

AIRSTAGE

AIR CONDITIONER

Wall mounted type

FUJITSU

REFRIGERANT R32
INVERTER

DESIGN & TECHNICAL MANUAL

INDOOR



ASUH09KPAS
ASUH12KPAS



ASUH18KPAS
ASUH24KPAS



ASUH30KPAS
ASUH36KPAS

OUTDOOR



AOUH09KPAS1
AOUH12KPAS1



AOUH18KPAS1
AOUH24KPAS1



AOUH30KPAS1
AOUH36KPAS1

FUJITSU GENERAL LIMITED

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Part 1. INDOOR UNIT

WALL MOUNTED TYPE:

ASUH09KPAS

ASUH12KPAS

ASUH18KPAS

ASUH24KPAS

ASUH30KPAS

ASUH36KPAS

1. Specifications

1-1. Models: ASUH09KPAS and ASUH12KPAS

Type	Wall mounted		
Model name	Inverter, Heat pump		
	ASUH09KPAS	ASUH12KPAS	
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
		Btu/h	9,000 3.52
		Min.—Max.	kW 0.90—3.28
		Btu/h	3,100—11,200 0.90—4.00
	Heating	Rated	kW 2.93
		Btu/h	10,000 4.10
		Min.—Max.	kW 0.70—4.00
		Btu/h	2,400—13,600 0.80—4.98
	17°FDB (Outdoor temp.) ^{*1}	Rated	kW 1.87
		Btu/h	6,400 2.55
		Max.	kW 2.64
		Btu/h	9,000 3.22
	5°FDB (Outdoor temp.) ^{*2}	Rated	kW 2.09
		Btu/h	7,100 2.50
		Max.	kW 2.09
		Btu/h	7,100 2.50
Input power	Cooling	Rated	0.72
		Min.—Max.	0.12—1.13
		Rated	0.70
		Min.—Max.	0.11—1.18
	Heating	Rated	0.61
		Max.	1.0
		Rated	0.915
		Max.	0.915
	Fan	HIGH	21.8
		MED—HIGH	17.3
		MED	12.2
		MED—LOW	9.2
		LOW	6.8
		QUIET	2.9
Current	Cooling	Rated	A 3.5
	Heating		3.4
EER2	Cooling	Btu/hW	12.5
COP2	Heating	kW/kW	4.18
SEER2	Cooling	Btu/hW	26.0
HSPF2	Heating		10.8
Power factor	Cooling	%	89.4
	Heating		89.5
Moisture removal		pints/h (L/h)	2.40 (1.12) 3.40 (1.59)
Maximum operating current ^{*3}	Cooling	A	6.4
	Heating		7.9
Fan	Airflow rate	Cooling	HIGH 394 (670)
			MED—HIGH 365 (620)
			MED 318 (540)
			MED—LOW 283 (480)
			LOW 247 (420)
			QUIET 153 (260)
			HIGH 430 (730)
		Heating	MED—HIGH 365 (620)
			MED 394 (670)
			MED—LOW 336 (570)
			LOW 330 (560)
			QUIET 265 (450)
			188 (320)
			Crossflow fan × 1
Sound pressure level ^{*4}	Type × Qty	W	30
			40
			38
			34
			32
			29
			19
	Motor output	dB (A)	42
			38
			36
			33
			31
			21
			Main 1: 8-1/4 × 26-5/16 × 1-1/16 (210 × 668 × 26.6) Main 2: 4-7/16 × 26-5/16 × 13/16 (112 × 668 × 20.0)
Heat exchanger type	Dimensions (H × W × D)	in (mm)	Main 1: 21 Main 2: 23
	Fin pitch	FPI	Main 1: 2 Main 2: 23
	Rows × Stages		Main 1: 2 × 10 Main 2: 2 × 7
	Pipe type		Copper tube
	Fin type		Aluminum

Type			Wall mounted		
Model name			Inverter, Heat pump		
Enclosure	Material	ASUH09KPAS		ASUH12KPAS	
	Color	Polystyrene White Approximate color of Munsell N9.25/			
Dimensions (H × W × D)	Net	in (mm)	10-5/8 × 32-13/16 × 8-3/4 (270 × 834 × 222)		
	Gross		10-7/8 × 36 × 13-1/16 (277 × 914 × 332)		
Weight	Net	lb (kg)	21 (9.5)		
	Gross		26 (12.0)		
Connection pipe	Size	in (mm)	Ø1/4 (Ø6.35)		
	Gas		Ø3/8 (Ø9.52)		
Method			Flare		
Drain hose	Material	Polypropylene + High-density polyethylene			
	Tip diameter	in (mm)	I.D.: Ø17/32 (Ø13.8), O.D.: Ø19/32 to Ø21/32 (Ø15.0 to Ø16.8)		
Operation range	Cooling		64 to 90 (18 to 32)		
	Heating		%RH 80 or less		
			°F (°C) 60 to 86 (16 to 30)		
Remote controller type			Wireless (Option: Wired, 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.

1-2. Models: ASUH18KPAS and ASUH24KPAS

Type	Wall mounted			
Model name	Inverter, Heat pump			
	ASUH18KPAS	ASUH24KPAS		
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 5.28 6.45	
		Btu/h	18,000 22,000	
		kW	1.17—5.86 1.17—7.15	
		Btu/h	4,000—20,000 4,000—24,400	
	47°FDB (Outdoor temp.)	Rated	kW 5.28 7.03	
		Btu/h	18,000 24,000	
		kW	1.22—7.03 1.22—8.50	
		Btu/h	4,150—24,000 4,150—29,000	
	Heating	Rated	kW 3.31 4.34	
		Btu/h	11,300 14,800	
		kW	6.36 7.13	
		Btu/h	21,700 24,300	
	17°FDB (Outdoor temp.) ^{*1}	Rated	kW 5.42 5.86	
		Btu/h	18,500 20,000	
		kW	5.42 5.86	
		Btu/h	18,500 20,000	
Input power	Cooling	Rated	1.44 1.88	
		Min.—Max.	0.20—1.90 0.20—3.20	
		Rated	1.26 1.85	
		Min.—Max.	0.21—2.10 0.21—3.10	
	Heating	Rated	1.01 1.43	
		Max.	2.45 2.85	
		Rated	2.45 2.75	
		Max.	2.45 2.75	
	Fan	HIGH	38 69	
		MED—HIGH	34 46	
		MED	30 30	
		MED—LOW	24 24	
		LOW	19 19	
		QUIET	11 14	
Current	Cooling	Rated	A 6.7 8.2	
	Heating		5.6 8.1	
EER2	Cooling		Btu/hW 12.5 11.7	
COP2	Heating		kW/kW 4.2 3.8	
SEER2	Cooling		Btu/hW 22.0 21.5	
HSPF2	Heating			
Power factor	Cooling		% 97.3 99.2	
	Heating		98.0 98.9	
Moisture removal			pints/h (L/h) 4.9 (2.3) 6.3 (3.0)	
Maximum operating current ^{*3}	Cooling		A 9.9 14.4	
	Heating		11.9 13.9	
Fan	Airflow rate	HIGH	CFM (m ³ /h) 536 (910) 689 (1,170)	
		MED—HIGH	506 (860) 583 (990)	
		MED	483 (820)	
		MED—LOW	430 (730)	
		LOW	377 (640)	
		QUIET	259 (440) 312 (530)	
		HIGH	506 (860) 600 (1,020)	
		MED—HIGH	465 (790) 553 (940)	
	Heating	MED	430 (730) 506 (860)	
		MED—LOW	388 (660) 441 (750)	
		LOW	347 (590) 377 (640)	
		QUIET	277 (470) 318 (540)	
Type × Qty			Crossflow fan × 1	
Motor output			W 59	
Sound pressure level ^{*4}	Cooling	HIGH	dB (A) 44 51	
		MED—HIGH	43 48	
		MED	42 43	
		MED—LOW	40	
		LOW	37	
		QUIET	26 31	
		HIGH	43 47	
		MED—HIGH	41 45	
	Heating	MED	39 43	
		MED—LOW	37 40	
		LOW	34 36	
		QUIET	28 32	
	Dimensions (H × W × D)			Main 1: 8-1/4 × 31-5/16 × 1-1/16 (210 × 796 × 26.6) Main 2: 5-5/16 × 31-5/16 × 13/16 (135 × 796 × 20.0) Sub 1: 3-5/16 × 31-5/16 × 1/2 (84 × 796 × 13.3) Sub 2: 3-5/16 × 31-5/16 × 1/2 (84 × 796 × 13.3)
Heat exchanger type	Fin pitch			Main 1: 21 Main 2: 23 Sub 1: 18 Sub 2: 18
	Rows × Stages			Main 1: 2 × 10 Main 2: 2 × 8 Sub 1: 1 × 4 Sub 2: 1 × 4
	Pipe type			Copper tube
	Fin type			Aluminum

Type			Wall mounted	
Model name			Inverter, Heat pump	
Enclosure	Material	ASUH18KPAS		ASUH24KPAS
	Color	Polystyrene White Approximate color of Munsell N9.25/		
Dimensions (H × W × D)	Net	in (mm)	11 × 38-9/16 × 9-7/16 (280 × 980 × 240) 12-11/16 × 42-7/16 × 13-5/8 (322 × 1,078 × 346)	
	Gross		28 (12.5) 36 (16.5)	
Weight	Net	lb (kg)	Ø1/4 (Ø6.35) Ø1/2 (Ø12.70)	
	Gross		Flare	
Connection pipe	Size	in (mm)	Ø1/4 (Ø6.35) Ø1/2 (Ø12.70)	
	Method		Polypropylene + High-density polyethylene	
Drain hose	Material	in (mm)	Ø17/32 (Ø13.8) (I.D.), Ø19/32 to 21/32 (Ø15 to 16.8) (O.D.)	
	Tip diameter		64 to 90 (18 to 32) 80 or less	
Operation range	Cooling	°F (°C)	64 to 90 (18 to 32) 80 or less	
	Heating	%RH	60 to 86 (16 to 30)	
Remote controller type			Wireless (Option: Wired, 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.

1-3. Models: ASUH30KPAS and ASUH36KPAS

Type	Wall mounted				
Model name	Inverter, Heat pump				
	ASUH30KPAS	ASUH36KPAS			
Power supply intake			Outdoor unit		
Voltage	V	208/230			
System power supply	Frequency	Hz	60		
	Available voltage range	V	187—253		
Indoor unit power supply (from outdoor unit)		V	208/230		
Capacity	Cooling	Rated	kW	8.79	9.67
			Btu/h	30,000	33,000
			kW	2.90—9.50	2.90—10.00
		Btu/h	9,900—32,400	9,900—34,100	
	Heating	Rated	kW	8.79	9.96
			Btu/h	30,000	34,000
			kW	2.7—10.2	2.7—11.0
		Btu/h	9,200—34,800	9,200—37,500	
	5°FDB (Outdoor temp.) ^{*2}	Rated	kW	5.74	6.56
			Btu/h	19,600	22,400
			kW	8.83	
		Btu/h	30,100		
Input power	Cooling	Rated	kW	7.56	
			Btu/h	25,800	
			kW	7.56	
		Btu/h	25,800		
	Heating	Rated	kW	2.56	3.39
			Btu/h	0.45—3.42	0.45—3.82
			kW	2.43	3.02
		Btu/h	0.52—3.00	0.52—3.72	
	Fan	17°FDB (Outdoor temp.) ^{*1}	kW	1.89	2.27
			Btu/h	3.68	
			kW	3.43	
		Btu/h	3.43		
Fan	Airflow rate	HIGH MED—HIGH MED MED—LOW LOW QUIET	W	58	
				45	
				36	
				28	
				22	
				15	
	Type × Qty	Cooling	A	11.3	14.8
				10.8	13.3
				806 (1,370)	
				724 (1,230)	
				653 (1,110)	
				583 (990)	
Sound pressure level ^{*4}	Heating	HIGH MED—HIGH MED MED—LOW LOW QUIET	CFM (m ³ /h)	518 (880)	
				418 (710)	
				742 (1,260)	
				671 (1,140)	
				612 (1,040)	
				547 (930)	
	Cooling	HIGH MED—HIGH MED MED—LOW LOW QUIET		483 (820)	
				418 (710)	
				Crossflow fan × 1	
				78	
				51	
				49	
Heat exchanger	Rows × Stages	HIGH MED—HIGH MED MED—LOW LOW QUIET	dB (A)	46	
				43	
				39	
				32	
				48	
	Dimensions (H × W × D)	HIGH MED—HIGH MED MED—LOW LOW QUIET		45	
				42	
				39	
				36	
				32	
Enclosure	Material	in (mm)		18-3/16 × 35-3/8 × 1-1/16 (462 × 898 × 26.6)	
				21	
	Color	FPI		2 × 22	
				Copper	
				Aluminum	
Dimensions (H × W × D)	Net	in (mm)		Polystyrene	
				White	
	Gross			Approximate color of Munsell N9.25/	
Weight	Net	lb (kg)		13-3/8 × 45-1/4 × 11 (340 × 1,150 × 280)	
	Gross			15-15/16 × 50 × 17-11/16 (405 × 1,270 × 450)	

Type	Wall mounted				
	Inverter, Heat pump				
Model name	ASUH30KPAS		ASUH36KPAS		
	Size		in (mm)		
Connection pipe	Liquid	Ø3/8 (Ø9.52)			
	Gas	Ø5/8 (Ø15.88)			
Drain hose	Method				
	Material				
	Tip diameter	in (mm)	Polypropylene + High-density polyethylene		
Operation range	Cooling		Ø17/32 (Ø13.8) (I.D.), Ø19/32 to 21/32 (Ø15.0 to 16.8) (O.D.)		
	°F (°C)		64 to 90 (18 to 32)		
	%RH		80 or less		
Remote controller type	Heating	°F (°C)	60 to 86 (16 to 30)		
	Wireless (Option: Wired, Mobile app ^{*5} [AIRSTAGE Mobile])				

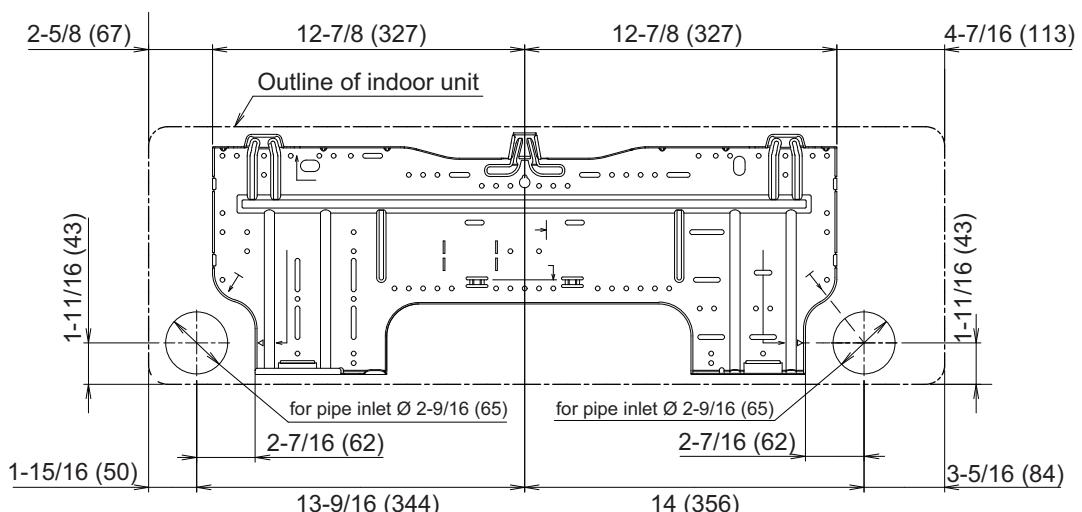
NOTES:

- 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.

2. Dimensions

2-1. Models: ASUH09KPAS and ASUH12KPAS

Unit: in (mm)

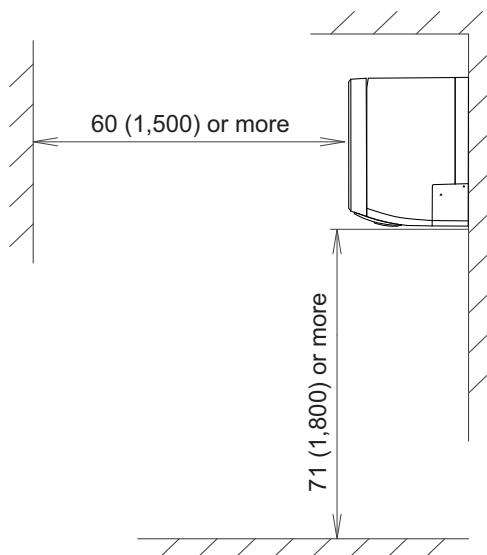
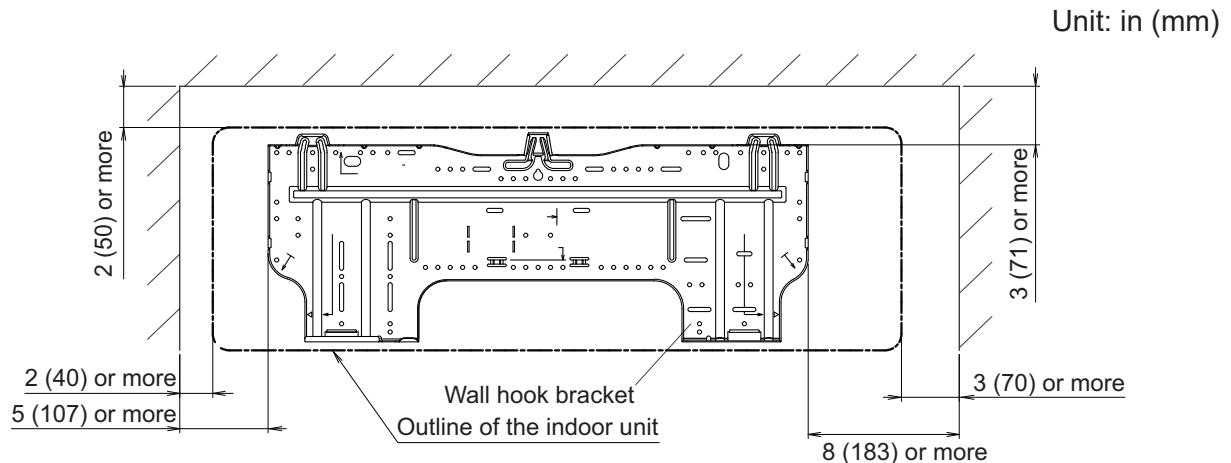


■ Installation space requirement

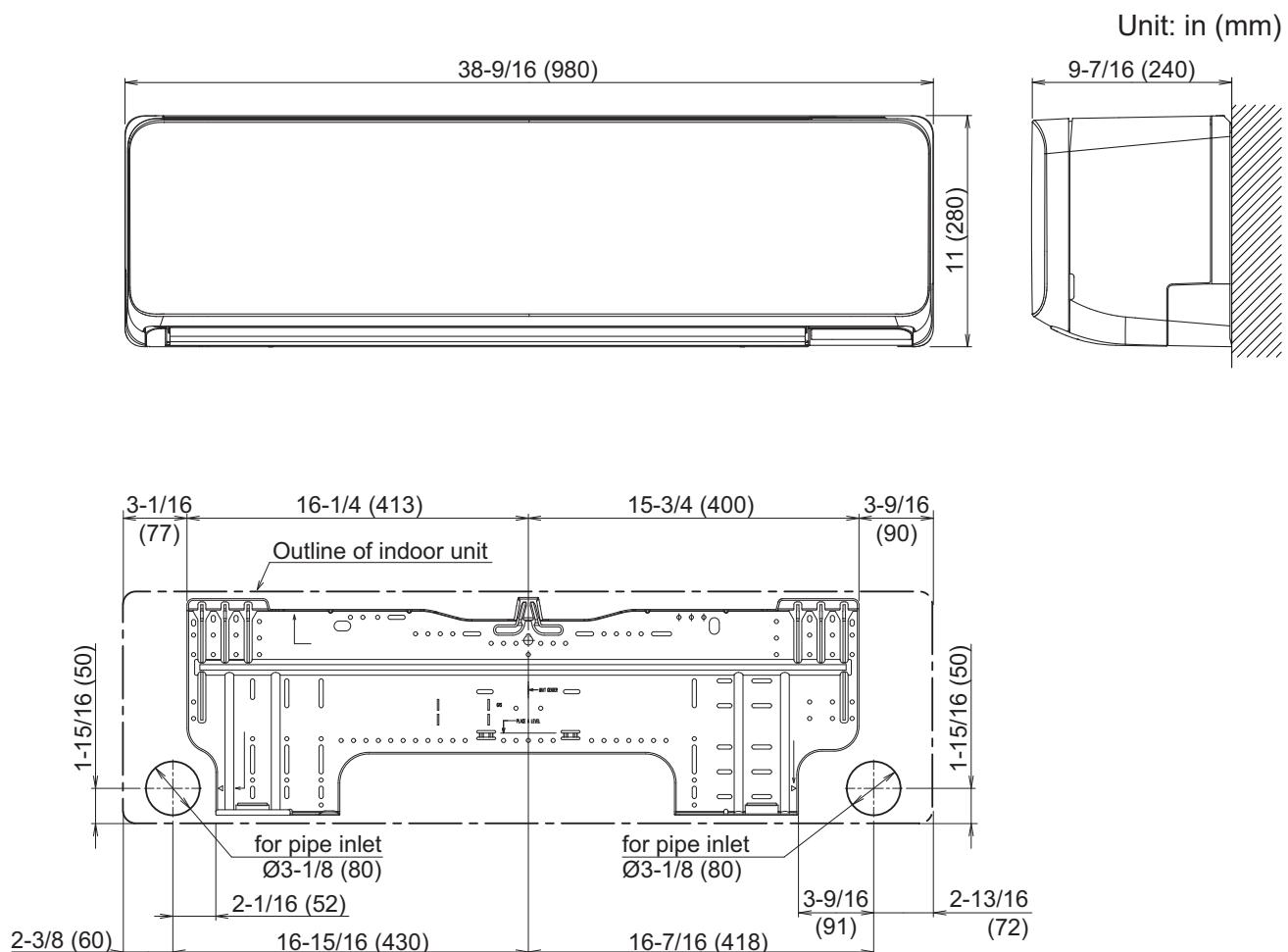
Provide sufficient installation space for product safety.

△ CAUTION

Do not place any other electrical products or household belongings under the product. Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.



2-2. Models: ASUH18KPAS and ASUH24KPAS

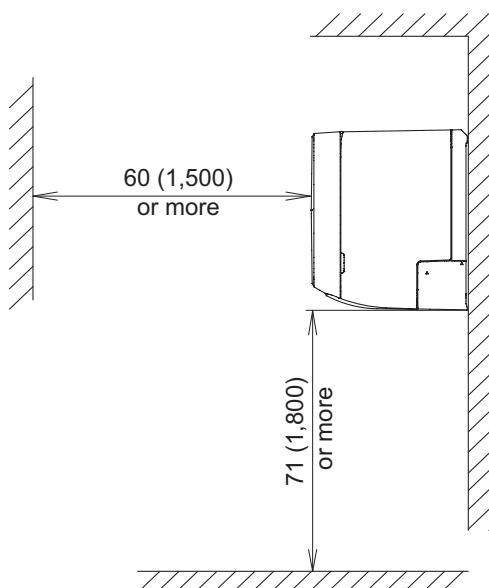
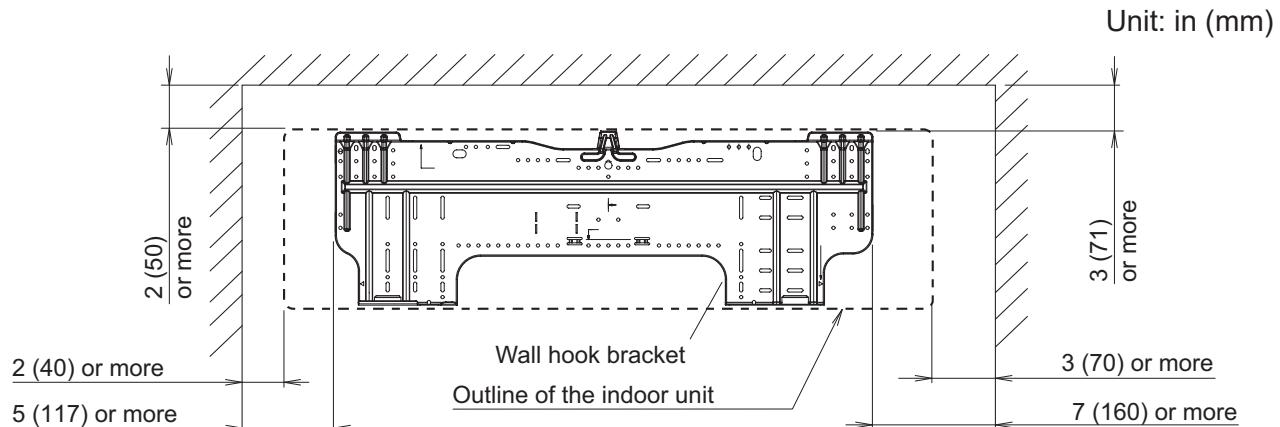


■ Installation space requirement

Provide sufficient installation space for product safety.

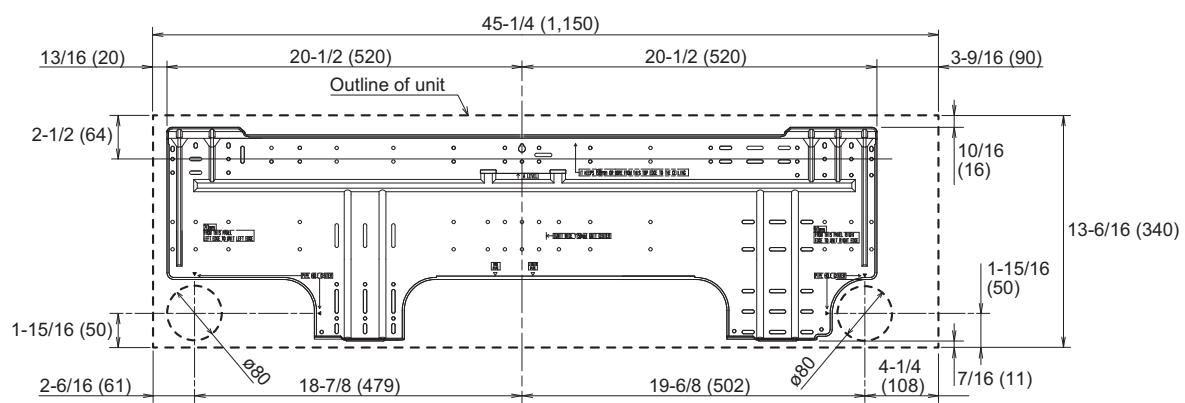
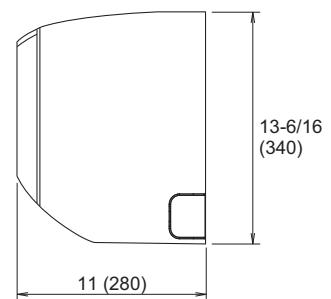
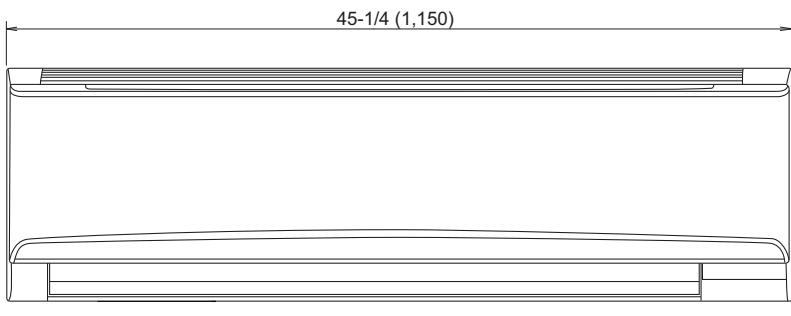
⚠ CAUTION

Do not place any other electrical products or household belongings under the product. Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.



2-3. Models: ASUH30KPAS and ASUH36KPAS

Unit: in (mm)



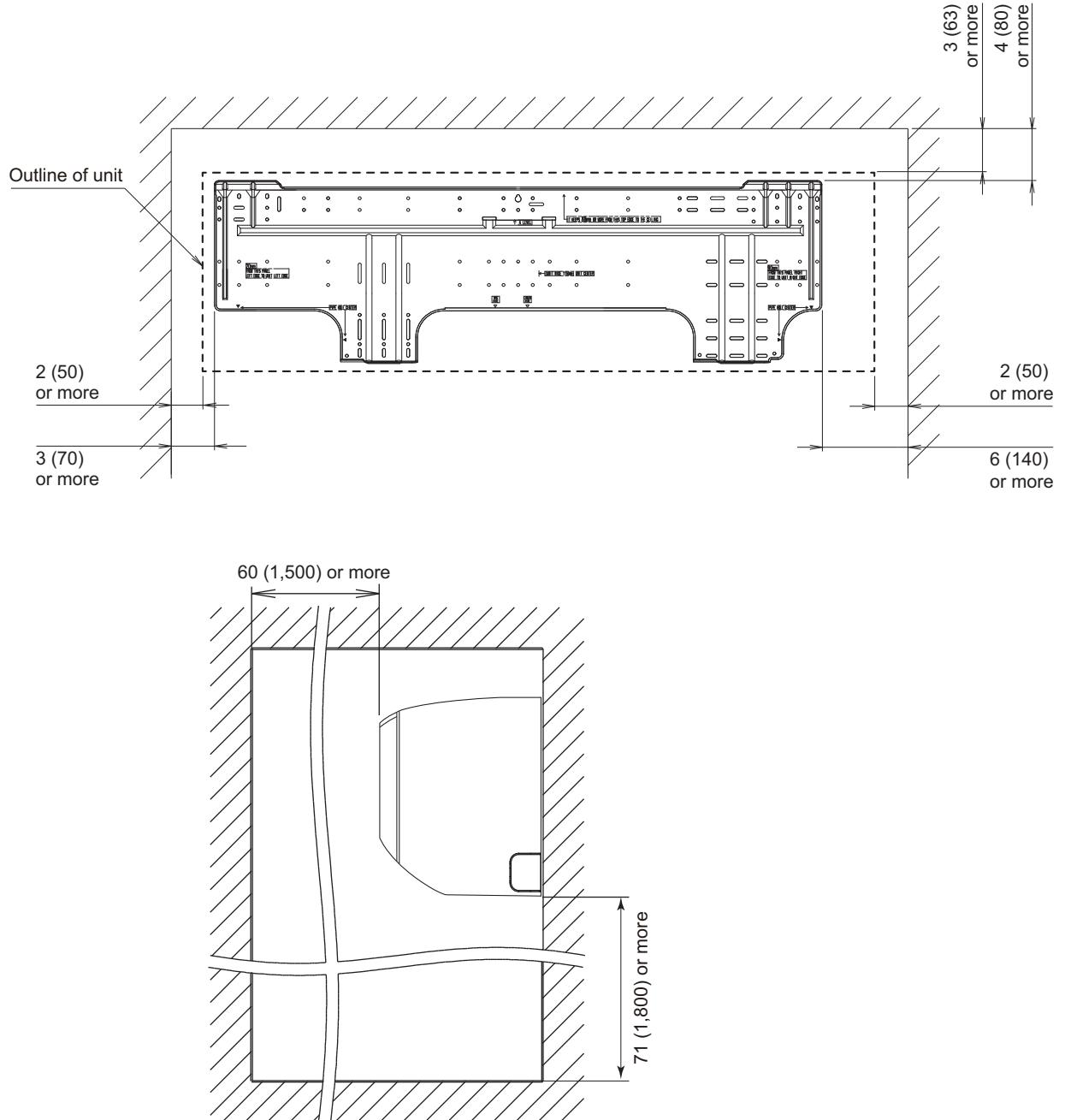
■ Installation space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Do not place any other electrical products or household belongings under the product. Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.

Unit: in (mm)

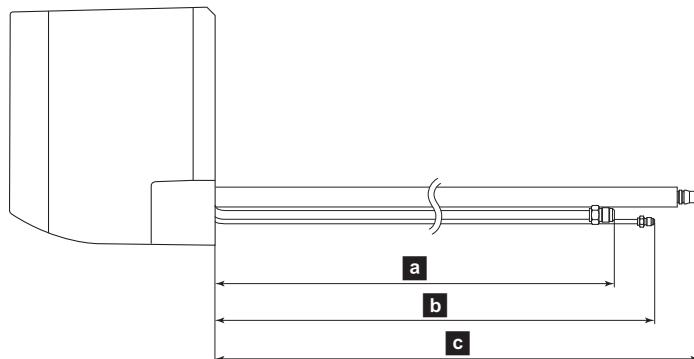


2-4. Pipe exit length from the rear

Design the system considering the length of the pipes or hose exiting from the rear of the indoor unit.

NOTE: Detailed shapes of the indoor unit and the tip of each pipe or hose may vary depending on the model.

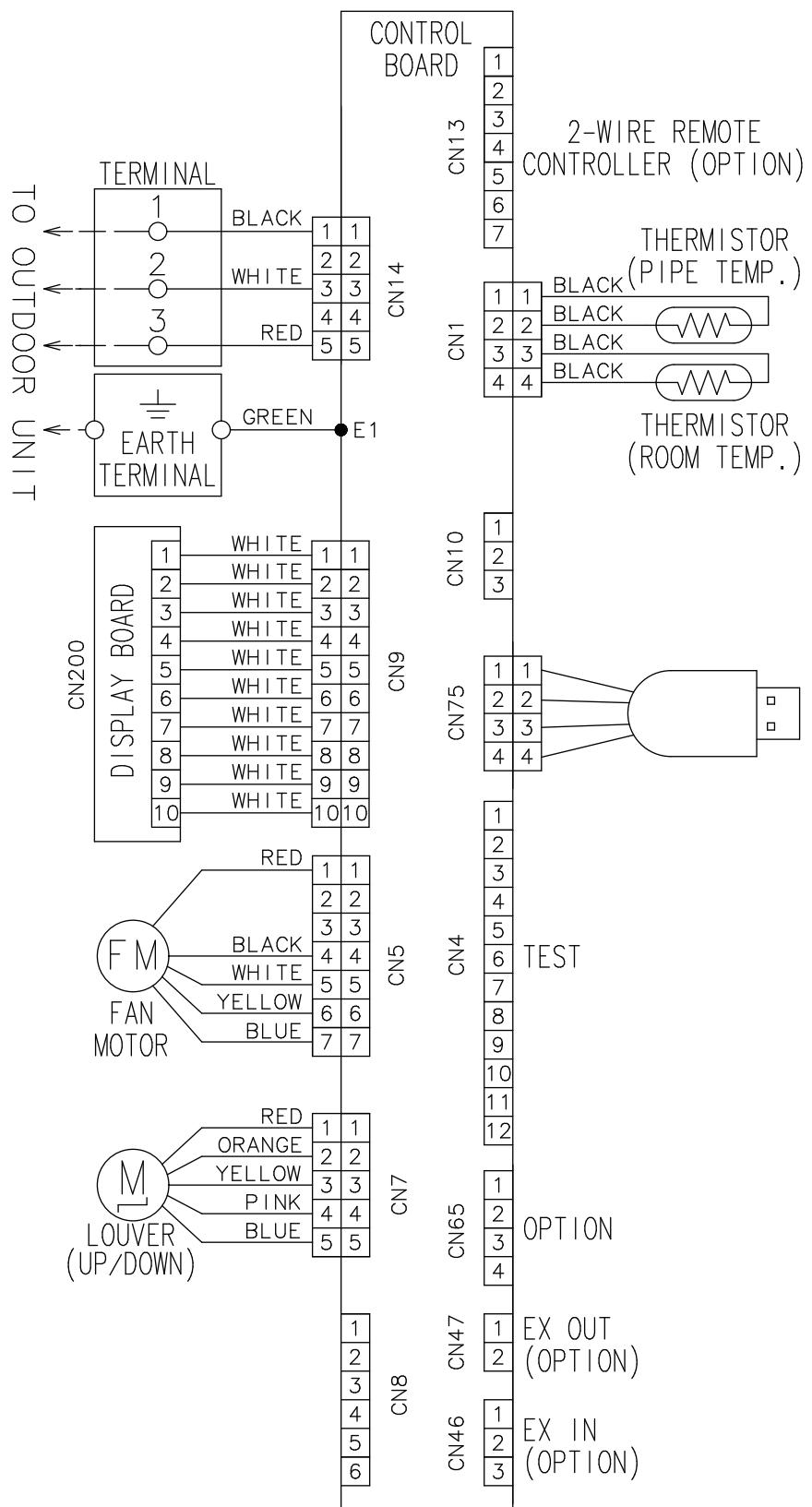
Unit: in (mm)



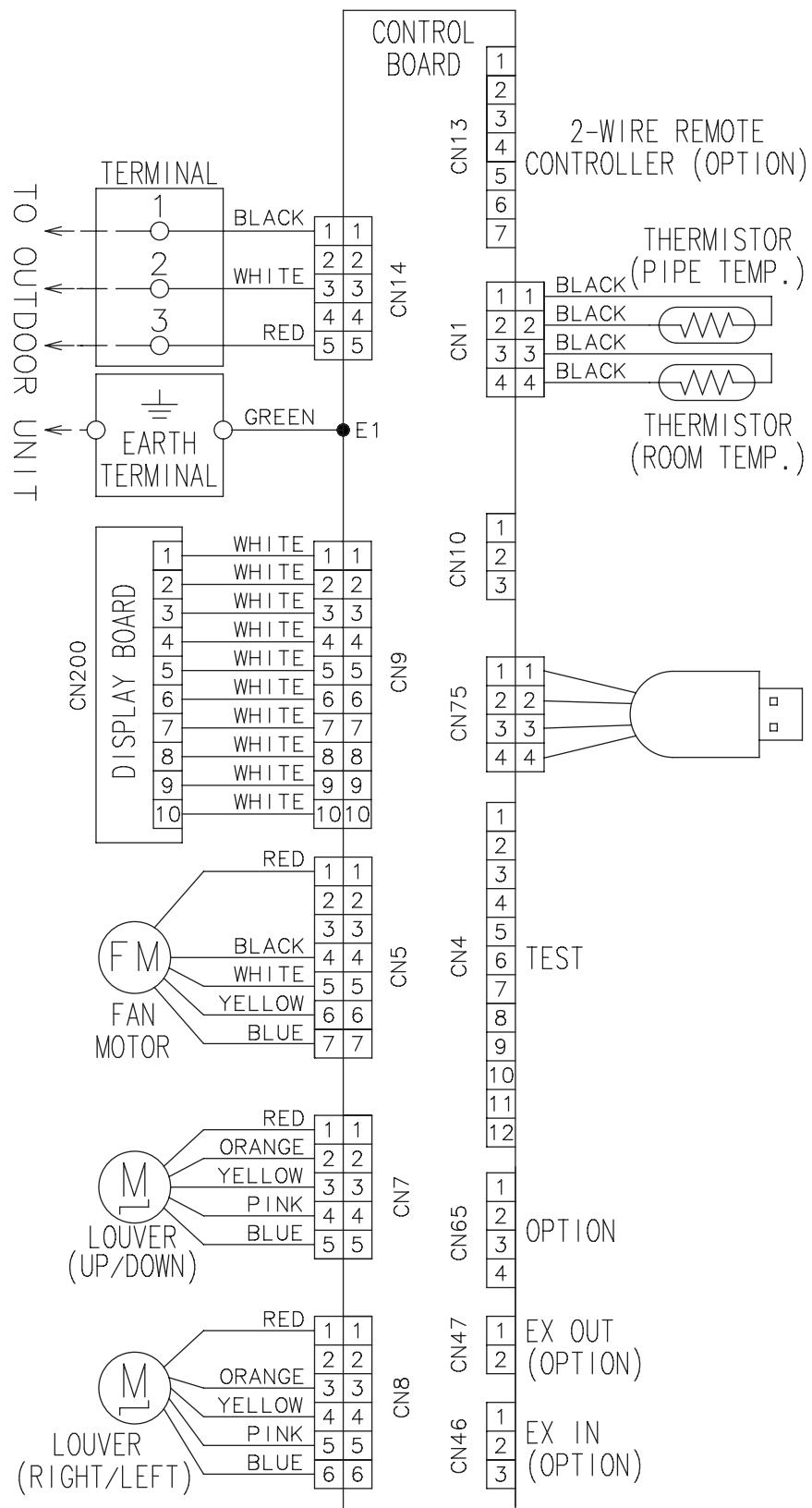
Model name	Approximate length		
	a Gas pipe	b Liquid pipe	c Drain hose
ASUH09-12KPAS	14-15/16 (380)	16-15/16 (430)	18-7/8 (480)
ASUH18-24KPAS	16-15/16 (430)	19-1/8 (485)	18-1/2 (470)
ASUH30-36KPAS	21-7/8 (555)	19-1/8 (485)	20-1/4 (515)

