

### **3 . CEILING TYPE :**



**ABU36RSLX**

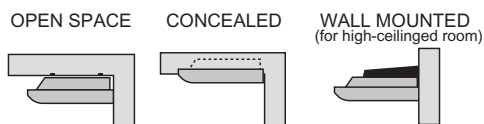
## 3-1. FEATURE

### ■ MODELS : ABU36RSLX / AOU36RLX

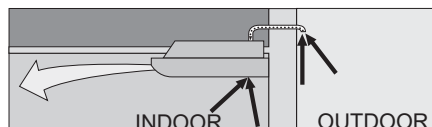


### ■ FEATURES

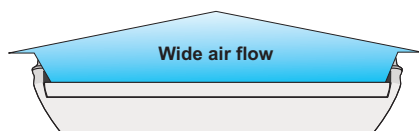
#### ● Installation



#### ● Fresh-air intake

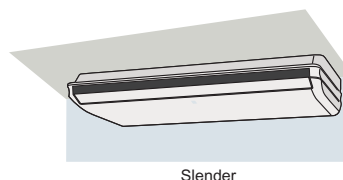


#### ● Wide air flow



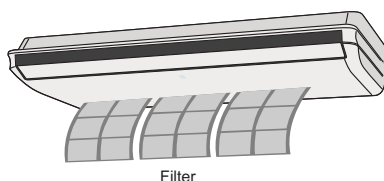
#### ● Slender shape

A slender shape with curves harmonizes perfectly with the room interior.

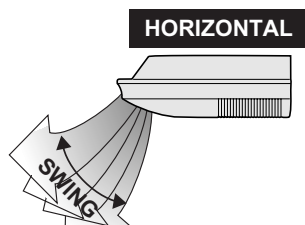
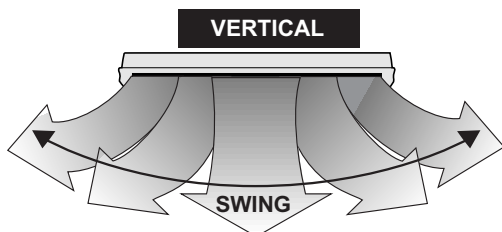


#### ● Long-life filter

High efficiency long-life filter that extends the cleaning cycle up to 2 times that of the current model is standard.



#### ● Double auto swing



#### ● Others

- \* Auto Restart
- \* Detachable and Washable Open Panel

## 3-2. REMOTE CONTROLLER

### 3-2-1. WIRELESS REMOTE CONTROLLER

Wireless remote controller is an accessory of all indoor units.

#### ■ FEATURES



- \* Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.
- \* Four kinds of timers. Easy operation.
- \* Can be used jointly with Wired remote controllers.
- \* Easy to change transmission code (4 patterns) by button operation.

#### ● Built-in timers

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

#### ● Program timer

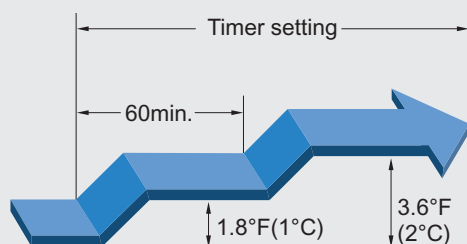
The program timer operates the ON and OFF timer once within a 24 hour period.

#### ● 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.

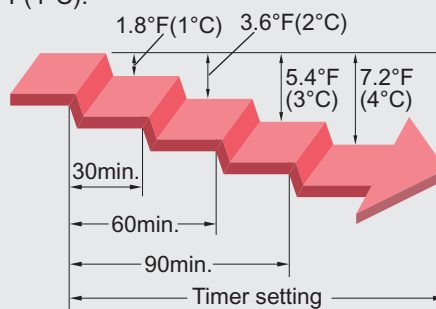
##### Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises  $1.8^{\circ}\text{F}$  ( $1^{\circ}\text{C}$ ) every hour. The set temperature can rise up to a maximum of  $3.6^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ ).

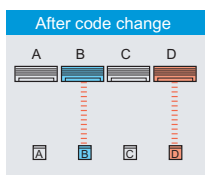
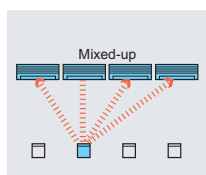


##### Heating operation

When the sleep timer is set, the set temperature automatically drops  $1.8^{\circ}\text{F}$  ( $1^{\circ}\text{C}$ ) every 30 minutes. The set temperature can drop to a maximum of  $7.2^{\circ}\text{F}$  ( $4^{\circ}\text{C}$ ).



#### ● Simple operation

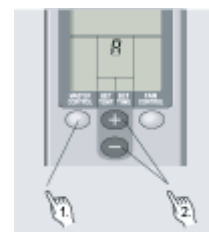


- Code selector switch eliminates unit being wrongly switched. (Up to 4 codes can be set.)

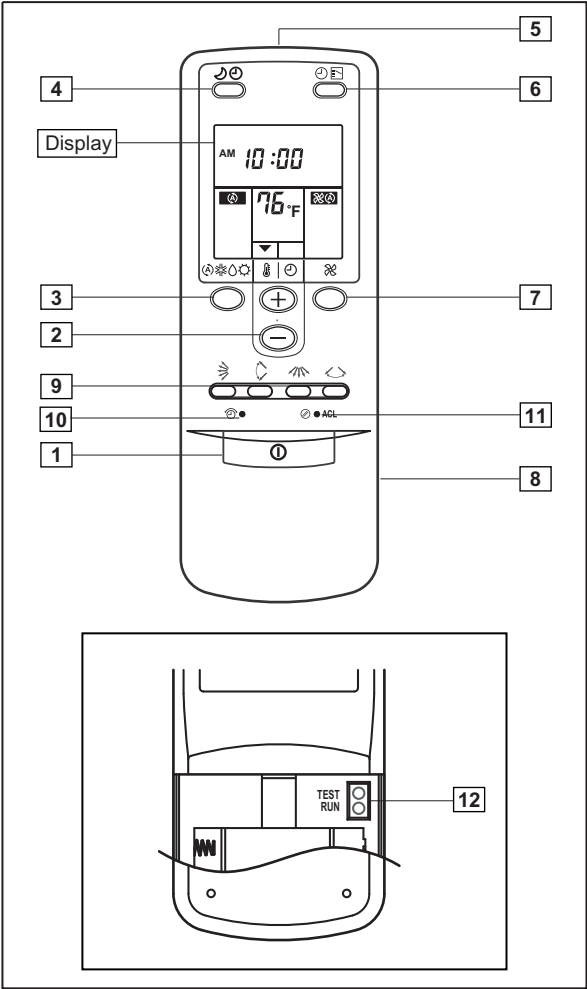


- Wide and precise transmitting range.

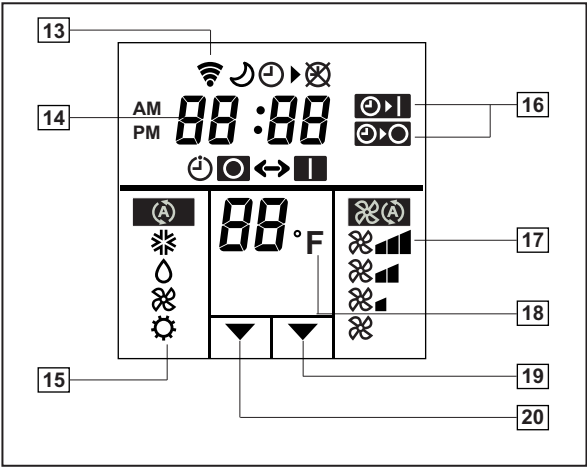
1. Press the MASTER CONTROL button for more than five seconds to start the code change.
2. Press the (+) or (-) button to select the desired code.  
→ A → B → C → D
3. Press the MASTER CONTROL button again to end the code change.



FUNCTIONS



Display panel



SPECIFICATION

SIZE [H x W x D in.(mm)]	6 - 7 / 32 x 2 - 13 / 64 x 25 / 32 (158 x 56 x 20)
WEIGHT oz.( g )	2 - 15 / 32 (70)

- 1 START/STOP button  
Pressed to start and stop operation
- 2 Set temp./Set time buttons/Set remote controller custom code buttons  
Sets the indoor temp./Sets the current time and on-off time /Set R.C. custom code
- 3 Master control button/Code change  
Selects the operating mode (AUTO, HEAT, FAN, COOL, DRY). Start/end R.C. custom code change. (Max. 4 types)
- 4 Sleep timer button  
Pressed to select sleep timer.
- 5 Signal transmitter
- 6 Timer button  
Pressed to select the timer mode. (OFF TIMER, ON TIMER, PROGRAM TIMER, TIMER RESET)
- 7 Fan control button  
Selects the fan speed (AUTO, LOW, MED, HIGH).
- 8 Battery compartment lid
- 9 Air flow direction button  
Used to set the desired air flow direction & swing function.
- 10 Time adjust button  
Sets the current time.
- 11 ACL button  
Used when replacing batteries or change the code.
- 12 Test run button  
Used when testing the air conditioner after installation.
- 13 Transmit indicator
- 14 Clock display
- 15 Master control display
- 16 Timer mode display
- 17 Fan speed display
- 18 Set temperature display
- 19 Timer set indicator
- 20 Temperature set indicator

