AIRSTAGE

AIR CONDITIONER

Cassette type

FUJITSU

REFRIGERANT R32

INVERTER

DESIGN & TECHNICAL MANUAL

INDOOR

ACUH09KUAS
ACUH12KUAS
ACUH18KUAS

OUTDOOR

AOUH09KUAS1

AOUH12KUAS1
AOUH18KUAS1

FUJITSU GENERAL LIMITED

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Part 1. INDOOR UNIT

CASSETTE TYPE:

ACUH09KUAS
ACUH12KUAS
ACUH18KUAS

CASSETTE
ACUH09-18KUAS

1. Specifications

Type					Cassette		
					Inverter, Heat pump		
Model name					ACUH09KUAS	ACUH12KUAS	ACUH18KUAS
Power supply intake					Outdoor unit		
System power supply		Voltage		V	208/230		
		Frequency		Hz	60		
		Available voltage range		V	187—253		
Indoor unit power supply (from outdoor unit)				V	208/230		
Capacity	Cooling		Rated	kW	2.64	3.52	5.28
				Btu/h	9,000	12,000	18,000
			Min.—Max.	kW	0.91—3.20	0.91—3.99	0.91—5.89
				Btu/h	3,100—11,000	3,100—13,600	3,100—20,100
	Heating	47°FDB (Outdoor temp.)	Rated	kW	3.52	4.69	6.33
				Btu/h	12,000	16,000	21,600
			Min.—Max.	kW	0.91—4.69	0.91—5.69	0.91—7.00
				Btu/h	3,100—16,000	3,100—19,400	3,100—23,900
		17°FDB (Outdoor temp.)*1	Rated	kW	2.32	3.14	4.22
				Btu/h	7,900	10,700	14,400
			Max.	kW	3.28	5.08	5.66
				Btu/h	11,200	17,300	19,300
		5°FDB (Outdoor temp.)*2	Rated	kW	2.96	4.54	5.01
				Btu/h	10,100	15,500	17,100
			Max.	kW	2.96	4.54	5.01
				Btu/h	10,100	15,500	17,100
Input power	Cooling		Rated	kW	0.62	0.85	1.42
			Min.—Max.		0.14—0.90	0.15—1.36	0.18—2.04
	Heating	47°FDB (Outdoor temp.)	Rated		0.93	1.30	1.78
			Min.—Max.		0.15—1.72	0.21—2.02	0.18—2.50
		17°FDB (Outdoor temp.)*1	Rated		0.77	1.05	1.43
			Max.		1.42	2.18	2.39
		5°FDB (Outdoor temp.)*2	Rated		1.33	2.25	2.28
			Max.		1.33	2.25	2.28
	Fan		HIGH	W	18	23	39
			MED		15	18	27
			LOW		13	15	19
			QUIET		12	13	14
Current		Cooling	Rated	A	3.3	3.8	6.3
		Heating			4.5	5.8	7.8
EER2		Cooling		Btu/hW	14.5	14.1	12.6
COP2		Heating		kW/kW	3.78	3.60	3.54
SEER2		Cooling		Btu/hW	24.4	23.7	21.9
HSPF2		Heating			11.8	11.5	11.3
Power factor		Cooling		%	81.7	97.3	98.0
		Heating			89.9	97.5	99.2
Moisture removal				pints/h (L/h)	1.3 (0.6)	2.5 (1.2)	4.6 (2.2)
Maximum operating current*3		Cooling		A	6.4	10.2	12.2
		Heating			8.9	11.7	14.8
Fan	Airflow rate	Cooling	HIGH	CFM (m^3/h)	318 (540)	359 (610)	441 (750)
			MED		288 (490)	312 (530)	341 (580)
			LOW		259 (440)	277 (470)	288 (490)
			QUIET		230 (390)	241 (410)	
		Heating	HIGH		318 (540)	359 (610)	471 (800)
			MED		288 (490)	312 (530)	400 (680)
			LOW		259 (440)	277 (470)	341 (580)
			QUIET		230 (390)	241 (410)	265 (450)
	Type × Qty				Turbo fan × 1		
	Motor output			W	54		
Sound pressure level*4		Cooling	HIGH	dB (A)	34	37	42
			MED		32	34	36
			LOW		30	31	32
			QUIET		28	29	
		Heating	HIGH		34	37	44
			MED		32	34	40
			LOW		30	31	36
			QUIET		28	29	30
Heat exchanger type		Dimensions (H × W × D)		in (mm)	Main 1: 8-1/4 × 51-9/16 × 1/2 (210 × 1,310 × 13.3) Main 2: 8-1/4 × 49-3/16 × 1/2 (210 × 1,250 × 13.3)		Main 1: 8-1/4 × 53-9/16 × 1/2 (210 × 1,360 × 13.3) Main 2: 8-1/4 × 51 × 1/2 (210 × 1,295 × 13.3) Main 3: 8-1/4 × 48-5/8 × 1/2 (210 × 1,235 × 13.3)
		Fin pitch		FPI	Main 1: 21 Main 2: 21		Main 1: 18 Main 2: 18 Main 3: 18
		Rows × Stages			Main 1: 1 × 10 Main 2: 1 × 10		Main 1: 1 × 10 Main 2: 1 × 10 Main 3: 1 × 10
		Pipe type			Copper tube		
		Fin type			Aluminum		
Dimensions (H × W × D)	Net			in (mm)	9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)		
	Gross				10-7/16 × 28-3/4 × 24-5/8 (265 × 730 × 625)		
Weight	Net			lb (kg)	33 (15)		35 (16)
	Gross				40 (18)	42 (19)	44 (20)
Connection pipe	Size	Liquid		in (mm)	Ø1/4 (Ø6.35)		
		Gas			Ø3/8 (Ø9.52)		Ø1/2 (Ø12.70)
	Method				Flare		
Drain hose	Material				Polyvinyl chloride		
	Tip diameter			in (mm)	I.D.: Ø1 (Ø25.0), O.D.: Ø1-1/4 (Ø32.0)		

CASSETTE
ACUH09-18KUAS

Type				Cassette		
				Inverter, Heat pump		
Model name				ACUH09KUAS	ACUH12KUAS	ACUH18KUAS
Operation range	Cooling		°F (°C)	64 to 90 (18 to 32)		
			%RH	80 or less		
	Heating		°F (°C)	60 to 86 (16 to 30)		
Cassette grille (Option)	Enclosure	Material		Polystyrene		
		Color		White (UTG-CCGFGA) Approximate color of Munsell N9.25/		
	Dimensions (H × W × D)	Net	in (mm)	1-15/16 × 24-7/16 × 24-7/16 (49 × 620 × 620)		
		Gross		4-3/4 × 30-1/8 × 29-3/4 (120 × 765 × 755)		
	Weight	Net	lb (kg)	5 (2.3)		
		Gross		10 (4.5)		
Remote controller type (Option)				Wired, Wireless, Mobile app*5 (AIRSTAGE Mobile)		

NOTES:

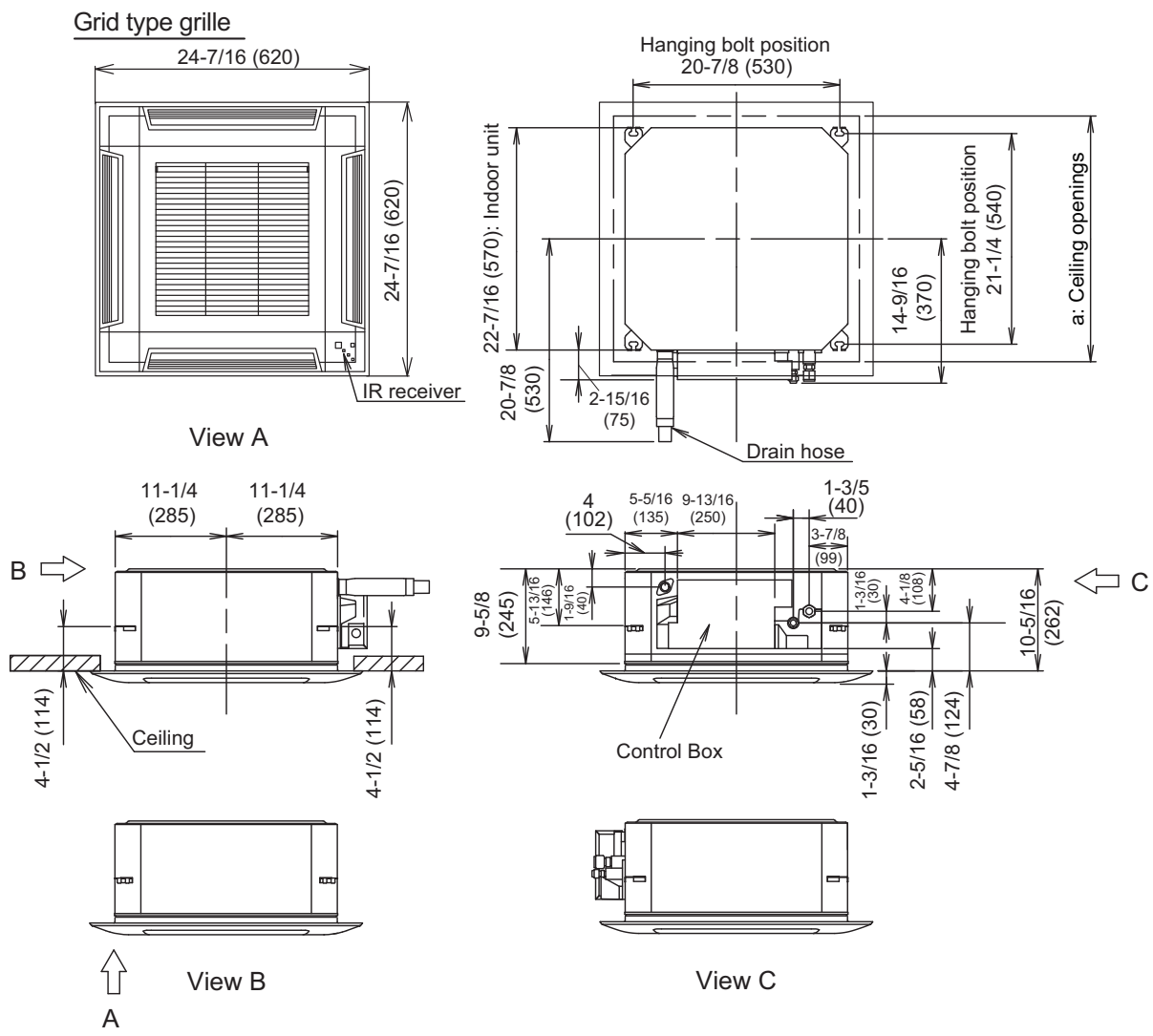
- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 80°FDB/67°FWB (26.67°CDB/19.44°CWB), and outdoor temperature of 95°FDB/75°FWB (35°CDB/23.9°CWB).
  - Heating: Indoor temperature of 70°FDB/60°FWB (21.11°CDB/15.56°CWB), and outdoor temperature of 47°FDB/43°FWB (8.33°CDB/6.11°CWB).
  - *1: Heating (17°F): Indoor temperature of 70°FDB/60°FWB (21.11°CDB/15.56°CWB), and outdoor temperature of 17°FDB/15°FWB (-8.33°CDB/-9.44°CWB).
  - *2: Heating (5°F): Indoor temperature of 70°FDB/60°FWB (21.11°CDB/15.56°CWB), and outdoor temperature of 5°FDB/4°FWB (-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®. Optional WLAN Adapter is also required. For details, refer to the setting manual.

CASSETTE
ACUH09-18KUAS

2. Dimensions

2-1. Models: ACUH09KUAS, ACUH12KUAS, and ACUH18KUAS

Unit: in (mm)

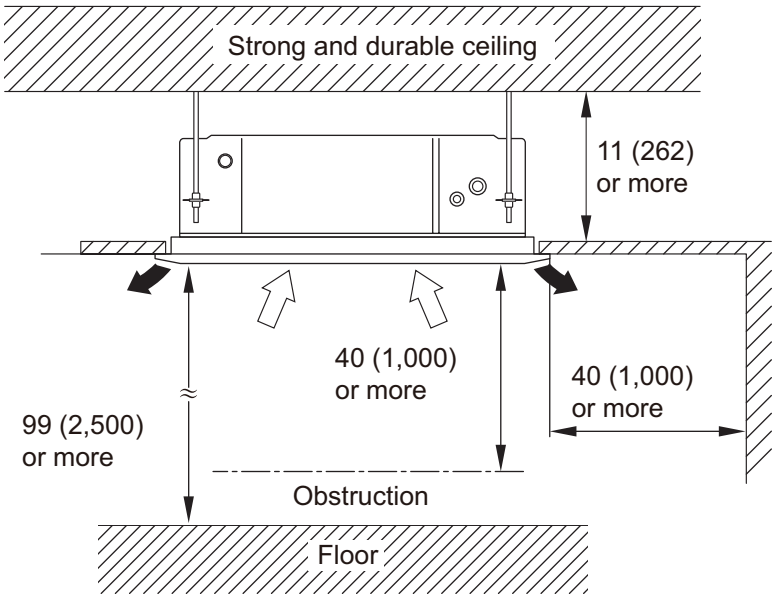


a: Ceiling openings			
Cassette grille	Grid type	in (mm)	22-13/16 to 24 (580 to 610)

CASSETTE
ACUH09-18KUAS

2-2. Installation space requirement

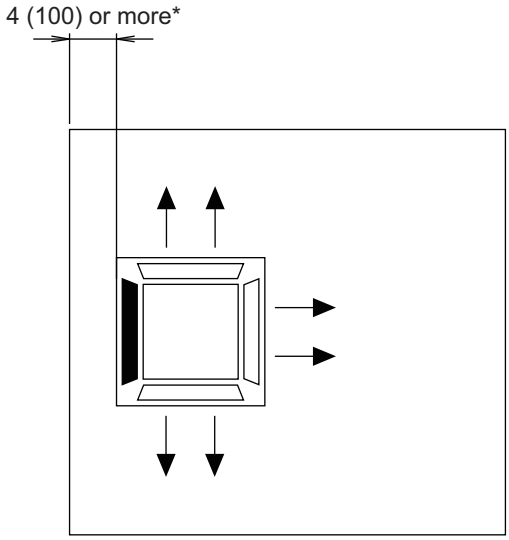
Unit: in (mm)



Maximum height from floor to ceiling [Unit: in (mm)]	
Standard	107 (2,700)
High ceiling	119 (3,000)

● 3-way direction setting

Unit: in (mm)

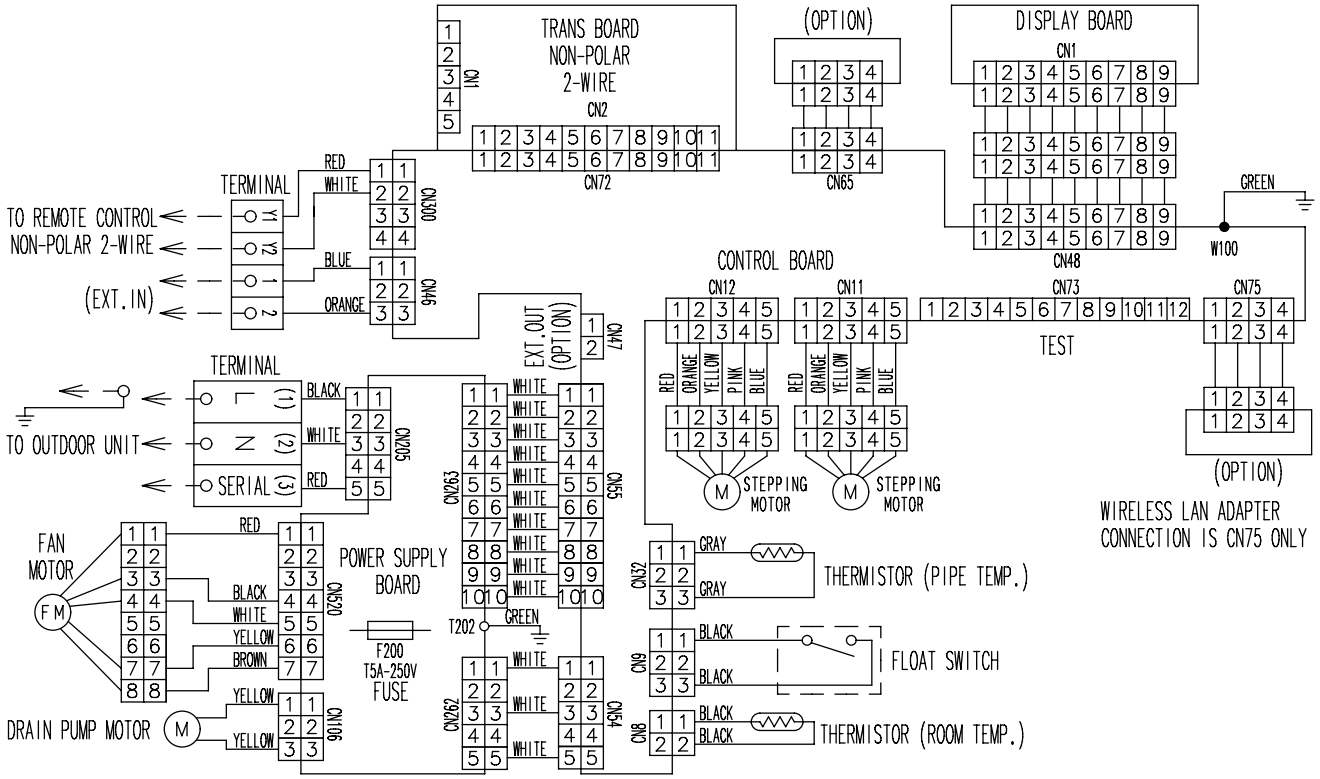


NOTES:

- To set “3-direction”, optional Air Outlet Shutter Plate (UTR-YDZB) must be installed, and the “outlet-direction” need to be switched to “3-way” by remote controller.
  *When installing the indoor unit, be careful about the maintenance space.
- In 3-way outlet mode, changing of ceiling height setting by function setting 20 is prohibited. (Ceiling height setting [function setting 20] is allowed to be changed only in 4-way outlet mode.)

3. Wiring diagrams

3-1. Models: ACUH09KUAS, ACUH12KUAS, and ACUH18KUAS



CASSETTE
ACUH09-18KUAS

4. Capacity table

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

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

4-1. Cooling capacity

■ Model: ACUH09KUAS

AFR	CFM	318

		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	9.37	6.64	0.38	10.43	6.71	0.38	10.81	7.28	0.38	11.87	7.89	0.38	12.59	7.85	0.39	13.28	8.38	0.39
	5	8.87	6.29	0.37	9.88	6.36	0.38	10.24	6.90	0.38	11.24	7.47	0.38	11.93	7.44	0.38	12.57	7.94	0.40
	14	8.43	5.97	0.39	9.38	6.04	0.39	9.72	6.55	0.39	10.67	7.10	0.39	11.33	7.06	0.41	11.94	7.54	0.41
	32	7.54	5.36	0.39	8.43	5.39	0.40	8.70	5.87	0.40	9.56	6.35	0.40	10.13	6.31	0.40	10.71	6.72	0.42
	41	7.47	5.05	0.40	8.33	5.08	0.41	8.60	5.53	0.41	9.45	5.97	0.41	10.03	5.97	0.41	10.58	6.35	0.43
	50	7.34	4.74	0.41	8.16	4.78	0.41	8.46	5.19	0.41	9.28	5.63	0.42	9.83	5.60	0.42	10.41	5.97	0.42
	59	7.17	4.57	0.42	7.98	4.61	0.42	8.26	5.02	0.42	9.06	5.43	0.43	9.62	5.39	0.43	10.17	5.77	0.43
	67	8.56	5.39	0.42	9.55	5.43	0.43	9.90	5.90	0.43	10.85	6.38	0.44	11.50	6.35	0.44	12.15	6.79	0.45
	77	8.12	5.15	0.48	9.04	5.19	0.49	9.35	5.63	0.49	10.26	6.11	0.50	10.88	6.07	0.50	11.50	6.48	0.51
	87	7.57	5.05	0.54	8.46	5.08	0.55	8.74	5.53	0.56	9.60	6.01	0.57	10.17	5.97	0.57	10.75	6.35	0.58
	95	7.10	4.85	0.60	7.92	4.85	0.61	8.19	5.29	0.61	9.00	5.73	0.62	9.55	5.70	0.63	10.10	6.07	0.63
	104	6.04	4.57	0.64	6.72	4.61	0.65	6.96	5.02	0.67	7.65	5.43	0.68	8.12	5.39	0.68	8.56	5.77	0.69
	115	5.56	5.25	0.52	6.18	5.29	0.53	6.41	5.73	0.53	7.03	6.21	0.54	7.44	6.18	0.55	7.88	6.59	0.55
	122	5.25	4.96	0.52	5.83	4.99	0.53	6.06	5.41	0.53	6.64	5.86	0.54	7.02	5.83	0.55	7.44	6.22	0.55

AFR	m^3/h	540

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
	-20.6	2.75	1.95	0.38	3.06	1.97	0.38	3.17	2.13	0.38	3.48	2.31	0.38	3.69	2.30	0.39	3.89	2.46	0.39
	-15.0	2.60	1.84	0.37	2.89	1.86	0.38	3.00	2.02	0.38	3.30	2.19	0.38	3.50	2.18	0.38	3.68	2.33	0.40
	-10.0	2.47	1.75	0.39	2.75	1.77	0.39	2.85	1.92	0.39	3.13	2.08	0.39	3.32	2.07	0.41	3.50	2.21	0.41
	0.0	2.21	1.57	0.39	2.47	1.58	0.40	2.55	1.72	0.40	2.80	1.86	0.40	2.97	1.85	0.40	3.14	1.97	0.42
	5.0	2.19	1.48	0.40	2.44	1.49	0.41	2.52	1.62	0.41	2.77	1.75	0.41	2.94	1.75	0.41	3.10	1.86	0.43
	10.0	2.15	1.39	0.41	2.39	1.40	0.41	2.48	1.52	0.41	2.72	1.65	0.42	2.88	1.64	0.42	3.05	1.75	0.42
	15.0	2.10	1.34	0.42	2.34	1.35	0.42	2.42	1.47	0.42	2.66	1.59	0.43	2.82	1.58	0.43	2.98	1.69	0.43
	19.4	2.51	1.58	0.42	2.80	1.59	0.43	2.90	1.73	0.43	3.18	1.87	0.44	3.37	1.86	0.44	3.56	1.99	0.45
	25.0	2.38	1.51	0.48	2.65	1.52	0.49	2.74	1.65	0.49	3.01	1.79	0.50	3.19	1.78	0.50	3.37	1.90	0.51
	30.0	2.22	1.48	0.54	2.48	1.49	0.55	2.56	1.62	0.56	2.81	1.76	0.57	2.98	1.75	0.57	3.15	1.86	0.58
	35.0	2.08	1.42	0.60	2.32	1.42	0.61	2.40	1.55	0.61	2.64	1.68	0.62	2.80	1.67	0.63	2.96	1.78	0.63
	40.0	1.77	1.34	0.64	1.97	1.35	0.65	2.04	1.47	0.67	2.24	1.59	0.68	2.38	1.58	0.68	2.51	1.69	0.69
	46.1	1.63	1.54	0.52	1.81	1.55	0.53	1.88	1.68	0.53	2.06	1.82	0.54	2.18	1.81	0.55	2.31	1.93	0.55
	50.0	1.54	1.45	0.52	1.71	1.46	0.53	1.77	1.59	0.53	1.94	1.72	0.54	2.06	1.71	0.55	2.18	1.82	0.55

CASSETTE
ACUH09-18KUAS

■ Model: ACUH12KUAS

AFR	CFM	359

		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	8.98	0.36	11.72	9.02	0.36	12.14	9.82	0.36	13.32	10.65	0.37	14.19	10.67	0.37	14.92	11.27	0.37
	5	10.45	8.91	0.38	11.62	8.94	0.38	12.04	9.73	0.38	13.20	10.56	0.38	14.06	10.57	0.39	14.79	11.18	0.39
	14	10.37	8.84	0.38	11.53	8.87	0.38	11.94	9.66	0.38	13.11	10.48	0.40	13.96	10.49	0.40	14.67	11.09	0.40
	32	10.20	8.67	0.40	11.36	8.74	0.40	11.74	9.49	0.41	12.91	10.27	0.41	13.68	10.24	0.42	14.47	10.88	0.42
	41	10.13	8.60	0.41	11.26	8.67	0.41	11.67	9.42	0.42	12.81	10.20	0.42	13.58	10.17	0.43	14.37	10.82	0.43
	50	10.03	8.53	0.42	11.19	8.60	0.42	11.57	9.35	0.43	12.71	10.10	0.43	13.48	10.07	0.44	14.23	10.75	0.44
	59	9.96	8.50	0.43	11.09	8.53	0.44	11.46	9.28	0.44	12.61	10.07	0.44	13.38	10.00	0.45	14.13	10.65	0.45
	67	11.23	9.59	0.55	12.52	9.62	0.56	12.93	10.48	0.57	14.22	11.36	0.58	15.08	11.29	0.58	15.93	12.04	0.58
	77	10.68	9.08	0.64	11.91	9.14	0.66	12.32	9.93	0.66	13.53	10.78	0.67	14.33	10.71	0.68	15.15	11.43	0.69
	87	10.10	8.60	0.74	11.26	8.63	0.75	11.64	9.38	0.75	12.78	10.17	0.75	13.55	10.13	0.76	14.33	10.78	0.77
	95	9.49	8.05	0.82	10.58	8.12	0.83	10.92	8.84	0.84	12.00	9.55	0.85	12.73	9.52	0.86	13.31	10.03	0.87
	104	8.02	7.20	0.90	8.91	7.23	0.91	9.21	7.88	0.92	10.13	8.53	0.93	10.75	8.50	0.95	11.36	9.04	0.96
	115	7.37	6.69	0.70	8.22	6.72	0.71	8.50	7.30	0.72	9.34	7.92	0.73	9.90	7.88	0.74	10.48	8.39	0.75
	122	6.97	6.33	0.70	7.78	6.36	0.71	8.04	6.91	0.72	8.85	7.49	0.73	9.36	7.46	0.74	9.91	7.94	0.75