3. Wiring diagrams

3-1. Models: ASUH09KPAS and ASUH12KPAS



3-2. Models: ASUH18KPAS, ASUH24KPAS, ASUH30KPAS, and ASUH36KPAS



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: ASUH09KPAS

AFR			CFM			394													
						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	
	14	8.78	7.35	0.36	9.60	8.04	0.36	10.53	8.81	0.37	10.85	9.08	0.37	11.56	9.68	0.37	12.33	10.32	0.38
	23	8.67	7.26	0.37	9.48	7.95	0.38	10.39	8.71	0.39	10.72	8.98	0.39	11.42	9.57	0.39	12.17	10.20	0.40
	32	8.56	7.18	0.39	9.37	7.86	0.40	10.26	8.61	0.41	10.58	8.88	0.41	11.27	9.46	0.41	12.02	10.09	0.42
	41	8.09	6.94	0.53	8.85	7.60	0.53	9.70	8.32	0.54	10.00	8.58	0.55	10.66	9.14	0.56	11.36	9.75	0.56
	50	8.31	6.94	0.50	9.09	7.60	0.50	9.96	8.32	0.51	10.27	8.58	0.52	10.94	9.14	0.53	11.67	9.75	0.53
	59	8.15	6.98	0.49	8.91	7.64	0.49	9.77	8.37	0.50	10.07	8.63	0.51	10.73	9.20	0.52	11.44	9.80	0.52
	67	7.90	6.94	0.54	8.64	7.60	0.54	9.47	8.32	0.55	9.76	8.58	0.56	10.40	9.14	0.57	11.09	9.75	0.57
	77	7.69	6.81	0.59	8.42	7.45	0.59	9.22	8.17	0.61	9.51	8.42	0.61	10.13	8.97	0.62	10.80	9.57	0.63
	87	7.49	6.68	0.64	8.19	7.31	0.65	8.98	8.01	0.66	9.25	8.26	0.67	9.86	8.80	0.67	10.51	9.38	0.68
	95	7.28	6.55	0.69	7.97	7.17	0.70	8.73	7.86	0.71	9.00	8.10	0.72	9.59	8.63	0.73	10.22	9.20	0.73
	104	6.82	6.33	0.77	7.46	6.92	0.78	8.18	7.59	0.79	8.43	7.82	0.80	8.98	8.33	0.81	9.58	8.88	0.82
	115	5.41	4.88	0.77	5.92	5.34	0.78	6.49	5.85	0.79	6.69	6.03	0.80	7.06	6.36	0.80	7.45	6.72	0.80
	122	4.69	4.69	0.77	5.13	5.13	0.78	5.29	5.29	0.78	5.80	5.80	0.80	6.12	6.12	0.80	6.59	6.59	0.80

AFR			m³/h			670													
						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		kW	kW		kW	kW		kW	kW	
	-10.0	2.57	2.15	0.36	2.81	2.36	0.36	3.08	2.58	0.37	3.18	2.66	0.37	3.39	2.84	0.37	3.61	3.02	0.38
	-5.0	2.54	2.13	0.37	2.78	2.33	0.38	3.05	2.55	0.39	3.14	2.63	0.39	3.35	2.80	0.39	3.57	2.99	0.40
	0.0	2.51	2.11	0.39	2.74	2.30	0.40	3.01	2.52	0.41	3.10	2.60	0.41	3.30	2.77	0.41	3.52	2.96	0.42
	5.0	2.37	2.03	0.53	2.59	2.23	0.53	2.84	2.44	0.54	2.93	2.51	0.55	3.12	2.68	0.56	3.33	2.86	0.56
	10.0	2.44	2.03	0.50	2.66	2.23	0.50	2.92	2.44	0.51	3.01	2.51	0.52	3.21	2.68	0.53	3.42	2.86	0.53
	15.0	2.39	2.05	0.49	2.61	2.24	0.49	2.86	2.45	0.50	2.95	2.53	0.51	3.14	2.70	0.52	3.35	2.87	0.52
	19.4	2.31	2.03	0.54	2.53	2.23	0.54	2.77	2.44	0.55	2.86	2.51	0.56	3.05	2.68	0.57	3.25	2.86	0.57
	25.0	2.25	2.00	0.59	2.47	2.18	0.59	2.70	2.39	0.61	2.79	2.47	0.61	2.97	2.63	0.62	3.17	2.80	0.63
	30.6	2.19	1.96	0.64	2.40	2.14	0.65	2.63	2.35	0.66	2.71	2.42	0.67	2.89	2.58	0.67	3.08	2.75	0.68
	35.0	2.13	1.92	0.69	2.33	2.10	0.70	2.56	2.30	0.71	2.64	2.37	0.72	2.81	2.53	0.73	3.00	2.70	0.73
	40.0	2.00	1.85	0.77	2.19	2.03	0.78	2.40	2.22	0.79	2.47	2.29	0.80	2.63	2.44	0.81	2.81	2.60	0.82
	46.0	1.59	1.43	0.77	1.74	1.56	0.78	1.90	1.71	0.79	1.96	1.77	0.80	2.07	1.86	0.80	2.18	1.97	0.80
	50.0	1.38	1.38	0.77	1.50	1.50	0.78	1.55	1.55	0.78	1.70	1.70	0.80	1.79	1.79	0.80	1.93	1.93	0.80

■ Model: ASUH12KPAS

AFR			CFM			430													
						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	
	14	11.59	8.25	0.52	12.68	9.03	0.52	13.90	9.89	0.53	14.33	10.20	0.54	15.27	10.87	0.55	16.28	11.59	0.55
	23	11.28	8.21	0.60	12.34	8.98	0.60	13.52	9.84	0.61	13.94	10.15	0.62	14.85	10.81	0.63	15.84	11.52	0.63
	32	10.96	8.16	0.67	11.99	8.93	0.68	13.14	9.79	0.69	13.55	10.09	0.70	14.44	10.75	0.71	15.39	11.46	0.71
	41	10.40	7.96	0.78	11.38	8.71	0.79	12.48	9.55	0.80	12.86	9.84	0.81	13.70	10.49	0.82	14.61	11.18	0.83
	50	11.04	8.04	0.57	12.08	8.80	0.57	13.24	9.64	0.58	13.65	9.94	0.59	14.55	10.59	0.60	15.51	11.29	0.60
	59	10.99	8.05	0.63	12.02	8.81	0.64	13.17	9.65	0.65	13.58	9.95	0.66	14.47	10.60	0.67	15.43	11.30	0.67
	67	10.71	7.91	0.72	11.72	8.66	0.73	12.84	9.49	0.74	13.24	9.78	0.75	14.11	10.42	0.76	15.04	11.11	0.77
	77	10.38	7.76	0.81	11.35	8.49	0.82	12.44	9.30	0.83	12.83	9.59	0.84	13.67	10.22	0.85	14.57	10.89	0.86
	87	10.04	7.60	0.90	10.99	8.32	0.91	12.04	9.11	0.93	12.41	9.39	0.94	13.23	10.01	0.95	14.10	10.67	0.96
	95	9.71	7.44	0.99	10.62	8.14	1.00	11.64	8.92	1.02	12.00	9.20	1.03	12.79	9.80	1.04	13.63	10.45	1.05
	104	9.08	7.09	1.08	9.94	7.76	1.09	10.89	8.51	1.11	11.23	8.77	1.12	11.97	9.35	1.13	12.76	9.96	1.14
	115	6.08	4.66	0.87	6.65	5.10	0.88	7.29	5.59	0.90	7.51	5.76	0.91	7.92	6.08	0.91	8.36	6.42	0.91
	122	5.24	5.24	0.87	5.74	5.74	0.88	5.91	5.91	0.89	6.48	6.48	0.91	6.84	6.84	0.91	7.36	7.36	0.91

AFR			m³/h			730													
						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		
	-10.0	3.40	2.42	0.52	3.72	2.65	0.52	4.07	2.90	0.53	4.20	2.99	0.54	4.48	3.19	0.55	4.77	3.40	0.55
	-5.0	3.31	2.41	0.60	3.62	2.63	0.60	3.96	2.88	0.61	4.09	2.97	0.62	4.35	3.17	0.63	4.64	3.38	0.63
	0.0	3.21	2.39	0.67	3.52	2.62	0.68	3.85	2.87	0.69	3.97	2.96	0.70	4.23	3.15	0.71	4.51	3.36	0.71
	5.0	3.05	2.33	0.78	3.34	2.55	0.79	3.66	2.80	0.80	3.77	2.88	0.81	4.02	3.07	0.82	4.28	3.28	0.83
	10.0	3.24	2.36	0.57	3.54	2.58	0.57	3.88	2.83	0.58	4.00	2.91	0.59	4.26	3.10	0.60	4.54	3.31	0.60
	15.0	3.22	2.36	0.63	3.52	2.58	0.64	3.86	2.83	0.65	3.98	2.92	0.66	4.24	3.11	0.67	4.52	3.31	0.67
	19.4	3.14	2.32	0.72	3.43	2.54	0.73	3.76	2.78	0.74	3.88	2.87	0.75	4.13	3.05	0.76	4.41	3.26	0.77
	25.0	3.04	2.27	0.81	3.33	2.49	0.82	3.65	2.73	0.83	3.76	2.81	0.84	4.01	2.99	0.85	4.27	3.19	0.86
	30.6	2.94	2.23	0.90	3.22	2.44	0.91	3.53	2.67	0.93	3.64	2.75	0.94	3.88	2.93	0.95	4.13	3.13	0.96
	35.0	2.85	2.18	0.99	3.11	2.39	1.00	3.41	2.62	1.02	3.52	2.70	1.03	3.75	2.87	1.04	4.00	3.06	1.05
	40.0	2.66	2.08	1.08	2.91	2.28	1.09	3.19	2.49	1.11	3.29	2.57	1.12	3.51	2.74	1.13	3.74	2.92	1.14
	46.0	1.78	1.37	0.87	1.95	1.49	0.88	2.14	1.64	0.90	2.20	1.69	0.91	2.32	1.78	0.91	2.45	1.88	0.91
	50.0	1.54	1.54	0.87	1.68	1.68	0.88	1.73	1.73	0.89	1.90	1.90	0.91	2.00	2.00	0.91	2.16	2.16	0.91

■ Model: ASUH18KPAS

	AFR	CFM			536														
Outdoor temperature	°FDB	64			70			75			80			85			90		
		54			60			63			67			71			73		
		TC	SHC	IP	TC	SHC	IP												
		kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW		
14	15.64	12.14	1.14	17.12	13.30	1.14	18.21	14.14	1.16	19.35	15.03	1.18	20.61	16.00	1.19	21.98	17.08	1.21	
23	15.58	12.40	1.11	17.07	13.55	1.12	18.13	14.41	1.14	19.30	15.31	1.16	20.56	16.31	1.17	21.90	17.38	1.18	
32	15.56	12.69	1.10	17.03	13.88	1.11	18.11	14.76	1.12	19.24	15.68	1.14	20.51	16.70	1.15	21.86	17.81	1.16	
41	15.68	12.36	1.05	17.12	13.52	1.06	18.24	14.38	1.08	19.36	15.28	1.10	20.64	16.28	1.11	22.00	17.36	1.12	
50	15.76	12.05	1.01	17.25	13.18	1.02	18.33	14.04	1.03	19.48	14.90	1.05	20.77	15.88	1.06	22.14	16.94	1.08	
59	17.28	12.63	1.11	18.92	13.80	1.12	20.11	14.69	1.13	21.37	15.61	1.16	22.78	16.61	1.16	24.28	17.72	1.17	
67	18.81	13.30	1.21	20.60	14.56	1.22	21.90	15.49	1.24	23.26	16.44	1.26	24.78	17.52	1.28	26.43	18.69	1.28	
77	18.26	13.24	1.37	19.99	14.49	1.39	21.25	15.41	1.41	22.56	16.38	1.43	24.06	17.45	1.45	25.64	18.59	1.46	
87	17.72	13.19	1.54	19.40	14.44	1.56	20.61	15.34	1.58	21.91	16.30	1.61	23.34	17.37	1.62	24.87	18.54	1.64	
95	14.55	10.59	1.38	15.92	11.60	1.39	16.95	12.33	1.42	18.00	13.10	1.44	19.19	13.97	1.45	20.46	14.89	1.47	
104	16.18	12.43	1.84	17.71	13.59	1.86	18.82	14.46	1.89	20.00	15.36	1.92	21.31	16.37	1.94	22.72	17.44	1.96	
115	12.22	11.03	1.37	13.38	12.07	1.39	14.23	12.83	1.41	15.12	13.62	1.43	16.10	14.51	1.45	17.17	15.49	1.46	
122	9.77	9.56	1.16	10.69	10.48	1.18	11.35	11.12	1.19	12.07	11.82	1.21	12.86	12.59	1.22	13.72	13.44	1.24	

	AFR	m³/h			910														
Outdoor temperature	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
		12.2			15.6			17.2			19.4			21.7			22.8		
		TC	SHC	IP	TC	SHC	IP												
		kW			kW			kW			kW			kW			kW		
-10.0	4.58	3.56	1.14	5.02	3.90	1.14	5.34	4.15	1.16	5.67	4.40	1.18	6.04	4.69	1.19	6.44	5.01	1.21	
-5.0	4.57	3.64	1.11	5.00	3.97	1.12	5.31	4.22	1.14	5.66	4.49	1.16	6.03	4.78	1.17	6.42	5.09	1.18	
0.0	4.56	3.72	1.10	4.99	4.07	1.11	5.31	4.33	1.12	5.64	4.60	1.14	6.01	4.90	1.15	6.41	5.22	1.16	
5.0	4.60	3.62	1.05	5.02	3.96	1.06	5.35	4.21	1.08	5.67	4.48	1.10	6.05	4.77	1.11	6.45	5.09	1.12	
10.0	4.62	3.53	1.01	5.06	3.86	1.02	5.37	4.12	1.03	5.71	4.37	1.05	6.09	4.65	1.06	6.49	4.96	1.08	
15.0	5.07	3.70	1.11	5.55	4.04	1.12	5.90	4.30	1.13	6.26	4.57	1.16	6.68	4.87	1.16	7.12	5.19	1.17	
19.4	5.51	3.90	1.21	6.04	4.27	1.22	6.42	4.54	1.24	6.82	4.82	1.26	7.26	5.13	1.28	7.75	5.48	1.28	
25.0	5.35	3.88	1.37	5.86	4.25	1.39	6.23	4.52	1.41	6.61	4.80	1.43	7.05	5.12	1.45	7.51	5.45	1.46	
30.6	5.19	3.86	1.54	5.69	4.23	1.56	6.04	4.50	1.58	6.42	4.78	1.61	6.84	5.09	1.62	7.29	5.43	1.64	
35.0	4.26	3.10	1.38	4.67	3.40	1.39	4.97	3.61	1.42	5.28	3.84	1.44	5.62	4.09	1.45	6.00	4.36	1.47	
40.0	4.74	3.64	1.84	5.19	3.98	1.86	5.52	4.24	1.89	5.86	4.50	1.92	6.25	4.80	1.94	6.66	5.11	1.96	
46.1	3.58	3.23	1.37	3.92	3.54	1.39	4.17	3.76	1.41	4.43	3.99	1.43	4.72	4.25	1.45	5.03	4.54	1.46	
50.0	2.86	2.80	1.16	3.13	3.07	1.18	3.33	3.26	1.19	3.54	3.46	1.21	3.77	3.69	1.22	4.02	3.94	1.24	

■ Model: ASUH24KPAS

	AFR	CFM			689														
Outdoor temperature	°FDB	64			70			75			80			85			90		
		54			60			63			67			71			73		
		TC	SHC	IP	TC	SHC	IP												
		kBtu	kW																
14	18.18	14.11	1.02	19.89	15.45	1.02	21.17	16.44	1.04	22.49	17.46	1.06	23.96	18.60	1.07	25.55	19.85	1.08	
23	17.69	14.08	1.12	19.38	15.39	1.13	20.58	16.36	1.15	21.91	17.38	1.17	23.34	18.51	1.18	24.86	19.73	1.19	
32	17.24	14.06	1.22	18.87	15.38	1.23	20.07	16.35	1.25	21.32	17.37	1.27	22.73	18.51	1.28	24.22	19.73	1.29	
41	17.97	14.17	0.97	19.62	15.50	0.98	20.91	16.48	1.00	22.19	17.51	1.02	23.66	18.66	1.03	25.22	19.90	1.04	
50	18.66	14.26	0.73	20.42	15.60	0.74	21.69	16.62	0.75	23.06	17.64	0.76	24.59	18.80	0.77	26.21	20.05	0.78	
59	20.53	15.00	1.36	22.48	16.39	1.38	23.89	17.44	1.39	25.38	18.54	1.42	27.05	19.73	1.44	28.84	21.04	1.45	
67	22.40	14.26	2.01	24.53	15.61	2.02	26.08	16.60	2.05	27.70	17.63	2.09	29.52	18.78	2.11	31.48	20.03	2.13	
77	21.75	14.19	2.28	23.81	15.54	2.30	25.30	16.51	2.34	26.87	17.55	2.37	28.65	18.71	2.40	30.54	19.93	2.42	
87	21.11	14.13	2.56	23.10	15.48	2.58	24.54	16.44	2.62	26.09	17.47	2.66	27.80	18.62	2.69	29.62	19.87	2.72	
95	17.79	13.10	1.80	19.46	14.35	1.82	20.71	15.25	1.85	22.00	16.20	1.88	23.46	17.27	1.90	25.01	18.41	1.91	
104	18.08	13.89	2.16	19.79	15.18	2.18	21.03	16.16	2.22	22.35	17.16	2.25	23.82	18.29	2.27	25.39	19.48	2.30	
115	13.65	12.32	1.61	14.94	13.48	1.63	15.90	14.33	1.66	16.89	15.22	1.68	17.98	16.21	1.70	19.18	17.30	1.71	
122	10.92	10.68	1.36	11.94	11.70	1.38	12.68	12.42	1.40	13.48	13.20	1.42	14.36	14.06	1.43	15.32	15.01	1.45	

	AFR	m³/h			1,170														
Outdoor temperature	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
		12.2			15.6			17.2			19.4			21.7			22.8		
		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
-10.0	5.33	4.14	1.02	5.83	4.53	1.02	6.20	4.82	1.04	6.59	5.12	1.06	7.02	5.45	1.07	7.49	5.82	1.08	
-5.0	5.18	4.13	1.12	5.68	4.51	1.13	6.03	4.80	1.15	6.42	5.10	1.17	6.84	5.43	1.18	7.29	5.78	1.19	
0.0	5.05	4.12	1.22	5.53	4.51	1.23	5.88	4.79	1.25	6.25	5.09	1.27	6.66	5.42	1.28	7.10	5.78	1.29	
5.0	5.27	4.15	0.97	5.75	4.54	0.98	6.13	4.83	1.00	6.50	5.13	1.02	6.93	5.47	1.03	7.39	5.83	1.04	
10.0	5.47	4.18	0.73	5.98	4.57	0.74	6.36	4.87	0.75	6.76	5.17	0.76	7.21	5.51	0.77	7.68	5.88	0.78	
15.0	6.02	4.40	1.36	6.59	4.80	1.38	7.00	5.11	1.39	7.44	5.43	1.42	7.93	5.78	1.44	8.45	6.17	1.45	
19.4	6.56	4.18	2.01	7.19	4.57	2.02	7.64	4.87	2.05	8.12	5.17	2.09	8.65	5.50	2.11	9.23	5.87	2.13	
25.0	6.37	4.16	2.28	6.98	4.55	2.30	7.42	4.84	2.34	7.88	5.15	2.37	8.40	5.48	2.40	8.95	5.84	2.42	
30.6	6.19	4.14	2.56	6.77	4.54	2.58	7.19	4.82	2.62	7.65	5.12	2.66	8.15	5.46	2.69	8.68	5.82	2.72	
35.0	5.21	3.84	1.80	5.70	4.21	1.82	6.07	4.47	1.85	6.45	4.75	1.88	6.87	5.06	1.90	7.33	5.39	1.91	
40.0	5.30	4.07	2.16	5.80	4.45	2.18	6.17	4.74	2.22	6.55	5.03	2.25	6.98	5.36	2.27	7.44	5.71	2.30	
46.1	4.00	3.61	1.61	4.38	3.95	1.63	4.66	4.20	1.66	4.95	4.46	1.68	5.27	4.75	1.70	5.62	5.07	1.71	
50.0	3.20	3.13	1.36	3.50	3.43	1.38	3.72	3.64	1.40	3.95	3.87	1.42	4.21	4.12	1.43	4.49	4.40	1.45	

■ Model: ASUH30KPAS

	AFR	CFM			806														
Outdoor temperature	°FDB	64			70			75			80			85			90		
		54			60			63			67			71			73		
		TC	SHC	IP	TC	SHC	IP												
		kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
14	27.75	19.84	1.84	29.38	20.53	1.89	31.01	21.19	1.92	32.65	21.85	1.98	33.43	22.55	2.01	34.65	23.62	2.06	
23	27.89	19.89	1.78	29.53	20.58	1.83	31.17	21.24	1.86	32.81	21.90	1.92	33.59	22.60	1.94	34.82	23.67	1.99	
32	28.02	19.93	1.72	29.67	20.63	1.76	31.32	21.29	1.80	32.96	21.95	1.85	33.75	22.65	1.87	34.99	23.72	1.92	
41	27.90	19.93	1.74	29.54	20.63	1.78	31.18	21.29	1.82	32.82	21.95	1.87	33.61	22.65	1.89	34.84	23.72	1.94	
50	27.81	19.93	1.76	29.45	20.63	1.80	31.08	21.29	1.83	32.72	21.95	1.89	33.50	22.65	1.91	34.73	23.72	1.96	
59	27.69	19.93	1.77	29.32	20.63	1.82	30.95	21.29	1.85	32.58	21.95	1.91	33.35	22.65	1.94	34.58	23.72	1.98	
67	27.58	19.92	1.80	29.21	20.63	1.84	30.84	21.29	1.87	32.47	21.95	1.93	33.25	22.66	1.96	34.45	23.72	2.01	
77	27.23	20.05	1.90	28.82	20.76	1.95	30.44	21.41	1.99	32.05	22.08	2.05	32.83	22.79	2.07	33.99	23.85	2.12	
87	26.24	19.62	2.16	27.78	20.33	2.22	29.35	20.98	2.26	30.88	21.60	2.32	31.65	22.33	2.35	32.78	23.37	2.40	
95	25.50	19.28	2.38	27.00	19.96	2.44	28.50	20.60	2.48	30.00	21.24	2.56	30.72	21.91	2.59	31.84	22.95	2.65	
104	23.65	18.54	2.60	25.05	19.18	2.67	26.45	19.79	2.72	27.85	20.40	2.81	28.53	21.04	2.84	29.55	22.05	2.91	
115	21.97	17.83	2.92	23.26	18.48	3.00	24.55	19.07	3.05	25.84	19.65	3.15	26.46	20.27	3.19	27.40	21.23	3.26	
122	15.10	14.53	2.26	16.02	15.17	2.31	16.90	15.65	2.35	17.79	16.12	2.43	18.23	16.66	2.45	18.86	17.44	2.52	

	AFR	m³/h			1,370														
Outdoor temperature	°CDB	17.8			21.1			23.9			26.7			29.4			32.2		
		12.2			15.6			17.2			19.4			21.7			22.8		
		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
-10.0	8.13	5.82	1.84	8.61	6.02	1.89	9.09	6.21	1.92	9.57	6.40	1.98	9.80	6.61	2.01	10.16	6.92	2.06	
-5.0	8.17	5.83	1.78	8.65	6.03	1.83	9.13	6.23	1.86	9.61	6.42	1.92	9.84	6.62	1.94	10.20	6.94	1.99	
0.0	8.21	5.84	1.72	8.69	6.04	1.76	9.18	6.24	1.80	9.66	6.43	1.85	9.89	6.64	1.87	10.25	6.95	1.92	
5.0	8.18	5.84	1.74	8.66	6.04	1.78	9.14	6.24	1.82	9.62	6.43	1.87	9.85	6.64	1.89	10.21	6.95	1.94	
10.0	8.15	5.84	1.76	8.63	6.04	1.80	9.11	6.24	1.83	9.59	6.43	1.89	9.82	6.64	1.91	10.18	6.95	1.96	
15.0	8.12	5.84	1.77	8.59	6.04	1.82	9.07	6.24	1.85	9.55	6.43	1.91	9.78	6.64	1.94	10.13	6.95	1.98	
19.4	8.08	5.84	1.80	8.56	6.05	1.84	9.04	6.24	1.87	9.52	6.43	1.93	9.74	6.64	1.96	10.10	6.95	2.01	
25.0	7.98	5.88	1.90	8.45	6.08	1.95	8.92	6.27	1.99	9.39	6.47	2.05	9.62	6.68	2.07	9.96	6.99	2.12	
30.6	7.69	5.75	2.16	8.14	5.96	2.22	8.60	6.15	2.26	9.05	6.33	2.32	9.28	6.54	2.35	9.61	6.85	2.40	
35.0	7.47	5.65	2.38	7.91	5.85	2.44	8.35	6.04	2.48	8.79	6.22	2.56	9.00	6.42	2.59	9.33	6.73	2.65	
40.0	6.93	5.43	2.60	7.34	5.62	2.67	7.75	5.80	2.72	8.16	5.98	2.81	8.36	6.17	2.84	8.66	6.46	2.91	
46.0	6.44	5.23	2.92	6.82	5.42	3.00	7.19	5.59	3.05	7.57	5.76	3.15	7.76	5.94	3.19	8.03	6.22	3.26	
50.0	4.43	4.26	2.26	4.70	4.45	2.31	4.95	4.59	2.35	5.21	4.73	2.43	5.34	4.88	2.45	5.53	5.11	2.52	

■ Model: ASUH36KPAS

AFR			CFM			806													
						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	
	14	30.53	21.11	2.44	32.32	21.84	2.50	34.12	22.54	2.55	35.91	23.25	2.63	36.77	23.98	2.66	38.12	25.12	2.72
	23	30.67	21.15	2.36	32.48	21.89	2.42	34.28	22.60	2.46	36.09	23.30	2.54	36.95	24.04	2.57	38.30	25.18	2.63
	32	30.82	21.20	2.27	32.64	21.94	2.33	34.45	22.65	2.38	36.26	23.35	2.45	37.13	24.09	2.48	38.49	25.23	2.54
	41	30.69	21.20	2.30	32.50	21.94	2.36	34.30	22.65	2.40	36.11	23.35	2.48	36.97	24.09	2.51	38.32	25.23	2.57
	50	30.59	21.20	2.32	32.39	21.94	2.38	34.19	22.65	2.43	35.99	23.35	2.51	36.85	24.09	2.54	38.20	25.23	2.60
	59	30.46	21.20	2.35	32.25	21.94	2.41	34.04	22.65	2.46	35.83	23.35	2.53	36.69	24.09	2.56	38.03	25.23	2.62
	67	30.34	21.19	2.38	32.13	21.94	2.44	33.93	22.65	2.48	35.72	23.35	2.56	36.57	24.11	2.60	37.90	25.24	2.66
	77	29.95	21.33	2.52	31.71	22.08	2.58	33.48	22.77	2.63	35.25	23.49	2.71	36.11	24.24	2.75	37.39	25.37	2.81
	87	28.86	20.87	2.86	30.55	21.62	2.94	32.28	22.31	3.00	33.97	22.97	3.08	34.81	23.75	3.12	36.06	24.86	3.18
	95	28.05	20.51	3.15	29.70	21.23	3.23	31.35	21.91	3.29	33.00	22.59	3.39	33.79	23.31	3.43	35.03	24.41	3.51
	104	27.14	21.26	2.98	28.74	22.00	3.07	30.34	22.70	3.12	31.95	23.40	3.22	32.73	24.14	3.26	33.90	25.29	3.34
	115	22.48	18.25	2.99	23.80	18.91	3.07	25.12	19.51	3.12	26.44	20.12	3.22	27.09	20.75	3.26	28.05	21.73	3.34
	122	17.18	16.53	2.57	18.22	17.25	2.63	19.23	17.80	2.68	20.23	18.34	2.76	20.74	18.95	2.79	21.45	19.83	2.86

AFR			m³/h												1,370					
			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			
	-10.0	8.95	6.19	2.44	9.47	6.40	2.50	10.00	6.61	2.55	10.52	6.81	2.63	10.78	7.03	2.66	11.17	7.36	2.72	
	-5.0	8.99	6.20	2.36	9.52	6.42	2.42	10.05	6.62	2.46	10.58	6.83	2.54	10.83	7.04	2.57	11.22	7.38	2.63	
	0.0	9.03	6.21	2.27	9.56	6.43	2.33	10.10	6.64	2.38	10.63	6.84	2.45	10.88	7.06	2.48	11.28	7.39	2.54	
	5.0	8.99	6.21	2.30	9.52	6.43	2.36	10.05	6.64	2.40	10.58	6.84	2.48	10.83	7.06	2.51	11.23	7.39	2.57	
	10.0	8.97	6.21	2.32	9.49	6.43	2.38	10.02	6.64	2.43	10.55	6.84	2.51	10.80	7.06	2.54	11.19	7.39	2.60	
	15.0	8.93	6.21	2.35	9.45	6.43	2.41	9.98	6.64	2.46	10.50	6.84	2.53	10.75	7.06	2.56	11.15	7.39	2.62	
	19.4	8.89	6.21	2.38	9.42	6.43	2.44	9.94	6.64	2.48	10.47	6.84	2.56	10.72	7.06	2.60	11.11	7.40	2.66	
	25.0	8.78	6.25	2.52	9.29	6.47	2.58	9.81	6.67	2.63	10.33	6.88	2.71	10.58	7.10	2.75	10.96	7.44	2.81	
	30.6	8.46	6.12	2.86	8.95	6.34	2.94	9.46	6.54	3.00	9.96	6.73	3.08	10.20	6.96	3.12	10.57	7.28	3.18	
	35.0	8.22	6.01	3.15	8.70	6.22	3.23	9.19	6.42	3.29	9.67	6.62	3.39	9.90	6.83	3.43	10.26	7.15	3.51	
	40.0	7.95	6.23	2.98	8.42	6.45	3.07	8.89	6.65	3.12	9.36	6.86	3.22	9.59	7.07	3.26	9.94	7.41	3.34	
	46.0	6.59	5.35	2.99	6.98	5.54	3.07	7.36	5.72	3.12	7.75	5.90	3.22	7.94	6.08	3.26	8.22	6.37	3.34	
	50.0	5.03	4.84	2.57	5.34	5.06	2.63	5.64	5.22	2.68	5.93	5.38	2.76	6.08	5.55	2.79	6.29	5.81	2.86	

4-2. Heating capacity

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

■ Model: ASUH09KPAS

AFR	CFM		430
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		Indoor temperature											
Outdoor temperature	°FDB	60		65		70		72		75			
		TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	kBtu	kW
		kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
5	3	7.49	0.88	7.30	0.90	7.10	0.92	6.90	0.94	6.71	0.96		
14	12	9.09	0.94	8.85	0.96	8.61	0.98	8.37	1.00	8.13	1.02		
23	19	10.65	1.00	10.37	1.02	10.09	1.04	9.81	1.06	9.53	1.08		
32	28	12.19	1.06	11.87	1.08	11.55	1.10	11.23	1.12	10.91	1.14		
41	37	13.77	1.11	13.41	1.14	13.05	1.16	12.69	1.18	12.33	1.20		
47	43	14.35	1.13	13.98	1.16	13.60	1.18	13.22	1.20	12.85	1.23		
50	47	15.34	1.16	14.94	1.18	14.54	1.21	14.14	1.23	13.74	1.26		
59	50	15.81	1.18	15.39	1.20	14.98	1.23	14.57	1.25	14.15	1.28		
68	59	17.09	1.19	16.65	1.21	16.20	1.24	15.46	1.24	14.74	1.24		
75	64	18.18	1.19	17.71	1.21	17.23	1.24	16.44	1.24	15.68	1.24		

AFR	m³/h		730
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		Indoor temperature											
Outdoor temperature	°CDB	15.6		18.3		21.1		22.0		23.9			
		TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	kW	kW
		kW		kW		kW		kW		kW			
-15.0	-16.1	2.20	0.88	2.14	0.90	2.08	0.92	2.02	0.94	1.97	0.96		
-10.0	-11.1	2.66	0.94	2.59	0.96	2.52	0.98	2.45	1.00	2.38	1.02		
-5.0	-7.2	3.12	1.00	3.04	1.02	2.96	1.04	2.88	1.06	2.79	1.08		
0.0	-2.2	3.57	1.06	3.48	1.08	3.39	1.10	3.29	1.12	3.20	1.14		
5.0	2.8	4.04	1.11	3.93	1.14	3.82	1.16	3.72	1.18	3.61	1.20		
8.3	6.1	4.21	1.13	4.10	1.16	3.99	1.18	3.88	1.20	3.77	1.23		
10.0	8.3	4.50	1.16	4.38	1.18	4.26	1.21	4.14	1.23	4.03	1.26		
15.0	10.0	4.63	1.18	4.51	1.20	4.39	1.23	4.27	1.25	4.15	1.28		
20.0	15.0	5.01	1.19	4.88	1.21	4.75	1.24	4.53	1.24	4.32	1.24		
24.0	18.0	5.33	1.19	5.19	1.21	5.05	1.24	4.82	1.24	4.60	1.24		

■ Model: ASUH12KPAS

AFR			CFM				436					
Indoor temperature												
Outdoor temperature	°FDB	°FWB	60		65		70		72		75	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
5	3	8.97	1.06	8.73	1.08	8.50	1.10	8.27	1.12	8.03	1.14	
14	12	10.93	1.13	10.65	1.16	10.36	1.18	10.07	1.20	9.79	1.23	
23	19	12.92	1.19	12.58	1.21	12.24	1.24	11.90	1.26	11.56	1.29	
32	28	14.98	1.27	14.59	1.29	14.20	1.32	13.81	1.35	13.42	1.37	
41	37	17.06	1.34	16.62	1.37	16.17	1.40	15.72	1.43	15.28	1.45	
47	43	17.94	1.37	17.47	1.40	17.00	1.43	16.53	1.46	16.06	1.48	
50	47	19.23	1.42	18.72	1.45	18.22	1.48	17.72	1.51	17.21	1.54	
59	50	19.33	1.33	18.83	1.36	18.32	1.39	17.81	1.42	17.31	1.44	
68	59	19.14	1.19	18.64	1.21	18.14	1.24	17.31	1.24	16.51	1.24	
75	64	20.86	1.19	20.32	1.21	19.77	1.24	18.86	1.24	17.99	1.24	

AFR			CFM				740					
Indoor temperature												
Outdoor temperature	°CDB	°CWB	15.6		18.3		21.1		22.0		23.9	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW									
-15.0	-16.1	2.63	1.06	2.56	1.08	3.10	1.10	2.42	1.12	2.35	1.14	
-10.0	-11.1	3.20	1.13	3.12	1.16	3.04	1.18	2.95	1.20	2.87	1.23	
-5.0	-7.2	3.79	1.19	3.69	1.21	3.59	1.24	3.49	1.26	3.39	1.29	
0.0	-2.2	4.39	1.27	4.28	1.29	4.16	1.32	4.05	1.35	3.93	1.37	
5.0	2.8	5.00	1.34	4.87	1.37	4.74	1.40	4.61	1.43	4.48	1.45	
8.3	6.1	5.26	1.37	5.12	1.40	4.98	1.43	4.84	1.46	4.71	1.48	
10.0	8.3	5.63	1.42	5.49	1.45	5.34	1.48	5.19	1.51	5.04	1.54	
15.0	10.0	5.67	1.33	5.52	1.36	5.37	1.39	5.22	1.42	5.07	1.44	
20.0	15.0	5.61	1.19	5.46	1.21	5.32	1.24	5.07	1.24	4.84	1.24	
24.0	18.0	6.11	1.19	5.95	1.21	5.79	1.24	5.53	1.24	5.27	1.24	

■ Model: ASUH18KPAS

AFR			CFM				506					
Indoor temperature												
Outdoor temperature	°FDB	°FWB	60		65		70		72		75	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW
5	3	20.14	2.34	19.61	2.39	19.08	2.44	18.55	2.48	18.02	2.54	
14	12	22.26	2.33	21.66	2.38	21.09	2.43	20.49	2.47	19.92	2.52	
23	19	24.38	2.33	23.74	2.38	23.09	2.43	22.45	2.47	21.81	2.52	
32	28	26.49	2.32	25.80	2.37	25.10	2.42	24.40	2.47	23.71	2.51	
41	37	27.88	2.04	27.16	2.08	26.43	2.13	25.71	2.17	24.98	2.21	
47	43	25.32	1.80	24.67	1.84	24.00	1.88	23.32	1.91	22.67	1.95	
50	47	24.65	1.64	24.00	1.67	23.35	1.71	22.70	1.74	22.05	1.78	
59	50	26.74	1.65	26.06	1.68	25.35	1.72	24.64	1.75	23.96	1.79	
68	59	26.46	1.36	25.75	1.38	25.07	1.41	24.39	1.44	23.68	1.47	
75	64	25.89	1.25	25.21	1.27	24.54	1.30	23.87	1.32	23.19	1.35	

AFR			CFM				860					
Indoor temperature												
Outdoor temperature	°CDB	°CWB	15.6		18.3		21.1		22.0		23.9	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW									
-15.0	-16.1	5.90	2.34	5.75	2.39	5.59	2.44	5.44	2.48	5.28	2.54	
-10.0	-11.1	6.52	2.33	6.35	2.38	6.18	2.43	6.00	2.47	5.84	2.52	
-5.0	-7.2	7.15	2.33	6.96	2.38	6.77	2.43	6.58	2.47	6.39	2.52	
0.0	-2.2	7.77	2.32	7.56	2.37	7.36	2.42	7.15	2.47	6.95	2.51	
5.0	2.8	8.17	2.04	7.96	2.08	7.75	2.13	7.53	2.17	7.32	2.21	
8.3	6.1	7.42	1.80	7.23	1.84	7.03	1.88	6.84	1.91	6.65	1.95	
10.0	8.3	7.22	1.64	7.03	1.67	6.84	1.71	6.65	1.74	6.46	1.78	
15.0	10.0	7.84	1.65	7.64	1.68	7.43	1.72	7.22	1.75	7.02	1.79	
20.0	15.0	7.76	1.36	7.55	1.38	7.35	1.41	7.15	1.44	6.94	1.47	
24.0	18.0	7.59	1.25	7.39	1.27	7.19	1.30	6.99	1.32	6.80	1.35	

■ Model: ASUH24KPAS

AFR		CFM				600							
Indoor temperature													
Outdoor temperature	°FDB	60		65		70		72		75			
		TC	IP	kBtu	kW								
5	3	21.75	2.62	21.17	2.67	20.60	2.73	20.03	2.78	19.45	2.84		
14	12	24.66	2.68	24.00	2.74	23.37	2.80	22.70	2.85	22.07	2.90		
23	19	27.59	2.76	26.86	2.81	26.13	2.87	25.40	2.92	24.68	2.98		
32	28	30.51	2.82	29.70	2.88	28.90	2.94	28.10	3.00	27.29	3.05		
41	37	32.10	2.48	31.27	2.53	30.43	2.59	29.60	2.64	28.76	2.69		
47	43	30.61	2.27	29.82	2.32	29.00	2.37	28.19	2.41	27.40	2.45		
50	47	29.79	2.07	29.01	2.11	28.22	2.15	27.44	2.20	26.65	2.24		
59	50	31.52	1.98	30.72	2.02	29.88	2.06	29.04	2.10	28.24	2.14		
68	59	29.32	1.57	28.53	1.61	27.78	1.64	27.02	1.67	26.24	1.71		
75	64	29.32	1.48	28.56	1.51	27.80	1.54	27.03	1.57	26.27	1.60		

AFR		CFM				1,020							
Indoor temperature													
Outdoor temperature	°CDB	15.6		18.3		21.1		22.0		23.9			
		TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	kW	kW
-15.0	-16.1	6.37	2.62	6.21	2.67	6.04	2.73	5.87	2.78	5.70	2.84		
-10.0	-11.1	7.23	2.68	7.03	2.74	6.85	2.80	6.65	2.85	6.47	2.90		
-5.0	-7.2	8.09	2.76	7.87	2.81	7.66	2.87	7.45	2.92	7.23	2.98		
0.0	-2.2	8.94	2.82	8.71	2.88	8.47	2.94	8.23	3.00	8.00	3.05		
5.0	2.8	9.41	2.48	9.16	2.53	8.92	2.59	8.67	2.64	8.43	2.69		
8.3	6.1	8.97	2.27	8.74	2.32	8.50	2.37	8.26	2.41	8.03	2.45		
10.0	8.3	8.73	2.07	8.50	2.11	8.27	2.15	8.04	2.20	7.81	2.24		
15.0	10.0	9.24	1.98	9.00	2.02	8.76	2.06	8.51	2.10	8.28	2.14		
20.0	15.0	8.59	1.57	8.36	1.61	8.14	1.64	7.92	1.67	7.69	1.71		
24.0	18.0	8.59	1.48	8.37	1.51	8.15	1.54	7.92	1.57	7.70	1.60		

