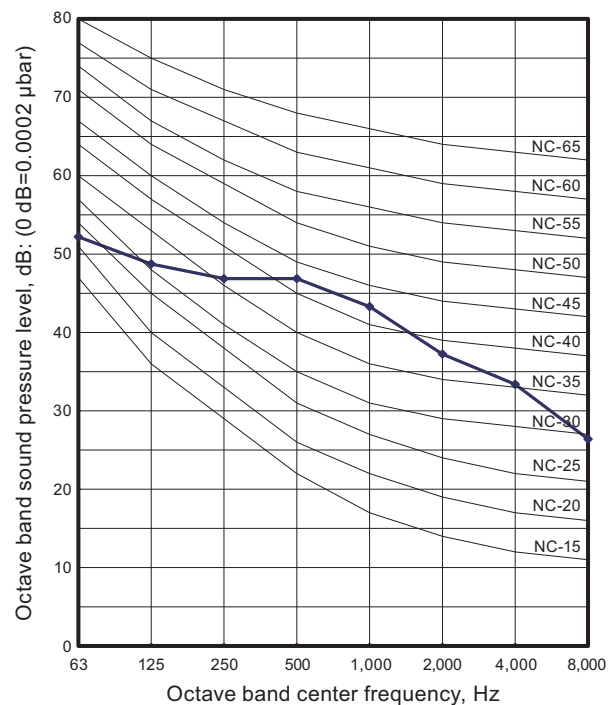
9-1. Noise level curve

■ Model: AOUH09KUBS1

● Cooling

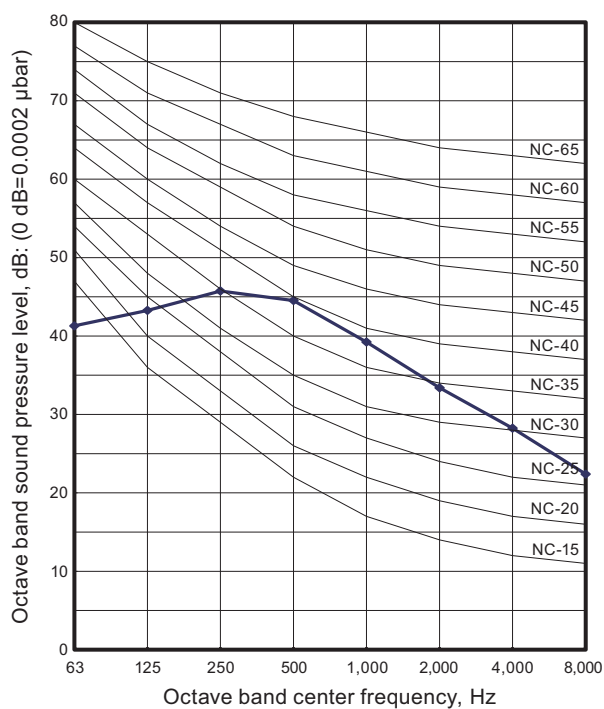


● Heating

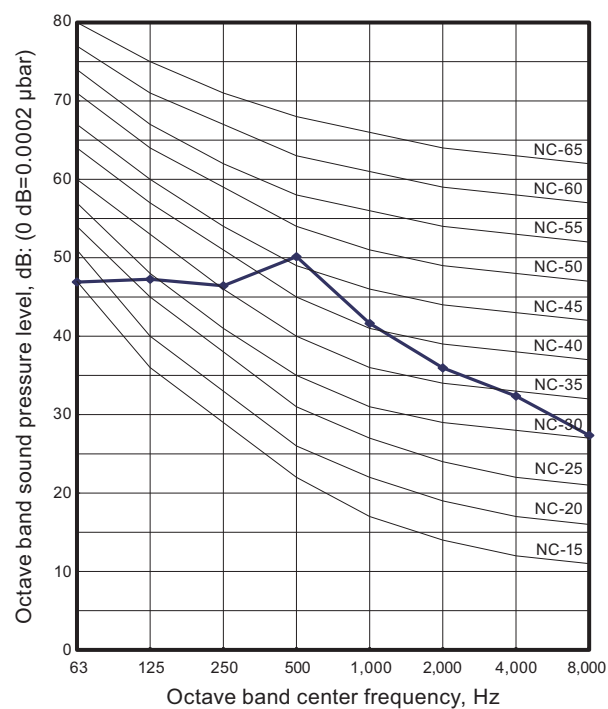


■ Model: AOUH12KUBS1 (combination with AGUH12KUAS)