AFR	m^3/h	610

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
	-20.6	3.09	2.63	0.36	3.44	2.64	0.36	3.56	2.88	0.36	3.90	3.12	0.37	4.16	3.13	0.37	4.37	3.30	0.37
	-15.0	3.06	2.61	0.38	3.41	2.62	0.38	3.53	2.85	0.38	3.87	3.09	0.38	4.12	3.10	0.39	4.33	3.28	0.39
	-10.0	3.04	2.59	0.38	3.38	2.60	0.38	3.50	2.83	0.38	3.84	3.07	0.40	4.09	3.08	0.40	4.30	3.25	0.40
	0.0	2.99	2.54	0.40	3.33	2.56	0.40	3.44	2.78	0.41	3.78	3.01	0.41	4.01	3.00	0.42	4.24	3.19	0.42
	5.0	2.97	2.52	0.41	3.30	2.54	0.41	3.42	2.76	0.42	3.76	2.99	0.42	3.98	2.98	0.43	4.21	3.17	0.43
	10.0	2.94	2.50	0.42	3.28	2.52	0.42	3.39	2.74	0.43	3.73	2.96	0.43	3.95	2.95	0.44	4.17	3.15	0.44
	15.0	2.92	2.49	0.43	3.25	2.50	0.44	3.36	2.72	0.44	3.70	2.95	0.44	3.92	2.93	0.45	4.14	3.12	0.45
	19.4	3.29	2.81	0.55	3.67	2.82	0.56	3.79	3.07	0.57	4.17	3.33	0.58	4.42	3.31	0.58	4.67	3.53	0.58
	25.0	3.13	2.66	0.64	3.49	2.68	0.66	3.61	2.91	0.66	3.97	3.16	0.67	4.20	3.14	0.68	4.44	3.35	0.69
	30.0	2.96	2.52	0.74	3.30	2.53	0.75	3.41	2.75	0.75	3.75	2.98	0.75	3.97	2.97	0.76	4.20	3.16	0.77
	35.0	2.78	2.36	0.82	3.10	2.38	0.83	3.20	2.59	0.84	3.52	2.80	0.85	3.73	2.79	0.86	3.90	2.94	0.87
	40.0	2.35	2.11	0.90	2.61	2.12	0.91	2.70	2.31	0.92	2.97	2.50	0.93	3.15	2.49	0.95	3.33	2.65	0.96
	46.1	2.16	1.96	0.70	2.41	1.97	0.71	2.49	2.14	0.72	2.74	2.32	0.73	2.90	2.31	0.74	3.07	2.46	0.75
	50.0	2.04	1.85	0.70	2.28	1.86	0.71	2.36	2.03	0.72	2.59	2.20	0.73	2.74	2.19	0.74	2.91	2.33	0.75

CASSETTE
ACUH09-18KUAS

■ Model: ACUH18KUAS

AFR	CFM	441

		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	16.31	12.35	0.62	18.17	12.43	0.63	18.79	13.52	0.63	20.65	14.64	0.65	21.88	14.58	0.65	23.12	15.52	0.66
	5	16.04	12.15	0.63	17.86	12.22	0.64	18.47	13.29	0.64	20.30	14.39	0.66	21.52	14.34	0.66	22.73	15.26	0.67
	14	15.79	11.96	0.64	17.59	12.03	0.65	18.19	13.08	0.65	19.99	14.17	0.67	21.19	14.12	0.67	22.39	15.03	0.68
	32	15.30	11.58	0.65	17.04	11.65	0.67	17.62	12.66	0.67	19.37	13.73	0.68	20.53	13.68	0.69	21.69	14.56	0.69
	41	15.06	11.41	0.66	16.77	11.46	0.68	17.34	12.47	0.68	19.06	13.51	0.69	20.20	13.45	0.70	21.34	14.33	0.70
	50	14.81	11.21	0.67	16.50	11.28	0.69	17.06	12.26	0.69	18.75	13.28	0.70	19.87	13.22	0.70	21.00	14.09	0.71
	59	14.56	10.99	0.68	16.22	11.07	0.69	16.78	12.03	0.70	18.44	13.05	0.71	19.54	12.99	0.71	20.65	13.84	0.72
	67	16.73	12.68	1.01	18.64	12.75	1.04	19.27	13.86	1.04	21.18	15.02	1.06	22.45	14.96	1.07	23.72	15.94	1.08
	77	15.96	12.05	1.12	17.78	12.13	1.13	18.38	13.19	1.14	20.20	14.28	1.16	21.41	14.23	1.17	22.62	15.16	1.18
	87	15.12	11.45	1.26	16.85	11.52	1.28	17.42	12.52	1.28	19.14	13.57	1.31	20.29	13.50	1.32	21.44	14.39	1.34
	95	14.22	10.77	1.37	15.84	10.84	1.39	16.38	11.78	1.40	18.00	12.77	1.42	19.08	12.71	1.43	20.16	13.55	1.45
	104	12.49	9.45	1.49	13.91	9.50	1.52	14.38	10.33	1.52	15.80	11.19	1.54	16.75	11.15	1.56	17.70	11.88	1.57
	115	10.48	8.59	1.20	11.67	8.64	1.22	12.07	9.40	1.23	13.26	10.18	1.25	14.06	10.13	1.26	14.86	10.81	1.28
	122	9.20	7.55	1.20	10.25	7.59	1.22	10.61	8.26	1.23	11.66	8.95	1.25	12.35	8.90	1.26	13.04	9.48	1.28

AFR	m^3/h	750

		Indoor temperature																	
	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
	°CWB	12.2			15.6			17.2			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
	-20.6	4.78	3.62	0.62	5.32	3.64	0.63	5.51	3.96	0.63	6.05	4.29	0.65	6.41	4.27	0.65	6.78	4.56	0.66
	-15.0	4.70	3.56	0.63	5.24	3.58	0.64	5.41	3.88	0.64	5.95	4.22	0.66	6.31	4.20	0.66	6.66	4.48	0.67
	-10.0	4.63	3.50	0.64	5.16	3.53	0.65	5.33	3.83	0.65	5.86	4.16	0.67	6.21	4.14	0.67	6.56	4.41	0.68
	0.0	4.48	3.40	0.65	5.00	3.42	0.67	5.17	3.72	0.67	5.68	4.03	0.68	6.02	4.01	0.69	6.36	4.28	0.69
	5.0	4.41	3.35	0.66	4.92	3.36	0.68	5.08	3.65	0.68	5.59	3.96	0.69	5.92	3.94	0.70	6.26	4.20	0.70
	10.0	4.34	3.29	0.67	4.83	3.30	0.69	5.00	3.59	0.69	5.49	3.89	0.70	5.82	3.87	0.70	6.15	4.12	0.71
	15.0	4.27	3.22	0.68	4.75	3.24	0.69	4.92	3.53	0.70	5.40	3.82	0.71	5.73	3.81	0.71	6.05	4.05	0.72
	19.4	4.90	3.71	1.01	5.46	3.73	1.04	5.65	4.06	1.04	6.21	4.40	1.06	6.58	4.39	1.07	6.95	4.67	1.08
	25.0	4.68	3.54	1.12	5.21	3.56	1.13	5.39	3.86	1.14	5.92	4.19	1.16	6.28	4.17	1.17	6.63	4.44	1.18
	30.0	4.43	3.36	1.26	4.94	3.38	1.28	5.11	3.68	1.28	5.61	3.98	1.31	5.95	3.96	1.32	6.28	4.22	1.34
	35.0	4.17	3.16	1.37	4.64	3.18	1.39	4.80	3.45	1.40	5.28	3.75	1.42	5.59	3.73	1.43	5.91	3.97	1.45
	40.0	3.66	2.77	1.49	4.08	2.79	1.52	4.22	3.03	1.52	4.63	3.28	1.54	4.91	3.26	1.56	5.19	3.48	1.57
	46.1	3.07	2.51	1.20	3.42	2.54	1.22	3.54	2.76	1.23	3.89	2.99	1.25	4.12	2.96	1.26	4.35	3.16	1.28
	50.0	2.70	2.21	1.20	3.00	2.23	1.22	3.11	2.42	1.23	3.42	2.63	1.25	3.62	2.60	1.26	3.82	2.78	1.28

CASSETTE
ACUH09-18KUAS

4-2. Heating capacity

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

■ Model: ACUH09KUAS

AFR	CFM	318

		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	9.66	1.19	9.40	1.22	9.18	1.24	8.97	1.27	8.74	1.30
	5 3	10.58	1.28	10.34	1.30	10.10	1.33	9.70	1.35	9.59	1.38
	14 12	11.48	1.35	11.22	1.37	10.92	1.40	10.58	1.42	10.40	1.45
	17 15	11.74	1.36	11.45	1.39	11.20	1.42	10.91	1.45	10.64	1.48
	23 19	12.32	1.41	12.01	1.44	11.74	1.47	11.45	1.50	11.16	1.54
	32 28	13.99	1.49	13.65	1.52	13.31	1.55	12.98	1.58	12.66	1.61
	41 37	15.49	1.58	15.12	1.62	14.74	1.65	14.37	1.68	14.02	1.72
	47 43	16.79	1.65	16.41	1.69	16.00	1.72	15.60	1.75	15.18	1.79
	50 47	16.89	1.64	16.48	1.68	16.11	1.71	15.71	1.74	15.29	1.77
	59 50	17.06	1.45	16.65	1.48	16.24	1.51	15.84	1.54	15.42	1.56

AFR	m^3/h	540

		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	2.83	1.19	2.76	1.22	2.69	1.24	2.63	1.27	2.56	1.30
	-15.0 -16.1	3.10	1.28	3.03	1.30	2.96	1.33	2.84	1.35	2.81	1.38
	-10.0 -11.1	3.36	1.35	3.29	1.37	3.20	1.40	3.10	1.42	3.05	1.45
	-8.3 -9.4	3.44	1.36	3.36	1.39	3.28	1.42	3.20	1.45	3.12	1.48
	-5.0 -7.2	3.61	1.41	3.52	1.44	3.44	1.47	3.35	1.50	3.27	1.54
	0.0 -2.2	4.10	1.49	4.00	1.52	3.90	1.55	3.81	1.58	3.71	1.61
	5.0 2.8	4.54	1.58	4.43	1.62	4.32	1.65	4.21	1.68	4.11	1.72
	8.3 6.1	4.92	1.65	4.81	1.69	4.69	1.72	4.57	1.75	4.45	1.79
	10.0 8.3	4.95	1.64	4.83	1.68	4.72	1.71	4.60	1.74	4.48	1.77
	15.0 10.0	5.00	1.45	4.88	1.48	4.76	1.51	4.64	1.54	4.52	1.56

■ Model: ACUH12KUAS

AFR	CFM	359

		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	14.66	2.11	14.31	2.16	13.96	2.20	13.63	2.24	13.26	2.29
	5 3	16.25	2.16	15.89	2.21	15.50	2.25	14.87	2.29	14.70	2.34
	14 12	17.68	2.12	17.29	2.16	16.86	2.20	16.34	2.24	16.00	2.28
	17 15	18.21	2.09	17.79	2.14	17.30	2.18	16.90	2.23	16.49	2.27
	23 19	19.11	2.06	18.66	2.11	18.19	2.15	17.73	2.20	17.30	2.24
	32 28	19.42	2.01	18.97	2.06	18.49	2.10	18.04	2.14	17.57	2.19
	41 37	19.76	1.97	19.28	2.02	18.80	2.05	18.33	2.09	17.85	2.14
	47 43	20.37	1.94	19.89	1.97	19.40	2.02	18.92	2.06	18.43	2.10
	50 47	22.49	1.71	21.94	1.75	21.39	1.78	20.87	1.81	20.34	1.84
	59 50	23.30	1.51	22.76	1.55	22.21	1.58	21.67	1.61	21.09	1.63

AFR	m^3/h	610

		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	2.11	4.19	2.16	4.09	2.20	4.00	2.24	3.89	2.29
	-15.0 -16.1	4.76	2.16	4.66	2.21	4.54	2.25	4.36	2.29	4.31	2.34
	-10.0 -11.1	5.18	2.12	5.07	2.16	4.94	2.20	4.79	2.24	4.69	2.28
	-8.3 -9.4	5.34	2.09	5.21	2.14	5.08	2.18	4.95	2.23	4.83	2.27
	-5.0 -7.2	5.60	2.06	5.47	2.11	5.33	2.15	5.20	2.20	5.07	2.24
	0.0 -2.2	5.69	2.01	5.56	2.06	5.42	2.10	5.29	2.14	5.15	2.19
	5.0 2.8	5.79	1.97	5.65	2.02	5.51	2.05	5.37	2.09	5.23	2.14
	8.3 6.1	5.97	1.94	5.83	1.97	5.69	2.02	5.55	2.06	5.40	2.10
	10.0 8.3	6.59	1.71	6.43	1.75	6.27	1.78	6.12	1.81	5.96	1.84
	15.0 10.0	6.83	1.51	6.67	1.55	6.51	1.58	6.35	1.61	6.18	1.63

CASSETTE
ACUH09-18KUAS

■ Model: ACUH18KUAS

AFR	CFM	471

			Indoor temperature									
		°FDB	60		65		70		72		75	
	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
Outdoor temperature	-5	-7	15.13	2.04	14.76	2.08	14.40	2.12	14.06	2.17	13.69	2.21
	5	3	17.64	2.19	17.22	2.24	17.10	2.28	16.40	2.32	15.97	2.37
	14	12	19.62	2.27	19.15	2.31	18.80	2.36	18.22	2.40	17.75	2.46
	17	15	20.27	2.29	19.79	2.35	19.30	2.39	18.82	2.44	18.34	2.49
	23	19	21.62	2.35	21.09	2.40	20.57	2.45	20.05	2.50	19.56	2.54
	32	28	23.58	2.43	23.02	2.48	21.76	2.53	21.90	2.58	21.34	2.63
	41	37	25.58	2.51	24.97	2.56	22.33	2.61	23.76	2.66	23.14	2.71
	47	43	26.88	2.40	26.24	2.45	23.90	2.50	24.96	2.55	24.32	2.60
	50	47	27.70	2.25	27.04	2.29	24.90	2.34	25.71	2.38	25.05	2.42
	59	50	24.82	1.99	24.23	2.04	25.90	2.08	23.06	2.12	22.47	2.15

AFR	m^3/h	800

			Indoor temperature									
		°CDB	15.6		18.3		21.1		22.0		23.9	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
Outdoor temperature	-20.6	-21.7	4.43	2.04	4.33	2.08	4.22	2.12	4.12	2.17	4.01	2.21
	-15.0	-16.1	5.17	2.19	5.05	2.24	5.01	2.28	4.81	2.32	4.68	2.37
	-10.0	-11.1	5.75	2.27	5.61	2.31	5.51	2.36	5.34	2.40	5.20	2.46
	-8.3	-9.4	5.94	2.29	5.80	2.35	5.66	2.39	5.52	2.44	5.37	2.49
	-5.0	-7.2	6.34	2.35	6.18	2.40	6.03	2.45	5.88	2.50	5.73	2.54
	0.0	-2.2	6.69	2.43	6.54	2.48	6.38	2.53	6.22	2.58	6.06	2.63
	5.0	2.8	6.87	2.51	6.71	2.56	6.54	2.61	6.38	2.66	6.22	2.71
	8.3	6.1	7.35	2.40	7.18	2.45	7.00	2.50	6.82	2.55	6.65	2.60
	10.0	8.3	7.66	2.25	7.48	2.29	7.30	2.34	7.12	2.38	6.93	2.42
	15.0	10.0	7.97	1.99	7.78	2.04	7.59	2.08	7.40	2.12	7.21	2.15

CASSETTE
ACUH09-18KUAS

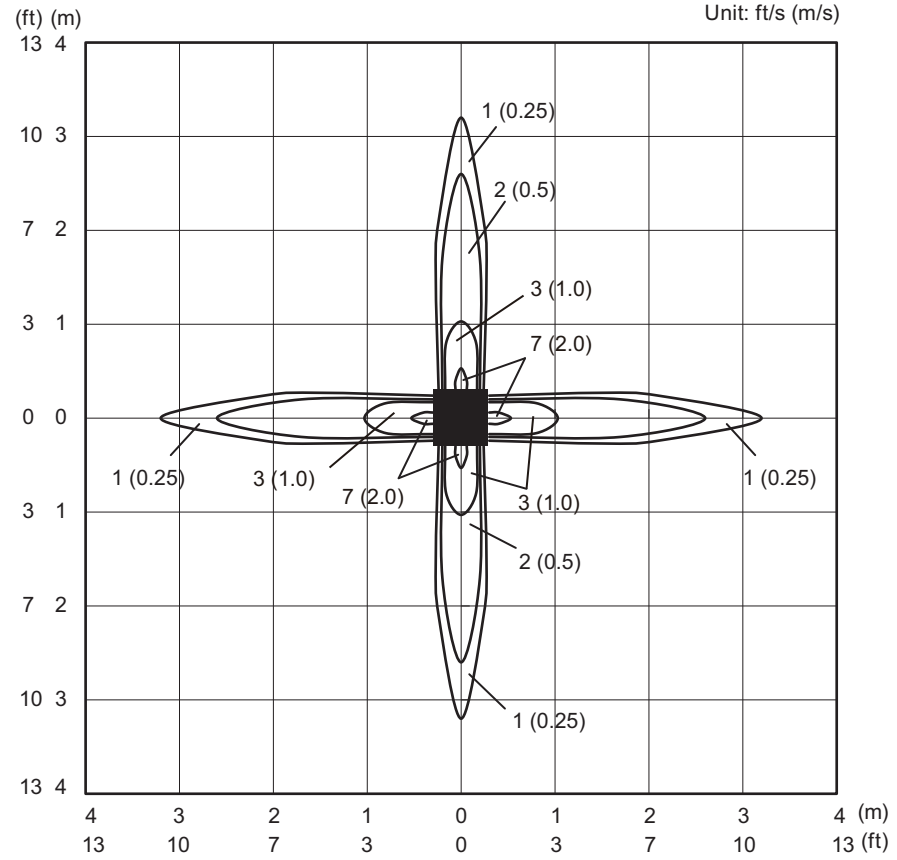
5. Fan performance

5-1. Air velocity distributions

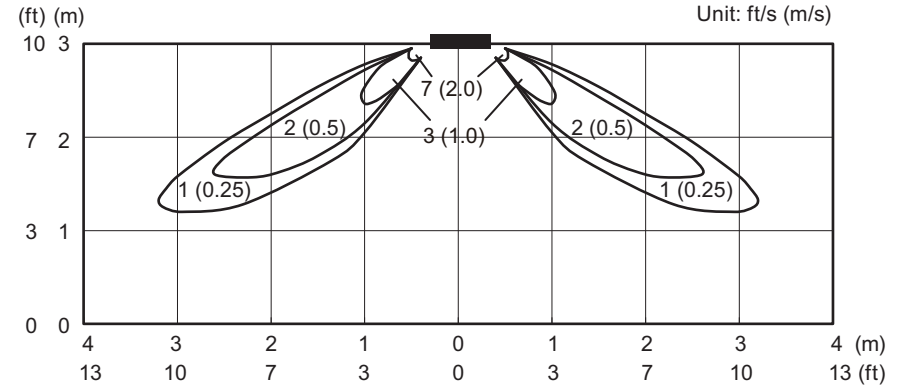
■ Model: ACUH09KUAS (4-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

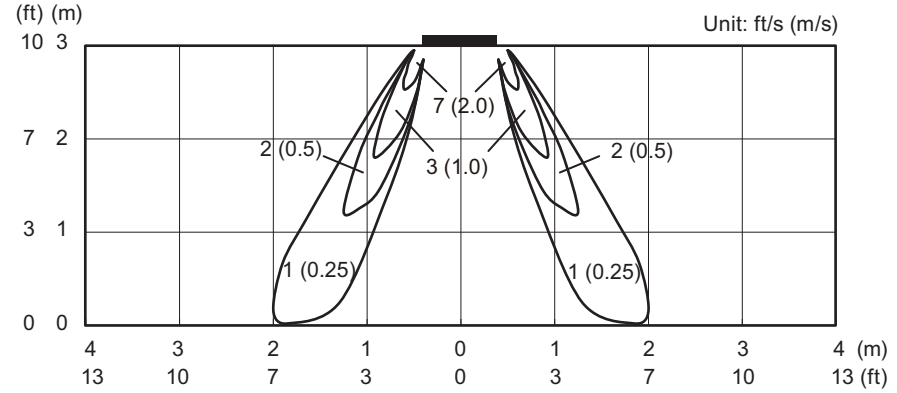
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward

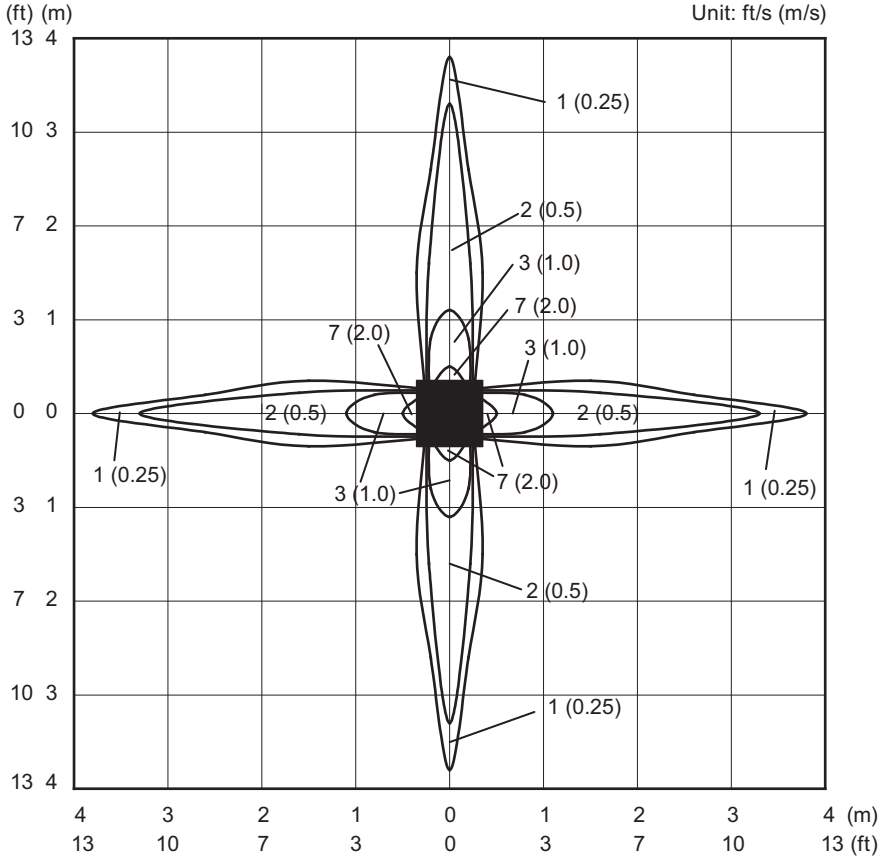


CASSETTE
ACUH09-18KUAS

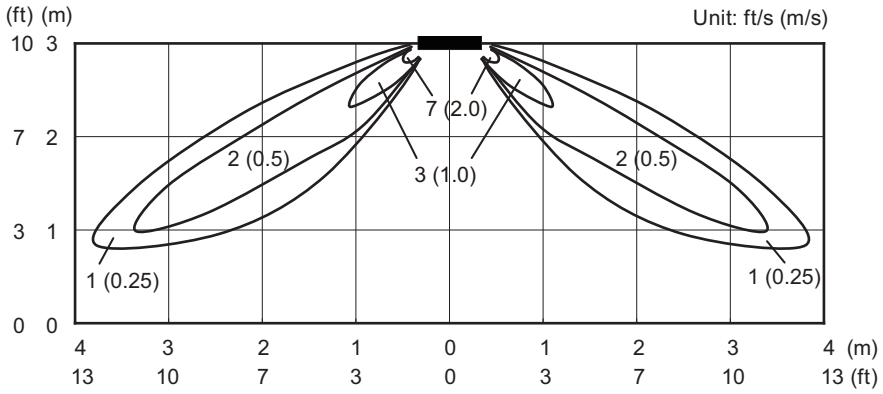
■ Model: ACUH12KUAS (4-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

