

AIR CONDITIONER

**Wall mounted type**

# DESIGN & TECHNICAL MANUAL

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INDOOR



RSG18KMTA  
RSG24KMTA  
RSG18KMTB  
RSG24KMTB

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OUTDOOR



ROG18KMTA



ROG24KMTA

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- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

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# **Part 1. INDOOR UNIT**

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## **WALL MOUNTED TYPE:**

**RSG18KMTA**

**RSG24KMTA**

**RSG18KMTB**

**RSG24KMTB**

# 1. Specifications

Type				Wall mounted		
				Inverter heat pump		
Model name				RSG18KMTA RSG18KMTB	RSG24KMTA RSG24KMTB	
Power supply				230 V ~ 50 Hz		
Power supply intake				Outdoor unit		
Available voltage range				198—264 V		
Capacity	Cooling	Rated	kW	5.20	7.10	
			Btu/h	17,700	24,200	
		Min.—Max.	kW	0.90—6.00	0.90—8.30	
			Btu/h	3,100—20,500	3,100—28,300	
	Heating	Rated	kW	6.30	8.00	
			Btu/h	21,500	27,200	
Min.—Max.		kW	0.90—8.70	0.90—10.10		
		Btu/h	3,100—29,600	3,100—34,400		
Input power	Cooling	Rated	kW	1.39	2.08	
		Min.—Max.		0.09—1.66	0.24—3.15	
	Heating	Rated	1.56	1.91		
		Min.—Max.	0.09—2.86	0.14—3.00		
	Fan	HIGH	W	37.5	61.6	
				MED	22.9	26.7
				LOW	13.3	13.3
				QUIET	8.2	8.2
	Current	Cooling	Rated	A	6.1	9.3
		Heating			7.0	8.6
EER	Cooling			3.74	3.41	
COP	Heating			4.04	4.19	
Sensible capacity	Cooling			kW	4.05	5.30
Power factor	Cooling			%	98	98
	Heating				98	96
Moisture removal			L/h (pints/h)	1.7 (3.0)	2.7 (4.8)	
Maximum operating current *1	Cooling			A	9.5	13.5
	Heating				13.5	16.0
Fan	Airflow rate	Cooling	m <sup>3</sup> /h	HIGH	980	1,170
				MED	810	850
				LOW	640	640
				QUIET	510	510
		Heating	HIGH	1,020	1,170	
			MED	850	850	
			LOW	640	640	
			QUIET	510	510	
	Type × Q'ty			Cross flow fan × 1		
	Motor output			W	59	
Sound pressure level *2	Cooling	dB (A)	HIGH	45	49	
			MED	40	40	
			LOW	35	35	
			QUIET	29	29	
	Heating	HIGH	46	49		
		MED	40	40		
		LOW	35	35		
		QUIET	29	29		
Heat exchanger type	Dimensions (H × W × D)	mm	Main1: 210 × 798 × 26.6, Main2: 135 × 798 × 20 Sub1: 84 × 798 × 13.3, Sub2: 84 × 798 × 13.3			
	Fin pitch		Main1: 1.2, Main2: 1.1 Sub1: 1.4, Sub2: 1.4			
	Rows × Stages	Main1: 2 × 10, Main2: 2 × 8 Sub1: 1 × 4, Sub2: 1 × 4				
	Pipe type	Copper				
	Fin type	Aluminum				
Enclosure	Material	Polystyrene				
	Color	White Approximate color of Munsell N 9.25/				
Dimensions (H × W × D)	Net	mm	280 × 980 × 240			
	Gross		322 × 1,078 × 346			
Weight	Net	kg	12.5			
	Gross		18			
Connection pipe	Size	Liquid	Ø 6.35 (Ø 1/4)			
		Gas	Ø 12.70 (Ø 1/2)			
	Method	Flare				
Drain hose	Material	PP + HDPE				
	Size	mm Ø 13.8 (I.D.), Ø 15.8 to Ø 16.7 (O.D.)				
Operation range	Cooling	°C	18 to 32			
	Heating	%RH	80 or less			
Remote control	Cooling	°C	16 to 30			
	Heating	°C				

## NOTES:

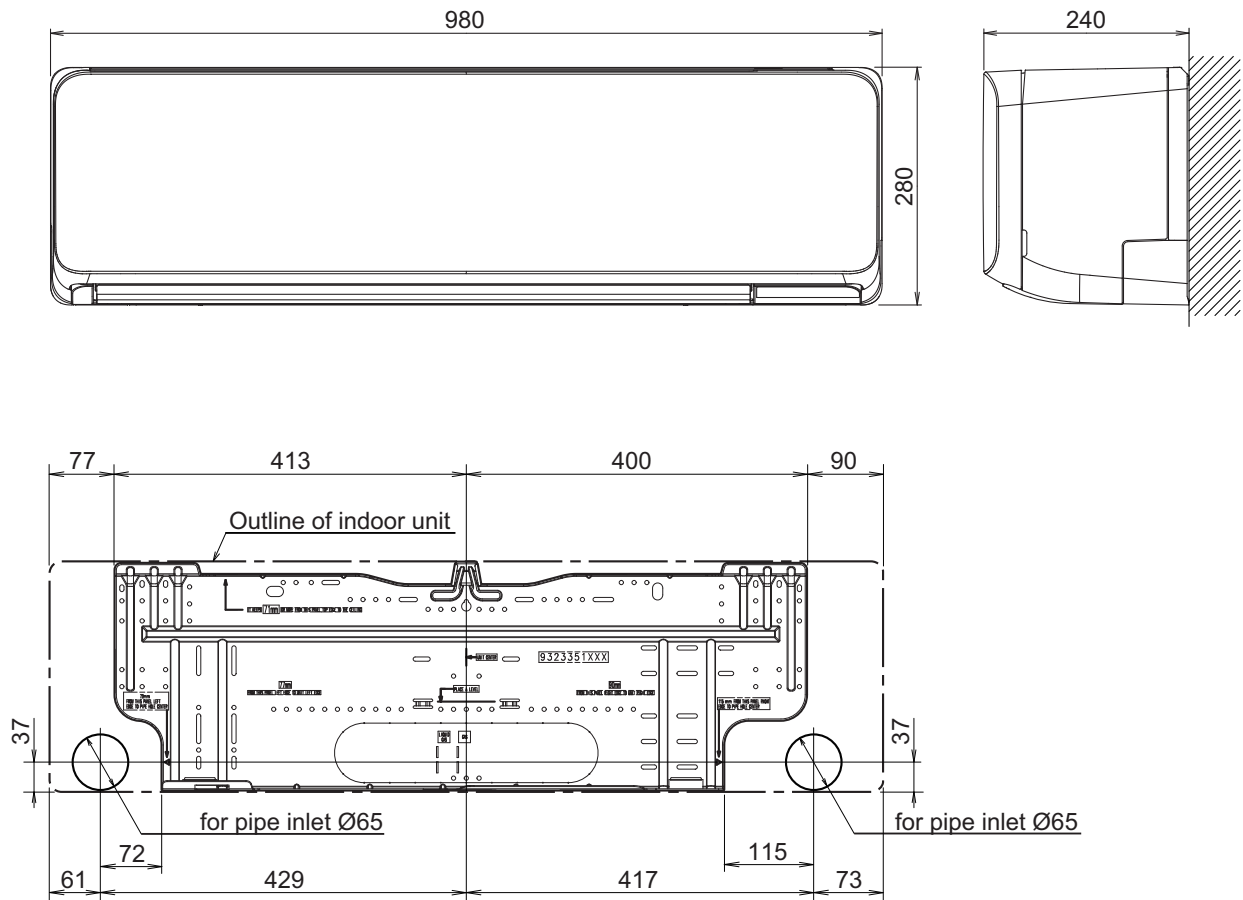
- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*1: Maximum operating current is the total current of the indoor unit and the outdoor unit.
- \*2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
- \*3: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual.

Specifications for ErP Lot10				
Model name			RSG18KMTA RSG18KMTB	RSG24KMTA RSG24KMTB
Energy efficiency class	Cooling		A <sup>++</sup>	
	Heating (Average)		A <sup>+</sup>	
Pdesign	Cooling	kW	5.2 (35°C)	7.1 (35°C)
	Heating (Average)		4.8 (-10°C)	7.1 (-10°C)
SEER	Cooling	kWh/kWh	7.77	7.28
SCOP	Heating (Average)		4.56	4.18
Annual energy consumption	QCE		234	341
	QHE (Average)		1,472	2,372
Sound power level	Cooling	HIGH	dB (A)	60
	Heating			65
				61
				65

## 2. Dimensions

### 2-1. Models: RSG18KMTA, RSG18KMTB, RSG24KMTA, and RSG24KMTB

Unit: mm

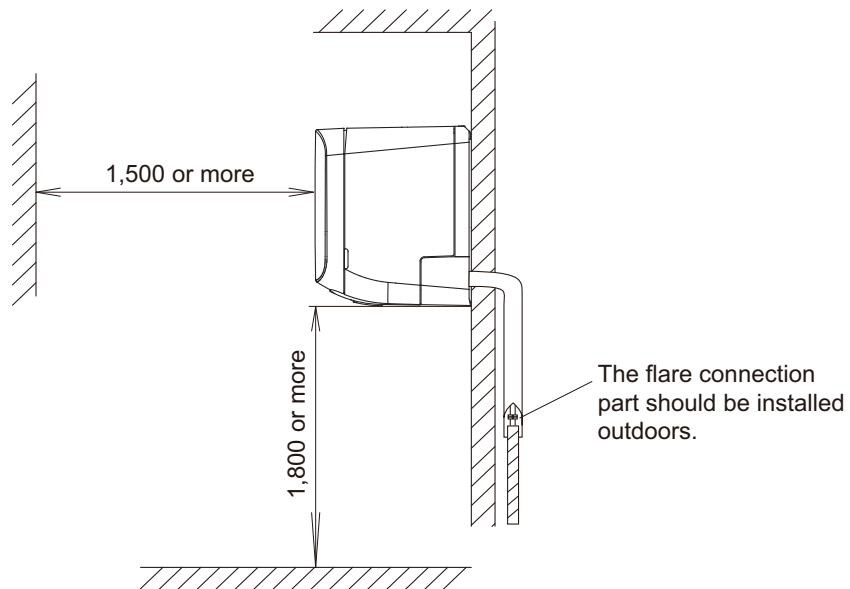
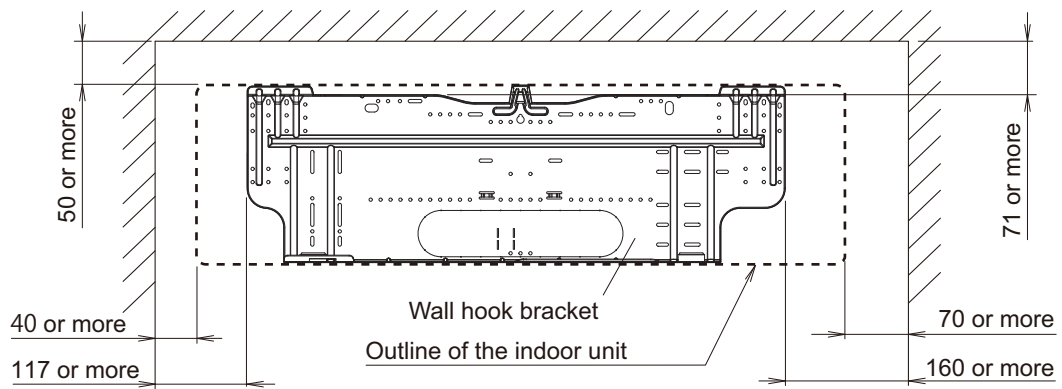




## ■ Installation space requirement

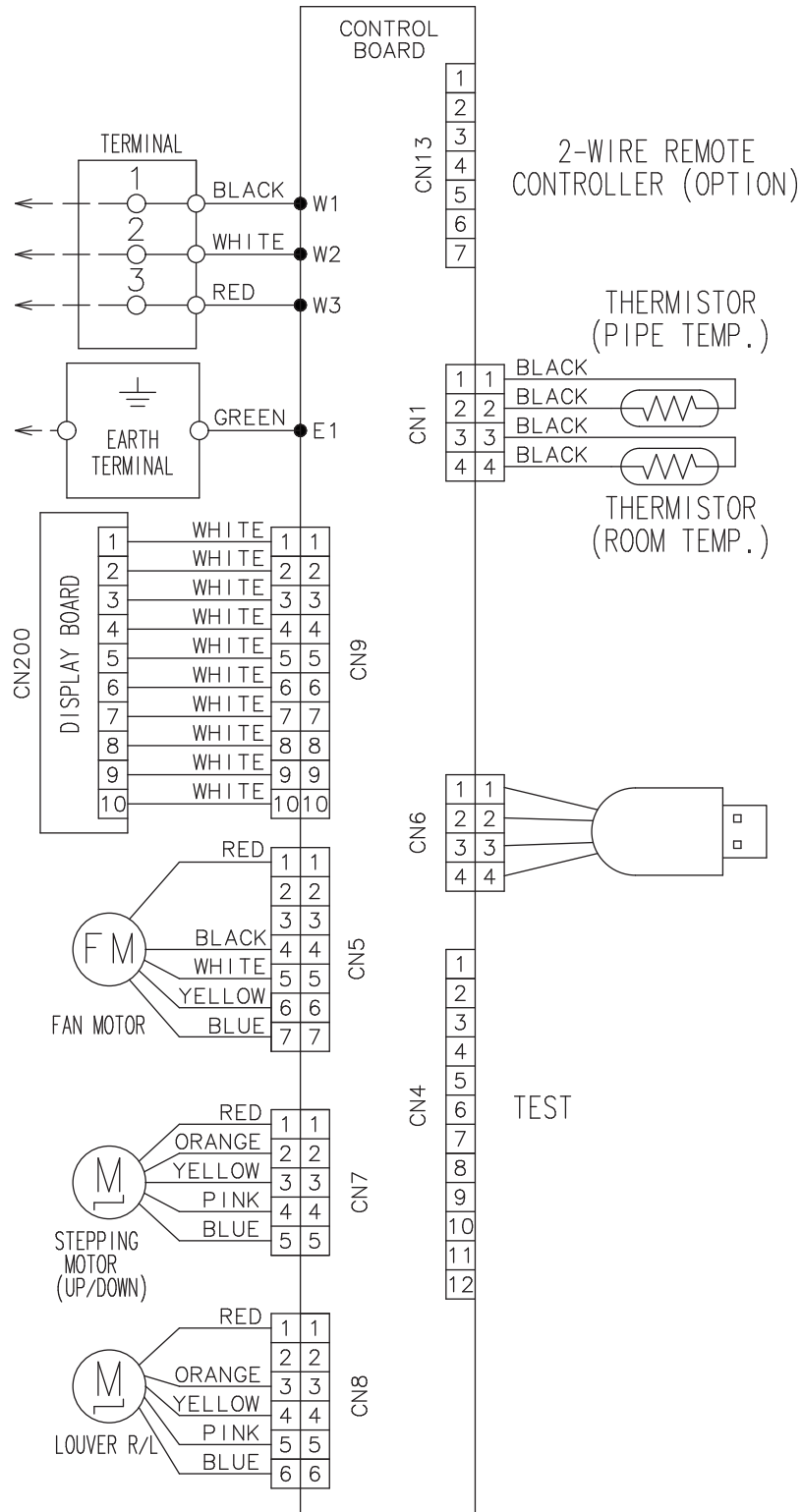
Provide sufficient installation space for product safety.