■ Model: ASUH30KPAS

AFR		CFM				742							
Indoor temperature													
Outdoor temperature	°FDB	60		65		70		72		75			
		TC	IP	kBtu	kW								
5	3	26.10	3.42	26.01	3.43	25.80	3.43	25.20	3.43	24.56	3.43		
14	12	29.72	3.67	29.55	3.68	29.38	3.68	28.66	3.68	27.94	3.68		
23	19	31.98	3.67	31.85	3.67	31.61	3.68	30.88	3.68	30.07	3.68		
32	28	33.20	3.36	33.06	3.36	32.81	3.37	32.03	3.37	31.19	3.42		
41	37	34.44	3.12	34.29	3.12	34.01	3.13	33.26	3.13	32.39	3.13		
47	43	35.20	2.99	35.05	2.99	34.80	3.00	34.00	3.00	33.12	3.00		
50	47	34.96	2.87	34.81	2.88	34.55	2.88	33.75	2.88	32.87	2.88		
59	50	33.71	2.42	33.57	2.42	33.32	2.42	32.55	2.42	31.70	2.42		
68	59	35.55	2.61	35.37	2.61	35.13	2.61	34.32	2.61	33.41	2.61		
75	64	37.00	2.76	36.82	2.76	36.54	2.76	35.71	2.77	34.78	2.77		

AFR		CFM				1,260							
Indoor temperature													
Outdoor temperature	°CDB	15.6		18.3		21.1		22.0		23.9			
		TC	IP	kW	kW								
-15.0	-16.1	7.65	3.42	7.62	3.43	7.56	3.43	7.39	3.43	7.20	3.43		
-10.0	-11.1	8.71	3.67	8.66	3.68	8.61	3.68	8.40	3.68	8.19	3.68		
-5.0	-7.2	9.37	3.67	9.34	3.67	9.26	3.68	9.05	3.68	8.81	3.68		
0.0	-2.2	9.73	3.36	9.69	3.36	9.62	3.37	9.39	3.37	9.14	3.42		
5.0	2.8	10.09	3.12	10.05	3.12	9.97	3.13	9.75	3.13	9.49	3.13		
8.3	6.1	10.32	2.99	10.27	2.99	10.20	3.00	9.97	3.00	9.71	3.00		
10.0	8.3	10.25	2.87	10.20	2.88	10.12	2.88	9.89	2.88	9.63	2.88		
15.0	10.0	9.88	2.42	9.84	2.42	9.76	2.42	9.54	2.42	9.29	2.42		
20.0	15.0	10.42	2.61	10.37	2.61	10.30	2.61	10.06	2.61	9.79	2.61		
24.0	18.0	10.84	2.76	10.79	2.76	10.71	2.76	10.47	2.77	10.19	2.77		

■ Model: ASUH36KPAS

AFR	CFM	742
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			Indoor temperature												
Outdoor temperature	°FDB	°FWB	60		65		70		72		75				
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	kBtu	kW	
			kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	kBtu	kW	
5	3	26.10	3.42	26.01	3.43	25.80	3.43	25.20	3.43	24.56	3.43	24.56	3.43	24.56	3.43
14	12	29.72	3.67	29.55	3.68	29.38	3.68	28.66	3.68	27.94	3.68	27.94	3.68	27.94	3.68
23	19	31.98	3.67	31.85	3.67	31.61	3.68	30.88	3.68	30.07	3.68	30.07	3.68	30.07	3.68
32	28	34.09	3.67	33.94	3.67	33.69	3.68	32.89	3.68	32.02	3.73	32.02	3.73	32.02	3.73
41	37	37.11	3.67	36.94	3.67	36.64	3.68	35.83	3.68	34.90	3.68	34.90	3.68	34.90	3.68
47	43	37.93	3.71	37.76	3.71	37.50	3.72	36.64	3.72	35.68	3.72	35.68	3.72	35.68	3.72
50	47	37.67	3.55	37.51	3.57	37.23	3.57	36.37	3.58	35.42	3.58	35.42	3.58	35.42	3.58
59	50	36.33	2.76	36.18	2.76	35.90	2.76	35.08	2.76	34.16	2.76	34.16	2.76	34.16	2.76
68	59	36.10	2.76	35.92	2.76	35.67	2.76	34.85	2.76	33.93	2.76	33.93	2.76	33.93	2.76
75	64	37.00	2.76	36.82	2.76	36.54	2.76	35.71	2.77	34.78	2.77	34.78	2.77	34.78	2.77

AFR	m³/h	1,260
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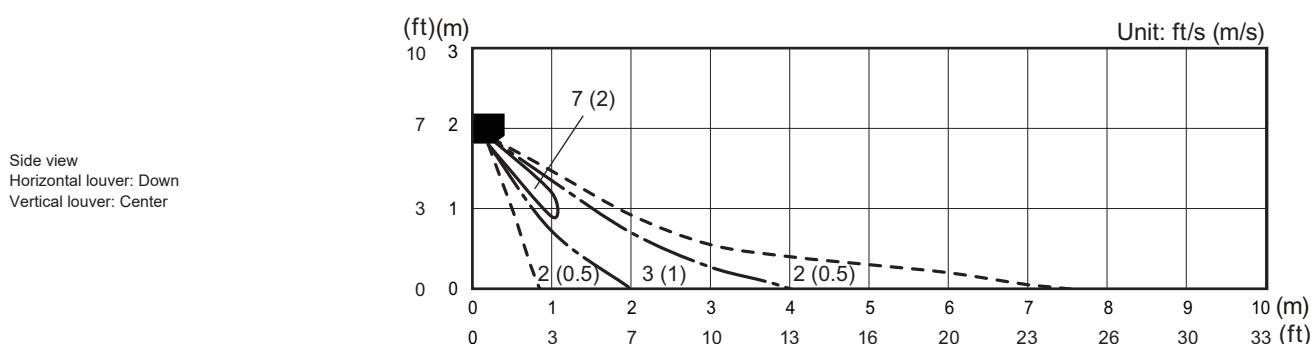
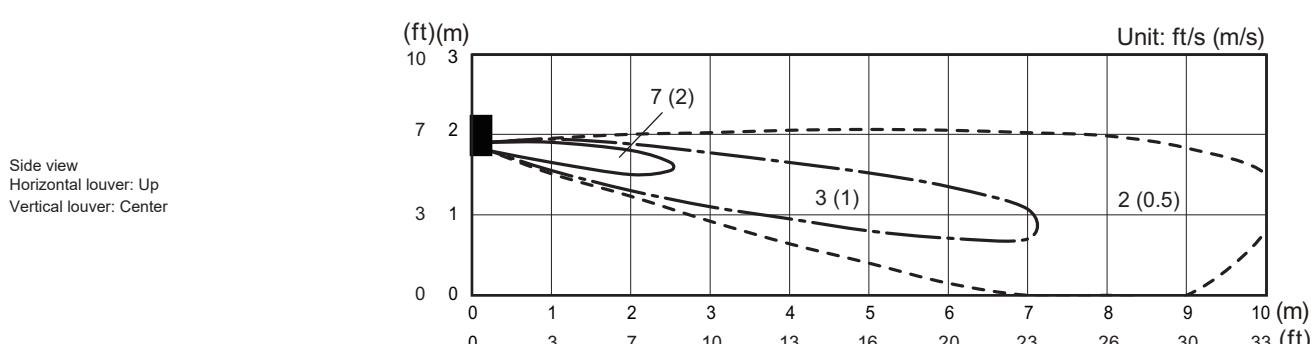
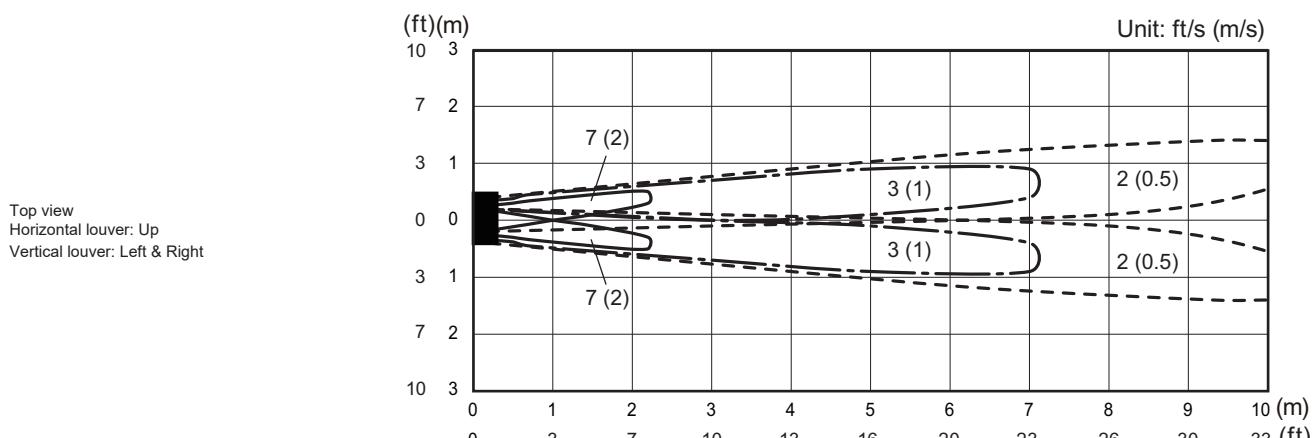
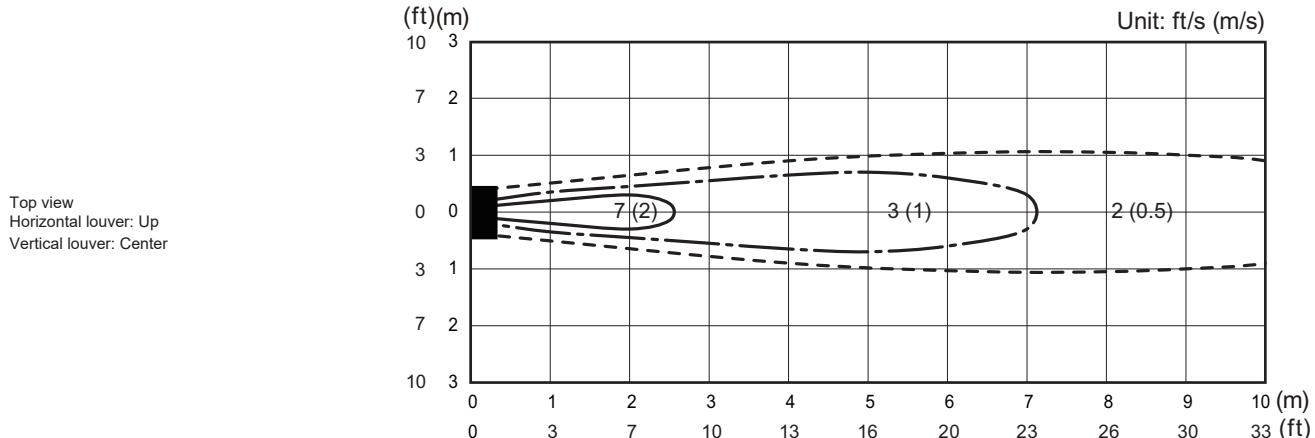
			Indoor temperature												
Outdoor temperature	°CDB	°CWB	15.6		18.3		21.1		22.0		23.9				
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	kW	kW	
			kW		kW		kW		kW		kW		kW		
-15.0	-16.1	7.65	3.42	7.62	3.43	7.56	3.43	7.39	3.43	7.20	3.43	7.20	3.43	7.20	3.43
-10.0	-11.1	8.71	3.67	8.66	3.68	8.61	3.68	8.40	3.68	8.19	3.68	8.19	3.68	8.19	3.68
-5.0	-7.2	9.37	3.67	9.34	3.67	9.26	3.68	9.05	3.68	8.81	3.68	8.81	3.68	8.81	3.68
0.0	-2.2	9.99	3.67	9.95	3.67	9.87	3.68	9.64	3.68	9.38	3.68	9.38	3.68	9.38	3.68
5.0	2.8	10.88	3.67	10.83	3.67	10.74	3.68	10.50	3.68	10.23	3.68	10.23	3.68	10.23	3.68
8.3	6.1	11.12	3.71	11.07	3.71	10.99	3.72	10.74	3.72	10.46	3.72	10.46	3.72	10.46	3.72
10.0	8.3	11.04	3.55	10.99	3.57	10.91	3.57	10.66	3.58	10.38	3.58	10.38	3.58	10.38	3.58
15.0	10.0	10.65	2.76	10.60	2.76	10.52	2.76	10.28	2.76	10.01	2.76	10.01	2.76	10.01	2.76
20.0	15.0	10.58	2.76	10.53	2.76	10.46	2.76	10.21	2.76	9.94	2.76	9.94	2.76	9.94	2.76
24.0	18.0	10.84	2.76	10.79	2.76	10.71	2.76	10.47	2.77	10.19	2.77	10.19	2.77	10.19	2.77

5. Fan performance

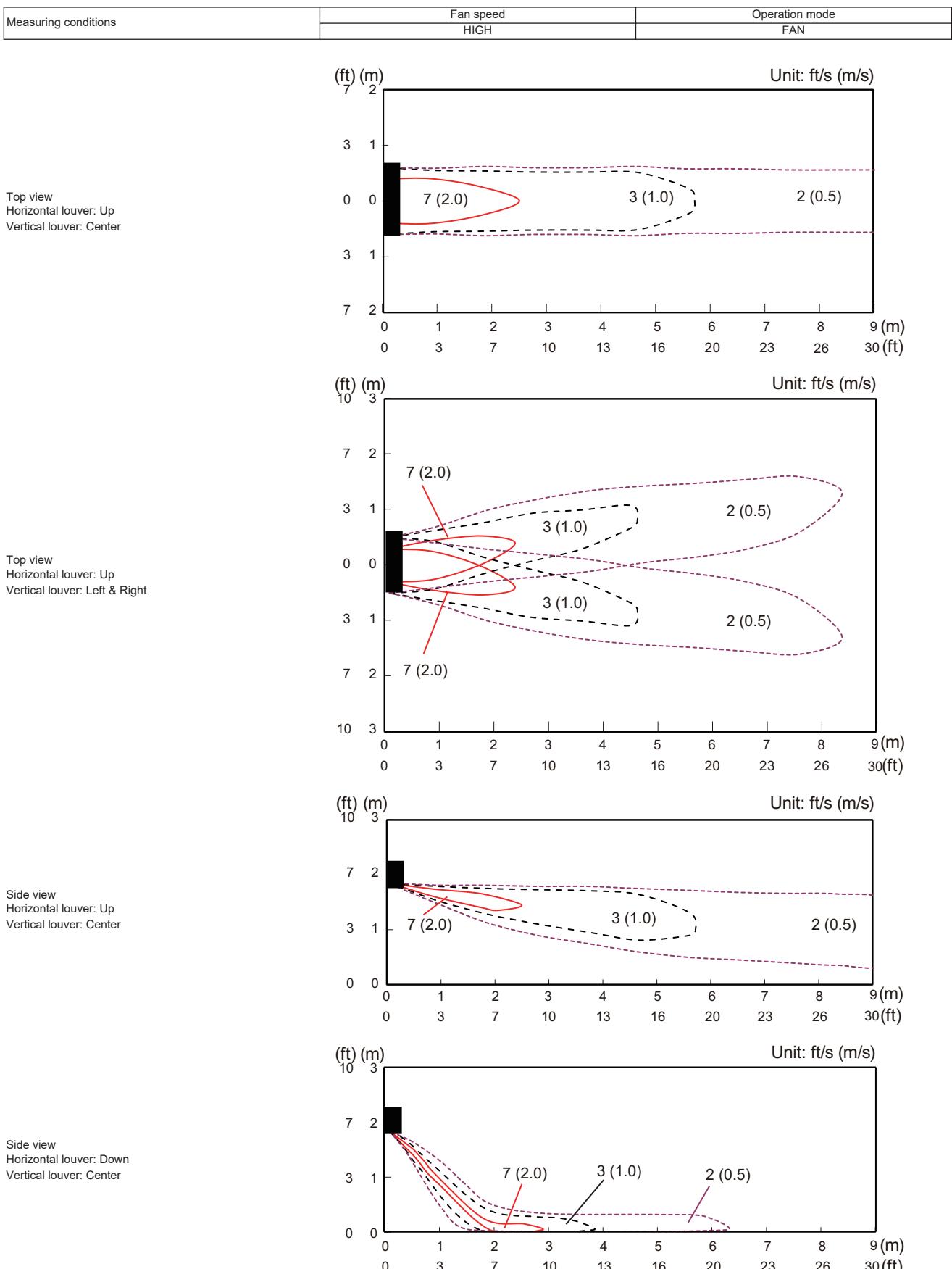
5-1. Air velocity distributions

■ Models: ASUH09KPAS and ASUH12KPAS

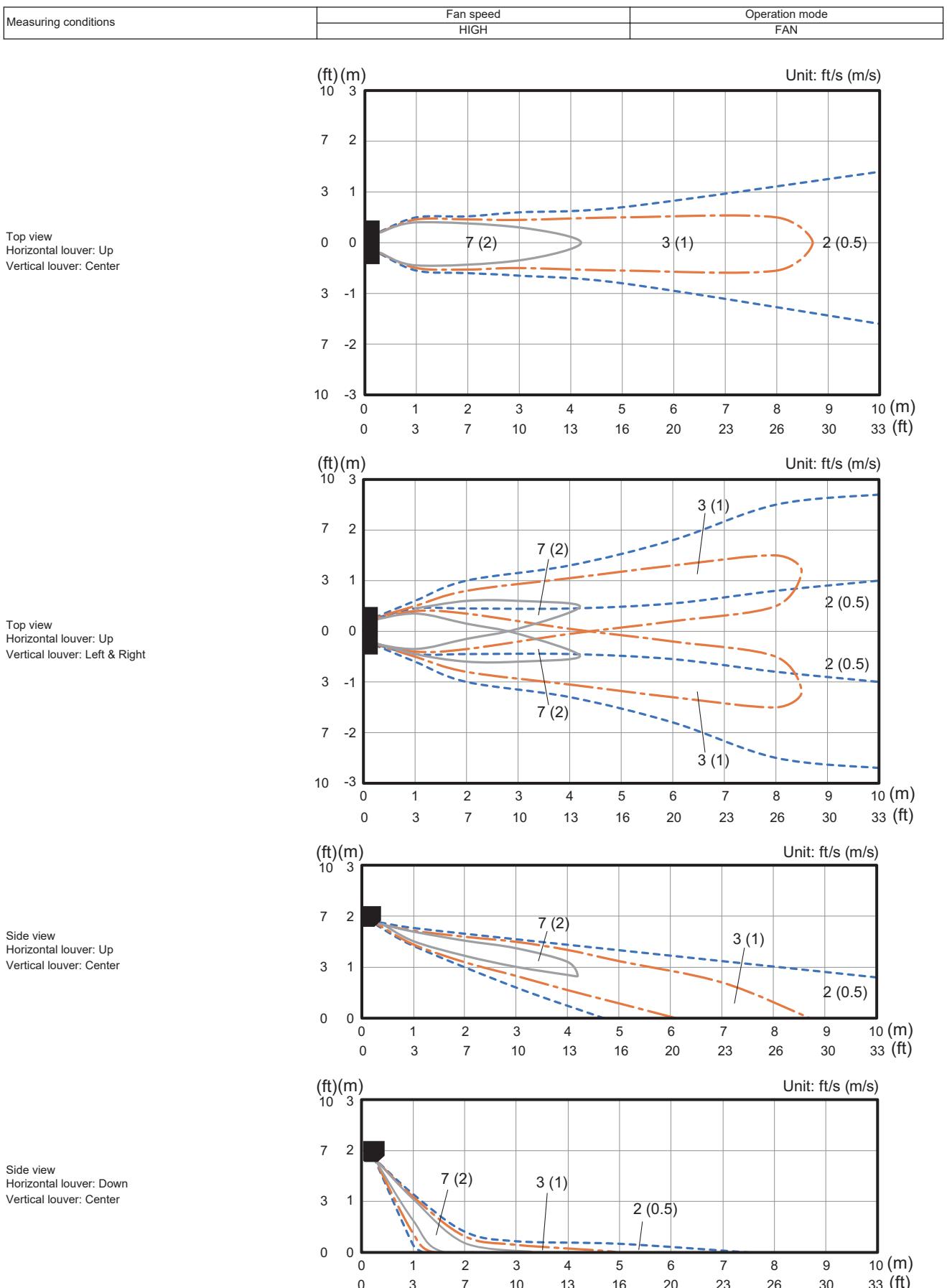
Measuring conditions	Fan speed HIGH	Operation mode FAN
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■ Model: ASUH18KPAS



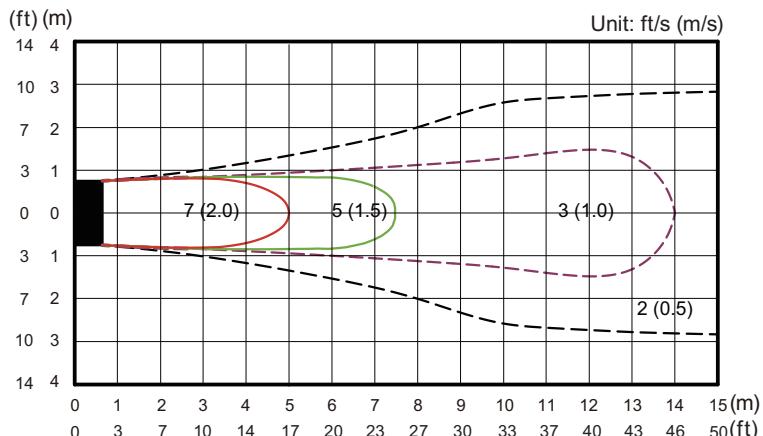
■ Model: ASUH24KPAS



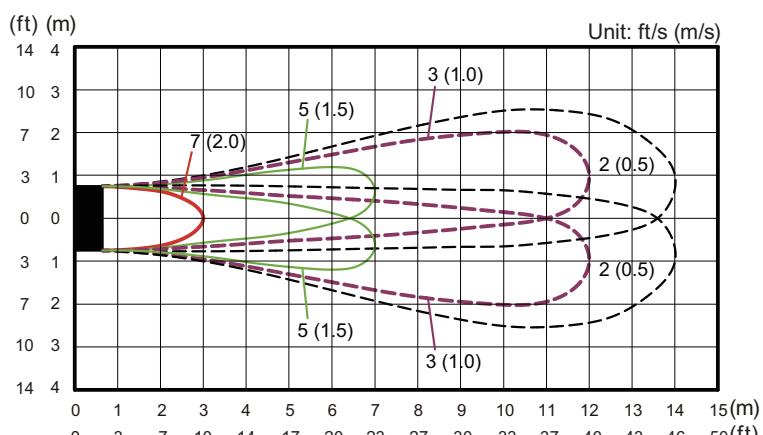
■ Models: ASUH30KPAS and ASUH36KPAS

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

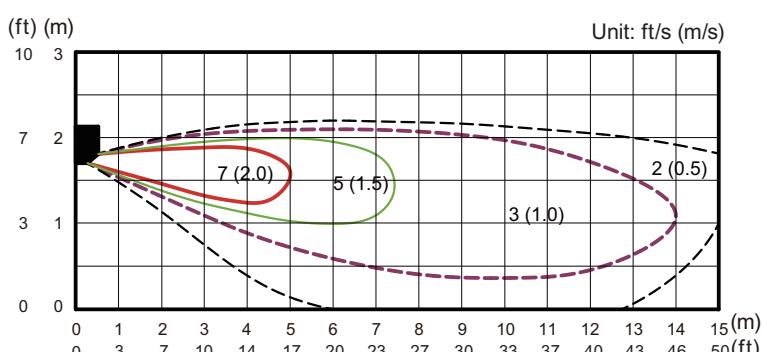
Top view
Horizontal louver: Up
Vertical louver: Center



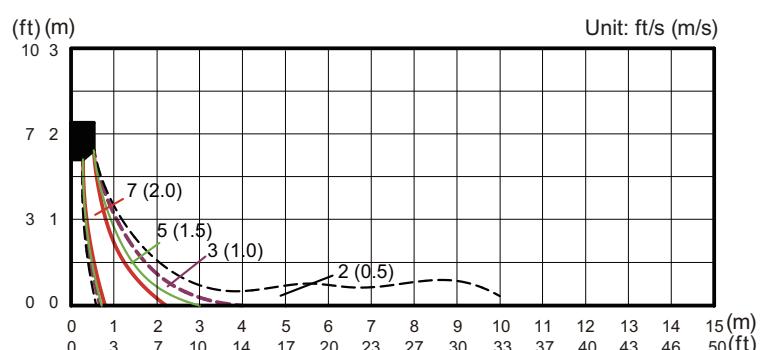
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



Side view
Horizontal louver: Down
Vertical louver: Center



5-2. Airflow

■ Model: ASUH09KPAS

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	670
	l/s	186
	CFM	394
MED—HIGH	m^3/h	620
	l/s	172
	CFM	365
MED	m^3/h	540
	l/s	150
	CFM	318
MED—LOW	m^3/h	480
	l/s	133
	CFM	283
LOW	m^3/h	420
	l/s	117
	CFM	247
QUIET	m^3/h	260
	l/s	72
	CFM	153

● Heating

Fan speed	Airflow	
HIGH	m^3/h	730
	l/s	203
	CFM	430
MED—HIGH	m^3/h	620
	l/s	172
	CFM	365
MED	m^3/h	570
	l/s	158
	CFM	336
MED—LOW	m^3/h	510
	l/s	142
	CFM	300
LOW	m^3/h	450
	l/s	125
	CFM	265
QUIET	m^3/h	320
	l/s	89
	CFM	188

■ Model: ASUH12KPAS**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	730
	l/s	203
	CFM	430
MED—HIGH	m ³ /h	620
	l/s	172
	CFM	365
MED	m ³ /h	540
	l/s	150
	CFM	318
MED—LOW	m ³ /h	480
	l/s	133
	CFM	283
LOW	m ³ /h	420
	l/s	117
	CFM	247
QUIET	m ³ /h	260
	l/s	72
	CFM	153

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	740
	l/s	206
	CFM	436
MED—HIGH	m ³ /h	670
	l/s	186
	CFM	394
MED	m ³ /h	620
	l/s	172
	CFM	365
MED—LOW	m ³ /h	560
	l/s	156
	CFM	330
LOW	m ³ /h	510
	l/s	142
	CFM	300
QUIET	m ³ /h	320
	l/s	89
	CFM	188

■ Model: ASUH18KPAS

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	910
	l/s	253
	CFM	536
MED—HIGH	m ³ /h	860
	l/s	239
	CFM	506
MED	m ³ /h	820
	l/s	228
	CFM	483
MED—LOW	m ³ /h	730
	l/s	203
	CFM	430
LOW	m ³ /h	640
	l/s	178
	CFM	377
QUIET	m ³ /h	440
	l/s	122
	CFM	259

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	860
	l/s	239
	CFM	506
MED—HIGH	m ³ /h	790
	l/s	219
	CFM	465
MED	m ³ /h	730
	l/s	203
	CFM	430
MED—LOW	m ³ /h	660
	l/s	183
	CFM	388
LOW	m ³ /h	590
	l/s	164
	CFM	347
QUIET	m ³ /h	470
	l/s	131
	CFM	277

■ Model: ASUH24KPAS**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	1,170
	l/s	325
	CFM	689
MED—HIGH	m ³ /h	990
	l/s	275
	CFM	583
MED	m ³ /h	820
	l/s	228
	CFM	483
MED—LOW	m ³ /h	730
	l/s	203
	CFM	430
LOW	m ³ /h	640
	l/s	178
	CFM	377
QUIET	m ³ /h	530
	l/s	147
	CFM	312

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,020
	l/s	283
	CFM	600
MED—HIGH	m ³ /h	940
	l/s	261
	CFM	553
MED	m ³ /h	860
	l/s	239
	CFM	506
MED—LOW	m ³ /h	750
	l/s	208
	CFM	441
LOW	m ³ /h	640
	l/s	178
	CFM	377
QUIET	m ³ /h	540
	l/s	150
	CFM	318

■ Model: ASUH30KPAS

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	1,370
	l/s	381
	CFM	806
MED—HIGH	m ³ /h	1,230
	l/s	342
	CFM	724
MED	m ³ /h	1,110
	l/s	308
	CFM	653
MED—LOW	m ³ /h	990
	l/s	275
	CFM	583
LOW	m ³ /h	880
	l/s	244
	CFM	518
QUIET	m ³ /h	710
	l/s	197
	CFM	418

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,260
	l/s	350
	CFM	742
MED—HIGH	m ³ /h	1,140
	l/s	317
	CFM	671
MED	m ³ /h	1,040
	l/s	289
	CFM	612
MED—LOW	m ³ /h	930
	l/s	258
	CFM	547
LOW	m ³ /h	820
	l/s	228
	CFM	483
QUIET	m ³ /h	710
	l/s	197
	CFM	418

■ Model: ASUH36KPAS**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	1,370
	l/s	381
	CFM	806
MED—HIGH	m ³ /h	1,230
	l/s	342
	CFM	724
MED	m ³ /h	1,110
	l/s	308
	CFM	653
MED—LOW	m ³ /h	990
	l/s	275
	CFM	583
LOW	m ³ /h	880
	l/s	244
	CFM	518
QUIET	m ³ /h	710
	l/s	197
	CFM	418

● Heating

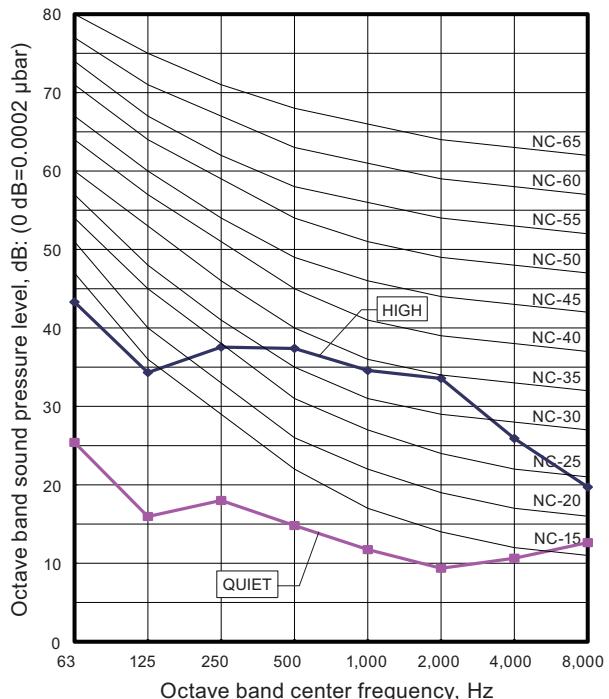
Fan speed	Airflow	
HIGH	m ³ /h	1,260
	l/s	350
	CFM	742
MED—HIGH	m ³ /h	1,140
	l/s	317
	CFM	671
MED	m ³ /h	1,040
	l/s	289
	CFM	612
MED—LOW	m ³ /h	930
	l/s	258
	CFM	547
LOW	m ³ /h	820
	l/s	228
	CFM	483
QUIET	m ³ /h	710
	l/s	197
	CFM	418

6. Operation noise (sound pressure)

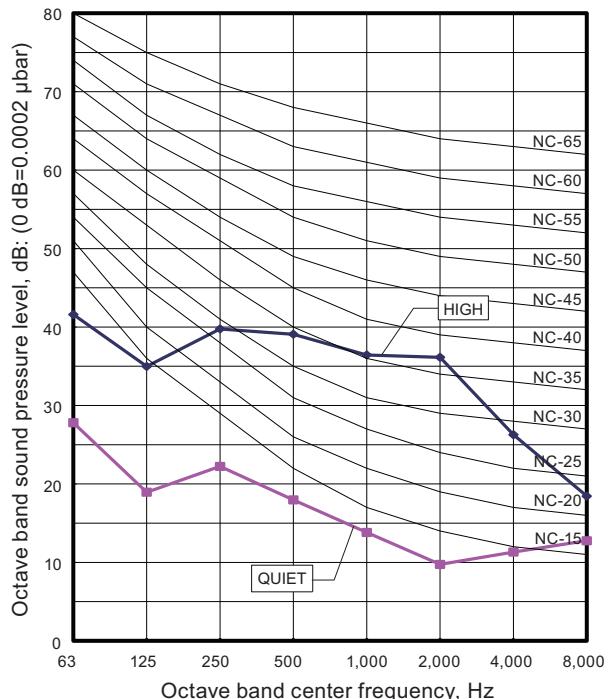
6-1. Noise level curve

■ Model: ASUH09KPAS

● Cooling

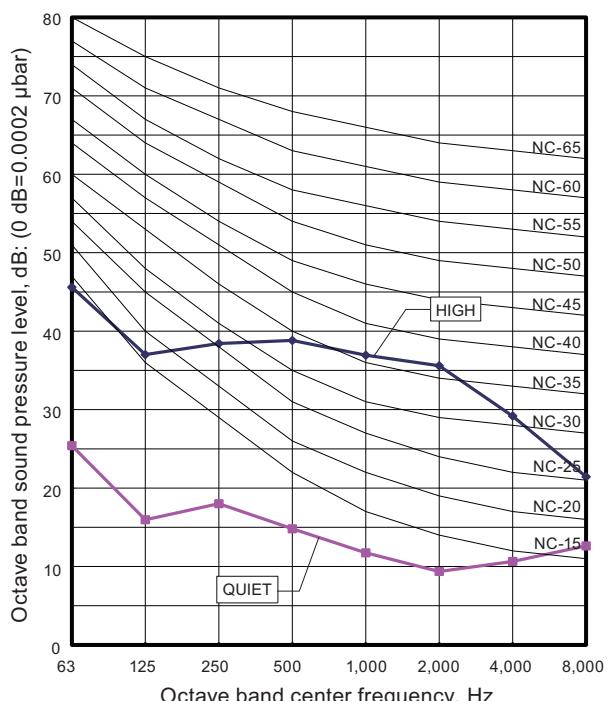


● Heating

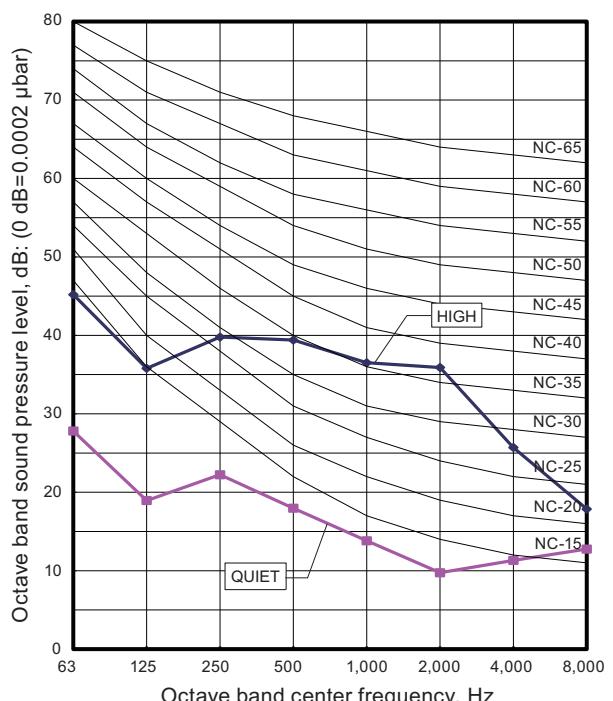


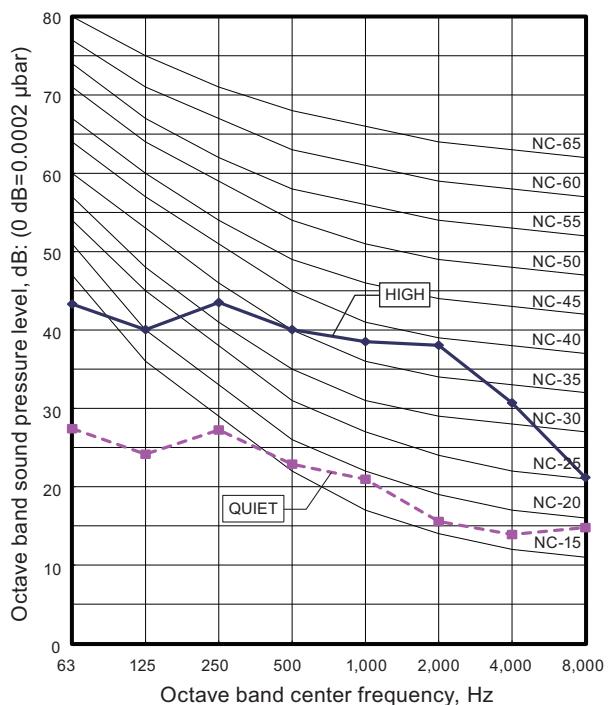
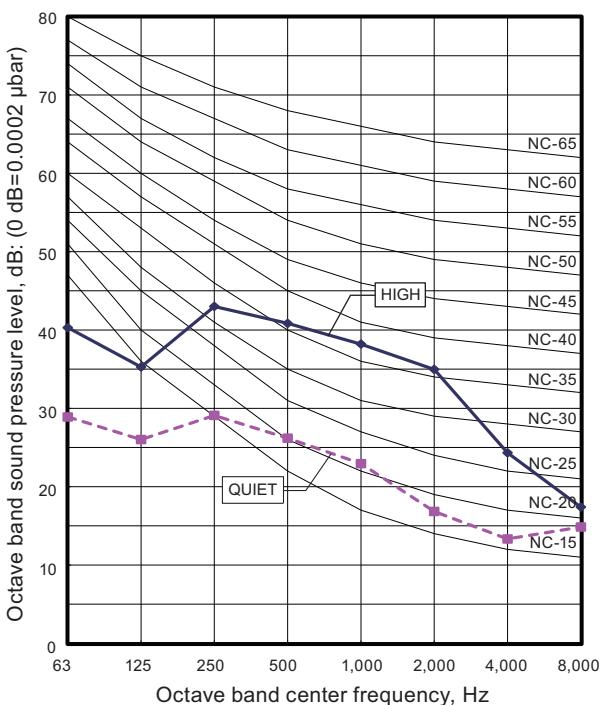
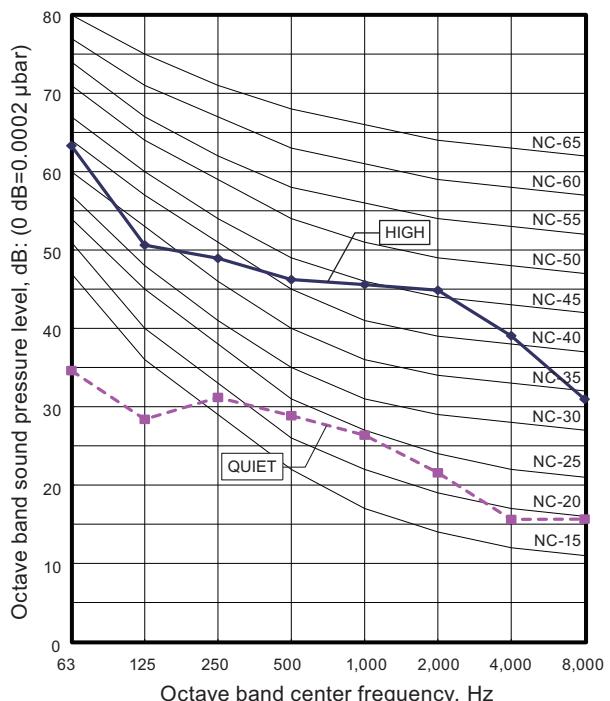
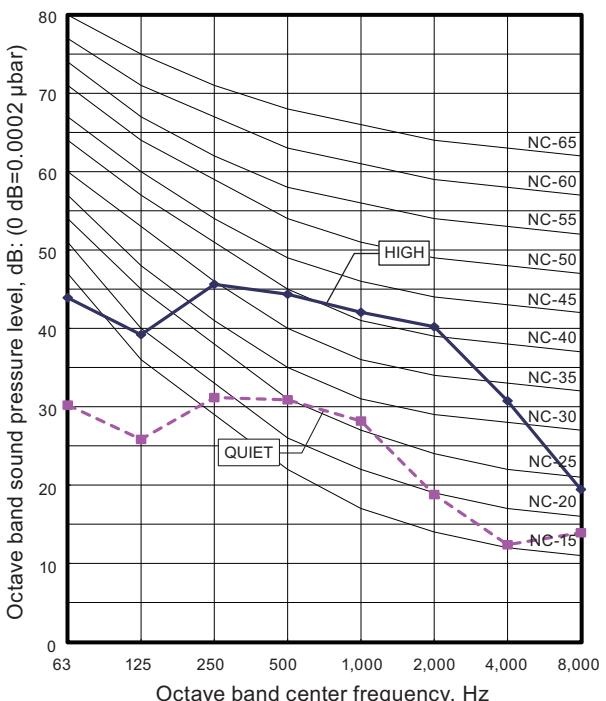
■ Model: ASUH12KPAS

