Refrigerant R410A
INVERTER

AIR CONDITIONER

Wall Mounted type

DESIGN & TECHNICAL MANUAL

INDOOR

AS∗G07LMCA
AS∗G09LMCA
AS∗G12LMCA
AS∗G14LMCA

OUTDOOR

AO∗G07LMCA
AO∗G09LMCA
AO∗G12LMCA

AO∗G14LMCA

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

WALL MOUNTED TYPE :

AS∗G07LMCA
AS∗G09LMCA
AS∗G12LMCA
AS∗G14LMCA

DTR_AS076E_03
2013.06.25

WALL MOUNTED TYPE
AS∗G07-14LMCA

CONTENTS

1. INDOOR UNIT

WALL MOUNTED TYPE
AS∗G07-14LMCA

1. FEATURES

■ MODELS

AS∗G07LMCA / AO∗G07LMCA
AS∗G09LMCA / AO∗G09LMCA
AS∗G12LMCA / AO∗G12LMCA
AS∗G14LMCA / AO∗G14LMCA

AO∗G07LMCA
AO∗G09LMCA
AO∗G12LMCA

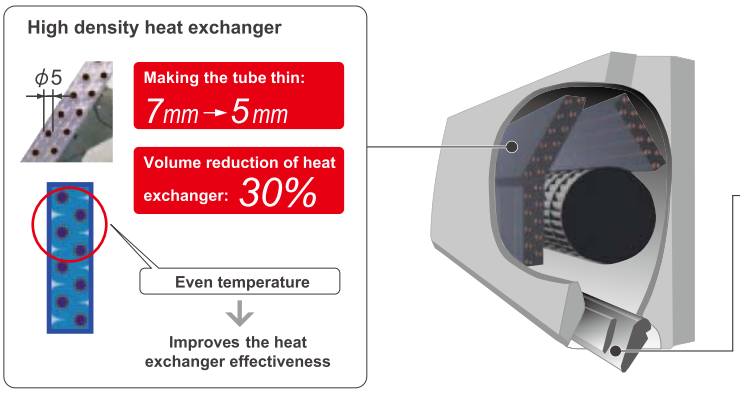
AO∗G14LMCA

■ FEATURES

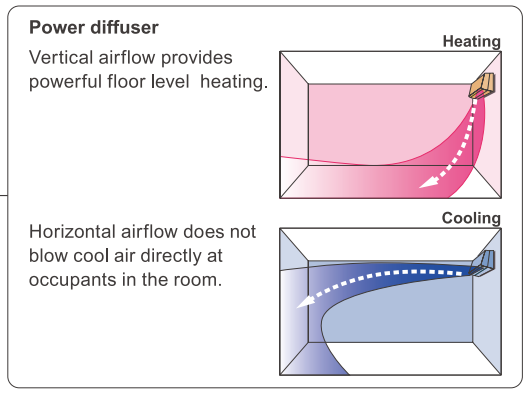
● Energy efficiency class

	MODEL			
	AS∗G07LMCA	AS∗G09LMCA	AS∗G12LMCA	AS∗G14LMCA
Cooling	A++	A++	A++	A++
Heating (Average)	A+	A+	A+	A+

● High efficient compact design



● More comfortable airflow



● Quiet operation

INDOOR UNIT

Airflow mode can be set in 4 steps and more detailed airflow setting is possible.

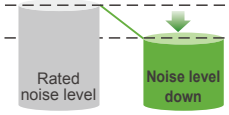
*21dB only at cooling operation (22dB at heating operation)

Fan speed	Noise level
Quiet	21dB(A)

(AS∗G07/09/12LMCA)

● Outdoor unit low noise

When air-conditioner operates in large capacity, operation noise of outdoor unit will be suppressed. ∗ In case of room temperature being close to setting temperature, operation noise may not decrease.

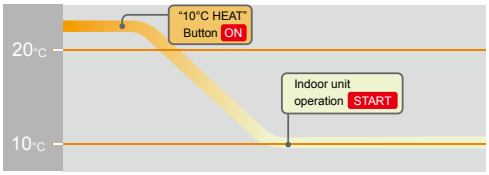


WALL MOUNTED TYPE
AS∗G07-14LMCA

● 10°C HEAT Operation

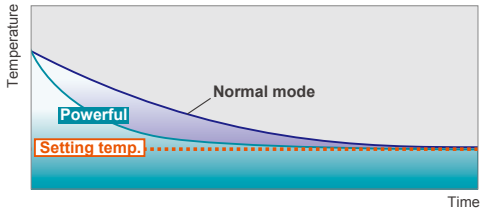
The room temperature can be set to go no lower than 10°C,
thus ensuring that the room does not get too cold when not occupied.

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



● Powerful operation

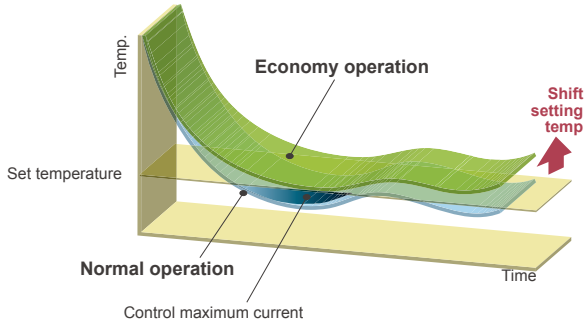
20 minutes continuous operation by maximum airflow and maximum compressor speed is possible. Rapid cooling and heating makes the room comfortable quickly.



● Economy operation

Example : Cooling operation

- Economy operation is energy saving, as the set temperature of indoor unit is shifted by 1°C and the maximum electric value of the outdoor unit is suppressed.



● 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

WALL MOUNTED TYPE
AS∗G07-14LMCA

2. WIRELESS REMOTE CONTROLLER

■ FEATURES

∗ 4 mode timer setup available (ON / OFF / PROGRAM / SLEEP).
∗ Easy operation.
∗ Easy to change signal code (max. 4 signal codes) by button operation.

● Simple function setting

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

● Built-in timers

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

● Program timer

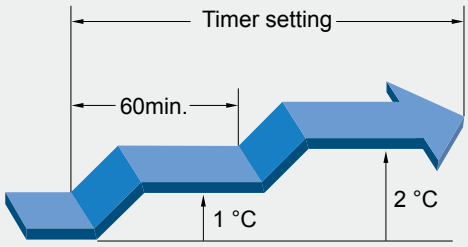
The program timer operates the on and off timer once within a 24 hour period.

● Sleep timer

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

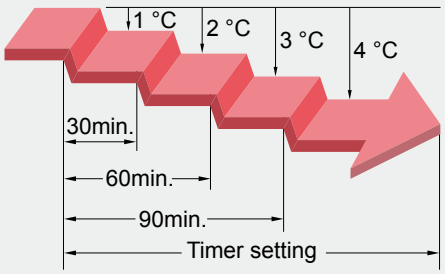
Cooling operation/dry operation

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.

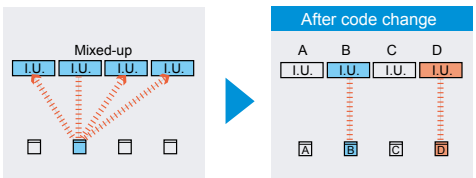


Heating operation

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.



● Switching remote controller signal code

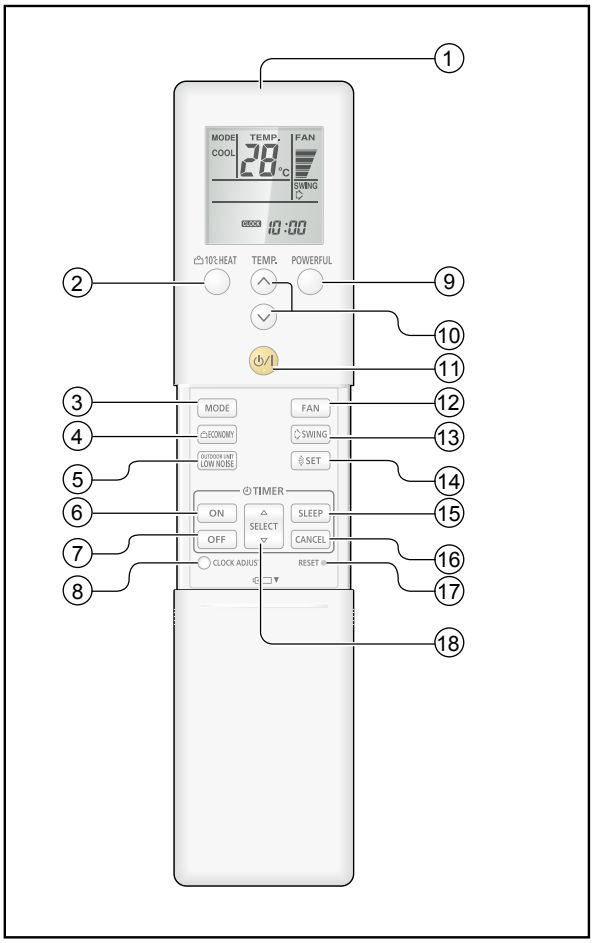


• Code selector switch eliminates unit being wrongly switched.
(Up to 4 signal codes can be set.)

*I.U.=Indoor unit

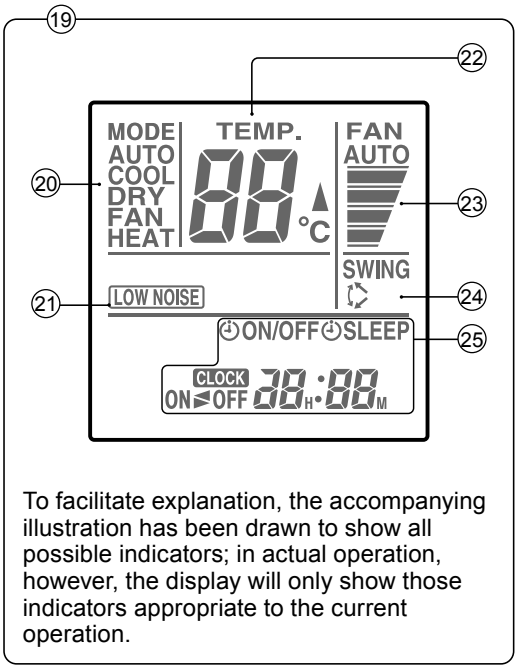
WALL MOUNTED TYPE
AS∗G07-14LMCA

■ FUNCTIONS



① **Signal Transmitter**
② **10 °C HEAT button**
③ **MODE button**
④ **ECONOMY button**
⑤ **OUTDOOR UNIT LOW NOISE button**
⑥ **ON TIMER button**
⑦ **OFF TIMER button**
⑧ **CLOCK ADJUST button**
⑨ **POWERFUL button**
⑩ **TEMP. Set button (▲ / ▼)**
⑪ **Start/Stop button**
⑫ **FAN button**
⑬ **SWING button**
⑭ **SET button**
⑮ **SLEEP TIMER button**
⑯ **CANCEL button**
⑰ **RESET button**
⑱ **TIMER SELECT button (▲ / ▼)**

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.

⑲ **Remote Controller Display**
⑳ **Operation Mode indicator**
㉑ **Low Noise Mode indicator**
㉒ **Temperature Set indicator**
㉓ **Fan Speed indicator**
㉔ **Swing indicator**
㉕ **Clock & Timer indicator**

NOTE:
Some button operations may not be available for all units or systems, refer to the operation manual.

■ SPECIFICATION

SIZE	(H x W x D mm)	205 x 61 x 17
WEIGHT	(g)	122
ACCESSORY		Holder

WALL MOUNTED TYPE
AS∗G07-14LMCA

3. SPECIFICATIONS

Type					WALL MOUNTED INVERTER HEAT PUMP			
Model name					AS∗G07LMCA	AS∗G09LMCA	AS∗G12LMCA	AS∗G14LMCA
Power source					230V~ 50Hz			
Available voltage range					198-264V~ 50Hz			
Capacity	Cooling	Rated		kW	2.00	2.50	3.40	4.00
				Btu/h	6,800	8,500	11,600	13,600
		Min - Max		kW	0.5~3.0	0.5 - 3.2	0.9 - 3.9	0.9~4.4
				Btu/h	1,700~10,200	1,700 - 10,900	3,100 - 13,300	3,100~15,000
	Heating	Rated		kW	3.00	3.20	4.00	5.00
				Btu/h	10,200	10,900	13,600	17,100
		Min - Max		kW	0.5~3.4	0.5 - 4.0	0.9 - 5.3	0.9~6.0
				Btu/h	1,700 - 11,600	1,700 - 13,600	3,100 - 18,000	3,100 - 20,400
Input power	Cooling	Rated		kW	0.465	0.65	0.97	1.135
		Min - Max			0.25 - 1.29	0.25 - 1.29	0.25 - 1.40	0.25 - 1.98
	Heating	Rated			0.685	0.730	1.02	1.365
		Min - Max			0.25 - 1.63	0.25 - 1.63	0.25 - 1.98	0.25 - 2.32
Current	Cooling	Rated		A	2.5	3.2	4.6	5.3
	Heating				3.3	3.5	4.8	6.3
EER	Cooling			kW/kW	4.30	3.85	3.50	3.52
COP	Heating				4.38	4.38	3.92	3.66
Sensible capacity	Cooling			kW	1.2	1.6	2.2	3.2
Power factor	Cooling			%	81	88	91	93
	Heating				90	90	92	94
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 *		Cooling		A	6.0	6.0	6.5	9.0
		Heating			7.5	7.5	9.0	10.5
Fan	Airflow rate	Cooling	High	m^3/h	750			770
			Med		640			680
			Low		480			530
			Quiet		310			360
		Heating	High		750			770
			Med		640			680
			Low		520			560
			Quiet		330			380
	Type × Q'ty				Crossflow fan x 1			
	Motor output			W	30			
Sound pressure level		Cooling	High	dB(A)	43			44
			Med		40			40
			Low		32			33
			Quiet		21			25
		Heating	High		43			44
			Med		38			40
			Low		33			35
			Quiet		22			27
Heat exchanger type		Dimensions (H × W × D)		mm	Main:320 x 630 x 20 Sub:84 x 630 x 13.3			
		Fin pitch			Main:1.1, Sub:1.4			
		Rows × Stages			Main:2 x 20, Sub:1 x 4			
		Pipe type			Copper			
		Fin type			Aluminium			
Enclosure		Material			Polystyrene			
		Colour			White (Approximate colour of MUNSELL N9.25)			
Dimensions (H × W × D)	Net			mm	268 x 840 x 203			
	Gross				270 x 884 x 336			
Weight	Net			kg	8.5			
	Gross				10.5			
Connection pipe	Size	Liquid		mm	Ø 6.35 (Ø 1/4 in.)			
		Gas			Ø 9.52 (Ø 3/8 in.)			Ø 12.7 (Ø 1/2 in.)
	Method				Flare			
Operation range		Cooling		°C	18 to 32			
				%RH	80 or less			
		Heating		°C	16 to 30			
Remote controller type					Wireless			
Drain hose	Material				PP + LLDPE			
	Size			mm	Ø 13.8 (I.D.), Ø 15.8 to Ø 16.7 (O.D.)			

NOTES:
- ●Specifications are based on the following conditions
  Cooling:Indoor temperature of 27°C DB / 19°CWB and outdoor temperature of 35°C DB / 24°CWB.
  Heating:Indoor temperature of 20°C DB/15°CWB and outdoor temperature of 7°C DB / 6°CWB.
  Pipe length: 5 m, Height difference: 0 m (Outdoor unit - Indoor unit)
- ●The protective function might work when using it in environment out of the temperature range mentioned above.
- *: The maximum current is the maximum value when operated within the operation range.