Unit: mm



### 3. Wiring diagrams

#### 3-1. Models: RSG18KMTA, RSG18KMTB, RSG24KMTA, and RSG24KMTB



## 4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

**For cooling capacity:** Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

**For heating capacity:** Total Capacity (TC) and Input Power (IP)

### 4-1. Cooling capacity

#### ■ Models: RSG18KMTA and RSG18KMTB

AFR		m <sup>3</sup> /h																		980					
Outdoor temperature	Indoor temperature																								
	°CDB	18			21			23			25			27			29			32					
	°CWB	12			15			16			18			19			21			23					
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP			
		kW			kW			kW			kW			kW			kW			kW					
-10	3.18	2.84	0.46	3.48	3.11	0.46	3.59	3.21	0.46	3.82	3.41	0.47	3.93	3.52	0.47	4.19	3.75	0.48	4.47	3.99	0.48				
-5	2.98	2.76	0.55	3.26	3.02	0.55	3.36	3.11	0.56	3.58	3.31	0.56	3.69	3.41	0.57	3.93	3.63	0.58	4.19	3.87	0.58				
0	2.78	2.68	0.64	3.05	2.93	0.65	3.14	3.02	0.65	3.34	3.21	0.66	3.44	3.31	0.67	3.67	3.52	0.67	3.91	3.76	0.68				
5	3.12	2.81	0.44	3.41	3.07	0.44	3.52	3.17	0.45	3.74	3.37	0.45	3.86	3.47	0.45	4.11	3.70	0.46	4.38	3.94	0.46				
10	2.95	2.74	0.52	3.23	3.00	0.53	3.33	3.09	0.53	3.54	3.29	0.54	3.65	3.39	0.54	3.88	3.61	0.55	4.14	3.85	0.55				
15	3.83	3.11	0.57	4.19	3.40	0.57	4.32	3.51	0.58	4.60	3.73	0.58	4.74	3.84	0.59	5.05	4.09	0.60	5.38	4.37	0.60				
20	4.61	3.45	0.93	5.05	3.77	0.94	5.20	3.89	0.95	5.53	4.13	0.96	5.70	4.26	0.97	6.07	4.54	0.98	6.48	4.84	0.99				
25	4.49	3.40	1.05	4.92	3.72	1.06	5.07	3.83	1.07	5.39	4.08	1.08	5.56	4.20	1.09	5.92	4.48	1.10	6.31	4.77	1.11				
30	4.35	3.34	1.19	4.76	3.65	1.20	4.91	3.76	1.21	5.22	4.00	1.23	5.38	4.13	1.24	5.73	4.40	1.25	6.11	4.69	1.26				
35	4.21	3.28	1.33	4.60	3.59	1.35	4.74	3.69	1.36	5.04	3.93	1.38	5.20	4.05	1.39	5.54	4.32	1.40	5.91	4.60	1.42				
40	3.92	3.14	1.42	4.29	3.44	1.44	4.42	3.54	1.45	4.70	3.77	1.47	4.85	3.88	1.48	5.17	4.14	1.50	5.51	4.41	1.51				
46	3.45	2.91	1.47	3.78	3.18	1.48	3.90	3.28	1.50	4.14	3.48	1.51	4.27	3.59	1.53	4.55	3.83	1.55	4.85	4.08	1.56				

#### ■ Model: RSG24KMTA and RSG24KMTB

AFR		m <sup>3</sup> /h																		1,170					
Outdoor temperature	Indoor temperature																								
	°CDB	18			21			23			25			27			29			32					
	°CWB	12			15			16			18			19			21			23					
	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP			
		kW			kW			kW			kW			kW			kW			kW					
-10	4.34	3.72	0.68	4.75	4.07	0.69	4.90	4.20	0.70	5.21	4.46	0.70	5.37	4.60	0.71	5.72	4.90	0.72	6.10	5.23	0.72				
-5	4.07	3.61	0.82	4.46	3.95	0.83	4.59	4.07	0.84	4.88	4.33	0.84	5.03	4.46	0.85	5.36	4.76	0.86	5.72	5.07	0.87				
0	3.80	3.50	0.96	4.16	3.83	0.97	4.28	3.95	0.98	4.56	4.20	0.99	4.70	4.33	1.00	5.01	4.61	1.01	5.34	4.92	1.02				
5	4.26	3.68	0.65	4.66	4.02	0.66	4.80	4.14	0.67	5.11	4.41	0.67	5.27	4.54	0.68	5.61	4.84	0.69	5.98	5.16	0.69				
10	4.03	3.59	0.78	4.41	3.92	0.79	4.54	4.04	0.80	4.83	4.30	0.81	4.98	4.43	0.81	5.30	4.72	0.82	5.65	5.04	0.83				
15	5.23	4.07	0.85	5.73	4.45	0.85	5.90	4.59	0.86	6.27	4.88	0.87	6.47	5.03	0.88	6.89	5.36	0.89	7.35	5.71	0.90				
20	6.29	4.51	1.39	6.89	4.94	1.41	7.10	5.09	1.42	7.55	5.41	1.44	7.78	5.58	1.45	8.29	5.95	1.46	8.84	6.34	1.48				
25	6.14	4.45	1.56	6.71	4.87	1.58	6.92	5.02	1.60	7.36	5.34	1.61	7.59	5.50	1.63	8.08	5.86	1.65	8.62	6.25	1.66				
30	5.94	4.37	1.78	6.50	4.78	1.80	6.70	4.93	1.82	7.12	5.24	1.84	7.34	5.40	1.86	7.82	5.75	1.87	8.34	6.13	1.89				
35	5.74	4.29	2.00	6.28	4.69	2.02	6.48	4.83	2.04	6.89	5.14	2.06	7.10	5.30	2.08	7.57	5.65	2.10	8.07	6.02	2.12				
40	5.36	4.11	2.13	5.86	4.50	2.15	6.04	4.63	2.18	6.42	4.93	2.20	6.62	5.08	2.22	7.05	5.41	2.24	7.52	5.77	2.26				
46	4.72	3.80	2.20	5.16	4.16	2.22	5.32	4.29	2.24	5.66	4.56	2.27	5.83	4.70	2.29	6.21	5.01	2.31	6.62	5.34	2.34				

## 4-2. Heating capacity

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

### ■ Models: RSG18KMTA and RSG18KMTB

AFR	m <sup>3</sup> /h	1,020
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			Indoor temperature													
			16		18		20		22		24		26		28	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	°CDB	°CWB	kW		kW		kW		kW		kW		kW		kW	
	-15	-16	5.17	1.92	5.04	1.96	4.90	2.00	4.76	2.04	4.63	2.08	4.49	2.12	4.36	2.16
	-10	-11	6.23	1.89	6.06	1.93	5.90	1.98	5.74	2.01	5.57	2.04	5.41	2.09	5.25	2.13
	-5	-7	7.31	2.11	7.12	2.15	6.93	2.07	6.74	2.24	6.55	2.28	6.36	2.33	6.17	2.37
	0	-2	8.45	2.71	8.23	2.76	8.01	2.70	7.79	2.87	7.57	2.93	7.34	2.99	7.12	3.05
	5	3	9.36	3.18	9.11	3.25	8.87	3.32	8.63	3.38	8.38	3.44	8.14	3.52	7.89	3.58
	7	6	9.18	2.75	8.94	2.80	8.70	2.86	8.46	2.91	8.22	2.97	7.98	3.03	7.74	3.09
	10	8	9.29	2.64	9.05	2.69	8.81	2.79	8.56	2.81	8.32	2.86	8.08	2.92	7.83	2.97
	15	10	9.35	2.28	9.11	2.32	8.86	2.46	8.62	2.42	8.37	2.46	8.13	2.52	7.88	2.56
	20	15	9.42	2.04	9.17	2.09	8.93	2.17	8.68	2.17	8.43	2.21	8.19	2.26	7.94	2.30
24	18	9.48	1.89	9.23	1.93	8.98	1.97	8.73	2.01	8.48	2.05	8.24	2.09	7.99	2.13	

### ■ Model: RSG24KMTA and RSG24KMTB

AFR	m <sup>3</sup> /h	1,170
-----	-------------------	-------

			Indoor temperature													
			16		18		20		22		24		26		28	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	°CDB	°CWB	kW		kW		kW		kW		kW		kW		kW	
	-15	-16	6.56	2.76	6.39	2.81	6.22	2.87	6.05	2.93	5.88	2.98	5.70	3.05	5.53	3.10
	-10	-11	7.41	2.83	7.21	2.89	7.02	2.94	6.82	3.01	6.63	3.07	6.44	3.13	6.24	3.19
	-5	-7	8.25	2.96	8.04	3.02	8.05	3.04	7.60	3.15	7.39	3.21	7.17	3.27	6.96	3.33
	0	-2	9.10	3.17	8.86	3.24	8.63	3.26	8.39	3.37	8.15	3.43	7.91	3.50	7.67	3.57
	5	3	9.78	3.34	9.53	3.41	9.73	3.48	9.01	3.55	8.76	3.61	8.50	3.69	8.25	3.76
	7	6	10.66	2.88	10.38	2.94	10.10	3.00	9.82	3.06	9.54	3.11	9.26	3.18	8.98	3.24
	10	8	10.78	2.77	10.50	2.83	10.22	2.93	9.94	2.94	9.66	3.00	9.37	3.06	9.09	3.12
	15	10	10.86	2.39	10.58	2.44	10.29	2.58	10.01	2.54	9.72	2.59	9.44	2.64	9.15	2.69
	20	15	10.93	2.15	10.65	2.19	10.36	2.28	10.07	2.28	9.79	2.32	9.50	2.37	9.22	2.41
24	18	11.00	1.99	10.71	2.03	10.42	2.07	10.13	2.11	9.84	2.15	9.56	2.19	9.27	2.24	

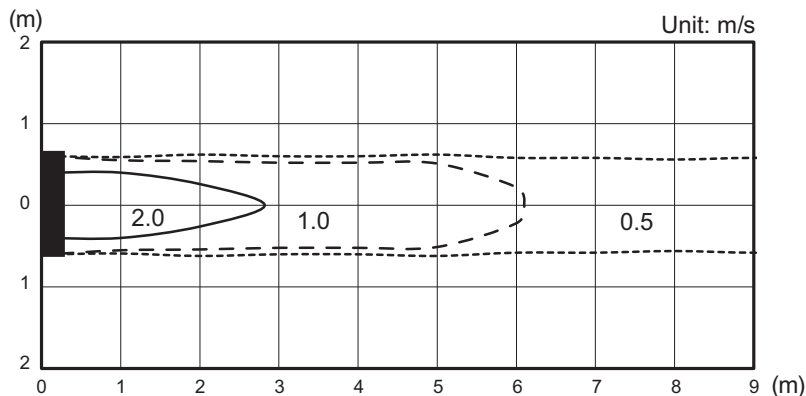
# 5. Fan performance

## 5-1. Air velocity distributions

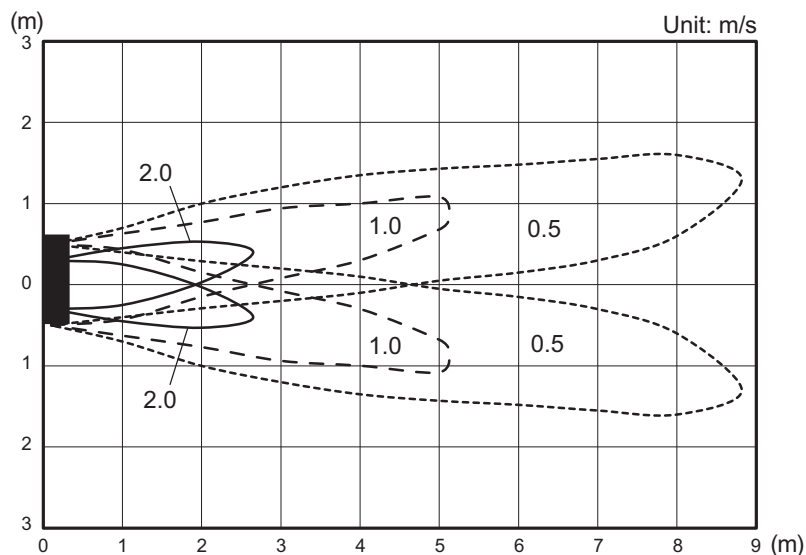
### ■ Models: ASYG18KMTA and ASYG18KMTB

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

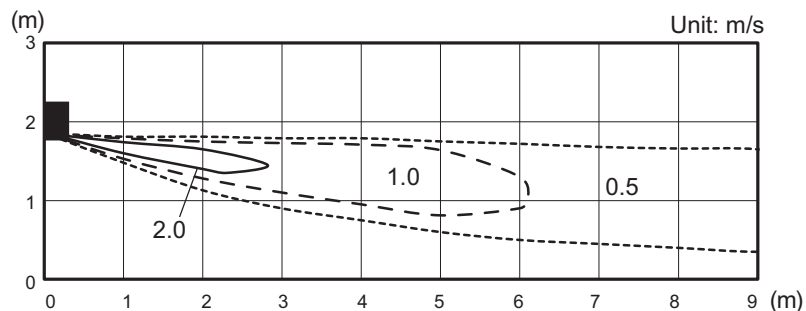
Top view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Center



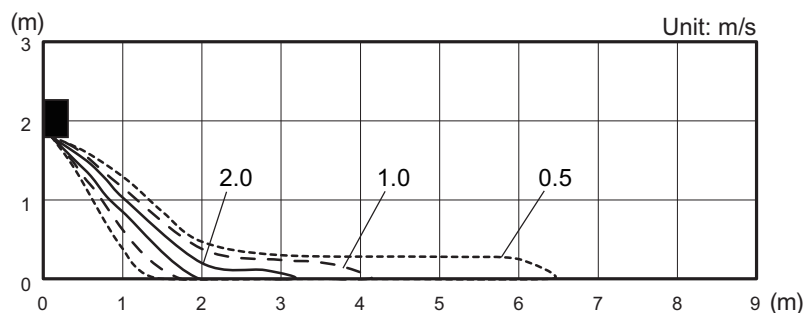
Top view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Left & Right



Side view  
Vertical airflow direction louver: Up  
Horizontal airflow direction louver: Center



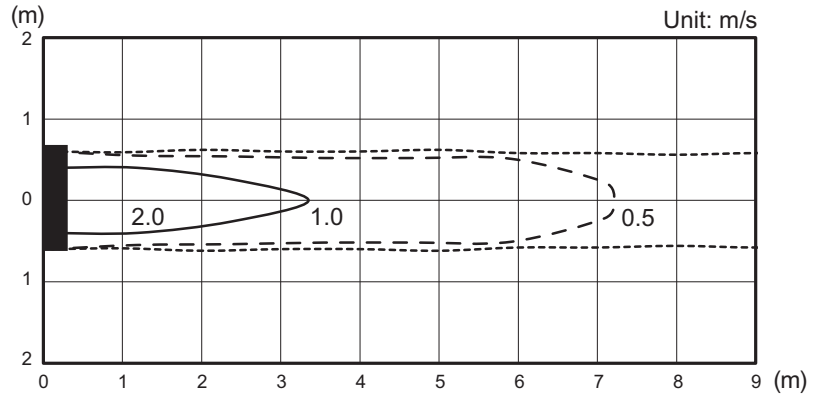
Side view  
Vertical airflow direction louver: Down  
Horizontal airflow direction louver: Center



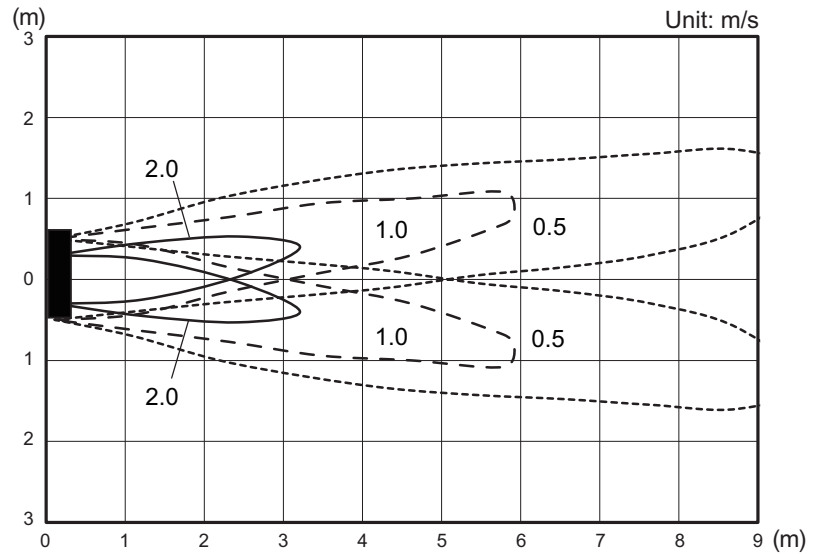
# Model: RSG24KMTA and RSG24KMTB

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

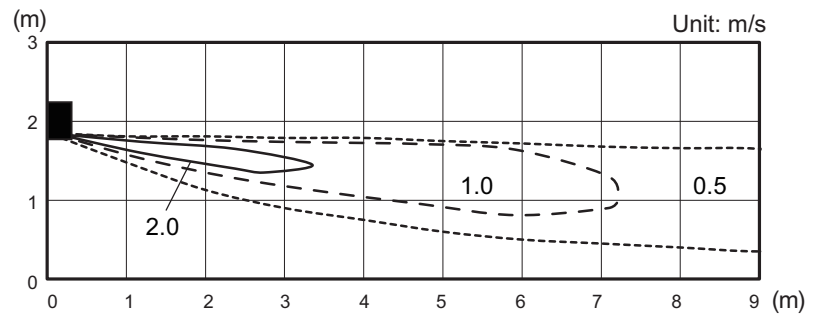
Top view  
 Vertical airflow direction louver: Up  
 Horizontal airflow direction louver: Center



