

AIR CONDITIONER

Ceiling type

DESIGN & TECHNICAL MANUAL

INDOOR



ABUH18LUAS



ABUH24LUAS
ABUH30LUAS



ABUH36LUAS

OUTDOOR



AOUH18LUAS1



AOUH24LUAS1



AOUH30LUAS1
AOUH36LUAS1

FUJITSU GENERAL LIMITED

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Part 1. INDOOR UNIT

ABUH18LUAS

ABUH24LUAS

ABUH30LUAS

ABUH36LUAS

1. Specifications

Type				Ceiling		
				Inverter, Heat pump		
Model name				ABUH18LUAS		
Power supply intake				Outdoor unit		
System power supply		Voltage		208/230		
		Frequency		60		
		Available voltage range		187—253		
Indoor unit power supply (from outdoor unit)				208/230		
Capacity	Cooling	Rated	kW		5.28	
			Btu/h		18,000	
		Min.—Max.	kW		0.91—5.89	
			Btu/h		3,100—20,100	
	Heating	47°FDB (Outdoor temp.)	Rated	kW		6.33
			Btu/h		21,600	
		Min.—Max.	kW		0.91—7.50	
			Btu/h		3,100—25,600	
		17°FDB (Outdoor temp.)*1	Rated	kW		4.63
			Btu/h		15,800	
			Max.	kW		5.66
				Btu/h		19,300
		5°FDB (Outdoor temp.)*2	Rated	kW		4.92
			Btu/h		16,800	
Input power	Cooling	Rated	kW	1.44		
		Min.—Max.		0.14—2.01		
	Heating	47°FDB (Outdoor temp.)		Rated	1.98	
		17°FDB (Outdoor temp.)*1		Min.—Max.	0.15—2.86	
				Rated	1.59	
		5°FDB (Outdoor temp.)*2		Max.	2.40	
			Rated	2.22		
		Fan	HIGH MED LOW QUIET	W	36	
	28					
	21					
	18					
	Current		Cooling	Rated	A	6.4
Heating			8.8			
EER2		Cooling	Btu/hW		12.5	
COP2		Heating	kW/kW		3.2	
SEER2		Cooling	Btu/hW		22.5	
HSPF2		Heating			10.6	
Power factor		Cooling	%		97.8	
		Heating			98.6	
Moisture removal				pints/h (L/h)		4.9 (2.3)
Maximum operating current*3		Cooling	A		11.8	
		Heating			14.8	
Fan	Airflow rate	Cooling	CFM (m³/h)	494 (840)		
				465 (790)		
				418 (710)		
				383 (650)		
		Heating		494 (840)		
				465 (790)		
				418 (710)		
				383 (650)		
	Type × Qty		Sirocco fan × 2			
	Motor output		W		50	
Sound pressure level*4		Cooling	dB (A)	38		
				36		
				33		
				31		
		Heating		38		
				36		
				33		
				31		
Heat exchanger type		Dimensions (H × W × D)		in (mm)		11-9/16 × 28-1/8 × 1-9/16 (294 × 715 × 39.9)
		Fin pitch		FPI		20
		Rows × Stages				3 × 14
		Pipe type				Copper tube
		Fin type				Aluminum
Enclosure		Material		Steel sheet		
		Color		White		
Dimensions (H × W × D)		Net		in (mm)		9-1/4 × 42-1/2 × 27-3/4 (235 × 1,080 × 705)
Gross						13 × 45-7/8 × 32-1/2 (330 × 1,165 × 825)
Weight		Net		lb (kg)		53 (24)
		Gross				73 (33)
Connection pipe		Size	Liquid	in (mm)		Ø1/4 (Ø6.35)
		Gas				Ø1/2 (Ø12.70)
Drain hose		Method				Flare
		Material				PVC
Operation range		Cooling		in (mm)		Ø13/16 (Ø20.7) (I.D.), Ø1-1/16 (Ø26.6) (O.D.)
				°F (°C)		64 to 90 (18 to 32)
		Heating		%RH		80 or less
				°F (°C)		60 to 86 (16 to 30)
Remote controller				Option: Wired, Wireless, Mobile app*5 (AIRSTAGE Mobile)		

Type	Ceiling
	Inverter, Heat pump
Model name	ABUH18LUAS
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.	

Type				Ceiling			
				Inverter, Heat pump			
Model name				ABUH24LUAS		ABUH30LUAS	
Power supply intake				Outdoor unit			
System power supply		Voltage		208/230			
		Frequency		60			
		Available voltage range		187—253			
Indoor unit power supply (from outdoor unit)				208/230			
Capacity	Cooling		Rated	kW	7.03	8.79	
				Btu/h	24,000	30,000	
			Min.—Max.	kW	1.58—8.21	2.81—10.26	
	Btu/h	5,400—28,000		9,600—35,000			
	Heating	47°FDB (Outdoor temp.)	Rated	kW	7.91	9.38	
				Btu/h	27,000	32,000	
		Min.—Max.	kW	1.58—9.38	2.70—11.14		
			Btu/h	5,400—32,000	9,200—38,000		
		17°FDB (Outdoor temp.) ^{*1}	Rated	kW	5.13	6.15	
				Btu/h	17,500	21,000	
			Max.	kW	7.62	9.05	
				Btu/h	26,000	30,900	
			5°FDB (Outdoor temp.) ^{*2}	Rated	kW	6.92	8.21
					Btu/h	23,600	28,000
Input power	Cooling		Rated	1.95	2.78		
				Min.—Max.	0.42—2.82	0.40—3.63	
	Heating	47°FDB (Outdoor temp.)	Rated	2.04	2.48		
				Min.—Max.	0.47—3.00	0.63—3.83	
		17°FDB (Outdoor temp.) ^{*1}	Rated	1.67	2.00		
				Max.	3.24	3.92	
		5°FDB (Outdoor temp.) ^{*2}	Rated	3.33	3.95		
				Fan		HIGH	48
	MED	27	38				
	LOW	19	26				
	QUIET	12	16				
	Current		Cooling	Rated	A	8.7	12.3
					Heating	9.0	11.0
	EER2		Cooling		Btu/hW	12.3	10.8
COP2		Heating		kW/kW	3.88	3.78	
SEER2		Cooling			21.5	20.0	
HSPF2		Heating		Btu/hW		10.5	
Power factor		Cooling		%	97.5	98.3	
		Heating		98.6	98.0		
Moisture removal				pints/h (L/h)	6.1 (2.9)	8.2 (3.9)	
Maximum operating current ^{*3}		Cooling		A	15.8	18.3	
		Heating		15.8	18.3		
Fan	Airflow rate	Cooling	HIGH	CFM (m ³ /h)	724 (1,230)	824 (1,400)	
			MED		583 (990)	659 (1,120)	
			LOW		506 (860)	577 (980)	
			QUIET		412 (700)	471 (800)	
		Heating	HIGH		724 (1,230)	824 (1,400)	
			MED		583 (990)	659 (1,120)	
			LOW		506 (860)	577 (980)	
			QUIET		412 (700)	471 (800)	
	Type × Qty		Sirocco fan × 3				
	Motor output		W		80		
Sound pressure level ^{*4}		Cooling	HIGH	dB (A)	41	45	
			MED		36	40	
			LOW		32	35	
			QUIET		29	32	
		Heating	HIGH		41	45	
			MED		36	40	
			LOW		32	35	
			QUIET		29	32	
Heat exchanger type		Dimensions (H × W × D)		in (mm)	11-9/16 × 40-3/8 × 1-9/16 (294 × 1,025 × 39.9)		
		Fin pitch		FPI	20		
		Rows × Stages		3 × 14			
		Pipe type		Copper tube			
		Fin type		Aluminum			
Enclosure		Material		Steel sheet			
		Color		White			
				Approximate color of Munsell N9.25/			
Dimensions (H × W × D)		Net		in (mm)	9-1/4 × 54-3/4 × 27-3/4 (235 × 1,390 × 705)		
		Gross			13 × 58-1/16 × 32-1/2 (330 × 1,475 × 825)		
Weight		Net		lb (kg)	68 (31)		
		Gross			90 (41)		
Connection pipe		Size	Liquid	in (mm)	Ø3/8 (Ø9.52)		
			Gas		Ø5/8 (Ø15.88)		
Drain hose		Method		Flare			
		Material		PVC			
		Tip diameter		in (mm)	Ø13/16 (Ø20.7) (I.D.), Ø1-1/16 (Ø26.6) (O.D.)		
Operation range		Cooling			°F (°C)	64 to 90 (18 to 32)	
					%RH	80 or less	
		Heating			°F (°C)	60 to 86 (16 to 30)	
Remote controller				Option: Wired, Wireless, Mobile app ^{*5} (AIRSTAGE Mobile)			

Type	Ceiling	
	Inverter, Heat pump	
Model name	ABUH24LUAS	ABUH30LUAS
NOTES: - Specifications are based on the following conditions: - Cooling: Indoor temperature of 80°FDB/67°F WB (26.67°CDB/19.44°CWB), and outdoor temperature of 95°FDB/75°F WB (35°CDB/23.9°CWB). - Heating: Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 47°FDB/43°F WB (8.33°CDB/6.11°CWB). *1: Heating (17°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 17°FDB/15°F WB (-8.33°CDB/-9.44°CWB). *2: Heating (5°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 5°FDB/4°F WB (-15.0°CDB/-15.56°CWB). - Test conditions are based on AHRI 210/240 2023. - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.) - Protective function might work when using it outside the operation range. *3: Maximum current: - The maximum value when operated within the operation range. - The total current of indoor unit and outdoor unit. *4: Sound pressure level: - Measured values in manufacturer's anechoic chamber. - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here. *5: Available on Google Play™ store or on App Store®. Optional WLAN Adapter is also required. For details, refer to the setting manual.		

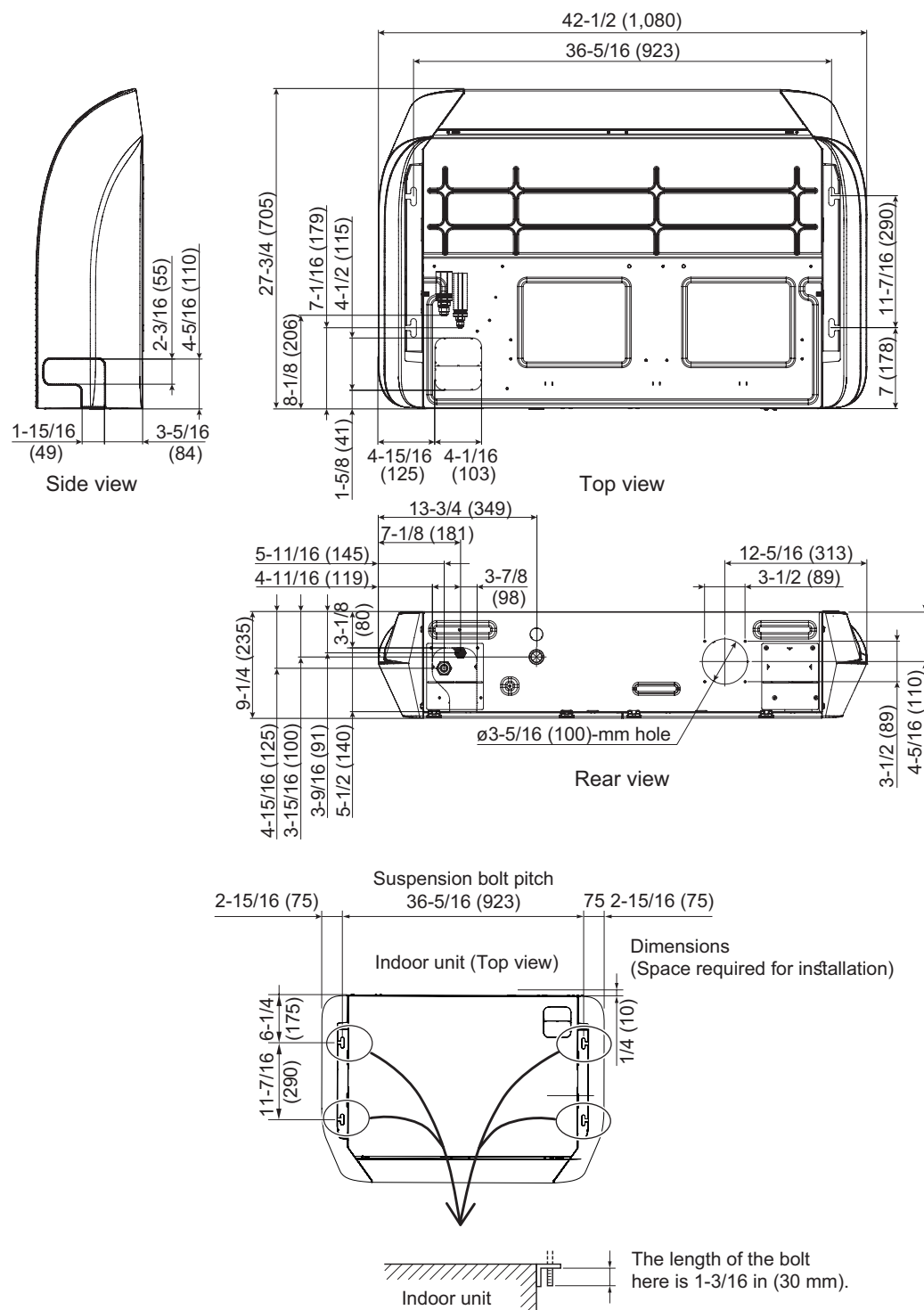
Type				Ceiling			
				Inverter, Heat pump			
Model name				ABUH36LUAS			
Power supply intake				Outdoor unit			
System power supply		Voltage		208/230			
		Frequency		60			
		Available voltage range		187—253			
Indoor unit power supply (from outdoor unit)			V	208/230			
Capacity	Cooling	Rated	kW	10.55			
			Btu/h	36,000			
		Min.—Max.	kW	2.81—11.43			
			Btu/h	9,600—39,000			
	Heating	47°FDB (Outdoor temp.)	Rated	kW	11.14		
			Btu/h	38,000			
		Min.—Max.	kW	2.7—12.6			
			Btu/h	9,200—43,000			
		17°FDB (Outdoor temp.)*1	Rated	kW	7.09		
			Btu/h	24,200			
			Max.	kW	10.11		
				Btu/h	34,500		
5°FDB (Outdoor temp.)*2		Rated	kW	9.09			
		Btu/h	31,000				
Input power	Cooling	Rated	kW	3.75			
		Min.—Max.		0.38—4.22			
	Heating	47°FDB (Outdoor temp.)		Rated	2.96		
		17°FDB (Outdoor temp.)*1		Min.—Max.	0.59—4.13		
				Rated	2.41		
		Max.		4.27			
			5°FDB (Outdoor temp.)*2	Rated	4.33		
		Fan	HIGH MED LOW QUIET	W	94		
	51						
	34						
	22						
	Current		Cooling	Rated	A	16.5	
Heating	13.0						
EER2		Cooling	Btu/hW	9.60			
COP2		Heating	kW/kW	3.76			
SEER2		Cooling		19.5			
HSPF2		Heating	Btu/hW	10.0			
Power factor		Cooling	%	98.8			
		Heating		99.0			
Moisture removal			pints/h (L/h)	9.1 (4.3)			
Maximum operating current*3		Cooling	A	19.8			
		Heating		19.8			
Fan	Airflow rate	Cooling	HIGH	CFM (m³/h)	1,089 (1,850)		
			MED		865 (1,470)		
			LOW		765 (1,300)		
			QUIET		618 (1,050)		
		Heating	HIGH		1,059 (1,800)		
			MED		865 (1,470)		
			LOW		765 (1,300)		
			QUIET		618 (1,050)		
	Type × Qty		Sirocco fan × 4				
	Motor output		W	110			
Sound pressure level*4		Cooling	HIGH	dB (A)	44		
			MED		40		
			LOW		37		
			QUIET		32		
		Heating	HIGH		44		
			MED		40		
			LOW		37		
			QUIET		32		
Heat exchanger type		Dimensions (H × W × D)		in (mm)	11-9/16 × 52-9/16 × 1-9/16 (294 × 1,335 × 39.9)		
		Fin pitch		FPI	20		
		Rows × Stages		3 × 14			
		Pipe type		Copper tube			
		Fin type		Aluminum			
Enclosure		Material		Steel sheet			
		Color		White			
Dimensions (H × W × D)		Net		in (mm)	9-1/4 × 66-15/16 × 27-3/4 (235 × 1,700 × 705)		
Gross					13 × 70-1/4 × 32-1/2 (330 × 1,785 × 825)		
Weight		Net		lb (kg)	84 (38)		
		Gross			106 (48)		
Connection pipe		Size	Liquid	in (mm)	Ø3/8 (Ø9.52)		
		Gas	Ø5/8 (Ø15.88)				
		Method		Flare			
Drain hose		Material		PVC			
		Tip diameter		in (mm)	Ø13/16 (Ø20.7) (I.D.), Ø1-1/16 (Ø26.6) (O.D.)		
Operation range		Cooling			°F (°C)	64 to 90 (18 to 32)	
					%RH	80 or less	
		Heating			°F (°C)	60 to 86 (16 to 30)	
Remote controller				Option: Wired, Wireless, Mobile app*5 (AIRSTAGE Mobile)			

Type	Ceiling
	Inverter, Heat pump
Model name	ABUH36LUAS
NOTES: - Specifications are based on the following conditions: - Cooling: Indoor temperature of 80°FDB/67°F WB (26.67°CDB/19.44°CWB), and outdoor temperature of 95°FDB/75°F WB (35°CDB/23.9°CWB). - Heating: Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 47°FDB/43°F WB (8.33°CDB/6.11°CWB). *1: Heating (17°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 17°FDB/15°F WB (-8.33°CDB/-9.44°CWB). *2: Heating (5°F): Indoor temperature of 70°FDB/60°F WB (21.11°CDB/15.56°CWB), and outdoor temperature of 5°FDB/4°F WB (-15.0°CDB/-15.56°CWB). - Test conditions are based on AHRI 210/240 2023. - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.) - Protective function might work when using it outside the operation range. *3: Maximum current: - The maximum value when operated within the operation range. - The total current of indoor unit and outdoor unit. *4: Sound pressure level: - Measured values in manufacturer's anechoic chamber. - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here. *5: Available on Google Play™ store or on App Store®. Optional WLAN Adapter is also required. For details, refer to the setting manual.	

2. Dimensions

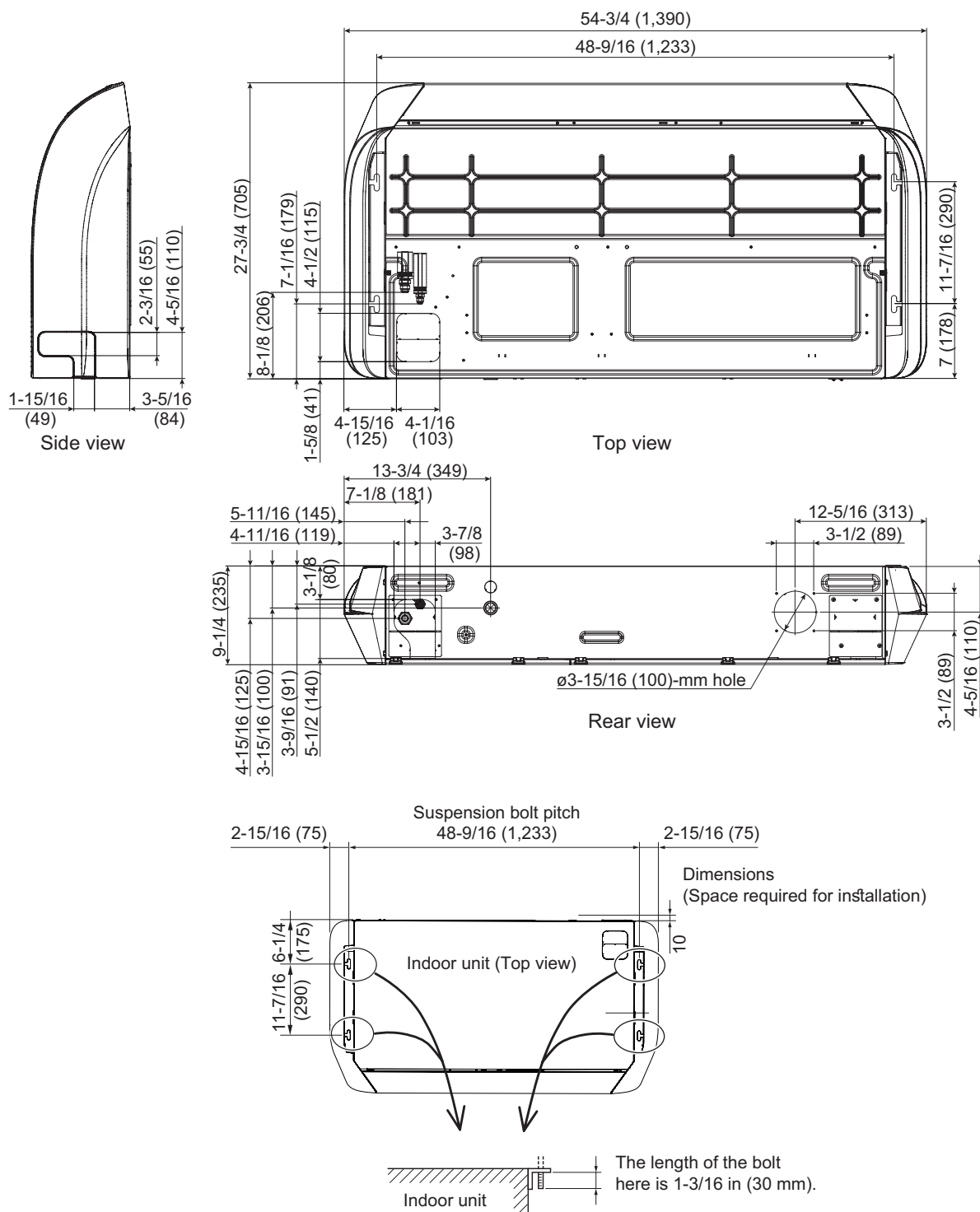
2-1. Model: ABUH18LUAS

Unit: in (mm)



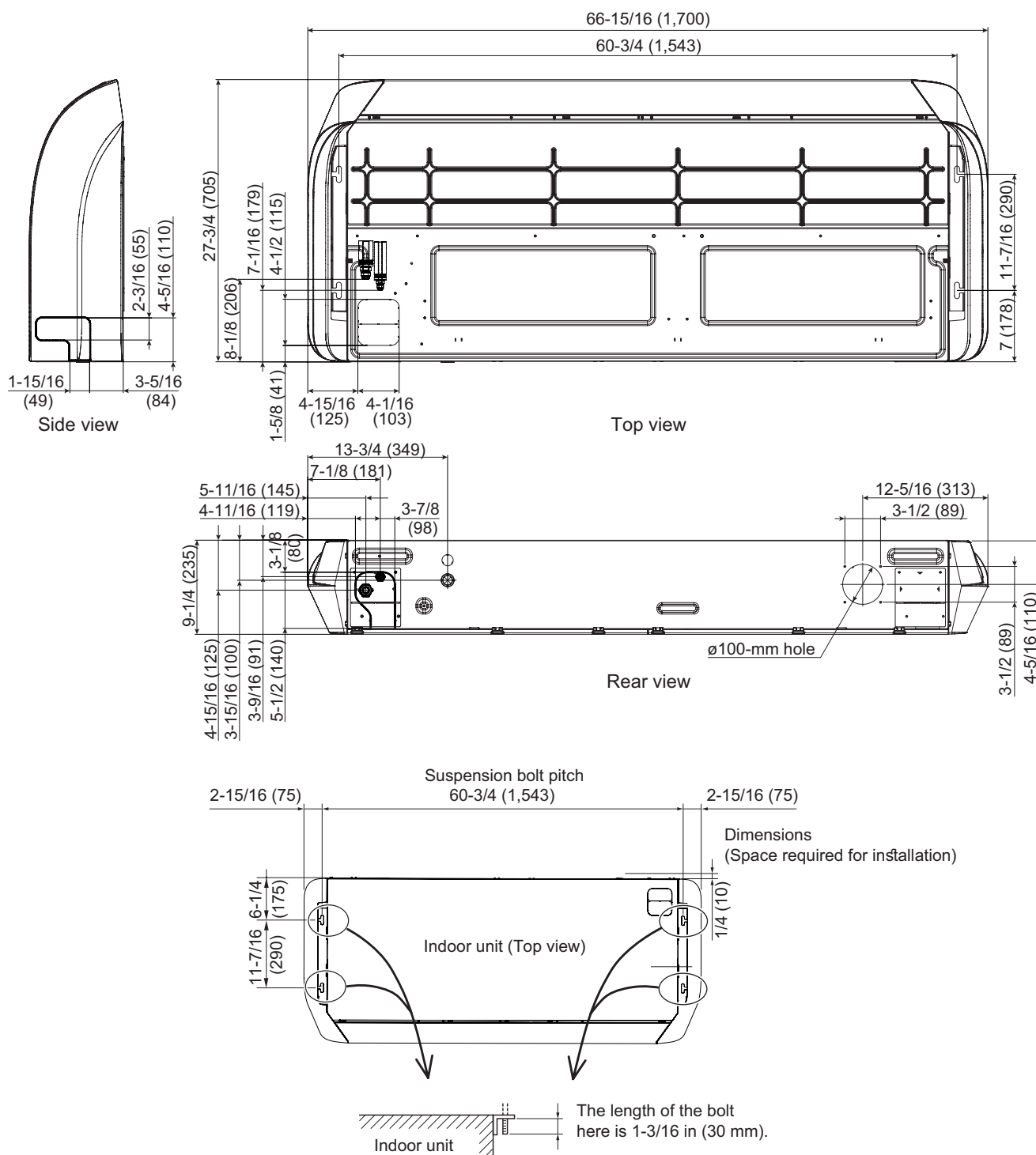
2-2. Models: ABUH24LUAS and ABUH30LUAS

Unit: in (mm)



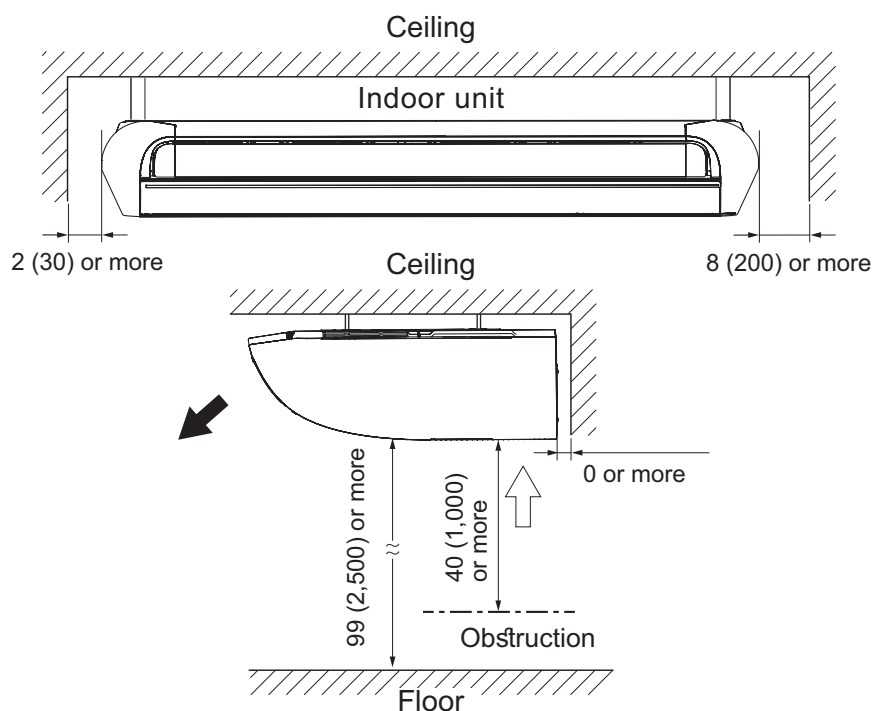
2-3. Model: ABUH36LUAS

Unit: in (mm)



2-4. Installation space requirement

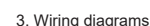
Unit: in (mm)



Required ceiling height varies according to the ceiling mode setting of function setting No. 20.

