

AIR CONDITIONER

Cassette type

DESIGN & TECHNICAL MANUAL



INDOOR

AUXG24KRLB
AUXG30KRLB
AUXG36KRLB
AUXG45KRLB
AUXG54KRLB

OUTDOOR



AOHG24KBTB



AOHG30KBTB
AOHG36KBTB



AOHG45KBTB
AOHG54KBTB

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CONTENTS

Part 1. INDOOR UNIT	1
1. Specifications	2
2. Dimensions	5
2-1. Model: AUXG24KRLB	5
2-2. Models: AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB	6
2-3. Installation space requirement	7
3. Wiring diagram	9
3-1. Models: AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB	9
4. Capacity table	10
4-1. Cooling capacity	10
4-2. Heating capacity	12
5. Fan performance	14
5-1. Air velocity distributions	14
5-2. Airflow	24
5-3. Fresh-air characteristics	28
6. Operation noise (sound pressure)	32
6-1. Noise level curve	32
6-2. Sound level check point	35
7. Safety devices	36
8. External input and output	37
8-1. External input	38
8-2. External output	40
8-3. Setting of external input and output	41
8-4. Details of control input function	42
8-5. Details of control output function	46
9. Function settings	49
9-1. Function settings on indoor unit	49
9-2. Function settings by using remote controller	51
10. Accessories	57
10-1. Models: AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB	57
11. Optional parts	58
11-1. Controllers	58
11-2. Cassette grille	59
11-3. Others	60

CONTENTS (continued)

Part 2. OUTDOOR UNIT63

1. Specifications	64
2. Dimensions	67
2-1. Model: AOHG24KBTB	67
2-2. Models: AOHG30KBTB and AOHG36KBTB	68
2-3. Models: AOHG45KBTB and AOHG54KBTB	69
3. Installation space	70
3-1. Model: AOHG24KBTB	70
3-2. Models: AOHG30KBTB, AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB	73
4. Refrigerant circuit	77
4-1. Model: AOHG24KBTB	77
4-2. Model: AOHG30KBTB	78
4-3. Models: AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB	79
5. Wiring diagrams	80
5-1. Model: AOHG24KBTB	80
5-2. Model: AOHG30KBTB	81
5-3. Model: AOHG36KBTB	81
5-4. Models: AOHG45KBTB and AOHG54KBTB	82
6. Capacity compensation rate for pipe length and height difference	83
6-1. Model: AOHG24KBTB	83
6-2. Model: AOHG30KBTB	84
6-3. Model: AOHG36KBTB	85
6-4. Models: AOHG45KBTB and AOHG54KBTB	86
7. Additional charge calculation	87
7-1. Model: AOHG24KBTB	87
7-2. Models: AOHG30KBTB and AOHG36KBTB	87
7-3. Models: AOHG45KBTB and AOHG54KBTB	87
8. Airflow	88
8-1. Model: AOHG24KBTB	88
8-2. Models: AOHG30KBTB and AOHG36KBTB	88
8-3. Models: AOHG45KBTB and AOHG54KBTB	88
9. Operation noise (sound pressure)	89
9-1. Noise level curve	89
9-2. Sound level check point	92
10. Electrical characteristics	93
11. Safety devices	94
12. External input and output (30-54 models)	96
12-1. External input	96
12-2. External output	98
13. Function settings (30-54 models)	100

CONTENTS (continued)

13-1.Control PCB and switch buttons location	100
13-2.Local setting procedure.....	102
14. Accessories	104
14-1.Model: AOHG24KBTB	104
14-2.Models: AOHG30KBTB, AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB	104
15. Optional parts	105

Part 1. INDOOR UNIT

CASSETTE TYPE:

AUXG24KRLB

AUXG30KRLB

AUXG36KRLB

AUXG45KRLB

AUXG54KRLB

1. Specifications

Type				Cassette					
				Inverter heat pump					
Model name				AUXG24KRLB	AUXG30KRLB	AUXG36KRLB			
Power supply				230 V ~ 50 Hz					
Power supply intake				Outdoor unit					
Available voltage range				198—264 V					
Capacity	Cooling	Rated	kW	6.8	8.5	9.5			
			Btu/h	23,200	29,000	32,400			
		Min.—Max.	kW	0.90—8.00	2.80—10.00	2.80—11.20			
			Btu/h	3,100—27,300	9,600—34,100	9,600—38,200			
	Heating	Rated	kW	7.5	10.0	10.8			
			Btu/h	25,600	34,100	36,850			
		Min.—Max.	kW	0.90—9.10	2.70—11.20	2.70—12.70			
			Btu/h	3,100—31,000	9,200—38,200	9,200—43,300			
Input power	Cooling	Rated	kW	1.89	2.44	2.91			
		Max.		2.94	3.53	4.19			
	Heating	Rated		1.90	2.51	2.45			
		Max.		2.58	4.17	4.48			
	Fan	HIGH	W	21	52	87			
		MED		16	39	52			
		LOW		13	31	39			
		QUIET		9	20	23			
		Current		Cooling	Rated	A	8.3	10.8	12.9
				Heating			8.4	11.1	10.9
Power factor	Cooling		%	98.6	98.2	98.0			
	Heating			98.7	98.2	98.0			
EER	Cooling	kW/kW		3.60	3.49	3.26			
COP	Heating			3.95	3.98	4.40			
Moisture removal			L/h (pints/h)	2.7 (4.8)	2.5 (4.4)	3.3 (5.8)			
Maximum operating current *1		Cooling	A	13.6	22.6	22.6			
		Heating		13.6	22.6	22.6			
Fan	Airflow rate	Cooling	HIGH	m³/h	1,150	1,600	1,870		
			MED		1,050	1,400	1,560		
			LOW		980	1,270	1,410		
			QUIET		870	1,150	1,160		
		Heating	HIGH		1,150	1,600	1,870		
			MED		1,050	1,400	1,560		
			LOW		980	1,270	1,410		
			QUIET		870	1,150	1,160		
			Type × Q'ty			Turbo fan × 1			
			Motor output			W			
Sound pressure level *2	Cooling	HIGH	dB (A)	35	40	44			
		MED		33	38	41			
		LOW		32	36	38			
		QUIET		29	33	34			
	Heating	HIGH		35	40	44			
		MED		33	38	41			
		LOW		32	36	38			
		QUIET		29	33	34			
		Heat exchanger type		Dimensions (H × W × D)		mm	Main1: 210 × 2,127 × 13.3 Main2: 210 × 2,061 × 13.3		Main1: 252 × 2,131 × 13.3 Main2: 252 × 2,064 × 13.3 Main3: 252 × 1,999 × 13.3
				Fin pitch			1.2		1.3
Rows × Stages			1 × 10		1 × 12	1 × 12			
Pipe type			Copper tube						
Fin type		Aluminum							
Dimensions (H × W × D)	Net		mm	246 × 840 × 840	288 × 840 × 840				
	Gross			298 × 960 × 950	340 × 960 × 950				
Weight	Net		kg	24	26	29			
	Gross			29	32	34			
Connection pipe	Size	Liquid	mm (in)	Ø 6.35 (Ø 1/4)	Ø 9.52 (Ø 3/8)				
		Gas		Ø 12.70 (Ø 1/2)	Ø 15.88 (Ø 5/8)				
		Method		Flare					
Drain hose		Material		PVC					
		Size		mm Ø 25 (I.D.), Ø 32 (O.D.)					
Operation range	Cooling			°C 18 to 32					
				%RH 80 or less					
		Heating			°C 16 to 30				
Cassette grille (Option)	Material			Polystyrene					
	Color			White					
				Approximate color of MUNSELL N 9.25/					
	Dimensions (H × W × D)	Net	mm	53 × 950 × 950					
		Gross		110 × 1,000 × 1,010					
	Weight	Net	kg	6.0					
		Gross		10.0					
Remote control (Option)				Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™)					

NOTES:

- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
 - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
 - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- *2: 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.
- *3: Available on Google Play™ store or on App Store®. Optional WLAN Adapter is also required. For details, refer to the setting manual.

Specifications for ErP Lot10									
Model name				AUXG24KRLB		AUXG30KRLB		AUXG36KRLB	
Energy efficiency class	Cooling			A++					
	Heating (Average)			A+					
Pdesign	Cooling		kW	6.8 (35°C)		8.5 (35°C)		9.5 (35°C)	
	Heating (Average)			6.0 (-10°C)		8.0 (-10°C)		8.7 (-10°C)	
SEER	Cooling		kWh/kWh	6.60		6.70		6.55	
SCOP	Heating (Average)			4.20		4.30		4.30	
Annual energy consumption	QCE		kWh/a	360		444		507	
	QHE (Average)			1,999		2,601		2,828	
Sound power level	Cooling	HIGH	dB (A)	49		54		58	
	Heating			49		54		58	

Type				Cassette				
				Inverter heat pump				
Model name				AUXG45KRLB	AUXG54KRLB			
Power supply				230 V ~ 50 Hz				
Power supply intake				Outdoor unit				
Available voltage range				198—264 V				
Capacity	Cooling	Rated	kW	12.1	13.4			
			Btu/h	41,300	45,700			
		Min.—Max.	kW	4.00—14.00	4.50—14.50			
			Btu/h	13,600—47,800	15,400—49,500			
	Heating	Rated	kW	13.5	13.7			
			Btu/h	46,000	46,700			
		Min.—Max.	kW	4.20—16.20	4.70—16.50			
			Btu/h	14,300—55,300	16,000—56,300			
Input power	Cooling	Rated	kW	3.61	4.41			
		Max.		5.00	5.23			
	Heating	Rated		3.21	3.67			
		Max.		4.69	4.77			
	Fan	HIGH	W	106	129			
		MED		60	95			
		LOW		45	55			
		QUIET		30	34			
	Current	Cooling	Rated	A	16.0	19.5		
		Heating			14.2	16.1		
Power factor	Cooling		%	98.2	98.3			
	Heating			98.3	98.4			
EER	Cooling		kW/kW	3.35	3.04			
COP	Heating			4.20	3.73			
Moisture removal			L/h (pints/h)	4.5 (7.9)	5.0 (8.8)			
Maximum operating current *1		Cooling	A	28.5	28.5			
		Heating		28.5	28.5			
Fan	Airflow rate	Cooling	m³/h	HIGH	2,000	2,100		
				MED	1,650	1,780		
				LOW	1,460	1,600		
				QUIET	1,300	1,320		
		Heating		HIGH	2,000	2,100		
				MED	1,650	1,780		
				LOW	1,460	1,600		
				QUIET	1,300	1,320		
				Type × Q'ty			Turbo fan × 1	
				Motor output			81	
Sound pressure level *2	Cooling	HIGH	dB (A)	46	47			
				MED	42	43		
				LOW	39	40		
				QUIET	35	36		
	Heating	HIGH		46	47			
		MED		42	43			
		LOW		39	40			
		QUIET		35	36			
Heat exchanger type	Dimensions (H × W × D)		mm	Main1: 252 × 2,131 × 13.3				
	Fin pitch			Main2: 252 × 2,064 × 13.3				
	Rows × Stages			Main3: 252 × 1,999 × 13.3				
	Pipe type			1.3				
	Fin type			1 × 12				
Dimensions (H × W × D)	Net		mm	Copper tube				
	Gross			Aluminum				
Weight	Net		kg	288 × 840 × 840				
	Gross			340 × 960 × 950				
Connection pipe	Size	Liquid Gas	mm (in)	29				
				34				
	Method			Ø 9.52 (Ø 3/8)				
Drain hose	Material		Ø 15.88 (Ø 5/8)					
	Size		Flare					
Operation range	Material		PVC(VP25)					
	Cooling		°C	Ø 25 (I.D.), Ø 32 (O.D.)				
				18 to 32				
Heating		%RH		80 or less				
Cassette grille (Option)	Material		mm	16 to 30				
	Color			Polystyrene				
	Dimensions (H × W × D)			White				
	Net	Gross		Approximate color of MUNSELL N 9.25/				
				53 × 950 × 950				
	Weight	Gross		110 × 1,000 × 1,010				
				6.0				
Remote control (Option)				10.0				
				Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™)				

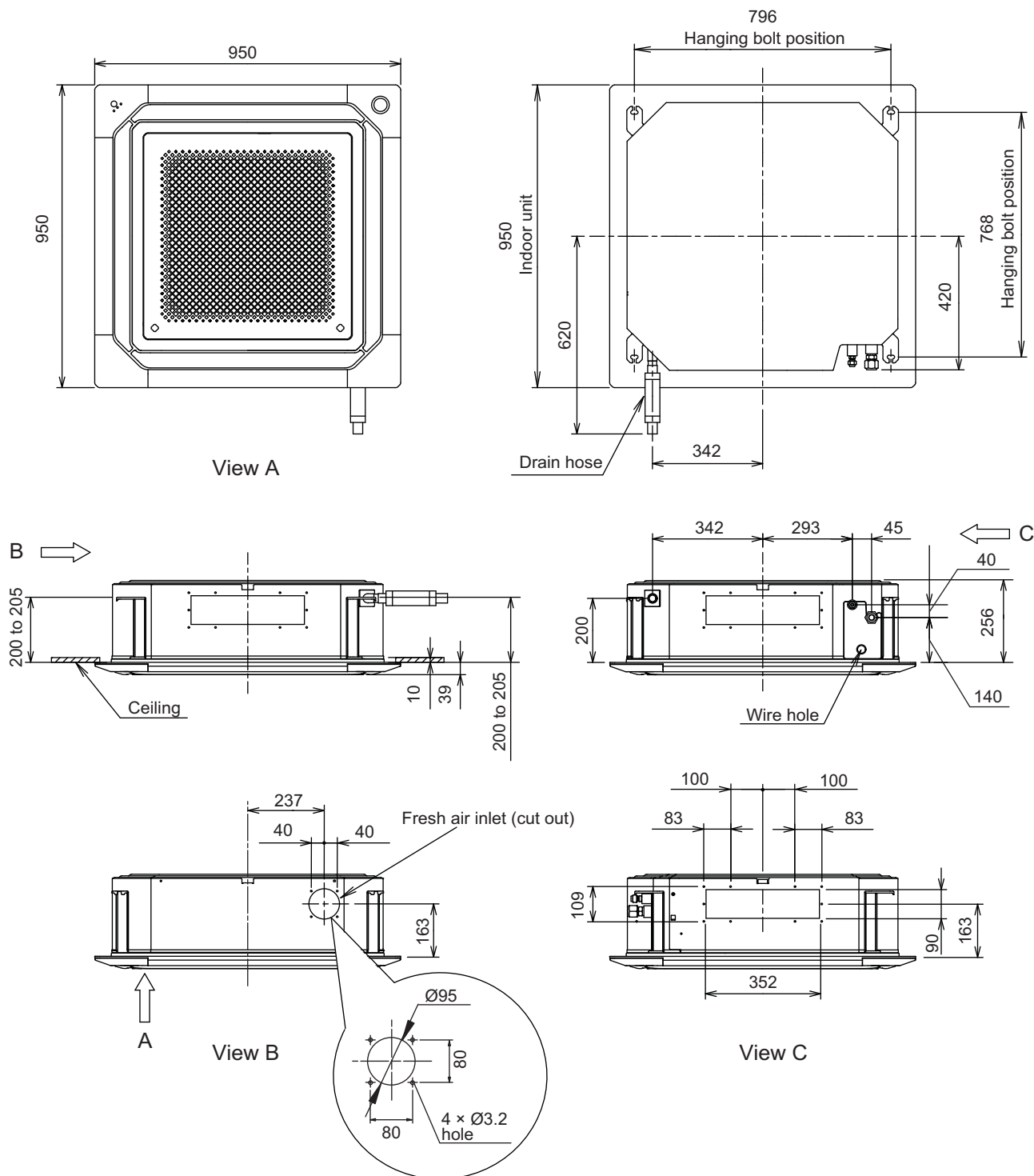
NOTES:

- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
 - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
 - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- *2: 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.
- *3: Available on Google Play™ store or on App Store®. Optional WLAN Adapter is also required. For details, refer to the setting manual.

2. Dimensions

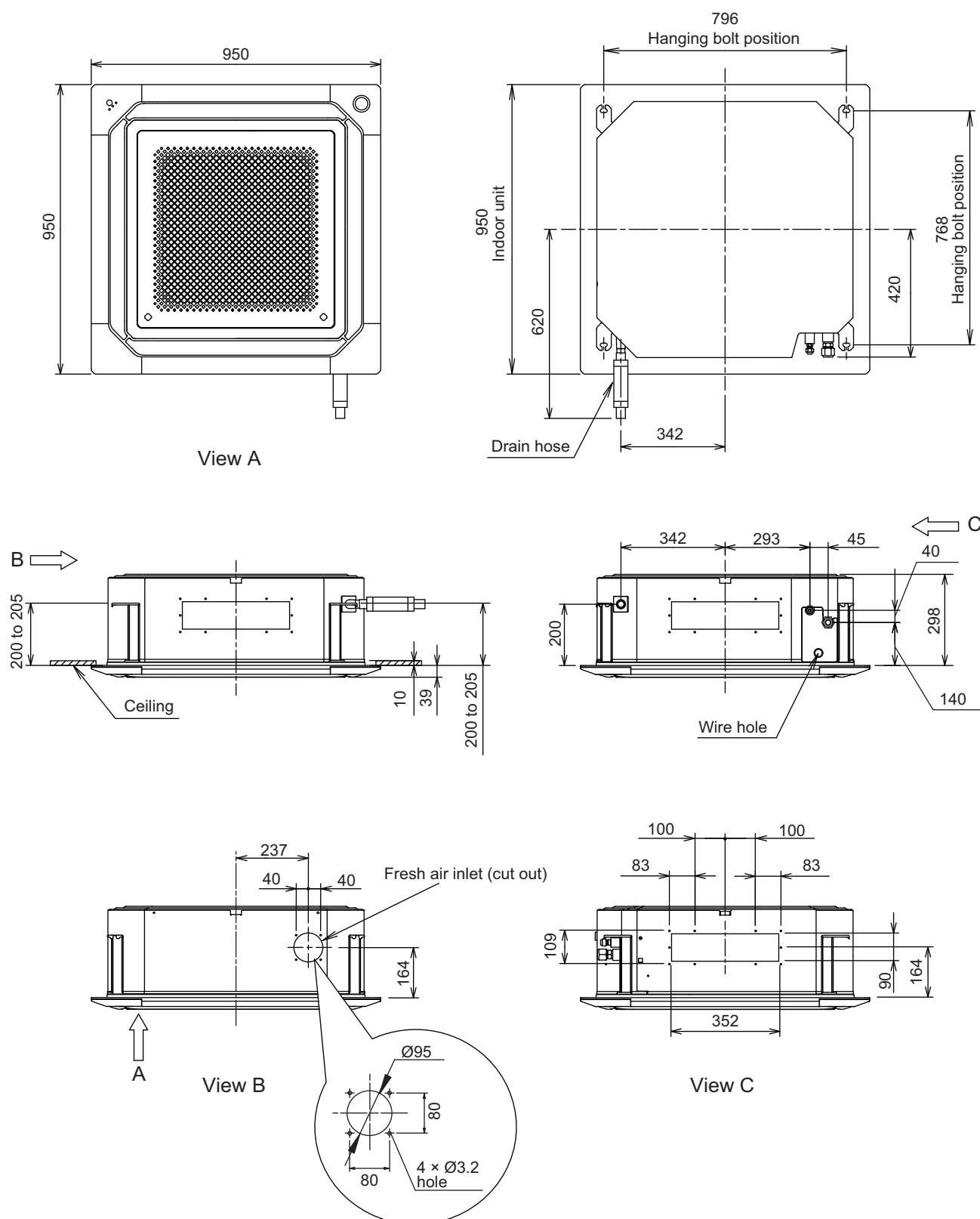
2-1. Model: AUXG24KRLB

Unit: mm



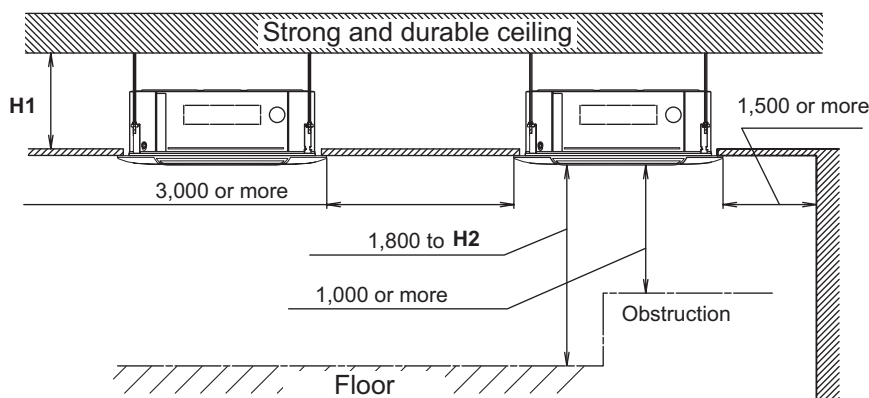
2-2. Models: AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB

Unit: mm



2-3. Installation space requirement

Unit: mm



Model name	H1: Attic height
AUXG24KRLB	256 or more
AUXG30-54KRLB	298 or more

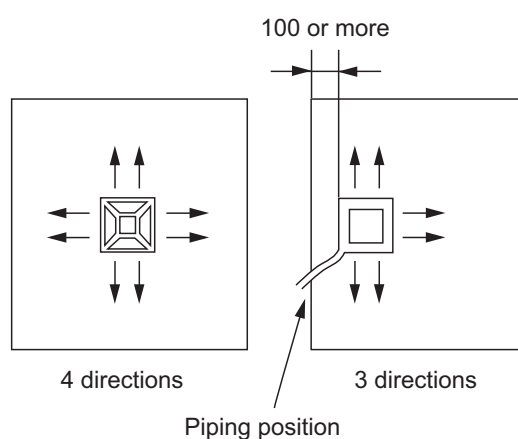
Be sure to make function setting with the remote controller according to the installed ceiling height.

H2: The maximum height from floor to ceiling		
Ceiling height	Model name	
	AUXG24KRLB	AUXG30-54KRLB
Standard	3,000	3,200
High ceiling	3,500	4,200

■ Installation notices

- When installing the indoor unit, be careful about the maintenance space.
- To set "3-direction", Air Outlet Shutter Plate (option) must be installed, and the "outlet-direction" need to be switched to "3-way" by the remote controller.

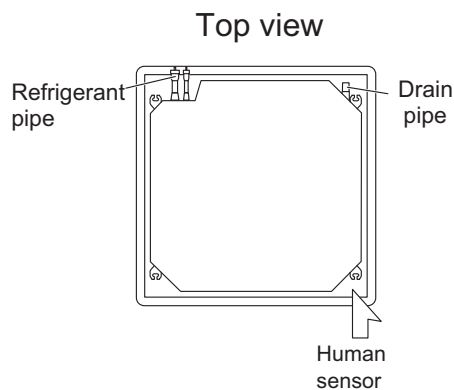
Unit: mm



- In 3-way outlet mode, changing of ceiling height setting by function setting 20 is prohibited. (Ceiling height setting [function setting 20] is allowed to be changed only in 4-way outlet mode.)
- Use the Insulation Kit for High Humidity (option), when the condition under the roof is over 80% in humidity and over 30°C in temperature. Otherwise, there is a risk of condensation on the ceiling.

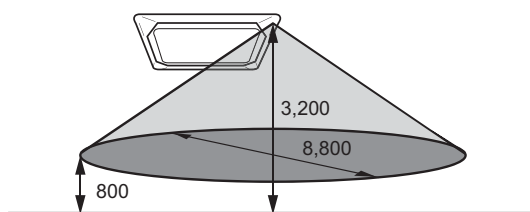
- **Human sensor (Option)**

NOTE: A separate device capable of controlling the human sensor (energy saving) function, such as the Touch Panel Controller, is required for use.



Example of sensitivity range:

Unit: mm



Equal sensitivity range of temperature	Ceiling height	3,200
	Detecting position	800 from floor surface

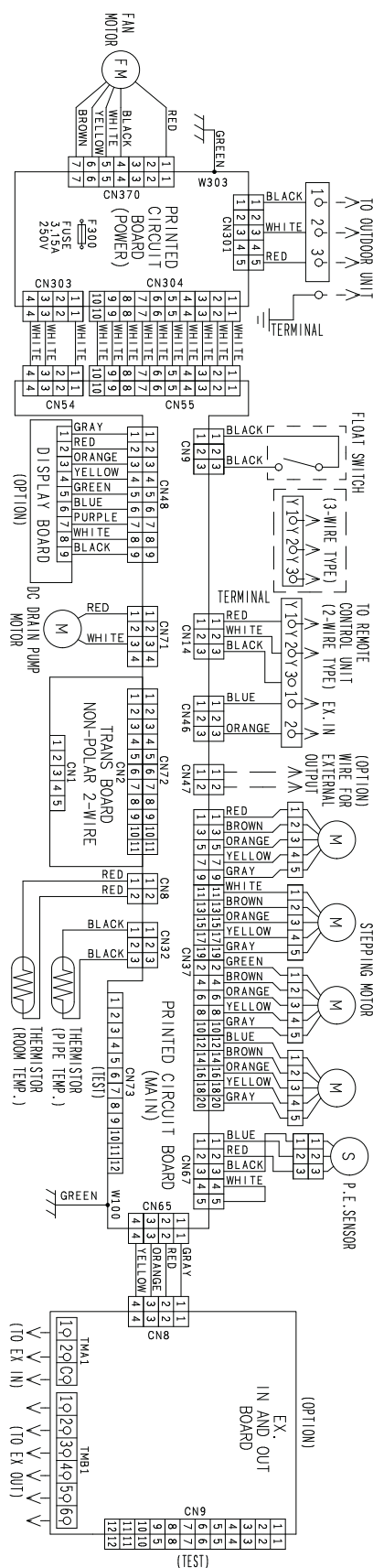
NOTE: When the installation height gets higher, the temperature sensitivity decreases.

⚠ CAUTION

- Do not place large objects near the human sensor.
- Keep any other heating units outside the sensor's detection area.