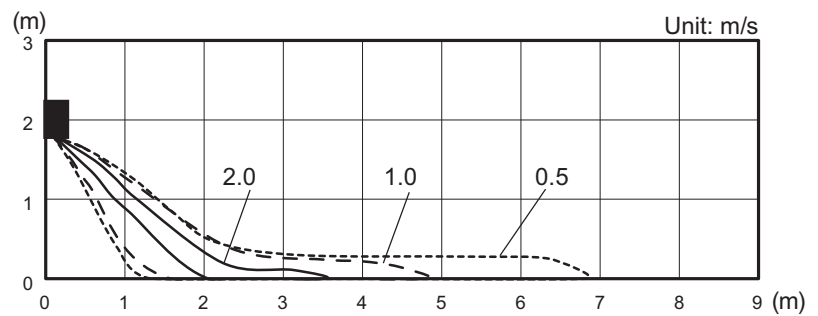
Top view  
 Vertical airflow direction louver: Up  
 Horizontal airflow direction louver: Left & Right



Side view  
 Vertical airflow direction louver: Up  
 Horizontal airflow direction louver: Center



Side view  
 Vertical airflow direction louver: Down  
 Horizontal airflow direction louver: Center



## 5-2. Airflow

### ■ Models: RSG18KMTA and RSG18KMTB

#### ● Cooling

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	980
	l/s	272
	CFM	577
MED	m <sup>3</sup> /h	810
	l/s	225
	CFM	477
LOW	m <sup>3</sup> /h	640
	l/s	178
	CFM	377
QUIET	m <sup>3</sup> /h	510
	l/s	142
	CFM	300

#### ● Heating

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	1,020
	l/s	283
	CFM	600
MED	m <sup>3</sup> /h	850
	l/s	236
	CFM	500
LOW	m <sup>3</sup> /h	640
	l/s	178
	CFM	377
QUIET	m <sup>3</sup> /h	510
	l/s	142
	CFM	300

## ■ Model: RSG24KMTA and RSG24KMTB

### ● Cooling

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	1,170
	l/s	325
	CFM	689
MED	m <sup>3</sup> /h	850
	l/s	236
	CFM	500
LOW	m <sup>3</sup> /h	640
	l/s	178
	CFM	377
QUIET	m <sup>3</sup> /h	510
	l/s	142
	CFM	300

### ● Heating

Fan speed	Airflow	
HIGH	m <sup>3</sup> /h	1,170
	l/s	325
	CFM	689
MED	m <sup>3</sup> /h	850
	l/s	236
	CFM	500
LOW	m <sup>3</sup> /h	640
	l/s	178
	CFM	377
QUIET	m <sup>3</sup> /h	510
	l/s	142
	CFM	300

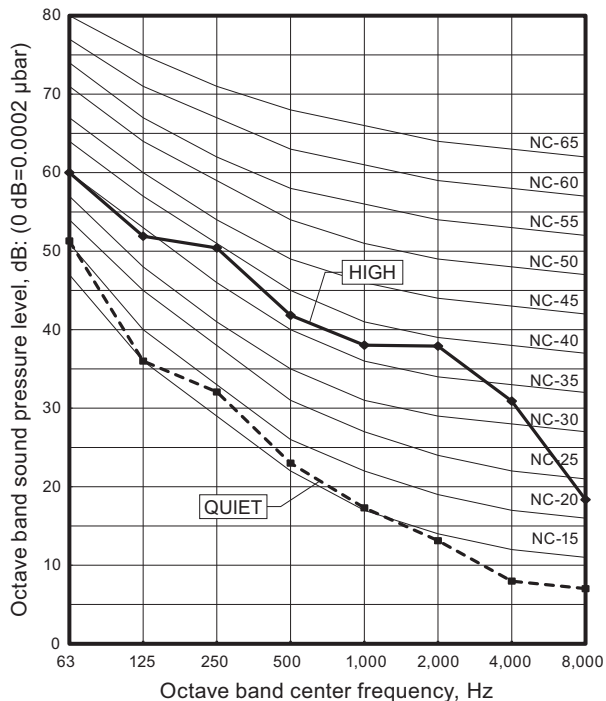


# 6. Operation noise (sound pressure)

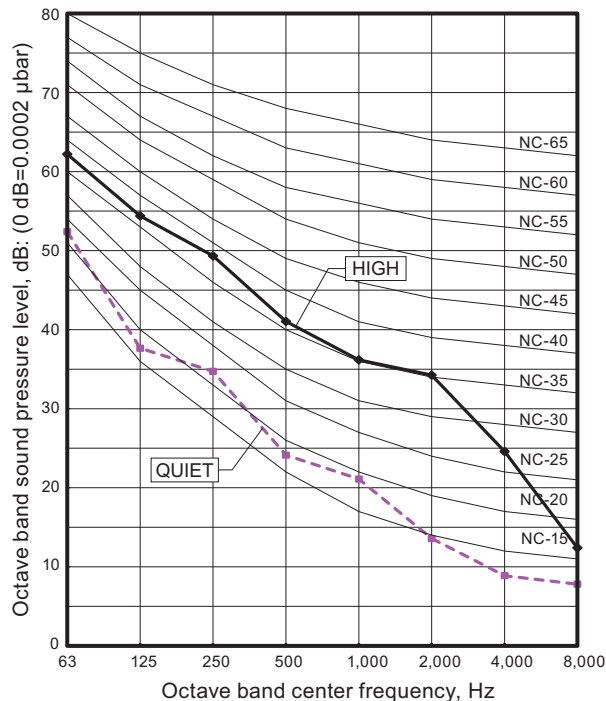
## 6-1. Noise level curve

### Models: ASYG18KMTA and ASYG18KMTB

#### ● Cooling

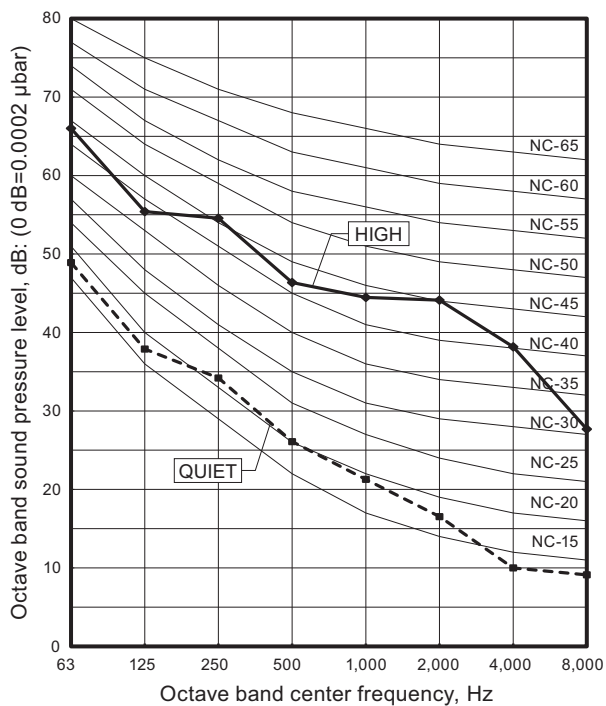


#### ● Heating

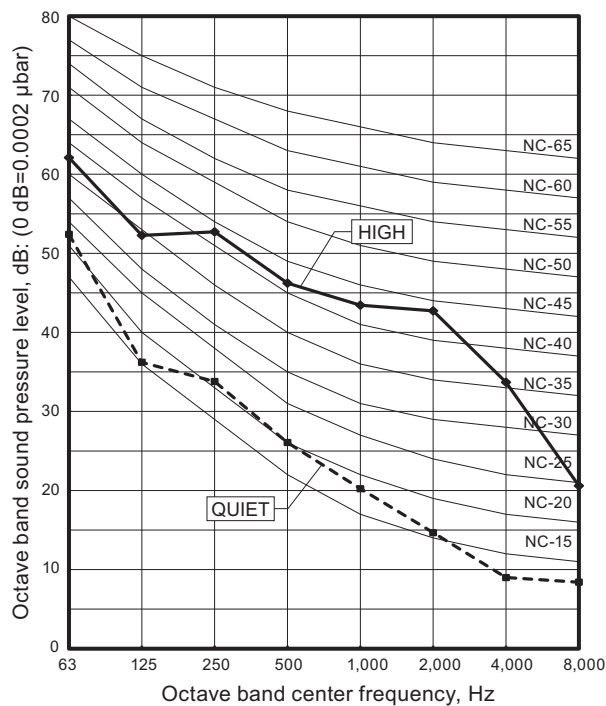


### Model: ASYG24KMTA and ASYG24KMTB

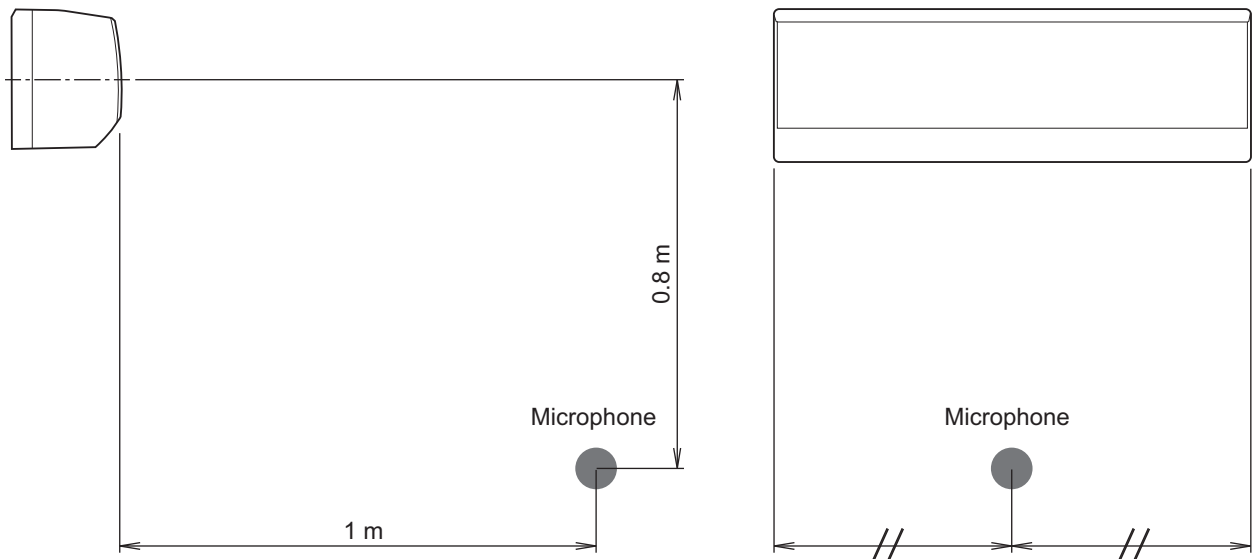
#### ● Cooling



#### ● Heating



## 6-2. Sound level check point



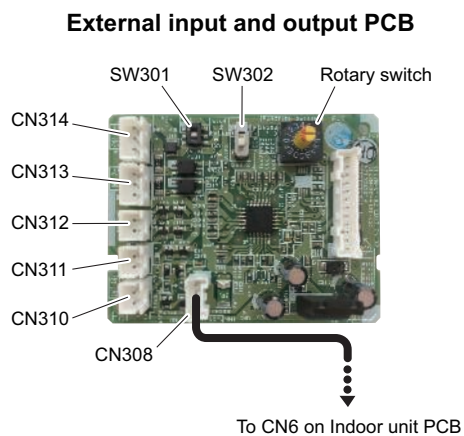
**NOTE:** Detailed shape of the actual indoor unit might be slightly different from the one illustrated above.

## 7. Safety devices

Type of protection	Protection form		Model	
			RSG18KMTA RSG18KMTB	RSG24KMTA RSG24KMTB
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A	
Fan motor protection	Thermal protector program	Activate	125 ±24°C Fan motor stop	
		Reset	100 ±25°C Fan motor restart	

\*PCB: Printed Circuit Board

## 8. External input and output



PCB	External input	External output	Connector	Input select	Input signal
External input and output (UTY-XCSXZ2)	Operation/Stop	—	CN313/ CN314	Dry contact/ Apply voltage	Edge/Pulse
	Forced stop		CN313		Edge
	Forced thermostat off				
	—	Operation status	CN310	—	—
		Error status	CN311		
		Indoor unit fan operation status	CN312		

# 8-1. External input

With using external input function, some functions on this product can be controlled from an external device.

- "Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable should be used. Maximum length of cable is 150 m.
- The wire connection should be separate from the power cable line.

## External input and output PCB

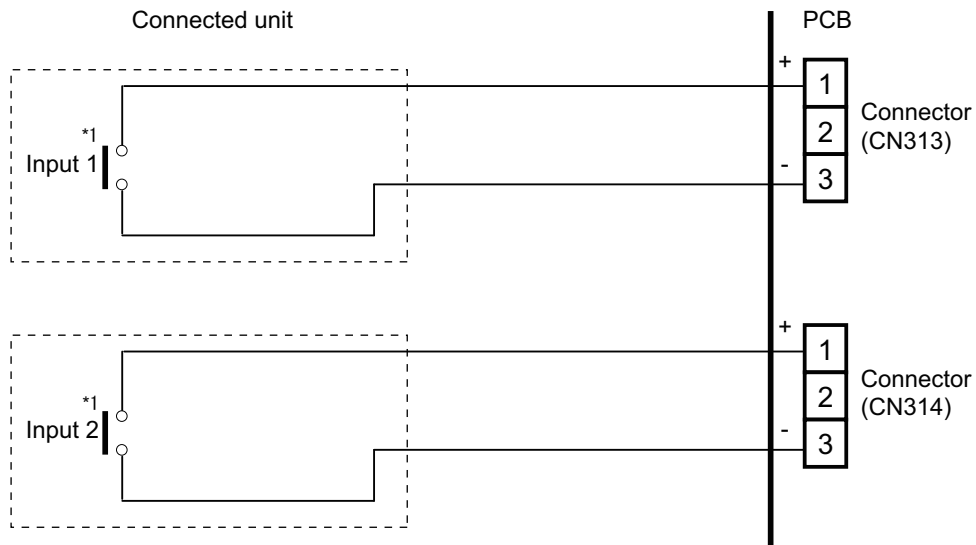
The indoor unit Operation/Stop can be set by using the input connector on the PCB.

• **Input select:**

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

– Dry contact

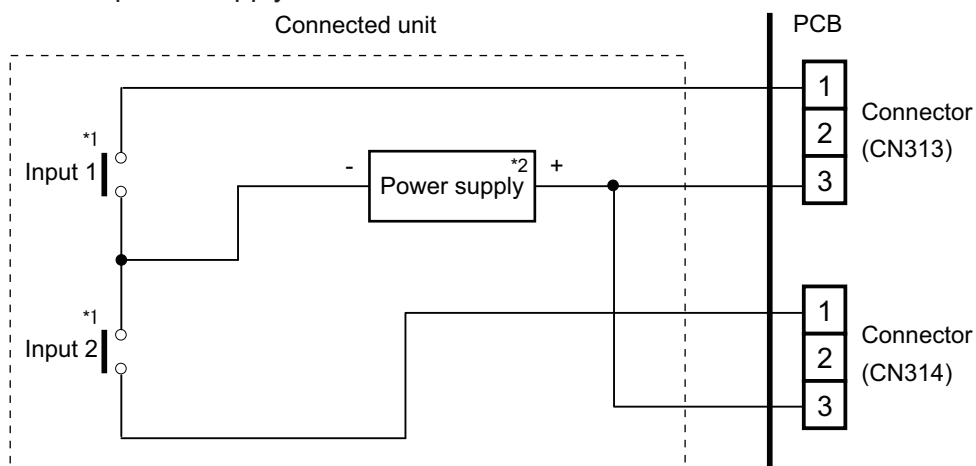
In case of internal power supply, set the slide switch of SW301 to "NON VOL" side.



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

– Apply voltage

In case of external power supply, set the slide switch of SW301 to "VOL" side.