● Cooling



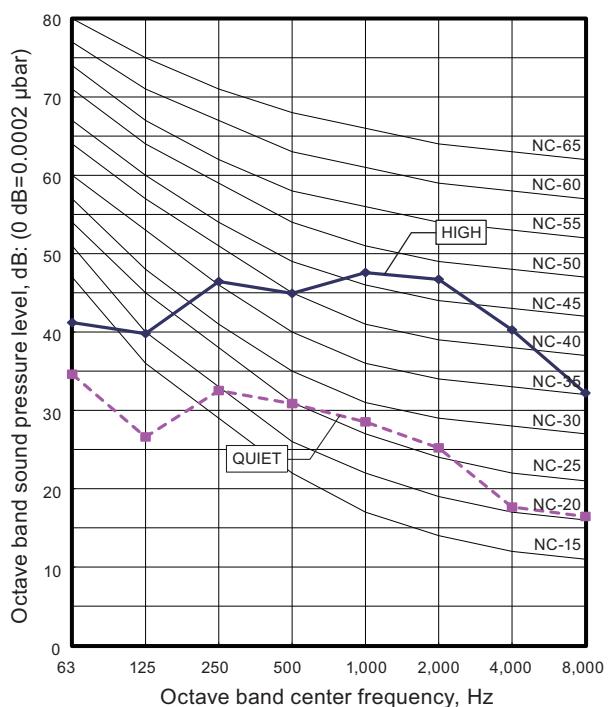
● Heating



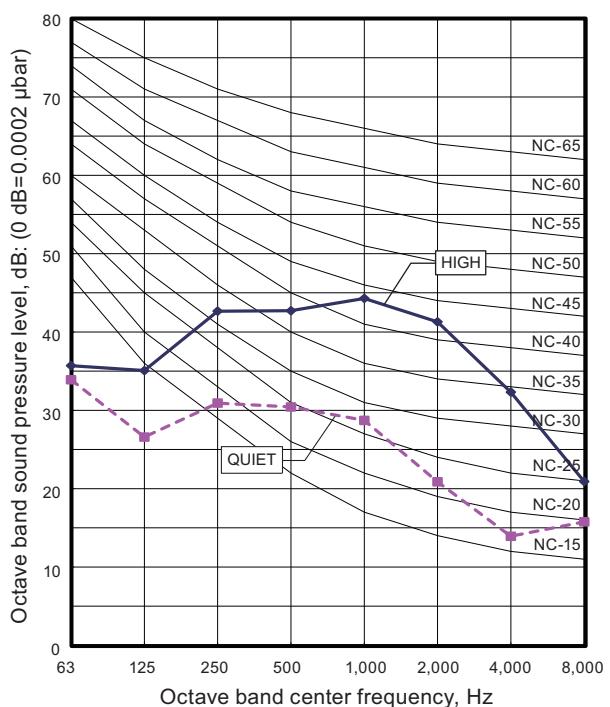
■ Model: ASUH18KPAS**● Cooling****● Heating****■ Model: ASUH24KPAS****● Cooling****● Heating**

■ Model: ASUH30KPAS

● Cooling

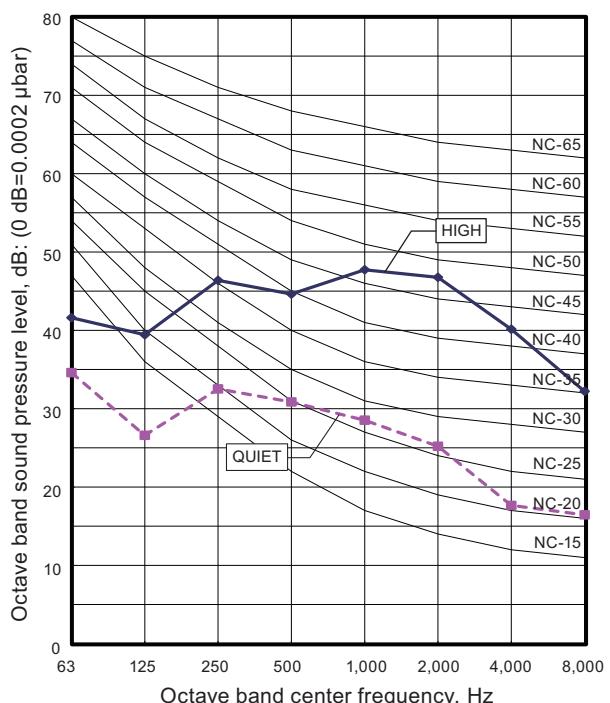


● Heating

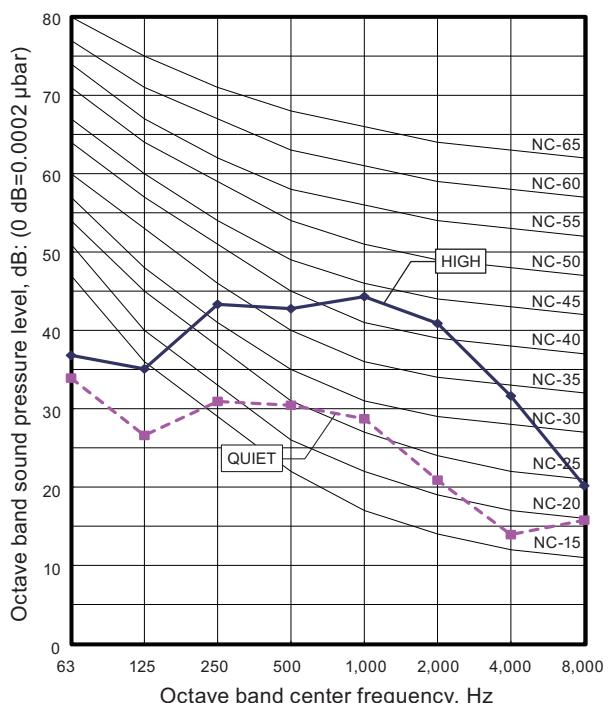


■ Model: ASUH36KPAS

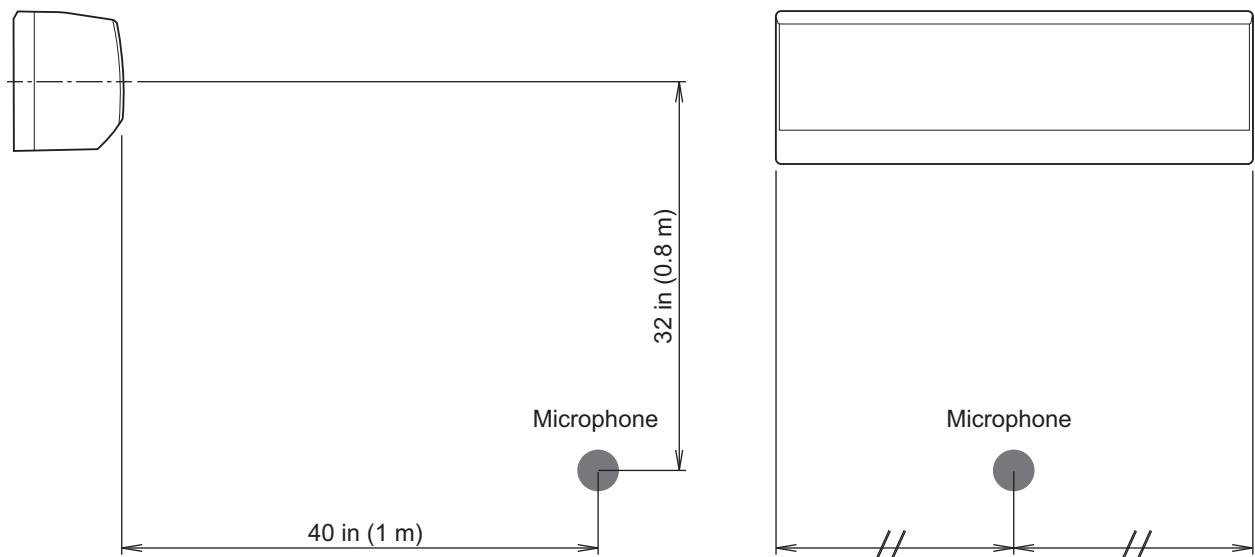
● Cooling



● Heating



6-2. Sound level check point



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

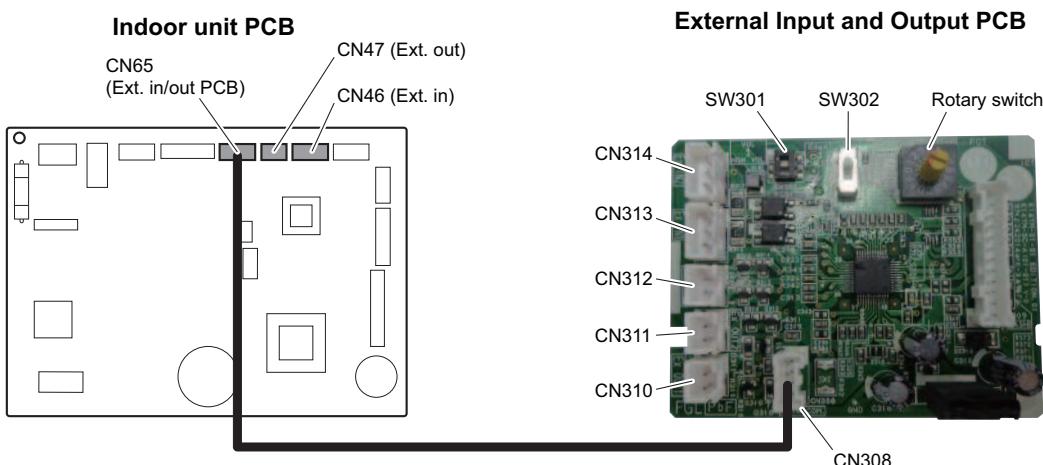
7. Safety devices

Type of protection	Protection form	Model	
		ASUH09KPAS	ASUH12KPAS
Circuit protection	Current fuse (PCB*)	250 V, 3.15 A	
Fan motor protection	Thermistor protection	Activate	230 ±27°F (110 ±15°C) Fan motor speed down
		Reset	230 ±27°F (110 ±15°C) Fan motor speed recover

Type of protection	Protection form	Model	
		ASUH18KPAS	ASUH30KPAS
Circuit protection	Current fuse (PCB*)	250 V, 3.15 A	
Fan motor protection	Thermistor protection	Activate	257 ±18°F (125 ±10°C) Fan motor stop
		Reset	212 ±18°F (100 ±10°C) Fan motor restart

*PCB: Printed Circuit Board

8. External input and output



Connecting point		Input/Output	Function	Input select	Input signal	
Indoor unit	CN46	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			
			Set point attainment status (For 18-36 model)			
External Input and Output PCB (UTY-XCSXZ2)	CN313/CN314	Input	Operation/Stop	Dry contact/Apply voltage	Edge/Pulse	
			Forced stop			
	CN313		Forced thermostat off			
			Operation status			
	CN310 CN311 CN312	Output	Error status			
			Indoor unit fan operation status			
			External heater output			
			Remote controller 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 48.

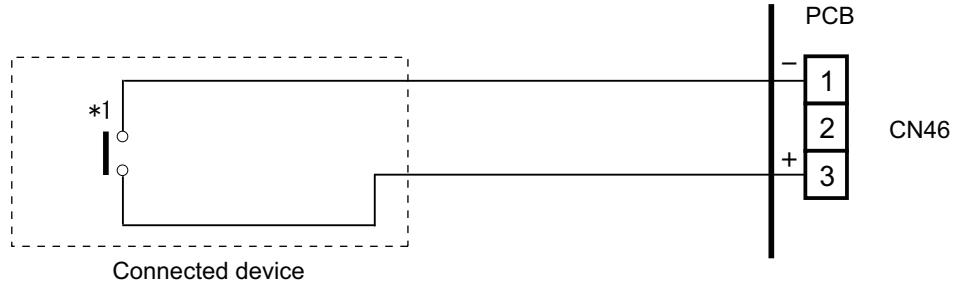
8-1. External input

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

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

■ Indoor unit

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



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

■ External Input and Output PCB

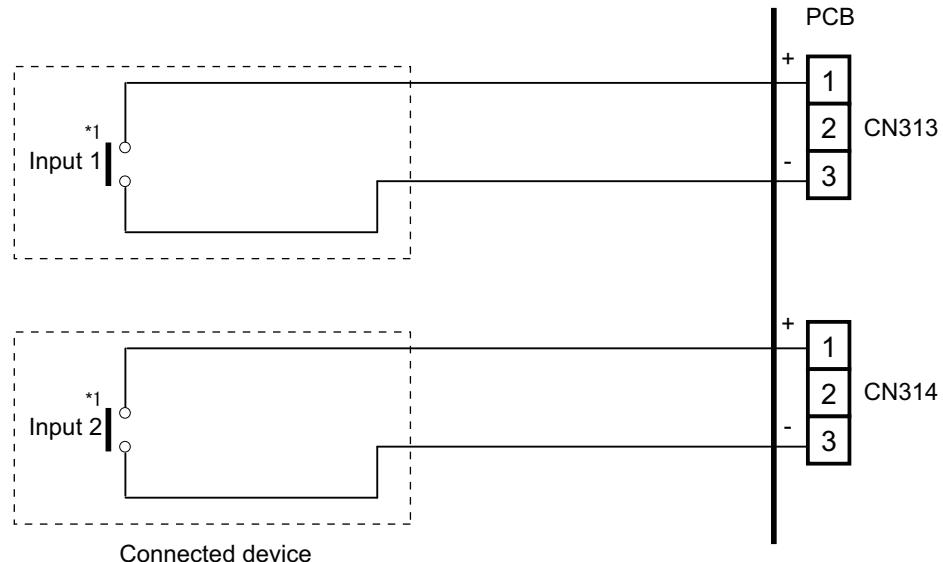
The indoor unit Operation/Stop can be set by using the input connector on the PCB.

• Input select

Use either one of these types of connectors according to the application. (Both types of connectors cannot be used simultaneously.)

– Dry contact

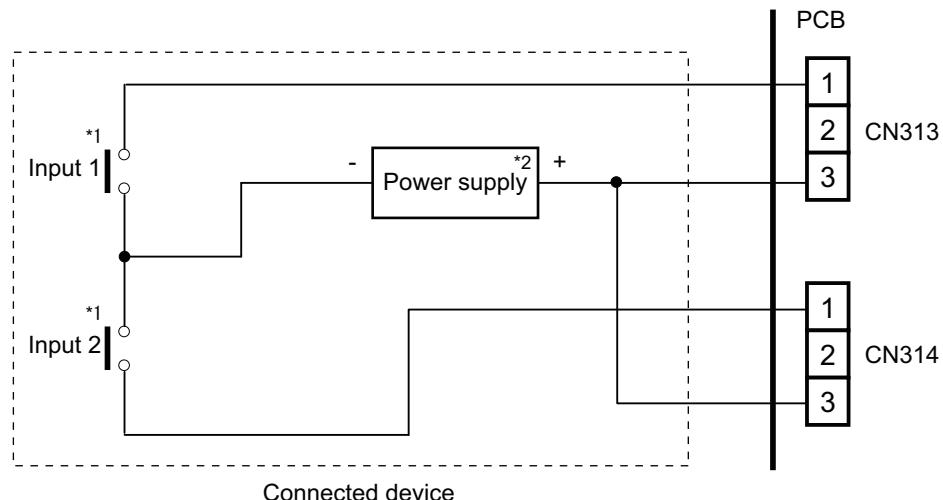
In case of internal power supply, set the slide switch of SW301 to "NON VOL" side.



*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 SW301 to "VOL" side.



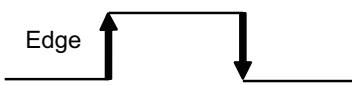
*1: The switches can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

*2: Make the power supply DC 12 V to 24 V, 10 mA or more.

■ Input signal type

- **Indoor unit**

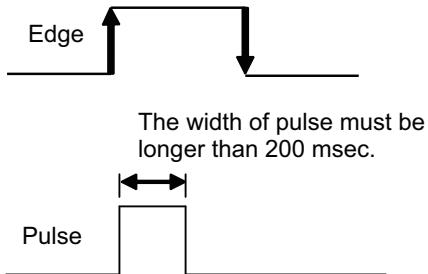
Input signal type is only "Edge".



- **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 (SW302) on the External Input and Output PCB.



NOTE: The input signal supports the following switch type:

- Edge: Alternate type switch
- Pulse: Momentary type switch

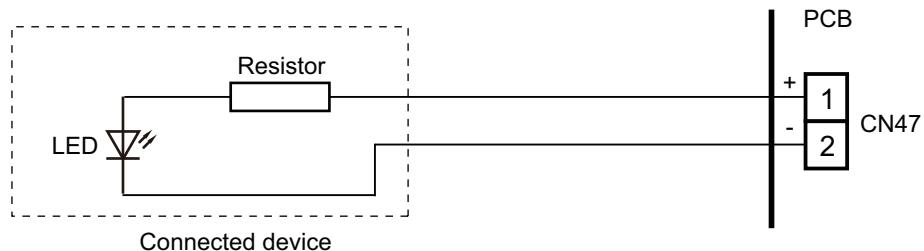
8-2. External output

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

■ Indoor unit

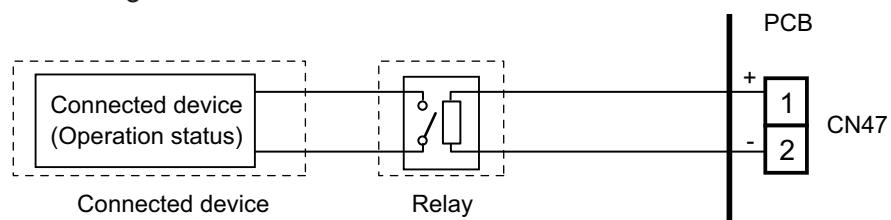
- A twisted pair cable (22 AWG) should be used. Maximum length of cable is 82 ft (25 m).
- Output voltage: High DC 12 V ± 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to "[Setting of external input and output](#)" on page 48.
- **When indicator, etc. are connected directly**

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"

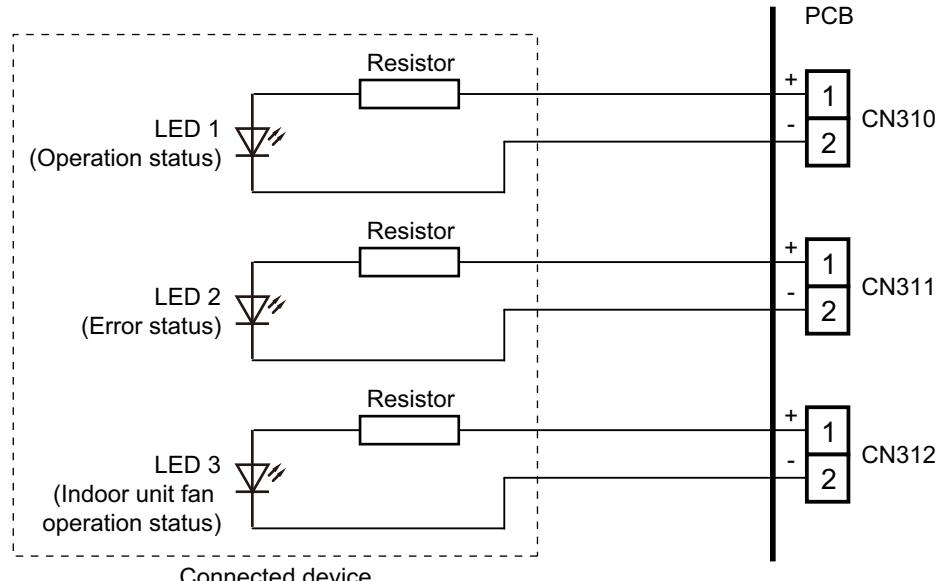


■ External Input and Output PCB

- A twisted pair cable (22AWG) 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 48.

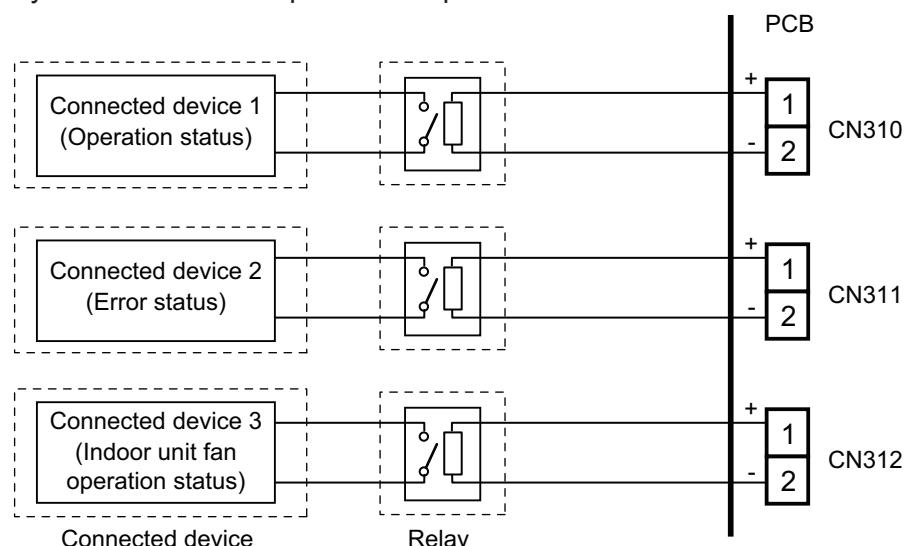
- When indicator or other components are connected directly:

Example: Rotary SW on External Input and Output PCB is set to "1".



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

Example: Rotary SW on External Input and Output PCB is set to "1".



8-3. Setting of external input and output

- Indoor unit

Input		
Connection point	Function setting number 46	Function
CN46	00	Operation/Stop mode 1 (R.C. enabled)
	01	(Setting prohibited)
	02	Forced stop mode
	03	Operation/Stop mode 2 (R.C. disabled)

Output		
Connection point	Function setting number 60	Function
CN47	00	Operation/Stop
	01 to 04	Cooling thermostat On
	05	Heating thermostat On
	06	Operation/Stop
	07 to 08	Cooling thermostat On
	09	Error status
	10	Indoor unit fan operation status
	11	External heater output
	12	Setpoint attainment status (For 18-36 model)

- External Input and Output PCB

Switch setting		Ex IN		Ex OUT		
Rotary switch	SW302	CN313	CN314	CN310	CN311	CN312
1	Edge	Operation/Stop	Not available	Operation/Stop	Error status	Indoor unit fan operation status
	Pulse	Operation	Stop			External heater output
	2	Edge* ¹	Forced thermostat off	Not available	Error status	Indoor unit fan operation status
	3		Mechanical cooling off	Not available	Error status	Indoor unit fan operation status
	4		Forced thermostat off	Not available	Error status	Remote controller output
	5		Mechanical cooling on* ²	Not available	Cooling high/low output	Remote controller output
	6		Mechanical cooling on* ²	Not available	Error status	Remote controller output
	7		Forced thermostat off	Not available	Error status	Indoor unit fan operation status
	8		Forced thermostat off	Not available	Error status	Indoor unit fan operation status
	9		Mechanical cooling off	Not available	Error status	Heating thermostat on
	A		Forced thermostat off	Not available	Heating thermostat on	External heater output
	B		Forced thermostat off	Not available	Operation/Stop	Remote controller output
	C		Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status
	D		Forced thermostat off	Not available	Operation/Stop	External heater output

NOTES:

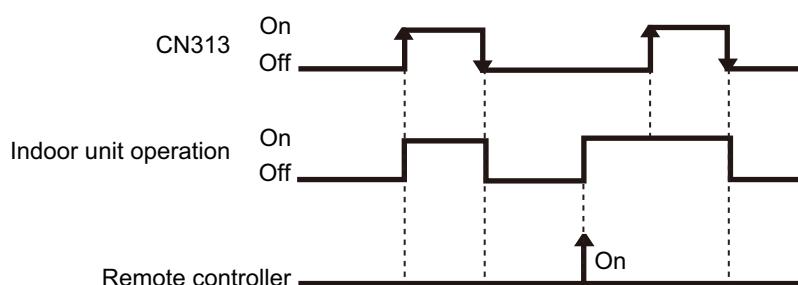
- When the rotary switch is selected to "1", the operation of the connector input of the indoor unit and the External Input and Output PCB input are the same. The operation content depends on the setting of function setting number 46.
- *1: The external input other than "Operation/Stop" is available only when the SW302 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".

8-4. Details of control input function

■ Operation/Stop mode 1

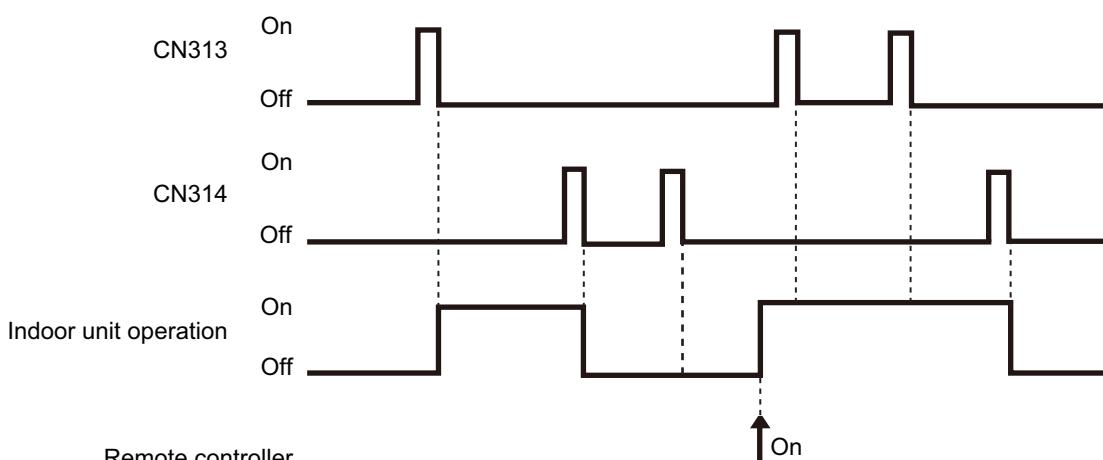
- In the case of "Edge" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-00	—	CN46	Input of indoor unit	Off → On	Operation
			On → Off	On → Off	Stop
	1	CN313	External Input and Output PCB	Off → On	Operation
			On → Off	On → Off	Stop



- In the case of "Pulse" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-00	1	Pulse	External Input and Output PCB	CN313 CN314	Pulse Operation Stop



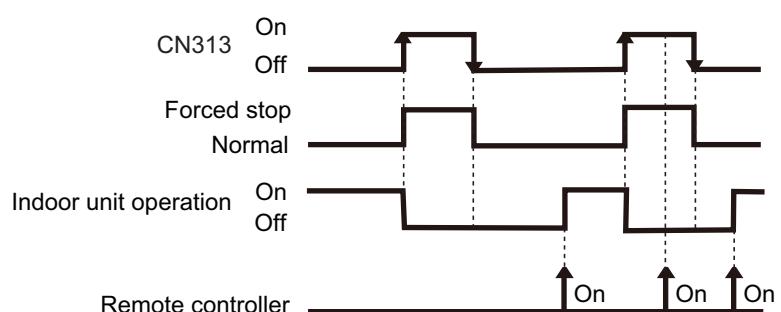
NOTES:

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

■ Forced stop

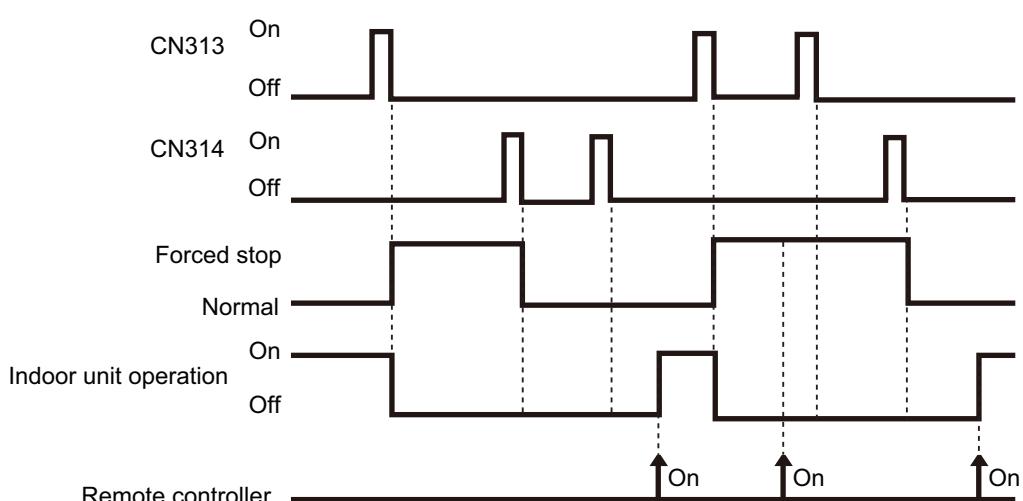
- In the case of "Edge" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-02	—	Input of indoor unit	CN46	Off → On	Forced stop (R.C. disabled)
				On → Off	Normal (R.C. enabled)
	1	Edge	External Input and Output PCB	CN313	Off → On
					Normal (R.C. enabled)



- In the case of "Pulse" input

Function setting	External Input and Output PCB		External input	Input signal	Command	
	Rotary switch	SW302				
46-02	1	Pulse	External Input and Output PCB	CN313	Pulse	Forced stop (R.C. disabled)
						Normal (R.C. enabled)



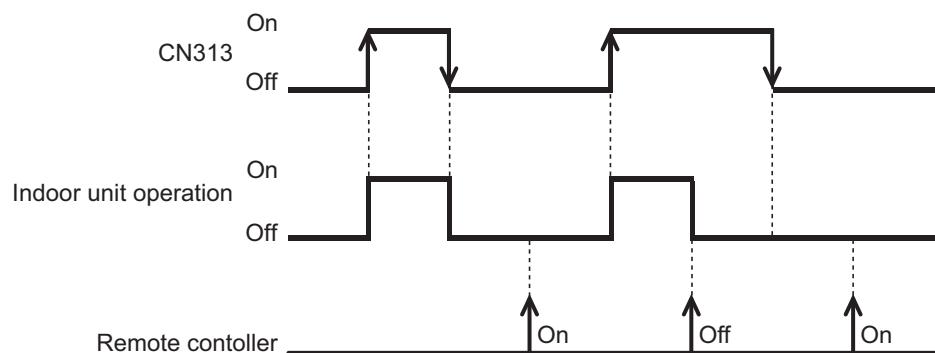
NOTES:

- 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.

■ Operation/Stop mode 2

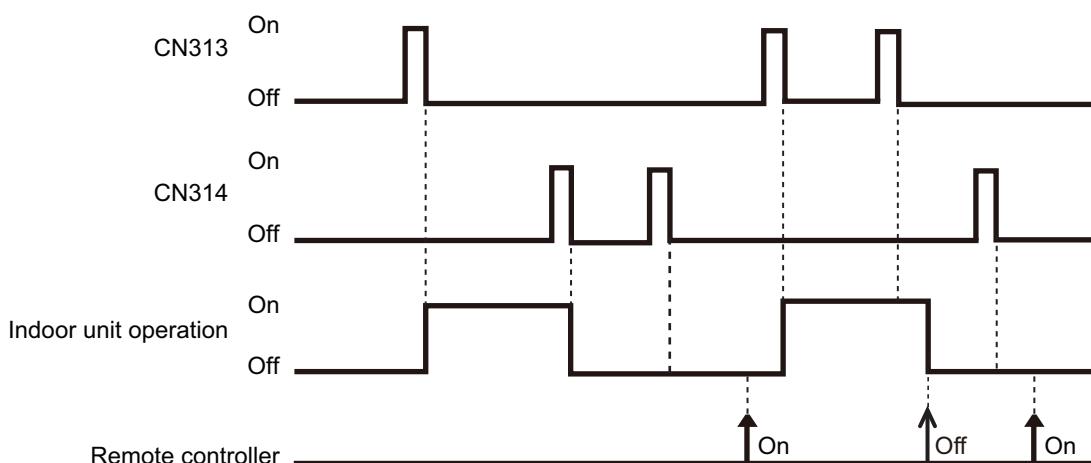
- In the case of “Edge” input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-03	—	Input of indoor unit	CN46	Off → On	Operation (R.C. enabled)
				On → Off	Stop (R.C. disabled)
	1	Edge	External Input and Output PCB	CN313	Off → On
					Stop (R.C. disabled)



- In the case of “Pulse” input

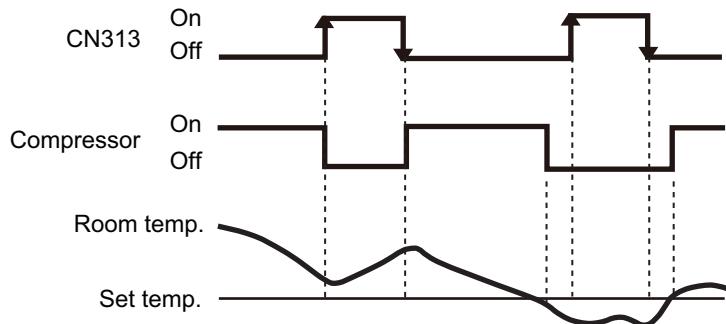
Function setting	External Input and Output PCB		External input	Input signal	Command	
	Rotary switch	SW302				
46-03	1	Pulse	External Input and Output PCB	CN313	Pulse	Operation (R.C. enabled)
						Stop (R.C. disabled)



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.

■ Forced thermostat off

External Input and Output PCB	External input		Input signal	Command
Rotary switch				
2, B, C, D	External Input and Output PCB	CN313	Off → On	Thermostat off
			On → Off	Normal operation
4, 7, 8, A	External Input and Output PCB	CN313	Off → On	Thermostat off
			On → Off	Normal operation

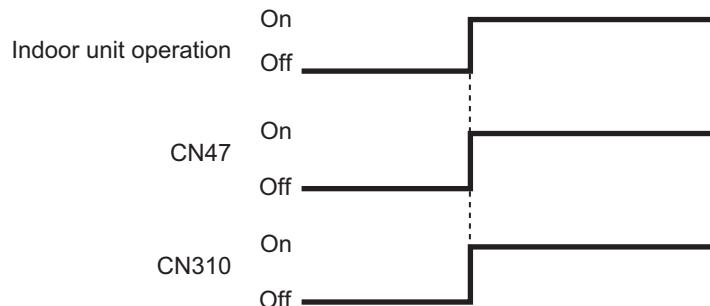


8-5. Details of control output function

■ Operation status

Function setting	External Input and Output PCB	External output		Output signal	Status
		Rotary switch			
60-00 60-06	1, 2, 8	Output of indoor unit	CN47	Off → On	Operation
				On → Off	Stop
—	1, B, C, D	External Input and Output PCB	CN310	Off → On	Operation
				On → Off	Stop

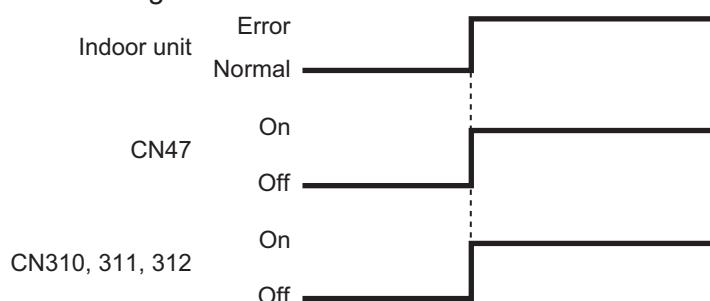
The output is low when the unit is stopped.



■ Error status

Function setting	External Input and Output PCB	External output		Output signal	Status
		Rotary switch			
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	CN310	Off → On	Error
				On → Off	Normal
—	1, C	External Input and Output PCB	CN311	Off → On	Error
				On → Off	Normal
—	D	External Input and Output PCB	CN312	Off → On	Error
				On → Off	Normal

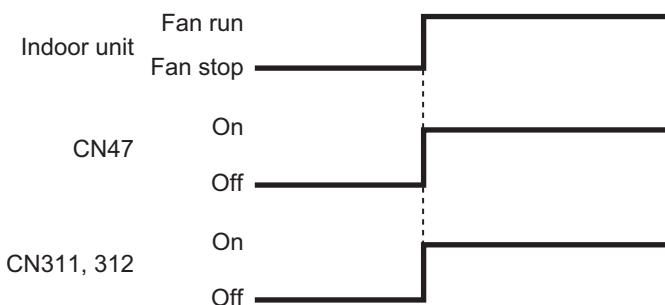
The output is on when an error is generated for the indoor unit.



■ Indoor unit fan operation status

Function setting	External Input and Output PCB	External output		Output signal	Status
60-10	C	Output of indoor unit	CN47	Off → On	Fan run
—	2, 3, 7, 8, B, D			On → Off	Fan stop
—	1	External Input and Output PCB	CN311	Off → On	Fan run
—	—			On → Off	Fan stop
—	—	External Input and Output PCB	CN312	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.



■ External heater output

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

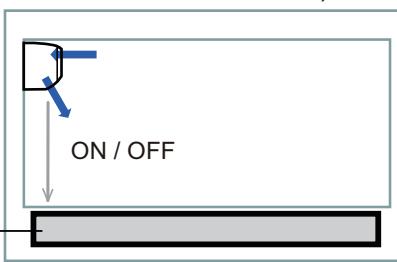
NOTES:

- After turning off the heater, 3 minutes of standby time is required by next power-on of the heater.
- For items marked “—” in the table, any of validate or invalidate of the setting are acceptable.
- *: External device means Hot water, Electrical heater, etc.

● Installation configuration of individual connection

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

Example of heating device:
- Floor heating device

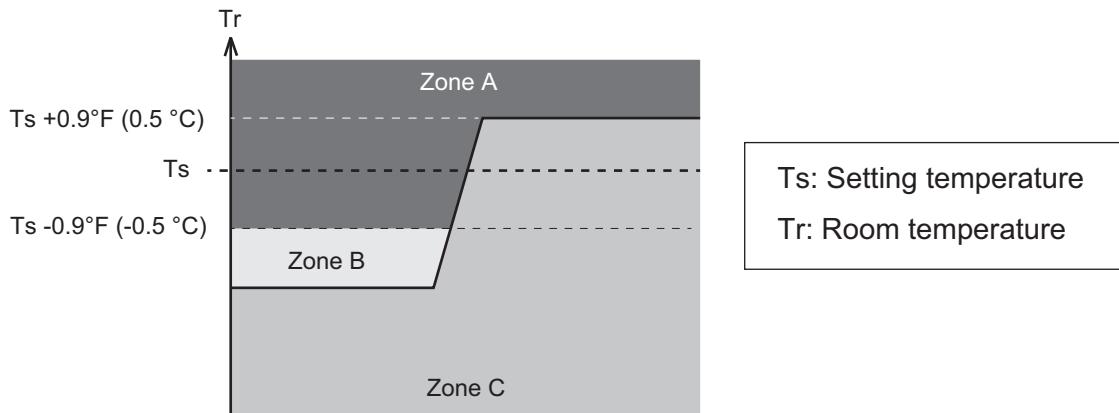


⚠ WARNING

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

● Auxiliary equipment control by room temperature

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



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

*1: For standby time for auxiliary equipment operation, refer to indoor unit function number 71 "Contents of function setting" on page 81.

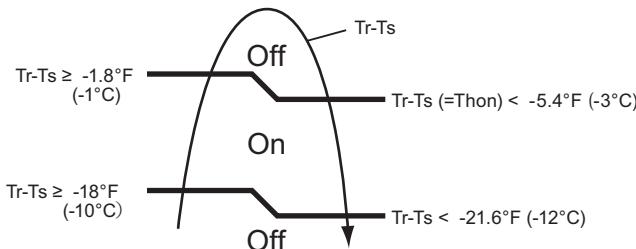
*2: When indoor unit function number 61 is set to "00", auxiliary equipment operates according to the following conditions.

