

AIR CONDITIONER

Duct type

DESIGN & TECHNICAL MANUAL

INDOOR



AR*G45LHTA
AR*G54LHTA

OUTDOOR



AO*G45LETL
AO*G54LETL

FUJITSU GENERAL LIMITED

1. INDOOR UNIT

DUCT TYPE :
AR*G45LHTA
AR*G54LHTA

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1. FEATURES

■ MODEL

AR*G45LHTA / AO*G45LETL

AR*G54LHTA / AO*G54LETL



■ FEATURES

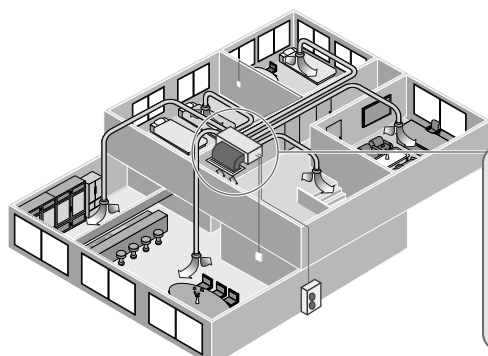
● Improvement of market suitability

Considerable improvement of installation work by compact size and light weight considering with the conditions of installation in the ceiling.

The size which the indoor unit can be installed in the spacing between the beams is required for the installation in the ceiling.

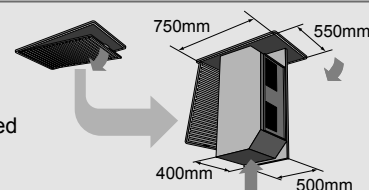
Restriction for dimension of width and height.

Indoor unit installation example



Carrying-in example in the ceiling

Restriction for space when being carried into the ceiling for replacement
(Ceiling intake grille)

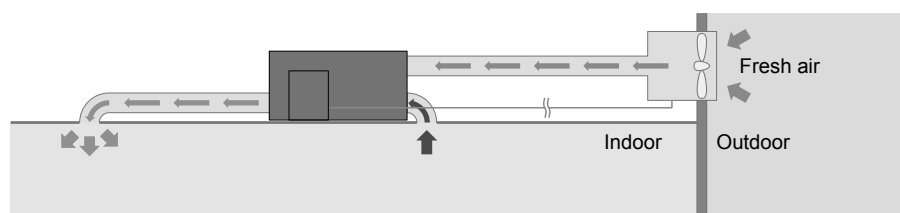


● Correspondence to Network

Various networks can be constructed according to the user needs.

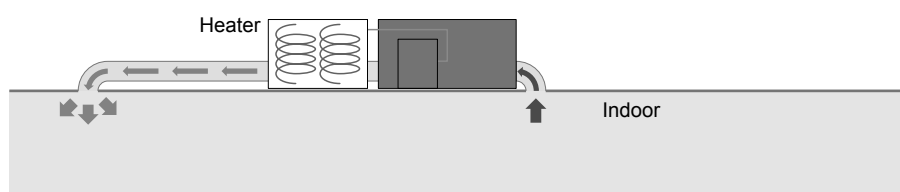
1. Fresh air output port

Fresh air is connected with the fan of an indoor unit.



2. Electrical heater output port

Electrical heater operates at the time of heating.

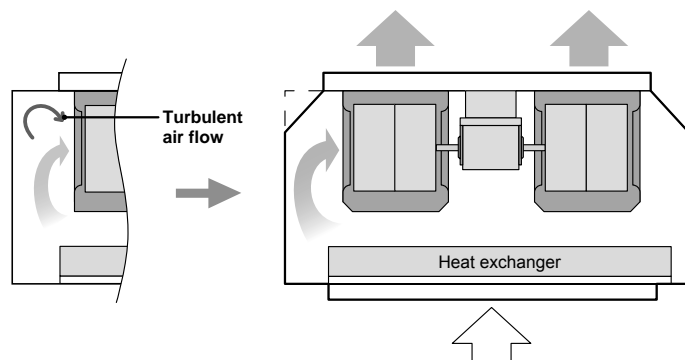


3. External input port

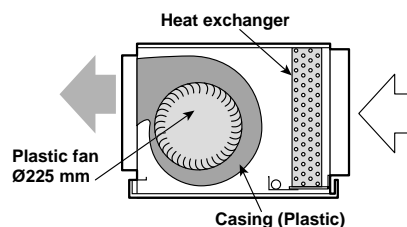
Start / Stop of the air conditioner can be changed from the external equipment.

● Operation sound (Low noise)

Turbulent air flow is reduced by cutting off the corners of conventional indoor unit front panel and fan case



Low noise is realized by adopting plastic case, plastic fan



● Economy operation

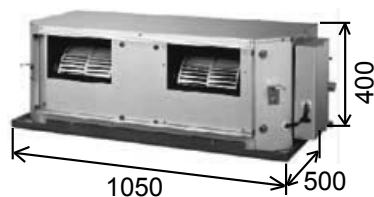
The power consumption can be reduced.

● Space saving

• Compact size

High performance has been realized with a compact indoor unit.

Due to the compact size of the indoor unit, the installation space required has been reduced allowing for a wider selection on installation locations.



■ FUNCTION SETTING

● Room temperature sensor switching

The sensor judging the room temperature is switchable from the sensor attached to the indoor unit, to the sensor attached to the wired remote controller.

● Auto restart

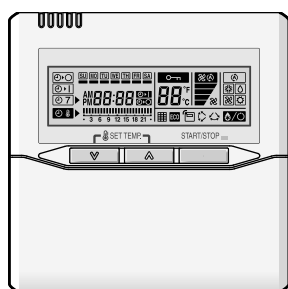
The units restart automatically when the current was returned even when there was a power interruption during operation.

● Cooling room temperature correction

● Heating room temperature correction

2. WIRED REMOTE CONTROLLER

■ FEATURES



- * Various timer setup (ON / OFF / WEEKLY) are possible.
- * Equipped with weekly timer as standard function.(2 times Start / Stop per day for a week)
- * When setting up a timer, operation mode and a temperature setup can be changed.
- * When a failure occurs, the error code is displayed. (Maximum of 16)
- * Error indication.(A maximum of 16 error histories are memorizable.)
- * Up to 16 indoor units can be simultaneously controlled.
- * The room temperature can be controlled by being detected the temperature accurately with built-in thermo sensor.