WALL MOUNTED TYPE
AS∗G07-14LMCA

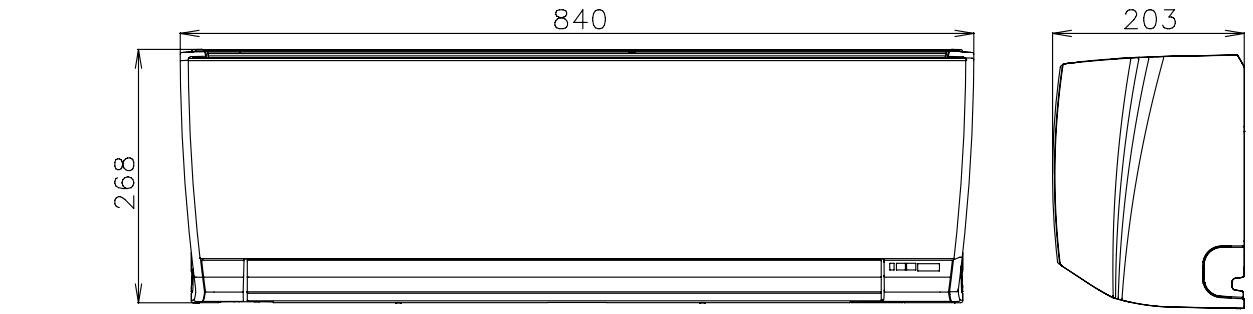
Model name				AS∗G07LMCA	AS∗G09LMCA	AS∗G12LMCA	AS∗G14LMCA
Energy efficiency class	Cooling			A++	A++	A++	A++
	Heating (Average)			A+	A+	A+	A+
Pdesign	Cooling		kW	2.0 (35°C)	2.5 (35°C)	3.4 (35°C)	4.0 (35°C)
	Heating (Average)			2.3 (-10°C)	2.4 (-10°C)	3.5 (-10°C)	3.9 (-10°C)
SEER	Cooling		kWh/kWh	6.80	7.00	7.00	6.90
SCOP	Heating (Average)			4.10	4.10	4.00	4.00
Annual energy consumption	QCE		kWh/a	103	125	170	203
	QHE (Average)			786	820	1225	1365
Sound power level	Cooling	High	dB (A)	59	59	59	60
	Heating			59	59	59	60

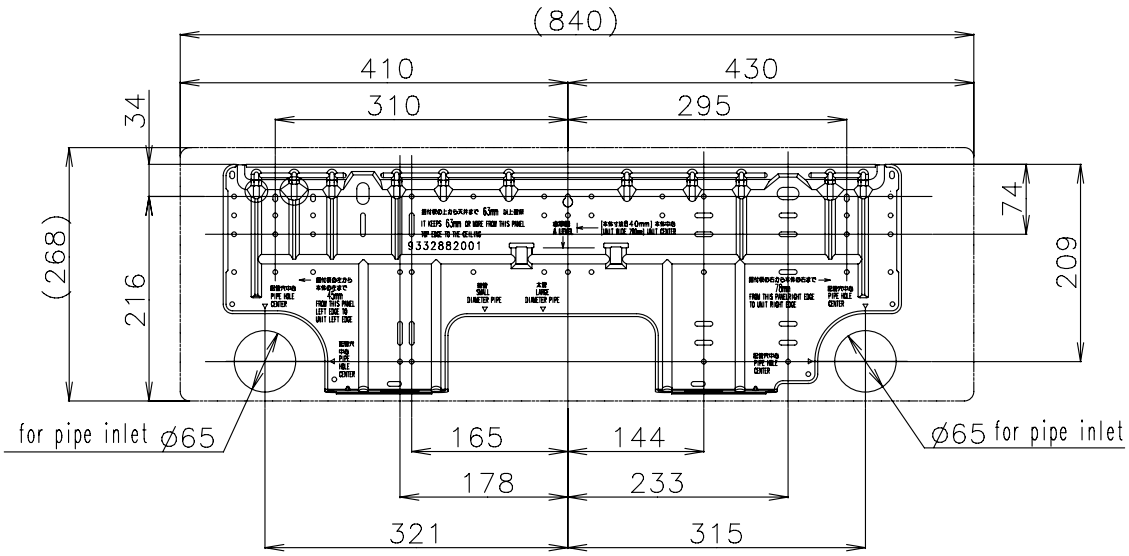
WALL MOUNTED TYPE
AS∗G07-14LMCA

4. DIMENSIONS

■MODELS : AS∗G07LMCA, AS∗G09LMCA, AS∗G12LMCA, AS∗G14LMCA

(Unit : mm)

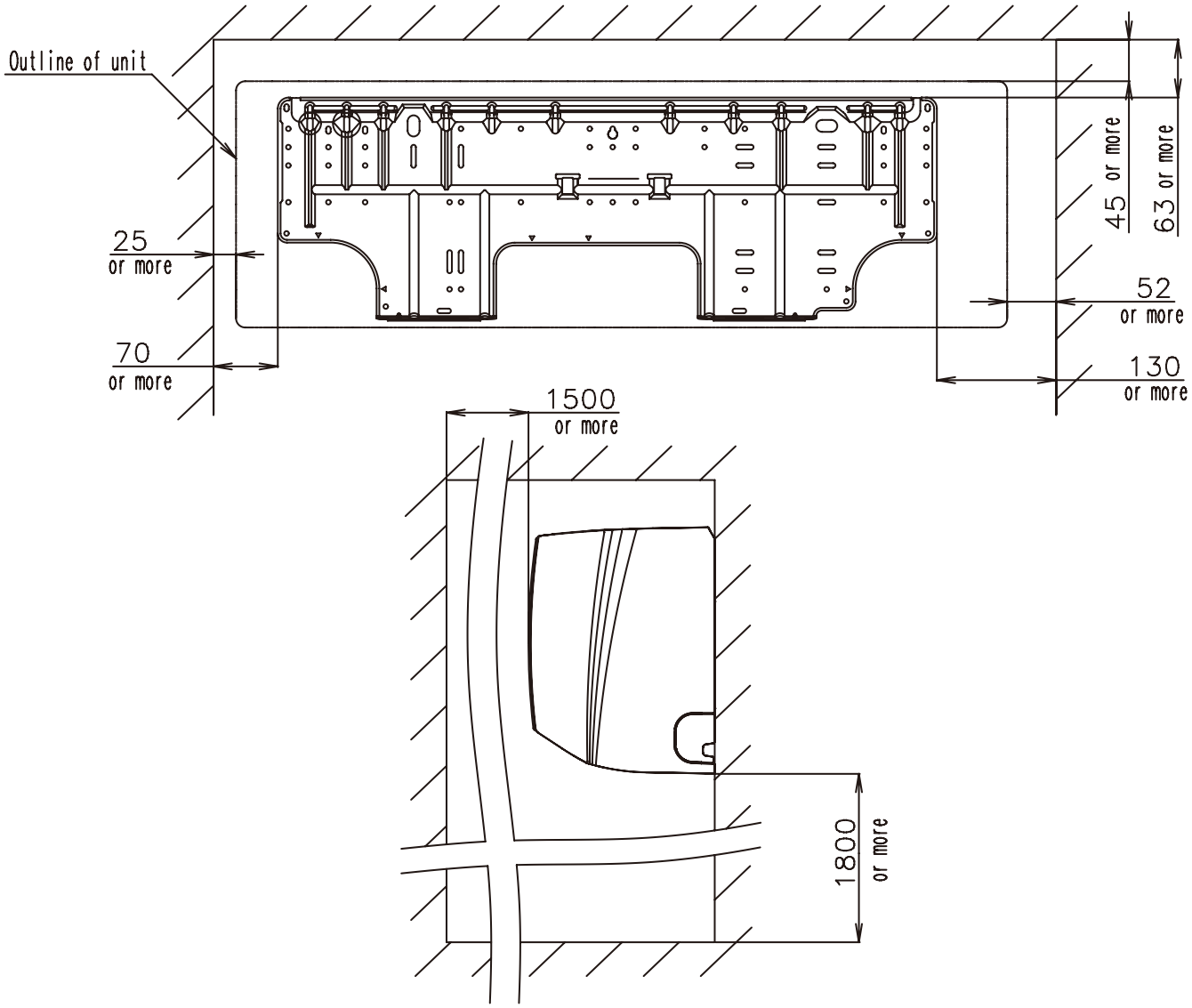




WALL MOUNTED TYPE
AS∗G07-14LMCA

■ INSTALLATION PLACE

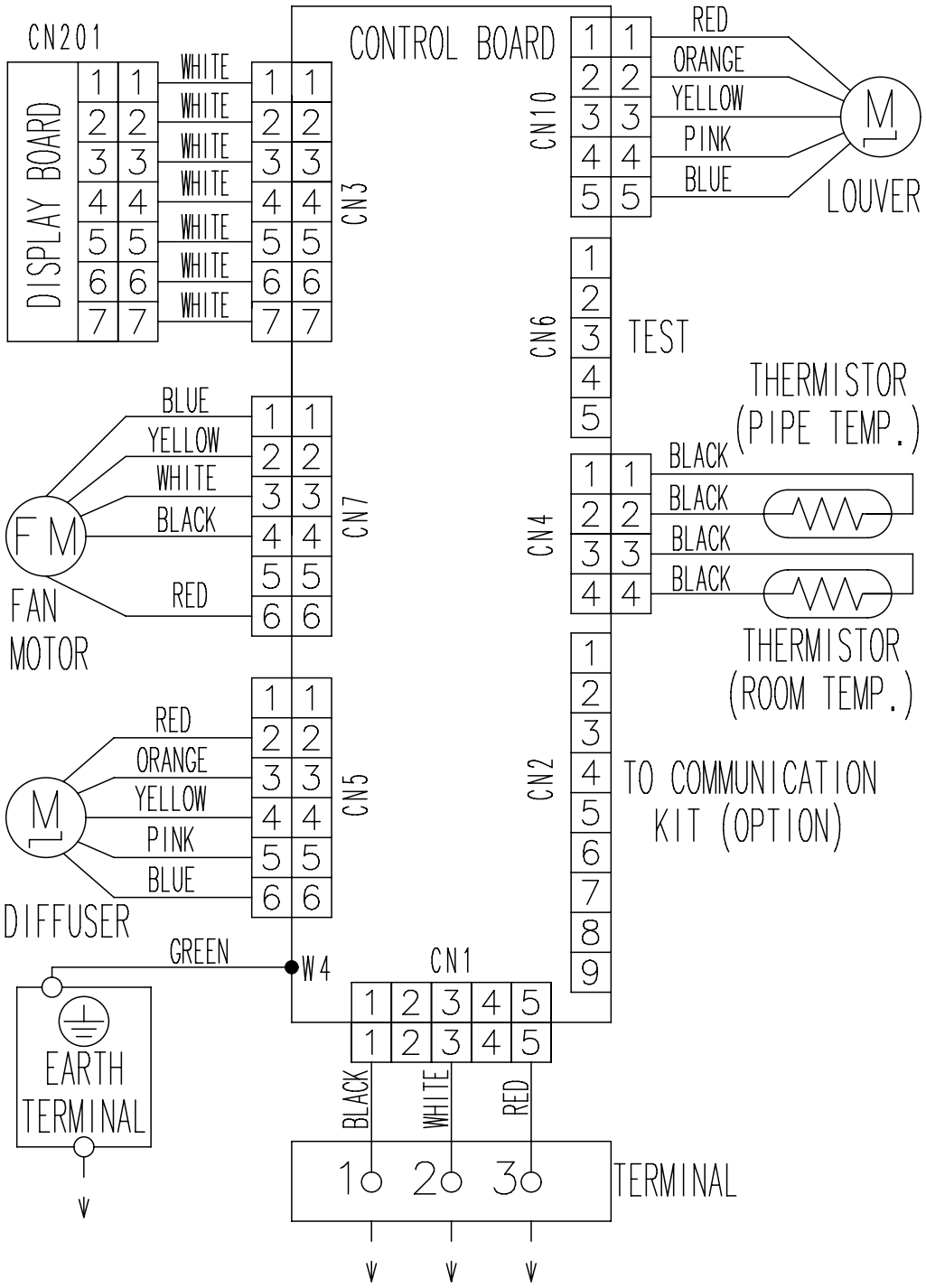
(Unit : mm)



WALL MOUNTED TYPE
AS∗G07-14LMCA

5. WIRING DIAGRAMS

■MODELS:AS∗G07LMCA, AS∗G09LMCA, AS∗G12LMCA, AS∗G14LMCA



WALL MOUNTED TYPE
AS∗G07-14LMCA

6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL: AS∗G07LMCA

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	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	20	1.87	1.32	0.33	2.09	1.33	0.33	2.16	1.45	0.33	2.30	1.45	0.34	2.37	1.57	0.34	2.51	1.56	0.34	2.65	1.66	0.35
	25	1.78	1.26	0.37	1.98	1.26	0.37	2.05	1.37	0.37	2.18	1.38	0.38	2.25	1.49	0.38	2.39	1.48	0.38	2.52	1.58	0.39
	30	1.68	1.19	0.41	1.87	1.19	0.41	1.94	1.30	0.42	2.06	1.30	0.42	2.13	1.41	0.42	2.25	1.40	0.43	2.38	1.49	0.43
	35	1.58	1.12	0.45	1.76	1.12	0.46	1.82	1.22	0.46	1.94	1.23	0.46	2.00	1.32	0.47	2.12	1.32	0.47	2.24	1.40	0.47
	40	1.41	1.00	0.45	1.57	1.00	0.46	1.62	1.09	0.46	1.73	1.09	0.46	1.78	1.18	0.46	1.89	1.17	0.47	2.00	1.25	0.47
	43	1.31	0.92	0.45	1.45	0.93	0.45	1.50	1.01	0.46	1.60	1.01	0.46	1.65	1.09	0.46	1.75	1.09	0.47	1.85	1.16	0.47

■ MODEL: AS∗G09LMCA

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	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	20	2.34	1.62	0.46	2.61	1.63	0.46	2.70	1.77	0.47	2.87	1.78	0.47	2.96	1.92	0.47	3.14	1.91	0.48	3.32	2.04	0.48
	25	2.22	1.54	0.51	2.48	1.55	0.52	2.56	1.68	0.52	2.73	1.69	0.53	2.81	1.82	0.53	2.98	1.82	0.54	3.15	1.93	0.54
	30	2.10	1.45	0.57	2.34	1.46	0.58	2.42	1.59	0.58	2.58	1.60	0.59	2.66	1.72	0.59	2.82	1.72	0.60	2.98	1.83	0.60
	35	1.98	1.37	0.63	2.20	1.38	0.64	2.28	1.50	0.64	2.43	1.50	0.65	2.50	1.62	0.65	2.65	1.61	0.66	2.80	1.72	0.66
	40	1.76	1.22	0.63	1.96	1.23	0.64	2.03	1.33	0.64	2.16	1.34	0.65	2.23	1.44	0.65	2.36	1.44	0.66	2.50	1.53	0.66
	43	1.63	1.13	0.62	1.82	1.14	0.63	1.88	1.24	0.64	2.00	1.24	0.64	2.07	1.34	0.65	2.19	1.33	0.65	2.31	1.42	0.66

■ MODEL: AS∗G12LMCA

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	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	20	3.18	2.18	0.66	3.55	2.19	0.67	3.67	2.39	0.68	3.91	2.39	0.68	4.03	2.59	0.69	4.27	2.57	0.70	4.51	2.74	0.70
	25	3.03	2.07	0.75	3.37	2.08	0.77	3.49	2.27	0.77	3.72	2.27	0.78	3.83	2.45	0.78	4.06	2.44	0.79	4.29	2.60	0.80
	30	2.86	1.96	0.84	3.19	1.97	0.86	3.30	2.14	0.86	3.52	2.15	0.87	3.63	2.32	0.87	3.84	2.31	0.88	4.06	2.46	0.89
	35	2.69	1.84	0.94	2.99	1.85	0.95	3.09	2.01	0.96	3.30	2.02	0.97	3.40	2.18	0.97	3.60	2.17	0.98	3.81	2.31	0.99
	40	2.27	1.64	0.87	2.53	1.65	0.88	2.62	1.79	0.89	2.79	1.80	0.90	2.87	1.94	0.90	3.05	1.94	0.91	3.22	2.06	0.92
	43	2.09	1.52	0.87	2.33	1.53	0.89	2.41	1.66	0.89	2.57	1.67	0.90	2.65	1.80	0.90	2.81	1.80	0.91	2.96	1.91	0.92

■ MODEL: AS∗G14LMCA

AFR	12.8

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
	20	3.72	2.44	0.77	4.15	2.46	0.78	4.29	2.67	0.79	4.57	2.68	0.80	4.71	2.90	0.80	4.99	2.89	0.81	5.28	3.07	0.82
	25	3.54	2.34	0.88	3.94	2.36	0.89	4.08	2.56	0.90	4.34	2.57	0.91	4.48	2.78	0.91	4.75	2.77	0.92	5.02	2.95	0.93
	30	3.36	2.31	0.99	3.74	2.32	1.00	3.87	2.52	1.01	4.12	2.53	1.02	4.25	2.73	1.02	4.50	2.72	1.03	4.76	2.90	1.04
	35	3.16	2.19	1.10	3.52	2.21	1.11	3.64	2.40	1.12	3.88	2.41	1.13	4.00	2.60	1.14	4.24	2.59	1.15	4.48	2.76	1.16
	40	2.30	1.87	0.75	2.56	1.88	0.76	2.65	2.04	0.77	2.83	2.05	0.78	2.91	2.21	0.78	3.09	2.20	0.79	3.26	2.35	0.80
	43	2.20	1.84	0.80	2.45	1.85	0.81	2.53	2.01	0.81	2.70	2.02	0.82	2.78	2.18	0.83	2.95	2.17	0.83	3.12	2.31	0.84

AFR : AirFlow Rate (m^3/min)
TC : Total Capacity (kW)
SHC : Sensible Heat Capacity (kW)
IP : Input Power (kW)

