

REFRIGERANT R32
INVERTER

AIR CONDITIONER

Wall mounted type

DESIGN & TECHNICAL MANUAL



INDOOR

ASYG07KMCF
ASYG09KMCF
ASYG12KMCF
ASYG14KMCF



OUTDOOR

AOYG07KMCC
AOYG09KMCC
AOYG12KMCC



AOYG14KMCC

FUJITSU GENERAL LIMITED

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- For further details, please check with our authorized dealer.

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Part 1. INDOOR UNIT

WALL MOUNTED TYPE:

ASYG07KMCF

ASYG09KMCF

ASYG12KMCF

ASYG14KMCF

1. Specifications

Type			Wall mounted						
			Inverter, Heat pump						
Model name			ASYG07KMCF	ASYG09KMCF	ASYG12KMCF	ASYG14KMCF			
Power supply			230 V~ 50 Hz						
Power supply intake			Outdoor unit						
Available voltage range			198–264 V						
Capacity	Cooling	Rated	kW	2.0	2.5	3.4	4.2		
			Btu/h	6,800	8,500	11,600	14,300		
		Min.—Max.	kW	0.9–3.0	0.9–3.2	0.9–3.9	0.9–4.4		
			Btu/h	3,100–10,200	3,100–10,900	3,100–13,300	3,100–15,000		
	Heating	Rated	kW	2.5	2.8	4.0	5.4		
			Btu/h	8,500	9,500	13,600	18,400		
		Min.—Max.	kW	0.9–3.4	0.9–4.0	0.9–5.3	0.9–6.0		
			Btu/h	3,100–11,600	3,100–13,600	3,100–18,000	3,100–20,500		
Input power	Cooling	Rated	kW	0.450	0.630	0.935	1.220		
		Min.—Max.		0.25–1.17	0.25–1.21	0.25–1.27	0.25–1.40		
		Rated	W	0.555	0.620	0.960	1.410		
		Min.—Max.		0.25–1.21	0.25–1.26	0.25–1.52	0.25–1.73		
	Heating	HIGH	W	22.1	26.5	33.6			
		MED		15.1	16.0	20.0			
		LOW	kW	10.0	6.4	11.8			
		QUIET		6.4	4.8	7.1			
Current		Cooling	A	2.6	3.4	4.8	5.8		
		Heating		3.0	3.4	5.1	6.8		
Energy efficiency class			Cooling	A++					
			Heating (Average)	A+					
Pdesign			Cooling	2.0	2.5	3.4	4.2		
			Heating (Average)	2.3	2.4	2.5	4.0		
SEER			Cooling	7.4					
			Heating (Average)	4.1					
SCOP			kWh/kWh	95	118	163	213		
				785	819	795	1,366		
Annual energy consumption			QCE	4.43					
			QHE (Average)	4.52					
EER			Cooling	3.97					
			Heating	3.65					
COP			kW/kW	3.44					
				3.83					
Sensible capacity			Cooling	2.2					
			Heating	3.2					
Power factor			Cooling	88					
			Heating	87					
Moisture removal			L/h (pints/h)	1.0 (1.8)	1.3 (2.3)	1.8 (3.2)	2.1 (3.7)		
Maximum operating current*1		Cooling	A	6.5					
		Heating		9.0					
Fan	Airflow rate	Cooling	m³/h	650	700	770			
				540	560	600			
				430	450	450			
				270	280	280			
	Heating	HIGH	W	720	750	780	820		
		MED		580	610	640	660		
		LOW		460	470	520	520		
		QUIET		330	340	340			
Type × Qty			Crossflow fan × 1						
Motor output			dB (A)	27					
Sound pressure level*2				38	40	43			
			dB (A)	33	34	35	36		
				29	20	30			
				41	42	44			
				35	36	38	39		
Sound power level			dB (A)	31	22	33			
				54	55	57			
				56	57	58	59		
Heat exchanger	Dimensions (H × W × D)			Main 1: 210 × 670 × 26.6 Main 2: 112 × 670 × 20.0					
	Fin pitch			Main 1: 1.2 Main 2: 1.1					
	Rows × Stages			Main 1: 2 × 10 Main 2: 2 × 7					
	Pipe type			Main 1: 2 × 10 Main 2: 2 × 7					
	Fin type			Copper tube Aluminum					
	Material			Polystyrene					
	Color			White Approximate color of Munsell N9.25/					
	Dimensions (H × W × D)			Main 1: 210 × 670 × 26.6 Main 2: 112 × 670 × 20.0 Sub 1: 84 × 670 × 13.3					
Weight			mm	Main 1: 1.2 Main 2: 1.1 Sub 1: 1.4					
				Main 1: 2 × 10 Main 2: 2 × 7 Sub 1: 1 × 4					
Connection pipe			mm (in)	Flare					
				PP+HDPE					
Drain hose			mm	Ø13.8 (I.D.), Ø15 to Ø16.8 (O.D.)					
				18 to 32					
Operation range			°C	80 or less					
				16 to 30					
Remote controller			Wireless (Option: Wired, Mobile app ³ [AIRSTAGE Mobile])						

Type	Wall mounted			
	Inverter, Heat pump			
Model name	ASYG07KMCF	ASYG09KMCF	ASYG12KMCF	ASYG14KMCF
NOTES:				
<ul style="list-style-type: none">• Specifications are based on the following conditions:<ul style="list-style-type: none">– 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: 5.0 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:<ul style="list-style-type: none">– 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®.• This data is based on EN 14511 standard.				

2. Wireless LAN control

By installing mobile app on a smart device, several functions can be controlled from outside the house.

2-1. System requirement

Before using this function, prepare the following items:

- **Wireless router:**

Wireless LAN standard	IEEE802.11b/g/n
Frequency bands*	<ul style="list-style-type: none"> • U.S.A., Canada: 2.4 GHz (1ch—11ch) • Other countries: 2.4 GHz (1ch—13ch)
Network security standard	<ul style="list-style-type: none"> • Open • WEP • WPA (PSK) • WPA2 Personal (PSK) • WPS for same-LAN registration

*: Usable only in the country or region where you purchased the product.

To check whether your wireless router complies with the network security standards listed above, refer to the operation manual.

- **Smartphone:**

App-compliant operating system	iOS	Check the latest version of supported OS at Google Play store or App Store.
	Android™	

- **AIRSTAGE Mobile (mobile application):**

Mobile app is available on Google Play store or on App Store.

After installation of mobile app, user registration is required. For user registration and setup information, refer to Setting Manual attached with the product.

For the latest version of the wireless LAN control manuals, refer to the following web site.

<https://www.fujitsu-general.com/global/support/>

2-2. Wireless LAN function list

NOTE: To use the wireless LAN control, user registration in advance and access to the wireless home network are required.

Item		Mobile app	Attached Wireless Remote Controller
Air conditioning control function	Operation on/off	○	○
	Operation mode setting	○	○
	Set temperature setting	○	○
	Fan speed setting	○	○
	Airflow direction setting	Louver position adjustment	○
		• Up/down	○
	Timer operation	Swing	○
		• Up/down	○
		Off timer	—
		On timer	○*1
		Sleep timer	○*1
Additional function	On/off program timer	—	○*1
	Weekly timer*2	○	○*1
	POWERFUL operation setting	○*1	○*1
	ECONOMY operation setting	○	○
	10 °C HEAT operation setting	○*1	○*1
	Room temperature indication	○	—
Fan control for energy saving		○	○
Outdoor unit low noise operation setting		○*1	○*1

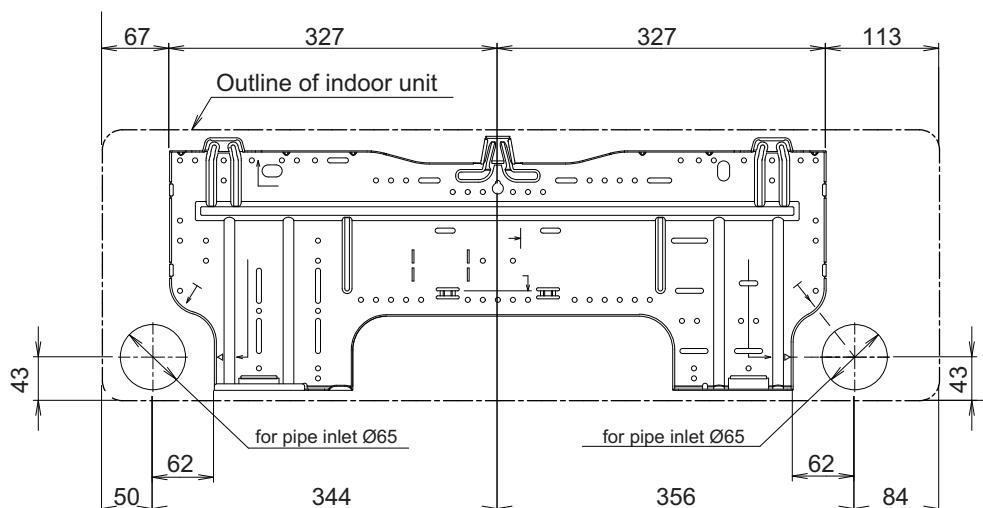
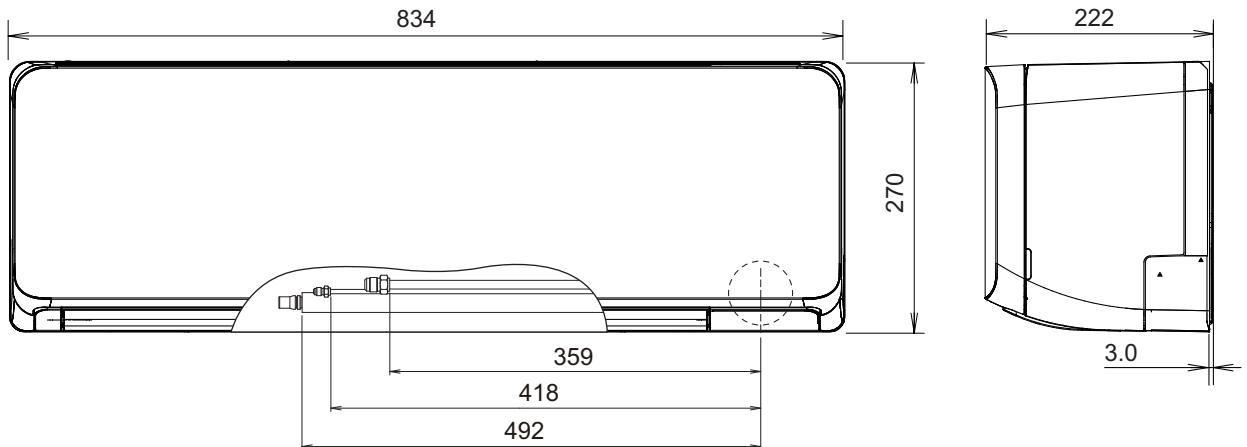
*1: Not operable when Wired Remote Controller is connected.

*2: Configurable functions of the weekly timer differs on Wireless Remote Controller and on mobile application. If timer settings are done from mobile application and from Wireless Remote Controller, both timer settings will be active.

3. Dimensions

3-1. Models: ASYG07KMCF, ASYG09KMCF, ASYG12KMCF, and ASYG14KMCF

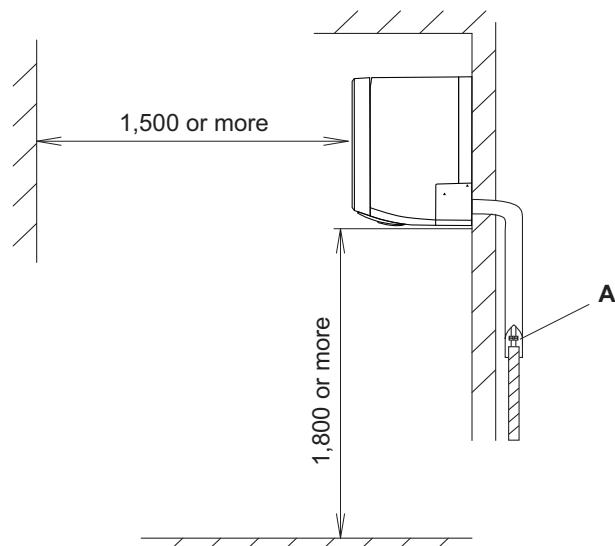
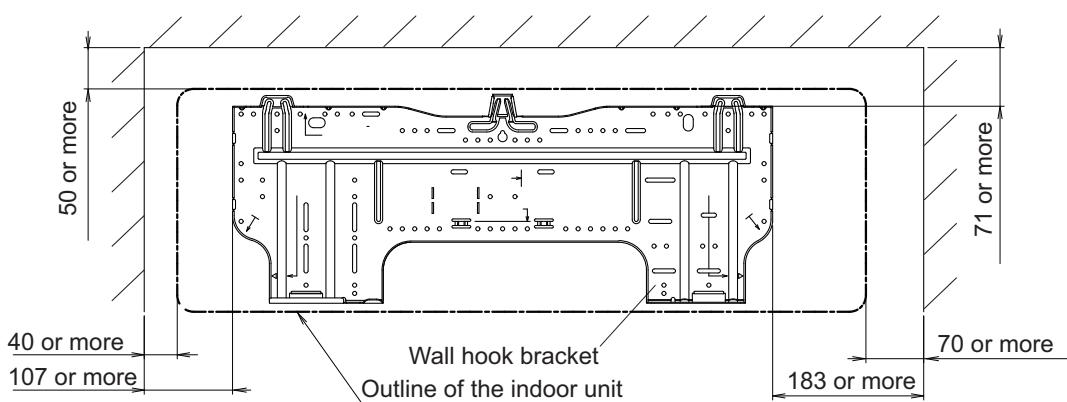
Unit: mm



■ Installation space requirement

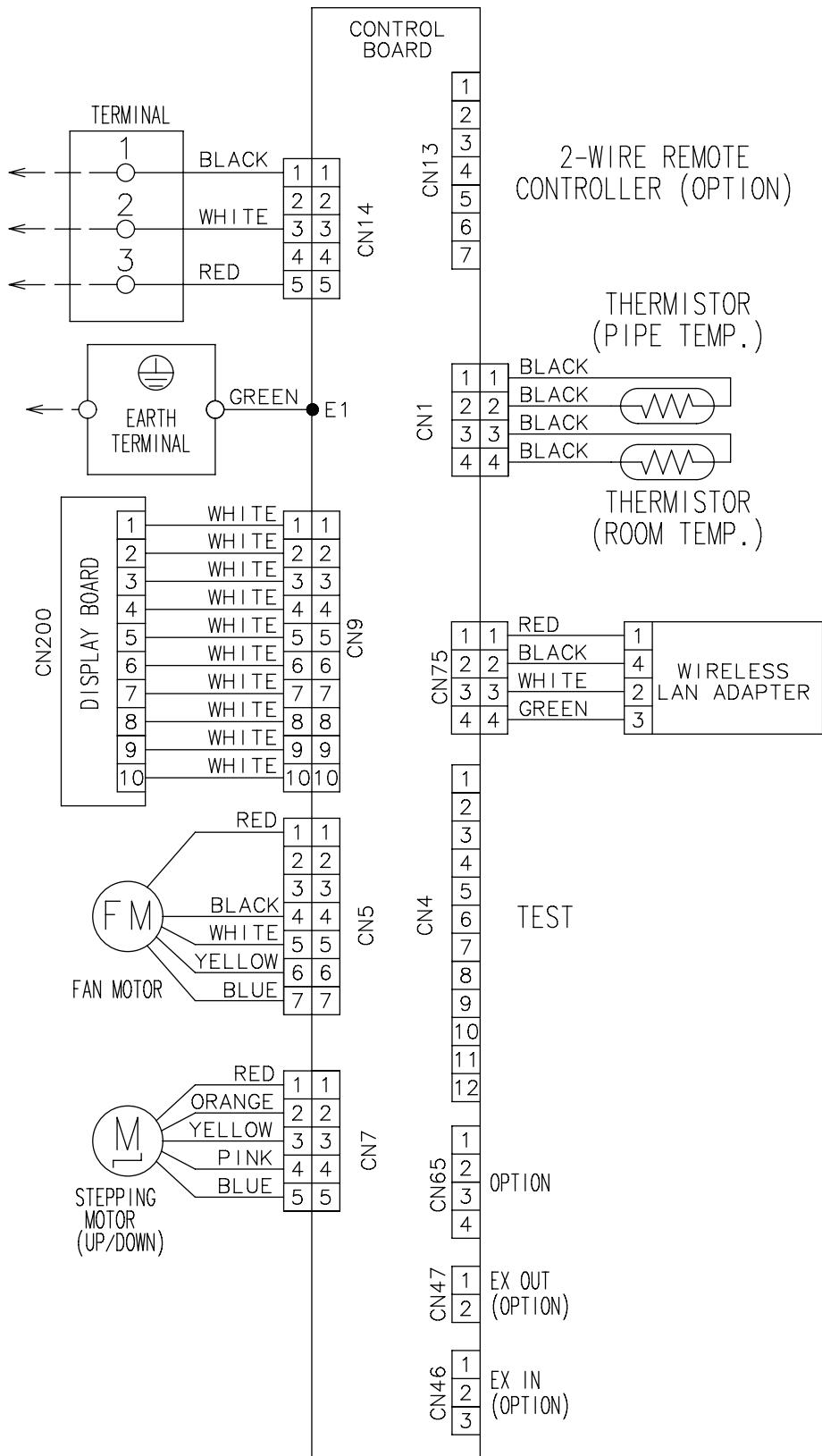
Provide sufficient installation space for product safety.