Ceiling height		
in (mm)		
Ceiling mode	Standard	High ceiling
18, 24, and 30 models	107 (2,700)	138 (3,500)
36 model	138 (3,500)	170 (4,300)

3-1. Models: ABUH18LUAS, ABUH24LUAS, and ABUH30LUAS



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: ABUH18LUAS

AFR							CFM							494							
Outdoor temperature	Indoor temperature																				
	°FDB			64			70			75			80			85			90		
	°FWB			54			60			63			67			71			73		
	°FDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP		
		kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW		
	-5	16.31	12.36	0.42	18.17	12.43	0.43	18.79	13.52	0.43	20.65	14.64	0.44	21.88	14.59	0.44	23.12	15.54	0.45		
	5	16.04	12.15	0.46	17.86	12.22	0.47	18.47	13.29	0.47	20.30	14.39	0.48	21.52	14.34	0.48	22.73	15.27	0.49		
14	15.79	11.96	0.49	17.59	12.03	0.50	18.19	13.08	0.50	19.99	14.17	0.51	21.19	14.11	0.52	22.39	15.04	0.52			
32	15.30	11.58	0.56	17.04	11.65	0.57	17.62	12.67	0.57	19.37	13.73	0.58	20.53	13.67	0.59	21.69	14.56	0.59			
41	15.06	11.40	0.56	16.77	11.47	0.57	17.34	12.47	0.57	19.06	13.51	0.58	20.20	13.45	0.59	21.34	14.33	0.59			
50	14.81	11.21	0.57	16.50	11.27	0.58	17.06	12.26	0.59	18.75	13.28	0.60	19.87	13.23	0.60	21.00	14.09	0.61			
59	14.56	11.01	0.61	16.22	11.07	0.62	16.78	12.04	0.63	18.44	13.04	0.64	19.54	12.99	0.64	20.65	13.84	0.65			
67	16.73	12.67	1.00	18.64	12.75	1.02	19.27	13.86	1.02	21.18	15.02	1.04	22.45	14.96	1.05	23.72	15.93	1.06			
77	15.96	12.06	1.12	17.78	12.13	1.14	18.38	13.19	1.15	20.20	14.29	1.16	21.41	14.23	1.17	22.62	15.16	1.19			
87	15.12	11.45	1.27	16.85	11.52	1.29	17.42	12.52	1.30	19.14	13.57	1.32	20.29	13.51	1.33	21.44	14.39	1.34			
95	14.22	10.77	1.39	15.84	10.84	1.41	16.38	11.78	1.42	18.00	12.77	1.44	19.08	12.71	1.45	20.16	13.54	1.47			
104	12.49	9.44	1.36	13.91	9.50	1.38	14.38	10.33	1.39	15.80	11.19	1.41	16.75	11.14	1.43	17.70	11.87	1.44			
115	10.48	8.59	1.35	11.67	8.65	1.37	12.07	9.40	1.38	13.26	10.18	1.40	14.06	10.14	1.41	14.86	10.80	1.43			

AFR						m³/h						840							
Outdoor temperature	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		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
	-20.6	4.78	3.62	0.42	5.32	3.64	0.43	5.51	3.96	0.43	6.05	4.29	0.44	6.41	4.27	0.44	6.78	4.55	0.45
	-15	4.70	3.56	0.46	5.24	3.58	0.47	5.41	3.89	0.47	5.95	4.22	0.48	6.31	4.20	0.48	6.66	4.48	0.49
	-10	4.63	3.51	0.49	5.16	3.53	0.50	5.33	3.83	0.50	5.86	4.15	0.51	6.21	4.14	0.52	6.56	4.41	0.52
	0	4.48	3.40	0.56	5.00	3.42	0.57	5.17	3.71	0.57	5.68	4.02	0.58	6.02	4.01	0.59	6.36	4.27	0.59
	5	4.41	3.34	0.56	4.92	3.36	0.57	5.08	3.65	0.57	5.59	3.96	0.58	5.92	3.94	0.59	6.26	4.20	0.59
10	4.34	3.29	0.57	4.83	3.30	0.58	5.00	3.59	0.59	5.49	3.89	0.60	5.82	3.88	0.60	6.15	4.13	0.61	
15	4.27	3.23	0.61	4.75	3.24	0.62	4.92	3.53	0.63	5.40	3.82	0.64	5.73	3.81	0.64	6.05	4.05	0.65	
19.4	4.90	3.71	1.00	5.46	3.74	1.02	5.65	4.06	1.02	6.21	4.40	1.04	6.58	4.38	1.05	6.95	4.67	1.06	
25	4.68	3.53	1.12	5.21	3.55	1.14	5.39	3.86	1.15	5.92	4.19	1.16	6.28	4.17	1.17	6.63	4.44	1.19	
30	4.43	3.36	1.27	4.94	3.38	1.29	5.11	3.67	1.30	5.61	3.98	1.32	5.95	3.96	1.33	6.28	4.22	1.34	
35	4.17	3.16	1.39	4.64	3.18	1.41	4.80	3.45	1.42	5.28	3.74	1.44	5.59	3.73	1.45	5.91	3.97	1.47	
40	3.66	2.77	1.36	4.08	2.78	1.38	4.22	3.03	1.39	4.63	3.28	1.41	4.91	3.27	1.43	5.19	3.48	1.44	
46.1	3.07	2.52	1.35	3.42	2.53	1.37	3.54	2.75	1.38	3.89	2.98	1.40	4.12	2.97	1.41	4.35	3.17	1.43	

Model: ABUH24LUAS

AFR							CFM							724							
Outdoor temperature	Indoor temperature																				
	°FDB			64			70			75			80			85			90		
	°FWB			54			60			63			67			71			73		
	°FDB		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	
			kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	
	-5		19.17	14.74	1.57	21.35	14.83	1.59	22.81	16.15	1.61	24.26	17.47	1.63	25.72	17.40	1.64	27.17	18.53	1.66	
	5		19.13	14.71	1.56	21.31	14.80	1.59	22.76	16.11	1.60	24.21	17.43	1.62	25.67	17.36	1.64	27.12	18.49	1.65	
	14		19.10	14.68	1.56	21.27	14.76	1.58	22.72	16.08	1.60	24.17	17.39	1.62	25.62	17.32	1.63	27.07	18.45	1.65	
	32		19.03	14.61	1.55	21.20	14.70	1.58	22.64	16.01	1.59	24.09	17.31	1.61	25.53	17.24	1.62	26.98	18.37	1.64	
	41		18.99	14.58	1.55	21.16	14.67	1.57	22.60	15.97	1.59	24.04	17.28	1.60	25.49	17.21	1.62	26.93	18.33	1.64	
50		18.96	14.55	1.54	21.12	14.63	1.57	22.56	15.94	1.58	24.00	17.24	1.60	25.44	17.17	1.62	26.88	18.29	1.63		
59		19.70	14.79	1.35	21.94	14.87	1.37	23.44	16.20	1.38	24.94	17.52	1.39	26.43	17.45	1.41	27.93	18.59	1.42		
67		21.61	15.81	1.41	24.07	15.90	1.43	25.71	17.31	1.45	27.35	18.73	1.46	28.99	18.65	1.48	30.63	19.87	1.49		
77		20.91	15.52	1.55	23.30	15.61	1.58	24.88	17.00	1.59	26.47	18.38	1.61	28.06	18.31	1.62	29.65	19.50	1.64		
87		20.30	15.26	1.68	22.61	15.35	1.70	24.15	16.71	1.72	25.69	18.08	1.74	27.23	18.00	1.75	28.77	19.18	1.77		
95		18.96	14.67	1.88	21.12	14.76	1.91	22.56	16.07	1.93	24.00	17.39	1.95	25.44	17.32	1.97	26.88	18.45	1.99		
104		17.62	14.09	2.09	19.63	14.18	2.12	20.96	15.44	2.14	22.30	16.70	2.16	23.64	16.63	2.18	24.98	17.72	2.21		
115		15.65	13.38	2.32	17.43	13.46	2.36	18.62	14.66	2.38	19.81	15.86	2.41	21.00	15.79	2.43	22.18	16.82	2.45		

AFR						m³/h						1,230							
Outdoor temperature	Indoor temperature																		
	17.8			21.1			23.9			26.7			29.4			32.2			
	°CDB			°CWB			°CDB			°CWB			°CDB			°CWB			
	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	
	kW			kW			kW			kW			kW			kW			
	-20.6	5.62	4.32	1.57	6.26	4.35	1.59	6.68	4.73	1.61	7.11	5.12	1.63	7.54	5.10	1.64	7.96	5.43	1.66
	-15	5.61	4.31	1.56	6.25	4.34	1.59	6.67	4.72	1.60	7.10	5.11	1.62	7.52	5.09	1.64	7.95	5.42	1.65
	-10	5.60	4.30	1.56	6.23	4.33	1.58	6.66	4.71	1.60	7.08	5.10	1.62	7.51	5.08	1.63	7.93	5.41	1.65
	0	5.58	4.28	1.55	6.21	4.31	1.58	6.64	4.69	1.59	7.06	5.07	1.61	7.48	5.05	1.62	7.91	5.38	1.64
	5	5.57	4.27	1.55	6.20	4.30	1.57	6.62	4.68	1.59	7.05	5.06	1.60	7.47	5.04	1.62	7.89	5.37	1.64
10	5.56	4.26	1.54	6.19	4.29	1.57	6.61	4.67	1.58	7.03	5.05	1.60	7.46	5.03	1.62	7.88	5.36	1.63	
15	5.77	4.33	1.35	6.43	4.36	1.37	6.87	4.75	1.38	7.31	5.13	1.39	7.75	5.11	1.41	8.19	5.45	1.42	
19.4	6.33	4.63	1.41	7.05	4.66	1.43	7.53	5.07	1.45	8.02	5.49	1.46	8.50	5.47	1.48	8.98	5.82	1.49	
25	6.13	4.55	1.55	6.83	4.57	1.58	7.29	4.98	1.59	7.76	5.39	1.61	8.22	5.37	1.62	8.69	5.72	1.64	
30	5.95	4.47	1.68	6.63	4.50	1.70	7.08	4.90	1.72	7.53	5.30	1.74	7.98	5.28	1.75	8.43	5.62	1.77	
35	5.56	4.30	1.88	6.19	4.33	1.91	6.61	4.71	1.93	7.03	5.10	1.95	7.45	5.08	1.97	7.88	5.41	1.99	
40	5.16	4.13	2.09	5.75	4.15	2.12	6.14	4.52	2.14	6.54	4.89	2.16	6.93	4.87	2.18	7.32	5.19	2.21	
46.1	4.59	3.92	2.32	5.11	3.95	2.36	5.46	4.30	2.38	5.81	4.65	2.41	6.15	4.63	2.43	6.50	4.93	2.45	

Model: ABUH30LUAS

AFR							CFM							824							
Outdoor temperature	Indoor temperature																				
	°FDB			64			70			75			80			85			90		
	°FWB			54			60			63			67			71			73		
	°FDB		TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	
			kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	
			-5	27.46	21.75	1.74	28.46	21.82	1.80	29.87	22.41	1.84	32.29	24.06	1.89	34.12	24.74	1.93	36.81	25.93	1.95
		5	27.29	21.76	1.76	28.26	21.80	1.81	29.69	22.38	1.85	32.10	23.98	1.90	33.91	24.73	1.93	36.60	25.89	1.96	
		14	27.13	21.77	1.78	28.08	21.80	1.82	29.53	22.36	1.86	31.93	23.92	1.90	33.73	24.72	1.93	36.42	25.85	1.97	
		32	26.83	21.61	1.78	27.80	21.66	1.83	29.19	22.21	1.87	31.60	23.78	1.92	33.36	24.56	1.94	36.00	25.67	1.98	
		41	26.69	21.54	1.79	27.67	21.59	1.84	29.06	22.17	1.88	31.43	23.72	1.93	33.20	24.49	1.96	35.85	25.60	2.00	
		50	26.55	21.47	1.80	27.49	21.56	1.85	28.91	22.12	1.89	31.27	23.65	1.94	32.99	24.42	1.97	35.65	25.54	2.01	
		59	27.10	21.80	1.70	28.02	21.85	1.74	29.49	22.43	1.78	31.89	24.00	1.82	33.68	24.80	1.85	36.34	25.95	1.89	
		67	29.14	22.37	1.94	30.17	22.41	1.99	31.73	23.00	2.04	34.28	24.63	2.08	36.22	25.41	2.12	39.12	26.59	2.16	
		77	28.03	21.94	2.15	29.00	21.98	2.20	30.49	22.55	2.26	32.98	24.13	2.32	34.83	24.92	2.35	37.58	26.07	2.40	
		87	27.03	21.52	2.35	27.99	21.56	2.41	29.42	22.12	2.47	31.81	23.69	2.52	33.59	24.44	2.57	36.28	25.56	2.62	
		95	25.48	20.86	2.59	26.40	20.90	2.64	27.74	21.44	2.71	30.00	22.95	2.78	31.69	23.69	2.83	34.20	24.81	2.88	
		104	23.96	20.16	2.82	24.82	20.20	2.89	26.09	20.74	2.96	28.18	22.20	3.04	29.78	22.90	3.08	32.15	23.98	3.14	
		115	22.06	19.34	3.12	22.84	19.38	3.18	24.01	19.89	3.27	25.97	21.29	3.35	27.43	21.99	3.40	29.60	22.98	3.47	

AFR						m³/h						1,400							
Outdoor temperature	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		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW		
	-20.6	8.05	6.38	1.74	8.34	6.39	1.80	8.76	6.57	1.84	9.46	7.05	1.89	10.00	7.25	1.93	10.79	7.60	1.95
	-15	8.00	6.38	1.76	8.28	6.39	1.81	8.70	6.56	1.85	9.41	7.03	1.90	9.94	7.25	1.93	10.73	7.59	1.96
	-10	7.95	6.38	1.78	8.23	6.39	1.82	8.66	6.55	1.86	9.36	7.01	1.90	9.89	7.24	1.93	10.67	7.58	1.97
	0	7.86	6.33	1.78	8.15	6.35	1.83	8.56	6.51	1.87	9.26	6.97	1.92	9.78	7.20	1.94	10.55	7.52	1.98
	5	7.82	6.31	1.79	8.11	6.33	1.84	8.52	6.50	1.88	9.21	6.95	1.93	9.73	7.18	1.96	10.51	7.50	2.00
10	7.78	6.29	1.80	8.06	6.32	1.85	8.47	6.48	1.89	9.16	6.93	1.94	9.67	7.16	1.97	10.45	7.48	2.01	
15	7.94	6.39	1.70	8.21	6.40	1.74	8.64	6.57	1.78	9.35	7.04	1.82	9.87	7.27	1.85	10.65	7.61	1.89	
19.4	8.54	6.56	1.94	8.84	6.57	1.99	9.30	6.74	2.04	10.05	7.22	2.08	10.61	7.45	2.12	11.46	7.79	2.16	
25	8.21	6.43	2.15	8.50	6.44	2.20	8.93	6.61	2.26	9.67	7.07	2.32	10.21	7.30	2.35	11.01	7.64	2.40	
30	7.92	6.31	2.35	8.20	6.32	2.41	8.62	6.48	2.47	9.32	6.94	2.52	9.84	7.16	2.57	10.63	7.49	2.62	
35	7.47	6.11	2.59	7.74	6.12	2.64	8.13	6.28	2.71	8.79	6.73	2.78	9.29	6.94	2.83	10.02	7.27	2.88	
40	7.02	5.91	2.82	7.27	5.92	2.89	7.65	6.08	2.96	8.26	6.51	3.04	8.73	6.71	3.08	9.42	7.03	3.14	
46.1	6.46	5.67	3.12	6.69	5.68	3.18	7.04	5.83	3.27	7.61	6.24	3.35	8.04	6.44	3.40	8.67	6.73	3.47	

Model: ABUH36LUAS

AFR						CFM									1,089						
Outdoor temperature	Indoor temperature																				
	°FDB			64			70			75			80			85			90		
	°FWB			54			60			63			67			71			73		
	°FDB			TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
				kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW	kBtu/h		kW
	-5	31.64	25.48	2.20	32.71	25.57	2.28	34.37	26.31	2.33	37.19	28.11	2.39	39.25	29.09	2.44	42.44	30.43	2.47		
	5	31.43	25.41	2.22	32.52	25.51	2.29	34.18	26.21	2.34	36.98	28.03	2.40	39.02	28.96	2.44	42.16	30.31	2.48		
	14	31.24	25.36	2.25	32.35	25.45	2.30	34.01	26.11	2.35	36.78	27.95	2.41	38.82	28.84	2.44	41.91	30.21	2.50		
	32	30.91	25.20	2.25	32.01	25.30	2.31	33.68	25.97	2.37	36.40	27.79	2.43	38.46	28.70	2.45	41.51	30.04	2.51		
	41	30.79	25.12	2.27	31.84	25.21	2.32	33.50	25.91	2.38	36.21	27.71	2.44	38.27	28.62	2.48	41.29	29.97	2.53		
50	30.58	25.08	2.27	31.69	25.18	2.33	33.30	25.83	2.38	36.02	27.63	2.45	38.04	28.55	2.48	41.07	29.90	2.54			
59	30.67	25.10	2.27	31.75	25.20	2.32	33.34	25.88	2.37	36.06	27.70	2.42	38.07	28.58	2.46	41.10	29.90	2.52			
67	35.42	27.00	2.70	36.65	27.12	2.77	38.53	27.83	2.83	41.64	29.79	2.90	44.01	30.75	2.94	47.50	32.19	3.01			
77	33.89	26.40	2.97	35.09	26.48	3.04	36.89	27.19	3.12	39.89	29.11	3.19	42.11	30.05	3.24	45.47	31.43	3.31			
87	32.59	25.86	3.21	33.73	25.98	3.30	35.45	26.64	3.37	38.32	28.51	3.46	40.49	29.43	3.51	43.70	30.83	3.58			
95	30.58	24.95	3.49	31.68	25.03	3.57	33.29	25.70	3.65	36.00	27.49	3.75	38.00	28.38	3.80	41.04	29.71	3.89			
104	28.60	24.00	3.76	29.62	24.08	3.86	31.14	24.73	3.94	33.68	26.47	4.04	35.57	27.32	4.11	38.41	28.58	4.19			
115	23.75	22.25	3.42	24.61	22.33	3.50	25.86	22.93	3.58	27.97	24.51	3.67	29.51	25.31	3.72	31.88	26.50	3.80			

AFR						m³/h									1,850						
	Indoor temperature																				
	17.8			21.1			23.9			26.7			29.4			32.2					
	°CWB			12.2			15.6			17.2			19.4			21.7			22.8		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP		
		kW			kW			kW			kW			kW			kW				
	-20.6	9.27	7.47	2.20	9.59	7.49	2.28	10.07	7.71	2.33	10.90	8.24	2.39	11.50	8.52	2.44	12.44	8.92	2.47		
	-15	9.21	7.45	2.22	9.53	7.48	2.29	10.02	7.68	2.34	10.84	8.21	2.40	11.44	8.49	2.44	12.36	8.88	2.48		
	-10	9.16	7.43	2.25	9.48	7.46	2.30	9.97	7.65	2.35	10.78	8.19	2.41	11.38	8.45	2.44	12.28	8.85	2.50		
	0	9.06	7.39	2.25	9.38	7.41	2.31	9.87	7.61	2.37	10.67	8.15	2.43	11.27	8.41	2.45	12.17	8.81	2.51		
	5	9.02	7.36	2.27	9.33	7.39	2.32	9.82	7.59	2.38	10.61	8.12	2.44	11.22	8.39	2.48	12.10	8.78	2.53		
	10	8.96	7.35	2.27	9.29	7.38	2.33	9.76	7.57	2.38	10.56	8.10	2.45	11.15	8.37	2.48	12.04	8.76	2.54		
	15	8.99	7.36	2.27	9.30	7.38	2.32	9.77	7.59	2.37	10.57	8.12	2.42	11.16	8.38	2.46	12.05	8.76	2.52		
	19.4	10.38	7.91	2.70	10.74	7.95	2.77	11.29	8.16	2.83	12.20	8.73	2.90	12.90	9.01	2.94	13.92	9.43	3.01		
	25	9.93	7.74	2.97	10.29	7.76	3.04	10.81	7.97	3.12	11.69	8.53	3.19	12.34	8.81	3.24	13.33	9.21	3.31		
	30	9.55	7.58	3.21	9.89	7.61	3.30	10.39	7.81	3.37	11.23	8.36	3.46	11.87	8.63	3.51	12.81	9.04	3.58		
	35	8.96	7.31	3.49	9.28	7.34	3.57	9.76	7.53	3.65	10.55	8.06	3.75	11.14	8.32	3.80	12.03	8.71	3.89		
	40	8.38	7.03	3.76	8.68	7.06	3.86	9.13	7.25	3.94	9.87	7.76	4.04	10.43	8.01	4.11	11.26	8.38	4.19		
46.1	6.96	6.52	3.42	7.21	6.54	3.50	7.58	6.72	3.58	8.20	7.18	3.67	8.65	7.42	3.72	9.34	7.77	3.80			

4-2. Heating capacity

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

■ Model: ABUH18LUAS

AFR				CFM				494				
			Indoor temperature									
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
	-5	-7	15.12	1.98	14.76	2.02	14.40	2.07	14.04	2.11	13.68	2.15
	5	3	17.64	2.13	17.22	2.18	16.80	2.22	16.38	2.26	15.96	2.31
	14	12	19.62	2.26	19.15	2.31	18.69	2.36	18.22	2.40	17.75	2.45
	17	15	20.27	2.31	19.79	2.36	19.30	2.40	18.82	2.45	18.34	2.50
	23	19	21.60	2.39	21.09	2.44	20.57	2.49	20.06	2.54	19.55	2.59
	32	28	23.59	2.53	23.02	2.58	22.46	2.63	21.90	2.68	21.34	2.74
	41	37	25.57	2.66	24.96	2.71	24.35	2.77	23.74	2.82	23.13	2.88
	47	43	26.88	2.75	26.24	2.80	25.60	2.86	24.96	2.92	24.32	2.97
50	47	27.69	2.72	27.03	2.78	26.37	2.84	25.71	2.89	25.06	2.95	
59	50	24.81	2.07	24.22	2.12	23.63	2.16	23.04	2.20	22.45	2.24	

AFR				m³/h				840				
				Indoor temperature								
		°CDB	15.6		18.3		21.1		22.2		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-20.6	-21.7	4.43	1.98	4.33	2.02	4.22	2.07	4.11	2.11	4.01	2.15
	-15	-16.1	5.17	2.13	5.05	2.18	4.92	2.22	4.80	2.26	4.68	2.31
	-10	-11.1	5.75	2.26	5.61	2.31	5.48	2.36	5.34	2.40	5.20	2.45
	-8.3	-9.4	5.94	2.31	5.80	2.36	5.66	2.40	5.52	2.45	5.37	2.50
	-5	-7.2	6.33	2.39	6.18	2.44	6.03	2.49	5.88	2.54	5.73	2.59
	0	-2.2	6.91	2.53	6.75	2.58	6.58	2.63	6.42	2.68	6.25	2.74
	5	2.8	7.49	2.66	7.32	2.71	7.14	2.77	6.96	2.82	6.78	2.88
	8.3	6.1	7.88	2.75	7.69	2.80	7.50	2.86	7.31	2.92	7.13	2.97
10	8.3	8.12	2.72	7.92	2.78	7.73	2.84	7.54	2.89	7.34	2.95	
15	10	7.27	2.07	7.10	2.12	6.93	2.16	6.75	2.20	6.58	2.24	

■ Model: ABUH24LUAS

AFR				CFM				724				
			Indoor temperature									
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
	-5	-7	22.05	3.13	21.53	3.19	21.00	3.26	20.48	3.33	19.95	3.39
	5	3	24.78	3.20	24.19	3.26	23.60	3.33	23.01	3.40	22.42	3.46
	14	12	26.68	3.13	26.04	3.19	25.41	3.26	24.77	3.32	24.14	3.39
	17	15	27.30	3.11	26.65	3.17	26.00	3.24	25.35	3.30	24.70	3.36
	23	19	28.57	3.06	27.89	3.12	27.21	3.19	26.53	3.25	25.85	3.32
	32	28	30.46	2.99	29.74	3.06	29.01	3.12	28.29	3.18	27.56	3.24
	41	37	32.36	2.92	31.59	2.99	30.81	3.05	30.04	3.11	29.27	3.17
	47	43	33.60	2.88	32.80	2.94	32.00	3.00	31.20	3.06	30.40	3.12
50	47	34.46	2.88	33.64	2.94	32.82	3.00	32.00	3.06	31.18	3.13	
59	50	34.74	2.78	33.92	2.84	33.09	2.90	32.26	2.96	31.43	3.00	

AFR			m³/h						1,230			
			Indoor temperature									
		°CDB	15.6		18.3		21.1		22.2		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-20.6	-21.7	6.46	3.13	6.31	3.19	6.15	3.26	6.00	3.33	5.85	3.39
	-15	-16.1	7.26	3.20	7.09	3.26	6.92	3.33	6.75	3.40	6.57	3.46
	-10	-11.1	7.82	3.13	7.63	3.19	7.45	3.26	7.26	3.32	7.07	3.39
	-8.3	-9.4	8.00	3.11	7.81	3.17	7.62	3.24	7.43	3.30	7.24	3.36
	-5	-7.2	8.37	3.06	8.17	3.12	7.97	3.19	7.78	3.25	7.58	3.32
	0	-2.2	8.93	2.99	8.72	3.06	8.50	3.12	8.29	3.18	8.08	3.24
	5	2.8	9.48	2.92	9.26	2.99	9.03	3.05	8.81	3.11	8.58	3.17
	8.3	6.1	9.85	2.88	9.61	2.94	9.38	3.00	9.15	3.06	8.91	3.12
10	8.3	10.10	2.88	9.86	2.94	9.62	3.00	9.38	3.06	9.14	3.13	
15	10	10.18	2.78	9.94	2.84	9.70	2.90	9.46	2.96	9.21	3.00	

Model: ABUH30LUAS

AFR				CFM				824				
			Indoor temperature									
			60		65		70		72		75	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
Outdoor temperature	°FDB	°FWB	24.20	3.86	24.09	3.89	24.00	3.88	23.40	3.88	21.78	3.89
	5	3	28.24	3.93	28.12	3.95	28.00	3.95	27.29	3.95	25.46	3.97
	14	12	30.41	3.91	30.30	3.91	30.15	3.92	29.36	3.92	27.45	3.94
	17	15	31.15	3.91	31.03	3.91	30.90	3.92	30.08	3.92	28.12	3.93
	23	19	32.54	3.90	32.40	3.90	32.29	3.90	31.44	3.91	29.37	3.92
	32	28	34.73	3.86	34.58	3.87	34.44	3.87	33.55	3.88	31.33	3.90
	41	37	36.89	3.84	36.76	3.85	36.59	3.85	35.63	3.85	33.29	3.87
	47	43	38.34	3.82	38.17	3.83	38.00	3.83	37.02	3.83	34.58	3.85
	50	47	39.05	3.77	38.88	3.79	38.72	3.79	37.74	3.79	35.23	3.81
59	50	36.30	3.13	36.15	3.14	36.00	3.14	35.07	3.14	32.76	3.15	

AFR			m³/h						1,400			
			Indoor temperature									
			15.6		18.3		21.1		22.2		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-20.6	-21.7	7.09	3.86	7.06	3.89	7.03	3.88	6.86	3.88	6.38	3.89
	-15	-16.1	8.28	3.93	8.24	3.95	8.21	3.95	8.00	3.95	7.46	3.97
	-10	-11.1	8.91	3.91	8.88	3.91	8.84	3.92	8.61	3.92	8.05	3.94
	-8.3	-9.4	9.13	3.91	9.09	3.91	9.05	3.92	8.82	3.92	8.24	3.93
	-5	-7.2	9.54	3.90	9.50	3.90	9.46	3.90	9.21	3.91	8.61	3.92
	0	-2.2	10.18	3.86	10.14	3.87	10.09	3.87	9.83	3.88	9.18	3.90
	5	2.8	10.81	3.84	10.77	3.85	10.72	3.85	10.44	3.85	9.76	3.87
	8.3	6.1	11.24	3.82	11.19	3.83	11.14	3.83	10.85	3.83	10.13	3.85
10	8.3	11.45	3.77	11.40	3.79	11.35	3.79	11.06	3.79	10.32	3.81	
15	10	10.64	3.13	10.59	3.14	10.55	3.14	10.28	3.14	9.60	3.15	

Model: ABUH36LUAS

AFR				CFM				1,059				
		Indoor temperature										
		°FDB	60		65		70		72		75	
Outdoor temperature	°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW
	-5	-7	27.24	4.22	27.08	4.24	27.00	4.24	26.29	4.24	24.55	4.24
	5	3	31.28	4.31	31.12	4.33	31.00	4.33	30.19	4.33	28.21	4.35
	14	12	33.87	4.27	33.73	4.29	33.58	4.29	32.70	4.29	30.56	4.31
	17	15	34.80	4.26	34.64	4.27	34.50	4.27	33.60	4.28	31.39	4.30
	23	19	36.47	4.23	36.29	4.24	36.15	4.24	35.24	4.26	32.88	4.27
	32	28	39.04	4.19	38.90	4.20	38.73	4.20	37.73	4.21	35.25	4.22
	41	37	41.67	4.15	41.47	4.15	41.30	4.16	40.25	4.16	37.57	4.17
	47	43	43.37	4.12	43.17	4.13	43.00	4.13	41.88	4.13	39.14	4.15
50	47	45.03	4.13	44.86	4.14	44.66	4.14	43.50	4.14	40.63	4.16	
59	50	39.50	3.10	39.35	3.11	39.18	3.11	38.17	3.11	35.64	3.12	

AFR			m³/h						1,800			
			Indoor temperature									
		°CDB	15.6		18.3		21.1		22.2		23.9	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-20.6	-21.7	7.98	4.22	7.94	4.24	7.91	4.24	7.70	4.24	7.20	4.24
	-15	-16.1	9.17	4.31	9.12	4.33	9.09	4.33	8.85	4.33	8.27	4.35
	-10	-11.1	9.93	4.27	9.88	4.29	9.84	4.29	9.58	4.29	8.96	4.31
	-8.3	-9.4	10.20	4.26	10.15	4.27	10.11	4.27	9.85	4.28	9.20	4.30
	-5	-7.2	10.69	4.23	10.64	4.24	10.60	4.24	10.33	4.26	9.64	4.27
	0	-2.2	11.44	4.19	11.40	4.20	11.35	4.20	11.06	4.21	10.33	4.22
	5	2.8	12.21	4.15	12.15	4.15	12.10	4.16	11.80	4.16	11.01	4.17
	8.3	6.1	12.71	4.12	12.65	4.13	12.60	4.13	12.27	4.13	11.47	4.15
10	8.3	13.20	4.13	13.15	4.14	13.09	4.14	12.75	4.14	11.91	4.16	
15	10	11.58	3.10	11.53	3.11	11.48	3.11	11.19	3.11	10.45	3.12	

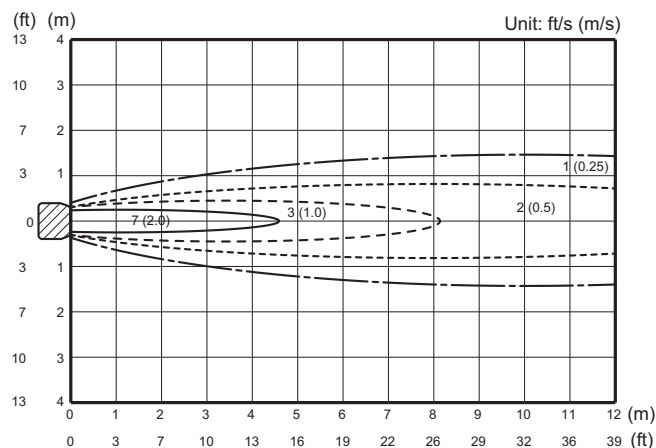
5. Fan performance

5-1. Air velocity and temperature distributions

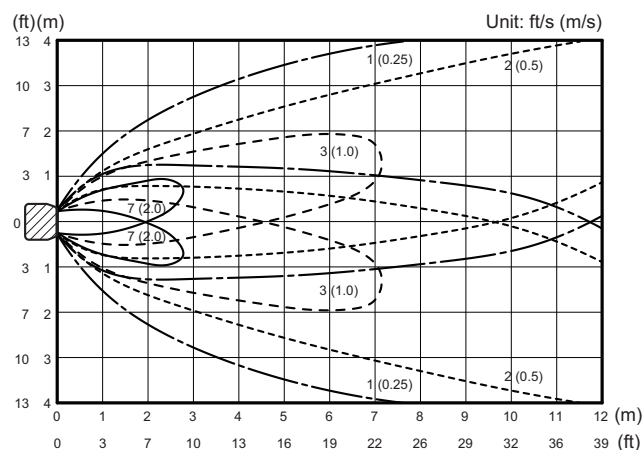
■ Model: ABUH18LUAS

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

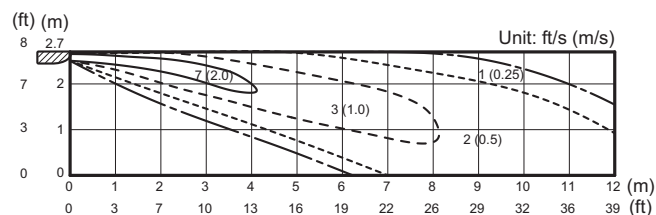
Top view
Horizontal louver: Up
Vertical louver: Center



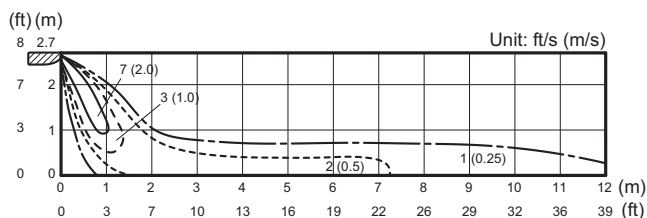
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



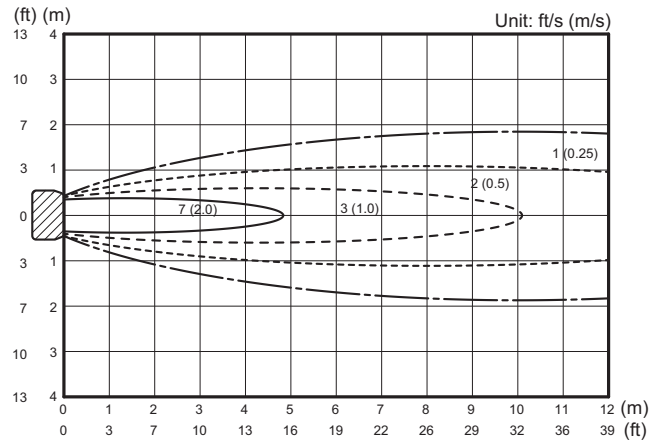
Side view
Horizontal louver: Down
Vertical louver: Center



