

AIR CONDITIONER

Wall Mounted type

DESIGN & TECHNICAL MANUAL

INDOOR



AS*G07LLCC
AS*G09LLCC
AS*G12LLCC

OUTDOOR



AO*G07LLCC
AO*G09LLCC
AO*G12LLCC

FUJITSU GENERAL LIMITED

1.INDOOR UNIT

WALL MOUNTED TYPE :

AS*G07LLCC

AS*G09LLCC

AS*G12LLCC

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1. FEATURES

■ MODEL

AS*G07LLCC / AO*G07LLCC
AS*G09LLCC / AO*G09LLCC
AS*G12LLCC / AO*G12LLCC



■ FEATURES

● Energy efficiency class

	MODEL		
	AS*G07LLCC	AS*G09LLCC	AS*G12LLCC
Cooling	A++	A++	A++
Heating(Average)	A+	A+	A

● Super quiet operation

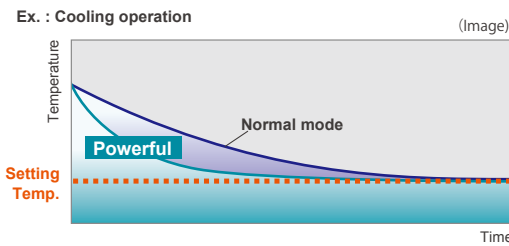
Top class low noise operation by new airflow construction.
Our quiet operation makes the more comfortable environment
in a bed room and a study room, etc.

Fan speed
Quiet

Noise level
22dB(A)

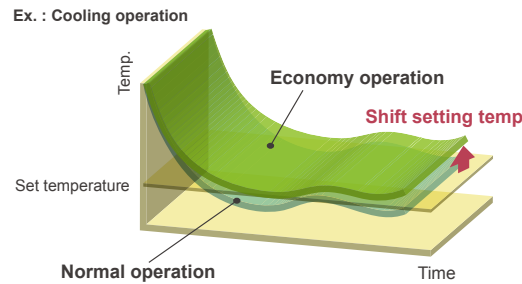
● Powerful operation

Reach the setting temperature quickly.



● Economy operation

Setting temp. is shifted by 1°C automatically.



● Easy maintenance

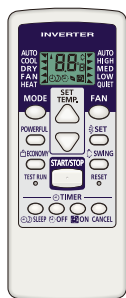
Removable & washable panel



● Corresponds to maximum 20m long piping

2. WIRELESS REMOTE CONTROLLER

■ FEATURES



- * 3 mode timer setup available (ON/OFF/SLEEP).
- * Easy operation.
- * Easy to change custom code (max. 4 custom codes) by button operation.

● Simple function setting

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

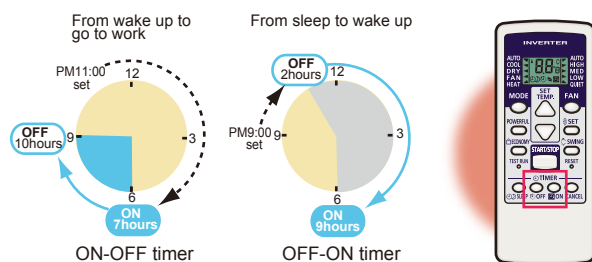
● Built-in timers

Select from three different timer programs (ON/OFF/SLEEP).

● ON-OFF Programmable timer

You can set an integrated ON-OFF or OFF-ON timer suitable for your life style.
(Setting time: 0.5, 1, 1.5, 2, 2.5, -----9.5, 10, 11, 12 hours)

Example of how to set the program timer.

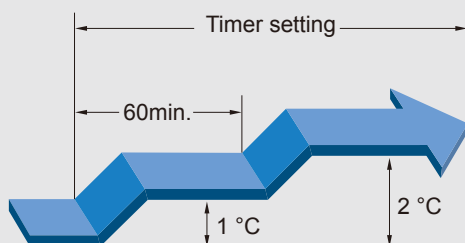


● Sleep timer

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

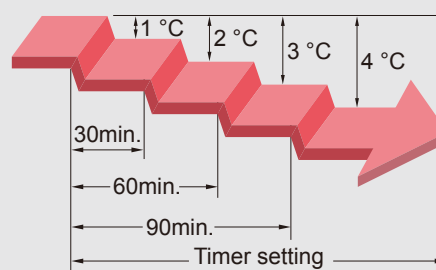
Cooling operation/dry operation

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.

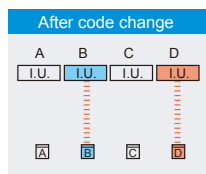
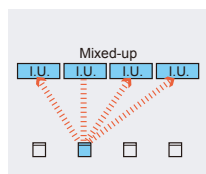


Heating operation

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.



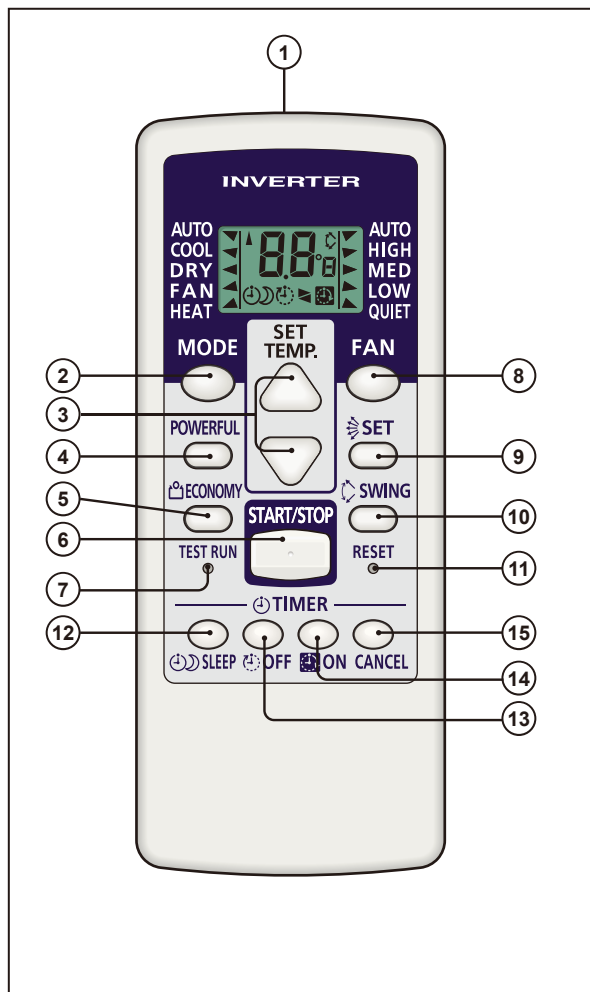
● Switching remote controller custom code



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

*I.U.=Indoor unit

FUNCTIONS



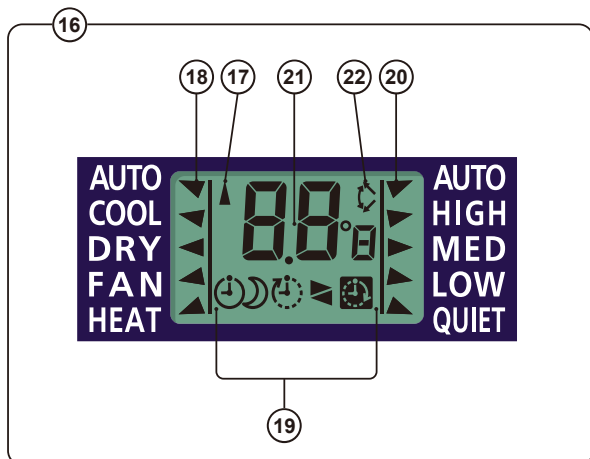
- 1 **Signal transmitter**
- 2 **MODE button**
- 3 **SET TEMP. button (▲ / ▼)**
- 4 **POWERFUL button**
- 5 **ECONOMY button**
- 6 **START/STOP button**
- 7 **TEST RUN button**
 - This button is used when installing the air conditioner, and should not be used under normal conditions, as it will cause the indoor unit's thermostat function to operate incorrectly.
 - If this button is pressed during normal operation, the indoor 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.

- 8 **FAN button**
- 9 **SET button**
- 10 **SWING button**
- 11 **RESET button**

TIMER

- 12 **SLEEP TIMER button**
- 13 **OFF TIMER button**
- 14 **ON TIMER button**
- 15 **TIMER CANCEL button**

Display panel



- 16 **Remote controller display**
- 17 **Transmit indicator**
- 18 **Operation mode indicator**
- 19 **Timer mode indicator**
 - SLEEP TIMER mark:
 - OFF TIMER mark:
 - OFF-ON TIMER mark:
 - ON-OFF TIMER mark:
 - ON TIMER Mark:
- 20 **Fan speed indicator**
- 21 **Temperature and time indicator**
 - It displays the temperature setting.
 - However, when making the Timer setting, it will display the Timer time.
 - (The temperature setting will reappear after finishing the timer setting)
- 22 **Swing indicator**

