Refrigerant
R410A

INDOOR UNIT

1. WALL MOUNTED TYPE :

AS∗A07LGC
AS∗A09LGC
AS∗A12LGC
AS∗A14LGC

D1D_AS016E/03
2009.03.24

WALL MOUNTED TYPE
AS∗A07-14LG

1. FEATURE

■ MODEL

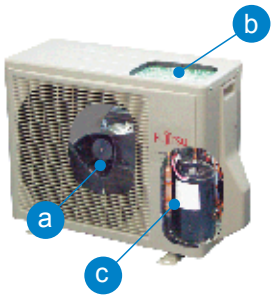
AS∗A07LGC
AS∗A09LGC
AS∗A12LGC
AS∗A14LGC

■ FEATURES

● Energy-Efficiency classification A

Europe Energy-Efficiency classification A achieved

● ALL DC



Front view

a **DC fan motor**

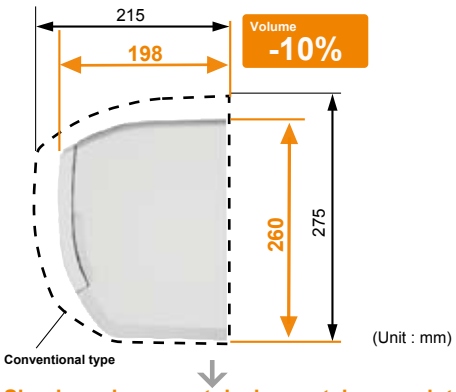
b **i-PAM control (12TYPE, 14TYPE)**
When operation starts, the machine operates at high voltage and high power and when operation stabilizes, the set temperature is maintained at low voltage.

V-PAM control (07TYPE, 09TYPE)
V-PAM technology makes a compressor more powerful.

c **DC rotary compressor**

● Compact Sized Indoor Unit

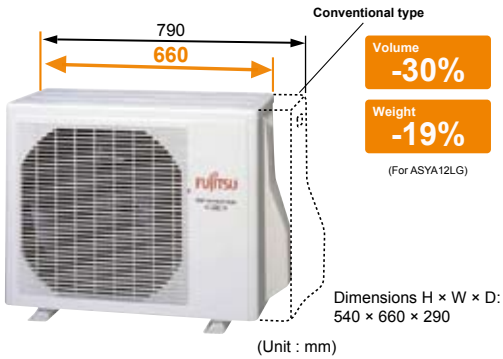
Top class compact size achieved by realizing the highest efficiency in the industry



Simple and compact design matches any interior decor

● Compact Sized Outdoor Unit (07/09/12TYPE)

Top class compact size increases workability and installation flexibility.

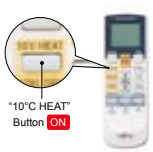


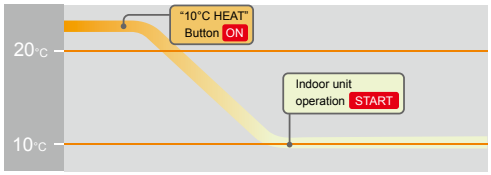
Compact design allows a wider selection of outdoor unit installation sites

● 10°C HEAT Operation

The room temperature can be set to go no lower than 10°C, thus ensuring that the room does not get too cold when not occupied

Caution)
- When the room temperature is higher than 10°C, “10°C HEAT” operation does not start. Operation starts and maintains the room temperature at 10°C when the temperature drops below 10°C.





WALL MOUNTED TYPE
AS∗A07-14LG

● Super quiet

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

Fan speed	Noise level
Quiet	21dB(A)

(07 / 09 / 12 TYPE)

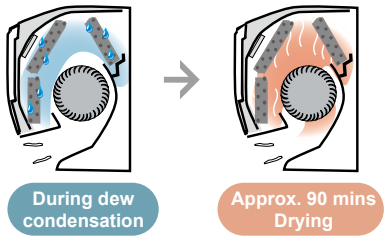
● Easy maintenance

Easy maintenance and always clean. Troublesome maintenance has been made easy.

Since the front panel is easy to remove, maintenance is also easy.

● Inner drying operation

This model is equipped with an inner drying function. After the power is turned off, the dry starts inside the air conditioner. This prevents the growth of mold and bacteria inside the air conditioner.



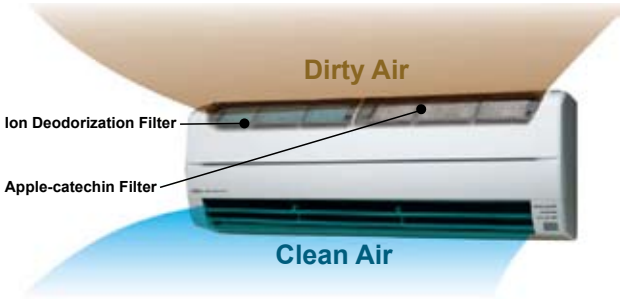
● Low outdoor air temperature correspondence

Corresponds to cooling operation at -10°C outdoor air temperature
Corresponds to heating operation at -15°C outdoor air temperature

Cooling	Heating
-10 to 43°C	-15 to 24°C

● Corresponds to maximum 20m long piping

● Air conditioner filter features




Long-life Ion Deodorization Filter


Apple-catechin Filter

WALL MOUNTED TYPE
AS∗A07-14LG

2. REMOTE CONTROLLER

2-1. WIRED REMOTE CONTROLLER

■ FEATURES

∗ Four kinds of timer setup (ON / OFF / PROGRAM / SLEEP) are possible.

∗ Four kinds of timers. Easy operation.

● Built-in timers

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

● Program timer

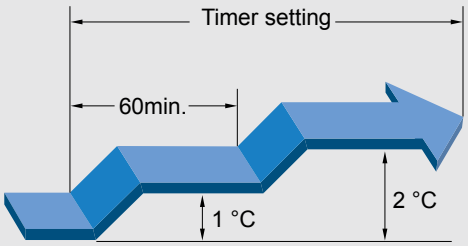
The program timer operates the ON and OFF timer once within a 24 hour period.

● Sleep timer

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

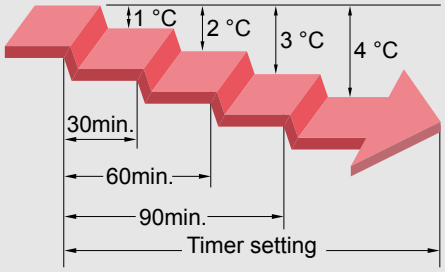
Cooling operation/dry operation

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



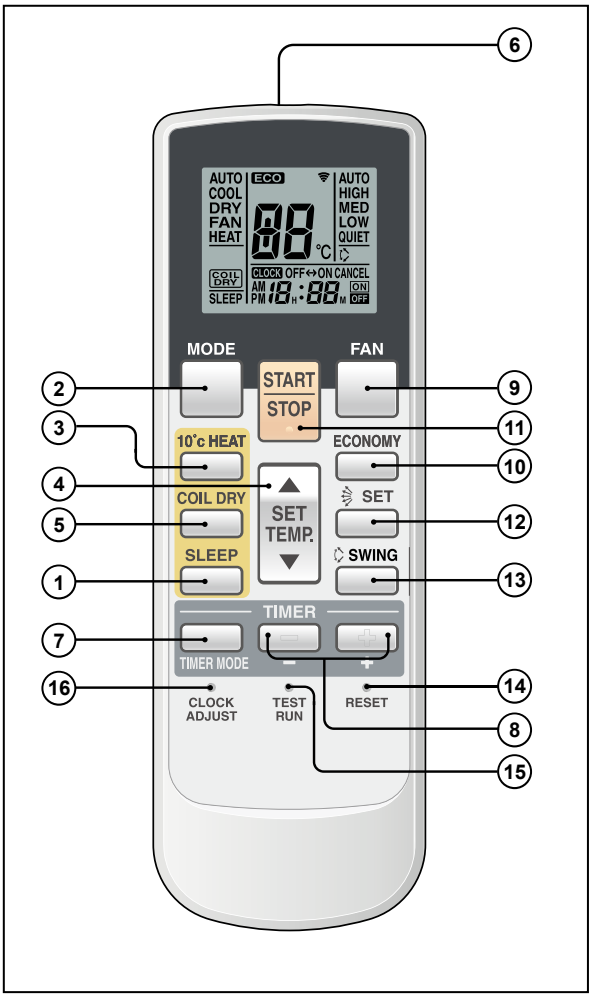
Heating operation

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



WALL MOUNTED TYPE
AS∗A07-14LG

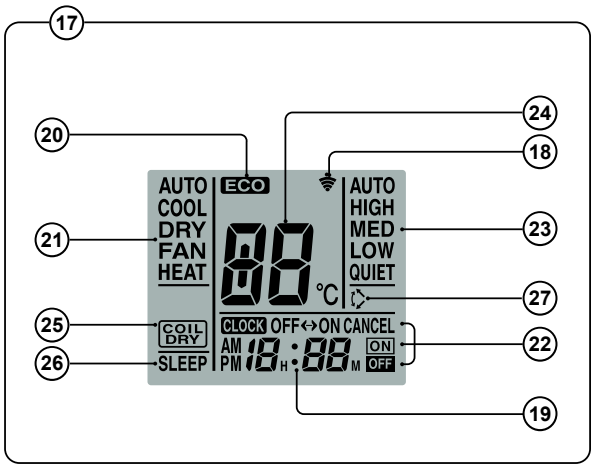
■ FUNCTIONS



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

16 **CLOCK ADJUST button**

Display panel



17 **Remote Control Unit Display**
18 **Transmit Indicator**
19 **Clock Display**
20 **ECONOMY Display**
21 **Operating Mode Display**
22 **Timer Mode Display**
23 **Fan Speed Display**
24 **Temperature SET Display**
25 **COIL DRY Display**
26 **SLEEP Display**
27 **SWING Display**

■ SPECIFICATION

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

WALL MOUNTED TYPE
AS∗A07-14LG

3. SPECIFICATIONS

Type					WALL MOUNTED INVERTER HEAT PUMP			
Model name					AS∗A07LGC	AS∗A09LGC	AS∗A12LGC	AS∗A14LGC
Power source					230V~ 50Hz			
Available voltage range					198-264V ~ 50Hz			
European energy label				Cooling	A	A	A	A
				Heating	A	A	A	A
Capacity	Cooling	Rated		kW	2.10	2.50	3.40	4.00
				BTU/h	7,200	8,500	11,600	13,600
		Min-Max		kW	0.5 - 3.0	0.5 - 3.2	0.9 - 3.9	0.9 - 5.0
				BTU/h	1,700 - 10,200	1,700 - 10,900	3,100 - 13,300	3,100 - 17,100
	Heating	Rated		kW	3.00	3.20	4.00	5.00
				BTU/h	10,200	10,900	13,600	17,100
		Min-Max		kW	0.5 - 4.5	0.5 - 4.5	0.9 - 5.6	0.9 - 7.0
				BTU/h	1,700 - 15,300	1,700 - 15,300	3,100 - 19,100	3,100 - 23,900
Input power	Cooling	Rated		kW	0.47	0.63	0.895	1.08
		Min-Max			0.25 - 1.19	0.25 - 1.27	0.25 - 1.40	0.25 - 2.03
	Heating	Rated			0.66	0.75	0.97	1.295
		Min-Max			0.25 - 1.60	0.25 - 1.60	0.25 - 1.99	0.25 - 2.40
Current	Cooling	Rated		A	2.4	3.2	4.3	4.9
		Max			6.0	6.0	6.5	9.0
	Heating	Rated			3.2	3.7	4.6	5.7
		Max			7.5	7.5	9.0	10.5
EER		Cooling		kW/kW	4.47	3.97	3.80	3.70
COP		Heating			4.55	4.27	4.12	3.86
SENSIBLE CAPACITY		Cooling		kW	1.40	1.60	2.20	2.60
POWER FACTOR		Cooling		%	87	87	91	95
		Heating			89	89	92	99
Moisture removal				l/h (pints/h)	1.0 (2.1)	1.3 (2.7)	1.8 (3.8)	2.1 (4.4)
Fan	Airflow rate	Cooling	High	m^3/h	750			800
			Med		610			670
			Low		440			500
			Quiet		300			340
		Heating	High		750			800
			Med		610			670
			Low		480			540
			Quiet		310			390
	Type × Q'ty				Cross flow fan×1			
	Motor output			W	30			
Sound pressure level		Cooling	High	dB(A)	43			44
			Med		38			40
			Low		33			33
			Quiet		21			25
		Heating	High		43			44
			Med		38			40
			Low		33			34
			Quiet		21			27
Heat exchanger type		Dimensions (H × W × D)		mm	630 × 256 × 20			
		Fin ptich			1.1			
		Rows x Stages			2 × 16			
		Pipe type			Copper			
		Fin type			Aluminium			
Enclosure		Material			Polystyrene			
		Colour			White			
Dimensions (H×W ×D)	Net			mm	260 × 790 × 198			
	Gross				259 × 840 × 328			
Weight	Net			kg(lb.)	7.5 (17)			
	Gross				10 (22)			
Connection pipe	Size	Liquid		mm	Φ6.35 (Φ 1/4 in.)			Φ6.35 (Φ 1/4 in.)
		Gas			Φ9.52 (Φ 3 /8 in.)			Φ12.7 (Φ 1/2 in.)
	Method				Flare			
Operation range		Cooling		°C	18 to 32			
				%RH	80 or less			
		Heating		°C	30 or less			
Remote controller type					Wireless			
Drain pipe	Material				PP+LLDPE			
	Size			mm	Outer diameter: 21 / Inner diameter: 13.6			

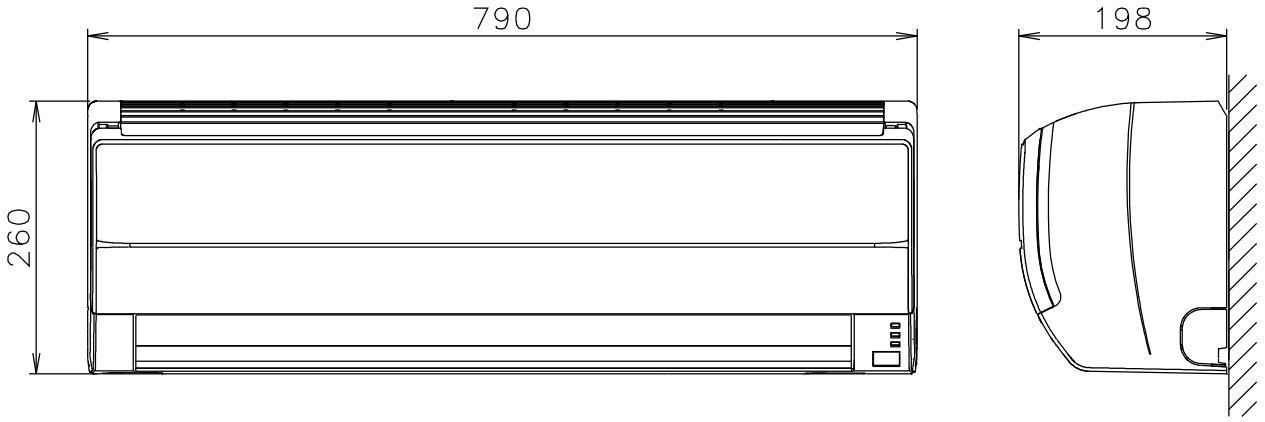
Note :
Specifications are based on the following conditions.
Cooling : Indoor temperature of 27 °CDB / 19 °CWB.and outdoor temperature of 35 °CDB/24 °CWB.
Heating : Indoor temperature of 20 °CDB / 15 °CWB.and outdoor temperature of 7 °CDB/6 °CWB.
Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