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

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

## 8-2. External output

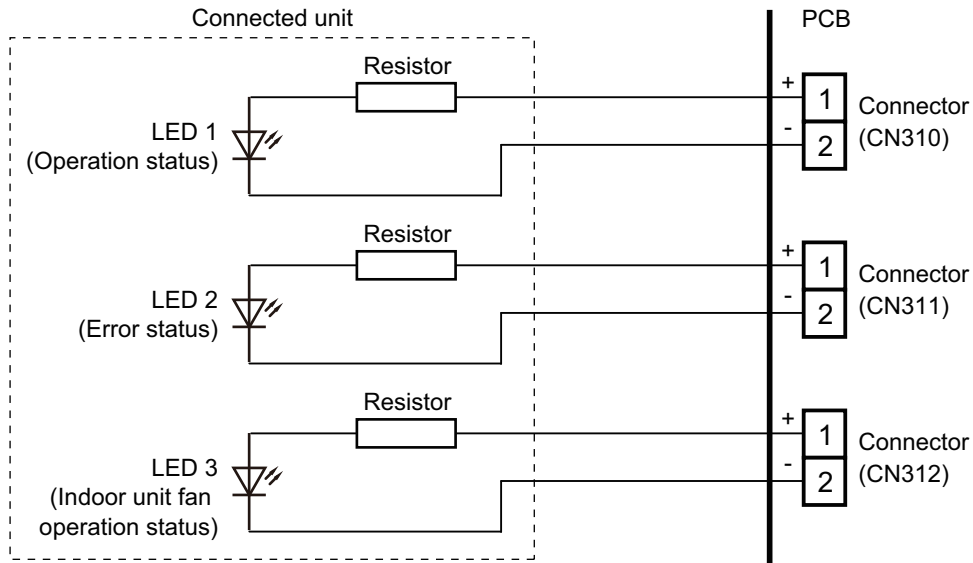
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

### External input and output PCB

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V±2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to ["Combination of external input and output"](#) on page 19.

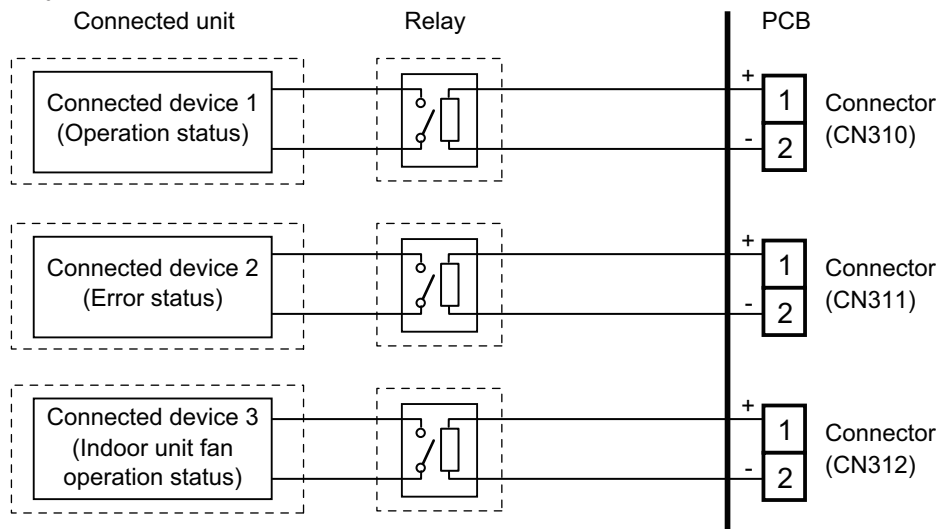
• **When indicator or other components are connected directly:**

**Example:** Rotary SW on External input and output PCB is set to "1".



• **When connecting with a device equipped with a power supply:**

**Example:** Rotary SW on External input and output PCB is set to "1".



## 8-3. Combination of external input and output

By combining the function setting of the indoor unit and rotary switch setting of the External input and output PCB, you can select various combinations of functions.

Combination examples of external input and output are as follows:

Mode	External input and output PCB (Rotary SW)	External input		
		External input and output PCB		
		CN313	CN314	Signal type
0-1	1	Operation/Stop	Not available	Edge
		Operation	Stop	Pulse
0-2	2	Forced Thermostat OFF	Not available	Edge
1—8	3 - 9, A	(Setting prohibited)		
9	B	Forced Thermostat OFF	Not available	Edge
10	C	Forced Thermostat OFF	Not available	Edge
11	D	Forced Thermostat OFF	Not available	Edge

Mode	External input and output PCB (Rotary SW)	External output		
		External input and output PCB		
		CN310	CN311	CN312
0-1	1	Operation/Stop	Error status	Indoor unit fan operation status
0-2	2	Error status	Indoor unit fan operation status	Not available
1—8	3 - 9, A	(Setting prohibited)		
9	B	Operation/Stop	Indoor unit fan operation status	Not available
10	C	Operation/Stop	Error status	Not available
11	D	Operation/Stop	Indoor unit fan operation status	Error status

**NOTE:** Input of Operation/Stop depends on the setting of function setting 46.

00: Operation/Stop mode 1 (R.C. enabled)

01: (Setting prohibited)

02: Forced stop

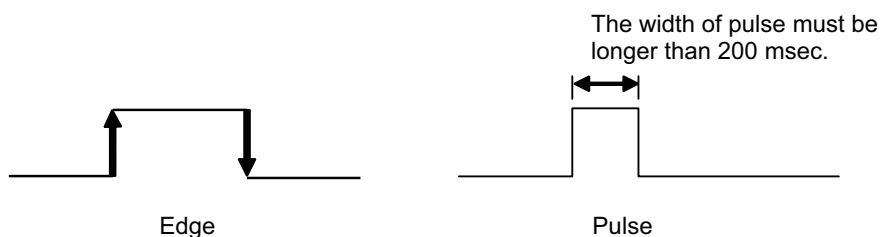
03: Operation/Stop mode 2 (R.C. disabled)

### Input signal type

#### External input and output PCB:

The input signal type can be selected.

Signal type (edge or pulse) can be switched by the DIP switch SW302 on the External input and output PCB.

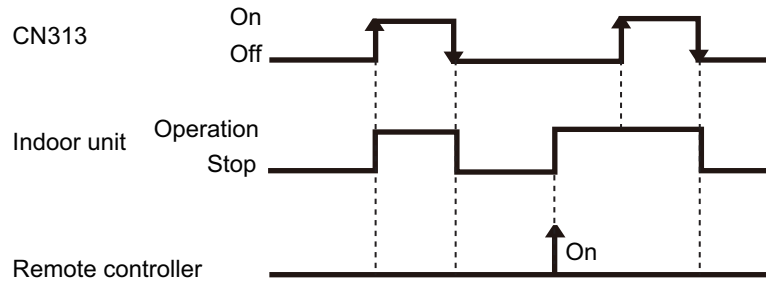


## 8-4. Details of function

### ■ Control input function

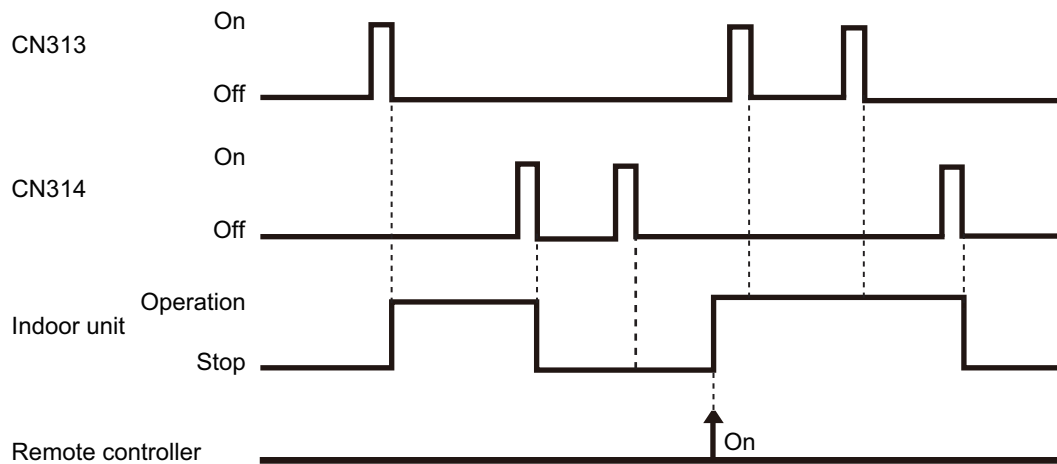
- When function setting is “Operation/Stop” mode 1
  - In the case of “Edge” input:

Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
		External input and output PCB	CN313		
46-00	1			Off → On	Operation
				On → Off	Stop



- In the case of “Pulse” input:

Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
		External input and output PCB	CN313		
46-00	1		CN313	Pulse	Operation
			CN314	Pulse	Stop



#### NOTES:

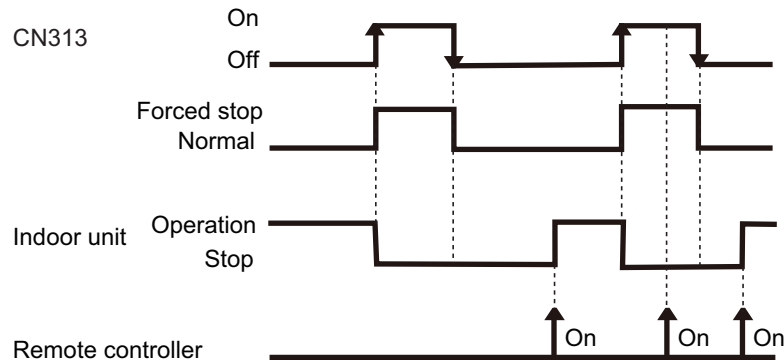
- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.



• When function setting is “Forced stop” mode

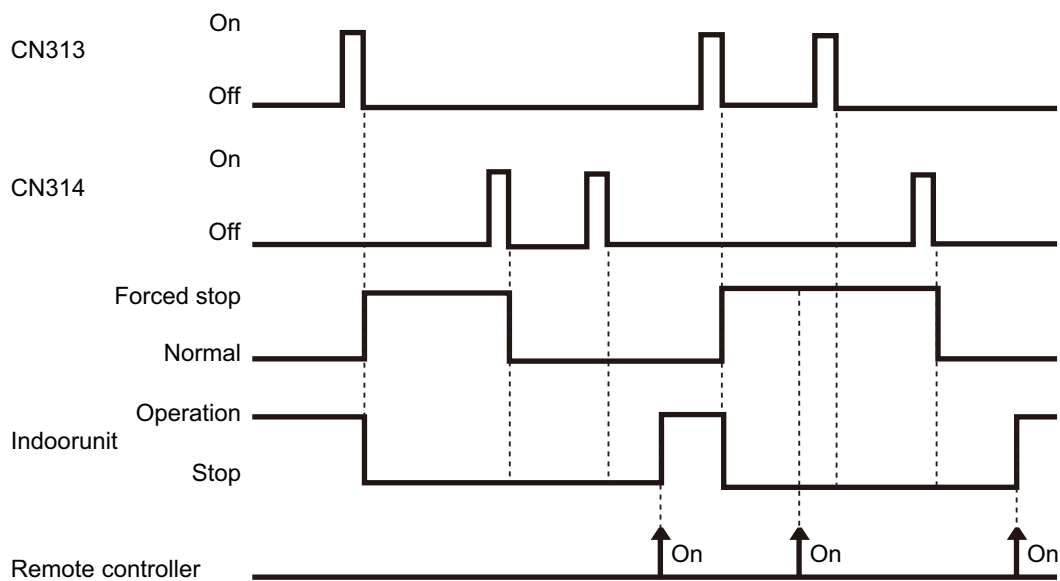
– In the case of “Edge” input:

Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
		External input and output PCB	CN313		
46-02	1			Off → On	Forced stop
				On → Off	Normal



– In the case of “Pulse” input:

Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
		External input and output PCB	CN313 CN314		
46-02	1		CN313	Pulse	Forced stop
			CN314	Pulse	Normal



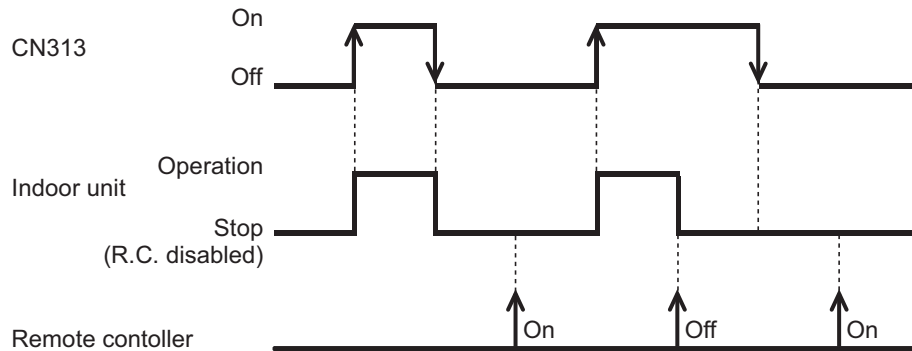
**NOTES:**

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

• When function setting is “Operation/Stop” mode 2

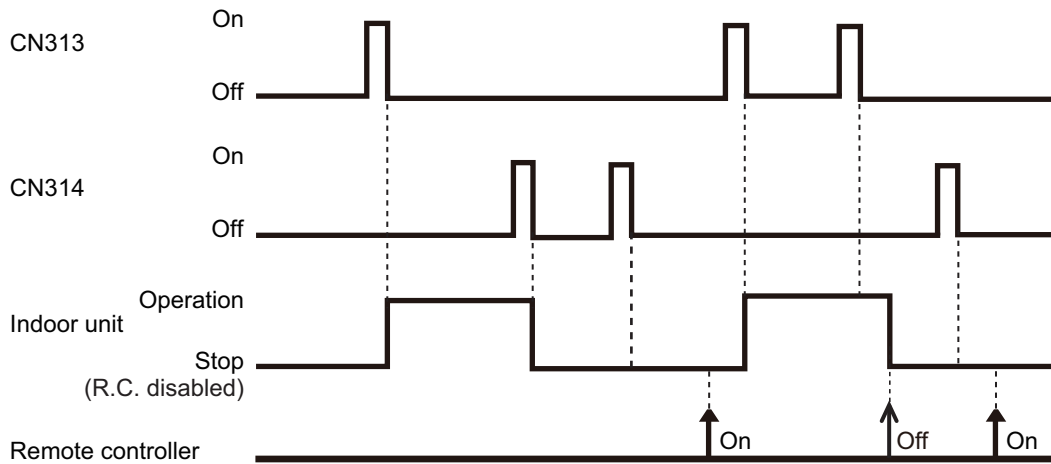
– In the case of “Edge” input:

Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
46-03	1	External input and output PCB	CN313	Off → On	Operation
				On → Off	Stop (R.C. disabled)



– In the case of “Pulse” input:

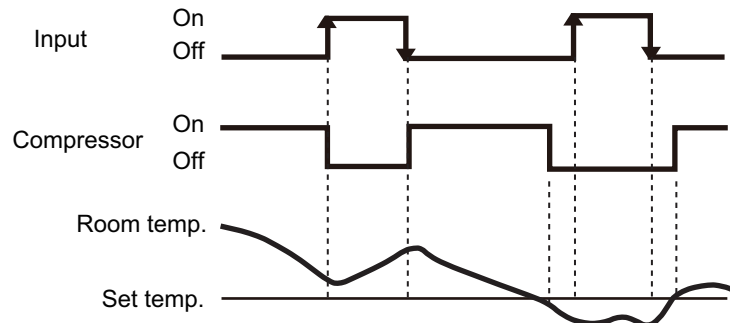
Function setting	Rotary SW on External input and output PCB	External input		Input signal	Command
46-03	1	External input and output PCB	CN313	Pulse	Operation
			CN314	Pulse	Stop (R.C. disabled)



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

- Forced thermostat off function

Rotary SW on External input and output PCB	External input		Input signal	Command
2	External input and output PCB	CN313	Off → On	Thermostat off
B			On → Off	Normal operation
C				

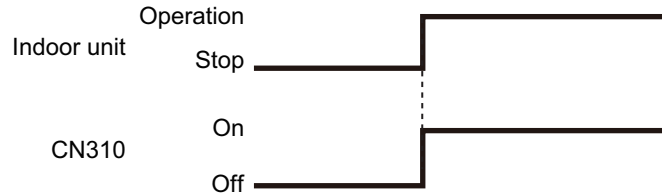


## ■ Control output function

### • Operation/Stop status

Rotary SW on External input and output PCB	External output		Output signal	Command
1 B C D	External input and output PCB	CN310	Off → On	Operation
On → Off			Stop	

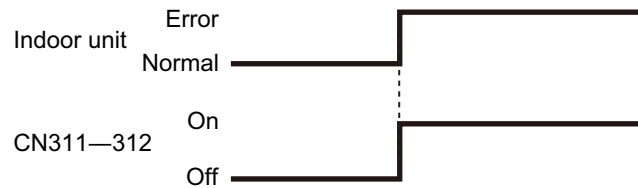
The output is low when the unit is stopped.