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

● Auxiliary heater control 1

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off Fan stop protection

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



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

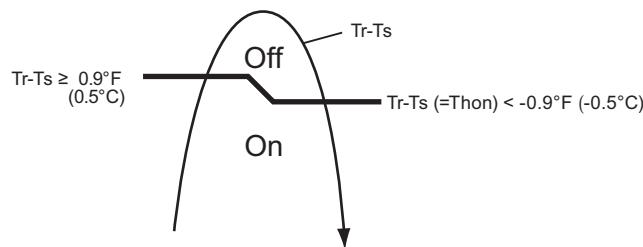
Example: When set temperature (Ts) is 72°F (22°C) (Factory setting),

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

● Auxiliary heater control 2

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off Fan stop protection

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



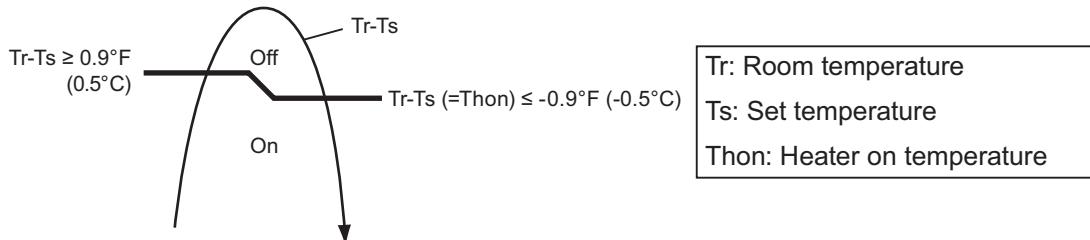
Tr: Room temperature
 Ts: Set temperature
 Thon: Heater on temperature

● Heat pump prohibition control

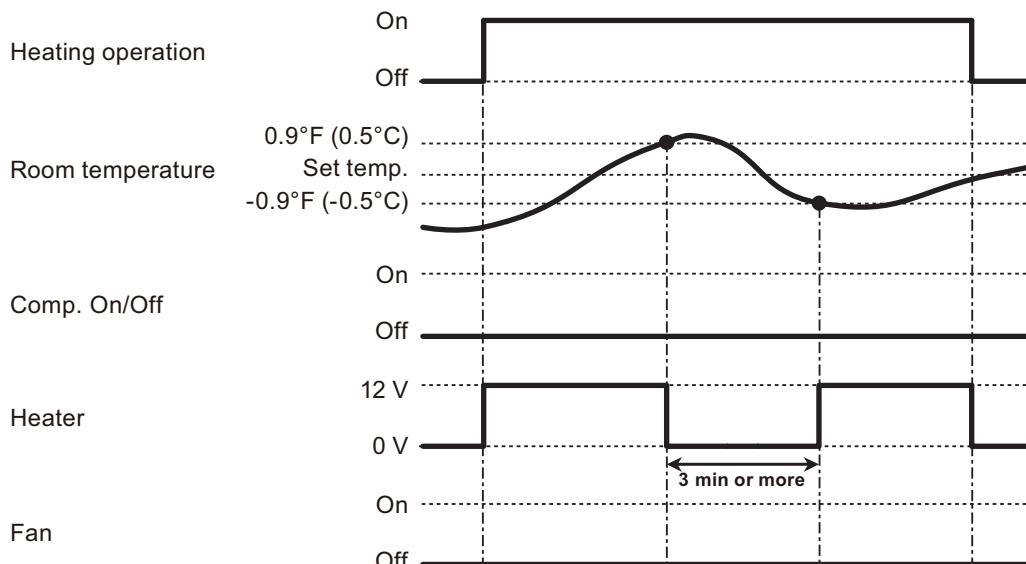
Perform heating by external heater only. Indoor unit is continuous thermostat off.

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

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



- Operation status



NOTE: In following operations, compressor will be on.

- Other than heating
- Test run

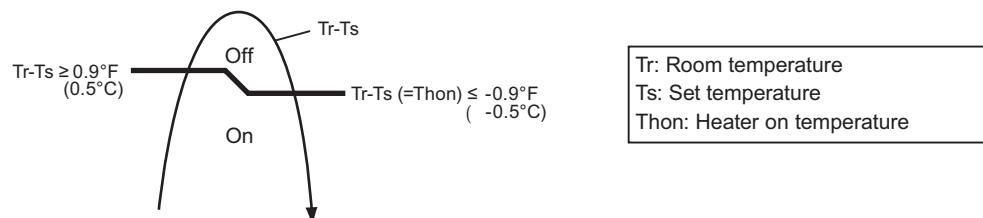
● Auxiliary heater control by outdoor temperature 1

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

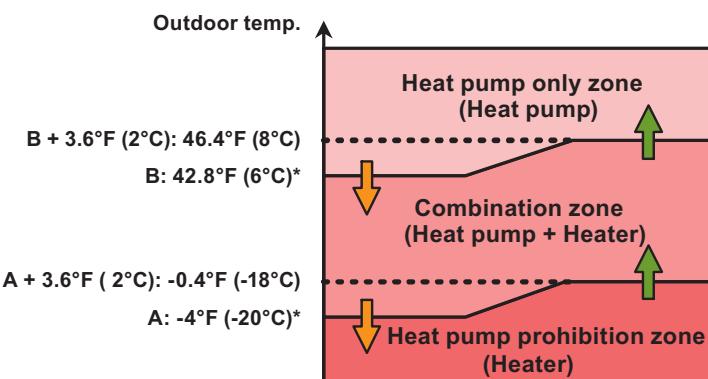
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> • Heater is off as shown in following diagram of heating temperature. • Other than heating mode • Error occurred • Forced thermostat off • Heat pump only zone

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

• External heater output

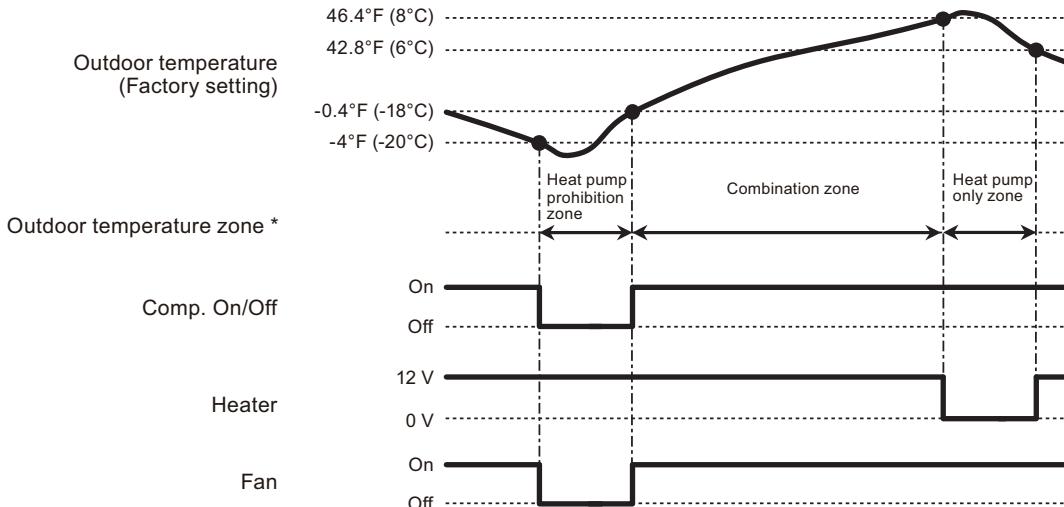


• Outdoor temperature zone



*: Adjustable by function setting 66 and 67

- Operation status



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

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

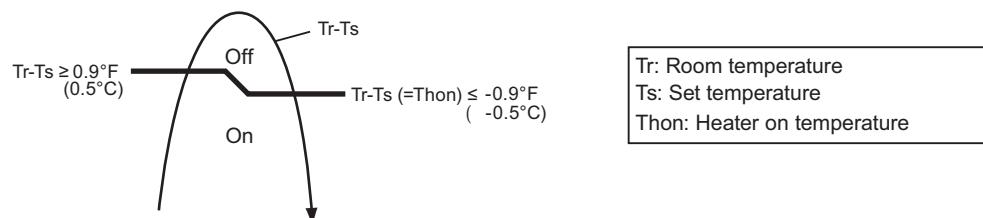
- Other than heating
- Test run

● Auxiliary heater control by outdoor temperature 2

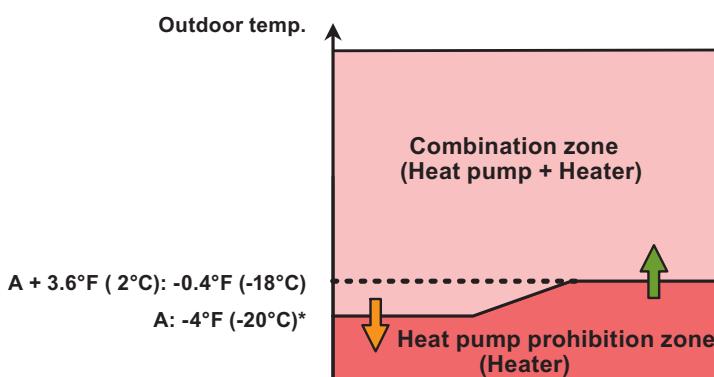
This control selects heat pump or external heater according to the outdoor temperature. Even when outdoor temperature is high, the heating is performed by using both of heat pump and external heater.

Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

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

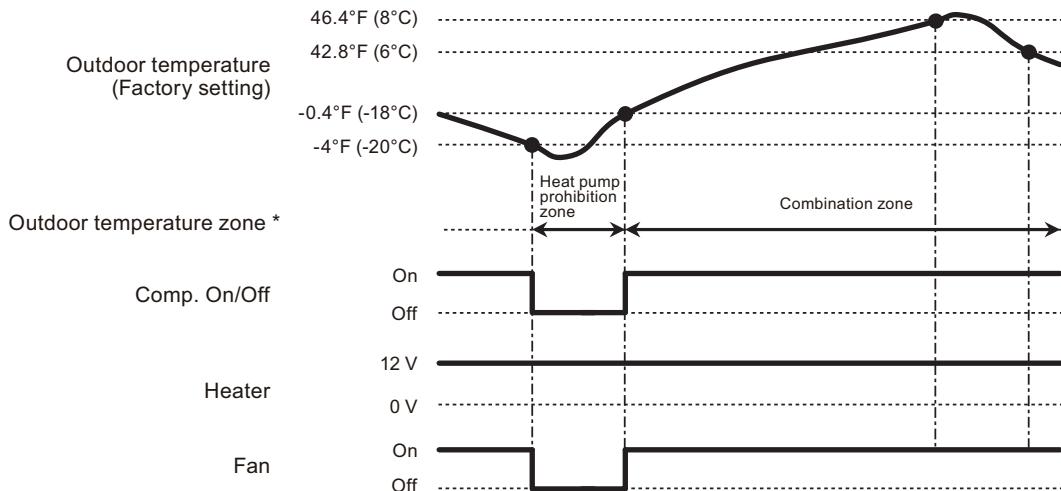


- Outdoor temperature zone**



*: Adjustable by function setting 66

- Operation status



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

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

- Other than heating
- Test run

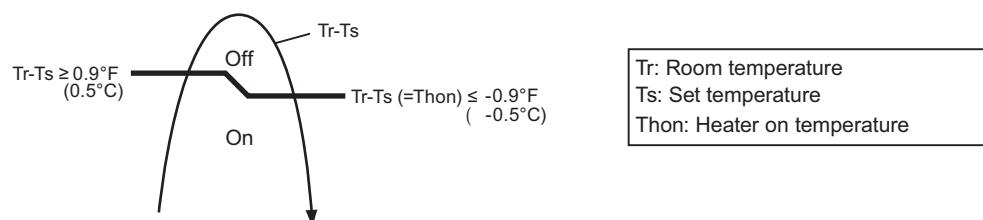
● Auxiliary heater control by outdoor temperature 3

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

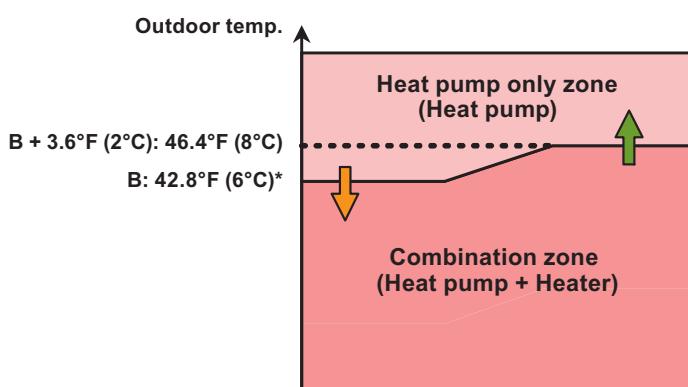
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

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

• External heater output

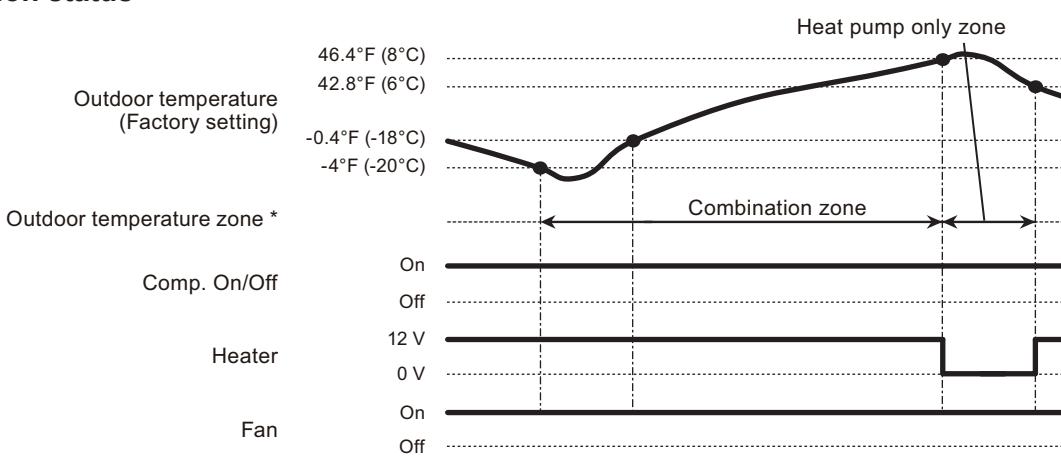


• Outdoor temperature zone



*: Adjustable by function setting 67

• Operation status



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

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

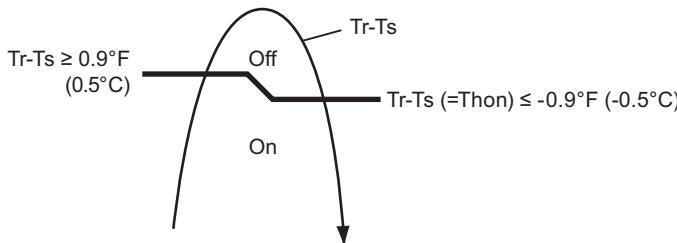
- Other than heating
- Test run

● Auxiliary heat pump control

- External heater output

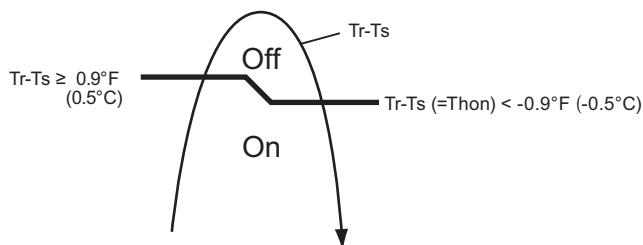
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

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



- Auxiliary heat pump On/Off

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

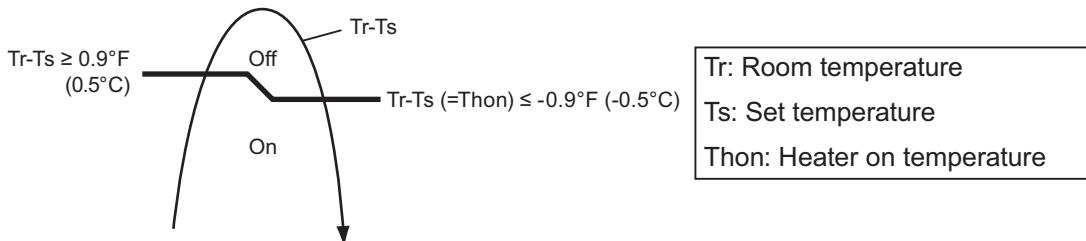


● Auxiliary heat pump control by outdoor temperature 1

- External heater output

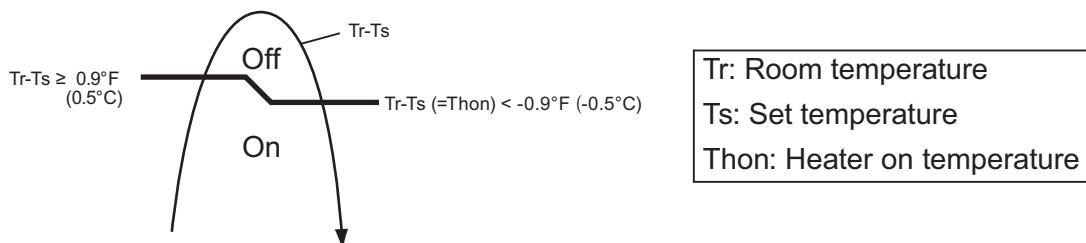
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) $+0.9^{\circ}\text{F}$ ($+0.5^{\circ}\text{C}$)

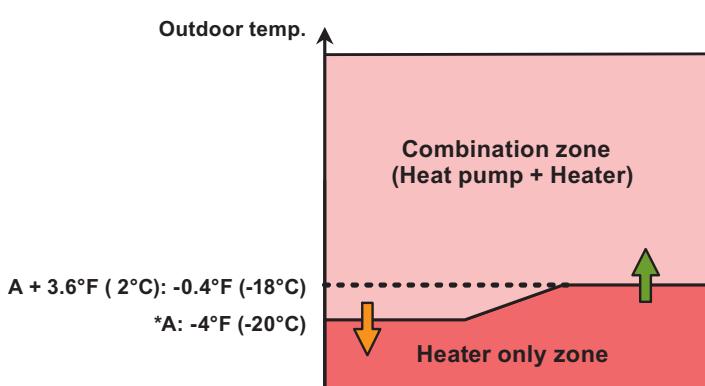


- Auxiliary heat pump On/Off

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

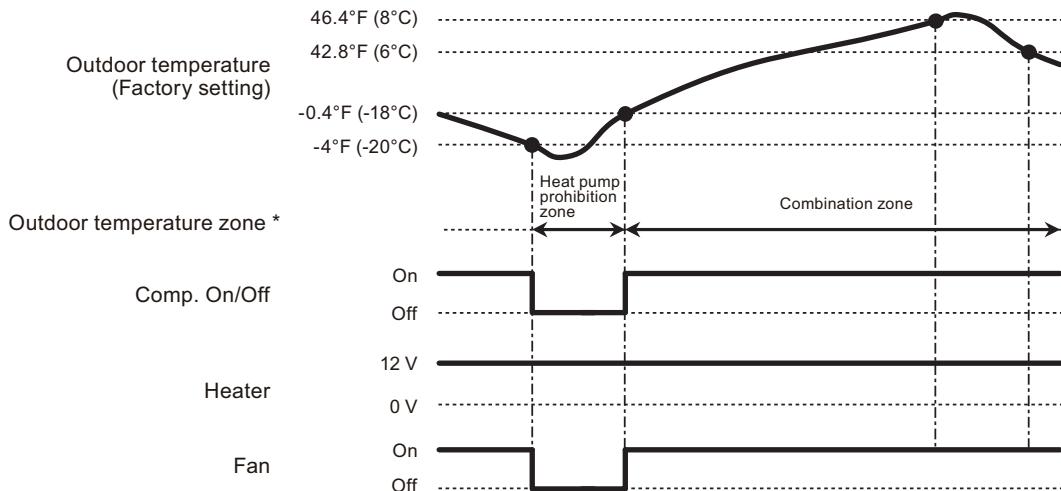


- Outdoor temperature zone



*: Adjustable by function setting 66

- Operation status



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

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

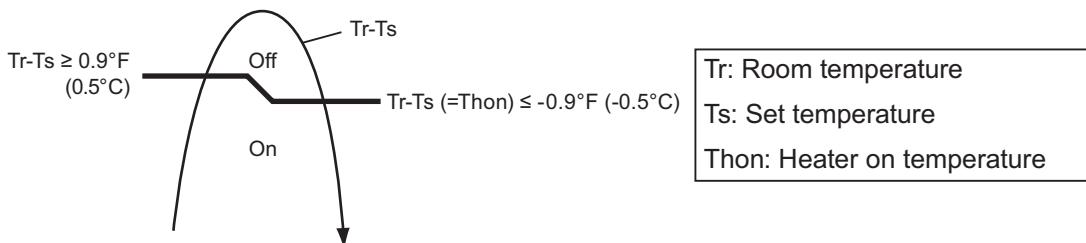
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 2

- External heater output

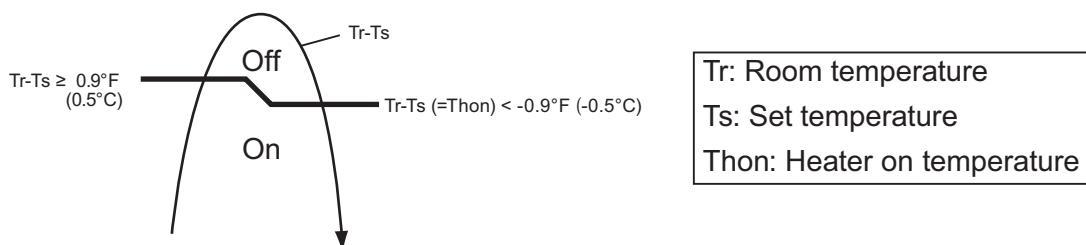
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) $+0.9^{\circ}\text{F}$ ($+0.5^{\circ}\text{C}$)

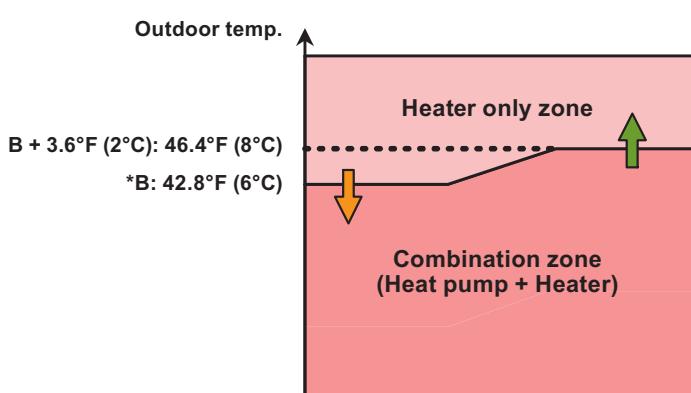


• Auxiliary heat pump On/Off

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

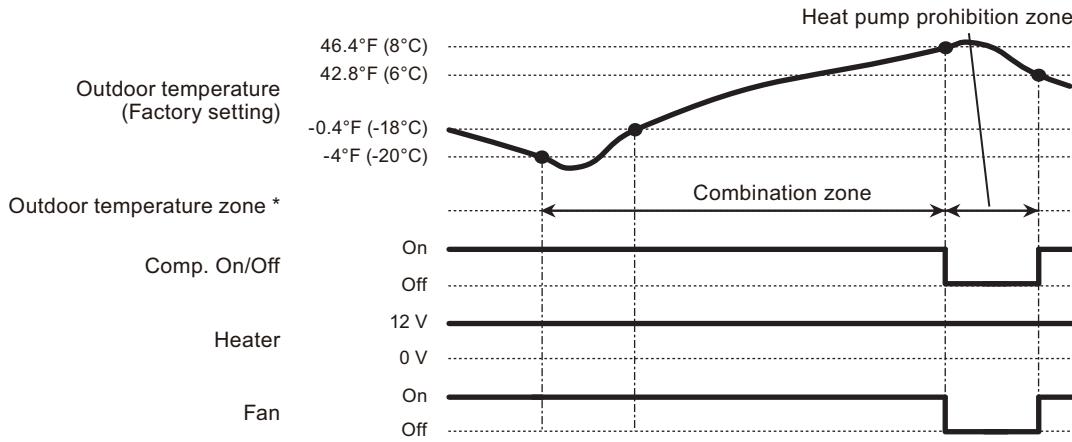


• Outdoor temperature zone



*: Adjustable by function setting 67

- Operation status



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

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

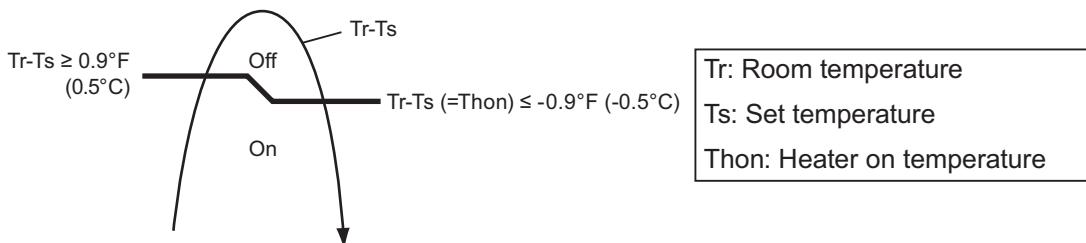
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 3

- External heater output

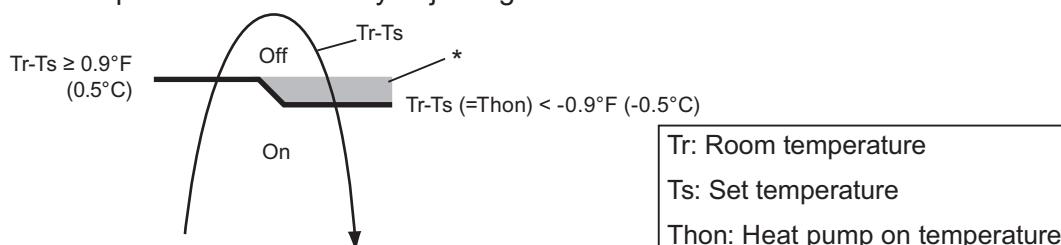
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	<ul style="list-style-type: none"> Heater is off as shown in following diagram of heating temperature. Other than heating mode Error occurred Forced thermostat off

- Temperature of heater on (Thon): Set temperature (Ts) -0.9°F (-0.5°C)
- Temperature of heater off: Set temperature (Ts) $+0.9^{\circ}\text{F}$ ($+0.5^{\circ}\text{C}$)



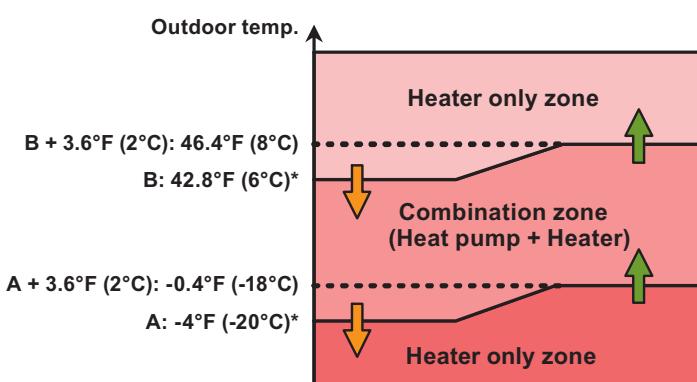
- Auxiliary heat pump On/Off

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



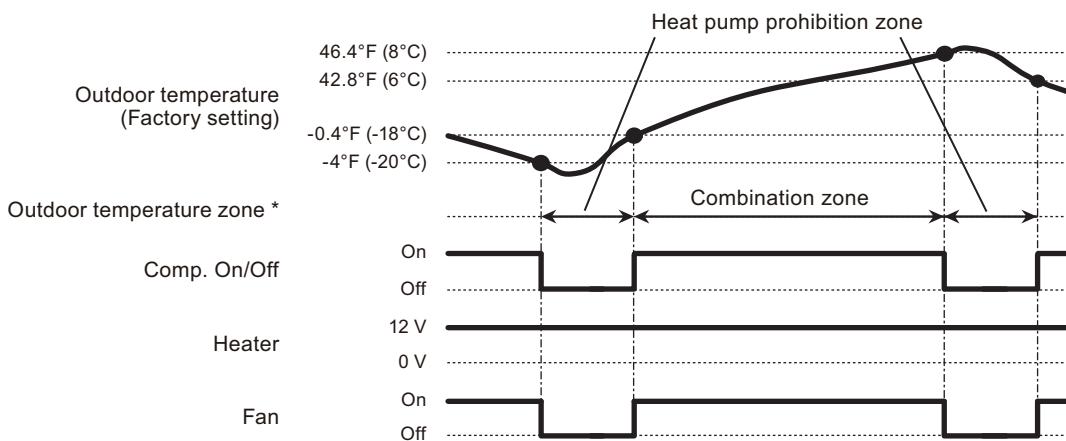
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

- Outdoor temperature zone



*: Adjustable by function setting 66 and 67

- Operation status



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

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

- Other than heating
- Test run

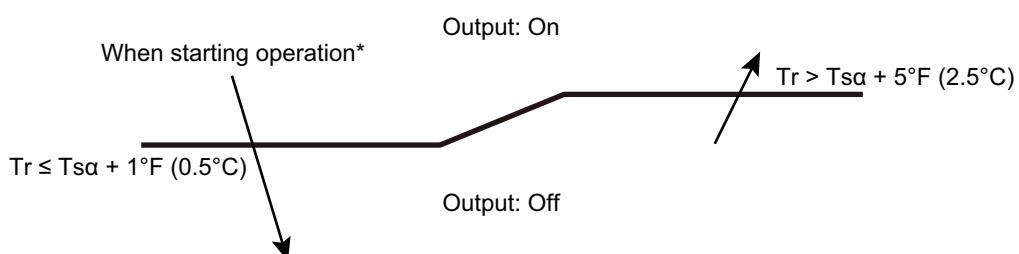
■ Setpoint attainment status (For 18-36 model)

NOTE: This function is valid only when function setting 96 is "Enable" (01).

When the room temperature does not reach the setpoint at a room due to the lower cooling performance caused by external factor such as the outdoor temperature change, signal is output to tell the attainment status of setpoint.

Function setting	External Input and Output PCB	External output		Output signal	Command
		Rotary switch			
60-12	D	Output of indoor unit	CN47	On → Off	Normal
				Off → On	Setpoint attainment

Output signal	Condition
Off	Reached the setpoint. ($Tr \leq Tsa + 1^{\circ}F [0.5^{\circ}C]$)
On	Unreached the setpoint. ($Tr > Tsa + 5^{\circ}F [2.5^{\circ}C]$) However, even if the setpoint unreached, the signal will not be output for 7 minutes after power is turned on.

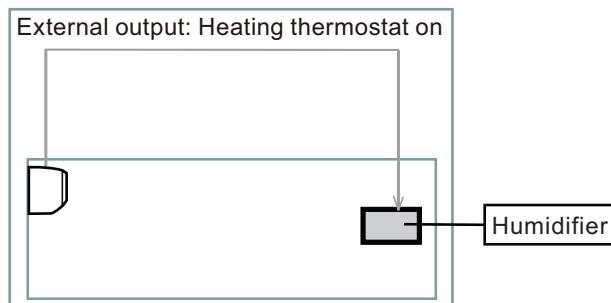


*: When starting operation or resetting, judges the zone to descending direction.

■ 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	CN312	
	7	60-07	9	CN311	
	8	60-08	A	CN310	

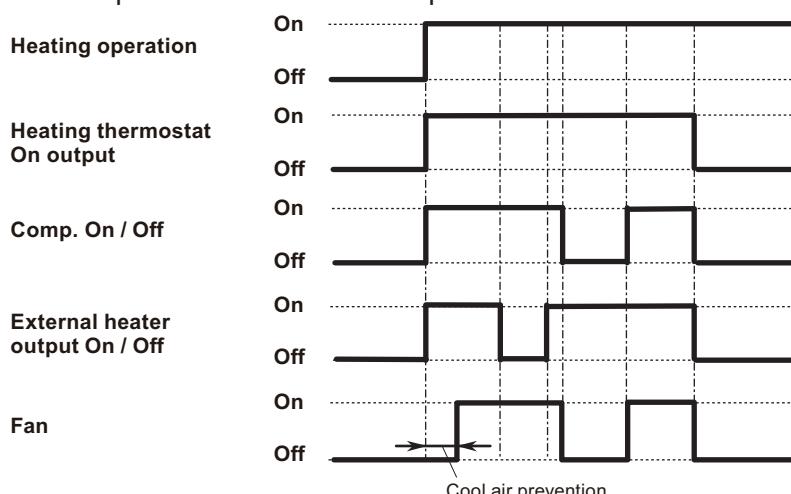
- Example of individual connection



- Operation status

The heating thermostat output for CNB01 (1-2 or 1-3 or 1- or 1-5) will be on when comp on or external heater on.

The heating thermostat output will be off when comp off and external heater off.



9. Group connection

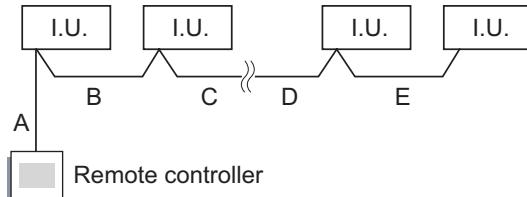
NOTE: Group control cannot be used together with WLAN Adapter.

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.

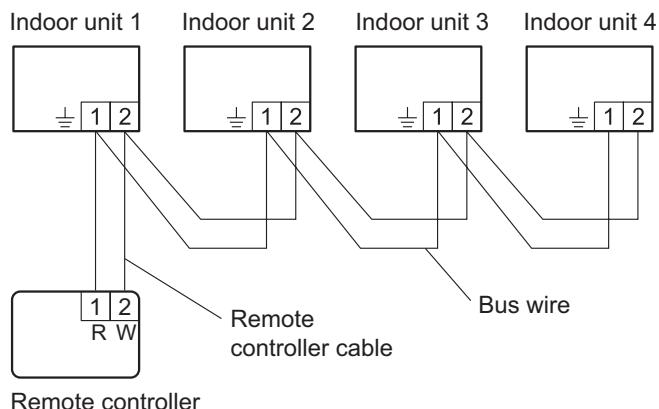
1. Connect up to 16 indoor units in a system.



A, B, C, D, E: Remote controller cable

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

Example of wiring method



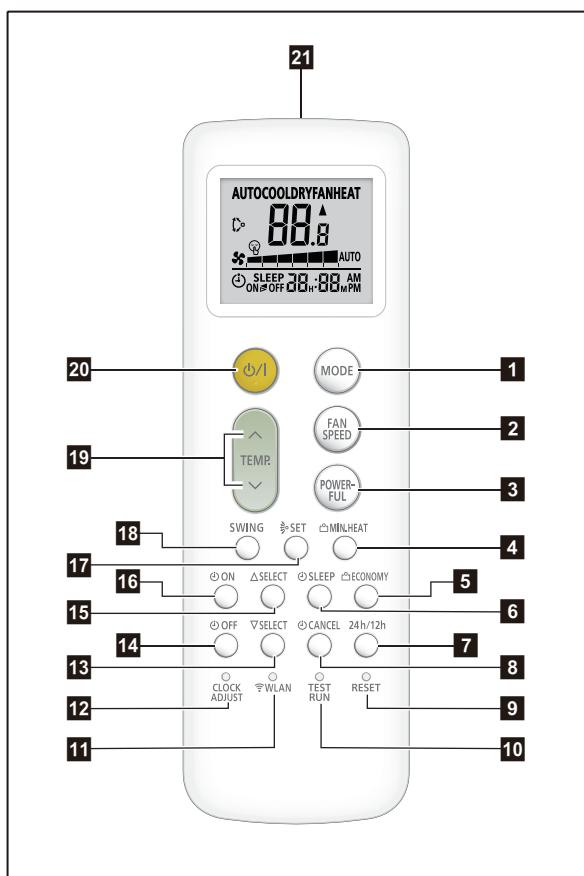
2. Automatic address setting

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

10. Remote controller

10-1. Wireless remote controller AR-RRH1U (for ASUH09KPAS and ASUH12KPAS)

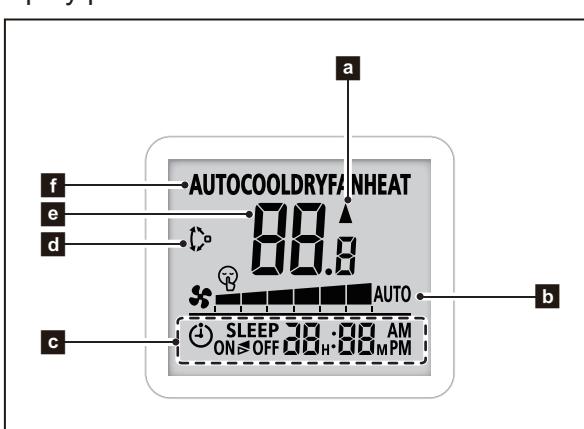
■ Overview



- 1** MODE button
- 2** FAN SPEED button
- 3** POWERFUL button
- 4** MIN. HEAT button
- 5** ECONOMY button
- 6** SLEEP timer button
- 7** 24h/12h button
- 8** Timer CANCEL button
- 9** RESET button
- 10** TEST RUN button
- 11** WLAN button
- 12** CLOCK ADJUST button
- 13** SELECT (Down) button
- 14** OFF timer button
- 15** SELECT (Up) button
- 16** ON timer button
- 17** SET button (Up/down airflow)
- 18** SWING button
- 19** TEMP. (Up/down) button
- 20** START/STOP button
- 21** Signal transmitter

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

Display panel



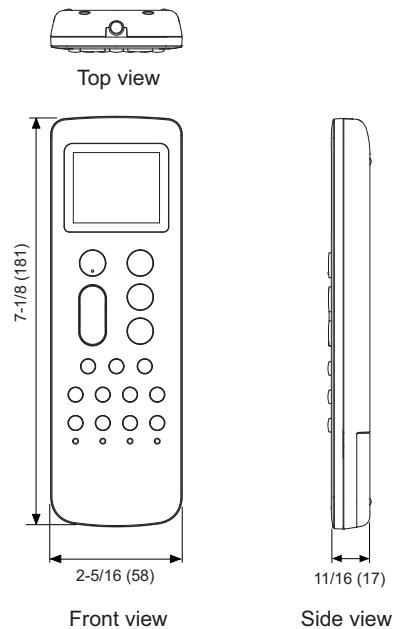
- a** Signal transmit indicator
- b** Fan speed indicator
- c** Clock and Timer indicator
- d** Swing indicator
- e** Temperature indicator
- f** Operating mode indicator

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

■ Specifications

● Controller

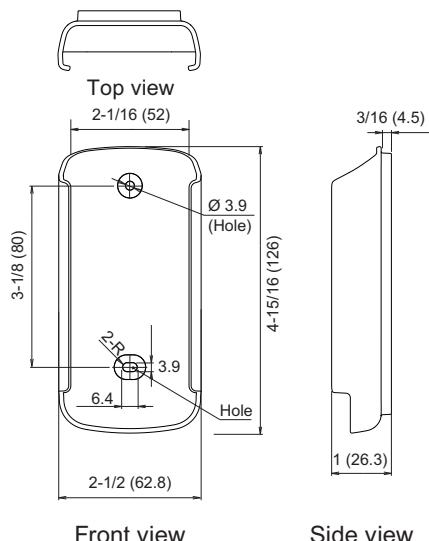
Unit: in (mm)



Size (H × W × D)	in (mm)	7-1/8 × 2-5/16 × 11/16 (181 × 58 × 17)
Weight	oz (g)	4 (116) (without batteries)

● Holder

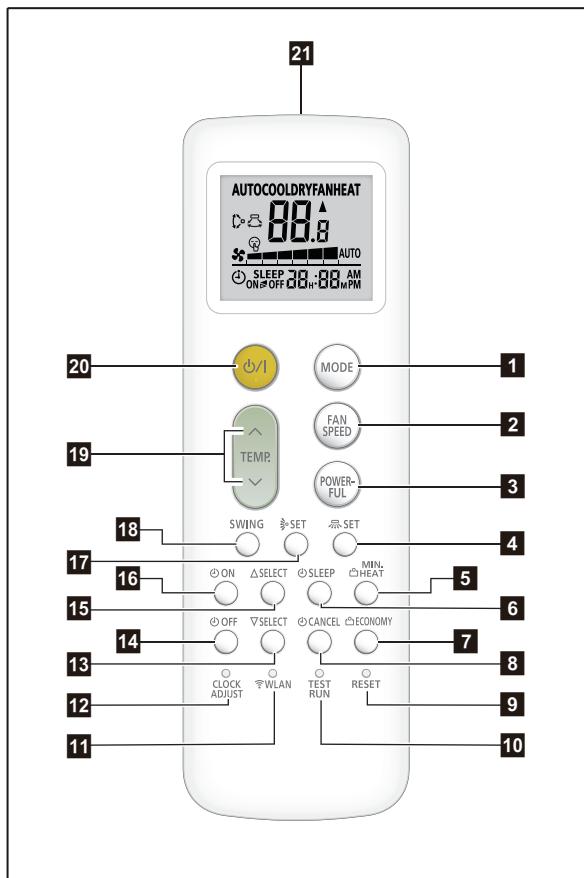
Unit: in (mm)



Size (H × W × D)	in (mm)	4-15/16 × 2-1/2 × 1 (126 × 62.8 × 26.3)
Weight	oz (g)	1 (28)

10-2. Wireless remote controller AR-RRH2U (for ASUH18KPAS, ASUH24KPAS, ASUH30KPAS, and ASUH36KPAS)

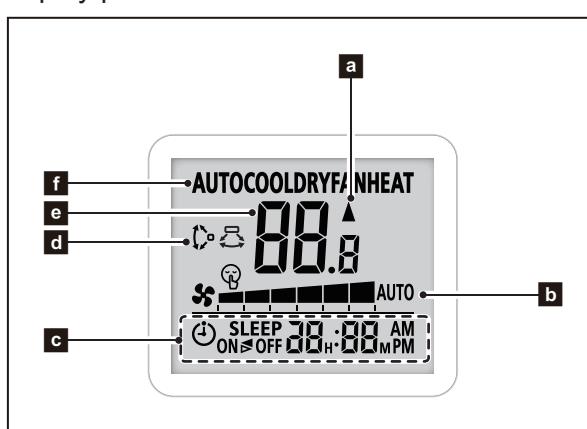
■ Overview



- 1** MODE button
- 2** FAN SPEED button
- 3** POWERFUL button
- 4** SET button (Left/right airflow)
- 5** MIN. HEAT button
- 6** SLEEP timer button
- 7** ECONOMY button
- 8** Timer CANCEL button
- 9** RESET button
- 10** TEST RUN button
- 11** WLAN button
- 12** CLOCK ADJUST button
- 13** SELECT (Down) button
- 14** OFF timer button
- 15** SELECT (Up) button
- 16** ON timer button
- 17** SET button (Up/down airflow)
- 18** SWING button
- 19** TEMP. (Up/down) button
- 20** START/STOP button
- 21** Signal transmitter

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

Display panel



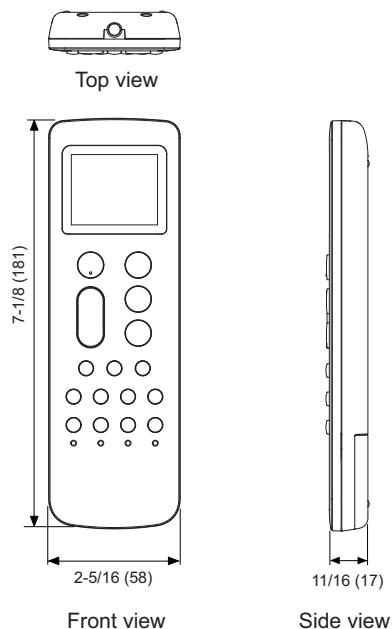
- a** Signal transmit indicator
- b** Fan speed indicator
- c** Clock and Timer indicator
- d** Swing indicator
- e** Temperature indicator
- f** Operating mode indicator

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

■ Specifications

● Controller

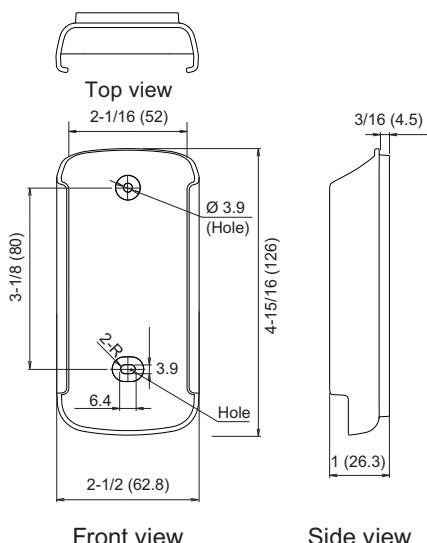
Unit: in (mm)



Size (H × W × D)	in (mm)	7-1/8 × 2-5/16 × 11/16 (181 × 58 × 17)
Weight	oz (g)	4 (116) (without batteries)

● Holder

Unit: in (mm)



Size (H × W × D)	in (mm)	4-15/16 × 2-1/2 × 1 (126 × 62.8 × 26.3)
Weight	oz (g)	1 (28)

11. Function settings

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

NOTE: Incorrect settings can cause a product malfunction.