3. Wiring diagram

3-1. Models: AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB



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

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

■ Model: AUXG24KRLB

AFR		m³/h									1,150											
Outdoor temperature		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
	-15	5.66	4.25	0.61	6.30	4.28	0.62	6.52	4.65	0.62	6.95	4.66	0.63	7.16	5.04	0.63	7.59	5.02	0.64	8.02	5.34	0.64
	-10	5.70	4.26	0.51	6.35	4.29	0.52	6.57	4.66	0.52	7.00	4.67	0.53	7.22	5.05	0.53	7.65	5.03	0.54	8.09	5.36	0.54
	0	5.56	4.20	0.52	6.19	4.22	0.53	6.40	4.59	0.53	6.83	4.60	0.54	7.04	4.97	0.54	7.46	4.95	0.55	7.88	5.27	0.55
	5	5.41	4.14	0.66	6.02	4.16	0.67	6.23	4.53	0.67	6.64	4.54	0.68	6.85	4.90	0.69	7.26	4.89	0.69	7.67	5.20	0.70
	10	5.37	4.13	0.65	5.98	4.15	0.66	6.19	4.52	0.66	6.60	4.53	0.67	6.80	4.89	0.67	7.21	4.87	0.68	7.62	5.19	0.69
15	5.20	4.06	0.78	5.79	4.08	0.79	5.99	4.44	0.79	6.39	4.45	0.80	6.58	4.81	0.81	6.98	4.79	0.81	7.37	5.10	0.82	
20	6.54	4.63	1.39	7.29	4.66	1.41	7.54	5.07	1.42	8.04	5.08	1.43	8.28	5.49	1.44	8.78	5.47	1.45	9.28	5.82	1.47	
25	6.15	4.48	1.54	6.85	4.51	1.56	7.09	4.90	1.57	7.55	4.92	1.58	7.79	5.31	1.59	8.25	5.29	1.61	8.72	5.64	1.62	
30	5.76	4.34	1.69	6.41	4.36	1.71	6.63	4.74	1.72	7.07	4.76	1.74	7.29	5.14	1.75	7.72	5.12	1.76	8.16	5.45	1.78	
35	5.37	4.19	1.82	5.98	4.21	1.85	6.19	4.58	1.86	6.60	4.59	1.88	6.80	4.96	1.89	7.21	4.94	1.91	7.62	5.26	1.93	
40	5.09	4.06	1.97	5.67	4.08	2.00	5.87	4.44	2.02	6.26	4.45	2.04	6.45	4.81	2.05	6.84	4.79	2.07	7.22	5.10	2.09	
46	4.18	3.59	1.70	4.66	3.61	1.73	4.82	3.93	1.74	5.13	3.94	1.76	5.29	4.25	1.77	5.61	4.24	1.78	5.93	4.51	1.80	

■ Model: AUXG30KRLB

AFR		m³/h									1,600											
Outdoor temperature		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
-15	6.18	4.69	1.03	6.40	4.70	1.06	6.54	4.71	1.08	6.91	4.94	1.09	7.27	5.17	1.11	7.68	5.33	1.13	8.29	5.58	1.15	
-10	6.05	4.62	1.26	6.26	4.63	1.29	6.41	4.64	1.31	6.76	4.86	1.33	7.12	5.08	1.35	7.52	5.25	1.37	8.12	5.49	1.40	
0	5.79	4.47	1.70	6.00	4.48	1.74	6.13	4.49	1.77	6.47	4.70	1.80	6.82	4.92	1.83	7.20	5.08	1.85	7.77	5.31	1.89	
5	5.74	4.45	1.75	5.95	4.46	1.79	6.08	4.47	1.82	6.42	4.69	1.85	6.76	4.90	1.88	7.14	5.06	1.91	7.71	5.29	1.95	
10	5.69	4.43	1.80	5.89	4.45	1.85	6.03	4.46	1.87	6.36	4.67	1.91	6.70	4.88	1.94	7.07	5.04	1.97	7.64	5.27	2.01	
15	5.60	4.36	1.86	5.79	4.37	1.90	5.93	4.38	1.93	6.26	4.59	1.96	6.59	4.80	1.99	6.96	4.96	2.02	7.51	5.19	2.07	
20	8.44	6.05	2.06	8.74	6.06	2.11	8.94	6.07	2.14	9.44	6.37	2.18	9.93	6.66	2.21	10.49	6.87	2.25	11.33	7.19	2.29	
25	8.04	5.90	2.13	8.32	5.91	2.18	8.51	5.92	2.21	8.98	6.21	2.25	9.46	6.49	2.29	9.99	6.70	2.32	10.78	7.01	2.37	
30	7.63	5.75	2.20	7.90	5.76	2.25	8.08	5.77	2.29	8.53	6.05	2.33	8.98	6.33	2.36	9.48	6.53	2.40	10.24	6.83	2.45	
35	7.22	5.60	2.27	7.48	5.61	2.32	7.65	5.62	2.36	8.07	5.89	2.40	8.50	6.16	2.44	8.98	6.36	2.48	9.69	6.66	2.53	
40	6.76	5.45	2.37	7.00	5.46	2.43	7.16	5.47	2.47	7.56	5.74	2.51	7.95	6.00	2.55	8.40	6.19	2.59	9.07	6.48	2.64	
46	6.20	5.27	2.50	6.42	5.28	2.55	6.57	5.29	2.59	6.93	5.55	2.64	7.30	5.80	2.68	7.71	5.99	2.72	8.32	6.26	2.78	

Model: AUXG36KRLB

AFR	m ³ /h	1,870
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		Indoor temperature																							
		18			21			23			25			27			29			32					
		°CWB			12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP			
		kW			kW			kW			kW			kW			kW			kW					
	-15	6.91	5.45	1.03	7.15	5.47	1.06	7.31	5.49	1.08	7.72	5.75	1.09	8.13	6.01	1.11	8.58	6.21	1.13	9.27	6.50	1.15			
	-10	6.76	5.39	1.26	7.00	5.41	1.29	7.16	5.42	1.31	7.56	5.68	1.33	7.96	5.94	1.35	8.40	6.13	1.37	9.07	6.42	1.40			
	0	6.47	5.26	1.70	6.70	5.28	1.74	6.86	5.29	1.77	7.24	5.55	1.80	7.62	5.80	1.83	8.05	5.99	1.85	8.69	6.27	1.89			
	5	6.42	5.23	1.75	6.64	5.25	1.79	6.80	5.27	1.82	7.17	5.52	1.85	7.55	5.77	1.88	7.98	5.96	1.91	8.61	6.24	1.95			
	10	6.36	5.21	1.80	6.59	5.23	1.85	6.74	5.24	1.87	7.11	5.49	1.91	7.49	5.74	1.94	7.91	5.93	1.97	8.54	6.21	2.01			
	15	6.26	5.12	1.86	6.48	5.14	1.90	6.62	5.16	1.93	6.99	5.40	1.96	7.36	5.65	1.99	7.77	5.83	2.02	8.39	6.10	2.07			
	20	9.44	6.98	2.46	9.77	7.01	2.52	9.99	7.03	2.55	10.55	7.36	2.60	11.10	7.70	2.64	11.73	7.95	2.68	12.66	8.32	2.74			
	25	8.98	6.72	2.54	9.30	6.74	2.60	9.51	6.76	2.64	10.04	7.08	2.69	10.57	7.41	2.73	11.16	7.65	2.77	12.05	8.00	2.83			
	30	8.53	6.45	2.62	8.83	6.48	2.69	9.03	6.49	2.73	9.53	6.80	2.77	10.03	7.11	2.82	10.60	7.34	2.86	11.44	7.69	2.92			
	35	8.07	6.19	2.71	8.36	6.21	2.77	8.55	6.23	2.81	9.02	6.52	2.86	9.50	6.82	2.91	10.03	7.04	2.95	10.83	7.37	3.02			
40	7.55	5.92	2.83	7.82	5.94	2.90	8.00	5.96	2.94	8.44	6.24	2.99	8.89	6.53	3.04	9.39	6.74	3.09	10.14	7.05	3.15				
46	6.93	5.60	2.98	7.18	5.62	3.05	7.34	5.64	3.09	7.75	5.90	3.15	8.16	6.17	3.20	8.61	6.37	3.24	9.30	6.67	3.31				

Model: AUXG45KRLB

AFR	m ³ /h	2,000
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		Indoor temperature																				
		18			21			23			25			27			29			32		
		12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
	-15	8.56	6.58	1.69	9.29	6.91	1.73	9.78	7.13	1.75	10.26	7.43	1.78	10.75	7.73	1.80	11.20	7.87	1.80	11.87	8.09	1.80
	-10	8.62	6.60	1.71	9.35	6.93	1.75	9.84	7.15	1.77	10.33	7.45	1.80	10.82	7.75	1.83	11.27	7.89	1.83	11.94	8.11	1.83
	0	8.73	6.63	1.75	9.47	6.96	1.79	9.96	7.18	1.82	10.46	7.49	1.84	10.95	7.79	1.87	11.41	7.93	1.87	12.09	8.15	1.87
	5	8.57	6.64	1.80	9.30	6.97	1.84	9.78	7.19	1.86	10.27	7.50	1.89	10.76	7.80	1.92	11.20	7.95	1.92	11.88	8.16	1.92
	10	8.42	6.65	1.84	9.13	6.98	1.88	9.61	7.20	1.91	10.08	7.51	1.94	10.56	7.81	1.96	11.00	7.96	1.96	11.66	8.17	1.96
	15	8.27	6.54	1.89	8.98	6.87	1.94	9.45	7.09	1.96	9.91	7.38	1.99	10.38	7.68	2.02	10.82	7.83	2.02	11.47	8.04	2.02
	20	11.05	8.32	3.07	11.99	8.73	3.14	12.61	9.01	3.19	13.24	9.39	3.23	13.86	9.77	3.28	14.44	9.95	3.28	15.31	10.22	3.28
	25	10.58	8.11	3.18	11.48	8.51	3.25	12.08	8.78	3.29	12.68	9.15	3.34	13.28	9.52	3.39	13.83	9.70	3.39	14.66	9.97	3.39
	30	10.11	7.90	3.28	10.97	8.29	3.35	11.54	8.56	3.40	12.12	8.92	3.45	12.69	9.28	3.50	13.22	9.45	3.50	14.01	9.71	3.50
	35	9.64	7.69	3.38	10.46	8.07	3.46	11.01	8.33	3.51	11.55	8.68	3.56	12.10	9.03	3.61	12.61	9.20	3.61	13.36	9.45	3.61
40	8.22	7.03	3.05	8.92	7.39	3.12	9.38	7.62	3.16	9.85	7.94	3.21	10.32	8.26	3.25	10.75	8.42	3.25	11.39	8.65	3.25	
46	6.51	6.25	2.65	7.07	6.56	2.70	7.44	6.77	2.74	7.80	7.05	2.78	8.17	7.34	2.82	8.51	7.47	2.82	9.03	7.68	2.82	

Model: AUXG54KRLB

AFR	m ³ /h	2,100
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Outdoor temperature		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
-15	9.57	7.35	1.89	10.39	7.73	1.93	10.93	7.98	1.96	11.47	8.31	1.99	12.01	8.65	2.02	12.51	8.81	2.02	13.27	9.05	2.02	
-10	9.60	7.38	1.91	10.42	7.76	1.95	10.96	8.01	1.98	11.51	8.34	2.01	12.05	8.68	2.03	12.55	8.84	2.03	13.31	9.08	2.03	
0	9.66	7.44	1.94	10.48	7.82	1.98	11.03	8.07	2.01	11.58	8.41	2.04	12.13	8.74	2.07	12.63	8.91	2.07	13.39	9.15	2.07	
5	9.49	7.34	1.99	10.30	7.71	2.03	10.84	7.96	2.06	11.37	8.29	2.09	11.91	8.63	2.12	12.41	8.79	2.12	13.15	9.03	2.12	
10	9.32	7.24	2.04	10.11	7.61	2.08	10.64	7.85	2.11	11.17	8.18	2.14	11.70	8.51	2.17	12.18	8.67	2.17	12.92	8.90	2.17	
15	9.16	7.12	2.10	9.94	7.48	2.14	10.46	7.72	2.17	10.98	8.05	2.21	11.50	8.37	2.24	11.98	8.53	2.24	12.70	8.76	2.24	
20	12.24	8.96	3.75	13.27	9.42	3.84	13.97	9.72	3.89	14.66	10.13	3.95	15.35	10.54	4.00	16.00	10.73	4.00	16.96	11.02	4.00	
25	11.72	8.73	3.88	12.71	9.18	3.97	13.38	9.48	4.02	14.04	9.87	4.08	14.70	10.27	4.14	15.32	10.46	4.14	16.24	10.74	4.14	
30	11.20	8.51	4.01	12.15	8.94	4.10	12.78	9.23	4.16	13.42	9.62	4.21	14.05	10.01	4.27	14.64	10.19	4.27	15.52	10.47	4.27	
35	10.68	8.28	4.13	11.59	8.70	4.23	12.19	8.99	4.29	12.80	9.36	4.35	13.40	9.74	4.41	13.96	9.92	4.41	14.80	10.19	4.41	
40	9.10	7.68	3.72	9.88	8.07	3.81	10.39	8.33	3.86	10.91	8.68	3.92	11.42	9.03	3.97	11.90	9.19	3.97	12.62	9.44	3.97	
46	7.21	6.95	3.23	7.83	7.30	3.30	8.23	7.54	3.35	8.64	7.85	3.40	9.05	8.17	3.45	9.43	8.32	3.45	10.00	8.54	3.45	

4-2. Heating capacity

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

■ Model: AUXG24KRLB

AFR		m³/h		1,150									
				Indoor temperature									
		°CDB	16		18		20		22		24		
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		kW		
	-15	-16	6.37	2.16	6.21	2.21	6.06	2.25	5.91	2.30	5.76	2.34	
	-10	-11	6.99	2.25	6.82	2.30	6.65	2.34	6.49	2.39	6.32	2.44	
	-5	-7	7.62	2.33	7.44	2.38	7.26	2.43	7.08	2.47	6.89	2.52	
	0	-2	8.25	2.40	8.06	2.45	7.86	2.50	7.66	2.55	7.47	2.60	
	5	3	8.89	2.48	8.67	2.53	8.46	2.58	8.25	2.63	8.04	2.68	
	7	6	9.56	2.48	9.33	2.53	9.10	2.58	8.87	2.63	8.65	2.68	
	10	8	9.16	2.34	8.94	2.39	8.72	2.44	8.51	2.48	8.29	2.53	
	15	10	8.52	2.11	8.31	2.16	8.11	2.20	7.91	2.24	7.70	2.28	
20	15	8.00	1.80	7.81	1.83	7.62	1.87	7.43	1.91	7.24	1.94		
24	18	8.32	1.78	8.13	1.81	7.93	1.85	7.73	1.89	7.53	1.92		

■ Model: AUXG30KRLB

AFR		m³/h		1,600									
		Indoor temperature											
		°CDB	16		18		20		22		24		
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	
			kW		kW		kW		kW		kW		
	-15	-16	7.10	2.55	7.07	2.56	7.04	2.56	6.86	2.56	6.40	2.57	
	-10	-11	8.12	2.76	8.09	2.76	8.05	2.77	7.84	2.77	7.33	2.78	
	-5	-7	9.14	2.97	9.10	2.97	9.07	2.97	8.83	2.98	8.25	2.99	
	0	-2	9.71	3.19	9.67	3.20	9.63	3.20	9.38	3.21	8.76	3.22	
	5	3	10.84	3.24	10.80	3.25	10.75	3.25	10.47	3.25	9.78	3.27	
	7	6	11.30	3.26	11.25	3.27	11.20	3.27	10.91	3.27	10.19	3.29	
	10	8	11.64	3.26	11.59	3.27	11.54	3.27	11.25	3.27	10.50	3.29	
	15	10	12.11	3.26	12.06	3.27	12.01	3.27	11.70	3.27	10.93	3.29	
20	15	12.90	3.27	12.84	3.27	12.79	3.28	12.46	3.28	11.64	3.29		
24	18	13.53	3.28	13.47	3.28	13.41	3.29	13.07	3.29	12.20	3.30		

■ Model: AUXG36KRLB

AFR		m³/h		1,870								
		Indoor temperature										
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-15	-16	8.05	2.85	8.01	2.86	7.98	2.86	7.77	2.86	7.26	2.87
	-10	-11	9.21	3.08	9.17	3.09	9.13	3.09	8.89	3.09	8.31	3.11
	-5	-7	10.37	3.31	10.32	3.32	10.28	3.32	10.02	3.33	9.35	3.34
	0	-2	11.01	3.58	10.97	3.59	10.92	3.59	10.64	3.60	9.94	3.61
	5	3	12.30	3.64	12.24	3.64	12.19	3.65	11.88	3.65	11.09	3.66
	7	6	12.81	3.66	12.75	3.67	12.70	3.67	12.37	3.67	11.56	3.69
	10	8	13.20	3.66	13.15	3.67	13.09	3.67	12.75	3.67	11.91	3.69
	15	10	13.73	3.66	13.68	3.67	13.62	3.67	13.27	3.67	12.39	3.69
	20	15	14.63	3.67	14.56	3.68	14.50	3.68	14.13	3.68	13.19	3.70
	24	18	15.34	3.68	15.27	3.68	15.21	3.69	14.82	3.69	13.84	3.70

■ Model: AUXG45KRLB

AFR	m ³ /h	2,000
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			Indoor temperature									
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-15	-16	12.04	4.31	11.75	4.33	11.46	4.35	11.19	4.35	10.53	4.35
	-10	-11	13.37	4.49	13.05	4.52	12.73	4.54	12.43	4.54	11.69	4.54
	-5	-7	14.70	4.68	14.35	4.70	14.00	4.72	13.67	4.72	12.86	4.72
	0	-2	15.48	4.86	15.11	4.88	14.74	4.91	14.40	4.91	13.54	4.91
	5	3	16.57	4.25	16.18	4.27	15.78	4.30	15.42	4.30	14.50	4.30
	7	6	17.01	4.25	16.61	4.27	16.20	4.29	15.82	4.29	14.88	4.29
	10	8	17.72	4.24	17.29	4.26	16.87	4.28	16.48	4.28	15.50	4.28
	15	10	18.89	4.22	18.44	4.24	17.99	4.27	17.57	4.27	16.53	4.27
	20	15	20.07	4.21	19.59	4.23	19.11	4.25	18.66	4.25	17.55	4.25
	24	18	21.01	4.19	20.50	4.22	20.00	4.24	19.54	4.24	18.38	4.24

■ Model: AUXG54KRLB

AFR	m ³ /h	2,100
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			Indoor temperature									
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
	-15	-16	12.26	4.49	11.97	4.51	11.67	4.53	11.40	4.53	10.72	4.53
	-10	-11	13.62	4.68	13.29	4.70	12.97	4.72	12.66	4.72	11.91	4.72
	-5	-7	14.97	4.87	14.61	4.89	14.26	4.92	13.93	4.92	13.10	4.92
	0	-2	15.77	5.06	15.39	5.08	15.02	5.11	14.67	5.11	13.79	5.11
	5	3	16.88	4.61	16.48	4.63	16.08	4.66	15.70	4.66	14.77	4.66
	7	6	17.33	4.60	16.91	4.63	16.50	4.65	16.12	4.65	15.16	4.65
	10	8	18.05	4.59	17.61	4.62	17.18	4.64	16.78	4.64	15.79	4.64
	15	10	19.24	4.58	18.78	4.60	18.32	4.62	17.90	4.62	16.83	4.62
	20	15	20.44	4.56	19.95	4.58	19.46	4.61	19.01	4.61	17.88	4.61
	24	18	21.40	4.55	20.88	4.57	20.37	4.59	19.90	4.59	18.72	4.59

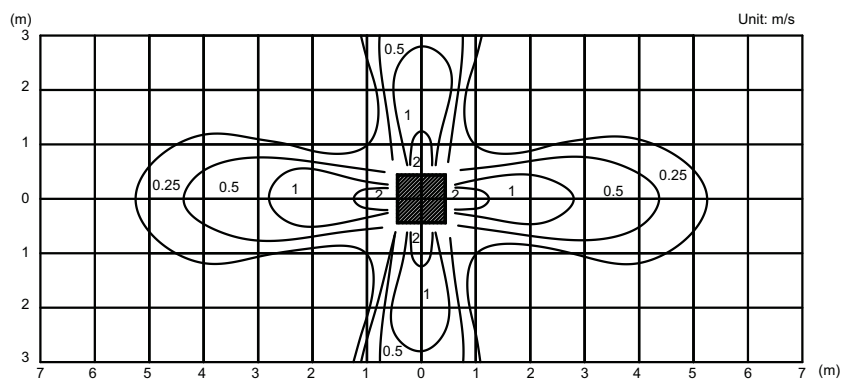
5. Fan performance

5-1. Air velocity distributions

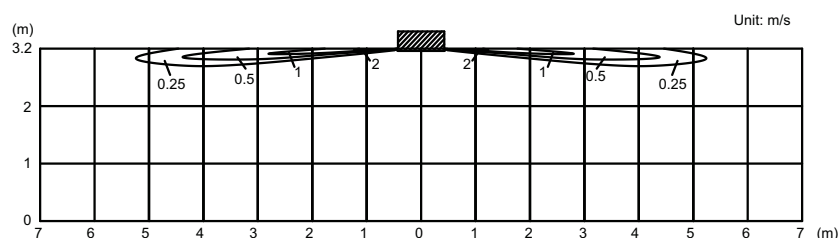
■ Model: AUXG24KRLB (4-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

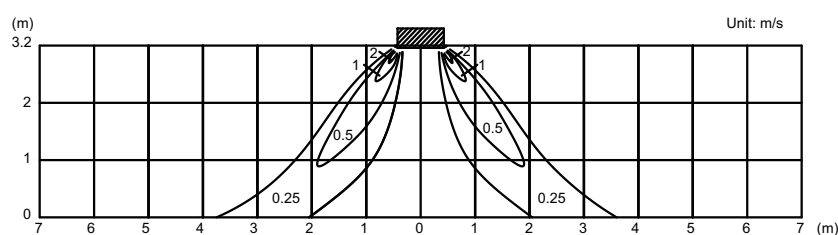
Top view
Horizontal louver: position 1



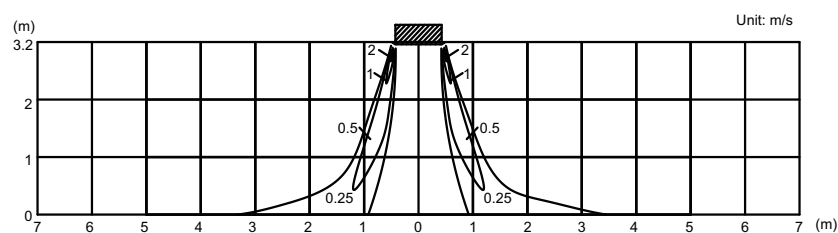
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



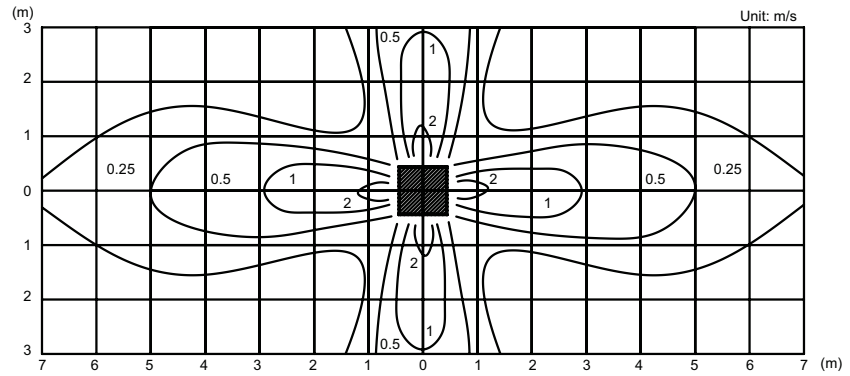
Side view
Horizontal louver: position 4



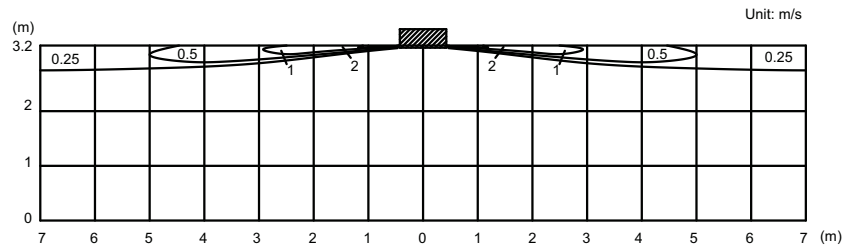
■ Model: AUXG30KRLB (4-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

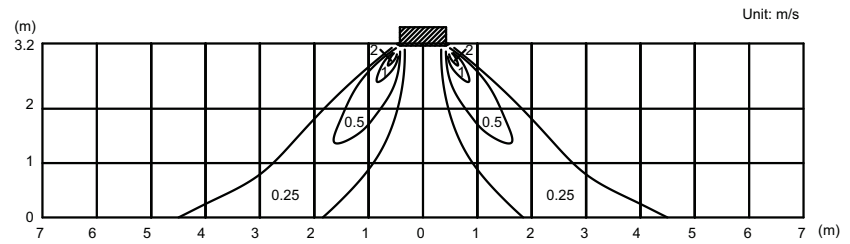
Top view
Horizontal louver: position 1



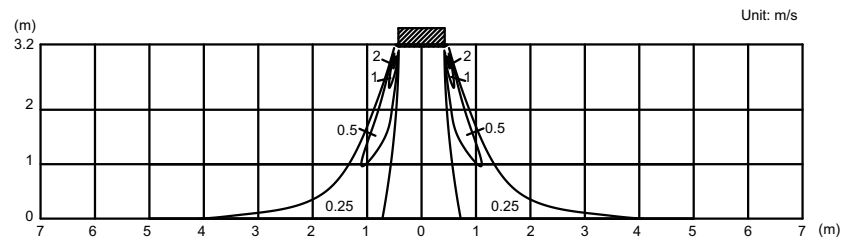
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



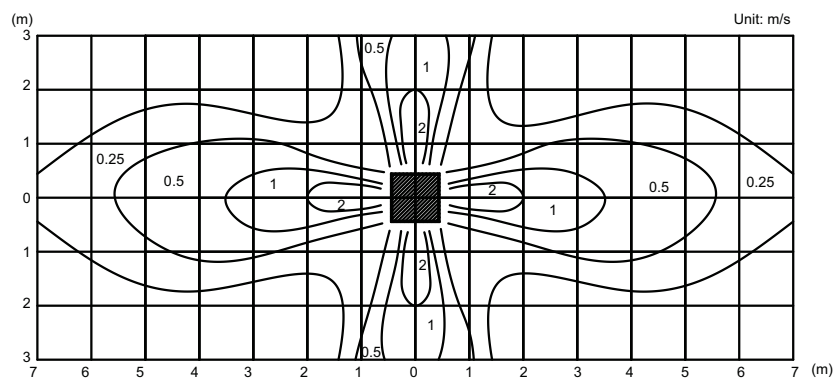
Side view
Horizontal louver: position 4



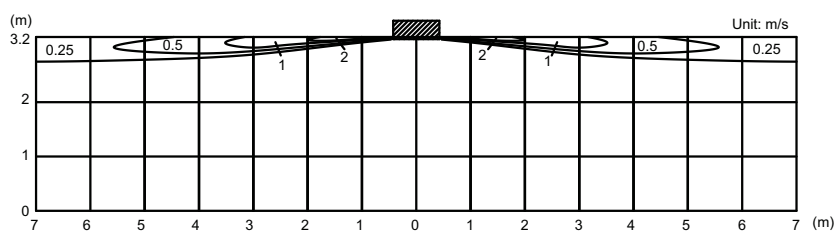
Model: AUXG36KRLB (4-way air outlet)

Measuring conditions	Fan speed HIGH	Operation mode FAN
----------------------	-------------------	-----------------------

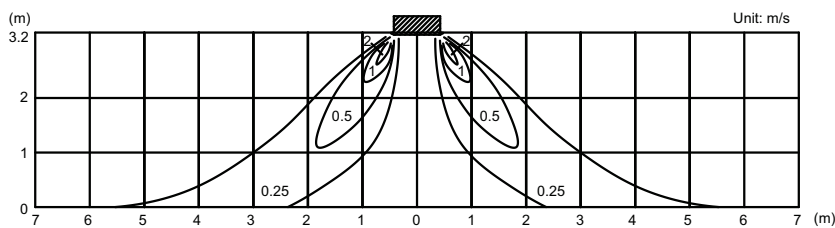
Top view
Horizontal louver: position 1



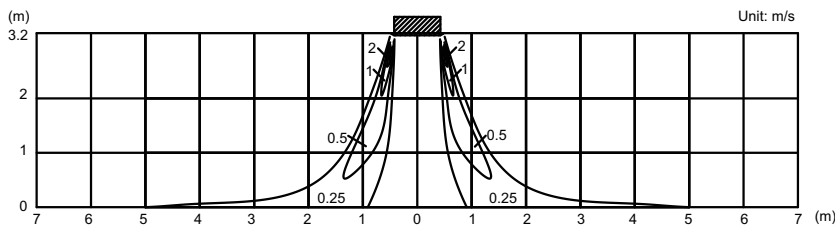
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



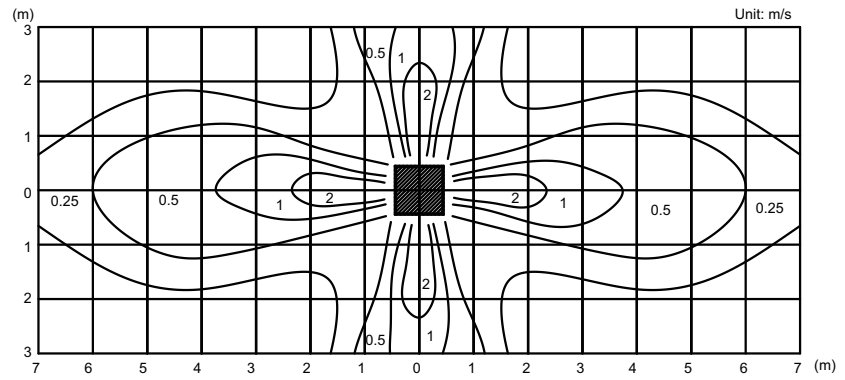
Side view
Horizontal louver: position 4



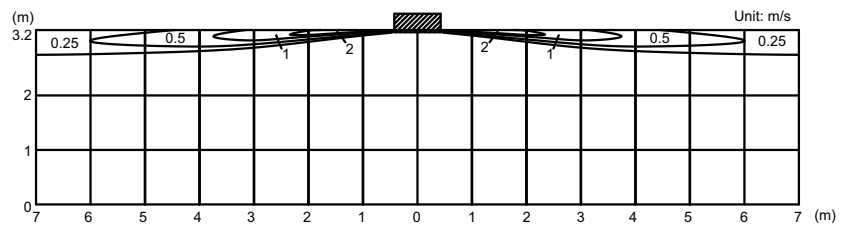
Model: AUXG45KRLB (4-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

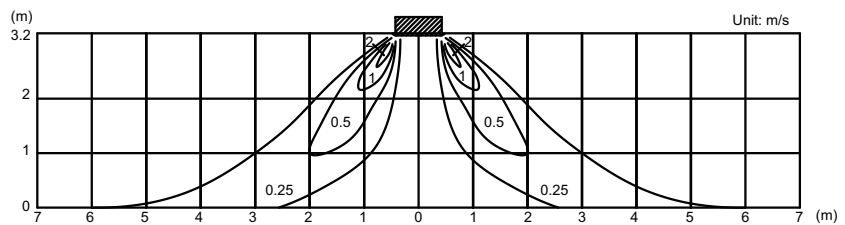
Top view
Horizontal louver: position 1



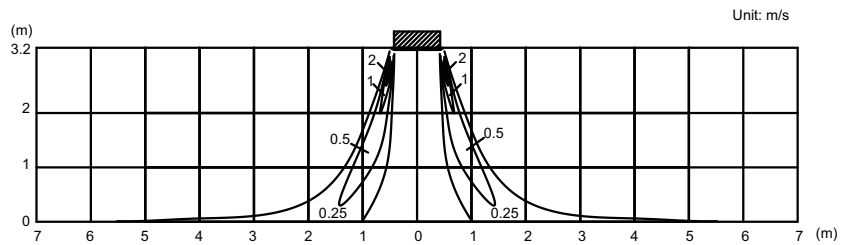
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



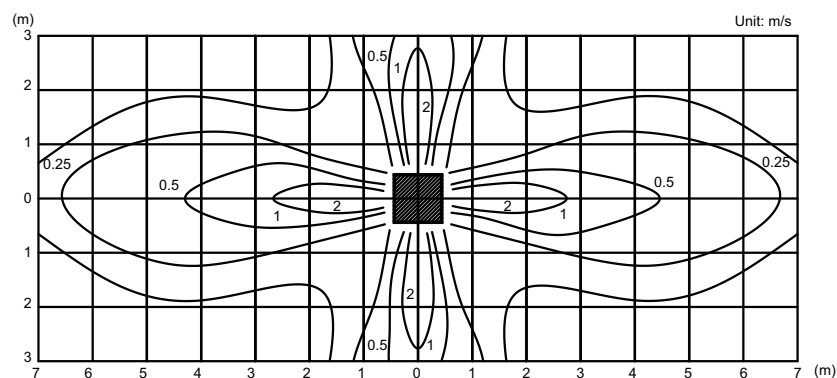
Side view
Horizontal louver: position 4



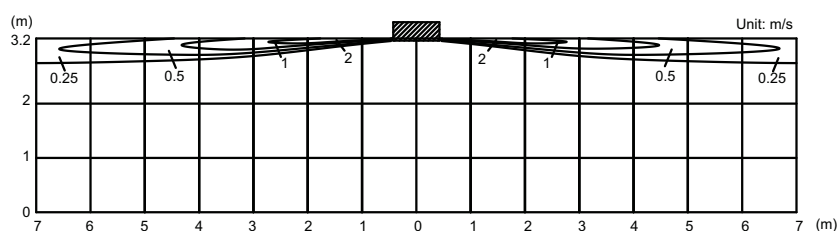
Model: AUXG54KRLB (4-way air outlet)

Measuring conditions	Fan speed HIGH	Operation mode FAN
----------------------	-------------------	-----------------------