● Simple function setting

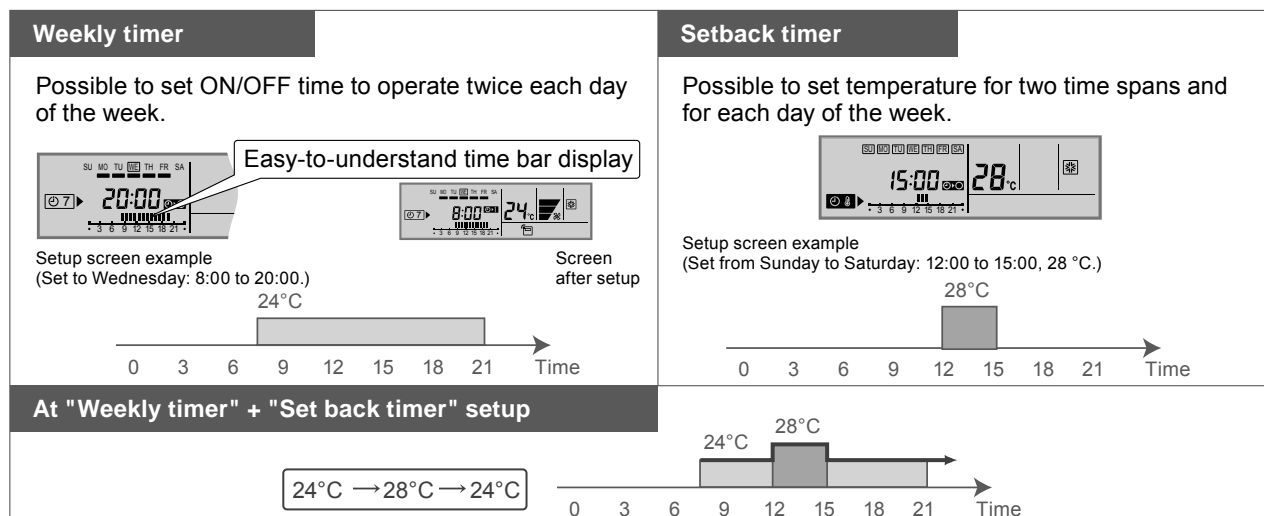
Setting of the air conditioner selection function is performed by remote controller.

● High performance and compact size

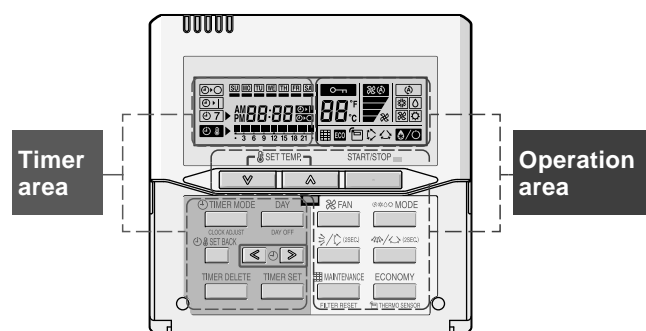
Three functions are combined in one unit.



● Built-in timers



● Easy-to-understand operation

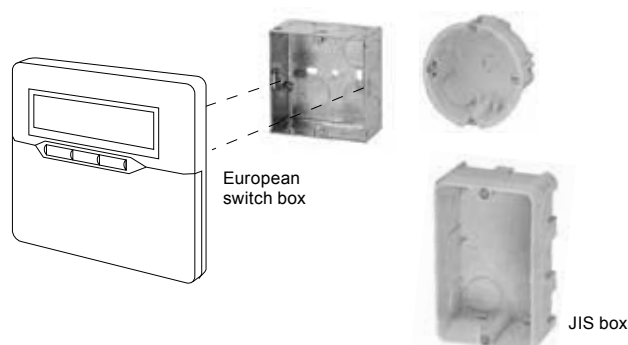


[Variable timer control]

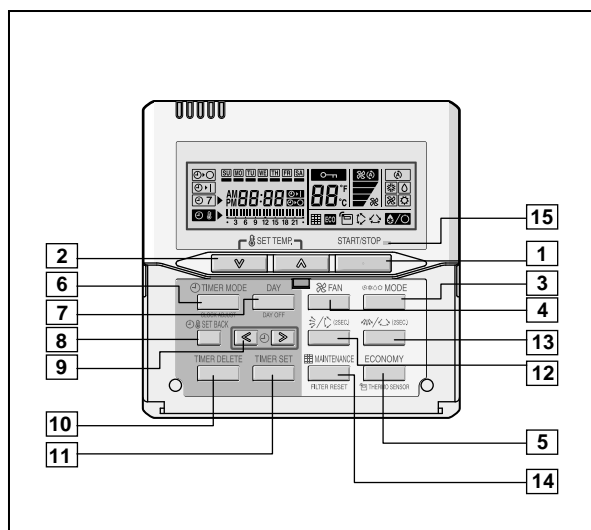
The operation/display sections are zoned according to time and operation, enabling variable programming to match application.

● Simple installation

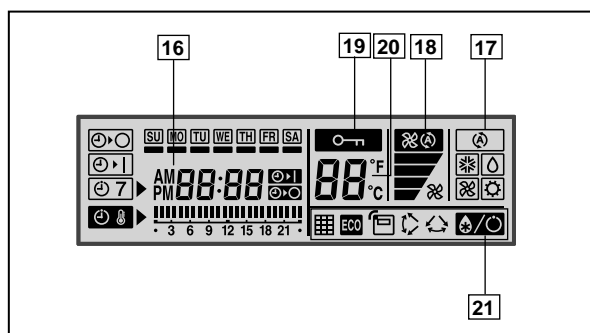
Components are compatible with standard switch boxes. Flat back construction allows equipment to be installed wherever it is needed.