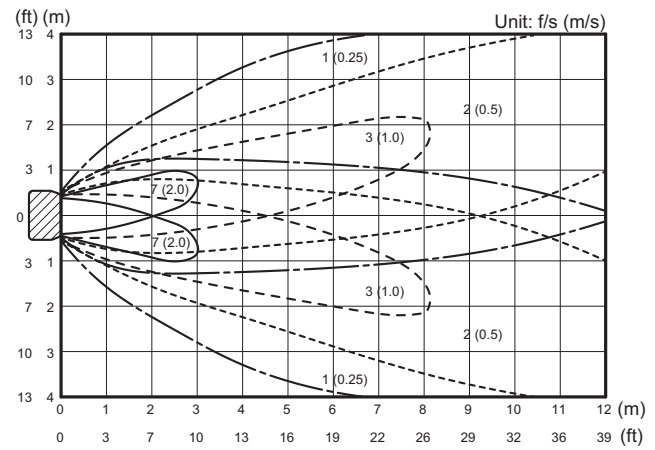
Model: ABUH24LUAS

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

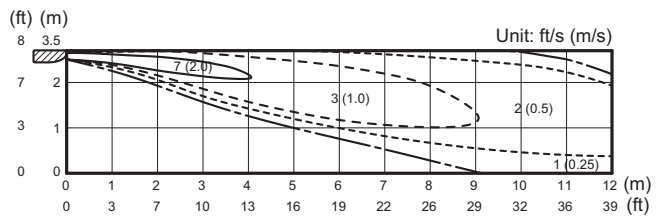
Top view
Horizontal louver: Up
Vertical louver: Center



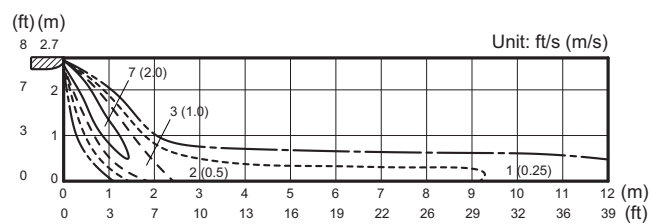
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



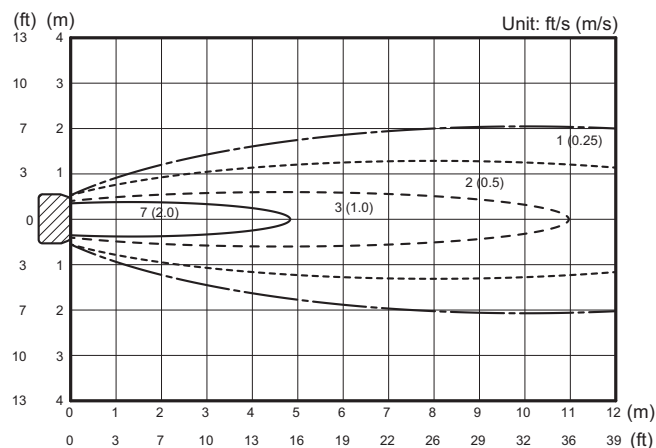
Side view
Horizontal louver: Down
Vertical louver: Center



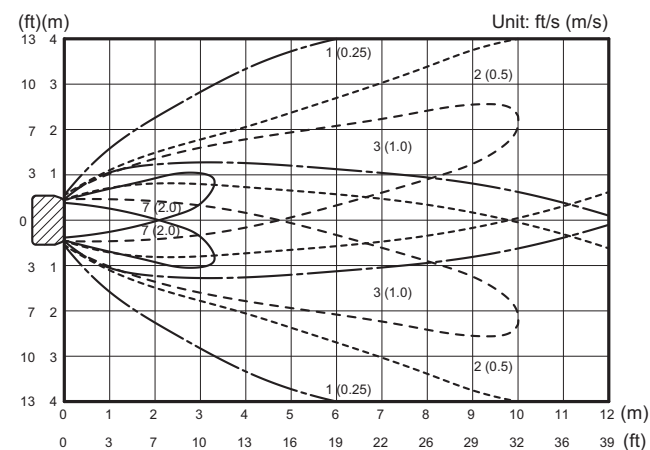
Model: ABUH30LUAS

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

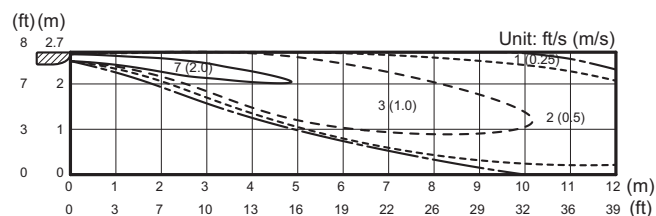
Top view
Horizontal louver: Up
Vertical louver: Center



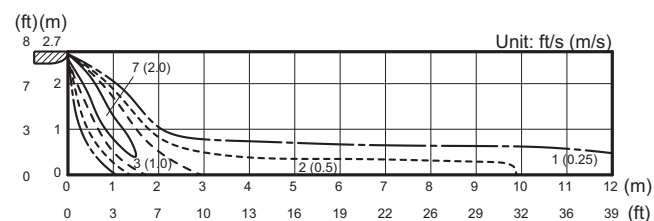
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



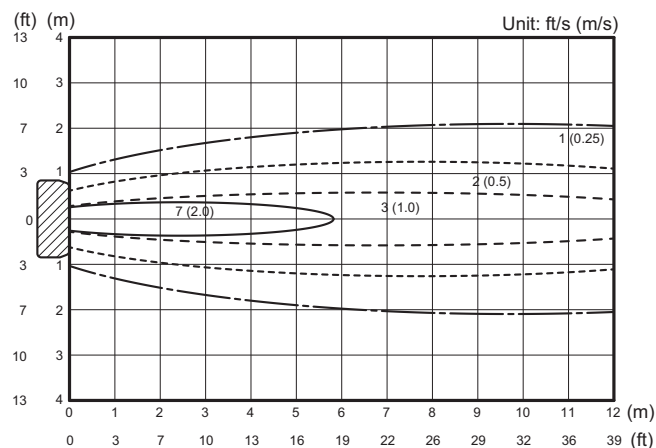
Side view
Horizontal louver: Down
Vertical louver: Center



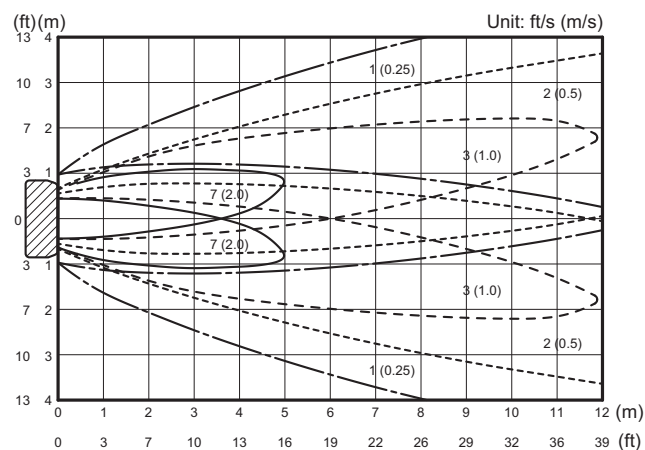
Model: ABUH36LUAS

Measuring conditions	Fan speed HIGH	Operation mode FAN
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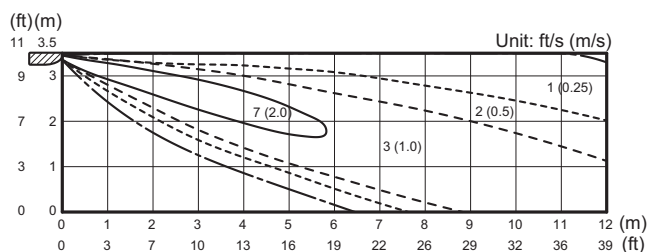
Top view
Horizontal louver: Up
Vertical louver: Center



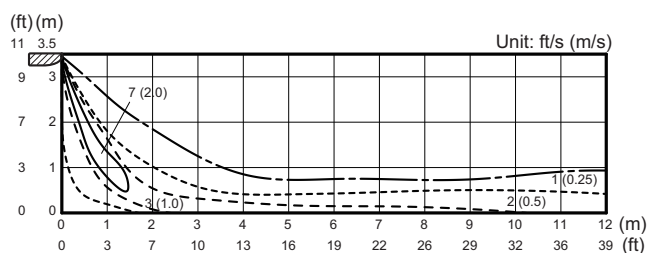
Top view
Horizontal louver: Up
Vertical louver: Left & Right



Side view
Horizontal louver: Up
Vertical louver: Center



Side view
Horizontal louver: Down
Vertical louver: Center



5-2. Airflow

Conversion factor:

- $1 \text{ m}^3/\text{h} = 0.2778 \text{ l/s} = 0.5886 \text{ CFM}$
- $3.6 \text{ m}^3/\text{h} = 1 \text{ l/s}$
- $1.699 \text{ m}^3/\text{h} = 1 \text{ CFM}$

■ Model: ABUH18LUAS

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	840
	l/s	233
	CFM	494
MED	m^3/h	790
	l/s	219
	CFM	465
LOW	m^3/h	710
	l/s	197
	CFM	418
QUIET	m^3/h	650
	l/s	181
	CFM	383

● Heating

Fan speed	Airflow	
HIGH	m^3/h	840
	l/s	233
	CFM	494
MED	m^3/h	790
	l/s	219
	CFM	465
LOW	m^3/h	710
	l/s	197
	CFM	418
QUIET	m^3/h	650
	l/s	181
	CFM	383

■ Model: ABUH24LUAS

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	1,230
	l/s	342
	CFM	724
MED	m ³ /h	990
	l/s	275
	CFM	583
LOW	m ³ /h	860
	l/s	239
	CFM	506
QUIET	m ³ /h	700
	l/s	194
	CFM	412

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,230
	l/s	342
	CFM	724
MED	m ³ /h	990
	l/s	275
	CFM	583
LOW	m ³ /h	860
	l/s	239
	CFM	506
QUIET	m ³ /h	700
	l/s	194
	CFM	412

■ Model: ABUH30LUAS

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	1,400
	l/s	389
	CFM	824
MED	m ³ /h	1,120
	l/s	311
	CFM	659
LOW	m ³ /h	980
	l/s	272
	CFM	577
QUIET	m ³ /h	800
	l/s	222
	CFM	471

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,400
	l/s	389
	CFM	824
MED	m ³ /h	1,120
	l/s	311
	CFM	659
LOW	m ³ /h	980
	l/s	272
	CFM	577
QUIET	m ³ /h	800
	l/s	222
	CFM	471

■ Model: ABUH36LUAS

● Cooling

Fan speed	Airflow	
HIGH	m ³ /h	1,850
	l/s	514
	CFM	1,089
MED	m ³ /h	1,470
	l/s	408
	CFM	865
LOW	m ³ /h	1,300
	l/s	361
	CFM	765
QUIET	m ³ /h	1,050
	l/s	292
	CFM	618

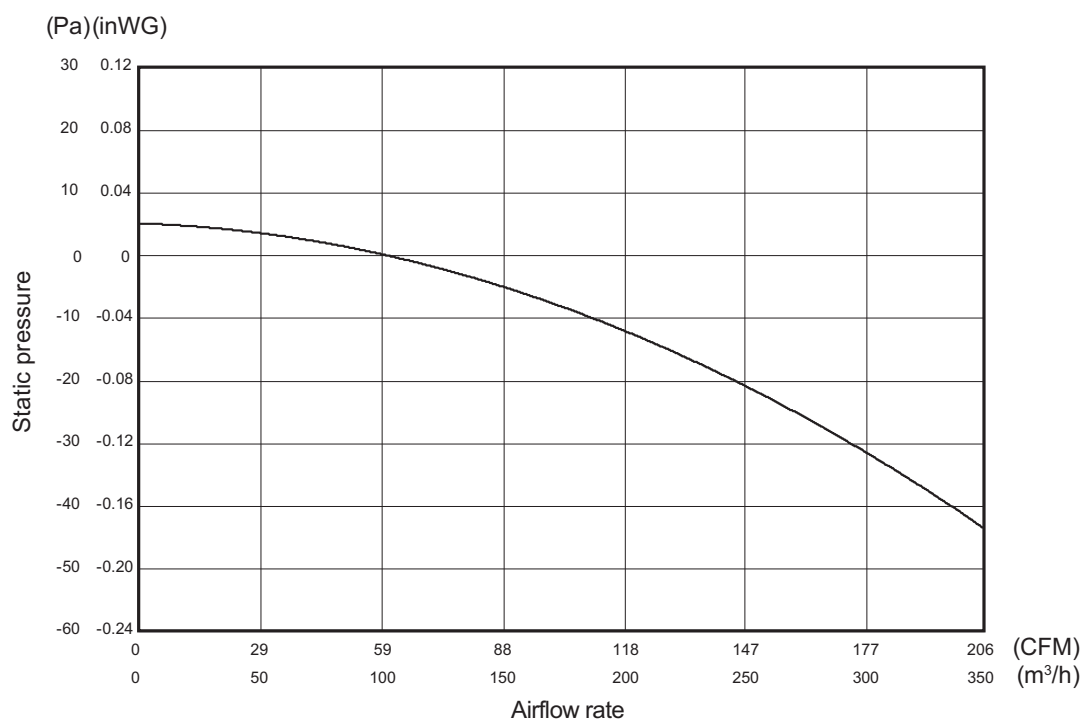
● Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,800
	l/s	500
	CFM	1,059
MED	m ³ /h	1,470
	l/s	408
	CFM	865
LOW	m ³ /h	1,300
	l/s	361
	CFM	765
QUIET	m ³ /h	1,050
	l/s	292
	CFM	618

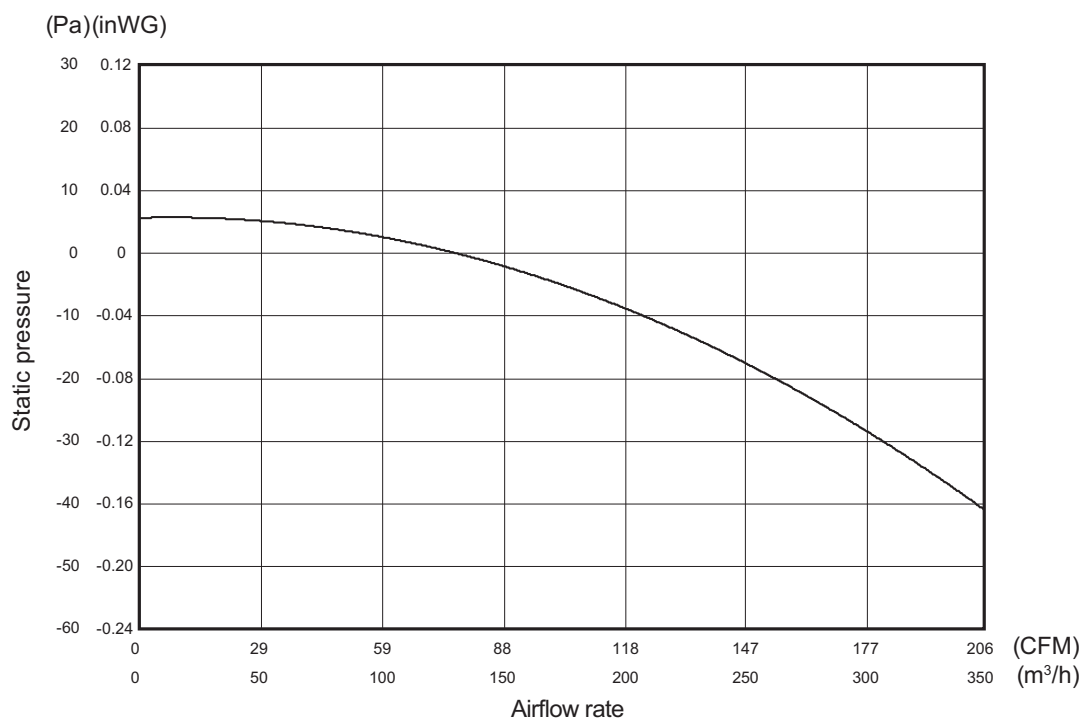
5-3. Fresh air characteristics

■ Airflow volume: Static pressure of fresh-air intake characteristics

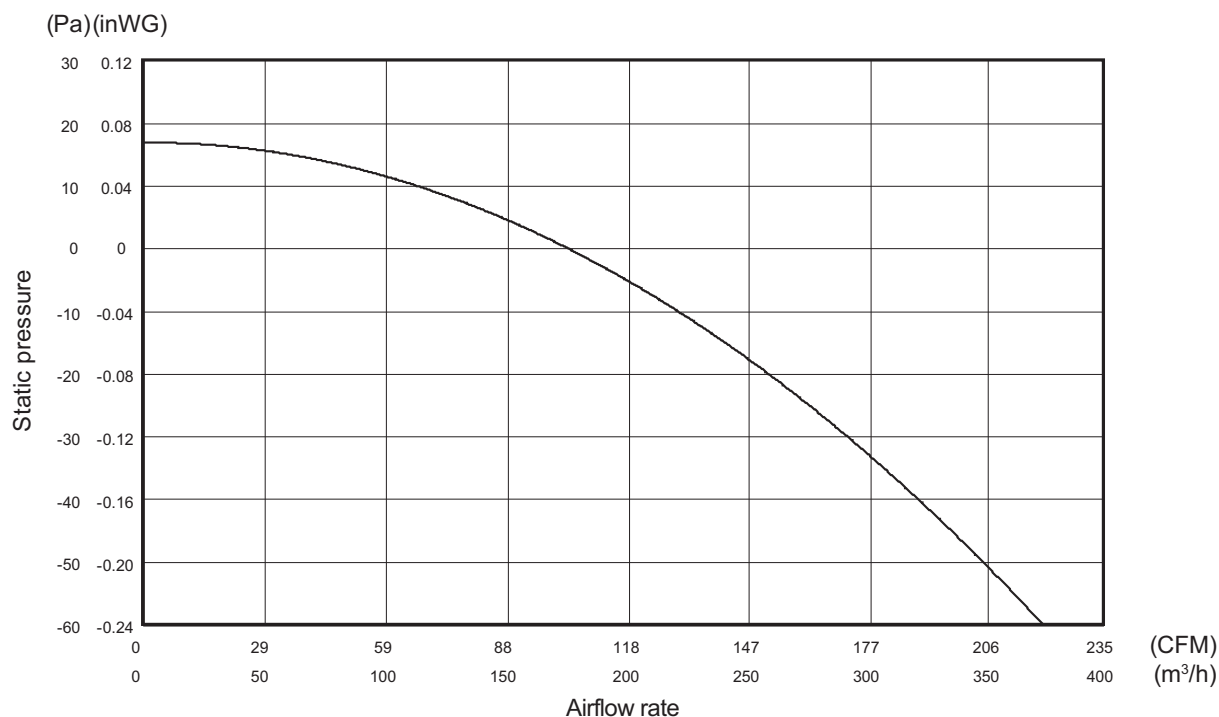
● Model: ABUH18LUAS



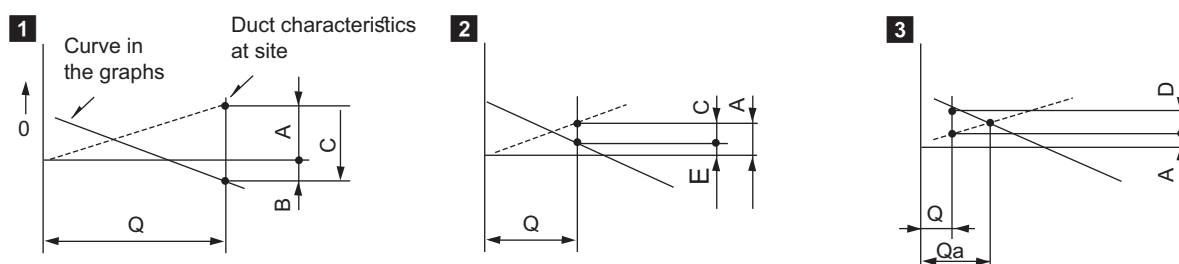
● Models: ABUH24LUAS and ABUH30LUAS



● Model: ABUH36LUAS



■ How to read curve



Q: Designed amount of fresh air intake (CFM [m^3/h])

A: Static pressure loss of fresh air intake duct system with airflow amount Q (inWG [Pa])

B: Forced static pressure at air conditioner inlet with airflow amount Q (inWG [Pa])

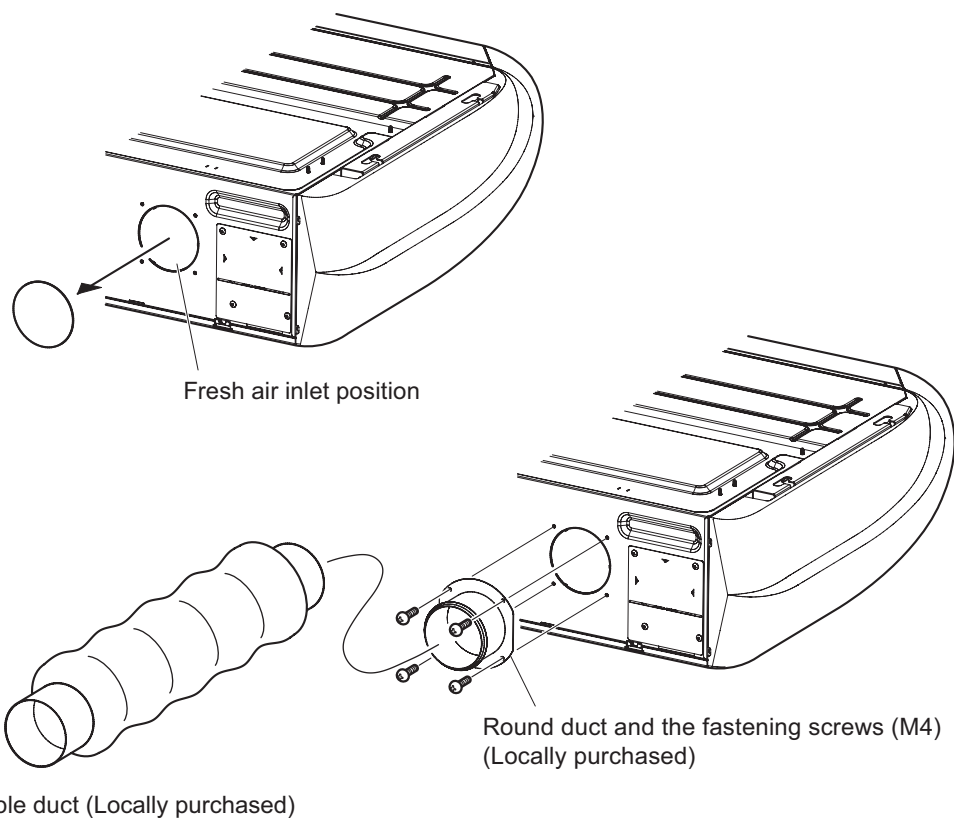
C: Static pressure of booster fan with airflow amount Q (inWG [Pa])

D: Static pressure loss increase amount of fresh air intake duct system for airflow amount Q (inWG [Pa])

E: Static pressure of indoor unit with airflow amount Q (inWG [Pa])

Qa: Estimated amount of fresh air intake without D (CFM [m^3/h])

■ Installation



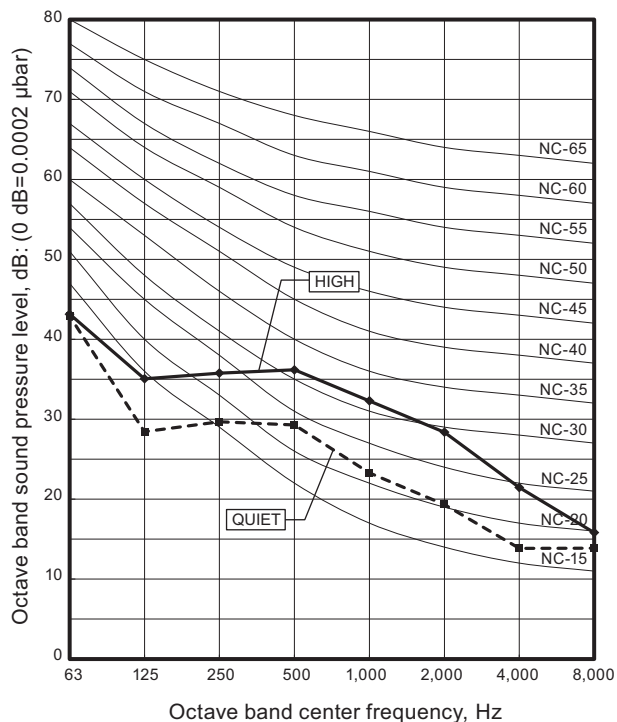
NOTE: When taking in the fresh air, thermal insulation is required to avoid the product malfunction caused by dew condensation.