3-3. SPECIFICATIONS

CEILING TYPE  
ABU36R

TYPE				CEILING MODELS	
				INVERTER HEAT PUMP	
MODEL NAME		INDOOR		ABU36RSLX	
		OUTDOOR		AOU36RLX	
POWER SOURCE				208/230V~ 60Hz	
AVAILABLE VOLTAGE RANGE				187-253V~ 60Hz	
CAPACITY	COOLING	RATED/MAX	kW	10.0/10.5	
			BTU/h	34,100/36,000	
	HEATING	RATED/MAX	kW	10.7/12.5	
			BTU/h	36,500/42,700	
INPUT POWER	COOLING	RATED/MAX	kW	4.22/4.35	
	HEATING	RATED/MAX		3.50/4.35	
CURRENT	COOLING	RATED/MAX	A	18.3/18.8	
	HEATING	RATED/MAX		15.3/18.8	
STARTING CURRENT			A	10	
SEER		COOLING		14.0	
HSPF		HEATING		8.5	
MOISTURE REMOVAL			pints/h(l/h)	7.4(3.5)	
AIR CIRCULATION COOL/HEAT	INDOOR	High	CFM(m³/h)	1089(1850) / 1089(1850)	
		Med		977(1660) / 883(1500)	
		Low		842(1430) / 748(1270)	
		Quiet		-	
	OUTDOOR	High		2119 (3600) / 2237 (3800)	
		Low		-	
FAN SPEED COOL/HEAT	INDOOR	High	r.p.m	1100/1100	
		Med		1000/900	
		Low		850/750	
		Quiet		-	
	OUTDOOR	High		850/900	
		Low		-	
FAN TYPE x Q'ty		INDOOR		SIROCCO × 4	
		OUTDOOR		PROPELLER × 1	
FAN MOTOR OUTPUT		INDOOR	W	160	
		OUTDOOR		100	
NOISE LEVEL (SOUND PRESSURE)	INDOOR	High	dB(A)	48.0/48.0	
		Med		45.0/43.0	
		Low		41.0/39.0	
COOL/HEAT	OUTDOOR			54.0/55.0	
COMPRESSOR	TYPE		DC TWIN ROTARY (INVERTER)		
	OUTPUT		W	1300	
	STARTING METHOD			Inverter	
HEAT EXCHANGER TYPE	INDOOR	Coil		Copper tube	
		Fin		Aluminium	
		Rows x Stages		3 × 12	
		Fin Pitch	FPI	18	
		Coil Dimensions	in.(mm)	9 - 29/32 × 53 - 5/32 × 1 - 9/16 (252 × 1350 × 39.9)	
	OUTDOOR	Coil		Copper tube	
		Fin		Aluminium	
		Rows x Stages	2 × 38		
	Fin Pitch	FPI	20		
	Coil Dimensions	in. (mm)	31 - 13/32 × 35 - 7/16 × 1 - 7/16 (798 × 900 × 36.38)		
CASING COLOR		INDOOR		White (5Y9/0.5NN)	
		OUTDOOR		Beige (10YR7.5/1.0NN)	
DIMENSIONS H × W × D	INDOOR	NET	in.(mm)	9 - 7/16 × 65 - 11/32 × 27 - 9/16 (240 × 1660 × 700)	
	OUTDOOR			32 - 11/16 × 35 - 7/16 × 13 (830 × 900 × 330)	
	INDOOR	GROSS		12 - 17/32 × 70 - 7/8 × 31 - 3/32 (318 × 1800 × 790)	
	OUTDOOR			38 - 3/16 × 41 - 11/32 × 17 - 17/32 (970 × 1050 × 445)	
WEIGHT	INDOOR	NET	lb. (kg)	106(48)	
	OUTDOOR	NET		141(64)	
	INDOOR	GROSS		134(61)	
	OUTDOOR			154(70)	
PIPE	CONNECTION METHOD			FLARE	
	SIZE	LIQUID	in.(mm)	Φ 3/8 (9.52)	
		GAS		Φ 5/8 (15.88)	
	MAX LENGTH		ft. (m)	164 (50) [chargeless:49 (15)]	
MAX HEIGHT		ft. (m)	98 (30)		
REFRIGERANT		TYPE		R410A	
		CHARGE	lb. oz. (g)	4lb. 13 - 19/32 oz. (2200)	
REFRIGERANT OIL		TYPE		POE	
OPERATION(OUTDOOR)		COOLING	°F(°C)	0 to 115 (-18 to 46)	
		HEATING		14 to 75 (-10 to 24)	
REMOTE CONTROLLER TYPE				WIRELESS (Option WIRED)	
DRAIN PIPE	MATERIAL			ABS	
	SIZE		mm (Reference in.)	Outer diameter 25.6 (1) Inner diameter 22.0 (7/8)	

Note : Specifications are based on the following conditions.  
Power source of specifications : 230V  
Cooling : Indoor temperature of 80.6°F(27°C)DB/66.2°F(19°C)WB, and outdoor temperature of 95.0°F(35°C)DB/75.2°F(24°C)WB.  
Heating : Indoor temperature of 68.0°F(20°C)DB/59.0°F(15°C)WB, and outdoor temperature of 44.6°F(7°C)DB/42.8°F(6°C)WB.  
Pipe length : 24ft. 7in.(7.5m),Height difference : 0 ft.(0m) [Outdoor unit - Indoor unit]

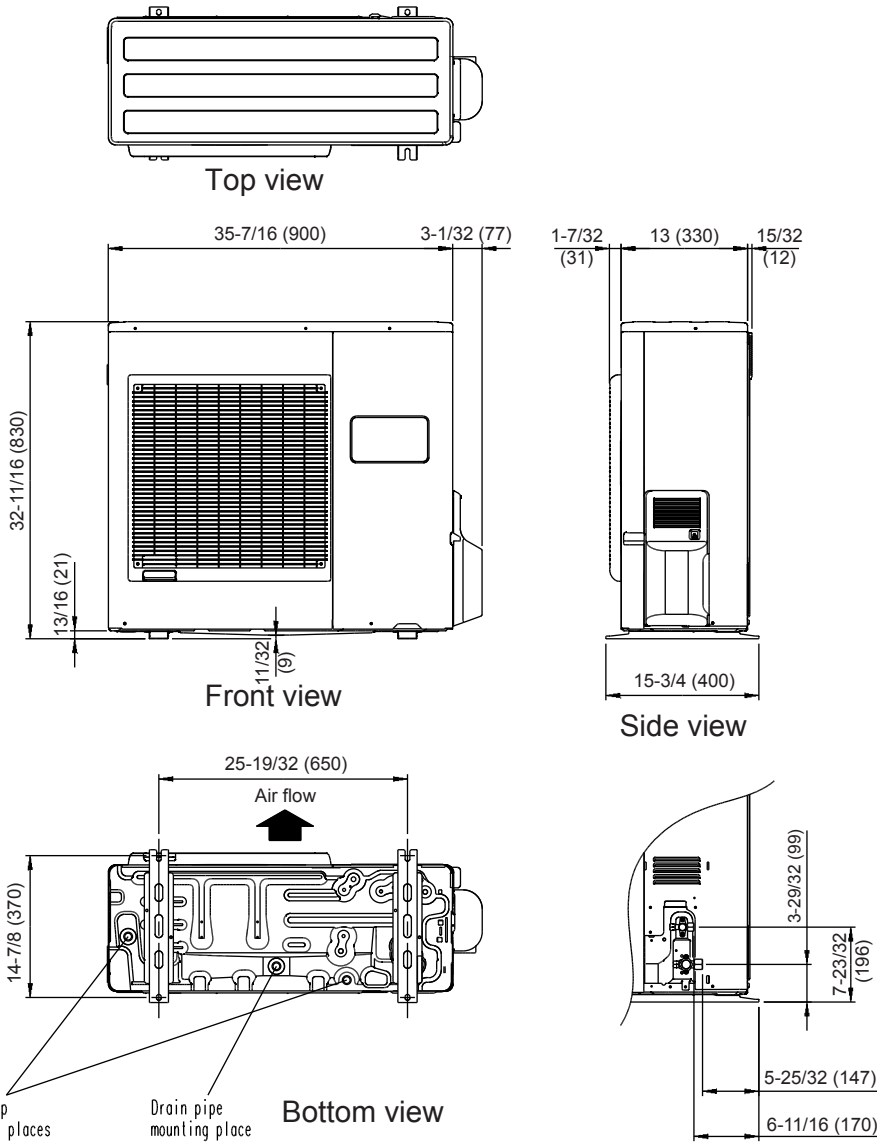
CEILING TYPE  
ABU36R

3-4. DIMENSIONS

3-4-1. OUTDOOR UNIT

■ MODEL : AOU36R

Unit : in.(mm)

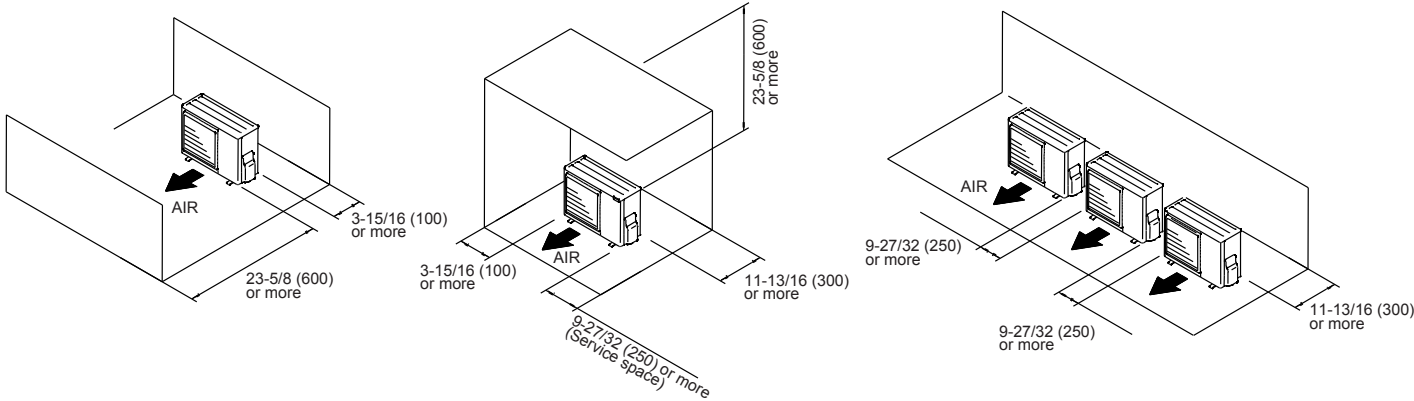


■ MOUNTING POSITION

When there are obstacles at the back or front sides.