11-1. Function settings by using remote controller

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

■ Setting procedure by using wireless remote controller

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

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

- Cover for the electrical enclosure on the outdoor unit is in place.
- There is no wiring mistake.
- Piping air tightness test and vacuuming have been performed firmly.
- All the necessary wiring work for outdoor unit has been finished.

After reconfirming the items listed above, connect the power supply of the indoor unit.

NOTES:

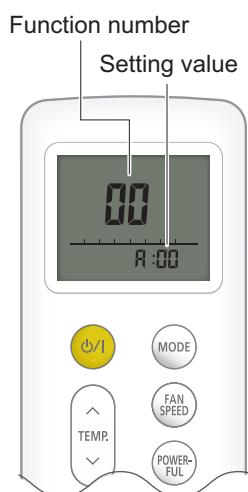
- Settings will not be changed if invalid numbers or setting values are selected.
- When optional wired remote controller is used, refer to the installation manual enclosed with the remote controller.

Entering function setting mode:

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

Selecting the function number and setting value:

1. Press MODE button.
2. Press the TEMP. (▲) (▼) buttons to select the function number. (Press MODE button to switch between the left and right digits.)
3. Press the FAN SPEED button to proceed to value setting. (Press FAN SPEED button again to return to the function number selection.)
4. Press the TEMP. (▲) (▼) buttons to select the setting value. (Press MODE button to switch between the left and right digits.)
5. Press the POWERFUL button once. Confirm that you hear the beep.
6. Press the START/STOP button once to fix the Function setting. Confirm that you hear the beep.
7. Press the RESET button to cancel the function setting mode.
8. After completing the function setting, be sure to disconnect the power supply and then reconnect it.



⚠ CAUTION

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

■ Contents of function setting

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

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

● Function setting list

	Function no.	Functions
1)	11	Filter sign
2)	30/31	Room temperature control for indoor unit sensor
3)	35/36	Room temperature control for wired remote controller sensor
4)	40	Auto restart
5)	42	Room temperature sensor switching
6)	44	Remote controller custom code
7)	46	External input control
8)	48	Room temperature sensor switching (Aux.)
9)	49	Indoor unit fan control for energy saving for cooling
10)	60	Switching functions for external output terminal
11)	61	Control switching of external heaters
12)	62	Operating temperature switching of external heaters
13)	66	Outdoor temperature zone boundary temperature A
14)	67	Outdoor temperature zone boundary temperature B
15)	71	Standby time for auxiliary equipment operation
16)	72	Heat pump backup setting
17)	73	Emergency heat for external output terminal
18)	94	Fixed operation mode switching
19)	95	Heat insulation condition (building insulation)
20)	96	Special cooling operation (For 18-36 model)

1) Filter sign

Select appropriate intervals for displaying the filter sign on the indoor unit according to the estimated amount of dust in the air of the room.

If the indication is not required, select "No indication" (03).

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

2) Room temperature control for indoor unit sensor

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

Depending on the installed environment, correction of the room temperature sensor may be required. Select the appropriate control setting according to the installed environment.

The temperature of the room temperature sensor is corrected as follows:

$$\text{Corrected temp.} = \text{Temp. of the room temp. sensor} - \text{Correction temp. value}$$

Example of correction:

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

The temperature correction values show the difference from the Standard setting "00" (manufacturer's recommended value).

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

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

3) Room temperature control for wired remote controller sensor

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

Depending on the installed environment, correction of the wire remote temperature sensor may be required. Select the appropriate control setting according to the installed environment.

To change this setting, set Function 42 to "Both" (01).

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

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

Function number	Setting value	Setting description	Factory setting
35 (For cooling)	36 (For heating)	00	Standard setting*
		01	No correction 0.0°F (0.0°C)
		02	-1°F (-0.5°C)
		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)
		11	+2°F (+1.0°C)
		12	+3°F (+1.5°C)
		13	+4°F (+2.0°C)
		14	+5°F (+2.5°C)
		15	+6°F (+3.0°C)
		16	+7°F (+3.5°C)
		17	+8°F (+4.0°C)

4) Auto restart

Enables or disables automatic restart after a power interruption.

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

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

5) Room temperature sensor switching

(Only for wired remote controller)

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

Function number	Setting value	Setting description	Factory setting
42	00	Indoor unit	♦
	01	Both	

00: Sensor on the indoor unit is active.

01: Sensors on both indoor unit and wired remote controller are active.

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

6) Remote controller custom code

(Only for wireless remote controller)

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

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

7) External input control

“Operation/Stop” mode or “Forced stop” mode can be selected.

Function number	Setting value	Setting description	Factory setting
46	00	Operation/Stop mode 1 (Remote controller enabled)	◆
	01	(Setting prohibited)	
	02	Forced stop mode	
	03	Operation/Stop mode 2 (Remote controller disabled)	

8) Room temperature sensor switching (Aux.)

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

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

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

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

9) Indoor unit fan control for energy saving for cooling

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

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

10) 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	
	12	Setpoint Attainment status (For 18-36 model)	

11) 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 54.

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	

12) 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 54.

Function number	Setting value	Setting description		Factory setting
		Heater: On	Heater: Off	
62	00	-5.4 °F (-3 °C)	-1.8 °F (-1 °C)	◆
	01	-3.6 °F (-2 °C)	-1.8 °F (-1 °C)	
	02	-3.6 °F (-2 °C)	-1.8 °F (-1 °C)	
	03	-5.4 °F (-3 °C)	-1.8 °F (-1 °C)	
	04	-7.2 °F (-4 °C)	-1.8 °F (-1 °C)	
	05	-9.0 °F (-5 °C)	-1.8 °F (-1 °C)	

13) 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 54.

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)	

14) 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 54.

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)	

15) 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 54.

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

16) 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	

17) 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.

18) 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	

NOTE: Do not use "Heating only" mode (01) of Function 94 and "Enabled" (01) of Function 96 simultaneously.

19) Heat insulation condition (building insulation)

Heat insulation conditions differ according to the installed environment.

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

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

When "High insulation" (01) is selected:

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

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

NOTE: When changing Function 95, perform this setting before other room-temperature control settings (Function 30, 31, 35, and 36). If Function 95 is not set first, room-temperature control settings (Function 30, 31, 35, and 36) will be reset and you must re-do them again.

20) Special cooling operation (For 18-36 model)

Stabilizes the cooling operation when the outdoor temperature is low.

- Operation mode: Fixed at COOL
- Airflow: Fixed at HIGH
- Set temperature: 76°F (24°C) to 88°F (30°C)
- Outdoor unit operation range: -4°F (-20°C) to 122°F (50°C)*
* Suction temperature

Function number	Setting value	Setting description	Factory setting
96	00	Disable	◆
	01	Enable	

NOTES:

- Do not enable this function when the Function 94 setting is “Heating only” (01).
- Connect the optional wired remote controller to change the setting value to “Enable” (01).
- Do not use the wireless remote controller after changing the setting value to “Enable” (01).
- If the wired remote controller becomes noncommunicable after setting “Enable” (01), the cooling operation starts automatically.
- If dew condenses on the indoor unit surface after setting “Enable” (01), set the setting value back to “Disable” (00).

11-2. Custom code setting for wireless remote controller

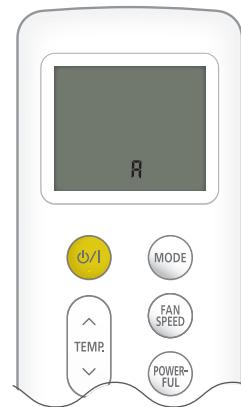
To interconnect the air conditioner and the wireless remote controller, assignment of the custom code for the wireless remote controller is required.

NOTE: Air conditioner cannot receive a signal if the air conditioner has not been set for the custom code.

When 2 or more air conditioners are installed in a room, and the remote controller is operating an air conditioner other than the one you wish to set, change the custom code of the remote controller to operate only the air conditioner you wish to set. (4 selections possible.)

Confirm the setting of the remote controller custom code and the function setting. If these do not match, the remote controller cannot be used to operate for the air conditioner.

1. Press the START/STOP button until only the clock is displayed on the remote controller display.
2. Press the MODE button for at least 5 seconds to display the current custom code. (Initially set to **A**.)
3. Press the TEMP. (\wedge) (\vee) buttons to change the custom code between **A** \rightarrow **B** \rightarrow **C** \rightarrow **D**. Match the code on the display to the air conditioner custom code. (Initially set to **A**.)
4. Press the MODE button again to return to the clock display. The custom code will be changed.



NOTES:

- If no button is pressed within 30 seconds after the custom code is displayed, the system returns to the original clock indicator. In this case, start again from step 1.
- The air conditioner custom code is set to **A** prior to shipment. To change the custom code, contact your retailer.
- If you do not know the assigned code for the air conditioner, try each of the custom code (**A** \rightarrow **B** \rightarrow **C** \rightarrow **D**) until you find the code which operates the air conditioner.

12. Accessories

12-1. Models: ASUH09KPAS, ASUH12KPAS, ASUH18KPAS, and ASUH24KPAS

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Wall hook bracket		1
Installation manual		1	Self-tapping screw (large)		5
Remote controller		1	Self-tapping screw (small)		2
Remote controller holder		1	Cloth tape		1
Battery		2	Filter holder		2
Installation spacer		1	Air cleaning filters		1

12-2. Models: ASUH30KPAS and ASUH36KPAS

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Drain hose insulation		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Self-tapping screw (large)		8
Remote controller		1	Self-tapping screw (small)		2
Battery		2	Air cleaning filters		1
Remote controller holder		1	Filter holder		2
Installation spacer		1			

13. Optional parts

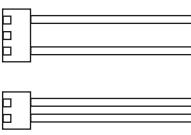
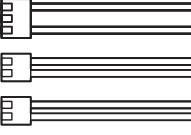
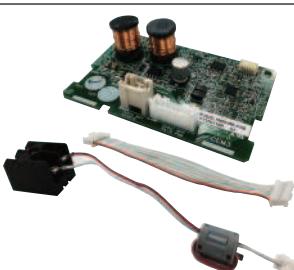
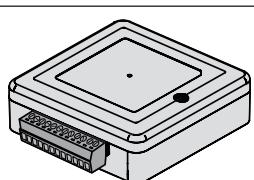
13-1. Controllers

Exterior	Part name	Model name	Summary
	Wired Remote Controller (Touch Panel)	UTY-RVRU	<p>Remote controller that provides the functions you need in a sleek design that uniquely transforms itself to blend with any interior.</p> <p>Optional Communication Kit is necessary for installation.</p> <p>NOTE: When this remote controller is connected, wireless remote controller cannot be used.</p> <p>Wireless RC</p>
	Wired Remote Controller (Touch Panel)	UTY-RNRUZ*	<p>Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room.</p> <p>Optional Communication Kit is necessary for installation.</p> <p>NOTE: When this remote controller is connected, wireless remote controller cannot be used.</p> <p>Wireless RC</p>
	Simple Remote Controller	UTY-RSRY	<p>Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode.</p> <p>Optional Communication Kit is necessary for installation.</p>
	Simple Remote Controller	UTY-RHRY	<p>Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting.</p> <p>Optional Communication Kit is necessary for installation.</p>

NOTES:

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

13-2. Others

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PCB. Connecting point: CN46 and CN47 on Main PCB
	External Connect Kit	UTY-XWZXZ5	Required when external device is connected. Connecting point: CN46 and CN47 on Main PCB
	External Input and Output PCB	UTY-XCSXZ2	Use to connect with external devices and air conditioner PCB. Optional External Connect Kit might be required to connect locally purchased devices via this PCB. Connecting point: CN65 on Main PCB
	Communication Kit	UTY-TWRXZ2	Use to connect Non-polar 2-core wired remote controller. Connecting point: CN13 on Main PCB
	WLAN Adapter	UTY-TFSXH4	Remotely manage an air conditioning system using mobile devices such as smartphones and tablets. Appropriate application for each region is required to use this option. For details, contact FGL sales company. Connecting point: USB connector
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: CN65 on Main PCB
	Thermostat Converter	UTY-TTRXZ*	This converter can control Fujitsu General products using a third-party thermostat controller. Optional Communication Kit is necessary for installation.
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system. Optional Communication Kit is necessary for installation.
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Optional Communication Kit is necessary for installation.

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOUH09KPAS1
AOUH12KPAS1
AOUH18KPAS1
AOUH24KPAS1
AOUH30KPAS1
AOUH36KPAS1

1. Specifications

1-1. Models: AOUH09KPAS1 and AOUH12KPAS1

Type	Inverter, Heat pump			
Model name	AOUH09KPAS1		AOUH12KPAS1	
Power supply	208/230 V~ 60 Hz			
Power supply intake	Outdoor unit			
Available voltage range	187—253 V			
Starting current	A		3.5 5.0	
Fan	Airflow rate	Cooling	936 (1,590)	
		Heating	959 (1,630) 818 (1,390)	
Type × Qty		Propeller fan × 1		
Motor output		23		
Sound pressure level*1		Cooling	46	
		Heating	48	
Dimensions (H × W × D)		in (mm)	19-13/16 × 25-9/16 × 11/16 (504 × 650 × 18.2) 19-13/16 × 24-13/16 × 1-7/16 (504 × 630 × 36.4)	
Fin pitch		FPI	20	
Heat exchanger type		Rows × Stages	1 × 24 2 × 24	
Pipe type		Copper tube		
Fin type		Type (Material)	Aluminum	
		Surface treatment	PC fin	
Compressor		Type	DC rotary	
		Motor output	550	
Refrigerant		Type	R32	
Charge		lb oz	1 lb 5 oz 1 lb 9 oz	
		g	600 700	
Refrigerant oil		Type	RB74AF	
		Amount	14.6 (240)	
Enclosure		Material	Steel sheet	
Color		Beige Approximate color of Munsell 10YR 7.5/1.0		
Dimensions (H × W × D)		Net	21-5/16 × 26-1/8 × 11-7/16 (541 × 663 × 290)	
		Gross	23-11/16 × 31-5/8 × 14-3/4 (602 × 804 × 375)	
Weight		Net	51 (23) 57 (26)	
		Gross	57 (26) 62 (28)	
Connection pipe	Size	Liquid	Ø1/4 (Ø6.35)	
		Gas	Ø3/8 (Ø9.52)	
Method		Flare		
Pre-charge length		49 (15)		
Max. length		ft (m)		
Max. height difference		66 (20)		
		49 (15)		
Operation range		Cooling	14 to 122*2 (-10 to 50*2)	
		Heating	5 to 75 (-15 to 24)	
Drain hose		Material	Polypropylene	
		Tip diameter	Ø1/2 (Ø13.0) (I.D.), Ø5/8 to Ø11/16 (Ø16.0 to Ø16.8) (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: AOUH18KPAS1 and AOUH24KPAS1

Type	Inverter, Heat pump		
Model name	AOUH18KPAS1		AOUH24KPAS1
Power supply	208/230 V~ 60 Hz		
Power supply intake	Outdoor unit		
Available voltage range	187–253 V		
Starting current	5.6		
Fan	Airflow rate	Cooling	1,218 (2,070)
		Heating	1,348 (2,290)
	Type × Qty		Propeller fan × 1
	Motor output	W	49
Sound pressure level* ¹	Cooling	dB (A)	50
			55
Heat exchanger type	Dimensions (H × W × D)	in (mm)	50
			54
	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 rotary
	Motor output	W	1,060
Refrigerant	Type		R32
	Charge	lb oz	2 lb 10 oz
		g	1,200
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)	86 (39)
	Gross		93 (42)
Connection pipe	Size	Liquid	Ø1/4 (Ø6.35)
		Gas	Ø1/2 (Ø12.70)
	Method		Flare
	Pre-charge length	ft (m)	49 (15)
Operation range	Max. length		98 (30)
	Max. height difference		82 (25)
	Cooling	°F (°C)	14 to 122* ² (-10 to 50* ²)
	Heating		5 to 75 (-15 to 24)

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.

1-3. Models: AOUH30KPAS1 and AOUH36KPAS1

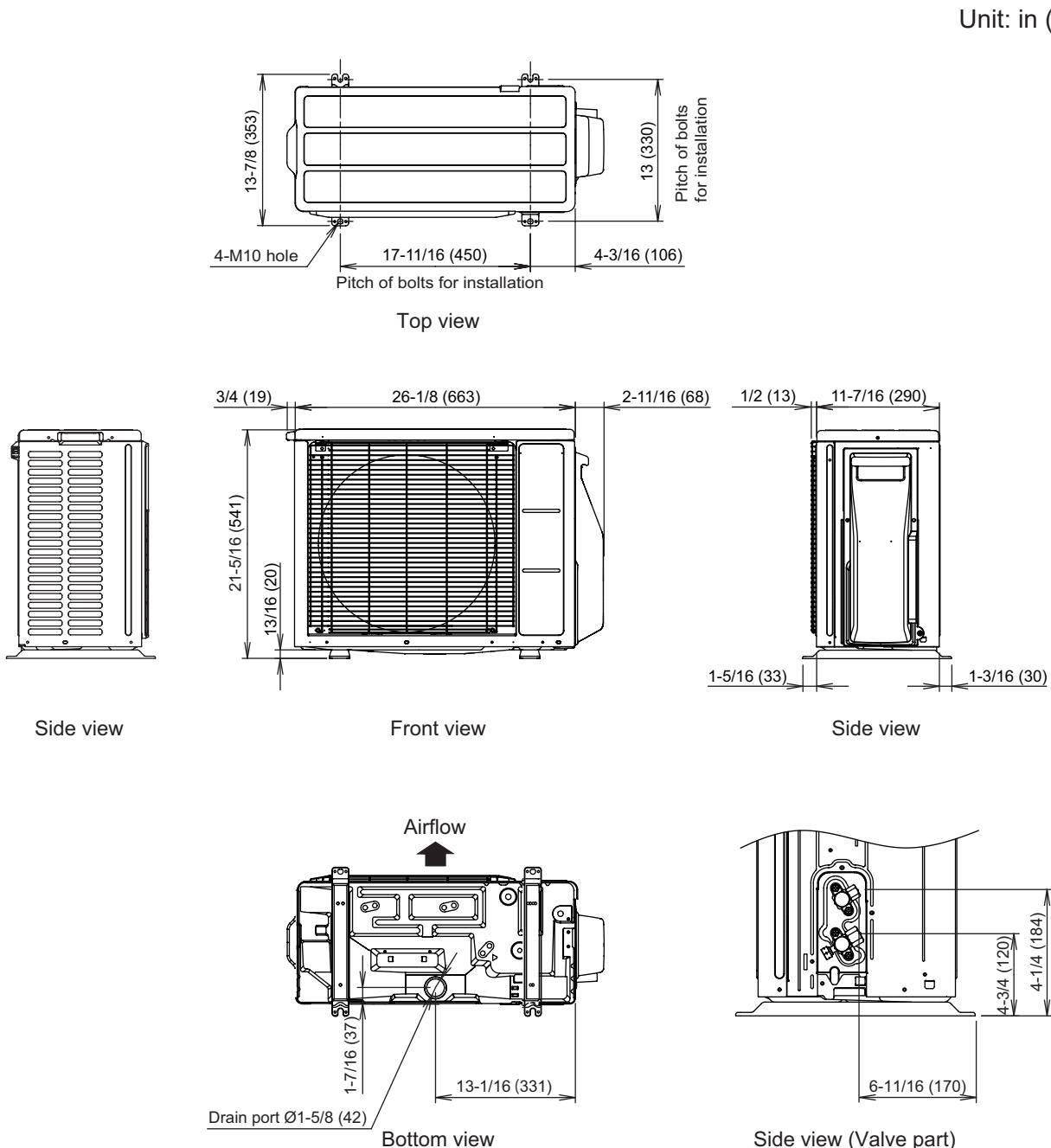
Type	Inverter, Heat pump		
Model name	AOUH30KPAS1		AOUH36KPAS1
Power supply	208/230 V~ 60 Hz		
Power supply intake	Outdoor unit		
Available voltage range	187—253 V		
Starting current	A	11.3	14.8
Fan	Airflow rate	Cooling	2,166 (3,680)
		Heating	2,166 (3,680)
	Type × Qty	Propeller fan × 1	
	Motor output	W	100
Sound pressure level* ¹	Cooling	dB (A)	53
			55
	Dimensions (H × W × D)	in (mm)	Main 1: 29-3/4 × 35-5/8 × 11/16 (756 × 905 × 18.19) Main 2: 29-3/4 × 35-5/8 × 11/16 (756 × 905 × 18.19)
		Fin pitch	FPI
Heat exchanger type	Main 1: 1 × 36 Main 2: 1 × 36		
	Rows × Stages		
	Pipe type		Copper tube
	Fin type	Type (Material)	Aluminum
Compressor	Surface treatment		Blue fin
	Type	DC twin rotary	
Refrigerant	Motor output	W	1,500
	Type	R32	
	Charge	lb oz	3 lb 12 oz
		g	1,700
Refrigerant oil	Type	FW68D	
	Amount	in ³ (cm ³)	36.6 (600)
Enclosure	Material	Steel sheet	
	Color	Beige Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net	in (mm)	31 × 37 × 12-5/8 (788 × 940 × 320)
	Gross		38-1/16 × 40-7/16 × 17-1/2 (966 × 1,027 × 445)
Weight	Net	lb (kg)	117 (53)
	Gross		134 (61)
Connection pipe	Size	Liquid	Ø3/8 (Ø9.52)
		Gas	Ø5/8 (Ø15.88)
	Method	Flare	
	Pre-charge length	ft (m)	66 (20)
Operation range	Max. length		164 (50)
	Max. height difference		98 (30)
	Cooling	°F (°C)	14 to 122* ² (-10 to 50* ²)
Drain hose	Heating		5 to 75 (-15 to 24)
	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.

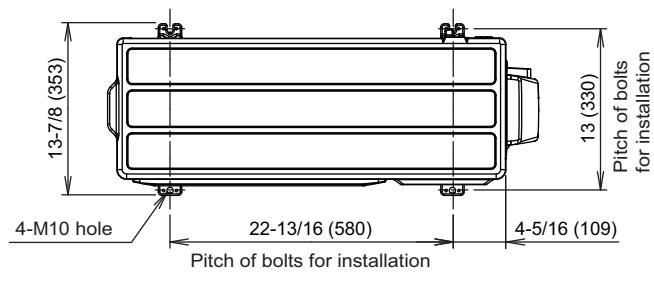
2. Dimensions

2-1. Models: AOUH09KPAS1 and AOUH12KPAS1

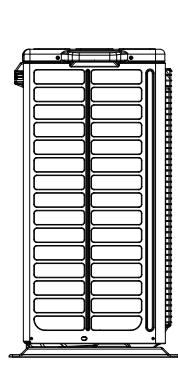


2-2. Models: AOUH18KPAS1 and AOUH24KPAS1

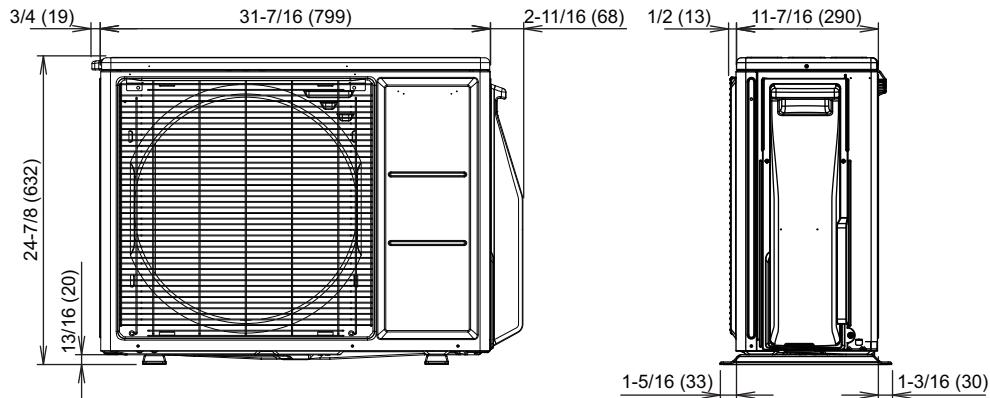
Unit: in (mm)



Top view

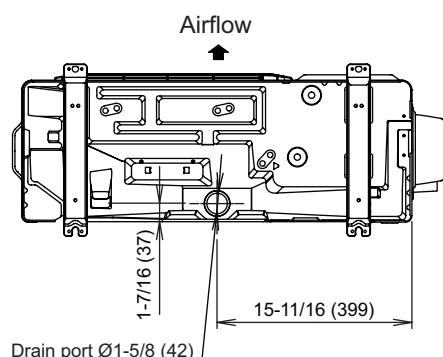


Side view

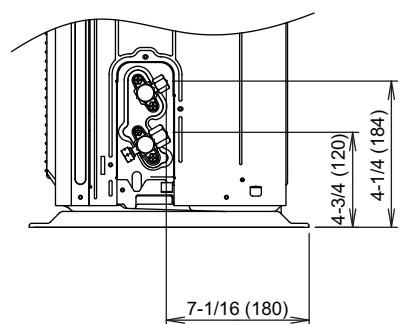


Front view

Side view



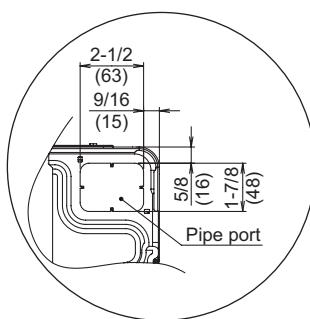
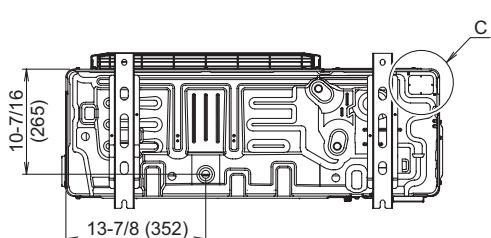
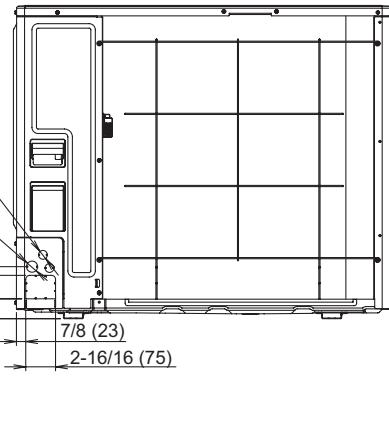
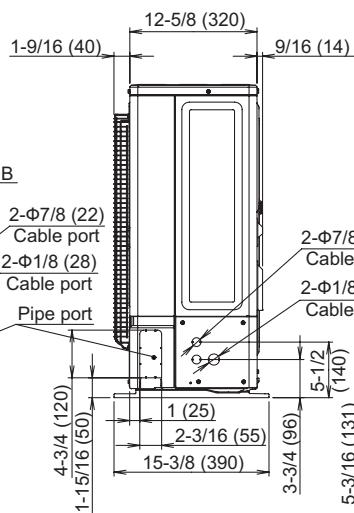
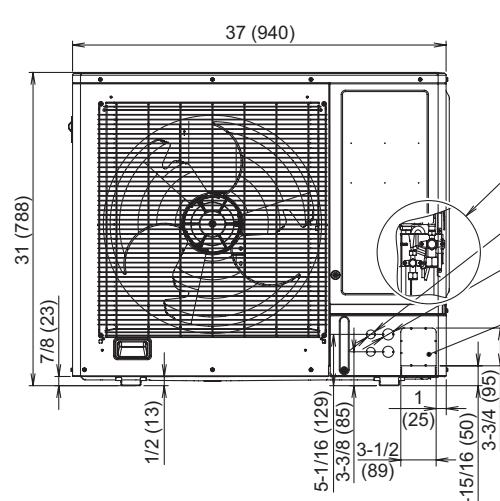
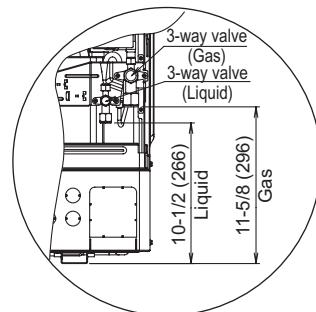
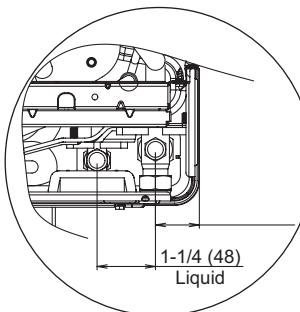
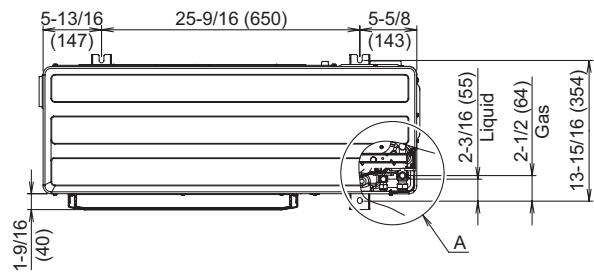
Bottom view



Side view (Valve part)

2-3. Models: AOUH30KPAS1 and AOUH36KPAS1

Unit: in (mm)

OUTDOOR UNIT
AOUH09-36KPAS1OUTDOOR UNIT
AOUH09-36KPAS1

3. Installation space

3-1. Models: AOUH09KPAS1, AOUH12KPAS1, AOUH18KPAS1, and AOUH24KPAS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

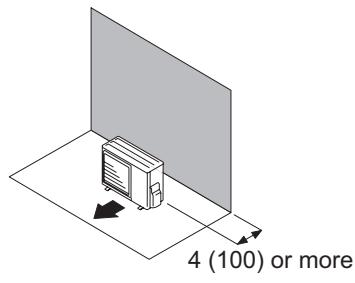
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

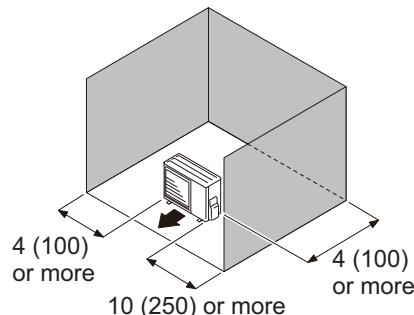
- When the upper space is open:

Unit: in (mm)

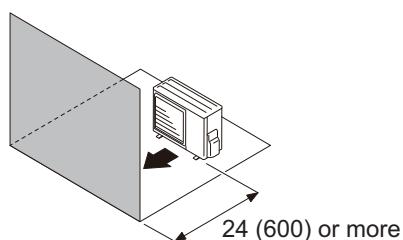
Obstacles at rear only



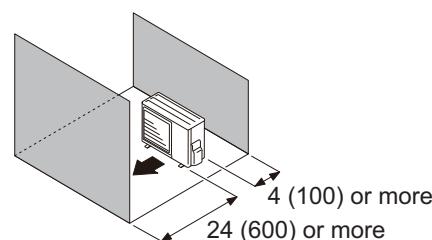
Obstacles at rear and sides



Obstacles at front



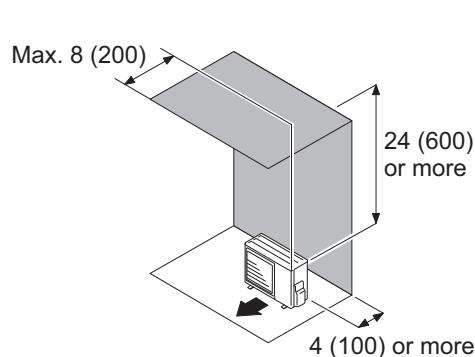
Obstacles at front and rear



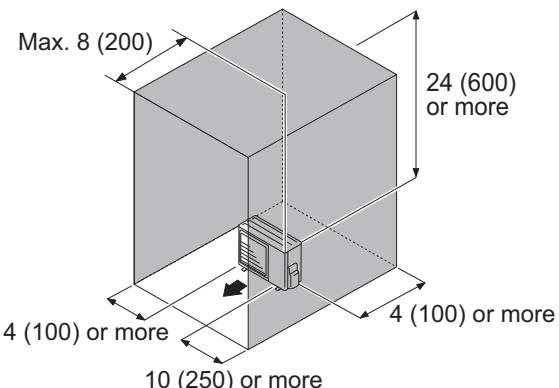
- When an obstruction in the upper space:

Unit: in (mm)

Obstacles at rear and above



Obstacles at rear, sides, and above

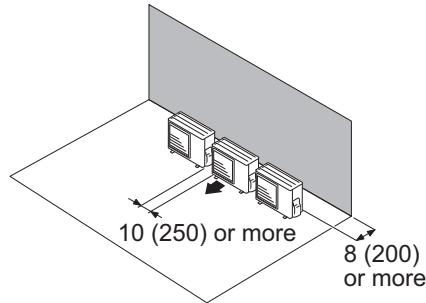


● Multiple outdoor unit installation

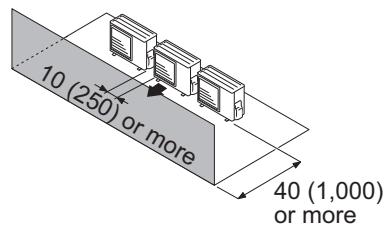
- Provide at least 10 in (250 mm) of space between the outdoor units if multiple units are installed.
 - When routing the piping from the side of an outdoor unit, provide space for piping.
 - No more than 3 units must be installed side by side.
- When 4 units or more are arranged in a line, provide the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

Unit: in (mm)

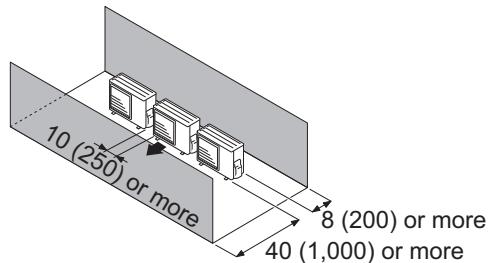
Obstacles at rear only



Obstacles at front only



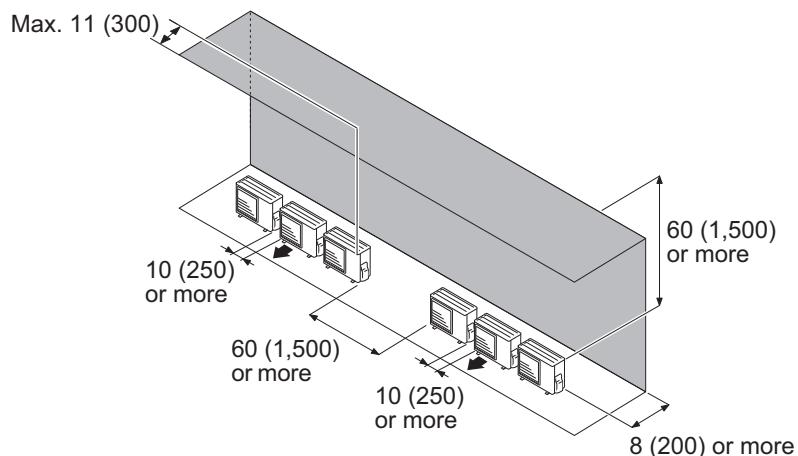
Obstacles at front and rear



- When an obstruction in the upper space:**

Unit: in (mm)

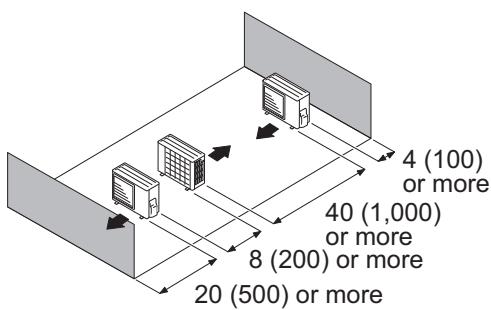
Obstacles at rear and above.



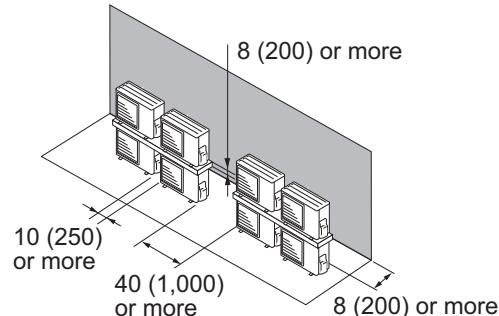
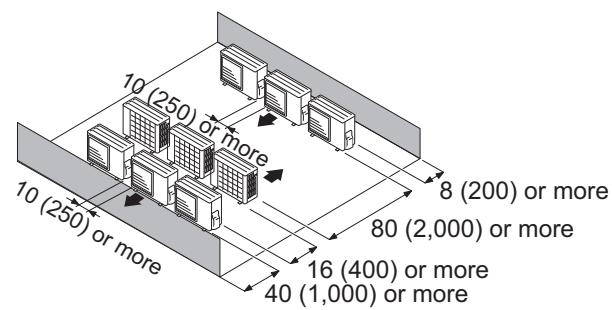
● Outdoor units installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



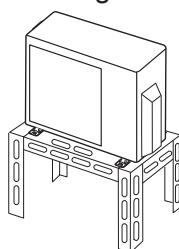
Multiple parallel unit arrangement

**NOTES:**

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

⚠ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 32 °F (0 °C) or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



3-2. Models: AOUH30KPAS1 and AOUH36KPAS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

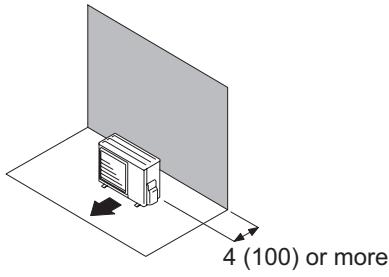
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

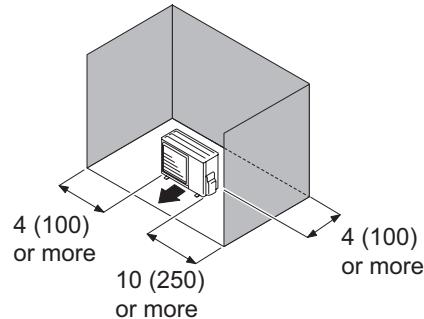
- When the upper space is open:

Unit: in (mm)

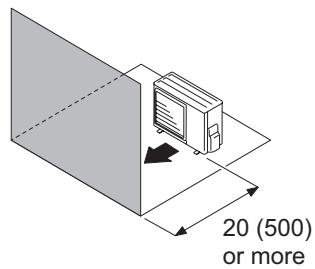
When there are obstacles at the rear only.



