

INDOOR UNIT

**1. WALL MOUNTED TYPE :
AS * B24LDC**

1. FEATURE

■ MODEL : AS*B24LDC

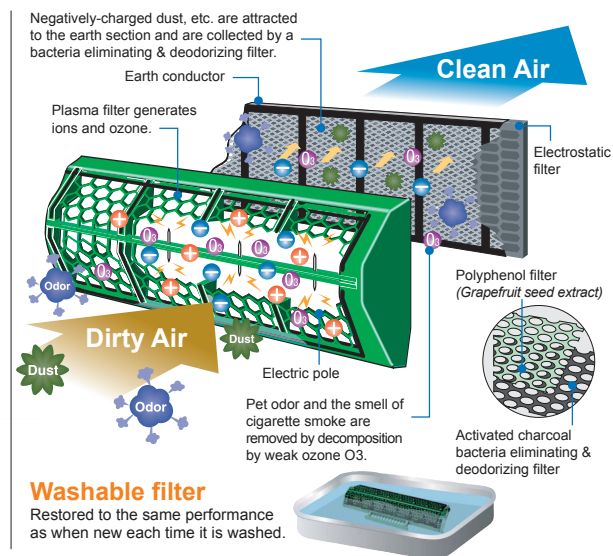


■ FEATURES

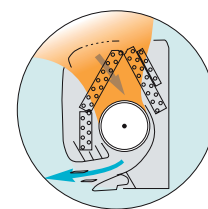
● Energy saving Rank A

Europe energy saving Rank A achieved

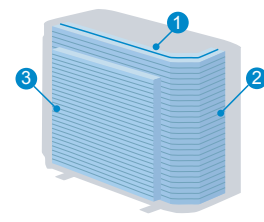
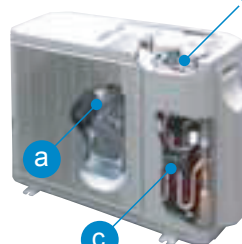
● Original plasma air cleaning unit effectively cleans the air in the room.



● ALL DC



- a DC fan motor**
- b V-PAM control**
V-PAM technology makes a compressor more powerful.
- c DC scroll compressor**
More compact compared with conventional model



● Super quiet

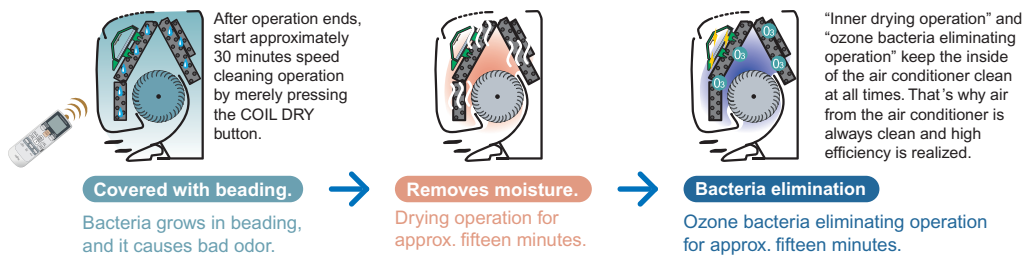
Air flow mode can be set in 4 steps and more detailed air flow setting is possible.

● Easy maintenance

Easy maintenance and always clean. Troublesome maintenance has been made easy.
Since the front panel is easy to remove, maintenance is also easy.

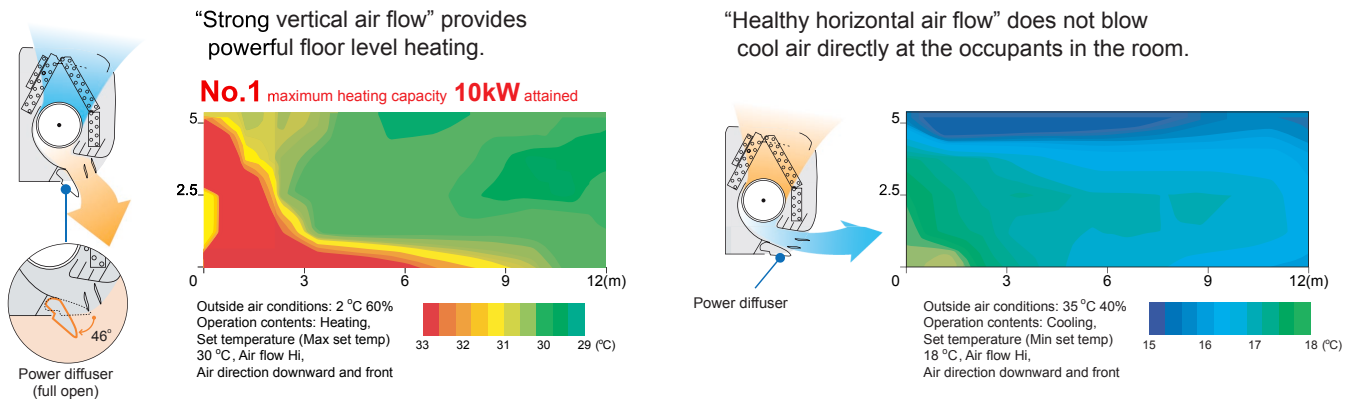
● Inner drying operation and plasma effect

This model is equipped with an inner drying function. After the power is turned off, the dry operation starts inside the air conditioner. The plasma air cleaning unit eliminates bacteria, deodorizes, and keeps the interior of the air conditioner clean by generating ozone and ions.



● Power diffuser

Adoption of large power diffuser



● Compact design

998mm width compact design

New model



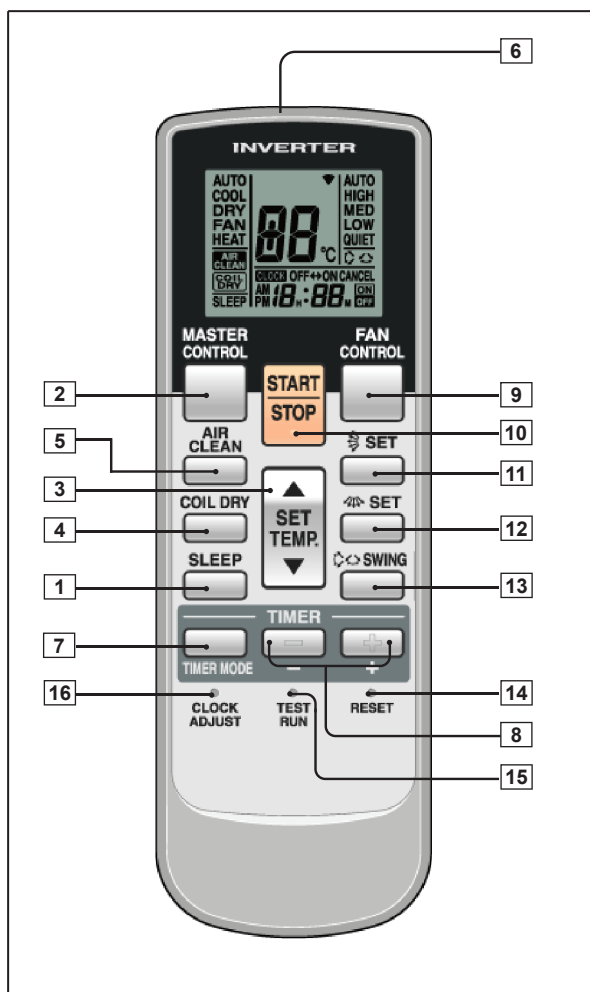
H320 x W998 x D228
(unit:mm)