SPECIFICATION

SIZE	(H x W x D mm)	139×56×18
WEIGHT	(g)	70

3. SPECIFICATIONS

Type				WALL MOUNTED				
				INVERTER HEAT PUMP				
Model name				AS*07LLCC	AS*G09LLCC	AS*G12LLCC		
Power source				230V~ 50Hz				
Available voltage range				198 - 264V~ 50Hz				
Capacity	Cooling	Rated	kW	2.00	2.50	3.40		
			Btu/h	6,800	8,500	11,600		
		Min-Max	kW	0.9 - 2.8	0.9 - 3.0	0.9 - 3.8		
			Btu/h	3,100 - 9,500	3,100 - 10,200	3,100 -13,000		
	Heating	Rated	kW	2.70	3.0	4.00		
			Btu/h	9,200	10,200	13,600		
		Min-Max	kW	0.9 - 3.6	0.9 - 3.8	0.9 - 5.0		
			Btu/h	3,100 - 12,200	3,100 - 13,000	3,100 - 17,000		
Input power	Cooling	Rated	kW	0.470	0.730	1.080		
		Min-Max		0.25 - 1.29	0.25 - 1.29	0.25 - 1.40		
	Heating	Rated		0.620	0.740	1.130		
		Min-Max		0.25 - 1.63	0.25 - 1.63	0.25 - 1.98		
Current	Cooling	Rated	A	2.6	3.5	5.2		
	Heating			3.0	3.5	5.4		
EER		Cooling	kW/kW	4.26	3.42	3.15		
COP		Heating		4.35	4.05	3.54		
Sensible capacity		Cooling	kW	1.30	1.60	2.20		
Power factor		Cooling	%	79	91	91		
		Heating		90	92	92		
Moisture removal			l/h (pints/h)	1.0 (1.8)	1.3 (2.3)	1.8 (3.2)		
Maximum operating current *		Cooling	A	6.0	6.0	6.5		
		Heating		7.5	7.5	9.0		
Fan	Air flow rate	Cooling	High	m³/h	720			
			Med		600			
			Low		420			
			Quiet		325			
		Heating	High		740			
			Med		600			
			Low		450			
			Quiet		325			
		Type × Q'ty			Cross flow fan × 1			
		Motor output			W	30		
Sound pressure level		Cooling	High	dB (A)	43			
			Med		38			
			Low		33			
			Quiet		22			
		Heating	High		43			
			Med		38			
			Low		33			
			Quiet		22			
Heat exchanger type		Dimensions (H × W × D)		mm	256 × 630 × 20			
		Fin pitch			1.1			
		Rows Stages			2 × 16			
		Pipe type			Copper			
		Fin type			Aluminium			
Enclosure		Material		Polystyrene				
		Colour		White (Approximate colour of MUNSELL N 9.25 /)				
Dimensions (H × W × D)	Net		mm	262 × 820 × 206				
	Gross			263 × 870 × 328				
Weight	Net		kg	7.0				
	Gross			9.0				
Connection pipe	Size	Liquid	mm	Ø 6.35 (Ø 1/4 in.)				
		Gas		Ø 9.52 (Ø 3/8 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.

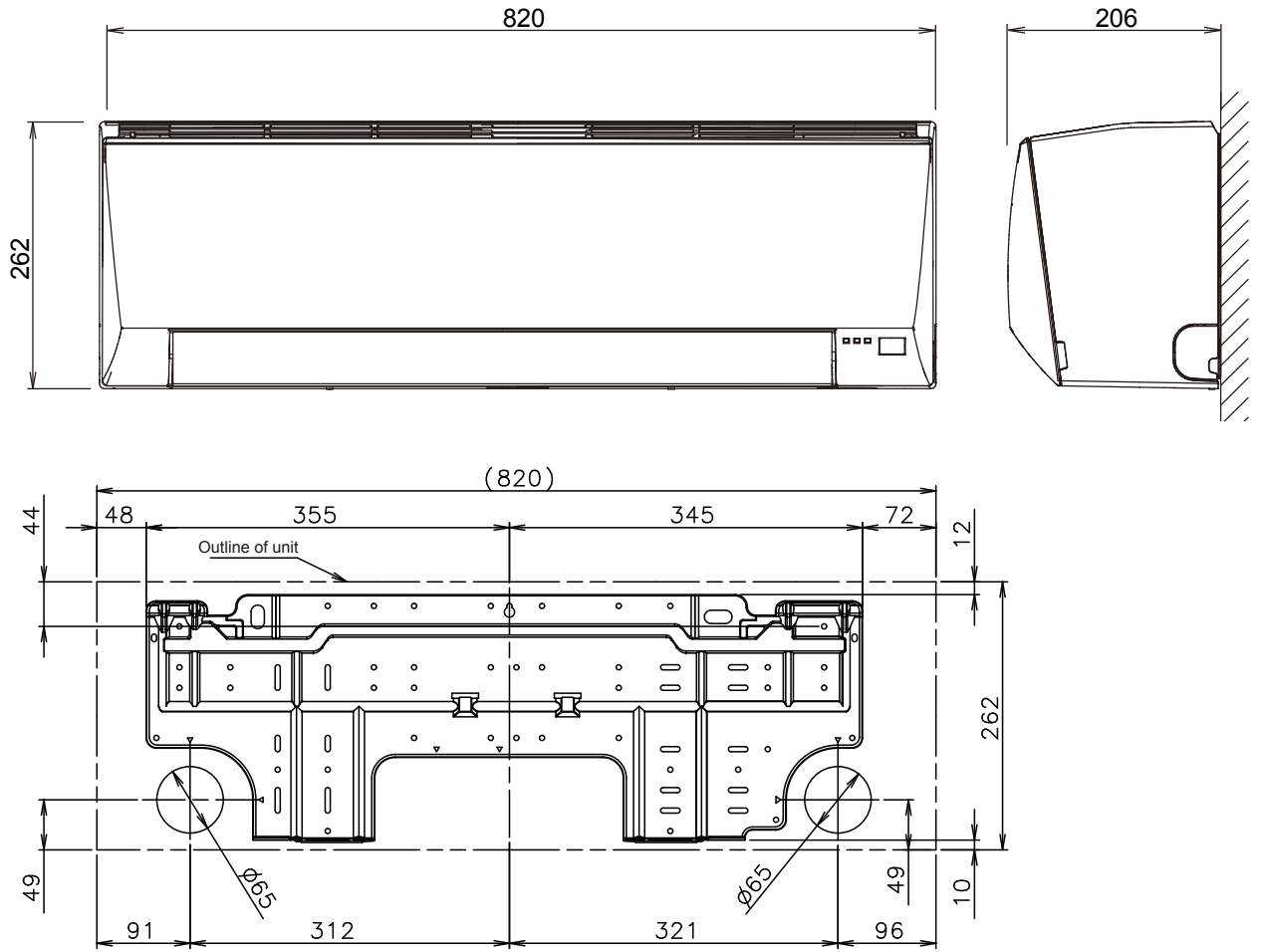
*: The maximum current is the maximum value when operated within the operation range.

Model name			AS*07LLCC	AS*G09LLCC	AS*G12LLCC
Energy efficiency class	Cooling		A++	A++	A++
	Heating (Average)		A+	A+	A
Pdesign	Cooling	kW	2.0 (35°C)	2.5 (35°C)	3.4 (35°C)
	Heating (Average)		2.2 (-10°C)	2.3 (-10°C)	3.2 (-10°C)
SEER	Cooling	kWh/kWh	6.70	6.90	6.60
SCOP	Heating (Average)		4.00	4.00	3.80
Annual energy consumption	QCE	kWh/a	104	127	180
	QHE (Average)		770	805	1179
Sound power level	Cooling	High	dB (A)	59	59
	Heating			60	60

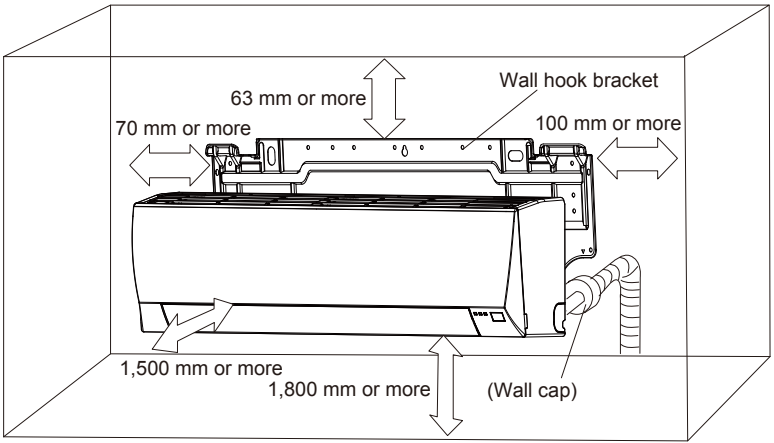
4. DIMENSIONS

■ MODEL: AS*G07LLCC, AS*G09LLCC, AS*G12LLCC

(Unit : mm)