### • Error status

Rotary SW on External input and output PCB	External output		Output signal	Command
1 C	External input and output PCB	CN311	Off → On	Error
D			On → Off	Normal
		CN312	Off → On	Error
On → Off			Normal	

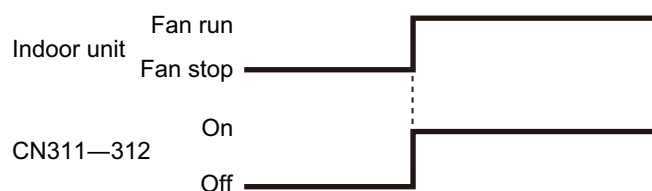
The output is ON when an error is generated for the indoor unit.



### • Indoor unit fan operation status

Rotary SW on External input and output PCB	External output		Output signal	Command
1	External input and output PCB	CN312	Off → On	Fan run
2 B D			On → Off	Fan stop
		CN311	Off → On	Fan run
On → Off			Fan stop	

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



## 9. Group connection

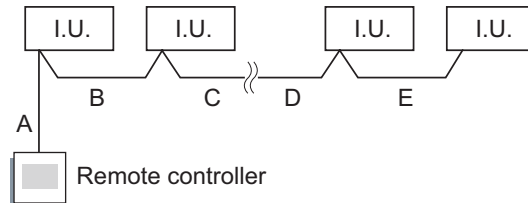
**NOTE:** Group control cannot be used together with Wireless LAN adapter.

### Installation procedure for group control system:

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

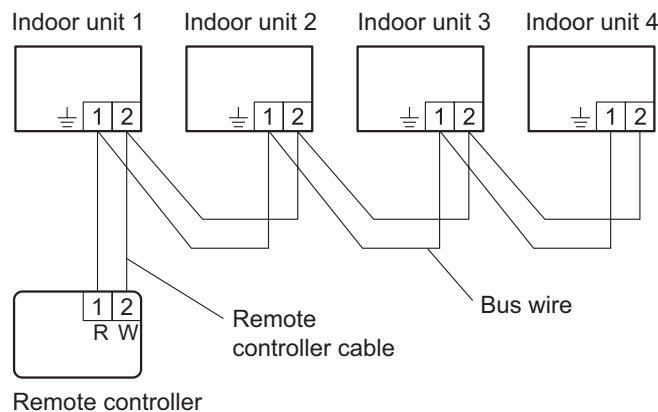
**NOTE:** When different type of indoor units (such as wall mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

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



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

Example of wiring method



2. Set the R.C. address. (Function setting)

- Addresses will be automatically set when initially starting up this unit. In such a case, do not change the remote controller address for the indoor unit, and keep it at the initial setting of "00".
- Only set addresses manually when using different numbers for addresses. Set the R.C. address of each indoor unit using the function setting. (Refer to "Remote controller address setting" in ["Contents of function setting"](#) on page 29.)

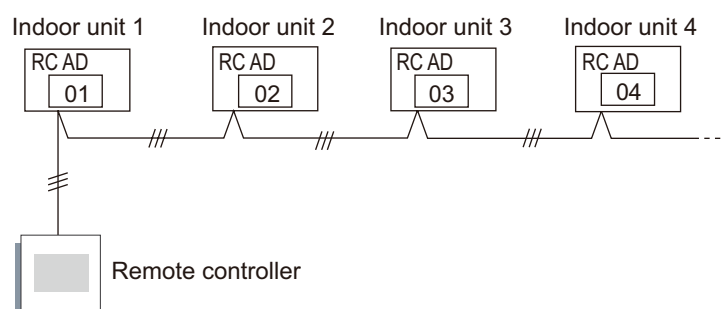
#### NOTES:

- Do not use the same setting value.
- Setting is reflected after the power is turned on again.

Also set the R.C. address for the remote controller. For details, refer to the remote controller installation manual.

**NOTE:** In manual setting, connect up to 15 indoor units in a system.

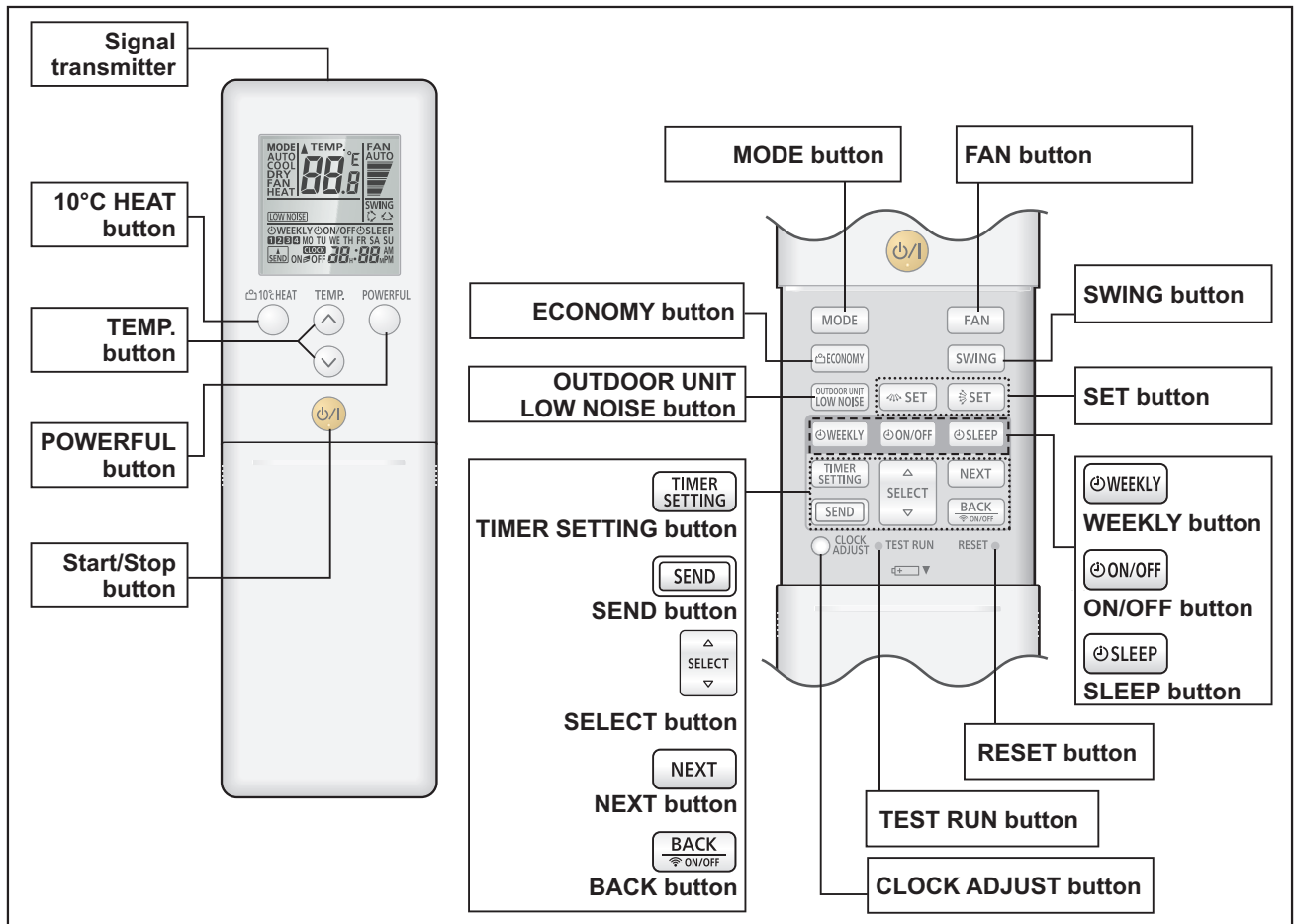
Example of wiring method



# 10. Remote controller

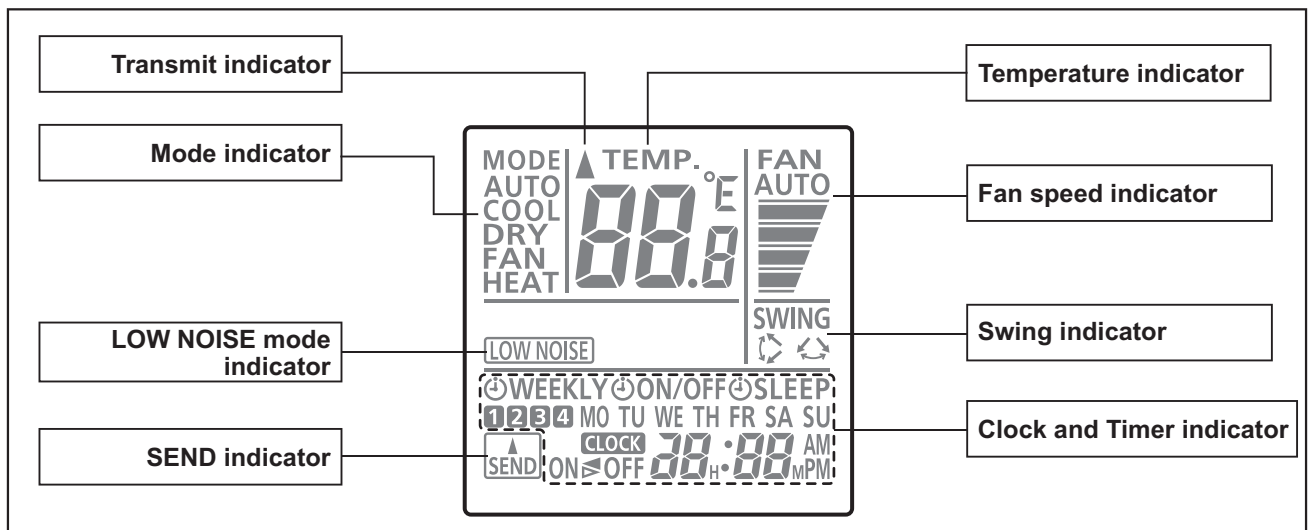
## 10-1. Wireless remote controller

### Overview



**NOTE:** Functions may differ by type of the indoor unit. For details, refer to the operation manual.

### Display panel

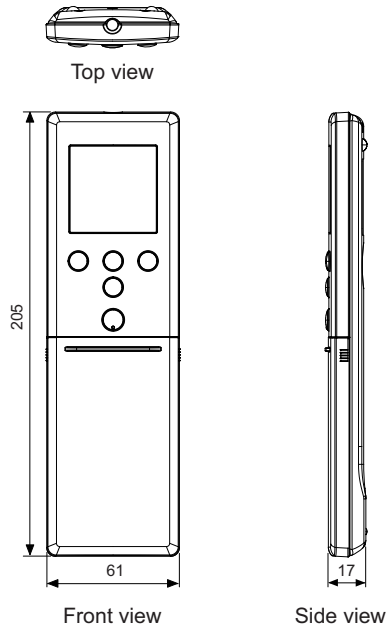


To facilitate explanation, the accompanying illustration has been drawn to show all possible indicators; in actual operation, however, the display will only show those indicators appropriate to the current operation.

## ■ Specifications

### ● Controller

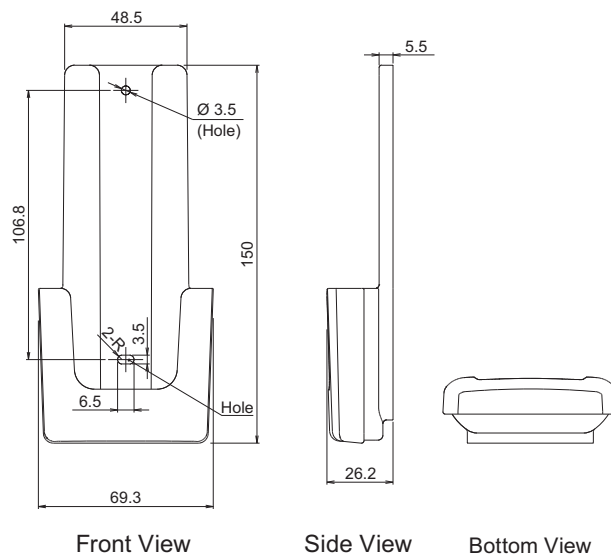
Unit: mm



Size (H × W × D)	mm	205 × 61 × 17
Weight	g	125 (without batteries)

### ● Holder

Unit: mm



Size (H × W × D)	mm	150 × 69.3 × 26.2
Weight	g	27

# 11. Function settings

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

**NOTE:** Incorrect settings can cause a product malfunction.

## 11-1. Function settings by using remote controller

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

### ■ Setting procedure by using wireless remote controller

The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

**Before connecting the power supply of the indoor unit, reconfirm following items:**

- Cover for the electrical enclosure on the outdoor unit is in place.
- There is no wiring mistake.
- Piping air tight test and vacuuming have been performed firmly.
- All the necessary wiring work for outdoor unit has been finished.

After reconfirming the items listed above, connect the power supply of the indoor unit.

#### NOTES:

- Settings will not be changed if invalid numbers or setting values are selected.
- When optional wired remote controller is used, refer to the installation manual enclosed with the remote controller.

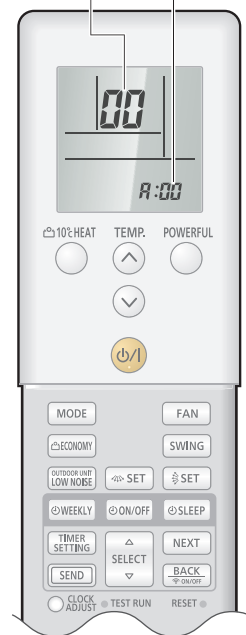
#### Entering function setting mode:

While pressing the POWERFUL button and TEMP. (^) button simultaneously, press the RESET button to enter the function setting mode.

#### Selecting the function number and setting value:

1. Press the TEMP. (^) (v) buttons to select the function number. To switch between the left and right digits, press the 10 °C HEAT button.
2. Press the POWERFUL button to proceed to value setting. To return the function number selection, press the POWERFUL button again.
3. Press the TEMP. (^) (v) buttons to select the setting value. To switch between the left and right digits, press the 10 °C HEAT button.
4. Press the MODE button once. Confirm that you hear the beep sound.
5. Press the START/STOP button to fix the function setting. Confirm that you hear the beep sound.
6. Press the RESET button to end the function setting mode.
7. After completing the function setting, be sure to disconnect the power supply and then reconnect it.

Function number  
Setting value



#### ⚠ CAUTION

After disconnecting the power supply, wait 30 seconds or more before reconnecting it. The function setting will not become active unless the power supply is disconnected and then reconnected.



## NOTES:

- The air conditioner custom code is set to  $\overline{H}$  prior to shipment.
- If you do not know the air conditioner custom code setting, try each of the custom codes ( $\overline{H} \rightarrow \overline{b}$   $\rightarrow \overline{c} \rightarrow \overline{d}$ ) until you find the code that operates the air conditioner.

## ■ Contents of function setting

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

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

## ● Function setting list

	Function no.	Functions
1)	00	Remote controller address setting
2)	11	Filter sign
3)	30/31	Room temperature control for indoor unit sensor
4)	35/36	Room temperature control for wired remote controller sensor
5)	40	Auto restart
6)	42	Room temperature sensor switching
7)	44	Remote controller custom code
8)	46	External input control
9)	48	Room temperature sensor switching (Aux.)
10)	49	Indoor unit fan control for energy saving for cooling

### 1) Remote controller address setting

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

Set the unit number of each indoor unit.