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

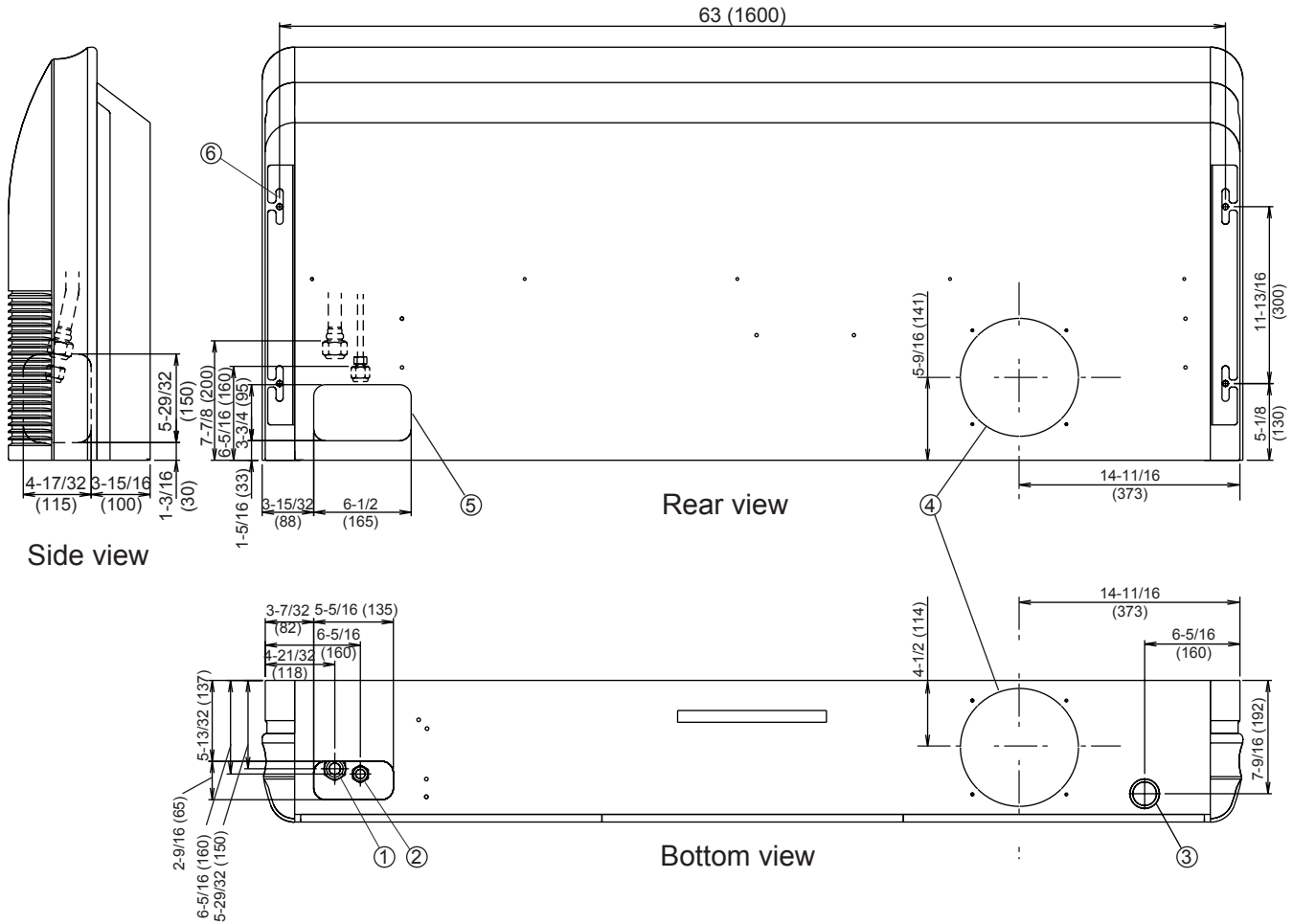
When there are obstacles at the back, side with the installation of more than one unit.



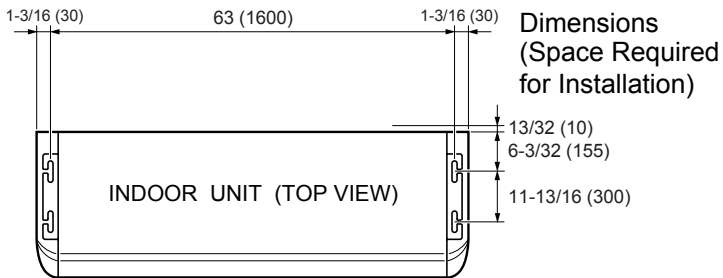
## 3-4-2. INDOOR UNIT

### ■ MODEL : ABU36R

Unit : in.(mm)



#### Suspension bolt pitch



INDOOR UNIT

Suspension bolt should extend outward 1-3/16 (30) to 2-15/16 (75).

- ① Refrigerant piping flare connection (Gas)
- ② Refrigerant piping flare connection (Liquid)
- ③ Drain piping connection [Drain pipe : I.D.  $\phi 22\text{mm}(7/8")$ , O.D.  $\phi 25.6\text{mm}(1")$ ]
- ④ Knock out hole for fresh air [ $\phi 200\text{mm}(7-7/8")$ ],
- ⑤ Knock out hole for refrigerant piping
- ⑥ Hole for lifting bolt (Use M10 screw bolt)

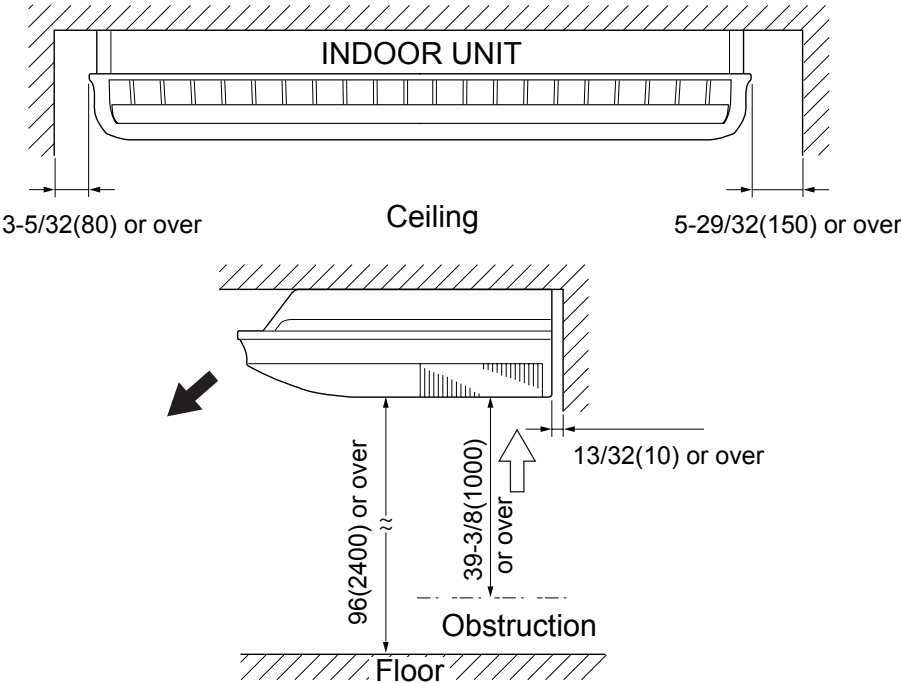
■ MOUNTING POSITION

Unit : in.(mm)

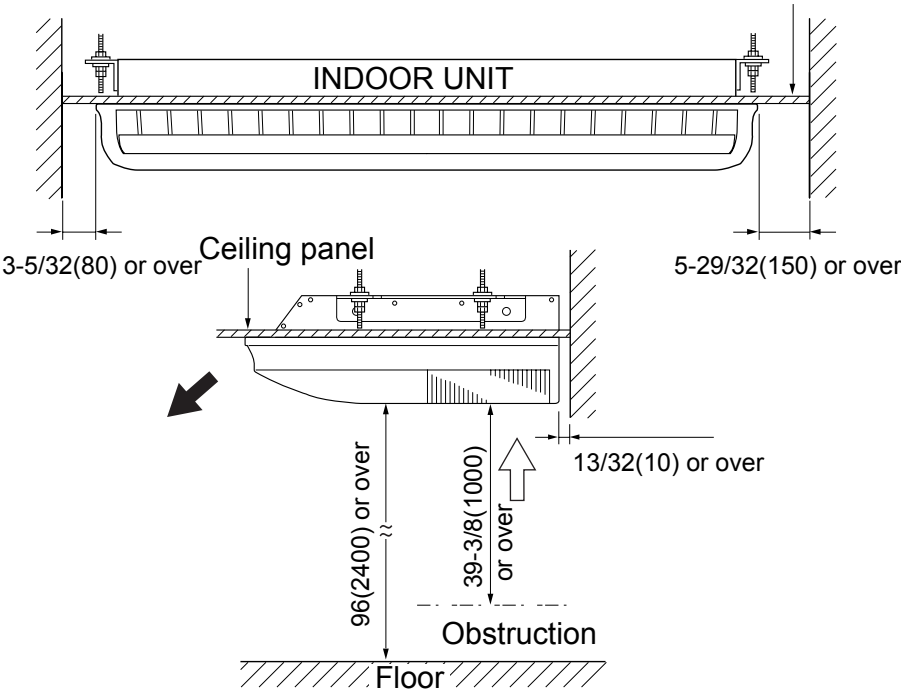
CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

Ceiling



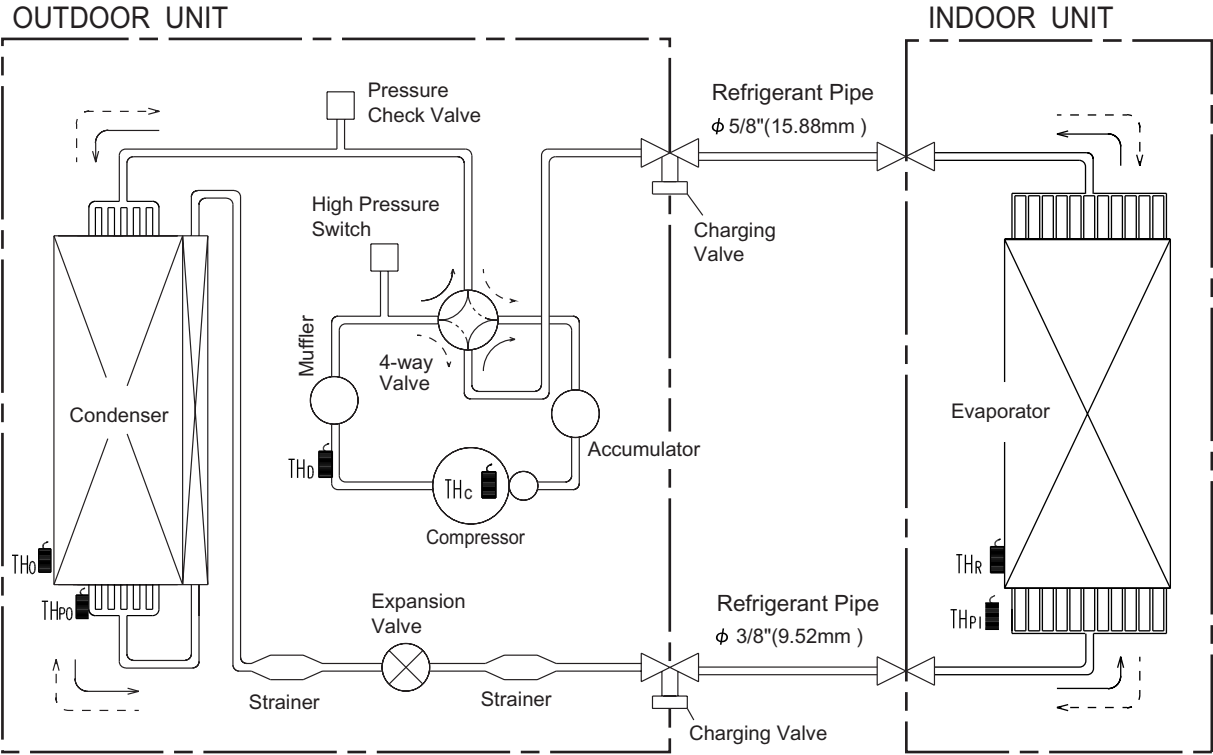
Ceiling panel



3-5. REFRIGERANT CIRCUIT

MODELS : ABU36R / AOU36R

CEILING TYPE  
ABU36R



→ : COOL  
- - -> : HEAT

THd : THERMISTOR (DISCHARGE TEMP.)  
THo : THERMISTOR (OUTDOOR TEMP.)  
THpo : THERMISTOR (PIPE TEMP.)  
THc : THERMISTOR (COMPRESSOR TEMP.)