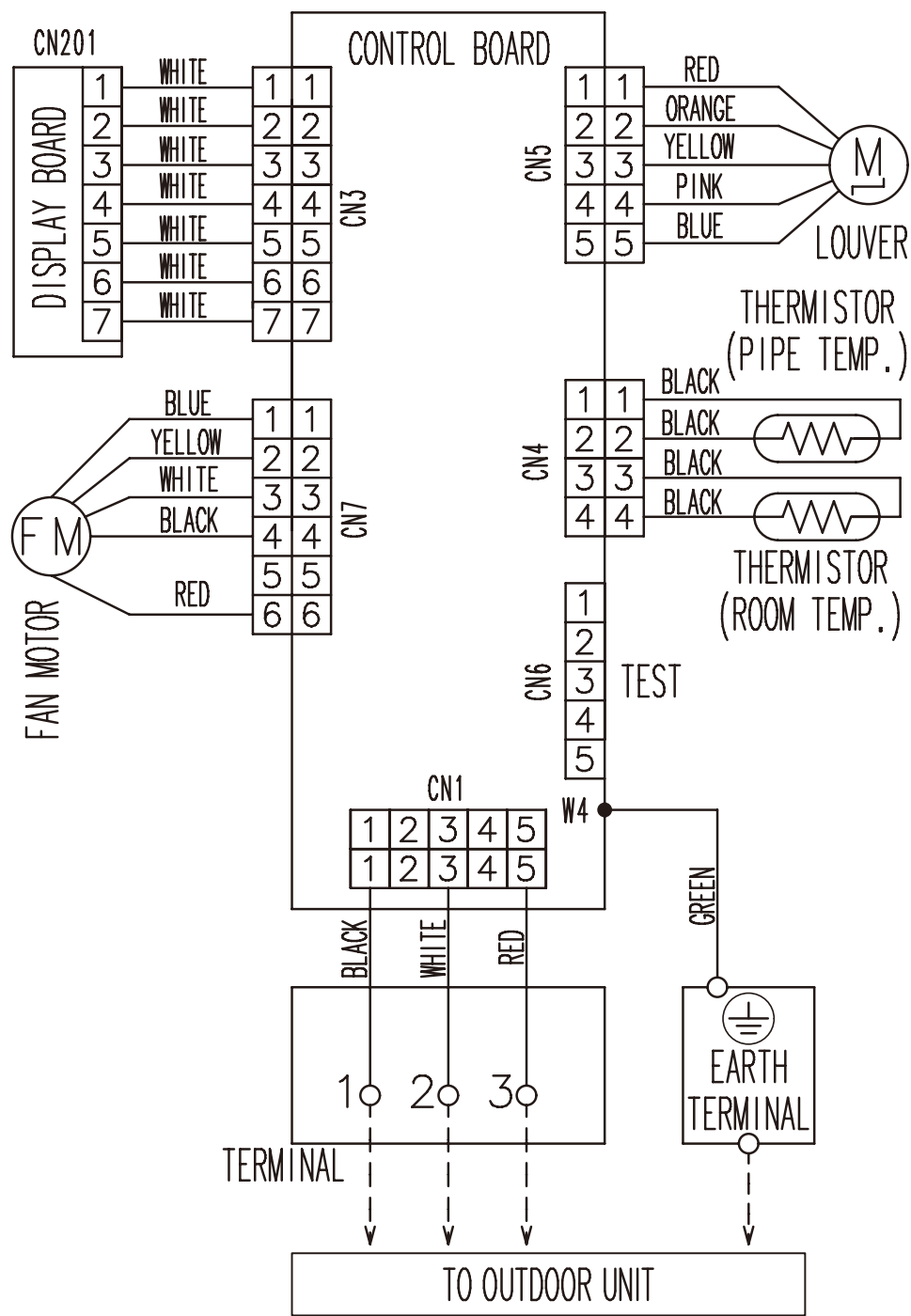
■ INSTALLATION PLACE



		AS*G07LLCC	AS*G09LLCC	AS*G12LLCC
Refrigerant pipe flare connection	Liquid	ϕ 6.35 mm		
	Gas	ϕ 9.52 mm		
Drain hose connection	Drain hose	ϕ 13.8 mm (I.D.), ϕ 15.8 to 16.7 mm (O.D.) Drain hose : L = 600 mm		

5. WIRING DIAGRAMS

■ MODEL: AS * G07LLCC, AS * G09LLCC, AS * G12LLCC



6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL: AS*G07LLCC

AFR	12.0
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		Indoor temperature																							
		18			21			23			25			27			29			32					
		°CDB			°CWB			12			15			16			18			19			21		
Outdoor temperature	°CDB	TC	SHC	IP	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	0.34	2.16	1.45	0.34	2.30	1.45	0.34	2.37	1.57	0.34	2.51	1.56	0.35	2.65	1.66	0.35	2.65	1.66	0.35
	25	1.78	1.26	0.37	1.98	1.26	0.38	2.05	1.37	0.38	2.18	1.38	0.38	2.25	1.49	0.38	2.39	1.48	0.39	2.52	1.58	0.39	2.52	1.58	0.39
	30	1.68	1.19	0.41	1.87	1.19	0.42	1.94	1.30	0.42	2.06	1.30	0.42	2.13	1.41	0.43	2.25	1.40	0.43	2.38	1.49	0.44	2.38	1.49	0.44
	35	1.58	1.12	0.45	1.76	1.12	0.46	1.82	1.22	0.46	1.94	1.23	0.47	2.00	1.32	0.47	2.12	1.32	0.47	2.24	1.40	0.48	2.24	1.40	0.48
	40	1.41	1.00	0.45	1.57	1.00	0.46	1.62	1.09	0.46	1.73	1.09	0.47	1.78	1.18	0.47	1.89	1.17	0.47	2.00	1.25	0.48	2.00	1.25	0.48
	43	1.31	0.92	0.45	1.45	0.93	0.46	1.50	1.01	0.46	1.60	1.01	0.47	1.65	1.09	0.47	1.75	1.09	0.47	1.85	1.16	0.48	1.85	1.16	0.48

■ MODEL: AS*G09LLCC

AFR	12.0
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		Indoor temperature																							
		18			21			23			25			27			29			32					
		°CDB			°CWB			12			15			16			18			19			21		
Outdoor temperature	°CDB	TC	SHC	IP	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	0.51	2.61	1.63	0.52	2.70	1.77	0.52	2.87	1.78	0.53	2.96	1.92	0.53	3.14	1.91	0.54	3.32	2.04	0.54	3.32	2.04	0.54
	25	2.22	1.54	0.58	2.48	1.55	0.58	2.56	1.68	0.59	2.73	1.69	0.59	2.81	1.82	0.60	2.98	1.82	0.60	3.15	1.93	0.61	3.15	1.93	0.61
	30	2.10	1.45	0.64	2.34	1.46	0.65	2.42	1.59	0.65	2.58	1.60	0.66	2.66	1.72	0.66	2.82	1.72	0.67	2.98	1.83	0.68	2.98	1.83	0.68
	35	1.98	1.37	0.70	2.20	1.38	0.72	2.28	1.50	0.72	2.43	1.50	0.73	2.50	1.62	0.73	2.65	1.61	0.74	2.80	1.72	0.74	2.80	1.72	0.74
	40	1.76	1.22	0.70	1.96	1.23	0.71	2.03	1.33	0.72	2.16	1.34	0.73	2.23	1.44	0.73	2.36	1.44	0.74	2.50	1.53	0.74	2.50	1.53	0.74
	43	1.63	1.13	0.70	1.82	1.14	0.71	1.88	1.24	0.72	2.00	1.24	0.72	2.07	1.34	0.73	2.19	1.33	0.73	2.31	1.42	0.74	2.31	1.42	0.74

■ MODEL: AS*G12LLCC

AFR	12.0
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		Indoor temperature																							
		18			21			23			25			27			29			32					
		°CDB			°CWB			12			15			16			18			19			21		
Outdoor temperature	°CDB	TC	SHC	IP	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	0.76	3.55	2.19	0.77	3.67	2.39	0.77	3.91	2.39	0.78	4.03	2.59	0.79	4.27	2.57	0.79	4.51	2.74	0.80	4.51	2.74	0.80
	25	3.02	2.07	0.85	3.37	2.08	0.87	3.48	2.27	0.87	3.71	2.27	0.88	3.83	2.45	0.88	4.06	2.44	0.89	4.28	2.60	0.90	4.28	2.60	0.90
	30	2.86	1.96	0.95	3.18	1.97	0.96	3.29	2.14	0.97	3.51	2.15	0.98	3.62	2.32	0.98	3.83	2.31	0.99	4.05	2.46	1.00	4.05	2.46	1.00
	35	2.69	1.84	1.04	2.99	1.85	1.06	3.09	2.01	1.06	3.30	2.02	1.07	3.40	2.18	1.08	3.60	2.17	1.09	3.81	2.31	1.10	3.81	2.31	1.10
	40	2.39	1.64	1.04	2.67	1.65	1.06	2.76	1.79	1.06	2.94	1.80	1.07	3.03	1.94	1.08	3.21	1.94	1.09	3.39	2.06	1.10	3.39	2.06	1.10
	43	2.22	1.52	1.04	2.47	1.53	1.05	2.56	1.66	1.06	2.73	1.67	1.07	2.81	1.80	1.08	2.98	1.80	1.09	3.15	1.91	1.10	3.15	1.91	1.10

AFR: Airflow Rate (m³/min.)
TC: Total Capacity (kW)
SHC: Sensible Heat Capacity (kW)
IP: Input Power (kW)

6-2. HEATING CAPACITY

■ MODEL: AS*G07LLCC

AFR	12.3
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			Indoor temperature									
Outdoor temperature	°CDB	°CDB °CWB	16		18		20		22		24	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-16	2.42	1.22	2.36	1.24	2.30	1.27	2.24	1.30	2.19	1.32
	-10	-11	2.51	1.17	2.45	1.20	2.39	1.22	2.33	1.24	2.27	1.27
	-5	-7	2.75	1.15	2.68	1.18	2.61	1.20	2.55	1.23	2.48	1.25
	0	-2	3.18	1.18	3.10	1.21	3.03	1.23	2.95	1.26	2.87	1.28
	5	3	3.61	1.21	3.52	1.23	3.44	1.26	3.35	1.28	3.26	1.31
	7	6	3.78	1.22	3.69	1.25	3.60	1.27	3.51	1.30	3.42	1.32
	10	8	3.80	1.18	3.71	1.21	3.62	1.23	3.53	1.26	3.44	1.28
	15	10	3.98	1.19	3.89	1.22	3.79	1.24	3.70	1.27	3.60	1.29

■ MODEL: AS*G09LLCC

AFR	12.3
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			Indoor temperature									
Outdoor temperature	°CDB	°CDB °CWB	16		18		20		22		24	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-16	2.63	1.23	2.56	1.25	2.50	1.28	2.44	1.31	2.38	1.33
	-10	-11	2.72	1.18	2.66	1.21	2.59	1.23	2.53	1.25	2.46	1.28
	-5	-7	2.96	1.16	2.88	1.19	2.81	1.21	2.74	1.24	2.67	1.26
	0	-2	3.39	1.20	3.31	1.22	3.23	1.25	3.14	1.27	3.06	1.30
	5	3	3.82	1.23	3.73	1.25	3.64	1.28	3.54	1.30	3.45	1.33
	7	6	3.99	1.24	3.90	1.27	3.80	1.29	3.71	1.32	3.61	1.34
	10	8	3.94	1.18	3.84	1.21	3.75	1.23	3.66	1.26	3.56	1.28
	15	10	4.11	1.19	4.01	1.22	3.91	1.24	3.81	1.27	3.71	1.29