WALL MOUNTED TYPE
AS∗G07-14LMCA

6-2. HEATING CAPACITY

■ MODEL: AS∗G07LMCA

AFR	12.5

			Indoor temperature									
		(°CDB)	16		18		20		22		24	
	(°CDB)	(°CWB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-16	1.72	0.71	1.68	0.73	1.64	0.74	1.60	0.75	1.56	0.77
	-10	-11	2.38	0.86	2.33	0.88	2.27	0.90	2.21	0.92	2.16	0.94
	-5	-7	2.90	0.97	2.83	0.99	2.76	1.01	2.69	1.03	2.62	1.05
	0	-2	3.18	1.02	3.10	1.04	3.03	1.06	2.95	1.08	2.87	1.10
	5	3	3.46	1.06	3.38	1.09	3.29	1.11	3.21	1.13	3.13	1.15
	7	6	3.57	1.08	3.49	1.10	3.40	1.13	3.32	1.15	3.23	1.17
	10	8	3.98	1.19	3.88	1.21	3.79	1.24	3.69	1.26	3.60	1.29
	15	10	3.72	1.09	3.63	1.12	3.54	1.14	3.45	1.16	3.36	1.18

■ MODEL: AS∗G09LMCA

AFR	12.5

			Indoor temperature									
		(°CDB)	16		18		20		22		24	
	(°CDB)	(°CWB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-16	1.72	0.71	1.68	0.73	1.64	0.74	1.60	0.75	1.56	0.77
	-10	-11	2.38	0.86	2.33	0.88	2.27	0.90	2.21	0.92	2.16	0.94
	-5	-7	2.99	0.97	2.91	0.99	2.84	1.01	2.77	1.03	2.70	1.05
	0	-2	3.49	1.02	3.41	1.04	3.33	1.06	3.24	1.08	3.16	1.10
	5	3	4.00	1.06	3.90	1.09	3.81	1.11	3.71	1.13	3.62	1.15
	7	6	4.20	1.08	4.10	1.10	4.00	1.13	3.90	1.15	3.80	1.17
	10	8	4.76	1.19	4.65	1.21	4.53	1.24	4.42	1.26	4.31	1.29
	15	10	4.53	1.09	4.42	1.12	4.31	1.14	4.20	1.16	4.10	1.18

■ MODEL: AS∗G12LMCA

AFR	12.5

			Indoor temperature									
		(°CDB)	16		18		20		22		24	
	(°CDB)	(°CWB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-16	2.94	1.54	2.87	1.57	2.80	1.60	2.73	1.63	2.66	1.66
	-10	-11	3.73	1.60	3.64	1.63	3.55	1.67	3.46	1.70	3.37	1.73
	-5	-7	4.40	1.62	4.29	1.65	4.19	1.69	4.08	1.72	3.98	1.75
	0	-2	4.88	1.57	4.77	1.60	4.65	1.64	4.53	1.67	4.42	1.70
	5	3	5.37	1.52	5.24	1.56	5.11	1.59	4.99	1.62	4.86	1.65
	7	6	5.57	1.51	5.43	1.54	5.30	1.57	5.17	1.60	5.04	1.63
	10	8	5.85	1.51	5.71	1.54	5.57	1.57	5.43	1.60	5.29	1.63
	15	10	5.66	1.39	5.52	1.42	5.39	1.45	5.25	1.48	5.12	1.51

■ MODEL: AS∗G14LMCA

AFR	12.8

			Indoor temperature									
		(°CDB)	16		18		20		22		24	
	(°CDB)	(°CWB)	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	-15	-16	2.92	1.43	2.85	1.46	2.78	1.49	2.71	1.52	2.64	1.55
	-10	-11	3.45	1.51	3.37	1.54	3.29	1.57	3.21	1.60	3.13	1.63
	-5	-7	3.94	1.58	3.85	1.61	3.76	1.64	3.66	1.68	3.57	1.71
	0	-2	4.63	1.69	4.52	1.72	4.41	1.76	4.30	1.79	4.19	1.83
	5	3	5.73	1.79	5.59	1.83	5.46	1.86	5.32	1.90	5.18	1.94
	7	6	6.30	1.86	6.15	1.89	6.00	1.93	5.85	1.97	5.70	2.01
	10	8	6.64	1.90	6.49	1.94	6.33	1.98	6.17	2.02	6.01	2.06
	15	10	6.44	1.65	6.28	1.69	6.13	1.72	5.98	1.76	5.82	1.79

AFR : AirFlow Rate (m^3/min)
TC : Total Capacity (kW)
IP : Input Power (kW)

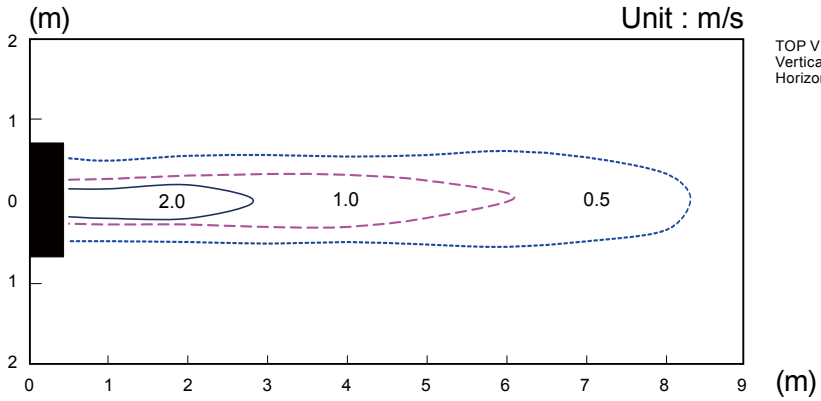
WALL MOUNTED TYPE
AS∗G07-14LMCA

7. FAN PERFORMANCE

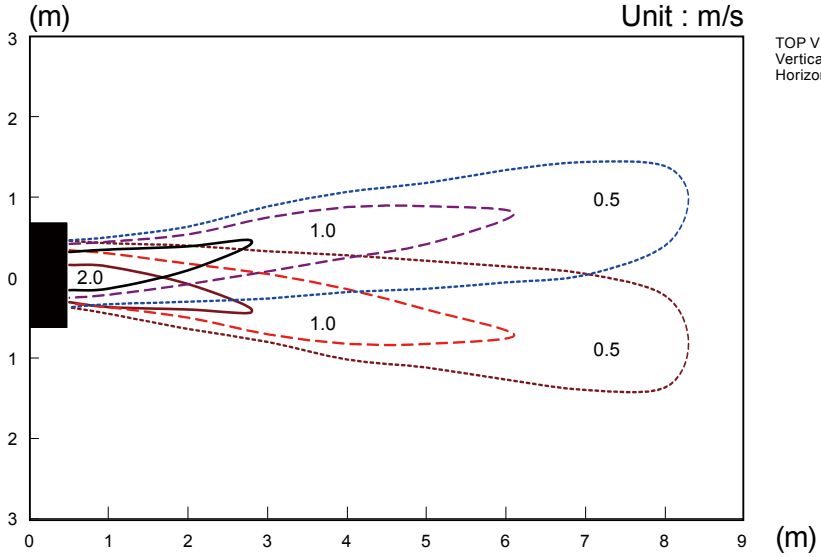
7-1. AIR VELOCITY DISTRIBUTION

Conditions:
Fan speed: HIGH
Operation mode: FAN

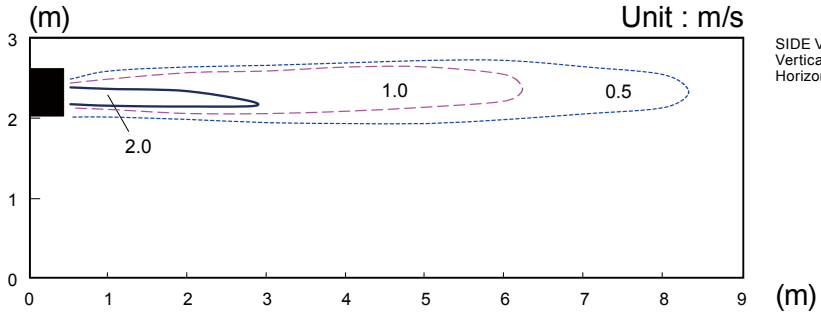
■MODELS : AS∗G07LMCA, AS∗G09LMCA, AS∗G12LMCA



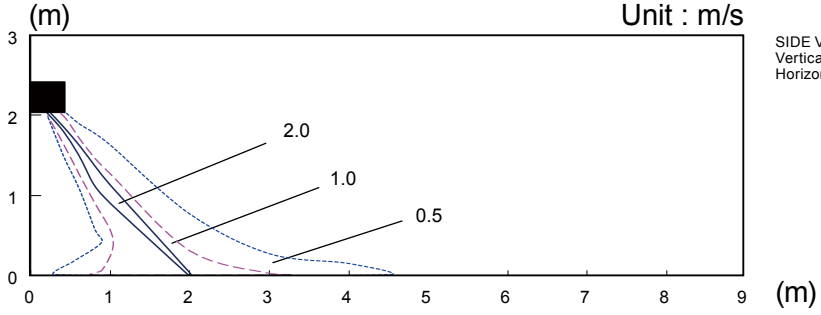
TOP VIEW
Vertical flap: Up
Horizontal flap: Center



TOP VIEW
Vertical flap: Up
Horizontal flap: Right & Left



SIDE VIEW
Vertical flap: Up
Horizontal flap: Center

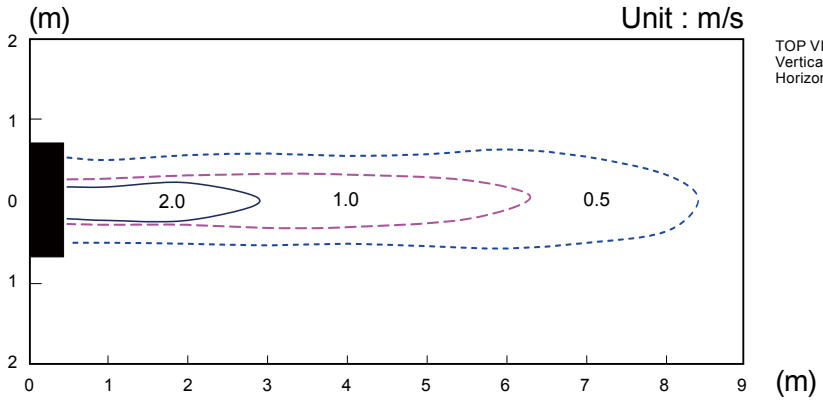


SIDE VIEW
Vertical flap: Down
Horizontal flap: Center

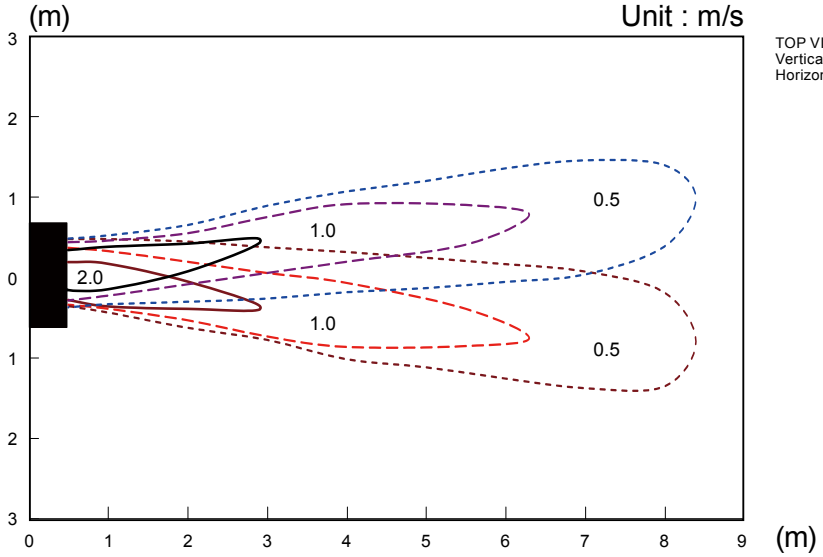
WALL MOUNTED TYPE
AS∗G07-14LMCA

Conditions:
Fan speed: HIGH
Operation mode: FAN

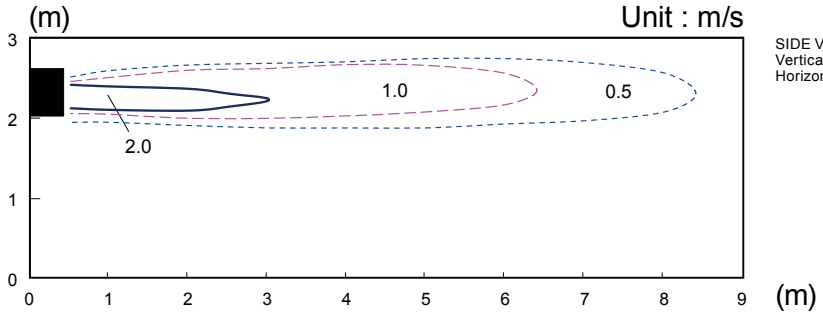
■ MODEL: AS∗G14LMCA



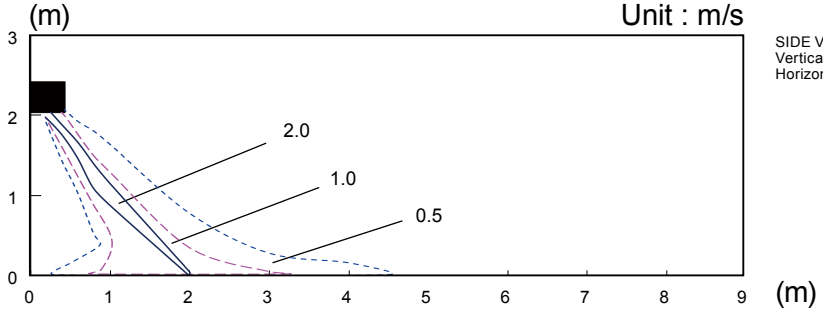
TOP VIEW
Vertical flap: Up
Horizontal flap: Center



TOP VIEW
Vertical flap: Up
Horizontal flap: Right & Left



SIDE VIEW
Vertical flap: Up
Horizontal flap: Center



SIDE VIEW
Vertical flap: Down
Horizontal flap: Center

WALL MOUNTED TYPE
AS∗G07-14LMCA

7-2. AIRFLOW

■MODELS : AS∗G07LMCA, AS∗G09LMCA, AS∗G12LMCA

● Cooling

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1320	m^3/h	750
		l/s	208
		CFM	441
MED	1160	m^3/h	640
		l/s	178
		CFM	376
LOW	930	m^3/h	480
		l/s	133
		CFM	282
QUIET	680	m^3/h	310
		l/s	86
		CFM	182

● Heating

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1320	m^3/h	750
		l/s	208
		CFM	441
MED	1160	m^3/h	640
		l/s	178
		CFM	376
LOW	980	m^3/h	520
		l/s	144
		CFM	306
QUIET	710	m^3/h	330
		l/s	92
		CFM	194

WALL MOUNTED TYPE
AS∗G07-14LMCA

■ MODEL: AS∗G14LMCA

● Cooling

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1360	m^3/h	770
		l/s	213
		CFM	453
MED	1220	m^3/h	680
		l/s	188
		CFM	400
LOW	990	m^3/h	530
		l/s	147
		CFM	311
QUIET	750	m^3/h	360
		l/s	100
		CFM	212

● Heating

Fan speed	Number of rotations (r.p.m.)	Airflow	
HIGH	1360	m^3/h	770
		l/s	213
		CFM	453
MED	1220	m^3/h	680
		l/s	188
		CFM	400
LOW	1040	m^3/h	560
		l/s	155
		CFM	329
QUIET	770	m^3/h	380
		l/s	105
		CFM	223

