

INDOOR UNIT

1. CEILING TYPE :

AB * A30LBT

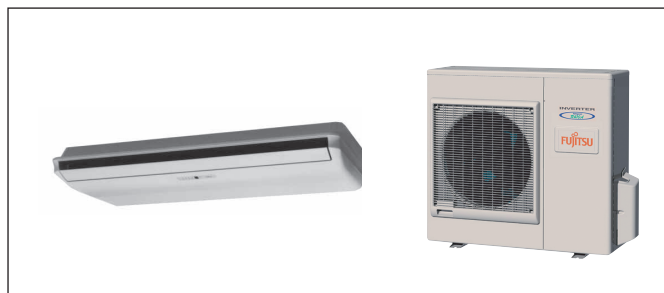
AB * A36LBT

1. FEATURE

■ MODEL :

AB*A30LBT / AO*A30LBTL

AB*A36LBT / AO*A36LBTL



■ FEATURES

● Energy saving rank A

European energy ranking rank A achieved by all DCization and optimization of the refrigerant cycle.

● Quiet operation

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

30 type: 32 dB / 36 type: 32 dB at operation in the Quiet mode.

● Filter sign

Dirtying of filter is detected by air conditioner operating time and the user is informed.

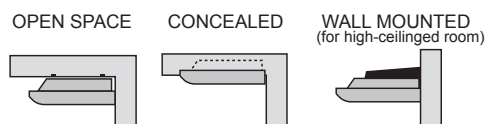
● Economy operation

Operation that suppresses maximum power consumption is performed.

● Wired/wireless simultaneous use possible

Wired remote controller and wireless remote controller can be simultaneously used.

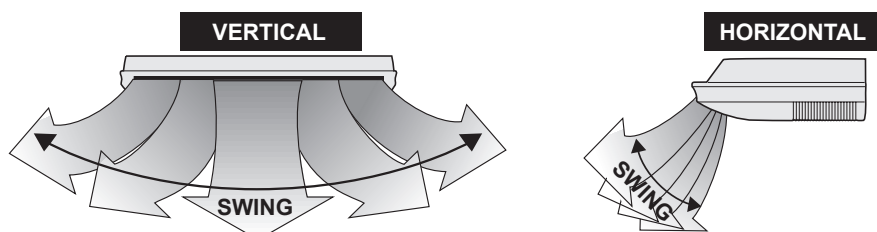
● Installation



● Double auto swing

Combination of up/down and right/left air direction swing allows three-dimensional air direction control.

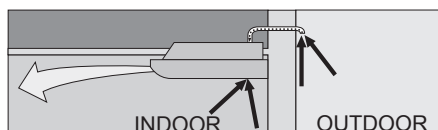
Since up/down air direction flaps operate automatically, according to the operating mode of the unit, it is possible to set the air direction based on the operating mode.



- **Filter sign operating time (Standard/long/short/no display)**

Filter sign display time interval and filter sign no display can be selected.

- **Fresh-air intake**



■ FUNCTION SETTING

- **Ceiling height (standard/high ceiling)**

Air conditioner operation capacity (air flow) switching is possible as response to height of installation ceiling.

- **Cooling room temperature correction (Standard/low control)**

Air conditioner control temperature can be switched to a little low as response to installation conditions.

- **Heating room temperature correction (Standard/low/slightly high/high control)**

Air conditioning control temperature can be slightly adjusted as response to installation conditions.

- **Auto restart (ON/OFF)**

ON/OFF of the function which automatically resets operation to the operation state before the power interruption at power recovery when there was a power interruption during operation can be selected.

- **Room temperature sensing function (ON/OFF) ← only at wired remote controller connection**

Sensor which controls the room temperature can be selected in two types: "Indoor sensor only" or "Indoor sensor or wired remote controller sensor can be switched by remote controller operation".

2. REMOTE CONTROLLER

WIRELESS REMOTE CONTROLLER

FEATURES



- * Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- * Four kinds of timers. Easy operation.
- * Easy to change transmission code (4 patterns) by button operation.

Simple function setting

Setting of the air conditioner selection function is performed by remote controller.

Built-in timers

Select from four different timer programs (On/Off/Program/Sleep).

Program timer

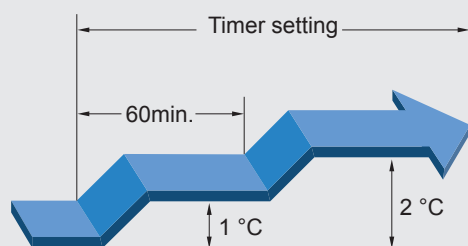
The program timer operates the ON and OFF timer once within a 24 hour period.

Sleep timer

The sleep timer function automatically corrects the temperature thermostat setting according to the time setting to prevent excessive cooling and heating while sleeping.

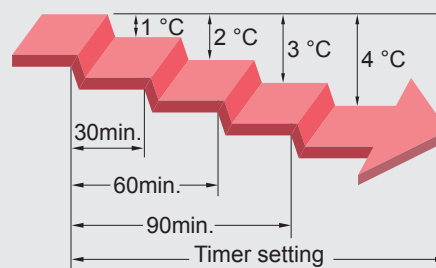
Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises 1 °C every hour. The set temperature can rise up to a maximum of 2 °C.

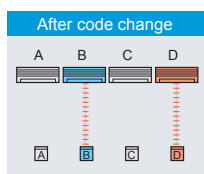
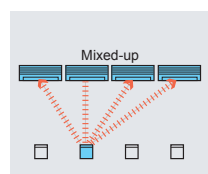


Heating operation

When the sleep timer is set, the set temperature automatically drops 1 °C every 30 minutes. The set temperature can drop to a maximum of 4 °C.



Simultaneously operation

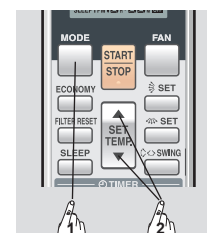


- Code selector switch eliminates unit being wrongly switched. (Up to 4 codes can be set.)

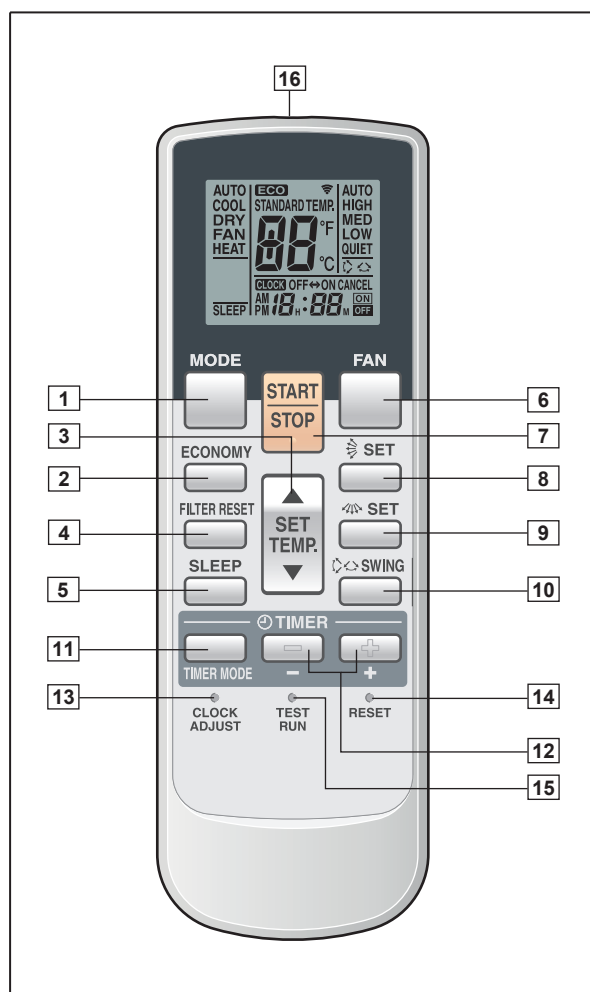


- Wide and precise transmitting range.

1. Press the MODE button for more than five seconds to start the code change.
2. Press the ▲ or ▼ button to select the desired code.
A → B → C → D
3. Press the MODE button again to end the code change.

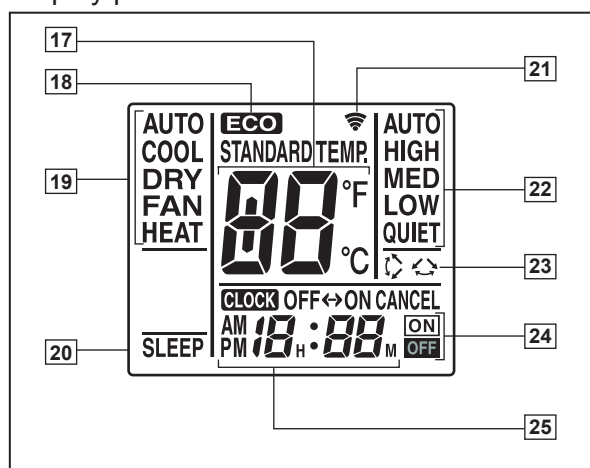


FUNCTIONS



- 1 **MODE button**
Selects the operating mode (AUTO, HEAT, FAN, COOL, DRY).
/Start / end R.C. custom code change. (Max 4 types)
- 2 **Economy button**
- 3 **Set temp. button (▲ / ▼)**
Set remote controller custom code buttons
Sets the indoor temp./ Sets R.C. custom code.
- 4 **Filter reset button**
- 5 **Sleep button**
Pressed to select sleep timer.
- 6 **Fan button**
Selects the fan speed (AUTO, QUIET, LOW, MED, HIGH).
- 7 **START/STOP button**
Pressed to start and stop operation.
- 8 **Set button (Vertical)**
Air flow direction vertical set button.
- 9 **Set button (Horizontal)**
Air flow direction horizontal set button.
- 10 **Swing button**
Air flow direction swing button.
- 11 **Timer mode button**
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)
- 12 **Timer set (⊕ / ⊖) button**
Sets the current time and on-off time.
- 13 **Clock adjust button**
Sets the current time.
- 14 **Reset button**
Used when replacing batteries.
- 15 **Test run button**
Used when testing the air conditioner after installation.

Display panel



- 16 **Signal transmitter**
- 17 **Temperature set display**
- 18 **Economy display**
- 19 **Operating mode display**
- 20 **Sleep display**
- 21 **Transmit indicator**
- 22 **Fan speed display**
- 23 **Swing display**
- 24 **Timer mode display**
- 25 **Clock display**

SPECIFICATION

SIZE (H x W x D mm)	170 x 56 x 19
WEIGHT (g)	85 (w/o batteries)
ACCESSORY	Holder

3. SPECIFICATIONS

Type			CEILING MODEL			
			INVERTER HEATPUMP			
Model name			AB * A30LBT	AB * A36LBT		
Power source			230V~ 50Hz			
Available voltage range			198-264V ~ 50Hz			
European energy label			Cooling	A		
			Heating	A		
Capacity	Cooling	Rated	kW	8.50	9.40	
			BTU/h	29000	32100	
		Min. - Max.	kW	2.80 - 10.00	2.80 - 11.20	
		BTU/h	9500 - 34100	9500 - 38200		
	Heating	Rated	kW	10.00	11.20	
			BTU/h	34100	38200	
Min. - Max.		kW	2.70 - 11.20	2.70 - 12.70		
	BTU/h	9200 - 38200	9200 - 43300			
Input power	Cooling	Rated	kW	2.65	2.93	
		*Max.		3.88	4.56	
	Heating	Rated		2.77	3.02	
		*Max.		3.88	4.56	
Current	Cooling	Rated	A	11.6	12.8	
		*Max.		17.0	20.0	
	Heating	Rated		12.2	13.2	
		*Max.		17.0	20.0	
EER		Cooling	kW/kW	3.21	3.21	
COP		Heating		3.61	3.71	
Moisture removal			l/h (pints/h)	2.5(5.3)	3.0 (6.3)	
Fan	Airflow rate	Cooling	High	m ³ /h	1660	1900
			Med		1500	1500
			Low		1200	1200
			Quiet		1000	1000
		Heating	High		1660	1900
			Med		1500	1500
			Low		1200	1200
			Quiet		1000	1000
	Type x Q'ty			Sirocco x 4		
	Motor output			W	120	120
Sound pressure level	Cooling	High	dB(A)	45	47	
		Med		43	43	
		Low		37	37	
		Quiet		32	32	
	Heating	High		45	47	
		Med		43	43	
		Low		37	37	
		Quiet		32	32	
Heat exchanger type	Dimensions (H x W x D)		mm	252 x 1350 x 39.9	252 x 1350 x 39.9	
	Fin pitch			1.45	1.45	
	Rows x Stages			3 x 12	3 x 12	
	Pipe type		Copper			
	Fin type		Aluminium			
Enclosure	Material		ABS			
	Colour		White			
Dimensions (H x W x D)	Net		mm	240 x 1660 x 700		
	Gross			318 x 1800 x 790		
Weight	Net		kg(lb.)	46 (101)	46 (101)	
	Gross			58 (128)	58 (128)	
Connection pipe	Size	Liquid	mm	φ 9.52 (φ 3 / 8 in.)	φ 9.52 (φ 3 / 8 in.)	
		Gas		φ 15.88 (φ 5 / 8 in.)	φ 15.88 (φ 5 / 8 in.)	
	Method			Flare	Flare	
Operation range	Cooling	°C	18 to 32	18 to 32		
		%RH	80 or less	80 or less		
	Heating	°C	16 to 30	16 to 30		
Remote controller type			Wireless			
Drain pipe	Material		ABS			
	Size		mm			
			Outer diameter : 26.0 / Inner diameter : 21.5			

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.