■ MODEL: AS*G12LLCC

AFR	12.3
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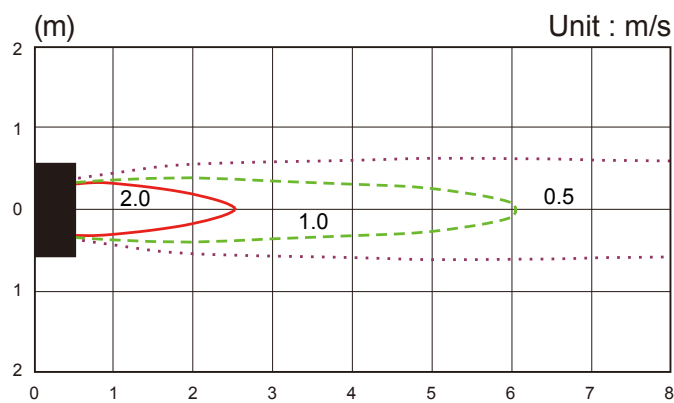
			Indoor temperature									
Outdoor temperature	°CDB	°CDB °CWB	16		18		20		22		24	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-16	3.17	1.39	3.10	1.42	3.02	1.45	2.94	1.48	2.87	1.51
	-10	-11	3.35	1.44	3.27	1.47	3.20	1.50	3.12	1.53	3.04	1.56
	-5	-7	3.72	1.48	3.63	1.51	3.54	1.54	3.45	1.57	3.37	1.60
	0	-2	4.36	1.51	4.25	1.54	4.15	1.57	4.05	1.60	3.94	1.63
	5	3	5.00	1.53	4.88	1.57	4.76	1.60	4.64	1.63	4.52	1.66
	7	6	5.25	1.55	5.13	1.58	5.00	1.61	4.88	1.64	4.75	1.67
	10	8	4.90	1.38	4.78	1.41	4.66	1.44	4.55	1.47	4.43	1.50
	15	10	5.15	1.39	5.02	1.42	4.90	1.45	4.78	1.48	4.66	1.51

AFR: Airflow Rate (m³/min.)
TC: Total Capacity (kW)
IP: Input Power (kW)

7. FAN PERFORMANCE AND CAPACITY

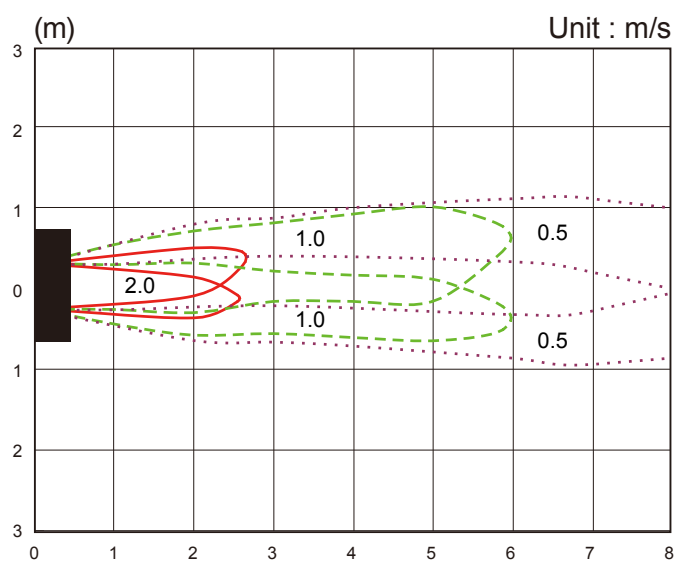
7-1. AIR VELOCITY DISTRIBUTION

■ MODEL: AS*G07LLCC, AS*G09LLCC, AS*G12LLCC

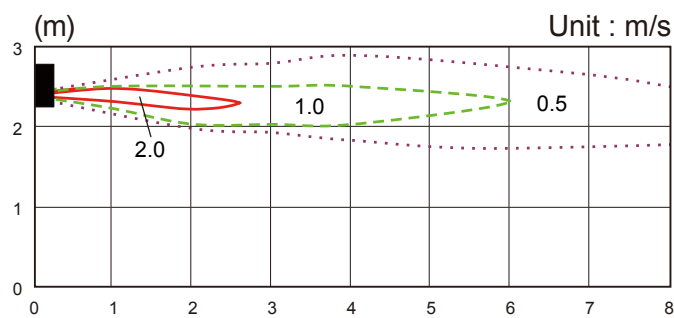


TOP VIEW
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center

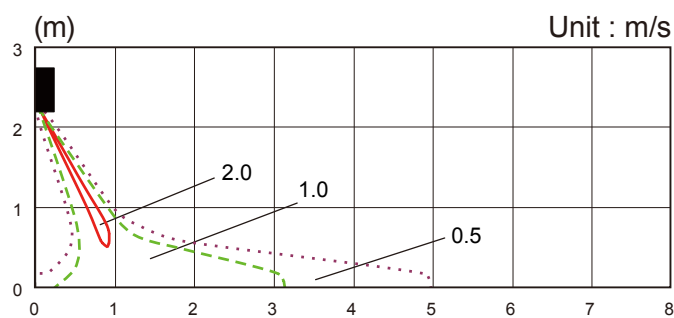
Conditions:
Fan speed: HIGH
Operation mode: FAN



TOP VIEW
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Right & Left



SIDE VIEW
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



SIDE VIEW
Vertical airflow direction louver: Down
Horizontal airflow direction louver: Center

7-2. AIRFLOW

■ **MODEL: AS*G07LLCC, AS*G09LLCC, AS*G12LLCC**

● **Cooling**

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1320	m³/h	720
		l/s	200
		CFM	424
MED	1120	m³/h	600
		l/s	167
		CFM	353
LOW	840	m³/h	420
		l/s	117
		CFM	247
QUIET	700	m³/h	325
		l/s	90
		CFM	191

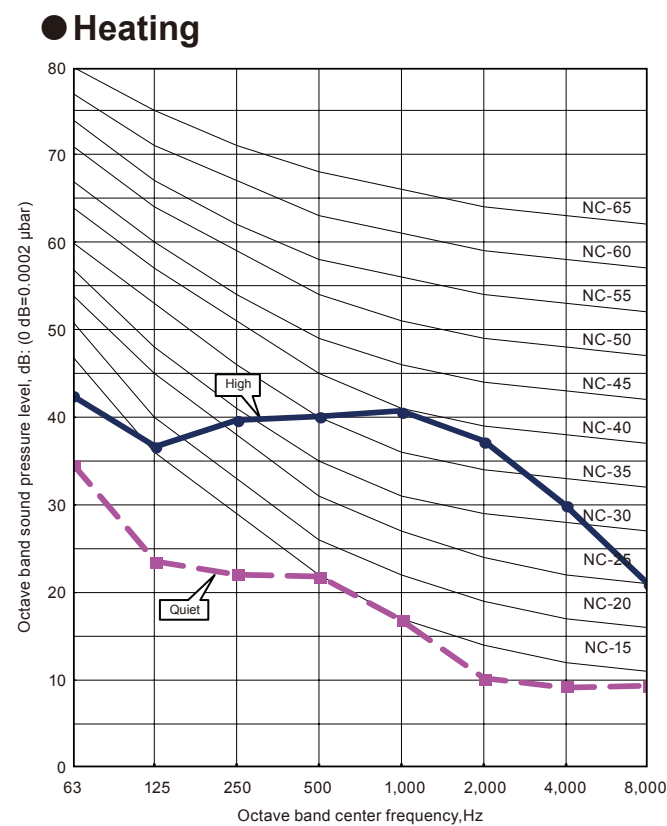
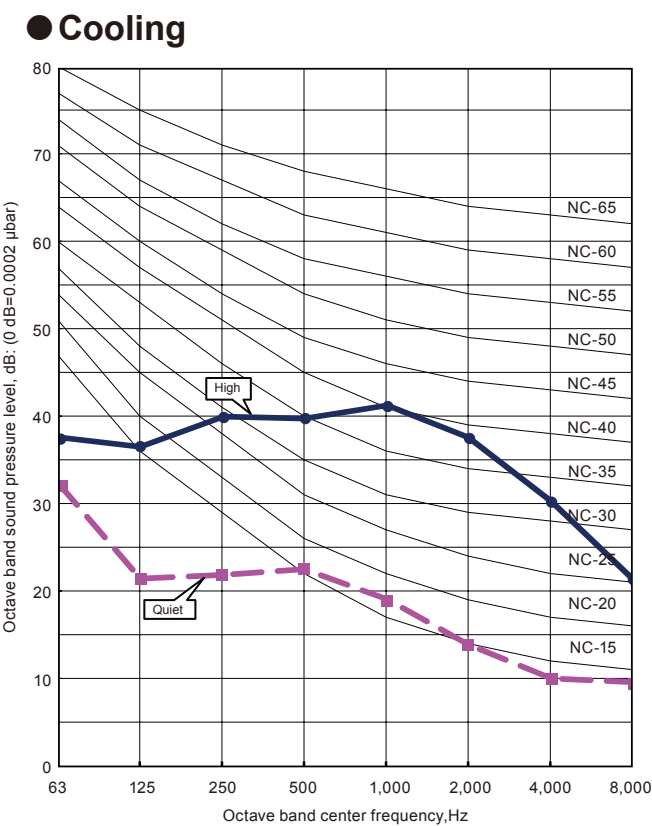
● **Heating**

Fan speed	Number of rotations (r.p.m)	Airflow	
HIGH	1360	m³/h	740
		l/s	206
		CFM	436
MED	1120	m³/h	600
		l/s	167
		CFM	353
LOW	900	m³/h	450
		l/s	125
		CFM	265
QUIET	700	m³/h	325
		l/s	90
		CFM	191