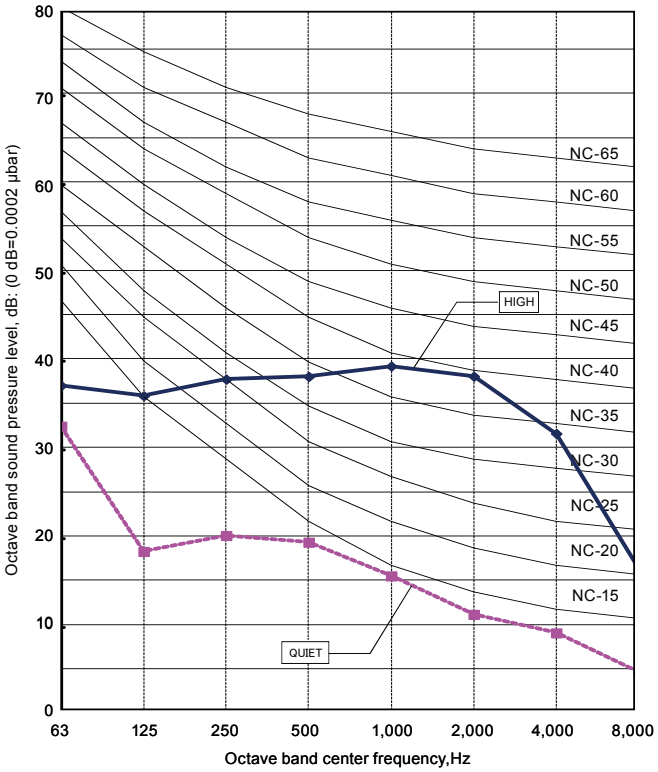
WALL MOUNTED TYPE
AS∗G07-14LMCA

8. OPERATION NOISE (SOUND PRESSURE)

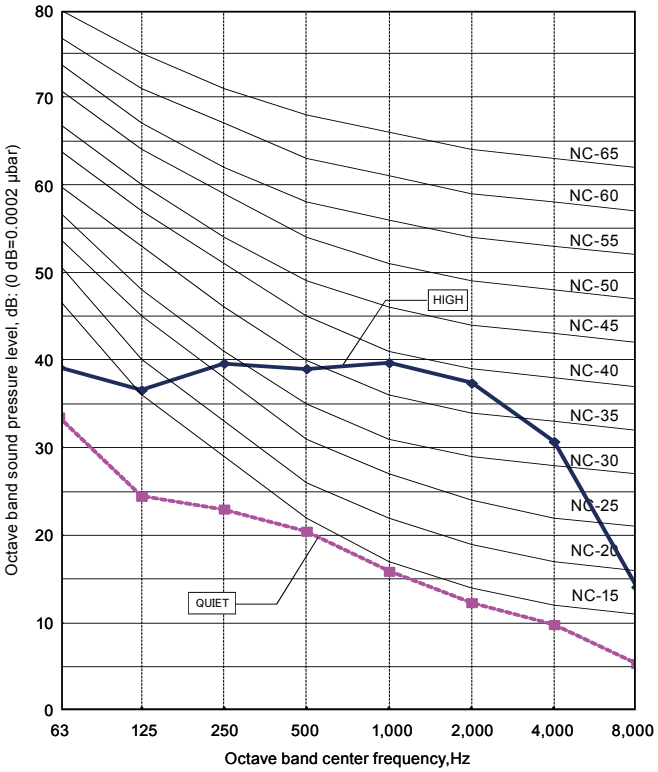
8-1. NOISE LEVEL CURVE

■MODEL: AS∗G07LMCA

●Cooling

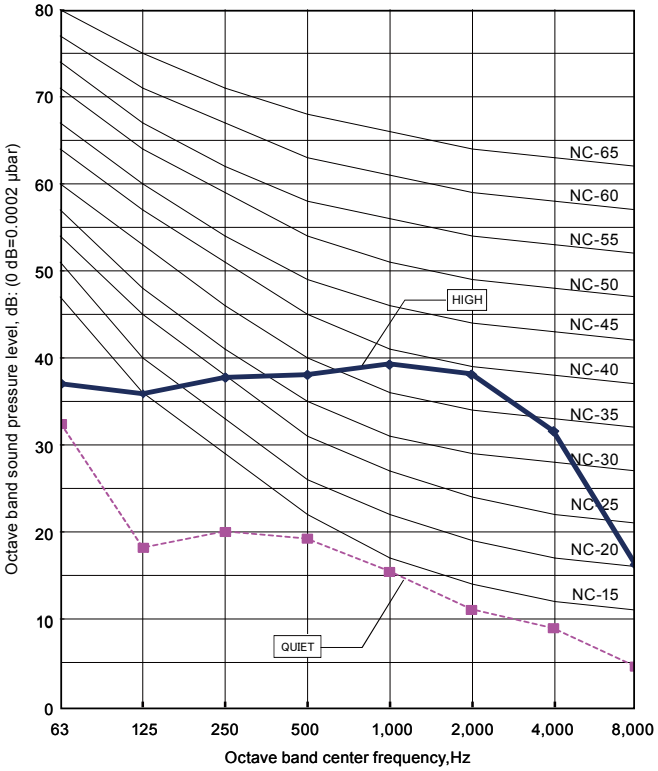


●Heating

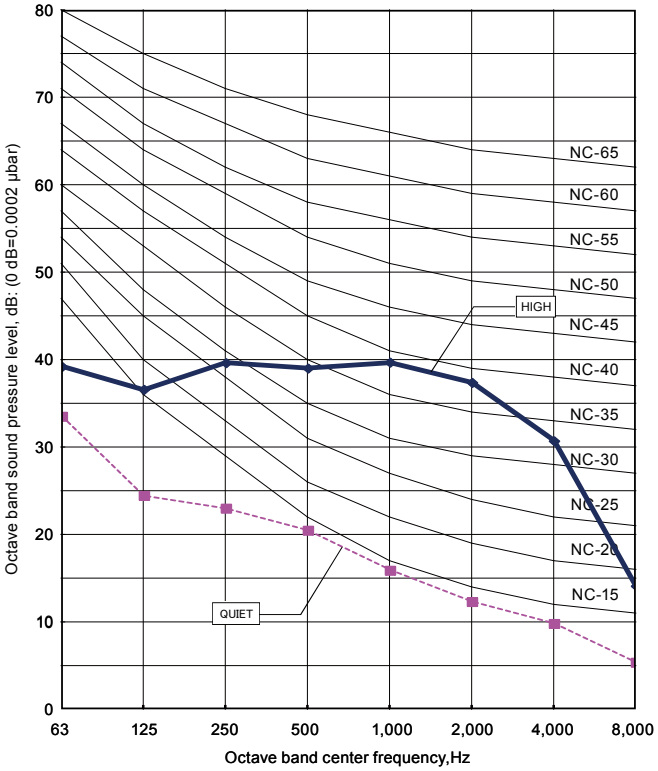


■MODEL: AS∗G09LMCA

●Cooling



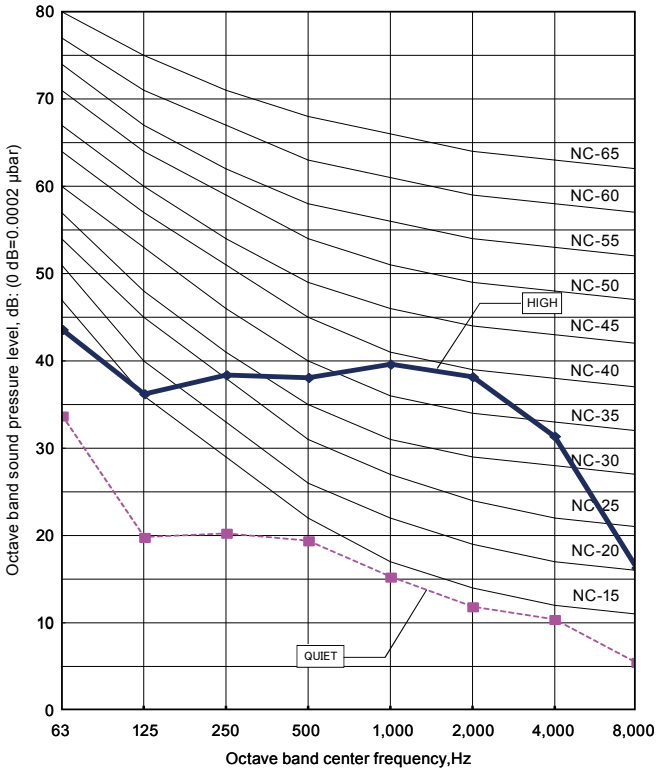
●Heating



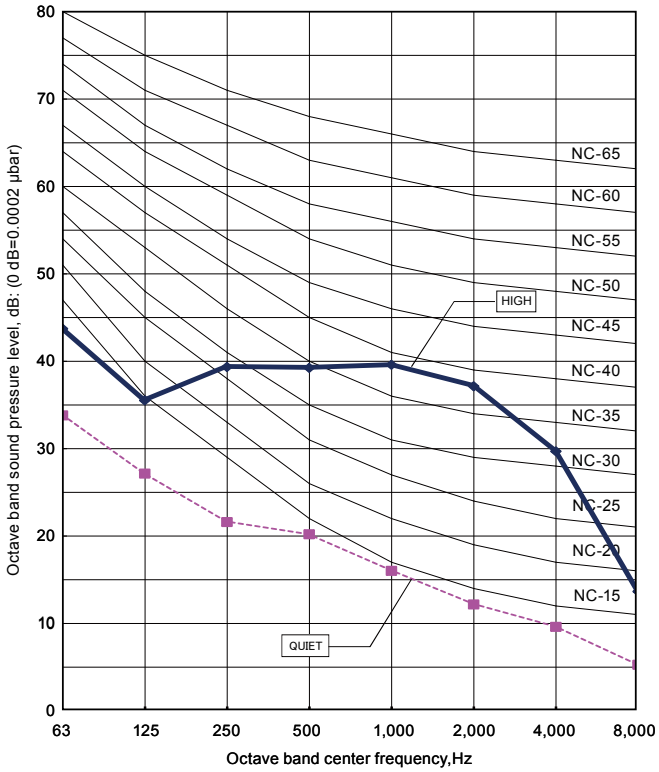
WALL MOUNTED TYPE
AS∗G07-14LMCA

■ MODEL: AS∗G12LMCA

● Cooling

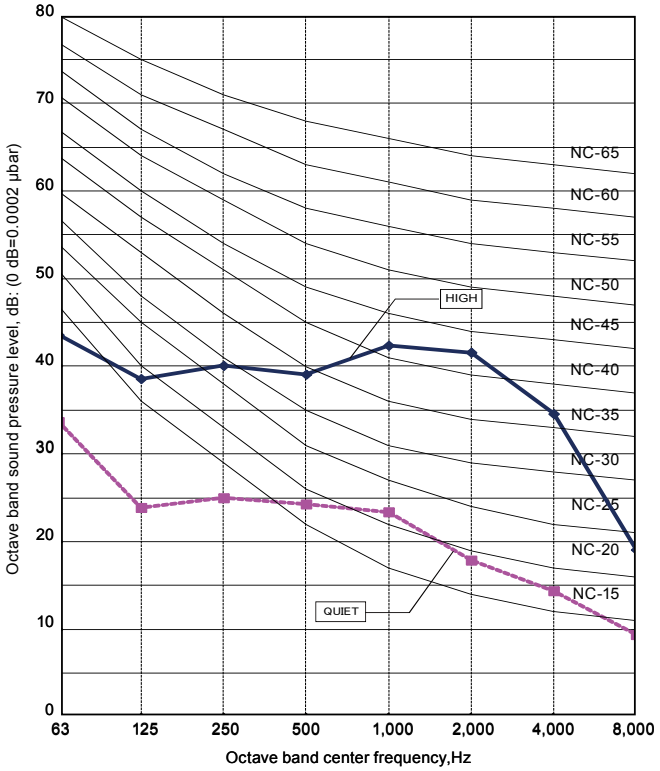


● Heating

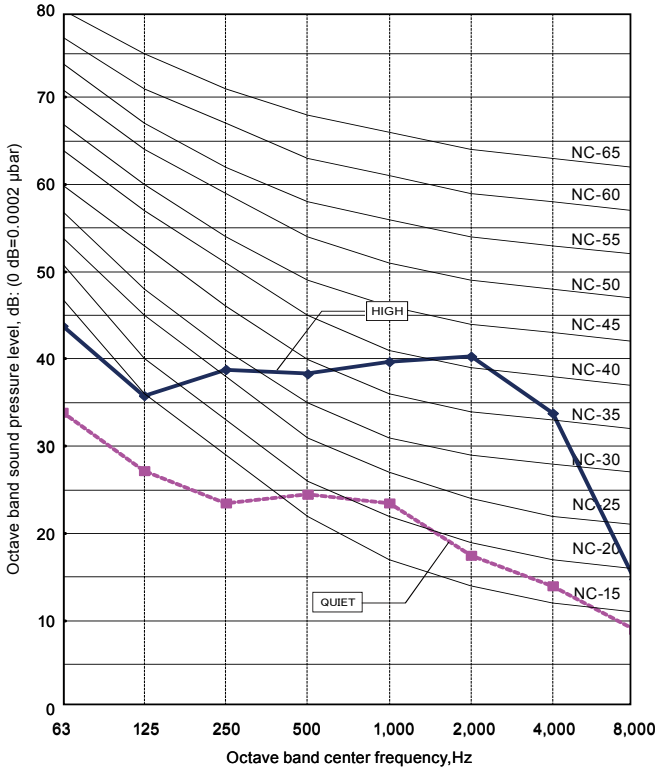


■ MODEL: AS∗G14LMCA

● Cooling

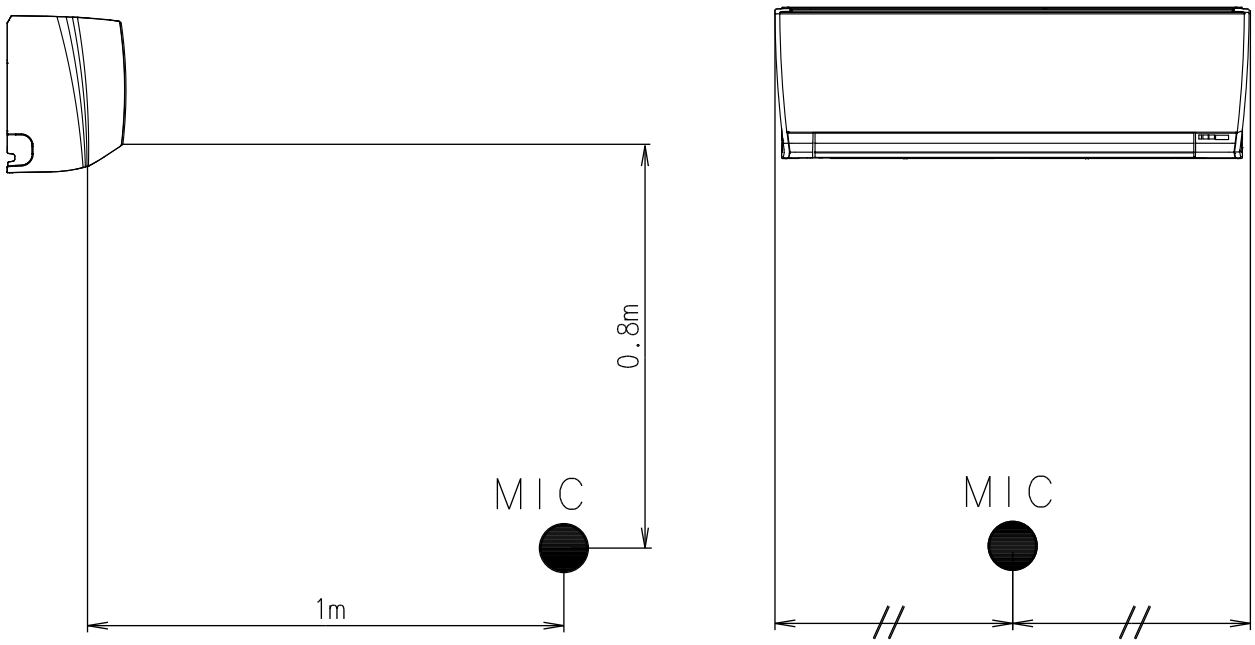


● Heating



WALL MOUNTED TYPE
AS∗G07-14LMCA

8-2. SOUND LEVEL CHECK POINT



WALL MOUNTED TYPE
AS∗G07-14LMCA

9. ELECTRICAL CHARACTERISTICS

Model name			AS∗G07LMCA	AS∗G09LMCA	AS∗G12LMCA	AS∗G14LMCA
Power supply	Voltage	V	230~			
	Frequency	Hz	50			
Max. operating current		A	0.4			
Wiring spec. *1	Connection cable	mm^2	1.5			
	Limited wiring length	m	21			

*1: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005.

WALL MOUNTED TYPE
AS∗G07-14LMCA

10. SAFETY DEVICES

	Protection form	Model
		AS∗G07LMCA AS∗G09LMCA AS∗G12LMCA AS∗G14LMCA
Circuit protection	Current fuse (PC board)	250V 3.15A
Fan motor protection	Thermal protector program	OFF: 105 ± 10 °C ON: 90 ± 10 °C

WALL MOUNTED TYPE
AS∗G07-14LMCA

11. EXTERNAL INPUT & OUTPUT

Connector	INPUT	OUTPUT	REMARKS
CNA01	Control input	-	See external input/output settings for details.
CNB01	-	Operation status output	
CNB02	-	Error status output	

11-1. EXTERNAL INPUT

■ CONTROL INPUT (Operation/Stop or Forced stop)

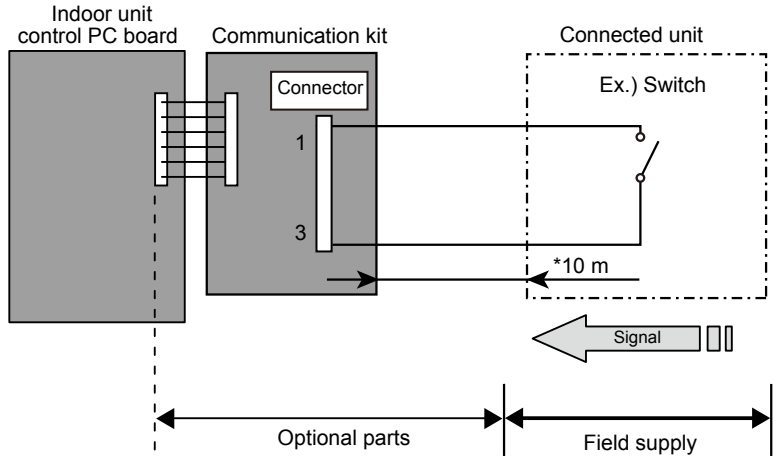
The air conditioner can be remotely operated by means of the following on-site work.

"Operation/Stop" mode or "Forced stop" mode can be selected with function setting of indoor unit.