Unit: mm



4. Wiring diagrams

4-1. Models: ASYG07KMCF, ASYG09KMCF, ASYG12KMCF, and ASYG14KMCF



■ Model: ASYG14KMCF

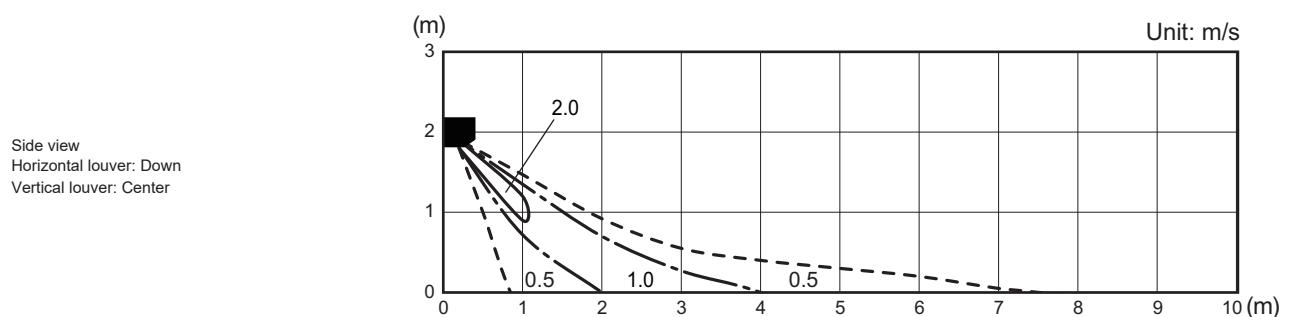
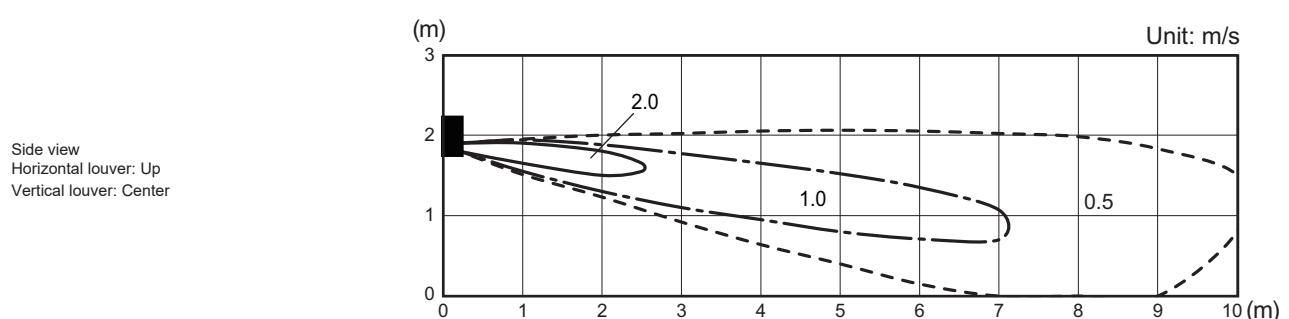
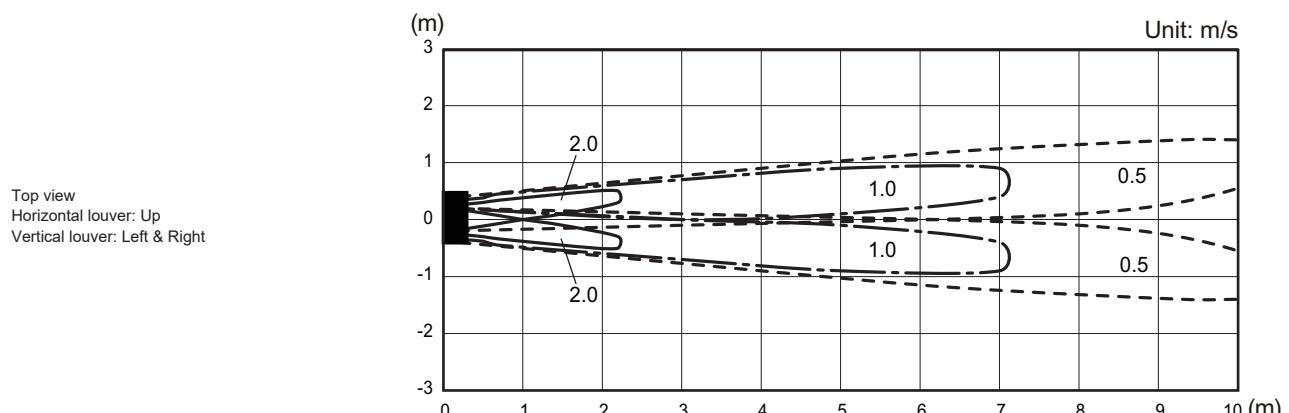
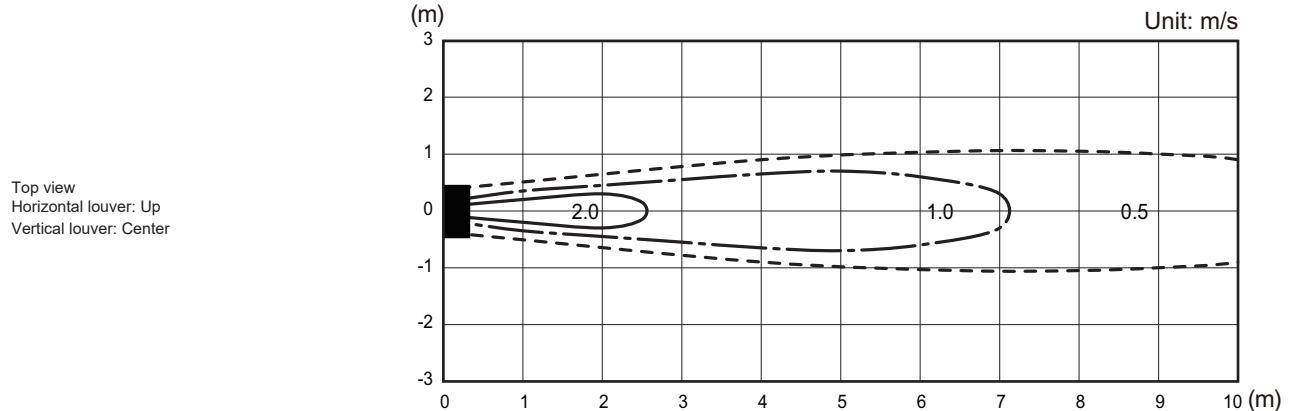
AFR	m³/h	Indoor temperature																770				
°CDB	18			21			23			25			27			29			32			
°CWB	12			15			16			18			19			21			23			
°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	
	kW			kW			kW			kW			kW			kW			kW			
Outdoor temperature	-10	3.77	3.49	0.67	4.11	3.62	0.66	4.34	3.70	0.66	4.57	3.79	0.65	4.85	3.86	0.65	5.03	3.95	0.65	5.37	4.08	0.64
	0	3.59	3.39	0.88	3.92	3.51	0.88	4.14	3.60	0.87	4.35	3.68	0.87	4.62	3.74	0.86	4.79	3.84	0.86	5.12	3.96	0.85
	5	3.50	3.34	0.99	3.82	3.46	0.99	4.04	3.54	0.98	4.25	3.62	0.98	4.51	3.69	0.96	4.67	3.78	0.97	4.99	3.90	0.96
	10	3.64	3.40	0.63	3.97	3.52	0.62	4.19	3.60	0.62	4.41	3.68	0.62	4.68	3.75	0.61	4.85	3.84	0.61	5.19	3.97	0.61
	15	3.65	3.33	0.78	3.99	3.45	0.78	4.21	3.53	0.77	4.43	3.61	0.77	4.70	3.67	0.76	4.88	3.77	0.76	5.21	3.89	0.76
	20	3.62	3.25	0.92	3.96	3.36	0.92	4.18	3.44	0.91	4.40	3.52	0.91	4.67	3.58	0.90	4.84	3.67	0.90	5.17	3.79	0.89
	25	3.55	3.15	1.05	3.87	3.26	1.04	4.09	3.33	1.04	4.31	3.41	1.03	4.57	3.47	1.02	4.74	3.56	1.02	5.06	3.67	1.01
	30	3.43	3.03	1.16	3.74	3.14	1.15	3.95	3.21	1.15	4.16	3.28	1.14	4.42	3.34	1.13	4.58	3.43	1.13	4.89	3.54	1.12
	35	3.26	2.90	1.26	3.56	3.00	1.25	3.76	3.07	1.24	3.96	3.14	1.23	4.20	3.20	1.22	4.35	3.28	1.22	4.65	3.39	1.21
	40	3.05	2.75	1.34	3.33	2.85	1.33	3.51	2.92	1.32	3.70	2.98	1.31	3.93	3.04	1.30	4.07	3.12	1.30	4.35	3.21	1.29
	46	2.73	2.55	1.41	2.98	2.65	1.40	3.15	2.71	1.40	3.31	2.77	1.39	3.52	2.82	1.37	3.65	2.89	1.37	3.90	2.98	1.36

6. Fan performance

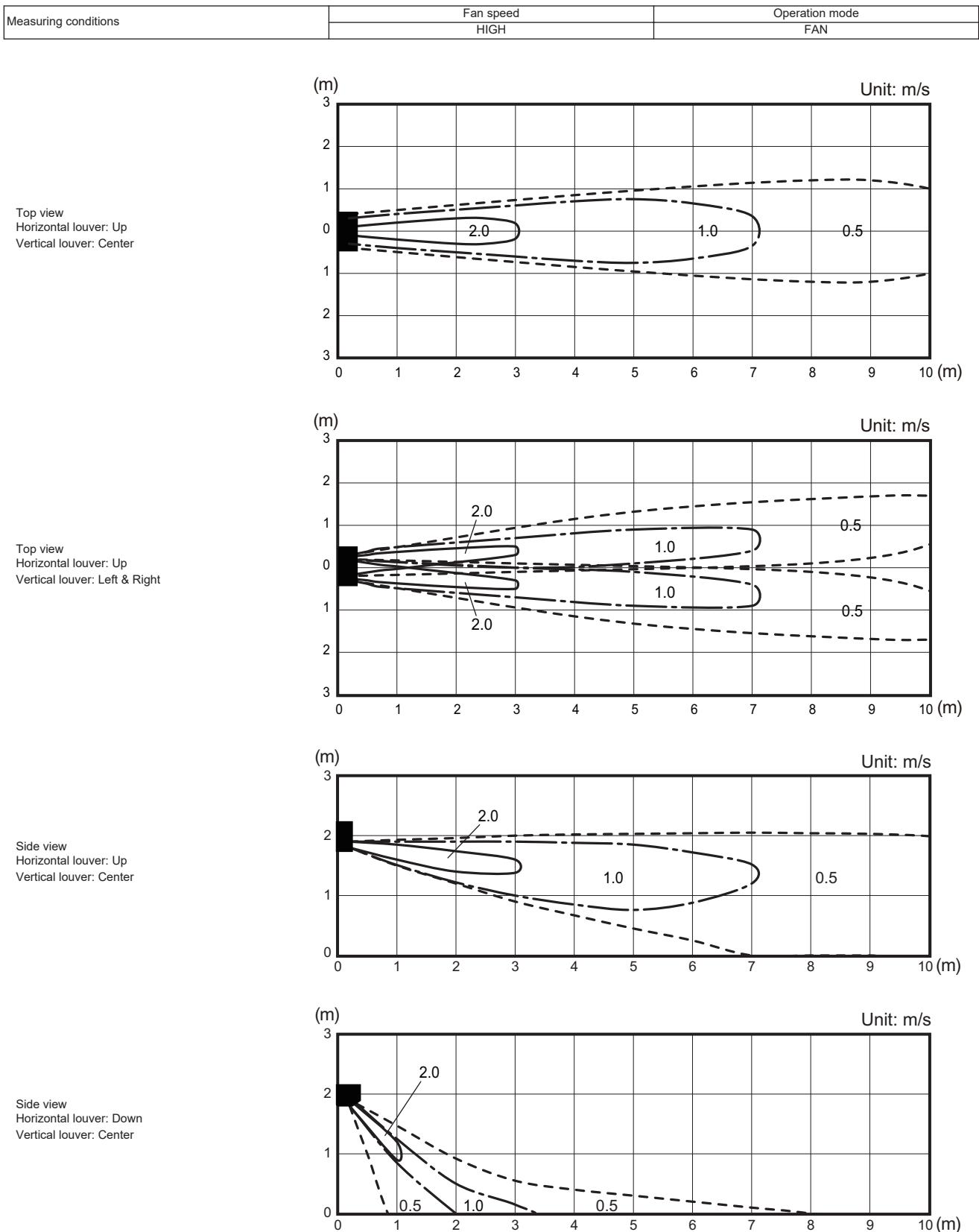
6-1. Air velocity distributions

■ Models: ASYG07KMCF, ASYG09KMCF, and ASYG12KMCF

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



■ Model: ASYG14KMCF



6-2. Airflow

■ Model: ASYG07KMCF

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	650
	l/s	181
	CFM	383
MED	m^3/h	540
	l/s	150
	CFM	318
LOW	m^3/h	430
	l/s	119
	CFM	253
QUIET	m^3/h	270
	l/s	75
	CFM	159

● Heating

Fan speed	Airflow	
HIGH	m^3/h	720
	l/s	200
	CFM	424
MED	m^3/h	580
	l/s	161
	CFM	341
LOW	m^3/h	460
	l/s	128
	CFM	271
QUIET	m^3/h	330
	l/s	92
	CFM	194

■ Model: ASYG09KMCF**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	700
	l/s	194
	CFM	412
MED	m ³ /h	560
	l/s	156
	CFM	330
LOW	m ³ /h	430
	l/s	119
	CFM	253
QUIET	m ³ /h	270
	l/s	75
	CFM	159

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	750
	l/s	208
	CFM	441
MED	m ³ /h	610
	l/s	169
	CFM	359
LOW	m ³ /h	470
	l/s	131
	CFM	277
QUIET	m ³ /h	330
	l/s	92
	CFM	194

■ Model: ASYG12KMCF**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	700
	l/s	194
	CFM	412
MED	m ³ /h	560
	l/s	156
	CFM	330
LOW	m ³ /h	430
	l/s	119
	CFM	253
QUIET	m ³ /h	270
	l/s	75
	CFM	159

● Heating

Fan speed	Airflow	
HIGH	m ³ /h	780
	l/s	217
	CFM	459
MED	m ³ /h	640
	l/s	178
	CFM	377
LOW	m ³ /h	520
	l/s	144
	CFM	306
QUIET	m ³ /h	330
	l/s	92
	CFM	194

■ Model: ASYG14KMCF**● Cooling**

Fan speed	Airflow	
HIGH	m ³ /h	770
	l/s	214
	CFM	453
MED	m ³ /h	600
	l/s	167
	CFM	353
LOW	m ³ /h	450
	l/s	125
	CFM	265
QUIET	m ³ /h	280
	l/s	78
	CFM	165

● Heating

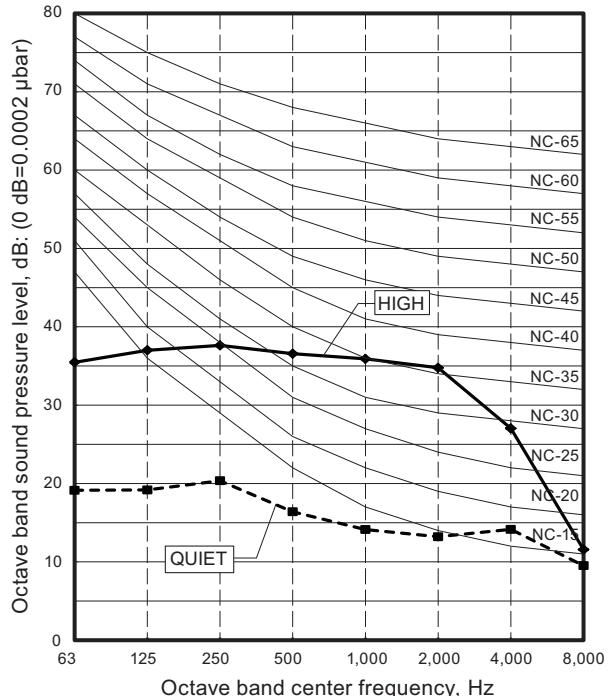
Fan speed	Airflow	
HIGH	m ³ /h	820
	l/s	228
	CFM	483
MED	m ³ /h	660
	l/s	183
	CFM	388
LOW	m ³ /h	520
	l/s	144
	CFM	306
QUIET	m ³ /h	340
	l/s	94
	CFM	200