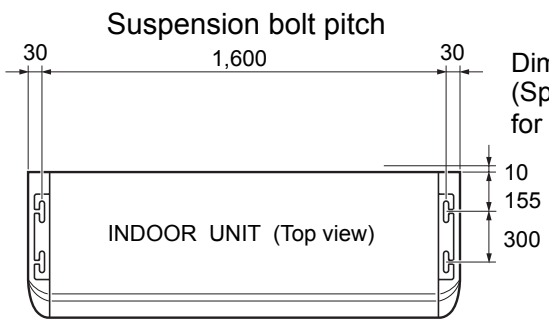
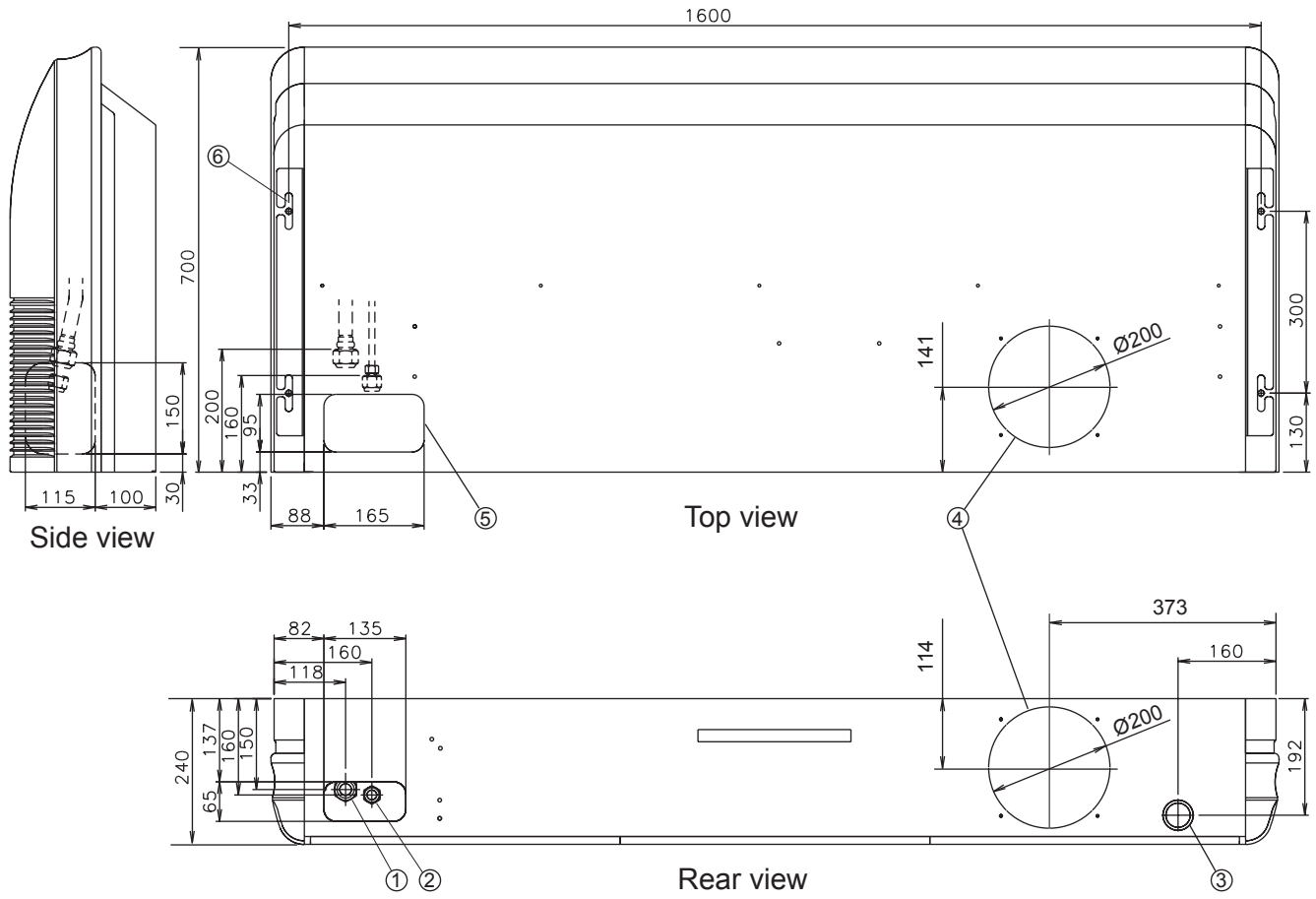
Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

The maximum current and the maximum input value are the maximum value when operated within the operation range(temperature)

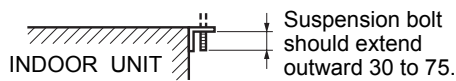
4. DIMENSIONS

■ MODEL : AB*A30L, AB*A36L

(Unit : mm)



Dimensions
(Space Required
for Installation)

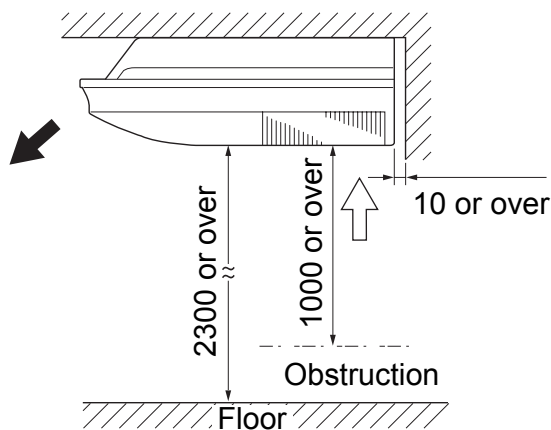
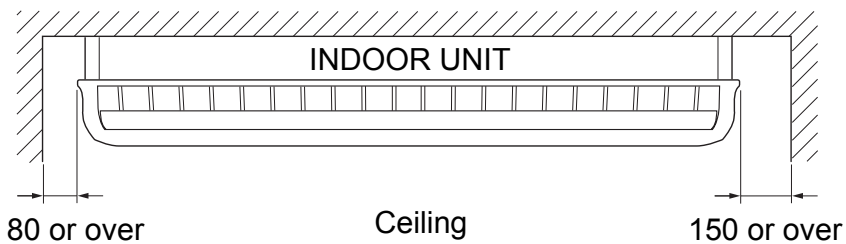


- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection
- ④ Knock out hole for fresh air
- ⑤ Knock out hole for refrigerant piping
- ⑥ Hole for lifting bolt (Use M10 screw bolt)

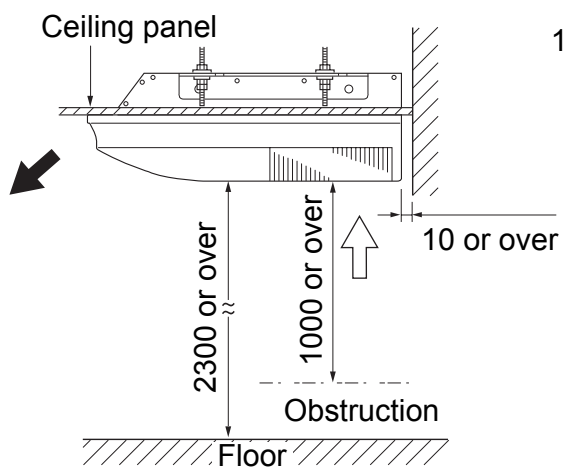
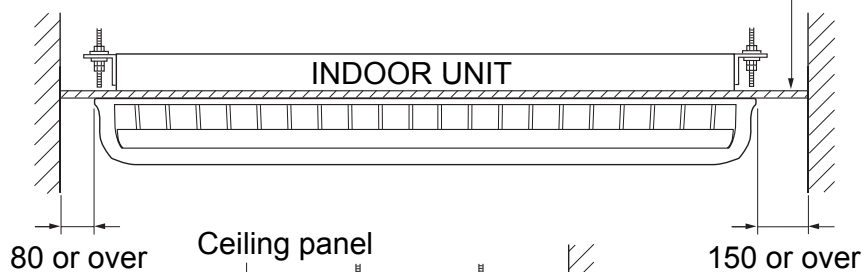
■ MOUNTING POSITION

(Unit : mm)

Ceiling

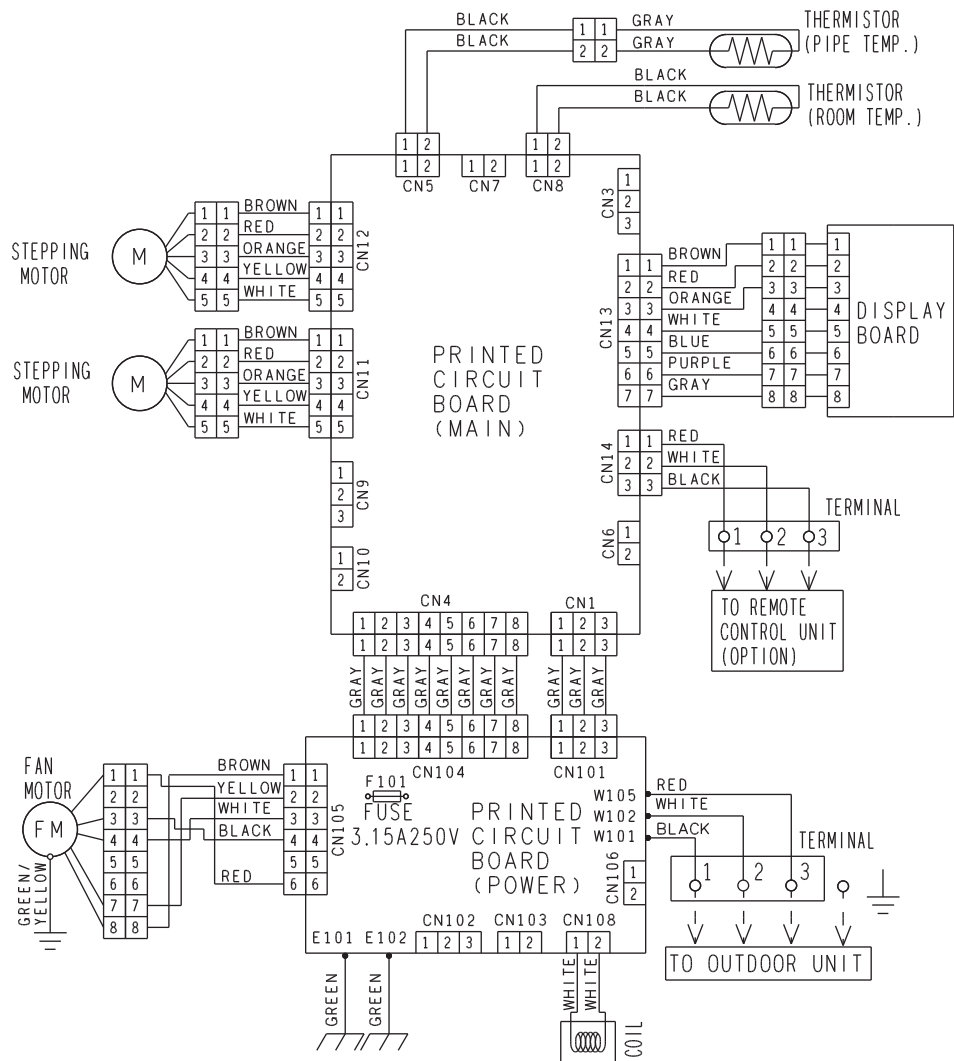


Ceiling panel



5. WIRING DIAGRAMS

MODEL : AB*A30L, AB*A36L



6. CAPACITY TABLE

6-1. COOLING CAPACITY

This table is created using the maximum capacity.