THr : THERMISTOR (ROOM TEMP.)  
THpi : THERMISTOR (PIPE TEMP.)

CEILING TYPE  
ABU36R

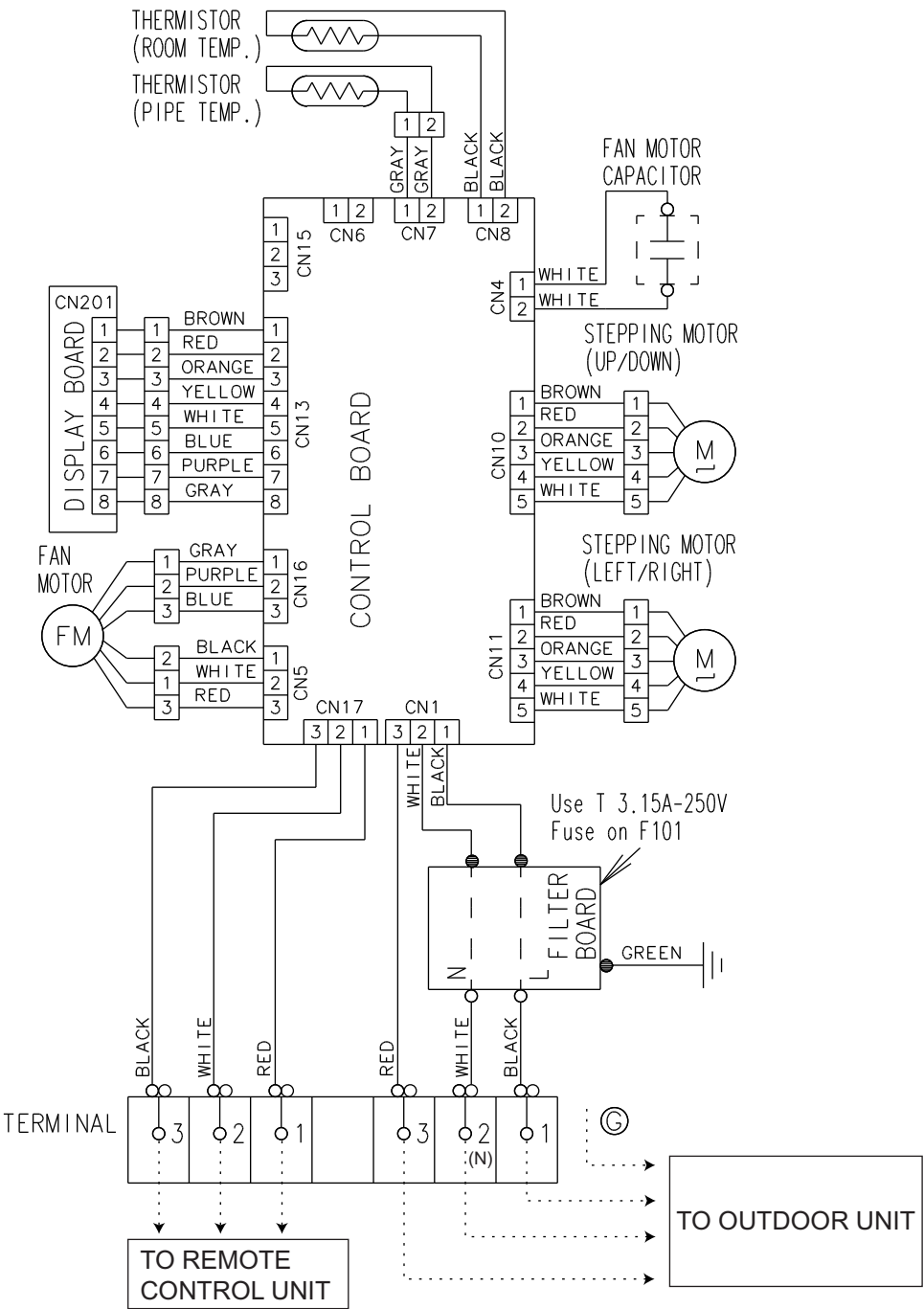
■ MODEL : AOU36R



**CEILING TYPE**  
**ABU36R**

3-6-2. INDOOR UNIT

■MODEL : ABU36R



CEILING TYPE  
ABU36R

3-7. CAPACITY TABLE

■ MODELS : ABU36R / AOU36R

● COOLING

AFR	1089
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		Indoor temperature																	
		64°FDB			70°FDB			75°FDB			80°FDB			85°FDB			90°FDB		
		54°FWB			60°FWB			63°FWB			67°FWB			71°FWB			73°FWB		
Outdoor temperature	(°FDB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	0	26.66	22.76	1.36	30.07	22.90	1.38	31.76	25.09	1.39	34.03	26.25	1.41	36.30	27.11	1.43	37.44	30.05	1.43
	14	26.27	21.69	1.56	29.63	21.82	1.59	31.30	23.91	1.60	33.54	25.01	1.62	35.78	25.83	1.64	36.90	28.63	1.65
	32	24.86	22.24	1.19	28.04	22.38	1.21	29.62	24.52	1.22	31.73	25.65	1.24	33.86	26.49	1.25	34.91	29.36	1.26
	41	26.60	22.53	1.36	30.00	22.67	1.38	31.69	24.84	1.39	33.95	25.99	1.41	36.22	26.84	1.42	37.35	29.75	1.43
	50	28.57	21.27	2.51	32.22	21.40	2.56	34.04	23.45	2.58	36.46	24.53	2.61	38.90	25.34	2.64	40.12	28.08	2.65
	59	30.60	22.17	2.10	34.51	22.31	2.14	36.46	24.44	2.16	39.06	25.57	2.18	41.67	26.41	2.21	42.97	29.27	2.22
	67	28.86	21.40	2.32	32.55	21.53	2.36	34.39	23.59	2.38	36.84	24.68	2.40	39.30	25.49	2.43	40.53	28.26	2.44
	77	30.25	22.03	3.11	34.12	22.16	3.17	36.04	24.28	3.19	38.61	25.40	3.23	41.20	26.24	3.27	42.48	29.08	3.28
	87	27.60	20.84	3.39	31.13	20.97	3.45	32.89	22.97	3.48	35.23	24.04	3.52	37.59	24.82	3.55	38.77	27.51	3.57
	95	28.20	21.05	4.19	31.81	21.18	4.27	33.60	23.20	4.30	36.00	24.27	4.35	38.41	25.07	4.40	39.61	27.79	4.42
	104	22.63	19.04	3.37	25.52	19.15	3.43	26.96	20.98	3.46	28.88	21.95	3.50	30.82	22.67	3.54	31.78	25.13	3.56
	115	15.75	16.10	2.46	17.77	16.20	2.50	18.77	17.75	2.52	20.11	18.57	2.55	21.45	19.18	2.58	22.12	21.26	2.59

AFR : Air flow rate(CFM)      TC : Total capacity (kBTU)      SHC : Sensible Heat capacity (kBTU)      PI : Power Input (kW)

AFR	30.8
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		Indoor temperature																	
		17.78°CDB			21.11°CDB			23.89°CDB			26.67°CDB			29.44°CDB			32.22°CDB		
		12.22°CWB			15.56°CWB			17.72°CWB			19.44°CWB			21.67°CWB			22.78°CWB		
Outdoor temperature	(°CDB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	-17.78	7.81	6.67	1.36	8.81	6.71	1.38	9.30	7.35	1.39	9.97	7.69	1.41	10.63	7.94	1.43	10.96	8.80	1.43
	-10.00	7.70	6.35	1.56	8.68	6.39	1.59	9.17	7.00	1.60	9.82	7.33	1.62	10.48	7.57	1.64	10.81	8.39	1.65
	0.00	7.28	6.51	1.19	8.21	6.55	1.21	8.68	7.18	1.22	9.30	7.51	1.24	9.92	7.76	1.25	10.23	8.60	1.26
	5.00	7.79	6.60	1.36	8.79	6.64	1.38	9.28	7.28	1.39	9.94	7.61	1.41	10.61	7.86	1.42	10.94	8.71	1.43
	10.00	8.37	6.23	2.51	9.44	6.27	2.56	9.97	6.87	2.58	10.68	7.19	2.61	11.39	7.42	2.64	11.75	8.22	2.65
	15.00	8.96	6.49	2.10	10.11	6.53	2.14	10.68	7.16	2.16	11.44	7.49	2.18	12.21	7.74	2.21	12.59	8.57	2.22
	19.44	8.45	6.27	2.32	9.53	6.31	2.36	10.07	6.91	2.38	10.79	7.23	2.40	11.51	7.47	2.43	11.87	8.28	2.44
	25.00	8.86	6.45	3.11	9.99	6.49	3.17	10.56	7.11	3.19	11.31	7.44	3.23	12.07	7.68	3.27	12.44	8.52	3.28
	30.56	8.08	6.10	3.39	9.12	6.14	3.45	9.63	6.73	3.48	10.32	7.04	3.52	11.01	7.27	3.55	11.35	8.06	3.57
	35.00	8.26	6.17	4.19	9.32	6.20	4.27	9.84	6.80	4.30	10.50	7.11	4.35	11.25	7.34	4.40	11.60	8.14	4.42
	40.00	6.63	5.58	3.37	7.48	5.61	3.43	7.90	6.15	3.46	8.46	6.43	3.50	9.03	6.64	3.54	9.31	7.36	3.56
	46.11	4.61	4.72	2.46	5.20	4.75	2.50	5.50	5.20	2.52	5.89	5.44	2.55	6.28	5.62	2.58	6.48	6.23	2.59