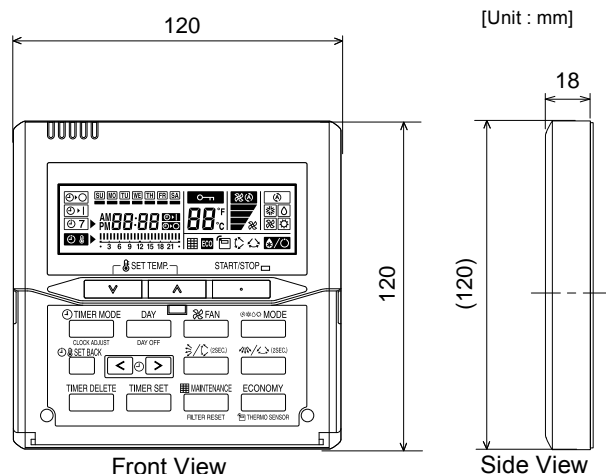
FUNCTIONS



Display panel



DIMENSIONS



SPECIFICATION

SIZE	(H x W x D mm)	120 x 120 x 18
WEIGHT	(g)	160
CABLE LENGTH	(m)	10
POWER	(V)	12

WIRING SPECIFICATIONS

Use	Size	Wire type	Remarks
Remote controller cable	0.33mm ² (22 AWG)	Polar 3 code	Use sheathed PVC cable

- 1 START/STOP button**
Pressed to start and stop operation.
- 2 SET TEMP. button**
Selects the setting temperature.
- 3 MODE button**
Selects the operating mode (AUTO, HEAT, FAN, COOL, DRY).
- 4 FAN button**
Selects the fan speed (AUTO, LOW, MED, HIGH).
- 5 ECONOMY button**
Turns the economy efficient mode on and off.
- 6 TIMER MODE (CLOCK ADJUST) button**
Selects the timer mode (OFF TIMER, ON TIMER, WEEKLY TIMER). Set the current time.
- 7 DAY (DAY OFF) button**
Temporarily cancels of one day timer.
- 8 SET BACK button**
Pressed to select the set back timer.
- 9 Set time button**
Pressed to set time.
- 10 TIMER DELETE button**
The schedule of a weekly timer is deleted.
- 11 TIMER SET button**
Sets the date, hour, minute and on-off time.
- 12 Vertical airflow direction and swing button**
Push for two seconds to change the swing mode.
- 13 Horizontal airflow direction and swing button**
Push for two seconds to change the swing mode.
- 14 FILTER RESET button**
- 15 Operation lamp**
Lights during operation and when the timer is on.
- 16 Timer and clock display**
- 17 Operation mode display**
- 18 Fan speed display**
- 19 Operation lock display**
- 20 Temperature display**
- 21 Function display**
 - Defrost display
 - Thermo sensor display
 - Economy display
 - Vertical swing display
 - Horizontal swing display
 - Filter display

Functions will be different due to type of indoor unit.
For details, please see operation manual.

3. SPECIFICATIONS

Type				DUCTED MODEL		
				INVERTER HEATPUMP		
Model name				AR✱G45LHTA	AR✱G54LHTA	
Power source				230V~ 50Hz		
Available voltage range				198-264V~ 50Hz		
Capacity	Cooling	Rated	kW	12.5	13.4	
			BTU/h	42700	45700	
		Min-Max	kW	4.5-14.0	5.0-14.5	
			BTU/h	15400-47800	17100-49500	
	Heating	Rated	kW	14.0	16.0	
			BTU/h	47800	54600	
		Min-Max	kW	5.0-16.2	5.5-18.0	
			BTU/h	17100-55300	18800-61500	
Input power	Cooling	Rated	kW	4.30	4.77	
		Max		5.15	5.40	
	Heating	Rated		3.80	4.69	
		Max		5.15	5.40	
Current	Cooling	Rated	A	18.9	20.9	
	Heating			16.7	20.5	
EER		Cooling	kW/kW	2.91	2.81	
COP		Heating		3.68	3.41	
Moisture removal			l/h (pints/h)	1.5 (2.6)	2.0 (3.5)	
Maximum operating current*		Cooling	A	22.5	23.5	
		Heating		22.5	23.5	
Fan	Airflow rate	Cooling	High	m³/h	3350	3350
			Med		2850	2850
			Low		2430	2430
			QUIET		-	-
		Heating	High		3350	3350
			Med		2850	2850
			Low		2430	2430
			QUIET		-	-
	Type ✱ Q'ty		Sirocco ✱ 2			
	Motor output		W	490		
Recommended static pressure			Pa	100 to 250	100 to 250	
Sound pressure level	Cooling	High	dB(A)	47	47	
		Med		43	43	
		Low		40	40	
		Quiet		-	-	
	Heating	High		47	47	
		Med		43	43	
		Low		40	40	
		Quiet		-	-	
Heat exchanger type	Dimensions (H ✱ W ✱ D)		mm	336 ✱ 890 ✱ 53.2		
	Fin pitch			1.3		
	Rows x Stages			4 ✱ 16		
	Pipe type			Copper		
	Fin type			Aluminium		
Enclosure	Material			Steel		
	Colour			-		
Dimensions (H ✱ W ✱ D)	Net		mm	400 ✱ 1050 ✱ 500		
	Gross			460 ✱ 1230 ✱ 640		
Weight	Net		kg	46		
	Gross			51		
Connection pipe	Size	Liquid	mm	Ø9.52 (3/8 in.)		
		Gas		Ø15.88 (5/8 in.)		
	Method		Flare			
Operation range	Cooling		°C	18 to 32		
			%RH	80 or less		
	Heating		°C	16 to 30		
Remote controller type				Wired		
Drain port	Material		mm	Steel		
	Size			Ø23.4 (I.D.), Ø25.4 (O.D.)		

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 27 °CDB / 19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.

Heating : Indoor temperature of 20 °CDB / 15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.

Standard static pressure : 100Pa.