Unit operation is started at the following contents by adding the contact input of a commercial ON/OFF switch to a connector on the external control PC board and turning it ON.

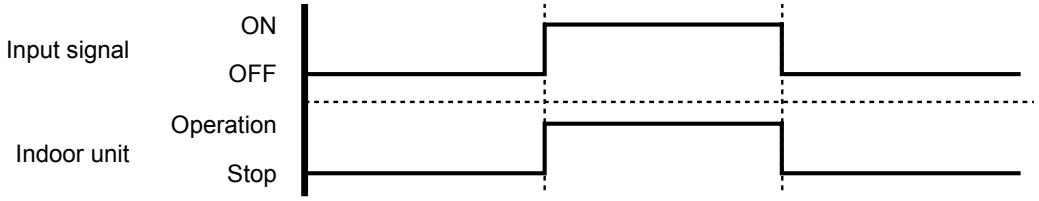
Unit operation	Initial setting after power is ON	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	24°C	Temperature at previous operation
Air flow mode	AUTO	Mode at previous operation
Up-down air direction (swing)	Standard air direction (swing OFF)	Air direction at previous operation

● Circuit diagram example



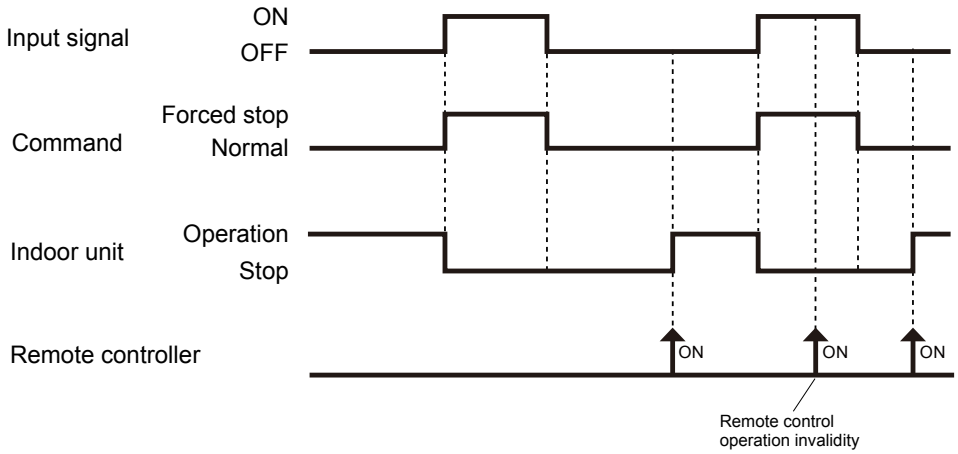
* Make the distance from the PC board to the connected unit within 10m.
Contact capacity: DC 24 V or more, 10 mA or more.
Use non-polar relays and switches.

● When function setting is in "Operation/Stop" mode



WALL MOUNTED TYPE
AS∗G07-14LMCA

● When function setting is in "Forced stop" mode

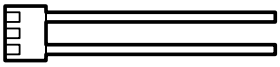


● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-XCBXZ2

*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).

Wire (External input) : UTY-XWZXZ5



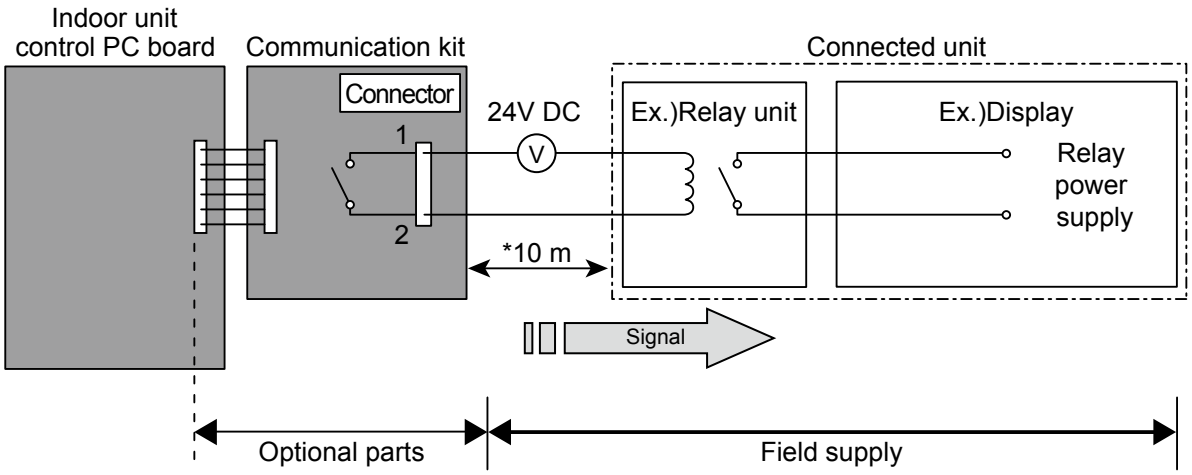
WALL MOUNTED TYPE
AS∗G07-14LMCA

11-2. EXTERNAL OUTPUT

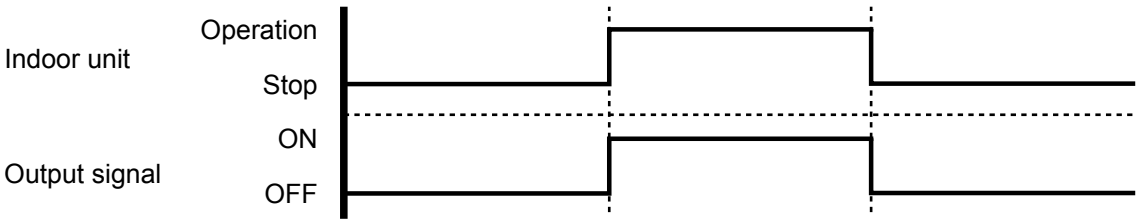
■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

● Circuit diagram example



*: Make the distance from the PC board to the connected unit within 10 m.
Relay spec.: Max. DC 24 V, 10 mA to less than 500 mA.

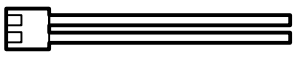


● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-XCBXZ2

*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).

Wire (External output) : UTY-XWZXZ5

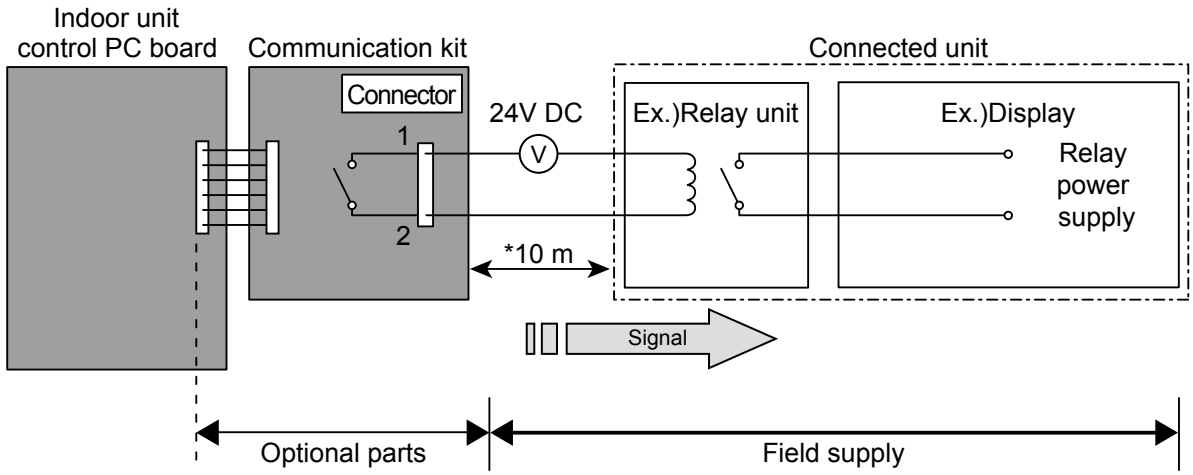


WALL MOUNTED TYPE
AS∗G07-14LMCA

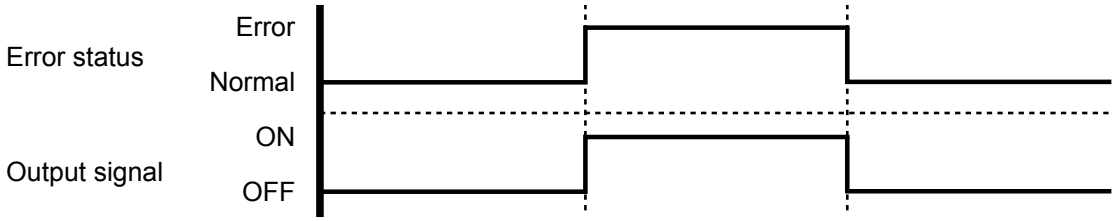
■ ERROR STATUS OUTPUT

An air conditioner error status signal can be output.

● Circuit diagram example



*: Make the distance from the PC board to the connected unit within 10 m.
Relay spec.: Max. DC 24 V, 10 mA to less than 500 mA.



● Parts (Optional)

Parts name	Model name
External connect kit	UTY-XWZXZ5
Communication kit	UTY-XCBXZ2

*For operating the EXTERNAL function, the wall mounted type requires the communication kit in addition to the wire (UTY-XWZXZ5).

Wire (External output) : UTY-XWZXZ5

WALL MOUNTED TYPE
AS∗G07-14LMCA

12. FUNCTION SETTINGS

12-1. INDOOR UNIT (Setting by remote controller)

- The function settings of the control of the indoor unit can be changed by this procedure according to the installation conditions. Incorrect settings can cause the indoor unit to malfunction.
- After the power is turned on, perform the Function Setting according to the installation conditions using the remote controller.
- The settings may be selected between the following two: Function Number and Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

■ PREPARATION

- Before turning on the power of the indoor unit:
  - Confirm whether the piping air-tight test and vacuuming have been conducted.
  - Reconfirm whether there is no miswiring.
- Turn on the power of the indoor units.

■ FUNCTION SETTING METHOD (for Wireless remote controller)

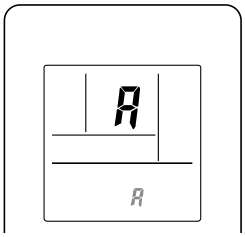
Entering the Function Setting Mode

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

STEP 1

Setting the Remote controller Signal Code

Use the following steps to select the signal code of the remote controller. (Note that the air conditioner cannot receive a signal code if the air conditioner has not been set for the signal code.) The signal codes that are set through this process are applicable only during the Function Setting process. For details on how to set the signal codes through the normal process, refer to "REMOTE CONTROLLER SIGNAL CODE SETTING".



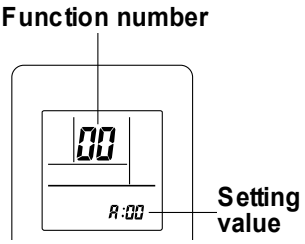
1. Press the SET TEMP. (▲) (▼) button to change the signal code between A → b → c → d.
   Match the code on the display to the air conditioner signal code. (initially set to A)
   (If the signal code does not need to be selected, press the 10°C HEAT button and proceed to **STEP 2**.)
2. Press the MODE button and check that the indoor unit can receive signals at the displayed signal code.
3. Press the 10°C HEAT button to accept the signal code, and proceed to **STEP 2**.

The air conditioner signal code is set to "A" prior to shipment.

The remote controller resets to signal code A when the batteries in the remote controller are replaced. If you use a signal code other than signal code A, reset the signal code after replacing the batteries.
If you do not know the air conditioner signal code setting, try each of the signal codes (A → b → c → d) until you find the code which operates the air conditioner.

STEP 2

Selecting the Function Number and Setting Value



1. Press the SET TEMP. (▲) (▼) buttons to select the function number. (Press the 10°C Heat button to switch between the left and right digits.)
2. Press the POWERFUL button to proceed to setting the value. (Press the POWERFUL button again to return to the function number selection.)
3. Press the SET TEMP. (▲) (▼) buttons to select the setting value. (Press the 10°C Heat button to switch between the left and right digits.)
4. Press the MODE button, then the START/STOP button in order to fix the settings.
5. Press the RESET button to end the function setting mode.
6. After completing the Function Setting, be sure to turn off the power and turn it on again.

⚠CAUTION
After turning off the power, wait 30 seconds or more before turning on it again. The Function Setting will not become active unless the power is turned off then on again.

WALL MOUNTED TYPE
AS∗G07-14LMCA

■ FUNCTION DETAILS

	Functions
1)	Filter sign
2)	Room temperature control for cooling
3)	Room temperature control for heating
4)	Auto restart
5)	Room temperature sensor switching
6)	Remote controller signal code
7)	External input control
8)	Room temperature sensor switching (Aux.)
9)	Indoor unit fan control for energy saving for cooling

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).

(◆... Factory setting)

	Setting description	Function number	Setting value
	Standard (400 hours)	11	00
	Long interval (1000 hours)		01
	Short interval (200 hours)		02
◆	No indication		03

2) Room temperature control for cooling

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

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Standard	30	00
	Slightly lower control		01
	Lower control		02
	Higher control		03

3) Room temperature control for heating

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

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Standard	31	00
	Lower control		01
	Slightly higher control		02
	Higher control		03

WALL MOUNTED TYPE
AS∗G07-14LMCA

4) Auto restart

Enable or disable automatic restart after a power interruption.

(◆... Factory setting)

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

*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 input device.

5) Room temperature sensor switching

(Only for wired remote controller)
When using the Wired remote controller temperture sensor, change the setting to "Both" (01).

(◆... Factory setting)

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

*00: Sensor on the indoor unit is active.

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

6) Remote controller signal code

(Only for wireless remote controller)
The indoor unit signal code can be changed.
Select the appropriate signal code.

(◆... Factory setting)

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

7) External input control

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

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Operation/Stop mode	46	00
	(Setting prohibited)		01
	Forced stop mode		02

8) Room temperature sensor switching (Aux.)

To use the 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)

(◆... Factory setting)

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

WALL MOUNTED TYPE
AS∗G07-14LMCA

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.

(◆... Factory setting)

	Setting description	Function number	Setting value
	Disable	49	00
◆	Enable		01

*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.

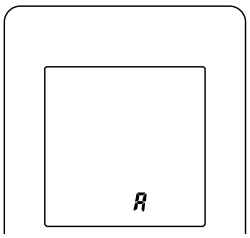
WALL MOUNTED TYPE
AS∗G07-14LMCA

■ REMOTE CONTROLLER SIGNAL CODE SETTING

Use the following steps to select the signal code of the remote controller.

(Note that the air conditioner cannot receive a signal if the right signal code has not been set.)

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 five seconds to display the current signal code (initially set to A).
3. Press the SET TEMP. (▲) (▼) button to change the signal code between A → b → c → d.
   Match the code on the display to the air conditioner signal code.
4. Press the MODE button again to return to the clock display. The signal code will be changed.



If no buttons are pressed within 30 seconds after the signal code is displayed, the system returns to the original clock display. In this case, start again from step 1.

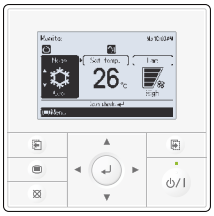
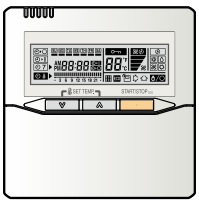
The air conditioner signal code is set to A prior to shipment.

The remote controller resets to signal code A when the batteries in the remote controller are replaced. If you use a signal code other than signal code A, reset the signal code after replacing the batteries. If you do not know the air conditioner signal code setting, try each of the signal codes (A → b → c → d) until you find the code which operates the air conditioner.

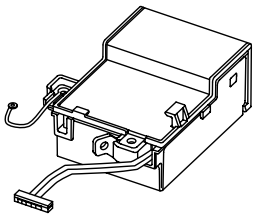
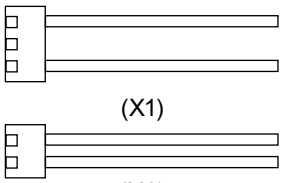
WALL MOUNTED TYPE
AS∗G07-14LMCA

13. OPTIONAL PARTS

13-1. CONTROLLERS

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTY-RVN∗M	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. *Optional communication kit is necessary for installation.
	Wired remote controller	UTY-RNN∗M	The room temperature can be controlled by detecting the temperature accurately with built-in thermo sensor. *Optional communication kit is necessary for installation.
	Simple remote controller	UTY-RSN∗M	Compact remote controller concentrates on the basic functions such as Start/Stop, Fan Control, Temperature Setting and Operation mode. *Optional communication kit is necessary for installation.

13-2. OTHERS

Exterior	Parts name	Model No.	Summary
	Communication kit	UTY-XCBXZ2	Use to connect with optional devices and air conditioner PC board.
 (X1) (X2)	External connect kit	UTY-XWZXZ5	Required when external device is connected. *Optional communication kit is necessary for installation.