● Low outdoor air temperature cooling correspondence

Corresponds to cooling operation at -10°C outdoor air temperature

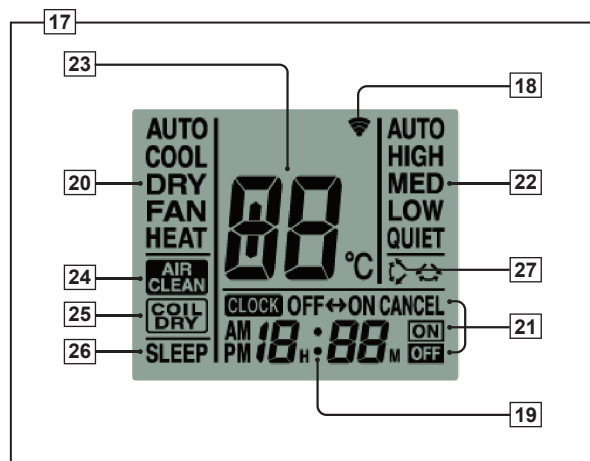
● Corresponds to maximum 30m long piping

FUNCTIONS



- 1 SLEEP button
- 2 MASTER CONTROL button
- 3 SET TEMP button (▲ / ▼)
- 4 COIL DRY button
- 5 AIR CLEAN button
- 6 Signal Transmitter
- 7 TIMER MODE button
- 8 TIMER SET (+ / -) button
- 9 FAN CONTROL button
- 10 START/STOP button
- 11 SET button (Vertical)
- 12 SET button (Horizontal)
- 13 SWING button
- 14 RESET button
- 15 TEST RUN button
 - This button is used when installing the conditioner, and should not be used under normal conditions, as it will cause the air conditioner's thermostat function to operate incorrectly.
 - If this button is pressed during normal operation, the unit will switch to test operation mode, and the Indoor Unit's OPERATION Indicator Lamp and TIMER Indicator Lamp will begin to flash simultaneously.
 - To stop the test operation mode, press the START/STOP button to stop the air conditioner.

Display panel



- 16 CLOCK ADJUST button
- 17 Remote Control Unit Display
- 18 Transmit Indicator
- 19 Clock Display
- 20 Operating Mode Display
- 21 Timer Mode Display
- 22 Fan Speed Display
- 23 Temperature SET Display
- 24 AIR CLEAN Display
- 25 COIL DRY Display
- 26 SLEEP Display
- 27 SWING Display

SPECIFICATION

SIZE (H x W x D mm)	176 x 56 x 18
WEIGHT (g)	110
ACCESSORY	Holder

3. SPECIFICATIONS

Type			WALL MOUNTED		
			INVERTER HEAT PUMP		
Model name			AS*B24LDC		
Power source			230V~ 50Hz		
Available voltage range			198 - 264V~ 50Hz		
European energy label			Cooling	A	
			Heating	A	
Capacity	Cooling	Rated	kW	7.10	
			BTU/h	24,200	
		Min-Max	kW	0.9 - 8.0	
			BTU/h	3,100 - 27,300	
	Heating	Rated	kW	8.10	
			BTU/h	27,600	
Min-Max		kW	0.9 - 10.6		
		BTU/h	3,100 - 36,200		
Input power	Cooling	Rated	kW	2.21	
		Min-Max		0.11 - 2.62	
	Heating	Rated		2.24	
		Min-Max		0.11 - 3.68	
Current	Cooling	Rated	A	9.7	
		Max		12	
	Heating	Rated		9.8	
		Max		17.5	
EER			Cooling	kW/kW	3.21
COP			Heating		3.62
SENSIBLE CAPACITY			Cooling	kW	5.54
POWER FACTOR			Cooling	%	99
			Heating		99
Moisture removal			I/h (pints/h)		3.0 (5.3)
Fan	Airflow rate	Cooling	High	m ³ /h	1170
			Med		970
			Low		785
			Quiet		685
		Heating	High		1170
			Med		970
			Low		785
			Quiet		685
	Type × Q'ty			Cross flow fan × 1	
	Motor output			W	42
Sound pressure level			Cooling	High	49
				Med	43
				Low	38
				Quiet	33
			Heating	High	48
				Med	42
				Low	37
				Quiet	33
Heat exchanger type			Dimensions (H × W × D)	mm	Main : 378 × 832 × 26.6 Sub : 84 × 832 × 13.3
					Fin pitch
			Rows × Stages	Main : 2 × 18, Sub : 1 × 4	
			Pipe type	Copper	
			Fin type	Aluminium	
Enclosure			Material	Polystyrene	
			Colour	White	
Dimensions (H × W × D)	Net		mm	320 × 998 × 228	
	Gross			319 × 1090 × 429	
Weight	Net		kg(lb.)	14 (30.8)	
	Gross			18 (39.6)	
Connection pipe	Size	Liquid	mm	Φ 6.35 (Φ 1/4 in.)	
		Gas		Φ 15.88 (Φ 5/8 in.)	
	Method	Flare			
Operation range			Cooling	°C	18 to 32
				%RH	80 or less
			Heating	°C	30 or less
Remote controller type			Wireless		
Drain pipe	Material		PVC		
	Size		mm	Outer diameter : 28 / Inner diameter : 16	

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 27°CDB/19°CWB. and outdoor temperature of 35°CDB/24°CWB.

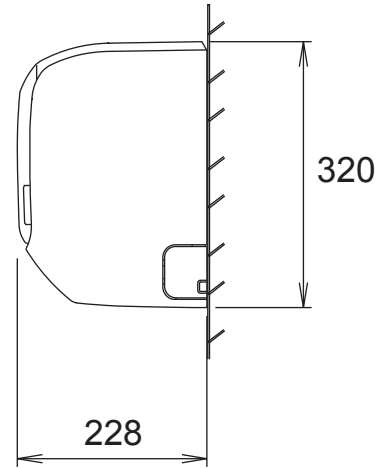
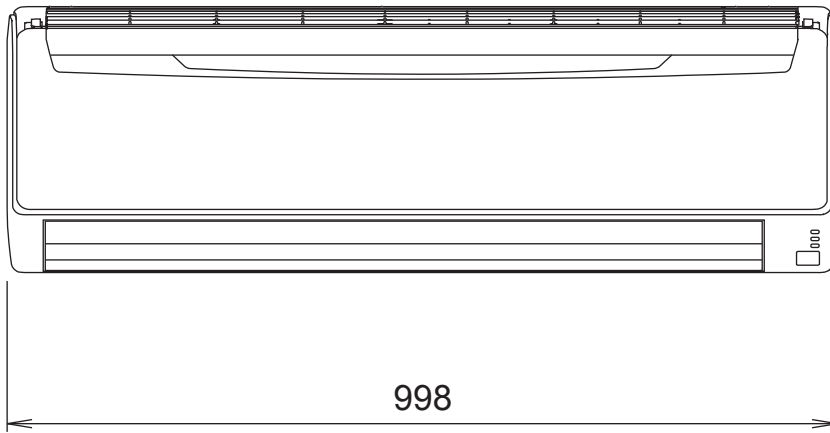
Heating : Indoor temperature of 20°CDB/15°CWB. and outdoor temperature of 7°CDB/6°CWB.

Pipe length : 7.5 m, Height difference : 0 m. (Outdoor unit - Indoor unit)

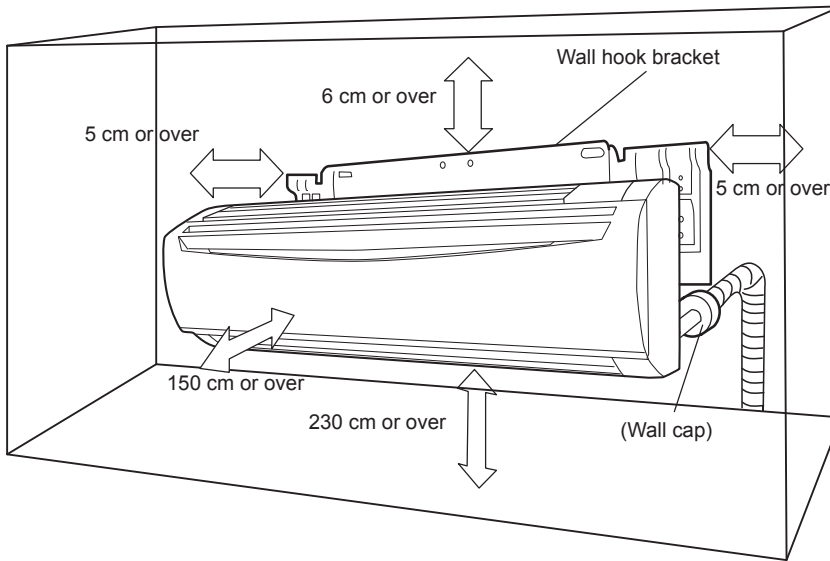
4. DIMENSIONS

■ MODEL : AS*B24LD

(Unit : mm)