Function number	Setting value	Setting description	Factory setting
00	00	Unit no. 0	◆
	01	Unit no. 1	
	02	Unit no. 2	
	03	Unit no. 3	
	04	Unit no. 4	
	05	Unit no. 5	
	06	Unit no. 6	
	07	Unit no. 7	
	08	Unit no. 8	
	09	Unit no. 9	
	10	Unit no. 10	
	11	Unit no. 11	
	12	Unit no. 12	
	13	Unit no. 13	
	14	Unit no. 14	
	15	Unit no. 15	

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

## 2) Filter sign

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

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

Function number	Setting value	Setting description	Factory setting
11	00	Standard (400 hours)	
	01	Long interval (1,000 hours)	
	02	Short interval (200 hours)	
	03	No indication	◆

## 3) Room temperature control for indoor unit sensor

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

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

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

Example of correction:

When the temperature of the room temp. sensor is 26°C and the setting value is "03" (-1.0°C), corrected temp. will be 27°C (26°C - [-1.0°C]).

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

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

#### 4) Room temperature control for wired remote controller sensor

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

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

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

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

#### 5) Auto restart

Enables or disables automatic restart after a power interruption.

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

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

#### 6) Room temperature sensor switching

(Only for wired remote controller)

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

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

00: Sensor on the indoor unit is active.

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

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

## 7) Remote controller custom code

(Only for wireless remote controller)

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

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

## 8) External input control

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

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

**NOTE:** If this function is necessary, the rotary switch on the External input and output PCB should be set to 1.

## 9) Room temperature sensor switching (Aux.)

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

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

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

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

## 10) Indoor unit fan control for energy saving for cooling

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

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

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

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

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

### NOTES:

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

## 11-2. Custom code setting for wireless remote controller

To interconnect the air conditioner and the wireless remote controller, assignment of the custom code for the wireless remote controller is required.

**NOTE:** Air conditioner cannot receive a signal if the air conditioner has not been set for the custom code.

When 2 or more air conditioners are installed in a room, and the remote controller is operating an air conditioner other than the one you wish to set, change the custom code of the remote controller to operate only the air conditioner you wish to set. (4 selections possible.)

Confirm the setting of the remote controller custom code and the function setting. If these do not match, the remote controller cannot be used to operate for the air conditioner.

1. Press the START/STOP button until only the clock is displayed on the remote controller display.
2. Press the MODE button for at least 5 seconds to display the current custom code. (Initially set to  $\text{F1}$ .)
3. Press the TEMP. ( $\wedge$ ) ( $\vee$ ) buttons to change the custom code between  $\text{F1} \rightarrow \text{F2} \rightarrow \text{F3} \rightarrow \text{F4}$ . Match the code on the display to the air conditioner custom code. (Initially set to  $\text{F1}$ .)
4. Press the MODE button again to return to the clock display. The custom code will be changed.


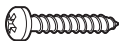


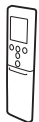




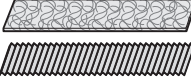
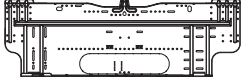


### NOTES:

- If no button is pressed within 30 seconds after the custom code is displayed, the system returns to the original clock indicator. In this case, start again from step 1.
- The air conditioner custom code is set to  $\text{F1}$  prior to shipment. To change the custom code, contact your retailer.
- If you do not know the assigned code for the air conditioner, try each of the custom code ( $\text{F1} \rightarrow \text{F2} \rightarrow \text{F3} \rightarrow \text{F4}$ ) until you find the code which operates the air conditioner.


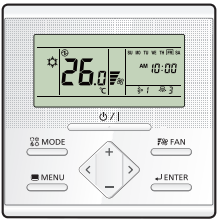


## 12. Accessories

### 12-1. Models: RSG18KMTA, RSG18KMTB, RSG24KMTA, and RSG24KMTB

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Tapping screw (large)		5
Installation manual		1	Tapping screw (small)		2
Remote controller		1	Battery		2
Remote controller holder		1	Filter holder		2
Cloth tape		1	Air cleaning filters		1
Wall hook bracket		1			

# 13. Optional parts

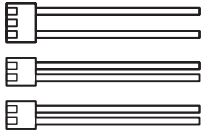

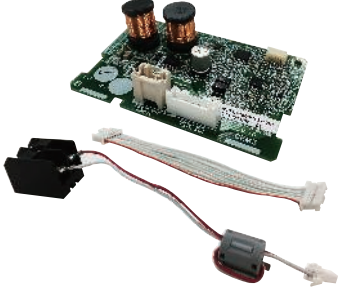

## 13-1. Controllers

Exterior	Part name	Model name	Summary
	Wired remote controller	UTY-RNRX*	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.
	Wired remote controller	UTY-RLRX	High visibility and easy operation. Room temperature can be accurately controlled using the built-in thermo sensor. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.
	Simple remote controller	UTY-RSRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.
	Simple remote controller	UTY-RHRY	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, and temperature setting. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.

### NOTES:

- Available functions may differ by the remote controller. For details, refer to the operation manual.
- When using a Wireless LAN adapter, group controlling system of the wired remote controller is prohibited.

## 13-2. Others

Exterior	Part name	Model name	Summary
	External connect kit	UTY-XWZXZ5	Required when external device is connected.
	External input and output PCB	UTY-XCSXZ2	Use to connect with external devices and air conditioner PCB. Optional External connect kit is necessary for installation.
	Communication kit	UTY-TWRXZ2	Use to connect Non-polar 2-core wired remote controller.
	Wireless LAN adapter	UTY-TFSXF2	Remotely manage an air conditioning system using mobile devices such as smartphones and tablets.



# **Part 2. OUTDOOR UNIT**

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**SINGLE TYPE:**

**ROG18KMTA**

**ROG24KMTA**

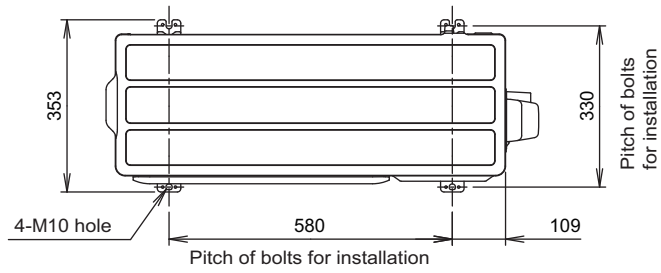
# 1. Specifications

Type			Inverter heat pump	
Model name			ROG18KMTA	ROG24KMTA
Power supply			230 V ~ 50 Hz	
Power supply intake			Outdoor unit	
Available voltage range			198—264 V	
Starting current			A	
Fan	Airflow rate	Cooling	7.0	8.6
		Heating	2,350	3,240
	Type × Q'ty		2,100	2,820
	Motor output	W	Propeller fan × 1 49	
Sound pressure level *1	Cooling	dB (A)	50	54
	Heating		50	52
Sound power level	Cooling	dB (A)	65	67
	Heating		65	66
Heat exchanger type	Dimensions (H × W × D)		588 × 881 × 18.19	672 × 881 × 18.19
	Fin pitch		588 × 851 × 18.19	
	Rows × Stages		1.3	
	Pipe type		1 × 28	1 × 32
	Type (Material)		Copper tube	
	Surface treatment		Aluminum PC fin	
Compressor	Type		DC twin rotary	
	Motor output	W	900	1,060
Refrigerant	Type (Global warming potential)		R32 (675)	
	Charge	g	1,020	1,320
Refrigerant oil	Type		FW68S	RmM68AF
	Amount	cm <sup>3</sup>	350	400
Enclosure	Material		Steel sheet	
	Color		Beige Approximate color of Munsell 10YR 7.5/1.0	
Dimensions (H × W × D)	Net		632 × 799 × 290	716 × 820 × 315
	Gross		692 × 940 × 375	776 × 961 × 450
Weight	Net		36	42
	Gross		40	46
Connection pipe	Size	Liquid	Ø 6.35 (Ø 1/4)	
		Gas	Ø 12.70 (Ø 1/2)	
	Method		Flare	
	Pre-charge length		15	
	Max. length		25	30
	Max. height difference		20	25
Operation range	Cooling	°C	-10 to 46	
	Heating		-15 to 24	
Drain hose	Material		PP	
	Size		Ø 13.0 (I. D.), Ø 16.0 to Ø 16.7 (O. D.)	
<b>NOTES:</b>				
<ul style="list-style-type: none"> <li>• Specifications are based on the following conditions: <ul style="list-style-type: none"> <li>– Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.</li> <li>– Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.</li> <li>– Pipe length: 5 m, Height difference: 0 m.</li> </ul> </li> <li>• Protective function might work when using it outside the operation range.</li> <li>• *1: Sound pressure level <ul style="list-style-type: none"> <li>– Measured values in manufacturer's anechoic chamber.</li> <li>– Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li> </ul> </li> </ul>				

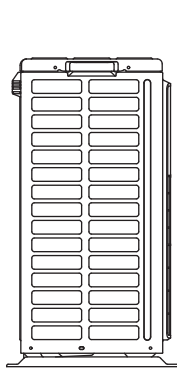
## 2. Dimensions

### 2-1. Model: ROG18KMTA

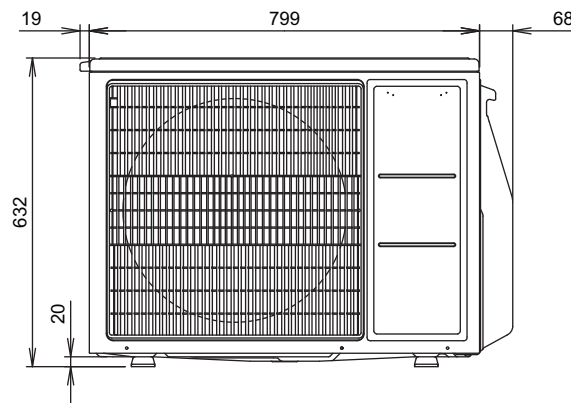
Unit: mm



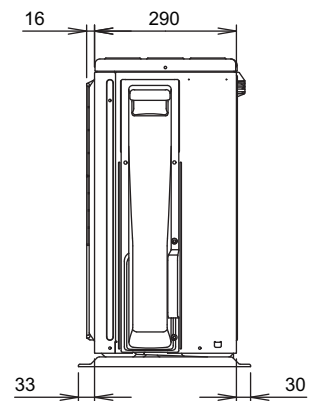
Top view



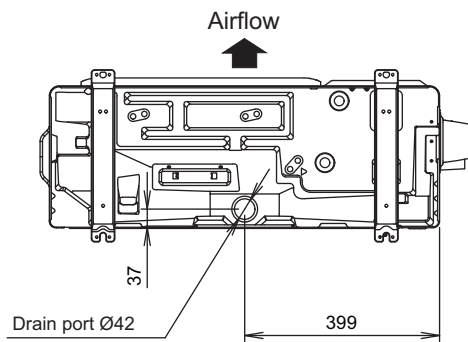
Side view



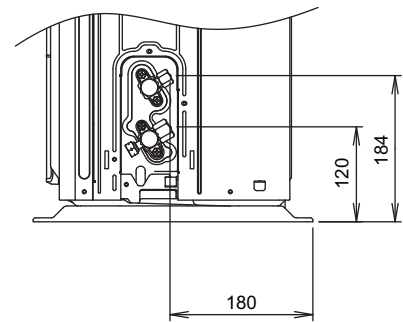
Front view



Side view



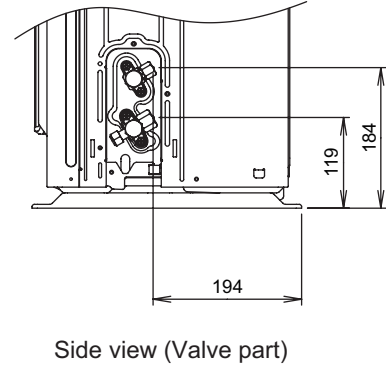
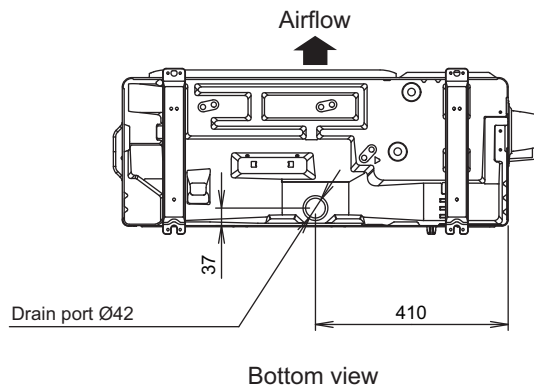
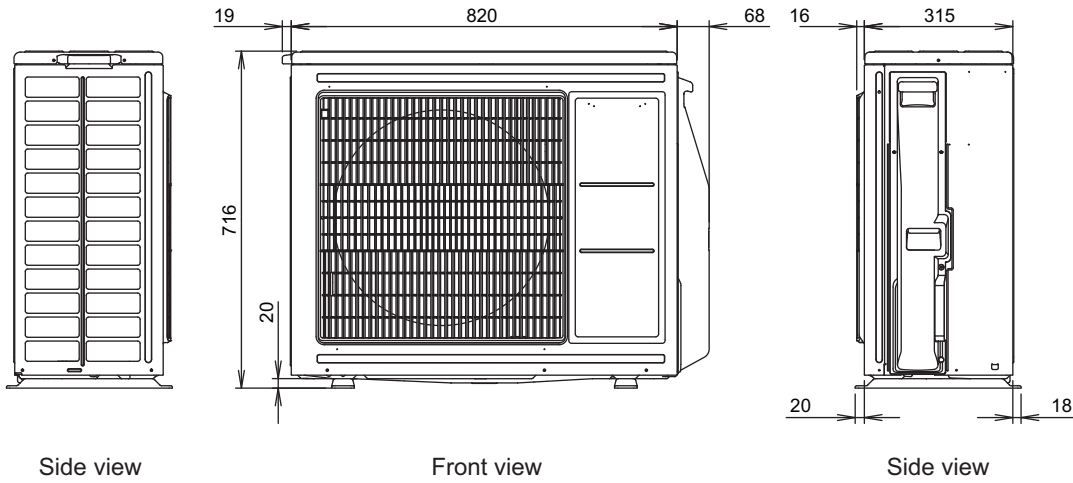
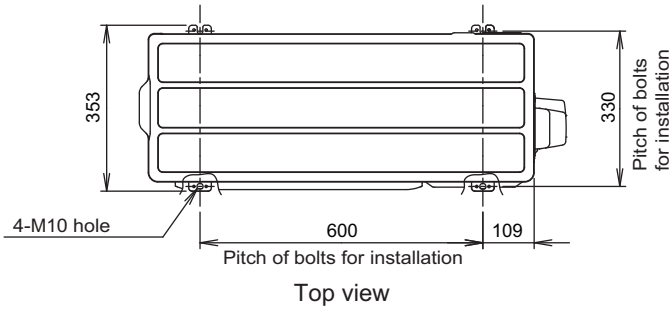
Bottom view



Side view (Valve part)

## 2-2. Model: ROG24KMTA

Unit: mm



# 3. Installation space

## 3-1. Models: ROG18KMTA and ROG24KMTA

### ■ Space requirement

Provide sufficient installation space for product safety.

**⚠ CAUTION**

Keep the space shown in the installation examples.