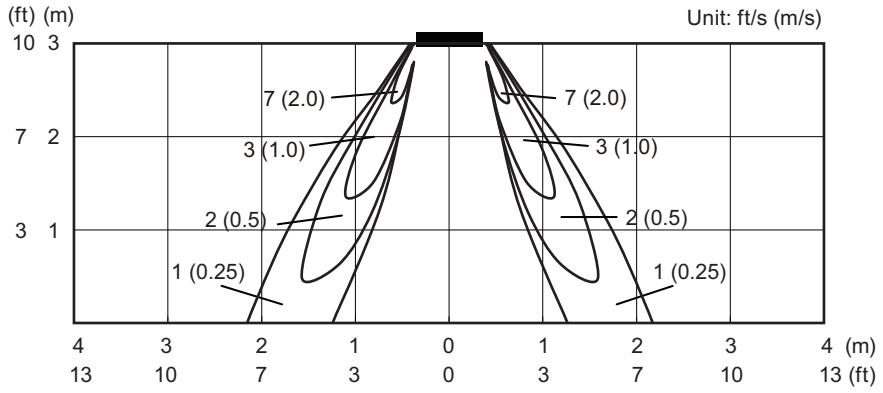
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward

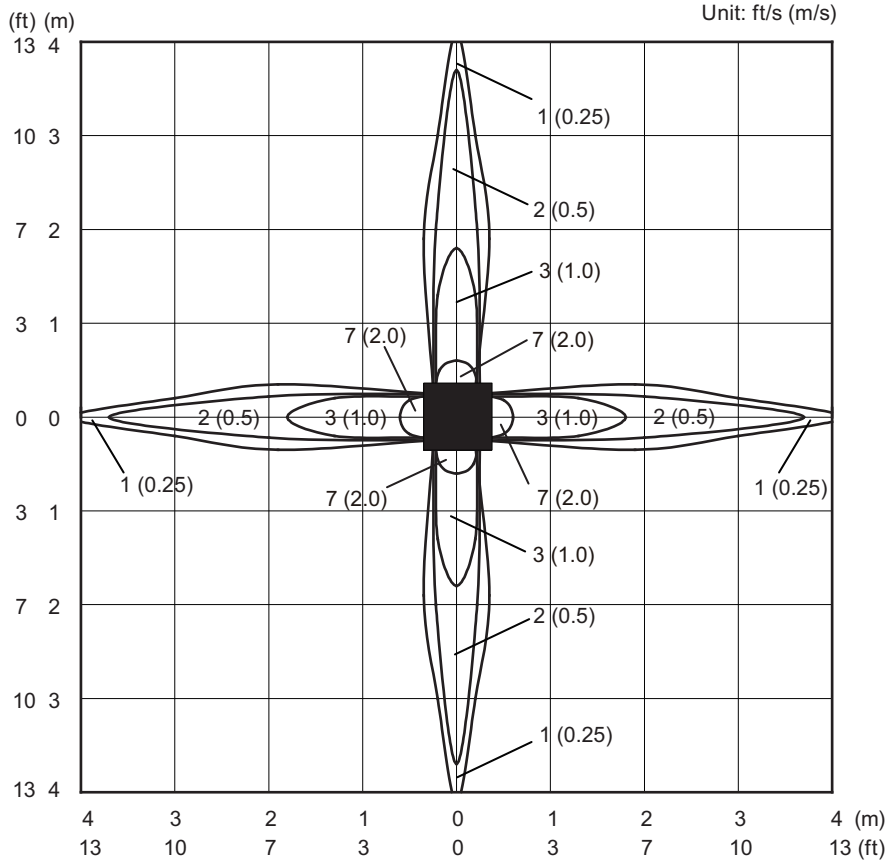


CASSETTE
ACUH09-18KUAS

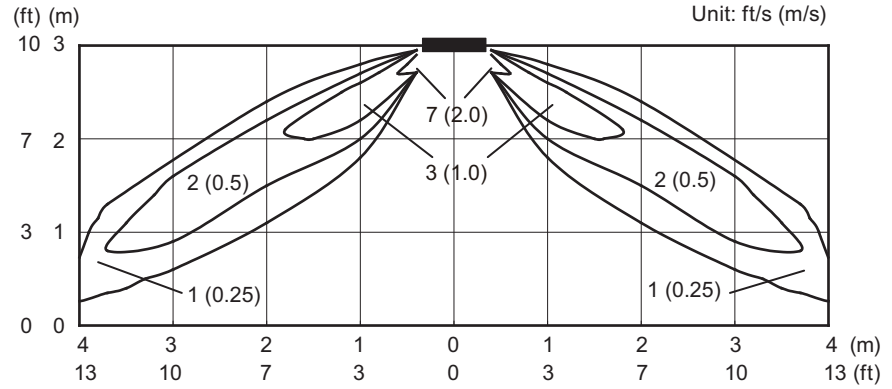
■ Model: ACUH18KUAS (4-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

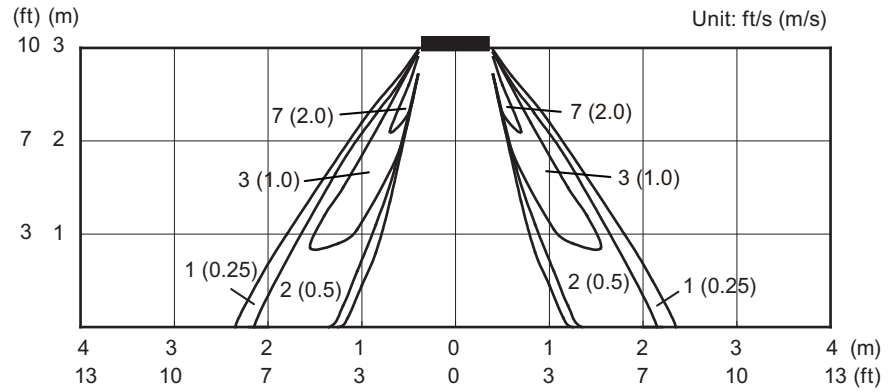
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward

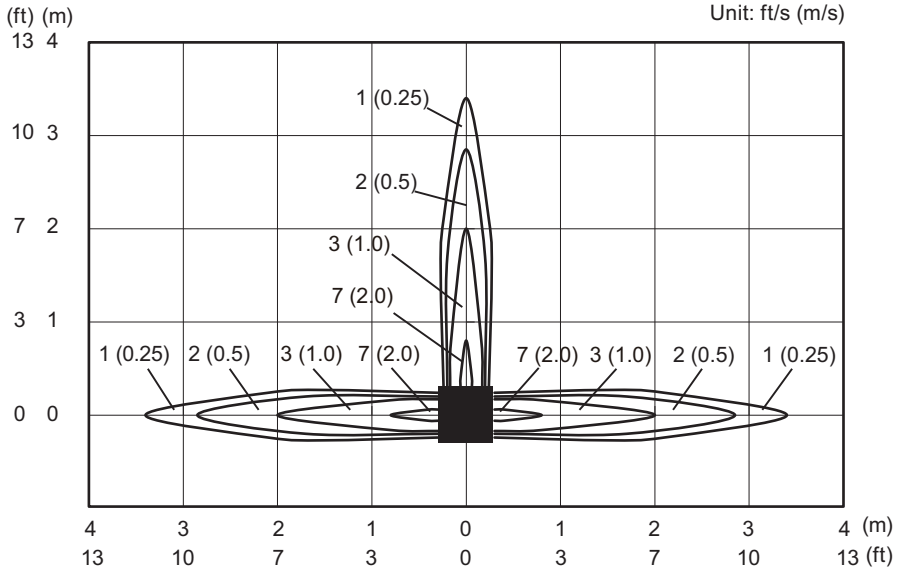


CASSETTE
ACUH09-18KUAS

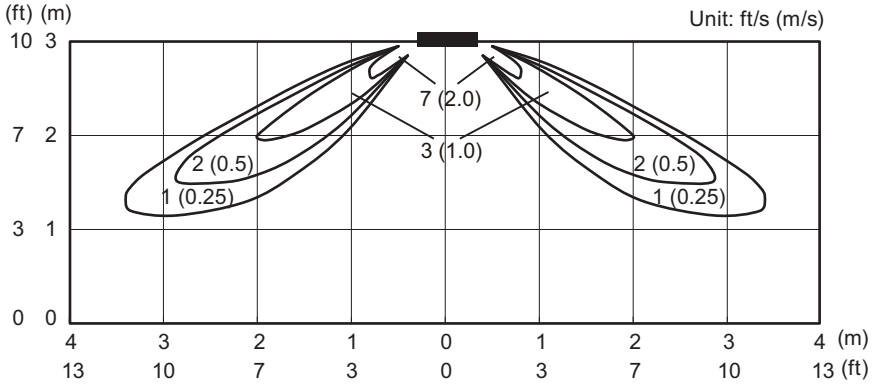
■ Model: ACUH09KUAS (3-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

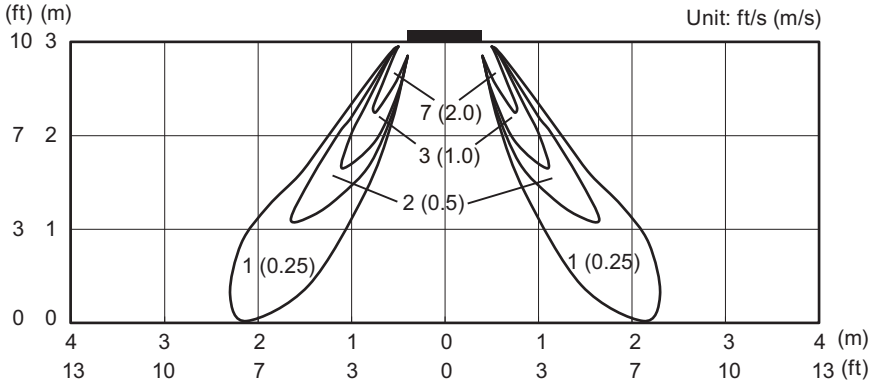
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward

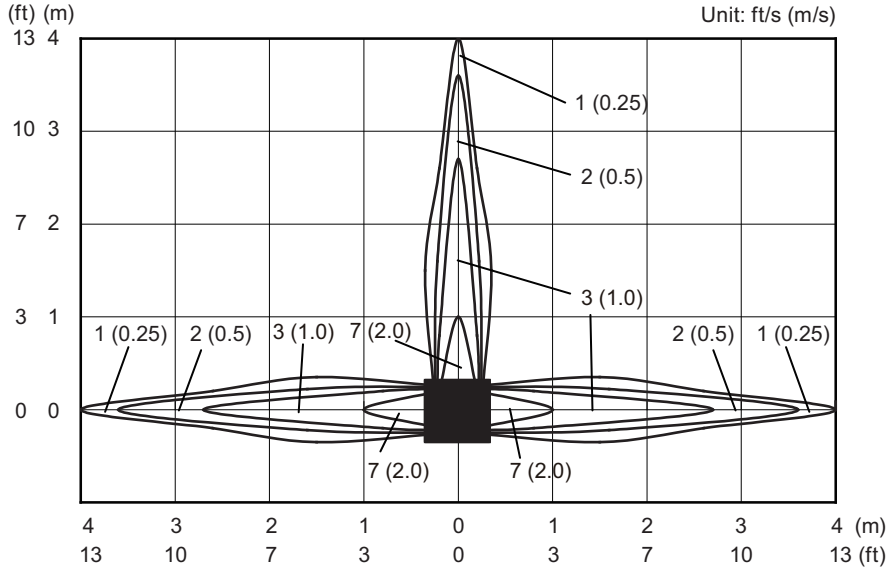


CASSETTE
ACUH09-18KUAS

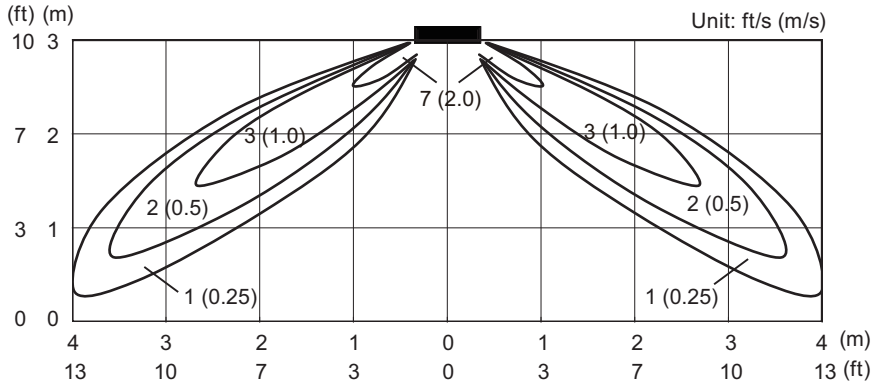
■ Model: ACUH12KUAS (3-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

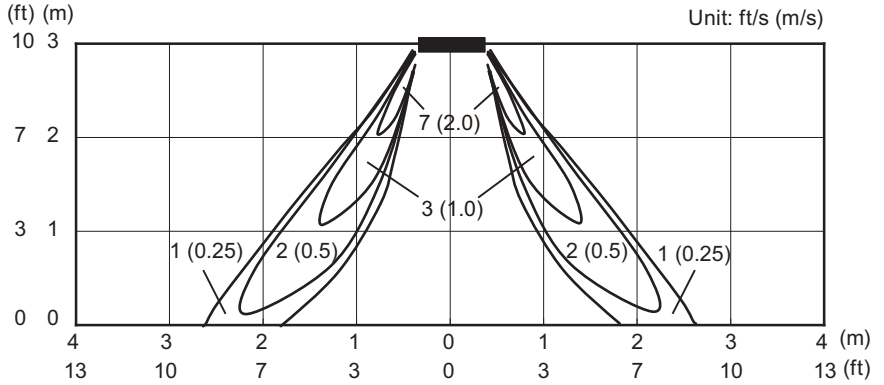
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward

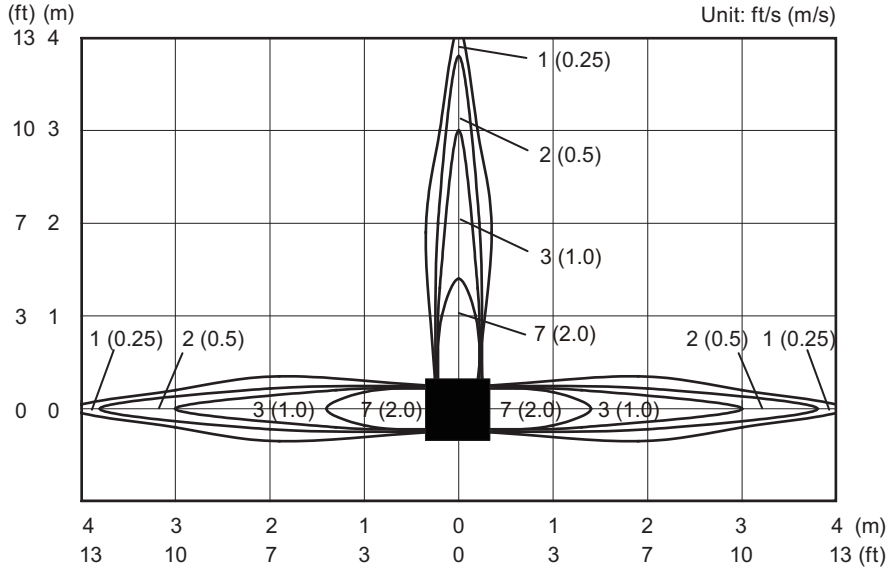


CASSETTE
ACUH09-18KUAS

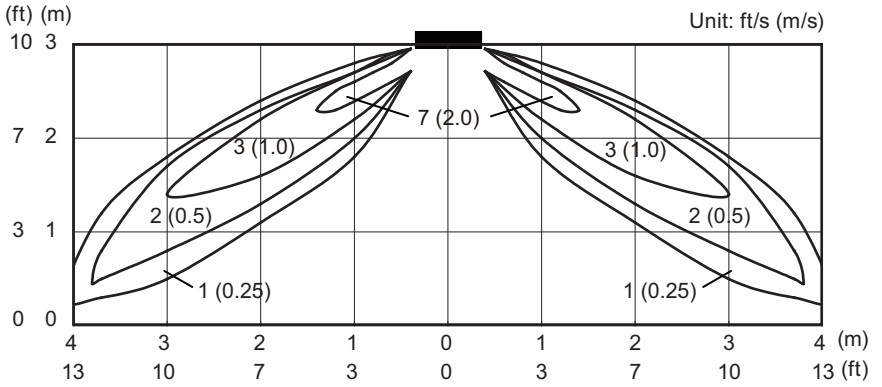
■ Model: ACUH18KUAS (3-way air outlet)

Measuring conditions	Fan speed	Operation mode	Ceiling mode
	HIGH	FAN	STANDARD

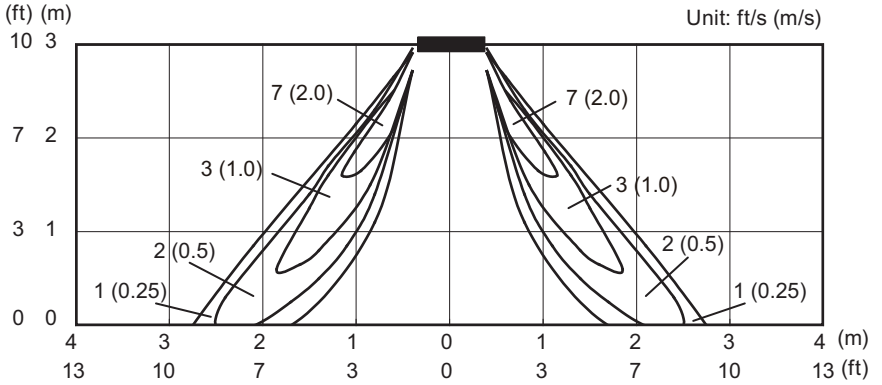
Top view
Horizontal louver: Upward



Side view
Horizontal louver: Upward



Side view
Horizontal louver: Downward



CASSETTE
ACUH09-18KUAS

5-2. Airflow

■ Model: ACUH09KUAS

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	540
	l/s	150
	CFM	318
MED	m^3/h	490
	l/s	136
	CFM	288
LOW	m^3/h	440
	l/s	122
	CFM	259
QUIET	m^3/h	390
	l/s	108
	CFM	230

● Heating

Fan speed	Airflow	
HIGH	m^3/h	540
	l/s	150
	CFM	318
MED	m^3/h	490
	l/s	136
	CFM	288
LOW	m^3/h	440
	l/s	122
	CFM	259
QUIET	m^3/h	390
	l/s	108
	CFM	230

CASSETTE
ACUH09-18KUAS

■ Model: ACUH12KUAS

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	610
	l/s	169
	CFM	359
MED	m^3/h	530
	l/s	147
	CFM	312
LOW	m^3/h	470
	l/s	131
	CFM	277
QUIET	m^3/h	410
	l/s	114
	CFM	241

● Heating

Fan speed	Airflow	
HIGH	m^3/h	610
	l/s	169
	CFM	359
MED	m^3/h	530
	l/s	147
	CFM	312
LOW	m^3/h	470
	l/s	131
	CFM	277
QUIET	m^3/h	410
	l/s	114
	CFM	241

CASSETTE
ACUH09-18KUAS

■ Model: ACUH18KUAS

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	750
	l/s	208
	CFM	441
MED	m^3/h	580
	l/s	161
	CFM	341
LOW	m^3/h	490
	l/s	136
	CFM	288
QUIET	m^3/h	410
	l/s	114
	CFM	241

● Heating

Fan speed	Airflow	
HIGH	m^3/h	800
	l/s	222
	CFM	471
MED	m^3/h	680
	l/s	189
	CFM	400
LOW	m^3/h	580
	l/s	161
	CFM	341
QUIET	m^3/h	450
	l/s	125
	CFM	265

CASSETTE
ACUH09-18KUAS

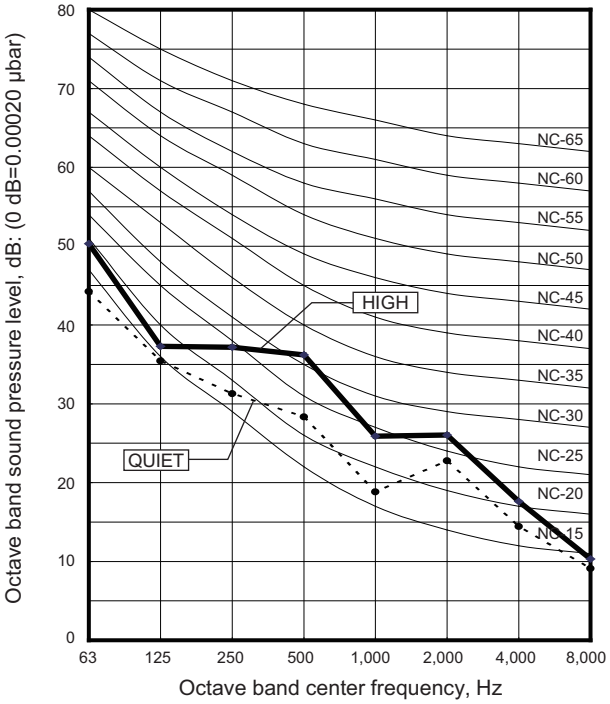
6. Operation noise (sound pressure)

6-1. Noise level curve

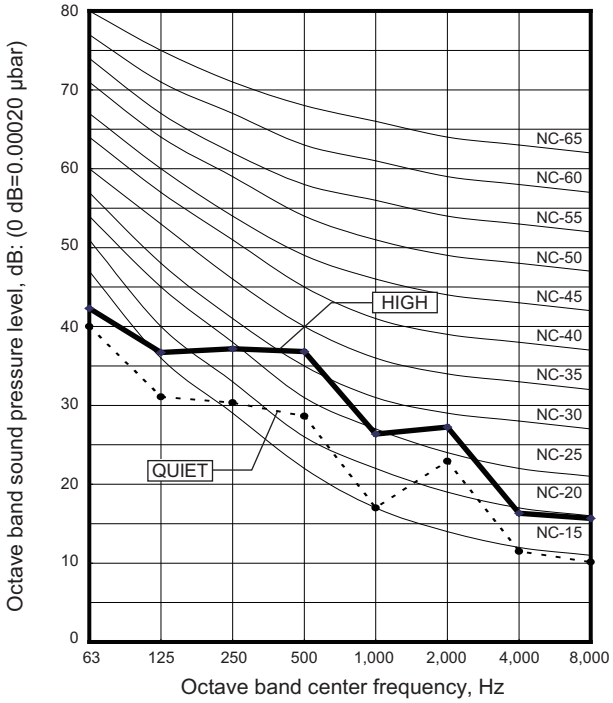
Measuring conditions	Ceiling height	Outlet directions
	Standard	4-way air outlet