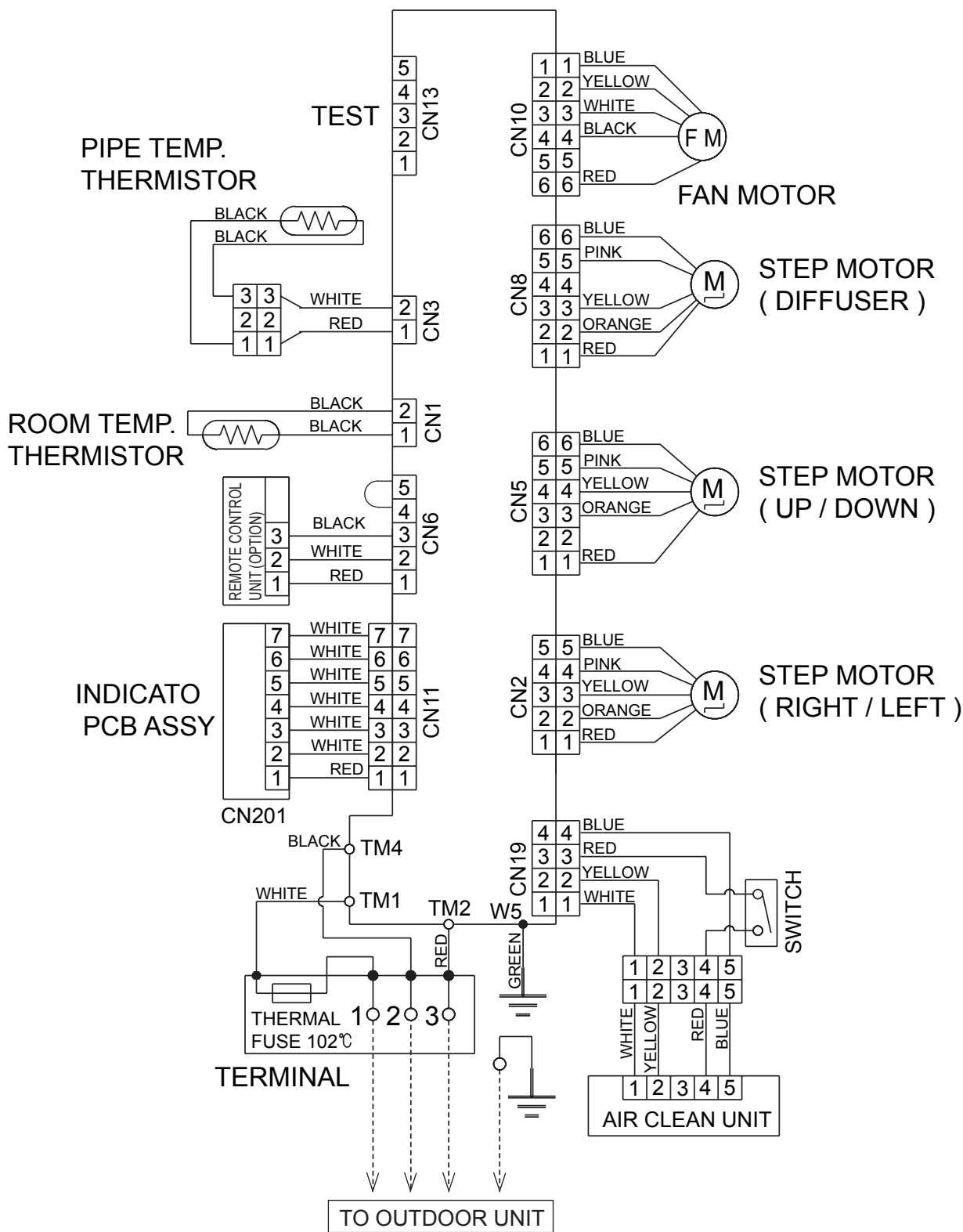


■ MOUNTING POSITION



5. WIRING DIAGRAMS

■ MODEL : AS*B24LD



6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL : AS * B24LD

AFR	18.3
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		Indoor temperature																					
		18			21			23			25			27			29			32			
		°CDB			°CWB			°CDB			°CWB			°CDB			°CWB			°CDB			°CWB
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
	20	5.26	4.97	1.05	5.86	5.00	1.07	6.06	5.43	1.07	6.46	5.45	1.09	6.66	5.88	1.09	7.05	5.86	1.10	7.45	6.24	1.11	
	25	6.26	5.61	1.75	6.98	5.64	1.78	7.22	6.13	1.79	7.69	6.15	1.80	7.93	6.65	1.81	8.41	6.62	1.83	8.88	7.05	1.85	
	30	6.00	5.21	1.94	6.68	5.24	1.97	6.91	5.70	1.98	7.36	5.71	2.00	7.59	6.17	2.01	8.05	6.15	2.03	8.50	6.55	2.05	
	35	5.61	4.67	2.13	6.25	4.70	2.17	6.46	5.11	2.18	6.89	5.13	2.20	7.10	5.54	2.21	7.53	5.51	2.23	7.95	5.87	2.25	
	40	5.06	4.08	2.15	5.64	4.10	2.18	5.83	4.46	2.19	6.22	4.47	2.21	6.41	4.83	2.22	6.79	4.81	2.25	7.18	5.13	2.27	
	43	4.73	3.72	2.16	5.27	3.74	2.20	5.45	4.07	2.21	5.81	4.08	2.23	5.99	4.41	2.24	6.35	4.39	2.27	6.71	4.67	2.29	

AFR : Air Flow Rate (m³/min)
 TC : Total Capacity (kW)
 SHC : Sensible Heat Capacity (kW)
 PI : Power Input (kW)

6-2. HEATING CAPACITY

■ MODEL : AS * B24LD

AFR	18.3
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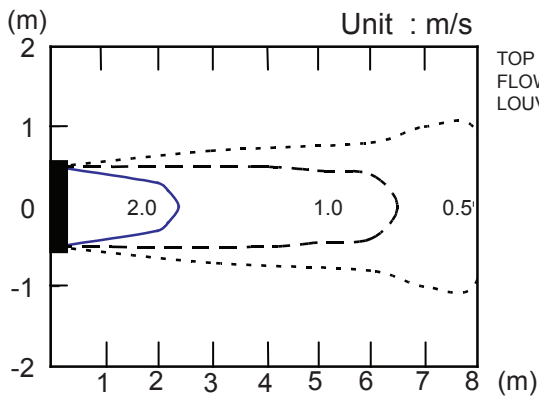
		Indoor temperature										
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	-15	-16	5.93	2.69	5.78	2.74	5.64	2.80	5.50	2.85	5.36	2.91
	-10	-11	7.04	2.94	6.87	3.00	6.70	3.06	6.53	3.12	6.37	3.18
	-5	-7	7.92	3.09	7.73	3.15	7.54	3.22	7.36	3.28	7.17	3.34
	0	-2	9.15	3.30	8.94	3.37	8.72	3.43	8.50	3.50	8.28	3.57
	5	3	10.41	3.52	10.16	3.59	9.91	3.67	9.67	3.74	9.42	3.81
	7	6	11.13	3.42	10.87	3.49	10.60	3.56	10.34	3.63	10.07	3.70
	10	8	11.53	3.42	11.25	3.49	10.98	3.56	10.71	3.64	10.43	3.71
15	10	11.16	2.97	10.90	3.04	10.63	3.10	10.37	3.16	10.10	3.22	