6. Operation noise (sound pressure)

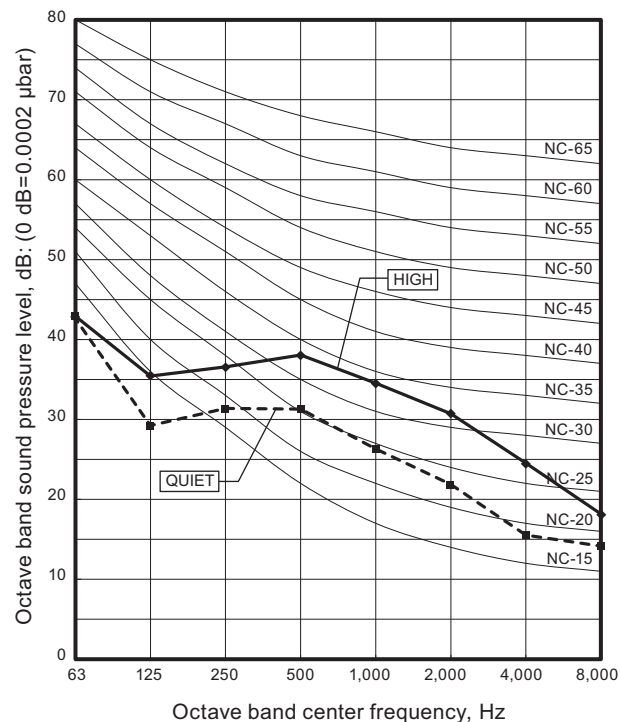
6-1. Noise level curve

■ Model: ABUH18LUAS

● Cooling

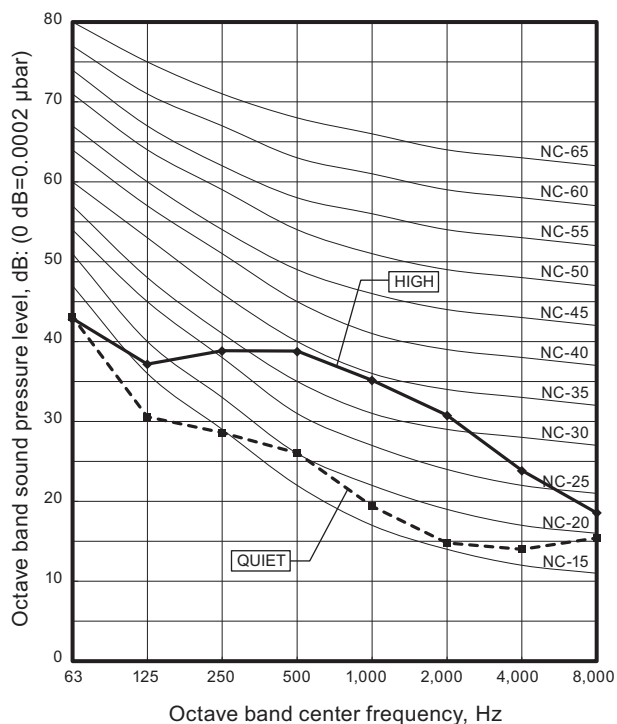


● Heating

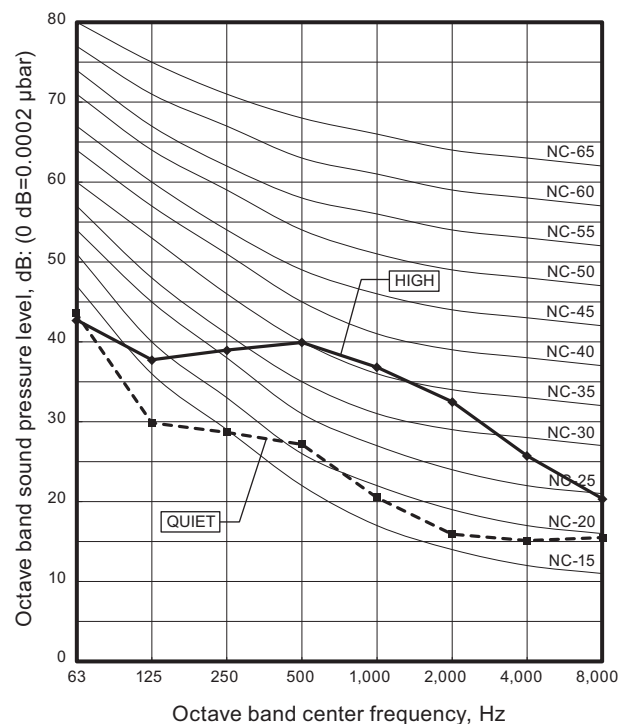


■ Model: ABUH24LUAS

● Cooling

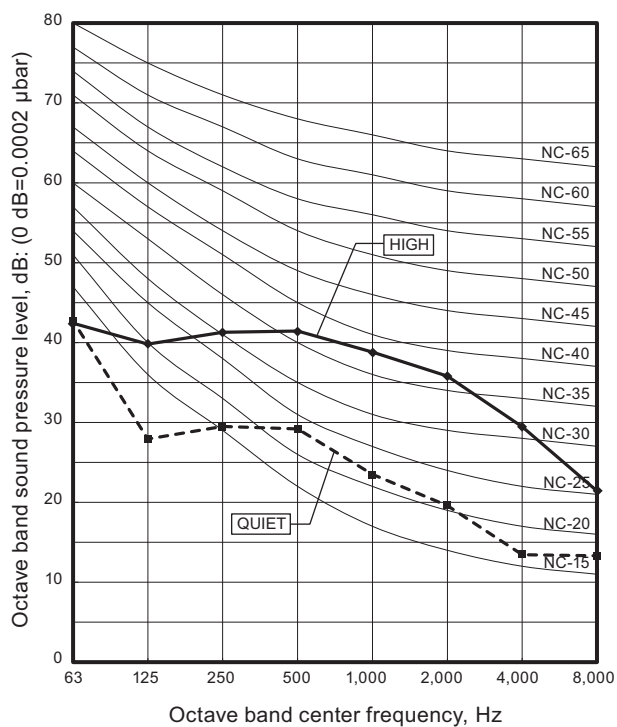


● Heating

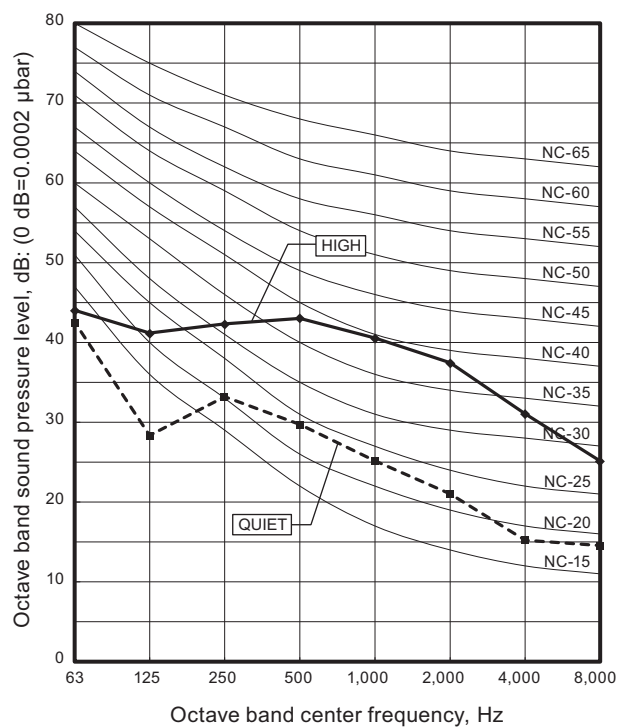


Model: ABUH30LUAS

Cooling

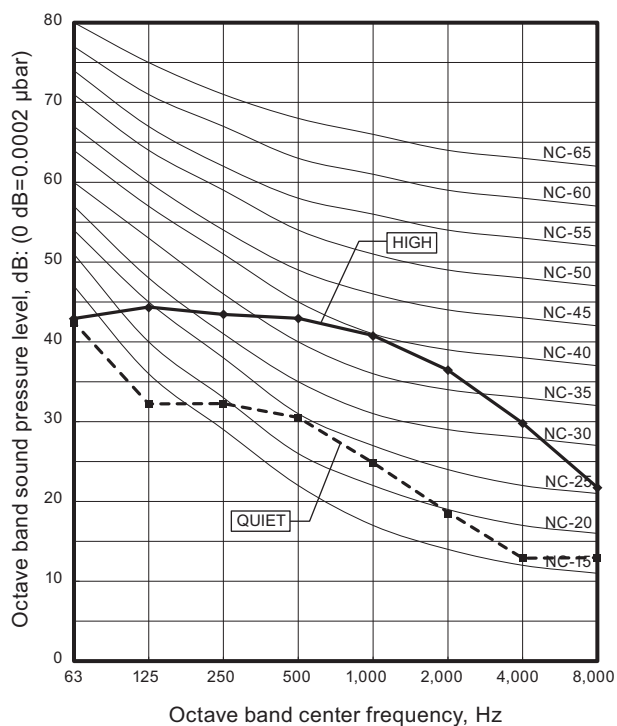


Heating

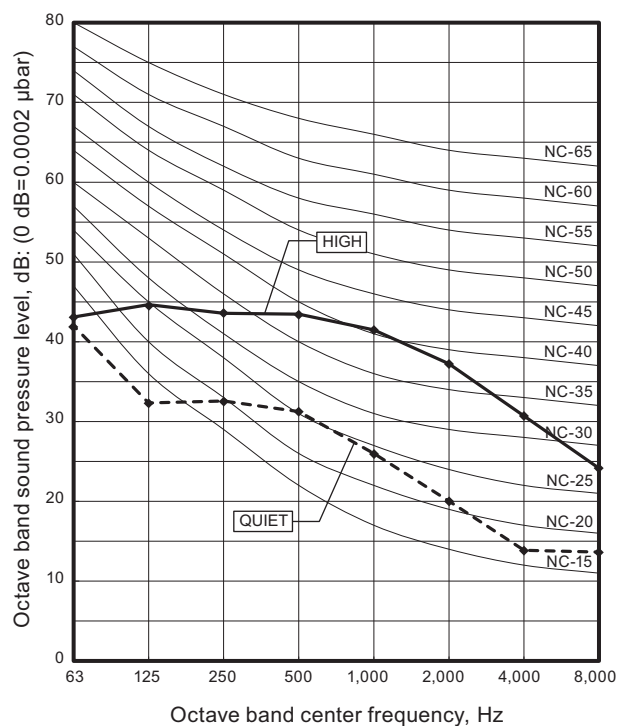


Model: ABUH36LUAS

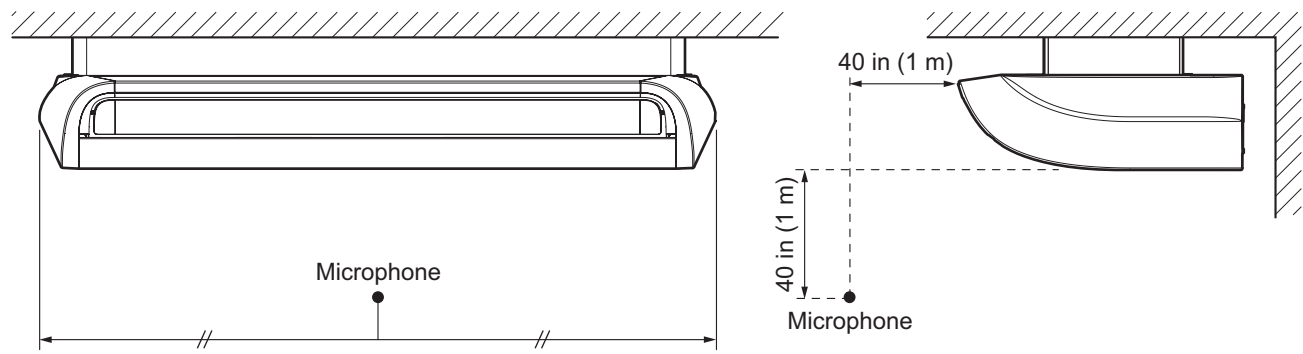
Cooling



Heating



6-2. Sound level check point



7. Safety devices

Type of protection	Protection form	Model		
		ABUH18LUAS	ABUH24LUAS	ABUH30LUAS
Circuit protection	Current fuse (PCB*)	250 V, 5.0 A		
Fan motor protection	Thermal protection program	Activate	275 ±27°F (135 ±15°C) Fan motor stop	
		Reset	221 ±27°F (105 ±15°C) Fan motor restart	

Type of protection	Protection form	Model		
		ABUH36LUAS		
Circuit protection	Current fuse (PCB*)	250 V, 5.0 A		
Fan motor protection	Thermal protection program	Activate	275 ±27°F (135 ±15°C) Fan motor stop	
		Reset	221 ±27°F (105 ±15°C) Fan motor restart	

*PCB: Printed Circuit Board

8. External input and output

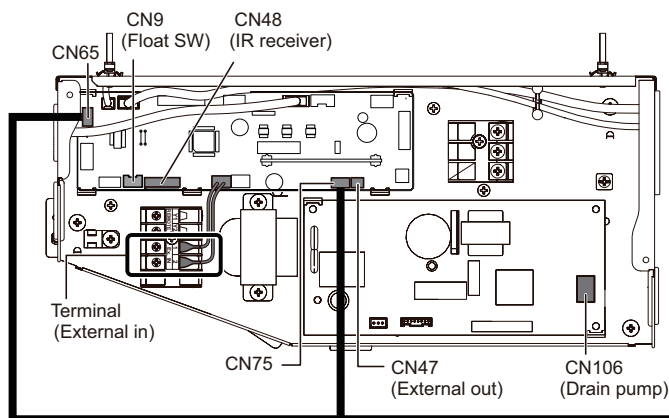


Fig. Indoor unit PCB

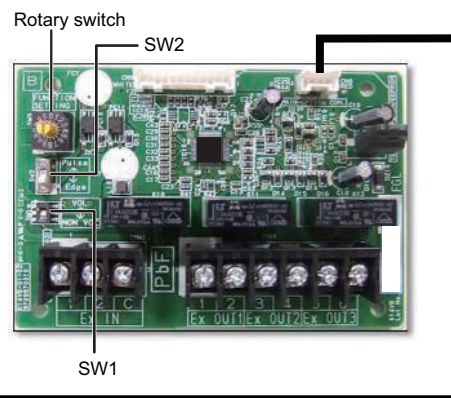


Fig. External input and output PCB

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

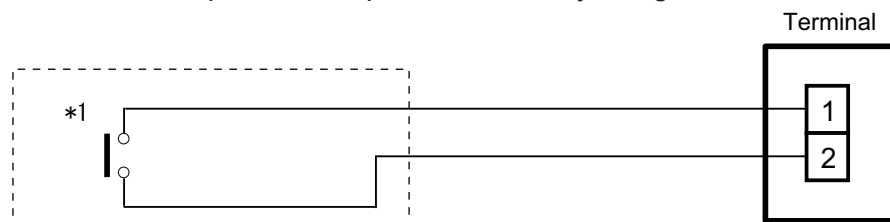
NOTE: For details of the switching function, refer to ["Setting of external input and output"](#) on page 38.

8-1. External input

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

Indoor unit

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



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

External Input and Output PCB

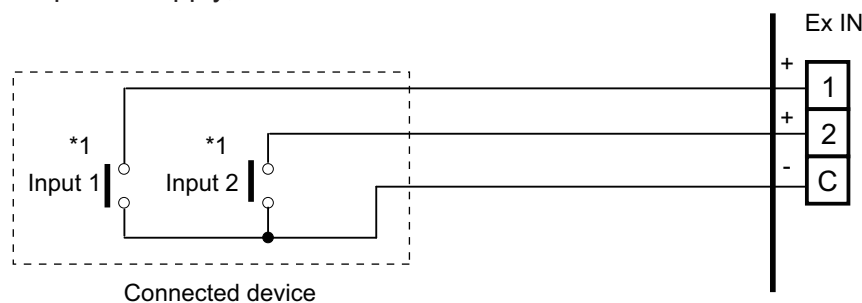
The indoor unit Operation/Stop can be set by using the input terminal on the PCB.

Input select

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

– Dry contact

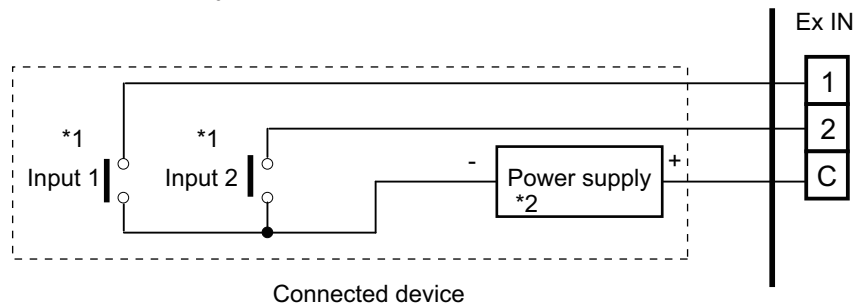
In case of internal power supply, set the slide switch of SW1 to “NON VOL” side.



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

– Apply voltage

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



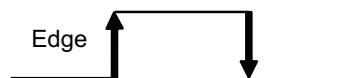
*1: The switches can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

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

■ Input signal type

- **Indoor unit**

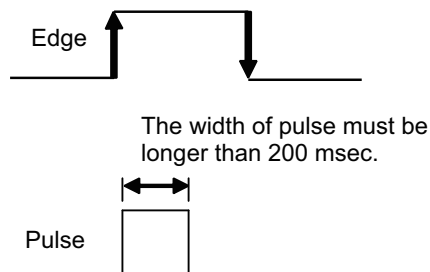
Input signal type is only "Edge".



- **External Input and Output PCB**

The input signal type can be selected.

Signal type (edge or pulse) can be switched by the DIP switch 2 (SW2) on the External Input and Output PCB.



NOTE: The input signal supports the following switch type:

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

8-2. External output

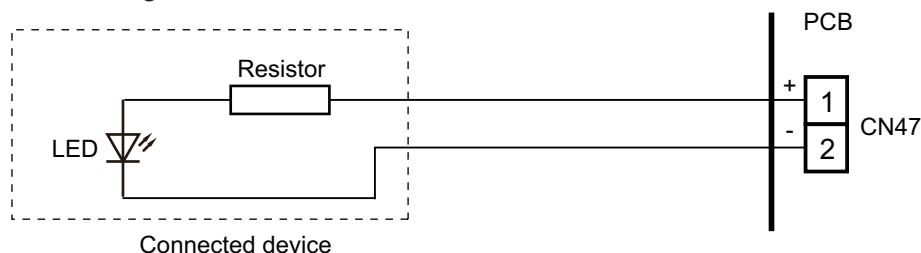
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

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 $\pm$ 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to ["Setting of external input and output"](#) on page 38.

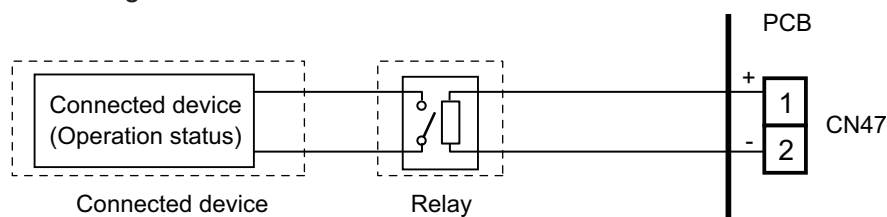
When indicator, etc. are connected directly

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



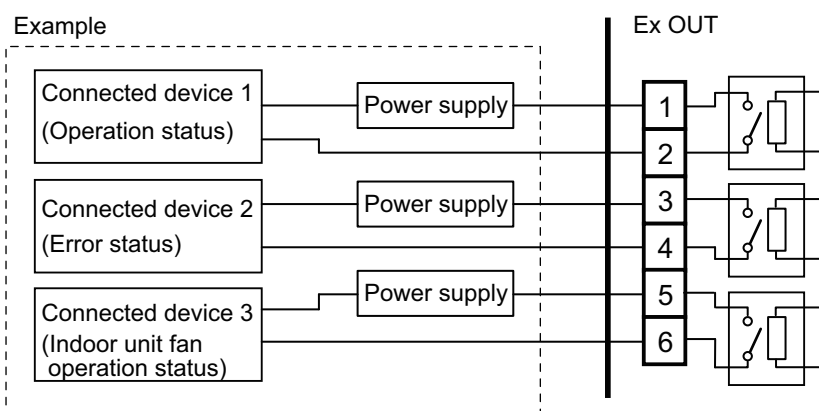
When connecting with a device equipped with a power supply

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



External Input and Output PCB

- A twisted pair cable (22 AWG) should be used.
- Permissible voltage and current: DC 5 V to 30 V/3 A, AC 30 V to 250 V/3 A
- For details, refer to ["Setting of external input and output"](#) on page 38.



8-3. Setting of external input and output

- Indoor unit

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

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

• External Input and Output PCB

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

NOTES:

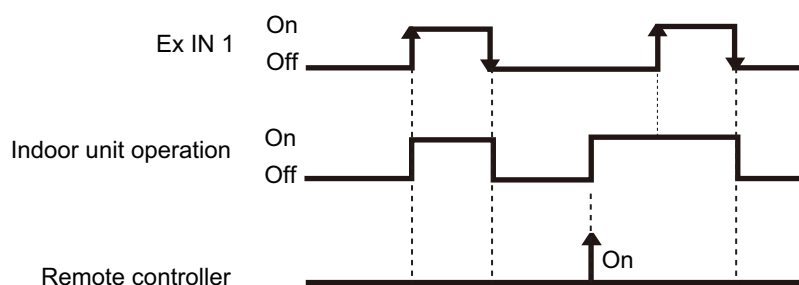
- When the rotary switch is selected to "1", the operation of the terminal input of the indoor unit and the External Input and Output PCB input are the same. The operation content depends on the setting of function setting number 46.
- *1: The external input other than "Operation/Stop" is available only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

8-4. Details of control input function

■ Operation/Stop mode 1

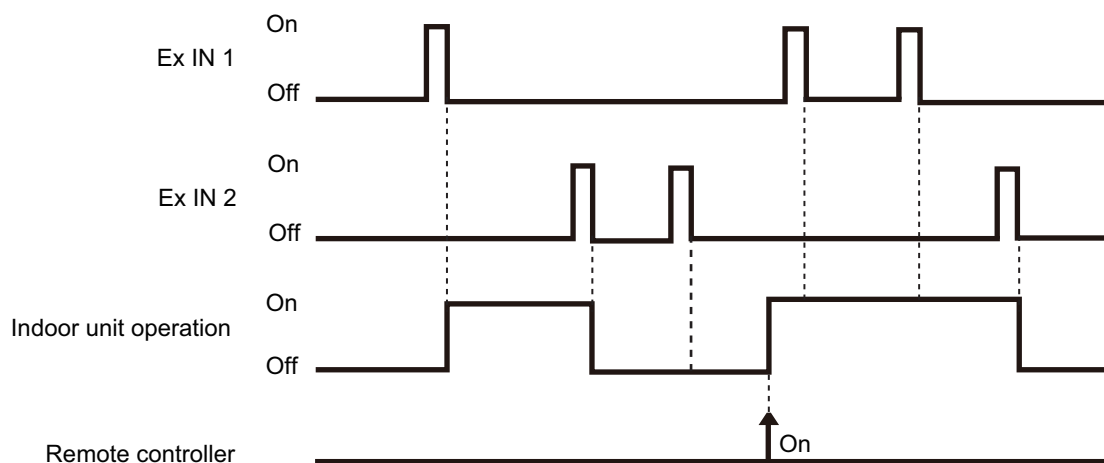
- In the case of "Edge" input

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



- In the case of "Pulse" input

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



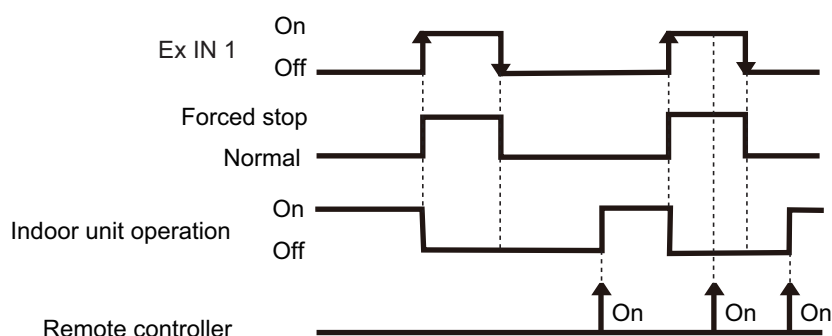
NOTES:

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

■ Forced stop

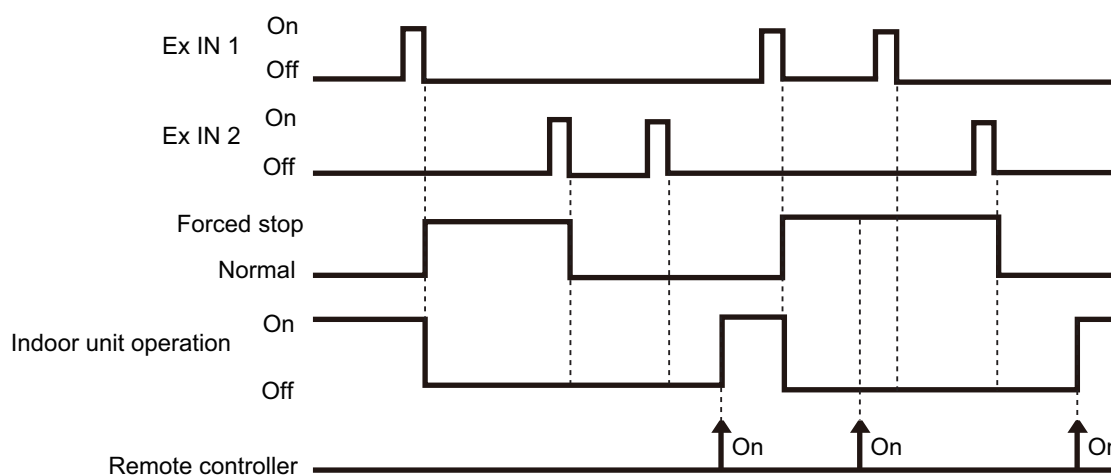
- In the case of "Edge" input

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



- In the case of "Pulse" input

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



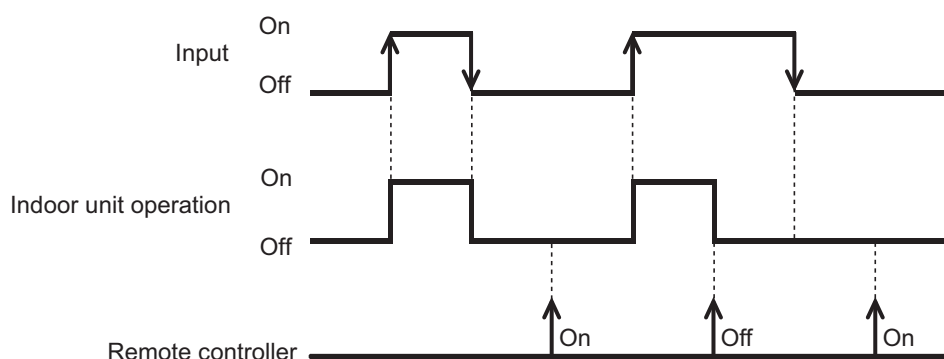
NOTES:

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

■ Operation/Stop mode 2

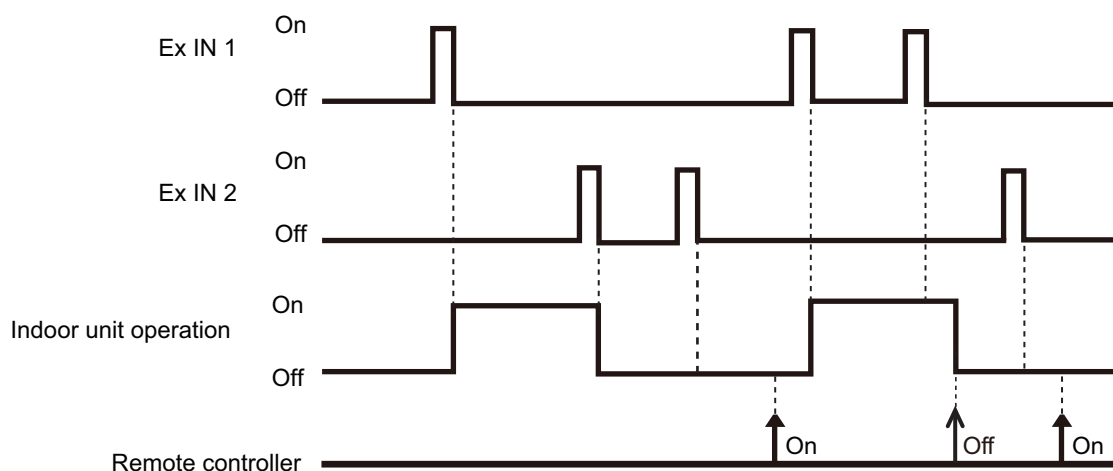
- In the case of "Edge" input

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



- In the case of "Pulse" input

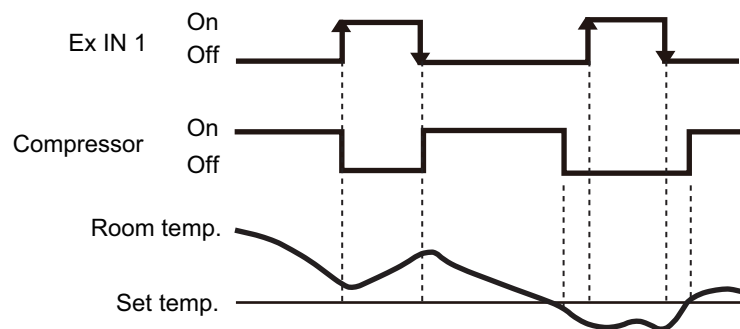
Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-03	1	Pulse	External Input and Output PCB	Ex IN 1	Pulse	Operation (R.C. enabled)
				Ex IN 2		Stop (R.C. disabled)



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

■ Forced thermostat off

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

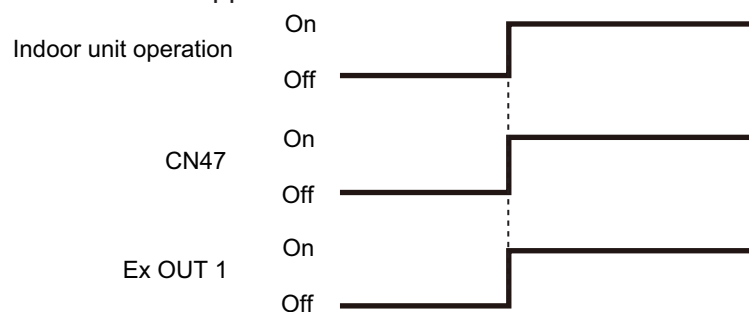


8-5. Details of control output function

■ Operation status

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

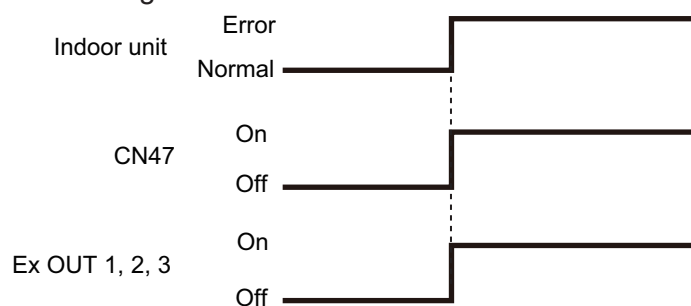
The output is low when the unit is stopped.



■ Error status

Function setting	External Input and Output PCB	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	Ex OUT 1	Off → On	Error
				On → Off	Normal
—	1, C	External Input and Output PCB	Ex OUT 2	Off → On	Error
				On → Off	Normal
—	D	External Input and Output PCB	Ex OUT 3	Off → On	Error
				On → Off	Normal

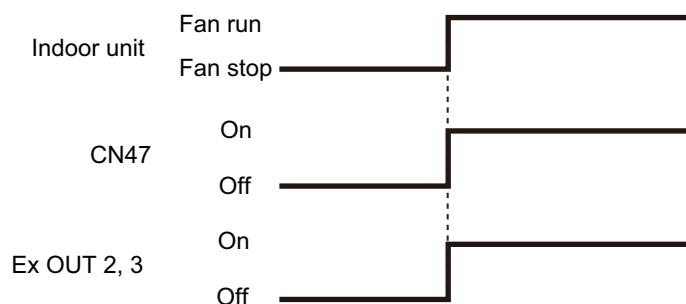
The output is on when an error is generated for the indoor unit.



Indoor unit fan operation status

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

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



External heater output

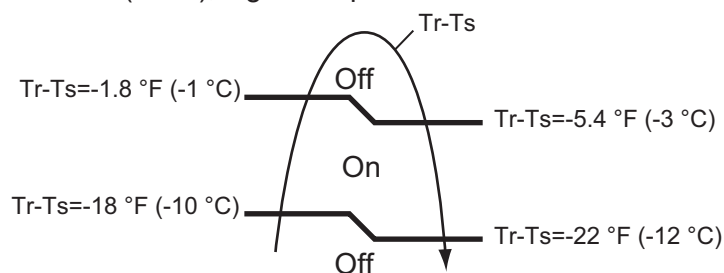
Function setting	External Input and Output PCB	External output		Output signal	Control
	Rotary switch				
60-11	—	Output of indoor unit	CN47	Off → On	Heater on
				On → Off	Heater off
—	2, B, C	External Input and Output PCB	Ex OUT 3	Off → On	Heater on
				On → Off	Heater off

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

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

Example: When set temperature (T_s) is set at 72°F (22°C);

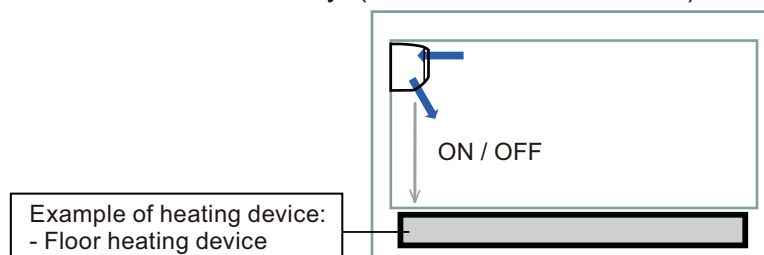
- And room temperature (T_r) increase above 53.6°F (12°C), signal output is on.
- And T_r increase above 69.8°F (21°C), signal output is off.
- And T_r decrease below 66.2°F (19°C), signal output is on.
- And T_r decrease below 50°F (10°C), signal output is off.



The output also turns off in defrost operation.

● Installation configuration of individual connection

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



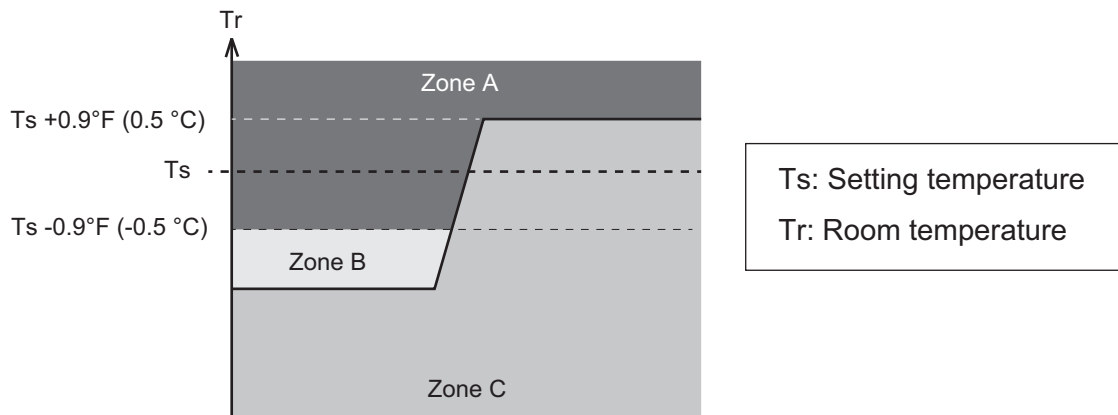
⚠ WARNING

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

- Design and install external heater appropriately with considering its protection.
- 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 66.

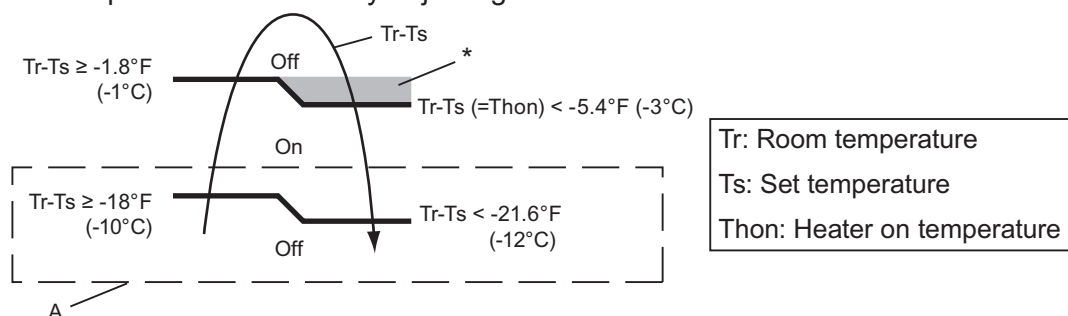
*2: When indoor unit function number 61 is set to "00", auxiliary equipment operates according to the following conditions.