WALL MOUNTED TYPE
AS∗A07-14LG

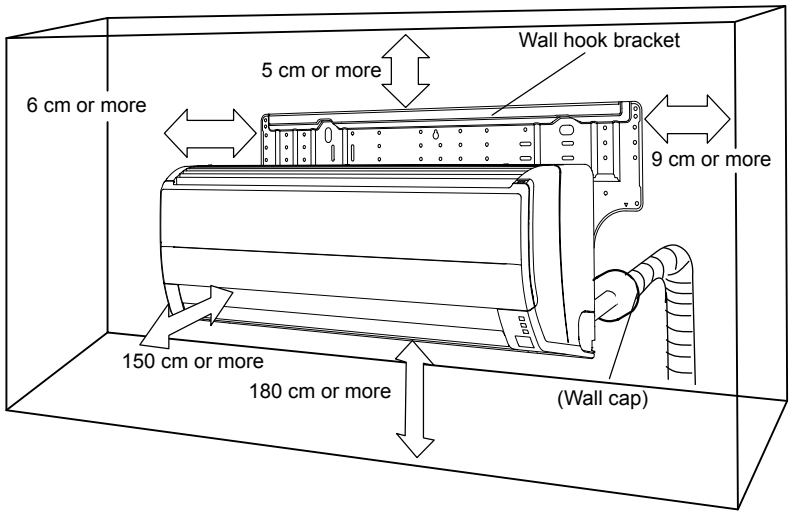
4. DIMENSIONS

■ MODEL: AS∗A07LG, AS∗A09LG, AS∗A12LG, AS∗A14LG

(Unit : mm)



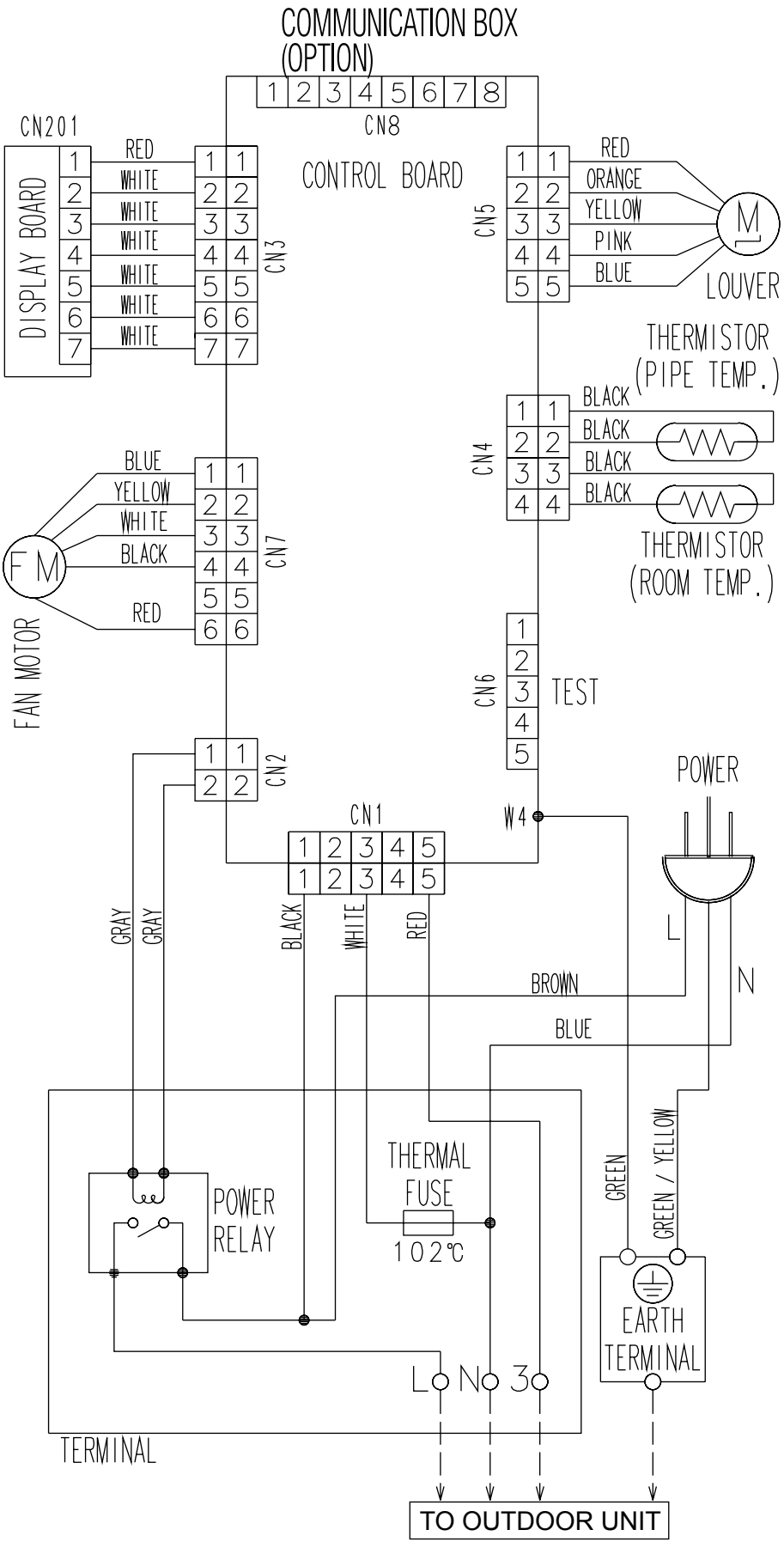
■ INSTALLATION PLACE



WALL MOUNTED TYPE
AS∗A07-14LG

5. WIRING DIAGRAMS

■ MODEL: AS∗A07LG, AS∗A09LG, AS∗A12LG, AS∗A14LG



WALL MOUNTED TYPE
AS∗A07-14LG

6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL: AS∗A07LG

AFR	12.5

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	20	1.97	1.40	0.33	2.19	1.41	0.34	2.26	1.53	0.34	2.41	1.54	0.34	2.49	1.66	0.34	2.64	1.65	0.35	2.79	1.76	0.35
	25	1.87	1.33	0.37	2.08	1.34	0.38	2.15	1.45	0.38	2.29	1.46	0.38	2.36	1.58	0.38	2.50	1.57	0.39	2.65	1.67	0.39
	30	1.76	1.26	0.41	1.97	1.26	0.42	2.03	1.37	0.42	2.17	1.38	0.42	2.23	1.49	0.43	2.37	1.48	0.43	2.50	1.58	0.44
	35	1.66	1.18	0.45	1.85	1.19	0.46	1.91	1.29	0.46	2.04	1.30	0.47	2.10	1.40	0.47	2.23	1.39	0.47	2.35	1.49	0.48
	40	1.48	1.05	0.45	1.65	1.06	0.46	1.70	1.15	0.46	1.82	1.16	0.47	1.87	1.25	0.47	1.98	1.24	0.47	2.10	1.32	0.48
	43	1.37	0.98	0.45	1.53	0.98	0.46	1.58	1.07	0.46	1.68	1.07	0.47	1.74	1.16	0.47	1.84	1.15	0.47	1.94	1.23	0.48

■ MODEL: AS∗A09LG

AFR	12.5

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	20	2.34	1.60	0.44	2.61	1.61	0.45	2.70	1.75	0.45	2.87	1.76	0.46	2.96	1.90	0.46	3.14	1.89	0.46	3.32	2.01	0.47
	25	2.22	1.52	0.50	2.48	1.53	0.50	2.56	1.66	0.51	2.73	1.67	0.51	2.81	1.80	0.51	2.98	1.79	0.52	3.15	1.91	0.53
	30	2.10	1.44	0.55	2.34	1.44	0.56	2.42	1.57	0.56	2.58	1.58	0.57	2.66	1.70	0.57	2.82	1.70	0.58	2.98	1.81	0.58
	35	1.98	1.35	0.61	2.20	1.36	0.62	2.28	1.48	0.62	2.43	1.48	0.63	2.50	1.60	0.63	2.65	1.59	0.64	2.80	1.70	0.64
	40	1.76	1.20	0.61	1.96	1.21	0.62	2.03	1.32	0.62	2.16	1.32	0.63	2.23	1.43	0.63	2.36	1.42	0.64	2.50	1.51	0.64
	43	1.63	1.12	0.61	1.82	1.12	0.62	1.88	1.22	0.62	2.00	1.22	0.62	2.07	1.32	0.63	2.19	1.32	0.63	2.31	1.40	0.64

■ MODEL: AS∗A12LG

AFR	12.5

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	20	3.18	2.20	0.61	3.55	2.21	0.62	3.67	2.41	0.63	3.91	2.41	0.63	4.03	2.61	0.64	4.27	2.60	0.64	4.51	2.77	0.65
	25	3.03	2.09	0.70	3.37	2.11	0.71	3.49	2.29	0.71	3.72	2.30	0.72	3.83	2.48	0.72	4.06	2.47	0.73	4.29	2.63	0.74
	30	2.86	1.98	0.78	3.19	1.99	0.79	3.30	2.17	0.79	3.52	2.17	0.80	3.63	2.35	0.81	3.84	2.34	0.81	4.06	2.49	0.82
	35	2.69	1.86	0.86	2.99	1.87	0.88	3.09	2.03	0.88	3.30	2.04	0.89	3.40	2.20	0.895	3.60	2.19	0.90	3.81	2.33	0.91
	40	2.27	1.57	0.80	2.53	1.58	0.82	2.62	1.72	0.82	2.79	1.72	0.83	2.87	1.86	0.83	3.05	1.85	0.84	3.22	1.97	0.85
	43	2.09	1.45	0.80	2.33	1.45	0.82	2.41	1.58	0.82	2.57	1.59	0.83	2.65	1.71	0.83	2.81	1.71	0.84	2.96	1.82	0.85

■ MODEL: AS∗A14LG

AFR	12.5

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	20	3.72	2.58	0.75	4.14	2.60	0.76	4.29	2.83	0.77	4.57	2.83	0.78	4.71	3.06	0.78	4.99	3.05	0.79	5.28	3.25	0.80
	25	3.55	2.46	0.85	3.95	2.48	0.86	4.08	2.69	0.87	4.35	2.70	0.87	4.49	2.92	0.88	4.76	2.91	0.89	5.03	3.10	0.90
	30	3.36	2.34	0.94	3.75	2.35	0.96	3.87	2.55	0.96	4.13	2.56	0.97	4.26	2.77	0.98	4.51	2.76	0.99	4.77	2.94	1.00
	35	3.16	2.19	1.04	3.52	2.21	1.06	3.64	2.40	1.06	3.88	2.41	1.07	4.00	2.60	1.08	4.24	2.59	1.09	4.48	2.76	1.10
	40	2.78	1.93	1.03	3.09	1.94	1.04	3.20	2.11	1.05	3.41	2.12	1.06	3.51	2.28	1.06	3.73	2.28	1.08	3.94	2.42	1.09
	43	2.53	1.76	1.01	2.82	1.77	1.03	2.91	1.92	1.03	3.11	1.93	1.04	3.20	2.08	1.05	3.39	2.07	1.06	3.59	2.21	1.07

AFR : Air flow rate (m^3/min)
TC : Total capacity (kW)
SHC : Sensible Heat capacity (kW)
PI : Power Input (kW)

WALL MOUNTED TYPE
AS∗A07-14LG

6-2. HEATING CAPACITY

■ MODEL: AS∗A07LG

AFR	12.5

			Indoor temperature									
		°CDB	16		18		20		22		24	
	°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
Outdoor temperature	-15	-16	2.25	0.99	2.19	1.01	2.14	1.03	2.09	1.05	2.03	1.07
	-10	-11	2.56	1.02	2.50	1.04	2.43	1.06	2.37	1.08	2.31	1.11
	-5	-7	2.93	1.05	2.86	1.07	2.79	1.10	2.72	1.12	2.65	1.14
	0	-2	3.47	1.09	3.39	1.12	3.31	1.14	3.23	1.16	3.14	1.19
	5	3	4.05	1.15	3.96	1.17	3.86	1.19	3.76	1.22	3.67	1.24
	7	6	4.41	1.17	4.31	1.20	4.20	1.22	4.10	1.25	3.99	1.27
	10	8	4.64	1.19	4.53	1.21	4.42	1.24	4.31	1.26	4.20	1.29
	15	10	4.81	1.18	4.69	1.20	4.58	1.23	4.46	1.25	4.35	1.27

■ MODEL: AS∗A09LG

AFR	12.5

			Indoor temperature									
		°CDB	16		18		20		22		24	
	°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
Outdoor temperature	-15	-16	2.25	0.99	2.19	1.01	2.14	1.03	2.09	1.05	2.03	1.07
	-10	-11	2.56	1.02	2.50	1.04	2.43	1.06	2.37	1.08	2.31	1.11
	-5	-7	2.93	1.05	2.86	1.07	2.79	1.10	2.72	1.12	2.65	1.14
	0	-2	3.47	1.09	3.39	1.12	3.31	1.14	3.23	1.16	3.14	1.19
	5	3	4.05	1.15	3.96	1.17	3.86	1.19	3.76	1.22	3.67	1.24
	7	6	4.41	1.17	4.31	1.20	4.20	1.22	4.10	1.25	3.99	1.27
	10	8	4.64	1.19	4.53	1.21	4.42	1.24	4.31	1.26	4.20	1.29
	15	10	4.81	1.18	4.69	1.20	4.58	1.23	4.46	1.25	4.35	1.27

■ MODEL: AS∗A12LG

AFR	12.5

			Indoor temperature									
		°CDB	16		18		20		22		24	
	°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
Outdoor temperature	-15	-16	3.40	1.72	3.32	1.76	3.24	1.80	3.16	1.83	3.07	1.87
	-10	-11	3.76	1.72	3.67	1.76	3.58	1.79	3.49	1.83	3.40	1.86
	-5	-7	4.18	1.72	4.08	1.76	3.98	1.79	3.88	1.83	3.78	1.87
	0	-2	4.68	1.72	4.57	1.76	4.46	1.80	4.35	1.83	4.24	1.87
	5	3	5.05	1.52	4.93	1.55	4.81	1.58	4.69	1.61	4.57	1.64
	7	6	5.36	1.51	5.23	1.54	5.10	1.57	4.97	1.60	4.85	1.63
	10	8	5.55	1.51	5.42	1.54	5.29	1.57	5.16	1.60	5.02	1.63
	15	10	5.54	1.41	5.41	1.44	5.28	1.47	5.15	1.50	5.01	1.53

■ MODEL: AS∗A14LG

AFR	12.5

			Indoor temperature									
		°CDB	16		18		20		22		24	
	°CDB	°CWB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
Outdoor temperature	-15	-16	3.47	1.78	3.38	1.81	3.30	1.85	3.22	1.89	3.14	1.93
	-10	-11	4.15	1.87	4.05	1.91	3.95	1.95	3.86	1.99	3.76	2.03
	-5	-7	4.77	1.95	4.66	1.99	4.55	2.04	4.43	2.08	4.32	2.12
	0	-2	5.42	1.67	5.29	1.71	5.16	1.74	5.03	1.78	4.90	1.81
	5	3	5.04	1.43	4.92	1.46	4.80	1.49	4.68	1.52	4.56	1.55
	7	6	5.57	1.49	5.43	1.52	5.30	1.55	5.17	1.59	5.04	1.62
	10	8	5.91	1.52	5.77	1.55	5.63	1.58	5.49	1.61	5.35	1.64
	15	10	6.18	1.51	6.03	1.55	5.88	1.58	5.74	1.61	5.59	1.64

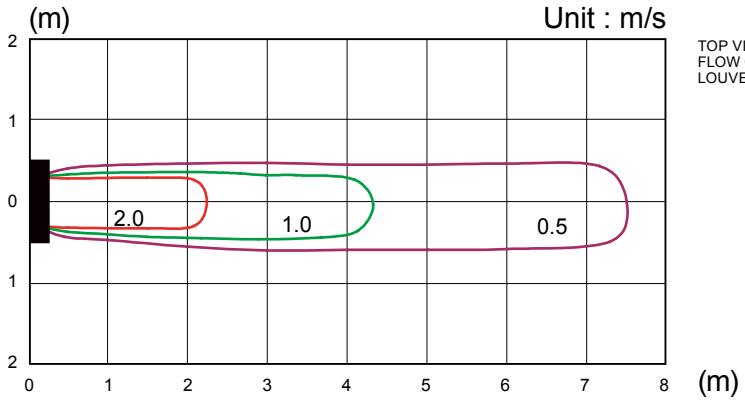
AFR : Air flow rate (m^3/min)
TC : Total capacity (kW)
PI : Power Input (kW)