● Cooling

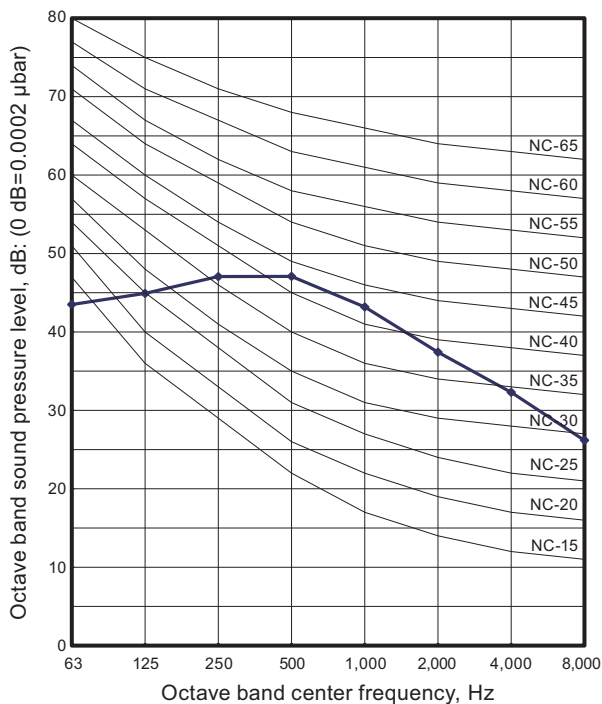


● Heating

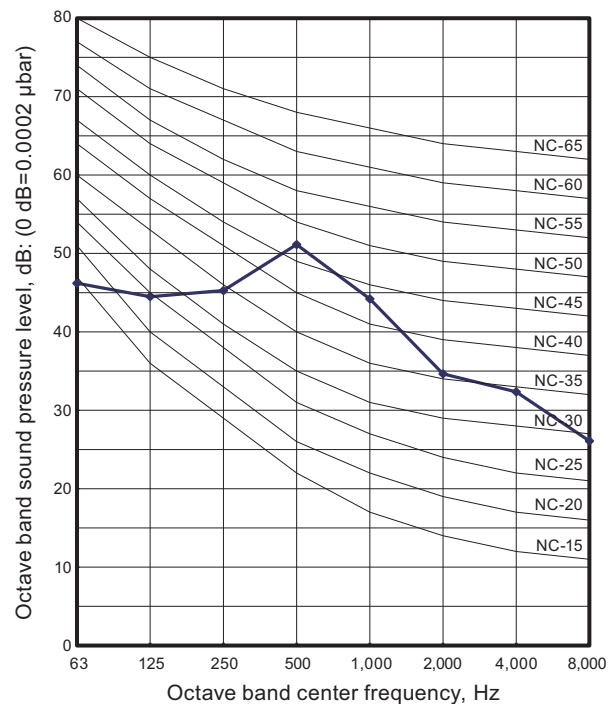


Model: AOUH12KUBS1 (combination with AGUH15KUAS)

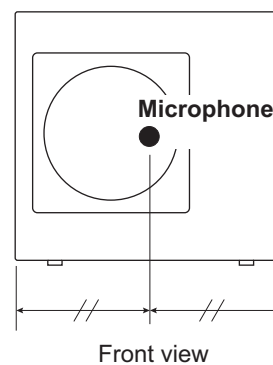
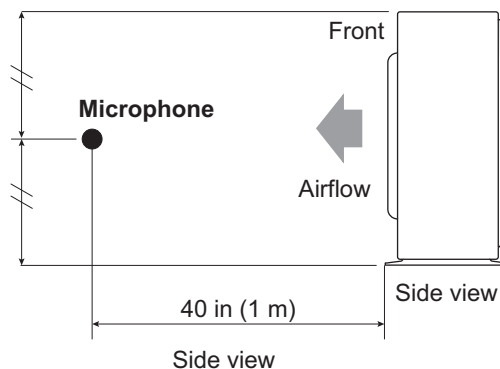
● Cooling



● 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			AOUH09KUBS1	AOUH12KUBS1
Power supply	Voltage		208/230	
	Frequency		60	
MCA* ¹		A	11.0	14.2
Starting current		A	4.5	5.8
Wiring spec.* ²	MAX. CKT. BKR* ³		15	
	Power cable		14	
	Connection cable* ³	Size	14	
		Limited wiring length	ft (m)	69 (21) 102 (31)

NOTES:

- *¹: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)
- *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.

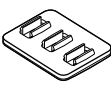
11. Safety devices

Type of protection	Protection form		Model	
			AOUH09KUBS1	AOUH12KUBS1
Circuit protection	Current fuse (PCB*)		250 V, 20 A	250 V, 25 A
			250 V, 5 A	
Fan motor protection	Thermal protection program	Activate	217.4 ±32.4°F (103 ±18°C) Fan motor stop	257 ±18°F (125 ±10°C) Fan motor stop
		Reset	203 ±32.4°F or less (95 ±18°C or less) Fan motor restart	248 ±18°F (120 ±10°C) Fan motor restart
Compressor protection	Thermal protection program (Compressor temp.)	Activate	—	226°F (108°C) Compressor stop
		Reset	—	After 3 minutes, and 176°F (80°C) or less Compressor restart
	Thermal protection program (Discharge temp.)	Activate	230°F (110°C) Compressor stop	
		Reset	After 7 minutes Compressor restart	
	Thermal protection program (Outdoor temp.) (Only in COOL and DRY mode)	Activate	-13°F (-25°C) Compressor stop	
		Reset	-4°F (-20°C) Compressor restart	

*PCB: Printed Circuit Board

12. Accessories

12-1. Models: AOUH09KUBS1 and AOUH12KUBS1

Part name	Exterior	Qty	Part name	Exterior	Qty
Installation manual		1	Cable tie		2
Drain pipe		1	Protection label		1
Drain cap		5			