■ Model: ACUH09KUAS

● Cooling

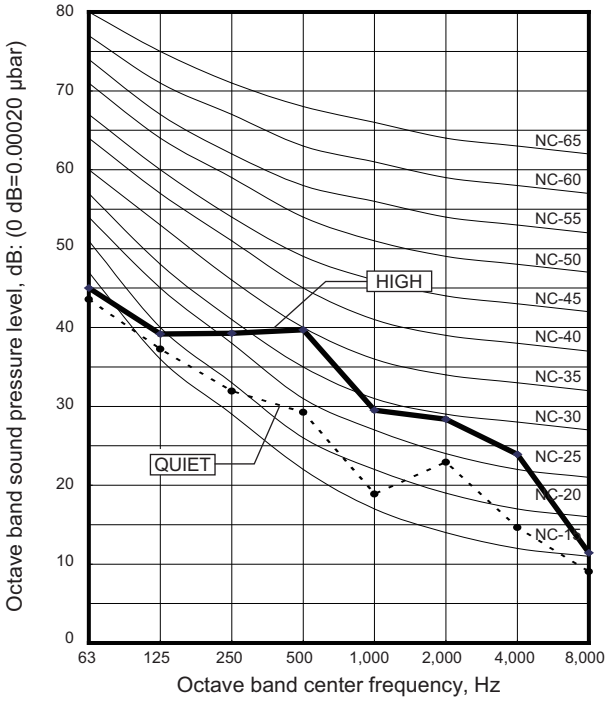


● Heating

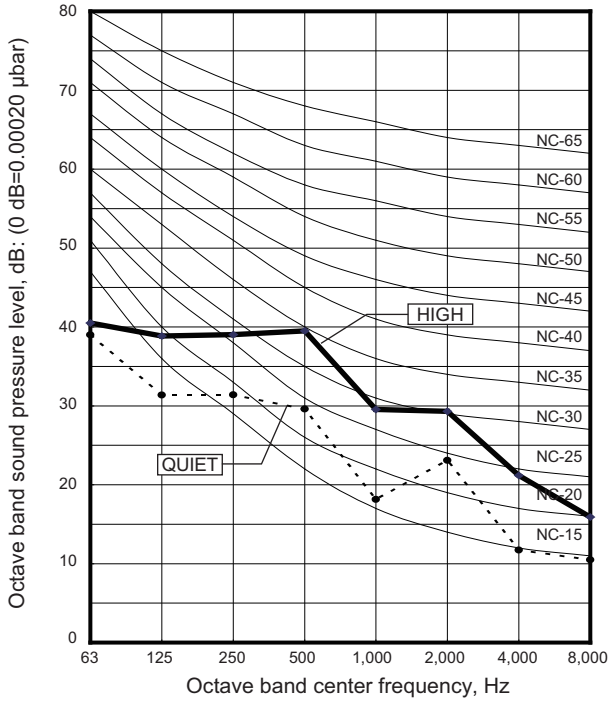


■ Model: ACUH12KUAS

● Cooling



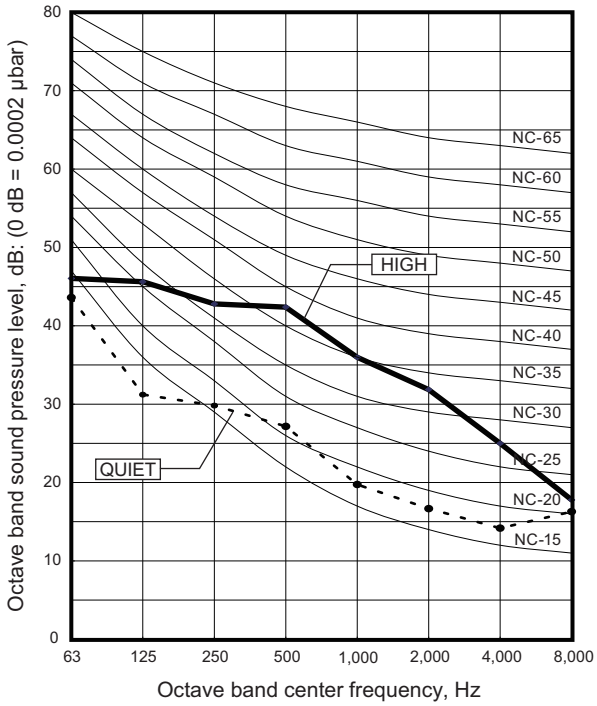
● Heating



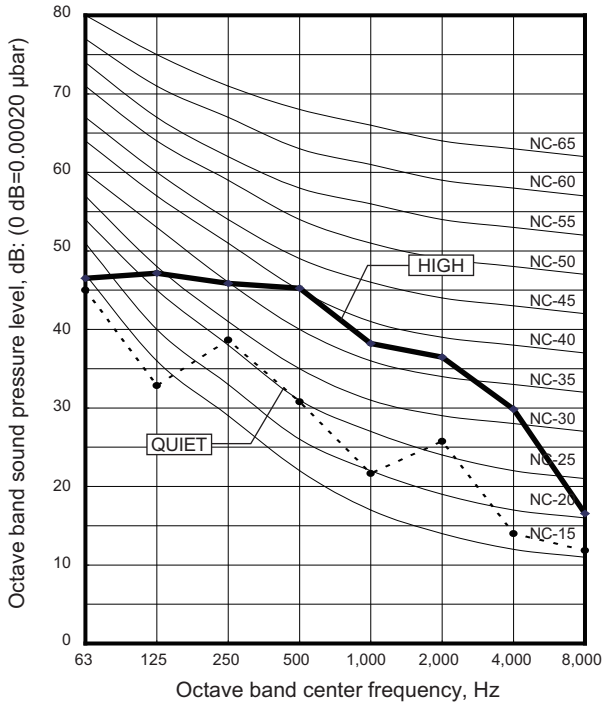
CASSETTE
ACUH09-18KUAS

■ Model: ACUH18KUAS

● Cooling

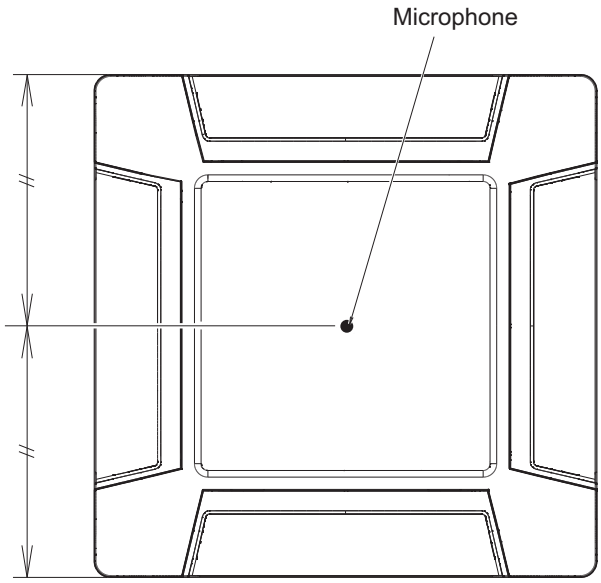


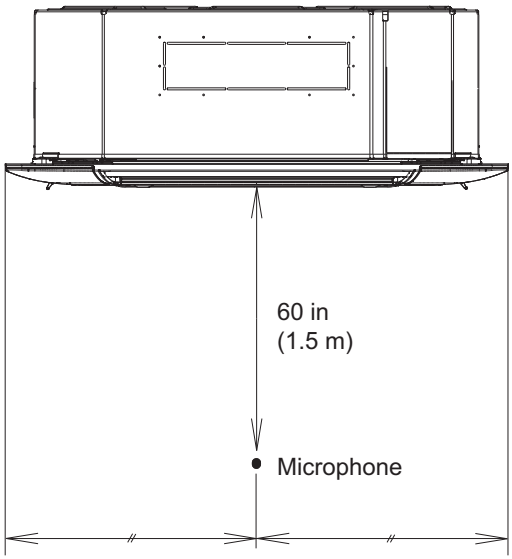
● Heating



CASSETTE
ACUH09-18KUAS

6-2. Sound level check point





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

CASSETTE
ACUH09-18KUAS

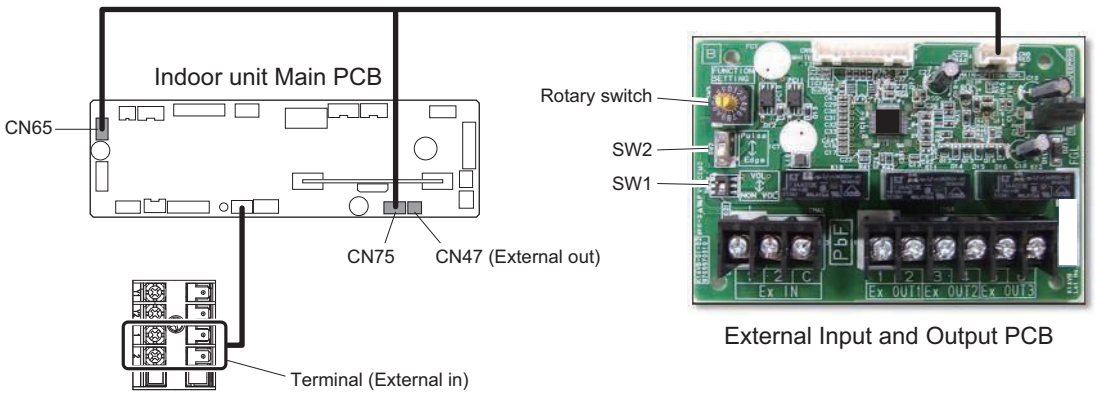
7. Safety devices

Type of protection	Protection form		Model
			ACUH09KUAS ACUH12KUAS ACUH18KUAS
Circuit protection	Current fuse (PCB*)		250 V, 5 A
Fan motor protection	Thermal protection program	Activate	212 ±27°F (100 ±15°C) Fan motor stop
		Reset	203 ±18°F (95 ±10°C) Fan motor restart

*PCB: Printed Circuit Board

CASSETTE
ACUH09-18KUAS

8. External input and output



Connecting point		Input/Output	Function	Input select	Input signal
Indoor unit	Terminal	Input	Operation/Stop	Dry contact	Edge
			Forced stop		
	CN47	Output	Operation/Stop	—	—
			Error status		
			Indoor unit fan operation status		
			Cooling thermostat On		
			Heating thermostat On		
			External heater output		
External Input and Output PCB (UTY-XCSX)	Ex IN 1/2	Input	Operation/Stop	Dry contact/Apply voltage	Edge/Pulse
	Ex IN 1		Forced thermostat off		Edge
	Ex OUT 1 Ex OUT 2 Ex OUT 3	Output	Operation/Stop	—	—
			Error status		
			Indoor unit fan operation status		
			External heater output		
			Cooling high/low output		
			Heating thermostat On		

NOTE: For details of the switching function, refer to "Setting of external input and output" on page 29.

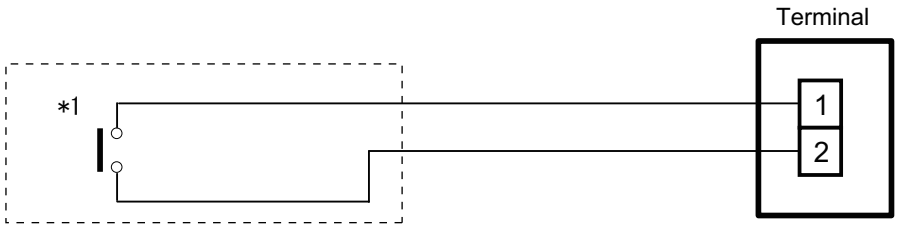
CASSETTE
ACUH09-18KUAS

8-1. External input

- “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 terminal.

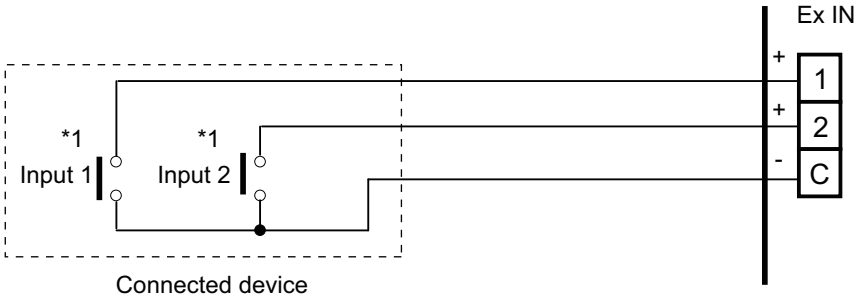


*1: The switch can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

■ External Input and Output PCB

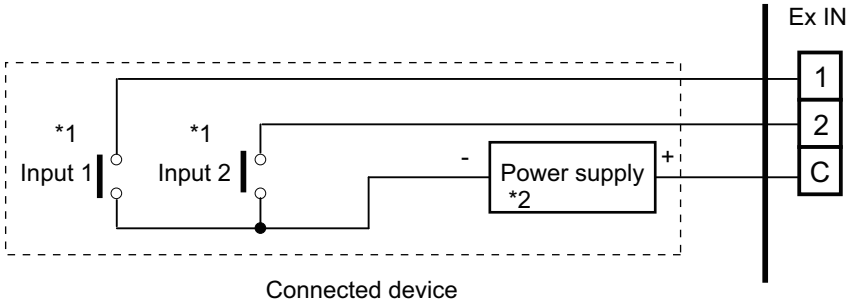
The indoor unit Operation/Stop can be set by using the input terminal on the PCB.

- **Input select**
  Use either one of these types of terminal according to the application. (Both types of terminal cannot be used simultaneously.)
  – **Dry contact**
  In case of internal power supply, set the slide switch of SW1 to "NON VOL" side.



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

  – **Apply voltage**
  In case of external power supply, set the slide switch of SW1 to “VOL” side.

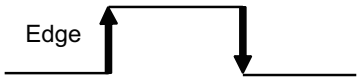


*1: The switches can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.
*2: Make the power supply DC 12 V to 24 V, 10 mA or more.

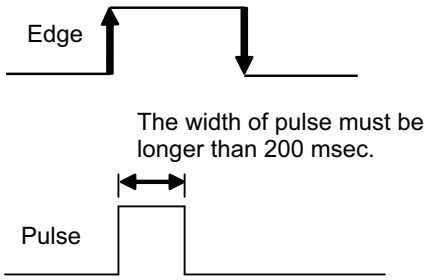
CASSETTE
ACUH09-18KUAS

■ Input signal type

- **Indoor unit**
  Input signal type is only "Edge".



- **External Input and Output PCB**
  The input signal type can be selected.
  Signal type (edge or pulse) can be switched by the DIP switch 2 (SW2) on the External Input and Output PCB.



NOTE: The input signal supports the following switch type:
- Edge: Alternate type switch
- Pulse: Momentary type switch

CASSETTE
ACUH09-18KUAS

8-2. External output

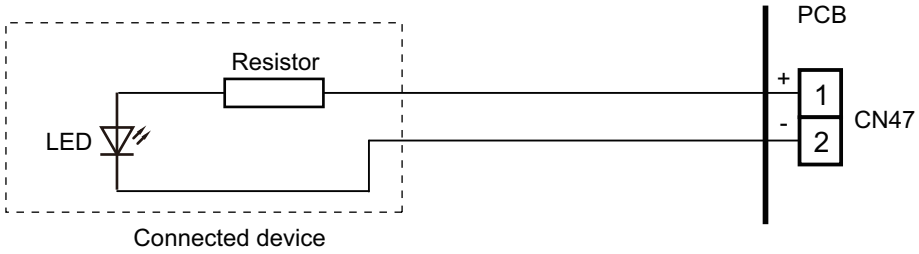
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

■ Indoor unit

- A twisted pair cable (22 AWG) should be used. Maximum length of cable is 82 ft (25 m).
- Output voltage: High DC 12 V ±2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to "Setting of external input and output" on page 29.

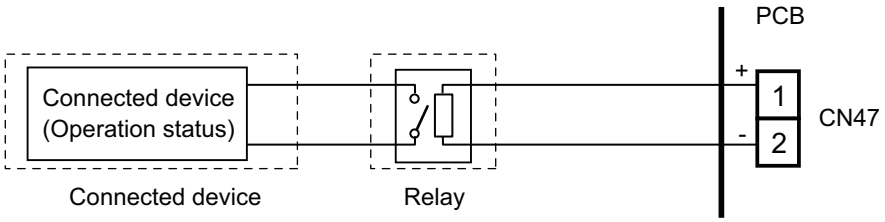
- **When indicator, etc. are connected directly**

Example: Function setting number 60 is set to "00"



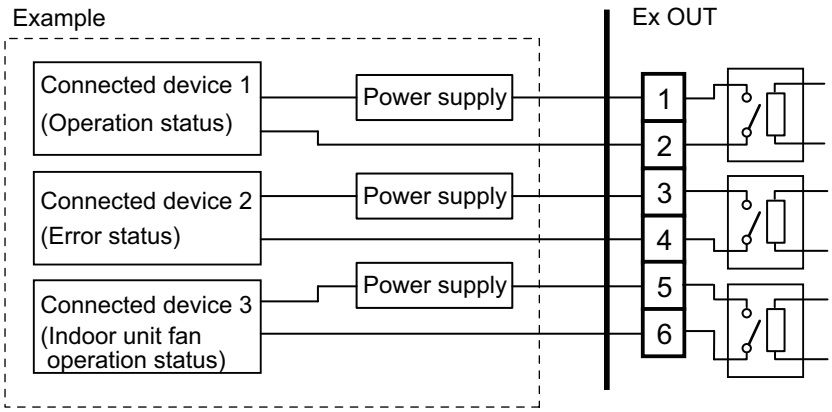
- **When connecting with a device equipped with a power supply**

Example: Function setting number 60 is set to "00"



■ External Input and Output PCB

- A twisted pair cable (22 AWG) should be used.
- Permissible voltage and current: DC 5 V to 30 V/3 A, AC 30 V to 250 V/3 A
- For details, refer to "Setting of external input and output" on page 29.



CASSETTE
ACUH09-18KUAS

8-3. Setting of external input and output

- **Indoor unit**

Input		
Connecting point	**Function setting number 46**	**Function**
Terminal	00	Operation/Stop mode 1
	01	(Setting prohibited)
	02	Forced stop mode
	03	Operation/Stop mode 2

Output		
Connecting point	**Function setting number 60**	**Function**
CN47	00	Operation/Stop
	01—04	Cooling thermostat On
	05	Heating thermostat On
	06	Operation/Stop
	07—08	Cooling thermostat On
	09	Error status
	10	Indoor unit fan operation status
	11	External heater output

CASSETTE ACUH09-18KUAS

- **External Input and Output PCB**

Switch setting		Ex IN		Ex OUT		
Rotary switch	**SW2**	**1**	**2**	**1**	**2**	**3**
1	Edge	Operation/Stop	Not available	Operation/Stop	Error status	Indoor unit fan operation status
	Pulse	Operation	Stop			
2	Edge*1	Forced thermostat off	Not available	Error status	Indoor unit fan operation status	External heater output
3		Mechanical cooling off	Not available	Error status	Indoor unit fan operation status	External heater output
4		Forced thermostat off	Not available	Error status	Operation/Stop	External heater output
5		Mechanical cooling on*2	Not available	Cooling high/low output	Operation/Stop	External heater output
6		Mechanical cooling on*2	Not available	Error status	Operation/Stop	Cooling high/low output
7		Forced thermostat off	Not available	Error status	Indoor unit fan operation status	External heater output
8		Forced thermostat off	Not available	Error status	Indoor unit fan operation status	Heating thermostat on
9		Mechanical cooling off	Not available	Error status	Heating thermostat on	External heater output
A		Forced thermostat off	Not available	Heating thermostat on	Operation/Stop	External heater output
B		Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status	External heater output
C		Forced thermostat off	Not available	Operation/Stop	Error status	External heater output
D		Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status	Error status

NOTES:

- When the rotary switch is selected to “1", the operation of the terminal input of the indoor unit and the External Input and Output PCB input are the same. The operation content depends on the setting of function setting number 46.
- *1: The external input other than “Operation/Stop” is available only when the SW2 is set to “Edge”.
- *2: The external input of “Mechanical cooling on” is available only when the function setting number 60 is set to “03” or “04”.

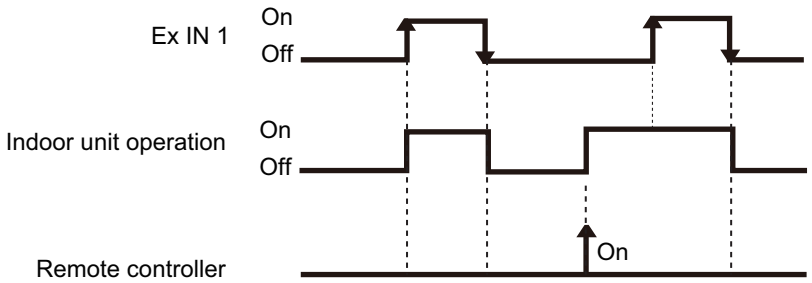
CASSETTE ACUH09-18KUAS

8-4. Details of control input function

■ Operation/Stop mode 1

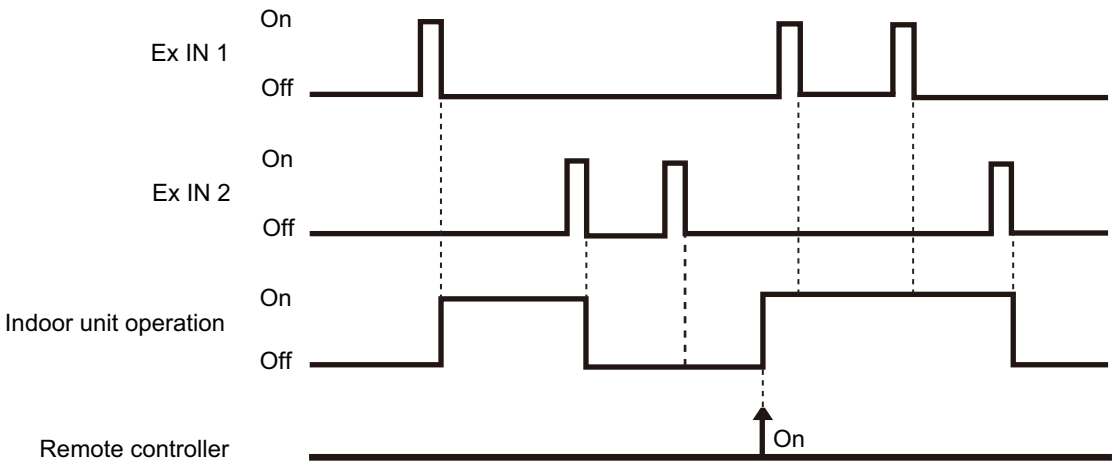
- **In the case of "Edge" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-00	—		Input of indoor unit	Terminal	Off → On	Operation
					On → Off	Stop
	1	Edge	External Input and Output PCB	Ex IN 1	Off → On	Operation
					On → Off	Stop



- **In the case of "Pulse" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-00	1	Pulse	External Input and Output PCB	Ex IN 1	Pulse	Operation
				Ex IN 2		Stop



NOTES:

- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.

CASSETTE
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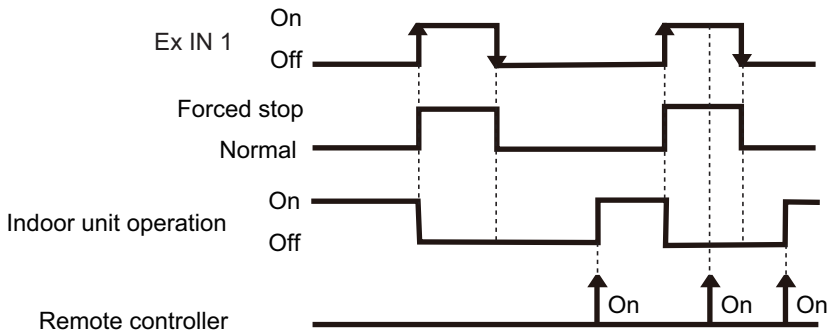
■ Forced stop

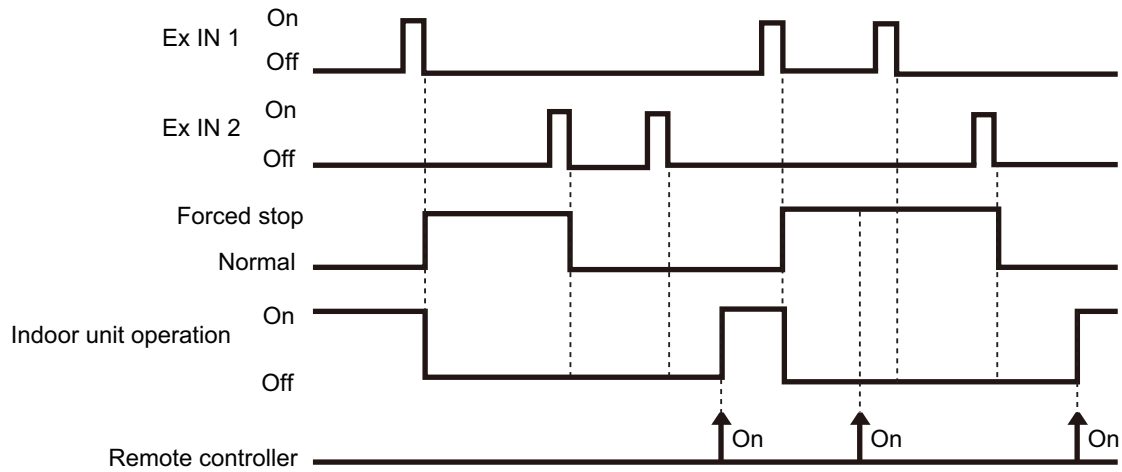
- **In the case of "Edge" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-02	—		Input of indoor unit	Terminal	Off → On	Forced stop (R.C. disabled)
					On → Off	Normal (R.C. enabled)
	1	Edge	External Input and Output PCB	Ex IN 1	Off → On	Forced stop (R.C. disabled)
					On → Off	Normal (R.C. enabled)



- **In the case of "Pulse" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-02	1	Pulse	External Input and Output PCB	Ex IN 1	Pulse	Forced stop (R.C. disabled)
				Ex IN 2		Normal (R.C. enabled)



NOTES:

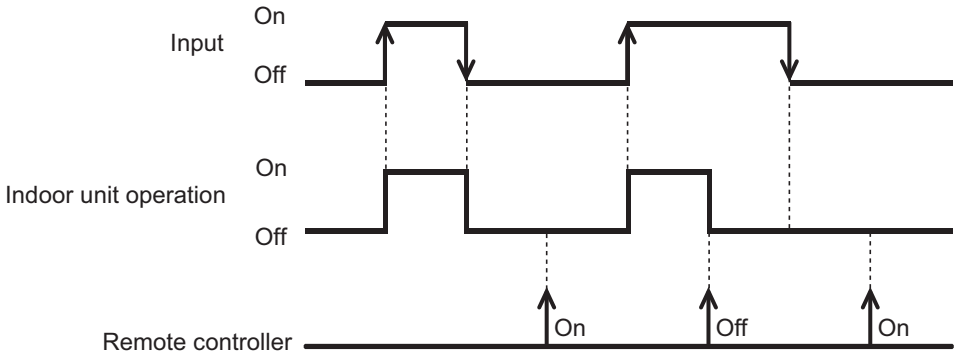
- When the forced stop is triggered, indoor unit stops and Operation/Stop operation by the remote controller is restricted.
- When forced stop function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

CASSETTE ACUH09-18KUAS

■ Operation/Stop mode 2

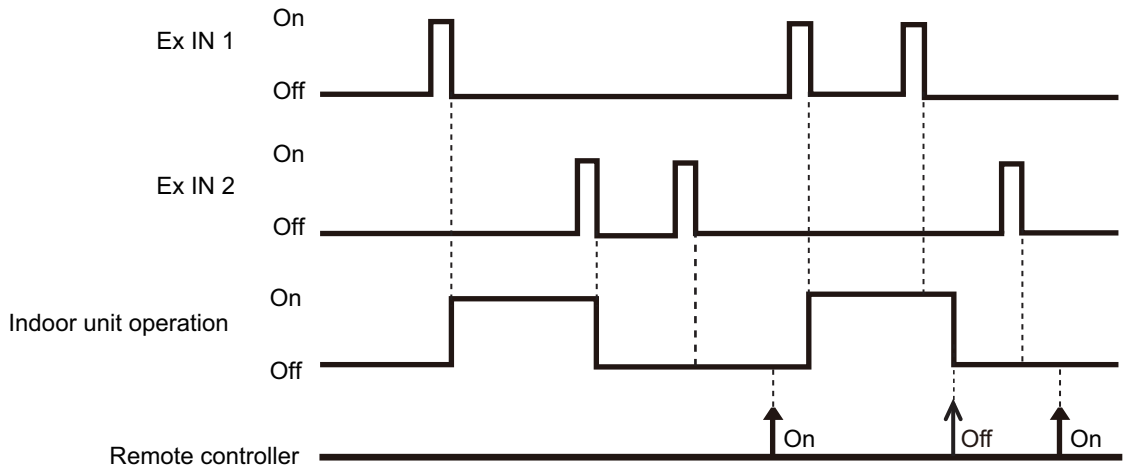
- **In the case of "Edge" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-03	—		Input of indoor unit	Terminal	Off → On	Operation (R.C. enabled)
					On → Off	Stop (R.C. disabled)
	1	Edge	External Input and Output PCB	Ex IN 1	Off → On	Operation (R.C. enabled)
					On → Off	Stop (R.C. disabled)



- **In the case of "Pulse" input**

Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-03	1	Pulse	External Input and Output PCB	Ex IN 1	Pulse	Operation (R.C. enabled)
				Ex IN 2		Stop (R.C. disabled)



NOTE: When "Operation/Stop" mode 2 function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.