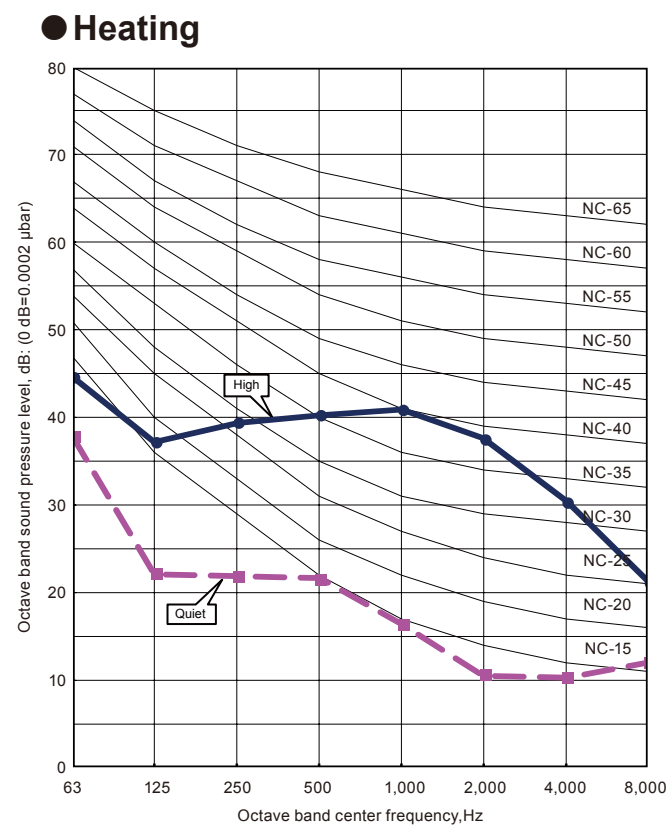
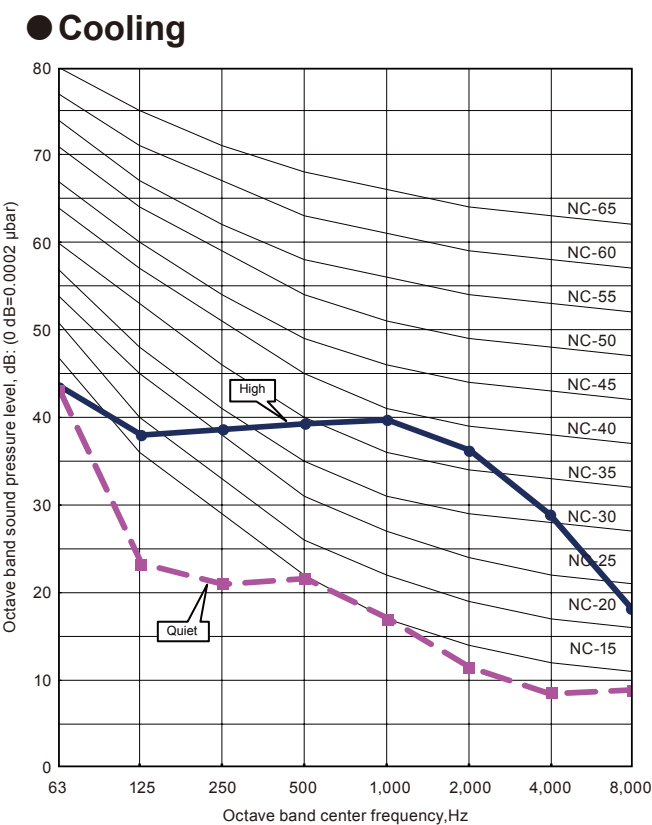
8. OPERATION NOISE (SOUND PRESSURE)

8-1. NOISE LEVEL CURVE

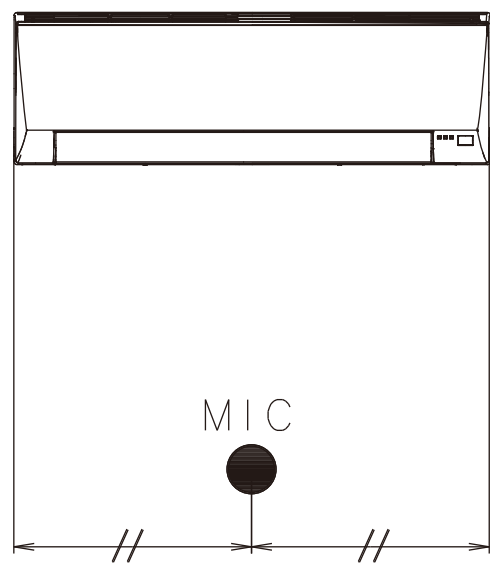
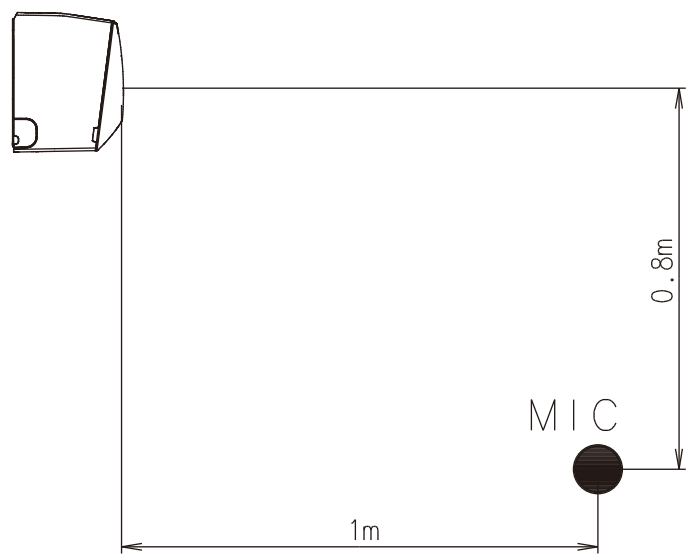
■ MODEL: AS*G07LLCC, AS*G09LLCC



■ MODEL: AS*G12LLCC



8-2. SOUND LEVEL CHECK POINT



9. ELECTRICAL CHARACTERISTICS

Model name			AS*G07LLCC	AS*G09LLCC	AS*G12LLCC
Power supply	Voltage	V	230 ~		
	Frequency	Hz	50		
Max. operating current		A	0.3		
Wiring spec.	Connection cable	mm ²	1.5		
	Limited wiring length	m	21		

- Note : Wiring Spec.
1. Selected Sample
(Selected based on Japan Electrotechnical Standards and Codes Committee E0005)
 2. Limited wiring length: Limit voltage drop to less than 2%. Increase cable gauge if voltage drop is 2% or more.

10. SAFETY DEVICES

	Protection form	Model		
		AS*G07LLCC	AS*G09LLCC	AS*G12LLCC
Circuit protection	Current fuse (PC board)	250V 3.15A		
Fan motor protection	Terminal protection program	OFF: 160 ± 25 °C ON: 110 ± 25 °C		

11. FUNCTION SETTINGS

11-1. 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 may cause an 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

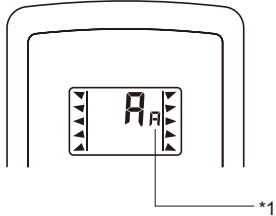
- While pressing the FAN button and SET TEMP. (▲) button simultaneously, press the RESET button to enter the function setting mode.

STEP 1

Setting the Remote controller Custom Code

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

1. Press the SET TEMP. (▲) (▼) button to change the custom code between $\text{A} \rightarrow \text{b} \rightarrow \text{c} \rightarrow \text{d}$.
Match the code on the display to the air conditioner custom code (initially set to A).
(If the custom code does not need to be selected, press the MODE button and proceed to **STEP 2**.)
2. Press the MODE button to accept the custom code, and proceed to **STEP 2**.



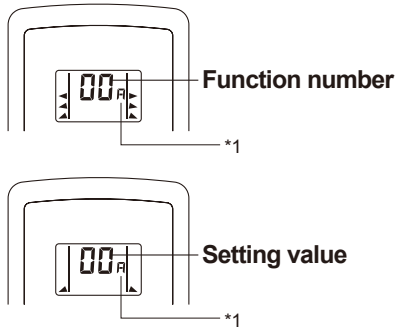
The air conditioner custom code is set to "A" prior to shipment.
Contact your retailer to change the custom code.

The remote controller resets to custom code A when the batteries in the remote controller are replaced. If you use a custom code other than custom code A , reset the custom code after replacing the batteries.
If you do not know the air conditioner custom code setting, try each of the custom codes ($\text{A} \rightarrow \text{b} \rightarrow \text{c} \rightarrow \text{d}$) 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 MODE button to switch between the left and right digits.)
2. Press the FAN button to proceed to setting the value.
(Press the FAN button again to return to the function number selection.)
3. Press the SET TEMP. (▲) (▼) buttons to select the setting value.
(Press the MODE button to switch between the left and right digits.)
4. Press the SLEEP button, then after you hear the beep emitted from the indoor unit, 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.

Note :

*1) Small "A" is displayed on the right of the custom code during the FUNCTION SETTING.

■ FUNCTION DETAILS

	Functions
1)	Filter sign
2)	Room temperature control for cooling
3)	Room temperature control for heating
4)	Auto restart
5)	Remote controller custom code
6)	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

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) Remote controller custom code

(Only for wireless remote controller)

The indoor unit custom code can be changed.

Select the appropriate custom code.

(◆... Factory setting)

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

6) 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.

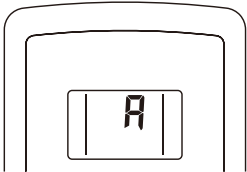
*01: When the outdoor unit is stopped, the indoor unit fan operates intermittently at a very low speed.

■ REMOTE CONTROLLER CUSTOM CODE SETTING

Use the following steps to select the custom 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 MODE button for at least five seconds to display the current custom code (initially set to **A**).
2. Press the SET TEMP. (▲) (▼) button to change the custom code between **A** → **b** → **c** → **d**.
Match the code on the display to the air conditioner custom code.
3. Press the MODE button again. The custom code will be changed.



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

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

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

12. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Remote controller holder	UTZ-RXLA	Wall or pillar mountable, and holds the remote controller.