Pipe length : 5 m. Height difference : 0 m. (Outdoor unit - Indoor unit)

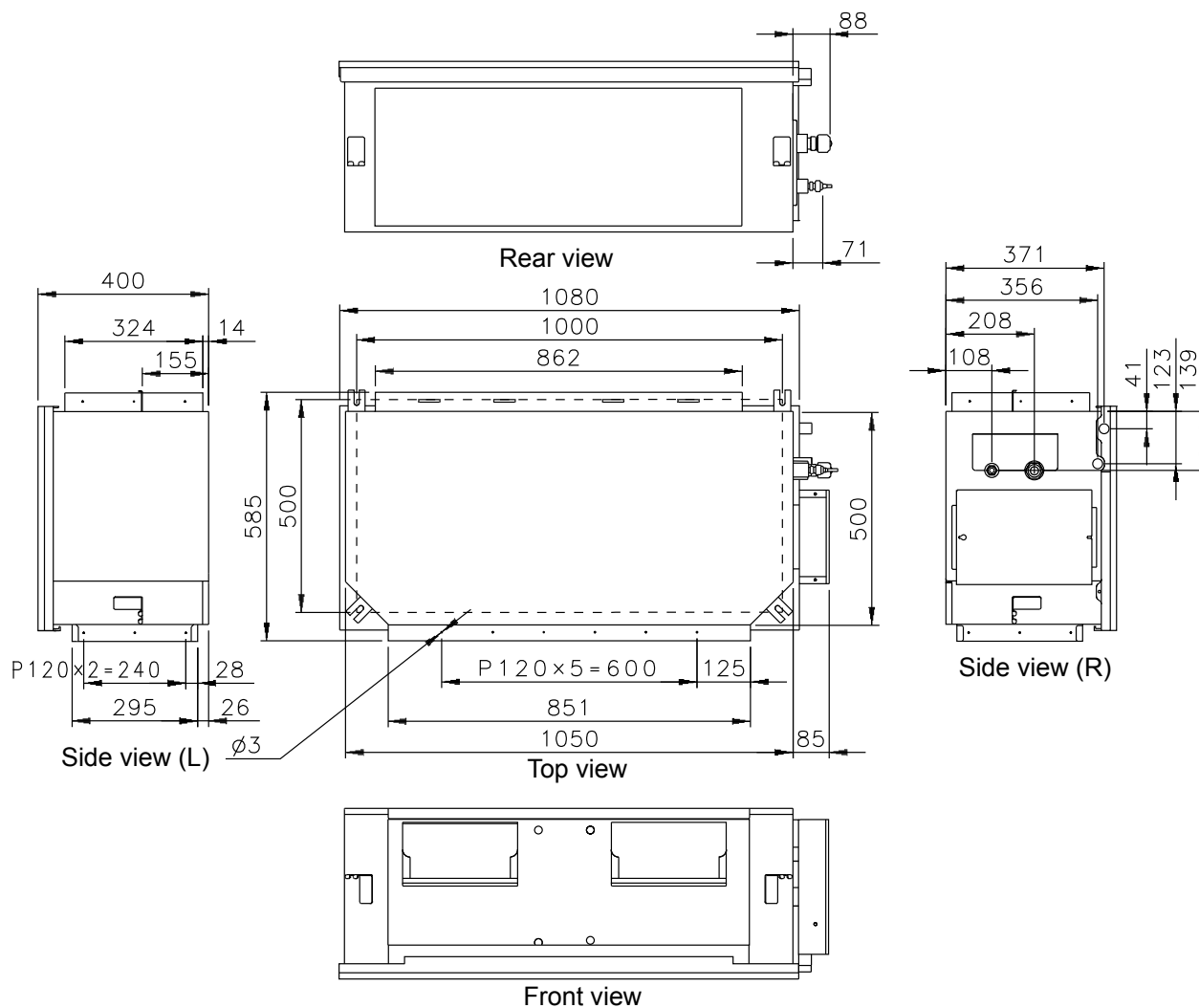
Sound pressure level : Install a 2m duct to the outlet port and a 1m duct to the suction port and measure.

The protective function might work when using outside the operation range.