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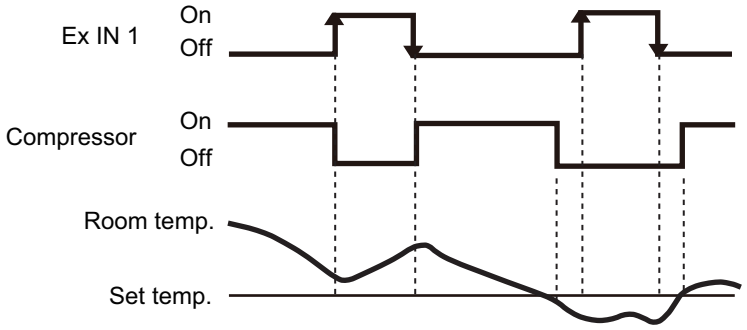
■ Forced thermostat off

External Input and Output PCB Rotary switch	External input		Input signal	Command
2, B, C, D	External Input and Output PCB	Ex IN 1	Off → On	Thermostat off
			On → Off	Normal operation
4, 7, 8, A	External Input and Output PCB	Ex IN 1	Off → On	Thermostat off
			On → Off	Normal operation



CASSETTE
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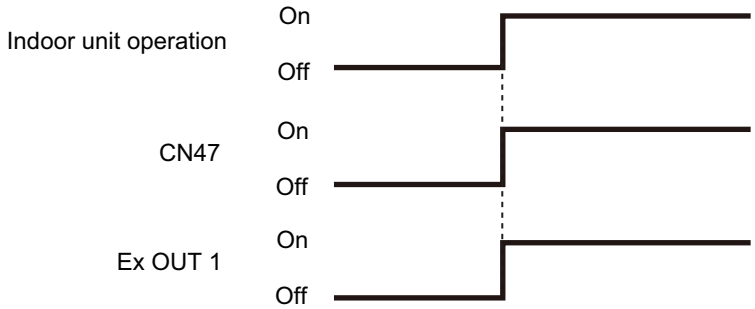
8-5. Details of control output function

■ Operation status

Function setting	External Input and Output PCB Rotary switch	External output		Output signal	Status
60-00 60-06	—	Output of indoor unit	CN47	Off → On	Operation
				On → Off	Stop
—	1, B, C, D	External Input and Output PCB	Ex OUT 1	Off → On	Operation
				On → Off	Stop

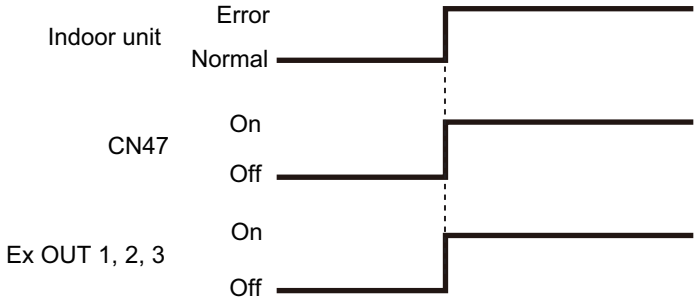
The output is low when the unit is stopped.



■ Error status

Function setting	External Input and Output PCB Rotary switch	External output		Output signal	Status
60-09	—	Output of indoor unit	CN47	Off → On	Error
				On → Off	Normal
—	2, 3, 4, 6, 7, 8, 9	External Input and Output PCB	Ex OUT 1	Off → On	Error
				On → Off	Normal
—	1, C	External Input and Output PCB	Ex OUT 2	Off → On	Error
				On → Off	Normal
—	D	External Input and Output PCB	Ex OUT 3	Off → On	Error
				On → Off	Normal

The output is on when an error is generated for the indoor unit.



CASSETTE
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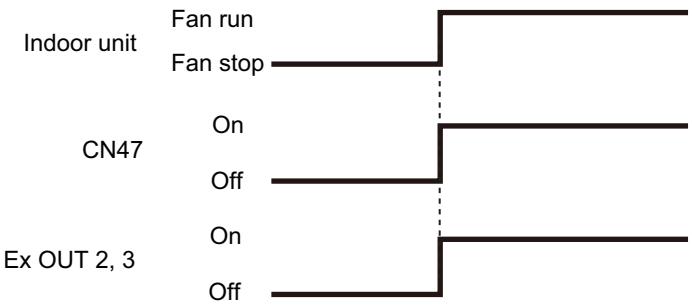
■ Indoor unit fan operation status

Function setting	External Input and Output PCB Rotary switch	External output		Output signal	Status
60-10	—	Output of indoor unit	CN47	Off → On	Fan run
				On → Off	Fan stop
—	2, 3, 7, 8, B, D	External Input and Output PCB	Ex OUT 2	Off → On	Fan run
				On → Off	Fan stop
—	1	External Input and Output PCB	Ex OUT 3	Off → On	Fan run
				On → Off	Fan stop

Output signal	Condition
On	The indoor unit fan is operating.
Off	The fan is stopped or during cold air prevention. During thermostat off when in dry mode operation.



CASSETTE ACUH09-18KUAS

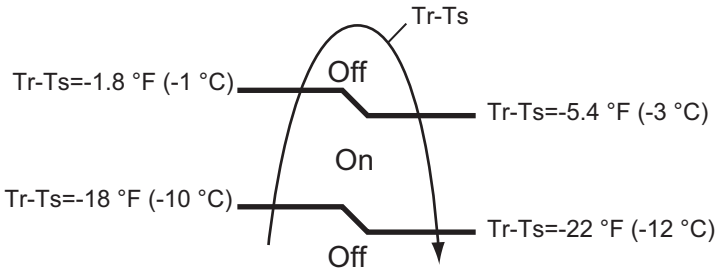
■ External heater output

Function setting	External Input and Output PCB Rotary switch	External output		Output signal	Control
60-11	—	Output of indoor unit	CN47	Off → On	Heater on
				On → Off	Heater off
—	2, 3, 4, 5, 7, 9, A, B, C	External Input and Output PCB	Ex OUT 3	Off → On	Heater on
				On → Off	Heater off

Output signal	Condition
Off → On	Heater turns on as shown in diagram of heating temperature
On → Off	Heater turns off as shown in diagram of heating temperature • Other than Heating mode • Error occurred • Forced thermo off • Fan stop protection

Specifications of the signal output performance are as shown as follows:

Example: When set temperature (Ts) is set at 72°F (22°C);
- And room temperature (Tr) increase above 53.6°F (12°C), signal output is on.
- And Tr increase above 69.8°F (21°C), signal output is off.
- And Tr decrease below 66.2°F (19°C), signal output is on.
- And Tr decrease below 50°F (10°C), signal output is off.



The output also turns off in defrost operation.

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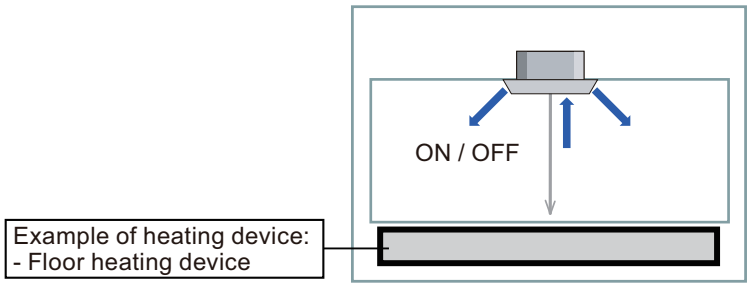
● Installation configuration of individual connection

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



⚠ WARNING

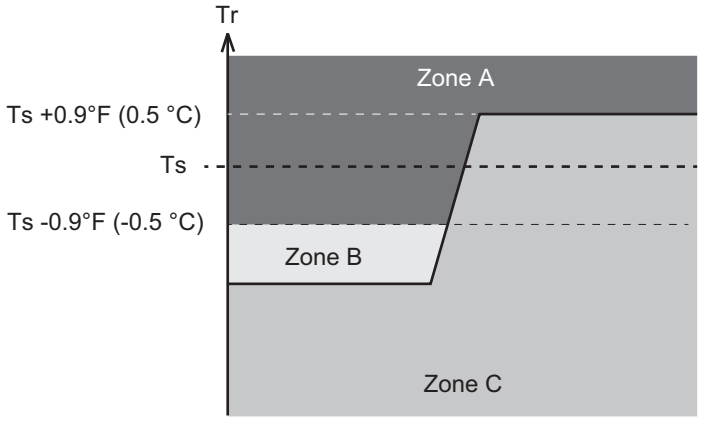
Operation	Condition
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

- 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.

CASSETTE
ACUH09-18KUAS

● 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.



Ts: Setting temperature
Tr: Room temperature

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 57.

*2: When indoor unit function number 61 is set to “00”, auxiliary equipment operates according to the following conditions.

- Ts - Tr > 21.6 °F (-12.0 °C): Auxiliary equipment turn off.
- Ts - Tr > 18.0 °F (-10.0 °C): Auxiliary equipment turn on.

CASSETTE
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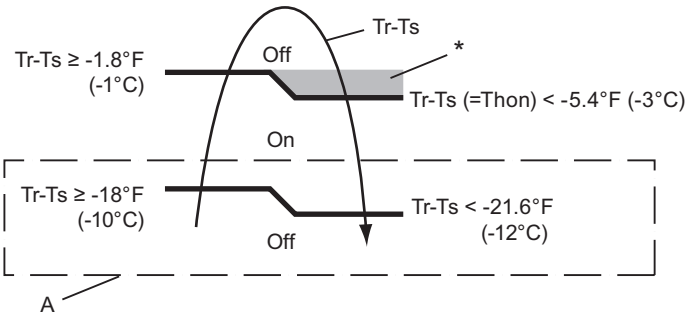
● Auxiliary heater control 1

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

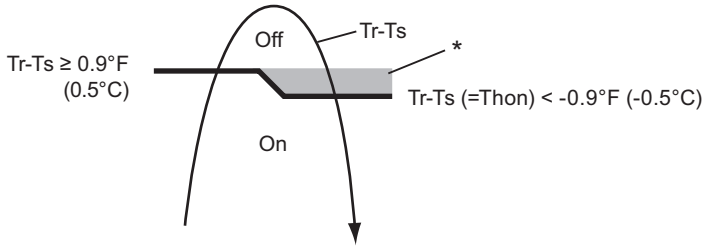
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

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

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

CASSETTE
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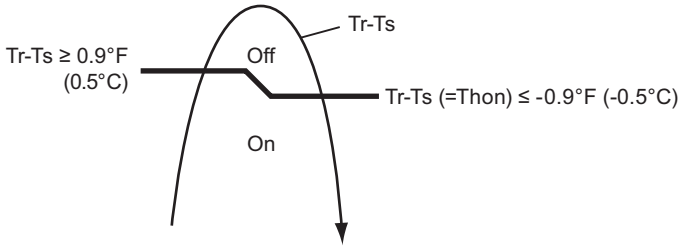
● Heat pump prohibition control

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

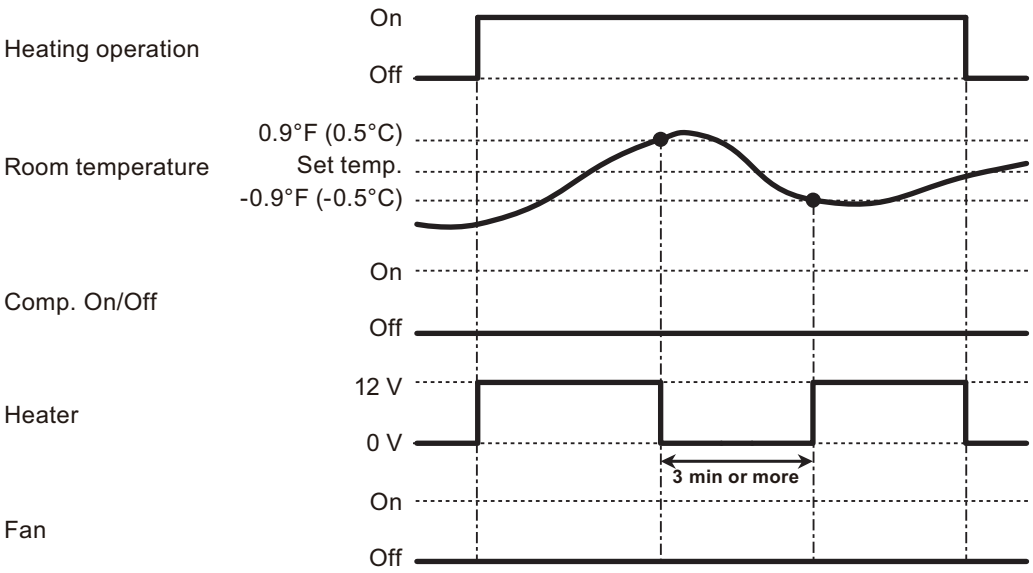
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

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



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

- **Operation status**



NOTE: In following operations, compressor will be on.
- Other than heating
- Test run

CASSETTE
ACUH09-18KUAS

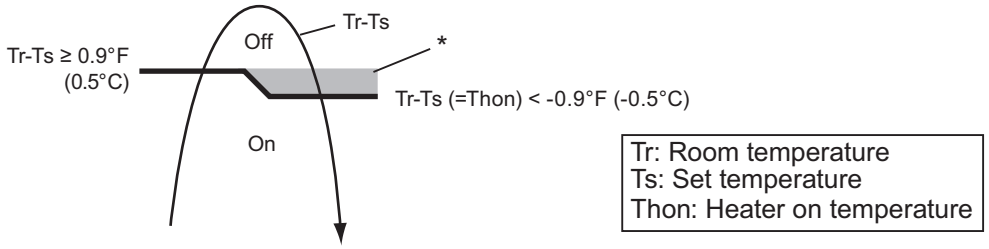
● Auxiliary heater control by outdoor temperature 1

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

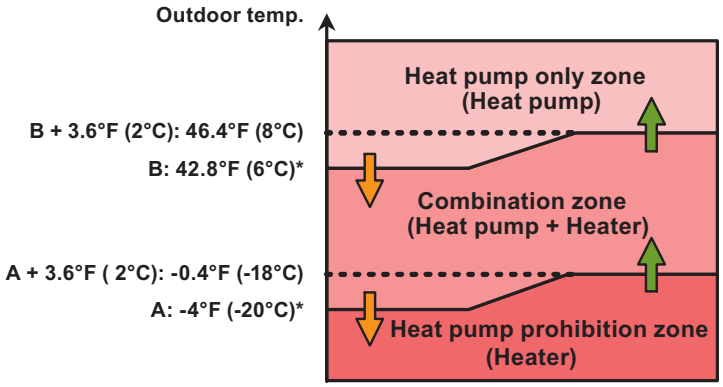
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting “Thon”.
- Outdoor temperature zone boundary A and B: Adjustable individually by function setting number 66 and 67.

- **External heater output**



*: 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

CASSETTE
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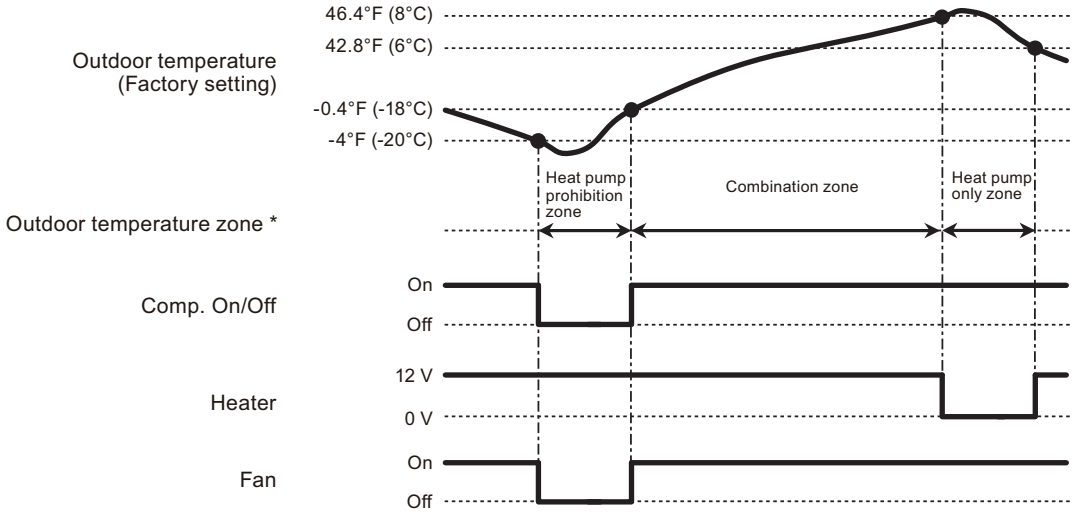
- **Operation status**



* 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

CASSETTE
ACUH09-18KUAS

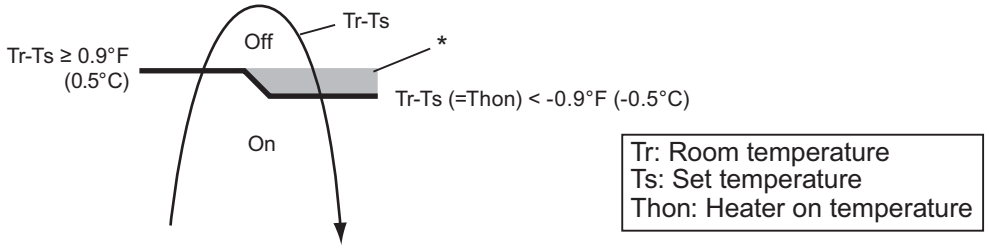
● Auxiliary heater control by outdoor temperature 2

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

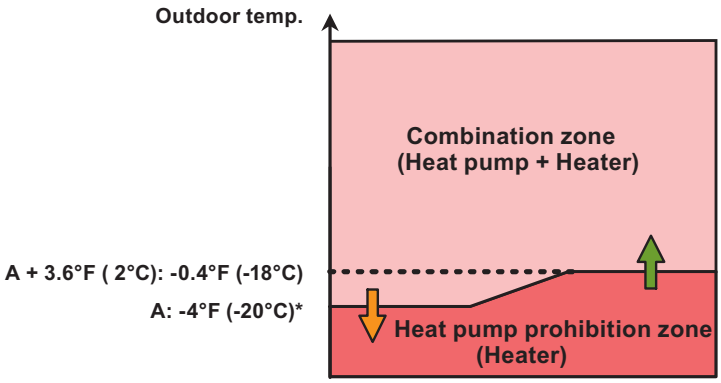
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting “Thon”.
- Outdoor temperature zone boundary A: Adjustable by function setting number 66.

- **External heater output**



*: 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

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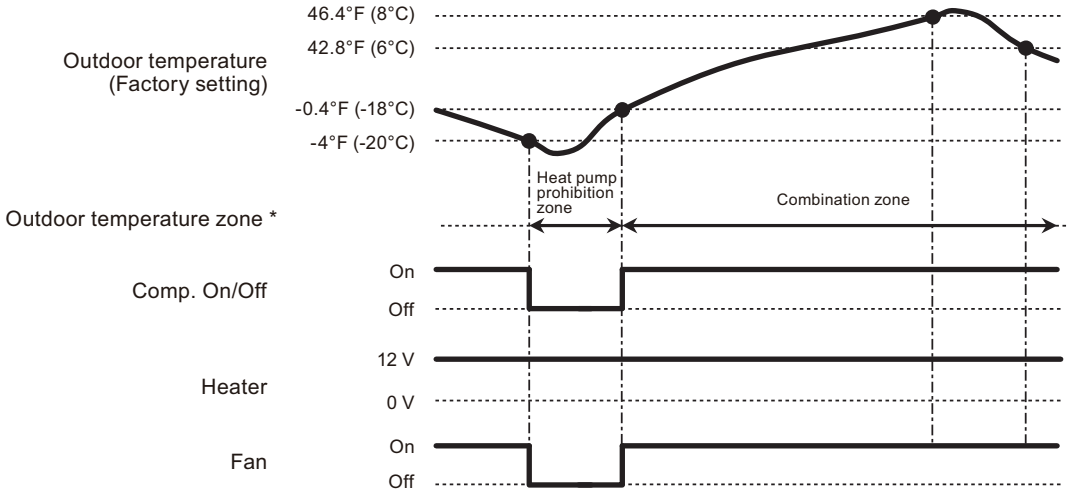
- **Operation status**



* 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

CASSETTE
ACUH09-18KUAS

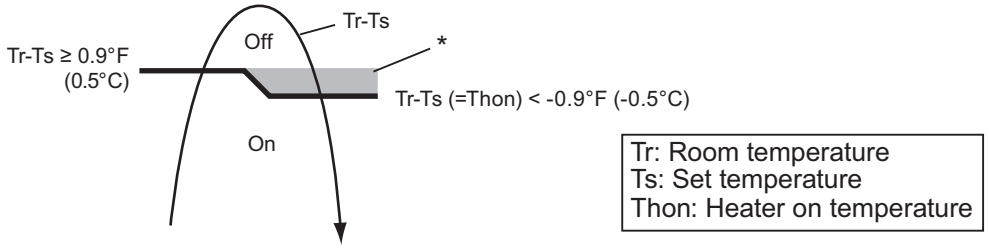
● Auxiliary heater control by outdoor temperature 3

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

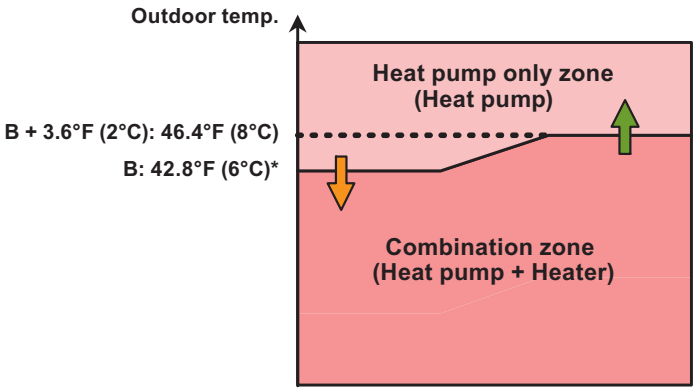
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting “Thon”.
- Outdoor temperature zone boundary B: Adjustable by function setting number 67.