WALL MOUNTED TYPE
AS∗A07-14LG

7. FAN PERFORMANCE AND CAPACITY

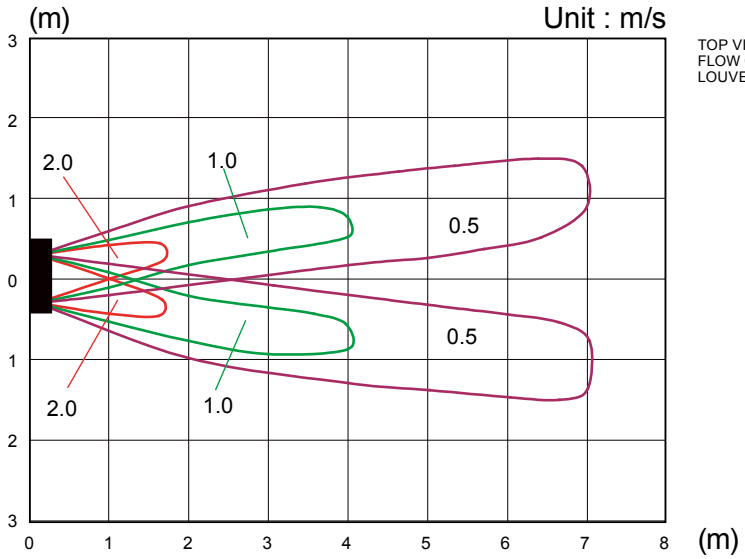
7-1. AIR VELOCITY DISTRIBUTION

■ MODEL: AS∗A07LG, AS∗A09LG, AS∗A12LG

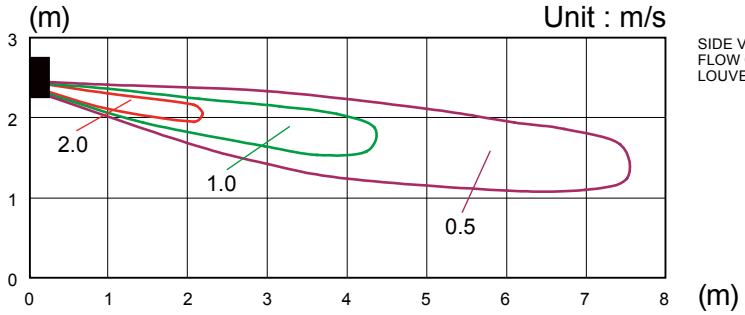


TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center

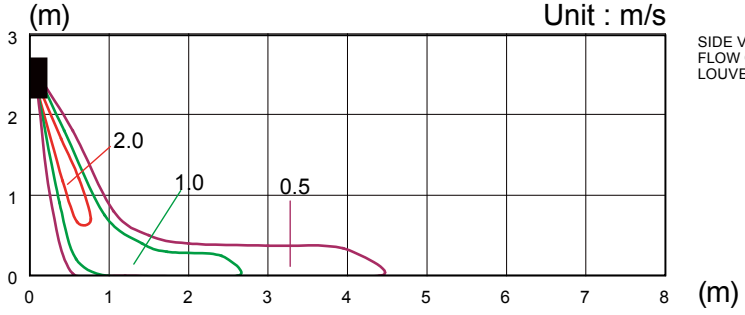
Note:
Fan speed : High
Operation mode : FAN
Voltage : 230V



TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



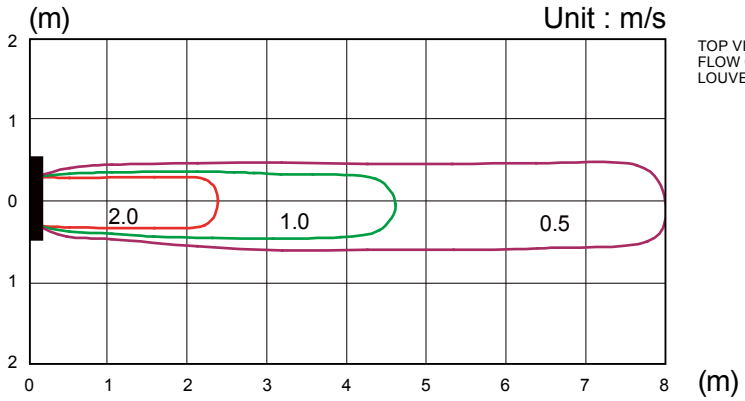
SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

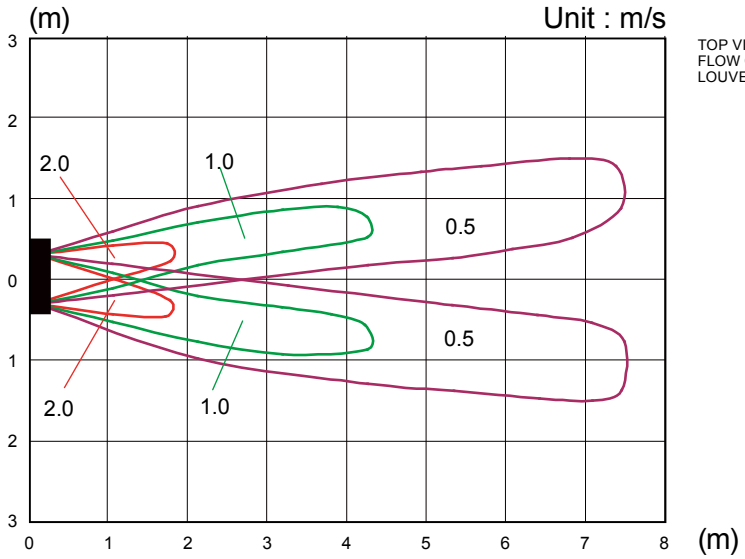
WALL MOUNTED TYPE
AS∗A07-14LG

■ MODEL: AS∗A14LG

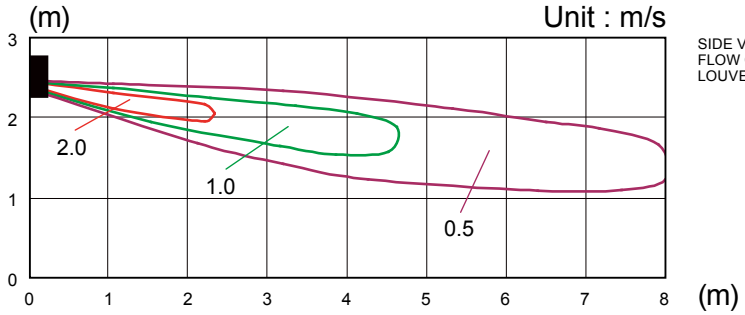


TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center

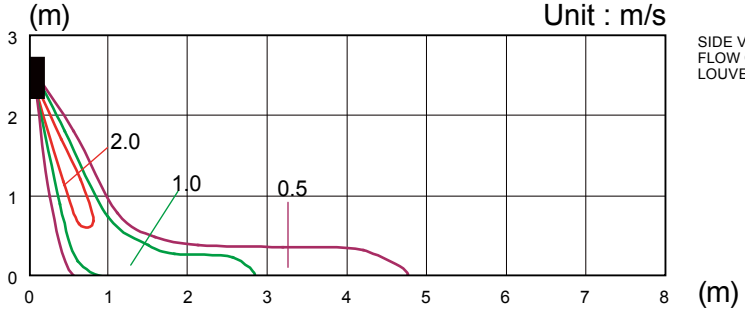
Note:
Fan speed : High
Operation mode : FAN
Voltage : 230V



TOP VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Right & Left



SIDE VIEW
FLOW CONTROL PANEL : Horiz.
LOUVER : Center



SIDE VIEW
FLOW CONTROL PANEL : Vert.
LOUVER : Center

WALL MOUNTED TYPE
AS∗A07-14LG

7-2. AIR FLOW

■ MODEL: AS∗A07LG, AS∗A09LG, AS∗A12LG

● COOLING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1440	750	m^3/h
		208	l/s
		441	CFM
MED	1200	610	m^3/h
		169	l/s
		359	CFM
LOW	920	440	m^3/h
		122	l/s
		259	CFM
QUIET	680	300	m^3/h
		83	l/s
		177	CFM

● HEATING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1440	750	m^3/h
		208	l/s
		441	CFM
MED	1200	610	m^3/h
		169	l/s
		359	CFM
LOW	980	480	m^3/h
		133	l/s
		282	CFM
QUIET	700	310	m^3/h
		86	l/s
		182	CFM

WALL MOUNTED TYPE
AS∗A07-14LG

■ MODEL: AS∗A14LG

● COOLING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1500	800	m^3/h
		222	l/s
		471	CFM
MED	1300	670	m^3/h
		186	l/s
		394	CFM
LOW	1020	500	m^3/h
		139	l/s
		294	CFM
QUIET	760	340	m^3/h
		94	l/s
		200	CFM

● HEATING

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1500	800	m^3/h
		222	l/s
		471	CFM
MED	1300	670	m^3/h
		186	l/s
		394	CFM
LOW	1080	540	m^3/h
		150	l/s
		318	CFM
QUIET	840	390	m^3/h
		108	l/s
		230	CFM