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

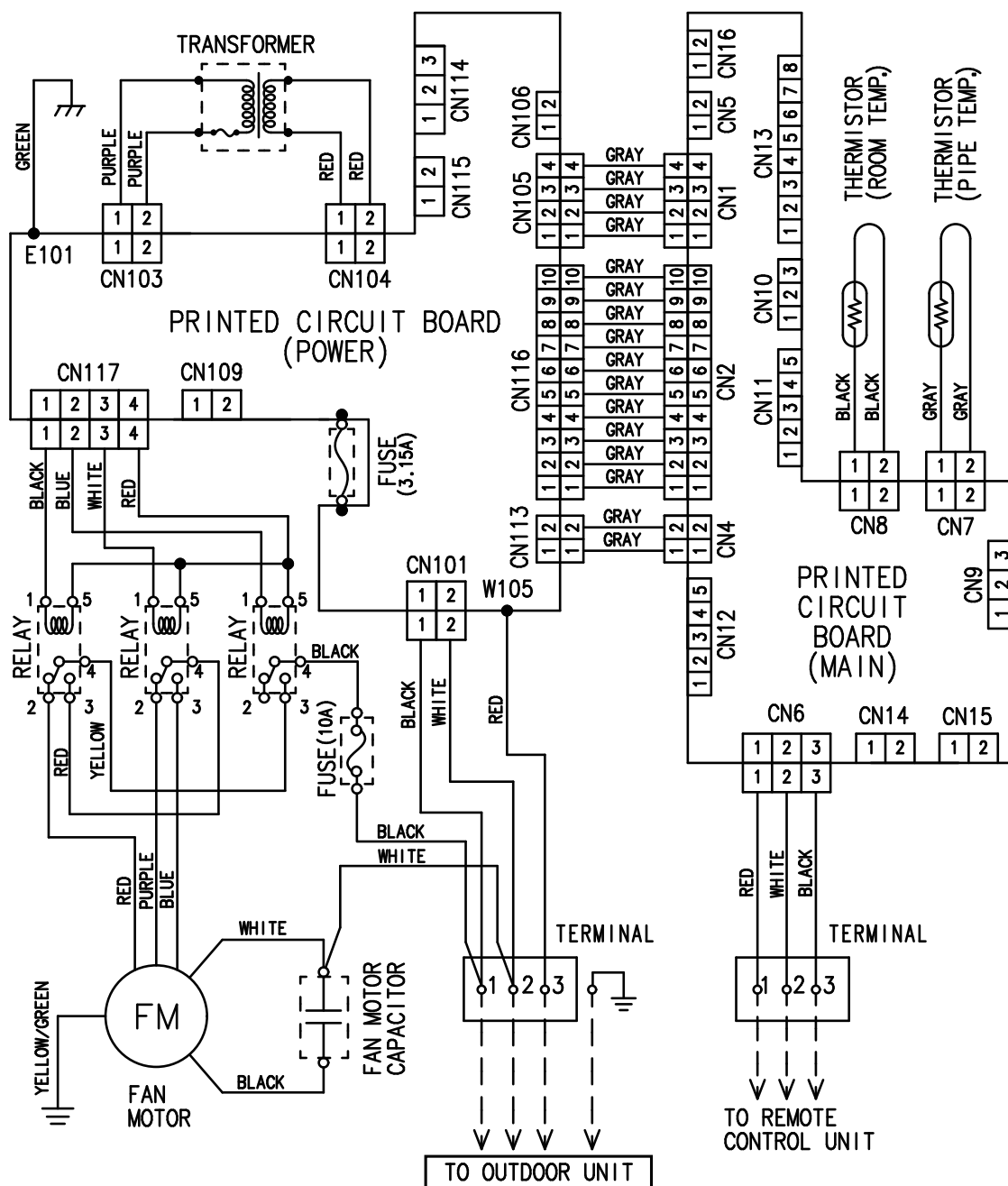
■ MODEL: AR*G45LHTA, AR*G54LHTA

(Unit : mm)



5. WIRING DIAGRAMS

■ MODEL: AR-G45LHTA, AR-G54LHTA



6. CAPACITY TABLE

6-1. COOLING CAPACITY

■ MODEL: AR*G45LHTA

AFR	55.8
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		Indoor temperature																										
		18			21			23			25			27			29			32								
		°CDB			°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	TC	SHC	IP			
	-15	11.75	10.43	2.86	13.09	10.50	2.90	13.54	11.41	2.92	14.43	11.45	2.95	14.88	12.36	2.96	15.77	12.31	2.99	16.66	13.12	3.02						
	-10	11.74	10.41	2.73	13.08	10.47	2.77	13.53	11.39	2.79	14.42	11.42	2.82	14.86	12.34	2.83	15.76	12.29	2.86	16.65	13.09	2.89						
	0	12.10	10.59	2.42	13.48	10.65	2.46	13.94	11.58	2.47	14.86	11.62	2.50	15.32	12.54	2.51	16.24	12.49	2.54	17.16	13.31	2.56						
	5	11.72	10.41	2.55	13.06	10.47	2.59	13.50	11.38	2.60	14.39	11.42	2.63	14.84	12.33	2.64	15.73	12.28	2.67	16.62	13.08	2.69						
	10	11.56	10.29	2.73	12.87	10.35	2.77	13.31	11.25	2.79	14.19	11.28	2.82	14.63	12.19	2.83	15.51	12.14	2.86	16.38	12.93	2.89						
	15	11.49	10.23	2.87	12.80	10.29	2.91	13.23	11.19	2.93	14.10	11.22	2.96	14.54	12.12	2.97	15.41	12.07	3.00	16.28	12.86	3.03						
	20	11.89	10.45	3.38	13.24	10.51	3.43	13.69	11.43	3.45	14.60	11.47	3.48	15.05	12.38	3.50	15.95	12.33	3.54	16.85	13.14	3.57						
	25	11.49	10.24	3.65	12.80	10.30	3.70	13.24	11.20	3.72	14.11	11.23	3.76	14.55	12.13	3.78	15.42	12.08	3.82	16.30	12.87	3.86						
	30	11.74	10.41	4.73	13.08	10.48	4.80	13.52	11.39	4.83	14.41	11.43	4.88	14.86	12.34	4.90	15.75	12.29	4.90	16.64	13.09	4.90						
	35	11.06	9.98	4.97	12.32	10.04	5.05	12.74	10.91	5.07	13.58	10.95	5.12	14.00	11.82	5.15	14.84	11.77	5.15	15.68	12.54	5.15						
	40	9.68	9.15	4.23	10.78	9.36	4.29	11.15	10.18	4.31	11.88	10.21	4.36	12.25	11.02	4.38	12.98	10.98	4.38	13.72	11.70	4.38						
46	7.37	7.36	3.55	8.21	7.81	3.61	8.49	8.46	3.62	9.05	8.52	3.66	9.33	9.20	3.68	9.89	9.16	3.68	10.45	9.76	3.68							

■ MODEL: AR*G54LHTA

AFR	55.8
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		Indoor temperature																										
		18			21			23			25			27			29			32								
		°CDB			°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	TC	SHC	IP			
	-15	12.72	11.08	3.16	14.17	11.14	3.21	14.66	12.12	3.23	15.62	12.15	3.26	16.11	13.13	3.28	17.07	13.07	3.31	18.04	13.93	3.34						
	-10	12.71	11.05	3.04	14.16	11.12	3.08	14.64	12.09	3.10	15.61	12.13	3.13	16.09	13.10	3.15	17.06	13.05	3.18	18.02	13.90	3.21						
	0	12.84	11.10	2.73	14.30	11.16	2.77	14.79	12.13	2.79	15.76	12.17	2.82	16.25	13.15	2.83	17.23	13.09	2.86	18.20	13.95	2.89						
	5	12.44	10.83	2.74	13.85	10.89	2.79	14.33	11.84	2.80	15.27	11.88	2.83	15.74	12.83	2.84	16.69	12.78	2.87	17.63	13.61	2.90						
	10	12.26	10.69	2.87	13.66	10.75	2.92	14.12	11.69	2.93	15.05	11.73	2.96	15.52	12.66	2.98	16.45	12.61	3.01	17.38	13.44	3.04						
	15	12.02	10.51	3.17	13.39	10.57	3.22	13.85	11.49	3.24	14.76	11.53	3.27	15.22	12.45	3.29	16.13	12.40	3.32	17.05	13.21	3.36						
	20	12.42	10.75	4.02	13.84	10.81	4.09	14.31	11.75	4.11	15.25	11.79	4.15	15.72	12.74	4.17	16.67	12.68	4.21	17.61	13.51	4.25						
	25	12.18	10.63	4.60	13.56	10.69	4.67	14.03	11.62	4.70	14.95	11.66	4.75	15.41	12.59	4.77	16.34	12.54	4.82	17.26	13.36	4.87						
	30	12.35	10.82	4.99	13.75	10.88	5.07	14.22	11.83	5.09	15.16	11.87	5.14	15.63	12.82	5.17	16.57	12.77	5.17	17.51	13.60	5.17						
	35	11.46	10.21	5.10	12.76	10.27	5.17	13.20	11.17	5.20	14.07	11.20	5.25	14.50	12.10	5.28	15.37	12.05	5.28	16.24	12.84	5.28						
	40	9.68	9.15	4.23	10.78	9.36	4.29	11.15	10.18	4.31	11.88	10.21	4.36	12.25	11.02	4.38	12.98	10.98	4.38	13.72	11.70	4.38						
	46	7.37	7.36	3.55	8.21	7.76	3.61	8.49	8.44	3.62	9.05	8.46	3.66	9.33	9.14	3.68	9.89	9.10	3.68	10.45	9.70	3.68						