■ MODEL : AB*A30L

AFR		27.7																							
Outdoor temperature	°CDB	Indoor temperature																							
		18			21			23			25			27			29			32					
		°CWB 12			15			16			18			19			21			23					
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
-15	8.60	6.53	1.32	9.59	6.57	1.35	9.91	7.14	1.35	10.57	7.17	1.37	10.89	7.74	1.37	11.55	7.71	1.39	12.20	8.21	1.40				
-10	8.38	6.44	1.71	9.33	6.48	1.73	9.65	7.05	1.74	10.28	7.07	1.76	10.60	7.64	1.77	11.24	7.61	1.79	11.87	8.10	1.80				
0	7.96	6.33	2.19	8.87	6.37	2.23	9.17	6.92	2.24	9.77	6.94	2.26	10.08	7.50	2.27	10.68	7.47	2.29	11.29	7.96	2.32				
5	7.85	6.17	2.24	8.75	6.21	2.28	9.04	6.75	2.29	9.64	6.77	2.31	9.94	7.32	2.33	10.54	7.29	2.35	11.13	7.76	2.37				
10	7.82	6.27	2.27	8.71	6.31	2.30	9.00	6.86	2.31	9.60	6.88	2.34	9.89	7.43	2.35	10.49	7.40	2.37	11.08	7.89	2.39				
15	8.20	6.31	2.47	9.13	6.35	2.51	9.44	6.90	2.52	10.07	6.92	2.54	10.38	7.48	2.56	11.00	7.45	2.58	11.62	7.93	2.61				
20	9.45	6.90	3.00	10.53	6.94	3.05	10.89	7.55	3.06	11.61	7.57	3.09	11.97	8.18	3.11	12.68	8.14	3.14	13.40	8.67	3.17				
25	9.12	6.77	3.34	10.16	6.81	3.39	10.51	7.40	3.41	11.20	7.42	3.44	11.55	8.02	3.46	12.24	7.99	3.49	12.93	8.51	3.53				
30	8.71	6.67	3.35	9.70	6.71	3.40	10.03	7.30	3.42	10.69	7.32	3.45	11.02	7.91	3.47	11.68	7.88	3.51	12.34	8.39	3.54				
35	7.90	6.31	3.36	8.80	6.34	3.41	9.10	6.90	3.43	9.70	6.92	3.47	10.00	7.47	3.48	10.60	7.44	3.52	11.20	7.93	3.55				
40	6.03	5.20	2.98	6.72	5.23	3.03	6.95	5.68	3.04	7.41	5.70	3.07	7.63	6.16	3.09	8.09	6.13	3.12	8.55	6.53	3.15				
46	5.39	5.10	2.92	6.01	5.13	2.97	6.21	5.58	2.99	6.62	5.59	3.02	6.82	6.04	3.03	7.23	6.02	3.06	7.64	6.41	3.09				

■ MODEL : AB*A36L

AFR		31.7																							
Outdoor temperature	°CDB	Indoor temperature																							
		18			21			23			25			27			29			32					
		°CWB 12			15			16			18			19			21			23					
°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
-15	8.73	6.97	1.32	9.72	7.02	1.34	10.05	7.63	1.35	10.72	7.65	1.36	11.05	8.26	1.37	11.71	8.23	1.39	12.37	8.77	1.40				
-10	8.49	6.76	1.71	9.46	6.80	1.74	9.78	7.39	1.75	10.43	7.41	1.77	10.75	8.01	1.78	11.40	7.97	1.79	12.04	8.49	1.81				
0	8.15	6.72	2.20	9.08	6.76	2.24	9.39	7.35	2.25	10.01	7.37	2.27	10.31	7.96	2.28	10.93	7.93	2.31	11.55	8.45	2.33				
5	8.04	6.54	2.24	8.95	6.58	2.28	9.26	7.16	2.29	9.87	7.18	2.31	10.17	7.75	2.33	10.78	7.72	2.35	11.39	8.23	2.37				
10	8.01	6.65	2.26	8.92	6.69	2.30	9.22	7.28	2.31	9.83	7.30	2.33	10.13	7.88	2.35	10.74	7.85	2.37	11.35	8.37	2.39				
15	8.43	6.70	2.47	9.39	6.74	2.50	9.71	7.33	2.52	10.35	7.35	2.54	10.67	7.94	2.56	11.31	7.90	2.58	11.95	8.42	2.61				
20	9.82	7.34	3.00	10.94	7.38	3.05	11.31	8.03	3.06	12.06	8.05	3.10	12.43	8.69	3.11	13.18	8.66	3.14	13.92	9.23	3.17				
25	9.38	7.13	3.34	10.45	7.18	3.39	10.80	7.80	3.41	11.52	7.83	3.44	11.87	8.45	3.46	12.59	8.42	3.49	13.30	8.97	3.53				
30	9.20	7.05	4.06	10.25	7.09	4.13	10.60	7.71	4.15	11.30	7.74	4.19	11.65	8.36	4.21	12.35	8.32	4.25	13.05	8.86	4.30				
35	8.85	7.03	4.05	9.86	7.08	4.11	10.19	7.69	4.13	10.86	7.72	4.17	11.20	8.33	4.19	11.87	8.30	4.24	12.54	8.84	4.28				
40	6.61	5.89	3.07	7.37	5.93	3.12	7.62	6.44	3.14	8.12	6.46	3.17	8.37	6.98	3.18	8.87	6.95	3.22	9.38	7.41	3.25				
46	5.95	5.91	2.95	6.62	5.94	2.99	6.85	6.46	3.01	7.30	6.48	3.04	7.53	7.00	3.05	7.98	6.97	3.09	8.43	7.42	3.12				

AFR : Air flow rate (m³/min)
 TC : Total capacity (kW)
 SHC : Sensible Heat capacity (kW)
 PI : Power Input (kW)

6-2. HEATING CAPACITY

This table is created using the maximum capacity.

■ MODEL : AB*A30L

AFR	27.7
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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	8.22	3.38	8.02	3.45	7.83	3.52	7.63	3.59	7.44	3.67
	-10	-11	8.79	3.39	8.58	3.46	8.37	3.53	8.16	3.60	7.95	3.67
	-5	-7	9.54	3.40	9.31	3.47	9.08	3.54	8.86	3.61	8.63	3.69
	0	-2	10.11	3.41	9.87	3.48	9.63	3.55	9.39	3.62	9.15	3.69
	5	3	11.22	3.37	10.96	3.44	10.69	3.51	10.42	3.58	10.16	3.65
	7	6	11.76	3.34	11.48	3.41	11.20	3.48	10.92	3.55	10.64	3.62
	10	8	12.12	3.27	11.83	3.34	11.54	3.40	11.25	3.47	10.97	3.54
	15	10	10.86	2.56	10.60	2.61	10.34	2.67	10.08	2.72	9.82	2.76
	20	15	10.85	2.26	10.59	2.30	10.33	2.35	10.07	2.40	9.81	2.43
24	18	11.31	2.27	11.04	2.31	10.77	2.36	10.50	2.41	10.23	2.45	

■ MODEL : AB*A36L

AFR	31.7
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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	9.17	3.97	8.95	4.05	8.73	4.13	8.51	4.22	8.29	4.30
	-10	-11	9.88	4.02	9.65	4.10	9.41	4.19	9.18	4.27	8.94	4.35
	-5	-7	10.56	4.04	10.31	4.12	10.06	4.21	9.81	4.29	9.56	4.38
	0	-2	11.81	4.06	11.53	4.15	11.25	4.23	10.97	4.32	10.69	4.40
	5	3	12.95	3.97	12.64	4.05	12.33	4.14	12.02	4.22	11.72	4.30
	7	6	13.34	3.46	13.02	3.53	12.70	3.61	12.38	3.68	12.07	3.75
	10	8	13.75	3.34	13.42	3.41	13.09	3.47	12.77	3.54	12.44	3.61
	15	10	12.18	2.59	11.89	2.65	11.60	2.70	11.31	2.76	11.02	2.80
	20	15	12.17	2.28	11.88	2.33	11.59	2.38	11.30	2.43	11.01	2.46
24	18	12.71	2.26	12.41	2.31	12.10	2.36	11.80	2.40	11.50	2.44	

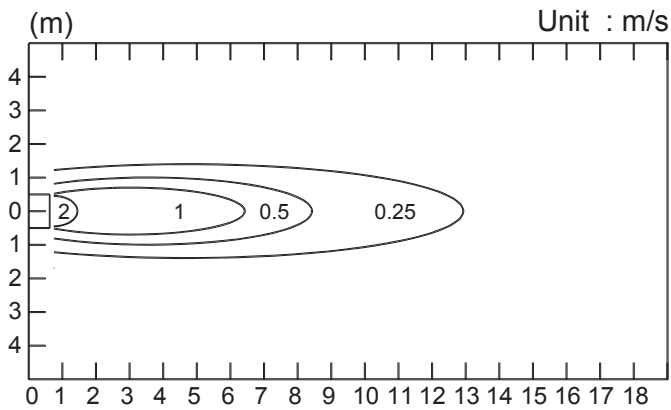
AFR : Air flow rate (m³/min)
 TC : Total capacity (kW)
 PI : Power Input (kW)

7. FAN PERFORMANCE AND AIR FLOW

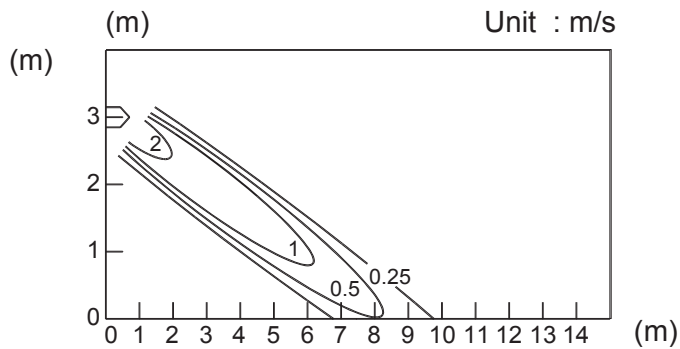
7-1. AIR VELOCITY DISTRIBUTION

MODEL : AB*A30L

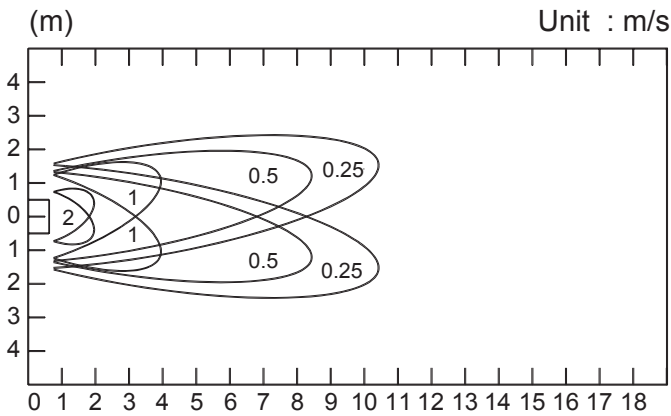
Note :
Condition
Fan speed : High
Operation mode : FAN



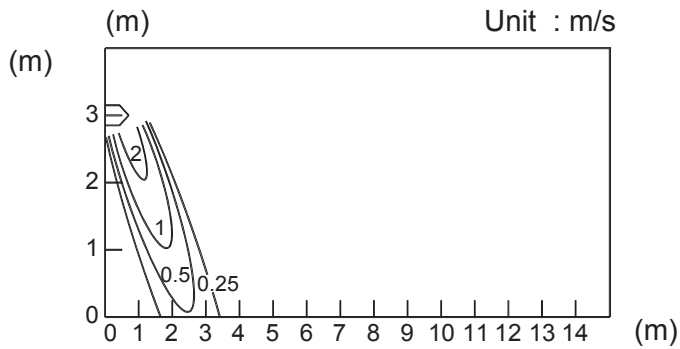
TOP VIEW
VERTICAL : UPWARD
HORIZONTAL : CENTER