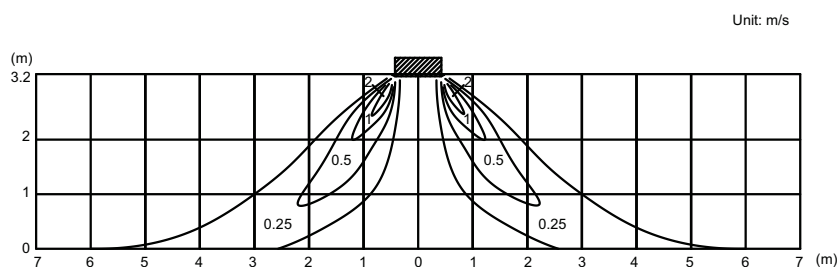
Top view
Horizontal louver: position 1



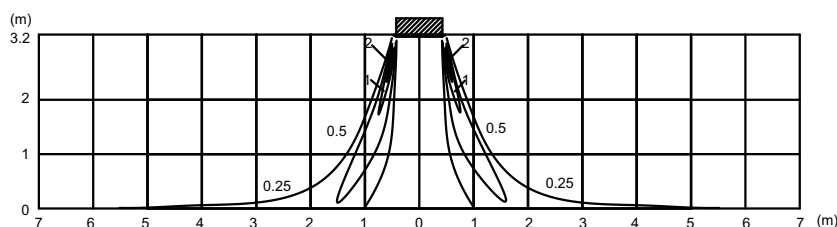
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



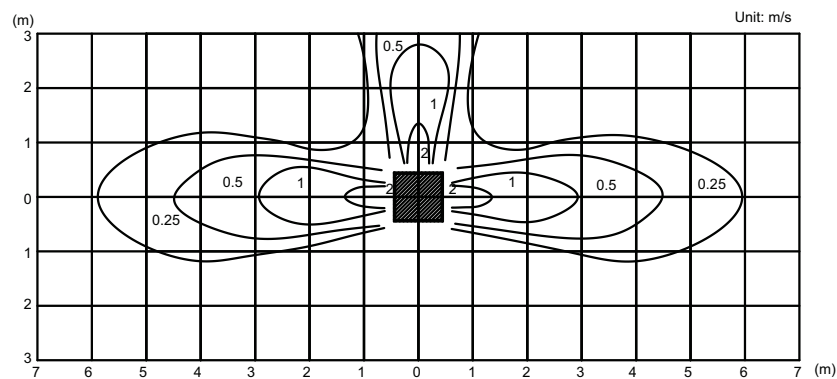
Side view
Horizontal louver: position 4



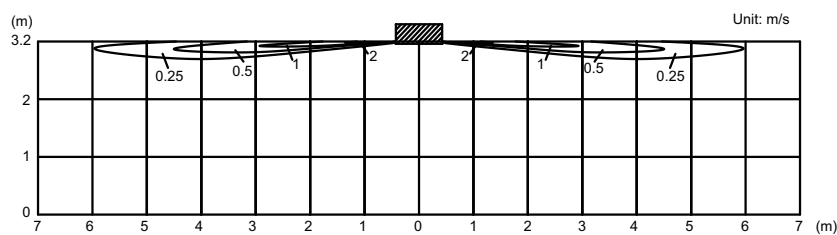
Model: AUXG24KRLB (3-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

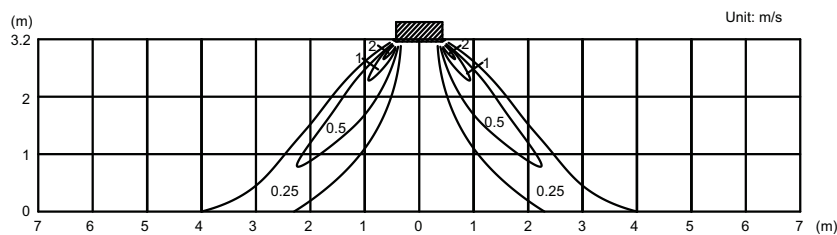
Top view
Horizontal louver: position 1



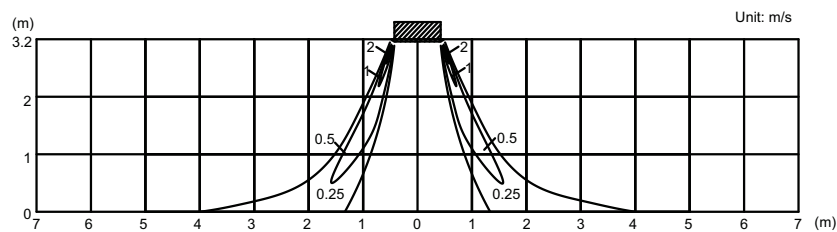
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



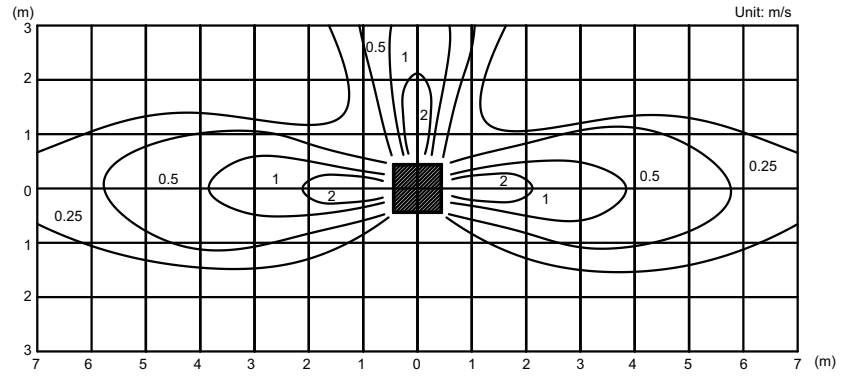
Side view
Horizontal louver: position 4



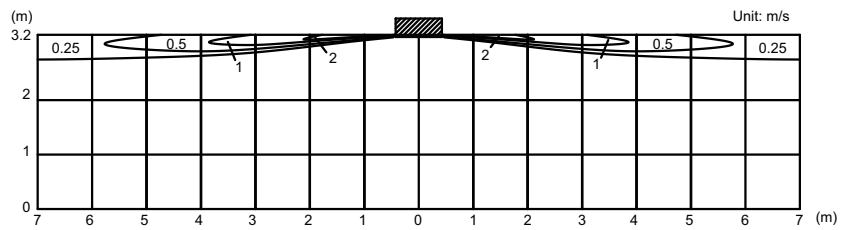
Model: AUXG30KRLB (3-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

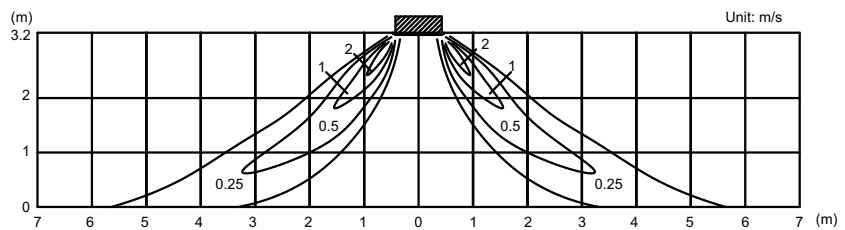
Top view
Horizontal louver: position 1



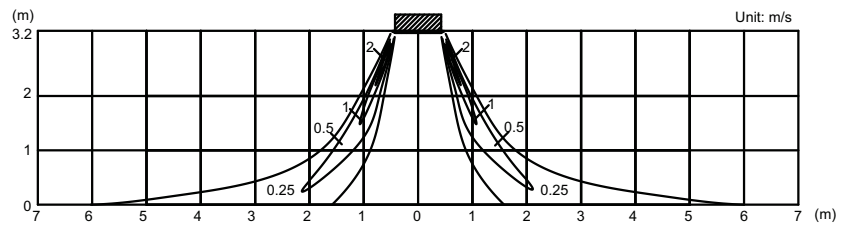
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



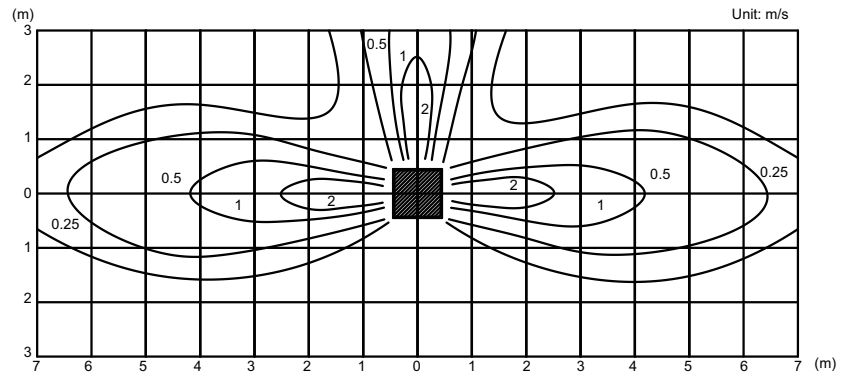
Side view
Horizontal louver: position 4



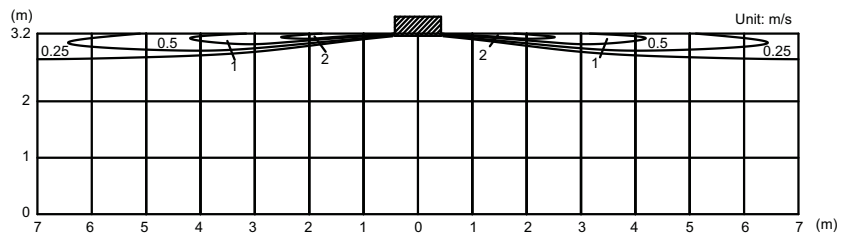
■ Model: AUXG36KRLB (3-way air outlet)

Measuring conditions	Fan speed HIGH	Operation mode FAN
----------------------	-------------------	-----------------------

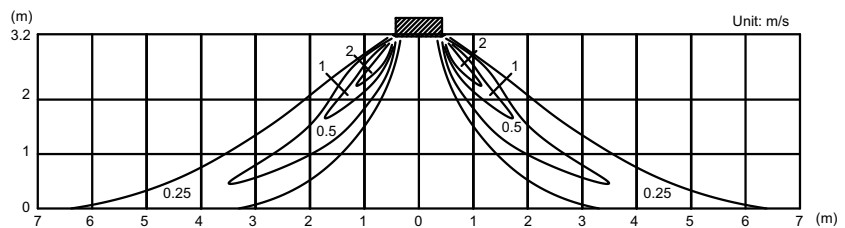
Top view
Horizontal louver: position 1



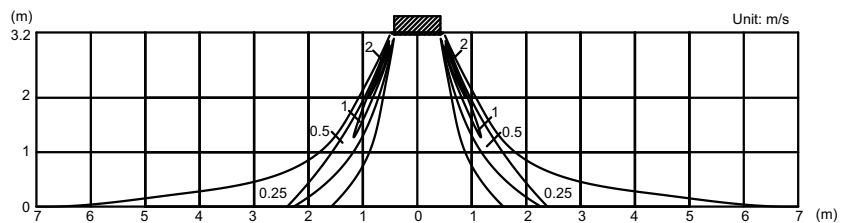
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



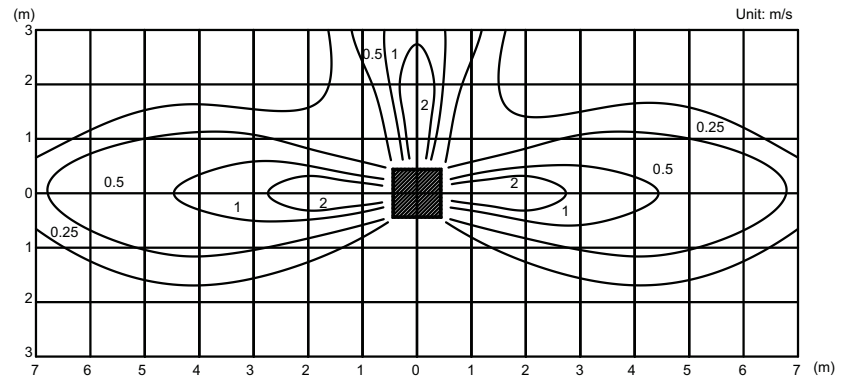
Side view
Horizontal louver: position 4



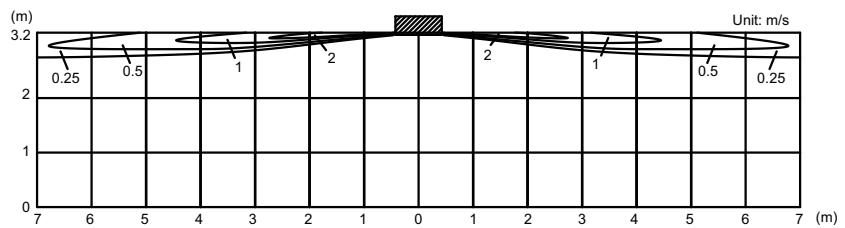
Model: AUXG45KRLB (3-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

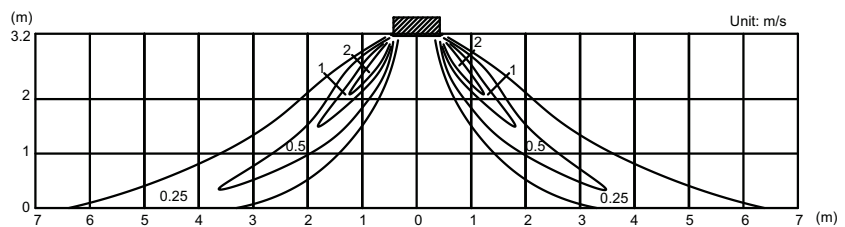
Top view
Horizontal louver: position 1



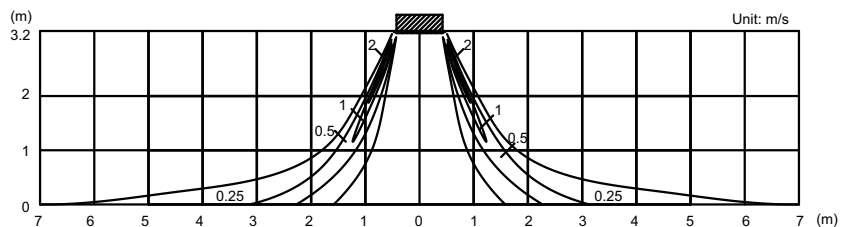
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



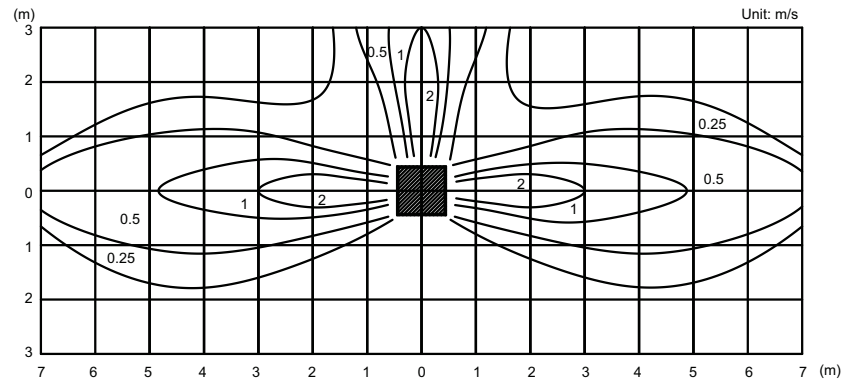
Side view
Horizontal louver: position 4



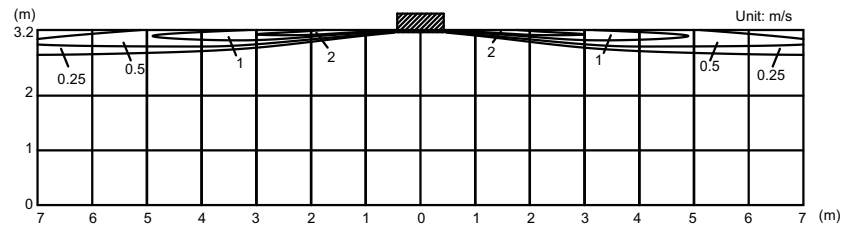
Model: AUXG54KRLB (3-way air outlet)

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

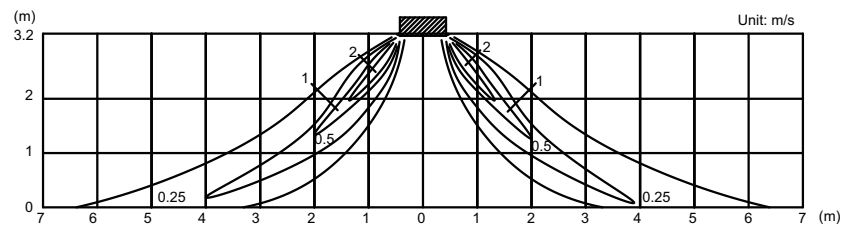
Top view
Horizontal louver: position 1



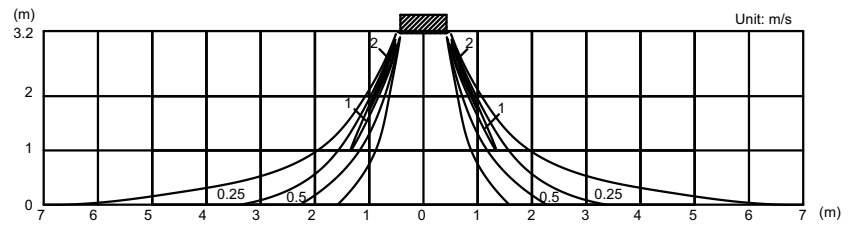
Side view
Horizontal louver: position 1



Side view
Horizontal louver: position 2



Side view
Horizontal louver: position 4



5-2. Airflow

■ Model: AUXG24KRLB (4-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,150
	l/s	319
	CFM	677
MED	m ³ /h	1,050
	l/s	292
	CFM	618
LOW	m ³ /h	980
	l/s	272
	CFM	577
QUIET	m ³ /h	870
	l/s	242
	CFM	512

■ Model: AUXG30KRLB (4-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,600
	l/s	444
	CFM	942
MED	m ³ /h	1,400
	l/s	389
	CFM	824
LOW	m ³ /h	1,270
	l/s	353
	CFM	748
QUIET	m ³ /h	1,150
	l/s	319
	CFM	677

■ Model: AUXG36KRLB (4-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,870
	l/s	519
	CFM	1,101
MED	m ³ /h	1,560
	l/s	433
	CFM	918
LOW	m ³ /h	1,410
	l/s	392
	CFM	830
QUIET	m ³ /h	1,160
	l/s	322
	CFM	683

■ Model: AUXG45KRLB (4-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	2,000
	l/s	556
	CFM	1,177
MED	m ³ /h	1,650
	l/s	458
	CFM	971
LOW	m ³ /h	1,460
	l/s	406
	CFM	859
QUIET	m ³ /h	1,300
	l/s	361
	CFM	765

■ Model: AUXG54KRLB (4-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	2,100
	l/s	583
	CFM	1,236
MED	m ³ /h	1,780
	l/s	494
	CFM	1,048
LOW	m ³ /h	1,600
	l/s	444
	CFM	942
QUIET	m ³ /h	1,320
	l/s	367
	CFM	777

■ Model: AUXG24KRLB (3-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,000
	l/s	278
	CFM	589
MED	m ³ /h	915
	l/s	254
	CFM	538
LOW	m ³ /h	850
	l/s	236
	CFM	500
QUIET	m ³ /h	755
	l/s	210
	CFM	444

■ Model: AUXG30KRLB (3-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,390
	l/s	386
	CFM	818
MED	m ³ /h	1,220
	l/s	339
	CFM	718
LOW	m ³ /h	1,100
	l/s	306
	CFM	647
QUIET	m ³ /h	1,000
	l/s	278
	CFM	589

■ Model: AUXG36KRLB (3-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,660
	l/s	461
	CFM	977
MED	m ³ /h	1,390
	l/s	386
	CFM	818
LOW	m ³ /h	1,240
	l/s	344
	CFM	730
QUIET	m ³ /h	1,030
	l/s	286
	CFM	606

■ Model: AUXG45KRLB (3-way outlet)

● Cooling/Heating

Fan speed	Airflow	
HIGH	m ³ /h	1,740
	l/s	483
	CFM	1,024
MED	m ³ /h	1,440
	l/s	400
	CFM	848
LOW	m ³ /h	1,270
	l/s	353
	CFM	748
QUIET	m ³ /h	1,130
	l/s	314
	CFM	665

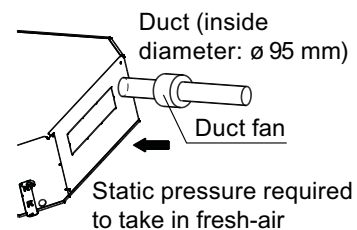
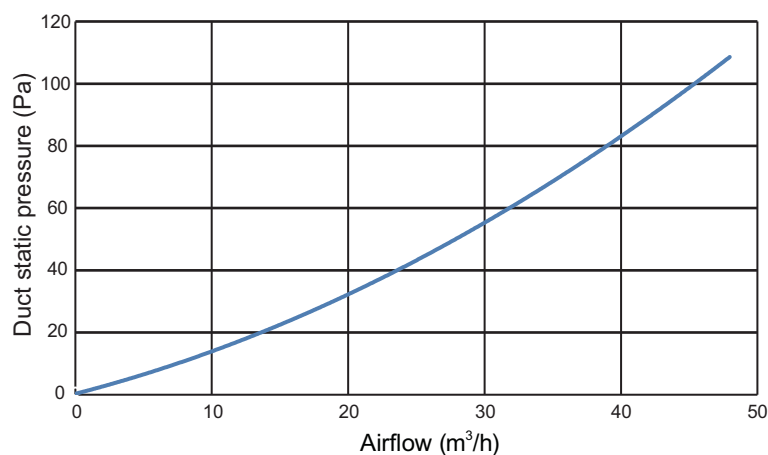
■ Model: AUXG54KRLB (3-way outlet)

● Cooling/Heating

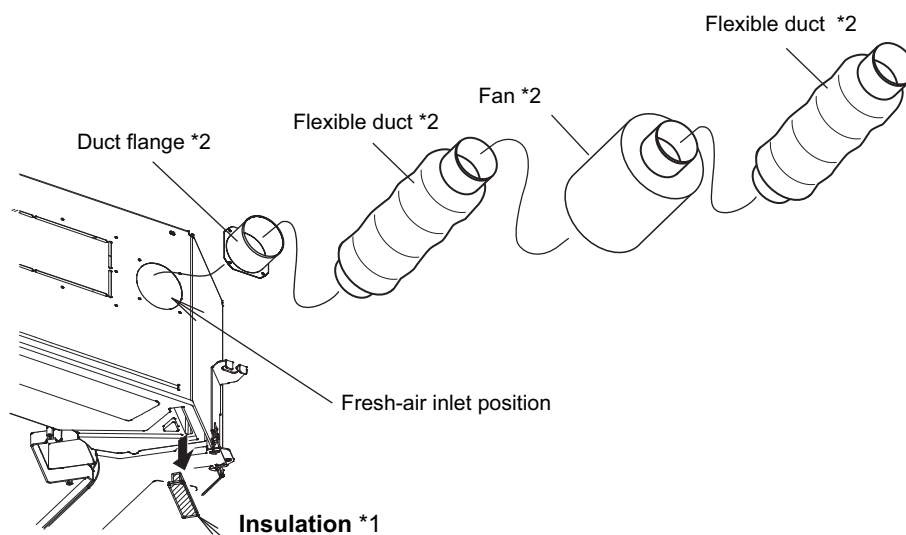
Fan speed	Airflow	
HIGH	m ³ /h	1,830
	l/s	508
	CFM	1,077
MED	m ³ /h	1,550
	l/s	431
	CFM	912
LOW	m ³ /h	1,390
	l/s	386
	CFM	818
QUIET	m ³ /h	1,150
	l/s	319
	CFM	677

5-3. Fresh-air characteristics

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



■ Installation



*1: In case of fresh-air intake, remove the insulation.

*2: Locally-purchased parts

For the fresh-air inlet position, refer to ["Dimensions"](#) on page 5.

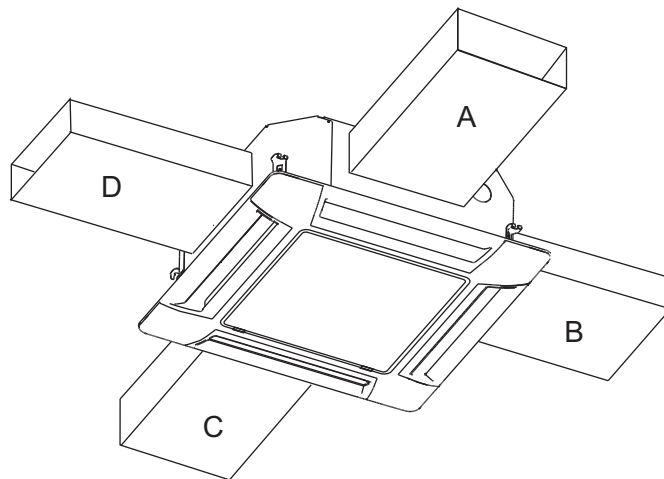
■ Air-outlet duct connection

● Precautions

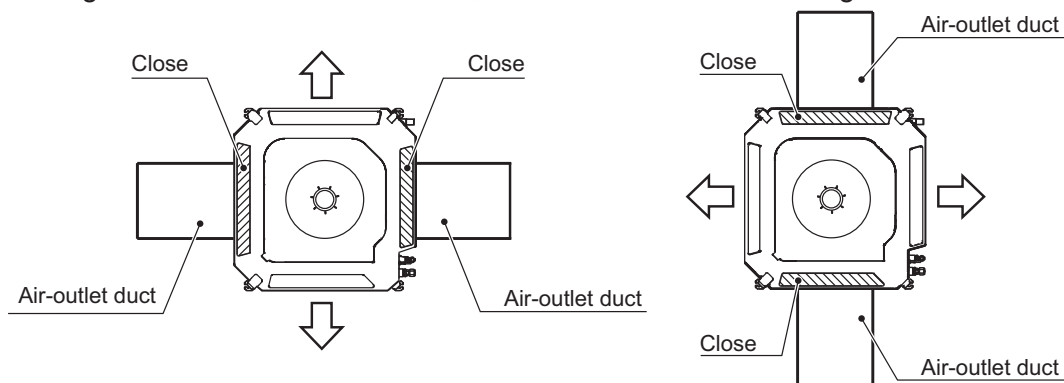
- Connect the air-outlet duct to maximum 2 directions among the 4-duct connecting directions.

⚠ CAUTION

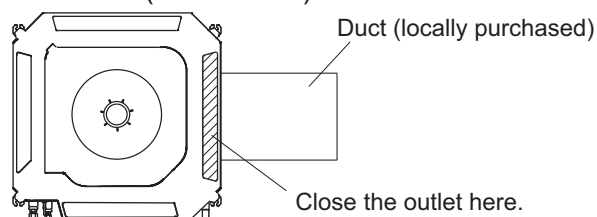
Do not connect ducts at 3 or more directions.



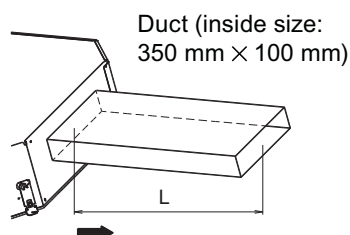
- When installing air-outlet duct in 2 directions, connect the ducts in a straight line.



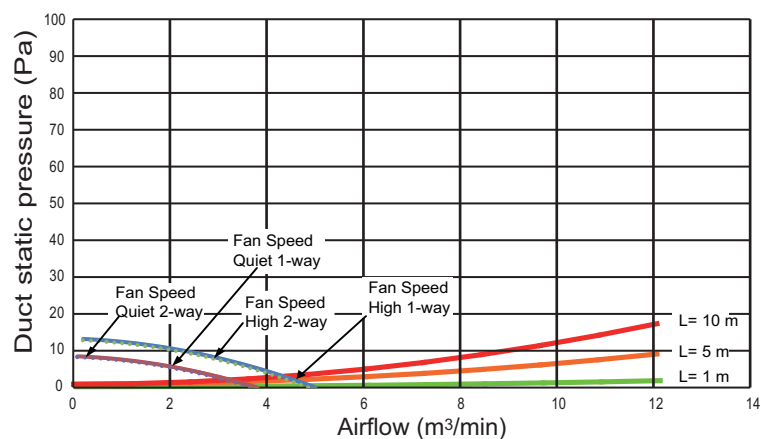
- Once the ducted direction is decided, be sure to close the outlet in the direction. Use optional Air Outlet Shutter Plate (UTR-YDZK) to close the outlet.