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

## ● HEATING

AFR	1089
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			Indoor temperature									
			60°FDB		65°FDB		70°FDB		75°FDB		78°FDB	
Outdoor temperature	(°FDB)	(°FWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	14	12	29.50	3.73	28.55	3.84	27.59	3.95	26.63	4.06	26.05	4.13
	23	19	34.32	3.99	33.21	4.10	32.09	4.22	30.98	4.34	30.31	4.41
	32	28	39.47	4.11	38.19	4.23	36.91	4.35	35.62	4.47	34.85	4.54
	41	37	41.37	4.11	40.03	4.23	38.68	4.35	37.34	4.47	36.53	4.54
	47	43	45.67	4.11	44.19	4.23	42.70	4.35	41.22	4.47	40.33	4.54
	50	47	47.32	4.11	45.79	4.23	44.25	4.35	42.71	4.47	41.79	4.54
	59	50	50.35	4.11	48.72	4.23	47.08	4.35	45.45	4.47	44.46	4.54
	68	59	44.07	3.31	42.64	3.40	41.21	3.50	39.78	3.60	38.92	3.66
	75	65	46.30	3.31	44.80	3.40	43.29	3.50	41.79	3.60	40.88	3.66

AFR : Air flow rate(CFM)      TC : Total capacity (kBTU)      PI : Power Input (kW)

AFR	30.8
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			Indoor temperature									
			15.56°CDB		18.33°CDB		21.11°CDB		23.89°CDB		25.56°CDB	
Outdoor temperature	(°CDB)	(°CWB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	-10.00	-11.11	8.64	3.73	8.36	3.84	8.08	3.95	7.80	4.06	7.63	4.13
	-5.00	-7.22	10.05	3.99	9.73	4.10	9.40	4.22	9.07	4.34	8.88	4.41
	0.00	-2.22	11.56	4.11	11.19	4.23	10.81	4.35	10.43	4.47	10.21	4.54
	5.00	2.78	12.12	4.11	11.72	4.23	11.33	4.35	10.94	4.47	10.70	4.54
	8.33	6.11	13.38	4.11	12.94	4.23	12.50	4.35	12.07	4.47	11.81	4.54
	10.00	8.33	13.86	4.11	13.41	4.23	12.96	4.35	12.51	4.47	12.24	4.54
	15.00	10.00	14.75	4.11	14.27	4.23	13.79	4.35	13.31	4.47	13.02	4.54
	20.00	15.00	12.91	3.31	12.49	3.40	12.07	3.50	11.65	3.60	11.40	3.66
	23.89	18.33	13.56	3.31	13.12	3.40	12.68	3.50	12.24	3.60	11.97	3.66

AFR : Air flow rate(m<sup>3</sup>/min)      TC : Total capacity (kW)      PI : Power Input (kW)

### 3-8. CAPACITY COMPENSATION FOR PIPE LENGTH AND HEIGHT DIFFERENCE

#### ■ MODELS : ABU36R / AOU36R

#### ● COEFFICIENT OF COMPENSATION FOR HEIGHT DIFFERENCE

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

COOLING				PIPE LENGTH						
				5 m	7.5 m	15 m	20 m	30 m	40 m	50 m
				16 ft.	25 ft.	49 ft.	66 ft.	98 ft.	131 ft.	164 ft.
HEIGHT DIFFERENCE	Outdoor unit is bottom-side	30m	98ft.	-	-	-	-	0.960	0.935	0.913
		20m	66ft.	-	-	-	0.983	0.960	0.935	0.913
		10m	33ft.	-	-	0.989	0.983	0.960	0.935	0.913
		7.5m	25ft.	-	1.000	0.989	0.983	0.960	0.935	0.913
		5m	16ft.	1.000	1.000	0.989	0.983	0.960	0.935	0.913
	Outdoor unit is up-side	0m	0 ft.	1.000	1.000	0.989	0.983	0.960	0.935	0.913
		-5m	-16ft.	0.992	0.992	0.981	0.975	0.952	0.928	0.906
		-7.5m	-25ft.	-	0.988	0.977	0.971	0.948	0.924	0.902
		-10m	-33ft.	-	-	0.973	0.967	0.945	0.920	0.898
		-20m	-66ft.	-	-	-	0.952	0.929	0.905	0.884
		-30m	-98ft.	-	-	-	-	0.914	0.890	0.869

HEATING				PIPE LENGTH						
				5 m	7.5 m	15 m	20 m	30 m	40 m	50 m
				16 ft.	25 ft.	49 ft.	66 ft.	98 ft.	131 ft.	164 ft.
HEIGHT DIFFERENCE	Outdoor unit is bottom-side	30m	98ft.	-	-	-	-	0.906	0.885	0.872
		20m	66ft.	-	-	-	0.938	0.915	0.894	0.881
		10m	33ft.	-	-	0.959	0.947	0.925	0.903	0.890
		7.5m	25ft.	-	0.993	0.962	0.950	0.927	0.905	0.892
		5m	16ft.	0.995	0.995	0.964	0.952	0.929	0.907	0.895
	Outdoor unit is up-side	0m	0 ft.	1.000	1.000	0.969	0.957	0.934	0.912	0.899
		-5m	-16ft.	1.000	1.000	0.969	0.957	0.934	0.912	0.899
		-7.5m	-25ft.	-	1.000	0.969	0.957	0.934	0.912	0.899
		-10m	-33ft.	-	-	0.969	0.957	0.934	0.912	0.899
		-20m	-66ft.	-	-	-	0.957	0.934	0.912	0.899
		-30m	-98ft.	-	-	-	-	0.934	0.912	0.899

### 3-9. ADDITIONAL CHARGE CALCULATION

■ MODELS : ABU36R / AOU36R

REFRIGERANT TYPE		R410A
REFRIGERANT AMOUNT	lb. oz. (g)	4 lb. 13-19/32 oz. (2200)

● REFRIGERANT CHARGE

PIPE LENGTH	ft.	~ 49	66	98	131	164 (MAX)	1-13/32oz./ft. 40g/m
	m	~ 15	20	30	40	50 (MAX)	
ADDITIONAL CHARGE	lb. oz.	0 (Charge less)	7-1/16oz.	1 lb. 5-5/32oz.	2 lb. 3-9/32 oz.	3 lb. 1-3/8 oz.	
	g	0 (Charge less)	200	600	1000	1400	

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

3-10. OPERATION RANGE

Model		Mode	Operation Range		
Indoor unit	Outdoor unit		Indoor temperature	Indoor humidity	Outdoor temperature
ABU36R	AOU36R	Cooling Dry	64 to 88°F (18 to 31°C)	About 80% or less	0 to 115°F (-18 to 46°C)
		Heating	60 to 86°F (16 to 31°C)	-	14 to 75°F (-10 to 24°C)

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

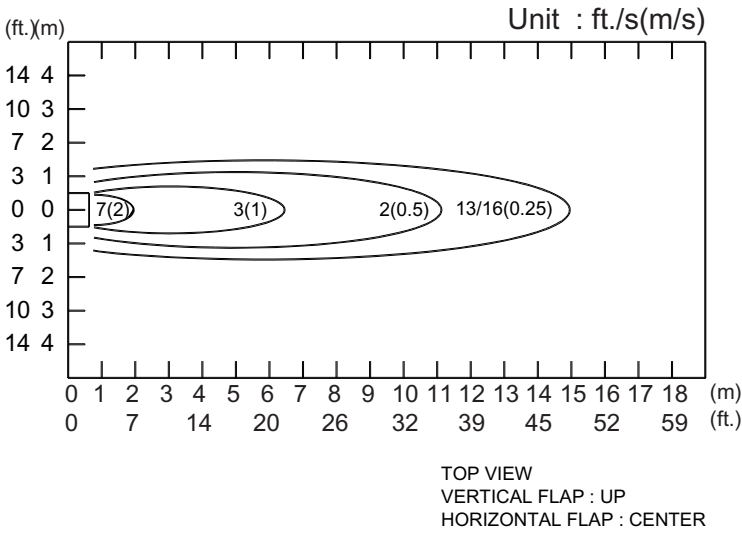
# 3-11. FAN PERFORMANCE AND AIR FLOW

## 3-11-1. AIR VELOCITY DISTRIBUTION

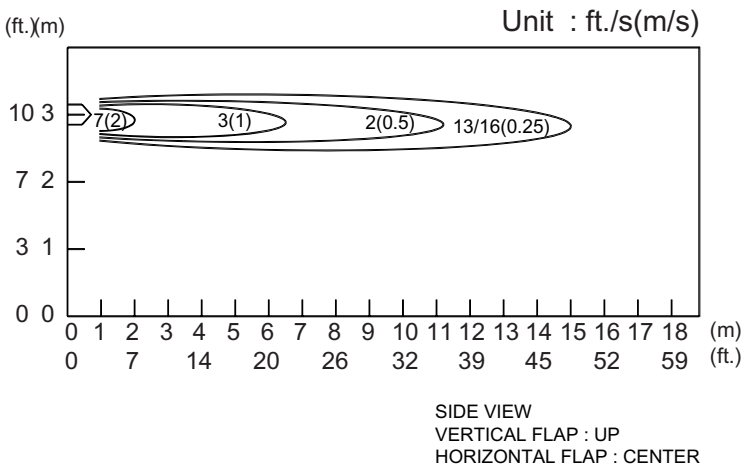
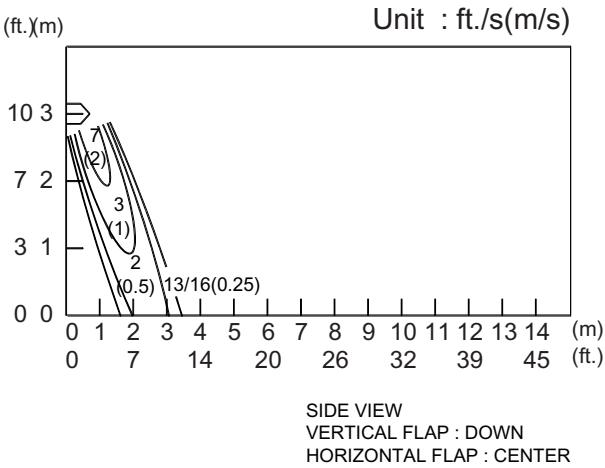
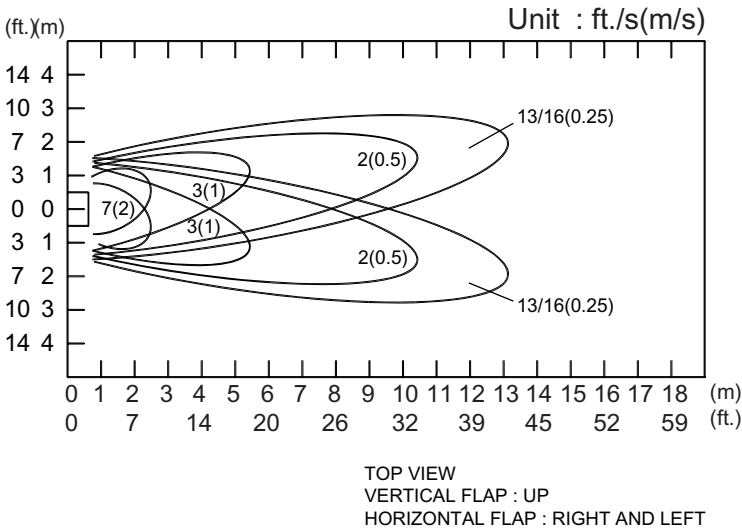
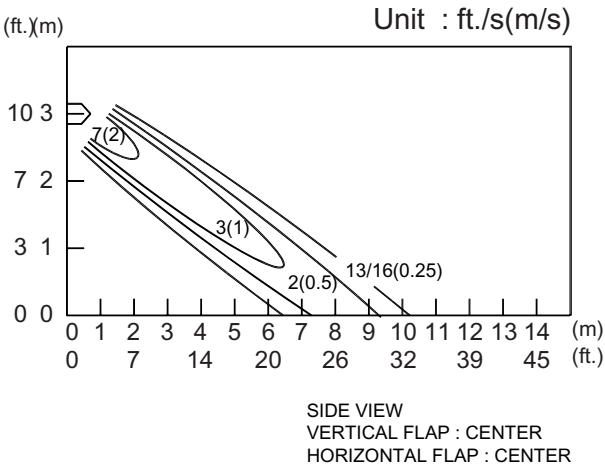
### ■ MODEL : ABU36R