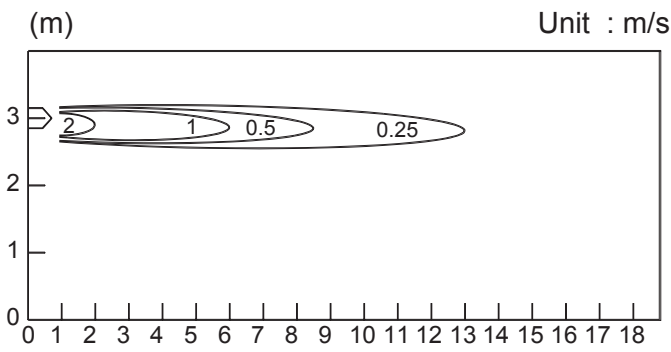
SIDE VIEW
VERTICAL : CENTER
HORIZONTAL : CENTER



TOP VIEW
VERTICAL : UPWARD
HORIZONTAL : RIGHT AND LEFT



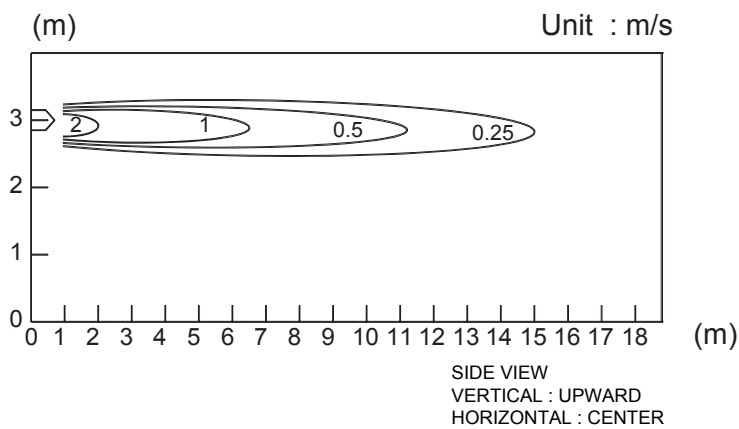
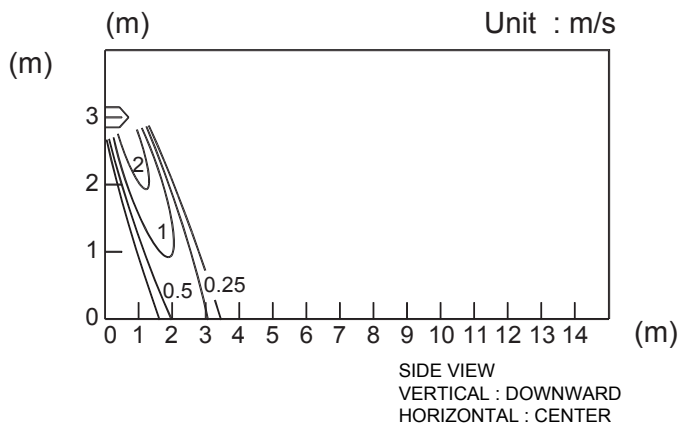
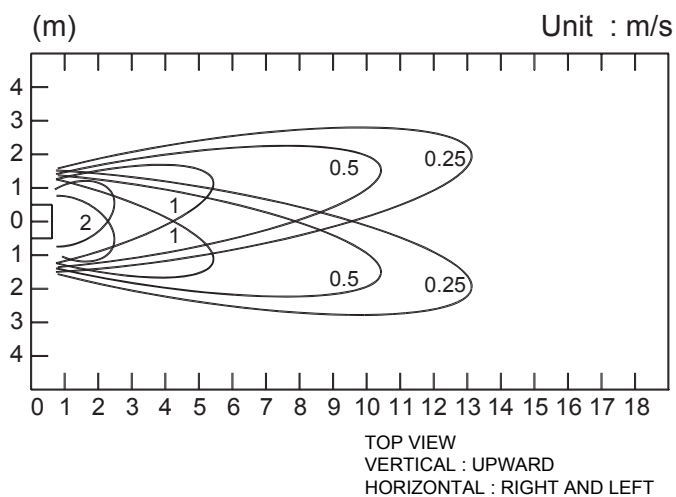
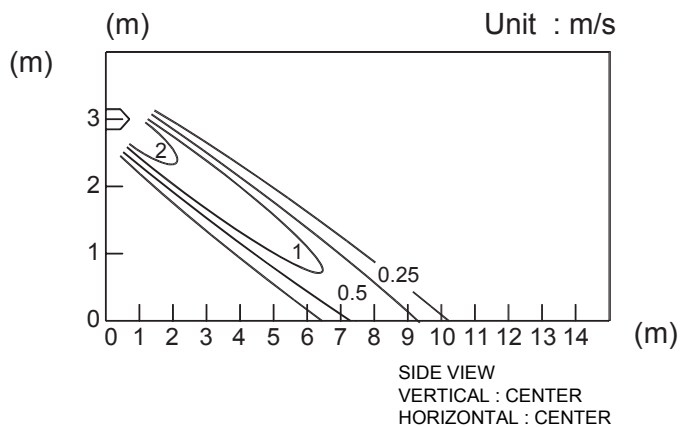
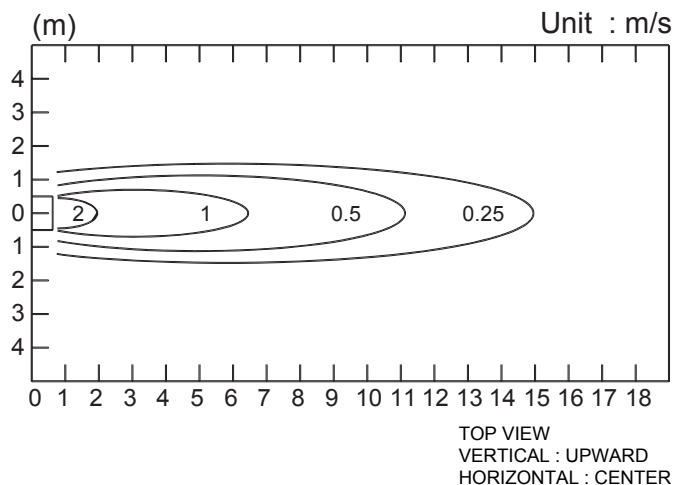
SIDE VIEW
VERTICAL : DOWNWARD
HORIZONTAL : CENTER



SIDE VIEW
VERTICAL : UPWARD
HORIZONTAL : CENTER

MODEL : AB*A36L

Note :
Condition
Fan speed : High
Operation mode :FAN



7-2. AIR FLOW

■ MODEL : AB*A30L

● COOLING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1000	m ³ /h	1660
		l/s	461
		CFM	977
MED	910	m ³ /h	1500
		l/s	417
		CFM	883
LOW	750	m ³ /h	1200
		l/s	333
		CFM	706
QUIET	650	m ³ /h	1000
		l/s	278
		CFM	589

● HEATING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1000	m ³ /h	1660
		l/s	461
		CFM	977
MED	910	m ³ /h	1500
		l/s	417
		CFM	883
LOW	750	m ³ /h	1200
		l/s	333
		CFM	706
QUIET	650	m ³ /h	1000
		l/s	278
		CFM	589

■ **MODEL : AB*A36L**

● **COOLING**

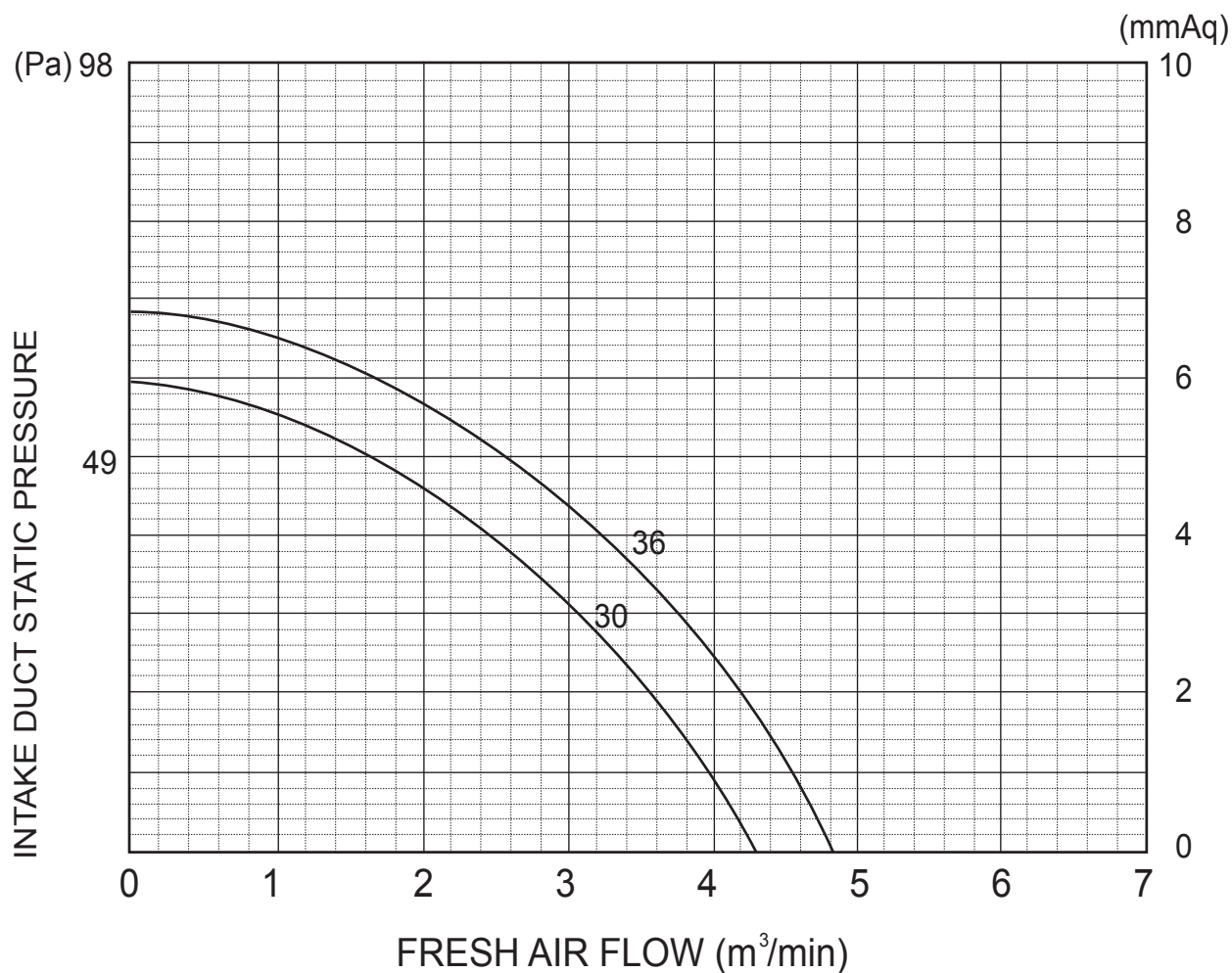
Fan speed	Number of rotations (r.p.m)	Airflow	
		m ³ /h	l/s
HIGH	1100	1900	528
		1118	
		CFM	
MED	910	1500	417
		883	
		CFM	
LOW	750	1200	333
		706	
		CFM	
QUIET	650	1000	278
		589	
		CFM	

● **HEATING**

Fan speed	Number of rotations (r.p.m)	Airflow	
		m ³ /h	l/s
HIGH	1100	1900	528
		1118	
		CFM	
MED	910	1500	417
		883	
		CFM	
LOW	750	1200	333
		706	
		CFM	
QUIET	650	1000	278
		589	
		CFM	