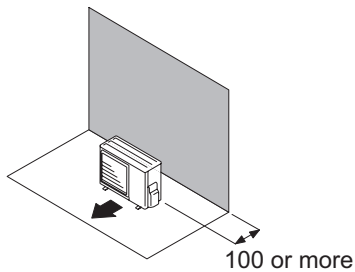
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

### ● Single outdoor unit installation

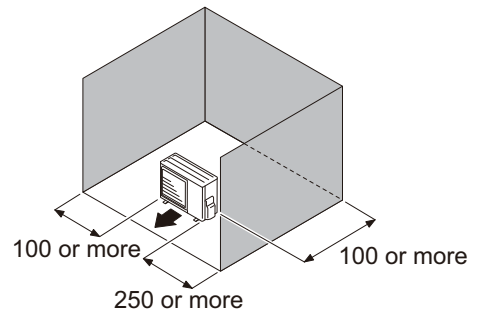
- When the upper space is open:

Unit: mm

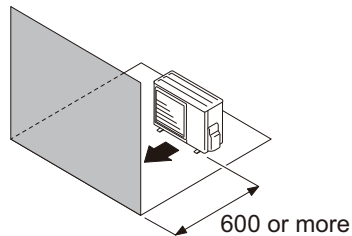
Obstacles at rear only



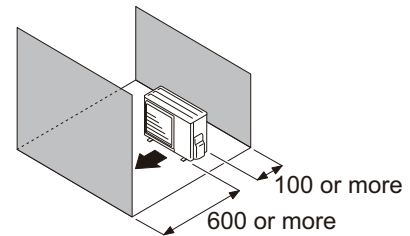
Obstacles at rear and sides



Obstacles at front



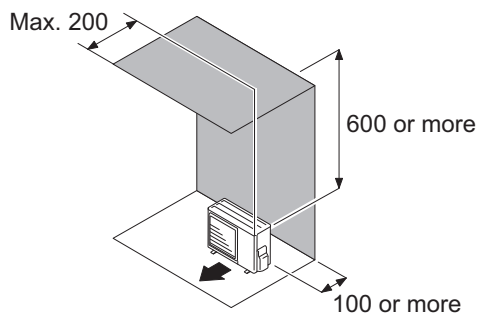
Obstacles at front and rear



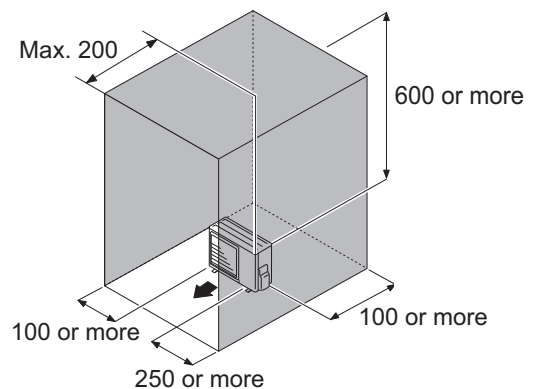
- When an obstruction in the upper space:

Unit: mm

Obstacles at rear and above



Obstacles at rear, sides, and above



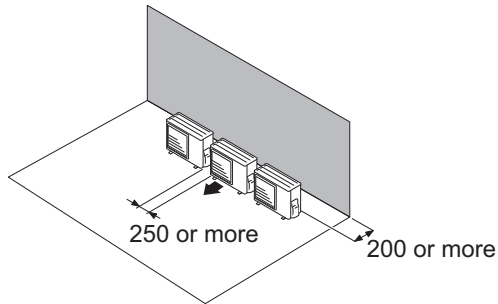
## ● Multiple outdoor unit installation

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

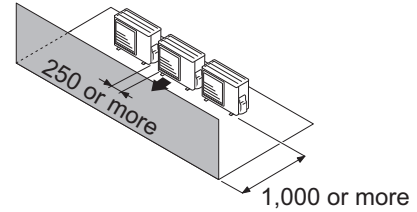
- **When the upper space is open:**

Unit: mm

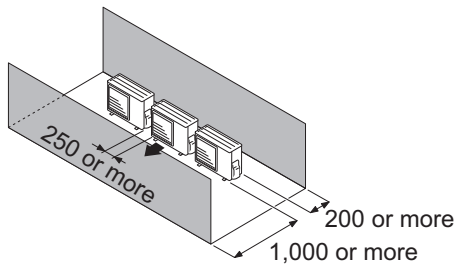
Obstacles at rear only



Obstacles at front only



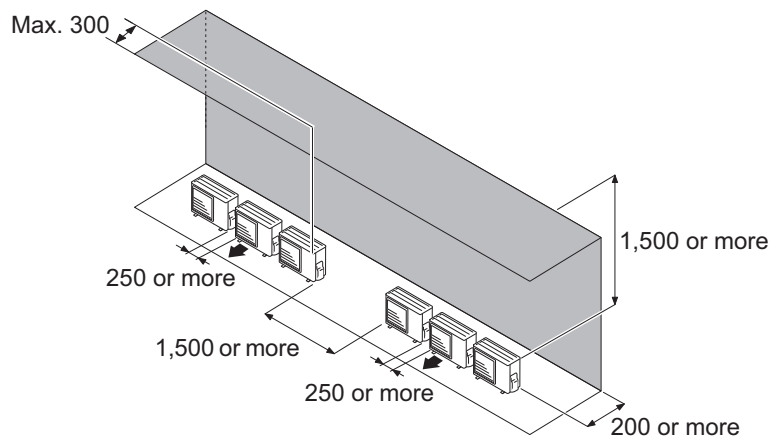
Obstacles at front and rear



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

Unit: mm

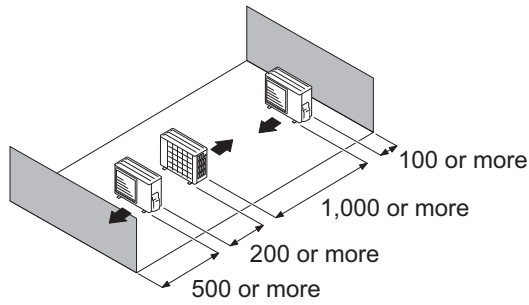
Obstacles at rear and above.



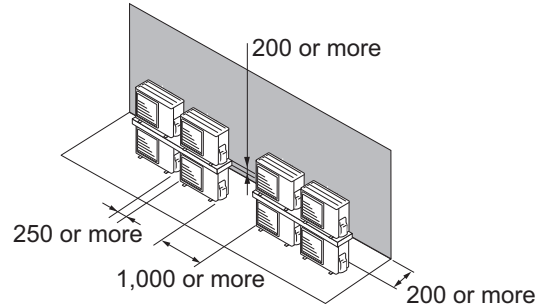
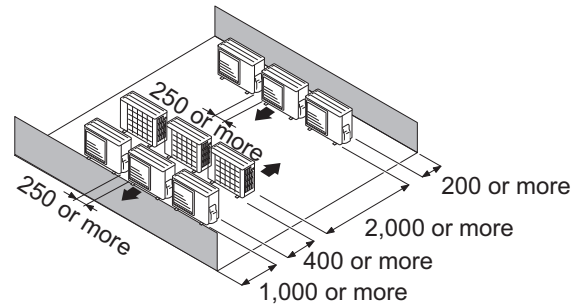
## ● Outdoor units installation in multi-row

Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement

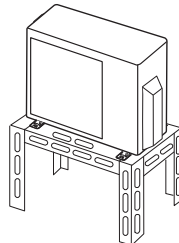


### NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

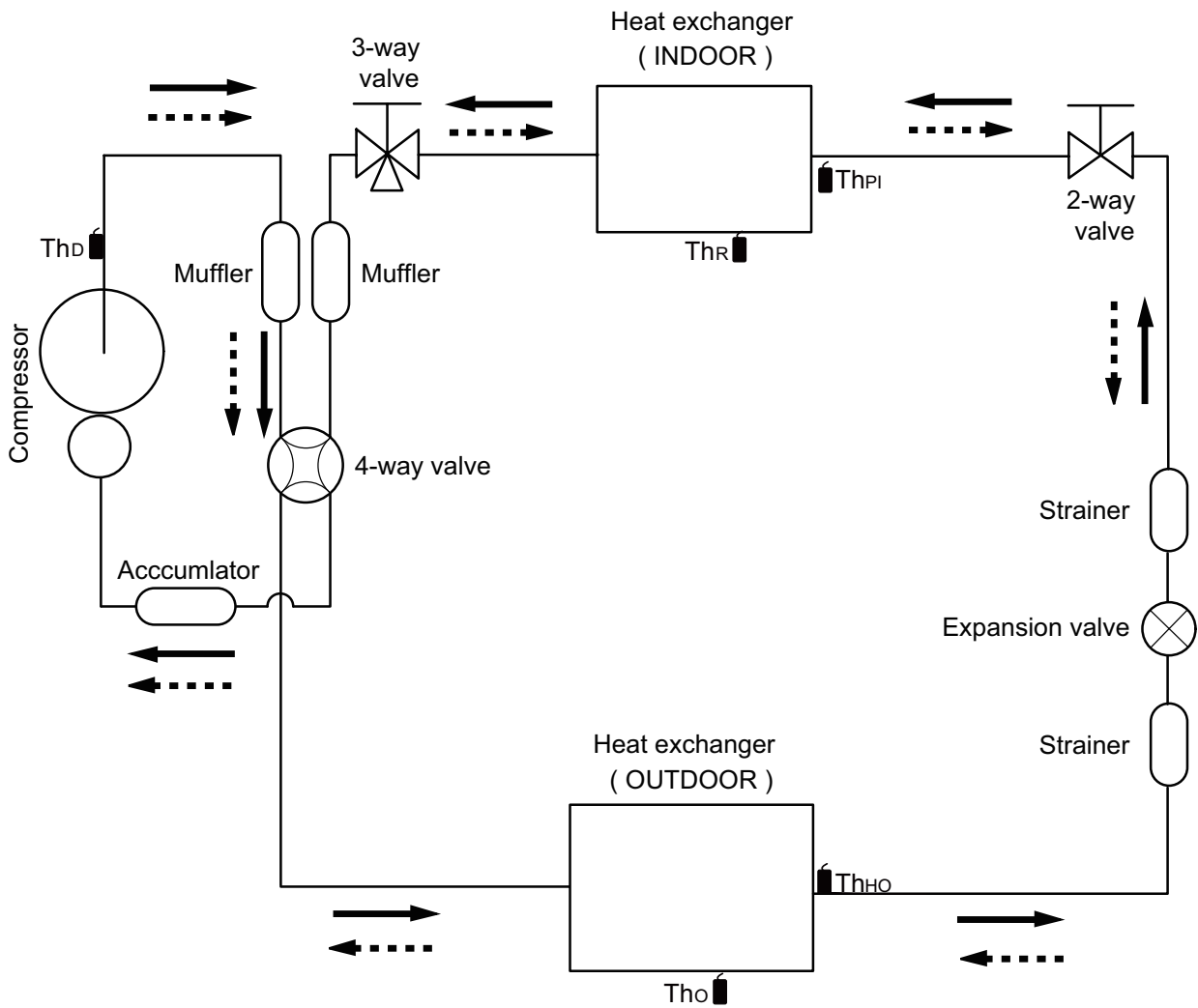
### ⚠ CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



# 4. Refrigerant circuit

## 4-1. Model: ROG18KMTA

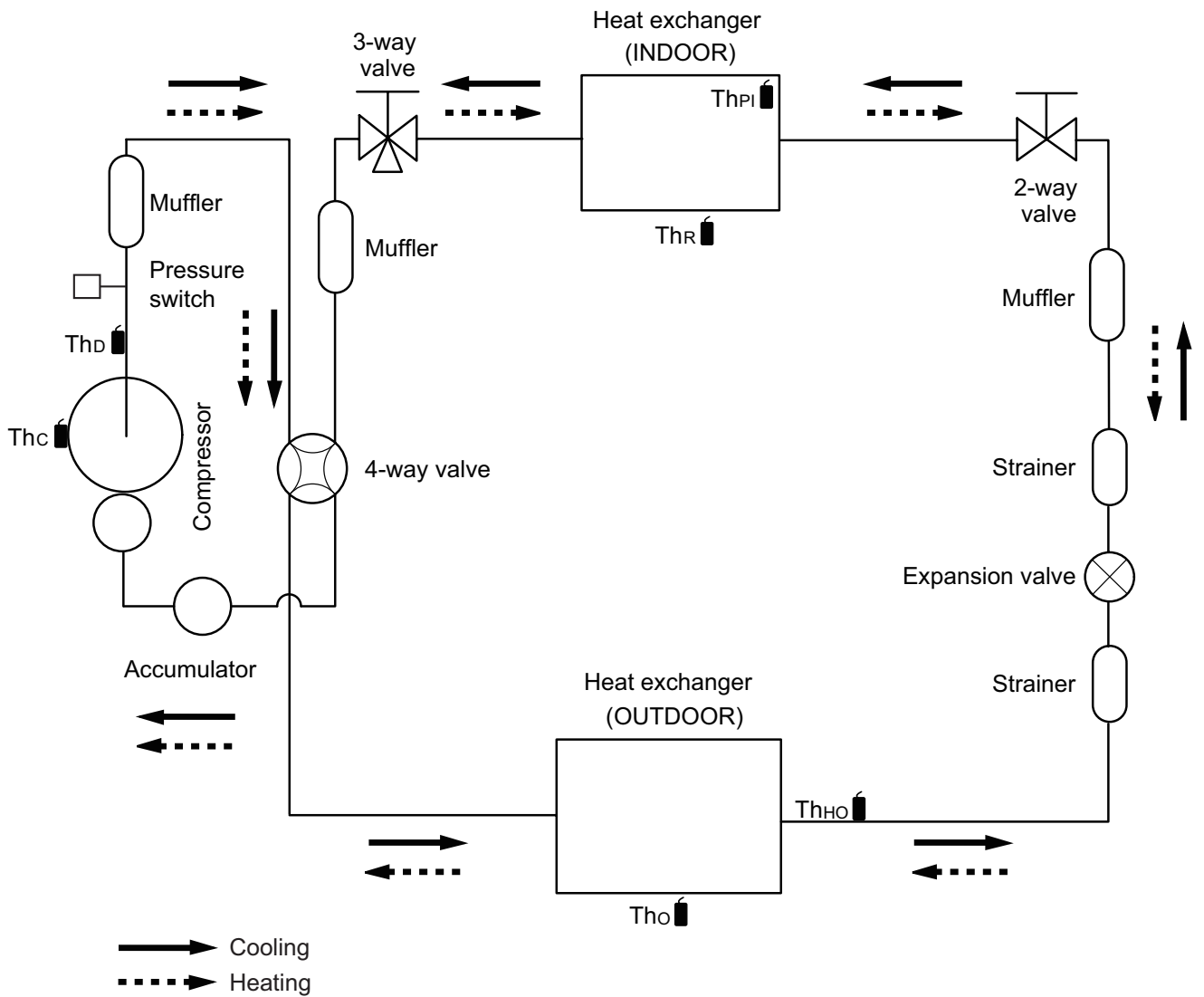


Cooling  
 Heating

- Th<sub>D</sub> : Thermistor (Discharge temperature)
- Th<sub>O</sub> : Thermistor (Outdoor temperature)
- Th<sub>HO</sub> : Thermistor (Heat exchanger out temperature)
- Th<sub>R</sub> : Thermistor (Room temperature)
- Th<sub>PI</sub> : Thermistor (Pipe temperature)