AFR: Air flow rate (m³/min)
 TC : Total capacity (kW)
 SHC: Sensible Heat capacity (kW)
 IP : Input power (kW)

6-2. HEATING CAPACITY

■ MODEL: AR*G45LHTA

AFR	55.8
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			Indoor temperature									
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-16	11.47	4.69	11.19	4.79	10.92	4.89	10.65	4.90	10.37	4.90
	-10	-11	12.63	4.70	12.33	4.80	12.03	4.90	11.73	4.90	11.43	4.90
	-5	-7	13.99	4.70	13.65	4.80	13.32	4.90	12.99	4.90	12.65	4.90
	0	-2	15.28	4.70	14.91	4.80	14.55	4.90	14.19	4.90	13.82	4.90
	5	3	16.36	4.70	15.97	4.80	15.58	4.90	15.19	4.90	14.80	4.90
	7	6	17.01	4.70	16.61	4.80	16.20	4.90	15.80	4.90	15.39	4.90
	10	8	18.16	4.70	17.73	4.80	17.30	4.90	16.86	4.90	16.43	4.90
	15	10	18.03	4.22	17.60	4.31	17.17	4.40	16.74	4.40	16.31	4.40
	20	15	18.59	4.22	18.14	4.31	17.70	4.40	17.26	4.40	16.82	4.40
	24	18	18.50	3.81	18.06	3.89	17.62	3.97	17.18	3.97	16.74	3.97

■ MODEL: AR*G54LHTA

AFR	55.8
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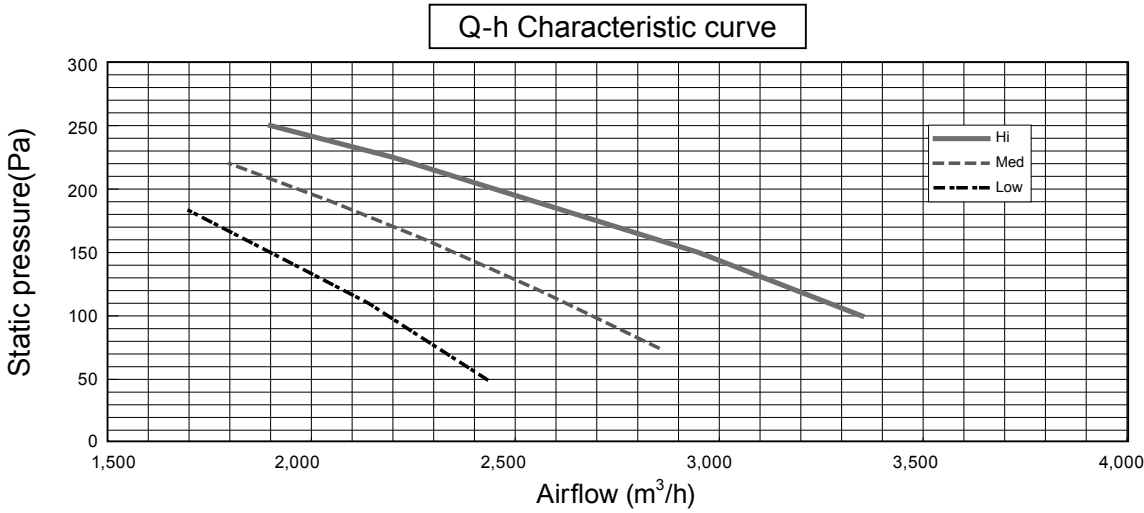
			Indoor temperature									
		°CDB	16		18		20		22		24	
Outdoor temperature	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
	-15	-16	12.10	4.92	11.81	5.03	11.52	5.13	11.23	5.23	10.94	5.28
	-10	-11	13.42	5.07	13.10	5.17	12.78	5.28	12.46	5.28	12.14	5.28
	-5	-7	15.02	5.07	14.66	5.17	14.30	5.28	13.94	5.28	13.59	5.28
	0	-2	16.24	5.07	15.86	5.17	15.47	5.28	15.08	5.28	14.70	5.28
	5	3	17.43	5.07	17.02	5.17	16.60	5.28	16.19	5.28	15.77	5.28
	7	6	18.90	5.07	18.45	5.17	18.00	5.28	17.55	5.28	17.10	5.28
	10	8	19.20	5.07	18.75	5.17	18.29	5.28	17.83	5.28	17.38	5.28
	15	10	18.03	4.22	17.60	4.31	17.17	4.40	16.74	4.40	16.31	4.40
	20	15	18.59	4.22	18.14	4.31	17.70	4.40	17.26	4.40	16.82	4.40
	24	18	18.50	3.81	18.06	3.89	17.62	3.97	17.18	3.97	16.74	3.97

AFR: Air flow rate (m³/min)
TC : Total capacity (kW)
IP : Input power (kW)