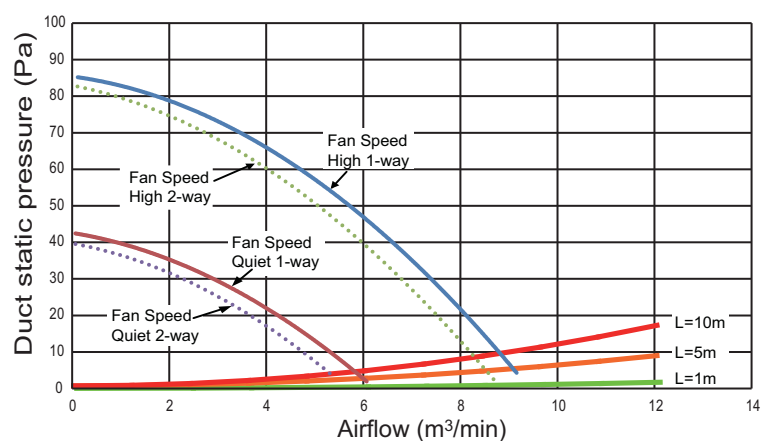
- The inside size of the duct is as follows:



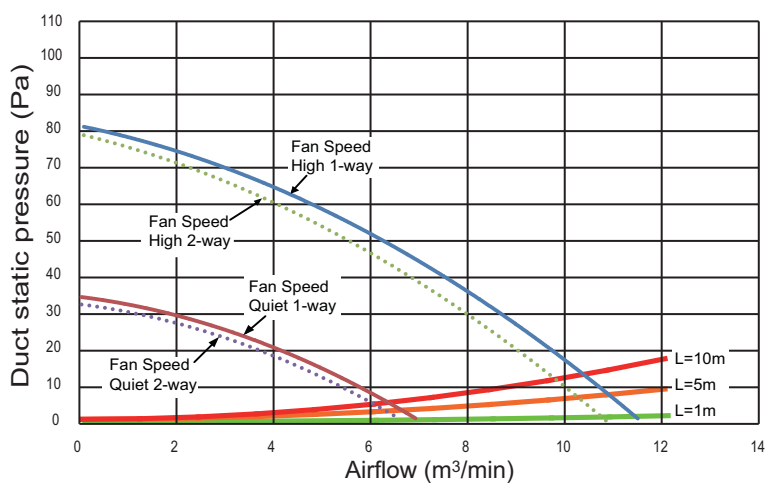
● Model: AUXG24KRLB



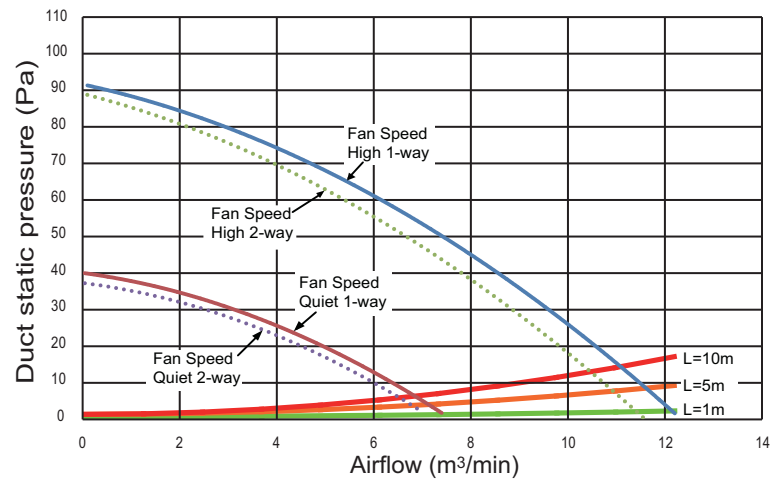
● Model: AUXG30KRLB



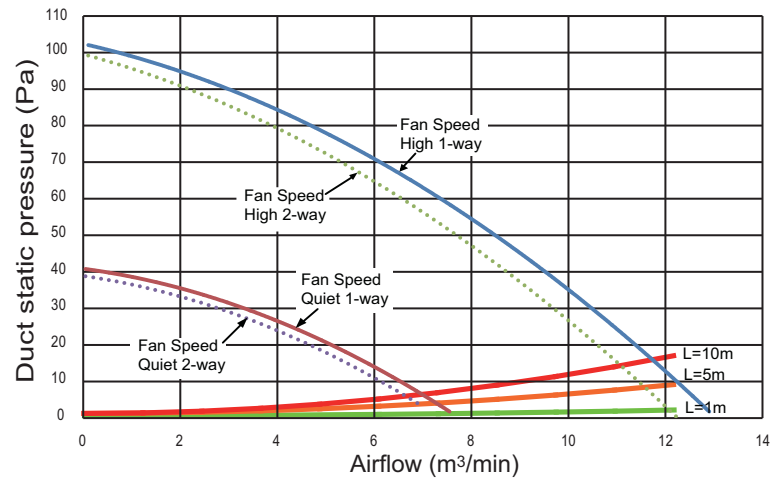
● Model: AUXG36KRLB



● Model: AUXG45KRLB



● Model: AUXG54KRLB



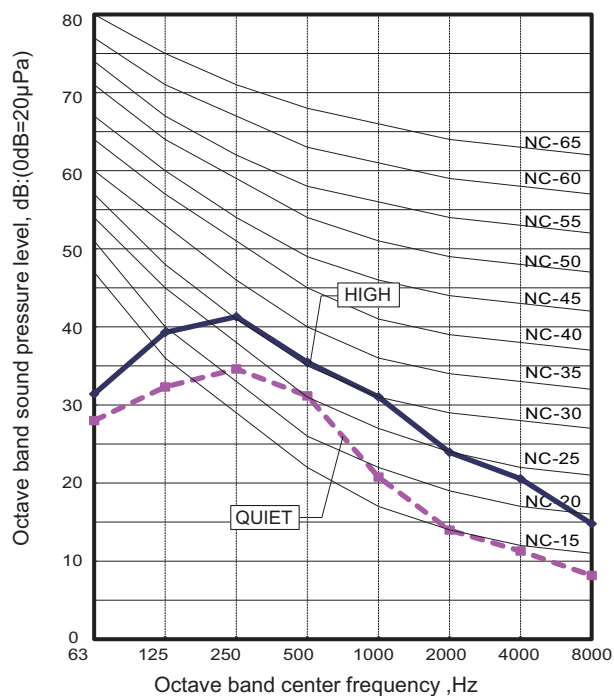
6. Operation noise (sound pressure)

6-1. Noise level curve

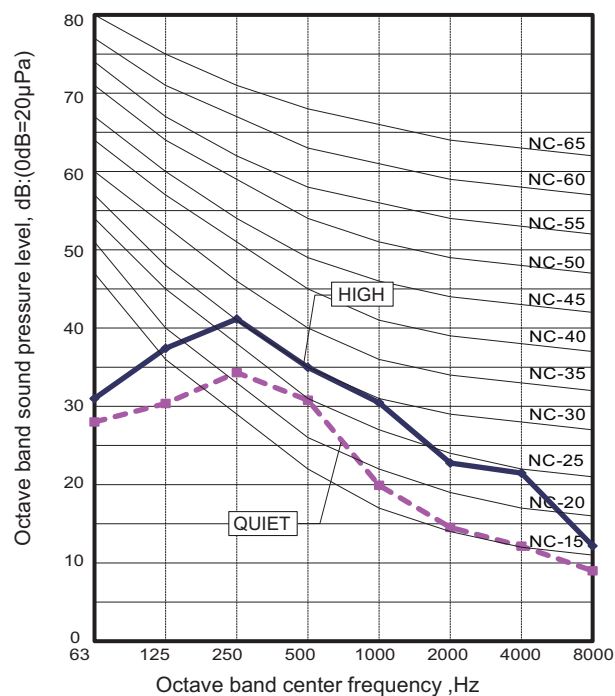
Measuring conditions	Ceiling height Standard	Outlet directions 4-way air outlet
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Model: AUXG24KRLB

● Cooling

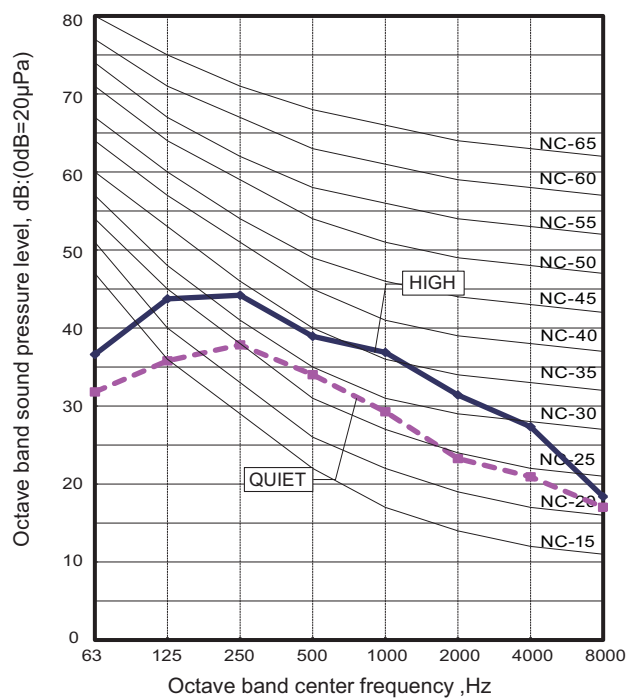


● Heating

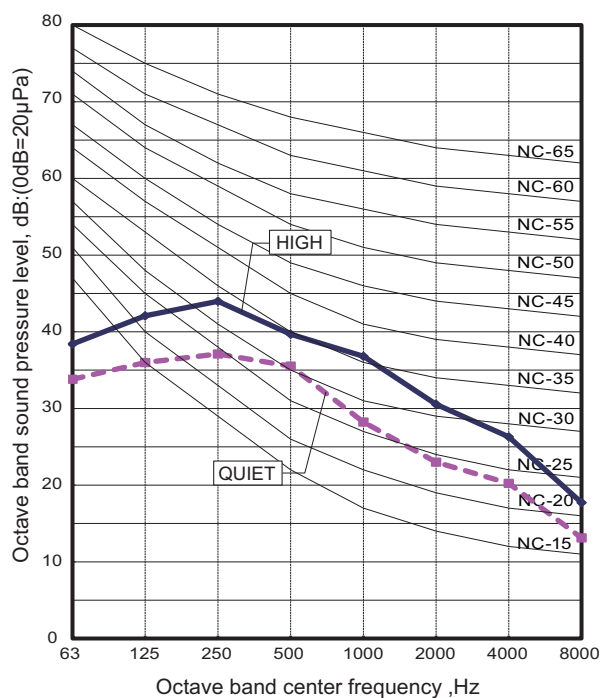


Model: AUXG30KRLB

● Cooling

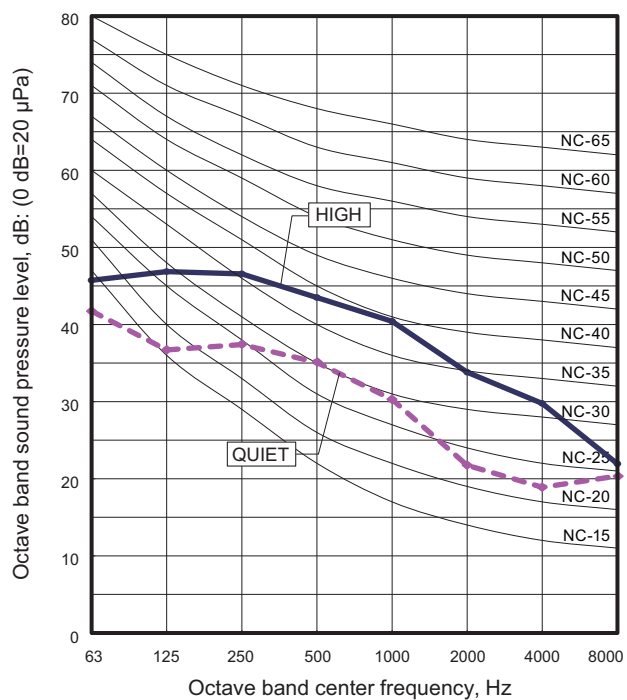


● Heating

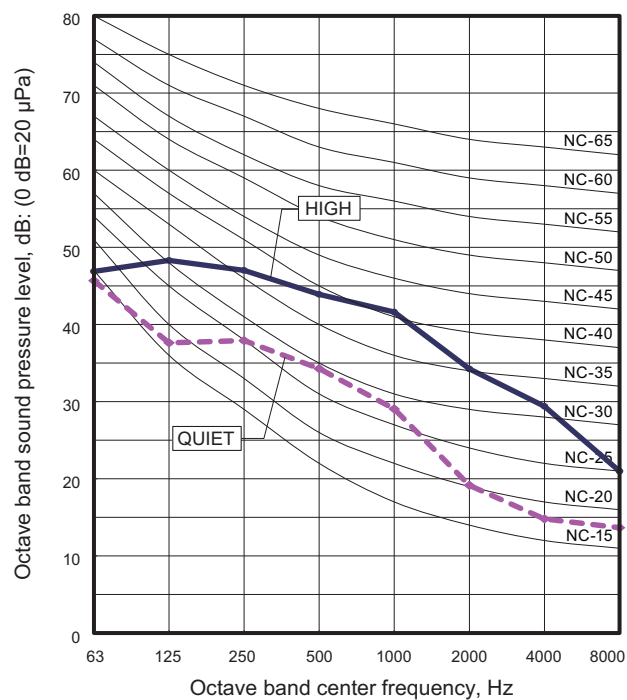


Model: AUXG36KRLB

Cooling

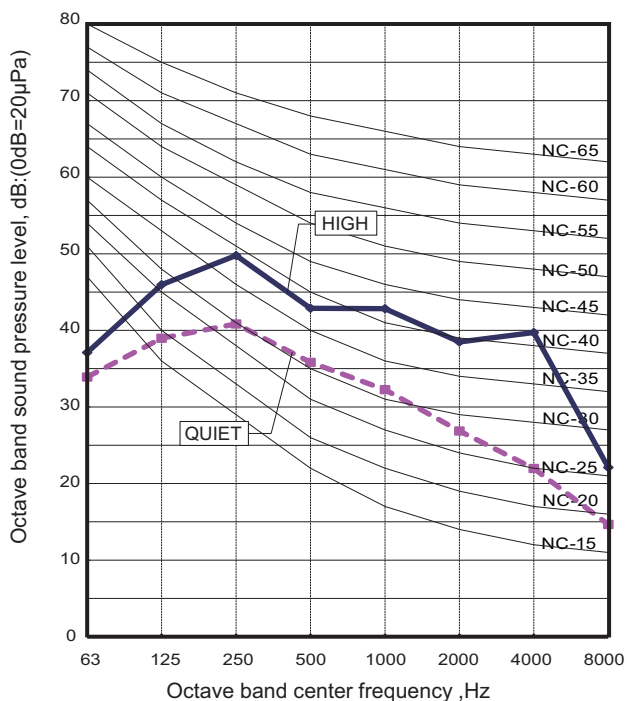


Heating

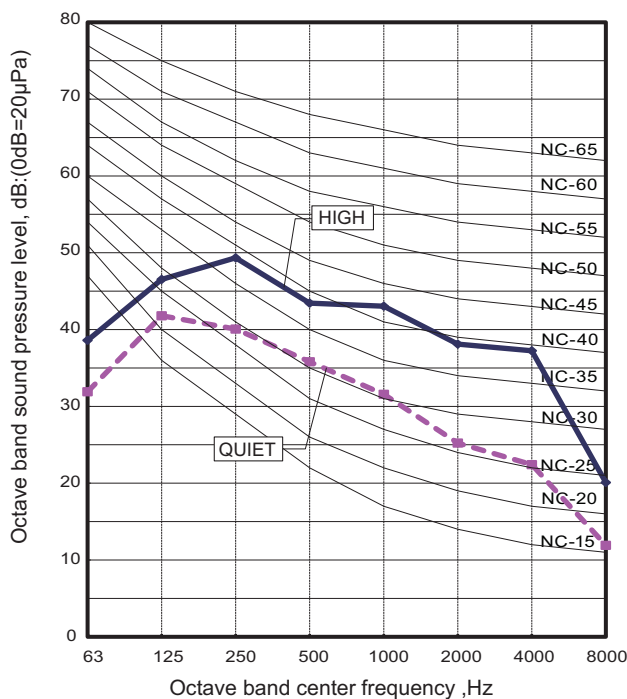


Model: AUXG45KRLB

Cooling

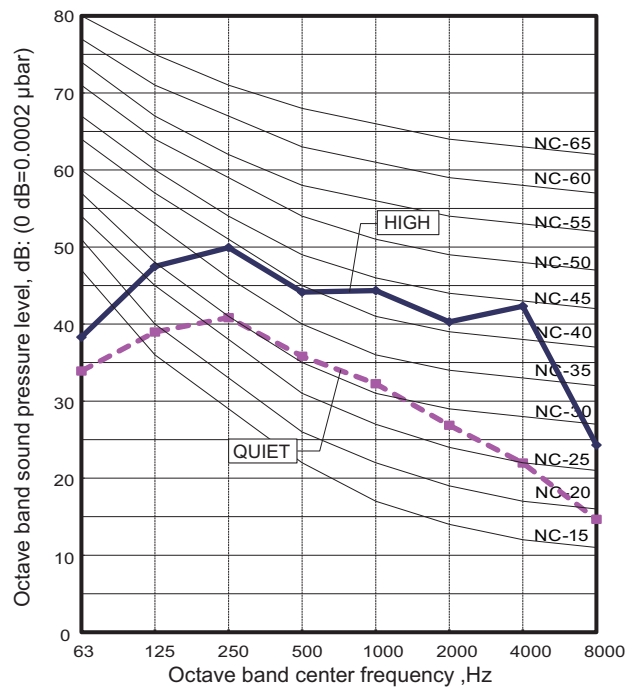


Heating

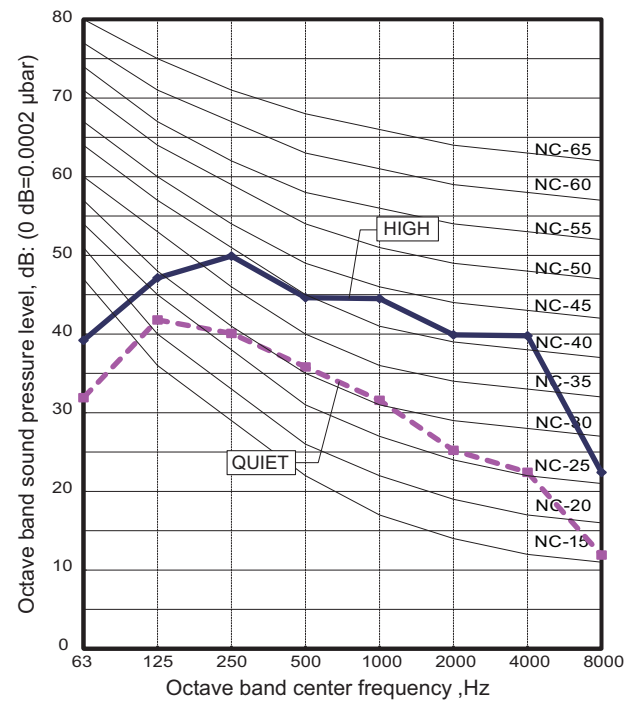


Model: AUXG54KRLB

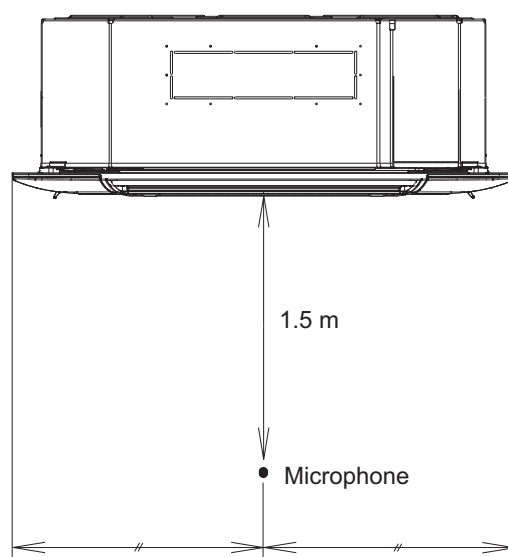
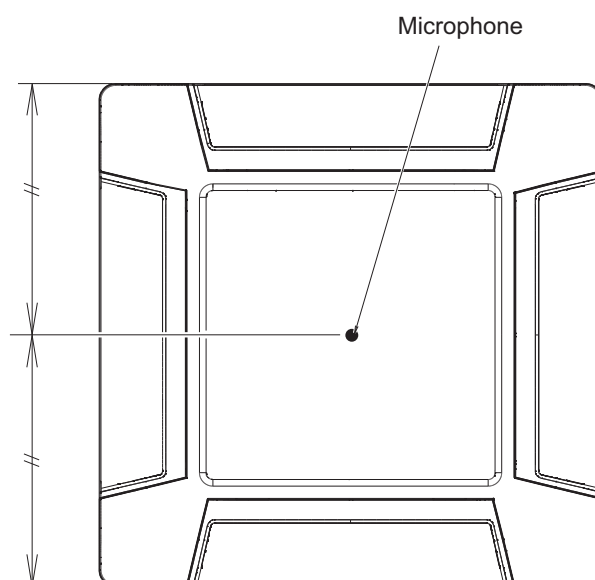
● Cooling



● Heating



6-2. Sound level check point



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

7. Safety devices

Type of protection	Protection form		Model
			AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A
Fan motor protection	Thermal protection program	Activate	125 ±10 °C Fan motor stop
		Reset	120 ±10 °C Fan motor restart

*: Printed Circuit Board

8. External input and output

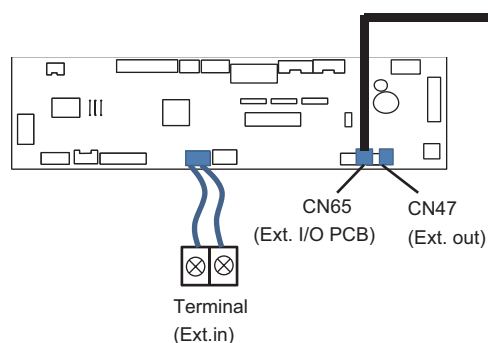


Fig. Indoor unit PCB

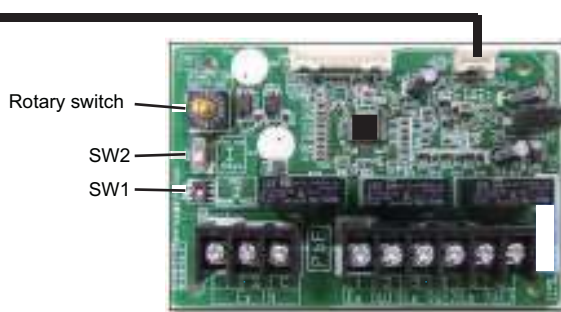


Fig. External Input and Output PCB

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		
			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		

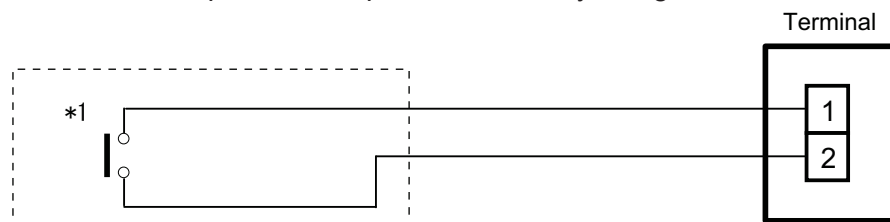
NOTE: For details of the switching function, refer to ["Setting of external input and output"](#) on page 41.

8-1. External input

- “Operation/Stop” mode or “Forced stop” mode can be selected with function setting of indoor unit.
- A twisted pair cable should be used. Maximum length of cable is 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

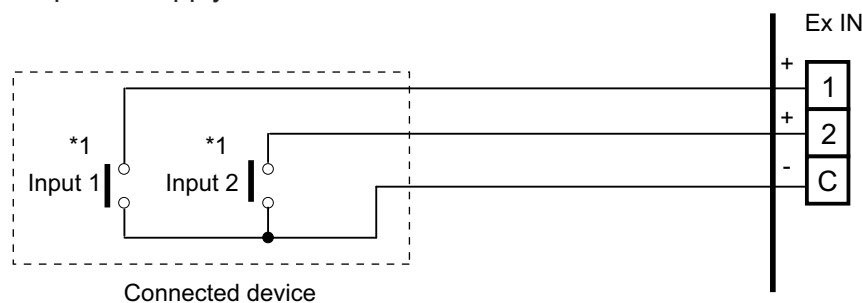
The indoor unit Operation/Stop can be set by using the input terminal on the PCB.

Input select

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

– Dry contact

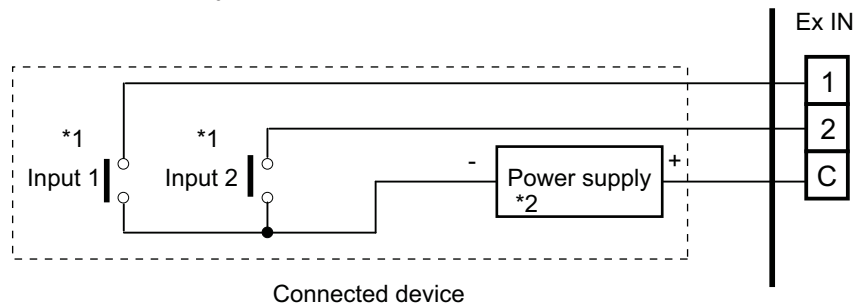
In case of internal power supply, set the slide switch of SW1 to “NON VOL” side.



*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.



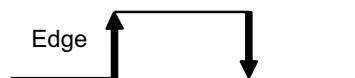
*1: The switches can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

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

■ Input signal type

- **Indoor unit**

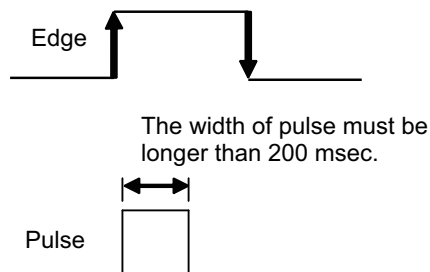
Input signal type is only "Edge".



- **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

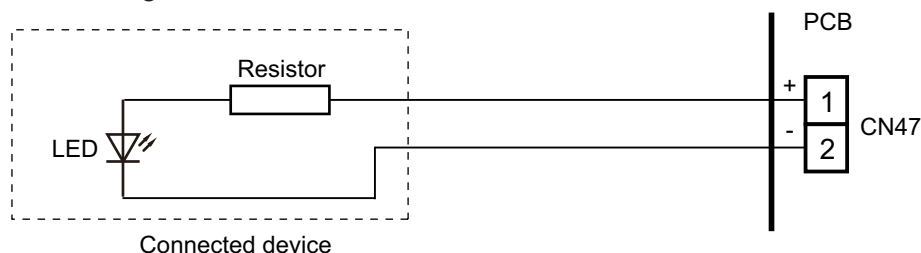
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

Indoor unit

- A twisted pair cable (22 AWG) should be used. Maximum length of cable is 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 41.

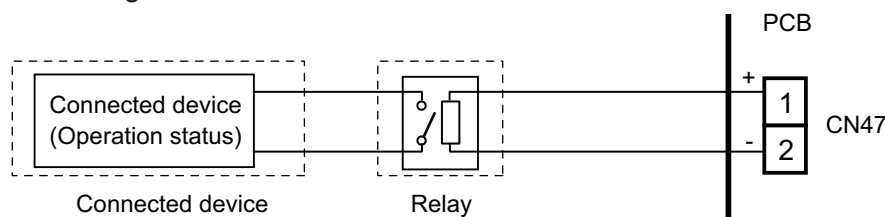
When indicator, etc. are connected directly

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



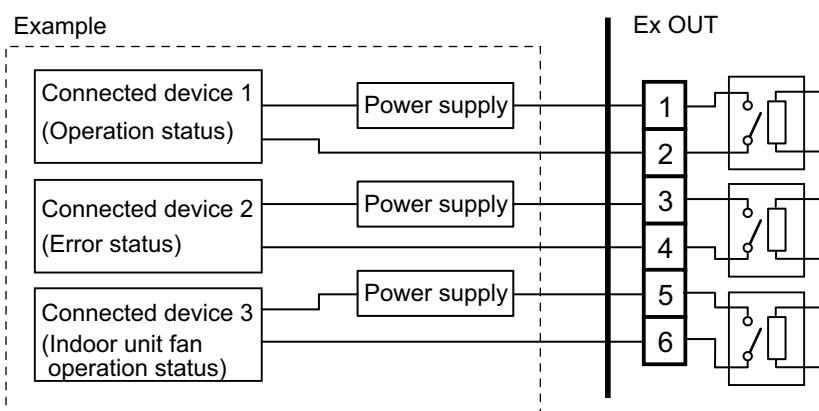
When connecting with a device equipped with a power supply

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 41.