7-3. FRESH AIR CHARACTERISTIC

■ FRESH AIR CHARACTERISTIC

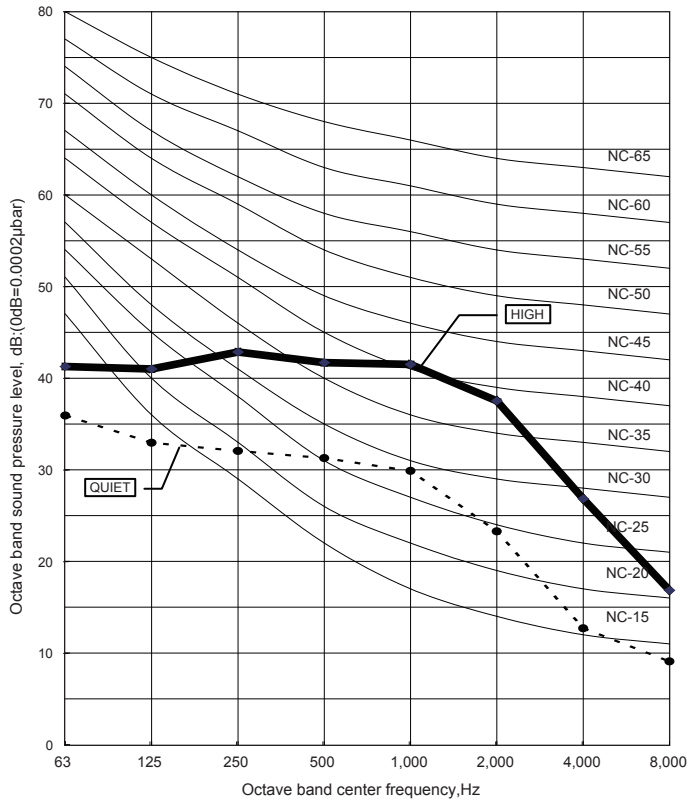


8. OPERATION NOISE

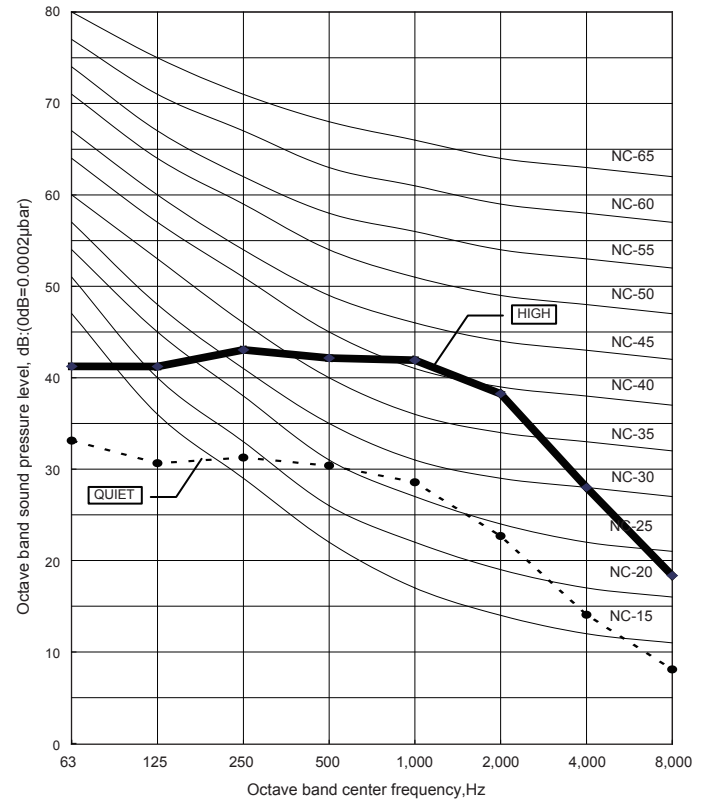
8-1. NOISE LEVEL CURVE

MODEL : AB * A30L

● COOLING

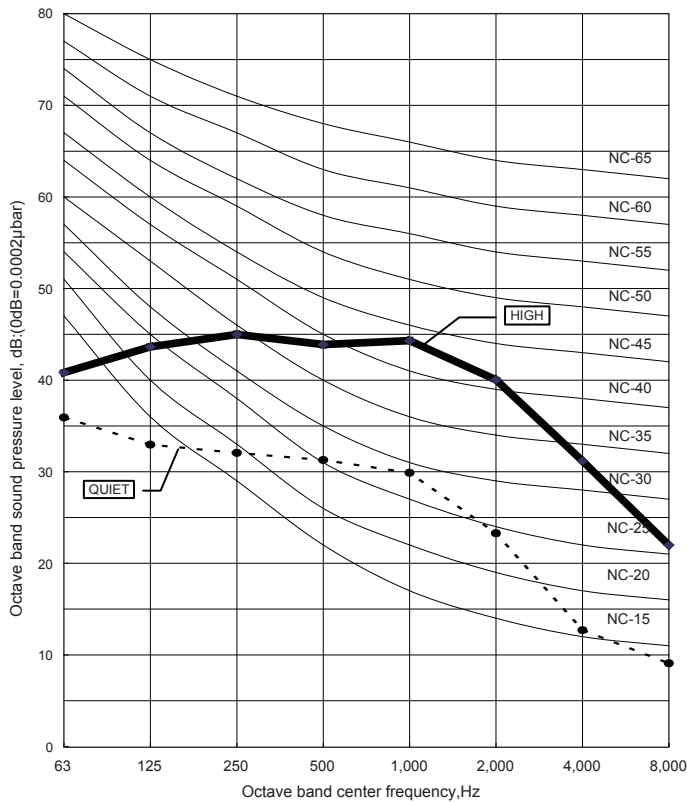


● HEATING

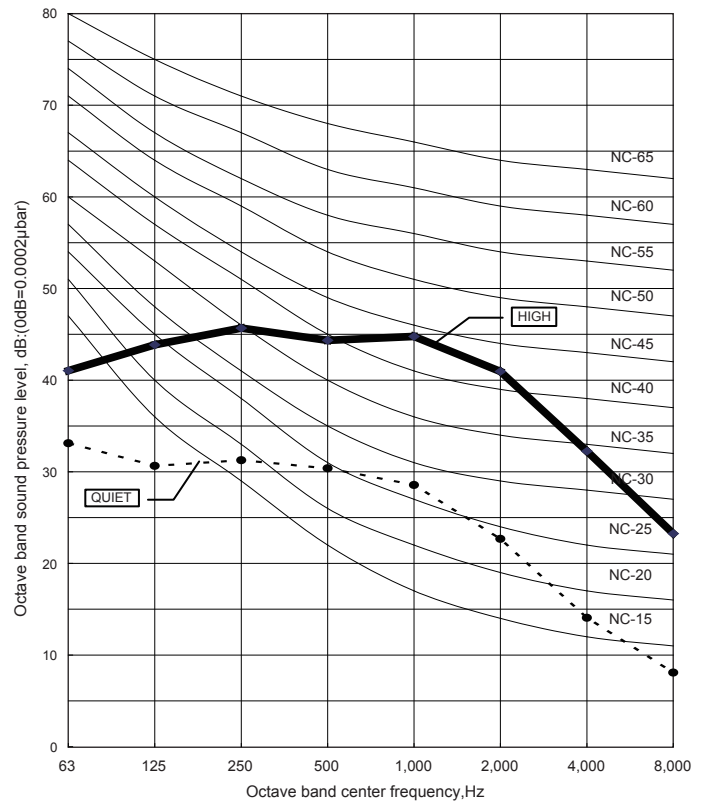


MODEL : AB * A36L

● COOLING

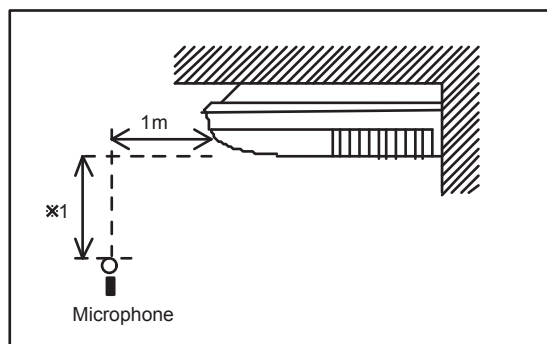


● HEATING

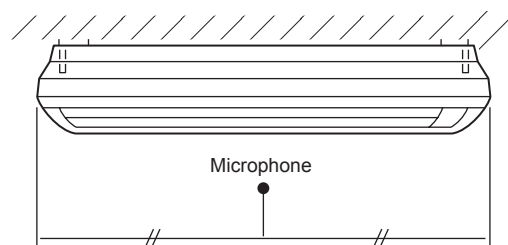


8-2. SOUND LEVEL CHECK POINT

● UNDER CEILING



※1 0.8m (For AB12 ~AB24)
1.0m (For AB30 ~AB54)



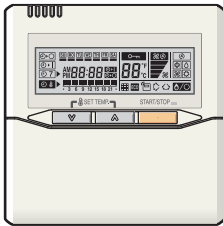
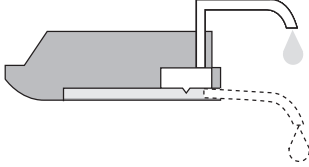
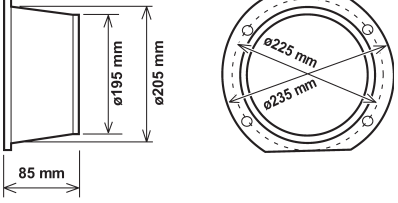
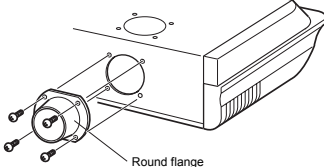
9. ELECTRIC CHARACTERISTICS

Model name			AB * A30L	AB * A36L
Power supply	Voltage	V	230~	
	Frequency	Hz	50	
Max. operating current		A	0.7	
Wiring spec.	Connection cable	mm ²	1.5 - 2.5	
	Limited wiring length	m	51	

10. SAFETY DEVICES

	Protection form	Model	
		AB * A30L	AB * A36L
Circuit protection	Current fuse (PCB)	3.15A 250V	
Fan motor protection	Thermal protection program	140±20°C OFF 110±20°C ON	

11. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTB- *UD	Unit control is performed by wired remote controller
	Drain water riser kit	UTR-DPB241	Optional drain lift-up mechanism allows more flexible installation.
	Round flange	UTD-RF204	Round flange is used when the fresh air duct is installed. 

OUTDOOR UNIT

2. SINGLE TYPE :

AO * A30LBTL

AO * A36LBTL

1. SPECIFICATIONS

Type			INVERTER HEATPUMP			
Model name			AO * A30LBTL	AO * A36LBTL		
Power source			230V~ 50Hz			
Available voltage range			198-264V ~ 50Hz			
Starting current		A	15.0	15.0		
Fan	Airflow rate	Cooling	3600	4000		
		Heating	3800	3800		
	Type × Q'ty		Propeller × 1			
	Motor output		W	103	103	
Sound pressure level		Cooling	dB(A)	53	54	
		Heating		55	55	
Heat exchanger type		Dimensions (H × W × D)	mm	798 × 900 × 36.4	798 × 900 × 36.4	
		Fin pitch		1.30	1.30	
		Rows × Stages		2 × 38	2 × 38	
		Pipe type		Copper		
		Fin type		Aluminium		
Compressor		Type × Q'ty		Twin Rotary × 1		
		Motor output	W	1700		
Refrigerant		Type		R410A		
		Charge	g	2100		
Refrigerant oil		Type		PVE		
Enclosure		Material		Steel sheet		
		Colour		Beige (10YR7.5/1.0NN)		
Dimensions (H × W × D)		Net		830 × 900 × 330		
		Gross		970 × 1050 × 445		
Weight		Net		62 (136)		
		Gross		70 (154)		
Connection pipe		Size	Liquid	φ 9.52 (φ 3/8 in.)		
			Gas	φ 15.88 (φ 5/8 in.)		
		Method		Flare		
		Max. length		m	50(chargeless:20)	50(chargeless:20)
		Max. height difference			30	30
Operation range		Cooling		-15 to 46		
		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 : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