- **External heater output**



*: 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 67

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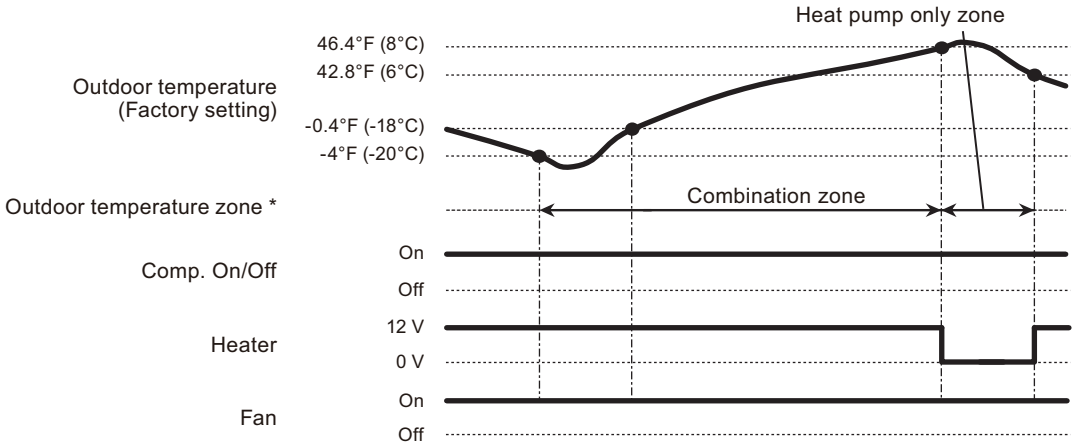
- **Operation status**



* 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

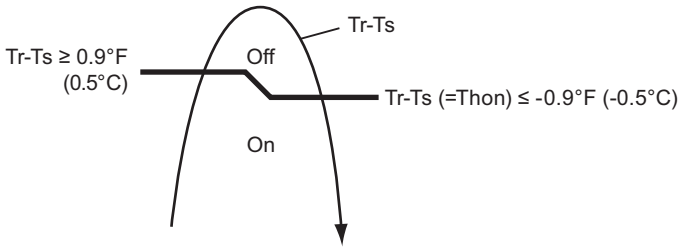
CASSETTE
ACUH09-18KUAS

● Auxiliary heat pump control

- **External heater output**

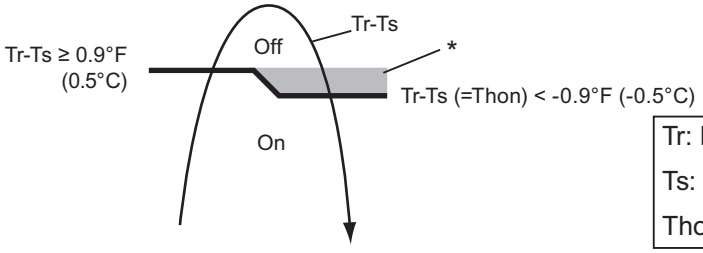
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

– 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: Heat pump on temperature

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

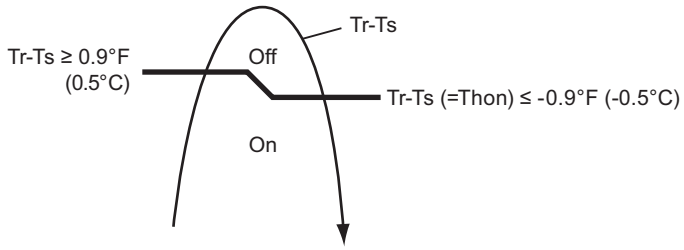
CASSETTE
ACUH09-18KUAS

● Auxiliary heat pump control by outdoor temperature 1

- **External heater output**

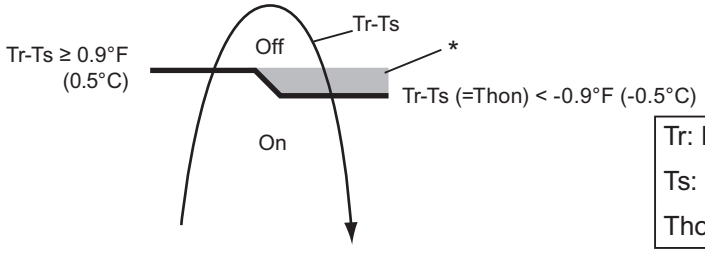
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

– 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)



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

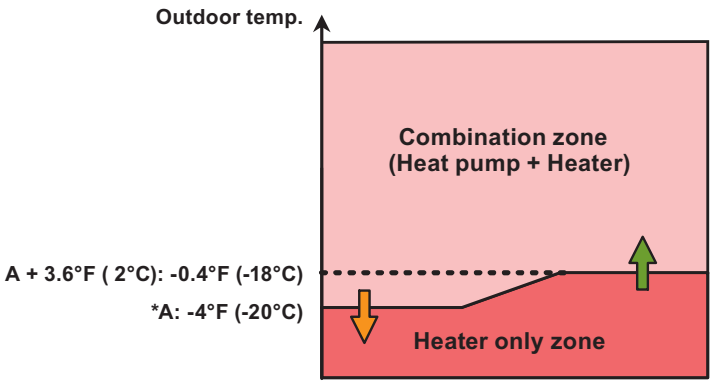
- **Auxiliary heat pump On/Off**
  – Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
  – All control temperatures will shift by adjusting “Thon”.



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump on temperature

*: 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

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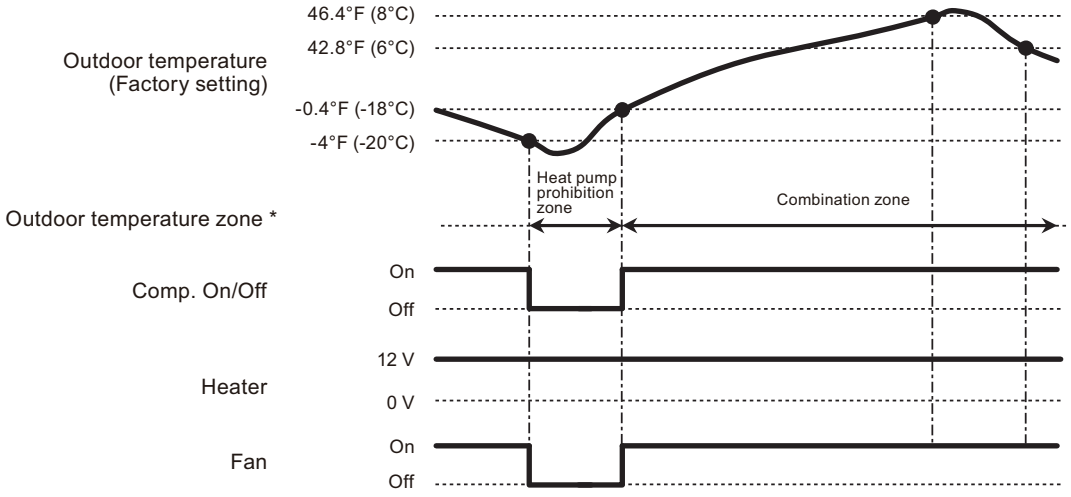
- **Operation status**



* 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

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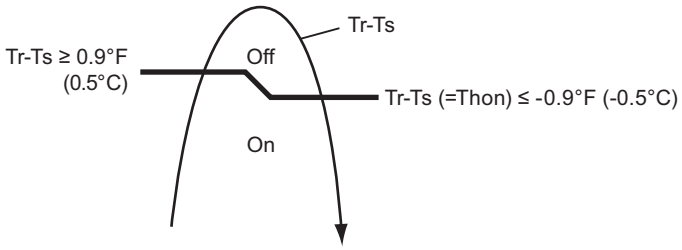
● Auxiliary heat pump control by outdoor temperature 2

- **External heater output**

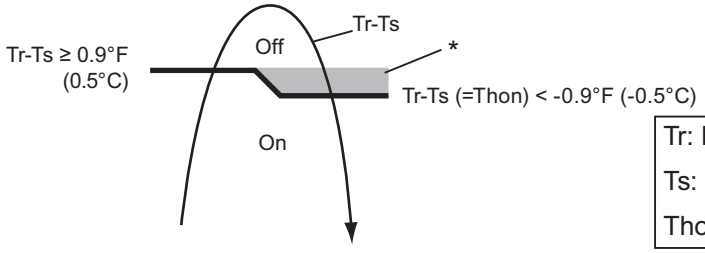
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

– 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)



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

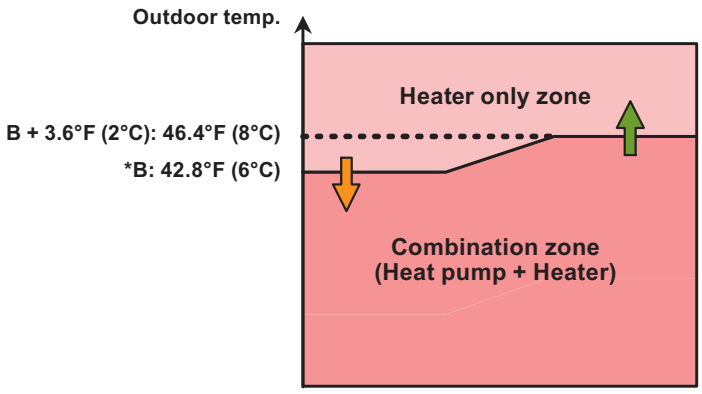
- **Auxiliary heat pump On/Off**
  – Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
  – All control temperatures will shift by adjusting “Thon”.



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump on temperature

*: 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 67

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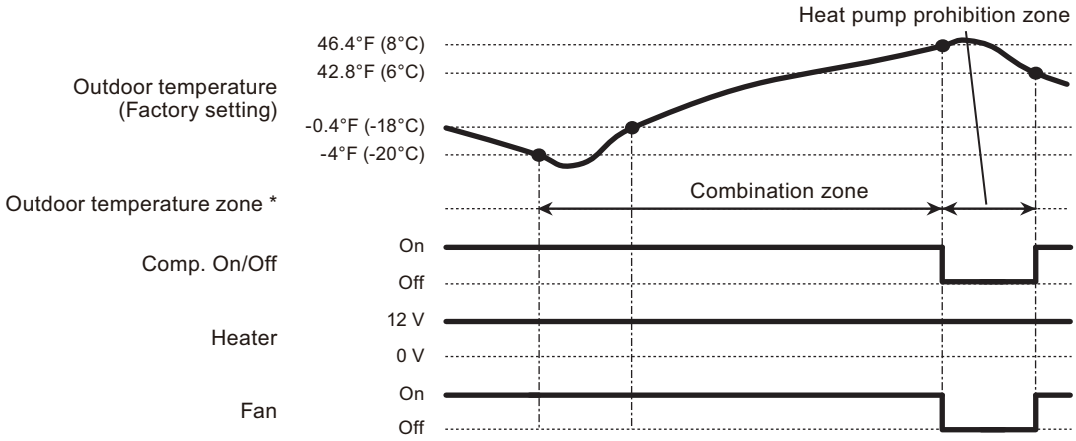
- **Operation status**



* 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

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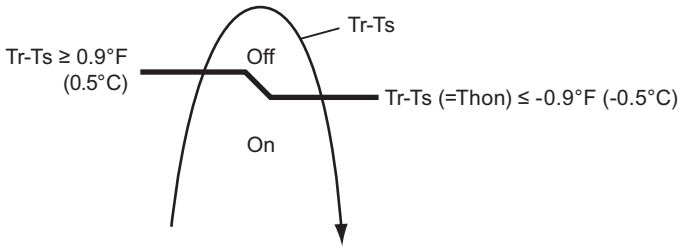
● Auxiliary heat pump control by outdoor temperature 3

- **External heater output**

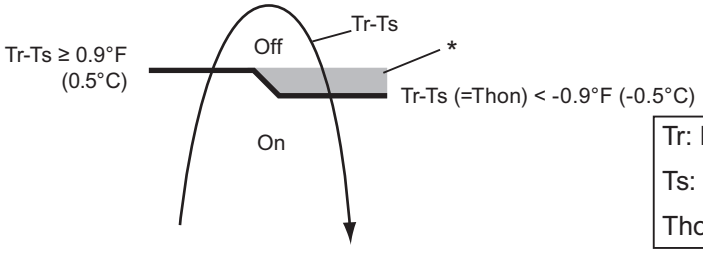
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	• Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off

– 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)



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

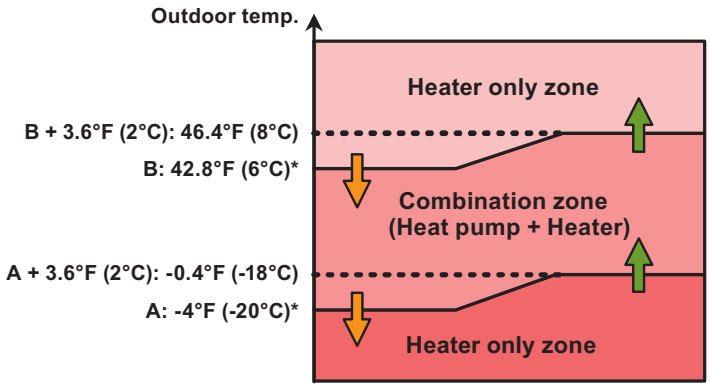
- **Auxiliary heat pump On/Off**
  – Temperature of heat pump on (Thon): Adjustable by function number 62 (Operating temperature switching of heat pump).
  – All control temperatures will shift by adjusting “Thon”.



Tr: Room temperature
Ts: Set temperature
Thon: Heat pump on temperature

*: 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

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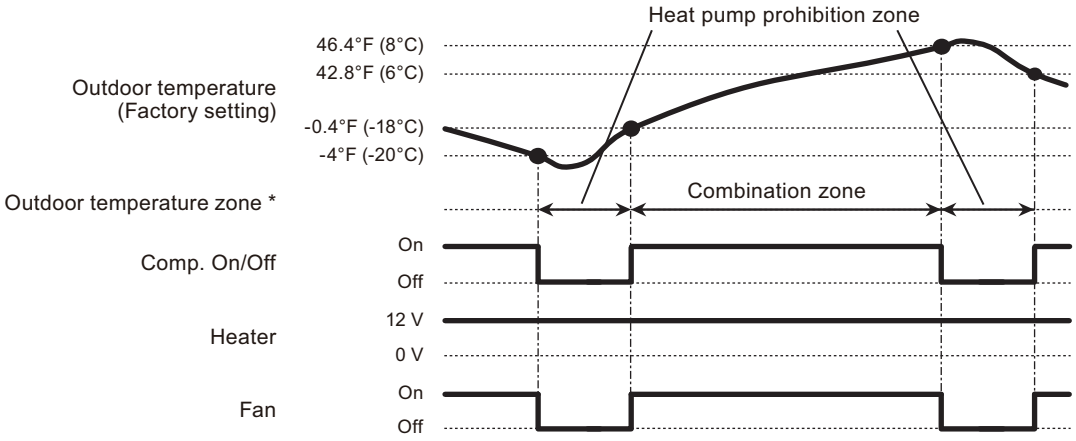
- **Operation status**



* 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

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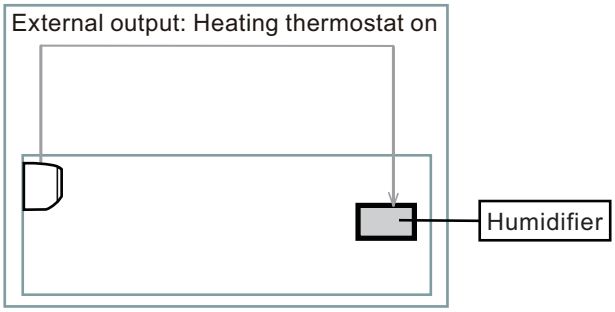
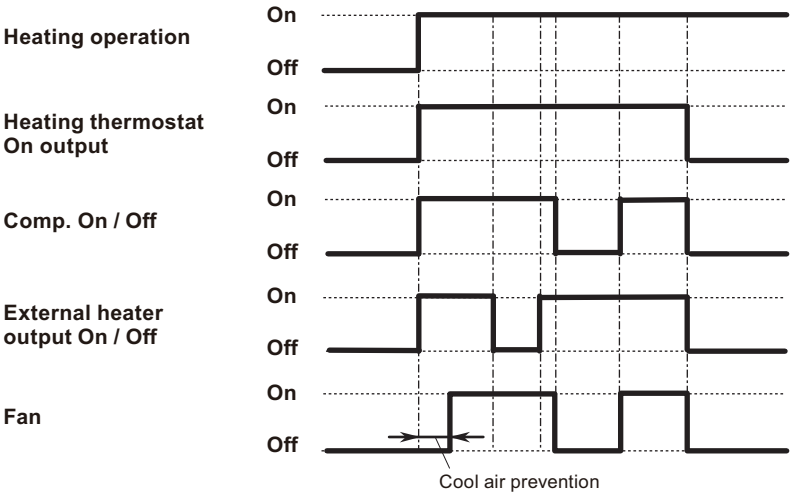
■ Heating thermostat on for humidifier

Situation	Indoor unit				
	Mode	Function setting	Rotary SW	External output	
		Heating thermostat on no. 60		Heating thermostat on	Indoor unit fan operation status
Example of individual connection	5	60-05	7	CN47	Not used
	6	60-06	8	Output 3	
	7	60-07	9	Output 2	
	8	60-08	A	Output 1	

- **Example of individual connection**



- **Operation status**
  The heating thermostat output for CN47, Output 1, Output 2, or Output 3 will be on when comp on or external heater on.
  The heating thermostat output will be off when comp off and external heater off.



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9. Group connection

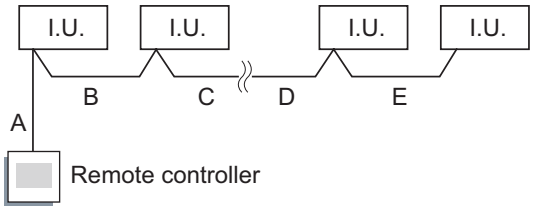
NOTE: Group control cannot be used together with WLAN Adapter.

Installation procedure for group control system:

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

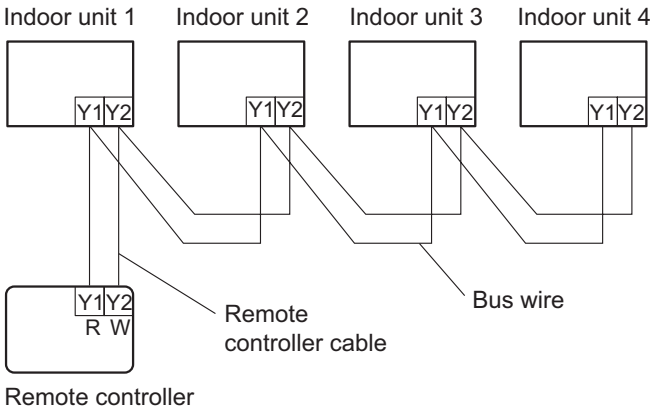
NOTE: When different type of indoor units (such as wall-mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

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 ≤ 76.5 yd (70 m)
	Other than UTY-RVRU	A + B + C + D + E ≤ 546.8 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.

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10. Function settings

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

NOTE: Incorrect settings can cause a product malfunction.

10-1. Function settings by using remote controller

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

■ Setting procedure by using 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)	20	Ceiling height
3)	22	Outlet directions
4)	30/31	Room temperature control for indoor unit sensor
5)	35/36	Room temperature control for wired remote controller sensor
6)	40	Auto restart
7)	42	Room temperature sensor switching
8)	44	Remote controller custom code
9)	46	External input control
10)	48	Room temperature sensor switching (Aux.)
11)	49	Indoor unit fan control for energy saving for cooling
12)	60	Switching functions for external output terminal
13)	61	Control switching of external heaters
14)	62	Operating temperature switching of external heaters
15)	66	Outdoor temperature zone boundary temperature A
16)	67	Outdoor temperature zone boundary temperature B
17)	68	Auto mode type
18)	69	Deadband value
19)	71	Standby time for auxiliary equipment operation
20)	72	Heat pump backup setting
21)	73	Emergency heat for external output terminal
22)	75	External heater use in defrosting
23)	94	Fixed operation mode switching

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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 (2,500 hours)	
	01	Long interval (4,400 hours)	
	02	Short interval (1,250 hours)	
	03	No indication	♦

2) Ceiling height

Select the appropriate ceiling height according to the place of installation.

Function number	Setting value	Setting description	Factory setting
20	00	Standard	♦
	01	High ceiling	

For the specific height for each setting value, refer to “Installation space” in Chapter 2. "Dimensions" on page 4.

NOTE: The ceiling height values are for the 4-way outlet. Do not change this setting in the 3-way outlet mode.

9000 Btu/h models cannot be installed in high ceilings.Do not change this setting.

3) Outlet directions

Select the appropriate number of outlet directions according to the installation conditions.

Function number	Setting value	Setting description	Factory setting
22	00	4-way	♦
	01	3-way	

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4) Room temperature control for indoor unit sensor

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).

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)		

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5) Room temperature control for wired remote controller sensor

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.

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)		

6) 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.

7) 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.

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8) 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	

9) 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)	

10) 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	

11) 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.

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12) 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	Setting description	Factory setting
60	00	Operation status	♦
	01—04	Cooling thermostat On	
	05	Heating operation	
	06	Operation/Stop	
	07—08	Cooling thermostat On	
	09	Error status	
	10	Indoor unit fan operation status	
	11	External heater	

13) 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 35.

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	

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14) 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 35.

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)	

15) 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 35.

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)	

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16) 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 35.

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)	

17) Auto mode type

Switches the setting method of the auto mode between single or dual (cooling and heating.)

Set the primary indoor unit using a wired remote controller for heat pump systems.

Function number	Setting value	Setting description	Factory setting
68	00	Single setpoint auto mode	♦
	01	Dual setpoint auto mode	

NOTE: The auto mode type setting is available only if a compatible operating device is connected.

18) Deadband value

Sets the minimum temperature of the deadband in the dual setpoint auto mode (the setting value 01 of the function setting number 68: Auto mode type.)

Function number	Setting value	Setting description	Factory setting
69	00	0°F (0°C)	♦
	01	0.9°F (0.5°C)	
	02	1.8°F (1.0°C)	
	03	2.7°F (1.5°C)	
	04	3.6°F (2.0°C)	
	05	4.5°F (2.5°C)	
	06	5.4°F (3.0°C)	
	07	6.3°F (3.5°C)	
	08	7.2°F (4.0°C)	
	09	8.1°F (4.5°C)	

NOTE: The deadband setting is available only if a compatible operating device is connected.

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19) Standby time for auxiliary equipment operation

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

For details, refer to "Details of control output function" on page 35.

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

20) 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	

21) 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.

22) External heater use in defrosting

Enables or disables external heater use in defrosting.

NOTE: Inappropriate heater selection may cause cold air in defrosting.

Function number	Setting value	Setting description	Factory setting
75	00	Disable	♦
	01	Enable	

23) Fixed operation mode switching

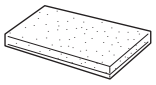
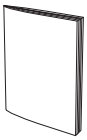
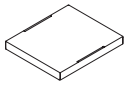
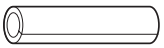
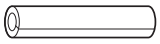
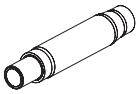
Sets the operation mode to heat pump, heating only, or cooling only.

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

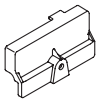
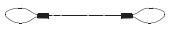
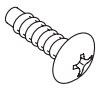
CASSETTE
ACUH09-18KUAS

11. Accessories

11-1. Models: ACUH09KUAS, ACUH12KUAS, and ACUH18KUAS

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Drain hose insulation		1
Installation manual		1	Hose band		1
Template (carton top)		1	Coupler heat insulation (large)		1
Washer A (with insulation)		4	Coupler heat insulation (small)		1
Washer B		4	Cable tie (for electrical wiring)		2
Drain hose		1			

11-2. Cassette Grille accessories

Part name	Exterior	Qty	Part name	Exterior	Qty
Connector cover		1	Hook wire		2
Self-tapping screw (M5 × 12 mm)		4	Screw (pitch small) (M4 × 10 mm)		2
Self-tapping screw (M4 × 12 mm)		1	Screw (pitch large) (M4 × 10 mm)		4
L angle		2			

CASSETTE
ACUH09-18KUAS

12. Optional parts

12-1. Controllers

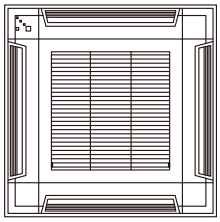
Exterior	Part name	Model name	Summary
	Wired Remote Controller (Touch Panel)	UTY-RVRU	Remote controller that provides the functions you need in a sleek design that uniquely transforms itself to blend with any interior. Connecting point: Terminal block (Y1 and Y2)
	Wired Remote Controller (Touch Panel)	UTY-RNRUZ∗	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Connecting point: Terminal block (Y1 and Y2)
	Simple Remote Controller	UTY-RSRY	Compact remote controller concentrates on the basic functions such as Start/ Stop, fan control, temperature setting, and operation mode. Connecting point: Terminal block (Y1 and Y2)
	Simple Remote Controller	UTY-RHRY	Compact remote controller concentrates on the basic functions such as Start/ Stop, fan control, and temperature setting. Connecting point: Terminal block (Y1 and Y2)
	Wireless Remote Controller	UTY-LNTU	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.

CASSETTE
ACUH09-18KUAS

12-2. Cassette Grille

Exterior	Part name	Model name	Summary
	Cassette Grille	UTG-CCGFGA	This cassette grille can be installed appropriately on the grid type ceiling common in the office.