7. Operation noise (sound pressure)

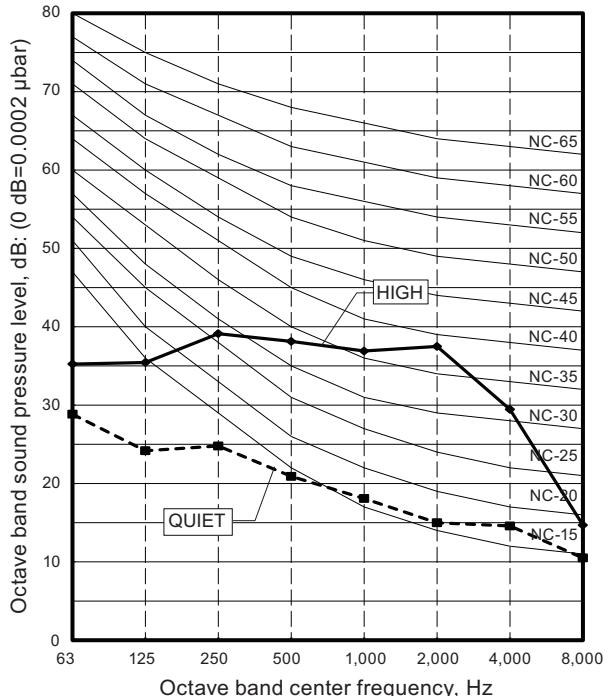
7-1. Noise level curve

■ Model: ASYG07KMCF

● Cooling

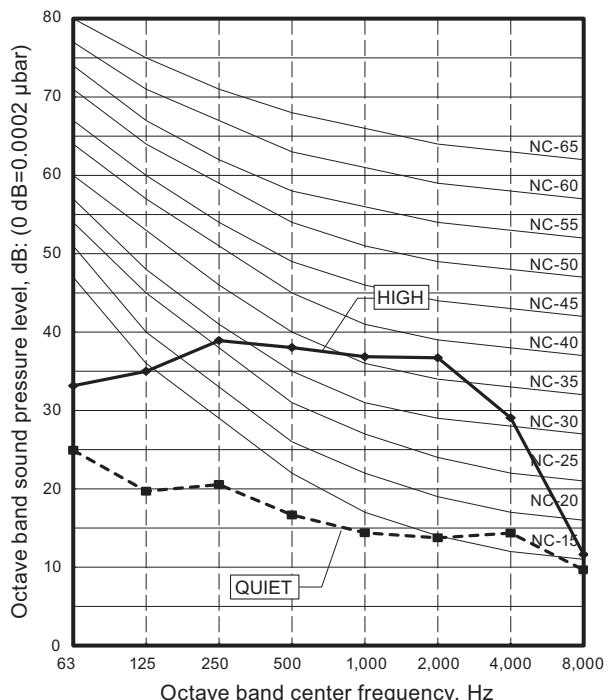


● Heating

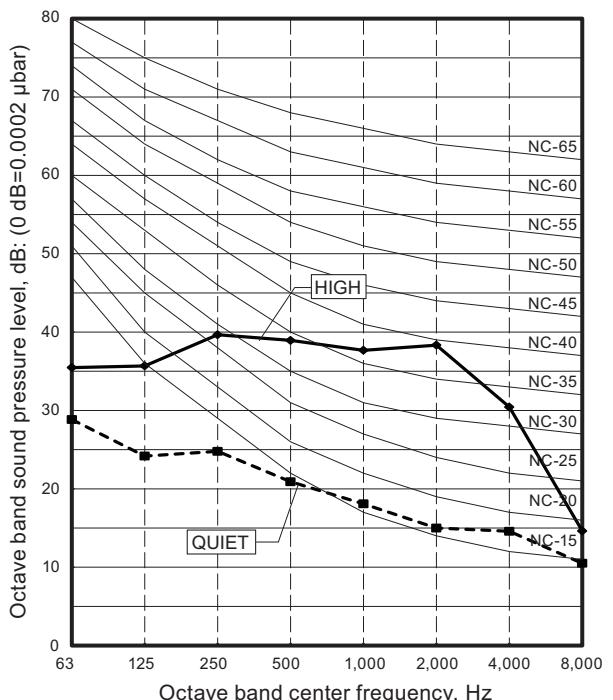


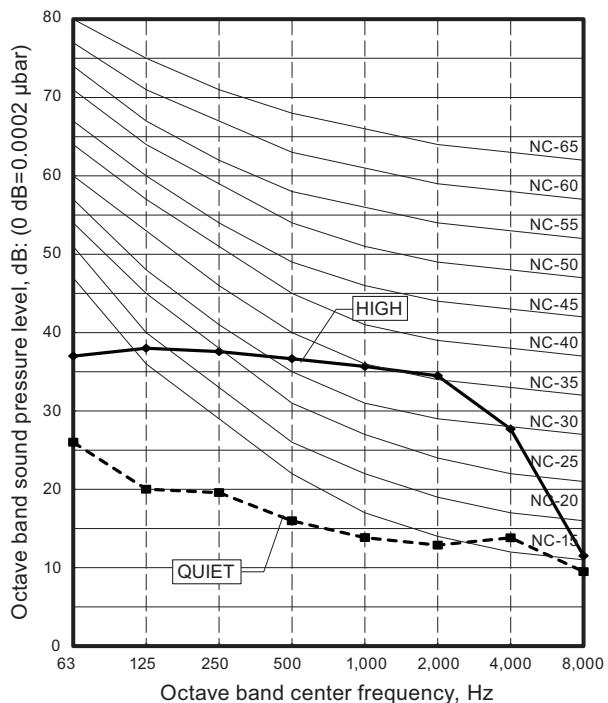
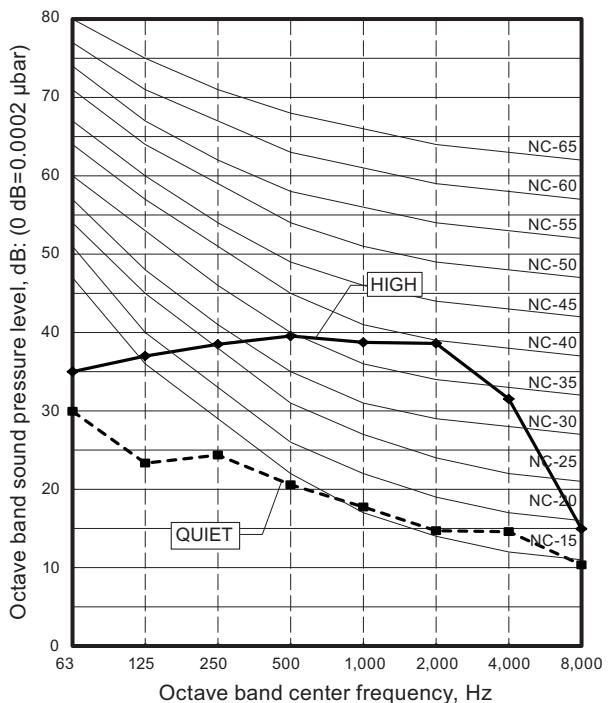
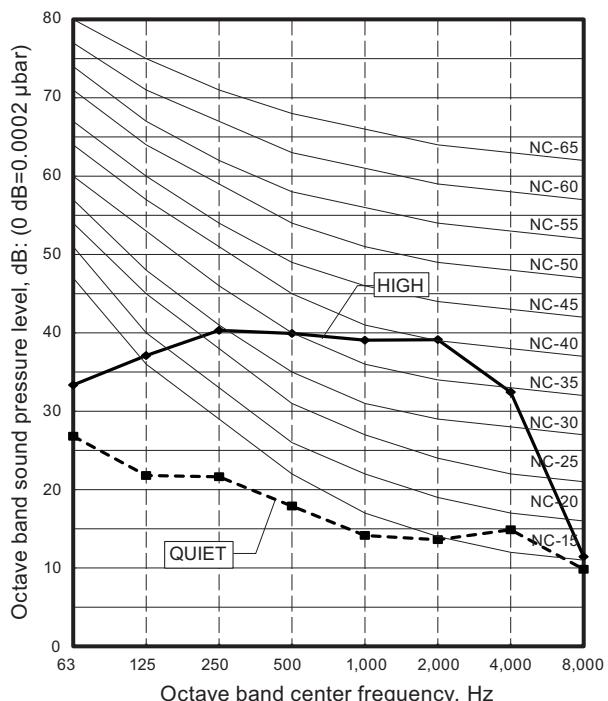
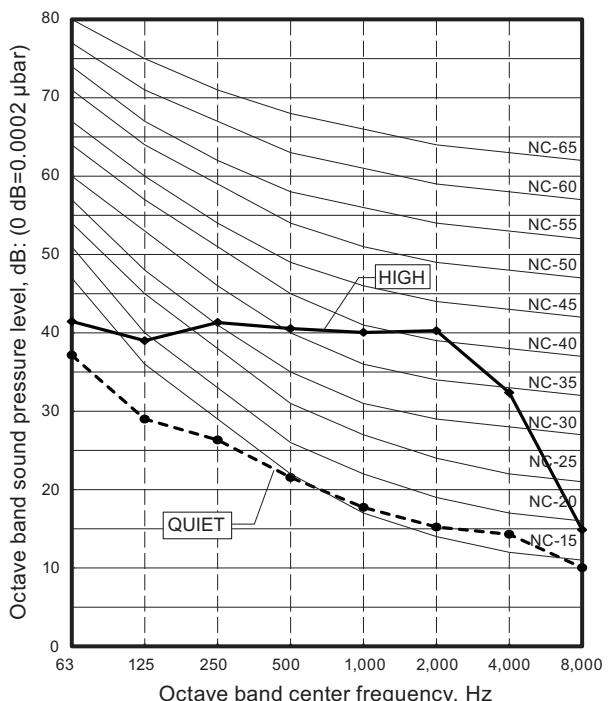
■ Model: ASYG09KMCF

● Cooling

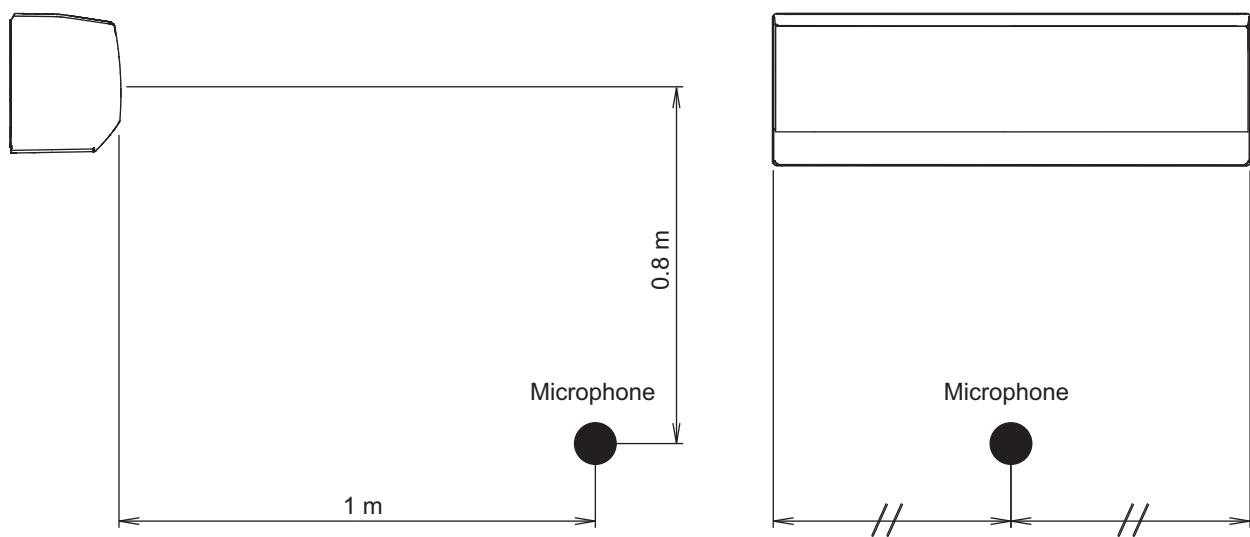


● Heating



■ Model: ASYG12KMCF**● Cooling****● Heating****■ Model: ASYG14KMCF****● Cooling****● Heating**

7-2. Sound level check point



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

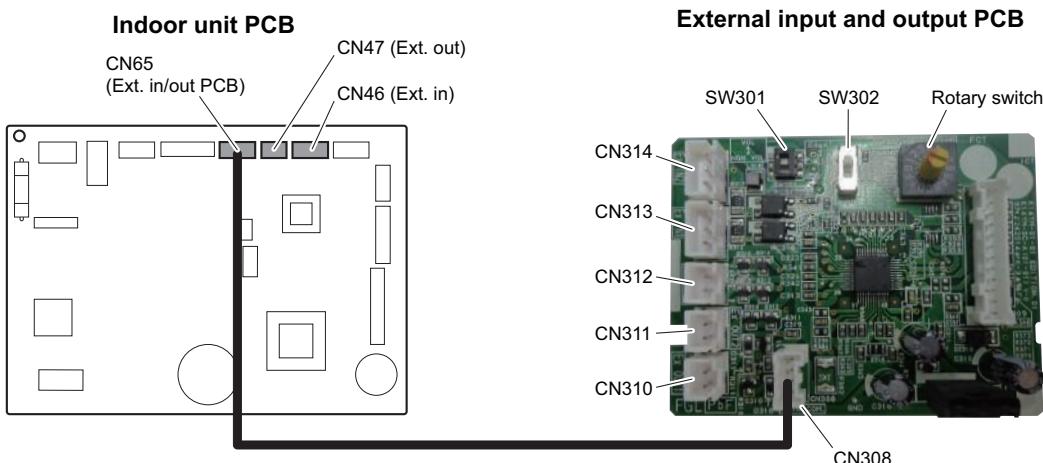
8. Safety devices

Type of protection	Protection form	Model		
		ASYG07KMCF	ASYG09KMCF	ASYG12KMCF
Circuit protection	Current fuse (PCB*)	250 V, 3.15 A		
Fan motor protection	Thermal protection	Activate	170 $^{+25}_{-30}$ °C Fan motor stop	
		Reset	145 $^{+25}_{-30}$ °C Fan motor restart	

Type of protection	Protection form	Model	
		ASYG14KMCF	
Circuit protection	Current fuse (PCB*)	250 V, 3.15 A	
Fan motor protection	Thermal protection	Activate	170 $^{+25}_{-30}$ °C Fan motor stop
		Reset	145 $^{+25}_{-30}$ °C Fan motor restart

*PCB: Printed Circuit Board

9. External input and output



Connecting point		Input/Output	Function	Input select	Input signal
Indoor unit	CN46	Input	Operation/Stop	Dry contact	Edge
	CN47		Forced stop		
External Input and Output PCB (UTY-XCSXZ2)	CN313	Input	Operation/Stop	Dry contact/Apply voltage	Edge/Pulse
	CN314		Forced stop		
	CN313		Forced thermostat off		Edge
	CN310	Output	Operation/Stop	—	—
	CN311		Error status		
	CN312		Indoor unit fan operation status		

NOTE: For details of the switching function, refer to "[Setting of external input and output](#)" on page 28.

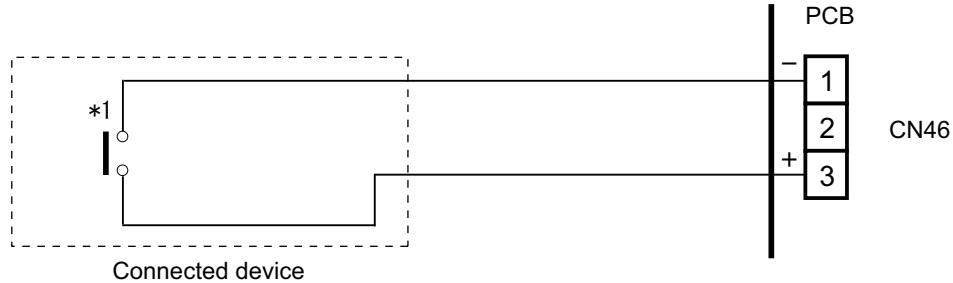
9-1. External input

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.
- Use an external input and output cable with appropriate external dimension, depending on the number of cables to be installed.
- The wire connection should be separate from the power cable line.

■ Indoor unit

Indoor unit functions such as Operation/Stop can be done by using indoor unit connectors.



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

■ External Input and Output PCB

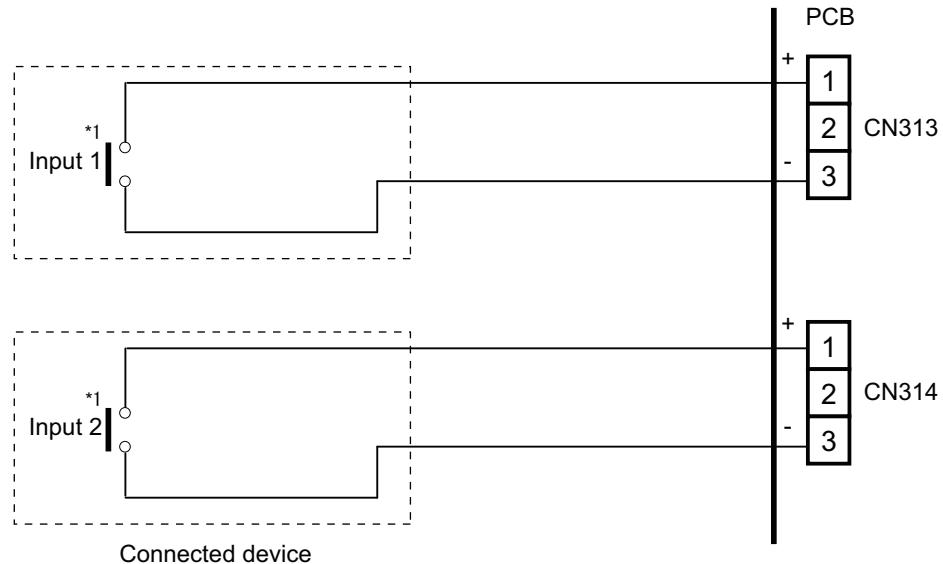
The indoor unit Operation/Stop can be set by using the input connector on the PCB.