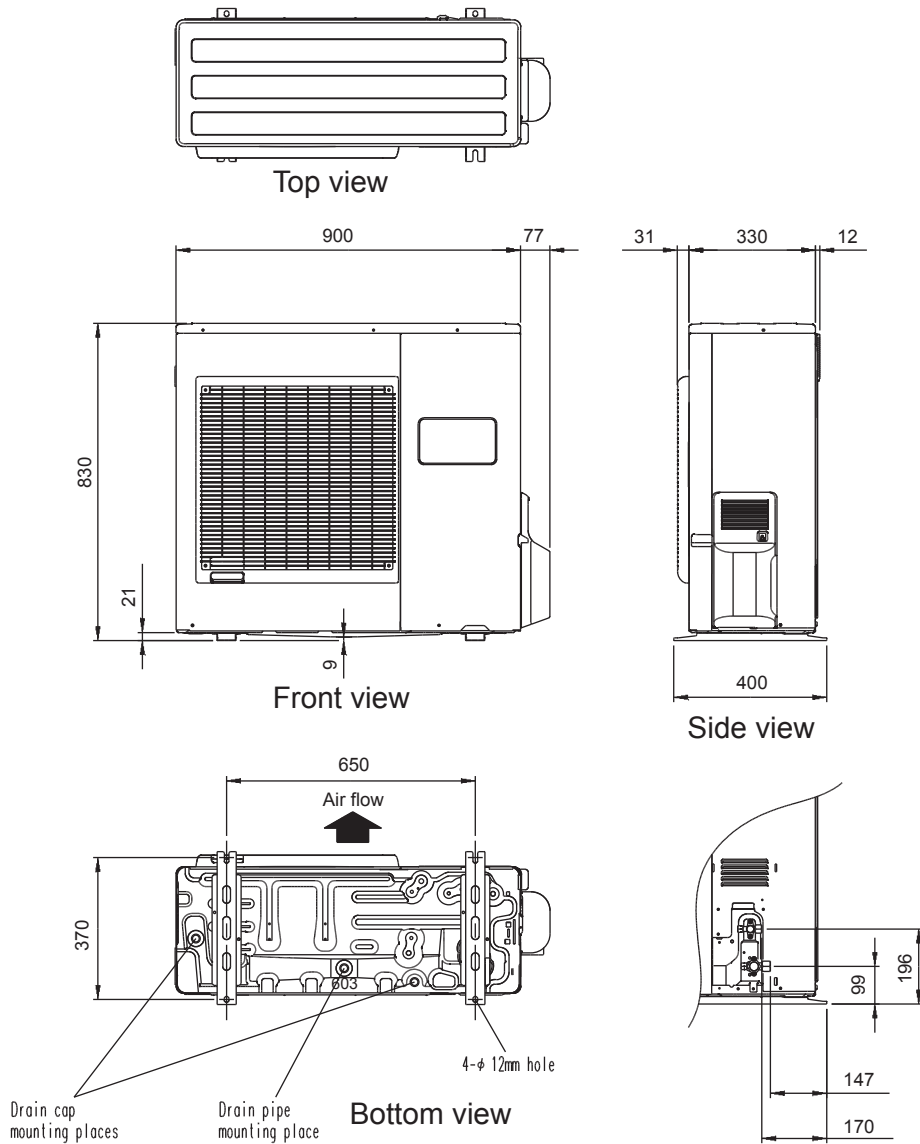
2. DIMENSIONS

■ MODEL : AO*A30L, AO*A36L

(Unit : mm)

OUTDOOR UNIT
AO*A30-36L

OUTDOOR UNIT
AO*A30-36L

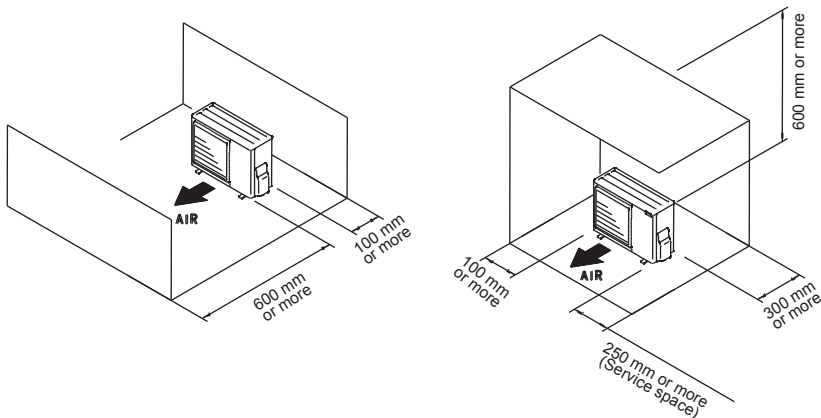


■ MOUNTING POSITION

When there are obstacles at the back or front sides.

When there are obstacles at the back, side(s), and top.

When there are obstacles at the back, side with the installation of more than one unit.

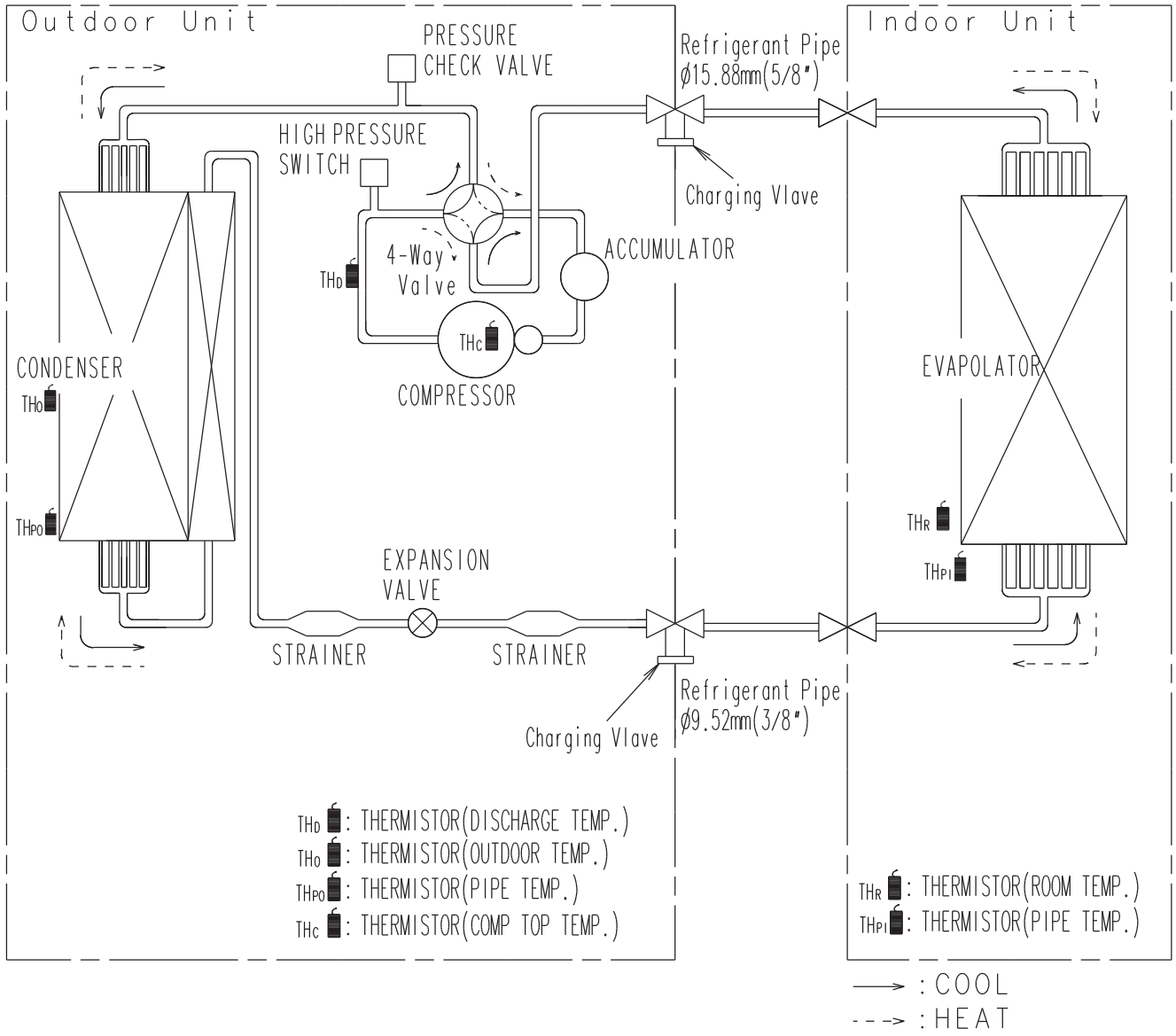


3. REFRIGERANT CIRCUIT

■ MODEL : AO*A30L, AO*A36L

OUTDOOR UNIT
AO*A30-36L

OUTDOOR UNIT
AO*A30-36L

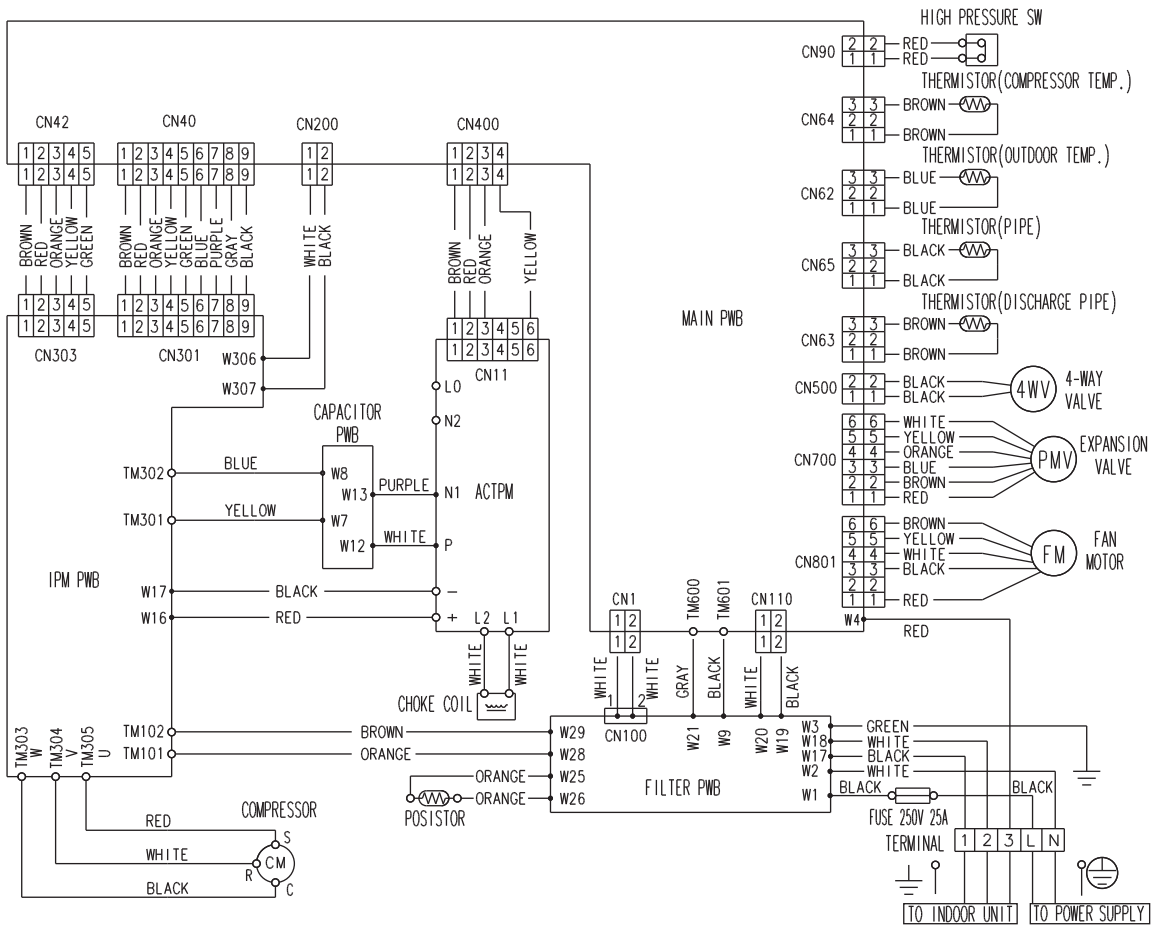


4. WIRING DIAGRAMS

■ MODEL : AO*A30L, AO*A36L

OUTDOOR UNIT
AO*A30-36L

OUTDOOR UNIT
AO*A30-36L



5. COEFFICIENT OF COMPENSATION FOR PIPE LENGTH AND HEIGHT DIFFERENCE

This table is created using the maximum capacity.