CASSETTE
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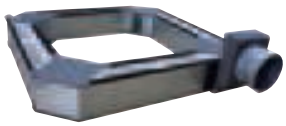
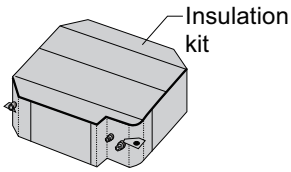
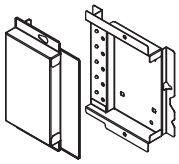
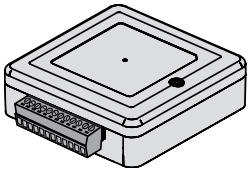
12-3. Others

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZXZG	Use to connect with various peripheral devices and air conditioner PCB. For control output port. Connecting point: CN47 on Main PCB
	Air Outlet Shutter Plate	UTR-YDZB	Installed at the air outlet when 3-directions mode is performed.
	Fresh Air Intake Kit	UTZ-VXAA	By attaching Fresh Air Intake Kit to the indoor unit, it can be taken in fresh air of up to 10% of “high” air volume of the indoor unit. Do not branch the connecting duct into multiple rooms. Connecting point: CN47 on Main PCB
	Insulation Kit for High Humidity	UTZ-KXGC	Install when the under-roof condition is expected to be the humidity of over 80% and the temperature of over 86 °F (30 °C).
	External Input and Output PCB	UTY-XCSX	Use to connect with external devices and air conditioner PCB. Connecting point: CN65 or CN75 on Main PCB
	External Input and Output PCB Box	UTZ-GXEA	For installing the External input and output PCB.
	WLAN Adapter	UTY-TFSXJ∗	Remotely manage an air conditioning system using mobile devices such as smartphones and tablets. For connection indoor unit with UART interface. Appropriate application for each region is required to use this option. For details, contact FGL sales company. Connecting point: CN75 on Main PCB
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: CN65 or CN75 on Main PCB
	Thermostat Converter	UTY-TTRXZ∗	This converter can control Fujitsu General products using a third-party thermostat controller. Connecting point: Terminal block (Y1 and Y2)
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system. Connecting point: Terminal block (Y1 and Y2)

CASSETTE
ACUH09-18KUAS

Exterior	Part name	Model name	Summary
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Connecting point: Terminal block (Y1 and Y2)

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOUH09KUAS1
AOUH12KUAS1
AOUH18KUAS1

OUTDOOR UNIT
AOUH09-18KUAS1

1. Specifications

1-1. Model: AOUH09KUAS1

Type				Inverter, Heat pump
Model name				**AOUH09KUAS1**
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 (m^3/h)	906 (1,540)
		Heating		906 (1,540)
	Type × Qty			Propeller fan × 1
	Motor output		W	23
Sound pressure level*1		Cooling	dB (A)	44
		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	in^3 (cm^3)	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			16 (5)
	Max. length			66 (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)	Ø1/2 (Ø13.0) (I.D.), Ø5/8 to Ø11/16 (Ø16.0 to Ø16.7) (O.D.)

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. Models: AOUH12KUAS1 and AOUH18KUAS1

Type				Inverter, Heat pump	
Model name				**AOUH12KUAS1**	**AOUH18KUAS1**
Power supply				208/230 V~ 60 Hz	
Power supply intake				Outdoor unit	
Available voltage range				187—253 V	
Starting current			A	5.8	7.8
Fan	Airflow rate	Cooling	CFM (m^3/h)	1,171 (1,990)	1,318 (2,240)
		Heating		1,089 (1,850)	1,154 (1,960)
	Type × Qty			Propeller fan × 1	
	Motor output		W	49	
Sound pressure level*1		Cooling	dB (A)	48	52
		Heating		49	55
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	1,030
Refrigerant		Type		R32	
		Charge	lb oz	2 lb 4 oz	2 lb 12 oz
			g	1,020	1,250
Refrigerant oil		Type		RmM68AF	
		Amount	in^3 (cm^3)	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)	
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)	
		Gas		Ø3/8 (Ø9.52)	Ø1/2 (Ø12.70)
	Method			Flare	
	Pre-charge length		ft (m)	66 (20)	
	Min. length			16 (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)	Ø1/2 (Ø13.0) (I.D.), Ø5/8 to Ø11/16 (Ø16.0 to Ø16.7) (O.D.)	

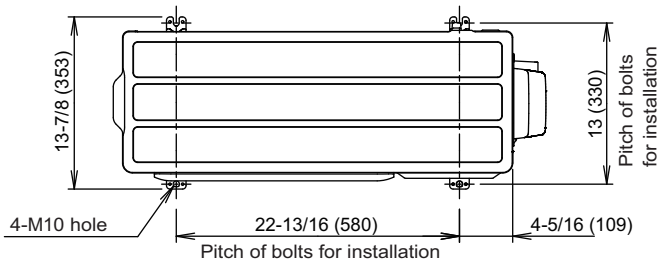
NOTES:

- 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

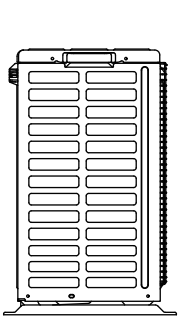
2. Dimensions

2-1. Model: AOUH09KUAS1

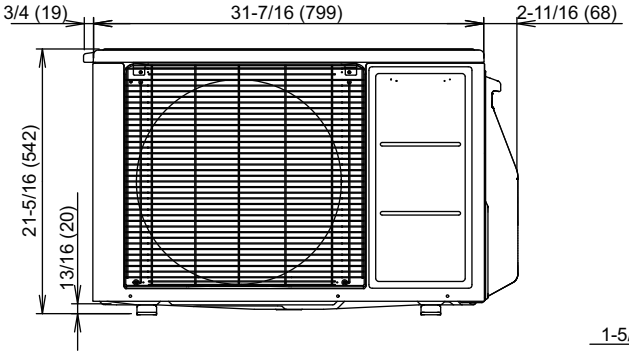
Unit: in (mm)



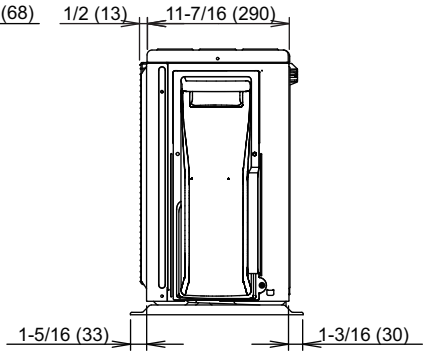
Top view



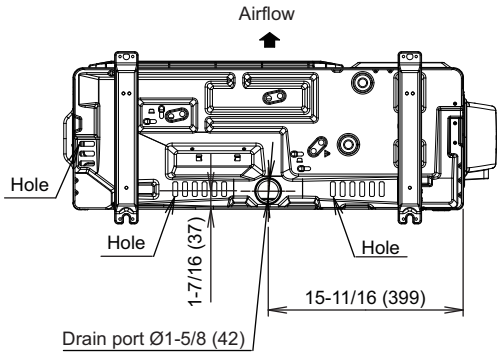
Side view



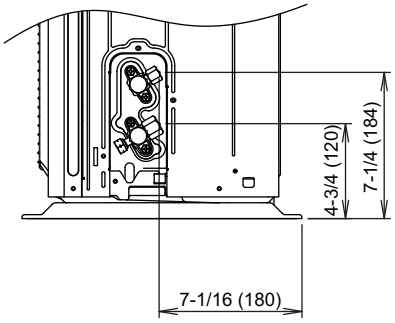
Front view



Side view



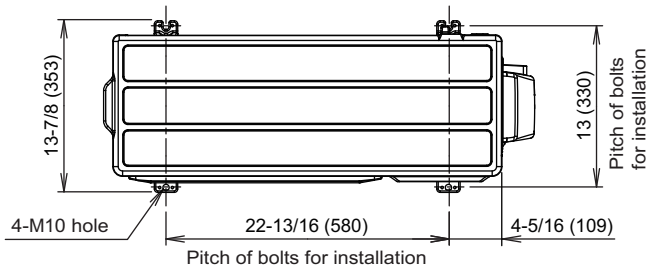
Bottom view



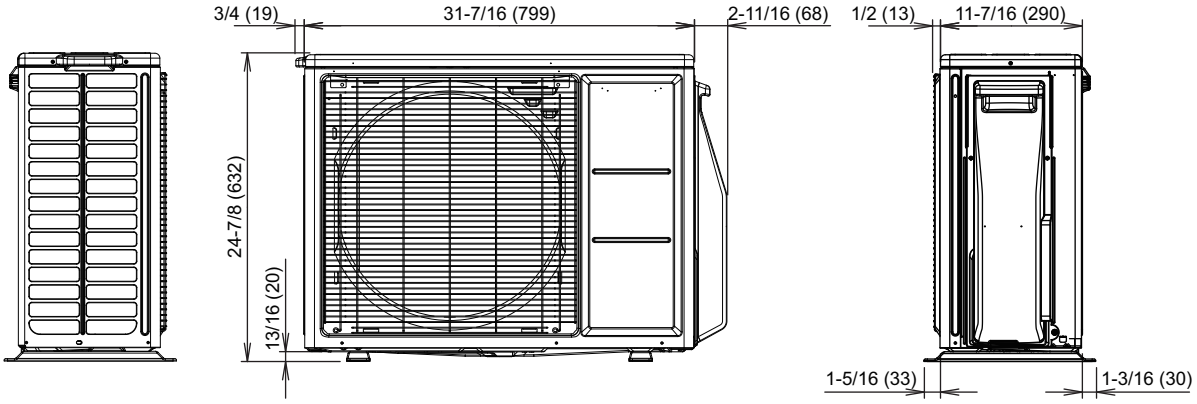
Side view (Valve part)

2-2. Models: AOUH12KUAS1 and AOUH18KUAS1

Unit: in (mm)



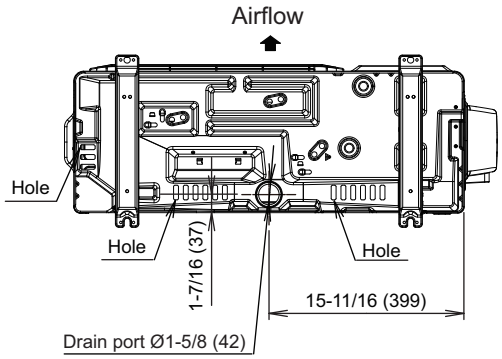
Top view



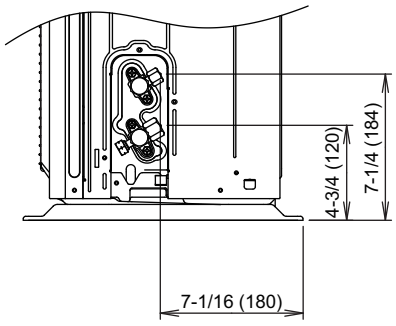
Side view

Front view

Side view



Bottom view



Side view (Valve part)

3. Installation space

3-1. Models: AOUH09KUAS1, AOUH12KUAS1, and AOUH18KUAS1

OUTDOOR UNIT
AOUH09-18KUAS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

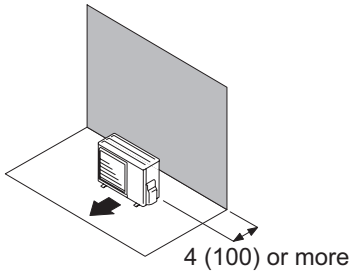
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

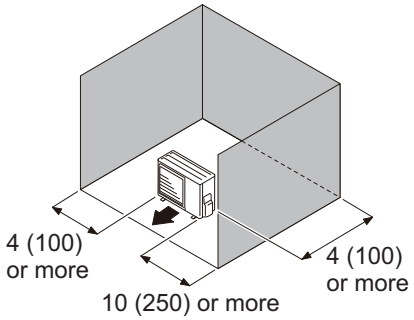
- **When the upper space is open:**

Unit: in (mm)

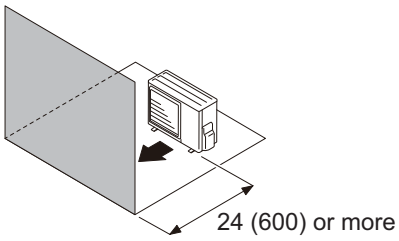
Obstacles at rear only



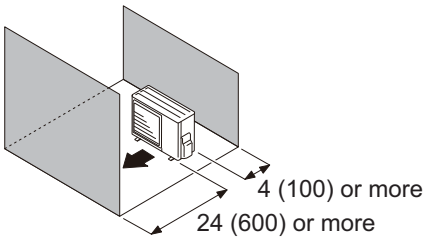
Obstacles at rear and sides



Obstacles at front



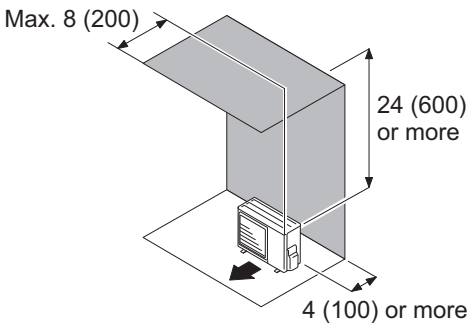
Obstacles at front and rear



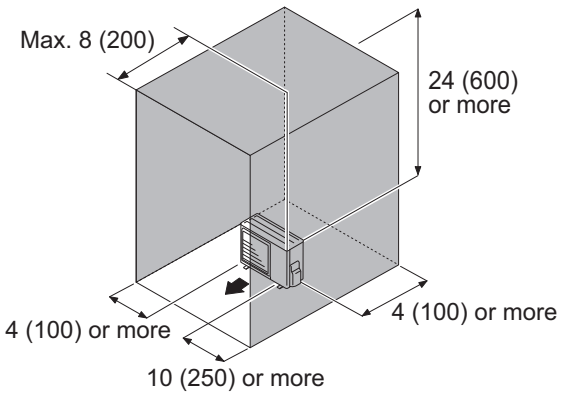
- **When an obstruction in the upper space:**

Unit: in (mm)

Obstacles at rear and above



Obstacles at rear, sides, and above



OUTDOOR UNIT
AOUH09-18KUAS1

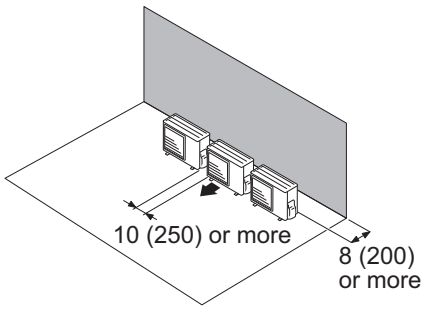
● Multiple outdoor unit installation

- 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:**".

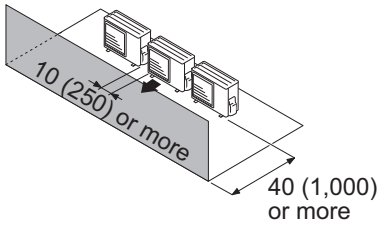
- **When the upper space is open:**

Unit: in (mm)

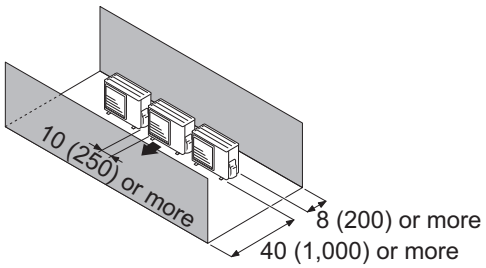
Obstacles at rear only



Obstacles at front only



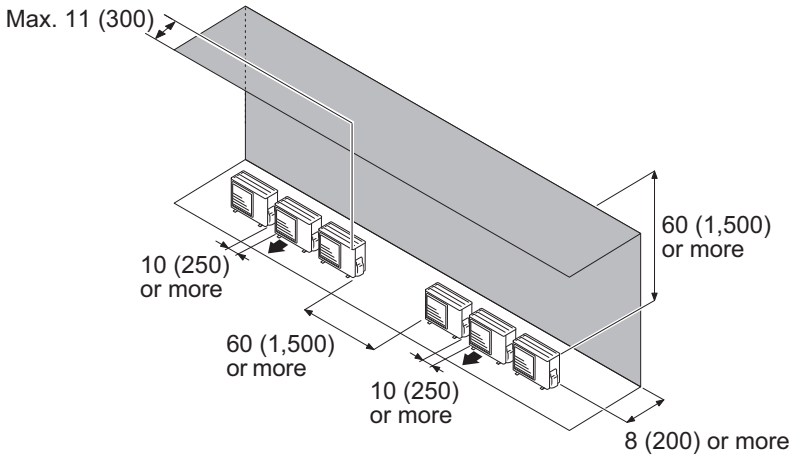
Obstacles at front and rear



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

Unit: in (mm)

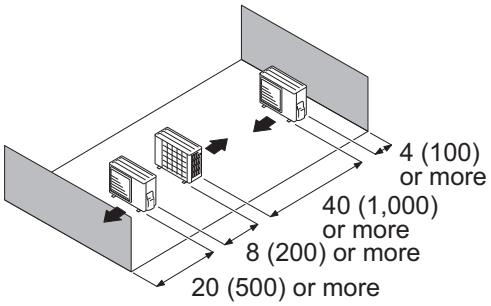
Obstacles at rear and above.



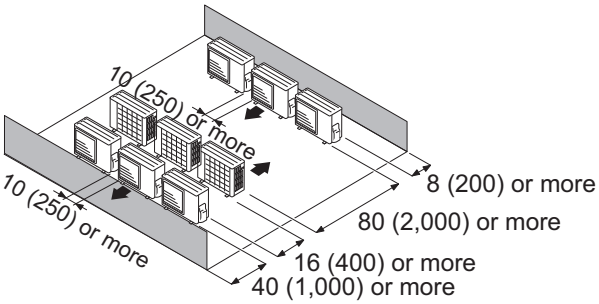
● Outdoor units installation in multi-row

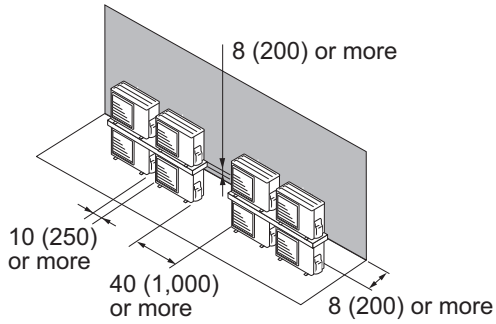
Unit: in (mm)

Single parallel unit arrangement



Multiple parallel unit arrangement



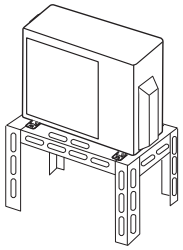


NOTES:

- 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.

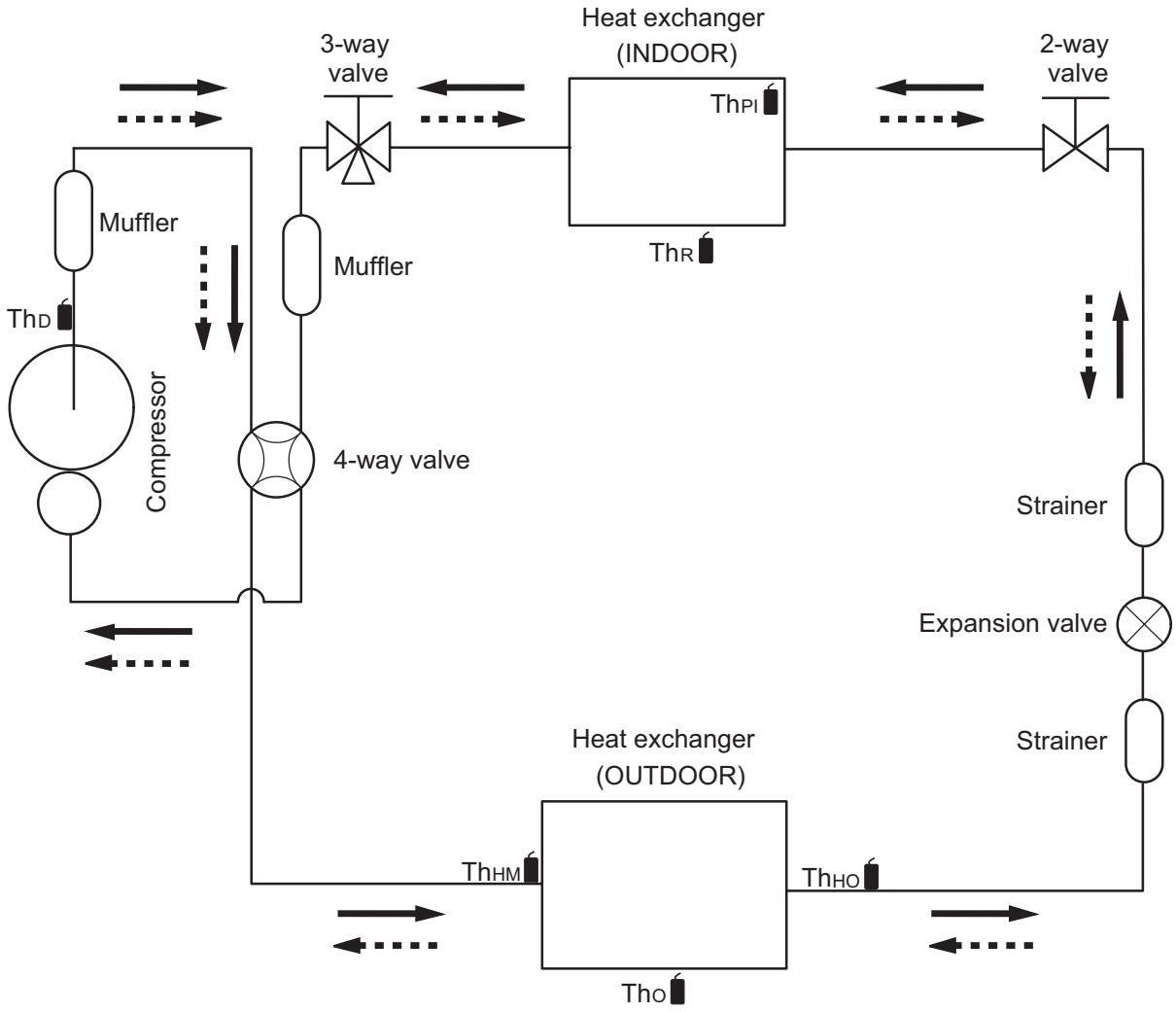
⚠ CAUTION

- 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: AOUH09KUAS1



ThD : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

ThO : Thermistor (Outdoor temperature)

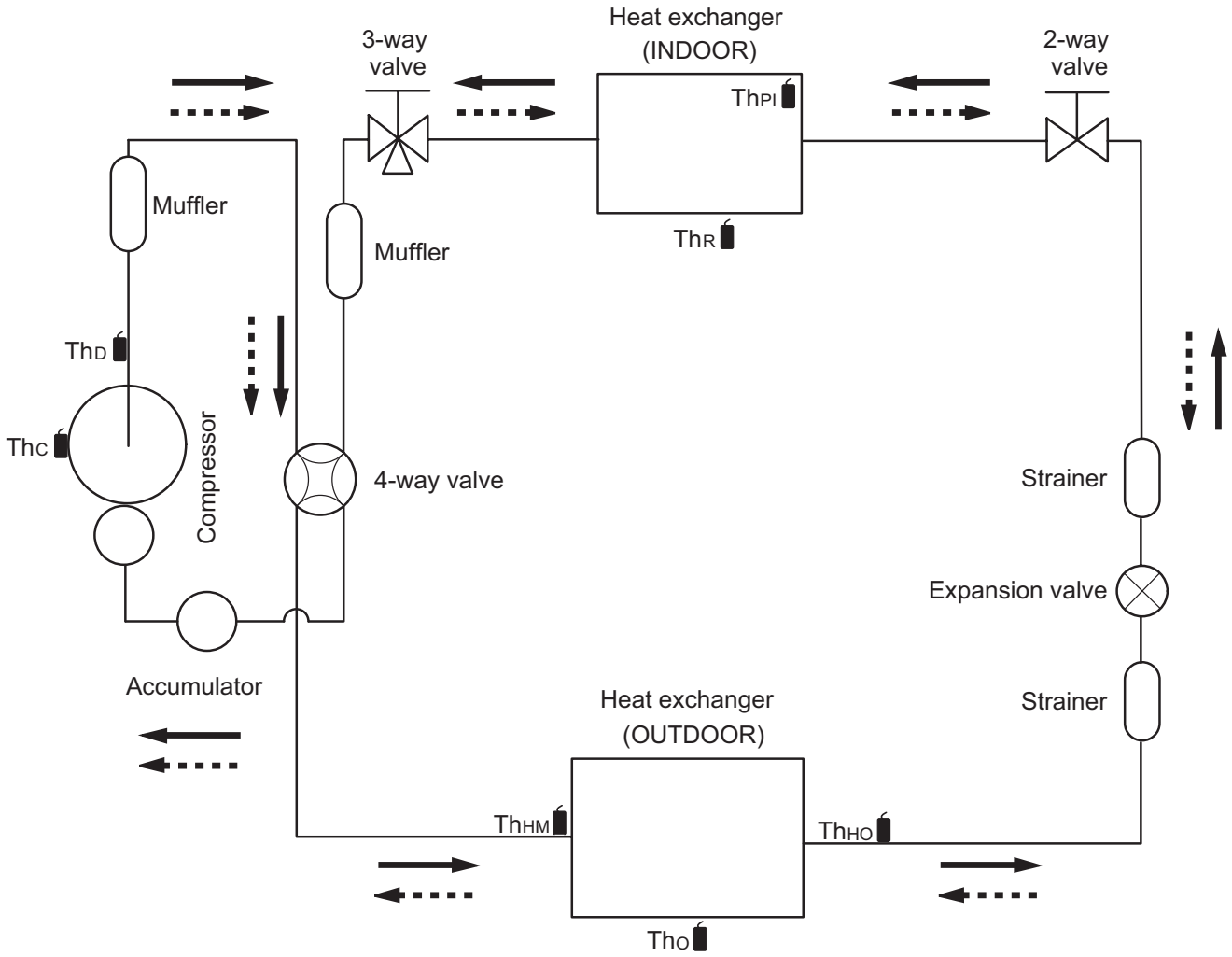
ThHO : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