2.OUTDOOR UNIT

SINGLE TYPE :

AO*G07LLCC

AO*G09LLCC

AO*G12LLCC

CONTENTS

2. OUTDOOR UNIT

1. SPECIFICATIONS.....	02 - 01
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4. WIRING DIAGRAMS.....	02 - 04
5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE	02 - 05
6. ADDITIONAL CHARGE CALCULATION.....	02 - 07
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8. OPERATION NOISE (SOUND PRESSURE).....	02 - 09
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8-2. SOUND LEVEL CHECK POINT	02 - 11
9. ELECTRICAL CHARACTERISTICS	02 - 12
10. SAFETY DEVICES	02 - 13

1. SPECIFICATIONS

Type				INVERTER COOLING & HEATING						
Model name				AO*G07LLCC		AO*G09LLCC		AO*G12LLCC		
Power source				230 V~ 50 Hz						
Available voltage range				198-264 V						
Starting current			A	3.0		3.5		5.4		
Fan	Air flow rate	Cooling	m³/h	1,670				1,830		
		Heating		1,470				1,600		
	Type × Q'ty			Propeller fan × 1						
	Motor output			W	23					
Sound pressure level		Cooling	dB (A)	47				50		
		Heating		48				51		
Sound power level		Cooling	dB (A)	61				65		
		Heating		61				65		
Heat exchanger type		Dimensions (H × W × D)		mm	650 × 504 × 18.2				642 × 504 × 18.2 612 × 504 × 18.2	
		Fin pitch			1.3				1.4	
		Rows × Stages		1 × 24				2 × 24		
		Pipe type		Copper						
		Fin type		Aluminium						
Compressor	Type × Q'ty			Rotary × 1						
	Motor output			610		670				
Refrigerant		Type (Global Warming Potential)		R410A (1975)						
		Charge		650				850		
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					
	Gross				595 × 790 × 395					
Weight	Net			kg	24				26	
	Gross				27				29	
Connection pipe	Size	Liquid	mm	Ø 6.35 (Ø 1/4 in.)						
		Gas		Ø 9.52 (Ø 3/8 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:

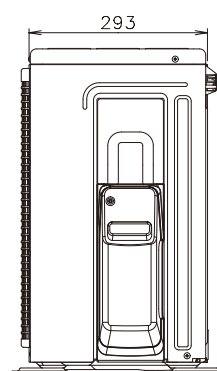
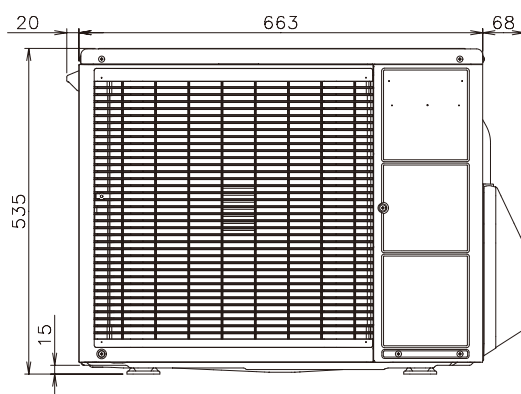
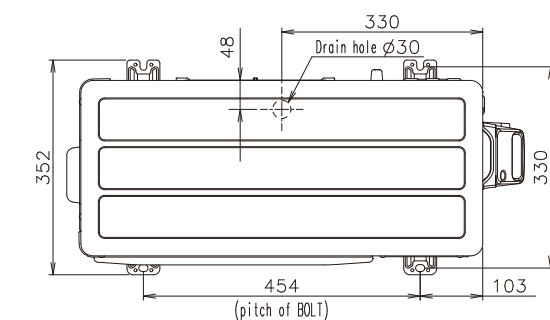
- Specifications are based on the following conditions.
Cooling: Indoor temperature of 27 °CDB / 19 °CWB and outdoor temperature of 35 °CDB / 24 °CWB.
Heating: Indoor temperature of 20 °CDB / 15 °CWB and outdoor temperature of 7 °CDB / 6 °CWB.
Pipe length: 5 m, Height difference: 0 m. (Outdoor unit -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

2. DIMENSIONS

■ MODELS : AO*G07LLCC, AO*G09LLCC, AO*G12LLCC

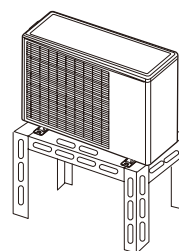
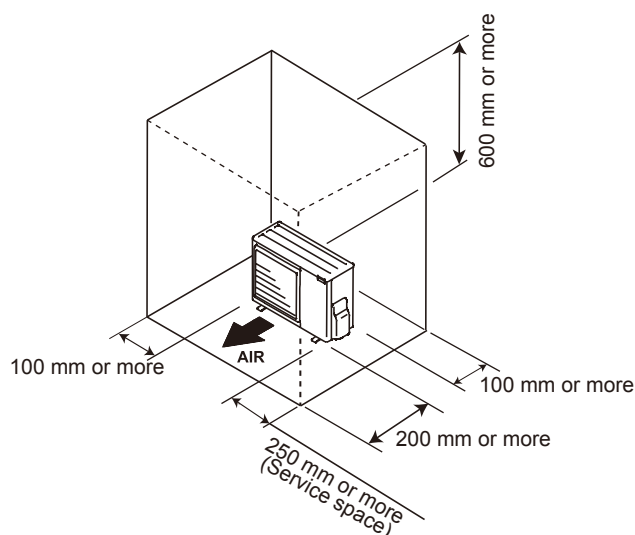
(Unit : mm)

OUTDOOR UNIT
AO*G07-12LLCC



OUTDOOR UNIT
AO*G07-12LLCC

■ INSTALLATION PLACE



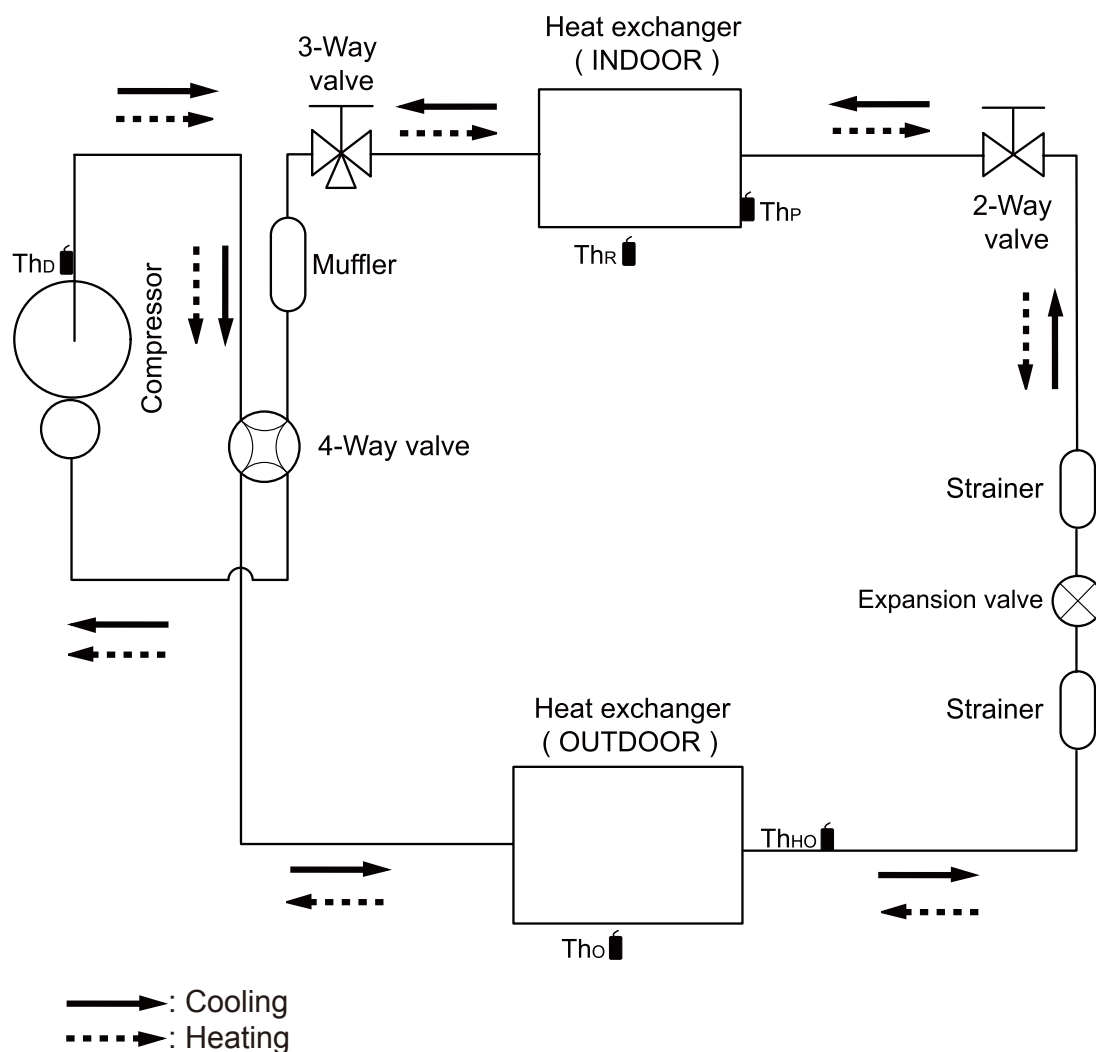
CAUTION

- 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.

3. REFRIGERANT CIRCUIT

■ MODELS : AO*G07LLCC, AO*G09LLCC, AO*G12LLCC



Th_D : Thermistor (Discharge Temp.)

Th_O : Thermistor (Outdoor Temp.)

Th_{HO} : Thermistor (Heat Exchanger Out Temp.)