8-3. Setting of external input and output

• Indoor unit

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

Output		
Connecting point	Function setting number 60	Function
CN47	00	Operation/Stop
	01 to 08	(Setting prohibited)
	09	Error status
	10	Indoor unit fan operation status
	11	External heater output

• External Input and Output PCB

Switch setting		Input		Output		
Rotary switch	SW2	Ex IN 1	Ex IN 2	Ex OUT 1	Ex OUT 2	Ex OUT 3
1	Edge	Operation/Stop	Not available	Operation/Stop	Error status	Indoor unit fan operation status
	Pulse	Operation	Stop			
2	Edge*	Forced thermostat off	Not available	Error status	Indoor unit fan operation status	External heater output
3 to 9, A		(Setting prohibited)				
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:

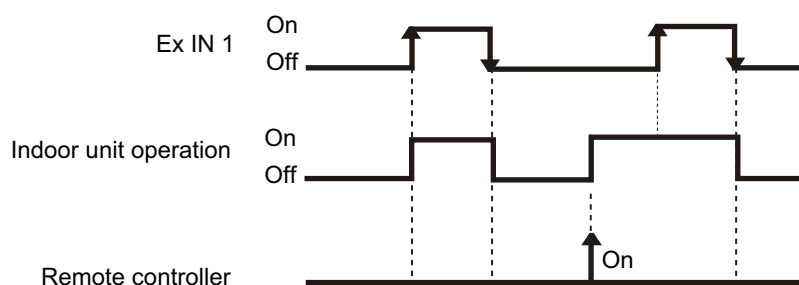
- When the rotary switch is selected to "1", the operation of the terminal input of the indoor unit and the External Input and Output PCB input are the same. The operation content depends on the setting of function setting number 46.
- *: The external input other than "Operation/Stop" is available only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

8-4. Details of control input function

■ Operation/Stop mode 1

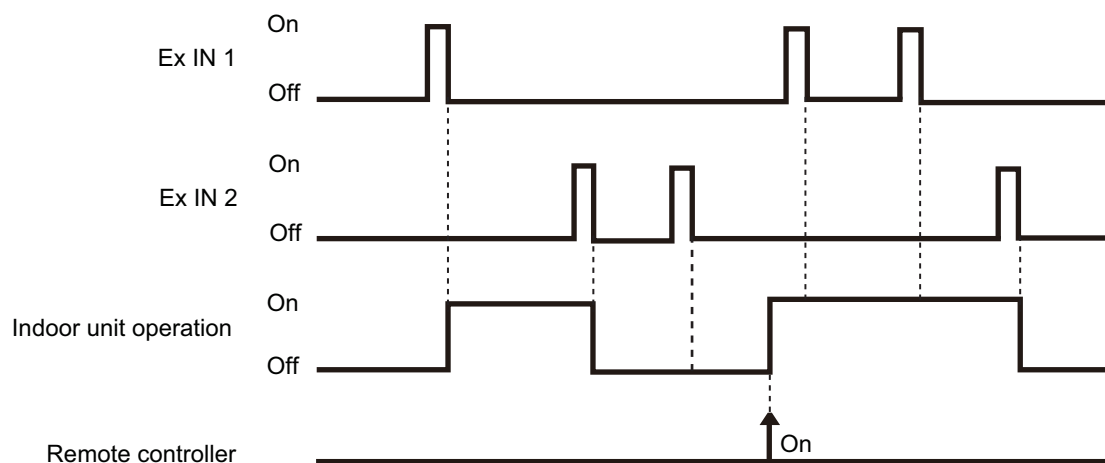
- In the case of "Edge" input

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



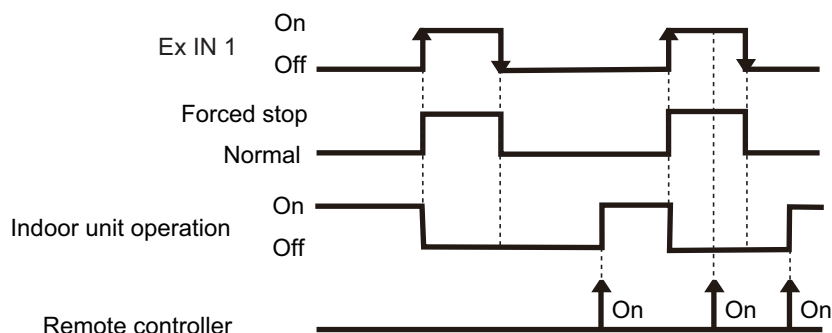
NOTES:

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

■ Forced stop

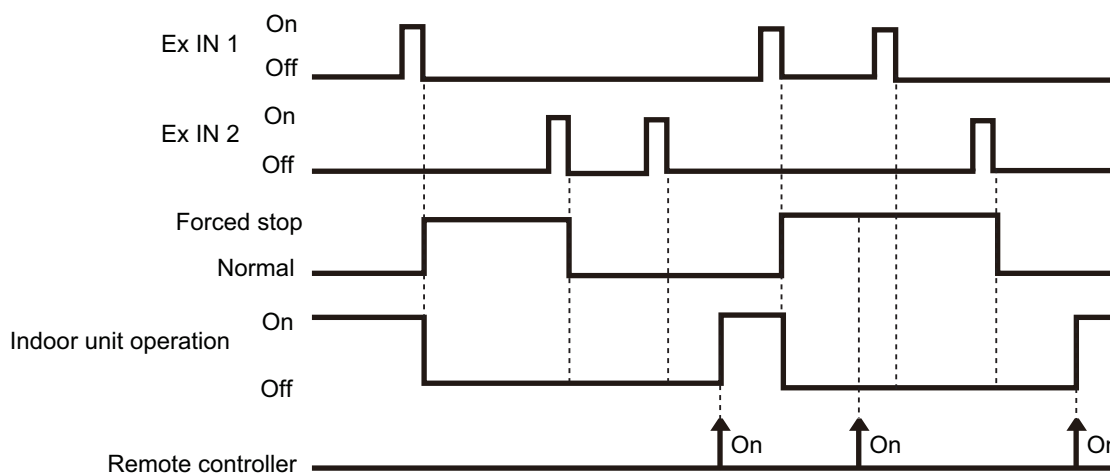
- In the case of "Edge" input

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)
					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)



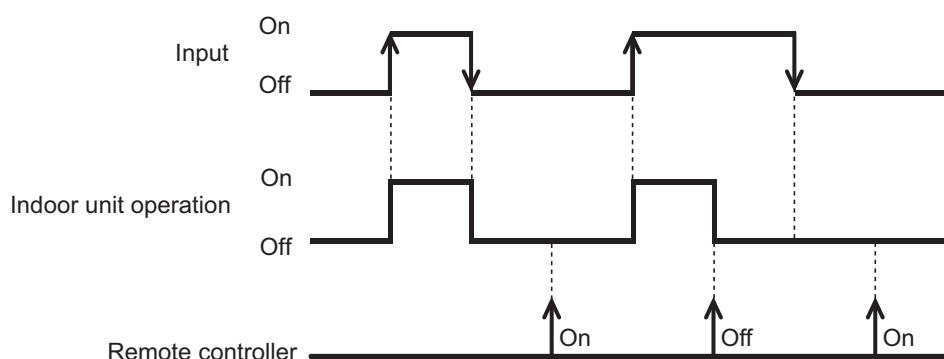
NOTES:

- 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

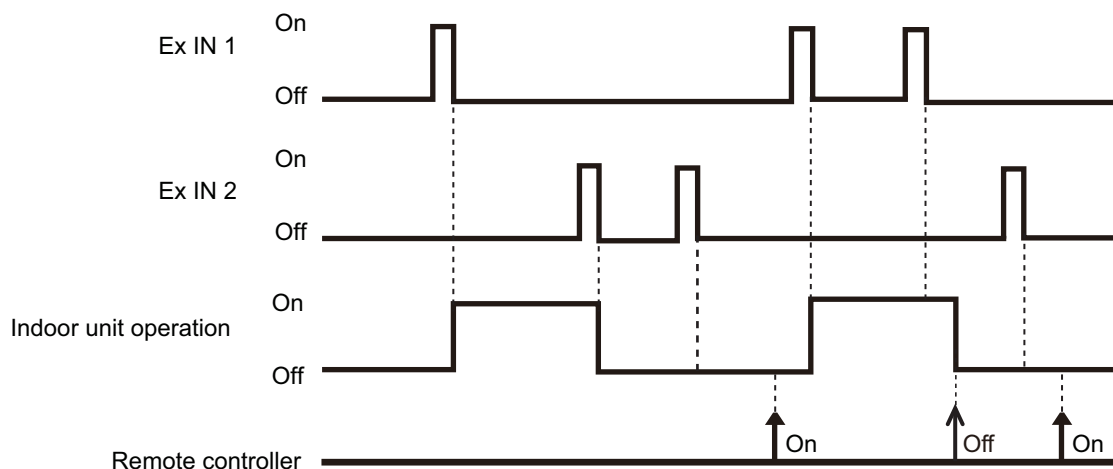
- In the case of "Edge" input

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)
	—		Input of indoor unit	Terminal	On → Off	Stop (R.C. disabled)
	1	Edge	External Input and Output PCB	Ex IN 1	Off → On	Operation (R.C. enabled)
	1	Edge	External Input and Output PCB	Ex IN 1	On → Off	Stop (R.C. disabled)



- In the case of "Pulse" input

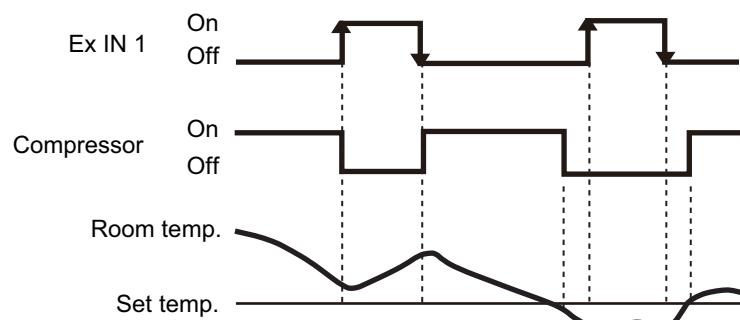
Function setting	External Input and Output PCB		External input		Input signal	Command
	Rotary switch	SW2				
46-03	1	Pulse	External Input and Output PCB	Ex IN 1	Pulse	Operation (R.C. enabled)
				Ex IN 2		Stop (R.C. disabled)



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

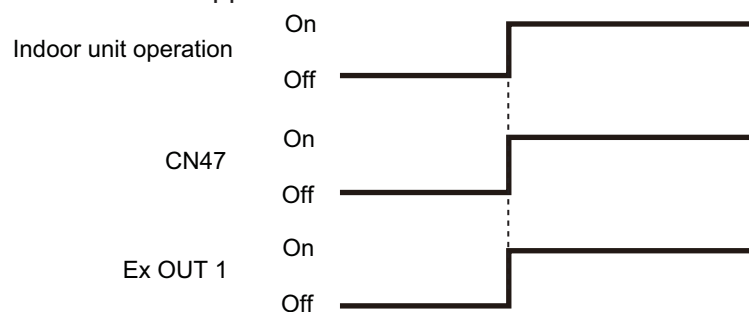


8-5. Details of control output function

■ Operation status

Function setting	External Input and Output PCB	External output		Output signal	Status
	Rotary switch				
60-00	—	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

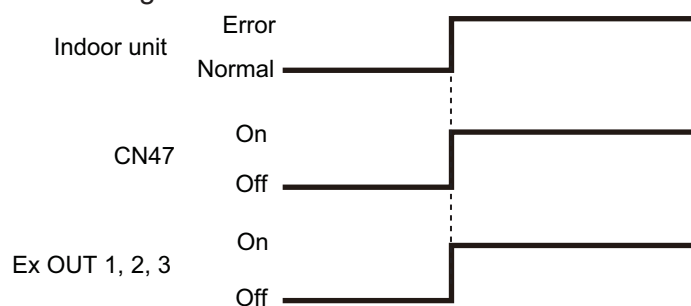
The output is low when the unit is stopped.



■ 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	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

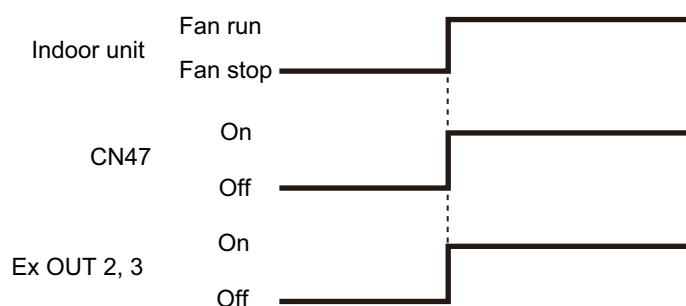
The output is on when an error is generated for the indoor unit.



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, 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

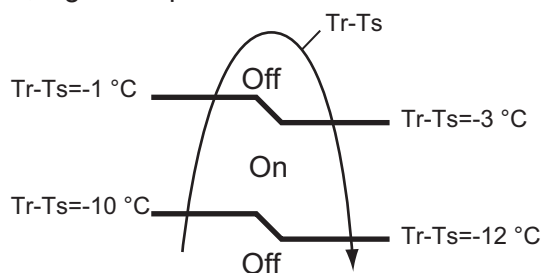
Function setting	External Input and Output PCB	External output		Output signal	Control
	Rotary switch				
60-11	—	Output of indoor unit	CN47	Off → On	Heater on
				On → Off	Heater off
—	2, B, C	External Input and Output PCB	Ex OUT 3	Off → On	Heater on
				On → Off	Heater off

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 22°C;

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



The output also turns off in defrost operation.

9. Function settings

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

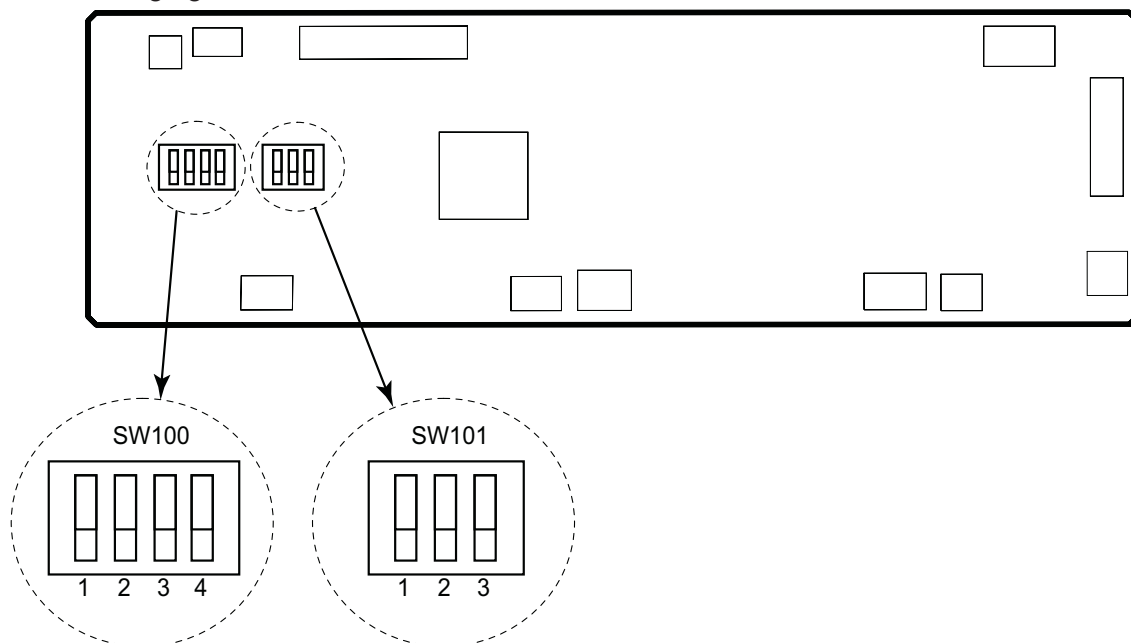
NOTE: Incorrect settings can cause a product malfunction.

9-1. Function settings on indoor unit

By using some components on the PCB, you can change the function settings.

■ Component location

Components on the indoor unit main PCB used for the function settings are located as shown in the following figure.



■ DIP switch setting

• SW100: Remote controller address setting

NOTE: Because this setting is normally done automatically when 2-core wired remote controller is installed, setting is unnecessary.

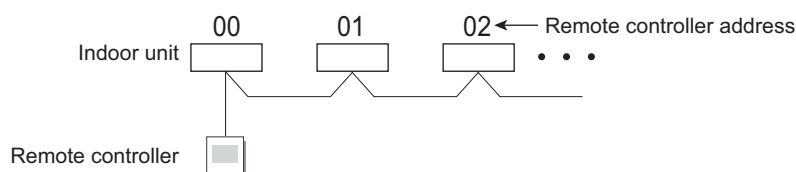
Multiple indoor units can be operated by using one wired remote controller.

Set the unit number of each indoor unit.

Remote controller address	DIP switch number				Factory setting
	1	2	3	4	
00	OFF	OFF	OFF	OFF	◆
01	ON	OFF	OFF	OFF	
02	OFF	ON	OFF	OFF	
03	ON	ON	OFF	OFF	
04	OFF	OFF	ON	OFF	
05	ON	OFF	ON	OFF	
06	OFF	ON	ON	OFF	
07	ON	ON	ON	OFF	
08	OFF	OFF	OFF	ON	
09	ON	OFF	OFF	ON	
10	OFF	ON	OFF	ON	
11	ON	ON	OFF	ON	
12	OFF	OFF	ON	ON	
13	ON	OFF	ON	ON	
14	OFF	ON	ON	ON	
15	ON	ON	ON	ON	

NOTES:

- When connecting Polar 3-core wired remote controller, set the remote controller address in the order of 0, 1, 2,, and 15.
- 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.



• SW101: Setting change prohibited

9-2. Function settings by using remote controller

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

■ Setting procedure by using remote controller

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

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

■ Contents of function setting

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

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

● Function setting list

	Function no.	Functions
1)	11	Filter sign
2)	20	Ceiling height
3)	22	Outlet directions
4)	23	Vertical airflow direction range control
5)	30/31	Room temperature control for indoor unit sensor
6)	35/36	Room temperature control for wired remote controller sensor
7)	40	Auto restart
8)	42	Room temperature sensor switching
9)	44	Remote controller custom code
10)	46	External input control
11)	48	Room temperature sensor switching (Aux.)
12)	49	Indoor unit fan control for energy saving for cooling
13)	60	Switching functions for external output terminal

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	
	02	Low ceiling	

For the specific height for each setting value, refer to "Installation space" in Chapter 2. **"Dimensions"** on page 5.

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

3) Outlet directions

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

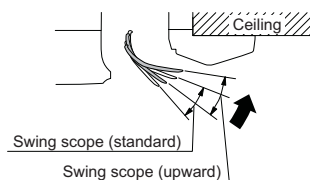
Function number	Setting value	Setting description	Factory setting
22	00	4-way	◆
	01	3-way	

4) Vertical airflow direction range control

To prevent draft, change the setting to "Upward" (01).

Note that the airflow in certain usage conditions may leave the ceiling dirty. In such cases, the use of the optional Panel Spacer is recommended.

Function number	Setting value	Setting description	Factory setting
23	00	Standard	◆
	01	Upward	



5) 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 26°C and the setting value is "03" (-1.0°C), corrected temp. will be 27°C (26°C - [-1.0°C]).

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°C	
		02	-0.5°C	More cooling Less heating
		03	-1.0°C	
		04	-1.5°C	
		05	-2.0°C	
		06	-2.5°C	
		07	-3.0°C	
		08	-3.5°C	
		09	-4.0°C	
		10	+0.5°C	Less cooling More heating
		11	+1.0°C	
		12	+1.5°C	
		13	+2.0°C	
		14	+2.5°C	
		15	+3.0°C	
		16	+3.5°C	
		17	+4.0°C	

6) 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°C	
		02	-0.5°C	More cooling Less heating
		03	-1.0°C	
		04	-1.5°C	
		05	-2.0°C	
		06	-2.5°C	
		07	-3.0°C	
		08	-3.5°C	
		09	-4.0°C	
		10	+0.5°C	Less cooling More heating
		11	+1.0°C	
		12	+1.5°C	
		13	+2.0°C	
		14	+2.5°C	
		15	+3.0°C	
		16	+3.5°C	
		17	+4.0°C	

7) 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.

8) 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.

9) 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	

10) 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)	

11) 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	

12) 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.

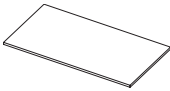
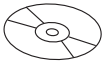
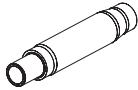
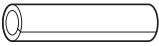
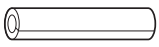
13) Switching functions for external output terminal

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—08	(Setting prohibited)	
	09	Error status	
	10	Indoor unit fan operation status	
	11	External heater	

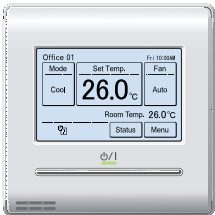
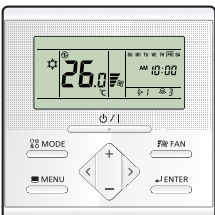
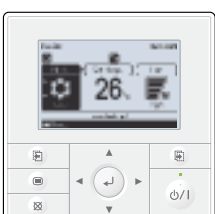
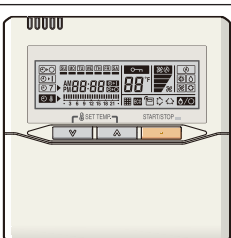
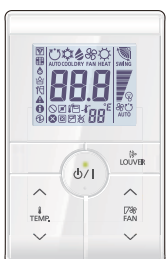
10. Accessories

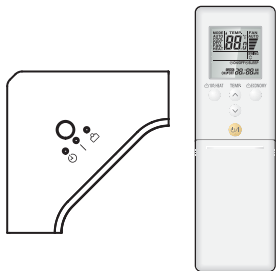
10-1. Models: AUXG24KRLB, AUXG30KRLB, AUXG36KRLB, AUXG45KRLB, and AUXG54KRLB

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Insulation		1
Operation manual (CD-ROM)		1	Drain hose		1
Installation manual		1	Hose band		1
Template (Carton top)		1	Drain hose heat insulation		1
Washer		8	Cable tie (large)		4
Coupler heat insulation (large)		1	Cable tie (small)		2
Coupler heat insulation (small)		1			

11. Optional parts

11-1. Controllers

Exterior	Part name	Model name	Summary
	Wired Remote Controller	UTY-RNRGZ*	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Wire type: Non-polar 2-wire
	Wired Remote Controller	UTY-RLRG	High visibility and easy operation. Room temperature can be accurately controlled using the thermo sensor. Wire type: Non-polar 2-wire
	Wired Remote Controller	UTY-RVNGM	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. Wire type: Polar 3-wire
	Wired Remote Controller	UTY-RNNGM	Room temperature can be controlled by detecting the temperature accurately with thermo sensor. Wire type: Polar 3-wire
	Simple Remote Controller	UTY-RSRG	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-RHRG	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting. Wire type: Non-polar 2-wire
	Simple Remote Controller	UTY-RSNGM	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Polar 3-wire

Exterior	Part name	Model name	Summary
	IR Receiver Kit with Wireless Remote Controller	UTY-LBTGC1	Unit control is performed by Wireless Remote Controller.

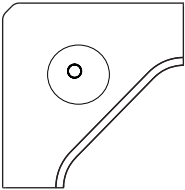
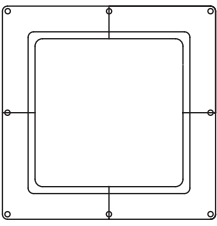
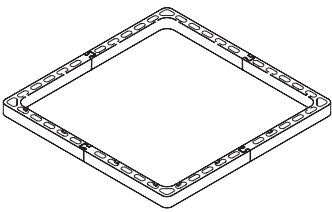
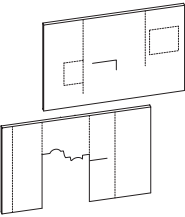
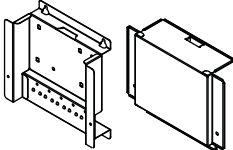
NOTES:

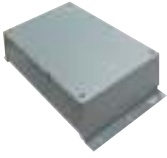
- Available functions may differ by the remote controller. For details, refer to the operation manual.
- When using the group controlling system of the Wired Remote Controller, using WLAN Adapter is prohibited.

11-2. Cassette grille

Exterior	Part name	Model name	Summary
	Cassette Grille	UTG-UKGA-W	This cassette grille to blow airflow in 360° direction by unique seamless airflow louver design. Wired remote controller (UTY-RNRGZ*) is included.
	Cassette Grille	UTG-UKGC-W	This cassette grille to blow airflow in 360° direction by unique seamless airflow louver design.
	Cassette Grille	UTG-UKGA-B	This cassette grille to blow airflow in 360° direction by unique seamless airflow louver design. Black color model.

11-3. Others

Exterior	Part name	Model name	Summary
	Human Sensor Kit	UTY-SHZXC	For circular flow cassette type.
	External Connect Kit	UTY-XWZXZG	Use to connect with various peripheral devices and air conditioner PCB. For control output port. Connecting point: CN47 on Main PCB
	Air Outlet Shutter Plate	UTR-YDZK	Installed at the air outlet when 3-directions mode is performed.
	Wide Panel	UTG-AKXA-W	Hides the gap between the ceiling hole and the cassette grille.
	Panel Spacer	UTG-BKXA-W	If there is not enough height in the ceiling space, by inserting this spacer between the cassette grille and the ceiling surface, the height of the unit body goes into the ceiling space become 50-mm lower.
	Fresh Air Intake Kit	UTZ-VXRA	By attaching Fresh Air Intake Kit to the indoor unit, it can be taken in fresh air of up to 10% of "high" air volume of the indoor unit.
	Insulation Kit for High Humidity	UTZ-KXRA	Install when the under-roof condition is expected to be the humidity of over 80% and the temperature of over 30 °C.
	External Input and Output PCB	UTY-XCSX	Use to connect with external devices and air conditioner PCB. Optional External Connect Kit is necessary for installation. Connecting point: CN65 on Main PCB
	External Input and Output PCB Box	UTZ-GXRA	For installing the External input and output PCB.

Exterior	Part name	Model name	Summary
	WLAN Adapter	UTY-TFSXZ1	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: CN65 on Main PCB
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: CN65 on Main PCB
	KNX Converter	UTY-VKSX	For connection between indoor unit with UART interface and a KNX open network. Connecting point: CN65 on Main PCB
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system.
	Network Converter (AC power supply)	UTY-VTGXV	This converter is required when connecting single split system to VRF network system.
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Use the terminal for wired remote controller.

NOTE: Combined use of following optional parts and WLAN Adapter (UTY-TFSXZ1) is not allowed.

- External Input and Output PCB (UTY-XCSX)
- Modbus Converter
- KNX Converter

Part 2. OUTDOOR UNIT

SINGLE TYPE:

AOHG24KBTB

AOHG30KBTB

AOHG36KBTB

AOHG45KBTB

AOHG54KBTB

1. Specifications

Type				Inverter heat pump	
Model name				AOHG24KBTB	
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Starting current			A	8.4	
Fan	Airflow rate	Cooling	m³/h	2,700	
		Heating		2,700	
	Type × Qty		Propeller × 1		
	Motor output		W	49	
Sound pressure level*1		Cooling	dB (A)	53	
		Heating		54	
Sound power level		Cooling	dB (A)	65	
		Heating		66	
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 672 × 881 × 18.2	
		Fin pitch		Main2: 672 × 851 × 18.2	
		Rows × Stages		1.3	
		Pipe type		2 × 32	
		Fin	Type (Material)	Copper tube	
			Surface treatment	Aluminum	
Compressor	Type	DC Twin rotary			
	Motor output		W	1,060	
Refrigerant		Type (Global warming potential)		R32 (675)	
		Factory charge		g	1,250
Refrigerant oil		Type		RmM68AF	
		Amount	cm³	400	
Enclosure		Material		Steel sheet	
		Color		Beige	
				Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net		mm	716 × 820 × 315	
	Gross			776 × 961 × 450	
Weight	Net		kg	42	
	Gross			46	
Connection pipe	Size	Liquid	mm (in)	Ø6.35 (1/4)	
		Gas		Ø12.70 (1/2)	
	Method		Flare		
	Pre-charge length		m	20	
	Max. length			30	
	Max. height difference			25	
Operation range		Cooling	°C	-15 to 46	
		Heating		-15 to 24	
Drain hose		Material		Polypropylene	
		Tip diameter	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)	
NOTES:					
- Specifications are based on the following conditions: - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB. - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB. - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.) - Protective function might work when using it outside the operation range. *1: Sound pressure level - Measured values in manufacturer's semi-anechoic chamber. - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.					

Type				Inverter heat pump	
Model name				AOHG30KBTB	AOHG36KBTB
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Starting current			A	11.1	12.9
Fan	Airflow rate	Cooling	m³/h	3,750	
		Heating		3,750	
	Type × Qty		Propeller × 1		
	Motor output		W	100	
Sound pressure level *1		Cooling	dB (A)	53	55
		Heating		55	55
Sound power level		Cooling	dB (A)	68	70
		Heating		69	70
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 756 × 905 × 18.2 Main2: 756 × 905 × 18.2	
		Fin pitch		1.45	
		Rows × Stages		1 × 36	
		Pipe type		Copper	
		Fin	Type (Material)	Aluminum	
			Surface treatment	Blue fin	
Compressor	Type	DC Twin rotary			
	Motor output	W	1,500		
Refrigerant		Type (Global warming potential)		R32 (675)	
		Factory charge	g	1,900	
Refrigerant oil		Type	FW68D		
		Amount	cm³	600	
Enclosure		Material		Steel sheet	
		Color		Beige Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net		mm	788 × 940 × 320	
	Gross			966 × 1,027 × 445	
Weight	Net		kg	52	
	Gross			60	
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (3/8)	
		Gas		Ø15.88 (5/8)	
	Method		Flare		
	Pre-charge length		m	30	
	Max. length			50	
	Max. height difference			30	
Operation range		Cooling	°C	-15 to 46	
		Heating		-15 to 24	
Drain hose		Material		Low-density polyethylene	
		Tip diameter	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)	

NOTES:

- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
 - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
 - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Sound pressure level
 - Measured values in manufacturer's semi-anechoic chamber.
 - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Type				Inverter heat pump	
Model name				AOHG45KBTB	AOHG54KBTB
Power supply				230 V ~ 50 Hz	
Power supply intake				Outdoor unit	
Available voltage range				198—264 V	
Starting current			A	16.0	19.4
Fan	Airflow rate	Cooling	m³/h	4,450	4,450
		Heating		4,450	4,450
	Type × Qty				Propeller × 1
	Motor output	W			120
Sound pressure level *1		Cooling	dB (A)	57	57
		Heating		57	59
Sound power level		Cooling	dB (A)	71	73
		Heating		71	73
Heat exchanger type		Dimensions (H × W × D)	mm	Main1: 966 × 905 × 18.2 Main2: 966 × 905 × 18.2 Sub: 966 × 543 × 18.2	
		Fin pitch		1.45	
		Rows × Stages		1 × 46	
		Pipe type		Copper	
		Fin	Type (Material)	Aluminum	
			Surface treatment	Blue fin	
Compressor	Type	DC Twin rotary			
	Motor output	W	2,180		
Refrigerant		Type (Global warming potential)	R32 (675)		
		Factory charge	g	2,700	
Refrigerant oil		Type	RmM68AF		
		Amount	cm³	800	
Enclosure		Material	Steel sheet		
		Color	Beige Approximate color of Munsell 10YR 7.5/1.0		
Dimensions (H × W × D)	Net	mm	998 × 940 × 320		
	Gross		1,176 × 1,027 × 445		
Weight	Net	kg	67		
	Gross		75		
Connection pipe	Size	Liquid	mm (in)	Ø9.52 (3/8)	
		Gas		Ø15.88 (5/8)	
	Method		Flare		
	Pre-charge length	m	30		
	Max. length		50		
	Max. height difference		30		
Operation range		Cooling	°C	-15 to 46	
		Heating		-15 to 24	
Drain hose		Material	Low-density polyethylene		
		Tip diameter	mm	Ø13.0 (I. D.), Ø16.0 to Ø16.8 (O. D.)	