2.OUTDOOR UNIT

SINGLE TYPE :

AO∗G07LMCA
AO∗G09LMCA
AO∗G12LMCA
AO∗G14LMCA

DTR_AO130E_03
2013.06.25

CONTENTS

2. OUTDOOR UNIT

OUTDOOR UNIT
AO∗G07-14LMCA

1. SPECIFICATIONS

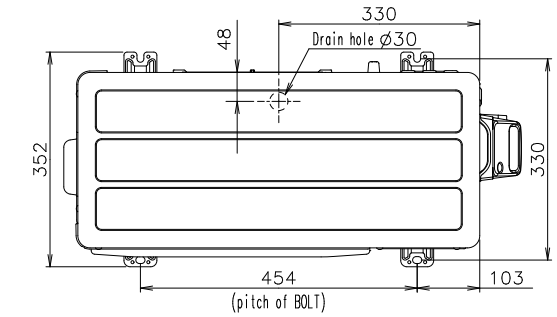
Type				INVERTER COOLING & HEATING			
Model name				AO∗G07LMCA	AO∗G09LMCA	AO∗G12LMCA	AO∗G14LMCA
Power source				230 V~ 50 Hz			
Available voltage range				198-264 V			
Starting current			A	3.3	3.5	4.8	6.3
Fan	Air flow rate	Cooling	m^3/h	1,670		1,830	1,940
		Heating		1,470		1,600	1,700
	Type × Q'ty			Propeller fan × 1			
	Motor output		W	23			37
Sound pressure level		Cooling	dB(A)	45		50	50
		Heating		45		50	50
Sound power level		Cooling	dB(A)	58		61	65
		Heating		56		61	65
Heat exchanger type		Dimensions (H × W × D)	mm	650 × 504 × 18.2		642 × 504 × 36.4	896 × 504 × 36.4
		Fin pitch		1.3		1.4	1.3
		Rows x Stages		1 × 24		2 × 24	
		Pipe type		Copper			
		Fin type		Aluminium			
Compressor	Type × Q'ty			Rotary × 1			
	Motor output		W	500		610	750
Refrigerant		Type (Global Warming Potential)		R410A (1975)			
		Charge	g	700		850	1050
Refrigerant oil		Type		POE(VG74)			
Enclosure		Material		Steel			
		Colour		BEIGE (Approximate colour of MUNSELL 10YR 7.5/1.0)			
Dimensions (H × W × D)	Net		mm	535 × 663 × 293			540 × 790 × 290
	Gross			595 × 790 × 395			648 × 938 × 400
Weight	Net		kg	21		26	34
	Gross			25		30	37
Connection pipe	Size	Liquid	mm	Φ6.35 (Φ 1/4 in.)			
		Gas		Φ9.52 (Φ 3/8 in.)			Φ12.7 (Φ 1/2 in.)
	Method			Flare			
	Pre-charge length		m	15			
	Max. length			20			
	Max. height difference			15			
Operation range		Cooling	°C	-10 to 43			
		Heating		-15 to 24			

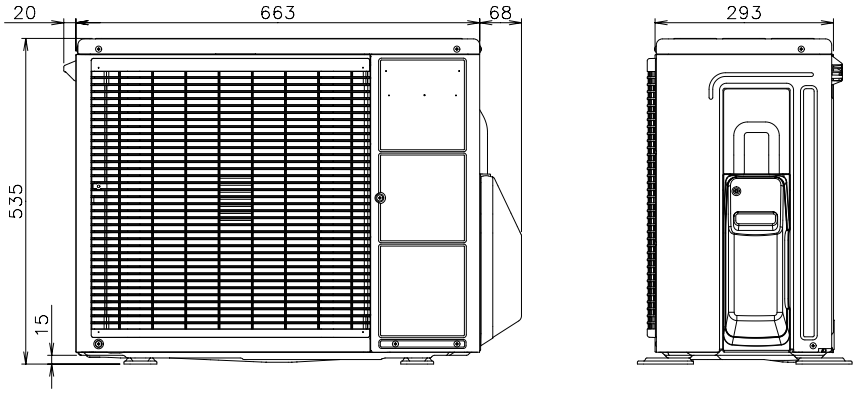
NOTES:
- ●Specifications are based on the following conditions.
  Cooling: Indoor temperature of 27 °CDB / 19 °CWB and outdoor temperature of 35 °CDB / 24 °CWB.
  Heating: Indoor temperature of 20 °CDB / 15 °CWB and outdoor temperature of 7 °CDB / 6 °CWB.
  Pipe length: 5 m, Height difference: 0 m. (Outdoor unit - Indoor unit)
- ●The protective function might work when using it out the operation range.

2. DIMENSIONS

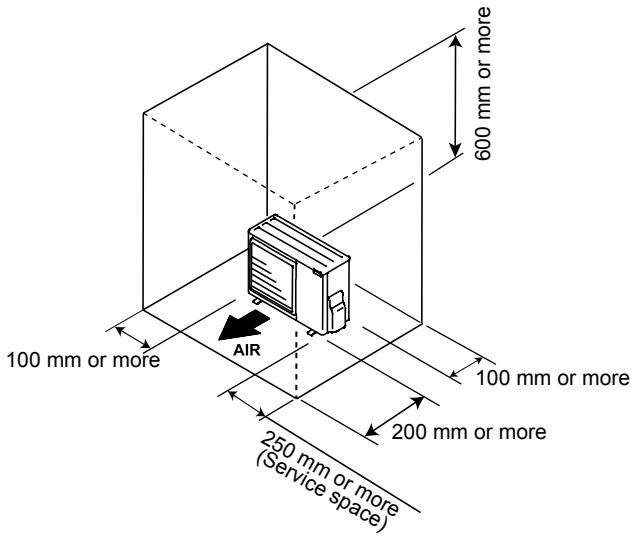
■MODELS : AO∗G07LMCA, AO∗G09LMCA, AO∗G12LMCA

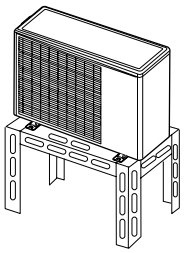
(Unit : mm)





■ INSTALLATION PLACE





⚠ CAUTION

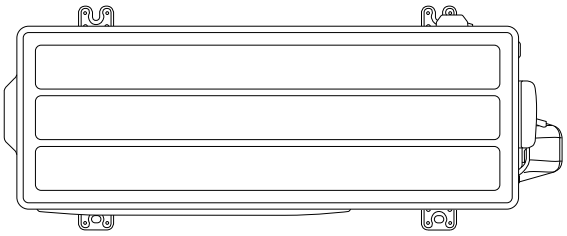
- When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold weather. (Reverse cycle model only)
- In areas with heavy snowfall, if the intake and outlet of outdoor unit is blocked with snow, it might become difficult to get warm and it is likely to cause breakdown. Please construct a canopy and a pedestal or place the unit on a high stand (local configured).

If the space is larger than stated, the condition will be the same as those without any obstacles.

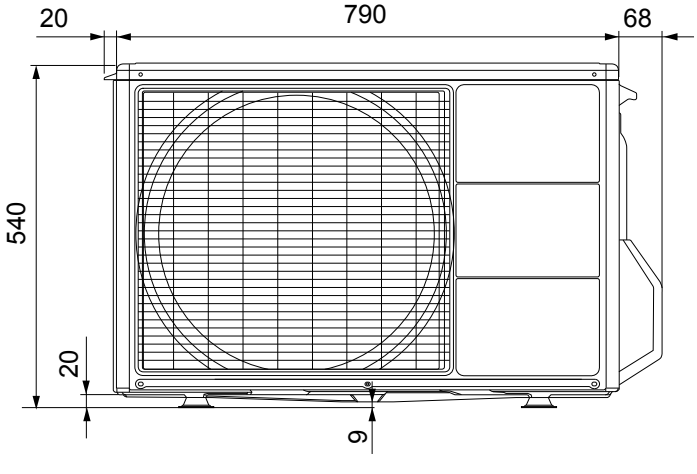
OUTDOOR UNIT
AO∗G07-14LMCA

■ MODEL: AO∗G14LMCA

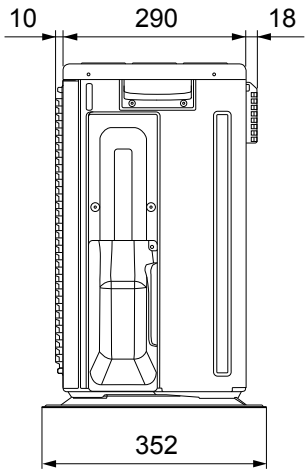
(Unit : mm)



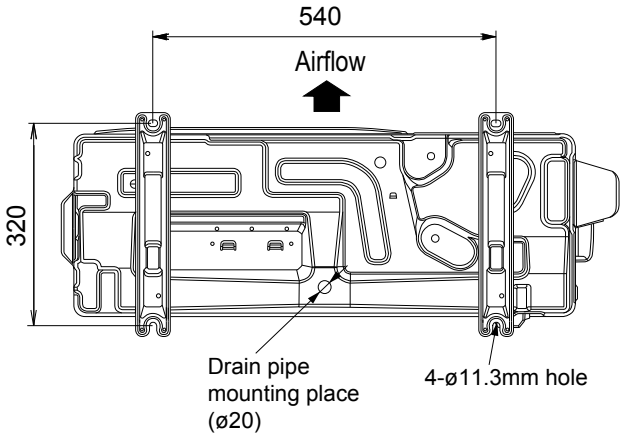
Top view



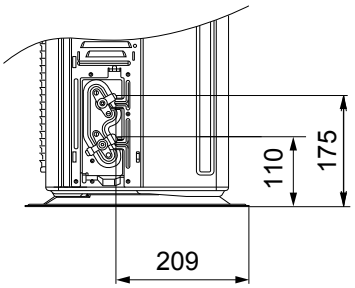
Front view



Side view

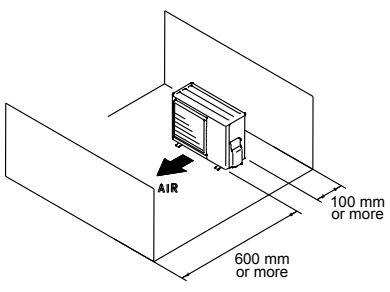


Bottom view

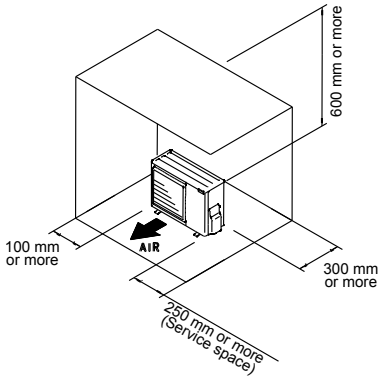


■ INSTALLATION PLACE

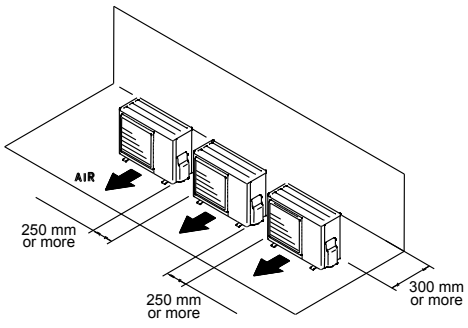
When there are obstacles at the back or front sides.



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



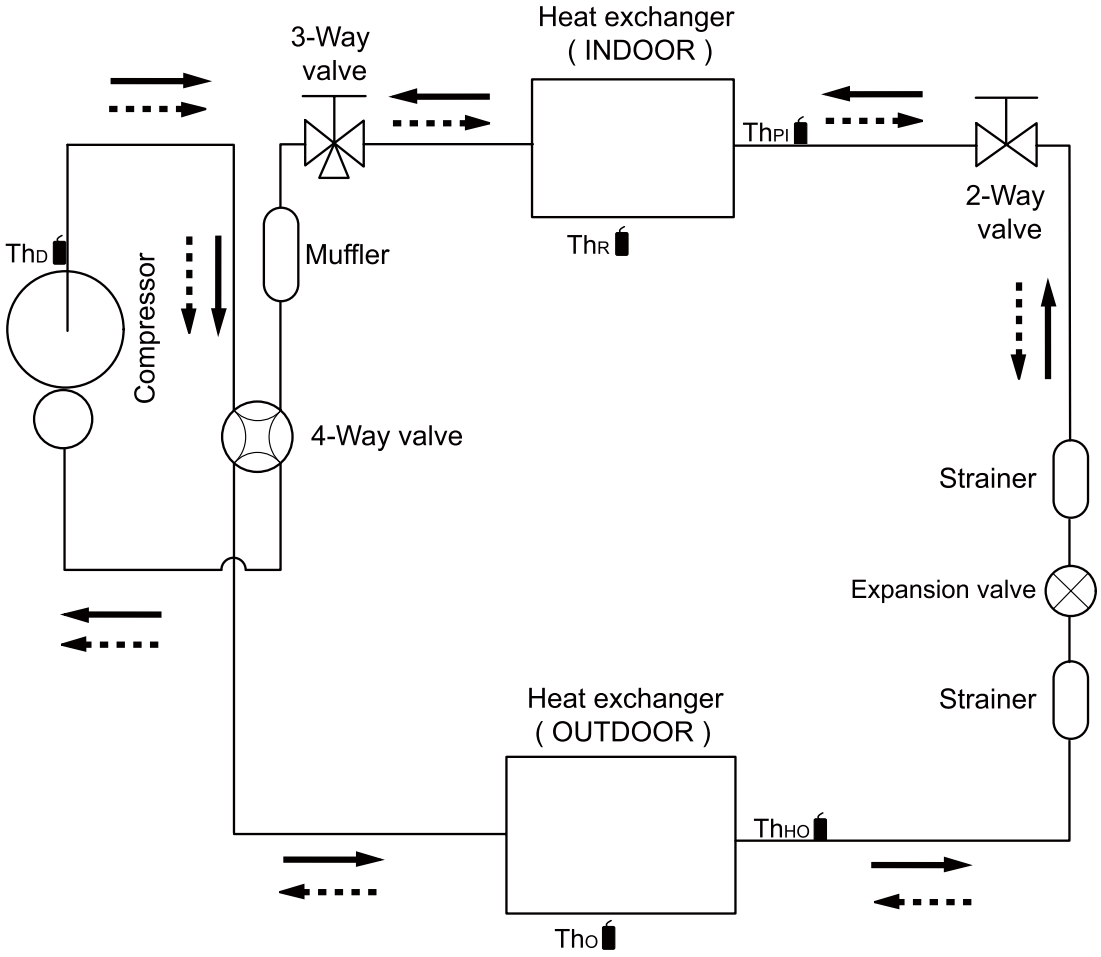
When there are obstacles at the back, side with the installation of more than one unit.



If the space is larger than stated, the condition will be the same as those without any obstacles.

3. REFRIGERANT CIRCUIT

■MODELS : AO*G07LMCA, AO*G09LMCA, AO*G12LMCA, AO*G14LMCA



ThD : Thermistor (Discharge Temp.)

ThO : Thermistor (Outdoor Temp.)

ThHO : Thermistor (Heat Exchanger Out Temp.)

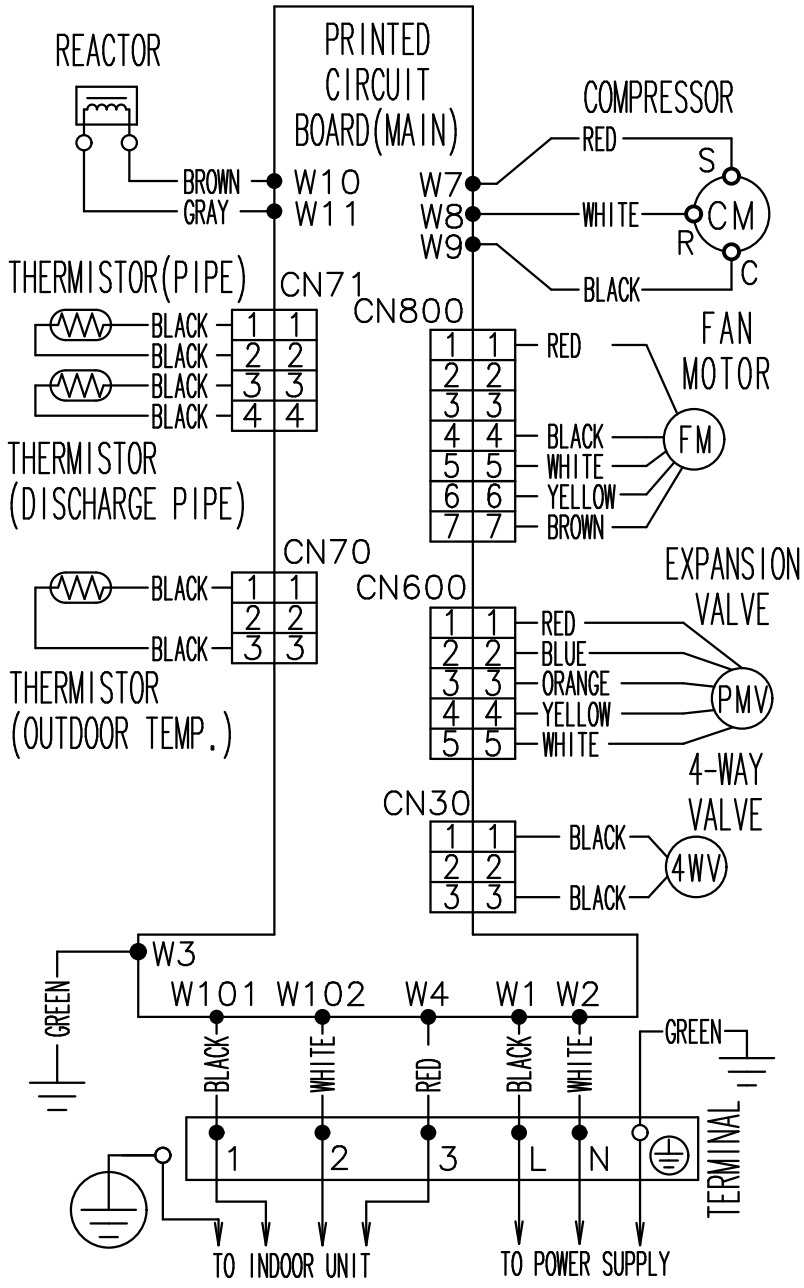
ThR : Thermistor (Room Temp.)