ThR : Thermistor (Room temperature)

OUTDOOR UNIT
AOUH09-18KUAS1

4-2. Models: AOUH12KUAS1 and AOUH18KUAS1



ThC : Thermistor (Compressor temperature)

ThD : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

ThO : Thermistor (Outdoor temperature)

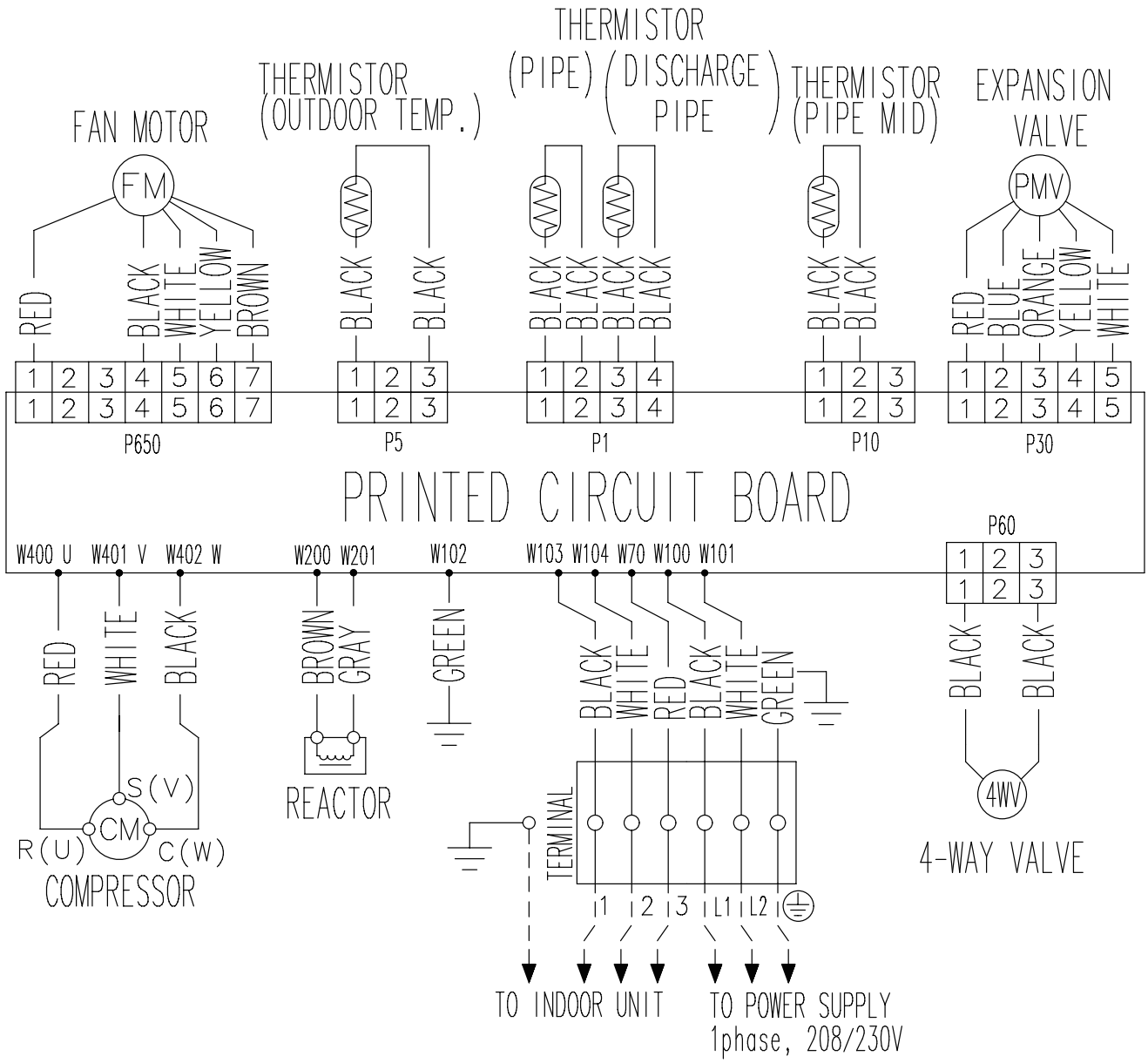
ThHO : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

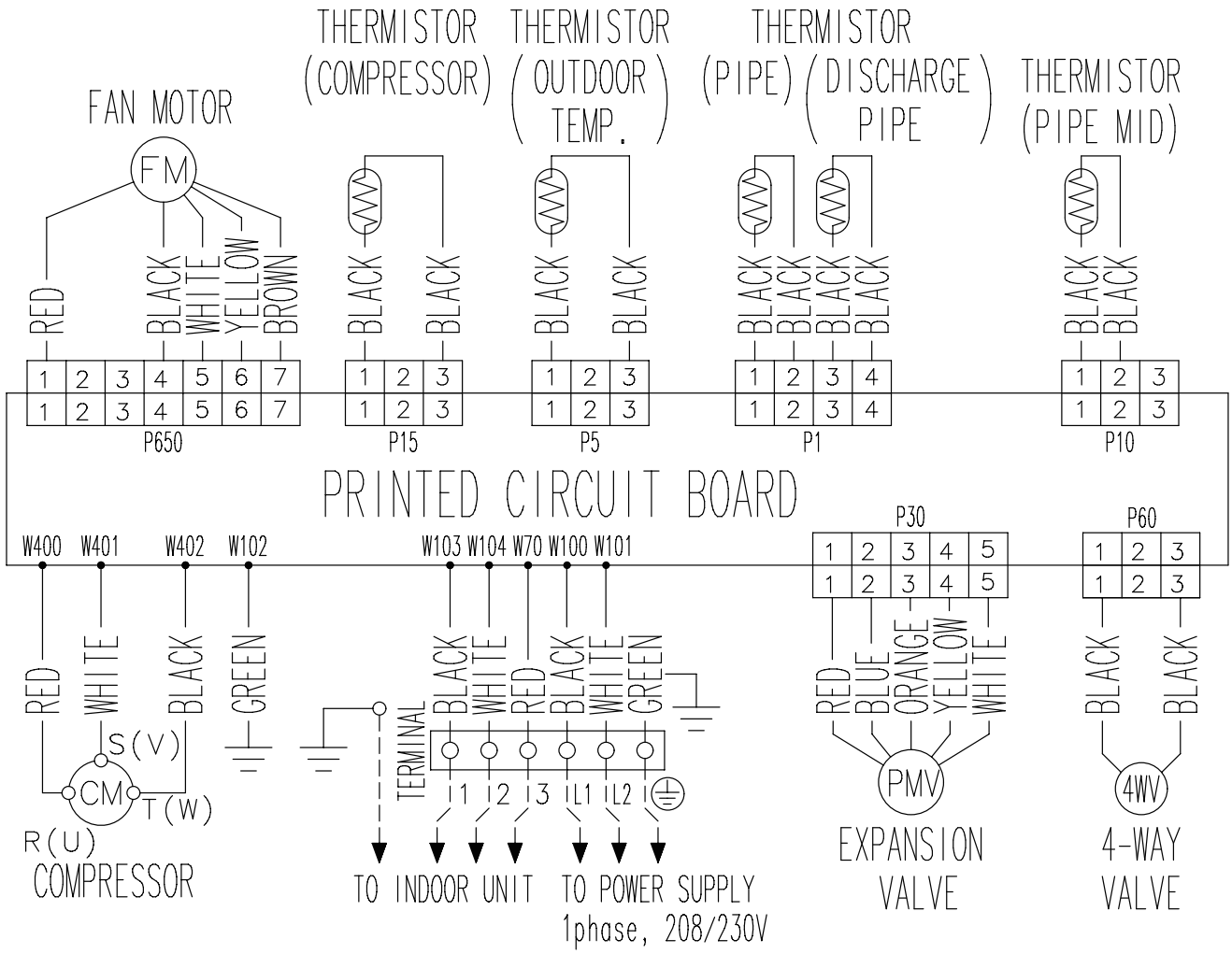
ThR : Thermistor (Room temperature)

5. Wiring diagrams

5-1. Model: AOUH09KUAS1



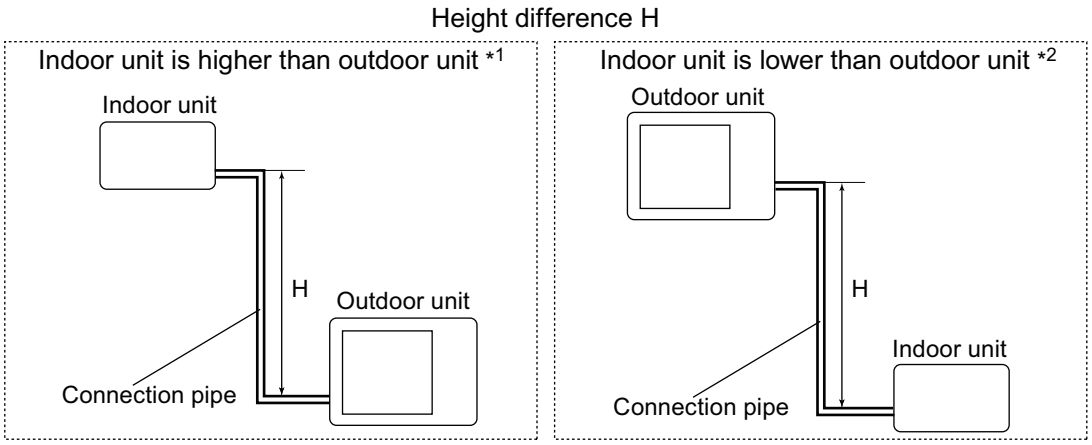
5-2. Models: AOUH12KUAS1 and AOUH18KUAS1



OUTDOOR UNIT
AOUH09-18KUAS1

OUTDOOR UNIT
AOUH09-18KUAS1

6. Capacity compensation rate for pipe length and height difference



6-1. Model: AOUH09KUAS1

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
		0	0	1.029	1.000	0.971	0.913	0.922
	Indoor unit is lower than outdoor unit *2	-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
		0	0	1.006	1.000	0.974	0.901	0.884
	Indoor unit is lower than outdoor unit *2	-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

OUTDOOR UNIT
AOUH09-18KUAS1

6-2. Model: AOUH12KUAS1

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

OUTDOOR UNIT
AOUH09-18KUAS1

6-3. Model: AOUH18KUAS1

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	—	—	—	0.951	0.950	0.947	0.941
		10	33	—	—	0.979	0.967	0.966	0.962	0.956
		7.5	25	—	0.988	0.983	0.971	0.970	0.966	0.960
		5	16	0.994	0.992	0.987	0.975	0.974	0.970	0.964
		0	0	1.002	1.000	0.995	0.983	0.982	0.978	0.972
	Indoor unit is lower than outdoor unit *2	-5	-16	1.002	1.000	0.995	0.983	0.982	0.978	0.972
		-7.5	-25	—	1.000	0.995	0.983	0.982	0.978	0.972
		-10	-33	—	—	0.995	0.983	0.982	0.978	0.972
		-15	-49	—	—	—	0.983	0.982	0.978	0.972

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	—	—	—	0.994	0.979	0.949	0.919
		10	33	—	—	1.012	0.994	0.979	0.949	0.919
		7.5	25	—	1.000	1.012	0.994	0.979	0.949	0.919
		5	16	0.969	1.000	1.012	0.994	0.979	0.949	0.919
		0	0	0.969	1.000	1.012	0.994	0.979	0.949	0.919
	Indoor unit is lower than outdoor unit *2	-5	-16	0.964	0.995	1.007	0.989	0.974	0.944	0.915
		-7.5	-25	—	0.993	1.004	0.986	0.972	0.942	0.911
		-10	-33	—	—	1.002	0.984	0.969	0.940	0.909
		-15	-49	—	—	—	0.974	0.959	0.930	0.899

OUTDOOR UNIT
AOUH09-18KUAS1

7. Additional charge calculation

7-1. Model: AOUH09KUAS1

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	3.5	
	g	0	100	

7-2. Model: AOUH12KUAS1

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	3.5	7	
	g	0	100	200	

7-3. Model: AOUH18KUAS1

Refrigerant type		R32
Factory charge amount	lb oz	2 lb 12 oz
	g	1,250

■ 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	3.5	7	
	g	0	100	200	

OUTDOOR UNIT
AOUH09-18KUAS1

8. Airflow

8-1. Model: AOUH09KUAS1

● 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: AOUH12KUAS1

● Cooling

m^3/h	1,990
l/s	553
CFM	1,171

● Heating

m^3/h	1,850
l/s	514
CFM	1,089

8-3. Model: AOUH18KUAS1

● Cooling

m^3/h	2,240
l/s	622
CFM	1,318

● Heating

m^3/h	1,960
l/s	544
CFM	1,154

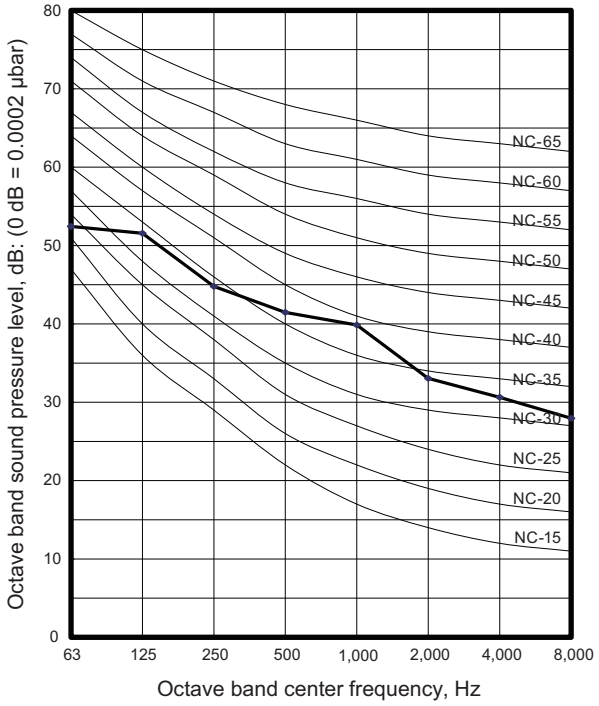
OUTDOOR UNIT
AOUH09-18KUAS1

9. Operation noise (sound pressure)

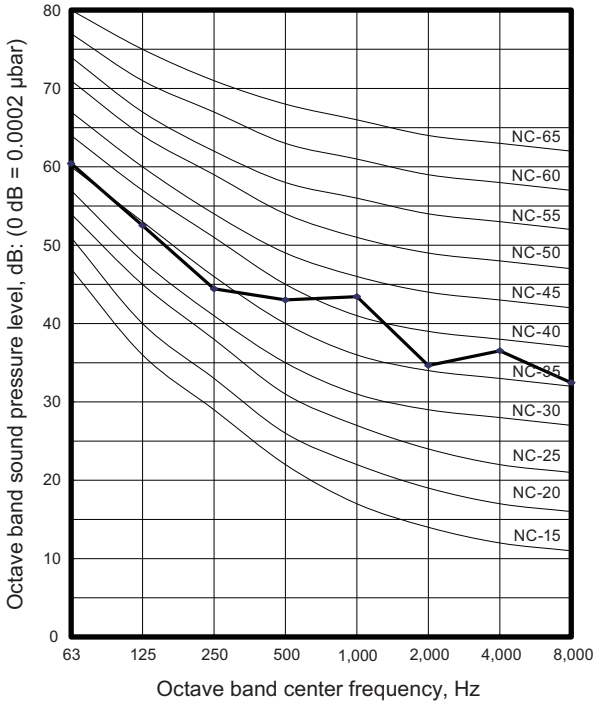
9-1. Noise level curve

■ Model: AOUH09KUAS1

● Cooling

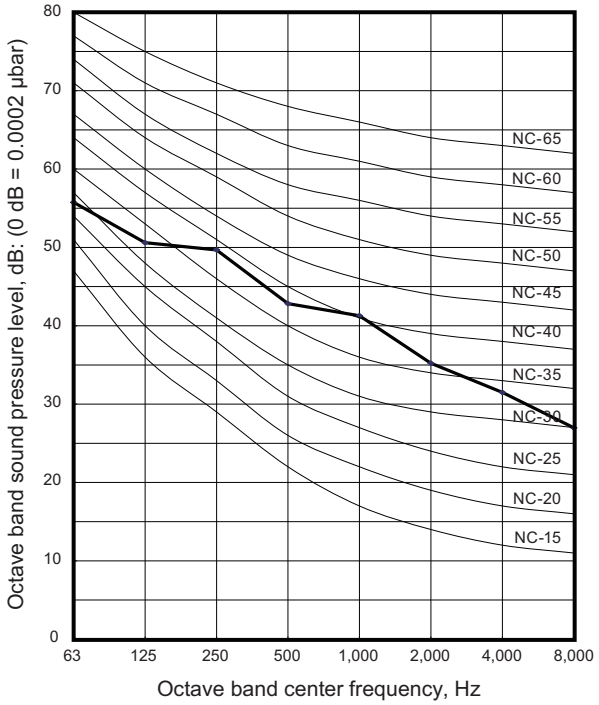


● Heating

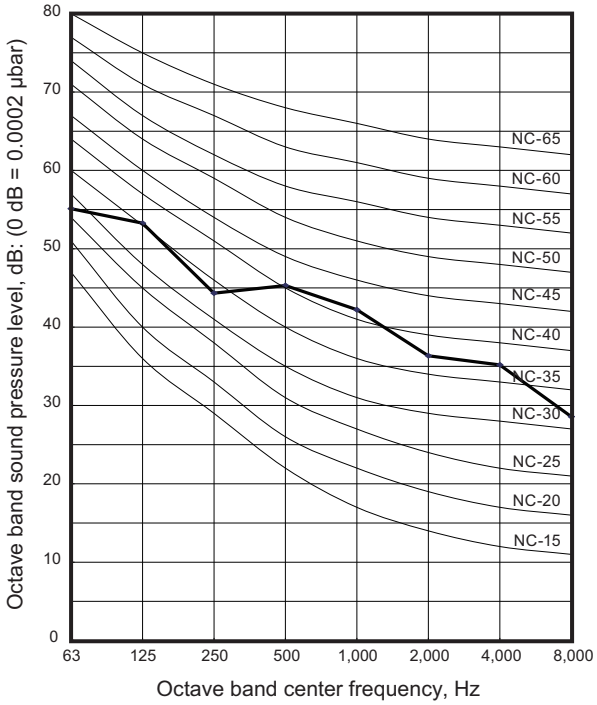


■ Model: AOUH12KUAS1

● Cooling



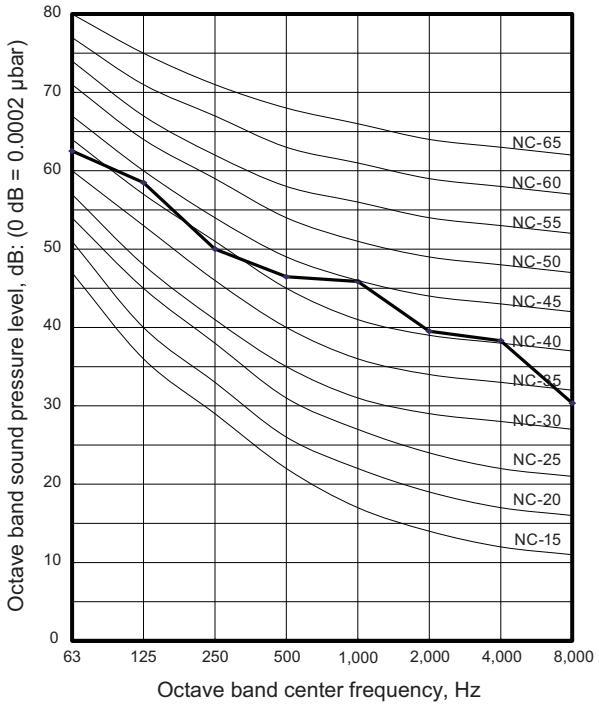
● Heating



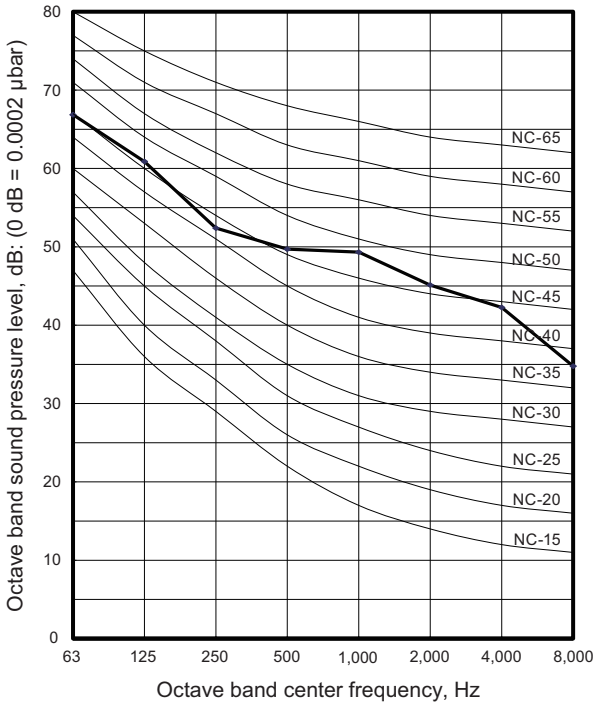
OUTDOOR UNIT
AOUH09-18KUAS1

■ Model: AOUH18KUAS1

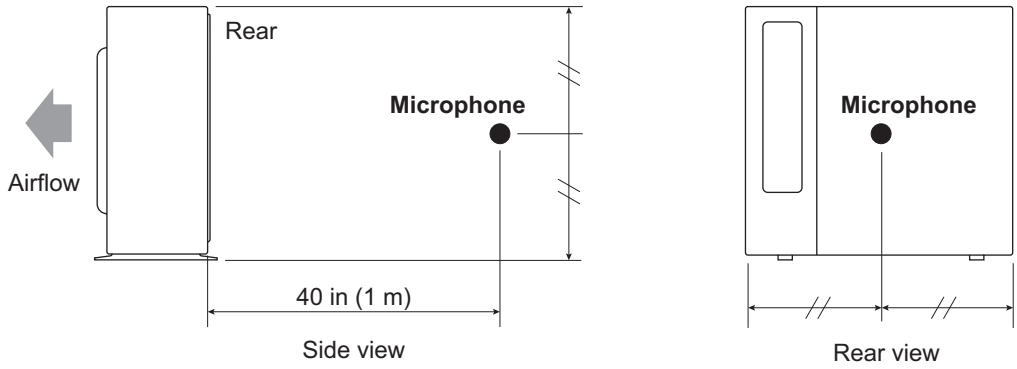
● Cooling



● 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

OUTDOOR UNIT
AOUH09-18KUAS1

Model name				AOUH09KUAS1	AOUH12KUAS1
Power supply	Voltage		V	208/230	
	Frequency		Hz	60	
MCA*1			A	11.0	14.2
Starting current			A	4.5	5.8
Wiring spec.*2	MAX. CKT. BKR*3		A	15	
	Power cable		AWG	14	
	Connection cable*3	Size	AWG	14	
		Limited wiring length	ft (m)	69 (21)	102 (31)

Model name				AOUH18KUAS1
Power supply	Voltage		V	208/230
	Frequency		Hz	60
MCA *1			A	17.9
Starting current			A	7.8
Wiring spec.*2	MAX. CKT. BKR*3		A	20
	Power cable		AWG	12
	Connection cable*4	Size	AWG	14
		Limited wiring length	ft (m)	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.

OUTDOOR UNIT
AOUH09-18KUAS1

11. Safety devices

Type of protection	Protection form		Model
			AOUH09KUAS1
Circuit protection	Current fuse (PCB*)		250 V, 20 A
			250 V, 5 A
Fan motor protection	Thermal protection program	Activate	217.4 ±32.4°F (103 ±18°C) Fan motor stop
		Reset	203 ±32.4°F or less (95 ±18°C or less) Fan motor restart
Compressor protection	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

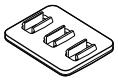
Type of protection	Protection form		Model	
			AOUH12KUAS1	AOUH18KUAS1
Circuit protection	Current fuse (PCB*)		250 V, 25 A	
			250 V, 5 A	
Fan motor protection	Thermal protection program	Activate	257 ±18°F (125 ±10°C) Fan motor stop	
		Reset	248 ±18°F (120 ±10°C) Fan motor restart	
Compressor protection	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

OUTDOOR UNIT
AOUH09-18KUAS1

12. Accessories

12-1. Models: AOUH09KUAS1, AOUH12KUAS1, and AOUH18KUAS1

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