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R



Note :  
Condition  
Fan speed : High  
Operation mode :FAN



### 3-11-2. AIR FLOW

■ MODELS : ABU36R / AOU36R

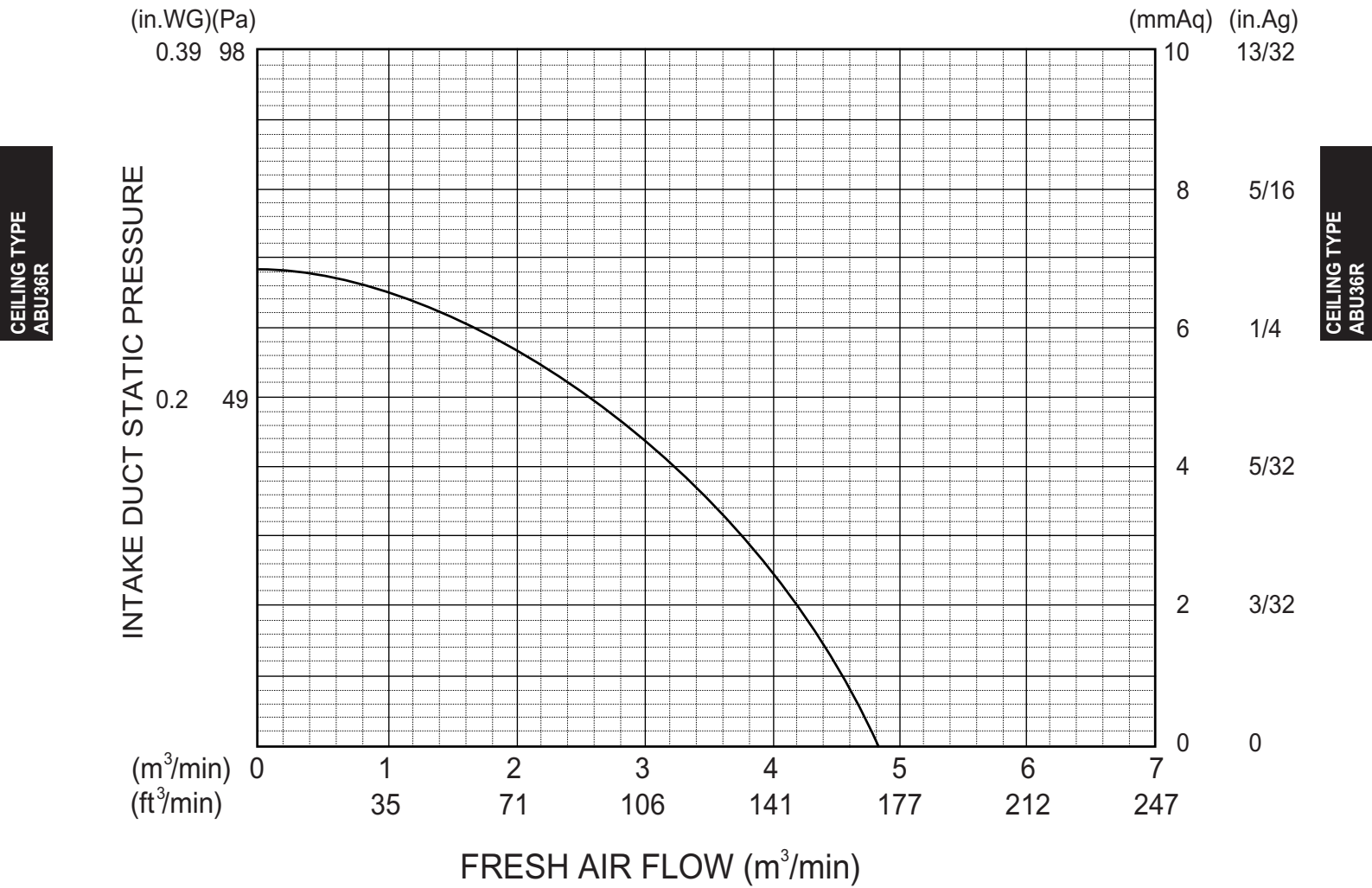
	FAN SPEED	NUMBER OF ROTATIONS (r.p.m)	AIR FLOW	
Indoor unit	HIGH	1100	m <sup>3</sup> /h	1850
			l/s	514
			CFM	1089
	MED	1000	m <sup>3</sup> /h	1660
			l/s	461
			CFM	977
	LOW	850	m <sup>3</sup> /h	1430
			l/s	397
			CFM	842
Outdoor unit	HIGH	850	m <sup>3</sup> /h	3600
			l/s	1000
			CFM	2119

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

3-11-3. FRESH AIR

■ FRESH AIR CHARACTERISTIC

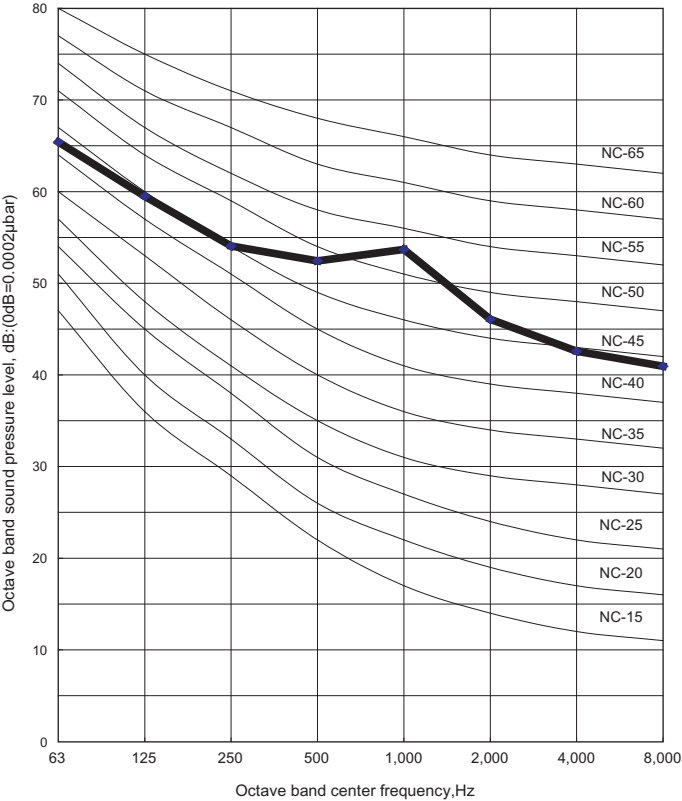


# 3-12. NOISE LEVEL CURVE

## 3-12-1. OUTDOOR UNIT

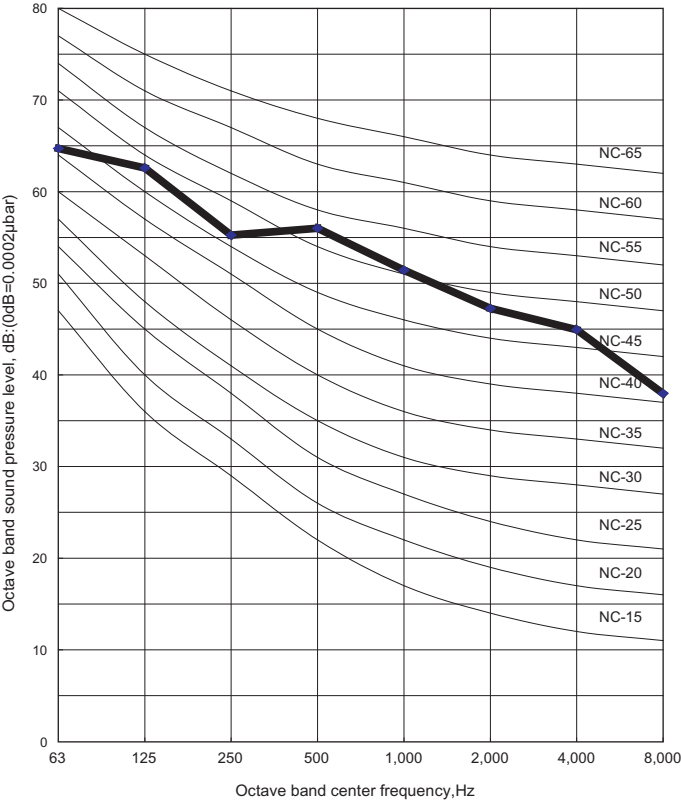
### ■ COOLING

● MODEL : AOU36R



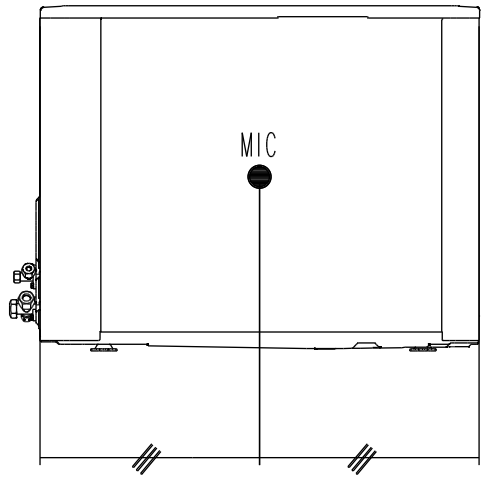
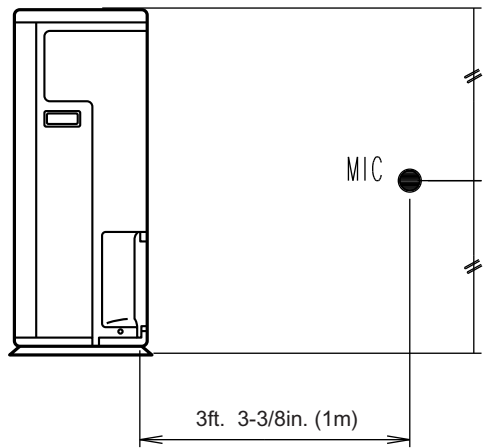
### ■ HEATING