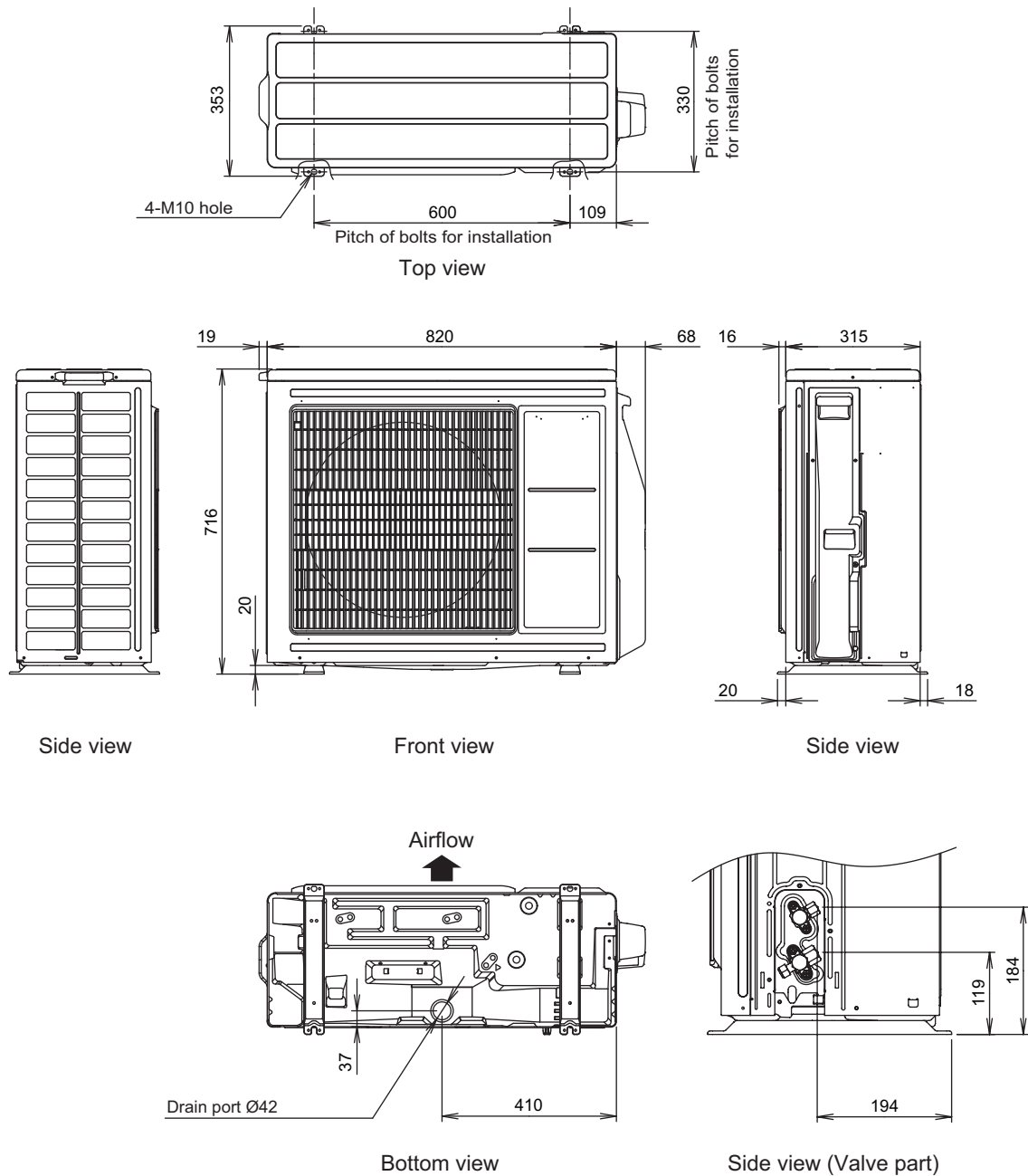
NOTES:

- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
 - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
 - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Sound pressure level
 - Measured values in manufacturer's semi-anechoic chamber.
 - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

2. Dimensions

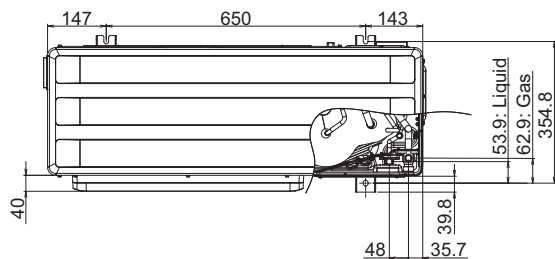
2-1. Model: AOHG24KBTB

Unit: mm

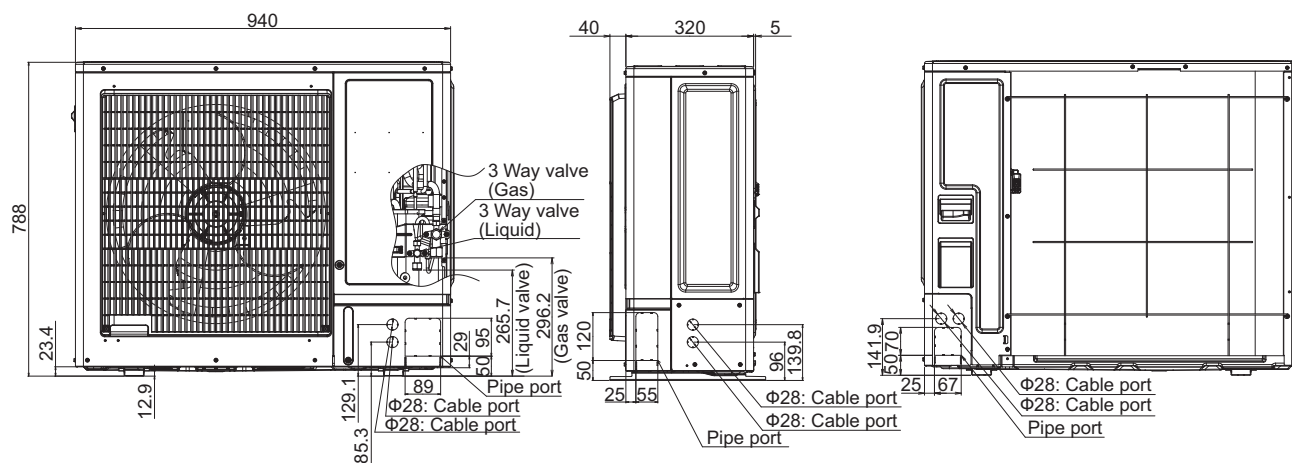
OUTDOOR UNIT
AOHG24-54KBTBOUTDOOR UNIT
AOHG24-54KBTB

2-2. Models: AOHG30KBTB and AOHG36KBTB

Unit: mm

OUTDOOR UNIT
AOHG24-54KBTBOUTDOOR UNIT
AOHG24-54KBTB

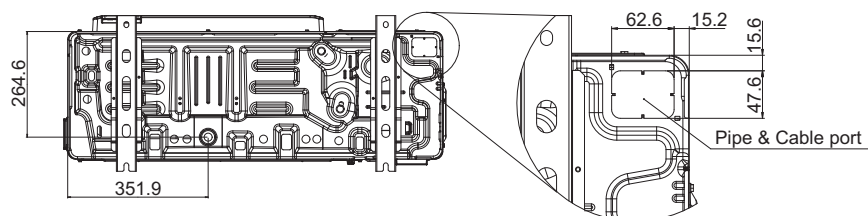
Top view



Front view

Side view

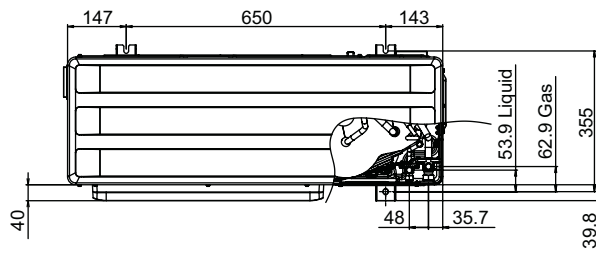
Rear view



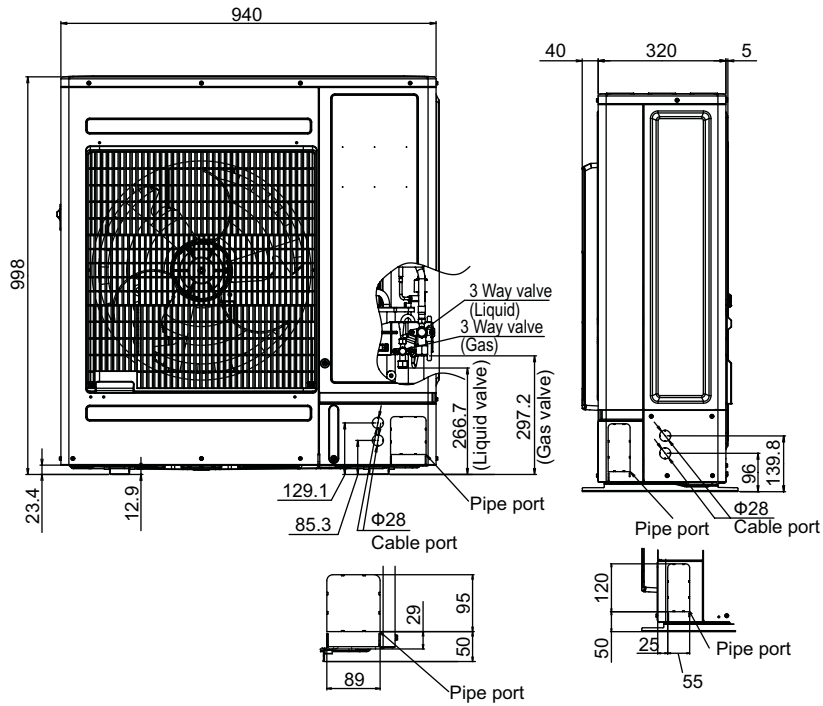
Bottom view

2-3. Models: AOHG45KBTB and AOHG54KBTB

Unit: mm

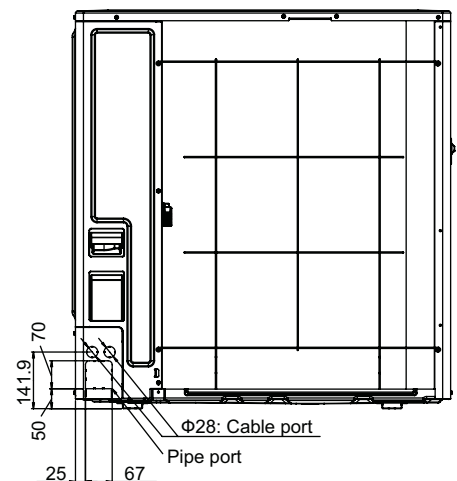


Top view

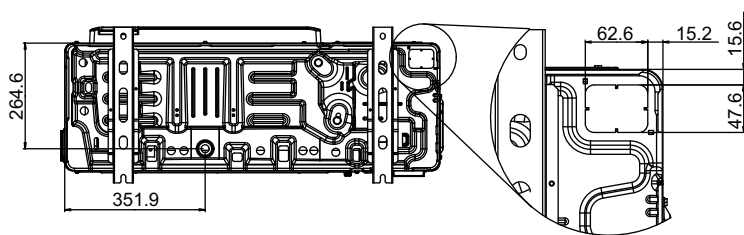


Front view

Side view



Rear view



Bottom view

Pipe & Cable port

3. Installation space

3-1. Model: AOHG24KBTB

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

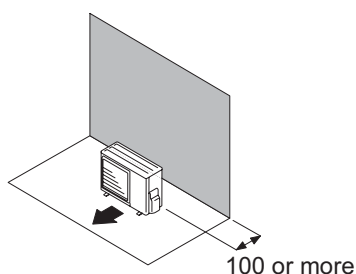
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

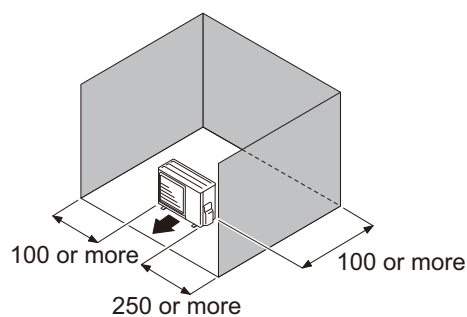
- When the upper space is open:

Unit: mm

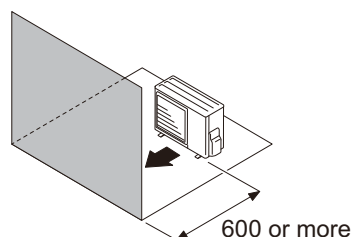
Obstacles at rear only



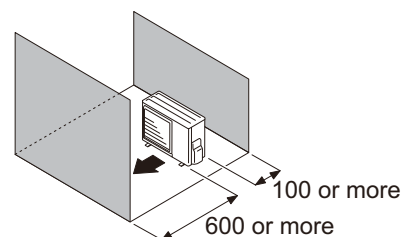
Obstacles at rear and sides



Obstacles at front



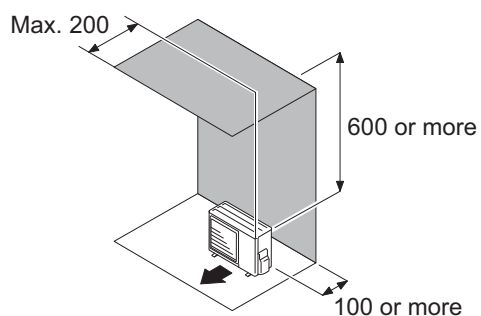
Obstacles at front and rear



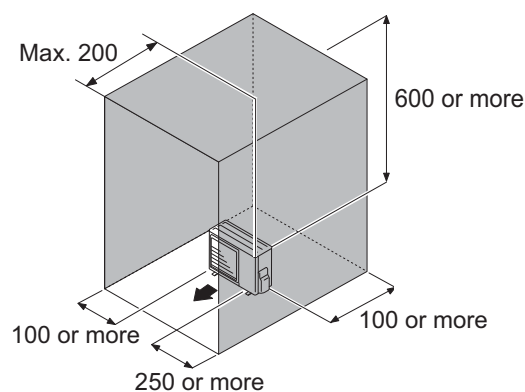
- When an obstruction in the upper space:

Unit: mm

Obstacles at rear and above



Obstacles at rear, sides, and above



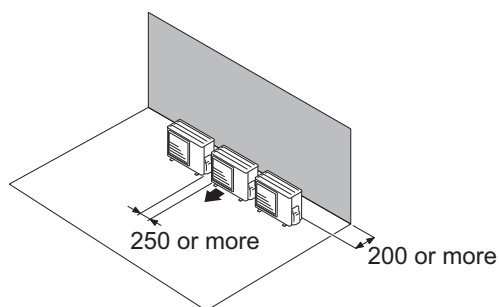
● Multiple outdoor unit installation

- 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:”**.

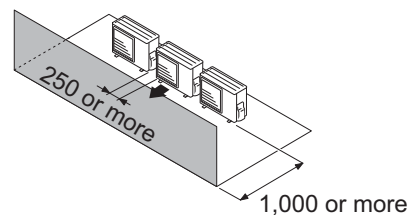
- **When the upper space is open:**

Unit: mm

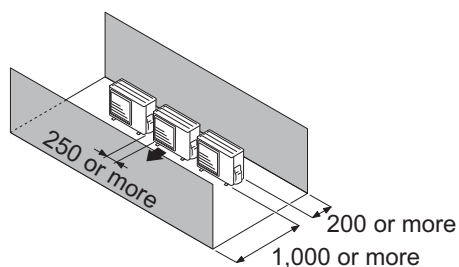
Obstacles at rear only



Obstacles at front only



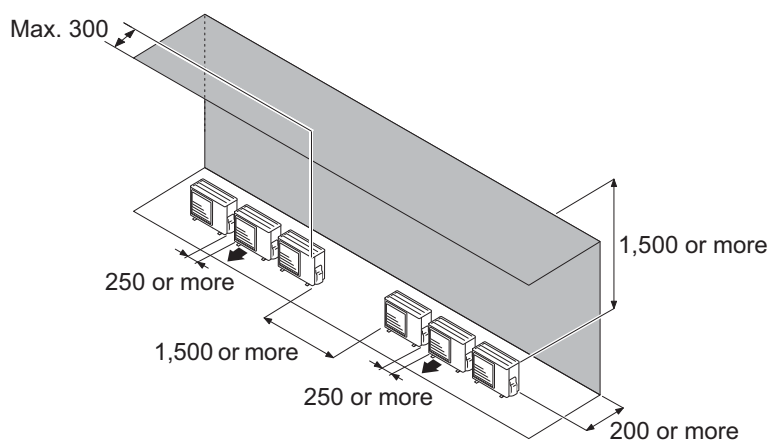
Obstacles at front and rear



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

Unit: mm

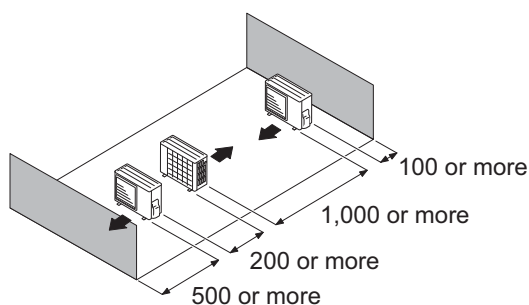
Obstacles at rear and above.



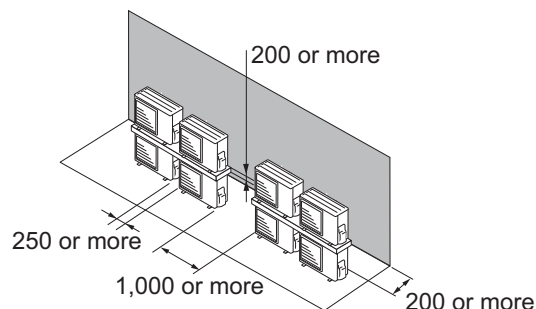
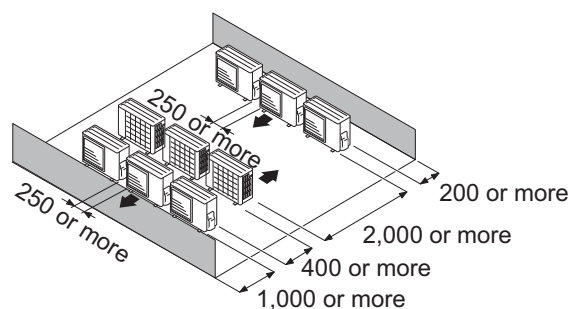
● Outdoor units installation in multi-row

Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement

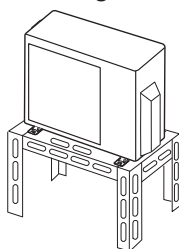


NOTES:

- 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 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: AOHG30KBTB, AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

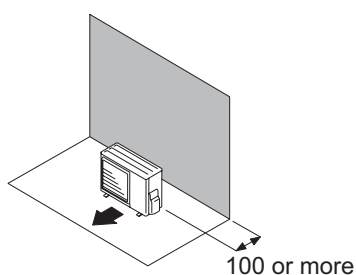
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

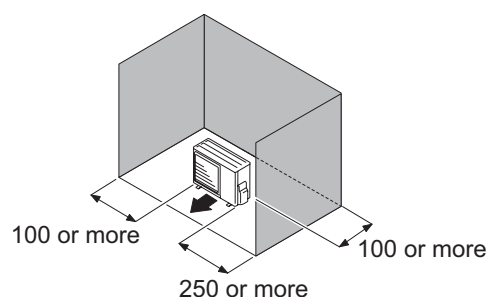
- When the upper space is open:

Unit: mm

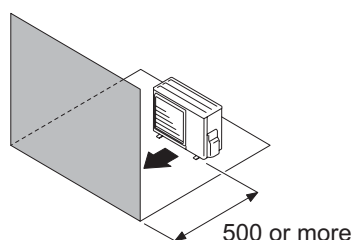
When there are obstacles at the rear only.



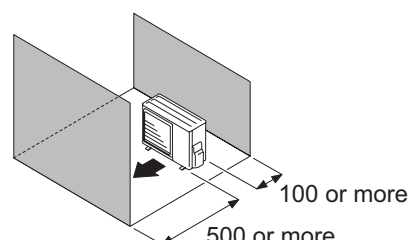
When there are obstacles at the rear and sides.



When there are obstacles at the front only.



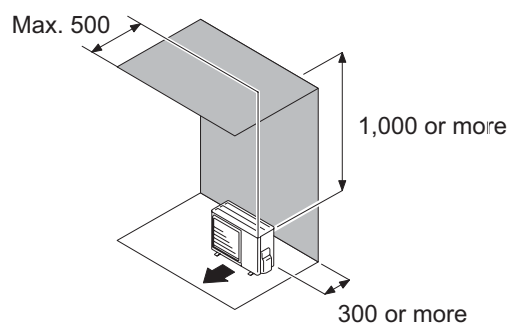
When there are obstacles at the front and rear.



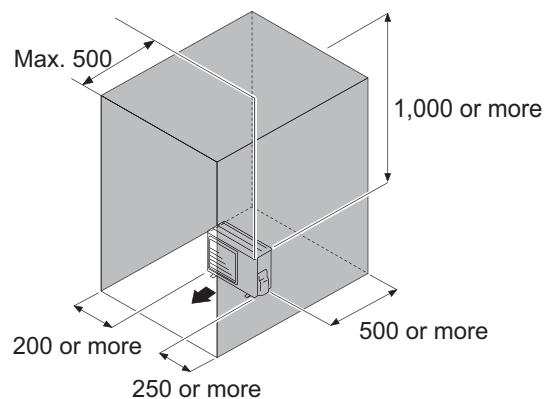
- When an obstruction in the upper space:

Unit: mm

When there are obstacles at the rear and above.



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



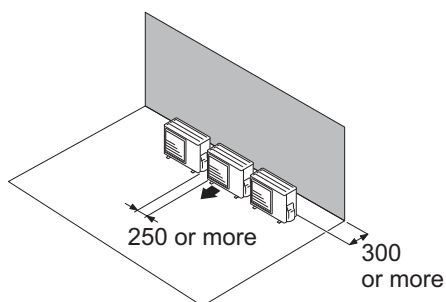
● Multiple outdoor unit installation

- 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:”**.

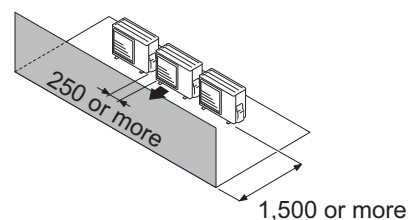
- **When the upper space is open:**

Unit: mm

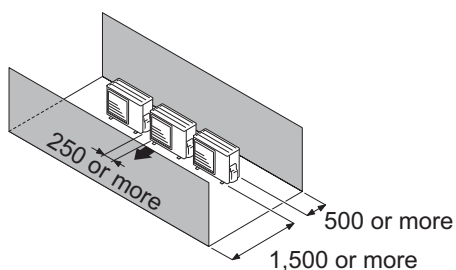
When there are obstacles at the rear only.



When there are obstacles at the front only.



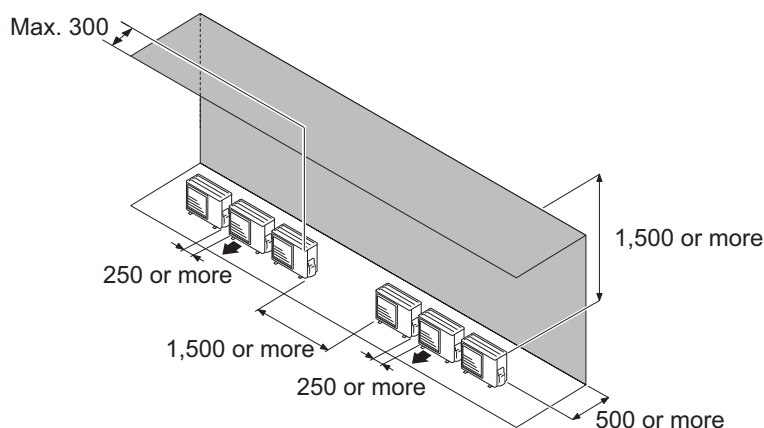
When there are obstacles at the front and rear.



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

Unit: mm

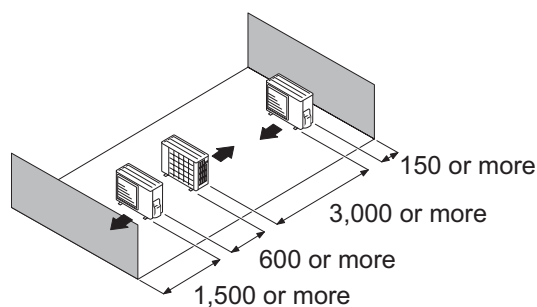
When there are obstacles at the rear and above.



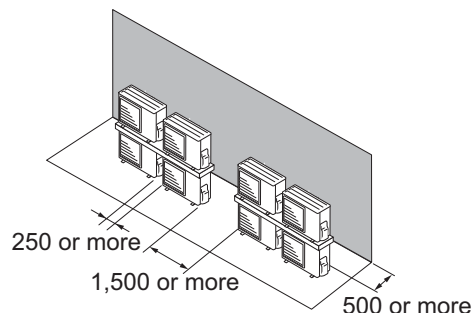
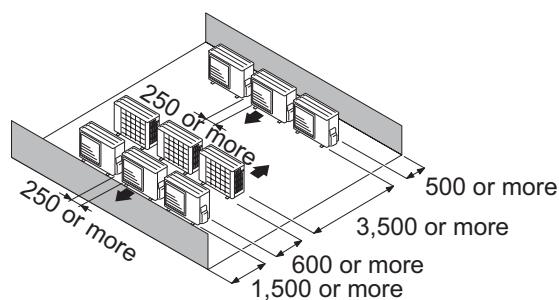
● Outdoor unit installation in multi-row

Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement

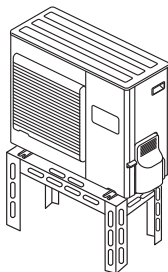


NOTES:

- 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 50 mm or more.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

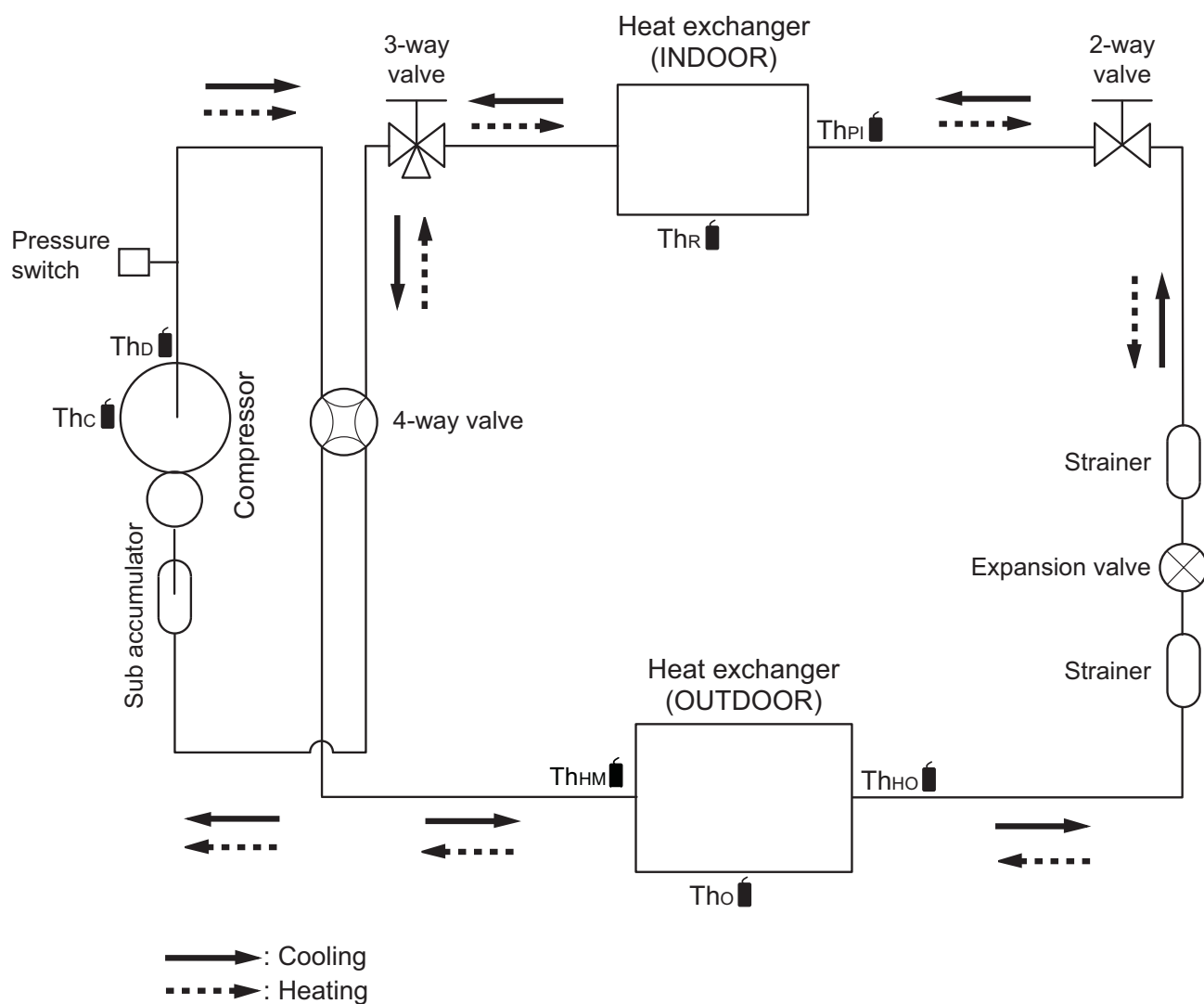
⚠ CAUTION

- 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 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.