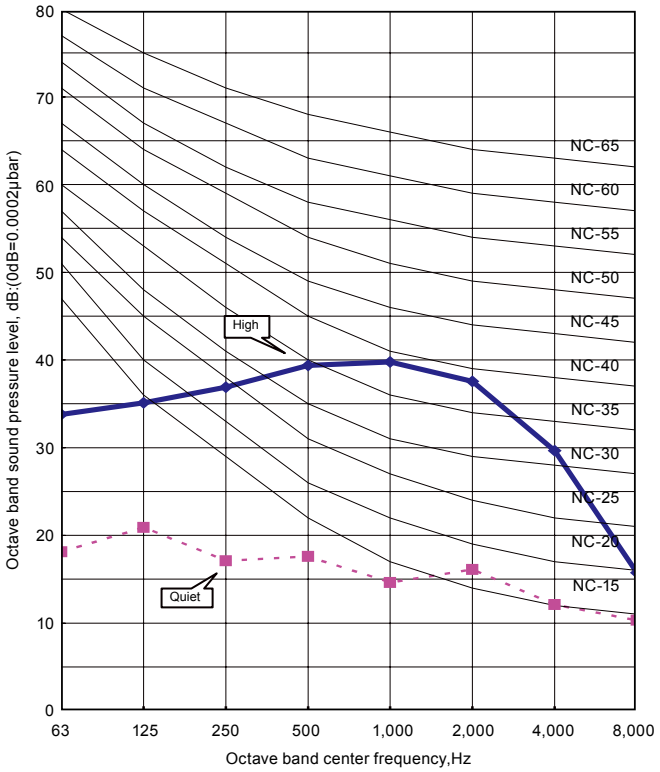
WALL MOUNTED TYPE
AS∗A07-14LG

8. OPERATION NOISE

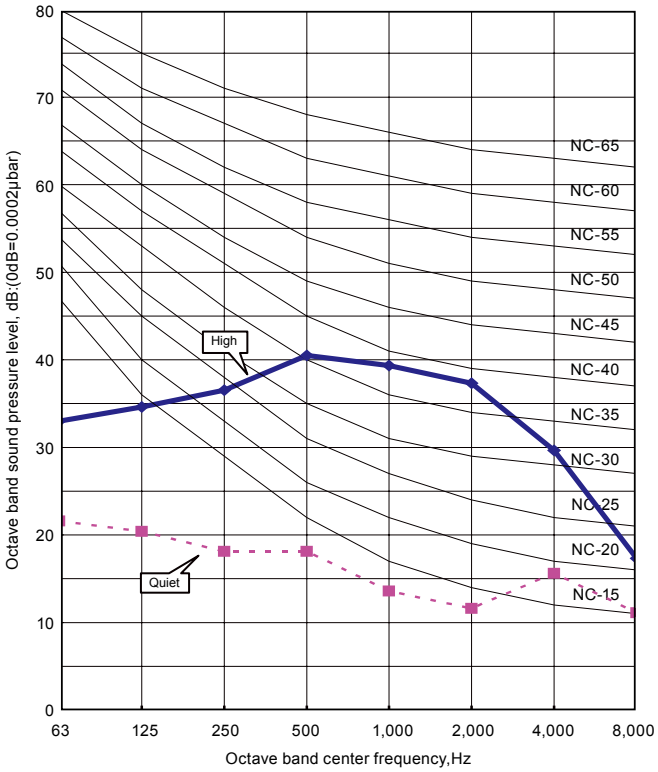
8-1. NOISE LEVEL CURVE

■ MODEL: AS∗A07LG

● COOLING

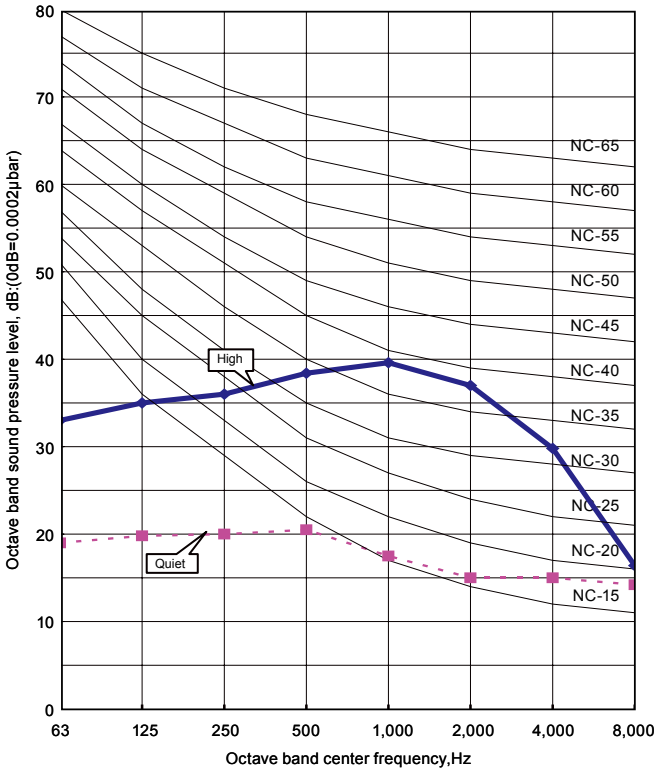


● HEATING

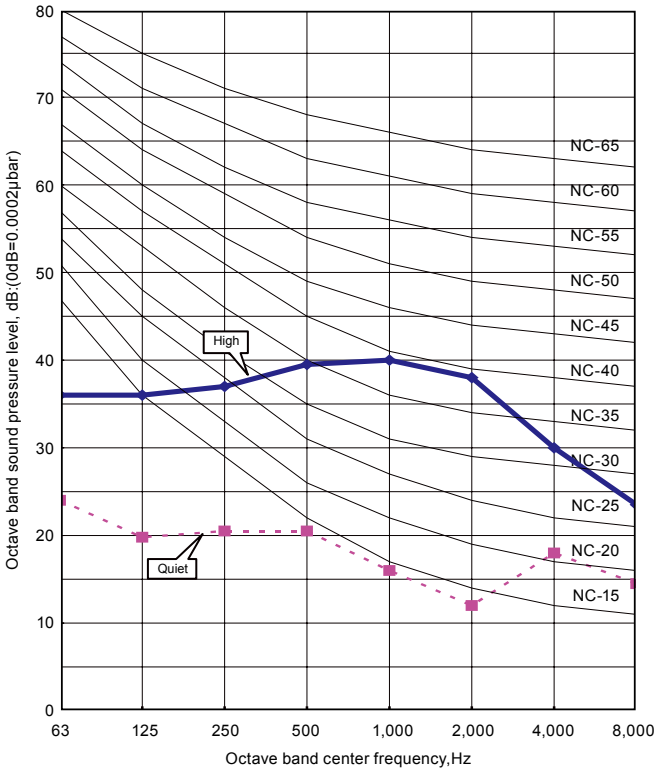


■ MODEL: AS∗A09LG

● COOLING



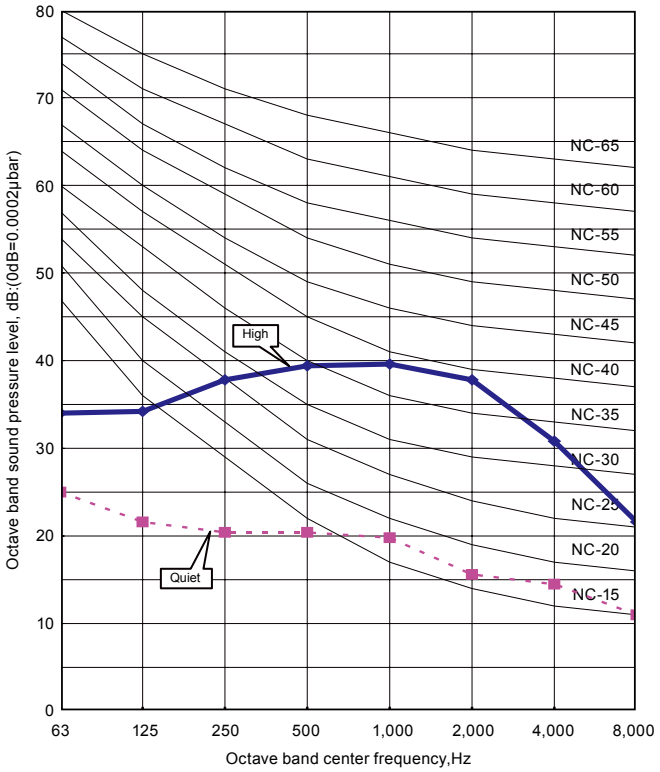
● HEATING



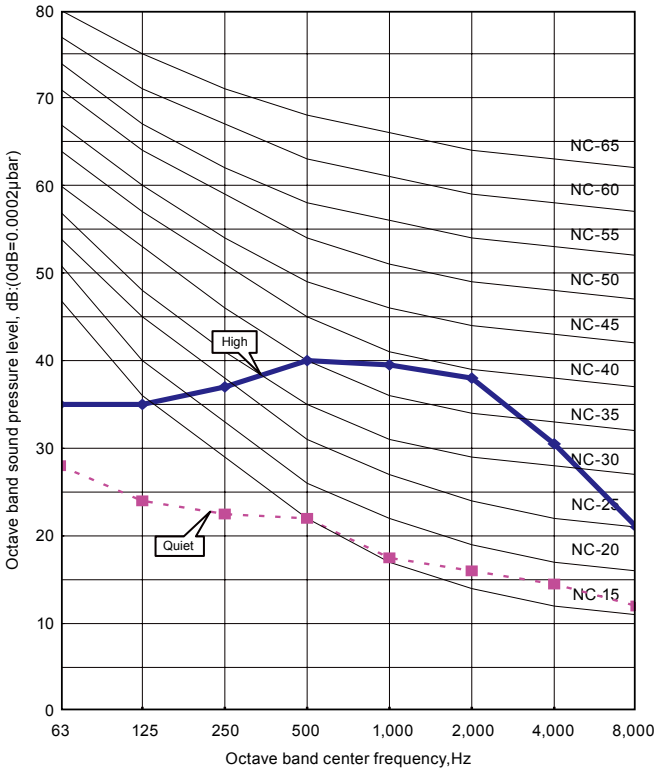
WALL MOUNTED TYPE
AS∗A07-14LG

■ MODEL: AS∗A12LG

● COOLING

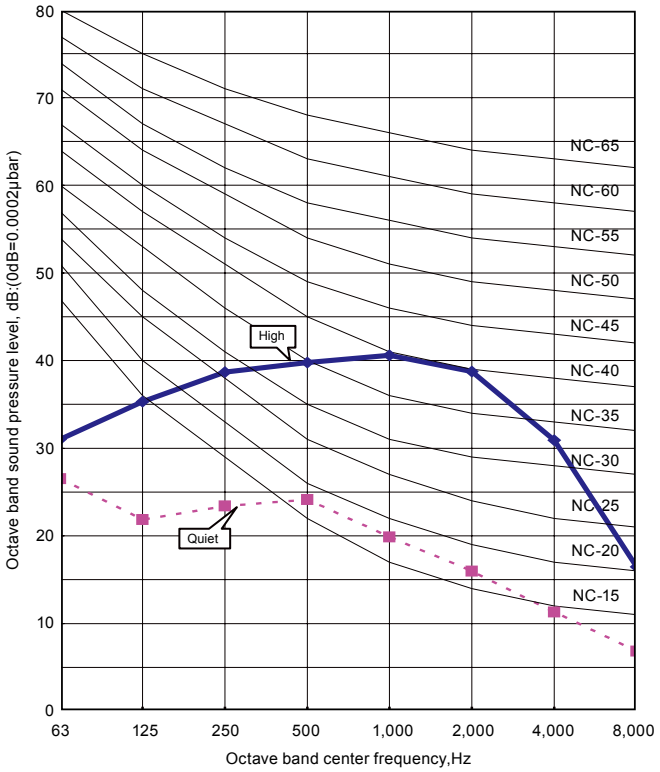


● HEATING

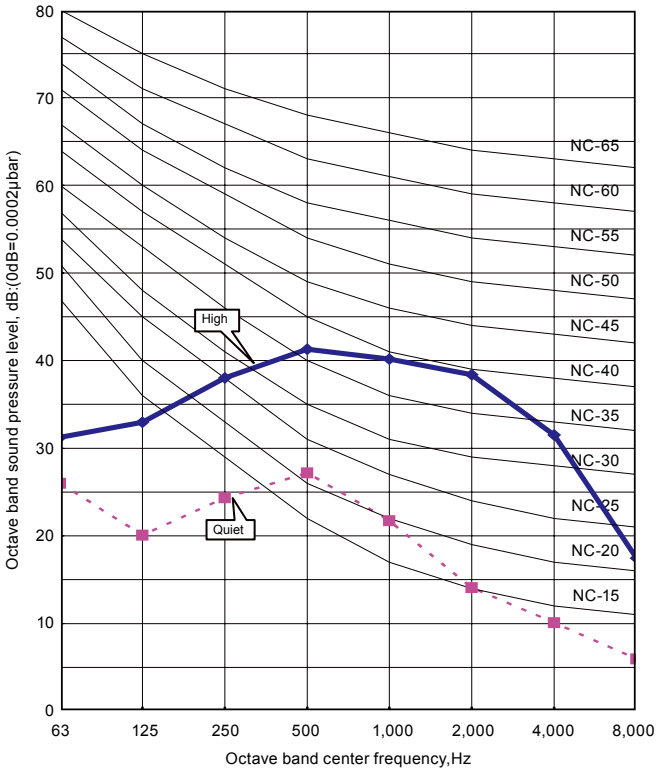


■ MODEL: AS∗A14LG

● COOLING

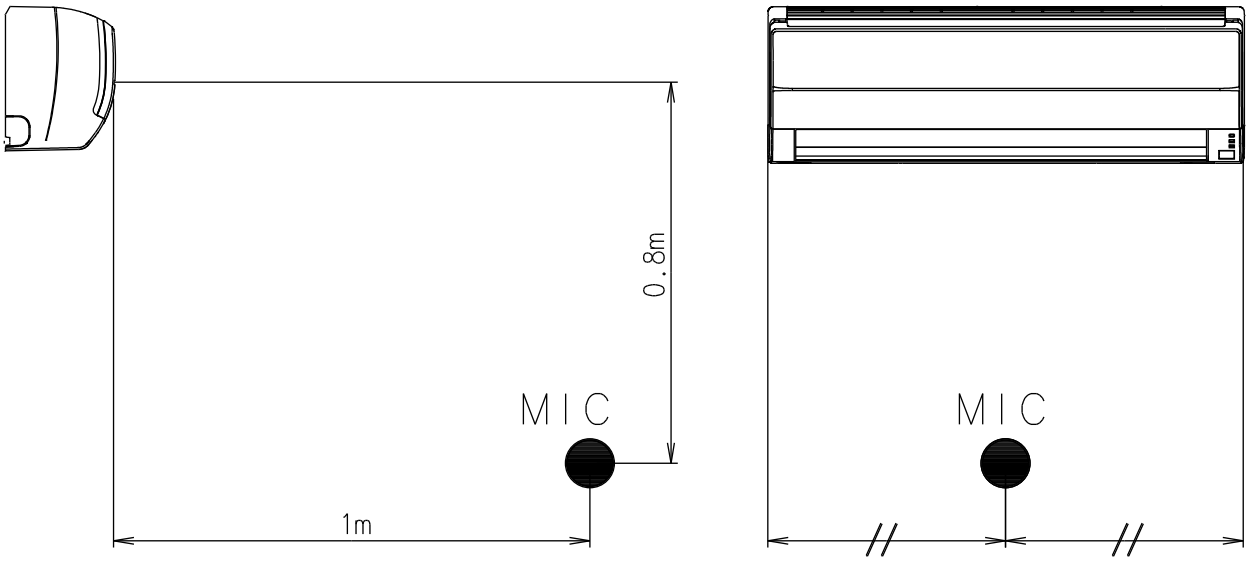


● HEATING



WALL MOUNTED TYPE
AS∗A07-14LG

8-2. SOUND LEVEL CHECK POINT



WALL MOUNTED TYPE
AS∗A07-14LG

9. ELECTRIC CHARACTERISTICS

Model Name			AS∗A07LG	AS∗A09LG	AS∗A12LG	AS∗A14LG
Power Supply	Voltage	V	230 ~			
	Frequency	Hz	50			
Max Operating Current		A	7.5	7.5	9.0	10.5
*1)Wiring Spec.	Circuit breaker	A	15			
	Connection Cable	mm^2	1.5-2.5			
	Limited wiring length	m	21			

*1) Wiring Spec.
Selected Sample
(Selected based on Japan Electrotechnical Standard and Codes Committee E0005)

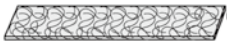
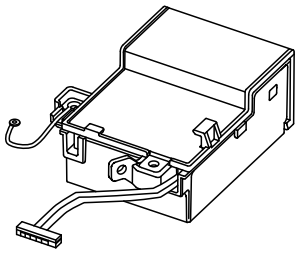
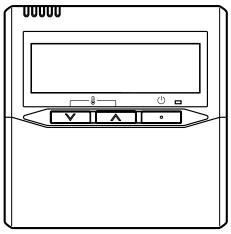
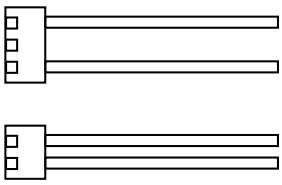
WALL MOUNTED TYPE
AS∗A07-14LG

10. SAFETY DEVICES

	Protection form	Model			
		AS∗A07LG	AS∗A09LG	AS∗A12LG	AS∗A14LG
Circuit protection	Current fuse (PCB)	3.15A 250V			
Terminal protection	Current (thermal) fuse	3A 250V 102°C			
Fan motor protection	Thermal protection program	MAX. 120±15°C			

WALL MOUNTED TYPE
AS∗A07-14LG

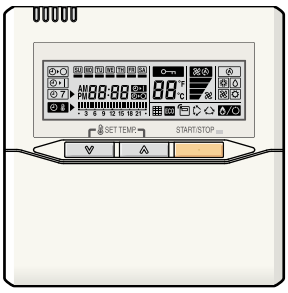
11. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Apple-catechin filter	UTR-FA16	Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by **static electricity**, and further growth is inhibited and deactivated by the polyphenol ingredient extracted from apples.
	Ion deodorisation filter	UTR-FA16-2	The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra fine-particle ceramic.
	Communication box kit	UTY-XCBXE	Use to connect with optional devices and air conditioner PC board.
	Wired remote controller	UTB-∗UD	Unit control is performed by wired remote controller.
	External connect kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PC board.

WALL MOUNTED TYPE
AS∗A07-14LG

11-1. WIRED REMOTE CONTROLLER

■ FEATURES



- ∗ Various timer setup (ON / OFF / WEEKLY) are possible.
- ∗ Equipped with weekly timer as standard function. (2 times Start / Stop per day for a week)
- ∗ When setting up a timer, operation mode and a temperature setup can be changed.
- ∗ When a failure occurs,the error code is displayed.
- ∗ Error indication.
- ∗ Economy operation are possible.
- ∗ Easy installation with a slim shape with no bulge in the back.

● Simple function setting

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

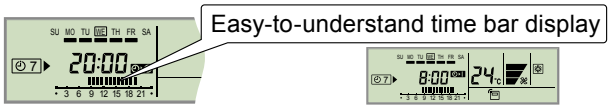
● High performance and compact size

Three functions are combined in one unit.

● Built-in timers

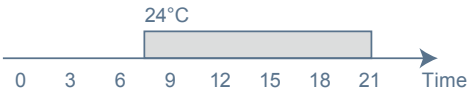
Weekly timer

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



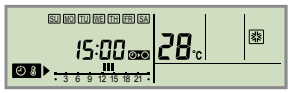
Setup screen example
(Set to Wednesday: 8:00 to 20:00.)

Screen after setup

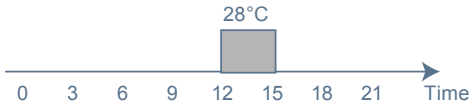


Setback timer

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

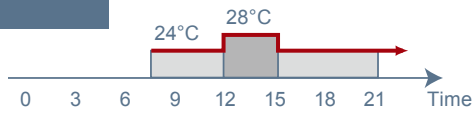


Setup screen example
(Set from Sunday to Saturday: 12:00 to 15:00, 28 °C.)

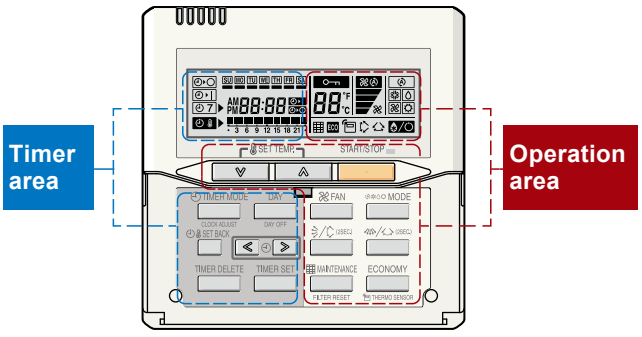


At "Weekly timer" + "Set back timer" setup

24°C → 28°C → 24°C



● Easy-to-understand operation

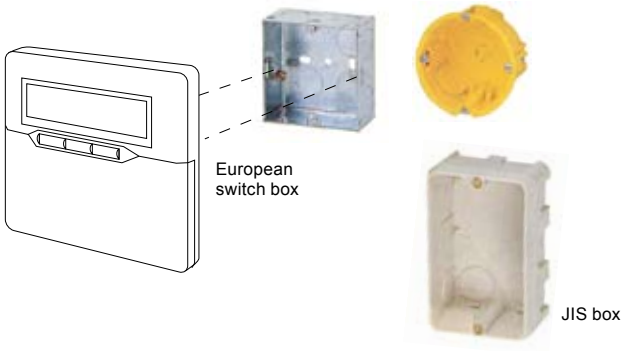


[Variable timer control]

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

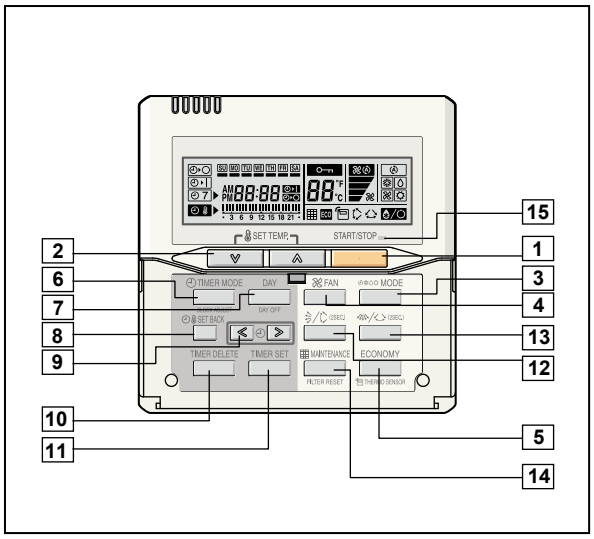
● Simple installation

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

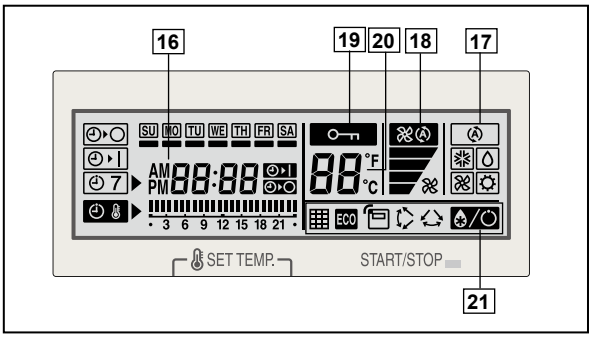


WALL MOUNTED TYPE
AS∗A07-14LG

■ FUNCTIONS



Display panel



1 **START/STOP button**
Pressed to start and stop operation.