● MODEL : AOU36R



■ SOUND LEVEL CHECK POINT

CEILING TYPE  
ABU36R

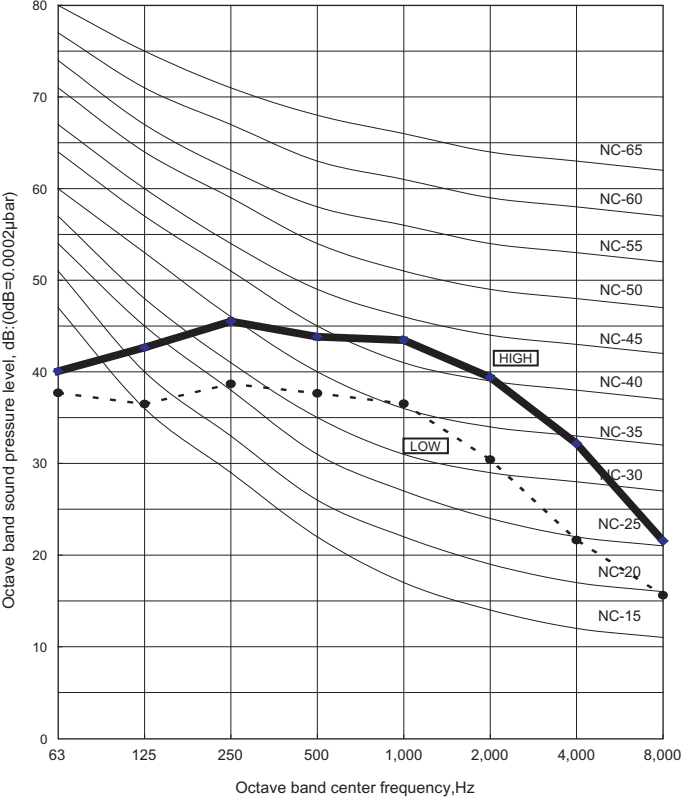


CEILING TYPE  
ABU36R

3-12-2. INDOOR UNIT

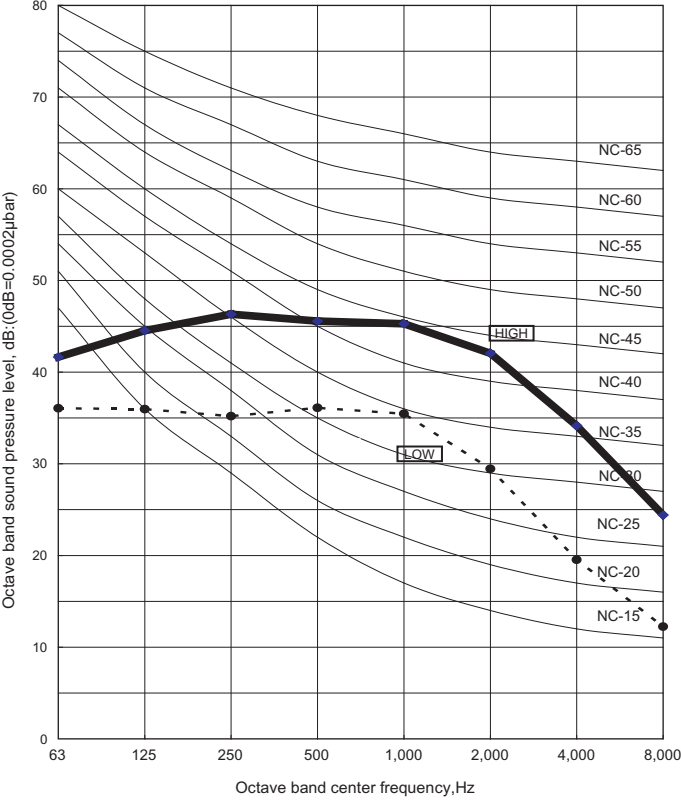
COOLING

MODEL : ABU36R



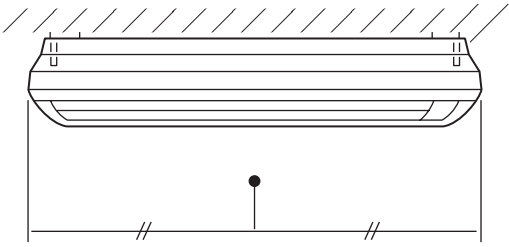
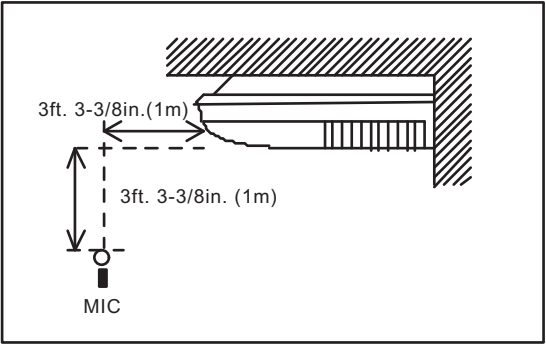
HEATING

MODEL : ABU36R



■ SOUND LEVEL CHECK POINT

● UNDER CEILING



CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

### 3-13. ELECTRIC CHARACTERISTICS

#### ■ MODELS : ABU36R / AOU36R

Model Name	Indoor unit		ABU36R	
	Outdoor unit		AOU36R	
Power Supply	Voltage	V	230~	
	Frequency	Hz	60	
Rated Value	Mode		Cooling	Heating
	Current	A	18.3	15.3
	Input	kW	4.22	3.50
Max Operating Current		A	18.8	18.8
Starting Current		A	10	
*1) Wiring Spec.	Main Fuse (Circuit breaker) Current	A	30	
	Power Cable	AWG	10	
	*2)Limited wiring length	ft.	95	
Indoor Fan Motor	Input	kW	0.14	
	Full Load Amp.	A	0.63	
Outdoor Fan Motor	Input	kW	0.13	
	Full Load Amp.	A	0.59	

\*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.

# 3-14. SAFETY DEVICE

## ■ OUTDOOR UNIT

	PROTECTION FORM	AOU36R	
FUSE ON MAIN PCB	CURRENT FUSE	3.15A 250V	
		5A 250V	
FAN MOTOR PROTECTION	THERMAL PROTECTOR	212 <sup>+27</sup> <sub>-18</sub> °F	100 <sup>+15</sup> <sub>-10</sub> °C
HIGH PRESSURE PROTECTION	PRESSURE SWITCH	OFF : 609±15 psi ON : 464±22 psi	OFF : 4.2±0.1MPa ON : 3.2±0.15MPa
DISCHARGE THERMISTOR	THERMAL PROTECTOR	OFF : 248±9°F ON : 176±9°F	OFF : 120±5°C ON : 80±5°C
COMPRESSOR THERMISTOR	THERMAL PROTECTOR	OFF : 266±9°F ON : 176±9°F	OFF : 130±5°C ON : 80±5°C

## ■ INDOOR UNIT

	PROTECTION FORM	ABU36R	
PCB FUSE	CURRENT FUSE	3.15A 250V	
FAN MOTOR PROTECTION	THERMAL PROTECTOR	248±9°F	120±5°C

CEILING TYPE  
ABU36R

CEILING TYPE  
ABU36R

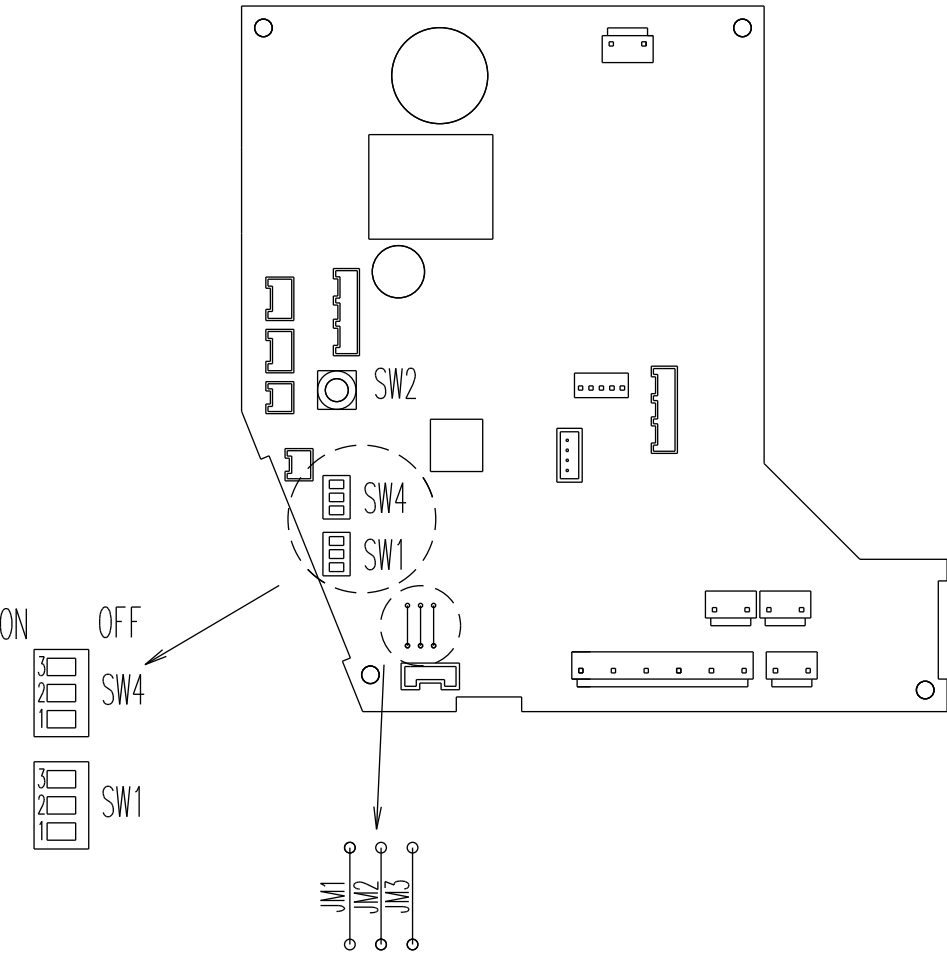
# 3-15. FUNCTION SETTING

## 3-15-1. INDOOR UNIT

INDOOR UNIT			
DIP SW	SW 1	1	Auto restart validity/invalidity
		2	Room temperature correct coefficient
		3	Room temperature correct coefficient
	SW 4	1	Forbidden
		2	Ceiling height setting
		3	
Rotary SW	SW 2		Indoor unit number setting
Jumper Wire		JM1	Forbidden
		JM2	Remote control unit signal code
		JM3	

### SWITCH POSITION

#### Indoor unit control circuit board



## 3-15-2. SWITCH FUNCTION (INDOOR UNIT)

### ■ DIP SWITCH SETTING

#### ● SW1-1. Auto restart setting

Auto restart function can be selected by turning this switch ON/OFF.