AFR: Air Flow Rate (m³/min)
 TC : Total Capacity (kW)
 PI : Power Input (kW)

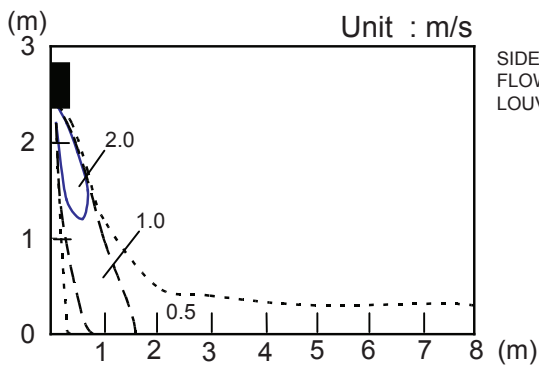
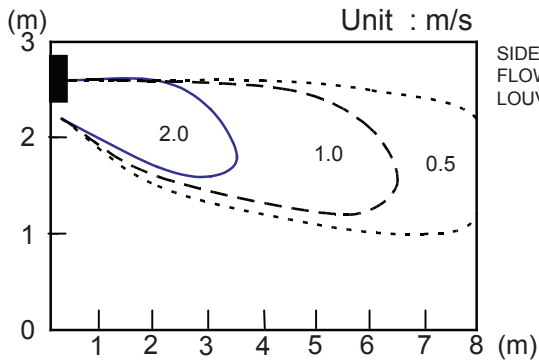
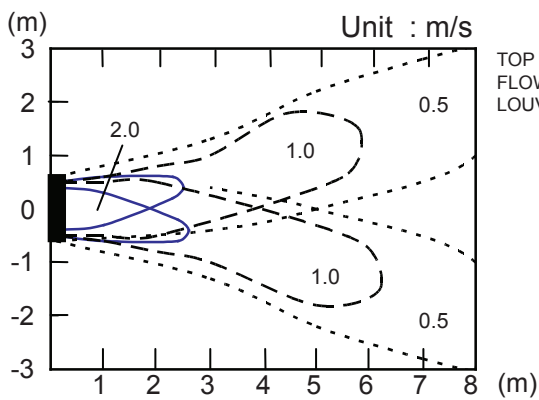
7. FAN PERFORMANCE

7-1. AIR VELOCITY DISTRIBUTION

■ MODEL : AS*B24LD



Note :
Fan speed : High
Operation mode : FAN
Voltage : 230V



7-2. AIR FLOW

■ MODEL : AS * B24LD

● COOLING

Fan speed	Number of rotations (r.p.m)	Air flow	
HIGH	1380	1170	m ³ /h
		325	l/s
		689	CFM
MED	1170	970	m ³ /h
		269	l/s
		571	CFM
LOW	980	785	m ³ /h
		218	l/s
		462	CFM
QUIET	860	685	m ³ /h
		190	l/s
		403	CFM

● HEATING

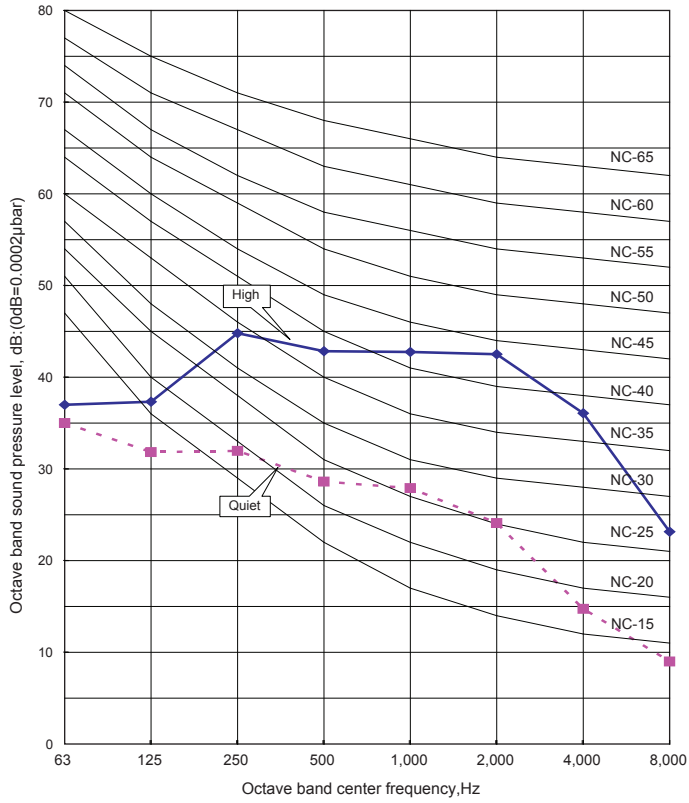
Fan speed	Number of rotations (r.p.m)	Air flow	
HIGH	1380	1170	m ³ /h
		325	l/s
		689	CFM
MED	1170	970	m ³ /h
		269	l/s
		571	CFM
LOW	980	785	m ³ /h
		218	l/s
		462	CFM
QUIET	860	685	m ³ /h
		190	l/s
		403	CFM

8. OPERATION NOISE

8-1. NOISE LEVEL CURVE

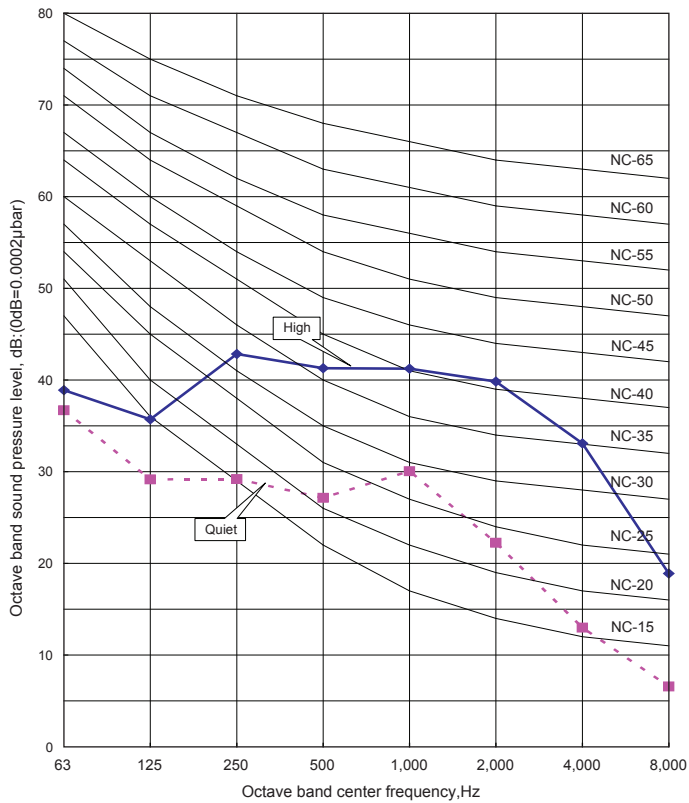
■ COOLING

● MODEL : AS*B24LD

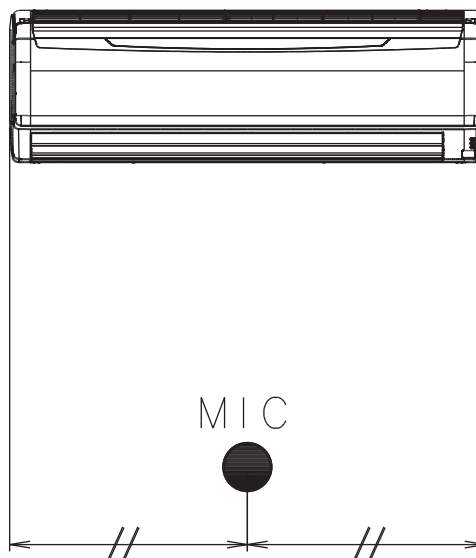
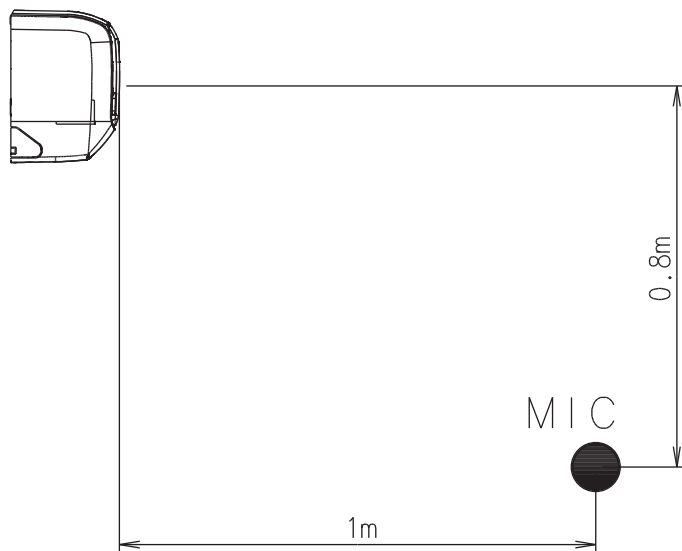