2 **Set temperature button**
Selects the setting temperature.

3 **Master control button**
Selects the operating mode(AUTO, HEAT, FAN, COOL, DRY).

4 **Fan control button**
Selects the fan speed (AUTO, QUIET, LOW, MED, HIGH).

5 **Economy button**
Turns the economy efficient mode on and off.

6 **Timer mode (CLOCK ADJUST) button**
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER). Set the current time.

7 **Day (DAY OFF) button**
Temporarily cancels of one day timer.

8 **Set back button**
Pressed to select the set back timer.

9 **Set time button**
Pressed to set time.

10 **Delete button**
The schedule of a weekly timer is deleted.

11 **Set button**
Sets the date, hour, minute and on-off time.

12 **Vertical airflow direction and swing button**
Push for two seconds to change the swing mode.

13 **Horizontal airflow direction and swing button*1)**
Push for two seconds to change the swing mode.

14 **Filter button*1)**

15 **Operation lamp**
Lights during operation and when the timer is on.

16 **Timer and clock display**

17 **Operation mode display**

18 **Fan speed display**

19 **Operation lock display**

20 **Temperature display**

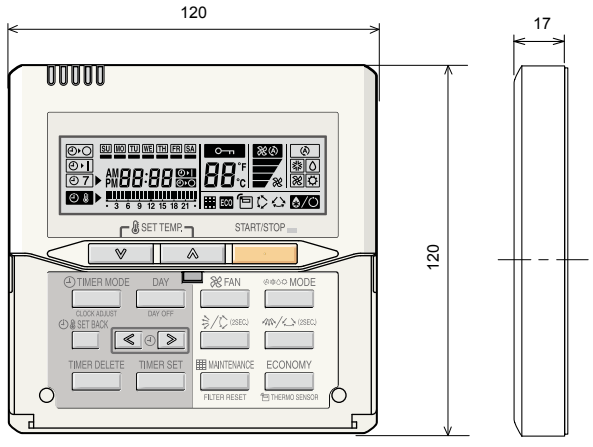
21 **Function display**

- Defrost display
- Thermo sensor display
- Economy display
- Vertical swing display
- Horizontal swing display
- Filter display

*1) Button number 13 and 14 can not be operated.

■ DIMENSION

[Unit : mm]



■ SPECIFICATION

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

WALL MOUNTED TYPE
AS∗A07-14LG

11-2. EXTERNAL CONNECT KIT

This kit allows to operate the air conditioner, such as stopping and starting, using an external device, and output the operation status of the air conditioner.

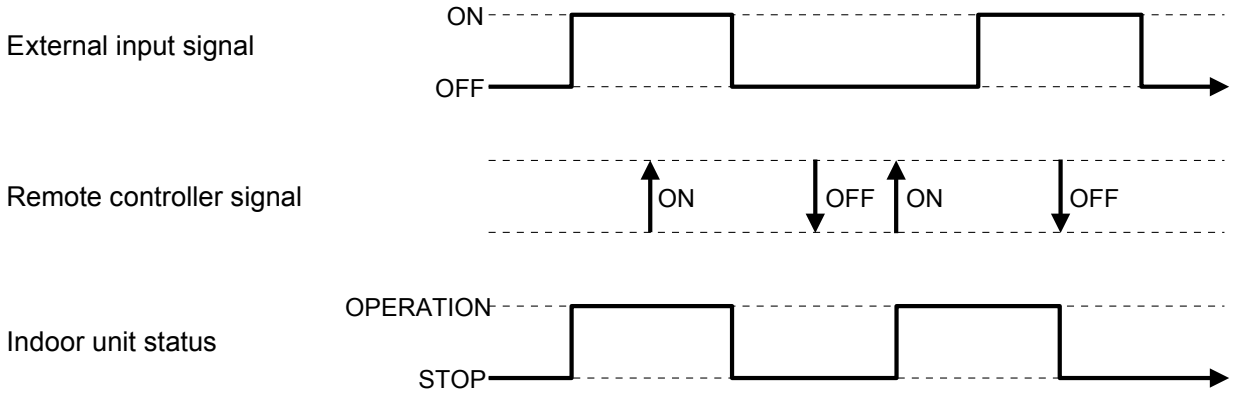
- Only operation and stop signals will be output.
  Use the remote control to check the operation mode, temperature, and airflow.
  Check the error information on the display area of the main unit.
- Operation mode, temperature, and airflow cannot be set by external input. Use the remote controller to set.
- If the air-conditioner is activated by external input, it will operate in the settings before stop.
  To change the settings, use the remote controller.

11-2-1. CONTROL INPUT SETTING

- You can control air conditioner ON / OFF operation by external input.

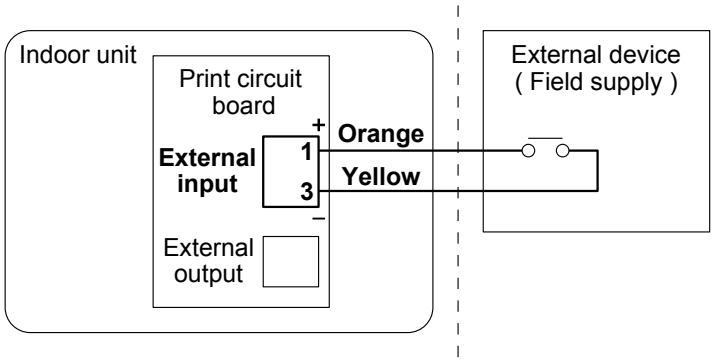
● Signal specification

- No voltage ON/OFF continuous signal.
- Contact capacity : DC12V 10mA

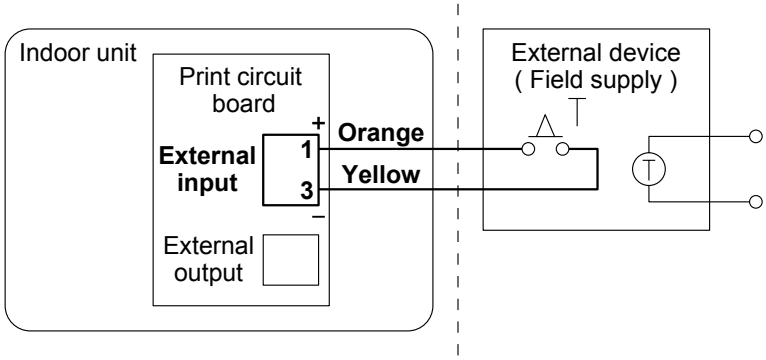


● Installation example

- For remote operation



- For external timer operation



WALL MOUNTED TYPE
AS∗A07-14LG

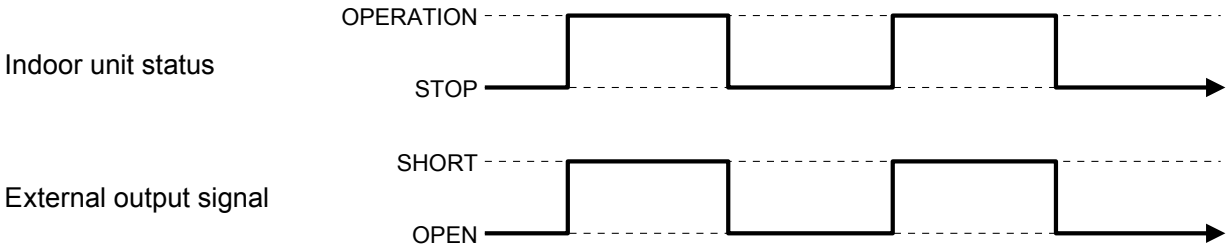
11-2-2. Operating output setting

• You can display air conditioner ON / OFF operation by e xternal o utput.

● Signal specification

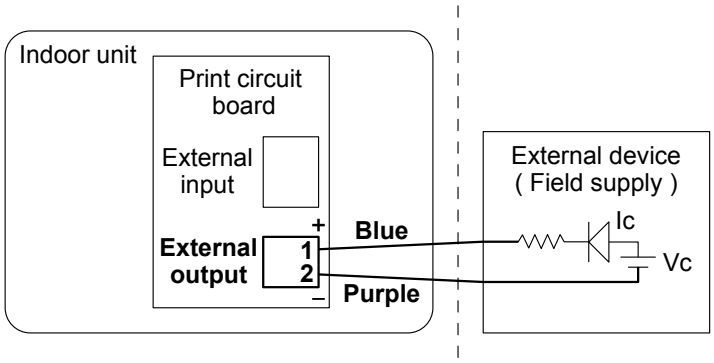
• No voltage contact.

• Contact capacity : Max. DC24V 10mA to 1A or less



● Installation example

• For operation display



Refrigerant
R410A

OUTDOOR UNIT

2. SINGLE TYPE :

AO∗R07LGC
AO∗R09LGC
AO∗R12LGC
AO∗R14LGC

D1D_AO018E/02
2008.10.03

1. SPECIFICATIONS

Type				INVERTER HEAT PUMP			
Model name				AO∗R07LGC	AO∗R09LGC	AO∗R12LGC	AO∗R14LGC
Power source				230V~ 50Hz			
Available voltage range				198-264V~ 50Hz			
Starting current			A	3.2	3.7	4.6	5.7
Fan	Airflow rate	Cooling	m^3/h	1,720	1,720	1,830	2,040
		Heating		1,510	1,510	1,600	1,800
	Type × Q'ty			Propeller fan×1			
	Motor output		W	40			
Sound pressure level		Cooling	dB(A)	45	45	48	48
		Heating		45	45	48	49
Heat exchanger type		Dimensions (H × W × D)	mm	650 × 504 × 18.2	650 × 504 × 18.2	642 × 504 × 36.4	881 × 588 × 36.4
		Fin pitch		1.3	1.3	1.4	1.3
		Rows x Stages		1 × 24	1 × 24	2 × 24	2 × 28
		Pipe type		Copper			
		Fin type		Aluminium			
Compressor	Type × Q'ty			Rotary ×1			
	Motor output		W	500	500	750	900
Refrigerant		Type		R410A			
		Charge	g	650	650	800	1,000
Refrigerant oil		Type		POE(VG74)			
Enclosure		Material		Steel			
		Colour		Beige			
Dimensions (H×W×D)	Net		mm	540 × 660 × 290			620 × 790 × 298
	Gross			611 × 797 × 401			712 × 935 × 400
Weight	Net		kg(lb.)	25 (55)	25 (55)	32 (71)	40 (88)
	Gross			28 (62)	28 (62)	35 (77)	44 (97)
Connection pipe	Size	Liquid	mm	Φ6.35 (Φ 1/4 in.)			Φ6.35 (Φ1/4 in.)
		Gas		Φ9.52 (Φ 3/8 in.)			Φ12.7 (Φ1/2 in.)
	Method			Flare			
	Max. length		m	20(chargeless:15)			
	Max. height difference			15			
Operation range		Cooling	°C	-10 to 43			
		Heating		-15 to 24			

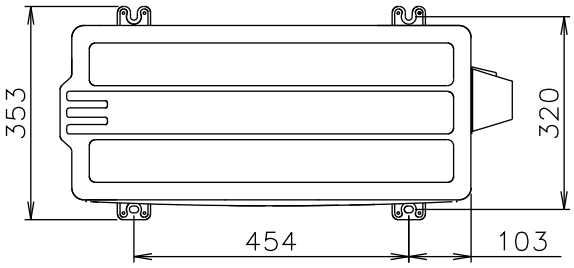
Note :
Specifications are based on the following conditions.
Cooling : Indoor temperature of 27 °CDB / 19 °CWB.and outdoor temperature of 35 °CDB/24 °CWB.
Heating : Indoor temperature of 20°CDB / 15°CWB.and outdoor temperature of 7 °CDB/6°CWB.
Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

OUTDOOR UNIT
AO∗R07-14LG

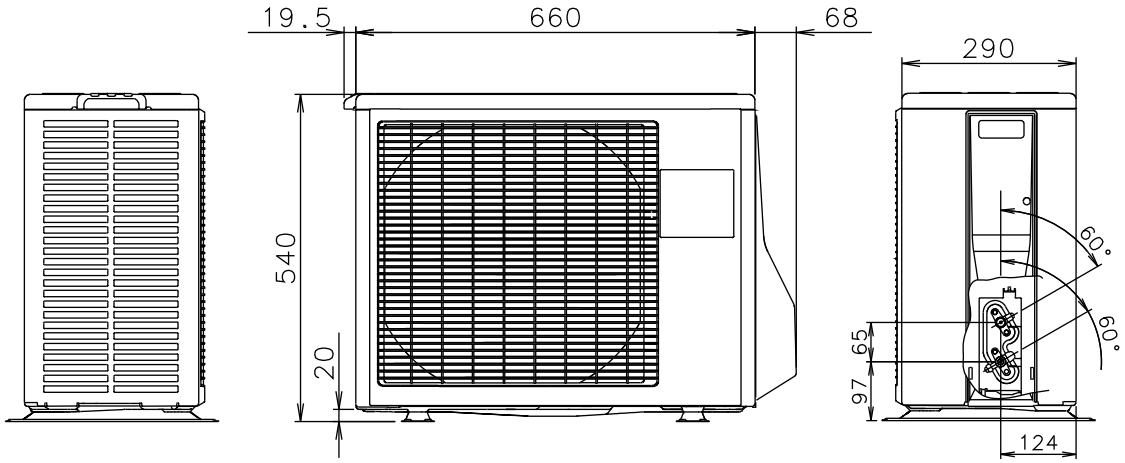
2. DIMENSIONS

■ MODEL: AO∗R07LG, AO∗R09LG, AO∗R12LG

(Unit : mm)

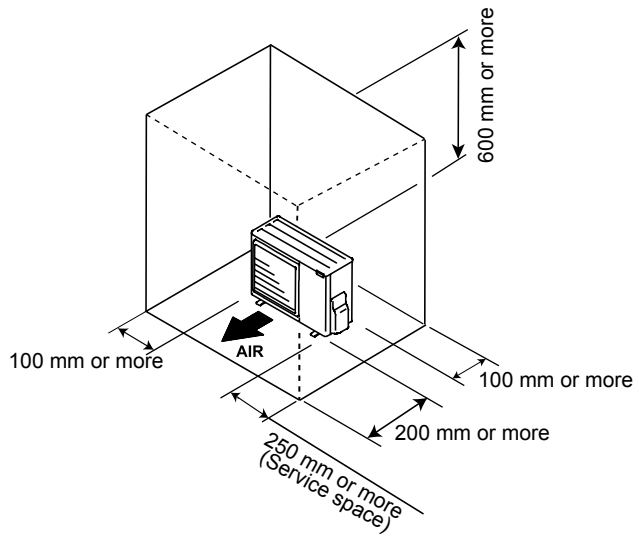


Top view



Side view Front view Side view

■ MOUNTING POSITION

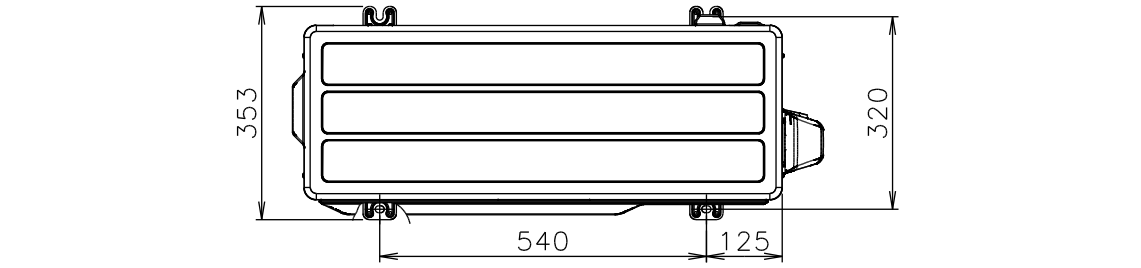


If the space is larger that is stated, the condition will be the same as that are no obstacles.