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

● Auxiliary heater control 1

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

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



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

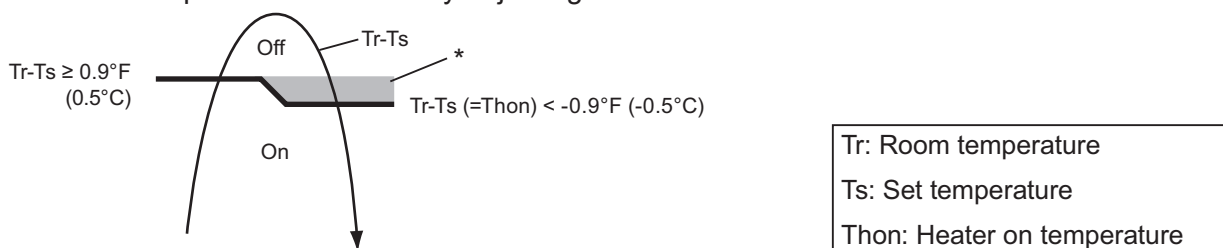
Example: When set temperature (Ts) is 72°F (22°C) (Factory setting),

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

● Auxiliary heater control 2

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

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



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

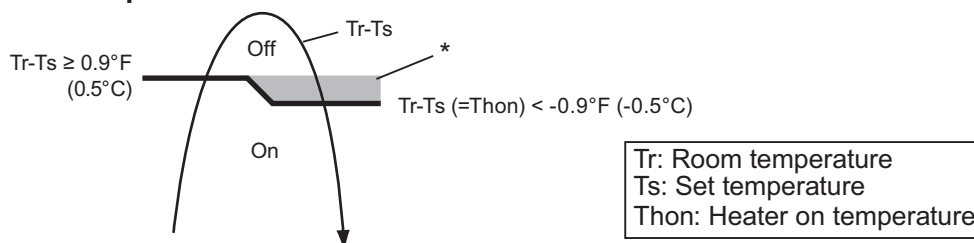
● Auxiliary heater control by outdoor temperature 1

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

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

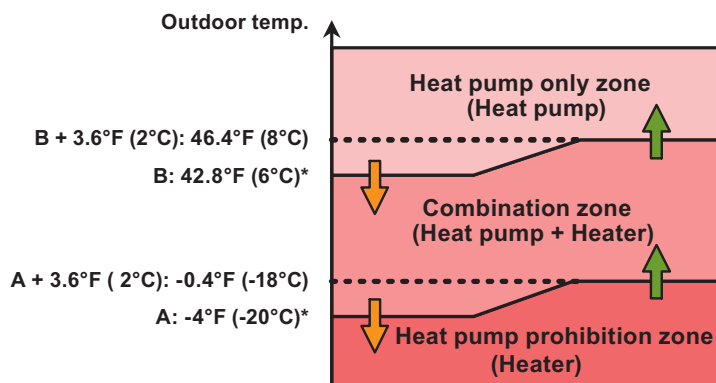
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary A and B: Adjustable individually by function setting number 66 and 67.

• External heater output



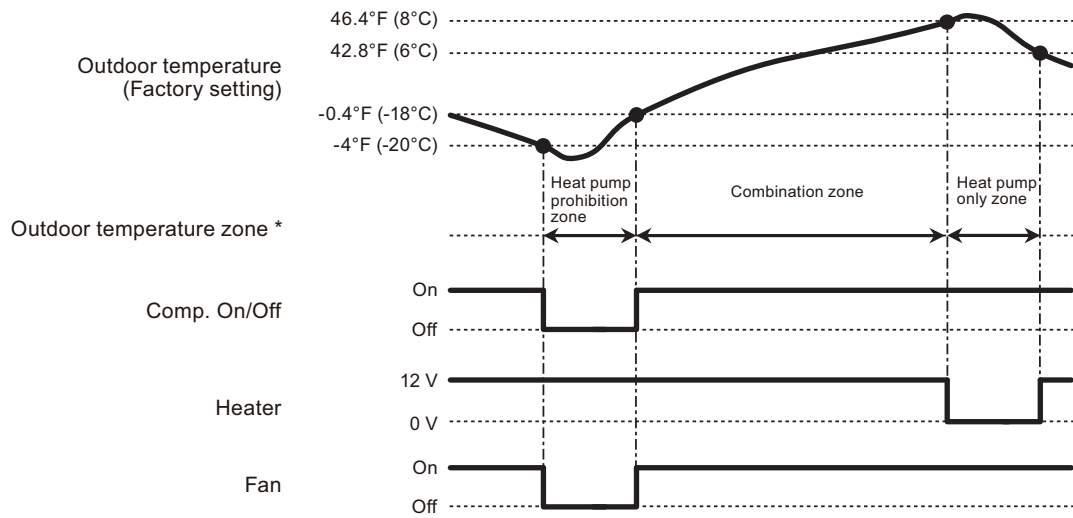
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 66 and 67

• Operation status



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

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

- Other than heating
- Test run

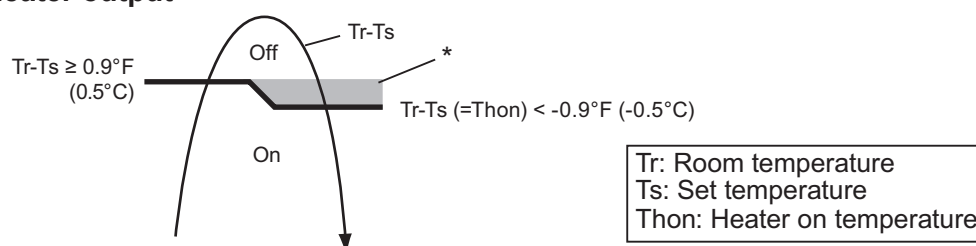
● Auxiliary heater control by outdoor temperature 2

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

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

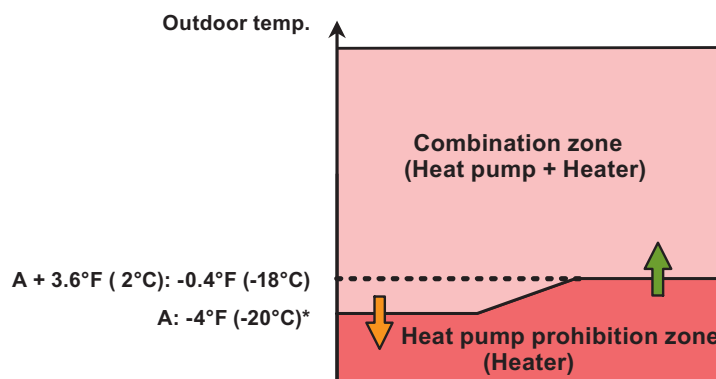
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary A: Adjustable by function setting number 66.

• External heater output



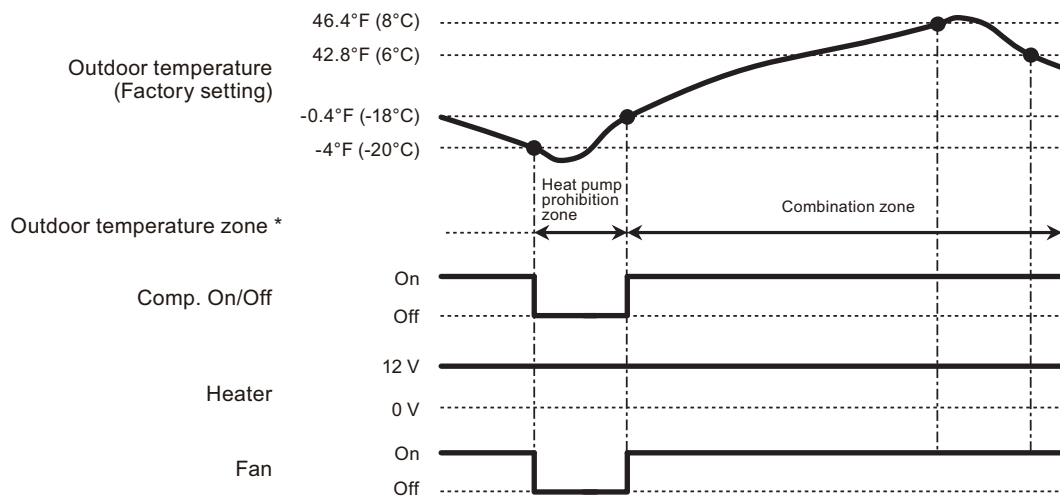
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 66

- Operation status



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

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

- Other than heating
- Test run

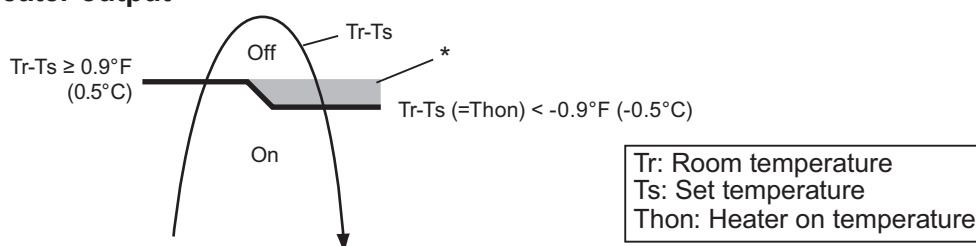
● Auxiliary heater control by outdoor temperature 3

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

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

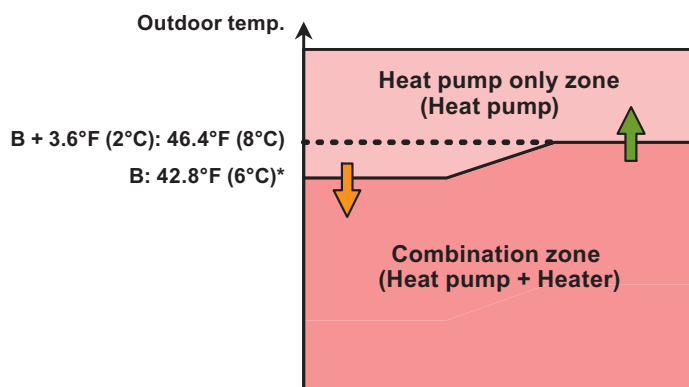
- Temperature of heater on (Thon): Adjustable by function number 62 (Operating temperature switching of external heaters).
- All control temperatures will shift by adjusting "Thon".
- Outdoor temperature zone boundary B: Adjustable by function setting number 67.

• External heater output



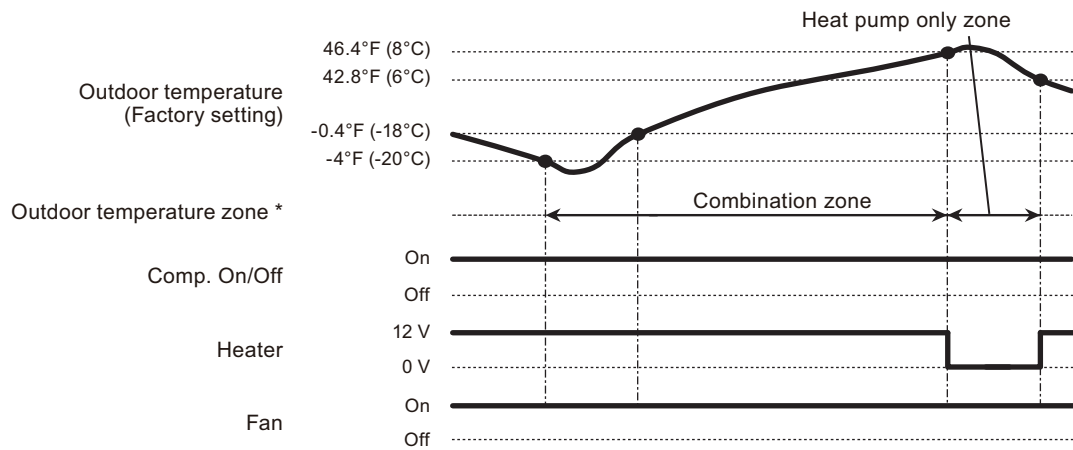
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 67

- Operation status



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

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

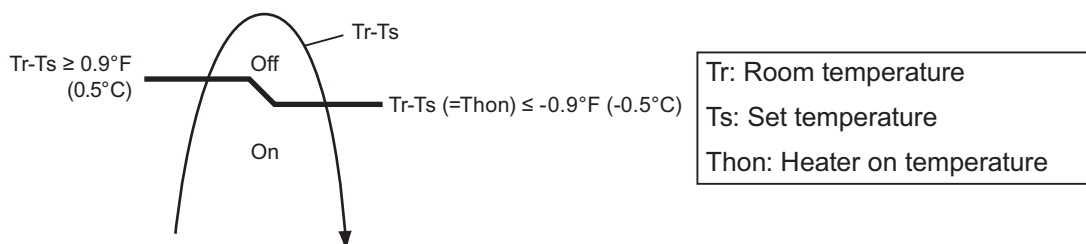
- Other than heating
- Test run

● Auxiliary heat pump control

• External heater output

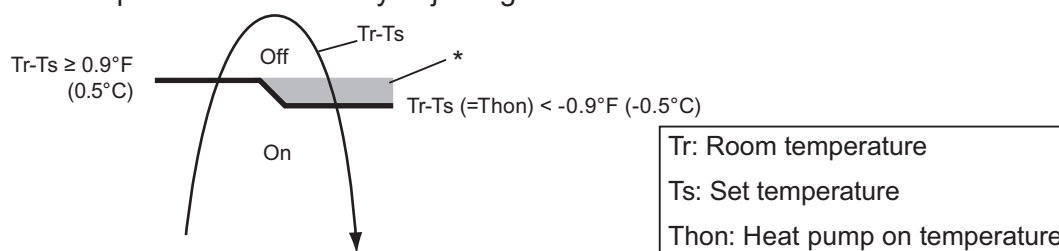
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

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



• 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".



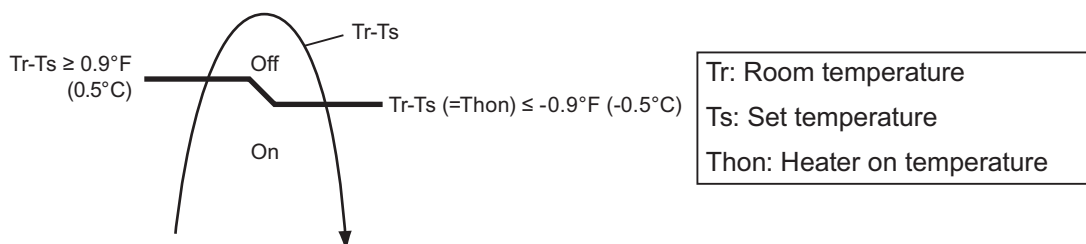
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

● Auxiliary heat pump control by outdoor temperature 1

• External heater output

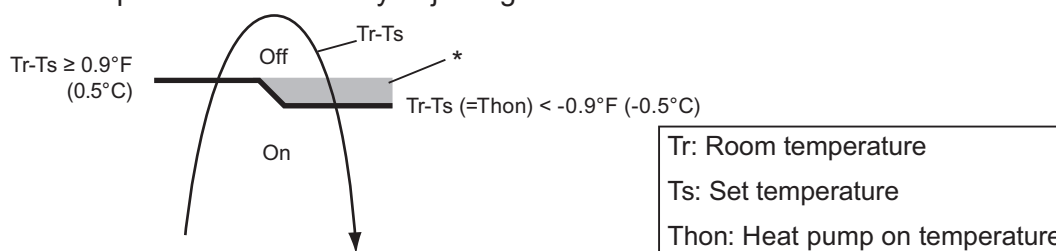
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

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



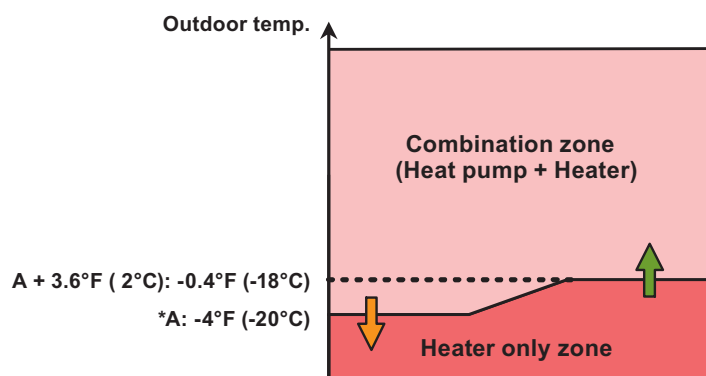
• Auxiliary heat pump On/Off

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



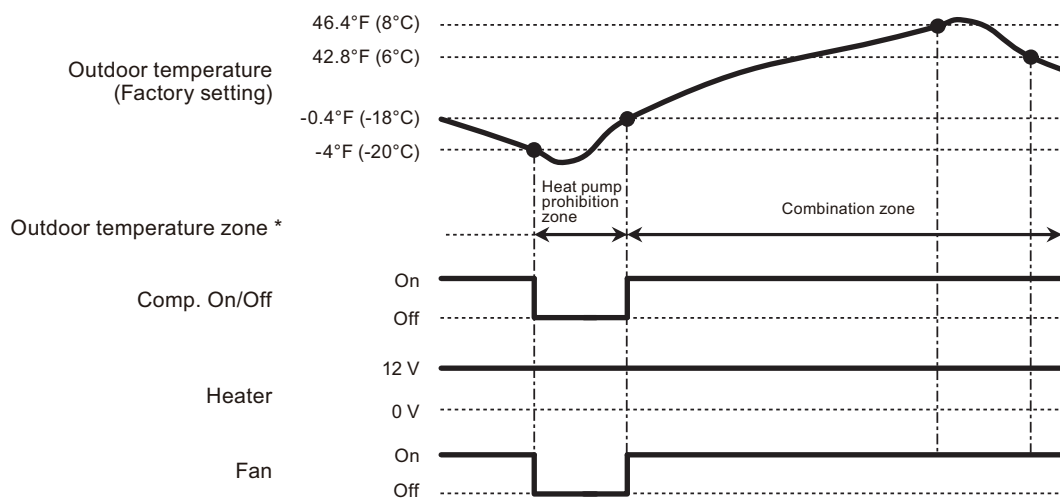
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 66

- Operation status



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

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

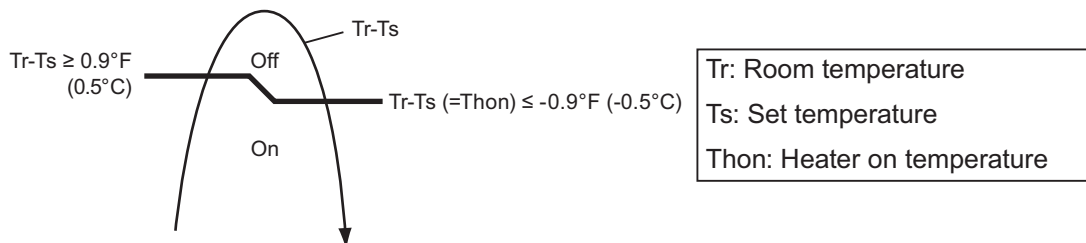
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 2

• External heater output

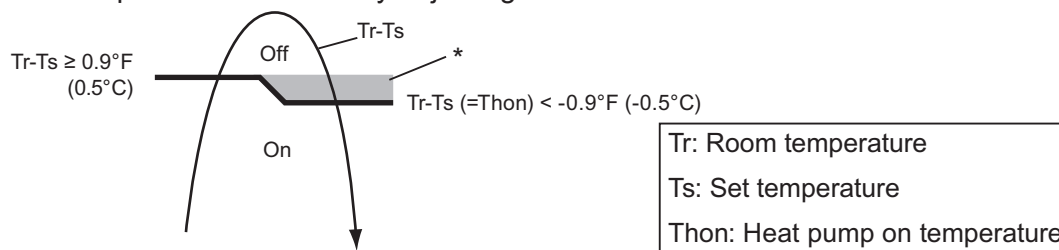
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

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



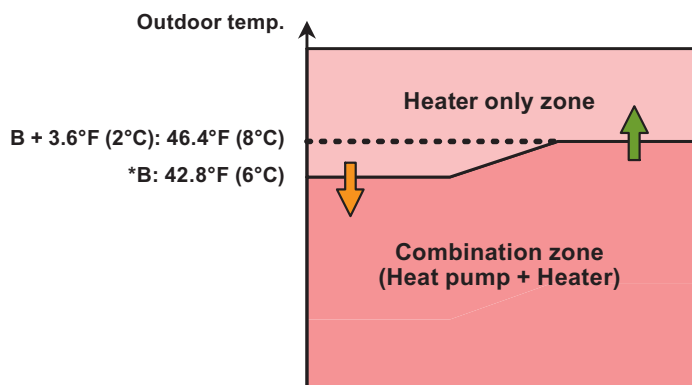
• Auxiliary heat pump On/Off

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



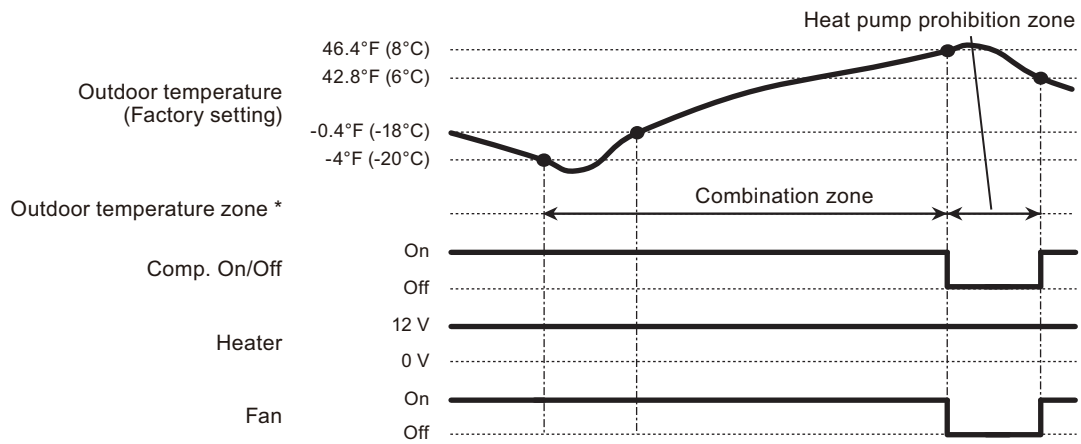
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 67

- Operation status



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

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

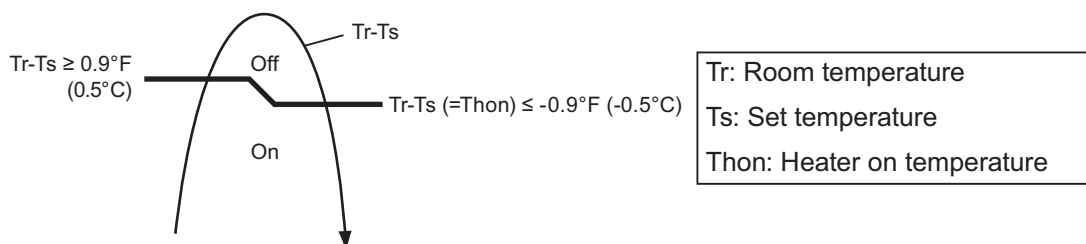
- Other than heating
- Test run

● Auxiliary heat pump control by outdoor temperature 3

• External heater output

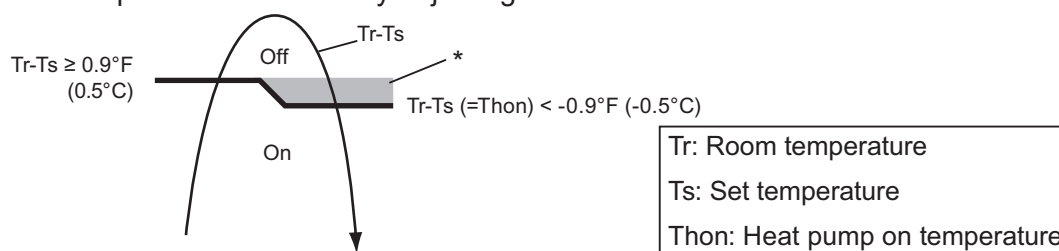
Operation	Condition
Heater on	Heater is on as shown in following diagram of heating temperature.
Heater off	- Heater is off as shown in following diagram of heating temperature. - Other than heating mode - Error occurred - Forced thermostat off

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



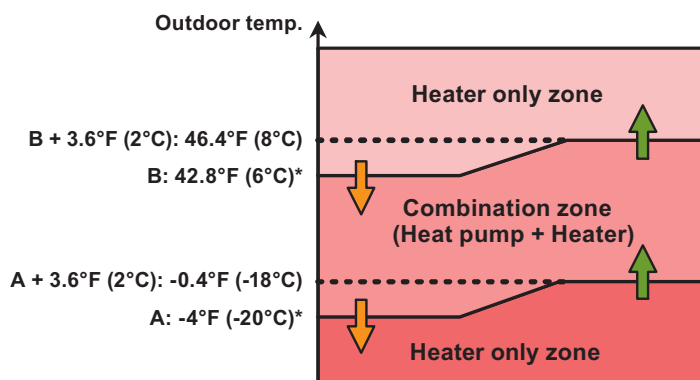
• Auxiliary heat pump On/Off

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



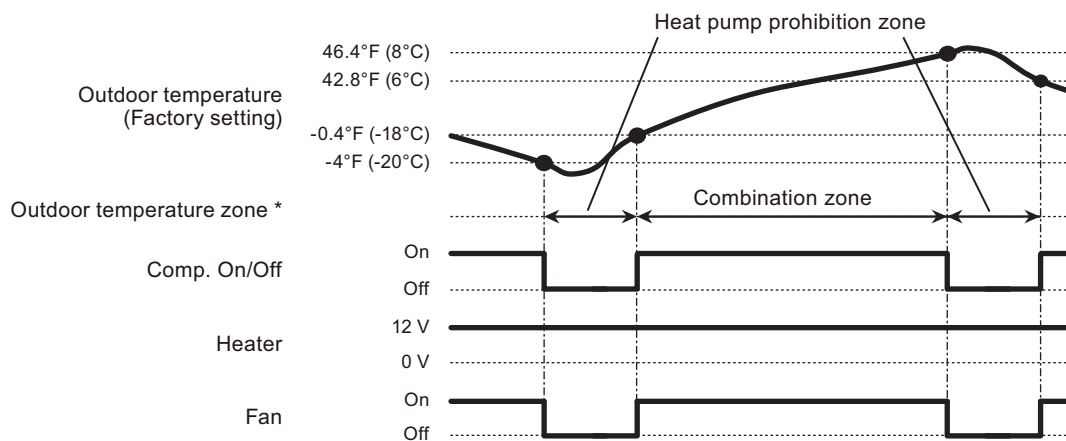
*: When room temperature stays in this zone for a specific time, auxiliary heater is turned on. For details, refer to function number 71.

• Outdoor temperature zone



*: Adjustable by function setting 66 and 67

- Operation status



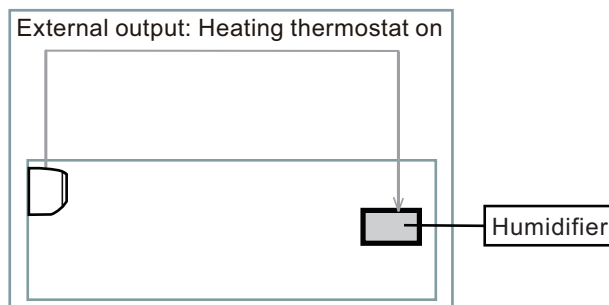
NOTE: In following operations, compressor will be on in heat pump prohibition zone.

- Other than heating
- Test run

■ Heating thermostat on for humidifier

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

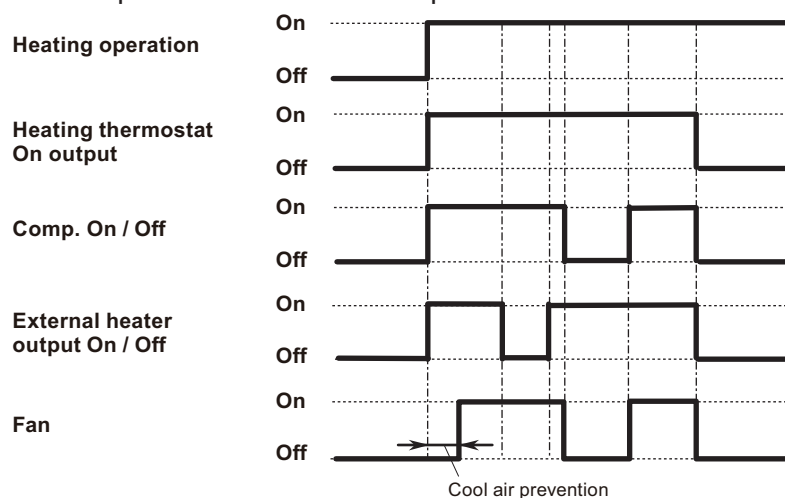
• Example of individual connection



• Operation status

The heating thermostat output for CN47, Output 1, Output 2, or Output 3 will be on when comp on or external heater on.

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



9. Group connection

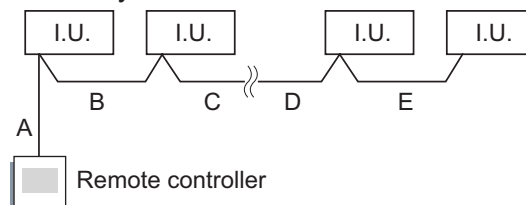
NOTE: Group control cannot be used together with WLAN Adapter.

Installation procedure for group control system:

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

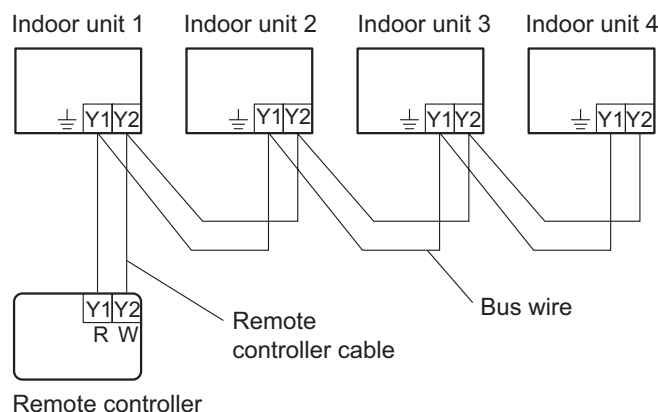
NOTE: When different type of indoor units (such as wall-mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

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



A, B, C, D, E: Remote controller cable	
Wiring length limitation	$A + B + C + D + E \leq 546.8 \text{ yd (500 m)}$

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. Function settings

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

NOTE: Incorrect settings can cause a product malfunction.

10-1. Function settings by using remote controller

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

■ Setting procedure by using remote controller

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

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

■ Contents of function setting

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

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

● Function setting list

	Function no.	Functions
1)	11	Filter sign
2)	20	Ceiling height
3)	28	Horizontal louver direction switching for dew condensation prevention
4)	30/31	Room temperature control for indoor unit sensor
5)	35/36	Room temperature control for wired remote controller sensor
6)	40	Auto restart
7)	42	Room temperature sensor switching
8)	44	Remote controller custom code
9)	46	External input control
10)	48	Room temperature sensor switching (Aux.)
11)	49	Indoor unit fan control for energy saving for cooling
12)	60	Switching functions for external output terminal
13)	61	Control switching of external heaters
14)	62	Operating temperature switching of external heaters
15)	66	Outdoor temperature zone boundary temperature A
16)	67	Outdoor temperature zone boundary temperature B
17)	71	Standby time for auxiliary equipment operation
18)	72	Heat pump backup setting
19)	73	Emergency heat for external output terminal
20)	74	Fan delay time
21)	75	External heater use in defrosting
22)	94	Fixed operation mode switching

1) Filter sign

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

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

Function number	Setting value	Setting description	Factory setting
11	00	Standard (2,500 hours)	
	01	Long interval (4,400 hours)	
	02	Short interval (1,250 hours)	
	03	No indication	◆

2) Ceiling height

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

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

For the specific height for each setting value, refer to "Installation space" in Chapter 2. ["Dimensions"](#) on page 8.

3) Horizontal louver direction switching for dew condensation prevention

Automatically switches the position of the horizontal louver if the airflow direction is set at lower than the dew condensation limit position in cooling or drying operation.

Select suitable adjustment position according to the customer's preference.