■ HEATING

● MODEL : AS*B24LD



8-2. SOUND LEVEL CHECK POINT



9. ELECTRIC CHARACTERISTICS

Model Name			AS * B24LD
Power Supply	Voltage	V	230~
	Frequency	Hz	50
Max Operating Current		A	0.3
*1)Wiring Spec.	Circuit breaker	A	0.4
	Connection Cable	mm ²	1.5 - 2.5
	Limited wiring length	m	31

*1) Wiring Spec.

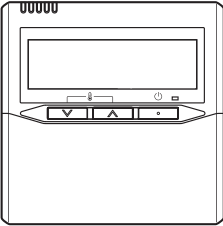
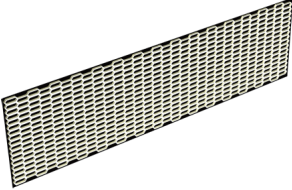
Selected Sample

(Selected based on Japan Electrotechnical Standard and Codes Committee E0005)

10. SAFETY DEVICES

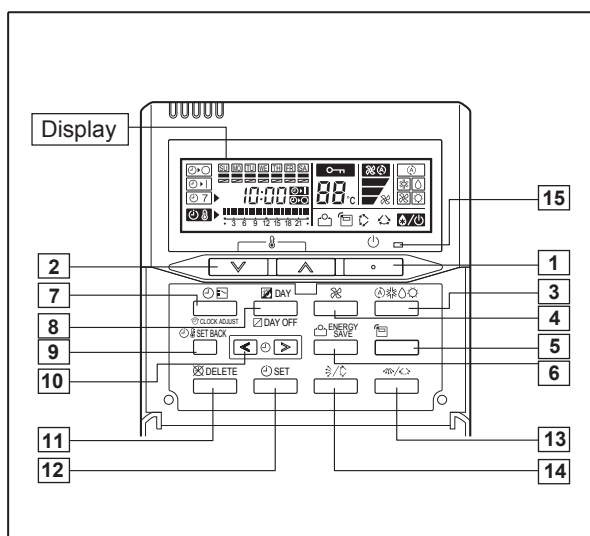
	Protection form	Model
		AS * B24LD
Circuit protection	Current fuse (PCB)	3.15A 250V
Terminal protection	Current fuse	3A 250V
Fan motor protection	Thermal protection program	100 ⁺¹⁵ ₋₁₀ °C OFF 95 ⁺⁵ ₋₁₀ °C ON

11. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTH-3TA16	Unit control is performed by wired remote controller
	Air-cleaning and deodorizing filter	UTR-FA14	Negatively-charged dust, etc. are attracted to the earth section and are collected by a bacteria eliminating & deodorizing filter.

11-1. WIRED REMOTE CONTROLLER

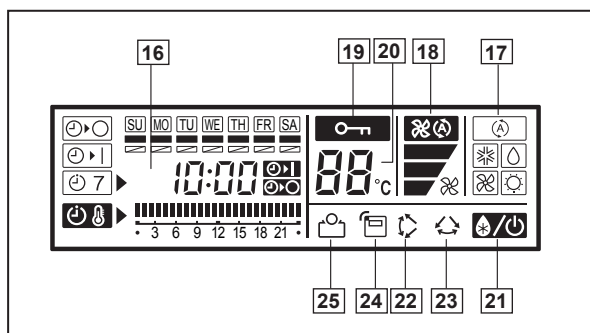
FUNCTIONS



- 1 Start/Stop Button
- 2 Set Temperature Button
- 3 Master Control Button
- 4 Fan Control Button
- 5 THERMO SENSOR Button
- 6 ENERGY SAVE Button
- 7 Timer Mode (CLOCK ADJUST) Button
- 8 DAY (DAY OFF) Button
- 9 SET BACK Button
- 10 Set Time Button
- 11 DELETE Button
- 12 SET Button
- 13 Horizontal airflow direction and swing Button
- 14 Vertical airflow direction and swing Button
- 15 Operation Lamp

* 1)

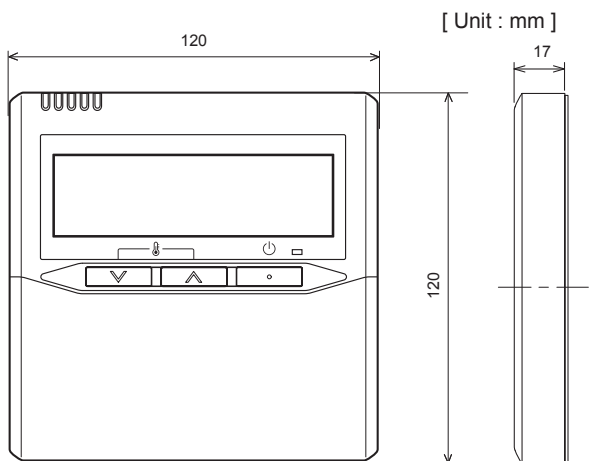
Display panel



- 16 Timer and Clock Display
- 17 Operation Mode Display
- 18 Fan Speed Display
- 19 Operation Lock Display
- 20 Temperature Display
- 21 Defrost Display
- 22 Vertical Swing Display
- 23 Horizontal Swing Display
- 24 Thermo Sensor Display
- 25 Energy Save Display

* 1) Button number 5 and 6 cannot be operated.

DIMENSION



SPECIFICATION

SIZE (H x W x D mm)	120 x 120 x 17
WEIGHT (g)	160
CABLE LENGTH (m)	10
POWER (V)	12

OUTDOOR UNIT

2. SINGLE TYPE :

AO * S24LDC

1. SPECIFICATIONS

OUTDOOR UNIT
AO*S24LD

OUTDOOR UNIT
AO*S24LD

Type			INVERTER HEAT PUMP			
Model name			AO*S24LDC			
Power source			230V~ 50Hz			
Available voltage range			198-264V~ 50Hz			
Starting current		A	9.8			
Fan	Airflow rate	Cooling	m ³ /h	2,340		
		Heating		2,470		
	Type × Q'ty		Propeller fan × 1			
	Motor output		W	65		
Sound pressure level		Cooling	dB(A)	52		
		Heating		54		
Heat exchanger type		Dimensions (H × W × D)	mm	Main : 546 × 866 × 36.4 Sub : 504 × 589 × 18.2		
		Fin pitch		Main : 1.4, Sub : 1.4		
		Rows × Stages	Main : 2 × 26, Sub : 1 × 24			
		Pipe type	Copper			
		Fin type	Aluminium			
Compressor		Type × Q'ty		Scroll × 1		
		Motor output		W	1,200	
Refrigerant		Type		R410A		
		Charge		g	1,600	
Refrigerant oil		Type		PVE (FV50S)		
Enclosure		Material		Steel		
		Colour		Beige		
Dimensions (H × W × D)		Net		578 × 790 × 315		
		Gross		648 × 910 × 380		
Weight		Net		44 (97)		
		Gross		48 (105.8)		
Connection pipe		Size	Liquid	Φ6.35 (Φ 1/4 in.)		
			Gas	Φ 15.88 (Φ 5/8 in.)		
		Method		Flare		
		Max. length		m	30 (chargeless : 15)	
Max. height difference		20				
Operation range		Cooling		-10 to 43		
		Heating		-15 to 24		