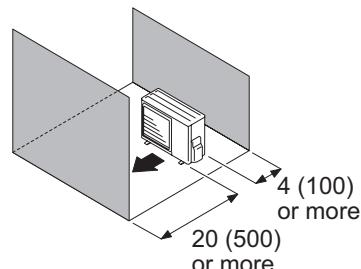
When there are obstacles at the rear and sides.



When there are obstacles at the front only.



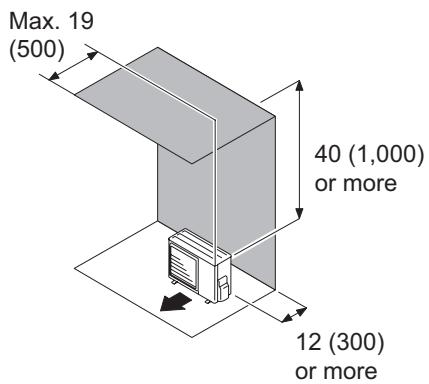
When there are obstacles at the front and rear.



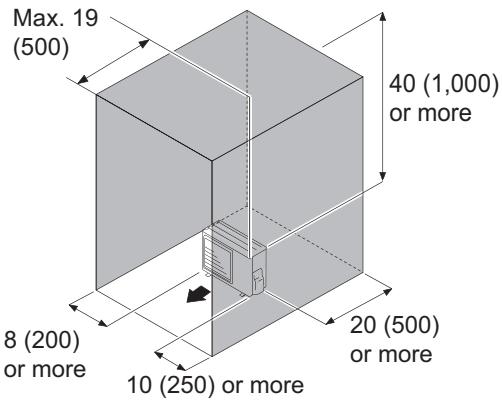
- When an obstruction in the upper space:

Unit: in (mm)

When there are obstacles at the rear and above.



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



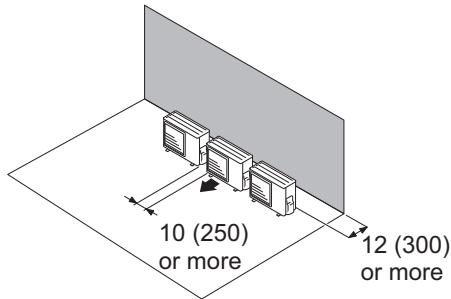
● Multiple outdoor unit installation

- Provide at least 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:"**.

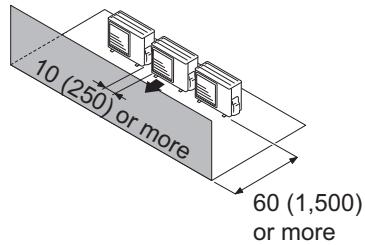
- When the upper space is open:**

Unit: in (mm)

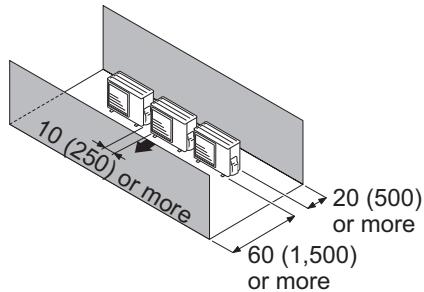
When there are obstacles at the rear only.



When there are obstacles at the front only.



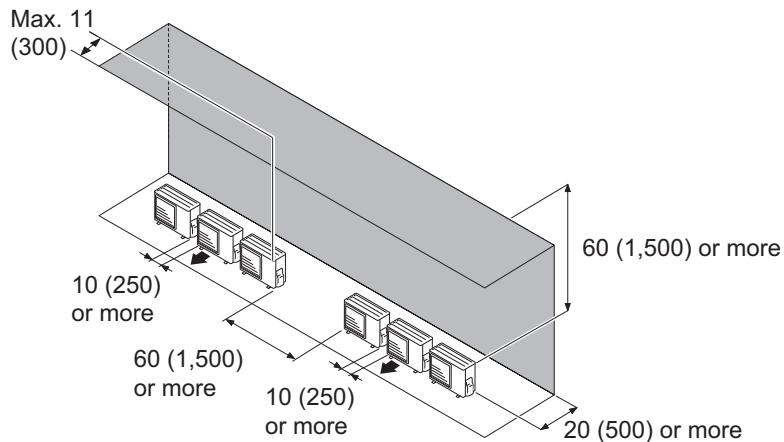
When there are obstacles at the front and rear.



- When an obstruction in the upper space:**

Unit: in (mm)

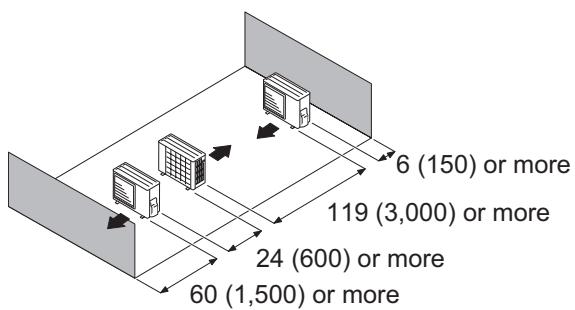
When there are obstacles at the rear and above.



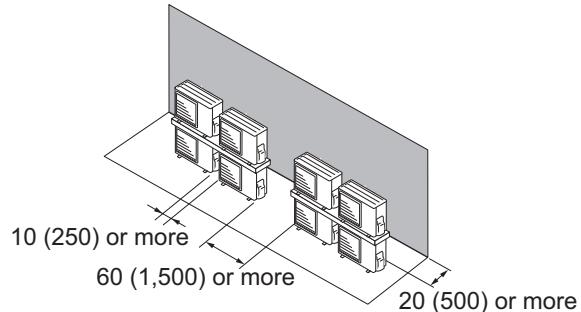
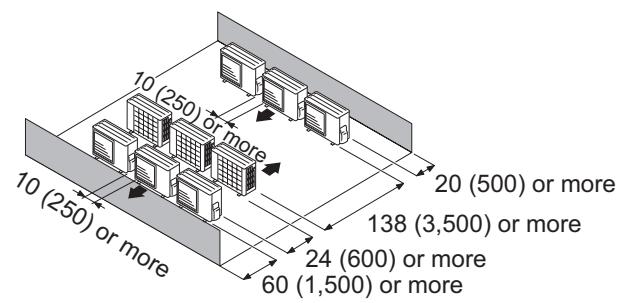
● Outdoor unit installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



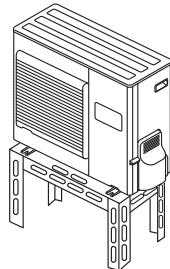
Multiple parallel unit arrangement

**NOTES:**

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

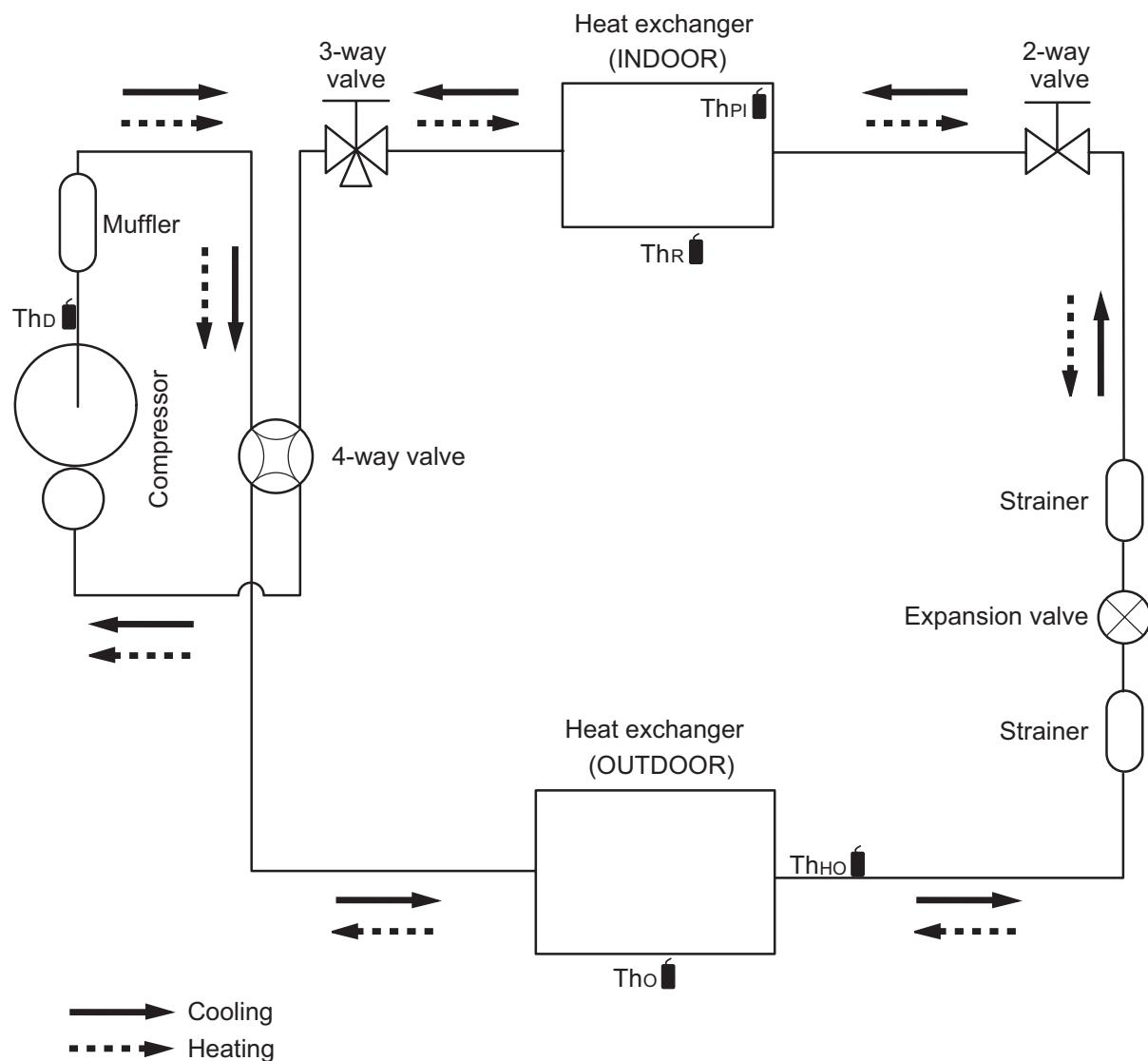
△ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 32 °F (0 °C) or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



4. Refrigerant circuit

4-1. Models: AOUH09KPAS1 and AOUH12KPAS1



ThD : Thermistor (Discharge temperature)

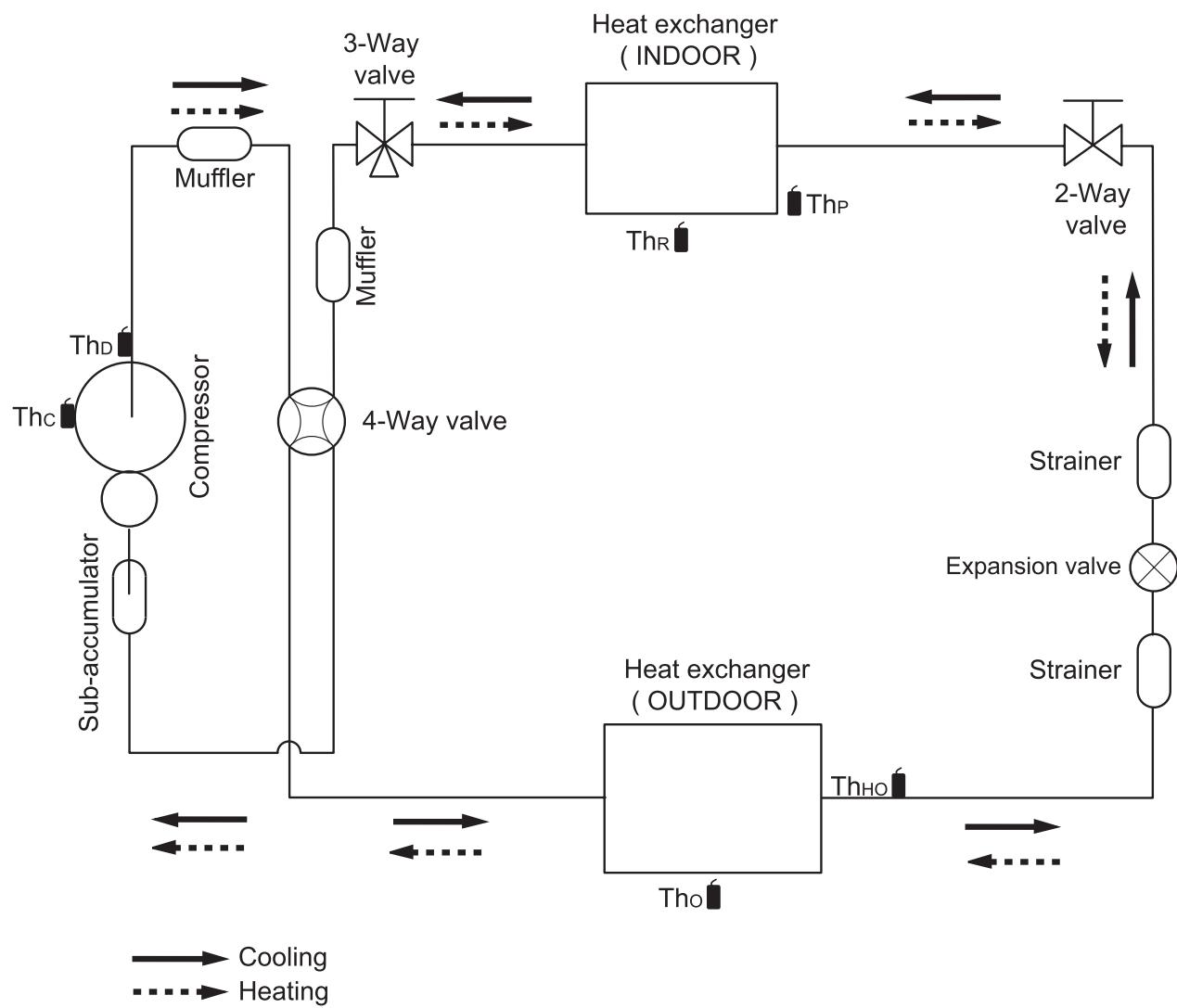
Tho : Thermistor (Outdoor temperature)

ThHo : Thermistor (Heat exchanger out temperature)

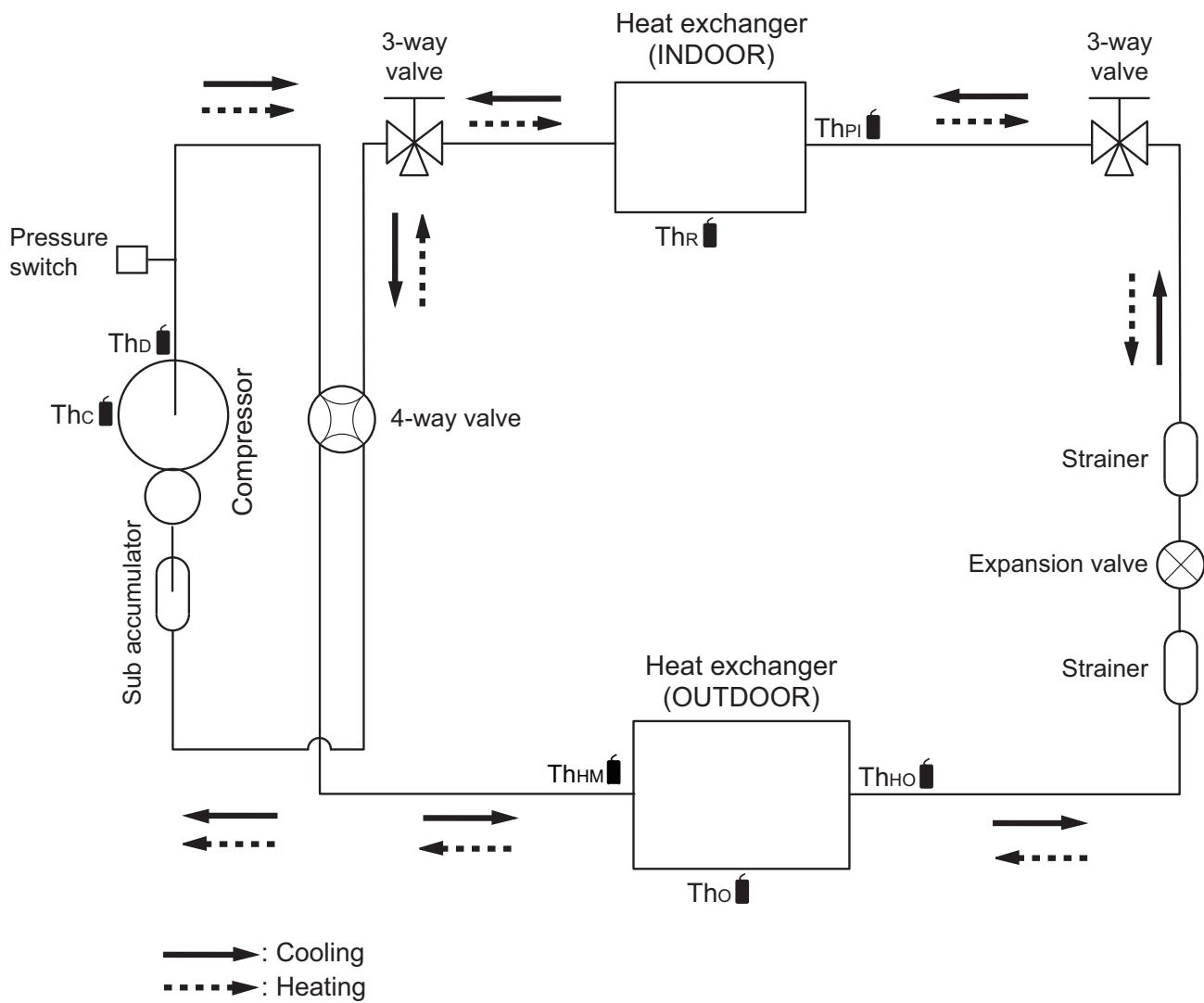
ThPI : Thermistor (Pipe temperature)

ThR : Thermistor (Room temperature)

4-2. Models: AOUH18KPAS1 and AOUH24KPAS1

OUTDOOR UNIT
AOUH09-36KPAS1OUTDOOR UNIT
AOUH09-36KPAS1Th_c : Thermistor (Compressor temperature)Th_d : Thermistor (Discharge temperature)Th_o : Thermistor (Outdoor temperature)Th_{ho} : Thermistor (Heat exchanger out temperature)Th_p : Thermistor (Pipe temperature)Th_r : Thermistor (Room temperature)

4-3. Models: AOUH30KPAS1 and AOUH36KPAS1

OUTDOOR UNIT
AOUH09-36KPAS1OUTDOOR UNIT
AOUH09-36KPAS1

Thc : Thermistor (Compressor temperature)

ThD : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

Tho : Thermistor (Outdoor temperature)

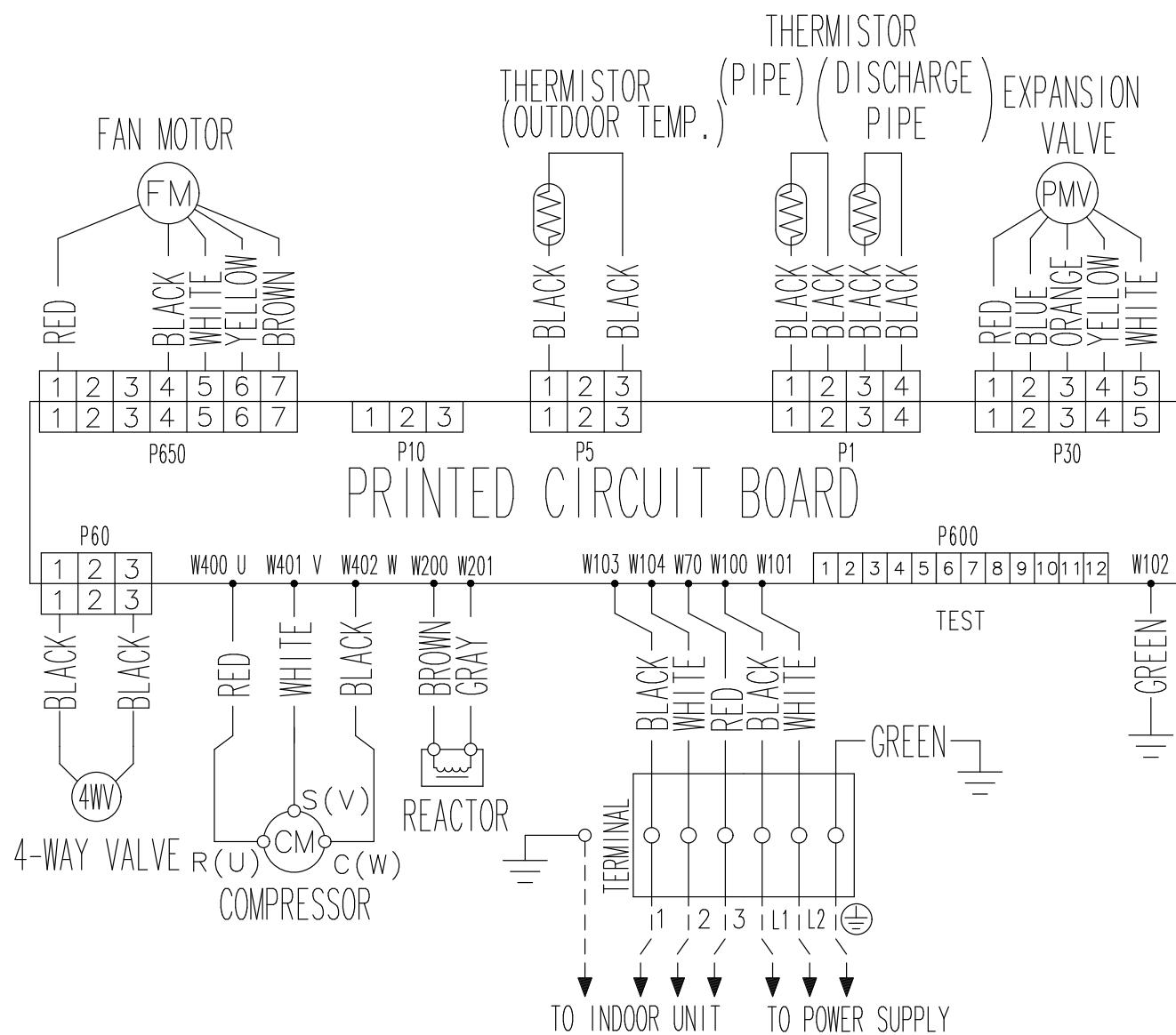
ThHO : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

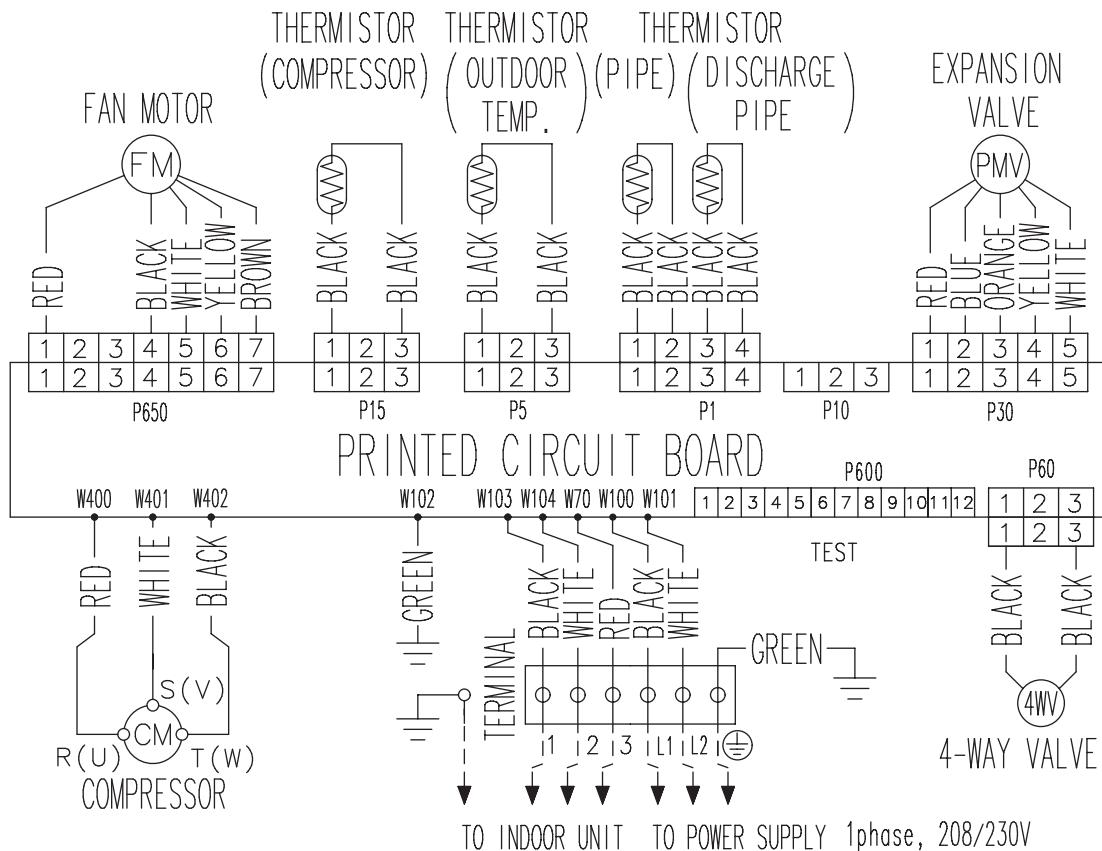
ThR : Thermistor (Room temperature)

5. Wiring diagrams

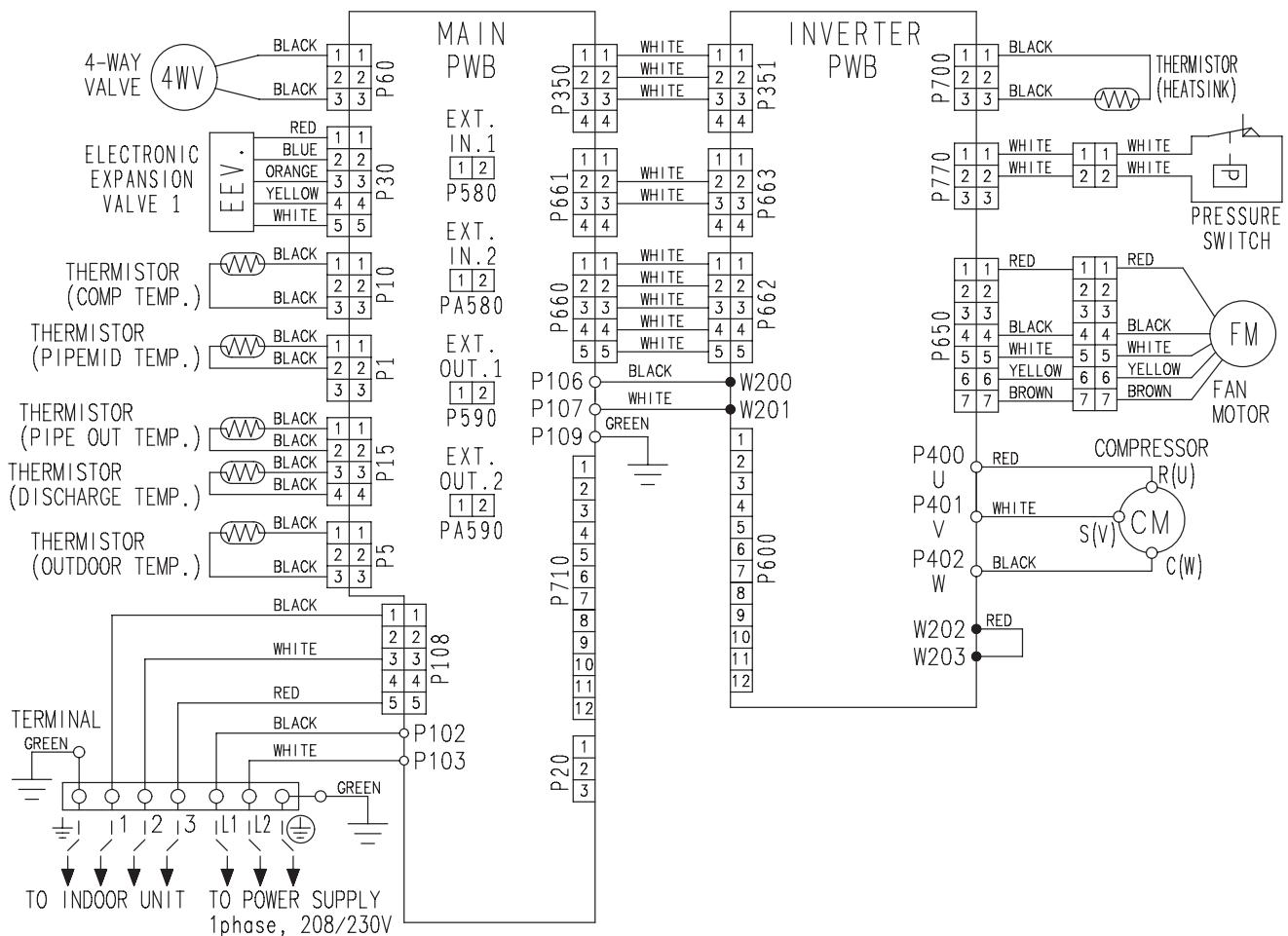
5-1. Models: AOUH09KPAS1 and AOUH12KPAS1

OUTDOOR UNIT
AOUH09-36KPAS1

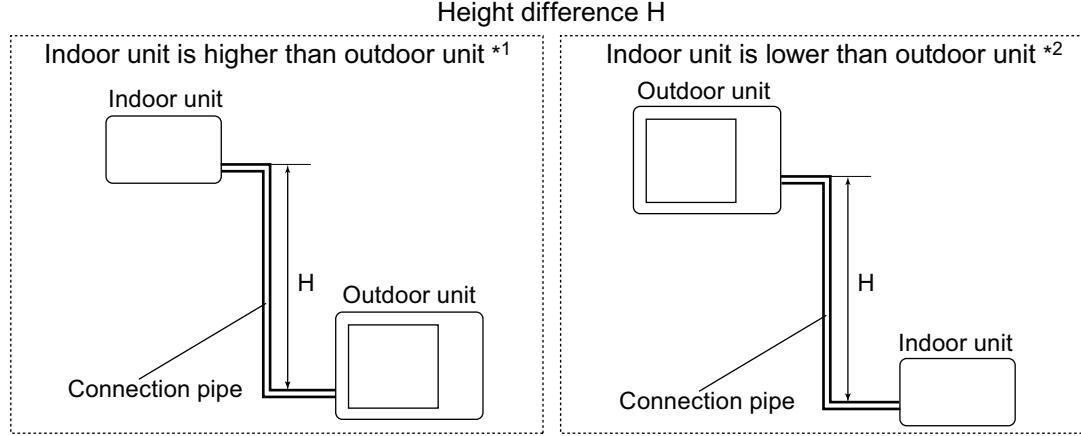
5-2. Models: AOUH18KPAS1 and AOUH24KPAS1



5-3. Models: AOUH30KPAS1 and AOUH36KPAS1



6. Capacity compensation rate for pipe length and height difference



6-1. Model: AOUH09KPAS1

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

COOLING		Pipe length					
		m	ft	5	7.5	10	15
Height difference H	Indoor unit is higher than outdoor unit * ¹	15	49	—	—	—	0.880
		10	33	—	—	0.970	0.894
		7.5	25	—	0.988	0.974	0.898
		5	16	1.001	0.992	0.978	0.901
		0	0	1.009	1.000	0.985	0.909
Height difference H	Indoor unit is lower than outdoor unit * ²	-5	-16	1.009	1.000	0.985	0.909
		-7.5	-25	—	1.000	0.985	0.909
		-10	-33	—	—	0.985	0.909
		-15	-49	—	—	—	0.909
							0.949

HEATING		Pipe length					
		m	ft	5	7.5	10	15
Height difference H	Indoor unit is higher than outdoor unit * ¹	15	49	—	—	—	0.866
		10	33	—	—	0.954	0.866
		7.5	25	—	1.000	0.954	0.866
		5	16	1.041	1.000	0.954	0.866
		0	0	1.041	1.000	0.954	0.866
Height difference H	Indoor unit is lower than outdoor unit * ²	-5	-16	0.994	0.995	0.949	0.862
		-7.5	-25	—	0.993	0.947	0.860
		-10	-33	—	—	0.945	0.857
		-15	-49	—	—	—	0.848
							0.838

6-2. Model: AOUH12KPAS1

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

COOLING		Pipe length					
		m	5	7.5	10	15	20
Height difference H	Indoor unit is higher than outdoor unit *1	ft	16	25	33	49	66
		15	49	—	—	0.883	0.893
		10	33	—	—	0.897	0.907
		7.5	25	—	0.988	0.960	0.901
	Indoor unit is lower than outdoor unit *2	5	16	1.021	0.992	0.964	0.904
		0	0	1.029	1.000	0.971	0.913
		-5	-16	1.029	1.000	0.971	0.922
		-7.5	-25	—	1.000	0.971	0.913
		-10	-33	—	—	0.971	0.913
		-15	-49	—	—	—	0.913

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

6-3. Models: AOUH18KPAS1 and AOUH24KPAS1

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

COOLING		Pipe length									
		m	3	5	7.5	10	15	20	25	30	
Height difference H	Indoor unit is higher than outdoor unit *1	m	ft	10	16	24	33	49	66	82	98
		25	82	—	—	—	—	—	—	0.901	0.885
		20	66	—	—	—	—	—	0.924	0.908	0.893
		15	49	—	—	—	—	0.949	0.932	0.915	0.900
		10	32	—	—	—	0.975	0.957	0.939	0.923	0.907
		7.5	24	—	—	0.988	0.979	0.960	0.943	0.927	0.911
		5	16	—	1.002	0.992	0.982	0.964	0.947	0.930	0.914
	Indoor unit is lower than outdoor unit *2	3	10	1.004	0.996	0.986	0.977	0.959	0.942	0.925	0.909
		0	0	1.018	1.010	1.000	0.990	0.972	0.954	0.938	0.922
		-3	-10	1.018	1.010	1.000	0.990	0.972	0.954	0.938	0.922
		-5	-16	—	1.010	1.000	0.990	0.972	0.954	0.938	0.922
		-7.5	-24	—	—	1.000	0.990	0.972	0.954	0.938	0.922
		-10	-32	—	—	—	0.990	0.972	0.954	0.938	0.922
		-15	-49	—	—	—	—	0.972	0.954	0.938	0.922

HEATING		Pipe length									
		m	3	5	7.5	10	15	20	25	30	
Height difference H	Indoor unit is higher than outdoor unit *1	m	ft	10	16	24	33	49	66	82	98
		25	82	—	—	—	—	—	—	0.873	0.861
		20	66	—	—	—	—	—	0.896	0.873	0.861
		15	49	—	—	—	—	0.929	0.896	0.873	0.861
		10	32	—	—	—	0.973	0.929	0.896	0.873	0.861
		7.5	24	—	—	1.000	0.973	0.929	0.896	0.873	0.861
		5	16	—	1.027	1.000	0.973	0.929	0.896	0.873	0.861
	Indoor unit is lower than outdoor unit *2	3	10	1.052	1.027	1.000	0.973	0.929	0.896	0.873	0.861
		0	0	1.052	1.027	1.000	0.973	0.929	0.896	0.873	0.861
		-3	-10	1.049	1.024	0.997	0.970	0.927	0.894	0.871	0.858
		-5	-16	—	1.022	0.995	0.969	0.925	0.892	0.869	0.857
		-7.5	-24	—	—	0.993	0.966	0.923	0.890	0.867	0.855
		-10	-32	—	—	—	0.964	0.920	0.887	0.865	0.852
		-15	-49	—	—	—	—	0.916	0.883	0.861	0.848

6-4. Models: AOUH30KPAS1 and AOUH36KPAS1

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

COOLING		Pipe length								
		m	ft	5	7.5	10	20	30	40	50
Height difference H	Indoor unit is higher than outdoor unit *1	30	98	—	—	—	—	0.932	0.926	0.922
		20	65	—	—	—	0.956	0.947	0.941	0.937
		10	32	—	—	0.982	0.971	0.962	0.956	0.952
		7.5	24	—	0.989	0.986	0.975	0.966	0.960	0.956
		5	16	0.996	0.993	0.990	0.979	0.970	0.964	0.960
Height difference H	Indoor unit is lower than outdoor unit *2	0	0	1.003	1.000	0.997	0.986	0.977	0.971	0.967
		-5	-16	1.003	1.000	0.997	0.986	0.977	0.971	0.967
		-7.5	-24	—	1.000	0.997	0.986	0.977	0.971	0.967
		-10	-32	—	—	0.997	0.986	0.977	0.971	0.967
		-20	-65	—	—	—	0.986	0.977	0.971	0.967
		-30	-98	—	—	—	—	0.977	0.971	0.967

HEATING		Pipe length								
		m	ft	5	7.5	10	20	30	40	50
Height difference H	Indoor unit is higher than outdoor unit *1	30	98	—	—	—	—	0.935	0.917	0.907
		20	65	—	—	—	0.959	0.935	0.917	0.907
		10	32	—	—	0.990	0.959	0.935	0.917	0.907
		7.5	24	—	1.000	0.990	0.959	0.935	0.917	0.907
		5	16	1.008	1.000	0.990	0.959	0.935	0.917	0.907
Height difference H	Indoor unit is lower than outdoor unit *2	0	0	1.008	1.000	0.990	0.959	0.935	0.917	0.907
		-5	-16	1.003	0.995	0.985	0.954	0.930	0.912	0.902
		-7.5	-24	—	0.993	0.983	0.952	0.928	0.910	0.900
		-10	-32	—	—	0.981	0.950	0.926	0.908	0.898
		-20	-65	—	—	—	0.941	0.917	0.899	0.889
		-30	-98	—	—	—	—	0.908	0.890	0.880

7. Additional charge calculation

7-1. Model: AOUH09KPAS1

Refrigerant type	R32		
Factory charge amount	lb oz	1 lb 5 oz	
	g	600	

■ 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: AOUH12KPAS1

Refrigerant type	R32		
Factory charge amount	lb oz	1 lb 9 oz	

■ 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	

7-3. Model: AOUH18KPAS1

Refrigerant type	R32		
Factory charge amount	lb oz	2 lb 10 oz	

■ Refrigerant charge

Total pipe length	ft	49 or less	65	82	98 (Max.)	0.22 oz/ft (20 g/m)
	m	15 or less	20	25	30 (Max.)	
Additional charge amount	oz	0	3.5	7	10.5	
	g	0	100	200	300	

7-4. Model: AOUH24KPAS1

Refrigerant type		R32			
Factory charge amount	lb oz	2 lb 10 oz			
	g	1,200			

■ Refrigerant charge

Total pipe length	ft	49 or less	65	82	98 (Max.)	0.22 oz/ft (20 g/m)
	m	15 or less	20	25	30 (Max.)	
Additional charge amount	oz	0	3.5	7	10.5	
	g	0	100	200	300	

7-5. Model: AOUH30KPAS1

Refrigerant type		R32					
Factory charge amount	lb oz	3 lb 12 oz					
	g	1,700					

■ Refrigerant charge

Total pipe length	ft	65 or less	82	98	114	131	147	164 (Max.)	0.44 oz/ft (40 g/m)
	m	20 or less	25	30	35	40	45	50 (Max.)	
Additional charge amount	oz	0	7	14	21	28	35	42	
	g	0	200	400	600	800	1,000	1,200	

7-6. Model: AOUH36KPAS1

Refrigerant type		R32					
Factory charge amount	lb oz	3 lb 12 oz					
	g	1,700					

■ Refrigerant charge

Total pipe length	ft	66 or less	82	98	114	131	147	164 (Max.)	0.43 oz/ft (40 g/m)
	m	20 or less	25	30	35	40	45	50 (Max.)	
Additional charge amount	oz	0	7	14	21	28	35	42	
	g	0	200	400	600	800	1,000	1,200	