ThPI : Thermistor (Pipe Temp.)

Refrigerant pipe diameter
Liquid: 1/4" (6.35mm)
Gas: 3/8" (9.52 mm): AO*G07LMCA, AO*G09LMCA, AO*G12LMCA
1/2" (12.70 mm): AO*G14LMCA

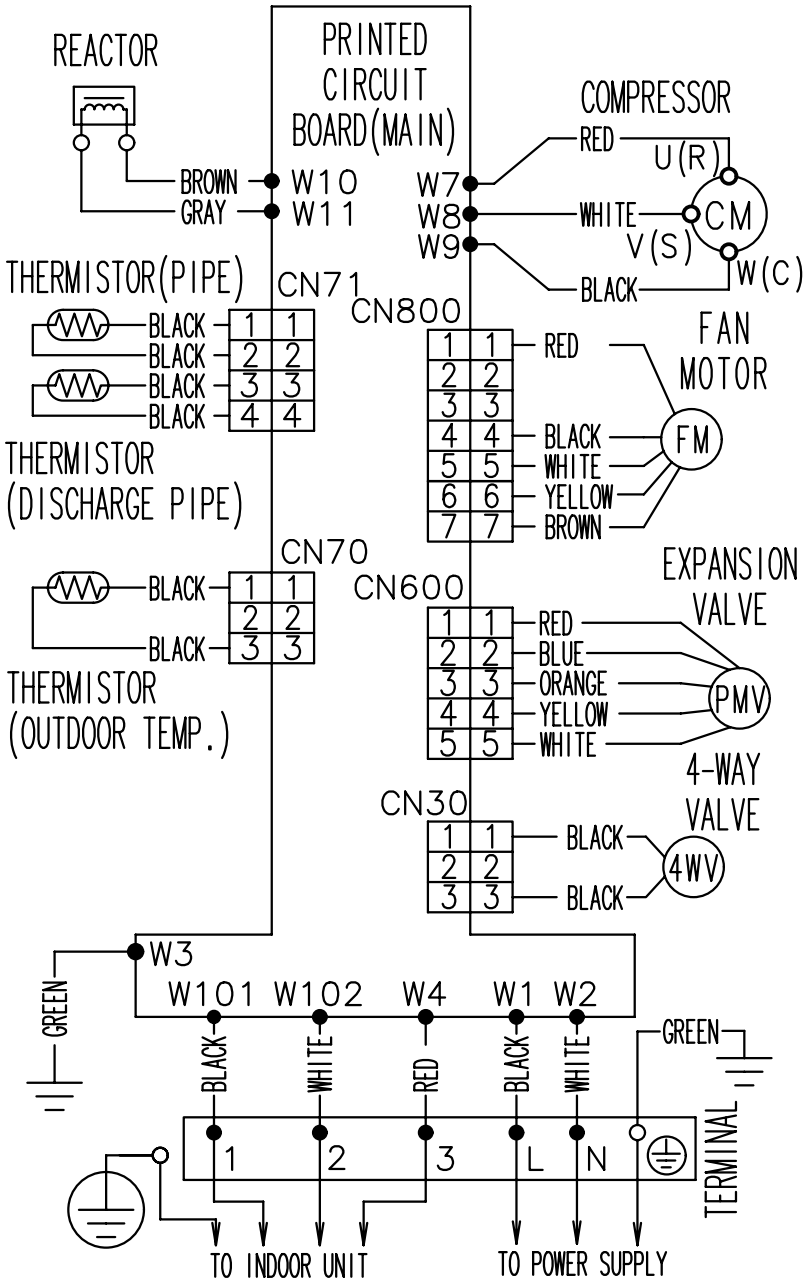
4. WIRING DIAGRAMS

■MODELS:AO*G07LMCA, AO*G09LMCA



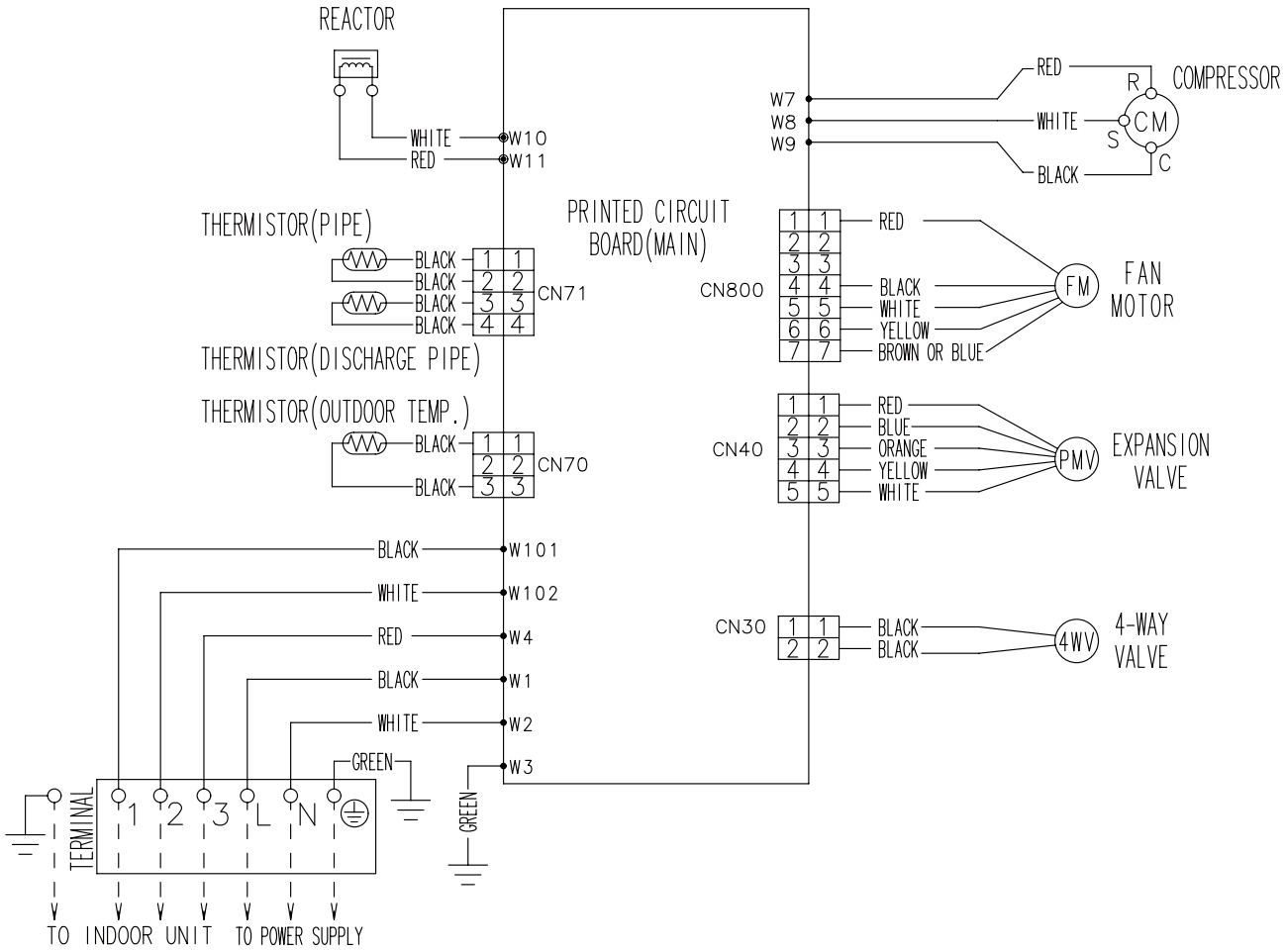
OUTDOOR UNIT
AO*G07-14LMCA

■ MODEL: AO*G12LMCA



OUTDOOR UNIT
AO*G07-14LMCA

■ MODEL: AO*G14LMCA



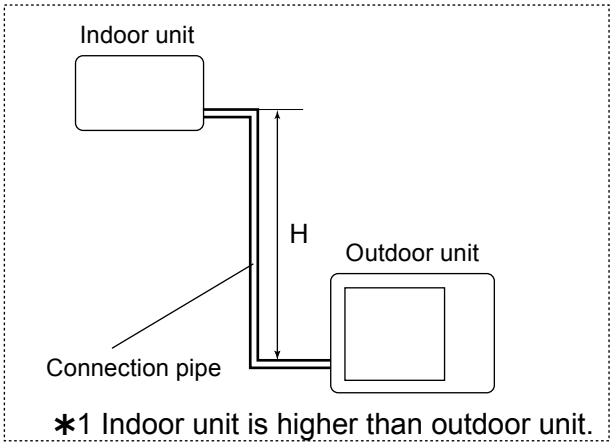
5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

■MODEL: AO∗G07LMCA, AO∗G09LMCA

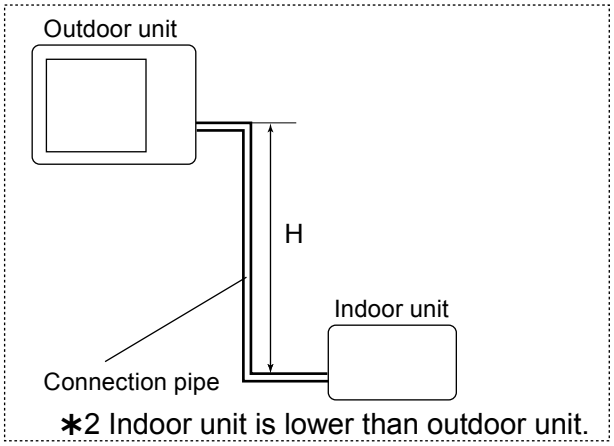
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is higher than outdoor unit.	15	-	-	-	0.872	0.910
		10	-	-	0.961	0.886	0.925
		7.5	-	0.979	0.965	0.890	0.929
		5	0.992	0.983	0.969	0.893	0.933
		0	1.000	0.991	0.976	0.901	0.940
	∗2 Indoor unit is lower than outdoor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



∗2 Indoor unit is lower than outdoor unit.

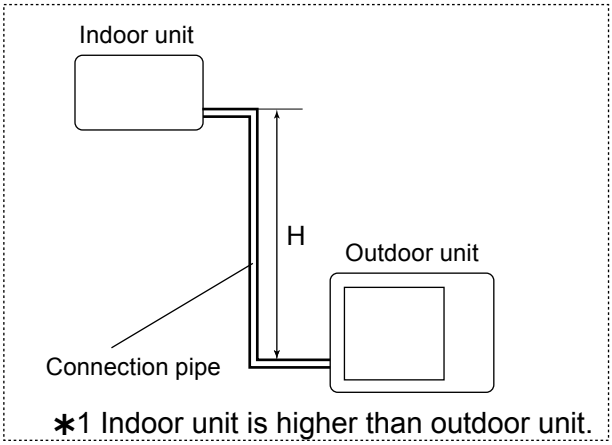
OUTDOOR UNIT
AO∗G07-14LMCA

■ MODEL: AO∗G12LMCA

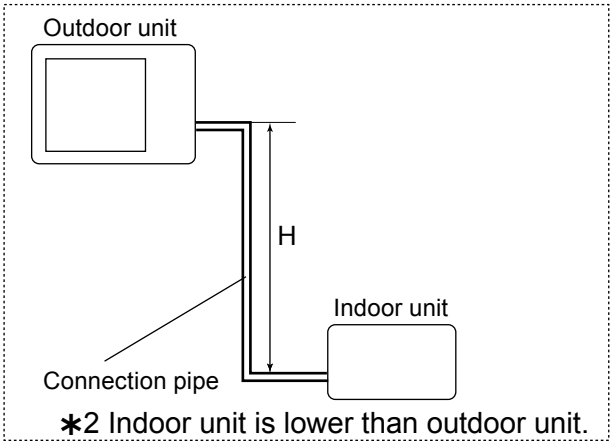
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is higher than outdoor unit.	15	-	-	-	0.858	0.868
		10	-	-	0.929	0.872	0.882
		7.5	-	0.960	0.933	0.876	0.885
		5	0.992	0.964	0.937	0.879	0.889
		0	1.000	0.972	0.944	0.887	0.896
	∗2 Indoor unit is lower than outdoor 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 higher than outdoor unit.	15	-	-	-	0.896	0.879
		10	-	-	0.968	0.890	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 lower 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 higher than outdoor unit.



∗2 Indoor unit is lower than outdoor unit.

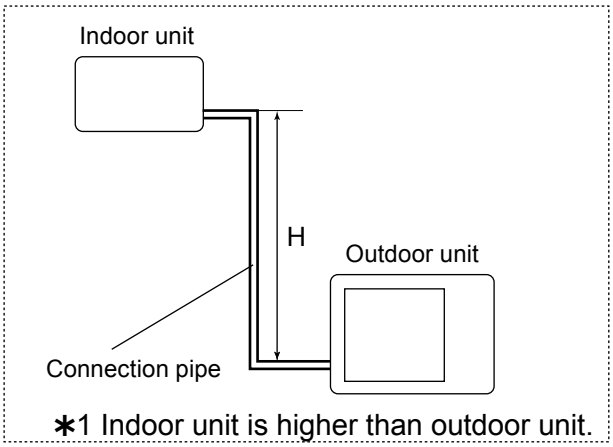
OUTDOOR UNIT
AO∗G07-14LMCA

■ MODEL: AO∗G14LMCA

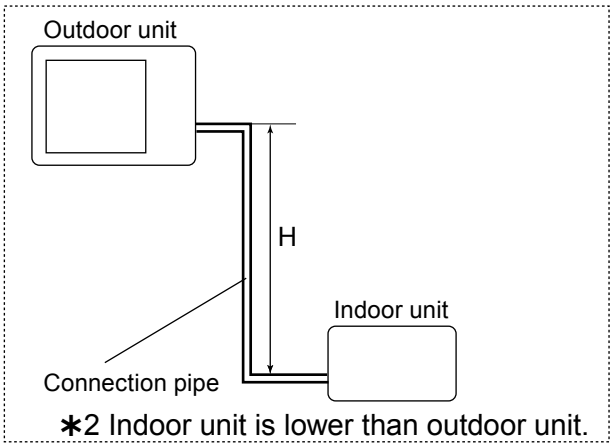
COOLING			Pipe length (m)				
			5	7.5	10	15	20
Height difference H (m)	∗1 Indoor unit is higher than outdoor unit.	15	-	-	-	0.893	0.909
		10	-	-	0.955	0.908	0.924
		7.5	-	0.975	0.959	0.912	0.928
		5	0.992	0.979	0.963	0.916	0.931
		0	1.000	0.987	0.970	0.923	0.939
	∗2 Indoor unit is lower than outdoor 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 higher 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 lower than outdoor unit.	-5	0.995	1.008	0.999	0.951	0.938
		-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 higher than outdoor unit.



∗2 Indoor unit is lower than outdoor unit.