Note :

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 : 7.5 m, Height difference : 0 m. (Outdoor unit - Indoor unit)

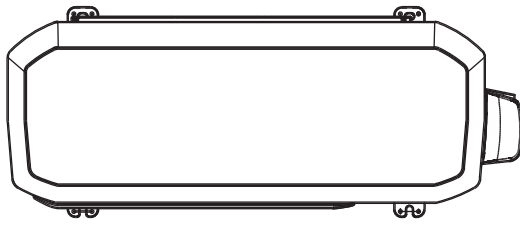
2. DIMENSIONS

■ MODEL : AO*S24LD

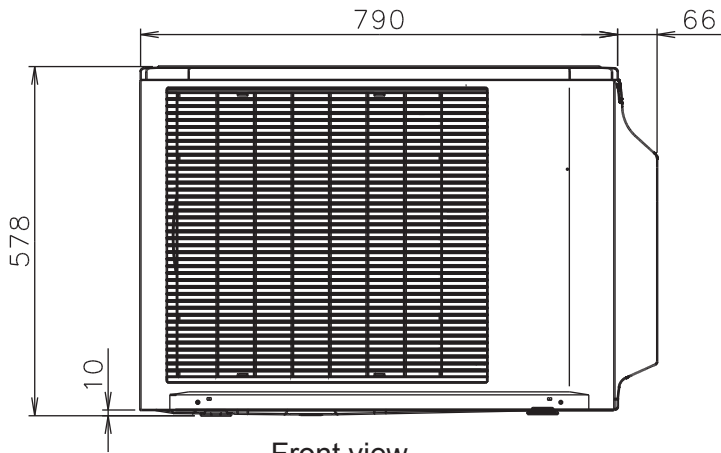
(Unit : mm)

OUTDOOR UNIT
AO*S24LD

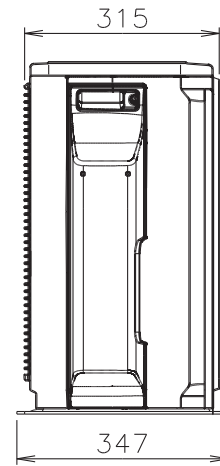
OUTDOOR UNIT
AO*S24LD



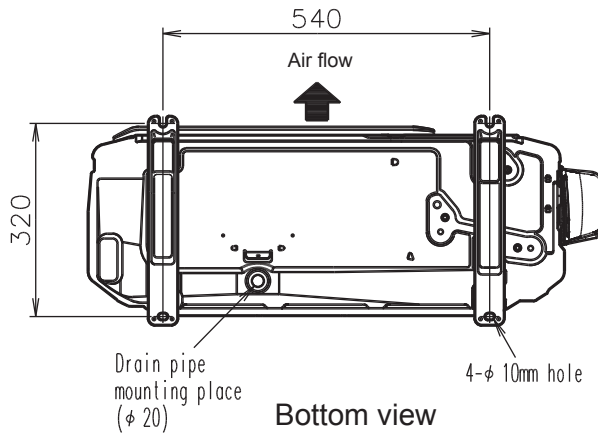
Top view



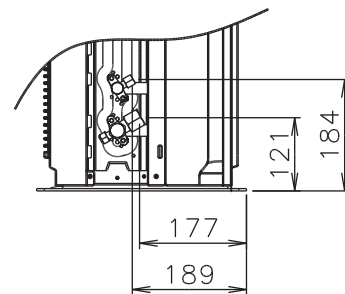
Front view



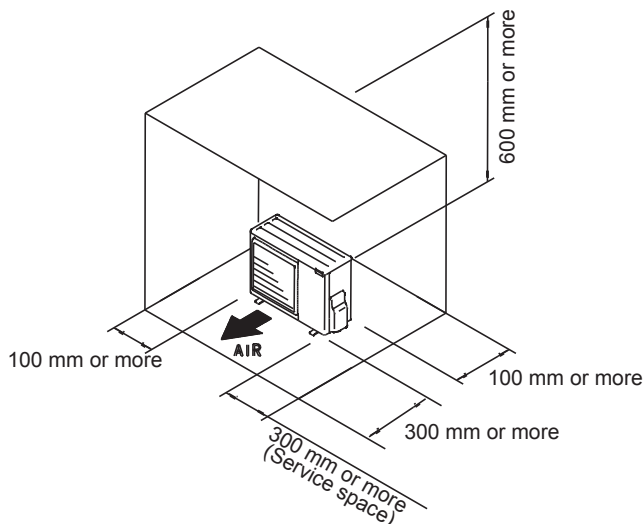
Side view



Bottom view



■ MOUNTING POSITION



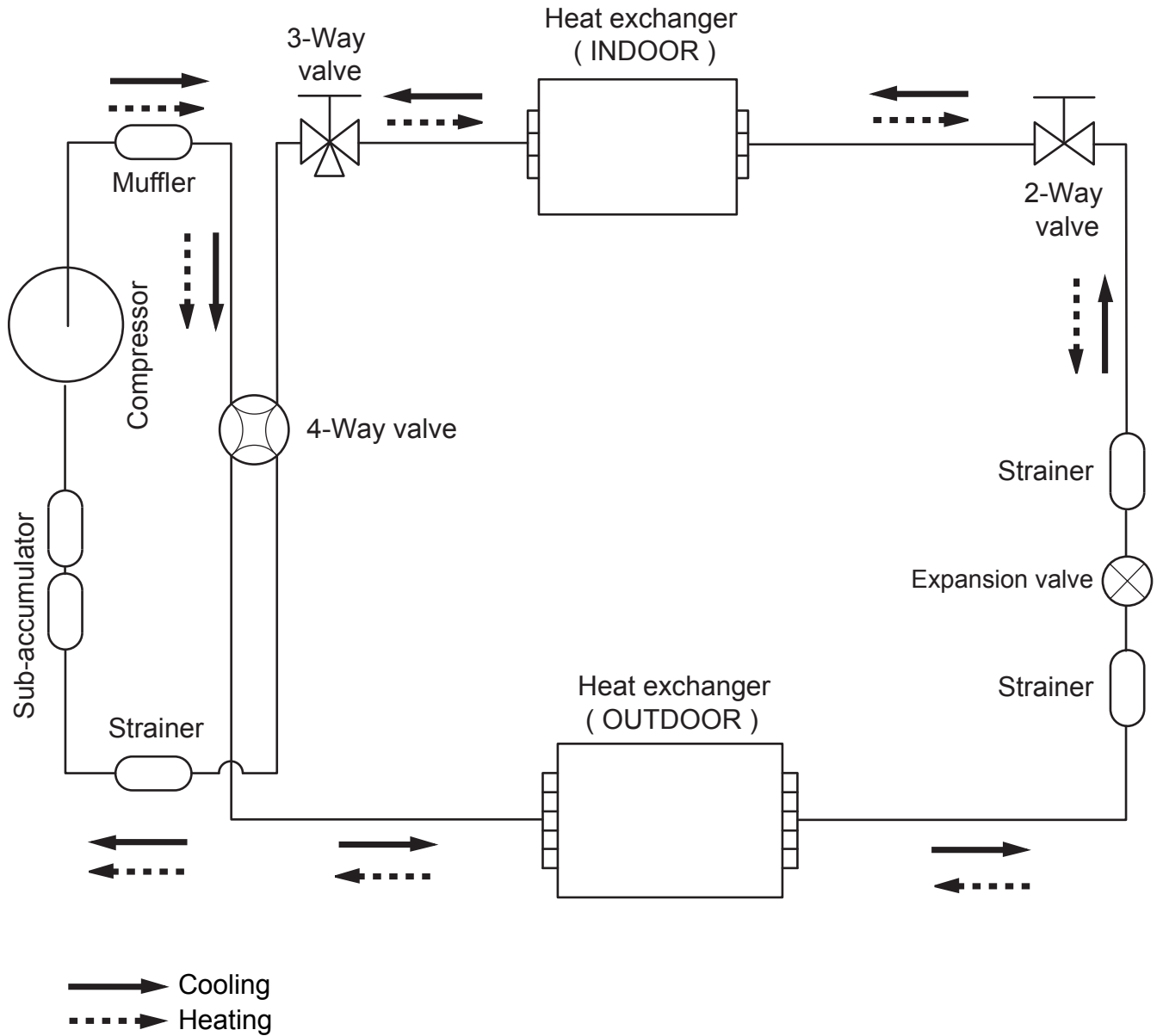
If the space is larger than that is stated, the condition will be the same as that are no obstacles.