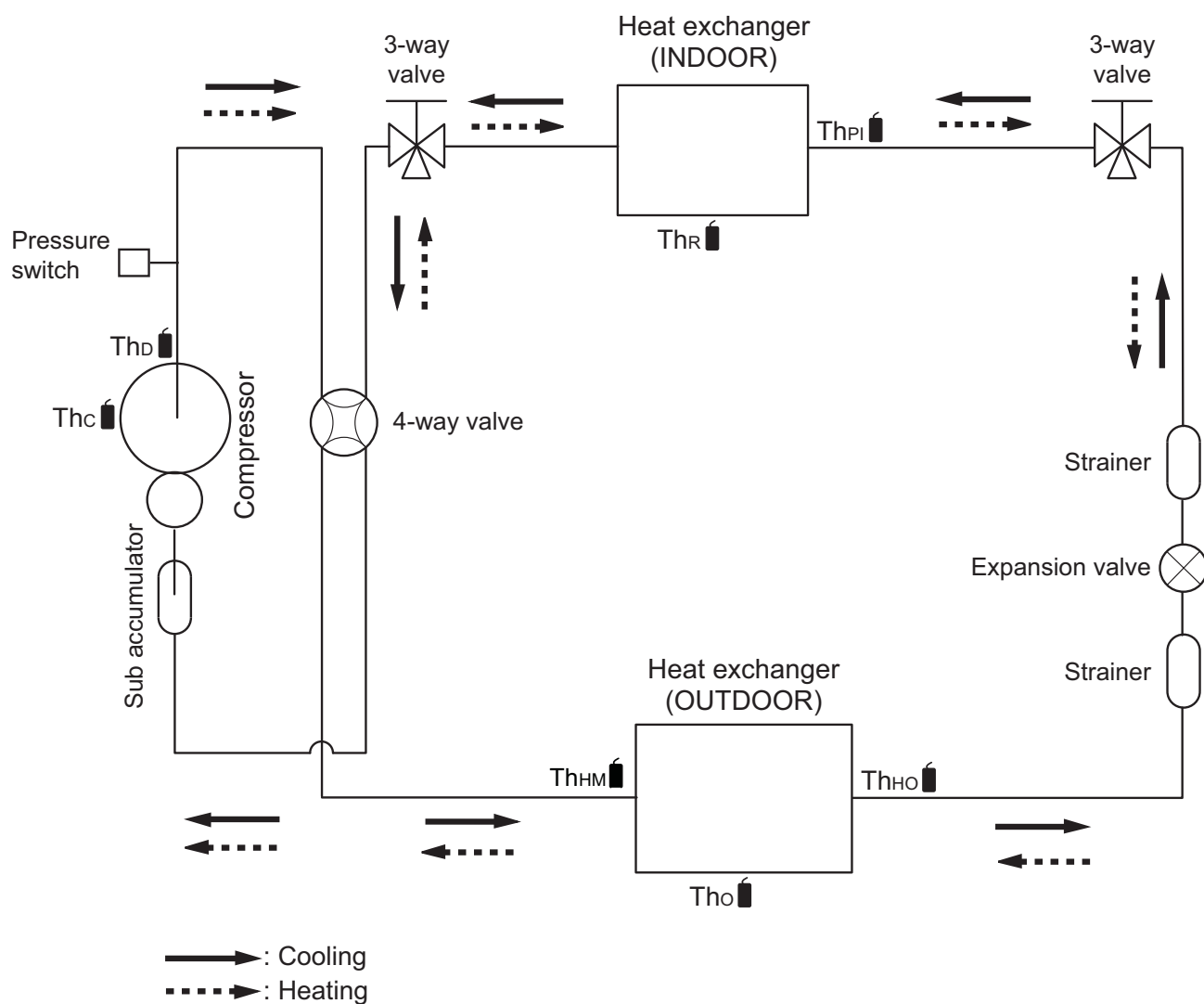
4. Refrigerant circuit

4-1. Model: AOHG24KBTB



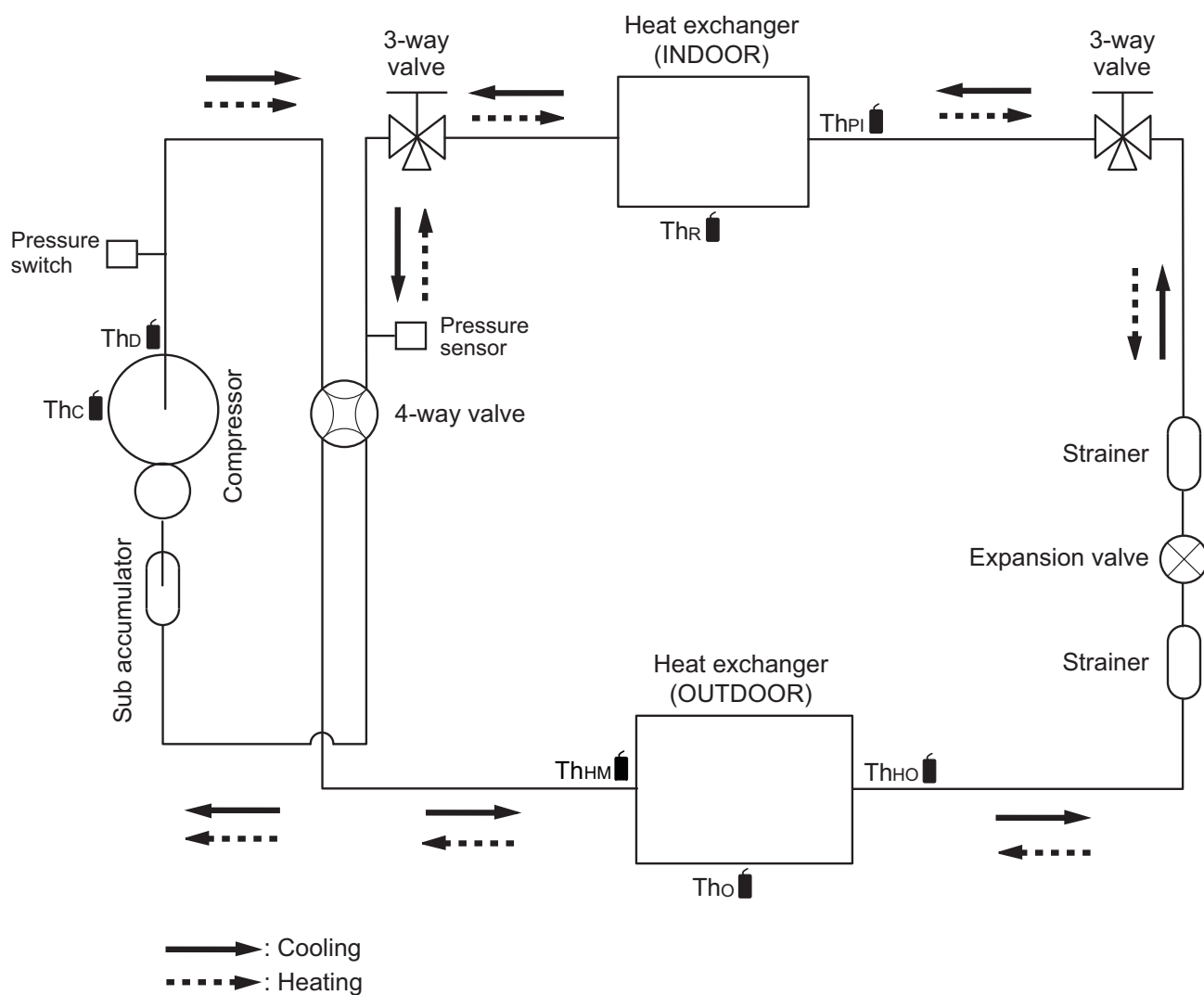
- Thc : Thermistor (Compressor temperature)
 Thd : Thermistor (Discharge temperature)
 ThHM : Thermistor (Heat exchanger middle temperature)
 Tho : Thermistor (Outdoor temperature)
 ThHO : Thermistor (Heat exchanger out temperature)
 ThPI : Thermistor (Pipe temperature)
 ThR : Thermistor (Room temperature)

4-2. Model: AOHG30KBTB



- Th_c : Thermistor (Compressor temperature)
 Th_D : Thermistor (Discharge temperature)
 Th_{HM} : Thermistor (Heat exchanger middle temperature)
 Th_o : Thermistor (Outdoor temperature)
 Th_{HO} : Thermistor (Heat exchanger out temperature)
 Th_{PI} : Thermistor (Pipe temperature)
 Th_R : Thermistor (Room temperature)

4-3. Models: AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB



Thc : Thermistor (Compressor temperature)

Thd : Thermistor (Discharge temperature)

ThHM : Thermistor (Heat exchanger middle temperature)

Tho : Thermistor (Outdoor temperature)

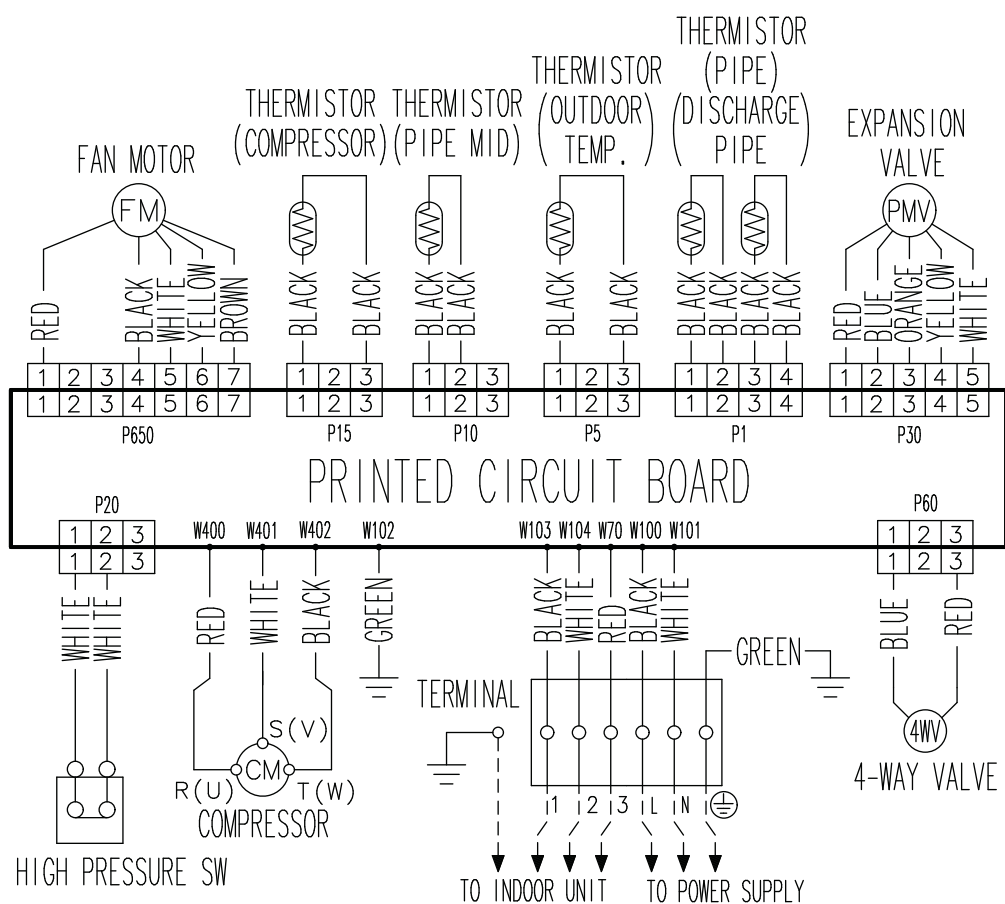
ThHO : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

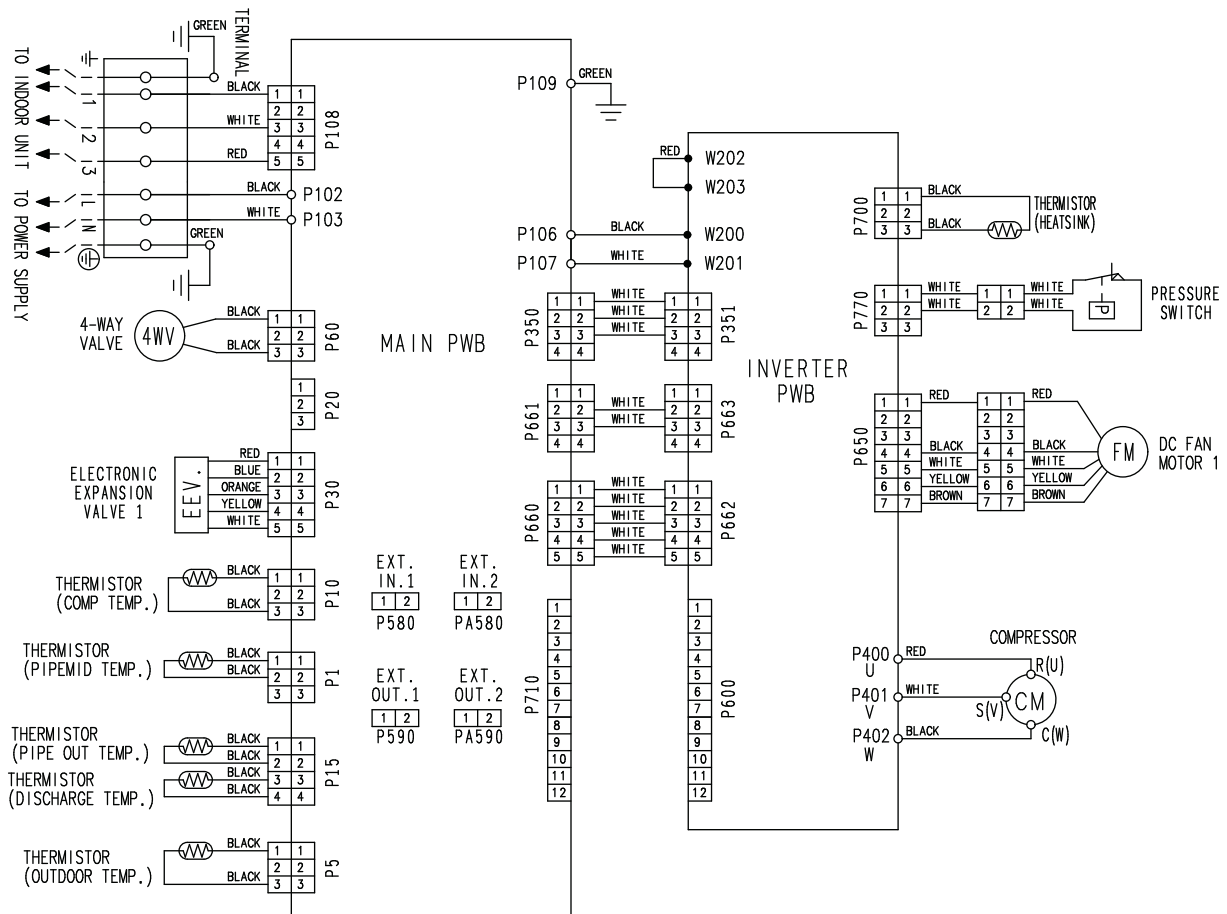
ThR : Thermistor (Room temperature)

5. Wiring diagrams

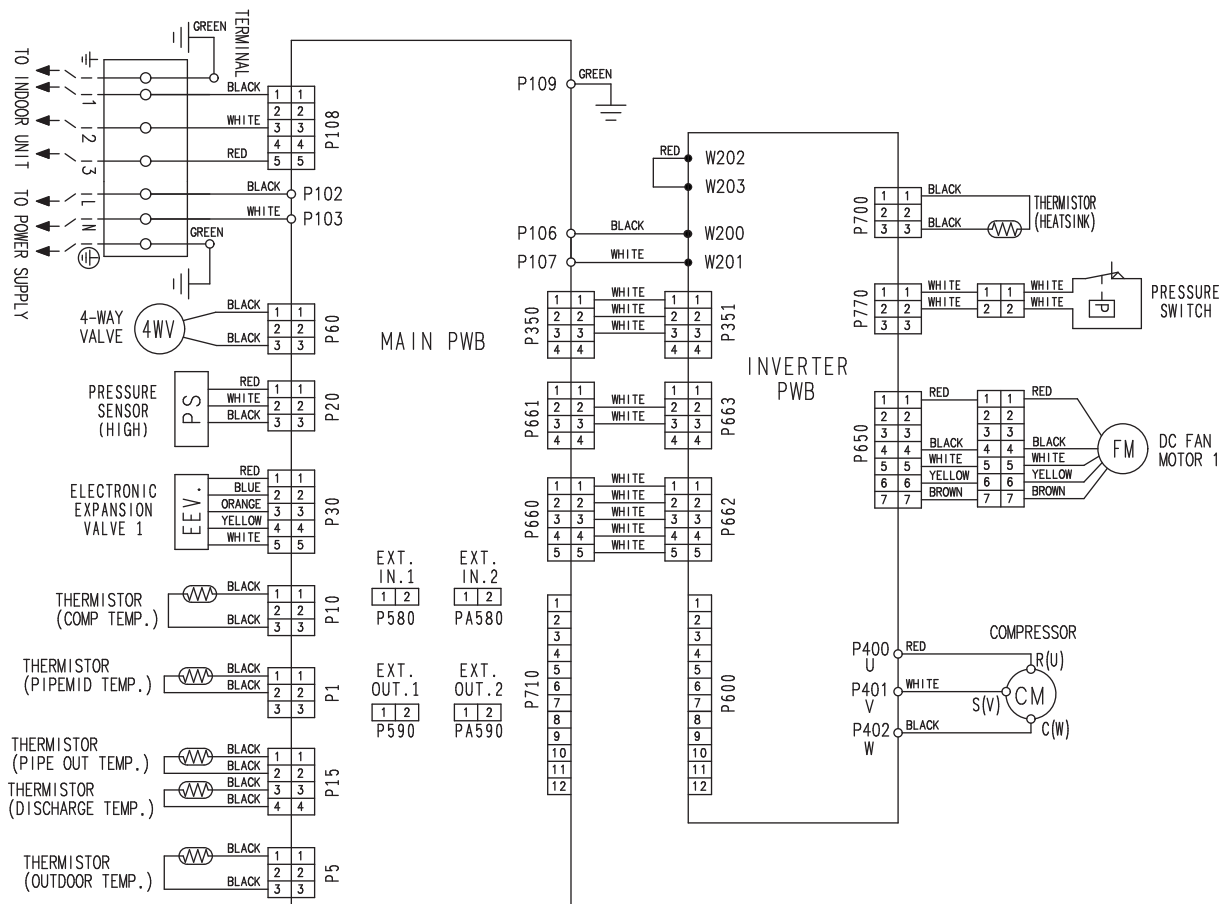
5-1. Model: AOHG24KBTB



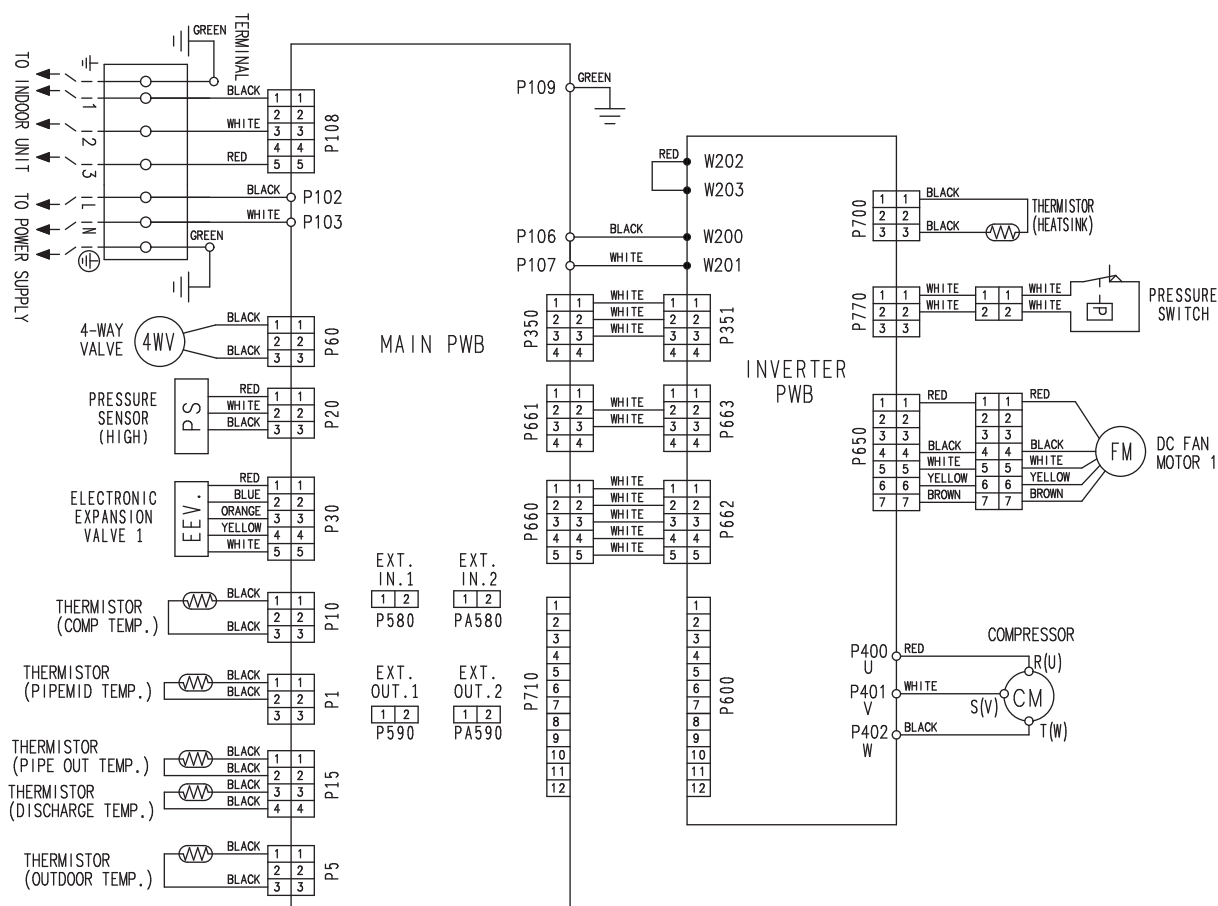
5-2. Model: AOHG30KBTB



5-3. Model: AOHG36KBTB

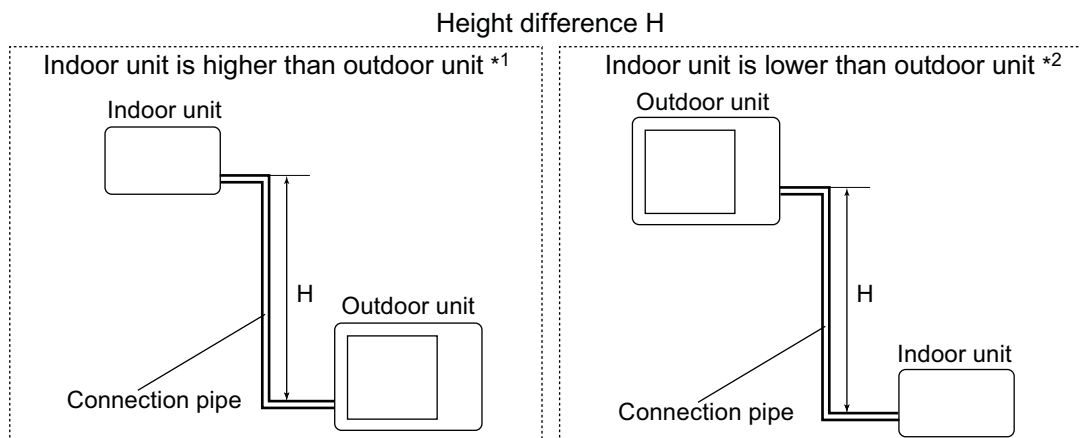


5-4. Models: AOHG45KBTB and AOHG54KBTB



**OUTDOOR UNIT
AOHG24-54KBTB**

6. Capacity compensation rate for pipe length and height difference



6-1. Model: AOHG24KBTB

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
Height difference H (m)	Indoor unit is higher than outdoor unit *1	25	—	—	—	—	—	0.893	0.877
		20	—	—	—	—	0.917	0.900	0.885
		10	—	—	0.966	0.947	0.932	0.914	0.899
		7.5	—	0.979	0.970	0.951	0.936	0.918	0.903
		5	0.992	0.983	0.974	0.955	0.939	0.922	0.906
	Indoor unit is lower than outdoor unit *2	0	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-5	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-7.5	—	0.991	0.981	0.963	0.946	0.930	0.914
		-10	—	—	0.981	0.963	0.946	0.930	0.914
		-20	—	—	—	—	0.946	0.930	0.914
		-25	—	—	—	—	—	0.930	0.914

HEATING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	Indoor unit is higher than outdoor unit *1	25	—	—	—	—	—	0.871	0.855
		20	—	—	—	—	0.887	0.871	0.855
		10	—	—	0.952	0.903	0.887	0.871	0.855
		7.5	—	0.976	0.952	0.903	0.887	0.871	0.855
		5	1.000	0.976	0.952	0.903	0.887	0.871	0.855
	Indoor unit is lower than outdoor unit *2	0	1.000	0.976	0.952	0.903	0.887	0.871	0.855
		-5	0.995	0.971	0.947	0.899	0.883	0.866	0.850
		-7.5	—	0.969	0.945	0.897	0.881	0.865	0.849
		-10	—	—	0.942	0.894	0.879	0.863	0.847
		-20	—	—	—	—	0.869	0.854	0.838
		-25	—	—	—	—	—	0.850	0.834

6-2. Model: AOHG30KBTB

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
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.926	0.916	0.906
		20	—	—	—	0.953	0.942	0.931	0.920
		10	—	—	0.979	0.968	0.958	0.946	0.936
		7.5	—	0.988	0.983	0.972	0.961	0.951	0.939
		5	0.992	0.992	0.987	0.976	0.965	0.954	0.943
			0	1.000	1.000	0.995	0.984	0.973	0.962
	Indoor unit is lower than outdoor unit *2	-5	1.000	1.000	0.995	0.984	0.973	0.962	0.951
		-7.5	—	1.000	0.995	0.984	0.973	0.962	0.951
		-10	—	—	0.995	0.984	0.973	0.962	0.951
		-20	—	—	—	0.984	0.973	0.962	0.951
		-30	—	—	—	—	0.973	0.962	0.951

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.931	0.914	0.899
		20	—	—	—	0.954	0.931	0.914	0.899
		10	—	—	0.990	0.954	0.931	0.914	0.899
		7.5	—	1.000	0.990	0.954	0.931	0.914	0.899
		5	1.000	1.000	0.990	0.954	0.931	0.914	0.899
			0	1.000	1.000	0.990	0.954	0.931	0.899
	Indoor unit is lower than outdoor unit *2	-5	0.995	0.995	0.986	0.949	0.926	0.909	0.895
		-7.5	—	0.993	0.983	0.946	0.924	0.907	0.892
		-10	—	—	0.981	0.944	0.921	0.904	0.890
		-20	—	—	—	0.935	0.912	0.895	0.881
		-30	—	—	—	—	0.903	0.886	0.872

6-3. Model: AOHG36KBTB

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
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.902	0.882	0.862
		20	—	—	—	0.938	0.917	0.897	0.876
		10	—	—	0.973	0.953	0.933	0.912	0.891
		7.5	—	0.988	0.977	0.957	0.936	0.916	0.895
		5	0.992	0.992	0.981	0.961	0.940	0.919	0.898
			0	1.000	1.000	0.989	0.968	0.947	0.926
	Indoor unit is lower than outdoor unit *2	-5	1.000	1.000	0.989	0.968	0.947	0.926	0.905
		-7.5	—	1.000	0.989	0.968	0.947	0.926	0.905
		-10	—	—	0.989	0.968	0.947	0.926	0.905
		-20	—	—	—	0.968	0.947	0.926	0.905
		-30	—	—	—	—	0.947	0.926	0.905

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.978	0.968	0.958
		20	—	—	—	0.988	0.978	0.968	0.958
		10	—	—	0.998	0.988	0.978	0.968	0.958
		7.5	—	1.000	0.998	0.988	0.978	0.968	0.958
		5	1.000	1.000	0.998	0.988	0.978	0.968	0.958
			0	1.000	1.000	0.998	0.988	0.978	0.958
	Indoor unit is lower than outdoor unit *2	-5	0.995	0.995	0.993	0.983	0.973	0.963	0.953
		-7.5	—	0.993	0.991	0.981	0.971	0.961	0.951
		-10	—	—	0.988	0.978	0.968	0.958	0.948
		-20	—	—	—	0.968	0.958	0.949	0.939
		-30	—	—	—	—	0.949	0.939	0.929

6-4. Models: AOHG45KBTB and AOHG54KBTB

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
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.900	0.879	0.858
		20	—	—	—	0.937	0.915	0.894	0.872
		10	—	—	0.973	0.952	0.931	0.908	0.887
		7.5	—	0.988	0.977	0.956	0.934	0.913	0.891
		5	0.992	0.992	0.981	0.960	0.938	0.916	0.894
			0	1.000	1.000	0.989	0.967	0.945	0.923
	Indoor unit is lower than outdoor unit *2	-5	1.000	1.000	0.989	0.967	0.945	0.923	0.901
		-7.5	—	1.000	0.989	0.967	0.945	0.923	0.901
		-10	—	—	0.989	0.967	0.945	0.923	0.901
		-20	—	—	—	0.967	0.945	0.923	0.901
		-30	—	—	—	—	0.945	0.923	0.901

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	—	—	—	—	0.978	0.968	0.958
		20	—	—	—	0.988	0.978	0.968	0.958
		10	—	—	0.998	0.988	0.978	0.968	0.958
		7.5	—	1.000	0.998	0.988	0.978	0.968	0.958
		5	1.000	1.000	0.998	0.988	0.978	0.968	0.958
			0	1.000	1.000	0.998	0.988	0.978	0.958
	Indoor unit is lower than outdoor unit *2	-5	0.995	0.995	0.993	0.983	0.973	0.963	0.953
		-7.5	—	0.993	0.991	0.981	0.971	0.961	0.951
		-10	—	—	0.988	0.978	0.968	0.958	0.948
		-20	—	—	—	0.968	0.958	0.949	0.939
		-30	—	—	—	—	0.949	0.939	0.929

7. Additional charge calculation

7-1. Model: AOHG24KBTB

Refrigerant type	R32	
Factory charge amount	g	1,250

■ Refrigerant charge

Total pipe length	m	20 or less	25	30 (Max.)	20 g/m
Additional charge amount	g	0	100	200	

7-2. Models: AOHG30KBTB and AOHG36KBTB

Refrigerant type	R32	
Factory charge amount	g	1,900

■ Refrigerant charge

Total pipe length	m	30 or less	40	50 (Max.)	40 g/m
Additional charge amount	g	0	400	800	

7-3. Models: AOHG45KBTB and AOHG54KBTB

Refrigerant type	R32	
Factory charge amount	g	2,700

■ Refrigerant charge

Total pipe length	m	30 or less	40	50 (Max.)	40 g/m
Additional charge amount	g	0	400	800	