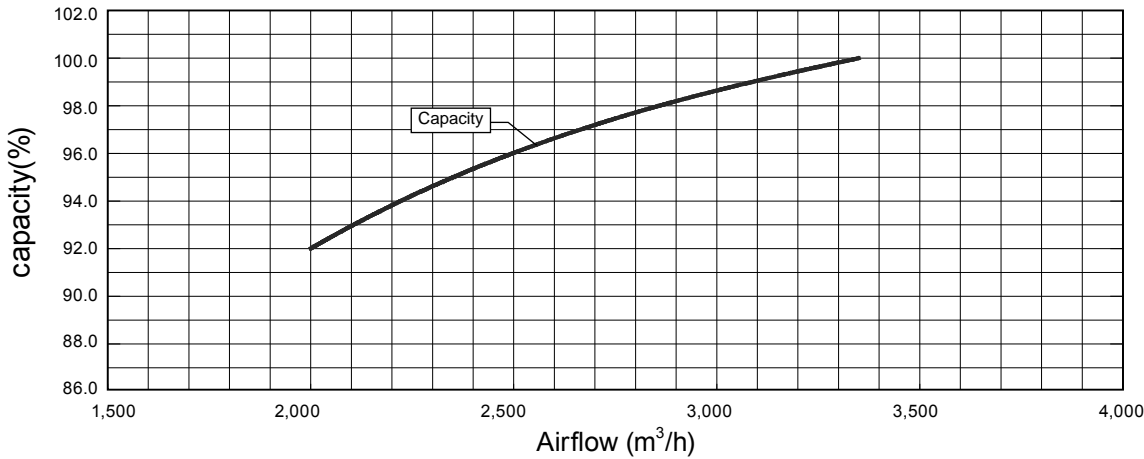
7. FAN PERFORMANCE AND CAPACITY

MODEL: AR*G45LHTA

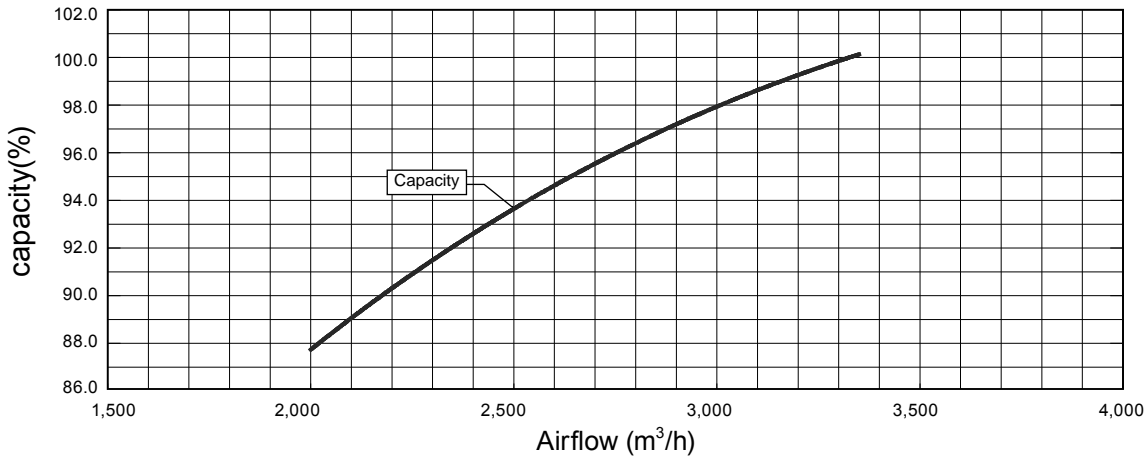
			Static pressure (Pa)								
			50	75	100	125	150	175	200	225	250
FAN SPEED	Hi	m³/h	-	-	3350	3150	2950	2700	2450	2280	1900
		l/s	-	-	931	875	819	750	681	633	528
		CFM	-	-	1972	1854	1736	1589	1442	1342	1118
	Med	m³/h	-	2850	2700	2520	2350	2160	1970	1750	-
		l/s	-	792	750	700	653	600	547	486	-
		CFM	-	1677	1589	1483	1383	1271	1159	1030	-
	Low	m³/h	2430	2310	2180	2050	1900	1750	-	-	-
		l/s	675	642	606	569	528	486	-	-	-
		CFM	1430	1360	1283	1207	1118	1030	-	-	-