3. REFRIGERANT CIRCUIT

■ MODEL : AO*S24LD

OUTDOOR UNIT
AO*S24LD

OUTDOOR UNIT
AO*S24LD



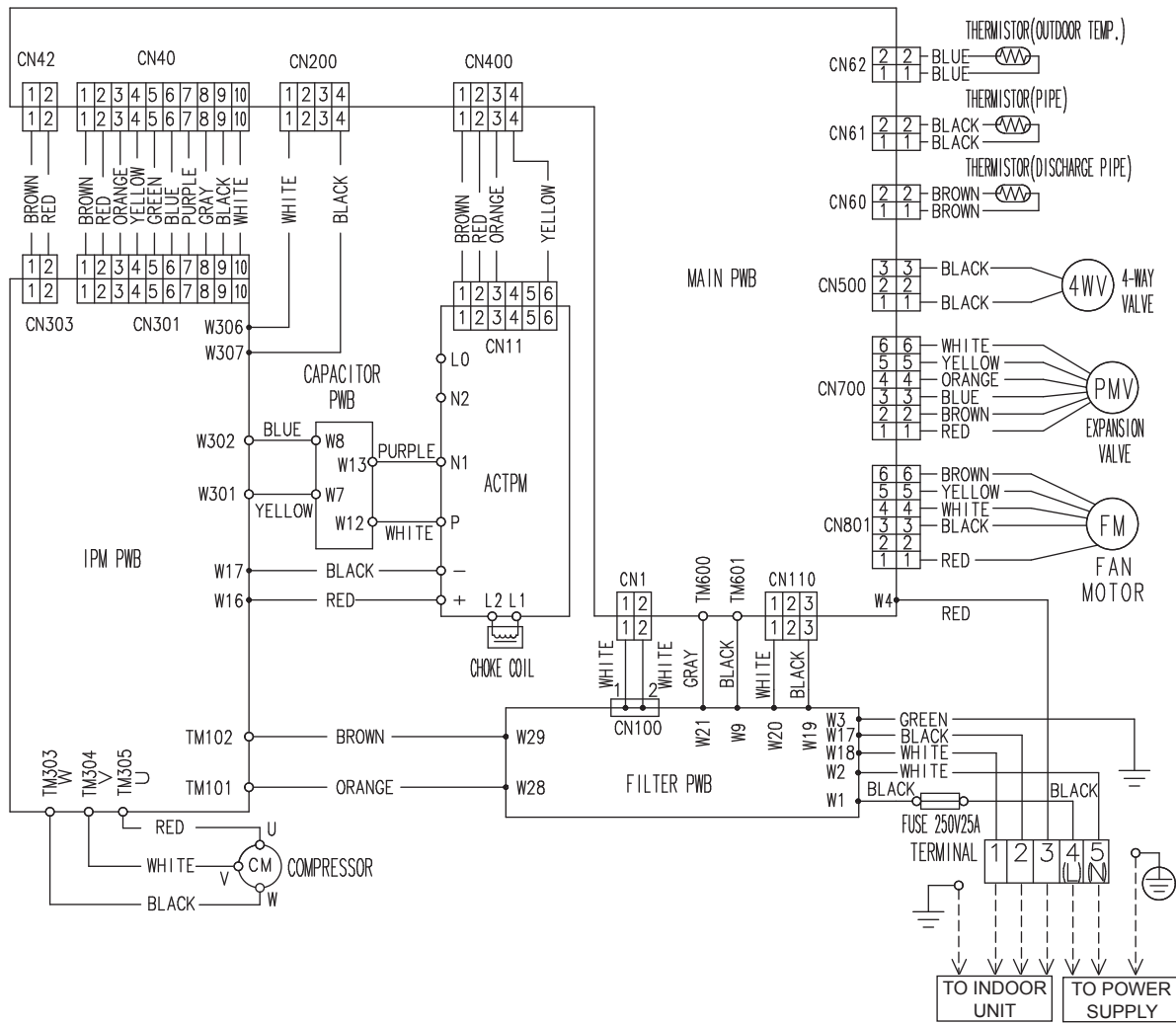
Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 5/8" (15.88 mm)

4. WIRING DIAGRAMS

■ MODEL : AO*S24LD

OUTDOOR UNIT
AO*S24LD

OUTDOOR UNIT
AO*S24LD



5. COEFFICIENT OF COMPENSATION FOR PIPE LENGTH AND HEIGHT DIFFERENCE

MODEL : AO*S24LD

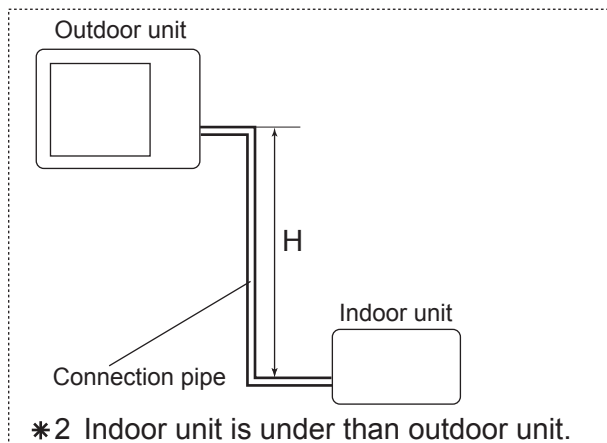
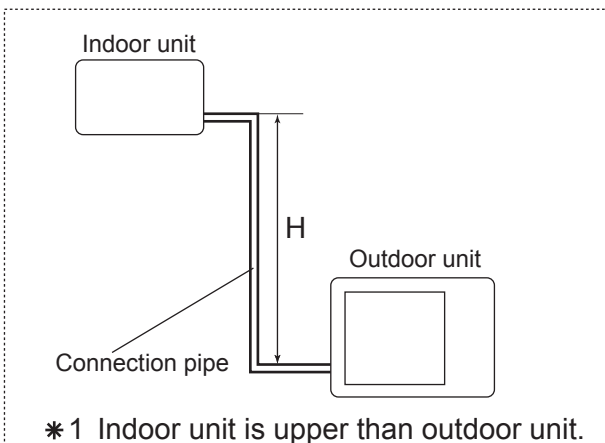
OUTDOOR UNIT
AO*S24LD

OUTDOOR UNIT
AO*S24LD

COOLING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	20	-	-	-	0.951	0.952	0.951	0.951
		10	-	-	0.980	0.966	0.968	0.967	0.966
		7.5	-	0.988	0.984	0.970	0.972	0.971	0.970
		5	0.995	0.992	0.988	0.974	0.976	0.975	0.974
	*2 Indoor unit is under than outdoor unit	0	1.003	1.000	0.996	0.982	0.983	0.983	0.982
		-5	1.003	1.000	0.996	0.982	0.983	0.983	0.982
		-7.5	-	1.000	0.996	0.982	0.983	0.983	0.982
		-10	-	-	0.996	0.982	0.983	0.983	0.982
	-20	-	-	-	0.982	0.983	0.983	0.982	