■ MODEL : AO*A30L

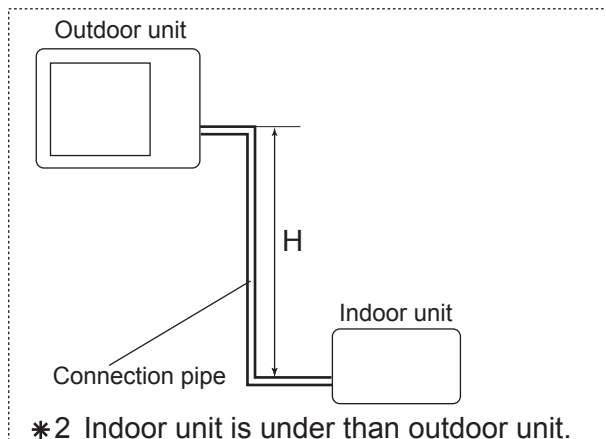
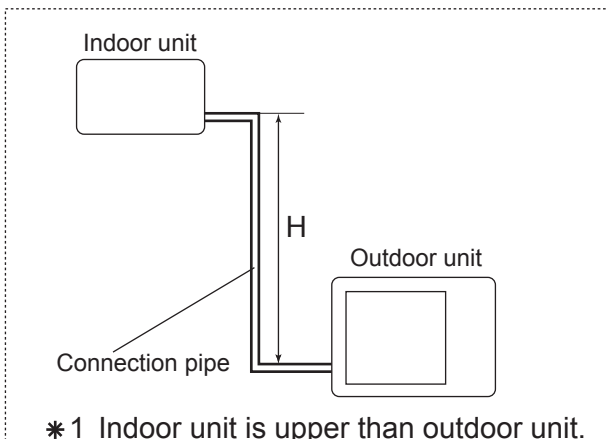
OUTDOOR UNIT
AO*A30-36L

OUTDOOR UNIT
AO*A30-36L

COOLING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	* 1 Indoor unit is upper than outdoor unit	30	-	-	-	-	0.908	0.894	0.876
		20	-	-	-	0.935	0.923	0.909	0.891
		10	-	-	0.968	0.951	0.938	0.924	0.906
		7.5	-	0.982	0.972	0.954	0.942	0.928	0.909
		5	0.992	0.986	0.976	0.958	0.946	0.932	0.913
	0	1.000	0.994	0.983	0.966	0.954	0.939	0.920	
	* 2 Indoor unit is under than outdoor unit.	-5	1.000	0.994	0.983	0.966	0.954	0.939	0.920
		-7.5	-	0.994	0.983	0.966	0.954	0.939	0.920
		-10	-	-	0.983	0.966	0.954	0.939	0.920
		-20	-	-	-	0.966	0.954	0.939	0.920
-30		-	-	-	-	0.954	0.939	0.920	

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	* 1 Indoor unit is upper than outdoor unit	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	-	0.991	0.990	0.954	0.931	0.914	0.899
		5	1.000	0.991	0.990	0.954	0.931	0.914	0.899
	0	1.000	0.991	0.990	0.954	0.931	0.914	0.899	
	* 2 Indoor unit is under than outdoor unit.	-5	0.995	0.986	0.986	0.949	0.926	0.909	0.895
		-7.5	-	0.983	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	

Height difference H



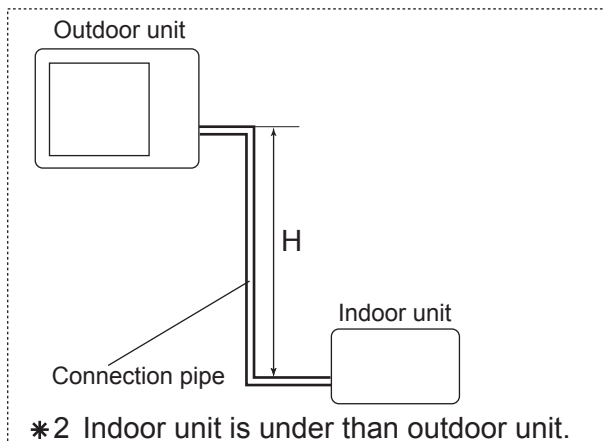
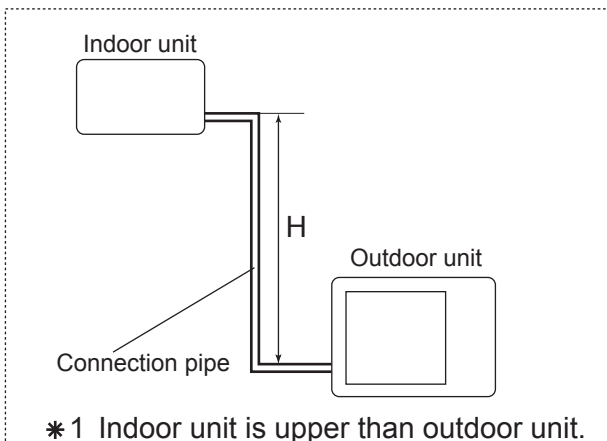
This table is created using the maximum capacity.

■ **MODEL : AO*A36L**

COOLING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	* 1 Indoor unit is upper than outdoor unit	30	-	-	-	-	0.908	0.894	0.876
		20	-	-	-	0.935	0.923	0.909	0.891
		10	-	-	0.968	0.951	0.938	0.924	0.906
		7.5	-	0.982	0.972	0.954	0.942	0.928	0.909
		5	0.992	0.986	0.976	0.958	0.946	0.932	0.913
	0	1.000	0.994	0.983	0.966	0.954	0.939	0.920	
	* 2 Indoor unit is under than outdoor unit.	-5	1.000	0.994	0.983	0.966	0.954	0.939	0.920
		-7.5	-	0.994	0.983	0.966	0.954	0.939	0.920
		-10	-	-	0.983	0.966	0.954	0.939	0.920
		-20	-	-	-	0.966	0.954	0.939	0.920
		-30	-	-	-	-	0.954	0.939	0.920

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	* 1 Indoor unit is upper than outdoor unit	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	-	0.991	0.990	0.954	0.931	0.914	0.899
		5	1.000	0.991	0.990	0.954	0.931	0.914	0.899
	0	1.000	0.991	0.990	0.954	0.931	0.914	0.899	
	* 2 Indoor unit is under than outdoor unit.	-5	0.995	0.986	0.986	0.949	0.926	0.909	0.895
		-7.5	-	0.983	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

Height difference H



6. ADDITIONAL CHARGE CALCULATION

■ MODEL : AO*A30L, AO*A36L

Refrigerant type		R410A
Refrigerant amount	g	2100

● REFRIGERANT CHARGE

Pipe length	m	~ 20	30	40	50	40g/m
Additional charge	g	0 (Chargeless)	+400	+800	+1200	

7. AIR FLOW

■ MODEL : AO*A30L

● COOLING

Number of rotations (r.p.m)	Airflow	
	850	m ³ /h
l/s		1000
CFM		2119

● HEATING

Number of rotations (r.p.m)	Airflow	
	900	m ³ /h
l/s		1056
CFM		2236

■ MODEL : AO*A36L

● COOLING

Number of rotations (r.p.m)	Airflow	
	950	m ³ /h
l/s		1111
CFM		2354

● HEATING

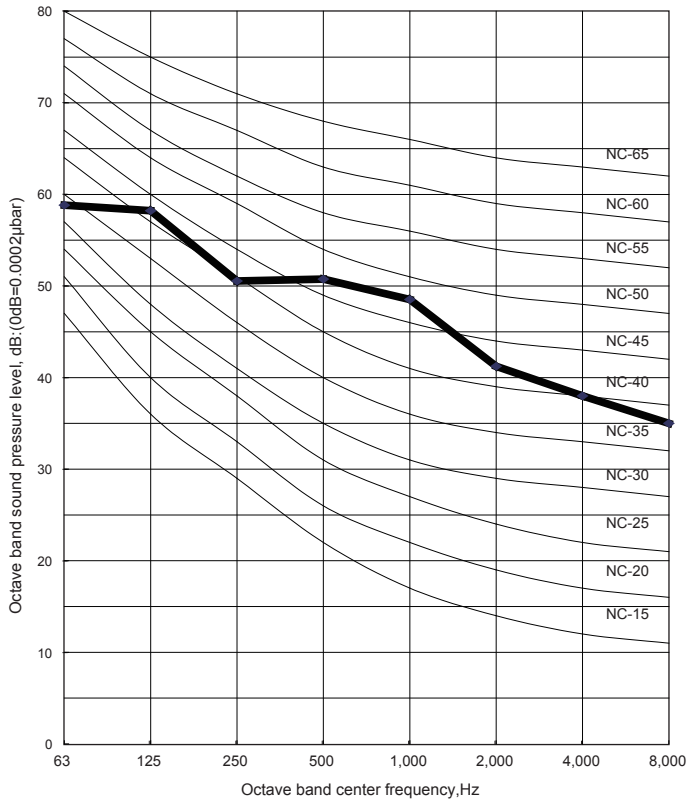
Number of rotations (r.p.m)	Airflow	
	900	m ³ /h
l/s		1056
CFM		2236