• Input select

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

– Dry contact

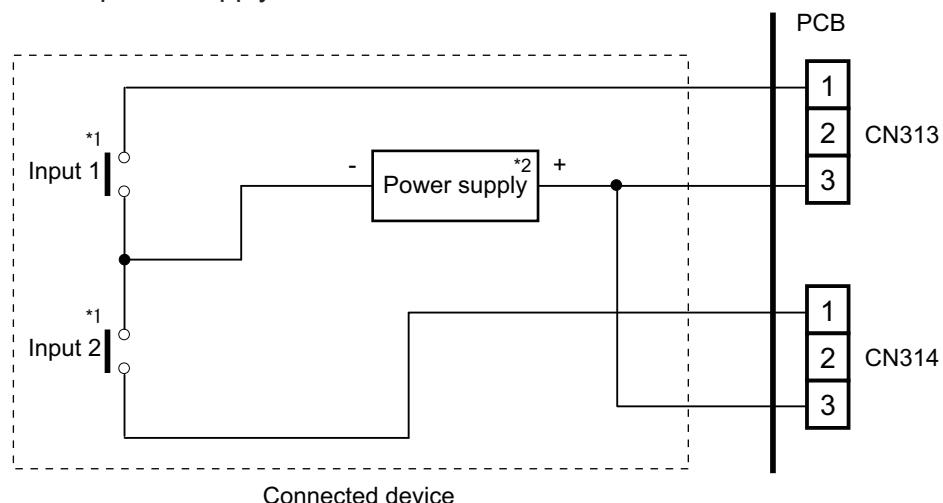
In case of internal power supply, set the slide switch of SW301 to "NON VOL" side.



*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.



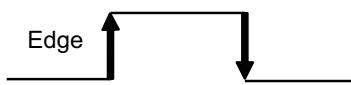
*1: The switches can be used on the following condition: DC 12 V to 24 V, 1 mA to 15 mA.

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

■ Input signal type

- **Indoor unit**

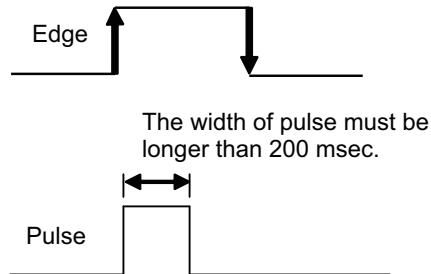
Input signal type is only "Edge".



- **External Input and Output PCB**

The input signal type can be selected.

Signal type (edge or pulse) can be switched by the DIP switch 2 (SW302) on the External Input and Output PCB.



NOTE: The input signal supports the following switch type:

- Edge: Alternate type switch
- Pulse: Momentary type switch

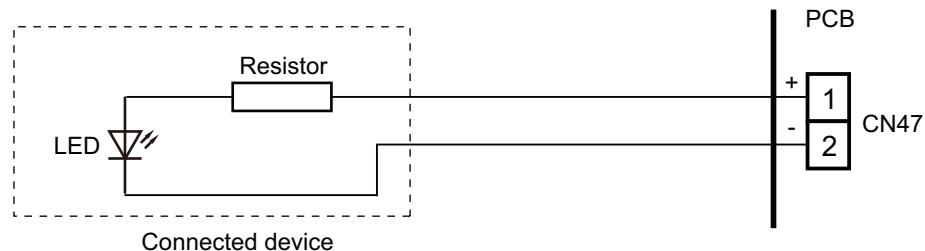
9-2. External output

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

■ Indoor unit

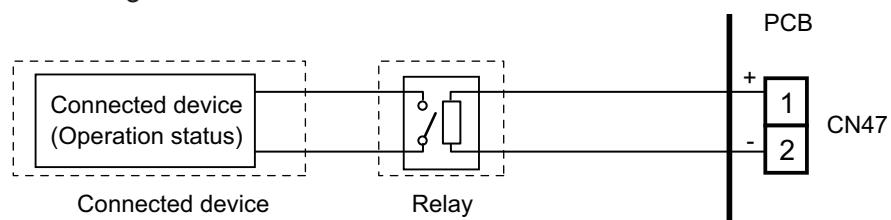
- A twisted pair cable should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V ± 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to "[Setting of external input and output](#)" on page 28.
- **When indicator, etc. are connected directly**

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



- **When connecting with a device equipped with a power supply**

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

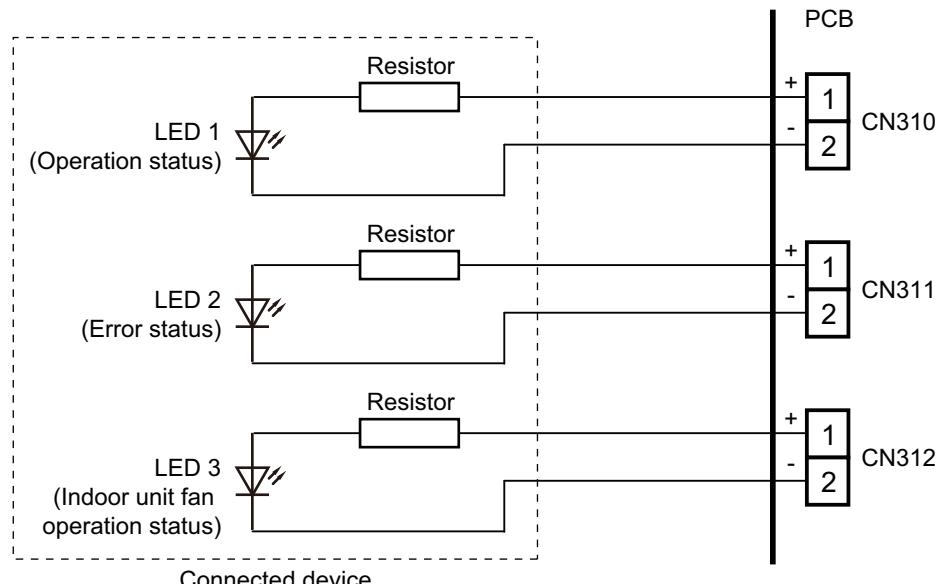


■ External Input and Output PCB

- A twisted pair cable 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 "[Setting of external input and output](#)" on page 28.

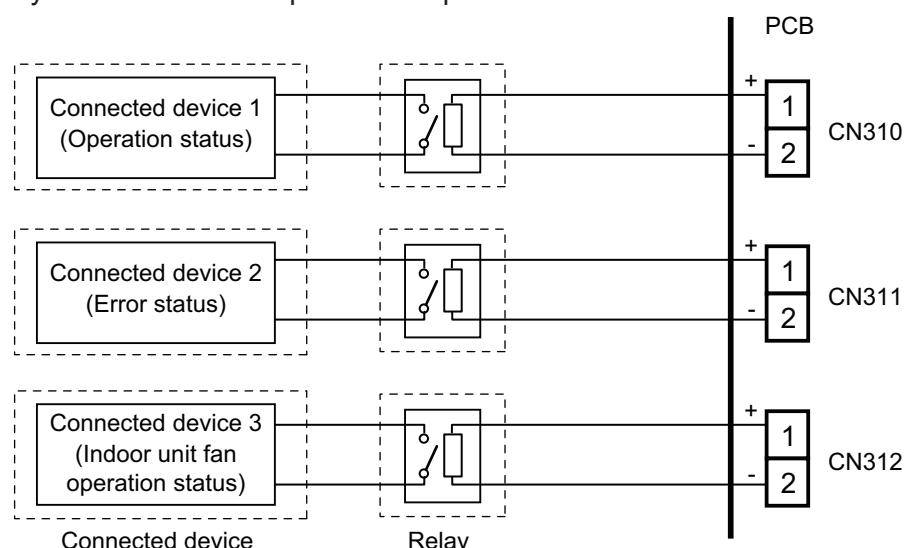
- When indicator or other components are connected directly:**

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".



9-3. Setting of external input and output

- Indoor unit

Input		
Connection point	Function setting number 46	Function
CN46	00	Operation/Stop mode 1 (R.C. enabled)
	01	(Setting prohibited)
	02	Forced stop mode
	03	Operation/Stop mode 2 (R.C. disabled)

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

- External Input and Output PCB

Switch setting		Input		Output			
Rotary switch	SW302	CN313	CN314	CN310	CN311	CN312	
1	Edge	Operation/Stop	Not available	Operation/Stop	Error status	Indoor unit fan operation status	
	Pulse	Operation	Stop				
2	Edge*	Forced thermostat off	Not available	Error status	Indoor unit fan operation status	Not available	
		(Setting prohibited)					
3 to 9, A	Edge*	Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status	Not available	
		Forced thermostat off	Not available	Operation/Stop	Error status	Not available	
B		Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status	Not available	
		Forced thermostat off	Not available	Operation/Stop	Error status	Not available	
D		Forced thermostat off	Not available	Operation/Stop	Indoor unit fan operation status	Error status	

NOTES:

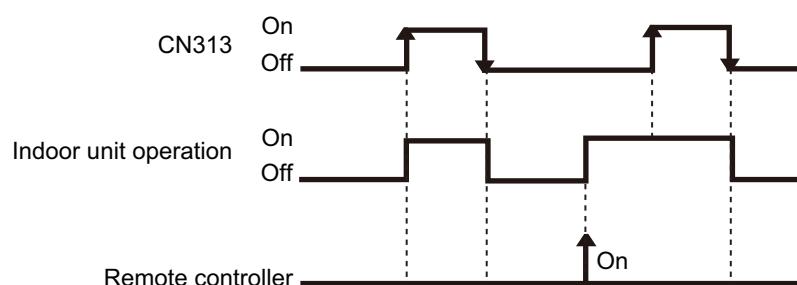
- When the rotary switch is selected to "1", the operation of the connector input of the indoor unit and the External Input and Output PCB input are the same. The operation content depends on the setting of function setting number 46.
- *: The external input other than "Operation/Stop" is available only when the SW302 is set to "Edge".

9-4. Details of control input function

■ Operation/Stop mode 1

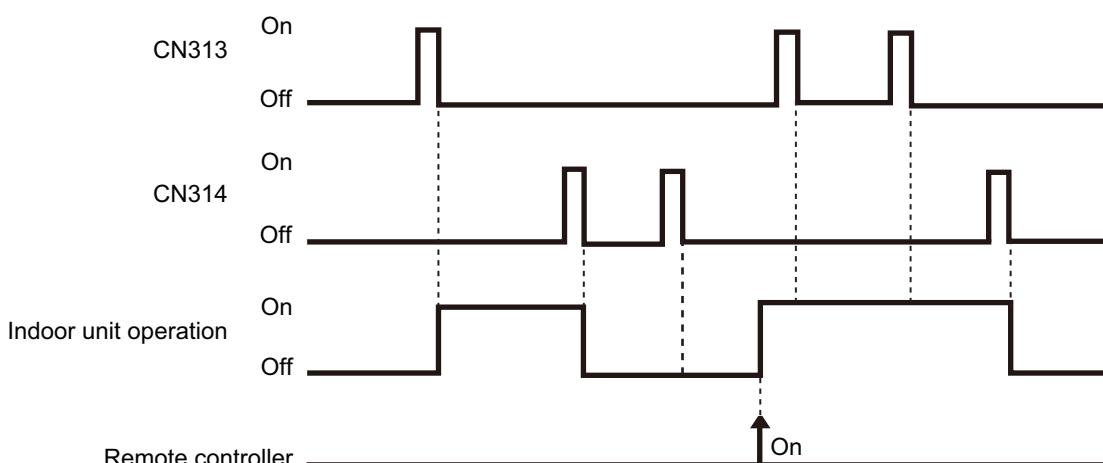
- In the case of "Edge" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-00	—	CN46	Input of indoor unit	Off → On	Operation
			On → Off	On → Off	Stop
	1	CN313	External Input and Output PCB	Off → On	Operation
			On → Off	On → Off	Stop



- In the case of "Pulse" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-00	1	Pulse	External Input and Output PCB	CN313	Operation
				CN314	



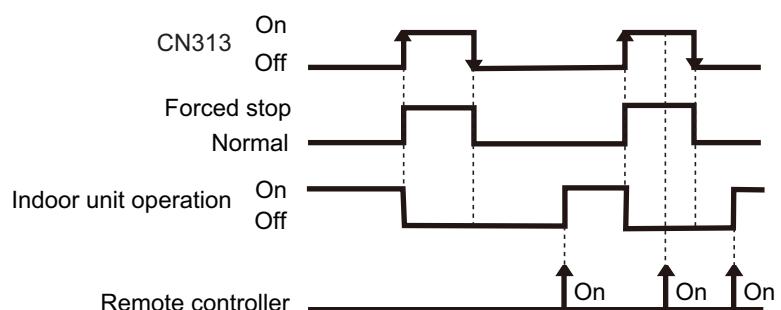
NOTES:

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

■ Forced stop

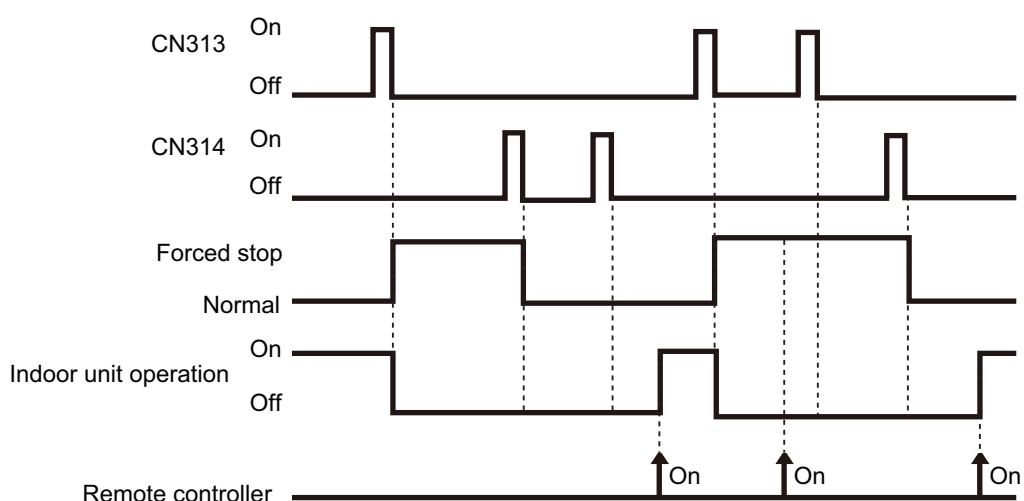
- In the case of "Edge" input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-02	—	Input of indoor unit	CN46	Off → On	Forced stop (R.C. disabled)
				On → Off	Normal (R.C. enabled)
	1	Edge	External Input and Output PCB	CN313	Off → On
					Normal (R.C. enabled)



- In the case of "Pulse" input

Function setting	External Input and Output PCB		External input	Input signal	Command	
	Rotary switch	SW302				
46-02	1	Pulse	External Input and Output PCB	CN313	Pulse	Forced stop (R.C. disabled)
						Normal (R.C. enabled)



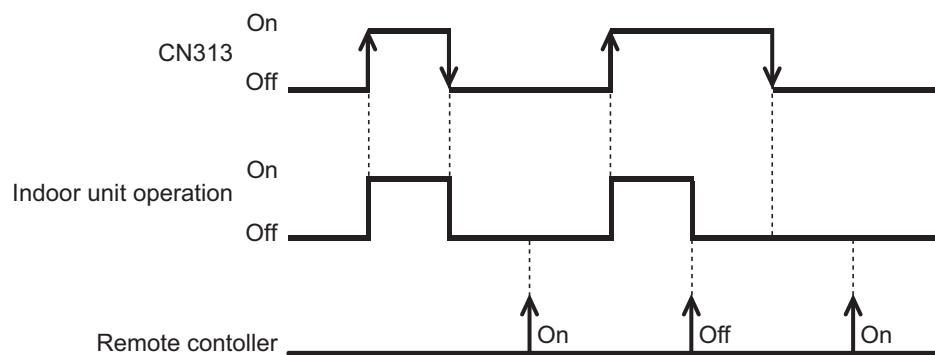
NOTES:

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

■ Operation/Stop mode 2

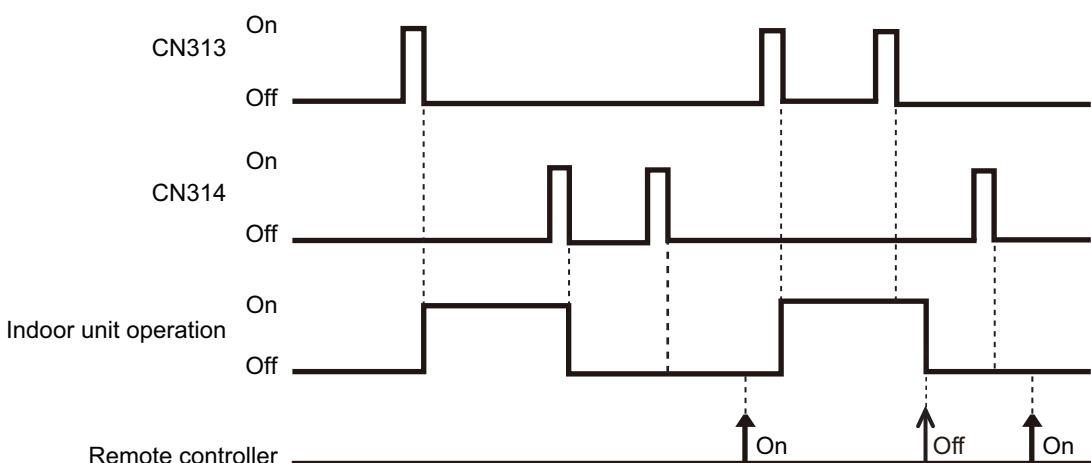
- In the case of “Edge” input

Function setting	External Input and Output PCB		External input	Input signal	Command
	Rotary switch	SW302			
46-03	—	Input of indoor unit	CN46	Off → On	Operation (R.C. enabled)
				On → Off	Stop (R.C. disabled)
	1	Edge	External Input and Output PCB	CN313	Off → On
					Stop (R.C. disabled)