HEATING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	*1 Indoor unit is upper than outdoor unit.	20	-	-	-	0.975	0.954	0.932	0.908
		10	-	-	0.998	0.975	0.954	0.932	0.908
		7.5	-	1.000	0.998	0.975	0.954	0.932	0.908
		5	0.989	1.000	0.998	0.975	0.954	0.932	0.908
	*2 Indoor unit is under than outdoor unit	0	0.989	1.000	0.998	0.975	0.954	0.932	0.908
		-5	0.984	0.995	0.993	0.970	0.950	0.927	0.903
		-7.5	-	0.993	0.991	0.968	0.947	0.925	0.901
		-10	-	-	0.988	0.965	0.945	0.923	0.899
	-20	-	-	-	0.956	0.935	0.914	0.890	

Height difference H



6. ADDITIONAL CHARGE CALCULATION

■ MODEL : AO*S24LD

Refrigerant type	R410A	
Refrigerant amount	g	1600

● REFRIGERANT CHARGE

Pipe length	m	~15	20	25	30	20g/m
Additional charge	g	0 (Chargeless)	+100	+200	+300	

7. AIR FLOW

■ MODEL : AO*S24LD

● COOLING

Number of rotations (r.p.m)	Air flow	
	1000	2340
650		l/s
1377		CFM

● HEATING

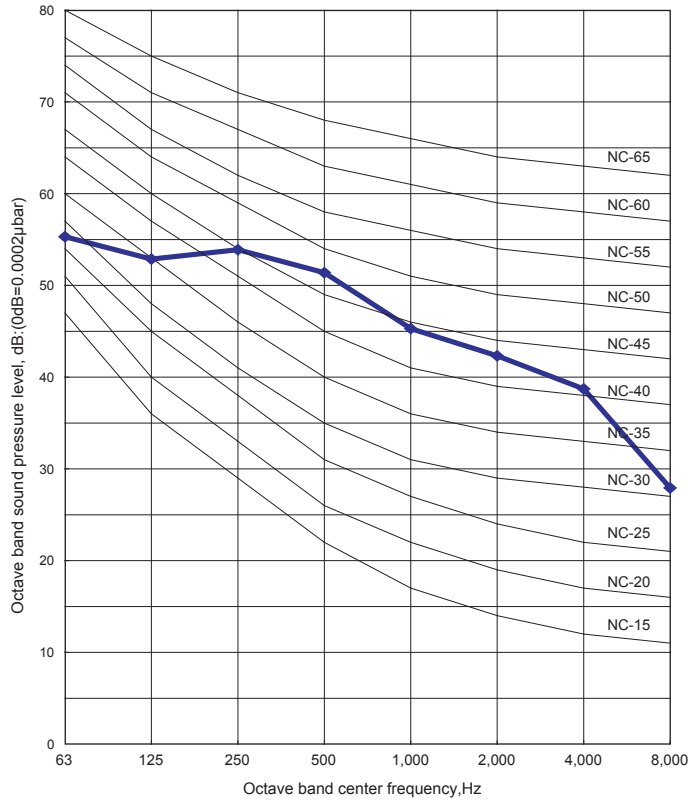
Number of rotations (r.p.m)	Air flow	
	1050	2470
686		l/s
1454		CFM

8. OPERATION NOISE

8-1. NOISE LEVEL CURVE

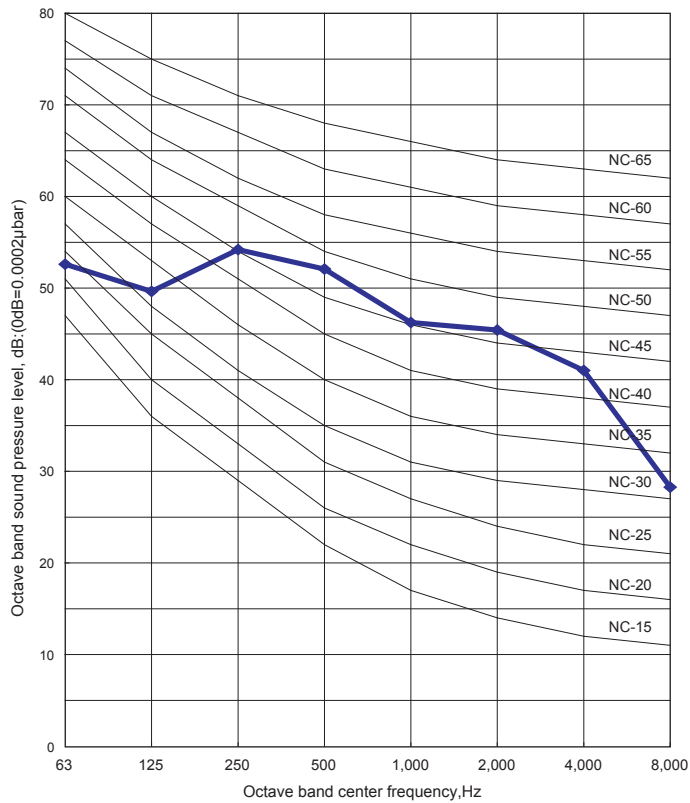
■ COOLING

● MODEL : AO*S24LD



■ HEATING

● MODEL : AO*S24LD

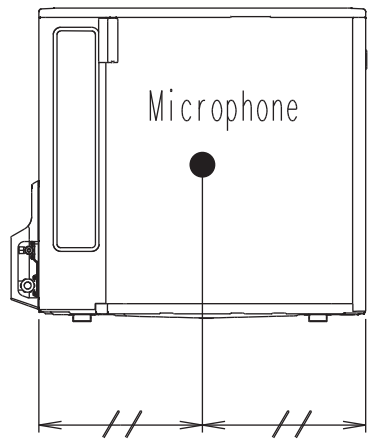
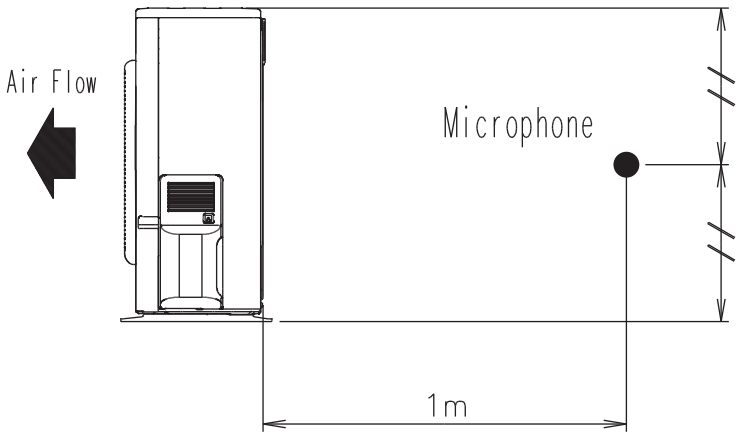


OUTDOOR UNIT
AO*S24LD

OUTDOOR UNIT
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8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AO*S24LD



OUTDOOR UNIT
AO*S24LD

9. ELECTRIC CHARACTERISTICS

Model Name			AO * S24LD
Power Supply	Voltage	V	230~
	Frequency	Hz	50
Max Operating Current		A	17.5
Starting Current		A	9.8
*1) Wiring Spec.	Main Fuse (Circuit breaker) Current	A	30
	Power Cable	mm ²	3.5 - 4.5
	*2)Limited wiring length	m	20

*1) Wiring Spec.

Selected Sample

(Selected based on Japan Electrotechnical Standard and Codes Committee E0005)

*2) Limited Wiring length :

This is the wiring length in case voltage descent is less than 2%.

When the wiring length becomes long, please select the wiring of a more larger diameter.

10. SAFETY DEVICES

	Protection form	Model
		AO * S24LD
Circuit protection	Current fuse (NEAR THE TERMINAL)	20A 250V
		5A 250V
	Current fuse (MAIN PRINTED CIRCUIT BOARD)	15A 250V
		3.15A 250V
Fan motor protection	Thermal protection program	OFF : 110^{+15}_{-10} °C ON : 105^{+15}_{-10} °C
Compressor protection	Thermal protection program (DISCHARGE TEMP.)	OFF : 110°C ON : After 7 minutes

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