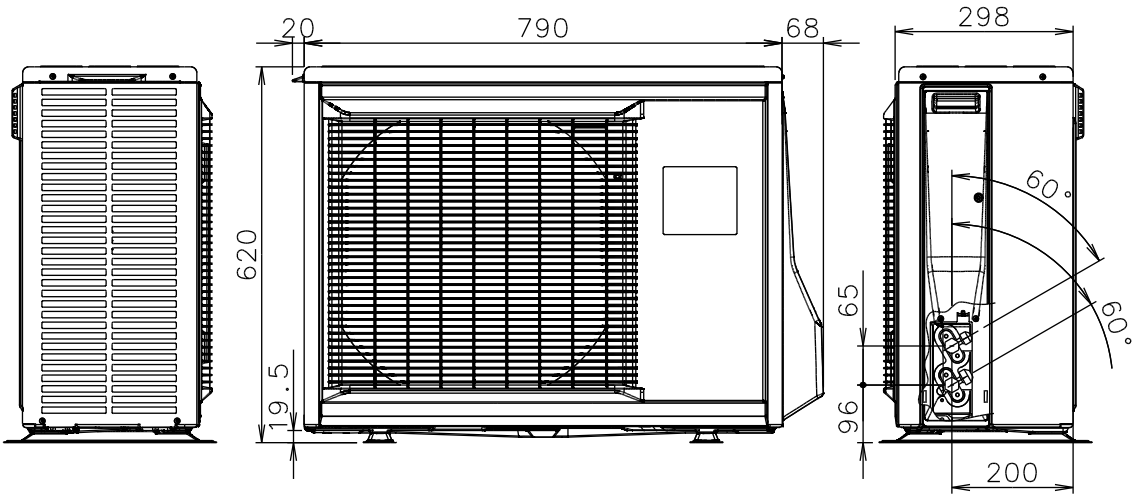
OUTDOOR UNIT
AO∗R07-14LG

■ MODEL: AO∗R14LG

(Unit : mm)

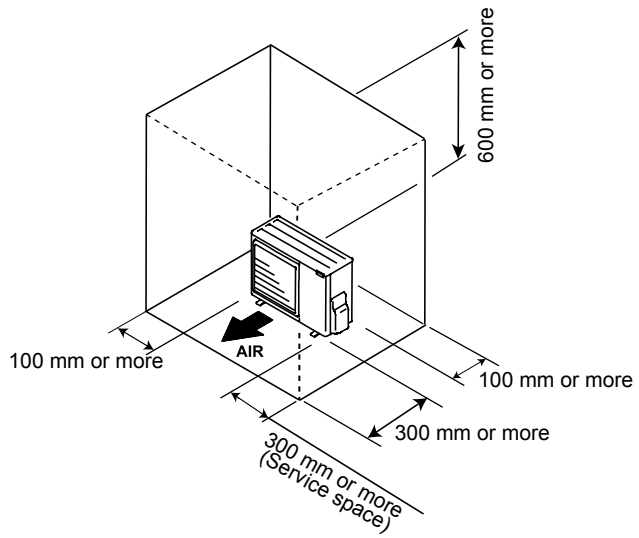


Top view



Side view Front view Side view

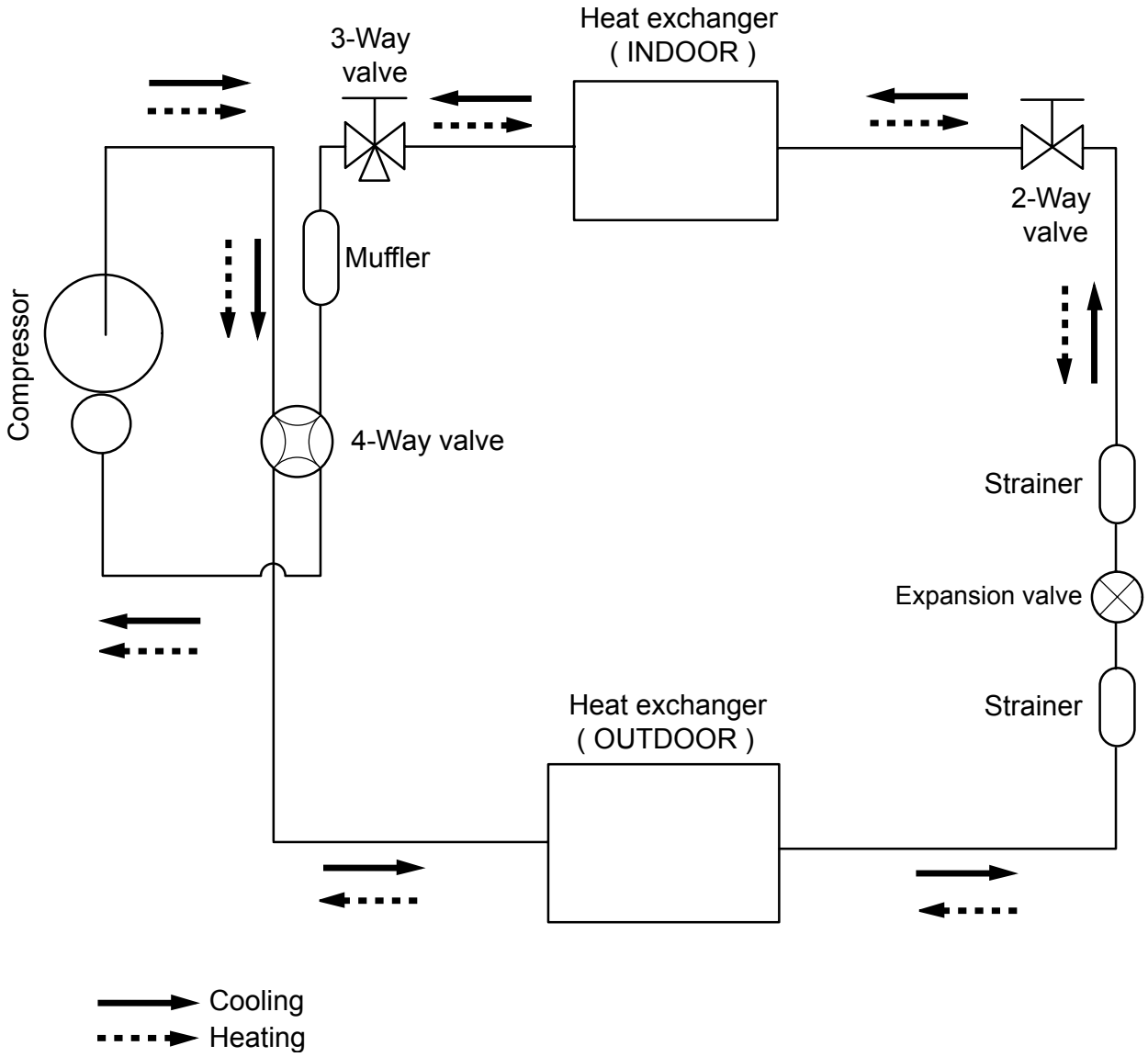
■ MOUNTING POSITION



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

3. REFRIGERANT CIRCUIT

■ MODEL: AO∗R07LG, AO∗R09LG, AO∗R12LG, AO∗R14LG

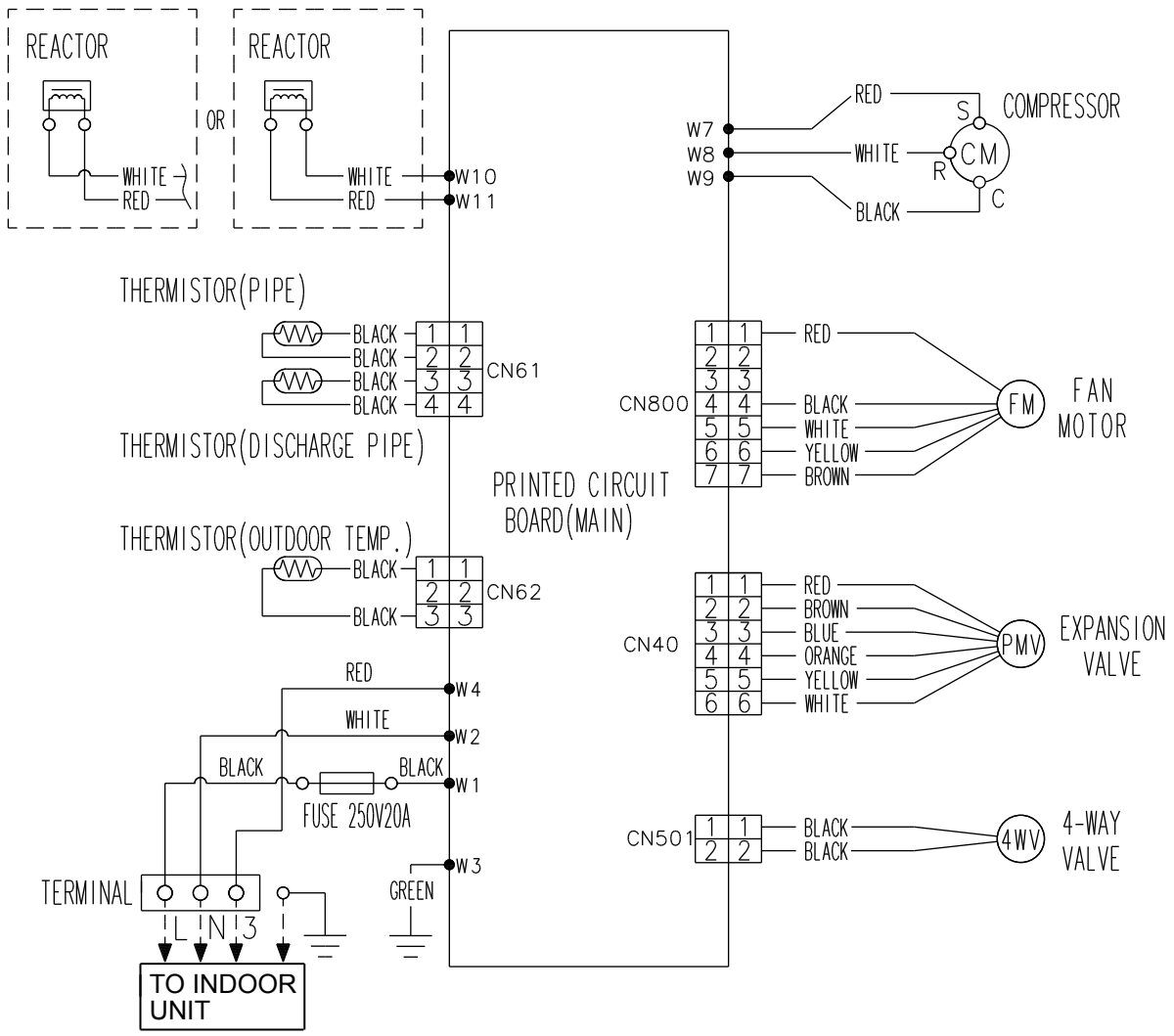


Refrigerant pipe diameter
Liquid : 1/4" (6.35 mm)
Gas : 3/8" (9.52 mm)