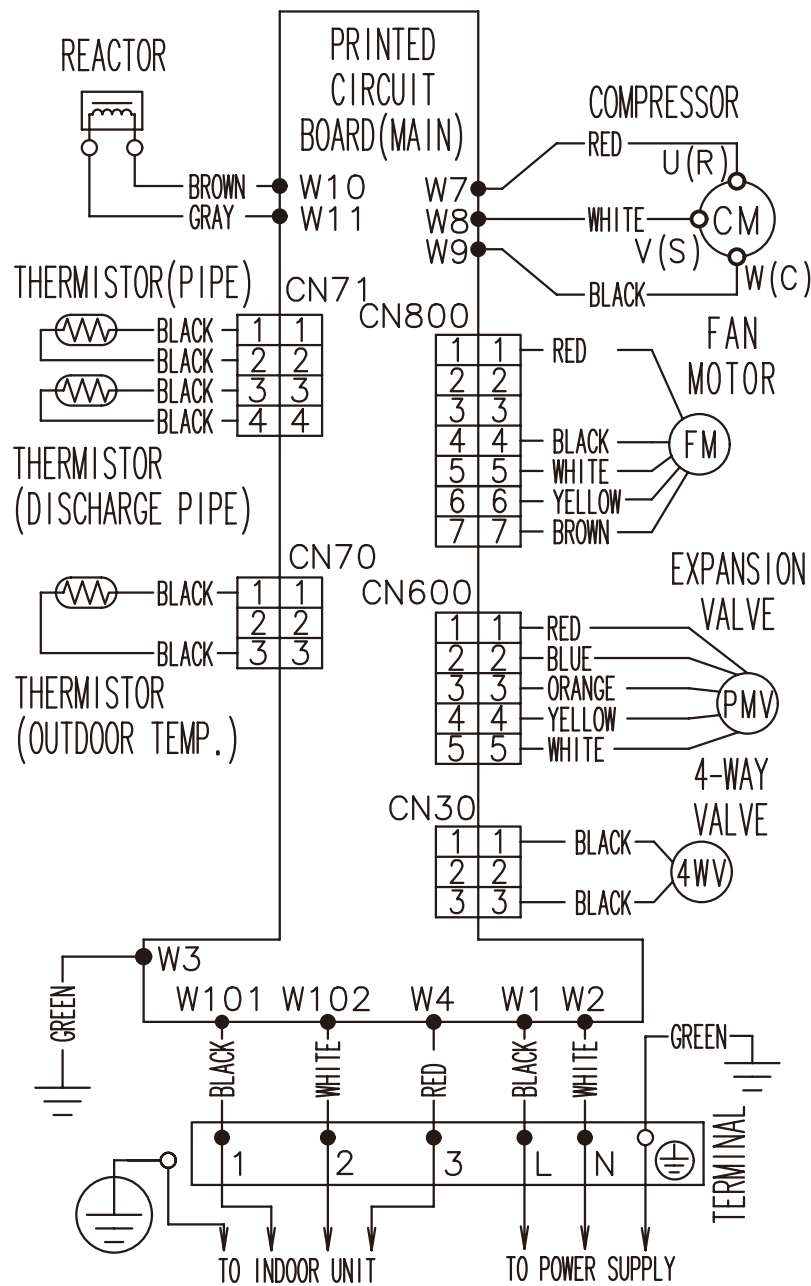
Th_R : Thermistor (Room Temp.)

Th_P : Thermistor (Pipe Temp.)

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

4. WIRING DIAGRAMS

■ MODEL: AO*G07LLCC, AO*G09LLCC, AO*G12LLCC



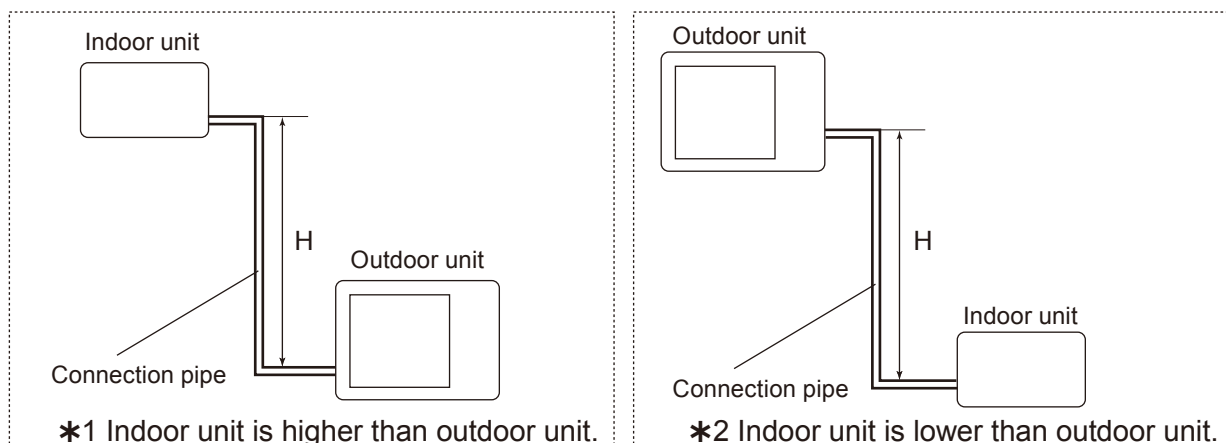
5. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

■ MODEL: AO*G07LLCC, AO*G09LLCC

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

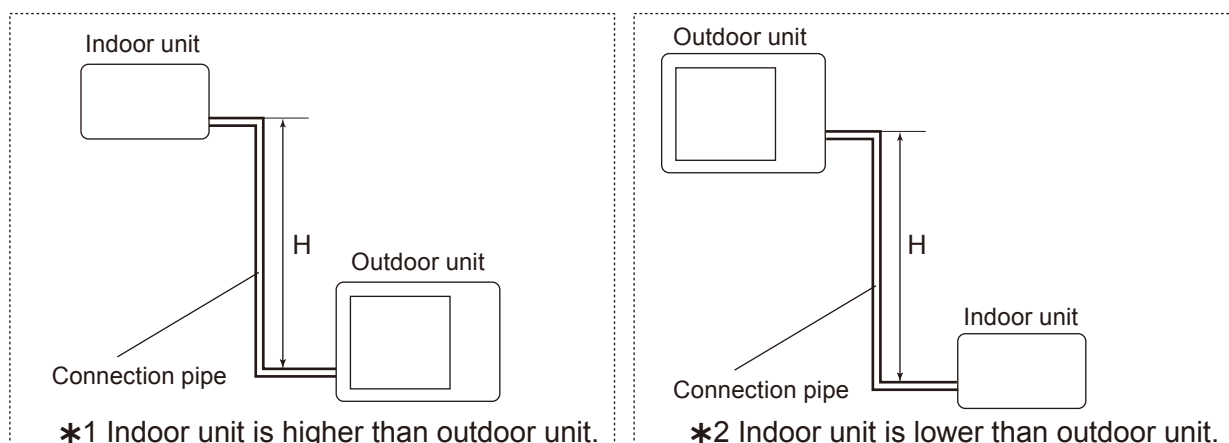


■ MODEL: AO*G12LLCC

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



6. ADDITIONAL CHARGE CALCULATION

■ MODELS : AO*G07LLCC, AO*G09LLCC

Refrigerant type		R410A
Refrigerant amount	g	650

● Refrigerant charge

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

■ MODEL: AO*G12LLCC

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	

7. AIRFLOW

■ MODELS : AO*G07LLCC, AO*G09LLCC

● 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*G12LLCC

● Cooling

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

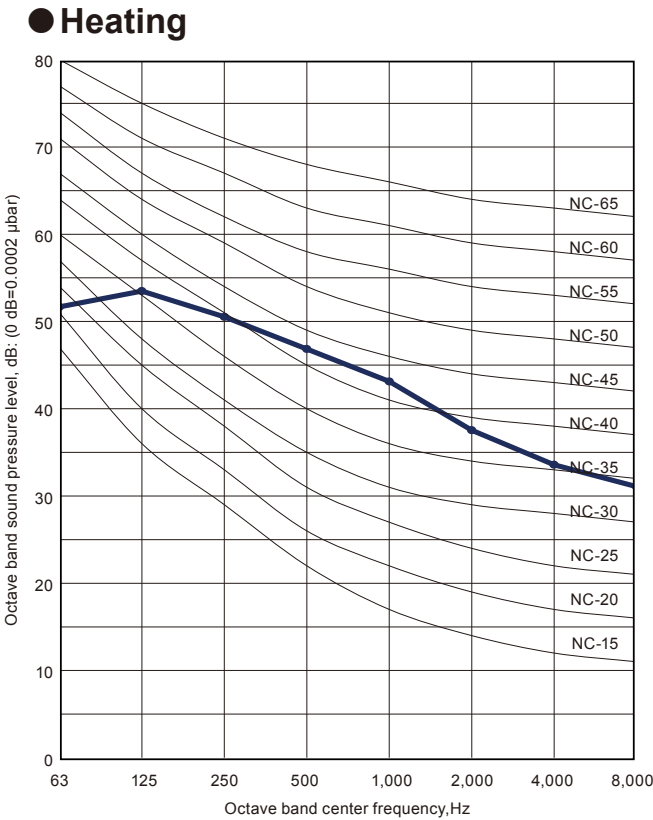
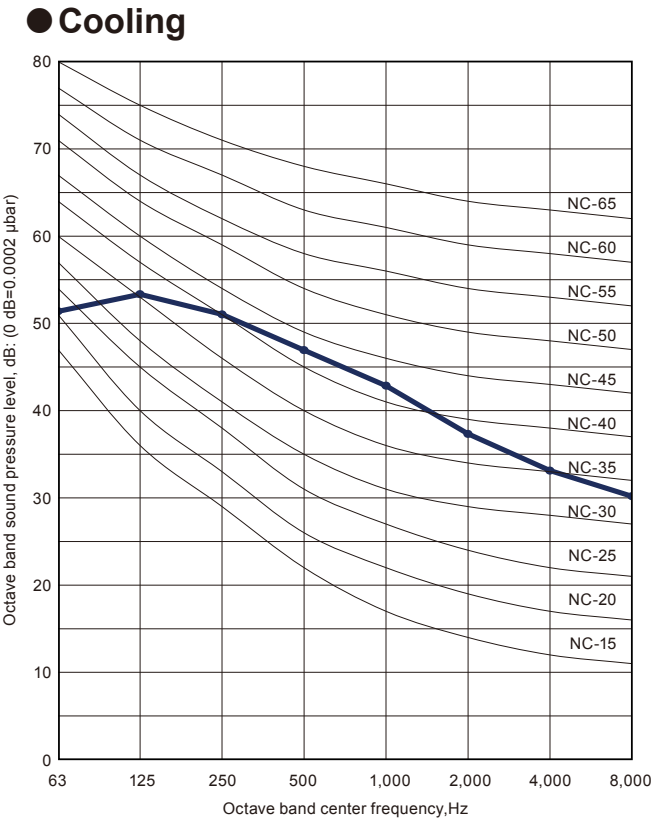
● Heating