8. Airflow

8-1. Model: AOHG24KBTB

● Cooling

m ³ /h	2,700
l/s	750
CFM	1,589

● Heating

m ³ /h	2,700
l/s	750
CFM	1,589

8-2. Models: AOHG30KBTB and AOHG36KBTB

● Cooling

m ³ /h	3,750
l/s	1,042
CFM	2,207

● Heating

m ³ /h	3,750
l/s	1,042
CFM	2,207

8-3. Models: AOHG45KBTB and AOHG54KBTB

● Cooling

m ³ /h	4,450
l/s	1,236
CFM	2,619

● Heating

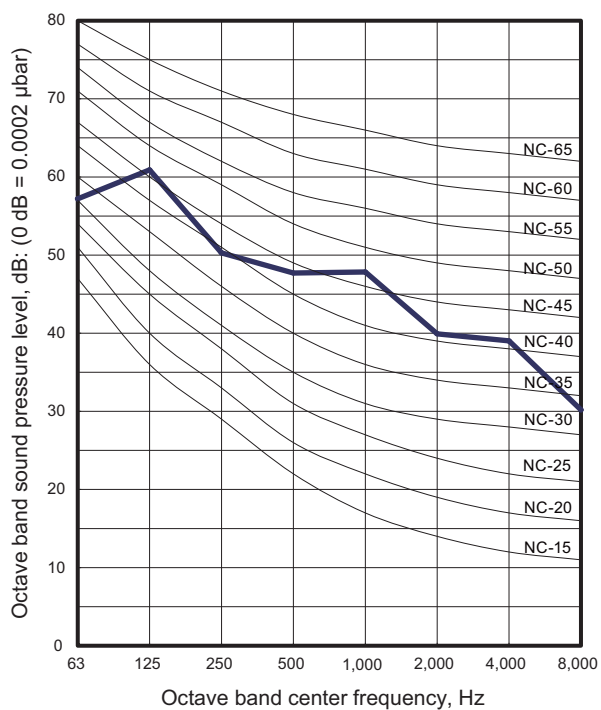
m ³ /h	4,450
l/s	1,236
CFM	2,619

9. Operation noise (sound pressure)

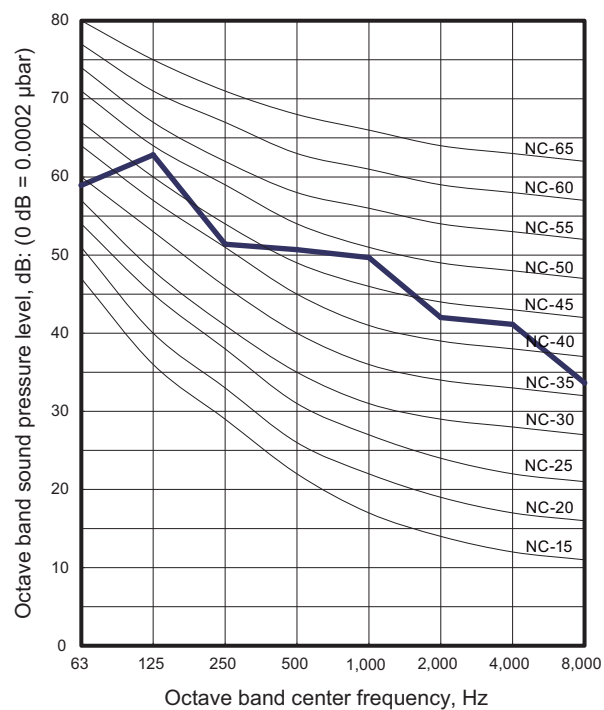
9-1. Noise level curve

Model: AOHG24KBTB

● Cooling

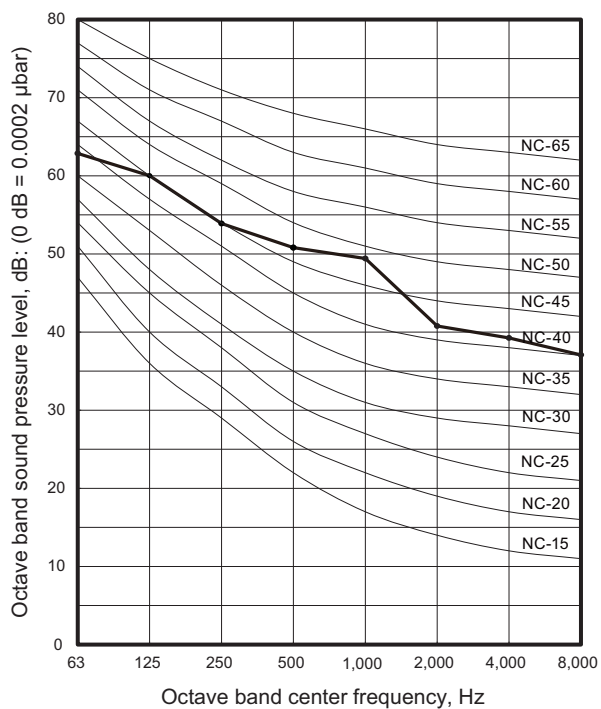


● Heating

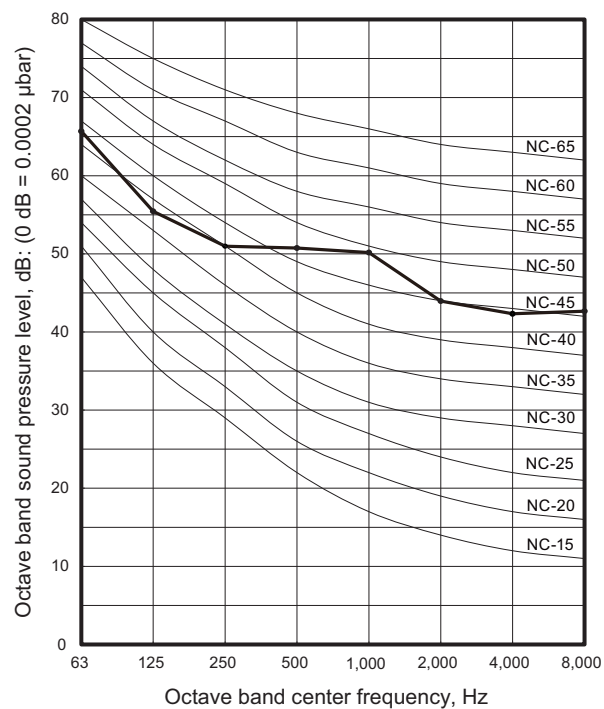


Model: AOHG30KBTB

● Cooling

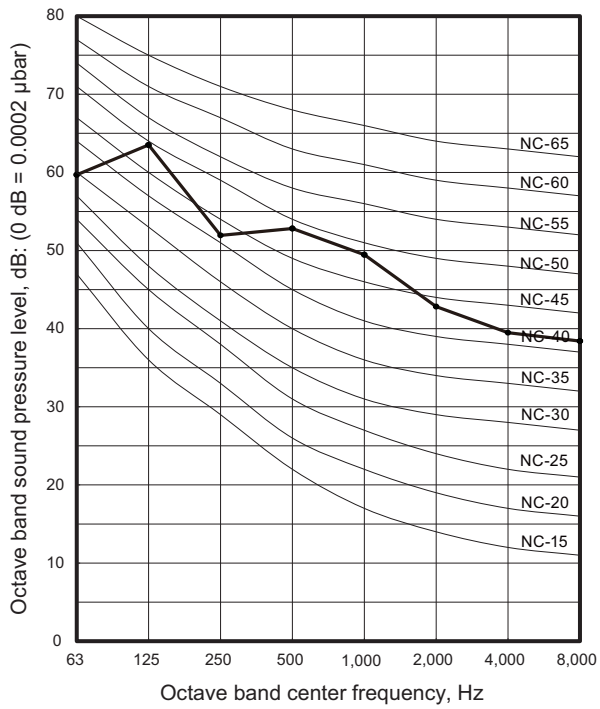


● Heating

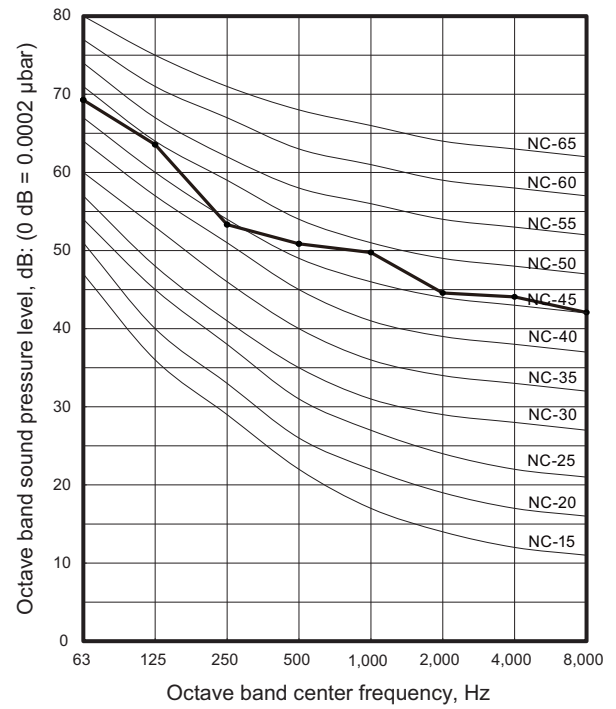


Model: AOHG36KBTB

Cooling

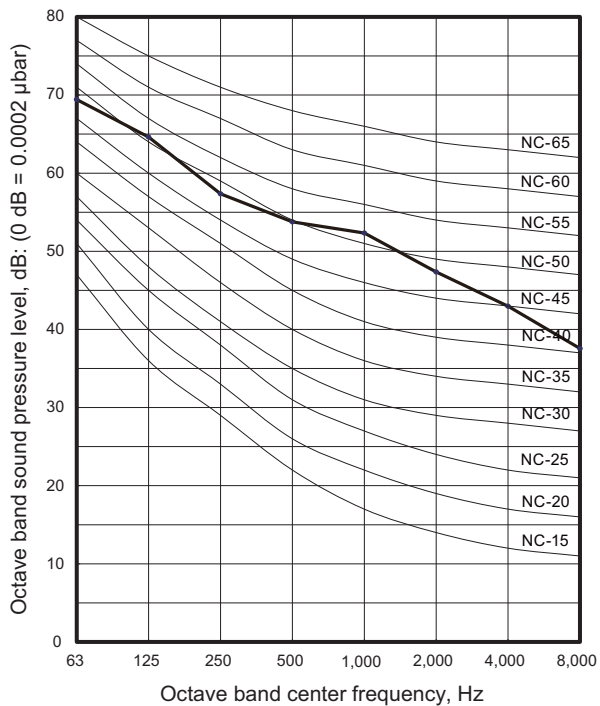


Heating

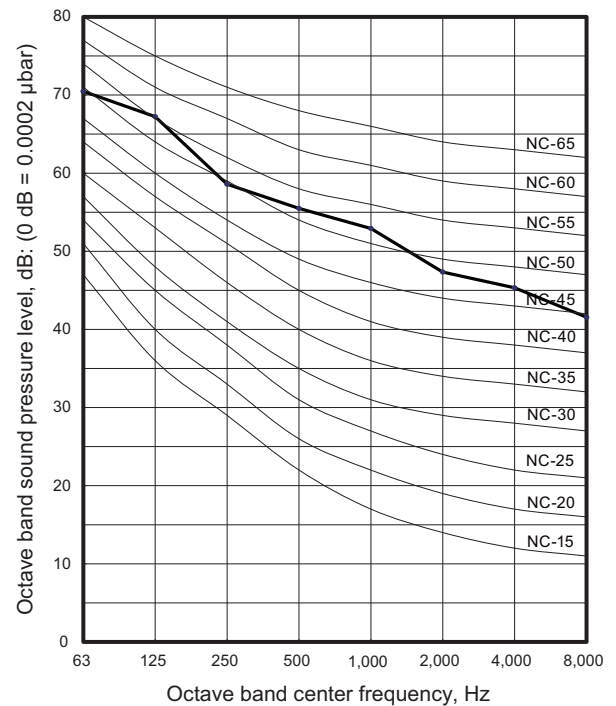


Model: AOHG45KBTB

Cooling

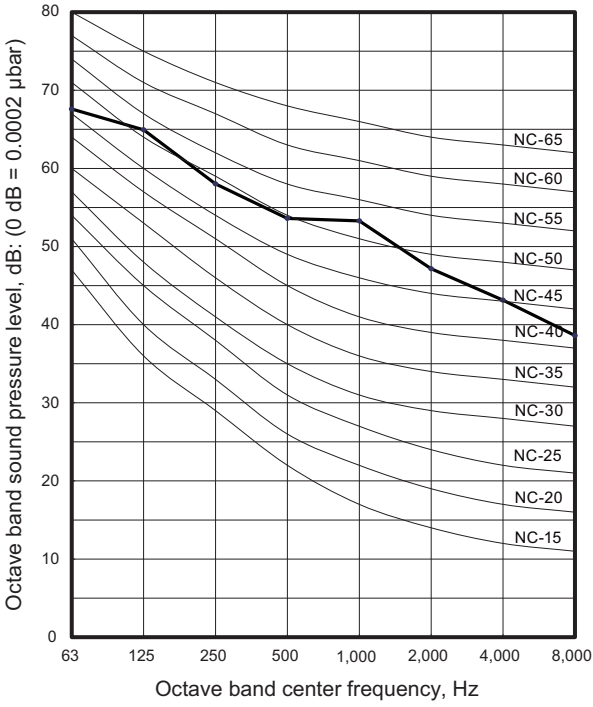


Heating

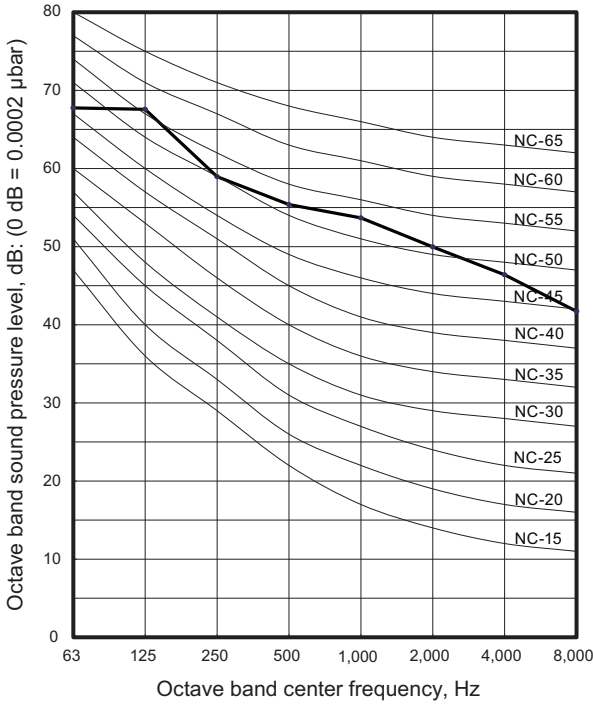


■ Model: AOHG54KBTB

● Cooling



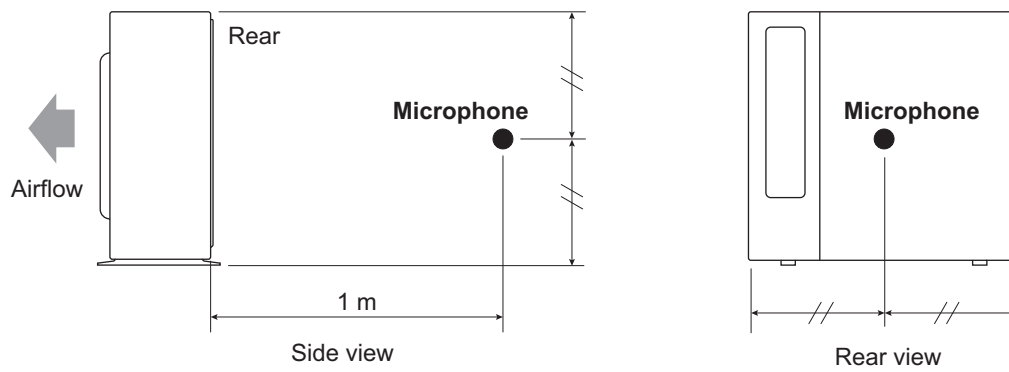
● Heating



OUTDOOR UNIT
AOHG24-54KBTB

OUTDOOR UNIT
AOHG24-54KBTB

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			AOHG24KBTB	
Power supply	Voltage	V	230 ~	
	Frequency	Hz	50	
Max operating current *1		A	13.6	
Starting current		A	8.4	
Wiring spec. *2	Circuit breaker current		A	20
	Power cable		mm ²	2.5
	Connection cable *3	Cross-sectional area	mm ²	1.5
		Limited wiring length	m	31

Model name				AOHG30KBTB		AOHG36KBTB	
Power supply	Voltage		V	230 ~			
	Frequency		Hz	50			
Max operating current *1			A	22.6			
Starting current			A	11.1		12.9	
Wiring spec. *2	Circuit breaker current		A	25			
	Power cable		mm ²	4.0			
	Connection cable *3	Cross-sectional area	mm ²	1.5			
		Limited wiring length	m	51			

Model name				AOHG45KBTB		AOHG54KBTB	
Power supply	Voltage		V	230 ~			
	Frequency		Hz	50			
Max operating current *1			A	28.5			
Starting current			A	16.0		19.4	
Wiring spec. *2	Circuit breaker current		A	32			
	Power cable		mm ²	4.0			
	Connection cable *3	Cross-sectional area	mm ²	1.5			
		Limited wiring length		m	51		

*1: Maximum current is the total current of the indoor unit and the outdoor unit.

*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: Limit voltage drop to less than 2%. Increase conductor size if voltage drop is 2% or more.

11. Safety devices

Type of protection	Protection form		Model
			AOHG24KBTB
Circuit protection	Current fuse (Main PCB)		250 V, 25 A 250 V, 5 A 250 V, 3.15 A
Fan motor protection	Thermal protection program	Activate	125 ±10 °C Fan motor stop
		Reset	120 ±10 °C Fan motor restart
Compressor protection	Thermal protection program (Discharge temp.)	Activate	110 °C Compressor stop
		Reset	After 7 minutes Compressor restart
	Thermal protection program (Compressor temp.)	Activate	108 °C Compressor stop
		Reset	80 °C or less Compressor restart
	Thermal protection program (Outdoor temp.) (Only in COOL or DRY mode)	Activate	-20 °C Compressor stop
		Reset	-15 °C Compressor restart

Type of protection	Protection form		Model
			AOHG30KBTB AOHG36KBTB
Circuit protection	Current fuse (Main PCB)		250 V, 30 A 250 V, 3.15 A 250 V, 10 A × 2
Fan motor protection	Thermal protection program	Activate	122 ±9 °C Fan motor stop
		Reset	107—126 °C Fan motor restart
Compressor protection	Thermal protection program (Discharge temp.)	Activate	110 °C Compressor stop
		Reset	After 7 minutes Compressor restart
	Thermal protection program (Compressor temp.)	Activate	108 °C Compressor stop
		Reset	80 °C or less Compressor restart
	Thermal protection program (Outdoor temp.) (Only in COOL or DRY mode)	Activate	-20 °C Compressor stop
		Reset	-15 °C Compressor restart

Type of protection	Protection form		Model
			AOHG45KBTB AOHG54KBTB
Circuit protection	Current fuse (Main PCB)		250 V, 30 A or 35.5 A 250 V, 3.15 A 250 V, 10 A × 2
Fan motor protection	Thermal protection program	Activate	150 ±15 °C Fan motor stop
		Reset	120 ±15 °C Fan motor restart
Compressor protection	Thermal protection program (Discharge temp.)	Activate	110 °C Compressor stop
		Reset	After 7 minutes Compressor restart
	Thermal protection program (Compressor temp.)	Activate	108 °C Compressor stop
		Reset	80 °C or less Compressor restart
	Thermal protection program (Outdoor temp.) (Only in COOL or DRY mode)	Activate	-20 °C Compressor stop
		Reset	-15 °C Compressor restart

12. External input and output (30-54 models)

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.

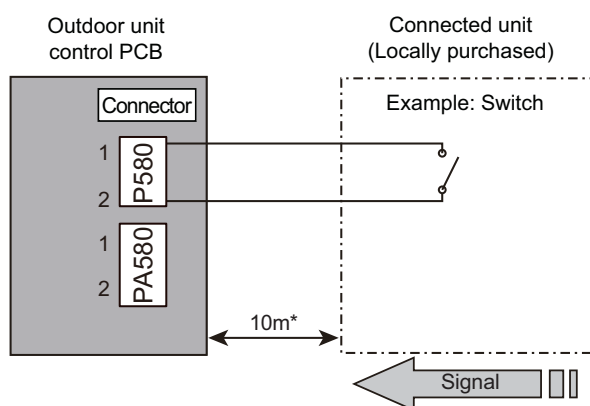
■ Low noise mode

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

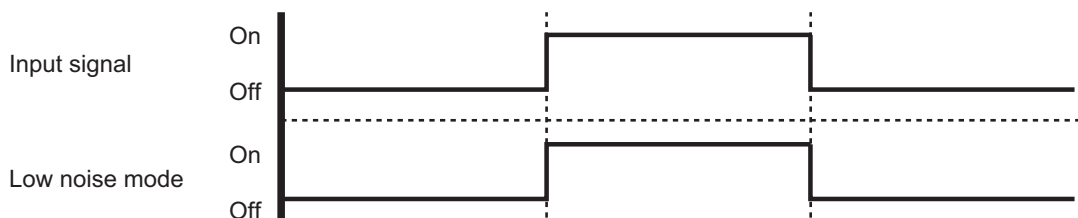
The air conditioner is set to the “Low noise mode” when closing the contact input of a commercial timer or on/off switch to a connector on the control PCB of the outdoor unit.

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 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 102 (under “Local setting procedure”).



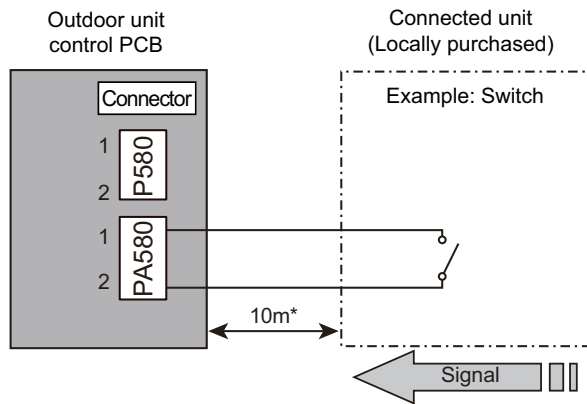
• Optional part

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

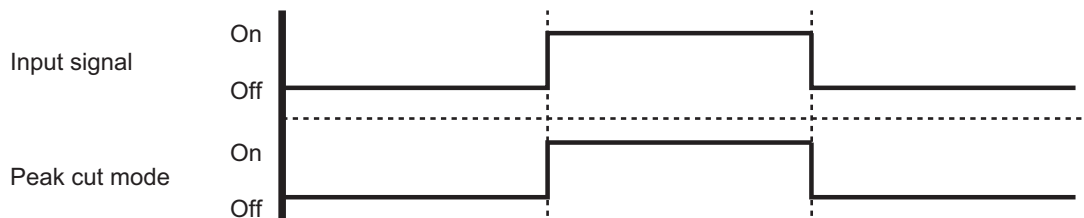
■ Peak cut mode

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 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 103 (under “Local setting procedure”).



• Optional part

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

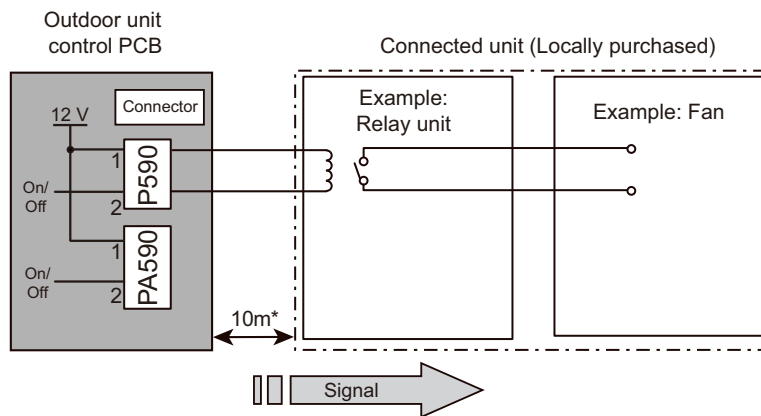
12-2. External output

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.

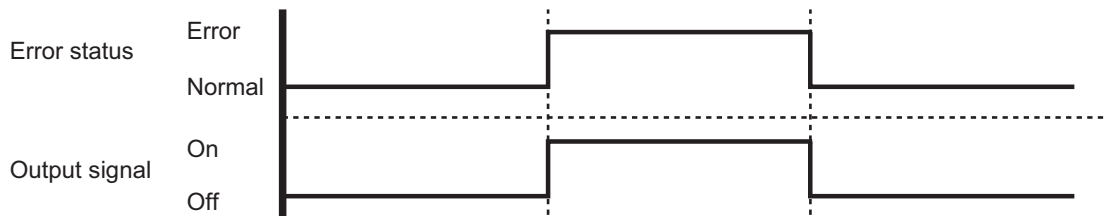
■ Error status output

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 10 m.



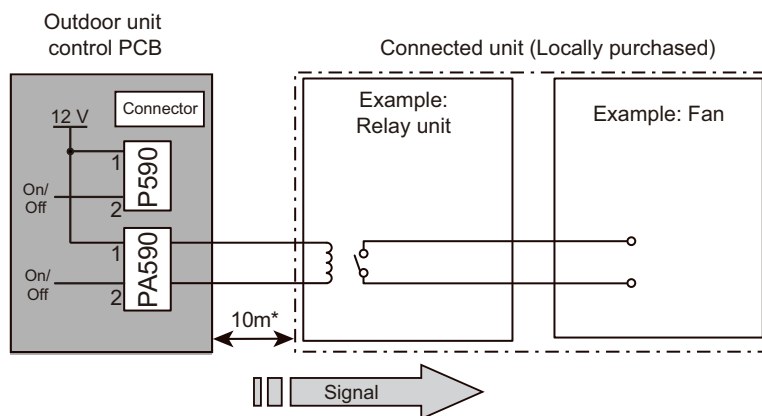
• Optional part

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

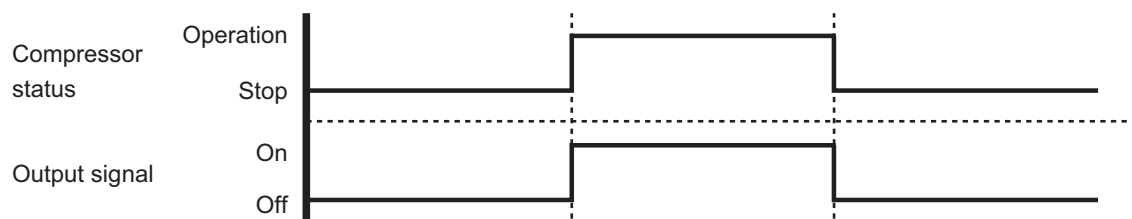
Compressor status output

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

• Circuit diagram example

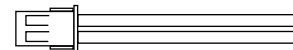


- Output voltage (Vcc): DC 12 V 50 mA or less
- *: Make the distance from the PCB to the connected unit within 10 m.



• Optional part

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



13. Function settings (30-54 models)

Perform appropriate function setting locally according to the installation environment.

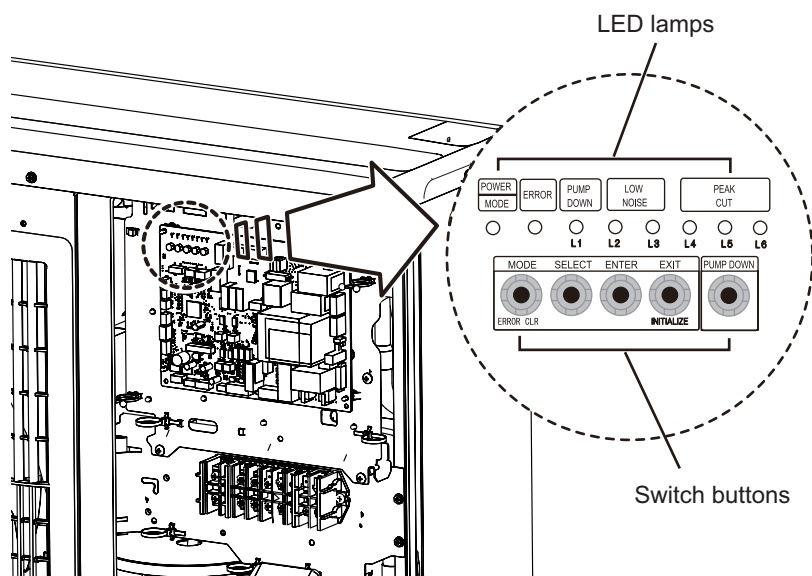
NOTE: Incorrect settings can cause a product malfunction.

⚠ CAUTION

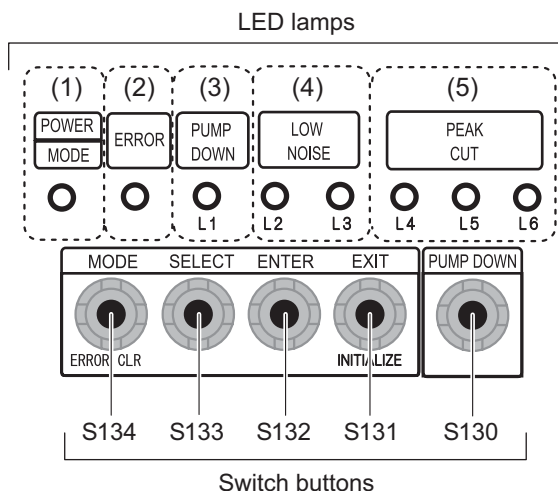
- Before setting up the switch buttons, discharge the static electricity from your body.
- Never touch the terminals or the patterns on the parts that are mounted on the PCB.

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.

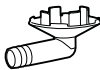
	PEAK CUT		
	(L4)	(L5)	(L6)
0 % of rated input ratio	○	○	●
50 % of rated input ratio	○	●	○
75 % of rated input ratio	○	●	●
100 % of rated input ratio	●	○	○

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

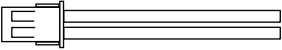
14-1. Model: AOHG24KBTB

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

14-2. Models: AOHG30KBTB, AOHG36KBTB, AOHG45KBTB, and AOHG54KBTB

Part name	Exterior	Qty	Part name	Exterior	Qty
Installation manual		1	Drain cap		3
Drain pipe		1	One-touch bush		2

15. Optional parts

Exterior	Part name	Model name	Summary
	External Connect Kit	UTY-XWZXZ3	Use to operate the external input and output functions of outdoor unit. (For 30-54 models)

OUTDOOR UNIT
AOHG24-54KBTB

OUTDOOR UNIT
AOHG24-54KBTB