OUTDOOR UNIT
AO∗G07-14LMCA

6. ADDITIONAL CHARGE CALCULATION

■MODELS:AO∗G07LMCA, AO∗G09LMCA

Refrigerant type		R410A
Refrigerant amount	g	700

● Refrigerant charge

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

■ MODEL: AO∗G12LMCA

Refrigerant type		R410A
Refrigerant amount	g	850

● Refrigerant charge

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

■ MODEL: AO∗G14LMCA

Refrigerant type		R410A
Refrigerant amount	g	1050

● Refrigerant charge

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

OUTDOOR UNIT
AO∗G07-14LMCA

7. AIRFLOW

■MODELS : AO∗G07LMCA, AO∗G09LMCA

● Cooling

Number of rotations (r.p.m.)	Airflow	
730	m^3/h	1670
	l/s	464
	CFM	984

● Heating

Number of rotations (r.p.m.)	Airflow	
650	m^3/h	1470
	l/s	408
	CFM	866

■ MODEL: AO∗G12LMCA

● Cooling

Number of rotations (r.p.m.)	Airflow	
860	m^3/h	1830
	l/s	508
	CFM	1078

● Heating

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

OUTDOOR UNIT
AO∗G07-14LMCA

■ MODEL: AO∗G14LMCA

● Cooling

Number of rotations (r.p.m.)	Airflow	
850	m^3/h	1940
	l/s	539
	CFM	1141

● Heating

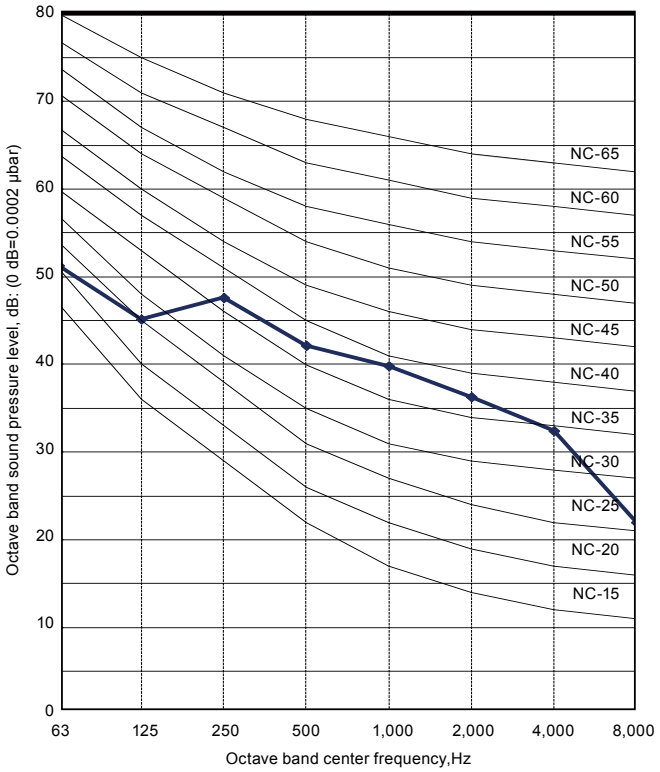
Number of rotations (r.p.m.)	Airflow	
750	m^3/h	1700
	l/s	472
	CFM	1000

8. OPERATION NOISE (SOUND PRESSURE)

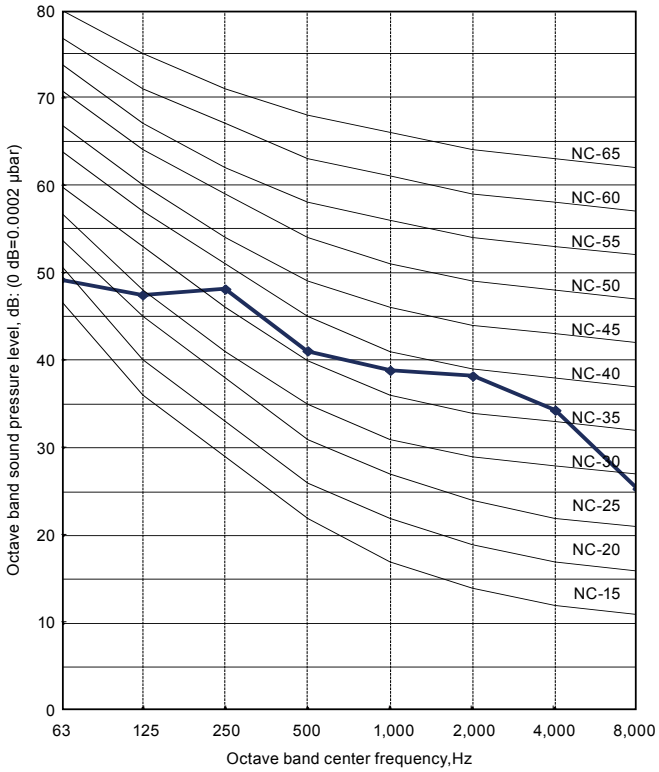
8-1. NOISE LEVEL CURVE

■ MODEL: AO∗G07LMCA

● Cooling

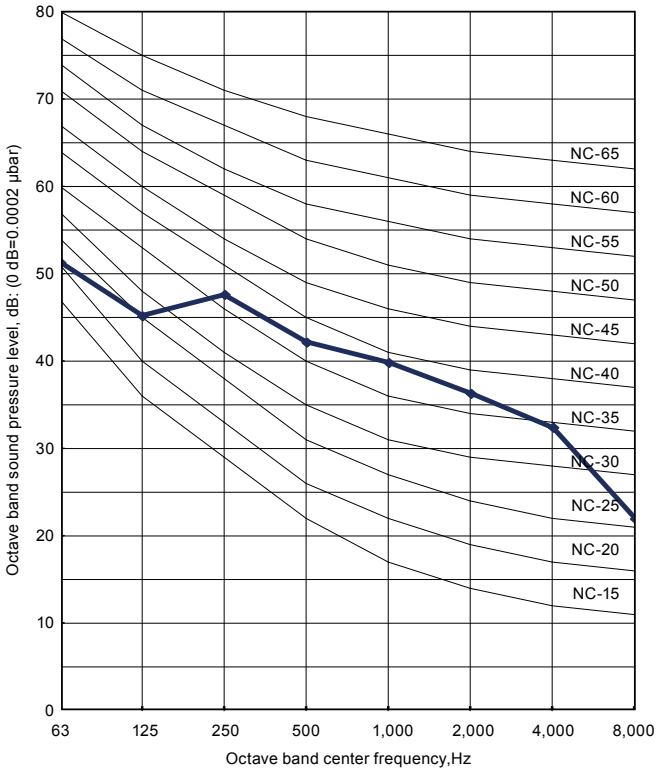


● Heating

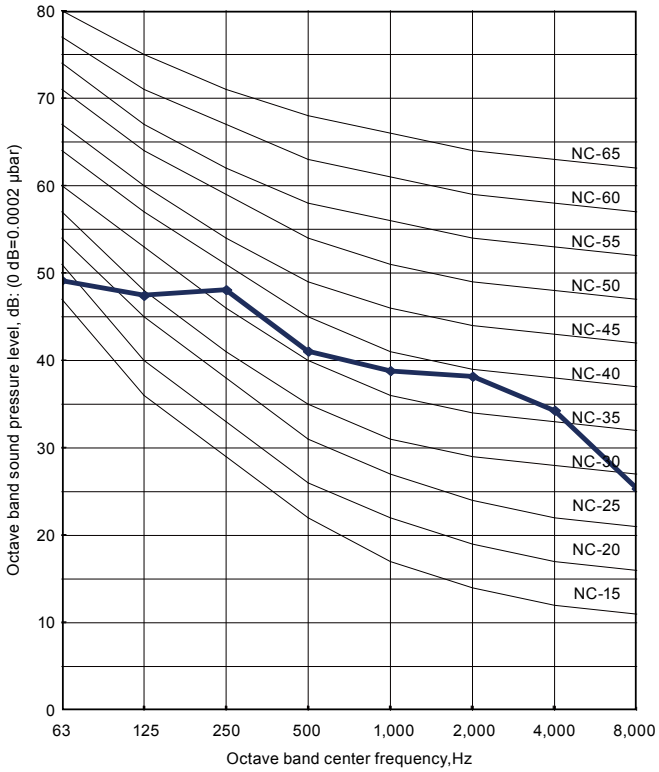


■ MODEL: AO∗G09LMCA

● Cooling



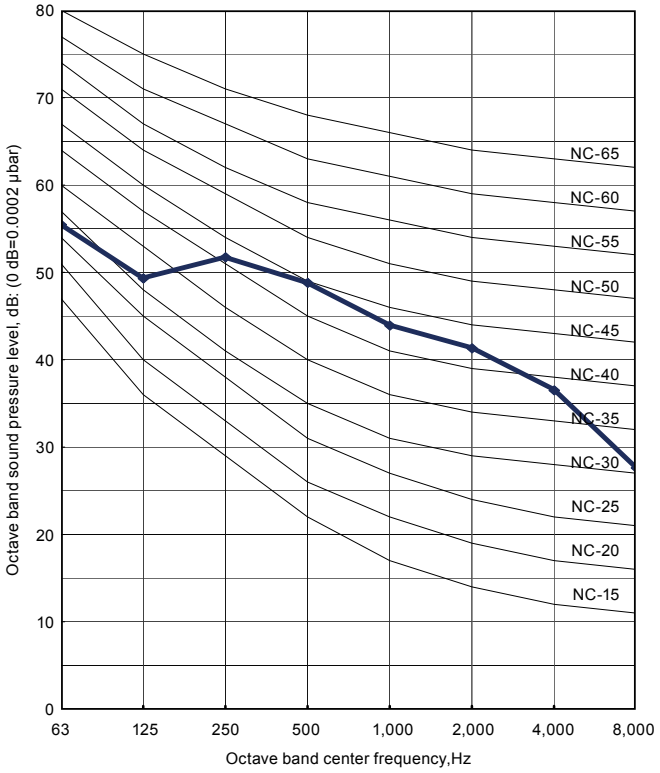
● Heating



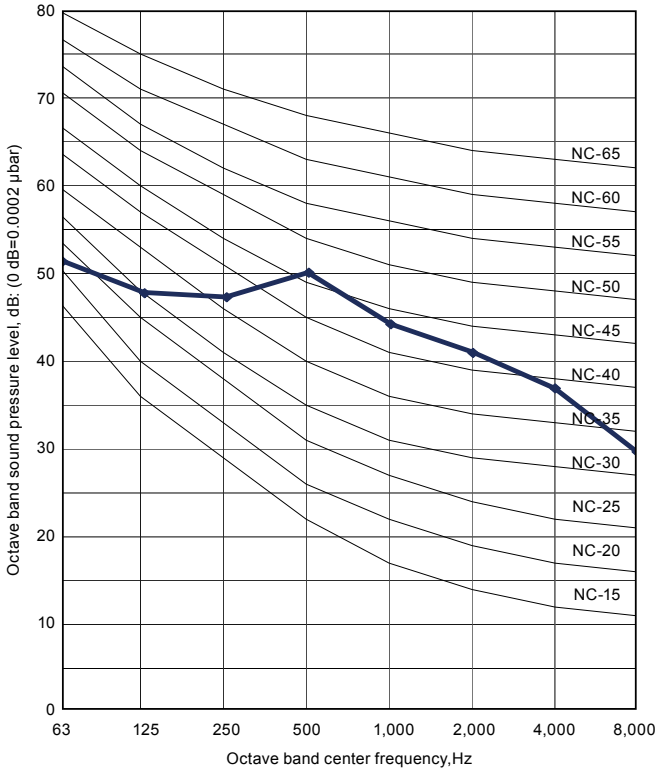
OUTDOOR UNIT
AO∗G07-14LMCA

■ MODEL: AO∗G12LMCA

● Cooling

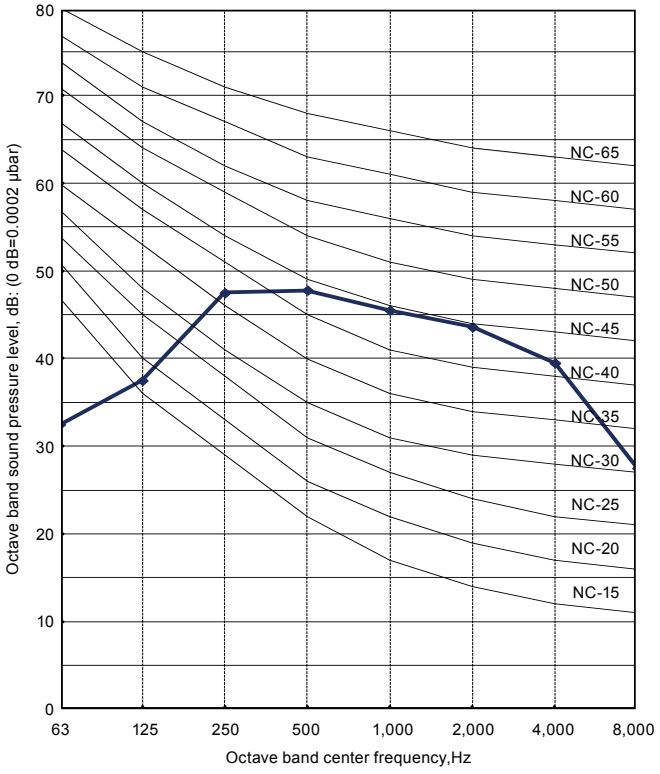


● Heating

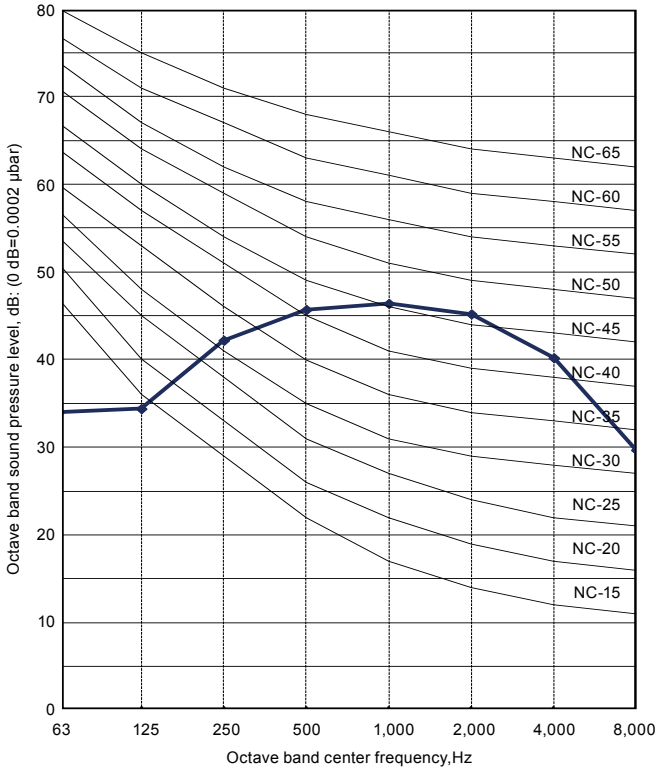


■ MODEL: AO∗G14LMCA

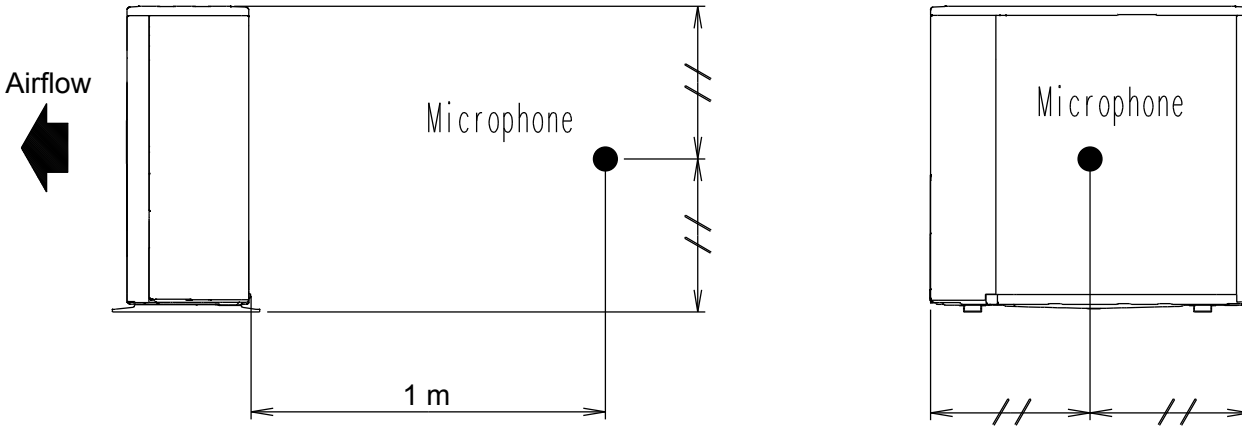
● Cooling



● Heating



8-2. SOUND LEVEL CHECK POINT



OUTDOOR UNIT
AO∗G07-14LMCA

9. ELECTRICAL CHARACTERISTICS

Model name			AO∗G07LMCA	AO∗G09LMCA	AO∗G12LMCA	AO∗G14LMCA
Power supply	Voltage	V	230 ~			
	Frequency	Hz	50			
Max. operating current *1		A	7.5	7.5	9.0	10.5
Starting current		A	3.3	3.5	4.8	6.3
Wiring spec. *2	Main fuse (Circuit breaker) current	A	15			
	Power cable	mm^2	1.5			

*1: The maximum current is the total current of indoor unit and outdoor unit.

*2: Wiring spec.:
Selected sample
(Selected based on Japan Electrotechnical Standards and Codes Committee E0005)

OUTDOOR UNIT
AO∗G07-14LMCA

10. SAFETY DEVICES

	Protection form	Model	
		AO∗G07LMCA AO∗G09LMCA AO∗G12LMCA	AO∗G14LMCA
Circuit protection	Current fuse (Main printed circuit board)	250V 20A	
		250V 3.15A	250V 5A
Fan motor protection	Terminal protection program	OFF: 100 ± 15 °C ON: 95 ± 10 °C	OFF: 150 ± 15 °C ON: 120 ± 15 °C
Compressor protection	Terminal protection program (Discharge temp.)	OFF:110°C ON: After 7 minutes	

OUTDOOR UNIT
AO∗G07-14LMCA