- In the case of “Pulse” input

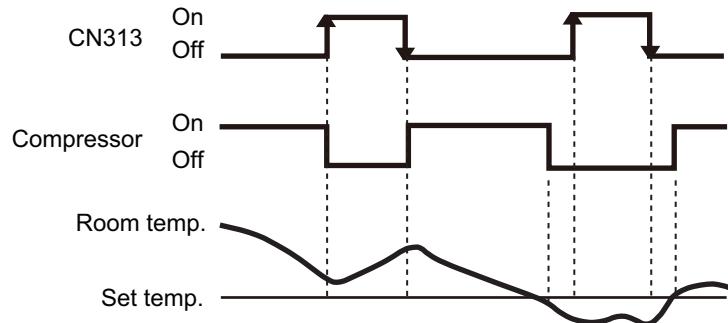
Function setting	External Input and Output PCB		External input	Input signal	Command	
	Rotary switch	SW302				
46-03	1	Pulse	External Input and Output PCB	CN313	Pulse	Operation (R.C. enabled)
						Stop (R.C. disabled)



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

■ Forced thermostat off

External Input and Output PCB	External input		Input signal	Command
Rotary switch				
2, B, C, D	External Input and Output PCB	CN313	Off → On	Thermostat off
			On → Off	Normal operation

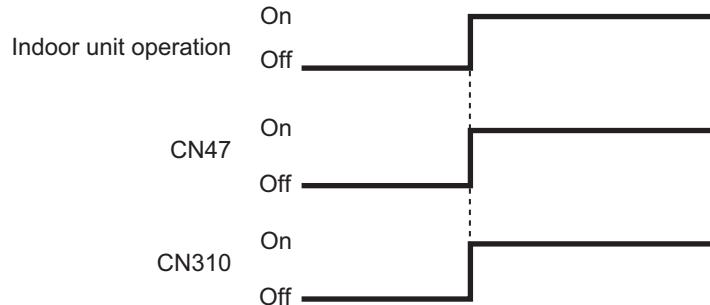


9-5. Details of control output function

■ Operation status

Function setting	External Input and Output PCB	External output		Output signal	Status
		Rotary switch			
60-00	1, 2	Output of indoor unit	CN47	Off → On	Operation
				On → Off	Stop
—	1, B, C, D	External Input and Output PCB	CN310	Off → On	Operation
				On → Off	Stop

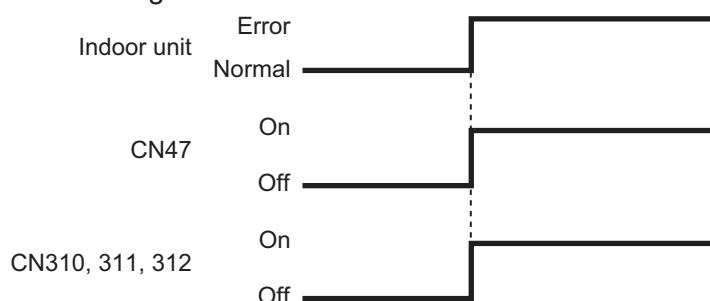
The output is low when the unit is stopped.



■ Error status

Function setting	External Input and Output PCB	External output		Output signal	Status
		Rotary switch			
60-09	—	Output of indoor unit	CN47	Off → On	Error
				On → Off	Normal
—	2	External Input and Output PCB	CN310	Off → On	Error
				On → Off	Normal
—	1, C	External Input and Output PCB	CN311	Off → On	Error
				On → Off	Normal
—	D	External Input and Output PCB	CN312	Off → On	Error
				On → Off	Normal

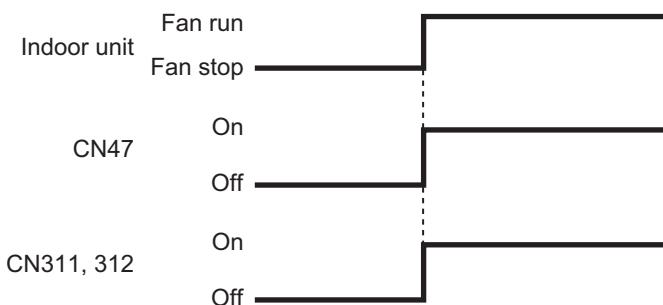
The output is on when an error is generated for the indoor unit.



■ Indoor unit fan operation status

Function setting	External Input and Output PCB	External output		Output signal	Status
	Rotary switch				
60-10	C	Output of indoor unit	CN47	Off → On	Fan run
—	2, B, D			On → Off	Fan stop
—	1	External Input and Output PCB	CN311	Off → On	Fan run
—	—			On → Off	Fan stop
—	—	External Input and Output PCB	CN312	Off → On	Fan run
—	—			On → Off	Fan stop

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



10. Group connection

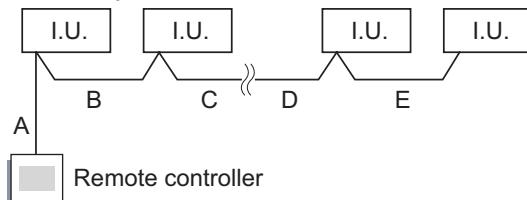
NOTE: Group control cannot be used together with WLAN Adapter.

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.

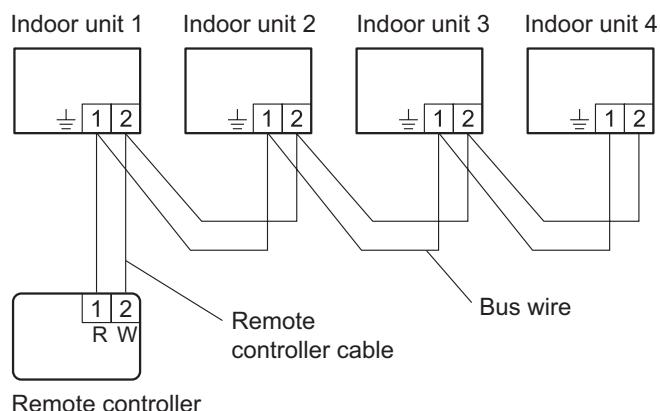


A, B, C, D, E: Remote controller cable

Wiring length limitation

$A + B + C + D + E \leq 500 \text{ m}$

Example of wiring method



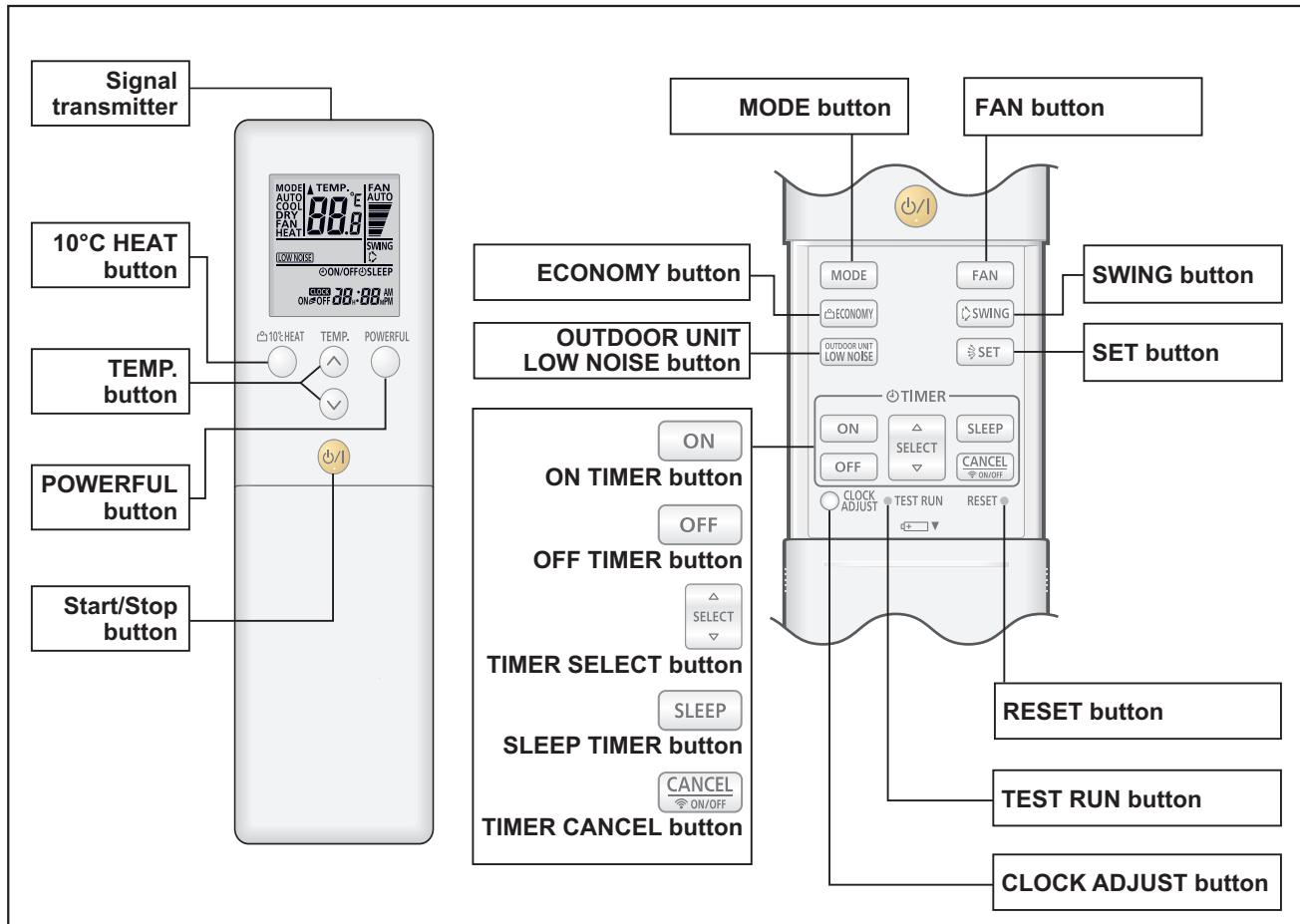
2. Automatic address setting

After the remote controller connection in the system, the automatic address setting runs in the initial starting up. Do not change the remote controller address for the indoor unit.

11. Remote controller

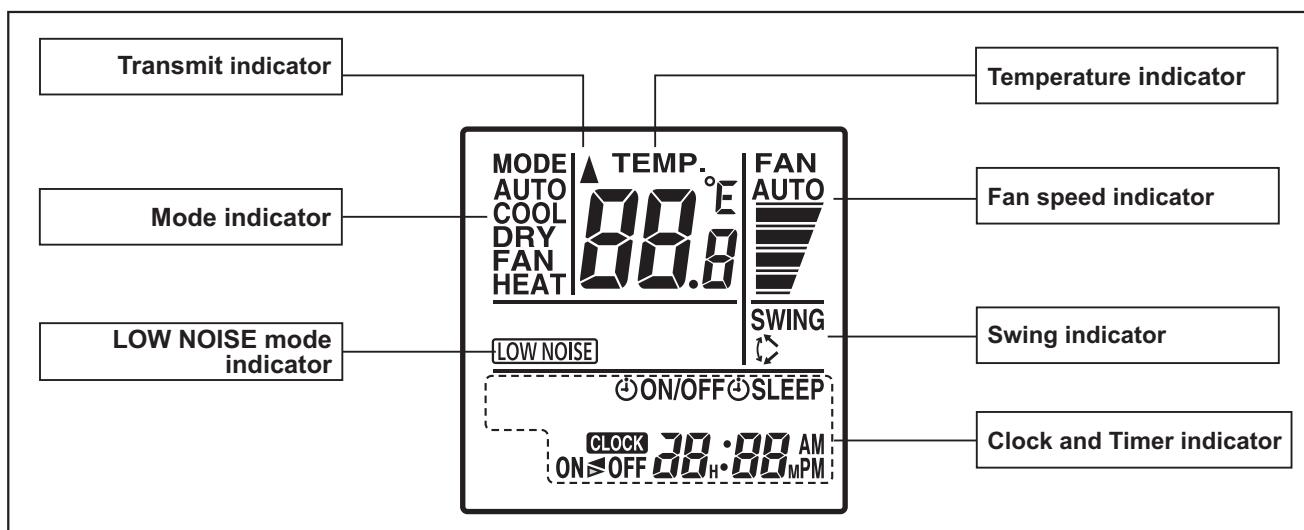
11-1. Wireless remote controller

■ Overview



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

Display panel

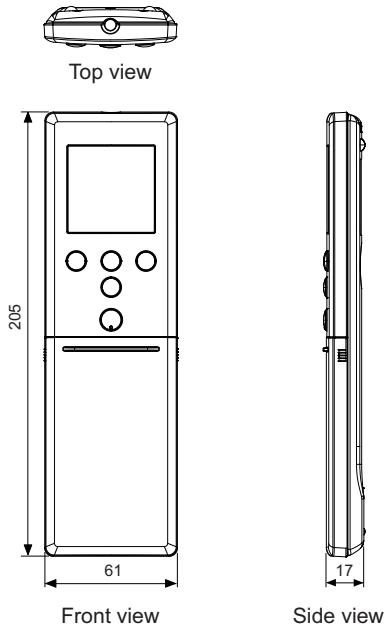


To facilitate explanation, the accompanying illustration has been drawn to show all possible indicators; in actual operation, however, the display will only show those indicators appropriate to the current operation.

■ Specifications

● Controller

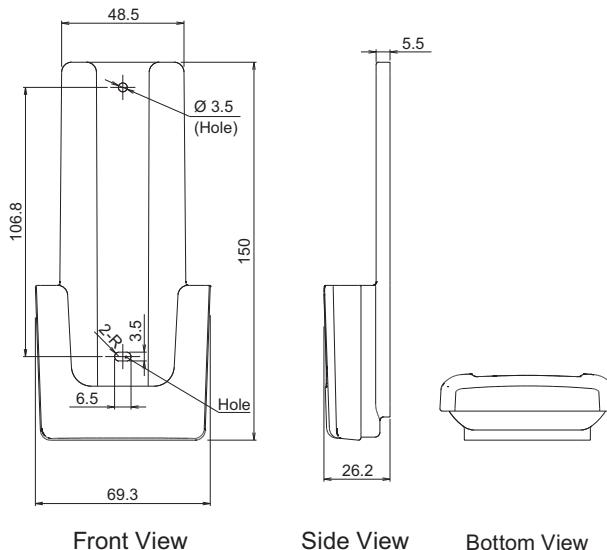
Unit: mm



Size (H × W × D)	mm	205 × 61 × 17
Weight	g	124 (without batteries)

● Holder

Unit: mm



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

12. 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.

12-1. 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 tightness 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. (\wedge) button simultaneously, press the RESET button to enter the function setting mode.

Selecting the function number and setting value:

1. Press the TEMP. (\wedge) (\vee) 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. (\wedge) (\vee) 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.



⚠ 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 H prior to shipment.
- If you do not know the air conditioner custom code setting, try each of the custom codes ($\text{H} \rightarrow \text{b}$
 $\rightarrow \text{c} \rightarrow \text{d}$) 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)	11	Filter sign
2)	30/31	Room temperature control for indoor unit sensor
3)	35/36	Room temperature control for wired remote controller sensor
4)	40	Auto restart
5)	42	Room temperature sensor switching
6)	44	Remote controller custom code
7)	46	External input control
8)	48	Room temperature sensor switching (Aux.)
9)	49	Indoor unit fan control for energy saving for cooling
10)	60	Switching functions for external output terminal

1) Filter sign

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

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

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

2) 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
		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
		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

3) 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	
		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	
		Less cooling More heating		

4) 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.

5) 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.

6) 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	

7) External input control

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

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

8) 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	

9) Indoor unit fan control for energy saving for cooling

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

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

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

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

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

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

10) Switching functions for external output terminal

Functions of the external output terminal can be switched. For details, refer to "External input and output".

Function number	Setting value	Setting description	Factory setting
60	00	Operation status	♦
	01—08	(Setting prohibited)	
	09	Error status	
	10	Indoor unit fan operation status	
	11	(Setting prohibited)	

12-2. 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 **A**.)
3. Press the TEMP. (\wedge) (\vee) buttons to change the custom code between **A** → **B** → **C** → **D**. Match the code on the display to the air conditioner custom code. (Initially set to **A**.)
4. Press the MODE button again to return to the clock display. The custom code will be changed.

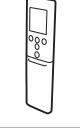
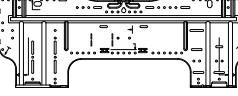
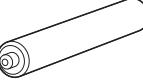
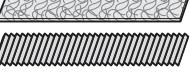


NOTES:

- 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 **A** 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 (**A** → **B** → **C** → **D**) until you find the code which operates the air conditioner.