Function number	Setting value	Setting description	Factory setting
28	00	Adjust to dew condensation limit position	◆
	01	Adjust to cooling standard position	

4) Room temperature control for indoor unit sensor

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

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

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

Example of correction:

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

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

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

5) Room temperature control for wired remote controller sensor

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

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

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

Function number		Setting value	Setting description	Factory setting
35 (For cooling)	36 (For heating)	00	Standard setting	◆
		01	No correction 0.0°F (0.0°C)	
		02	-1°F (-0.5°C)	More cooling Less heating
		03	-2°F (-1.0°C)	
		04	-3°F (-1.5°C)	
		05	-4°F (-2.0°C)	
		06	-5°F (-2.5°C)	
		07	-6°F (-3.0°C)	
		08	-7°F (-3.5°C)	
		09	-8°F (-4.0°C)	
		10	+1°F (+0.5°C)	Less cooling More heating
		11	+2°F (+1.0°C)	
		12	+3°F (+1.5°C)	
		13	+4°F (+2.0°C)	
		14	+5°F (+2.5°C)	
		15	+6°F (+3.0°C)	
		16	+7°F (+3.5°C)	
		17	+8°F (+4.0°C)	

6) Auto restart

Enables or disables automatic restart after a power interruption.

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

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

7) Room temperature sensor switching

(Only for wired remote controller)

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

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

00: Sensor on the indoor unit is active.

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

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

8) Remote controller custom code

(Only for wireless remote controller)

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

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

9) External input control

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

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

10) Room temperature sensor switching (Aux.)

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

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

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

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

11) Indoor unit fan control for energy saving for cooling

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

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

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

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

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

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

12) Switching functions for external output terminal

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

Function number	Setting value	Setting description	Factory setting
60	00	Operation status	◆
	01—04	Cooling thermostat On	
	05	Heating operation	
	06	Operation/Stop	
	07—08	Cooling thermostat On	
	09	Error status	
	10	Fresh air control	
	11	External heater	

13) Control switching of external heaters

Sets the control method for external heater to be used.

For details, refer to “External heater output” in ["Details of control output function"](#) on page 44.

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	

14) Operating temperature switching of external heaters

Sets the temperature conditions when the external heater is ON.

For details, refer to "External heater output" in ["Details of control output function"](#) on page 44.

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

15) Outdoor temperature zone boundary temperature A

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

For details, refer to "External heater output" in ["Details of control output function"](#) on page 44.

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)	

16) Outdoor temperature zone boundary temperature B

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

For details, refer to "External heater output" in ["Details of control output function"](#) on page 44.

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

17) 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 44.

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

18) Heat pump backup setting

Enables or disables the heat pump backup instruction from the outdoor unit.

This function will be usable provided that the corresponding outdoor unit is connected.

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

19) 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 is necessary.

20) Fan delay time

Sets the fan delay time when the heater is turned off.

Function number	Setting value	Setting description	Factory setting
74	00	1 minute	◆
	01	50 seconds	
	02	40 seconds	
	03	30 seconds	

21) External heater use in defrosting

Enables or disables external heater use in defrosting.

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

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

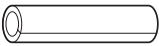
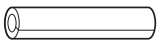
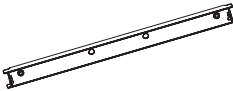
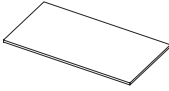
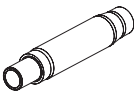
22) Fixed operation mode switching

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	

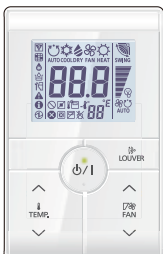
11. Accessories

11-1. Models: ABUH18LUAS, ABUH24LUAS, ABUH30LUAS, and ABUH36LUAS

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Hose band		1
Installation manual		1	Cable tie (large)		4
Template		1	Cable tie (small)		1
Washer		8	Cable hole cap		1
Coupler heat insulation (large)		1	Self-tapping screw (white)		6
Coupler heat insulation (small)		1	Casing guard (for 24, 30, and 36 model)		1
Insulation		1	Self-tapping screw		3
Drain hose		1			

12. Optional parts

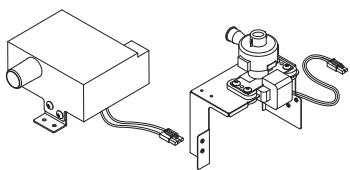
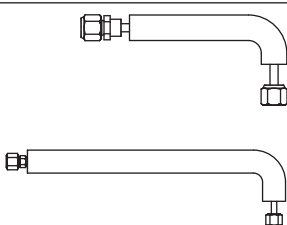
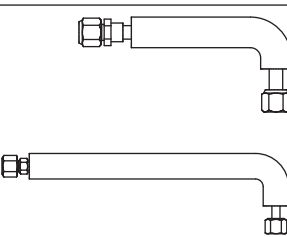
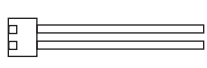
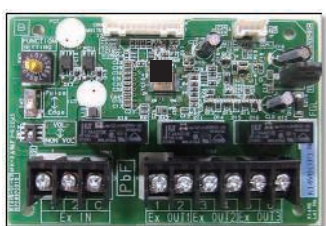
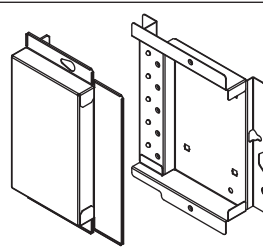
12-1. Controllers

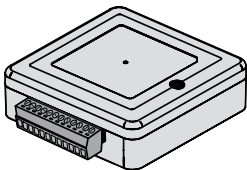
Exterior	Part name	Model name	Summary
	Wired Remote Controller	UTY-RNRUZ*	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Wire type: Non-polar 2-wire
	Simple Remote Controller	UTY-RSRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Non-polar 2-wire
	Simple Remote Controller	UTY-RHRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting. Wire type: Non-polar 2-wire
	IR Receiver Kit with Wireless Remote Controller	UTY-LBTUH	Unit control is performed by Wireless Remote Controller. Connecting point: CN48 on Main PCB

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.

12-2. Others

Exterior	Part name	Model name	Summary
	Drain Pump Unit	UTZ-PU1EBB	Optional drain lift up mechanism allows more flexible installation.
	Auxiliary Pipe Assembly	UTP-FX24A	For piping of upward direction only. • For liquid: 1/4 in (6.35 mm) • For gas: 1/2 in (12.70 mm)
	Auxiliary Pipe Assembly	UTP-FX35A	For piping of upward direction only. • For liquid: 3/8 in (9.52 mm) • For gas: 5/8 in (15.88 mm)
	External Connect Kit	UTY-XWZXZG	Use to connect with various peripheral devices and air conditioner PCB. For control output port. Connecting point: CN47 on Main PCB
	External Input and Output PCB	UTY-XCSX	Use to connect with external devices and air conditioner PCB. Connecting point: CN65 or CN75 on Main PCB
	External Input and Output PCB Box	UTZ-GXEA	For installing the External input and output PCB.
	WLAN Adapter	UTY-TFSXJ4	Remotely manage an air conditioning system using mobile devices such as smartphones and tablets. For connection indoor unit with UART interface. Appropriate application for each region is required to use this option. For details, contact FGL sales company. Connecting point: CN75 on Main PCB
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: CN65 or CN75 on Main PCB

Exterior	Part name	Model name	Summary
	KNX Converter	UTY-VKSX	For connection between indoor unit with UART interface and a KNX open network. Connecting point: CN65 or CN75 on Main PCB
	Thermostat Converter	UTY-TTRXZ*	This converter can control Fujitsu General products using a third-party thermostat controller. Connecting point: Terminal block (Y1, Y2) on Main PCB
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system. Connecting point: Terminal block (Y1, Y2) on Main PCB
	Network Converter (AC power supply)	UTY-VTGXV	This converter is required when connecting single split system to VRF network system. Connecting point: Terminal block (Y1, Y2) on Main PCB
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Connecting point: Terminal block (Y1, Y2) on Main PCB

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOUH18LUAS1

AOUH24LUAS1

AOUH30LUAS1

AOUH36LUAS1

1. Specifications

Type				Inverter, Heat pump		
Model name				AOUH18LUAS1	AOUH24LUAS1	
Power supply				208/230 V~ 60 Hz		
Power supply intake				Outdoor unit		
Available voltage range				187—253 V		
Starting current			A	8.1	10.3	
Fan	Airflow rate	Cooling	CFM (m³/h)	1,395 (2,370)	2,187 (3,715)	
		Heating			2,187 (3,715)	
	Type × Qty			Propeller fan × 1		
Motor output		W	49	100		
Sound pressure level*		Cooling	dB (A)	52		
		Heating		55	54	
Heat exchanger type	Dimensions (H × W × D)	in (mm)	Main 1: 23-1/8 × 34-11/16 × 11/16 (588 × 881 × 18.19) Main 2: 23-1/8 × 33-1/2 × 11/16 (588 × 851 × 18.19)	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	Main 1: 20 Main 2: 20	Main 1: 18 Main 2: 18		
	Rows × Stages		Main 1: 1 × 28 Main 2: 1 × 28	Main 1: 1 × 36 Main 2: 1 × 36		
	Pipe type		Copper tube			
	Fin type		Type (Material)	Aluminum		
			Surface treatment	PC fin	Blue fin	
Compressor	Type		DC rotary	DC twin rotary		
	Motor output	W	1,030	1,360		
Refrigerant	Type		R410A			
	Charge	lb oz	2 lb 12 oz	4 lb 10 oz		
		g	1,250	2,100		
Refrigerant oil	Type		POE (RB68)			
	Amount	in³ (cm³)	24.4 (400)	48.8 (800)		
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)	31 × 37 × 12-5/8 (788 × 940 × 320)		
	Gross		27-1/4 × 37 × 14-3/4 (692 × 940 × 375)	38-1/16 × 40-7/16 × 17-1/2 (966 × 1,027 × 445)		
Weight	Net	lb (kg)	86 (39)	117 (53)		
	Gross		95 (43)	134 (61)		
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)	Ø3/8 (Ø9.52)	
		Gas		Ø1/2 (Ø12.70)	Ø5/8 (Ø15.88)	
	Method		Flare			
	Pre-charge length		ft (m)	66 (20)		
	Max. length			98 (30)	164 (50)	
	Max. height difference			49 (15)	98 (30)	
		14 to 115 (-10 to 46)		-5 to 115 (-21 to 46)		
Operation range		Cooling	°F (°C)	-5 to 75 (-21 to 24)		
		Heating				
Drain hose		Material	LDPE			
		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)/60°FWB (15.56°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.
- *: 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.

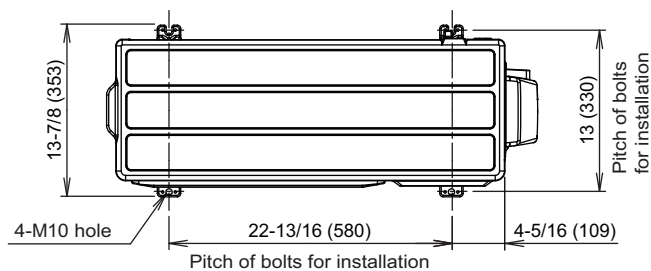
Type				Inverter, Heat pump	
Model name				AOUH30LUAS1	AOUH36LUAS1
Power supply				208/230 V~ 60 Hz	
Power supply intake				Outdoor unit	
Available voltage range				187—253 V	
Starting current			A	13.4	16.5
Fan	Airflow rate	Cooling	CFM (m³/h)	2,301 (3,910)	2,502 (4,250)
		Heating		2,219 (3,770)	2,431 (4,130)
		Type × Qty		Propeller fan × 1	
Motor output			W	120	
Sound pressure level*		Cooling	dB (A)	53	54
		Heating		55	56
Heat exchanger type		Dimensions (H × W × D)	in (mm)	Main 1: 38-1/16 × 35-5/8 × 11/16 (966 × 905 × 18.19) Main 2: 38-1/16 × 35-5/8 × 11/16 (966 × 905 × 18.19)	
		Fin pitch	FPI	Main 1: 18 Main 2: 18	
		Rows × Stages		Main 1: 1 × 46 Main 2: 1 × 46	
		Pipe type		Copper tube	
		Fin type	Type (Material)	Aluminum	
			Surface treatment	Blue fin	
Compressor		Type	DC twin rotary		
		Motor output	W	1,830	
Refrigerant		Type	R410A		
		Charge	lb oz g	5 lb 8 oz 2,500	
Refrigerant oil		Type	POE (RB68)		
		Amount	in³ (cm³)	48.8 (800)	
Enclosure		Material	Steel sheet		
		Color	Beige Approximate color of Munsell 10YR 7.5/1.0		
Dimensions (H × W × D)		Net	in (mm)	39-5/16 × 37 × 12-5/8 (998 × 940 × 320)	
		Gross		46-5/16 × 40-7/16 × 17-1/2 (1,176 × 1,027 × 445)	
Weight		Net	lb (kg)	139 (63)	
		Gross		159 (72)	
Connection pipe	Size	Liquid	in (mm)	Ø3/8 (Ø9.52)	
		Gas		Ø5/8 (Ø15.88)	
	Method		Flare		
	Pre-charge length		ft (m)	66 (20)	
	Max. length			164 (50)	
	Max. height difference			98 (30)	
Operation range		Cooling	°F (°C)	-5 to 115 (-21 to 46)	
		Heating		-5 to 75 (-21 to 24)	
Drain hose		Material	LDPE		
		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)/60°FWB (15.56°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. *: 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.					

OUTDOOR UNIT
AOUH18-36LUAS1OUTDOOR UNIT
AOUH18-36LUAS1

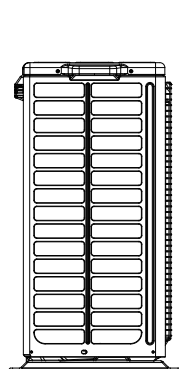
2. Dimensions

2-1. Model: AOUH18LUAS1

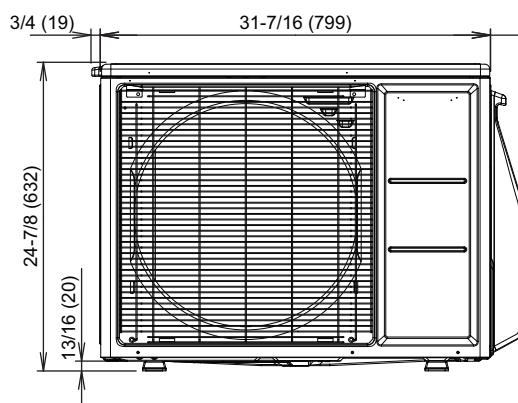
Unit: in (mm)



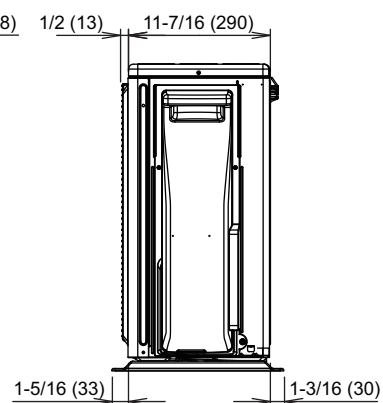
Top view



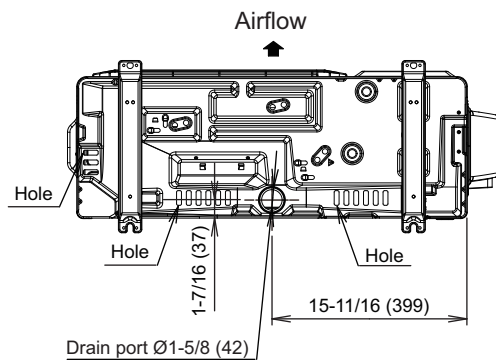
Side view



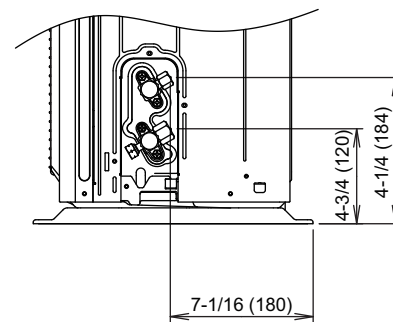
Front view



Side view



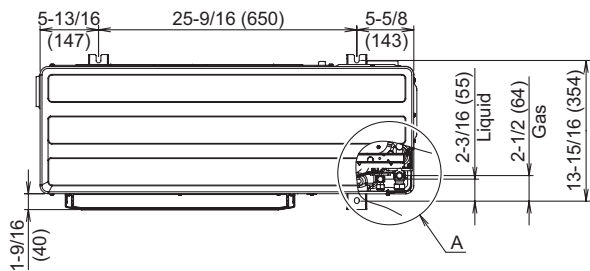
Bottom view



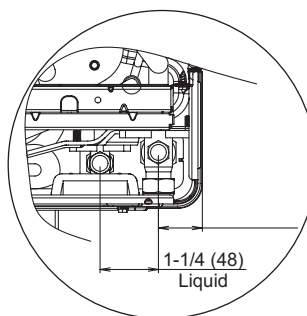
Side view (Valve part)

2-2. Model: AOUH24LUAS1

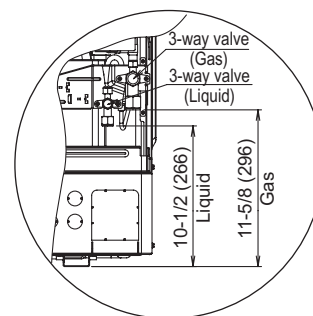
Unit: in (mm)

OUTDOOR UNIT
AOUH18-36LUAS1OUTDOOR UNIT
AOUH18-36LUAS1

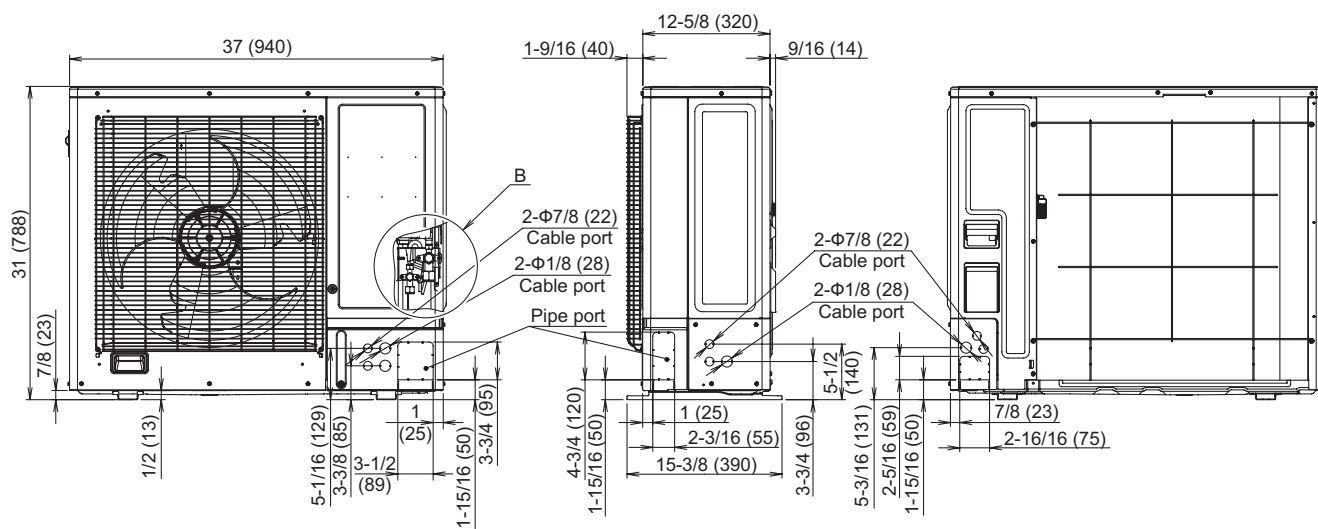
Top view



Detail A



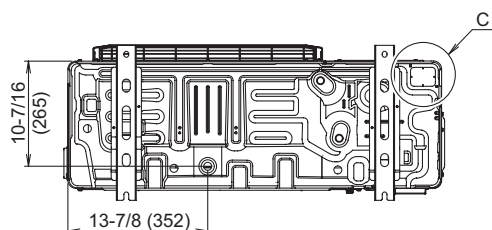
Detail B



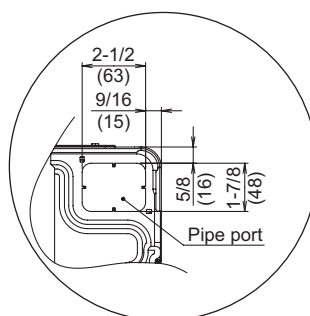
Front view

Side view

Rear view



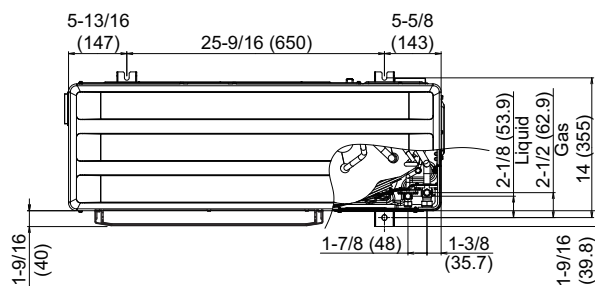
Bottom view



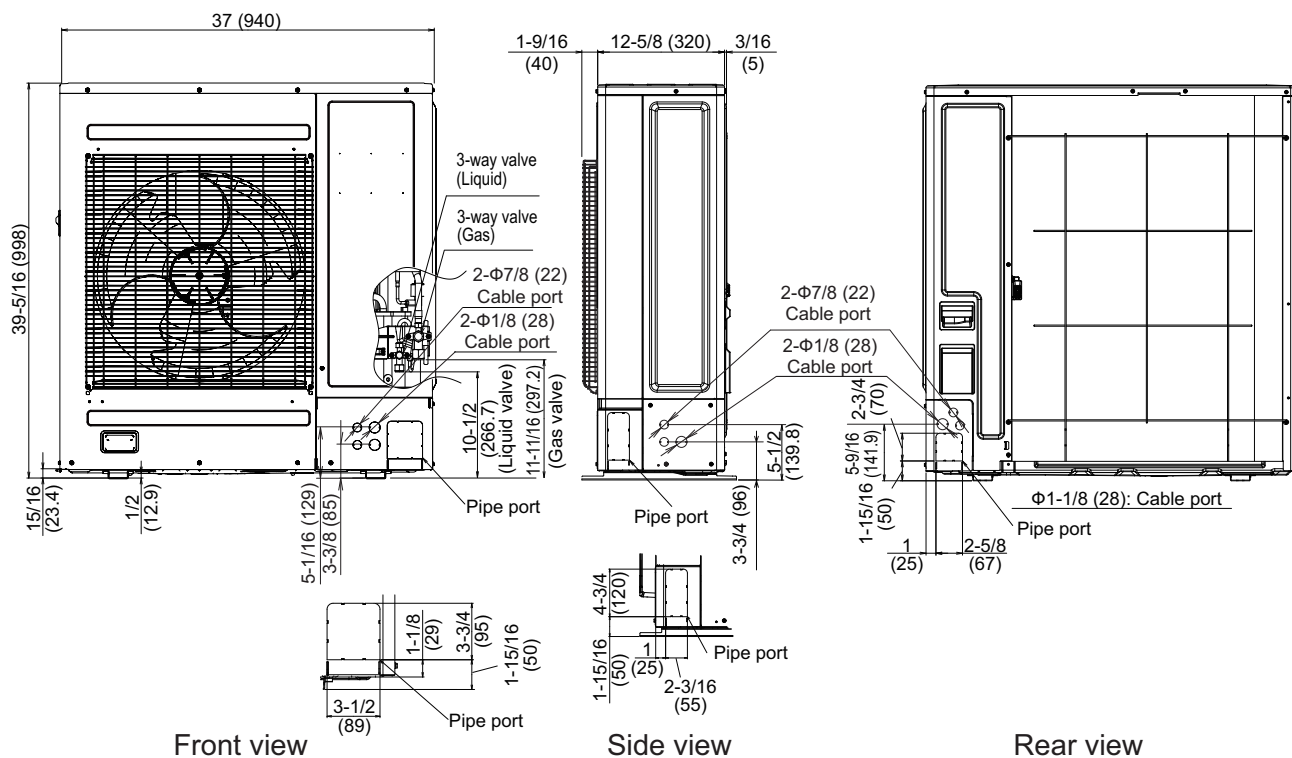
Detail C

2-3. Models: AOUH30LUAS1 and AOUH36LUAS1

Unit: in (mm)

OUTDOOR UNIT
AOUH18-36LUAS1OUTDOOR UNIT
AOUH18-36LUAS1

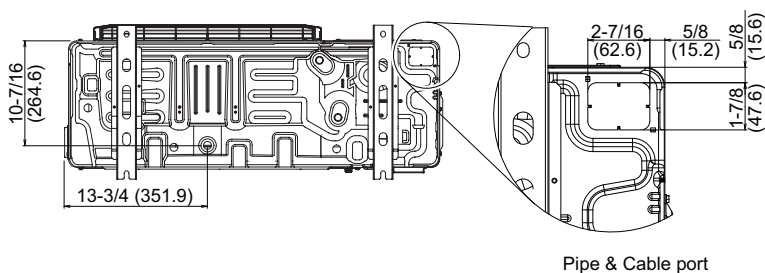
Top view



Front view

Side view

Rear view



Pipe & Cable port

Bottom view

3. Installation space

3-1. Model: AOUH18LUAS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

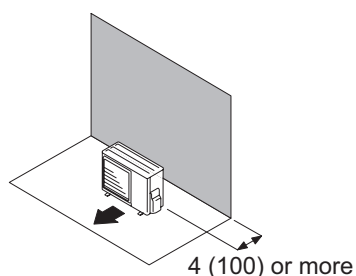
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

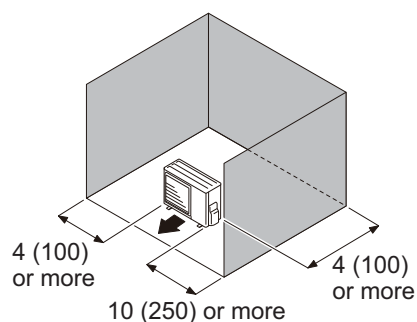
- When the upper space is open:

Unit: in (mm)

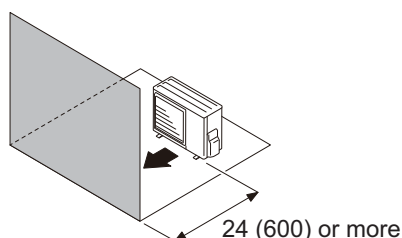
Obstacles at rear only



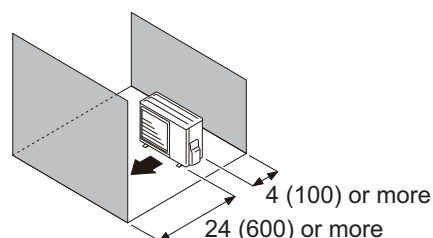
Obstacles at rear and sides



Obstacles at front



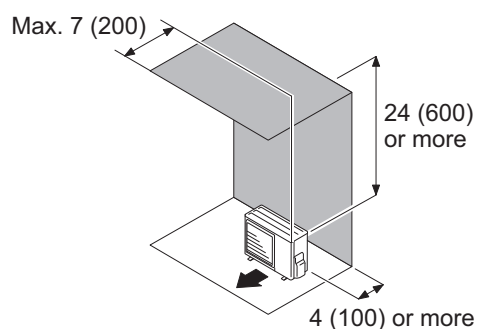
Obstacles at front and rear



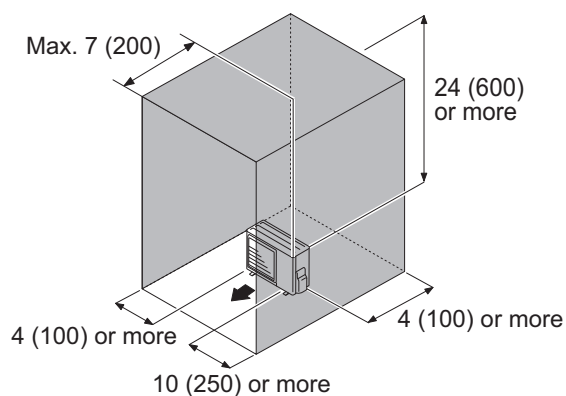
- When an obstruction in the upper space:

Unit: in (mm)

Obstacles at rear and above



Obstacles at rear, sides, and above

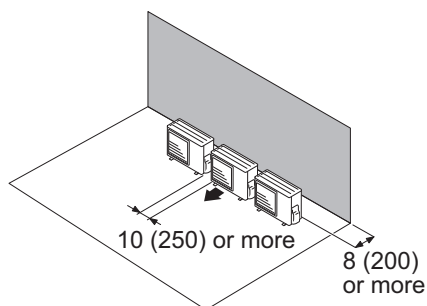


● Multiple outdoor unit installation

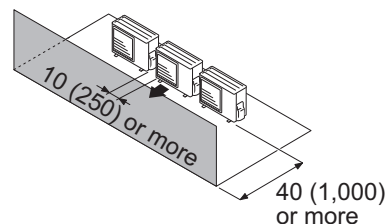
- Provide at least 10 in (250 mm) of space between the outdoor units if multiple units are installed.
- When routing the piping from the side of an outdoor unit, provide space for piping.
- No more than 3 units must be installed side by side.
When 4 units or more are arranged in a line, provide the space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

Unit: in (mm)

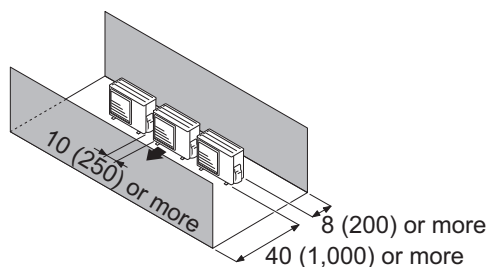
Obstacles at rear only



Obstacles at front only



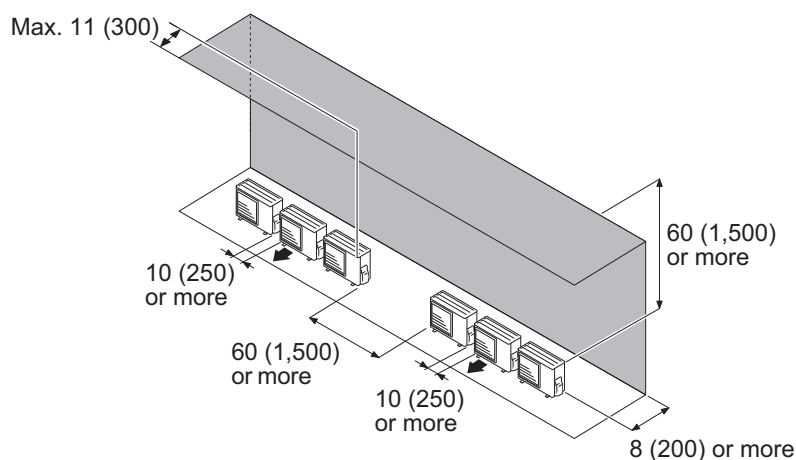
Obstacles at front and rear



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

Unit: in (mm)

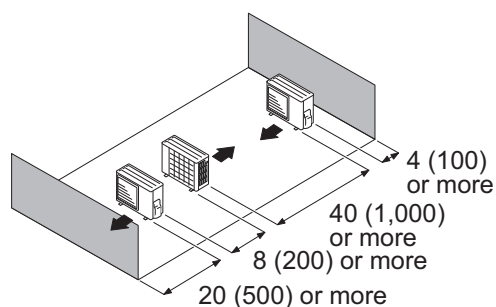
Obstacles at rear and above.