##### AUTO RESTART SETTING

(◆ . . . Factory setting)

SW 1-1	SW state
OFF	Invalidity
◆ ON	Validity

#### ● SW1-2, 1-3. Room temperature correct coefficient of heating.

Decide the heating temperature correct coefficient value of heating.

##### TEMPERATURE CORRECTION

(◆ . . . Factory setting)

SW 1-2	SW 1-3	SW state		
		heating	dry	cooling
OFF	OFF	+3.6degF	-3.6degF	-3.6degF
ON	OFF	-3.6degF	-3.6degF	-3.6degF
※ OFF	ON	0 degF	0 degF	0 degF
◆ ON	ON	+7.2degF	0 degF	0 degF

※ When used for Floor console type

#### ● SW4-1. REMOTE CONTROLLER SETTING

(◆ . . . Factory setting)

SW 4-1	SW state
◆ OFF	Wireless Remote Controller
ON	Wired Remote Controller (option)

#### ● SW4-2, 4-3. Ceiling height setting

(◆ . . . Factory setting)

Ceiling height ft.(m)		DIP - SW4		
		1	2	3
◆ 8ft. 2-7/16in. to 9ft. 10-1/8in. (2.5 to 3.0)	Normal	-	OFF	OFF
9ft. 10-1/8in. to 11ft. 5-25/32in. (3.0 to 3.5)	High ceiling 1	-	ON	OFF
More than 11ft. 5-25/32in. (3.5)	High ceiling 2	-	OFF	ON
Less than 8ft. 2-7/16in. (2.5)	Low ceiling	-	ON	ON

If the setting for a low ceiling is selected, the capacity of the air conditioner decreases slightly.

## ■ ROTARY SWITCH SETTING

(This function operates only when optional wired remote controller is used.)

This switch can be used when group control system.

Set the indoor unit address in the 0,1,-,15 order.

(◆ . . . Factory setting)

◆	SW 2	SW state
	0	Single
	1 - 15	Indoor unit address

## ■ JUMPER WIRE SETTING

### ● JM 1, 2, 3 setting

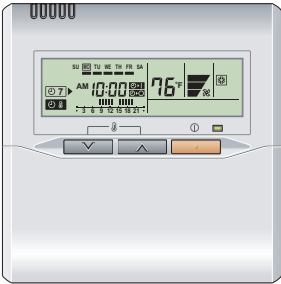
(◆ . . . Factory setting)

	Jumper wire		Remote control unit signal code
	JM2	JM3	
◆	connect	connect	A
	connect	Disconnect	B
	Disconnect	connect	C
	Disconnect	Disconnect	D

# 3-16. OPTIONAL PARTS

## 3-16-1. WIRED REMOTE CONTROLLER

### ■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.)
- \* Easy installation with a slim shape with no boldge in the back.
- \* Built in room temperature sensor.

### ●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: AM8:00 to PM8:00, 75 °F(24 °C)]

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

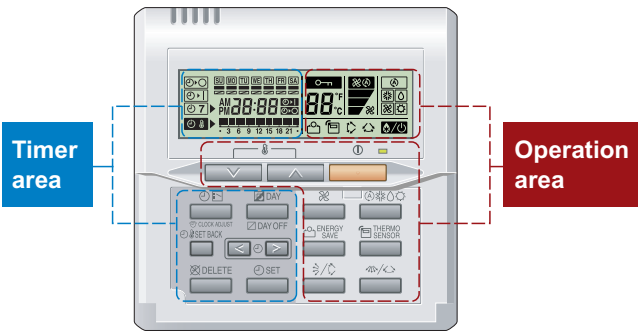
#### Setback timer

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

Screen after setup

Setup screen example  
[Set from Sunday to Saturday: PM12:00 to PM3:00, 82°F(28 °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.

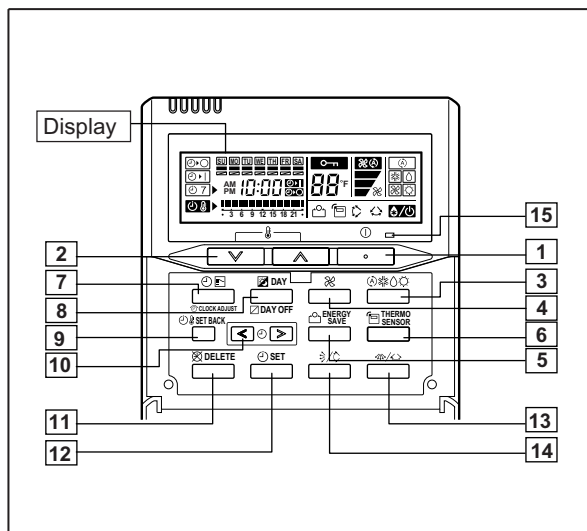
### ●Simple installation

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

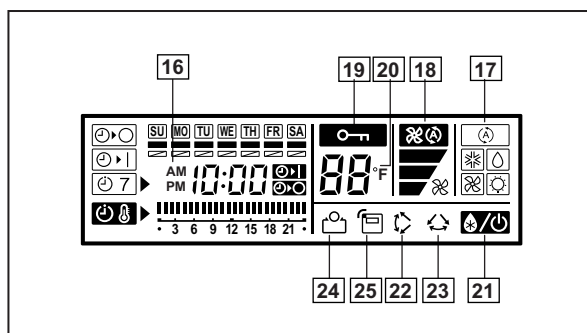
European switch box

JIS box

## FUNCTIONS



Display panel



- 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, LOW, MED, HIGH).
- 5** Energy save button  
Turns the energy efficient mode on and off.
- 6** Thermo sensor button  
Selects whether the room temperature is detected at the indoor unit (remote sensor) or the remote controller.
- 7** Timer mode (CLOCK ADJUST) button  
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER)  
Set the current time.
- 8** Day (DAY OFF) button  
Temporarily cancels of one day timer.
- 9** Set back button  
pressed select the set back timer.
- 10** Set time button  
Pessed to select the set back timer.
- 11** Delete button  
The schedule of a weekly timer is deleted.
- 12** Set button  
Sets the date, hour, minute and on-off time.
- 13** Horizontal air flow direction and swing button  
Push for two seconds to change the swing mode.
- 14** Vertical air flow direction and swing button  
Push for two seconds to change the swing mode
- 15** Operation lamp  
Lights during operation and when the timer is on.
- 16** Timer and clock display
- 17** Operation mode display
- 18** Fan speed display
- 19** Central control display
- 20** Temperature display
- 21** Stand by display  
Indicates during defrosting operation.
- 22** Vertical swing display
- 23** Horizontal swing display
- 24** Energy save display
- 25** Thermo sensor display

## SPECIFICATION

SIZE [(H x W x D in.) mm]	4-23/32 x 4-23/32 x 43/64 (120 x 120 x 17)
WEIGHT oz.( g )	5-21/32 (160)
CABLE LENGTH ft.( m )	33 (10)
POWER ( V )	12

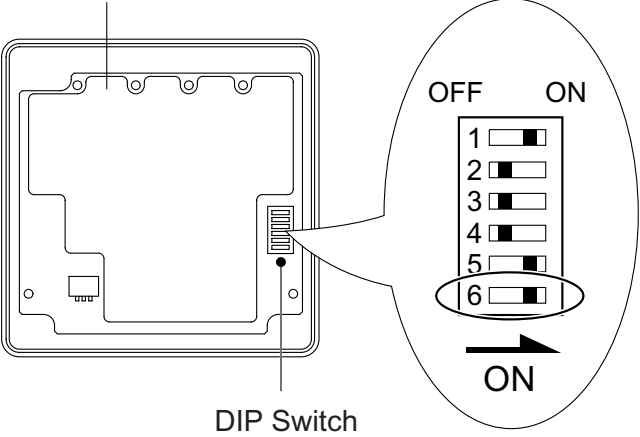
### 3-16-2. WIRED REMOTE CONTROLLER CIRCUIT BOARD

Wired remote controller		
DIP SW	1	Dual remote controller setting
	2	
	3	Group control setting
	4	Model setting
	5	Auto changeover setting
	6	Memory backup setting

#### SWITCH POSITION

##### Wired remote controller

Front case (back side)



## 3-16-3. WIRED REMOTE CONTROLLER

### ■ DIP SWITCH SETTING

#### ● 1. SW setting

##### 1-1 Dual remote controller setting

Set the remote controller DIP switch No.1 and 2 according to the following table.

(◆ . . . Factory setting)

Number of remote controller	Master unit		Slave unit	
	DIP-SW No.1	DIP-SW No.2	DIP-SW No.1	DIP-SW No.2
◆ 1 (Normal)	ON	OFF	—	—
2 (Dual)	OFF	OFF	ON	ON

##### 1-2 Group control setting

Number of indoor unit connection (One/Multiple)

This is switched according to the number of connected indoor units.

(◆ . . . Factory setting)

DIP-SW No.3	Number of indoor unit
◆ OFF	One unit connection
ON	Multiple unit connection

##### 1-3 Model setting

The system type of the outdoor unit can be selected by setting up DIP switch No.4 as follows.

(◆ . . . Factory setting)

DIP-SW No.4	Model
◆ OFF	Heat Pump model
ON	Cooling only model

##### 1-4 Auto changeover setting

Selecting auto changeover validity / invalidity.

(◆ . . . Factory setting)

DIP-SW No.5	Auto changeover
OFF	Invalidity
◆ ON	Validity

##### 1-5 Memory backup setting

Set to ON to use batteries for the memory backup. If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.

※ This function is wired remote control only.

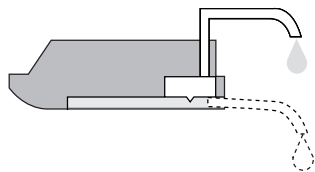
(◆ . . . Factory setting)

DIP-SW No.6	Memory backup
OFF	Invalidity
◆ ON	Validity

### 3-16-4. OPTIONAL PARTS

#### ■ 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.

UNIT : in.(mm)