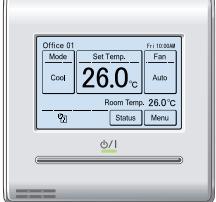
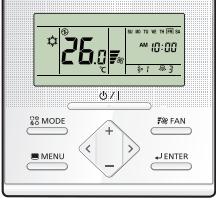
13. Accessories

13-1. Models: ASYG07KMCF, ASYG09KMCF, ASYG12KMCF, and ASYG14KMCF

Part name	Exterior	Qty	Part name	Exterior	Qty
Operation manual		1	Cloth tape		1
Operation manual (CD-ROM)		1	Self-tapping screw (large)		5
Installation manual		1	Self-tapping screw (small)		2
Remote controller		1	Wall hook bracket		1
Battery		2	Filter holder		2
Remote controller holder		1	Air cleaning filters		1

14. Optional parts

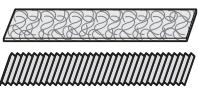
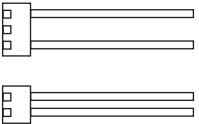
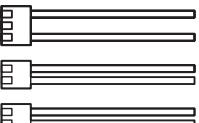
14-1. Controllers

Exterior	Part name	Model name	Summary
	Wired Remote Controller	UTY-RNRYZ*	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-RLRY	High visibility and easy operation. Room temperature can be accurately controlled using the thermo sensor. Wire type: Non-polar 2-wire Optional Communication Kit is necessary for installation.
	Compact Wired Remote Controller	UTY-RCRYZ1	Compact body and easy operation. Room temperature can be accurately controlled using the 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 the group controlling system of the Wired Remote Controller, using WLAN Adapter is prohibited.

14-2. Others

Exterior	Part name	Model name	Summary
	Air Cleaning Filter	UTR-FA16-5	Air Cleaning Filter can be mounted to the indoor unit.
	External Connect Kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PCB. Connecting point: CN46 and CN47 on Main PCB
	External Connect Kit	UTY-XWZXZ5	Required when external device is connected. Connecting point: CN46 and CN47 on Main PCB
	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. Connecting point: CN65 on Main PCB
	Communication Kit	UTY-TWRXZ2	Use to connect Non-polar 2-core wired remote controller.
	Modbus Converter	UTY-VMSX	For connection between indoor unit with UART interface and a Modbus open network. Connecting point: CN65 on Main PCB
	KNX Convertor	UTY-VKSX	For connection between indoor unit with UART interface and a KNX open network. Connecting point: CN65 on Main PCB
	Network Converter	UTY-VTGX	This converter is required when connecting single split system to VRF network system. Use the terminal for Wired Remote Controller.
	Network Converter (AC power supply)	UTY-VTGXV	This converter is required when connecting single split system to VRF network system. Use the terminal for Wired Remote Controller.
	External Switch Controller	UTY-TERX	Air conditioner switching can be controlled by connecting other external sensor switches. Use the terminal for Wired Remote Controller.

Part 2. OUTDOOR UNIT

SINGLE TYPE:

**AOYG07KMCC
AOYG09KMCC
AOYG12KMCC
AOYG14KMCC**

1. Specifications

Type			Inverter, Heat pump									
Model name			AOYG07KMCC	AOYG09KMCC	AOYG12KMCC	AOYG14KMCC						
Power supply			230 V~ 50 Hz									
Power supply intake			Outdoor unit									
Available voltage range			198—264 V									
Starting current			A	3.0	3.4	5.1						
Fan	Airflow rate	Cooling	m ³ /h	1,650	1,700	1,680						
		Heating		1,450	1,470	1,580						
Type × Qty			Propeller fan × 1									
Motor output			W	23								
Sound pressure level *			dB (A)	46	50							
Sound power level				46	50							
Dimensions (H × W × D)			mm	504 × 650 × 18.2		504 × 630 × 36.4						
Heat exchanger type				1.3		504 × 881 × 36.4						
Rows × Stages			1 × 24		2 × 24							
Pipe type			Copper									
Fin type			Type (Material)	Corrugate (Aluminum)								
Surface treatment			Corrosion resistance									
Compressor			DC rotary									
Motor output			W	550	900							
Refrigerant			R32 (675)									
Charge			g	600	700	850						
Refrigerant oil			RB74AF									
Amount			cm ³	240	340							
Enclosure			Steel sheet									
Color			Beige									
Dimensions (H × W × D)			Approximate color of Munsell 10YR 7.5/1.0									
Net			mm	541 × 663 × 290		542 × 799 × 290						
Gross				602 × 804 × 375		602 × 940 × 375						
Weight			kg	22	24	31						
Net				25	27	35						
Connection pipe			mm (in)	Ø6.35 (Ø1/4)								
Size				Ø9.52 (Ø3/8)								
Method			Flare									
Pre-charge length			m	15								
Max. length				20								
Max. height difference				15								
Operation range			°C	-10 to 46								
Cooling				-15 to 24								
Heating			Polypropylene									
Drain hose			Material	Ø13.0 (I.D.), Ø16.0 to Ø16.8 (O.D.)								
Tip diameter			mm									

NOTES:

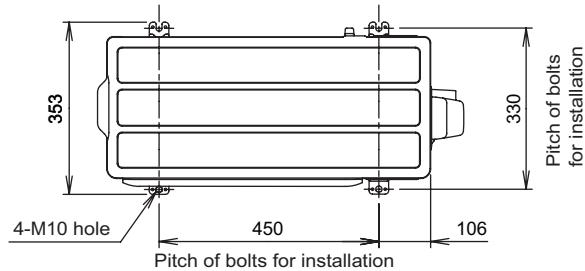
- Specifications are based on the following conditions:
 - Cooling: Indoor temperature of 27°CDB/19°CWB, and outdoor temperature of 35°CDB/24°CWB.
 - Heating: Indoor temperature of 20°CDB/15°CWB, and outdoor temperature of 7°CDB/6°CWB.
 - Pipe length: 5 m, Height difference: 0 m.
- Protective function might work when using it outside the operation range.
- *: 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.
- This data is based on EN 14511 standard.

2. Dimensions

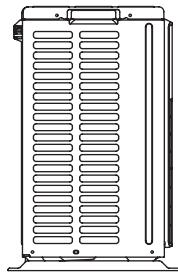
2-1. Models: AOYG07KMCC, AOYG09KMCC, and AOYG12KMCC

OUTDOOR UNIT
AOYG07-14KMCCOUTDOOR UNIT
AOYG07-14KMCC

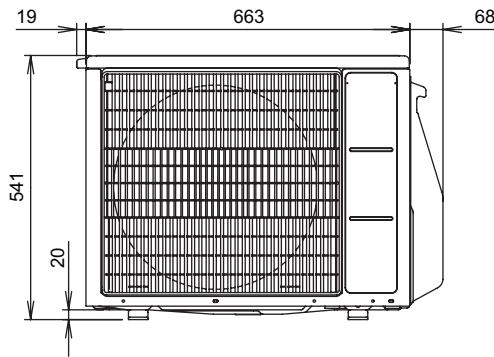
Unit: mm



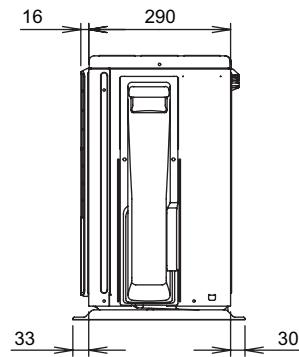
Top view



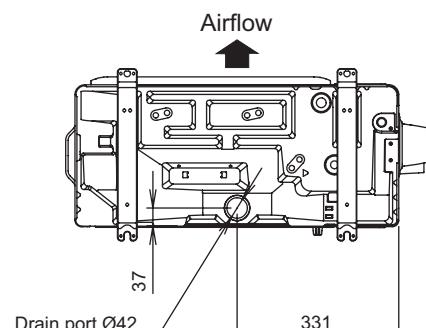
Side view



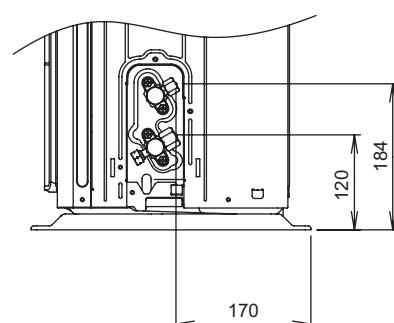
Front view



Side view



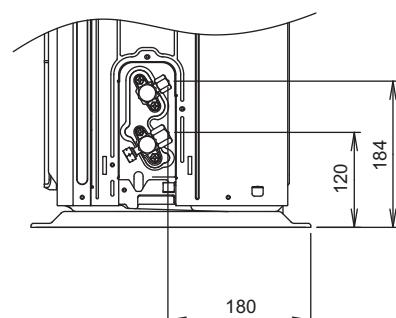
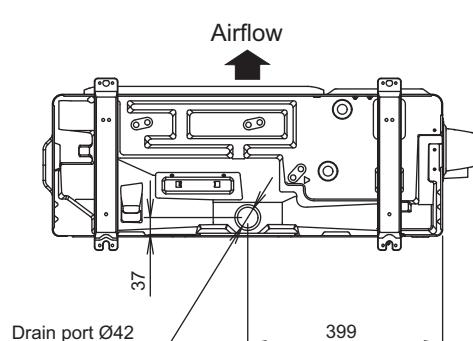
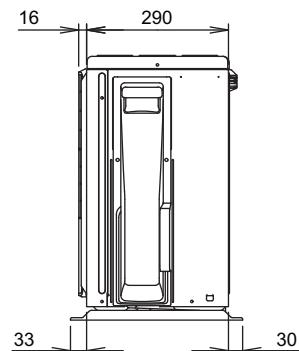
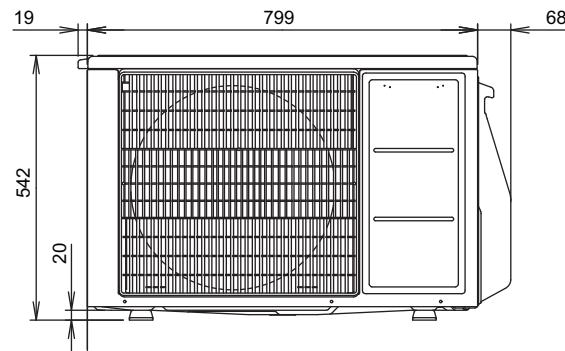
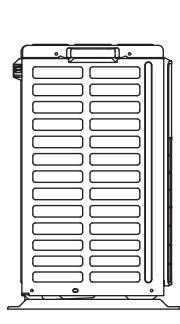
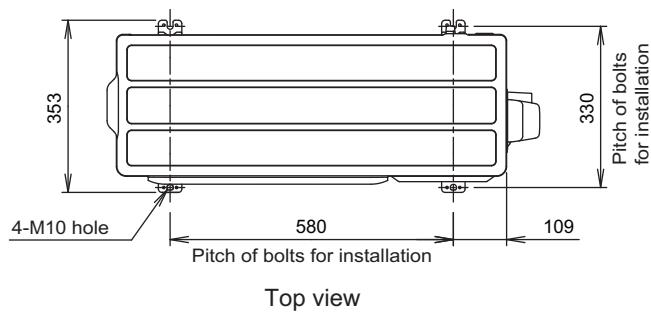
Bottom view



Side view (Valve part)

2-2. Model: AOYG14KMCC

Unit: mm

OUTDOOR UNIT
AOYG07-14KMCCOUTDOOR UNIT
AOYG07-14KMCC

3. Installation space

3-1. Models: AOYG07KMCC, AOYG09KMCC, AOYG12KMCC, and AOYG14KMCC

■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

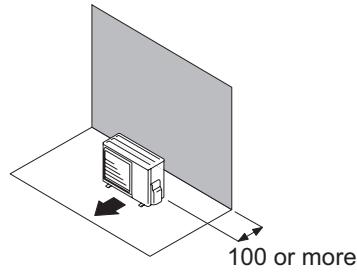
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.

● Single outdoor unit installation

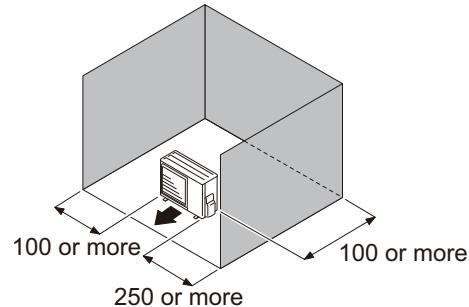
- When the upper space is open:

Unit: mm

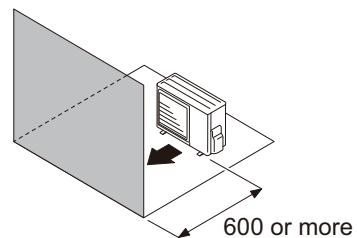
Obstacles at rear only



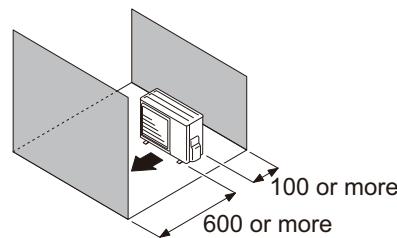
Obstacles at rear and sides



Obstacles at front



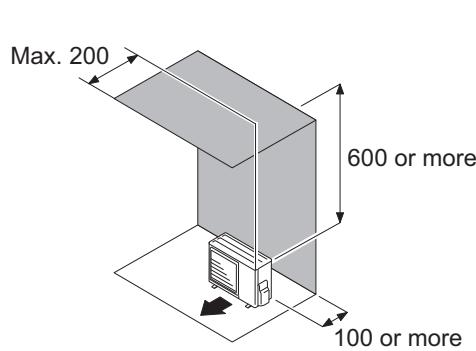
Obstacles at front and rear



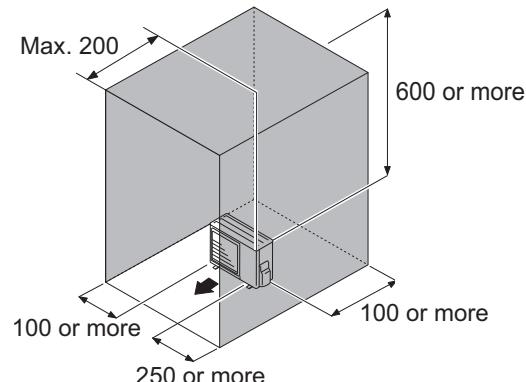
- When an obstruction in the upper space:

Unit: mm

Obstacles at rear and above



Obstacles at rear, sides, and above



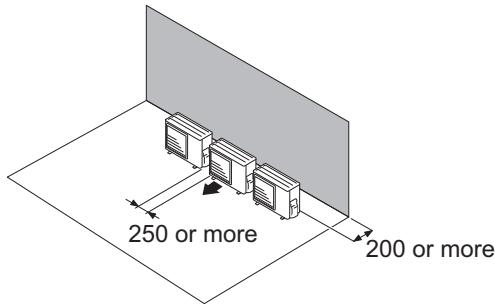
● Multiple outdoor unit installation

- 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:"**.

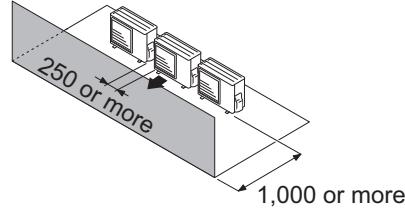
- When the upper space is open:**

Unit: mm

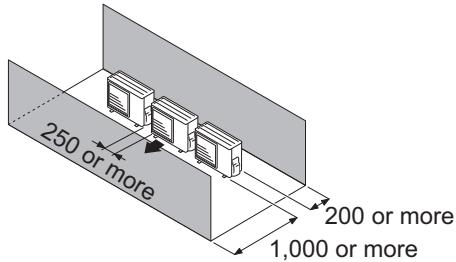
Obstacles at rear only



Obstacles at front only



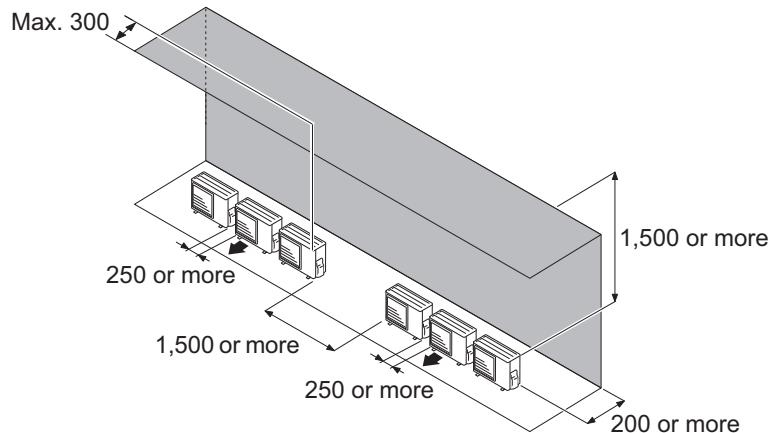
Obstacles at front and rear



- When an obstruction in the upper space:**

Unit: mm

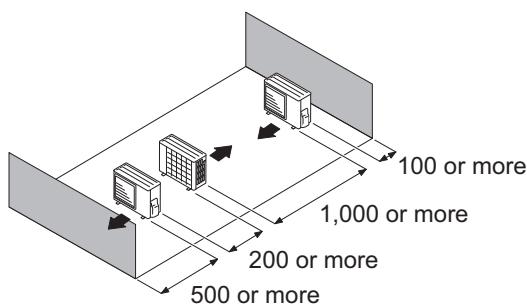
Obstacles at rear and above.