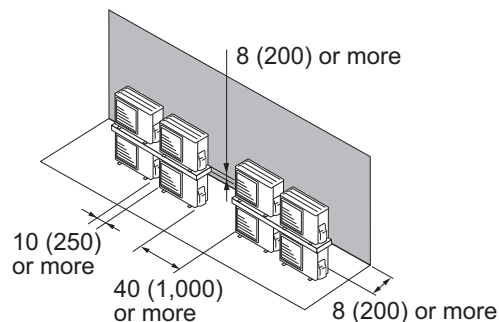
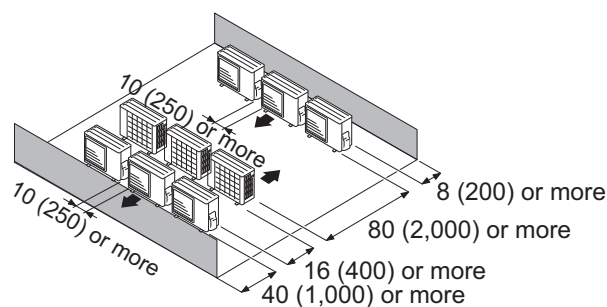
● Outdoor units installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



Multiple parallel unit arrangement

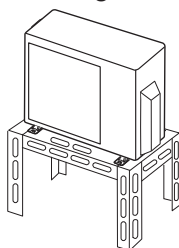


NOTES:

- 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: AOUH24LUAS1, AOUH30LUAS1, and AOUH36LUAS1

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

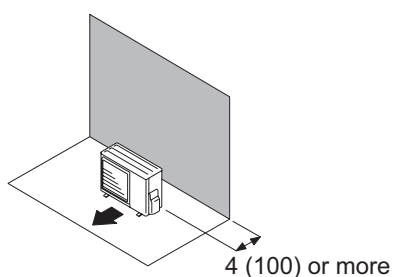
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

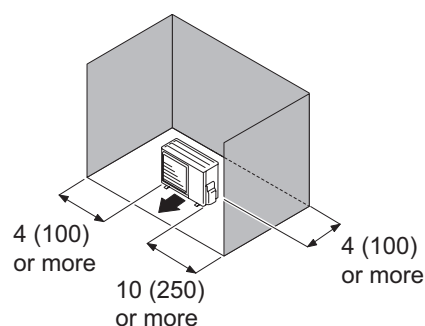
- When the upper space is open:

Unit: in (mm)

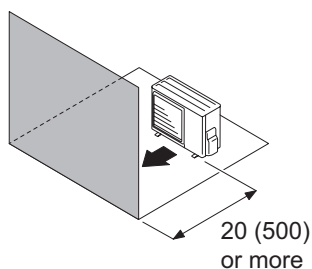
When there are obstacles at the rear only.



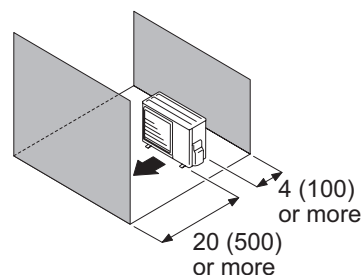
When there are obstacles at the rear and sides.



When there are obstacles at the front only.



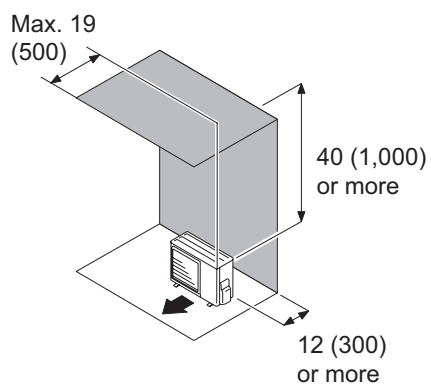
When there are obstacles at the front and rear.



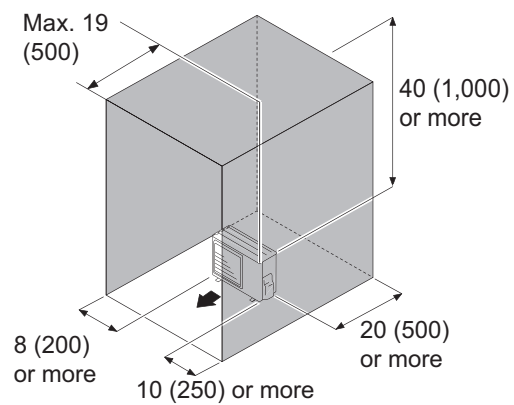
- When an obstruction in the upper space:

Unit: in (mm)

When there are obstacles at the rear and above.



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



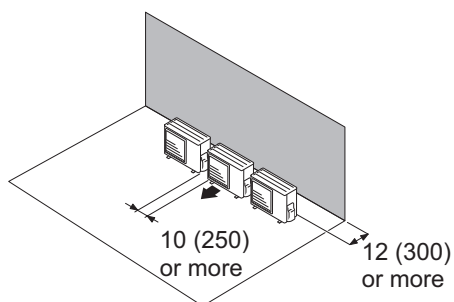
● Multiple outdoor unit installation

- 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:”**.

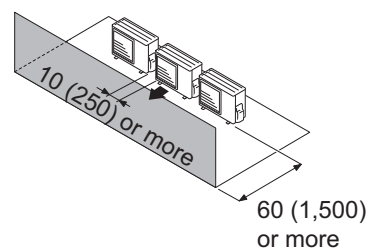
- **When the upper space is open:**

Unit: in (mm)

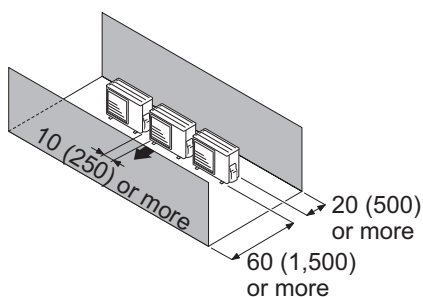
When there are obstacles at the rear only.



When there are obstacles at the front only.



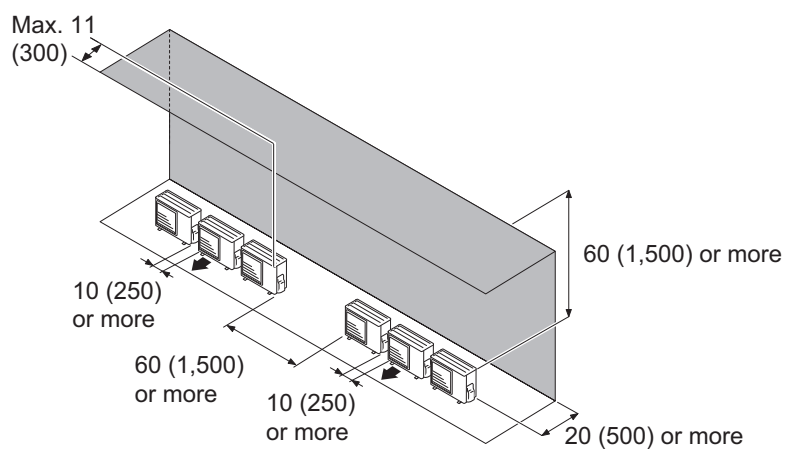
When there are obstacles at the front and rear.



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

Unit: in (mm)

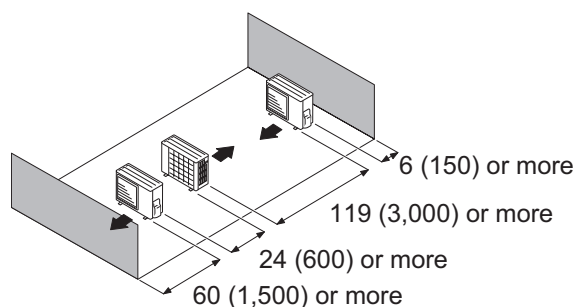
When there are obstacles at the rear and above.



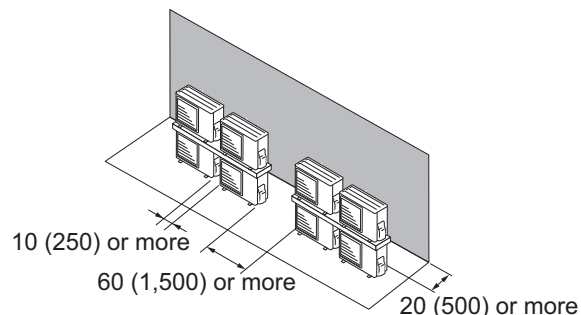
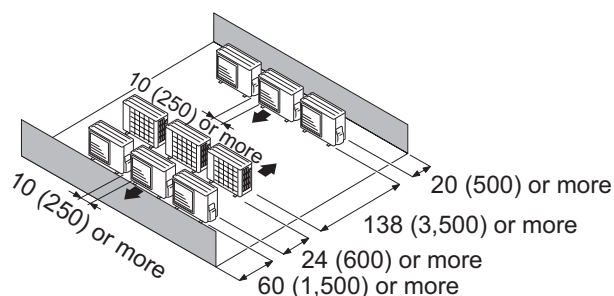
● Outdoor unit installation in multi-row

Unit: in (mm)

Single parallel unit arrangement



Multiple parallel unit arrangement

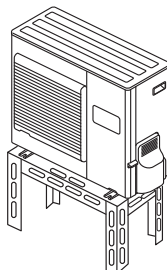


NOTES:

- 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.

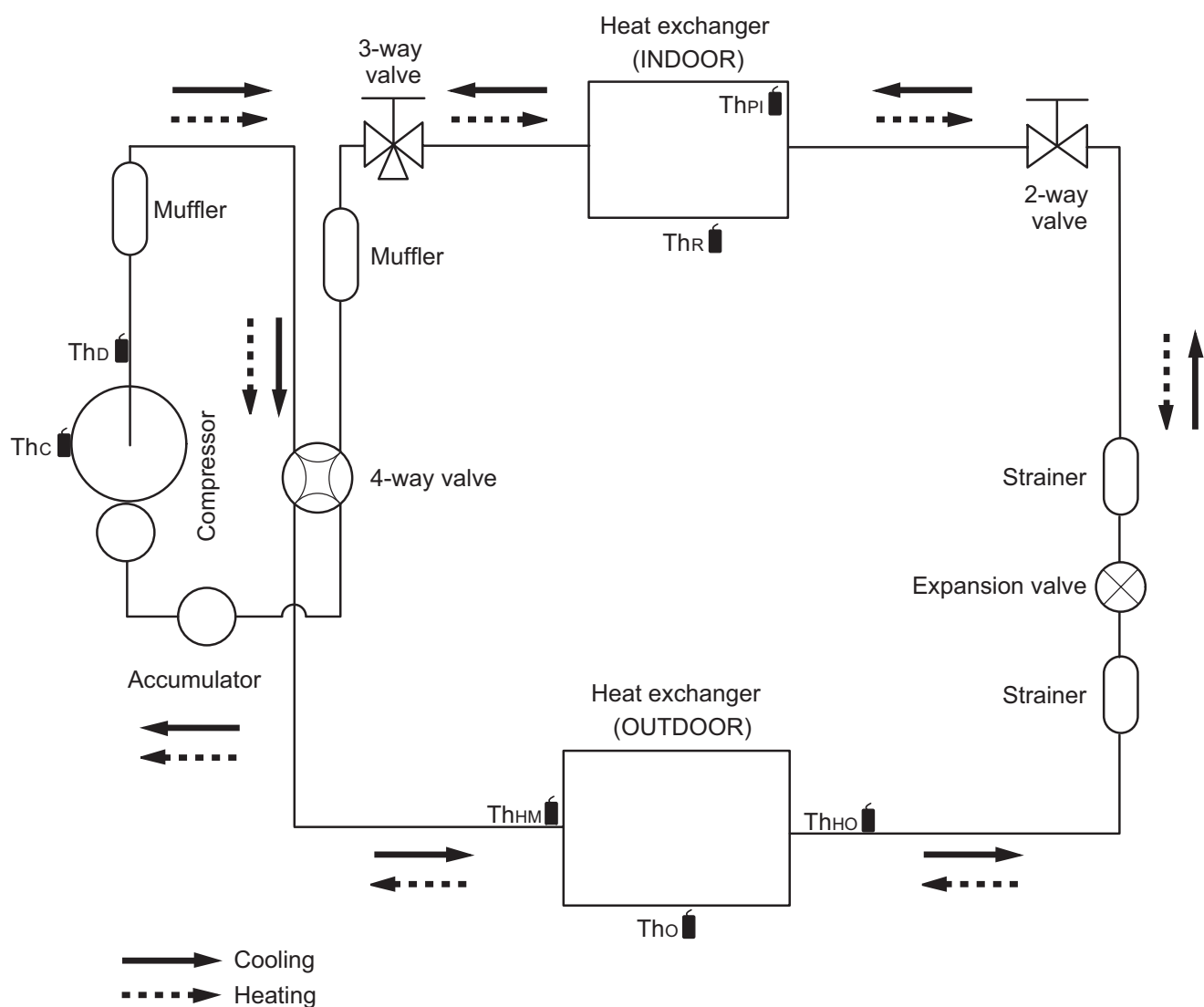
⚠ CAUTION

- 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. Model: AOUH18LUAS1



ThC : Thermistor (Compressor temperature)

ThD : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

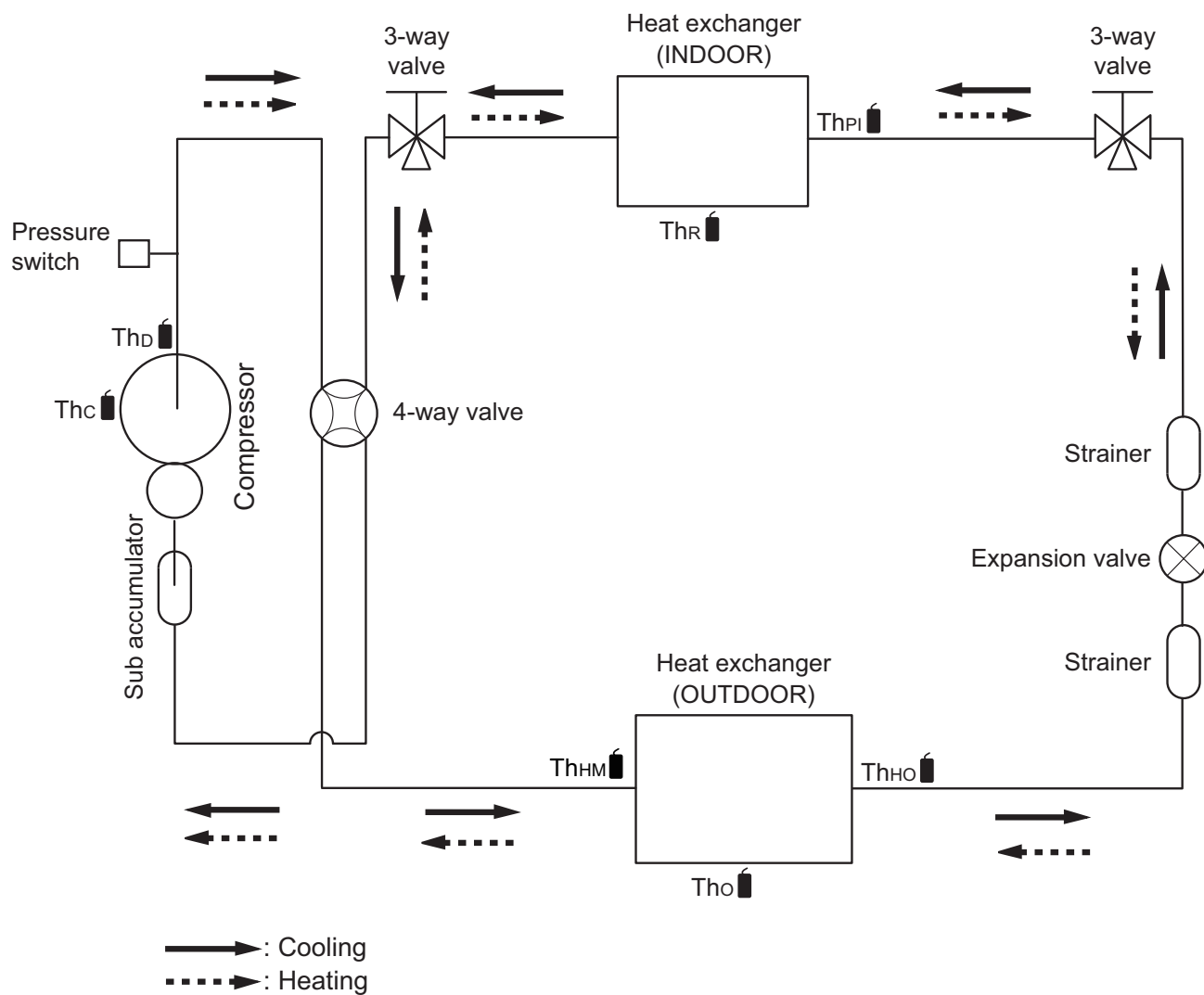
ThO : Thermistor (Outdoor temperature)

ThHO : Thermistor (Heat exchanger out temperature)

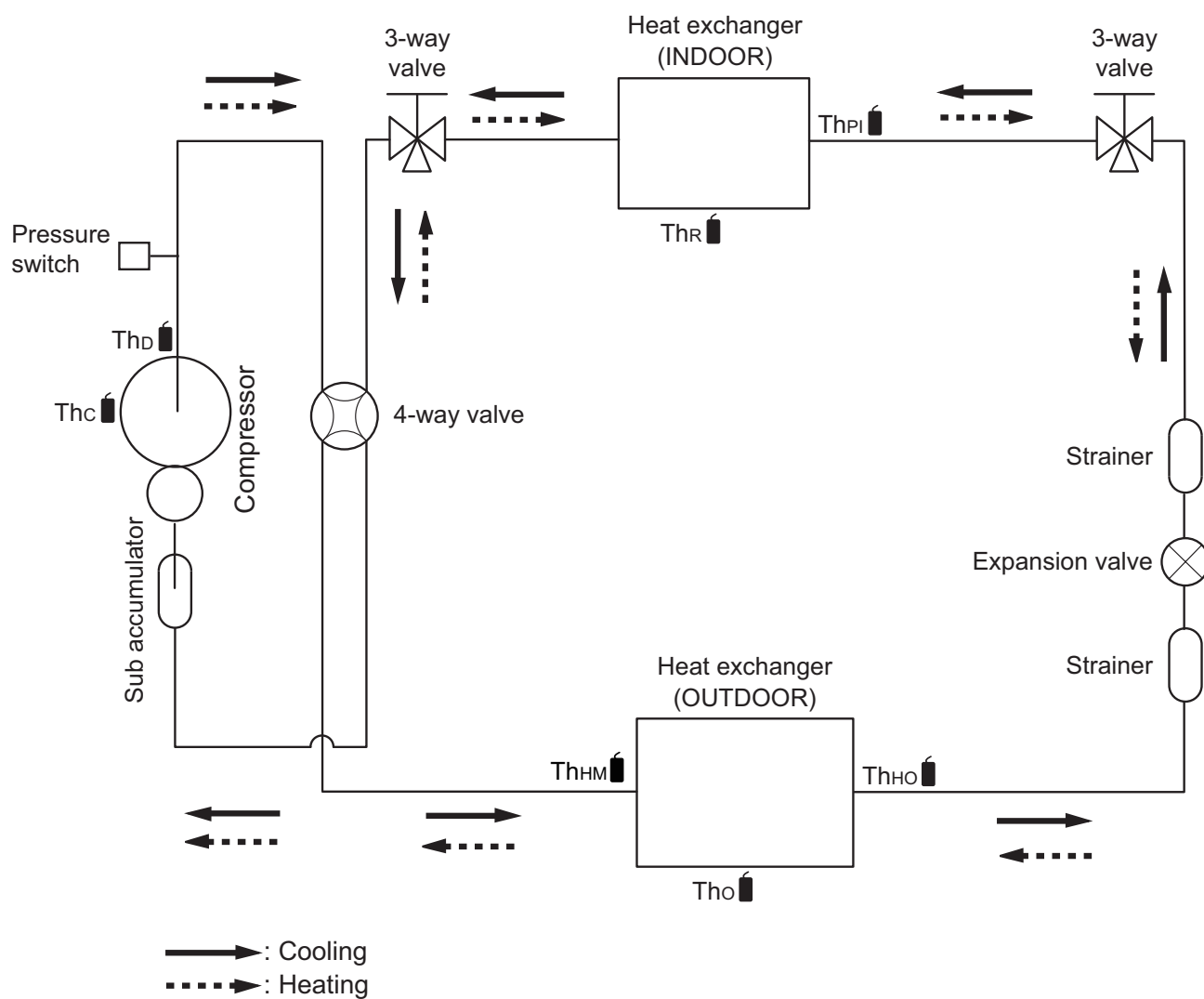
ThPI : Thermistor (Pipe temperature)

ThR : Thermistor (Room temperature)

4-2. Model: AOUH24LUAS1



4-3. Models: AOUH30LUAS1 and AOUH36LUAS1



Thc : Thermistor (Compressor temperature)

Thd : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

Tho : Thermistor (Outdoor temperature)

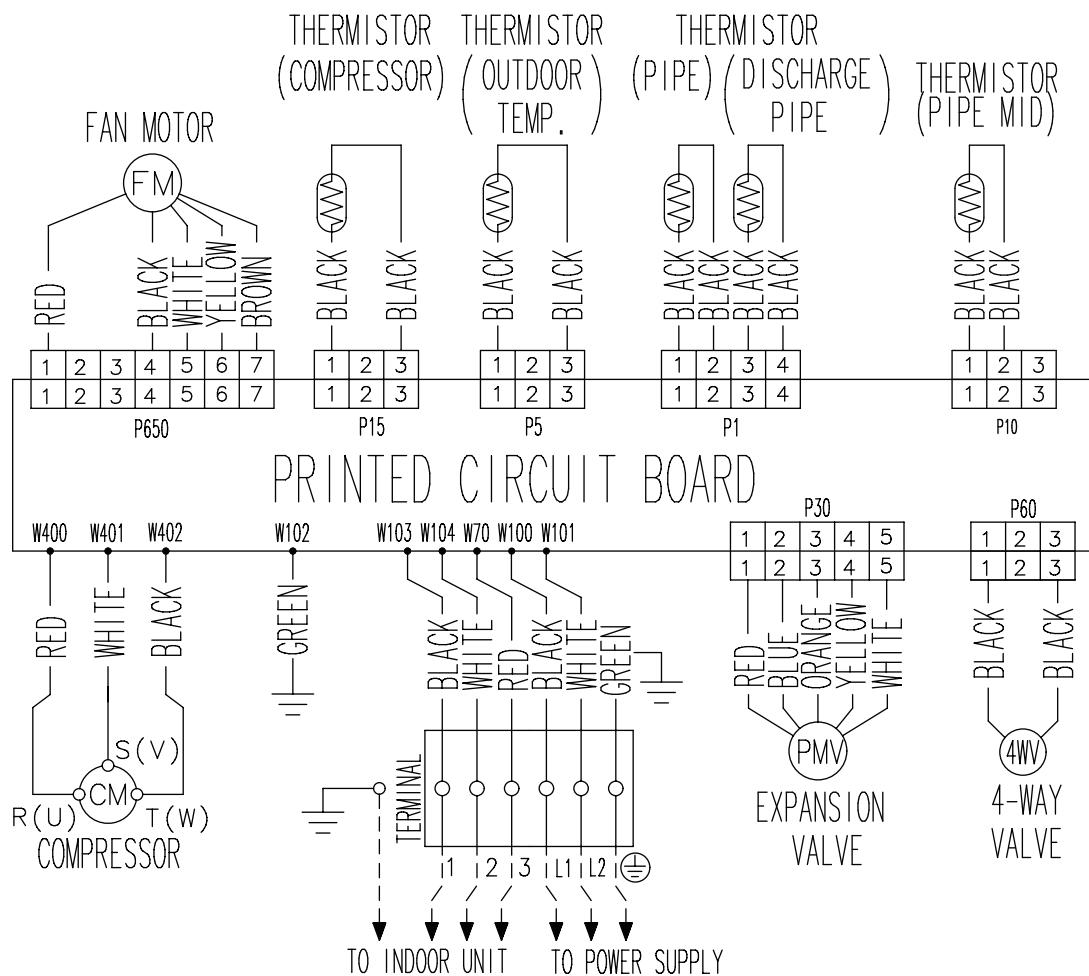
ThHO : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

ThR : Thermistor (Room temperature)

5. Wiring diagrams

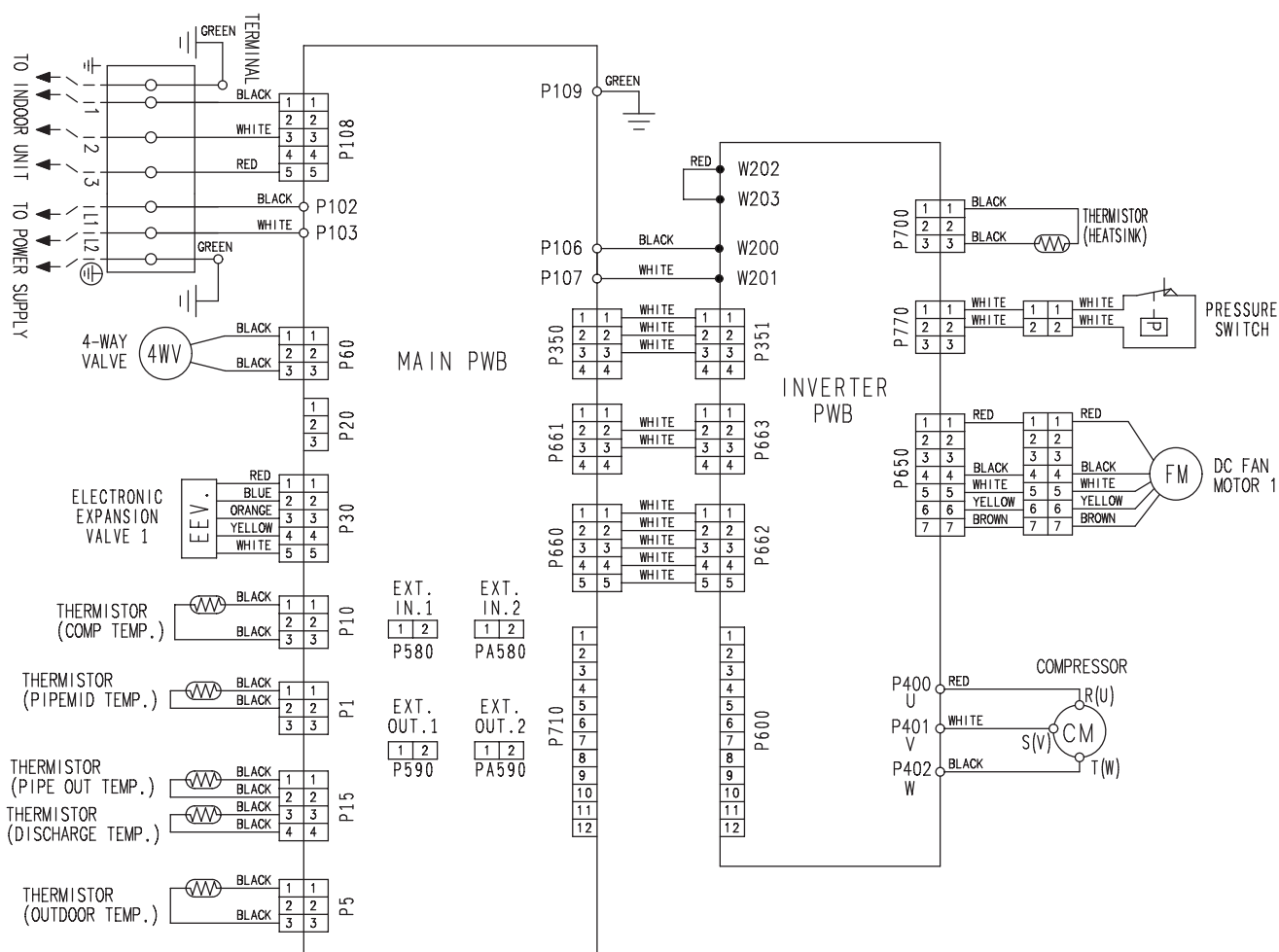
5-1. Model: AOUH18LUAS1



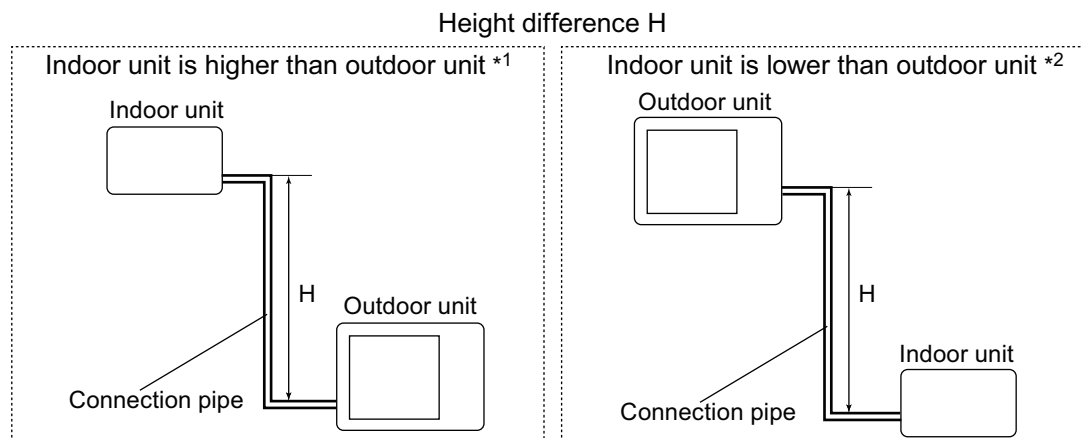
5-2. Models: AOUE24LUAS1, AOUE30LUAS1, and AOUE36LUAS1

OUTDOOR UNIT
AOUE18-36LUAS1

OUTDOOR UNIT
AOUE18-36LUAS1



6. Capacity compensation rate for pipe length and height difference



6-1. Model: AOUH18LUAS1

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

COOLING		Pipe length								
		m		5	7.5	10	15	20	25	30
			ft	16	25	33	49	66	82	98
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.951	0.950	0.947	0.941
		10	33	—	—	0.979	0.967	0.966	0.962	0.956
		7.5	25	—	0.988	0.983	0.971	0.970	0.966	0.960
		5	16	0.994	0.992	0.987	0.975	0.974	0.970	0.964
	Indoor unit is lower than outdoor unit *2	0	0	1.002	1.000	0.995	0.983	0.982	0.978	0.972
		-5	-16	1.002	1.000	0.995	0.983	0.982	0.978	0.972
		-7.5	-25	—	1.000	0.995	0.983	0.982	0.978	0.972
		-10	-33	—	—	0.995	0.983	0.982	0.978	0.972
		-15	-49	—	—	—	0.983	0.982	0.978	0.972

HEATING		Pipe length								
		m		5	7.5	10	15	20	25	30
			ft	16	25	33	49	66	82	98
Height difference H	Indoor unit is higher than outdoor unit *1	15	49	—	—	—	0.994	0.979	0.949	0.919
		10	33	—	—	1.012	0.994	0.979	0.949	0.919
		7.5	25	—	1.000	1.012	0.994	0.979	0.949	0.919
		5	16	0.969	1.000	1.012	0.994	0.979	0.949	0.919
	Indoor unit is lower than outdoor unit *2	0	0	0.969	1.000	1.012	0.994	0.979	0.949	0.919
		-5	-16	0.964	0.995	1.007	0.989	0.974	0.944	0.915
		-7.5	-25	—	0.993	1.004	0.986	0.972	0.942	0.911
		-10	-33	—	—	1.002	0.984	0.969	0.940	0.909
		-15	-49	—	—	—	0.974	0.959	0.930	0.899