8. OPERATION NOISE

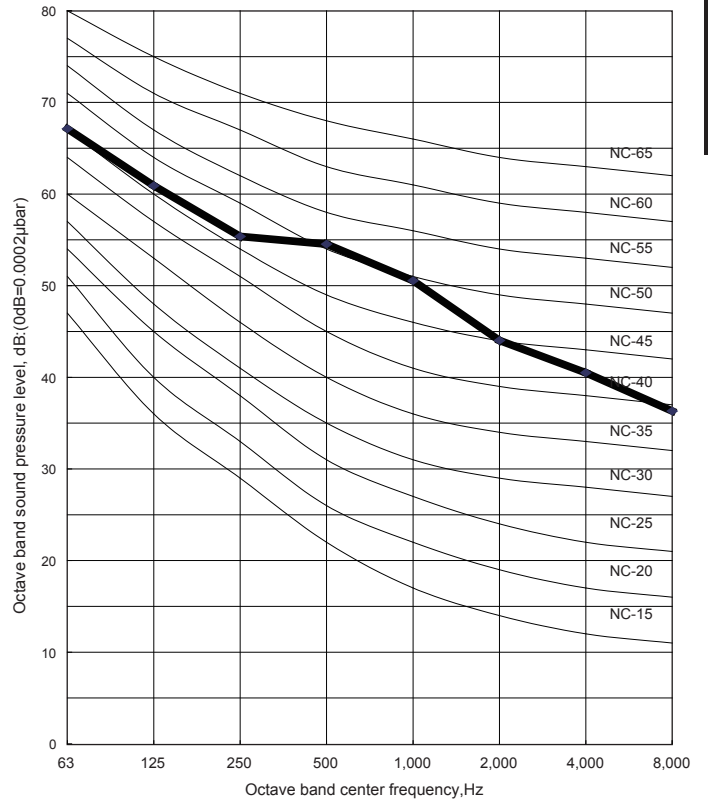
8-1. NOISE LEVEL CURVE

MODEL : AO * A30L

COOLING

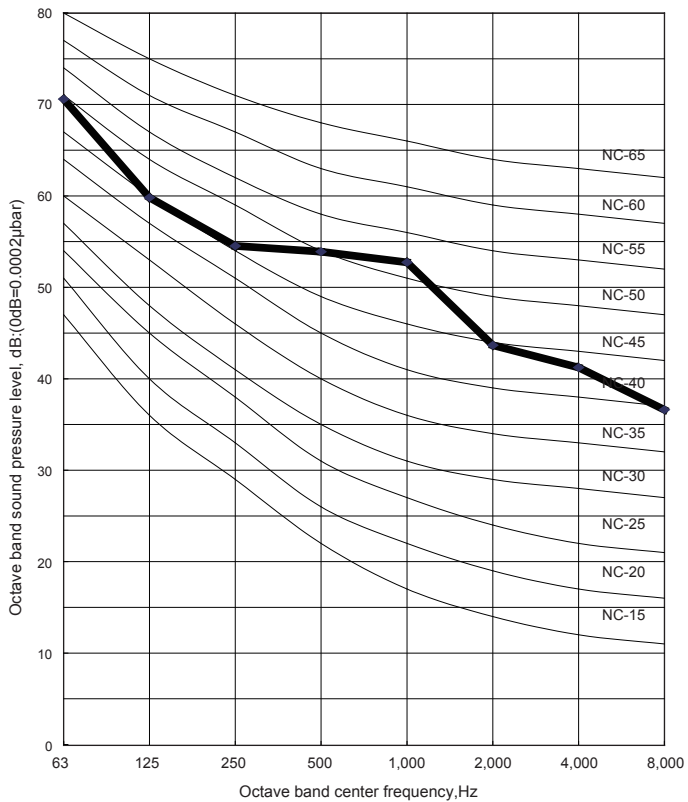


HEATING

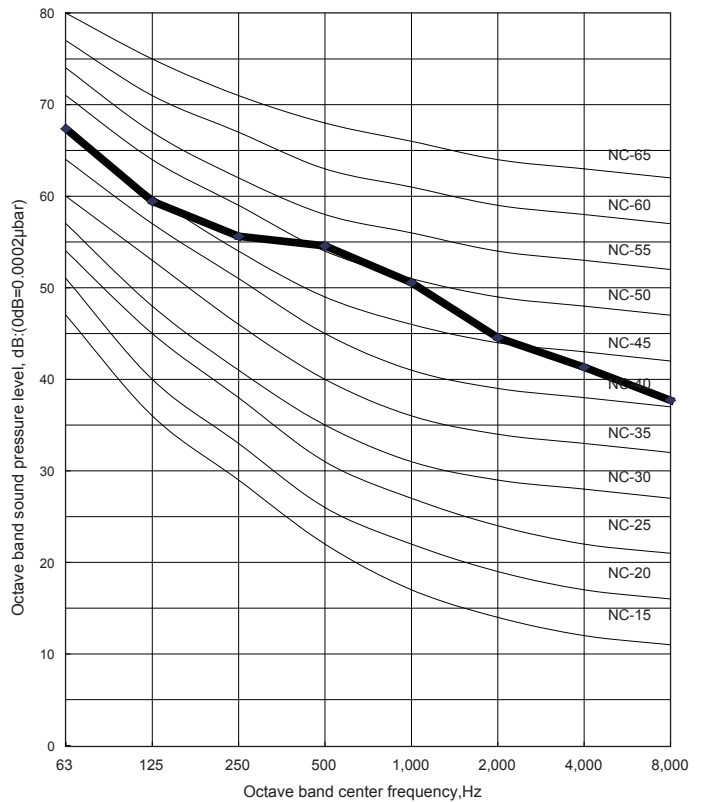


MODEL : AO * A36L

COOLING



HEATING

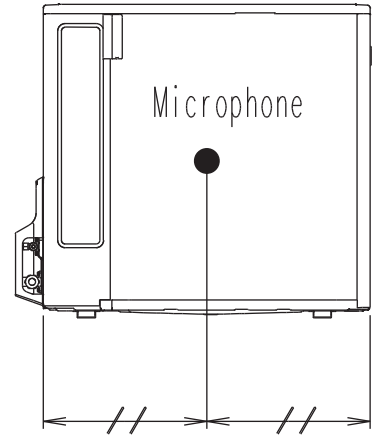
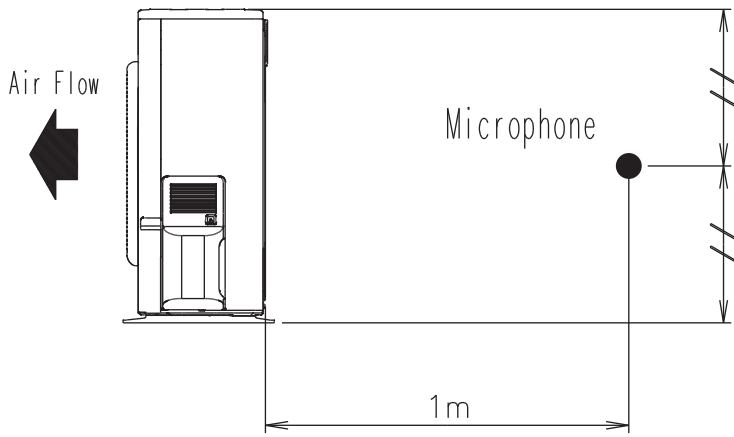


OUTDOOR UNIT
AO*A30-36L

OUTDOOR UNIT
AO*A30-36L

8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AO*A30-36L



OUTDOOR UNIT
AO*A30-36L

9. ELECTRIC CHARACTERISTICS

Model name			AO * A30L	AO * A36L
Power supply	Voltage	V	230 ~	
	Frequency	Hz	50	
Max. operating current		A	17.0	20.0
Starting current		A	15.0	
*1) Wiring spec.	Main fuse (Circuit breaker) current	A	30	
	Power cable	mm ²	4.0	
	*2)Limited wiring length	m	21	18

*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

OUTDOOR UNIT
AO*A30-36L

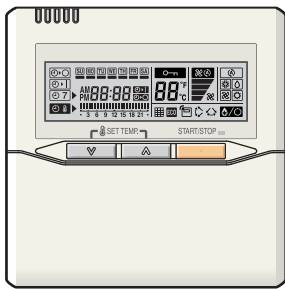
OUTDOOR UNIT
AO*A30-36L

	Protection form	Model	
		AO * A30L	AO * A36L
Circuit protection	Current fuse (NEAR THE TERMINAL)	25A 250V	
	Current fuse (FILTER PRINTED CIRCUIT BOARD)	10A 250V	
	Current fuse (MAIN PRINTED CIRCUIT BOARD)	3.15A 250V	
Fan motor protection	Thermal protection program	OFF : 140±20°C ON : 110±20°C	
High Pressure Protection	Pressure Switch	OFF : 4.2±0.1MPa ON : 3.2±0.15MPa	
Compressor protection	Thermal protection program (COMPRESSOR TEMP.)	OFF : 120°C ON : 80°C	
	Thermal protection program (DISCHARGE TEMP.)	OFF : 110°C ON : After 7 minutes	

REMOTE CONTROLLER

3. WIRED REMOTE CONTROLLER : UTB - *UD

FEATURES



- * Various timer setup (ON / OFF / WEEKLY) are possible.
- * Equipped with weekly timer as standard function. (2 times Start / Stop per day for a week)
- * When setting up a timer, operation mode and a temperature setup can be changed.
- * When a failure occurs, the error code is displayed. (Maximum of 16)
- * Error indication. (A maximum of 16 error histories are memorizable.)
- * Up to 16 indoor units can be simultaneously controlled.
- * Economy operation are possible.
- * Easy installation with a slim shape with no bulge in the back.
- * The room temperature can be controlled by being detected the temperature accurately with built-in thermo sensor.

REMOTE CONTROLLER
UTB-*/UD

REMOTE CONTROLLER
UTB-*/UD

Simple function setting

Setting of the air conditioner selection function is performed by remote controller.

High performance and compact size

Three functions are combined in one unit.



Built-in timers

Weekly timer

Possible to set ON/OFF time to operate twice each day of the week.

Easy-to-understand time bar display

Screen after setup

Setup screen example
(Set to Wednesday: 8:00 to 20:00.)

Setback timer

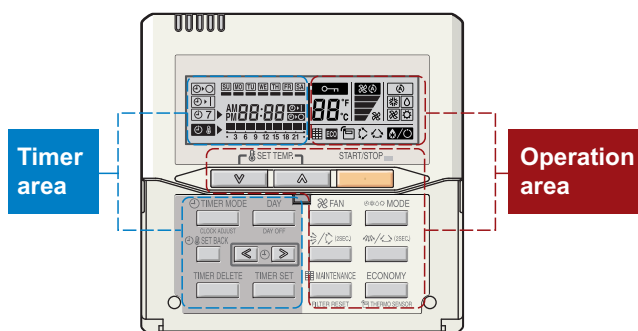
Possible to set temperature for two time spans and for each day of the week.

Setup screen example
(Set from Sunday to Saturday: 12:00 to 15:00, 28 °C.)

At "Weekly timer" + "Set back timer" setup

24°C → 28°C → 24°C

Easy-to-understand operation

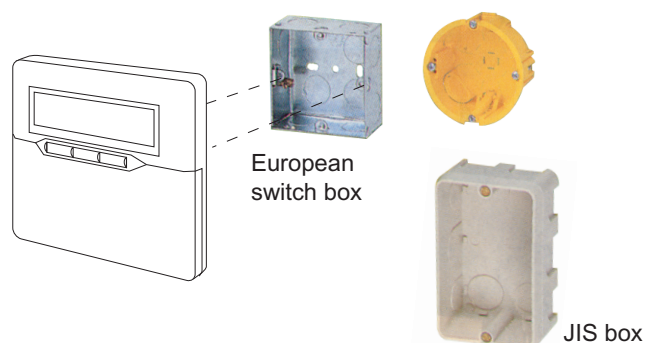


[Variable timer control]

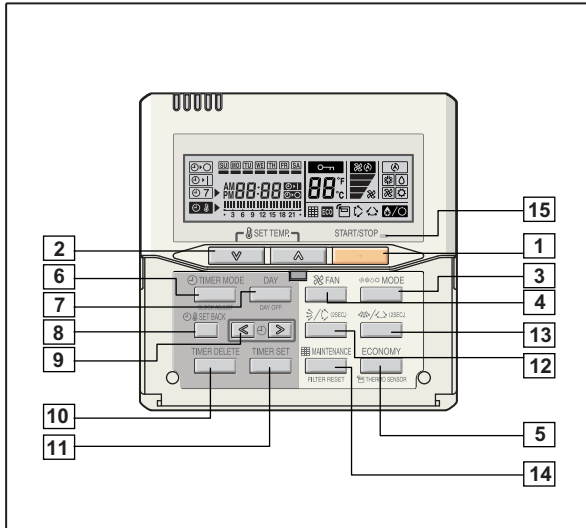
The operation/display sections are zoned according to time and operation, enabling variable programming to match application.

Simple installation

Components are compatible with standard switch boxes. Flat back construction allows equipment to be installed wherever it is needed.

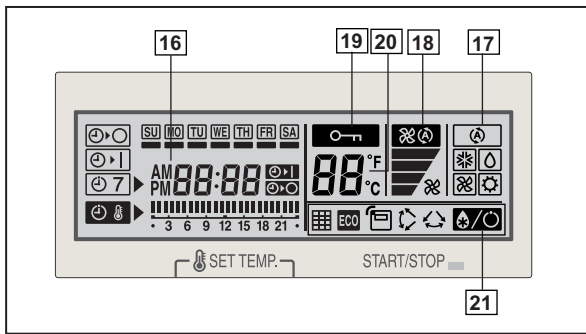


FUNCTIONS



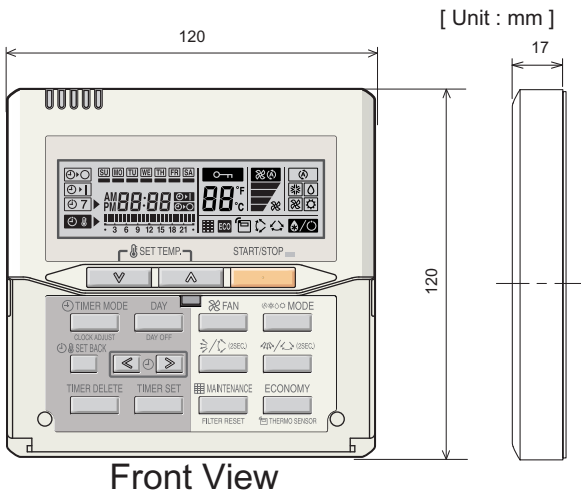
- 1 START/STOP button
Pressed to start and stop operation.
- 2 Set temperature button
Selects the setting temperature.
- 3 Master control button
Selects the operating mode(AUTO, HEAT, FAN, COOL, DRY).
- 4 Fan control button
Selects the fan speed (AUTO, QUIET, LOW, MED, HIGH).
- 5 Economy button
Turns the economy efficient mode on and off.
- 6 Timer mode (CLOCK ADJUST) button
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER)
Set the current time.
- 7 Day (DAY OFF) button
Temporarily cancels of one day timer.
- 8 Set back button
Pressed to select the set back timer.
- 9 Set time button
Pressed to set time.
- 10 Delete button
The schedule of a weekly timer is deleted.
- 11 Set button
Sets the date, hour, minute and on-off time.
- 12 Vertical airflow direction and swing button
Push for two seconds to change the swing mode.
- 13 Horizontal airflow direction and swing button
Push for two seconds to change the swing mode.
- 14 Filter button
- 15 Operation lamp
Lights during operation and when the timer is on.

Display panel



- 16 Timer and clock display
- 17 Operation mode display
- 18 Fan speed display
- 19 Operation lock display
- 20 Temperature display
- 21 Function display
 - Defrost display
 - Thermo sensor display
 - Economy display
 - Vertical swing display
 - Horizontal swing display
 - Filter display

DIMENSION



SPECIFICATION

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