OUTDOOR UNIT
AO*R07-14LG

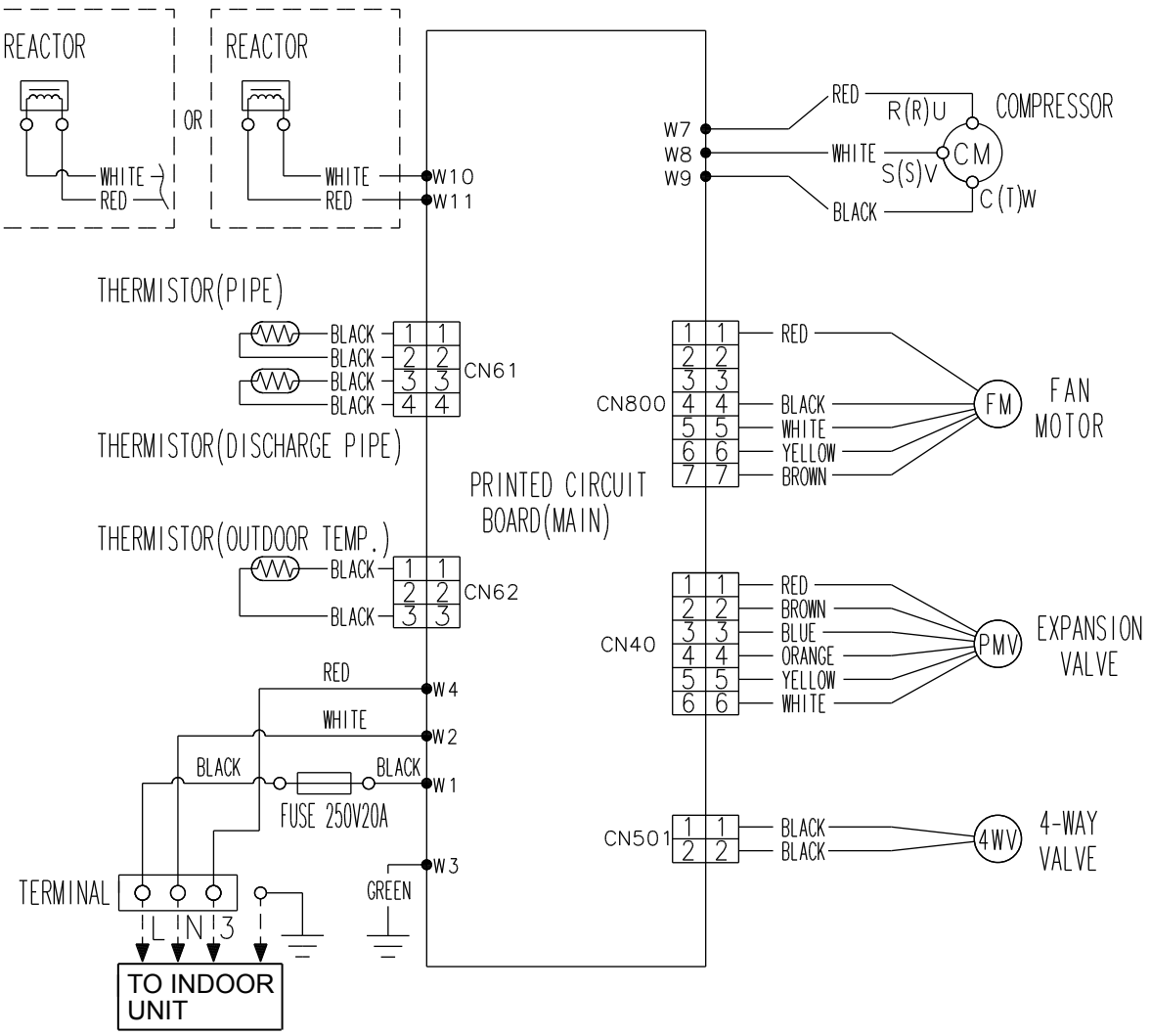
4. WIRING DIAGRAMS

■ MODEL: AO*R07LG, AO*R09LG



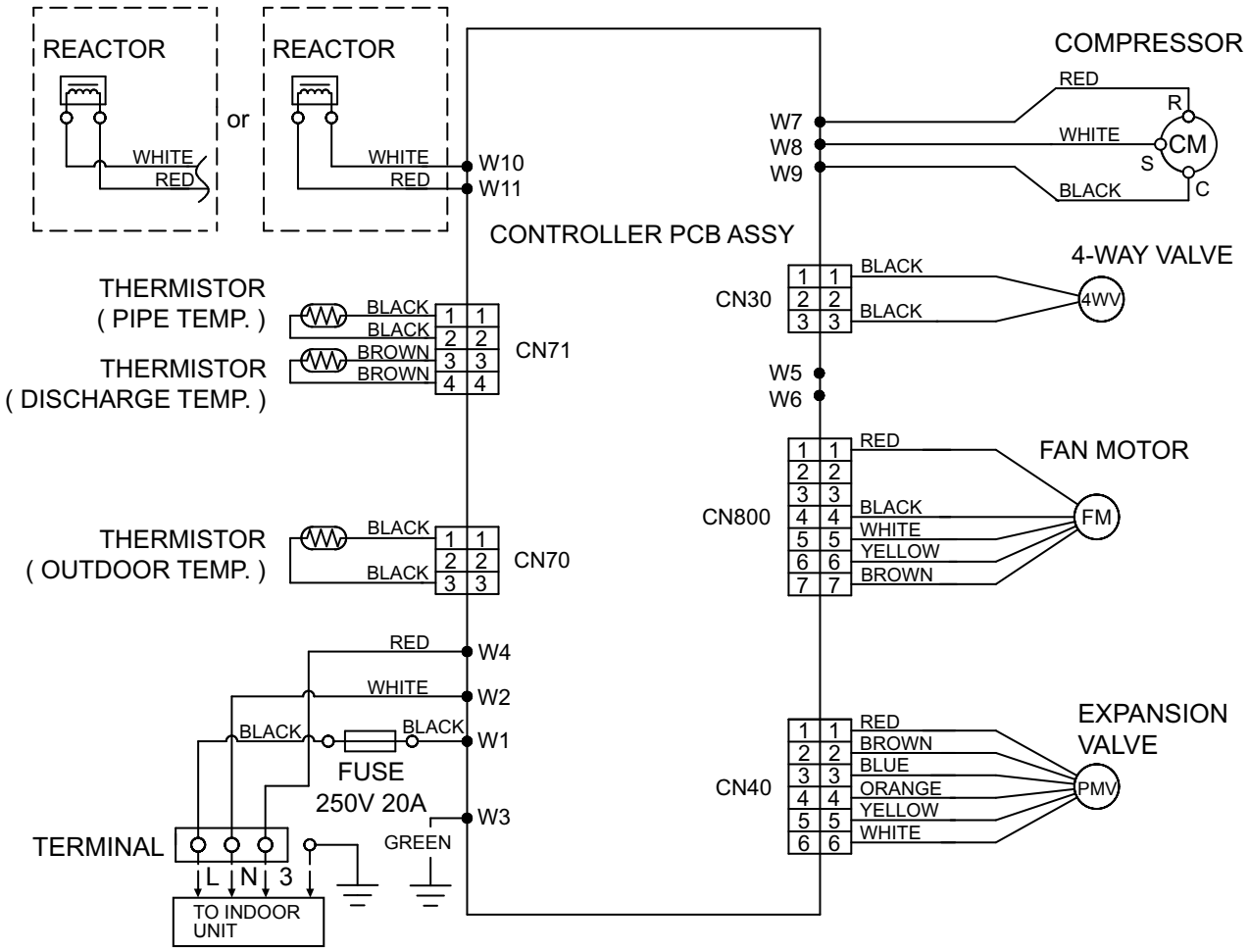
OUTDOOR UNIT
AO*R07-14LG

■ MODEL: AO*R12LG



OUTDOOR UNIT
AO∗R07-14LG

■ MODEL: AO∗R14LG



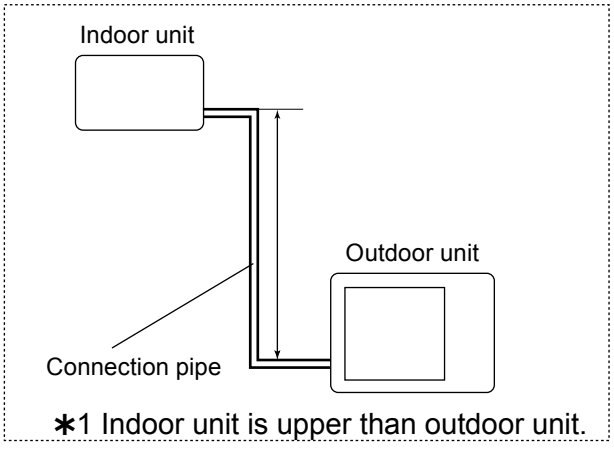
5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFERENCE

■ MODEL: AO∗R07LG, AO∗R09LG

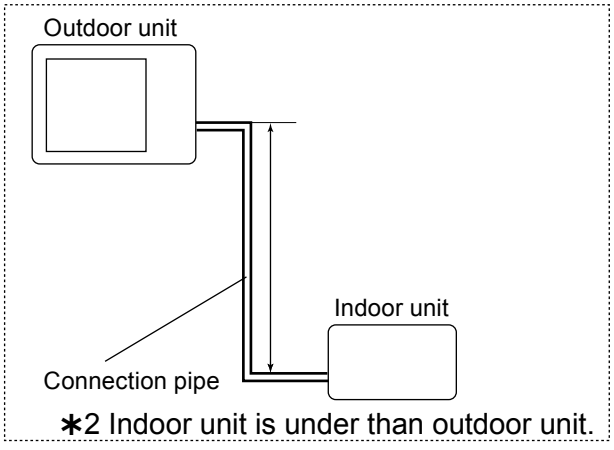
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.872	0.910
		10	-	-	0.961	0.886	0.925
		7.5	-	0.979	0.965	0.890	0.929
		5	0.992	0.983	0.969	0.893	0.933
		0	1.000	0.991	0.976	0.901	0.940
	∗2 Indoor unit is under than outdoor unit	-5	1.000	0.991	0.976	0.901	0.940
		-7.5	-	0.991	0.976	0.901	0.940
		-10	-	-	0.976	0.901	0.940
		-15	-	-	-	0.901	0.940

HEATING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.832	0.822
		10	-	-	0.917	0.832	0.822
		7.5	-	0.961	0.917	0.832	0.822
		5	1.000	0.961	0.917	0.832	0.822
		0	1.000	0.961	0.917	0.832	0.822
	∗2 Indoor unit is under than outdoor unit	-5	0.995	0.956	0.912	0.828	0.818
		-7.5	-	0.954	0.910	0.826	0.816
		-10	-	-	0.908	0.824	0.814
		-15	-	-	-	0.815	0.805

Height difference H



∗1 Indoor unit is upper than outdoor unit.



∗2 Indoor unit is under than outdoor unit.

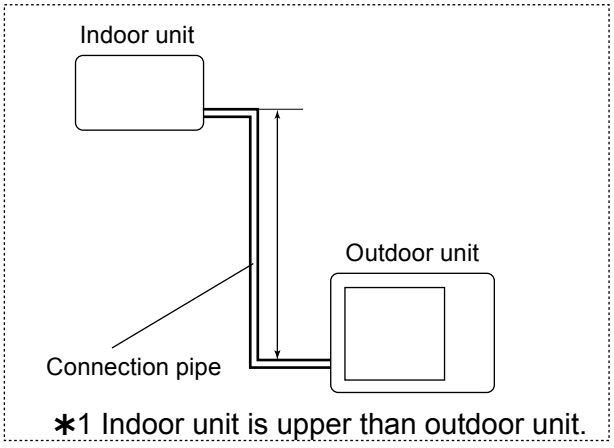
OUTDOOR UNIT
AO∗R07-14LG

■ MODEL: AO∗R12LG

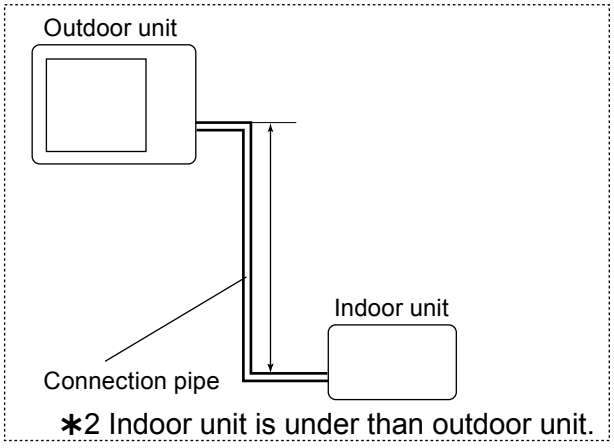
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.858	0.868
		10	-	-	0.929	0.872	0.882
		7.5	-	0.960	0.933	0.876	0.885
		5	0.992	0.964	0.937	0.879	0.889
		0	1.000	0.972	0.944	0.887	0.896
	∗2 Indoor unit is under than outdoor unit	-5	1.000	0.972	0.944	0.887	0.896
		-7.5	-	0.972	0.944	0.887	0.896
		-10	-	-	0.944	0.887	0.896
		-15	-	-	-	0.887	0.896

HEATING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.896	0.879
		10	-	-	0.968	0.896	0.879
		7.5	-	0.994	0.968	0.896	0.879
		5	1.000	0.994	0.968	0.896	0.879
		0	1.000	0.994	0.968	0.896	0.879
	∗2 Indoor unit is under than outdoor unit	-5	0.995	0.989	0.963	0.891	0.875
		-7.5	-	0.987	0.961	0.889	0.873
		-10	-	-	0.959	0.887	0.871
		-15	-	-	-	0.878	0.862

Height difference H



∗1 Indoor unit is upper than outdoor unit.



∗2 Indoor unit is under than outdoor unit.

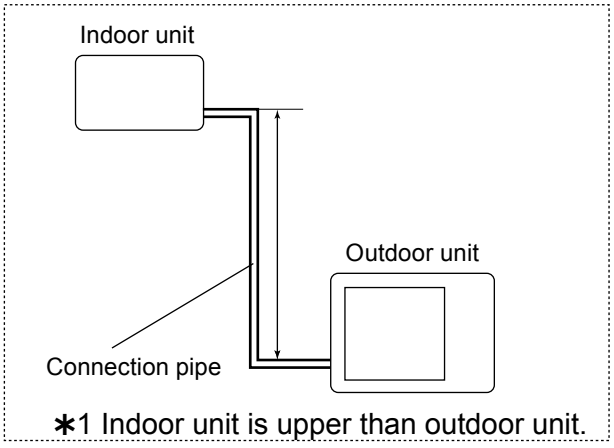
OUTDOOR UNIT
AO∗R07-14LG

■MODEL: AO∗R14LG

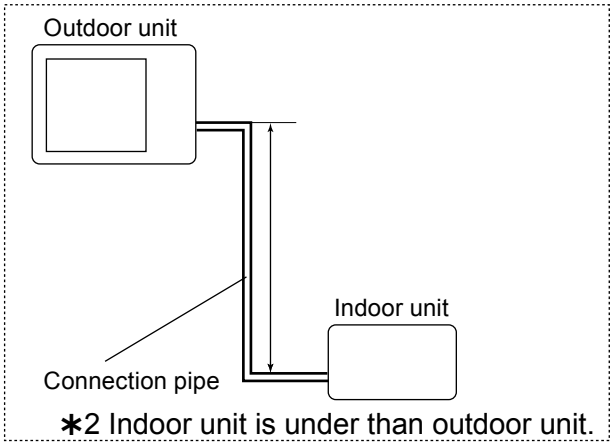
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.893	0.909
		10	-	-	0.955	0.908	0.924
		7.5	-	0.975	0.959	0.912	0.928
		5	0.992	0.979	0.963	0.916	0.931
		0	1.000	0.987	0.970	0.923	0.939
	∗2 Indoor unit is under than outdoor unit	-5	1.000	0.987	0.970	0.923	0.939
		-7.5	-	0.987	0.970	0.923	0.939
		-10	-	-	0.970	0.923	0.939
		-15	-	-	-	0.923	0.939

HEATING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is upper than outdoor unit.	15	-	-	-	0.956	0.938
		10	-	-	1.004	0.956	0.938
		7.5	-	1.013	1.004	0.956	0.938
		5	1.000	1.013	1.004	0.956	0.938
		0	1.000	1.013	1.004	0.956	0.938
	∗2 Indoor unit is under than outdoor unit	-5	0.995	1.008	0.999	0.951	0.933
		-7.5	-	1.005	0.997	0.948	0.931
		-10	-	-	0.994	0.946	0.929
		-15	-	-	-	0.937	0.919

Height difference H



∗1 Indoor unit is upper than outdoor unit.



∗2 Indoor unit is under than outdoor unit.