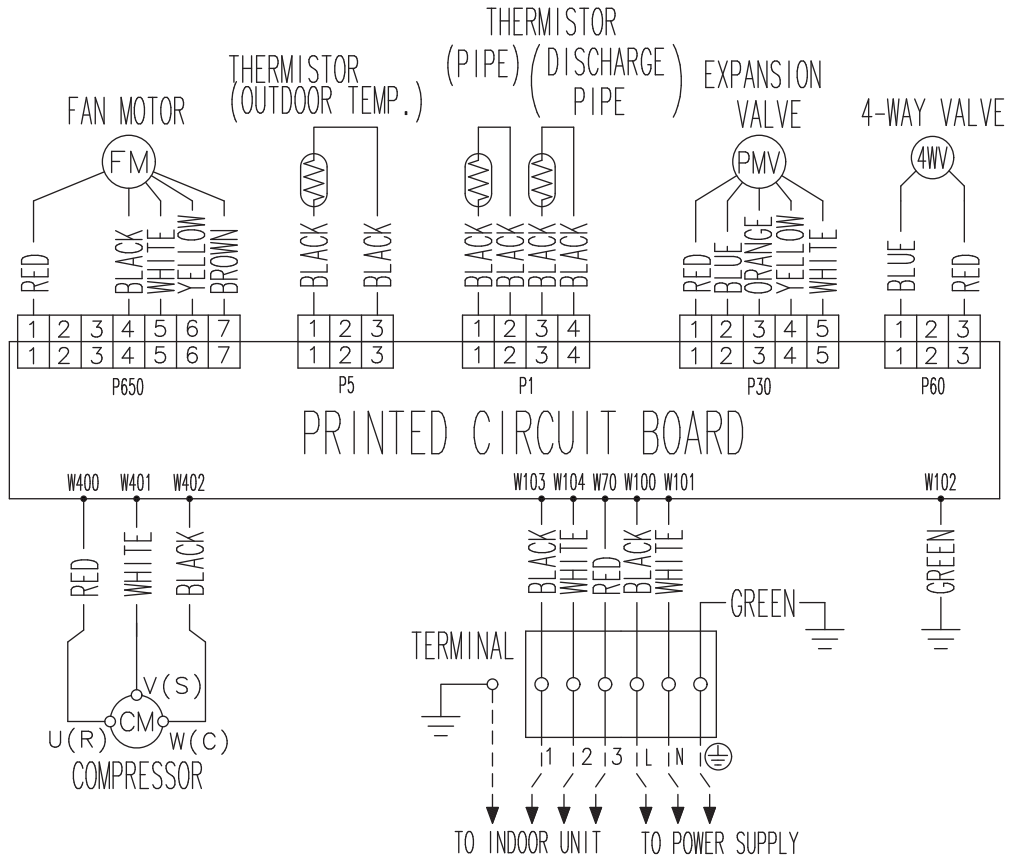
## 4-2. Model: ROG24KMTA



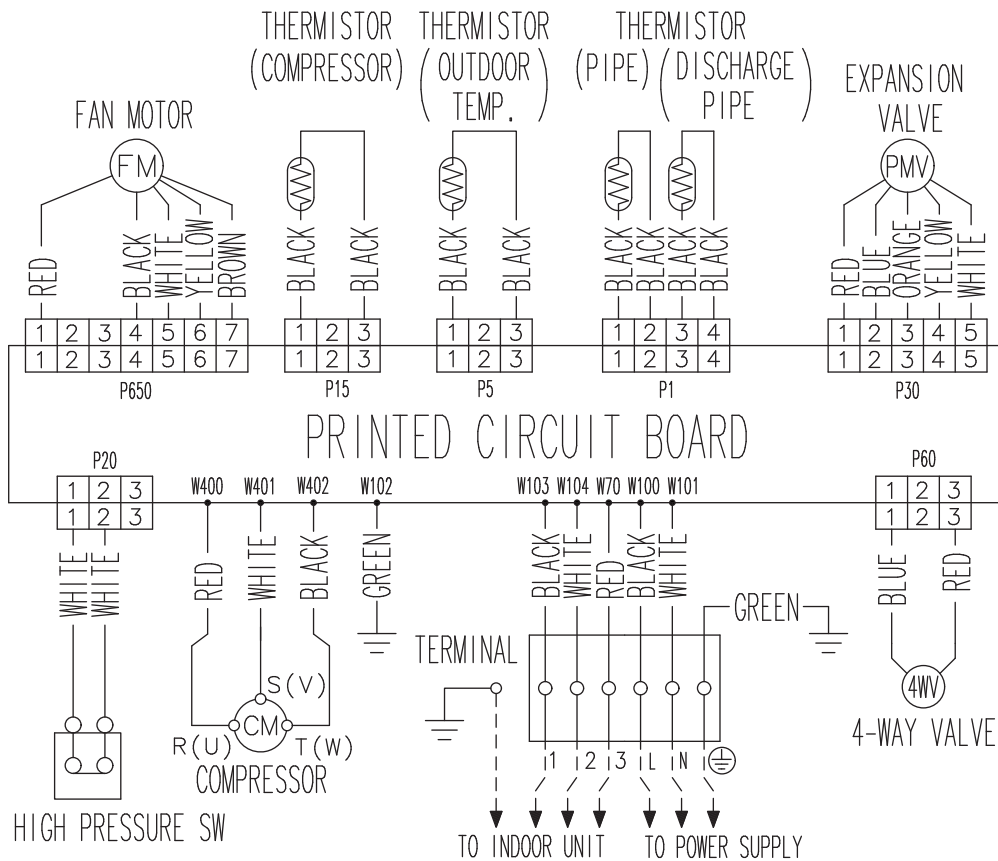
- Thc : Thermistor (Compressor temperature)
- Thd : Thermistor (Discharge temperature)
- Tho : Thermistor (Outdoor temperature)
- Thho : Thermistor (Heat exchanger out temperature)
- ThR : Thermistor (Room temperature)
- ThPI : Thermistor (Pipe temperature)

## 5. Wiring diagrams

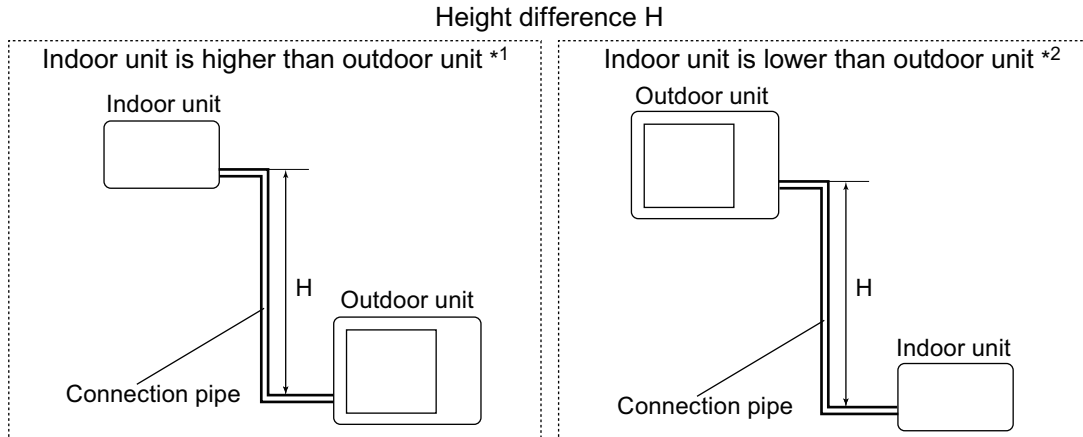
### 5-1. Model: ROG18KMTA



### 5-2. Model: ROG24KMTA



## 6. Capacity compensation rate for pipe length and height difference



### 6-1. Model: ROG18KMTA

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

COOLING			Pipe length (m)					
			5	7.5	10	15	20	25
Height difference H (m)	Indoor unit is higher than outdoor unit *1	20	—	—	—	—	0.917	0.900
		10	—	—	0.966	0.947	0.932	0.914
		7.5	—	0.979	0.970	0.951	0.936	0.918
		5	0.992	0.983	0.974	0.955	0.939	0.922
	Indoor unit is lower than outdoor unit *2	0	1.000	0.991	0.981	0.963	0.946	0.930
		-5	1.000	0.991	0.981	0.963	0.946	0.930
		-7.5	—	0.991	0.981	0.963	0.946	0.930
		-10	—	—	0.981	0.963	0.946	0.930
		-20	—	—	—	—	0.946	0.930

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

## 6-2. Model: ROG24KMTA

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

COOLING			Pipe length (m)						
			5	7.5	10	15	20	25	30
Height difference H (m)	Indoor unit is higher than outdoor unit *1	25	—	—	—	—	—	0.893	0.877
		20	—	—	—	—	0.917	0.900	0.885
		10	—	—	0.966	0.947	0.932	0.914	0.899
		7.5	—	0.979	0.970	0.951	0.936	0.918	0.903
		5	0.992	0.983	0.974	0.955	0.939	0.922	0.906
	Indoor unit is lower than outdoor unit *2	0	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-5	1.000	0.991	0.981	0.963	0.946	0.930	0.914
		-7.5	—	0.991	0.981	0.963	0.946	0.930	0.914
		-10	—	—	0.981	0.963	0.946	0.930	0.914
		-20	—	—	—	—	0.946	0.930	0.914
		-25	—	—	—	—	0.930	0.914	

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

## 7. Additional charge calculation

### 7-1. Model: ROG18KMTA

Refrigerant type					R32
Refrigerant amount		g			1,020

#### ■ Refrigerant charge

Total pipe length	m	15 or less	20	25 (Max.)	20 g/m
Additional charge	g	0	100	200	

### 7-2. Model: ROG24KMTA

Refrigerant type					R32
Refrigerant amount		g			1,320

#### ■ Refrigerant charge

Total pipe length	m	15 or less	20	25	30 (Max.)	20 g/m
Additional charge	g	0	100	200	300	

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## 8. Airflow

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### 8-1. Model: ROG18KMTA

#### ● Cooling

m <sup>3</sup> /h	2,350
l/s	653
CFM	1,383

#### ● Heating

m <sup>3</sup> /h	2,100
l/s	583
CFM	1,236

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### 8-2. Model: ROG24KMTA

#### ● Cooling

m <sup>3</sup> /h	3,240
l/s	900
CFM	1,907

#### ● Heating

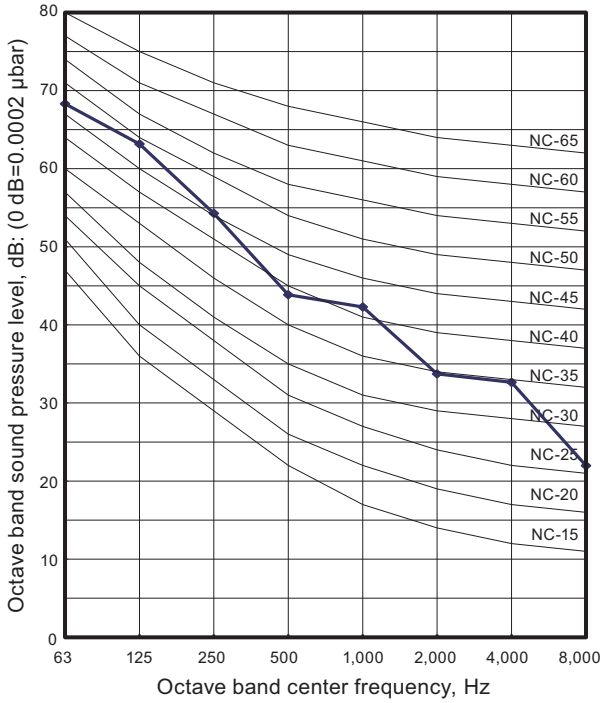
m <sup>3</sup> /h	2,820
l/s	783
CFM	1,660

# 9. Operation noise (sound pressure)

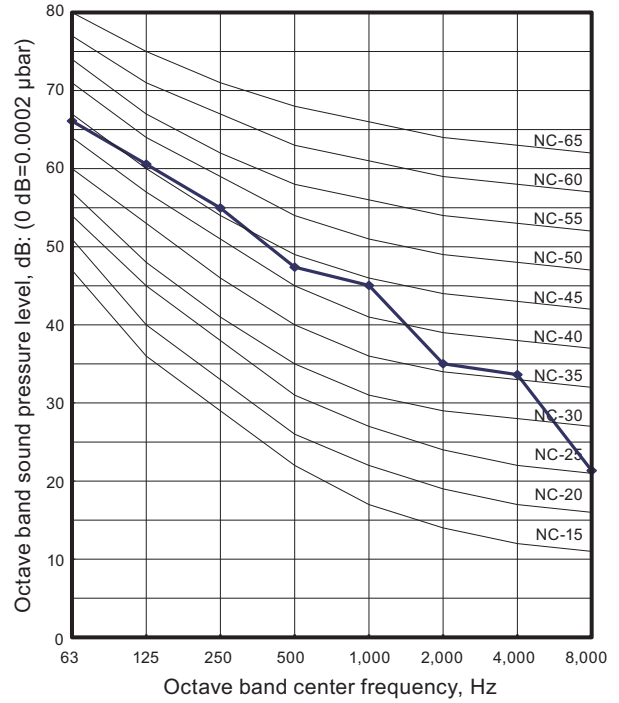
## 9-1. Noise level curve

### Model: AOYG18KMTA

#### Cooling

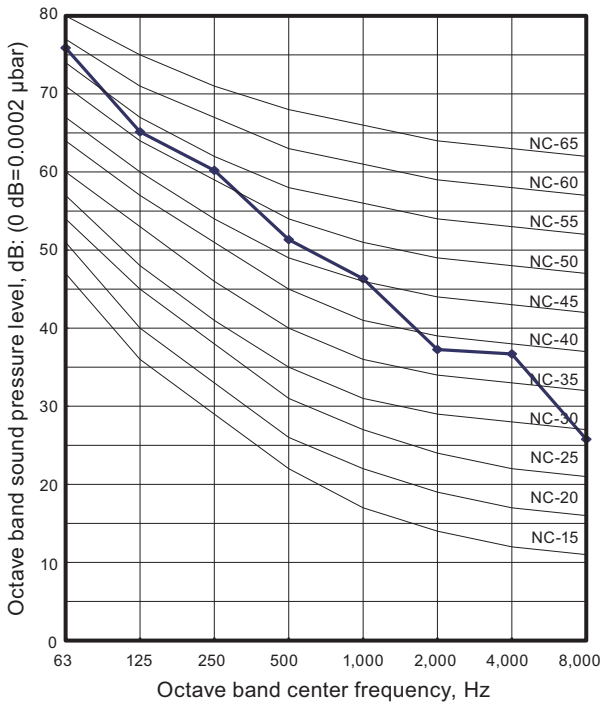


#### Heating

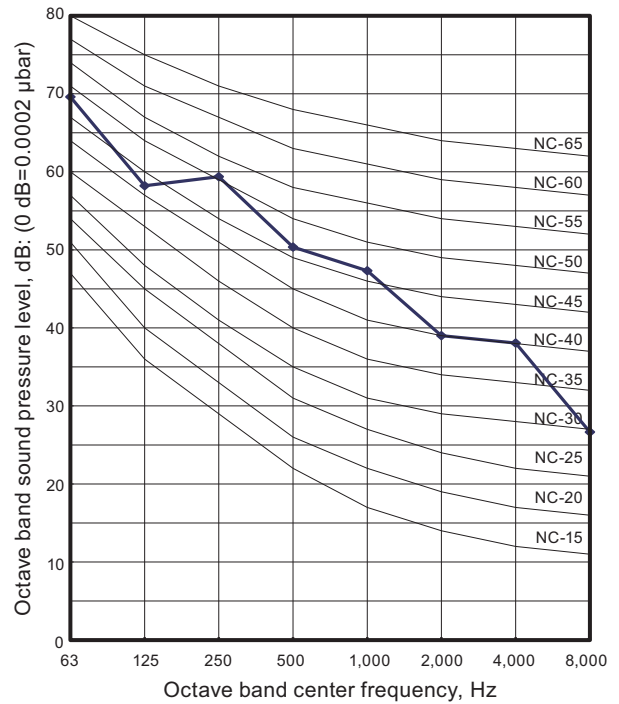


### Model: AOYG24KMTA

#### Cooling



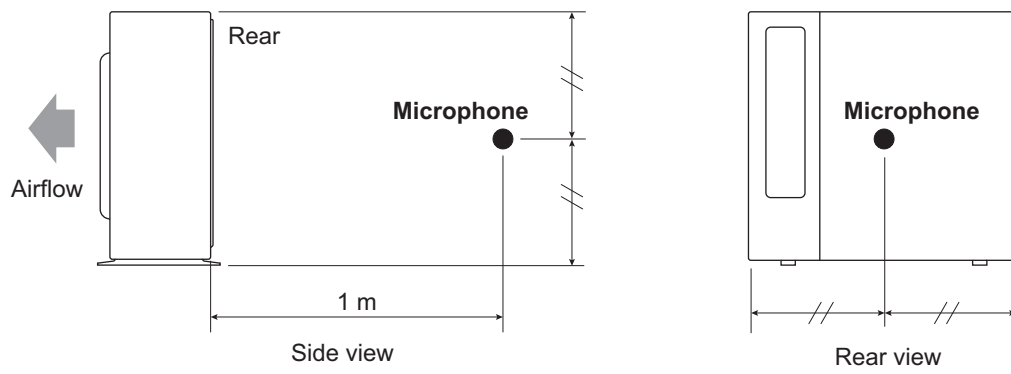
#### Heating



OUTDOOR UNIT  
AOYG18, 24KMTA

OUTDOOR UNIT  
AOYG18, 24KMTA

## 9-2. Sound level check point



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



## 10. Electrical characteristics

Model name			ROG18KMTA	ROG24KMTA	
Power supply	Voltage	V	230 ~		
	Frequency	Hz	50		
Max operating current *1		A	13.5	16.0	
Starting current		A	7.0	8.6	
Wiring spec. *2	Circuit breaker current		A	16	20
	Power cable		mm <sup>2</sup>	2.5	
	Connection cable *3	Cross-sectional area	mm <sup>2</sup>	1.5—2.5	
		Limited wiring length	m	26	31

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

\*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.



\*3: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

## 11. Safety devices

Type of protection	Protection form		Model		
			ROG18KMTA	ROG24KMTA	
Circuit protection	Current fuse (PCB*)		250 V, 25 A		
			250 V 5 A		
			250 V, 3.15 A		
Fan motor protection	Thermal protection program		Activate	100±15°C Fan motor stop	
			Reset	95±10°C Fan motor restart	
Compressor protection	Thermal protection program (Discharge temp.)		Activate	110°C Compressor stop	
			Reset	After 7 minutes Compressor restart	
	Thermal protection program (Outdoor temp.) (Only in COOL or DRY mode)		Activate	-20 °C Compressor stop	-15 °C Compressor stop
			Reset	-15 °C Compressor restart	-10 °C Compressor restart

## 12. Accessories

### 12-1. Models: ROG18KMTA and ROG24KMTA

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1