8. Airflow

8-1. Model: AOUH09KPAS1

● Cooling

m ³ /h	1,590
l/s	442
CFM	936

● Heating

m ³ /h	1,630
l/s	453
CFM	959

8-2. Model: AOUH12KPAS1

● Cooling

m ³ /h	1,630
l/s	453
CFM	959

● Heating

m ³ /h	1,390
l/s	386
CFM	818

8-3. Model: AOUH18KPAS1

● Cooling

m ³ /h	2,070
l/s	575
CFM	1,218

● Heating

m ³ /h	2,290
l/s	636
CFM	1,348

8-4. Model: AOUH24KPAS1

● Cooling

m ³ /h	2,920
l/s	811
CFM	1,719

● Heating

m ³ /h	2,650
l/s	736
CFM	1,560

8-5. Model: AOUH30KPAS1

● Cooling

m ³ /h	3,680
l/s	1,022
CFM	2,166

● Heating

m ³ /h	3,680
l/s	1,022
CFM	2,166

8-6. Model: AOUH36KPAS1

● Cooling

m ³ /h	3,680
l/s	1,022
CFM	2,166

● Heating

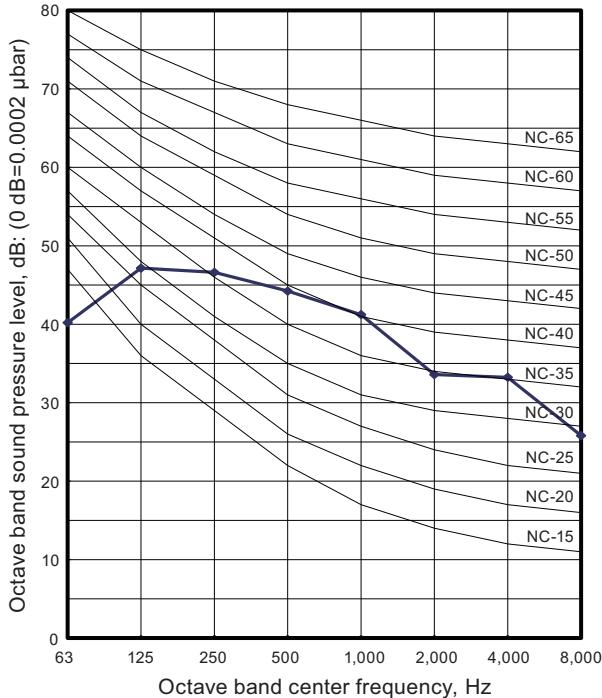
m ³ /h	3,680
l/s	1,022
CFM	2,166

9. Operation noise (sound pressure)

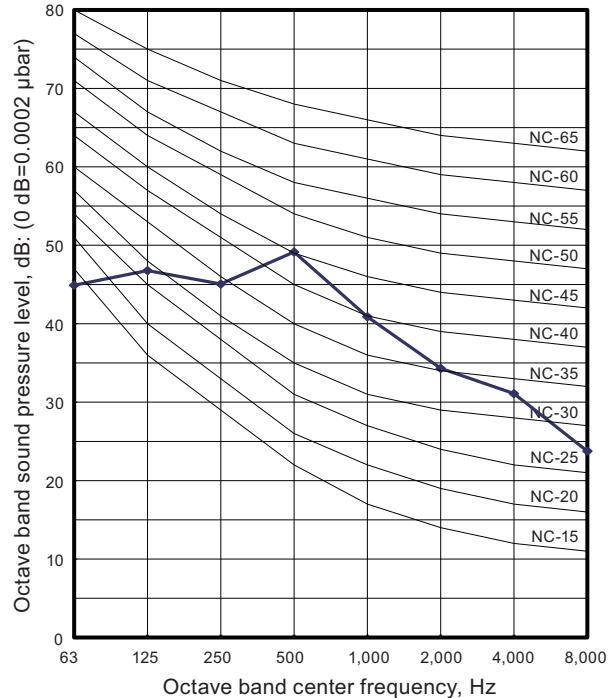
9-1. Noise level curve

■ Model: AOUH09KPAS1

● Cooling

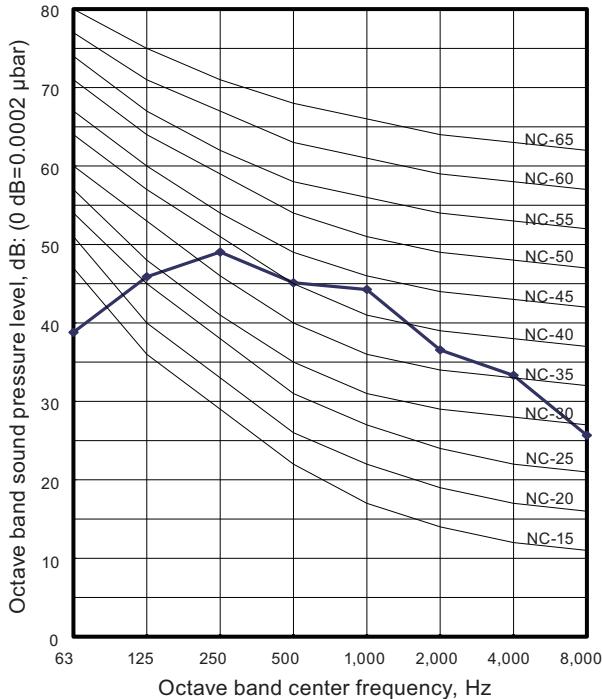


● Heating

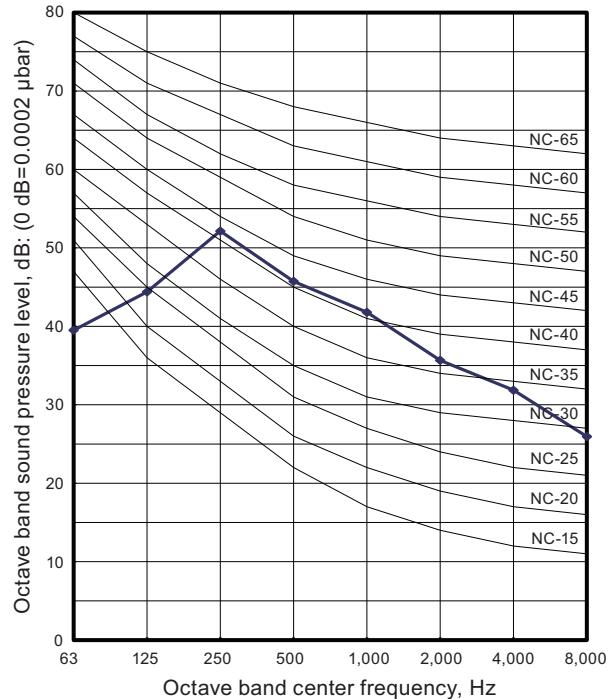


■ Model: AOUH12KPAS1

● Cooling

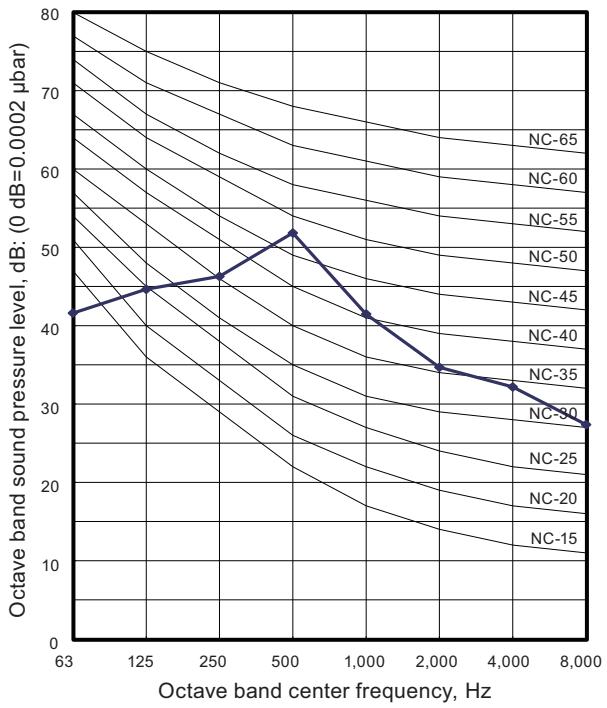


● Heating

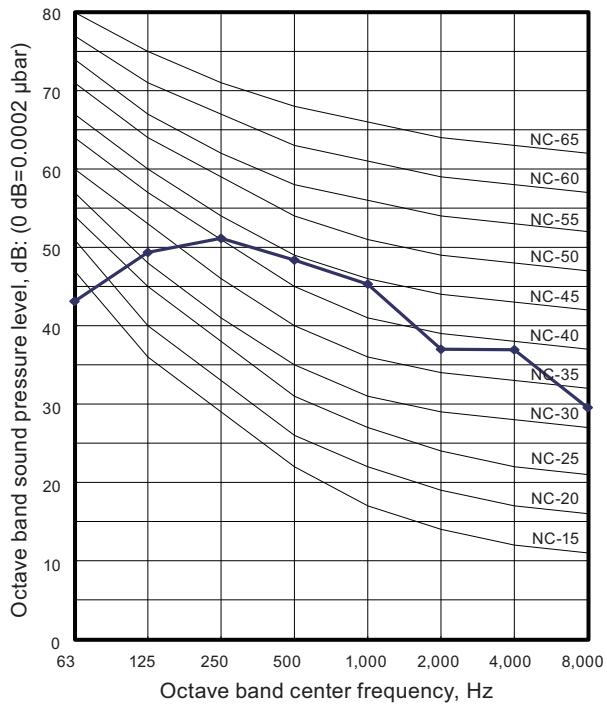


■ Model: AOUH18KPAS1

● Cooling

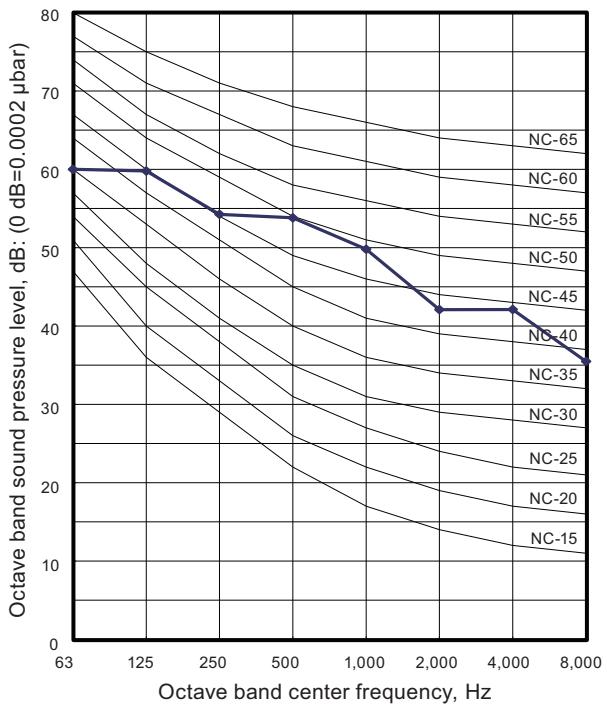


● Heating

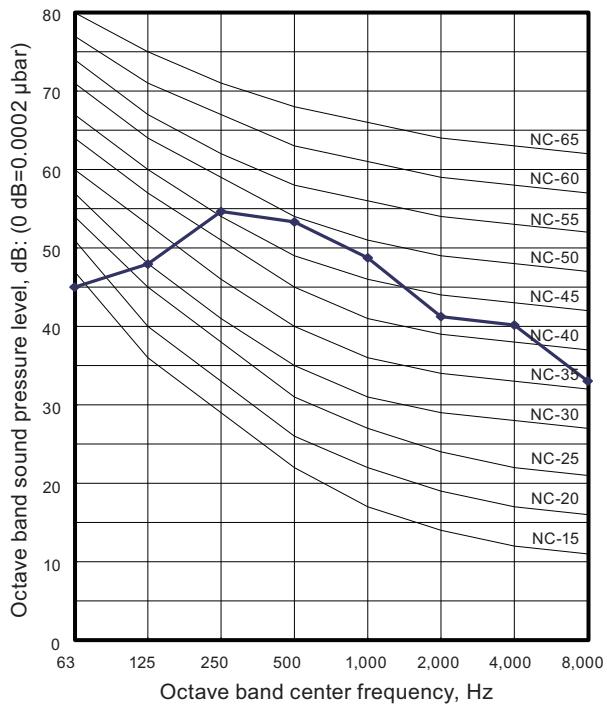


■ Model: AOUH24KPAS1

● Cooling

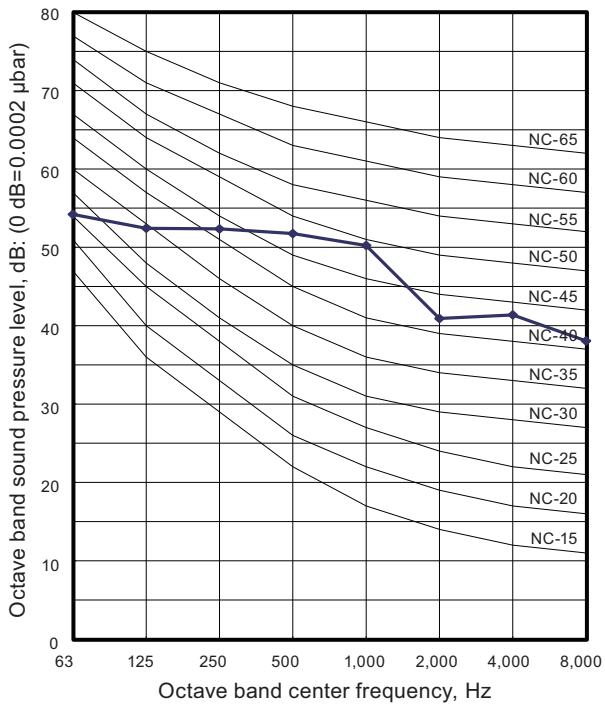


● Heating

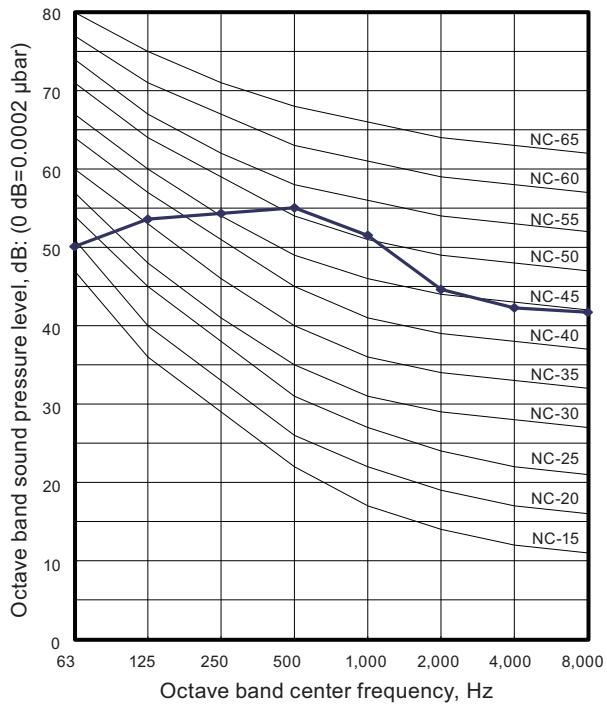


■ Model: AOUH30KPAS1

● Cooling

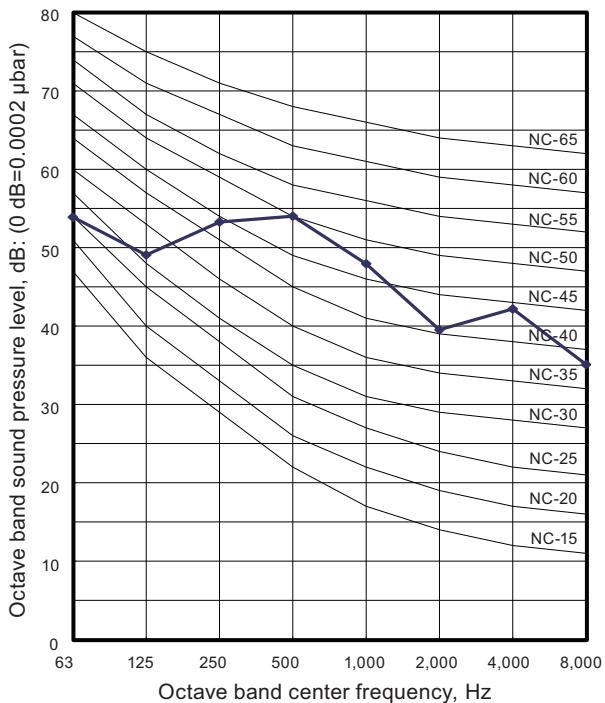


● Heating

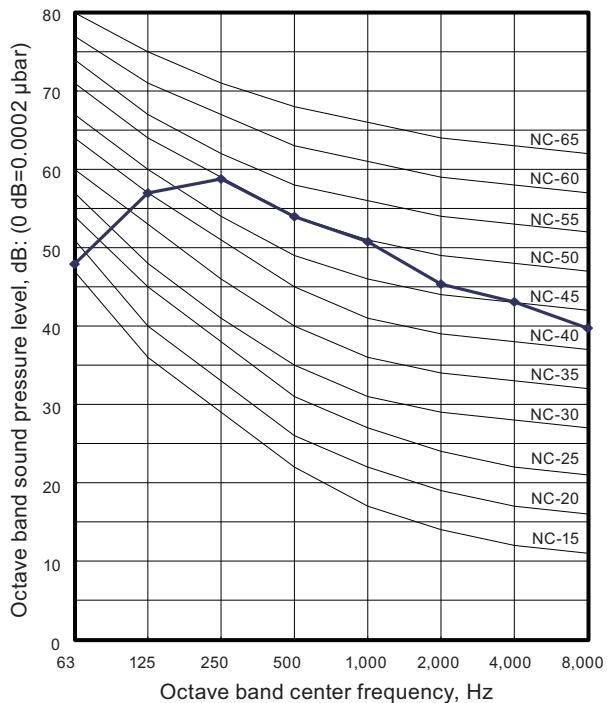


■ Model: AOUH36KPAS1

● Cooling

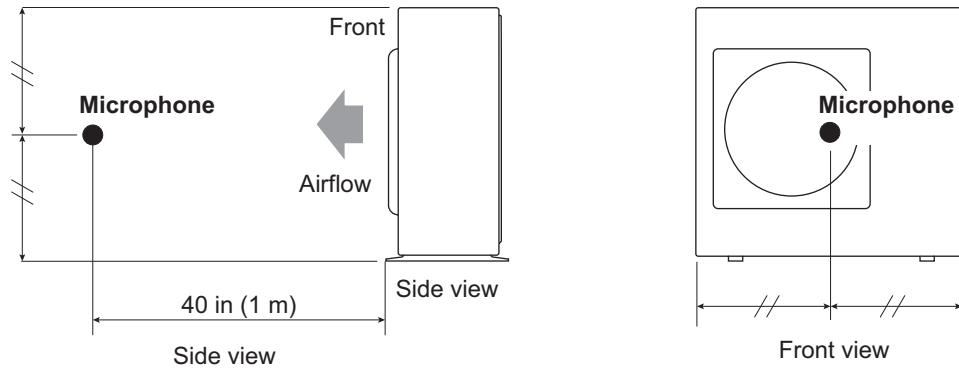


● Heating



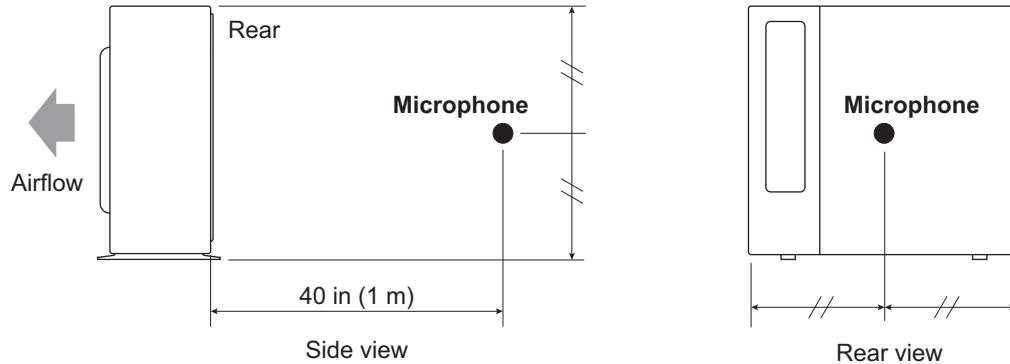
9-2. Sound level check point

■ Models: AOUH09KPAS1 and AOUH12KPAS1



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

■ Models: AOUH18KPAS1, AOUH24KPAS1, AOUH30KPAS1, and AOUH36KPAS1



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

10. Electrical characteristics

Model name			AOUH09KPAS1	AOUH12KPAS1
Power supply	Voltage	V	208/230	
	Frequency	Hz	60	
MCA*1		A	9.7	
Starting current		A	3.5	5.0
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)	

Model name			AOUH18KPAS1	AOUH24KPAS1
Power supply	Voltage	V	208/230	
	Frequency	Hz	60	
MCA*1		A	11.9	14.4
Starting current		A	5.6	8.2
Wiring spec.*2	MAX. CKT. BKR*3	A	15	20
	Power cable	AWG	14	
	Connection cable*3	Size AWG	14	
	Limited wiring length	ft (m)	102 (31)	

Model name			AOUH30KPAS1	AOUH36KPAS1
Power supply	Voltage	V	208/230	
	Frequency	Hz	60	
MCA*1		A	18.4	
Starting current		A	11.3	14.8
Wiring spec.*2	MAX. CKT. BKR*3	A	30	
	Power cable	AWG	12	
	Connection cable*3	Size AWG	14	
	Limited wiring length	ft (m)	167 (51)	

NOTES:

- *1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)
- *2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.
- *3: Maximum Circuit Breaker
- *4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

11. Safety devices

Type of protection	Protection form	Model	
		AOUH09KPAS1	AOUH12KPAS1
Circuit protection	Current fuse (Main PCB*)	250 V, 20 A 250 V, 5 A	
Fan motor protection	Thermal protection	Activate Fan motor stop 217.4 ±32.4°F (103 ±18°C)	
		Reset 203 ±32.4°F (95 ±18°C) Fan motor restart	
Compressor protection	Terminal protection program (Discharge temp.)	Activate Compressor stop 230°F (110°C)	
		Reset After 7 minutes Compressor restart	
	Thermal protection program (Outdoor temp.) (Only in COOL or DRY mode)	Activate 5°F (-15°C) Compressor stop	
		Reset 14°F (-10°C) Compressor restart	

Type of protection	Protection form	Model	
		AOUH18KPAS1	AOUH24KPAS1
Circuit protection	Current fuse (Main PCB*)	250 V, 25 A 250 V, 5 A	
Fan motor protection	Thermal protection	Activate Fan motor stop 257 ±18°F (125 ±10°C)	
		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	
	Terminal protection program (Discharge temp.)	Activate 230°F (110°C) Compressor stop	
		Reset After 7 minutes Compressor restart	

Type of protection	Protection form	Model	
		AOUH30KPAS1	AOUH36KPAS1
Circuit protection	Current fuse (Main PCB*)	250 V, 30 A 250 V, 3.15 A 250 V, 10 A × 2	
Fan motor protection	Thermal protection	Activate 251.6 ±16.2°F (122 ±9°C) Fan motor stop	
		Reset 240.8 +18.0 -16.2°F (116+10 -9°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	
	Terminal protection program (Discharge temp.)	Activate 230°F (110°C) Compressor stop	
		Reset After 7 minutes Compressor restart	

*PCB: Printed Circuit Board

12. External input and output (for 30-36 model)

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

Connector	Input	Output	Remarks
P580	Low noise mode	—	See external input/output settings for details.
PA580	Peak cut mode	—	
P590	—	Error status	
PA590	—	Compressor status	

12-1. External input

With using external input function, on/off status of "Low noise mode" and "Peak cut mode" can be specified by the external signal.

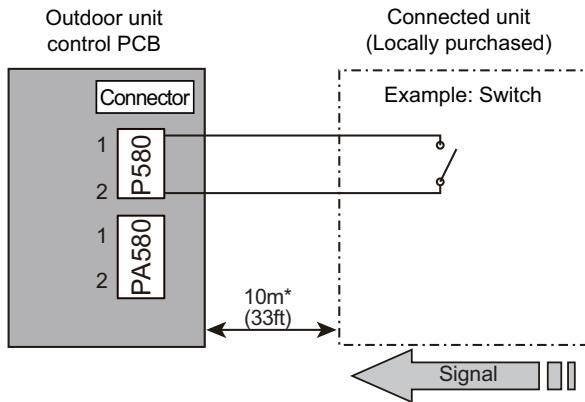
■ Low noise mode

In following condition, the operating noise of the outdoor unit reduces comparing from the one in normal operating condition:

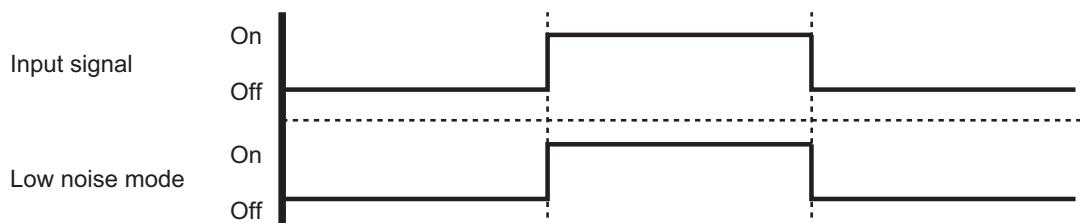
The air conditioner is set to the "Low noise mode" when closing the contact input of a commercial timer or on/off switch to a connector on the control PCB of the outdoor unit.

NOTE: Product performance may drop depending on some conditions such as the outdoor temperature.

- **Circuit diagram example**



- Contact capacity: DC 24 V or more, 10 mA or more.
- *: Make the distance from the PCB to the connected unit within 33 ft (10 m).
- Construct a circuit as shown in this figure with using optional parts mentioned below.
- Input signal: On in "Low noise mode"
- Input signal: Off in normal operation
- To set the level of "Low noise mode", refer to "Low noise mode" in "[Local setting procedure](#)" on page 134.



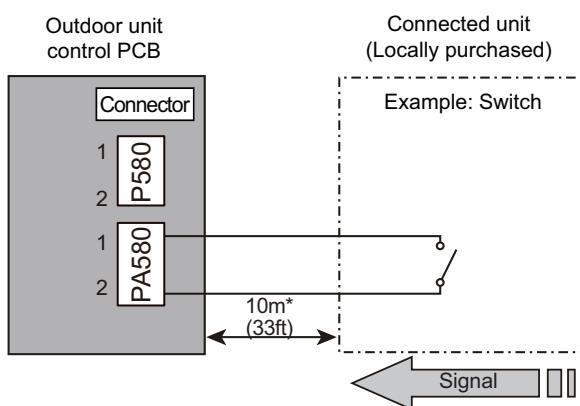
- **Optional part**

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ3	External input wire

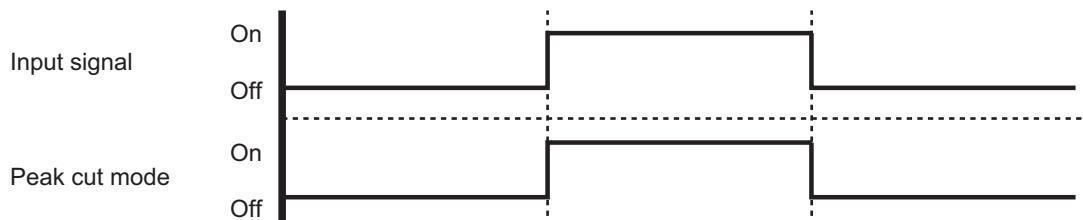
■ Peak cut mode

By performing following on-site work, operation that suppresses the current value can be enabled:
The air conditioner is set to the “Peak cut mode” when closing the contact input of a commercial timer or on/off switch to a connector on the control PCB of the outdoor unit.

- **Circuit diagram example**



- Contact capacity: DC 24 V or more, 10 mA or more.
- *: Make the distance from the PCB to the connected unit within 33 ft (10 m).
- Construct a circuit as shown in this figure with using optional parts mentioned below.
- Input signal: On in “Peak cut mode”
- Input signal: Off in normal operation
- To set the level of “Peak cut mode”, refer to “[Peak cut mode](#)” on page 135.



- **Optional part**

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ3	External input wire

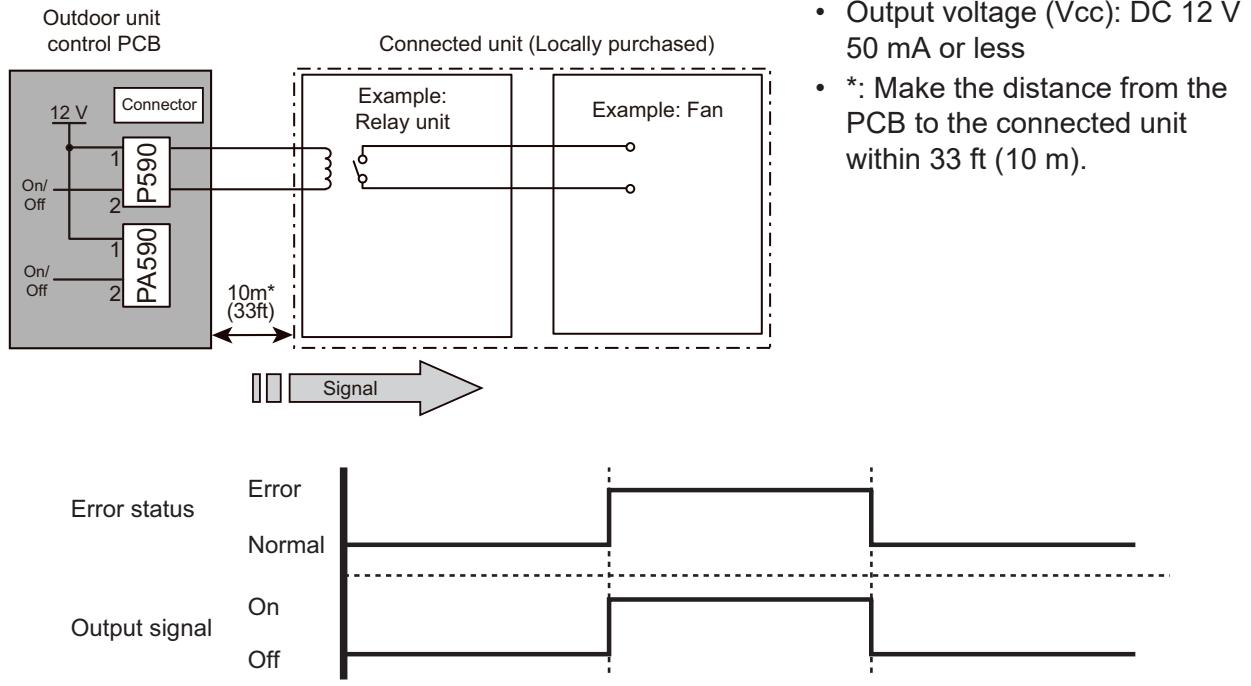
12-2. External output

With using external output function, some status signals are transmitted to the control PCB, and the related LED lamp indicates the status of this product.

■ Error status output

Signal on air conditioner error status is generated when a malfunction occurs.

- **Circuit diagram example**



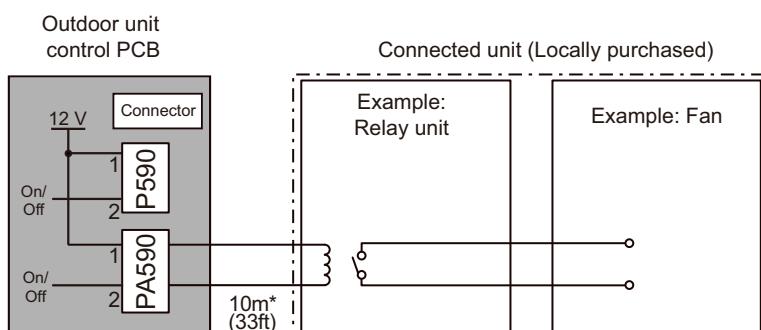
- **Optional part**

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ3	External output wire

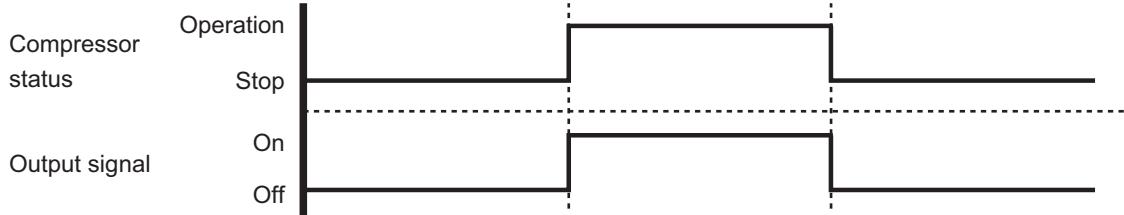
■ Compressor status output

Signal on compressor operation status is generated when the compressor is running.

- **Circuit diagram example**



- Output voltage (Vcc): DC 12 V
50 mA or less
- *: Make the distance from the PCB to the connected unit within 33 ft (10 m).



- **Optional part**

Part name	Model name	Exterior
External Connect Kit	UTY-XWZXZ3	External output wire

13. Function settings (for 30-36 model)

Perform appropriate function setting locally according to the installation environment.

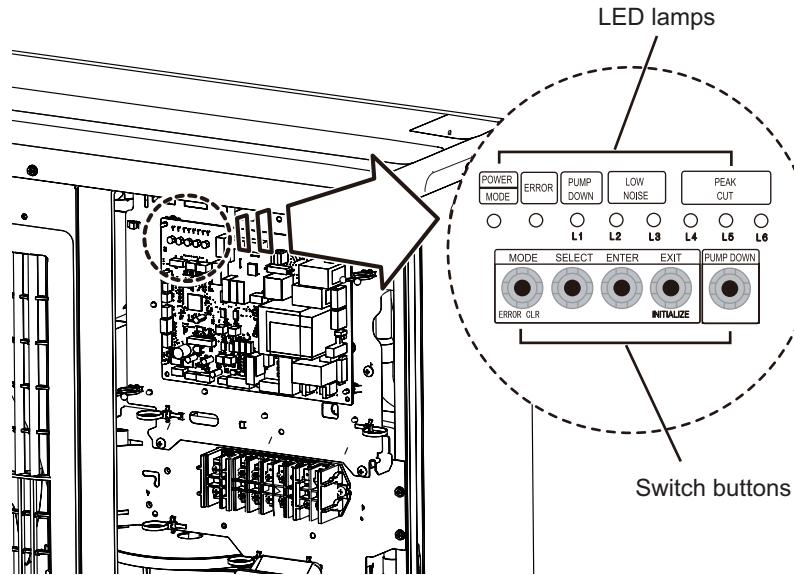
NOTE: Incorrect settings can cause a product malfunction.

⚠ CAUTION

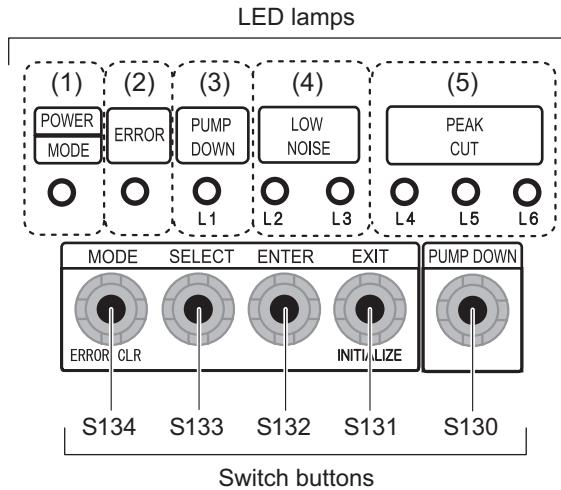
- Before setting up the switch buttons, discharge the static electricity from your body.
- Never touch the terminals or the patterns on the parts that are mounted on the PCB.

13-1. Control PCB and switch buttons location

Control PCB of the outdoor unit is located as shown in the following figure.



■ Switch buttons and the functions



Switch buttons

LED lamp			Function or operation method
(1)	POWER/MODE	Green	Lights on while power on. Blinks to show the local setting on the outdoor unit or the error code.
(2)	ERROR	Red	Blinks during error operation.
(3)	PUMP DOWN (L1)	Orange	Lights on during pump down operation.
(4)	LOW NOISE MODE (L2 and L3)	Orange	Lights on during "Low noise mode" when local setting is activated. (Light pattern of L2 and L3 indicates the low noise level.)
(5)	PEAK CUT MODE (L4, L5, and L6)	Orange	Lights on during "Peak cut mode" when local setting is activated. (Light pattern of L4, L5, and L6 indicates the peak cut level.)

Switch button		Function or operation method
S134	MODE	Switches between "Local setting" and "Error code display".
S133	SELECT	Switches between the individual "Local settings" and the "Error code displays".
S132	ENTER	Switches between the individual "Local settings" and the "Error code displays".
S131	EXIT	Returns to "Operation status display".
S130	PUMP DOWN	Starts the pump down operation.

13-2. Local setting procedure

NOTE: Before performing the function setting, be sure to stop the operation of the air conditioner.

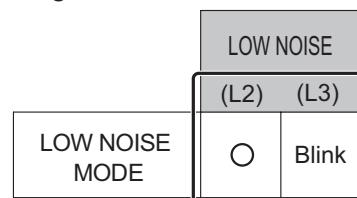
■ Low noise mode

1. Press the MODE switch button (S134) for 3 seconds or more to switch to “Local setting mode”.
2. After confirming the LED lamp of POWER/MODE blinks 9 times, press the ENTER switch button (S132).

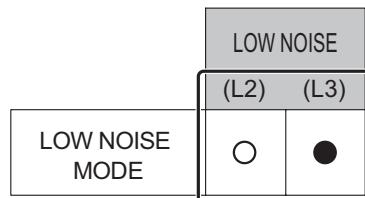
POWER	ERROR	PUMP DOWN (L1)	LOW NOISE (L2)	LOW NOISE (L3)	PEAK CUT (L4)	PEAK CUT (L5)	PEAK CUT (L6)
MODE							

Sign “○”: Lights off

3. Press the SELECT switch button (S133), and adjust the LED lamp as shown below. Then the LED lamp indicates the current setting.

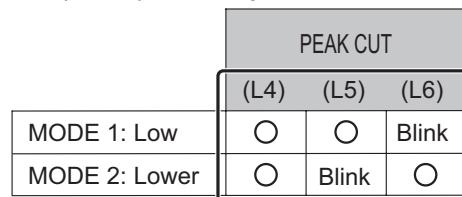


4. Press the ENTER switch button (S132).



Sign “●”: Lights on

5. Press the SELECT switch button (S133), and adjust the LED lamps as shown below.



6. Press the ENTER switch button (S132) and fix it.



7. To return to “Operating status display (Normal operation)”, press the EXIT switch button (S131).

In case of missing how many times you pressed the SELECT and ENTER switch buttons:

1. To return to “Operation status display (Normal operation)”, press the EXIT switch button once.
2. Restart from the beginning of setting procedure.

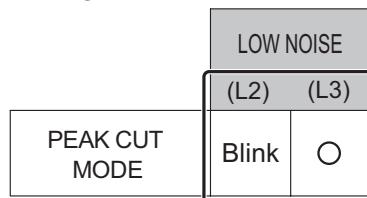
■ Peak cut mode

1. Press the MODE switch button (S134) for 3 seconds or more to switch to "Local setting mode".
2. After confirming the LED lamp of POWER/MODE blinks 9 times, press the ENTER switch button (S132).

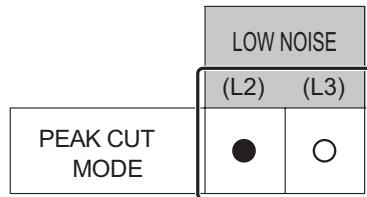
POWER	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)		PEAK CUT (L4) (L5) (L6)		
MODE							
Blinks (9 times)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sign “ ”: Lights off

3. Press the SELECT switch button (S133), and adjust the LED lamp as shown below. Then the LED lamp indicates the current setting.



4. Press the ENTER switch button (S132).



Sign “ ● ”: Lights on

5. Press the SELECT switch button (S133), and adjust the LED lamps as shown below.

PEAK CUT		
(L4) (L5) (L6)		
0 % of rated input ratio	<input type="radio"/>	<input type="radio"/>
50 % of rated input ratio	<input type="radio"/>	Blink
75 % of rated input ratio	<input type="radio"/>	Blink
100 % of rated input ratio	Blink	<input type="radio"/>

6. Press the ENTER switch button (S132) and fix it.

PEAK CUT		
(L4) (L5) (L6)		
0 % of rated input ratio	<input type="radio"/>	<input type="radio"/>
50 % of rated input ratio	<input type="radio"/>	●
75 % of rated input ratio	○	●
100 % of rated input ratio	●	<input type="radio"/>

7. To return to "Operating status display (Normal operation)", press the EXIT switch button (S131).

NOTE: When pressed number is lost during setting, you must redo the setting procedure. Return to "Operation status display (Normal operation)" by pressing the EXIT switch button once, and restart from the beginning of the setting procedure.

14. Accessories

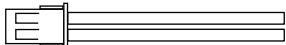
14-1. Models: AOUH09KPAS1, AOUH12KPAS1, AOUH18KPAS1, and AOUH24KPAS1

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

14-2. Models: AOUH30KPAS1 and AOUH36KPAS1

Part name	Exterior	Qty	Part name	Exterior	Qty
Installation manual		1	Drain pipe		1
Protection label		1	Drain cap		3

15. Optional parts

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZXZ3	Use to operate the external input and output functions of outdoor unit. (for 30-36 model)