OUTDOOR UNIT
AO∗R07-14LG

6. ADDITIONAL CHARGE CALCULATION

■ MODEL: AO∗R07LG

Refrigerant type		R410A
Refrigerant amount	g	650

● REFRIGERANT CHARGE

Pipe length	m	~15	20	20g/m
Additional charge	g	0 (Charge less)	+100	

■ MODEL: AO∗R09LG

Refrigerant type		R410A
Refrigerant amount	g	650

● REFRIGERANT CHARGE

Pipe length	m	~15	20	20g/m
Additional charge	g	0 (Charge less)	+100	

■ MODEL: AO∗R12LG

Refrigerant type		R410A
Refrigerant amount	g	800

● REFRIGERANT CHARGE

Pipe length	m	~15	20	20g/m
Additional charge	g	0 (Charge less)	+100	

■ MODEL: AO∗R14LG

Refrigerant type		R410A
Refrigerant amount	g	1000

● REFRIGERANT CHARGE

Pipe length	m	~15	20	20g/m
Additional charge	g	0 (Charge less)	+100	

OUTDOOR UNIT
AO∗R07-14LG

7. AIR FLOW

■ MODEL: AO∗R07LG, AO∗R09LG

● COOLING

Number of rotations (r.p.m)	Airflow	
730	1720	m^3/h
	478	l/s
	1012	CFM

● HEATING

Number of rotations (r.p.m)	Airflow	
650	1510	m^3/h
	419	l/s
	889	CFM

■ MODEL: AO∗R12LG

● COOLING

Number of rotations (r.p.m)	Airflow	
860	1830	m^3/h
	508	l/s
	1077	CFM

● HEATING

Number of rotations (r.p.m)	Airflow	
760	1600	m^3/h
	444	l/s
	942	CFM

OUTDOOR UNIT
AO∗R07-14LG

■ MODEL: AO∗R14LG

● COOLING

Number of rotations (r.p.m)	Airflow	
1050	2040	m^3/h
	567	l/s
	1201	CFM

● HEATING

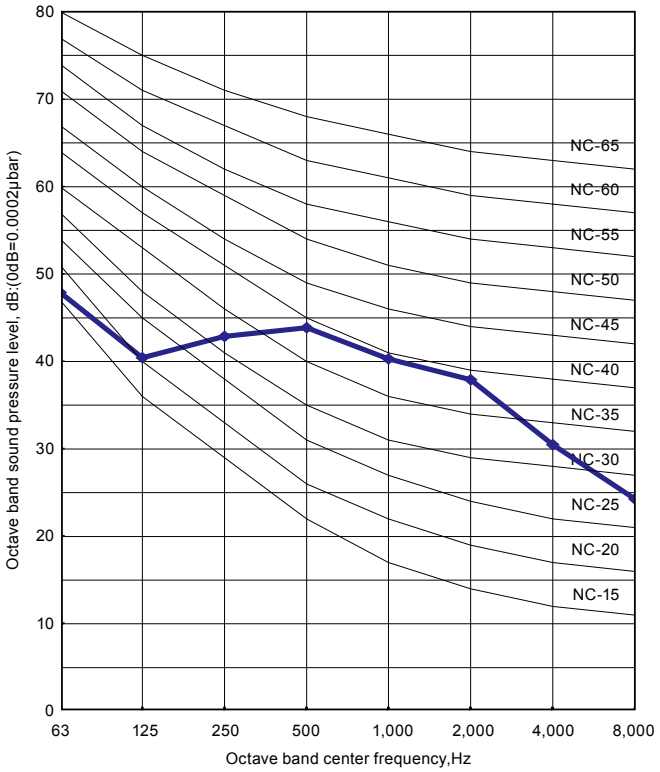
Number of rotations (r.p.m)	Airflow	
870	1800	m^3/h
	500	l/s
	1059	CFM

8. OPERATION NOISE

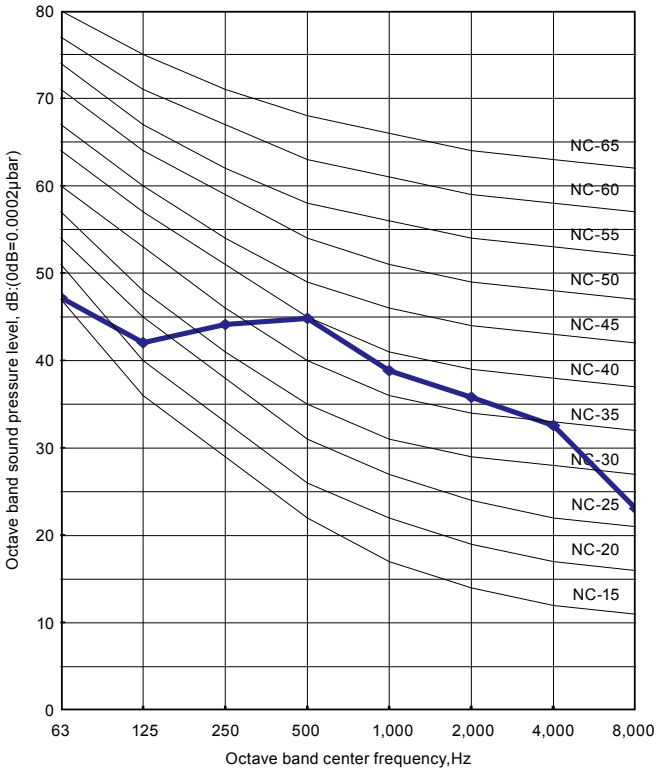
8-1. NOISE LEVEL CURVE

■ MODEL: AO∗R07LG

● COOLING

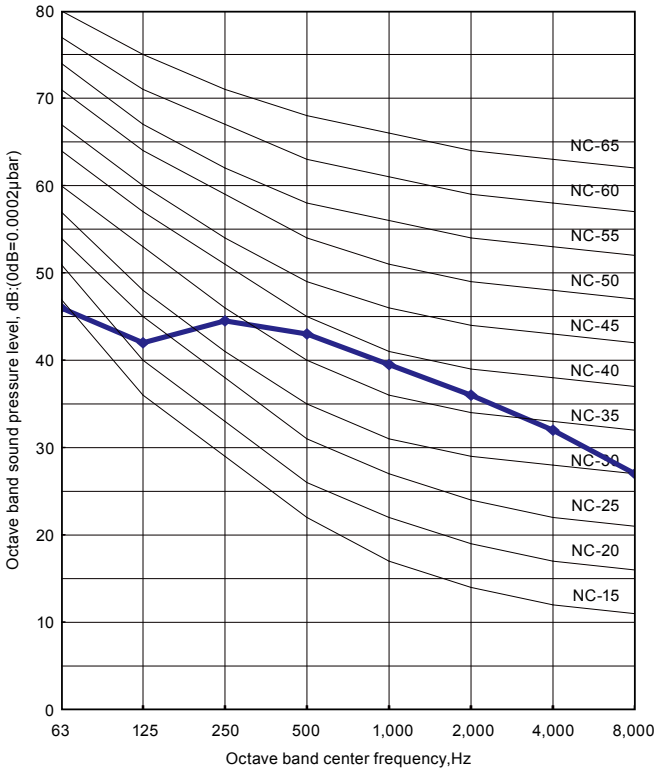


● HEATING

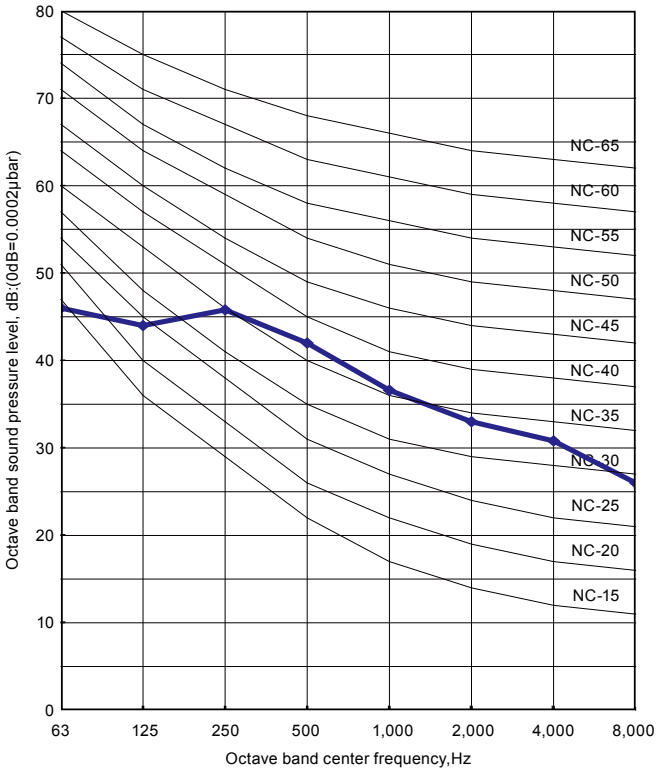


■ MODEL: AO∗R09LG

● COOLING



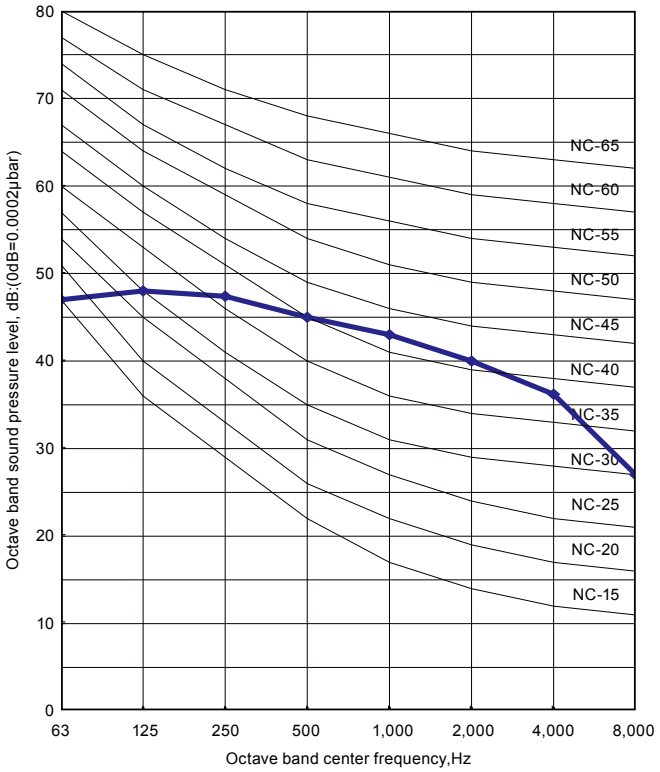
● HEATING



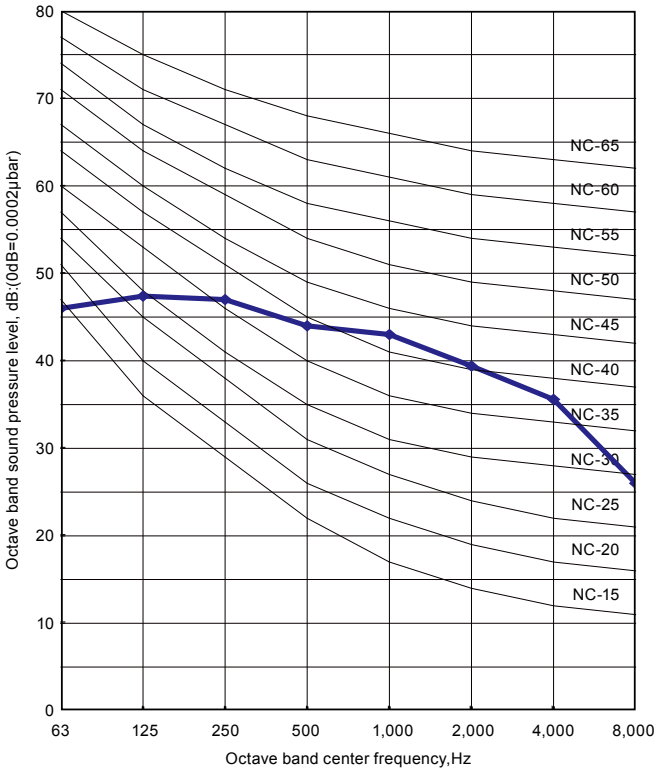
OUTDOOR UNIT
AO∗R07-14LG

■ MODEL: AO∗R12LG

● COOLING

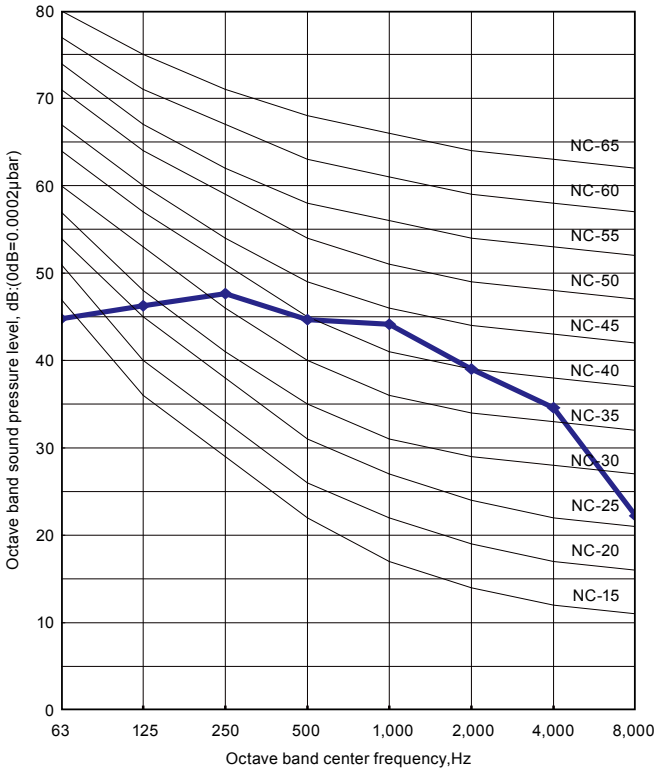


● HEATING

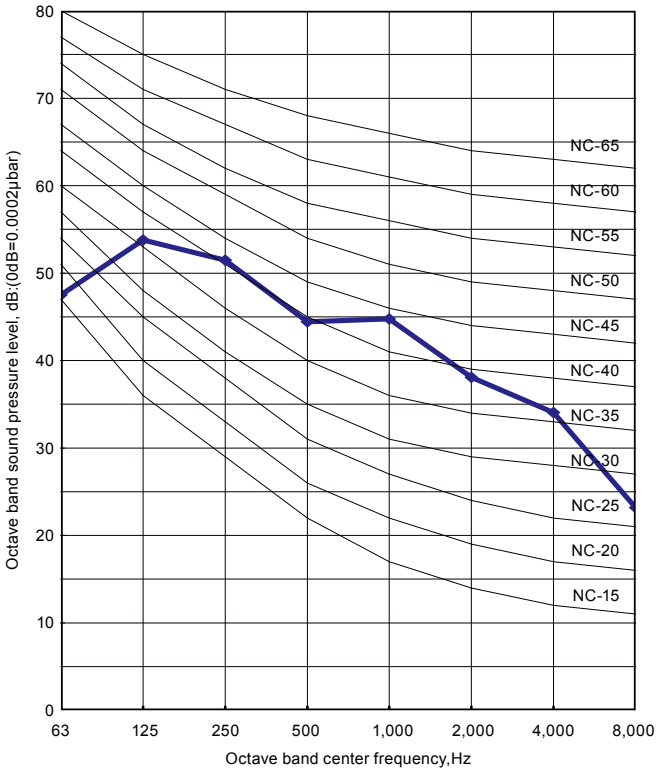


■ MODEL: AO∗R14LG

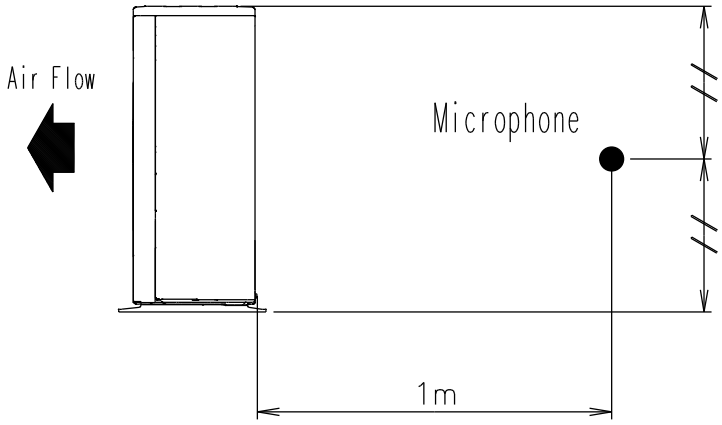
● COOLING

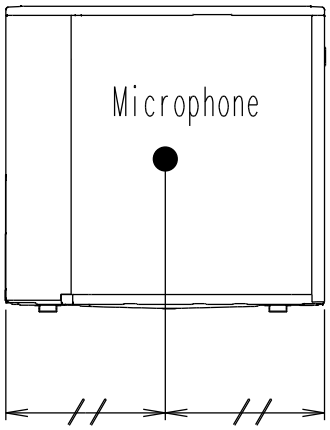


● HEATING



8-2. SOUND LEVEL CHECK POINT





OUTDOOR UNIT
AO*R07-14LG

9. ELECTRIC CHARACTERISTICS

Model Name			AO∗R07LG	AO∗R09LG	AO∗R12LG	AO∗R14LG
Power Supply	Voltage	V	230 ~			
	Frequency	Hz	50			
Starting Current		A	3.2	3.7	4.6	5.7

OUTDOOR UNIT
AO∗R07-14LG

10. SAFETY DEVICES

	Protection form	Model			
		AO∗R07LG	AO∗R09LG	AO∗R12LG	AO∗R14LG
Circuit protection	Current fuse (NEAR THE TERMINAL)	20A 250V			
	Current fuse (MAIN PRINTED CIRCUIT BOARD)	3.15A 250V			
Fan motor protection	Thermal protection program	OFF:100^{+15}_{-10}°C ON:95^{+15}_{-10}°C			OFF:90°C~110°C ON:85°C~105°C
Compressor protection	Thermal protection program (DISCHARGE TEMP.)	OFF:110°C ON: After 7 minutes			

OUTDOOR UNIT
AO∗R07-14LG