6-2. Models: AOUH24LUAS1, AOUH30LUAS1, and AOUH36LUAS1

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

COOLING		Pipe length								
		m		5	7.5	10	20	30	40	50
			ft	16	24	32	65	98	131	164
Height difference H	Indoor unit is higher than outdoor unit *1	30	98	—	—	—	—	0.913	0.899	0.881
		20	65	—	—	—	0.941	0.929	0.914	0.896
		10	32	—	—	0.974	0.957	0.944	0.930	0.911
		7.5	24	—	0.988	0.978	0.960	0.948	0.934	0.914
		5	16	0.998	0.992	0.982	0.964	0.952	0.938	0.919
		0	0	1.000	1.000	0.989	0.972	0.960	0.945	0.926
	Indoor unit is lower than outdoor unit *2	-5	-16	1.000	1.000	0.989	0.972	0.960	0.945	0.926
		-7.5	-24	—	1.000	0.989	0.972	0.960	0.945	0.926
		-10	-32	—	—	0.989	0.972	0.960	0.945	0.926
		-20	-65	—	—	—	0.972	0.960	0.945	0.926
		-30	-98	—	—	—	—	0.960	0.945	0.926

HEATING		Pipe length								
		m		5	7.5	10	20	30	40	50
			ft	16	24	32	65	98	131	164
Height difference H	Indoor unit is higher than outdoor unit *1	30	98	—	—	—	—	0.939	0.922	0.907
		20	65	—	—	—	0.963	0.939	0.922	0.907
		10	32	—	—	0.999	0.963	0.939	0.922	0.907
		7.5	24	—	1.000	0.999	0.963	0.939	0.922	0.907
		5	16	1.000	1.000	0.999	0.963	0.939	0.922	0.907
		0	0	1.000	1.000	0.999	0.963	0.939	0.922	0.907
	Indoor unit is lower than outdoor unit *2	-5	-16	1.000	0.995	0.995	0.958	0.934	0.917	0.903
		-7.5	-24	—	0.983	0.992	0.955	0.932	0.915	0.900
		-10	-32	—	—	0.990	0.953	0.929	0.912	0.898
		-20	-65	—	—	—	0.943	0.920	0.903	0.889
		-30	-98	—	—	—	—	0.911	0.894	0.880

OUTDOOR UNIT
AOUH18-36LUAS1

OUTDOOR UNIT
AOUH18-36LUAS1

7. Additional charge calculation

7-1. Model: AOUH18LUAS1

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

■ Refrigerant charge

Total pipe length	ft	66 or less	82	98 (Max.)	0.22 oz/ft (20 g/m)
	m	20 or less	25	30 (Max.)	
Additional charge	oz	0	1.0	2.0	
	g	0	100	200	

7-2. Model: AOUH24LUAS1

Refrigerant type		R410A
Factory charge amount	lb oz	4 lb 10 oz
	g	2,100

■ 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	

7-3. Models: AOUH30LUAS1 and AOUH36LUAS1

Refrigerant type		R410A
Factory charge amount	lb oz	5 lb 8 oz
	g	2,500

■ 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: AOUH18LUAS1

● Cooling

m ³ /h	2,370
l/s	658
CFM	1,395

● Heating

m ³ /h	2,480
l/s	689
CFM	1,460

8-2. Model: AOUH24LUAS1

● Cooling

m ³ /h	3,715
l/s	1,032
CFM	2,187

● Heating

m ³ /h	3,715
l/s	1,032
CFM	2,187

8-3. Model: AOUH30LUAS1

● Cooling

m ³ /h	3,910
l/s	1,086
CFM	2,301

● Heating

m ³ /h	3,770
l/s	1,047
CFM	2,219

8-4. Model: AOUE36LUAS1

● Cooling

m ³ /h	4,250
l/s	1,181
CFM	2,502

● Heating

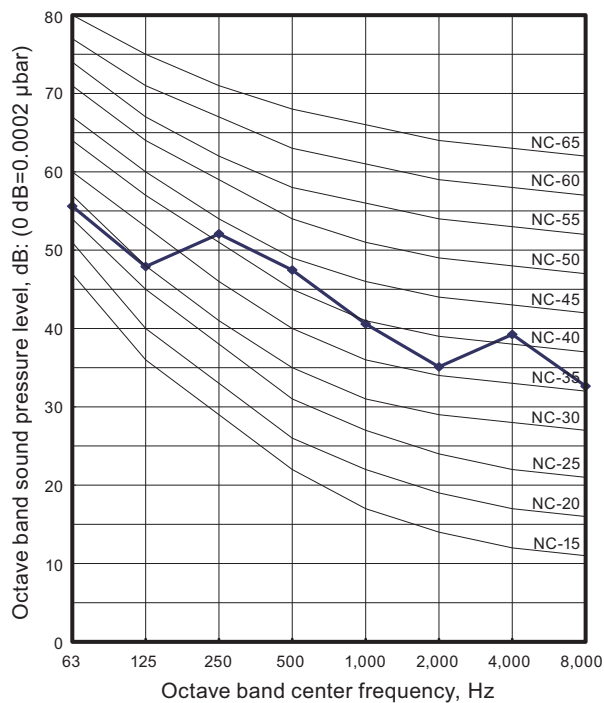
m ³ /h	4,130
l/s	1,147
CFM	2,431

9. Operation noise (sound pressure)

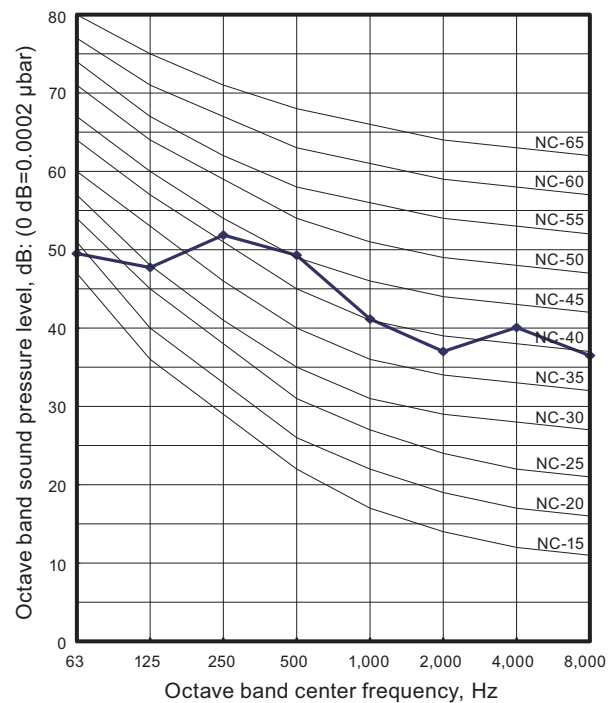
9-1. Noise level curve

■ AOUH18LUAS1

● Cooling

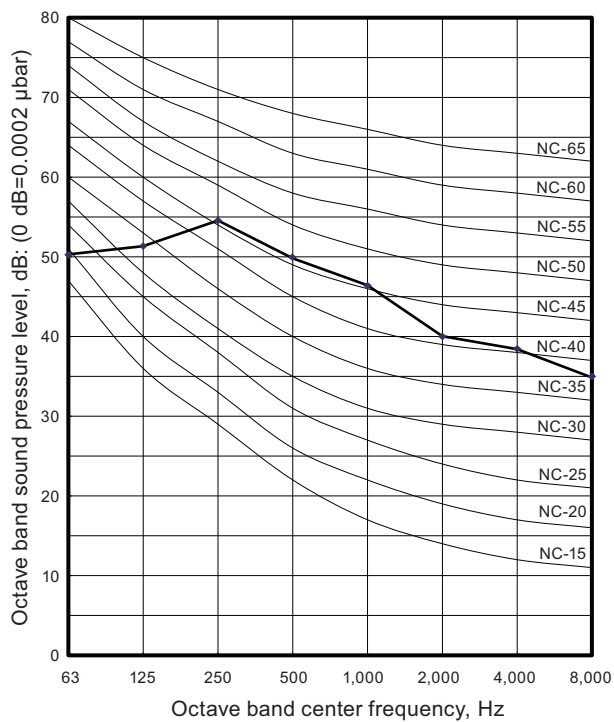


● Heating

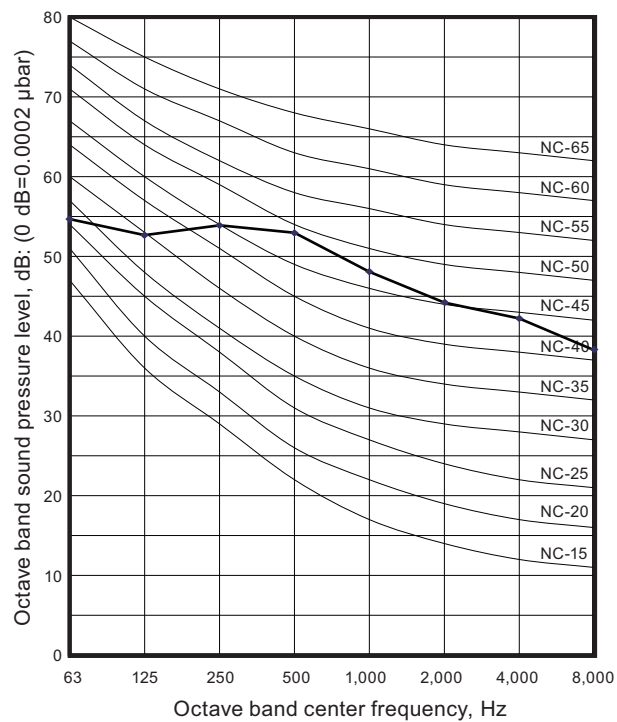


■ AOUH24LUAS1

● Cooling

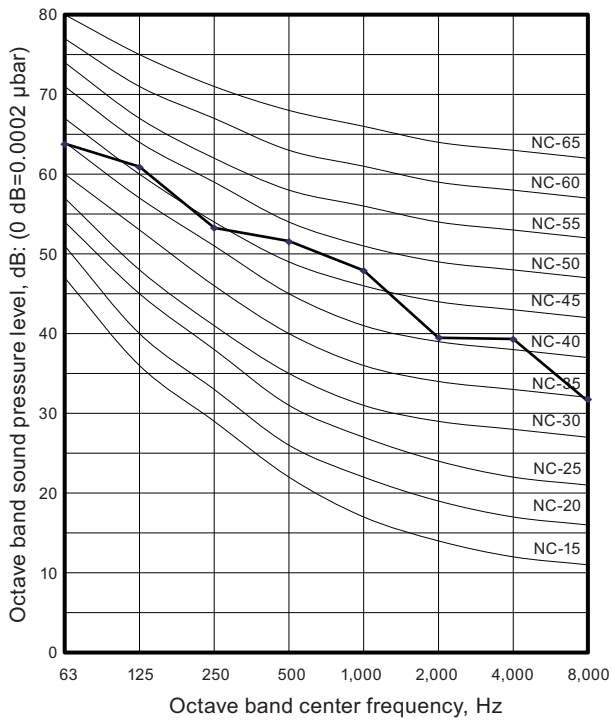


● Heating

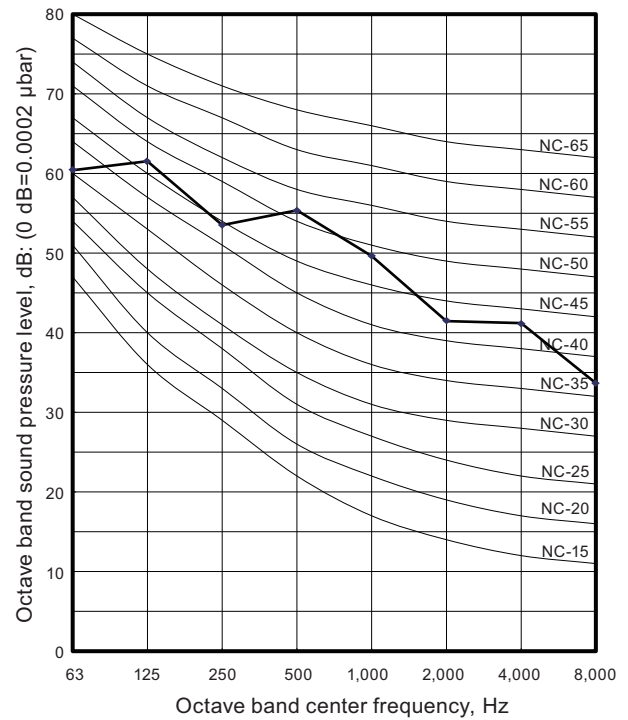


■ AOUH30LUAS1

● Cooling

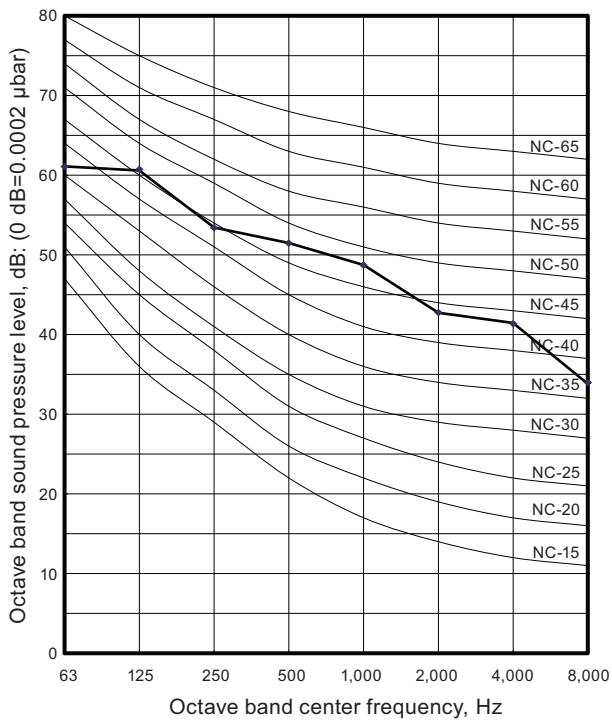


● Heating

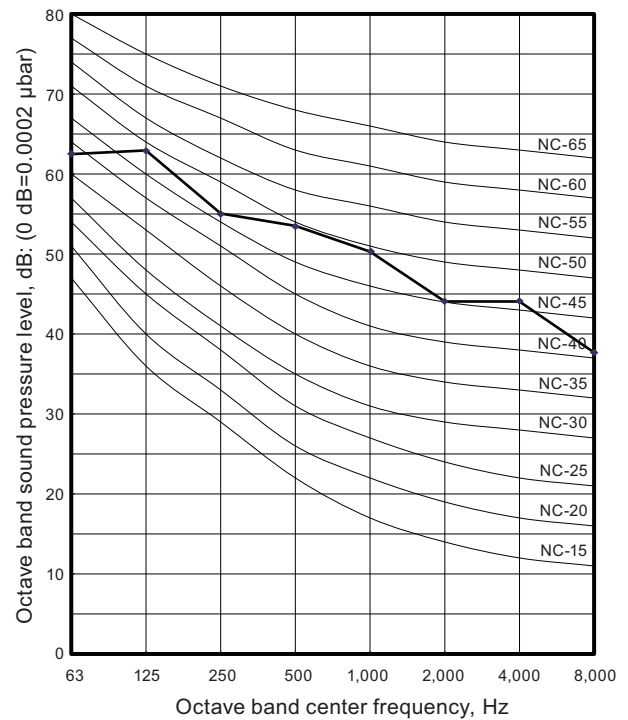


■ AOUH36LUAS1

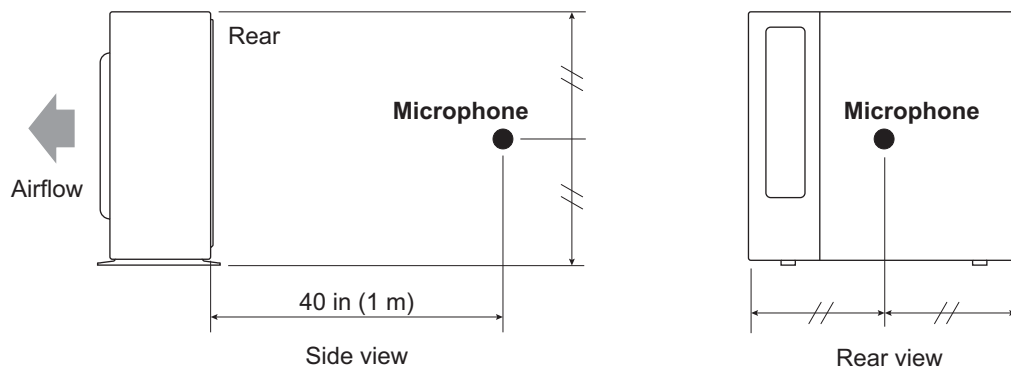
● Cooling



● Heating



9-2. Sound level check point



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

10. Electrical characteristics

Model name			AOUH18LUAS1	AOUH24LUAS1
Power supply	Voltage	V	208/230	
	Frequency	Hz	60	
MCA *1		A	18.1	19.2
Starting current		A	8.1	10.3
Wiring spec.*2	MAX. CKT. BKR*3		20	
	Power cable		14	12
	Connection cable*4	Cross-sectional area	14	
		Limited wiring length	102 (31)	167 (51)

Model name			AOUH30LUAS1	AOUH36LUAS1
Power supply	Voltage	V	208/230	
	Frequency	Hz	60	
MCA*1		A	22.2	24.1
Starting current		A	13.4	16.5
Wiring spec.*2	MAX. CKT. BKR*3		25	
	Power cable		12	
	Connection cable*4	Cross-sectional area	14	
		Limited wiring length	167 (51)	

NOTES:

- *1: Minimum Circuit Ampacity (Calculation based on UL1995)
- *2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005.
As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.
- *3: Maximum Circuit Breaker
- *4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

11. Safety devices

Type of protection	Protection form		Model	
			AOUH18LUAS1	AOUH24LUAS1
Circuit protection	Current fuse (PCB*)		250 V, 20 A	
			250 V, 5 A	250 V, 3.15 A
			250 V, 3.15 A	250 V, 10 A × 2
Fan motor protection	Thermal protection program	Activate	257 ±18°F (125 ±10°C) Fan motor stop	251.6 ±16.2°F (122 ±9°C) Fan motor stop
		Reset	248 ±18°F (120 ±10°C) Fan motor restart	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	
	Thermal protection program (Discharge temp.)	Activate	230°F (110°C) Compressor stop	
		Reset	After 7 minutes Compressor restart	
	Thermal protection program (Outdoor temp.) (Only in COOL and DRY mode)	Activate	5°F (-15°C) Compressor stop	-13°F (-25°C) Compressor stop
		Reset	14°F (-10°C) Compressor restart	-4°F (-20°C) Compressor restart

Type of protection	Protection form		Model	
			AOUH30LUAS1	AOUH36LUAS1
Circuit protection	Current fuse (PCB*)		250 V, 25 A or 30 A	
			250 V, 3.15 A	
			250 V, 10 A × 2	
Fan motor protection	Thermal protection program	Activate	302 ±27°F (150 ±15°C) Fan motor stop	
		Reset	248 ±27°F (120 ±15°C) Fan motor restart	
Compressor protection	Thermal protection program (Compressor temp.)	Activate	226°F (108°C) Compressor stop	
		Reset	After 3 minutes, and 176 °F (80°C) or less Compressor restart	
	Thermal protection program (Discharge temp.)	Activate	230°F (110°C) Compressor stop	
		Reset	After 7 minutes Compressor restart	
	Thermal protection program (Outdoor temp.) (Only in COOL and DRY mode)	Activate	-13°F (-25°C) Compressor stop	
		Reset	-4°F (-20°C) Compressor restart	

*PCB: Printed Circuit Board

12. External input and output (for 24-36 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.

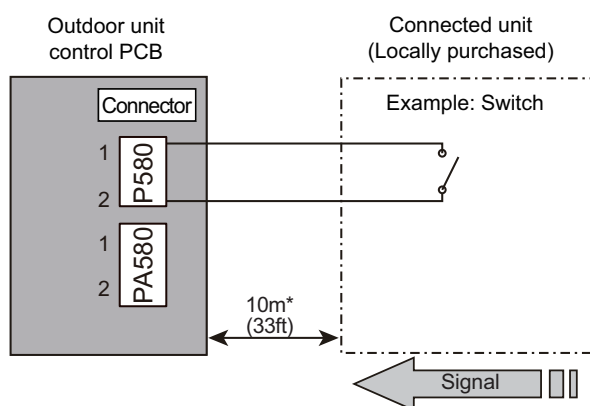
■ Low noise mode

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

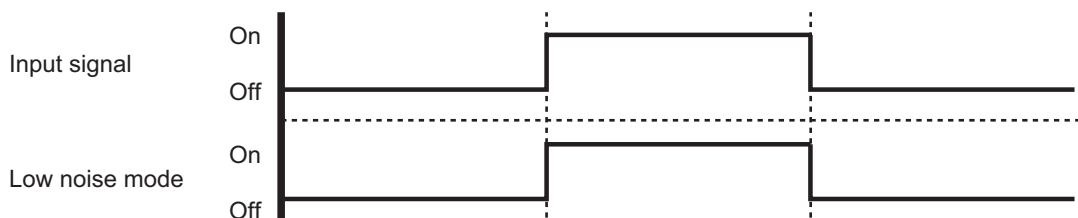
The air conditioner is set to the “Low noise mode” when closing the contact input of a commercial timer or on/off switch to a connector on the control PCB of the outdoor unit.

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"](#) on page 113 (under “Local setting procedure”).



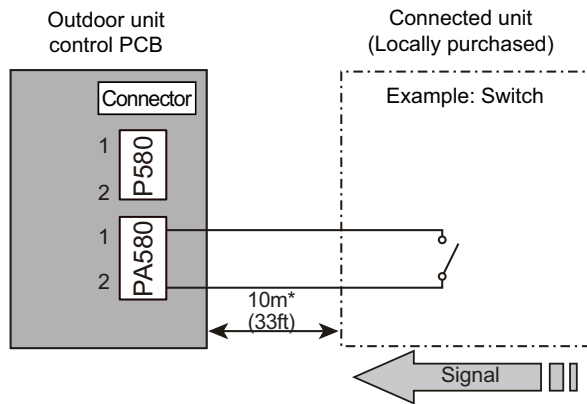
• Optional part

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

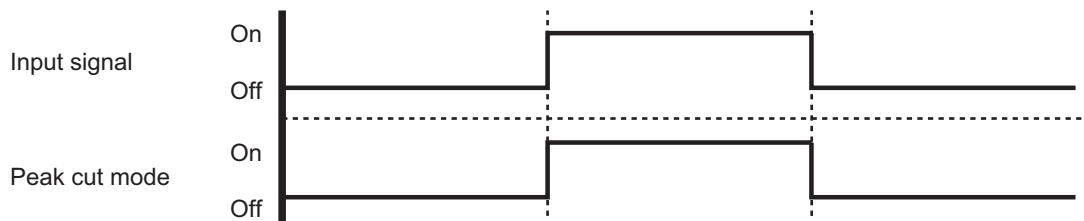
■ Peak cut mode

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 114 (under "Local setting procedure".)



• Optional part

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

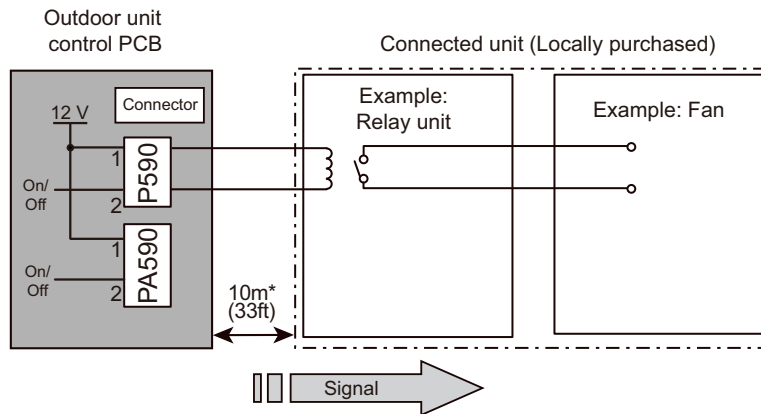
12-2. External output

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.

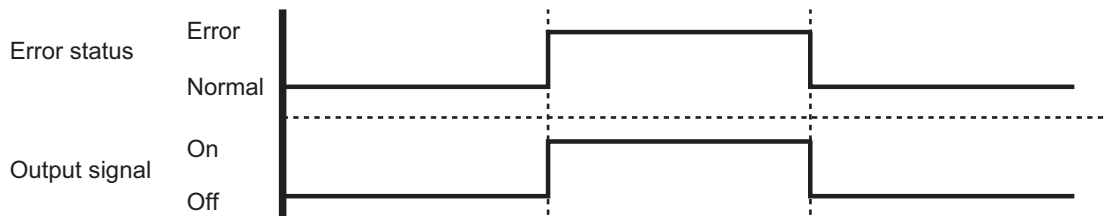
■ Error status output

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

• Circuit diagram example



- 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).



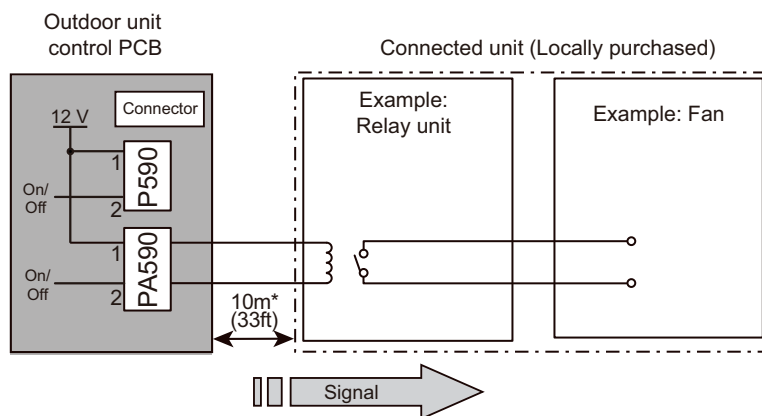
• Optional part

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

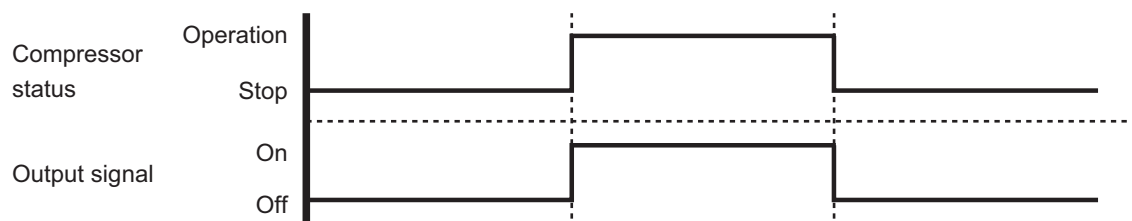
Compressor status output

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

• Circuit diagram example

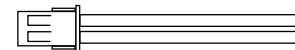


- Output voltage (Vcc): DC 12 V 50 mA or less
- *: Make the distance from the PCB to the connected unit within 33 ft (10 m).



• Optional part

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



13. Function settings (for 24-36 model)

Perform appropriate function setting locally according to the installation environment.

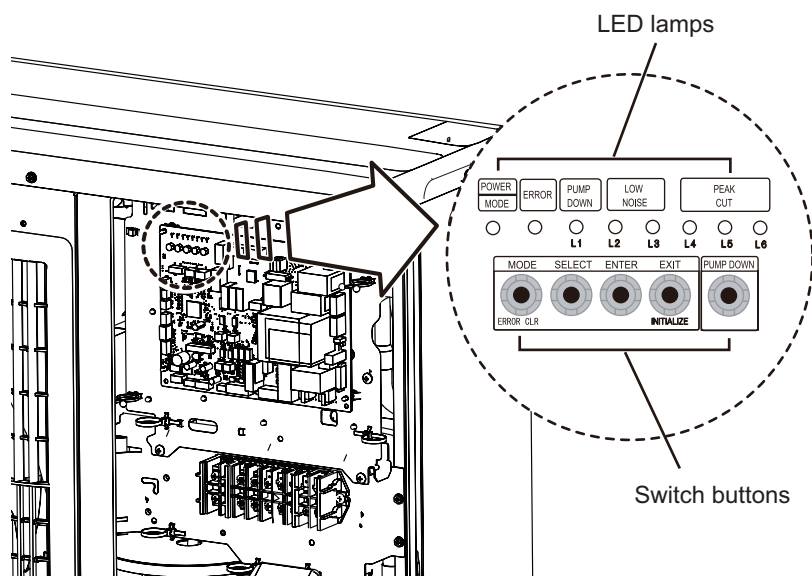
NOTE: Incorrect settings can cause a product malfunction.

⚠ CAUTION

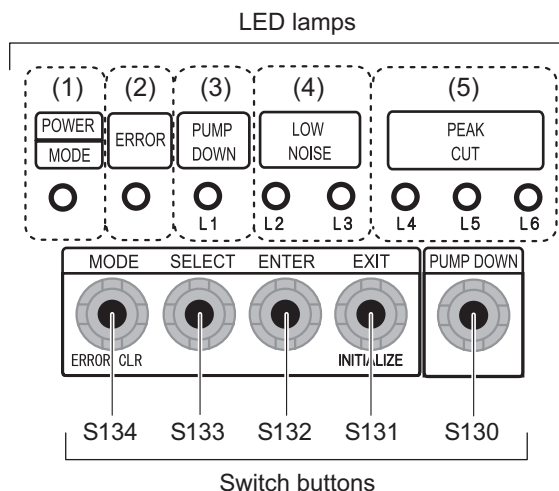
- Before setting up the switch buttons, discharge the static electricity from your body.
- Never touch the terminals or the patterns on the parts that are mounted on the PCB.

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



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 MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)		PEAK CUT (L4) (L5) (L6)		
Blinks (9 times)	○	○	○	○	○	○	○

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.

LOW NOISE MODE	LOW NOISE (L2) (L3)	
	○	Blink

4. Press the ENTER switch button (S132).

LOW NOISE MOD E	LOW NOISE (L2) (L3)	
	○	●

Sign "●": Lights on

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

	PEAK CUT (L4) (L5) (L6)		
	○	○	Blink
MODE 1: Low	○	○	Blink
MODE 2: Lower	○	Blink	○

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

	PEAK CUT (L4) (L5) (L6)		
	○	○	●
MODE 1: Low	○	○	●
MODE 2: Lower	○	●	○

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 MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)		PEAK CUT (L4) (L5) (L6)		
Blinks (9 times)	○	○	○	○	○	○	○

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.

PEAK CUT MODE	LOW NOISE	
	(L2)	(L3)
	Blink	○

4. Press the ENTER switch button (S132).

PEAK CUT MODE	LOW NOISE	
	(L2)	(L3)
	●	○

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	○	○	Blink
50 % of rated input ratio	○	Blink	○
75 % of rated input ratio	○	Blink	Blink
100 % of rated input ratio	Blink	○	○

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

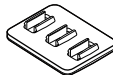
	PEAK CUT		
	(L4)	(L5)	(L6)
0 % of rated input ratio	○	○	●
50 % of rated input ratio	○	●	○
75 % of rated input ratio	○	●	●
100 % of rated input ratio	●	○	○

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

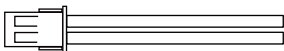
14-1. Model: AOUH18LUAS1

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

14-2. Models: AOUH24LUAS1, AOUH30LUAS1, and AOUH36LUAS1

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

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 24-36 model)

OUTDOOR UNIT
AOUH18-36LUAS1OUTDOOR UNIT
AOUH18-36LUAS1