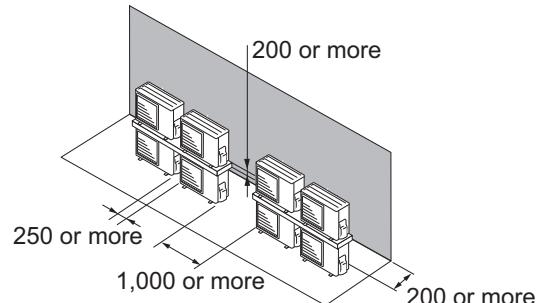
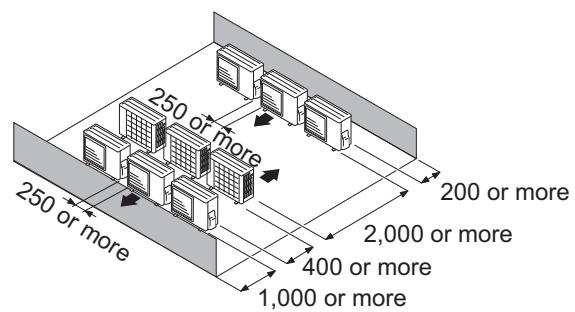
● Outdoor units installation in multi-row

Unit: mm

Single parallel unit arrangement



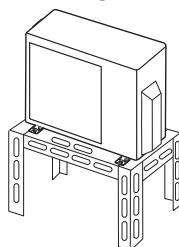
Multiple parallel unit arrangement

**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.

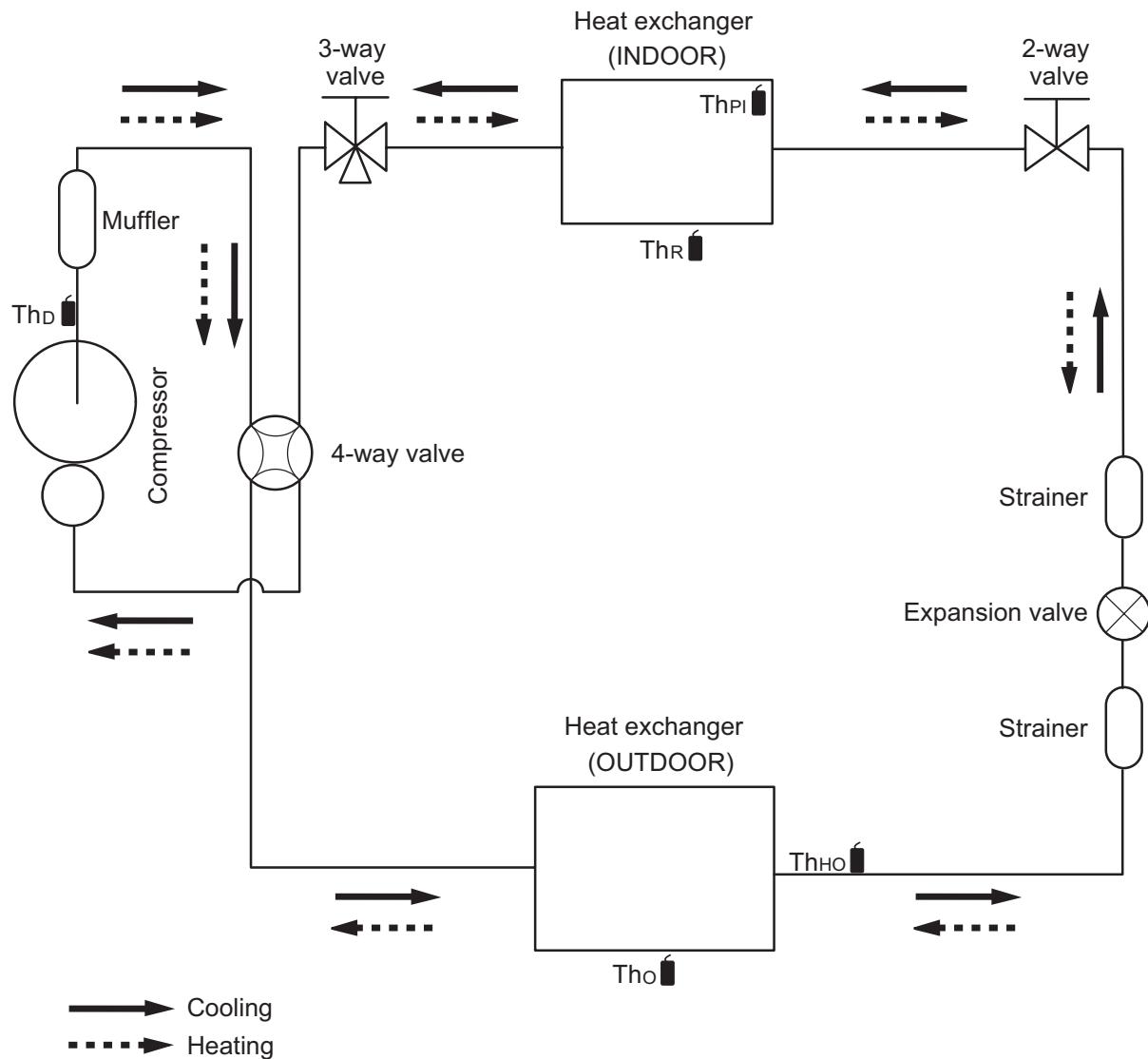
△ CAUTION

- 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. Models: AOYG07KMCC, AOYG09KMCC, and AOYG12KMCC

OUTDOOR UNIT
AOYG07-14KMCCOUTDOOR UNIT
AOYG07-14KMCC

ThD : Thermistor (Discharge temperature)

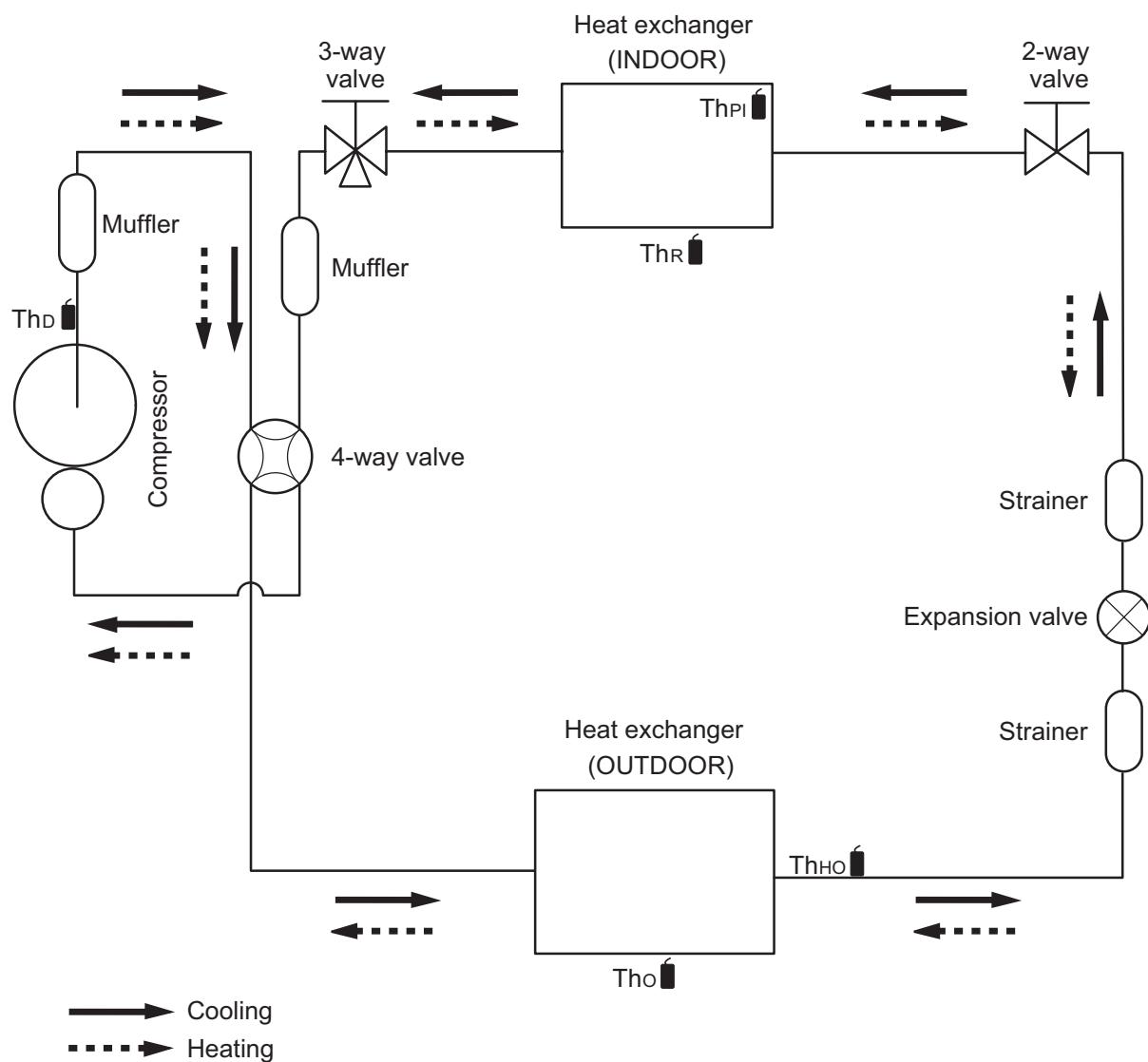
Tho : Thermistor (Outdoor temperature)

ThHo : Thermistor (Heat exchanger out temperature)

ThPI : Thermistor (Pipe temperature)

ThR : Thermistor (Room temperature)

4-2. Model: AOYG14KMCC



Th_D : Thermistor (Discharge temperature)

Th_O : Thermistor (Outdoor temperature)

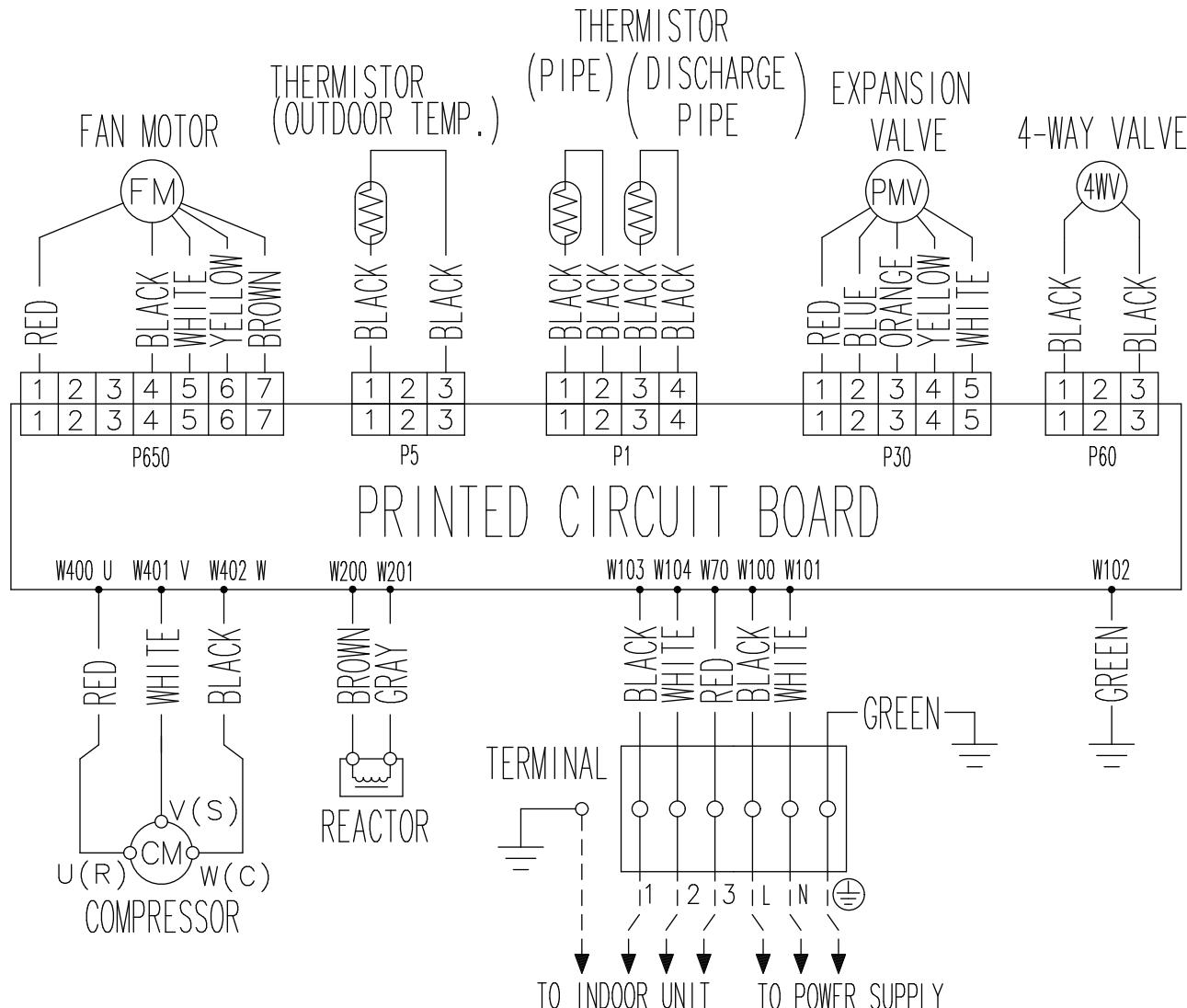
Th_{HO} : Thermistor (Heat exchanger out temperature)

Th_{PI} : Thermistor (Pipe temperature)

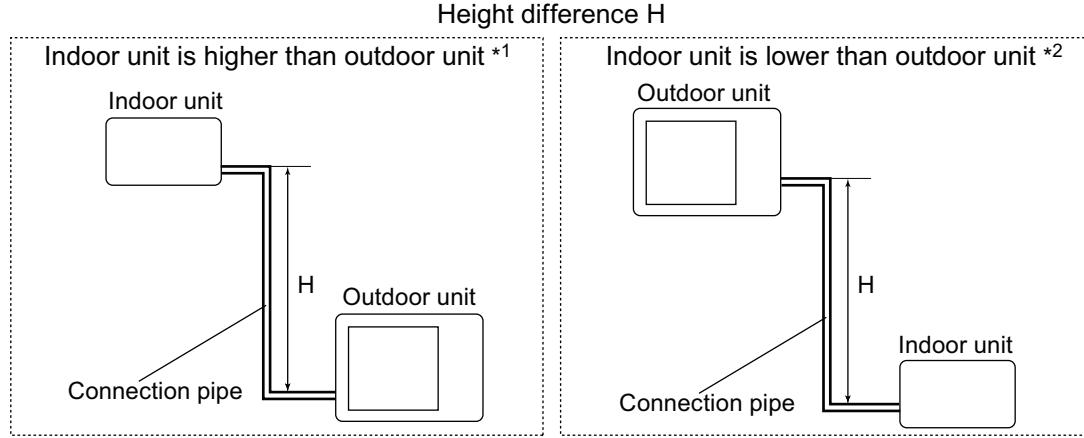
Th_R : Thermistor (Room temperature)

5. Wiring diagrams

5-1. Models: AOYG07KMCC, AOYG09KMCC, AOYG12KMCC, and AOYG14KMCC

OUTDOOR UNIT
AOYG07-14KMCCOUTDOOR UNIT
AOYG07-14KMCC

6. Capacity compensation rate for pipe length and height difference



6-1. Models: AOGY07KMCC and AOGY09KMCC

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

COOLING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit * ¹	15	—	—	0.872	0.910
	Indoor unit is higher than outdoor unit * ¹	10	—	—	0.961	0.886
	Indoor unit is higher than outdoor unit * ¹	7.5	—	0.979	0.965	0.890
	Indoor unit is higher than outdoor unit * ¹	5	0.992	0.983	0.969	0.893
	Indoor unit is higher than outdoor unit * ¹	0	1.000	0.991	0.976	0.901
	Indoor unit is lower than outdoor unit * ²	-5	1.000	0.991	0.976	0.901
	Indoor unit is lower than outdoor unit * ²	-7.5	—	0.991	0.976	0.901
	Indoor unit is lower than outdoor unit * ²	-10	—	—	0.976	0.901
	Indoor unit is lower than outdoor unit * ²	-15	—	—	—	0.901

HEATING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit * ¹	15	—	—	0.832	0.822
	Indoor unit is higher than outdoor unit * ¹	10	—	—	0.917	0.832
	Indoor unit is higher than outdoor unit * ¹	7.5	—	0.961	0.917	0.832
	Indoor unit is higher than outdoor unit * ¹	5	1.000	0.961	0.917	0.832
	Indoor unit is higher than outdoor unit * ¹	0	1.000	0.961	0.917	0.832
	Indoor unit is lower than outdoor unit * ²	-5	0.955	0.956	0.912	0.828
	Indoor unit is lower than outdoor unit * ²	-7.5	—	0.954	0.910	0.826
	Indoor unit is lower than outdoor unit * ²	-10	—	—	0.908	0.824
	Indoor unit is lower than outdoor unit * ²	-15	—	—	—	0.815