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

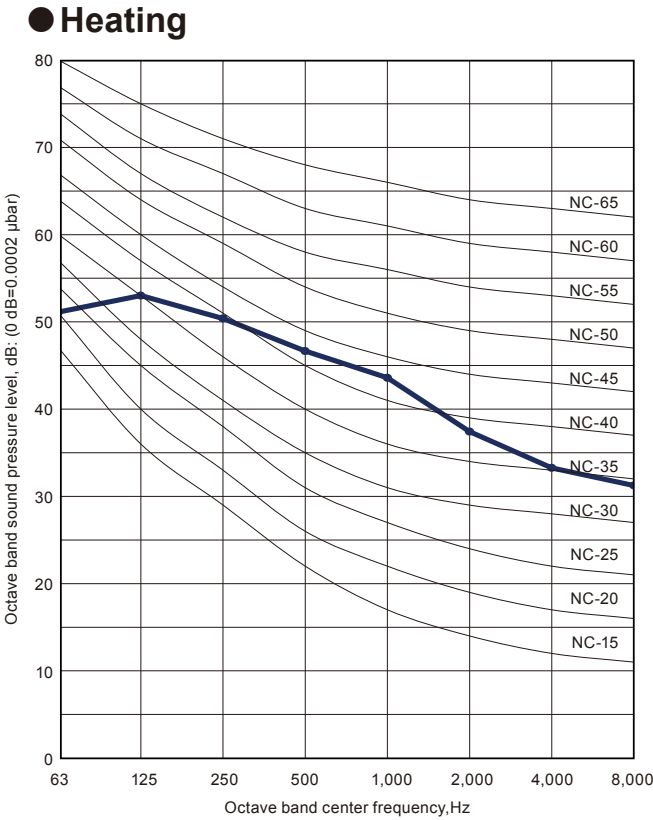
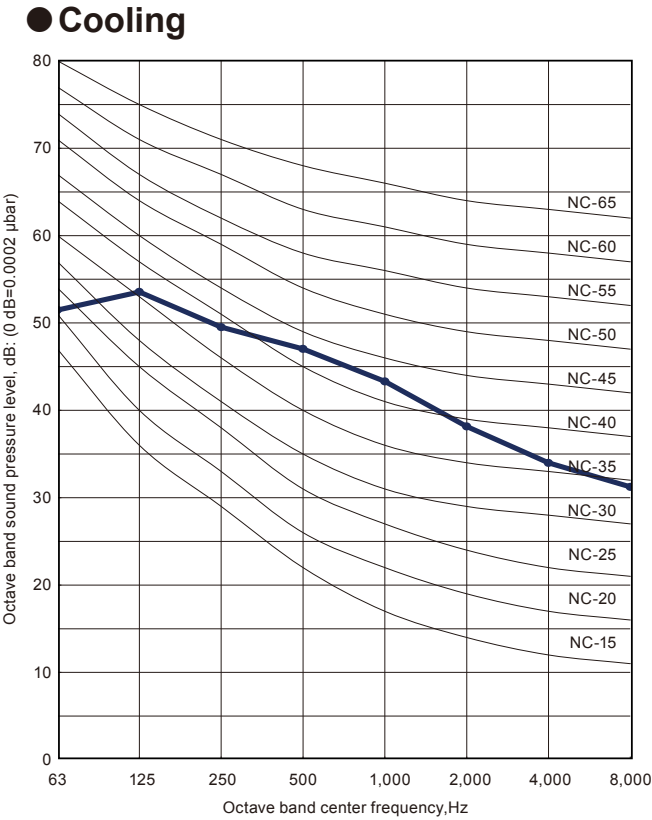
8. OPERATION NOISE (SOUND PRESSURE)

8-1. NOISE LEVEL CURVE

MODEL: AO*G07LLCC

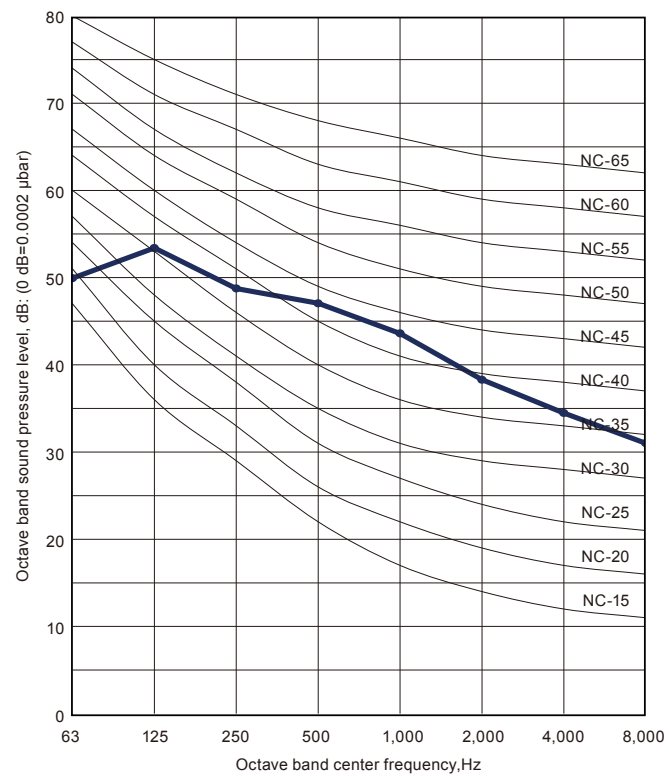


MODEL: AO*G09LLCC

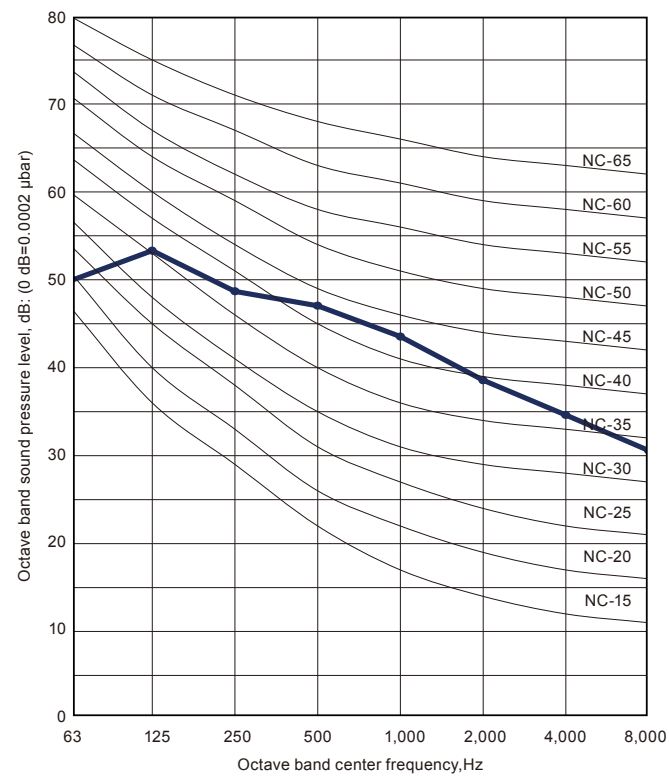


MODEL: AO*G12LLCC

● Cooling

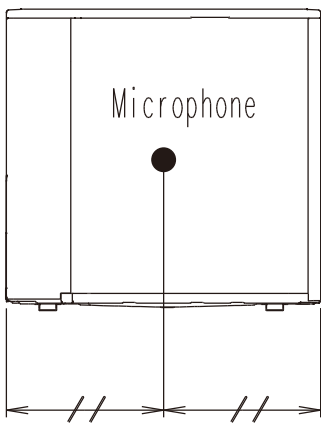
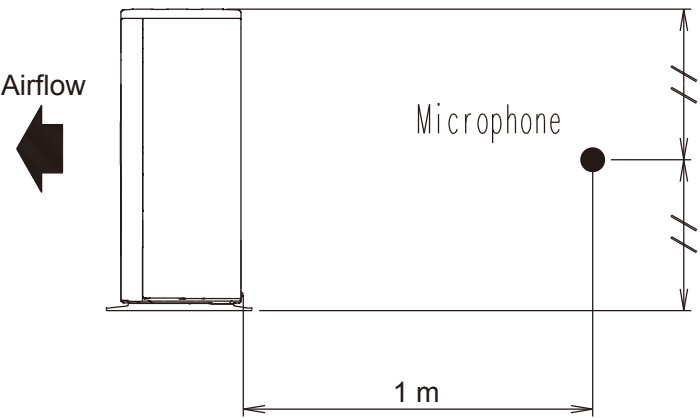


● Heating



8-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AO*G07-12LLCC



OUTDOOR UNIT
AO*G07-12LLCC

9. ELECTRICAL CHARACTERISTICS

Model name			AO*G07LLCC	AO*G09LLCC	AO*G12LLCC
Power supply	Voltage	V	230 ~		
	Frequency	Hz	50		
Max. operating current *1		A	7.5	7.5	9.0
Starting current		A	3.0	3.5	5.4
Wiring spec. *2	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)

10. SAFETY DEVICES

	Protection form	Model
		AO*G07LLCC AO*G09LLCC AO*G12LLCC
Circuit protection	Current fuse (Main printed circuit board)	250V 25A
		250V 5A
Fan motor protection	Terminal protection program	OFF: 100 ± 15 °C ON: 95 ± 10 °C
Compressor protection	Terminal protection program (Discharge temp.)	OFF: 110°C ON: After 7 minutes