6-2. Model: AOYG12KMCC

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

COOLING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit *1	15	—	—	—	0.858
		10	—	—	0.929	0.872
		7.5	—	0.960	0.933	0.876
		5	0.992	0.964	0.937	0.879
	Indoor unit is lower than outdoor unit *2	0	1.000	0.972	0.944	0.887
		-5	1.000	0.972	0.944	0.887
		-7.5	—	0.972	0.944	0.887
		-10	—	—	0.944	0.887
		-15	—	—	—	0.887

HEATING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit *1	15	—	—	—	0.896
		10	—	—	0.968	0.890
		7.5	—	0.994	0.968	0.896
		5	1.000	0.994	0.968	0.896
	Indoor unit is lower than outdoor unit *2	0	1.000	0.994	0.968	0.896
		-5	0.995	0.989	0.963	0.891
		-7.5	—	0.987	0.961	0.889
		-10	—	—	0.959	0.887
		-15	—	—	—	0.878

6-3. Model: AOYG14KMCC

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

COOLING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit *1	15	—	—	—	0.893
		10	—	—	0.955	0.908
		7.5	—	0.975	0.959	0.912
		5	0.992	0.979	0.963	0.916
	Indoor unit is lower than outdoor unit *2	0	1.000	0.987	0.970	0.923
		-5	1.000	0.987	0.970	0.923
		-7.5	—	0.987	0.970	0.923
		-10	—	—	0.970	0.923
		-15	—	—	—	0.923

HEATING		Pipe length (m)				
		5	7.5	10	15	20
Height difference H (m)	Indoor unit is higher than outdoor unit *1	15	—	—	—	0.956
		10	—	—	1.004	0.956
		7.5	—	1.013	1.004	0.956
		5	1.000	1.013	1.004	0.956
	Indoor unit is lower than outdoor unit *2	0	1.000	1.013	1.004	0.956
		-5	0.995	1.008	0.999	0.951
		-7.5	—	1.005	0.997	0.948
		-10	—	—	0.994	0.946
		-15	—	—	—	0.937

7. Additional charge calculation

7-1. Models: AOYG07KMCC and AOYG09KMCC

Refrigerant type	R32
Factory charge amount	600

■ Refrigerant charge

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

7-2. Model: AOYG12KMCC

Refrigerant type	R32
Factory charge amount	700

■ Refrigerant charge

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

7-3. Model: AOYG14KMCC

Refrigerant type	R32
Factory charge amount	850

■ Refrigerant charge

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

8. Airflow

8-1. Model: AOYG07KMCC

● Cooling

m ³ /h	1,650
l/s	458
CFM	971

● Heating

m ³ /h	1,450
l/s	403
CFM	853

8-2. Model: AOYG09KMCC

● Cooling

m ³ /h	1,650
l/s	458
CFM	971

● Heating

m ³ /h	1,450
l/s	403
CFM	853

8-3. Model: AOYG12KMCC

● Cooling

m ³ /h	1,700
l/s	472
CFM	1,001

● Heating

m ³ /h	1,470
l/s	408
CFM	865

8-4. Model: AOYG14KMCC

● Cooling

m ³ /h	1,680
l/s	467
CFM	989

● Heating

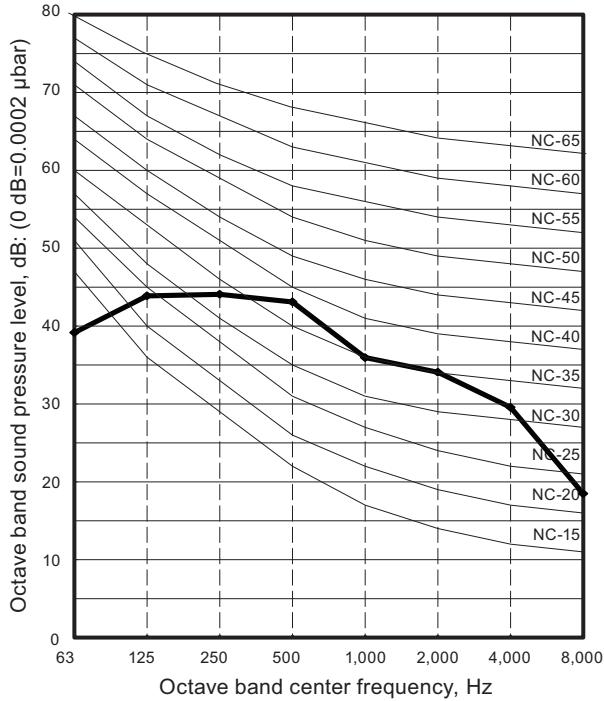
m ³ /h	1,580
l/s	439
CFM	930

9. Operation noise (sound pressure)

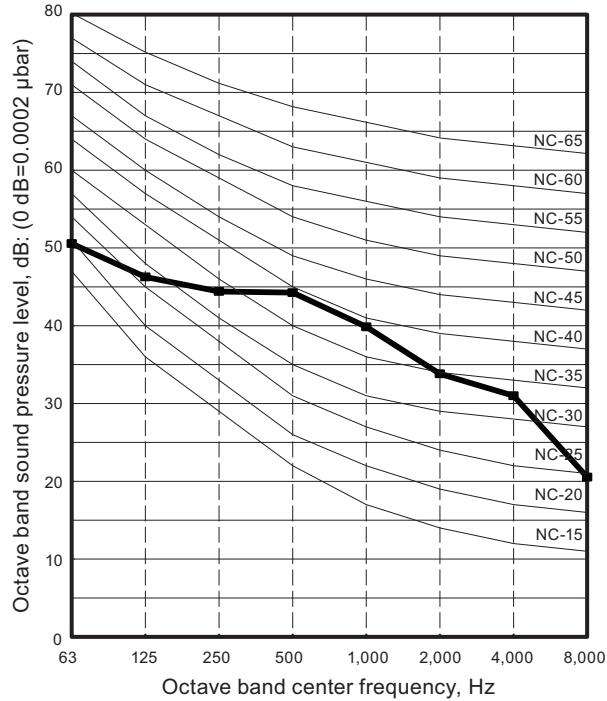
9-1. Noise level curve

■ Model: AOYG07KMCC

● Cooling

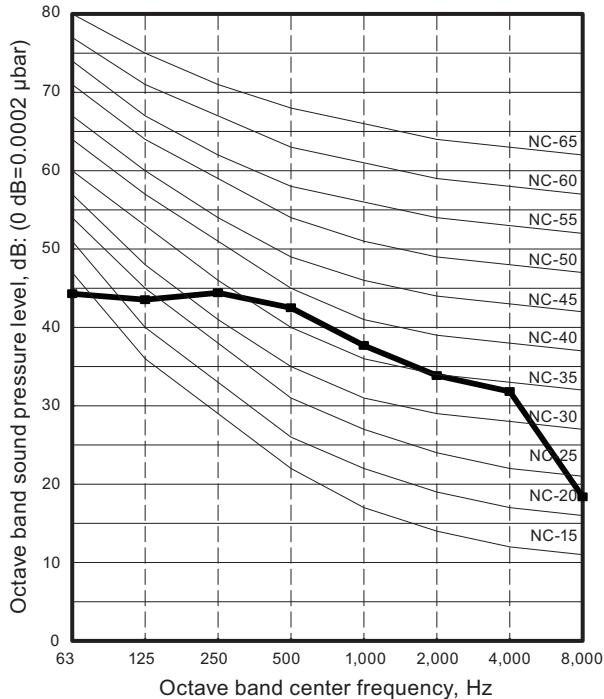


● Heating

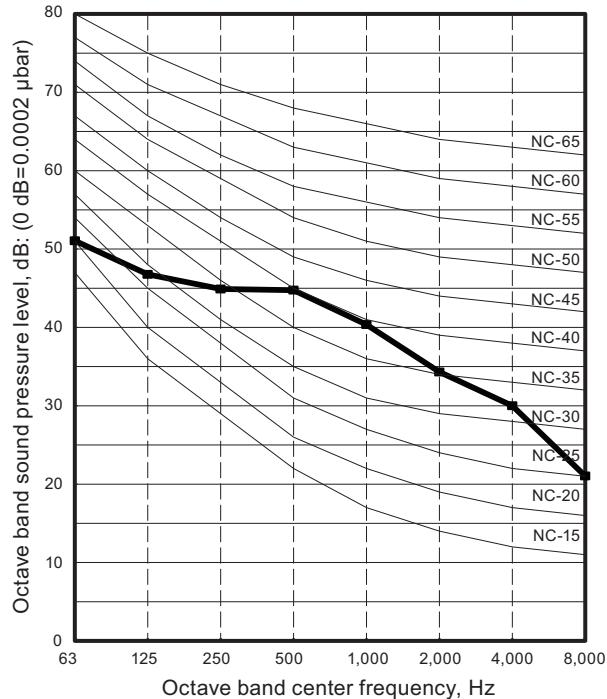


■ Model: AOYG09KMCC

● Cooling

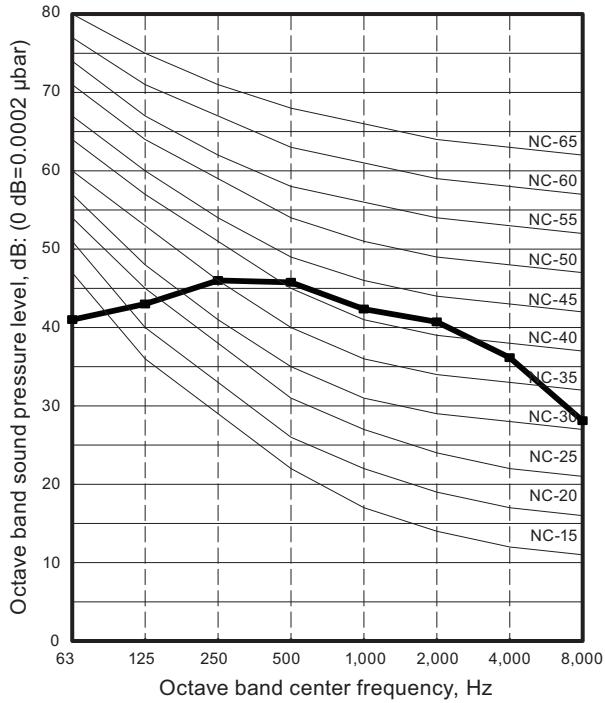


● Heating

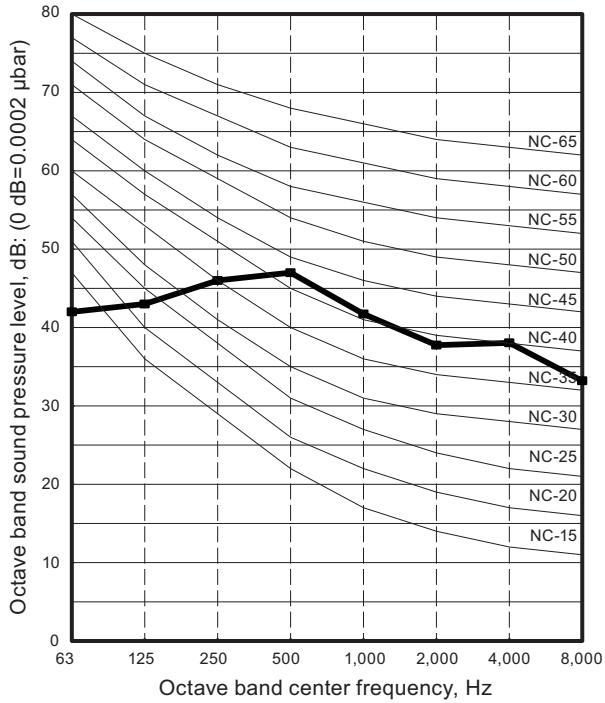


■ Model: AOYG12KMCC

● Cooling

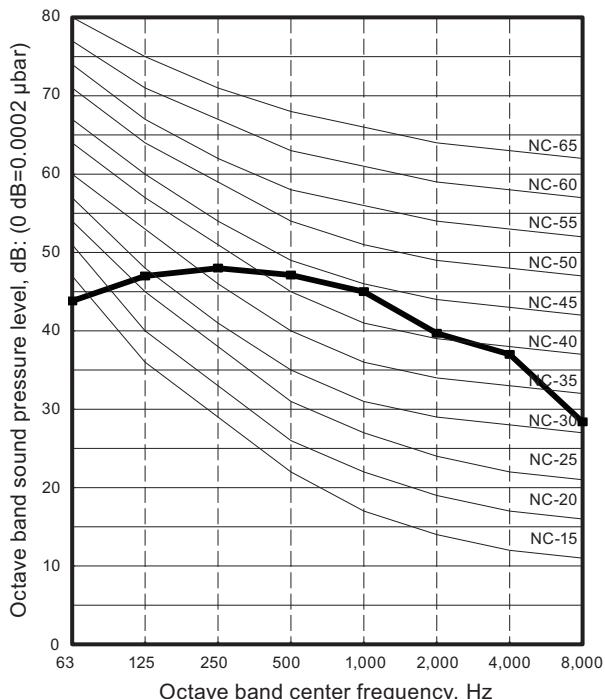


● Heating

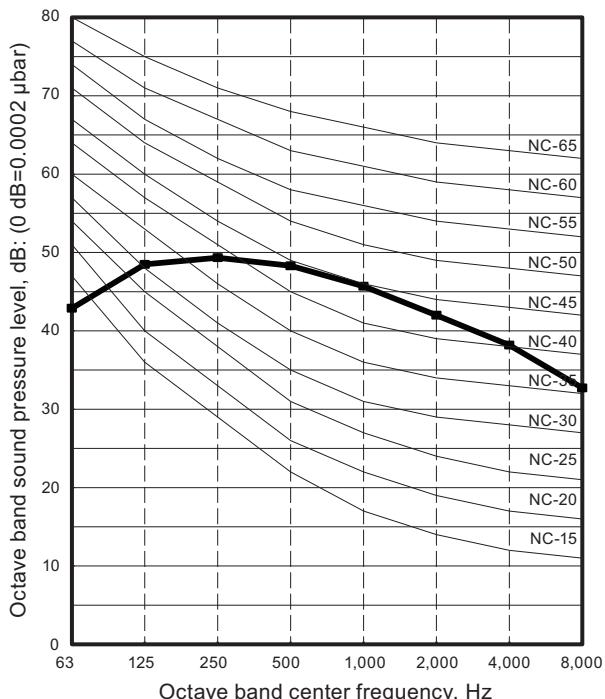
OUTDOOR UNIT
AOYG07-14KMCC

■ Model: AOYG14KMCC

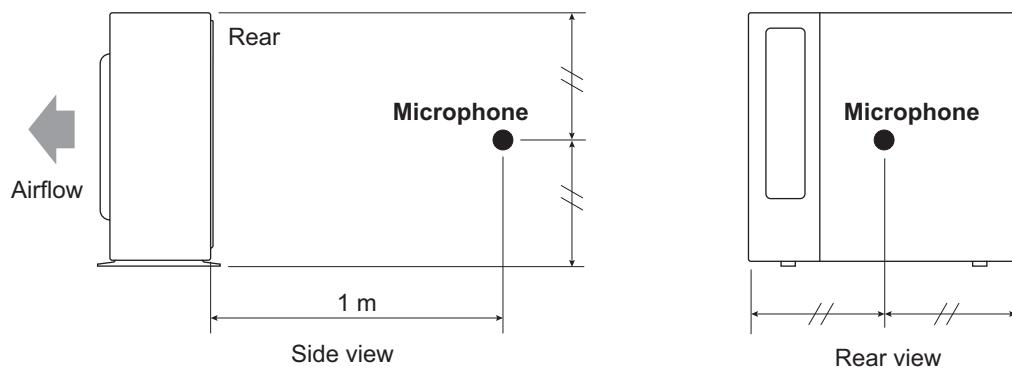
● Cooling



● Heating

OUTDOOR UNIT
AOYG07-14KMCC

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			AOYG07KMCC	AOYG09KMCC	AOYG12KMCC	AOYG14KMCC
Power supply	Voltage	V		230~		
	Frequency	Hz		50		
Max operating current *1			A	9.0		
Starting current			A	3.0	3.4	5.1
Wiring spec. *2	Circuit breaker current		A	15		
	Power cable		mm ²	1.5		
	Connection cable *3	Cross-sectional area	mm ²	1.5		
		Limited wiring length	m	21		

NOTES:

- *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	
		AOYG07KMCC	AOYG09KMCC
Circuit protection	Current fuse (Main PCB)	250 V, 20 A	
		250 V, 5 A	
Fan motor protection	Thermal protection	Activate 100 ±15°C Fan motor stop	
		Reset 95 ±10°C Fan motor restart	
Compressor protection	Terminal protection program (Discharge temp.)	Activate 110°C Compressor stop	
		Reset After 7 minutes Compressor restart	

Type of protection	Protection form	Model	
		AOYG12KMCC	AOYG14KMCC
Circuit protection	Current fuse (Main PCB)	250 V, 20 A	
		250 V, 5 A	
Fan motor protection	Thermal protection	Activate 100 ±15°C Fan motor stop	
		Reset 95 ±10°C Fan motor restart	
Compressor protection	Terminal protection program (Discharge temp.)	Activate 110°C Compressor stop	
		Reset After 7 minutes Compressor restart	

12. Accessories

12-1. Models: AOYG07KMCC, AOYG09KMCC, AOYG12KMCC, and AOYG14KMCC

OUTDOOR UNIT
AOYG07-14KMCCOUTDOOR UNIT
AOYG07-14KMCC

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