Cooling

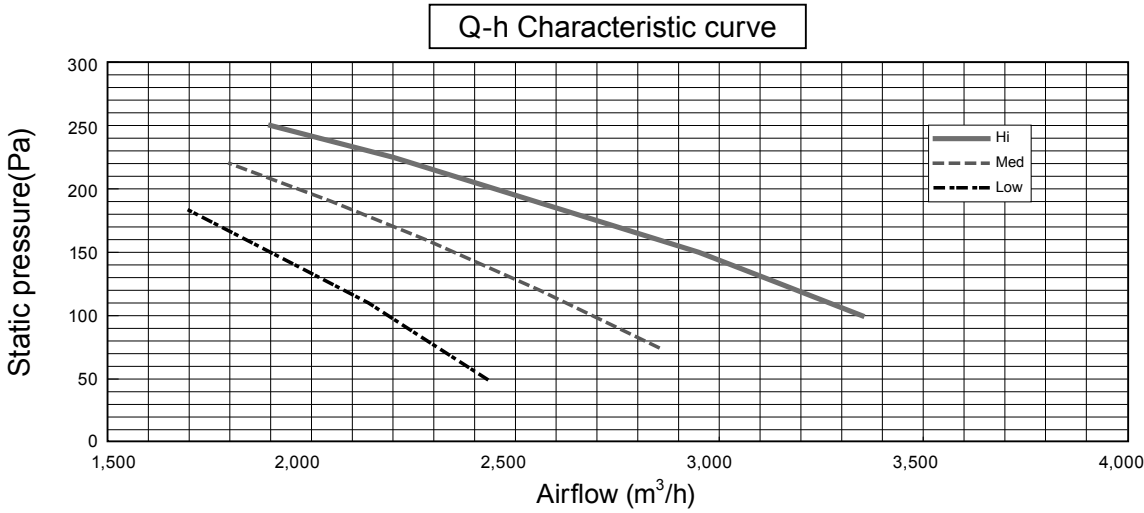


Heating

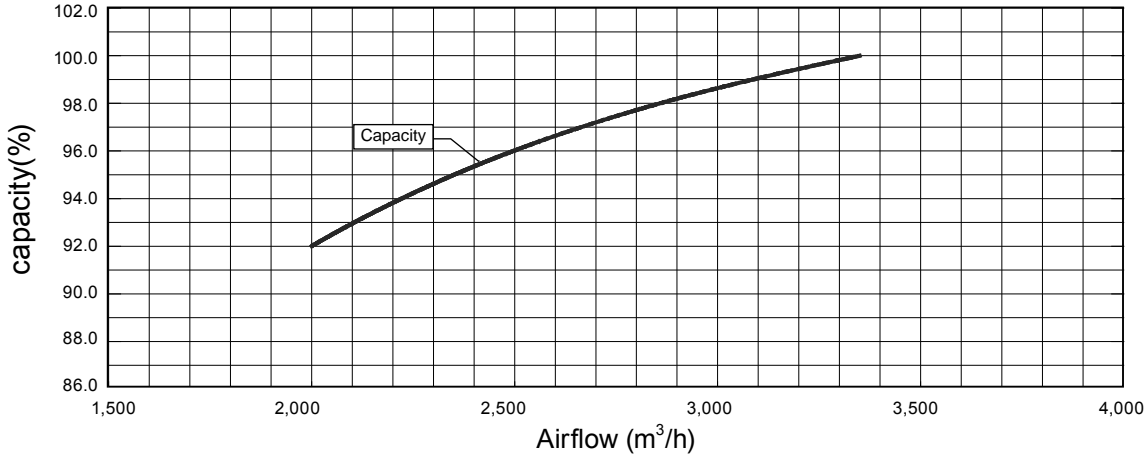


■ MODEL: AR*G54LHTA

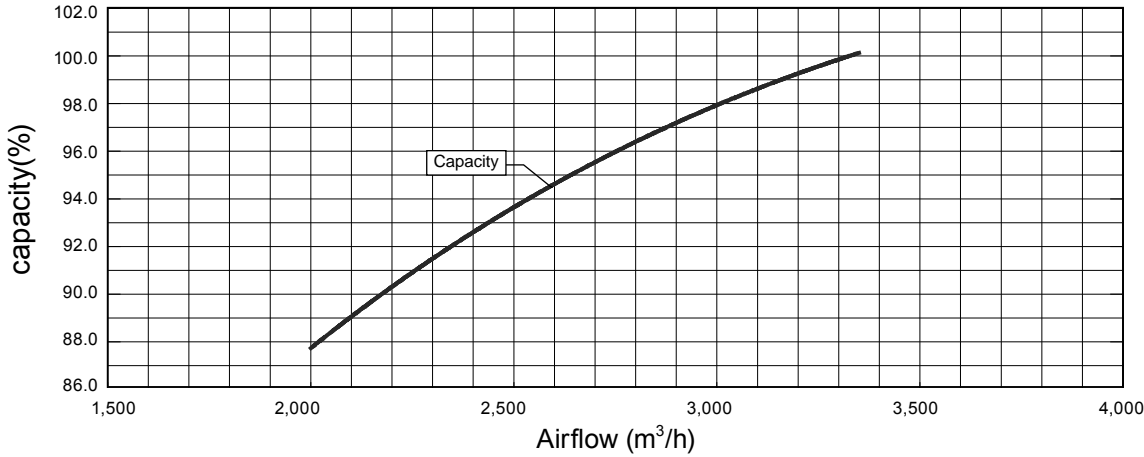
			Static pressure (Pa)								
			50	75	100	125	150	175	200	225	250
FAN SPEED	Hi	m³/h	-	-	3350	3150	2950	2700	2450	2280	1900
		l/s	-	-	931	875	819	750	681	633	528
		CFM	-	-	1972	1854	1736	1589	1442	1342	1118
	Med	m³/h	-	2850	2700	2520	2350	2160	1970	1750	-
		l/s	-	792	750	700	653	600	547	486	-
		CFM	-	1677	1589	1483	1383	1271	1159	1030	-
	Low	m³/h	2430	2310	2180	2050	1900	1750	-	-	-
		l/s	675	642	606	569	528	486	-	-	-
		CFM	1430	1360	1283	1207	1118	1030	-	-	-



● Cooling



● Heating



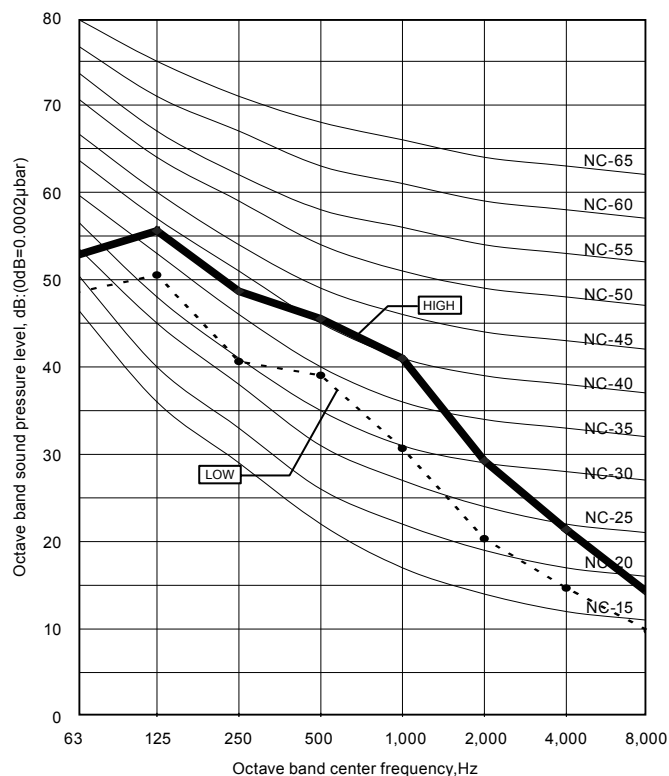
8. OPERATION NOISE

8-1. NOISE LEVEL CURVE

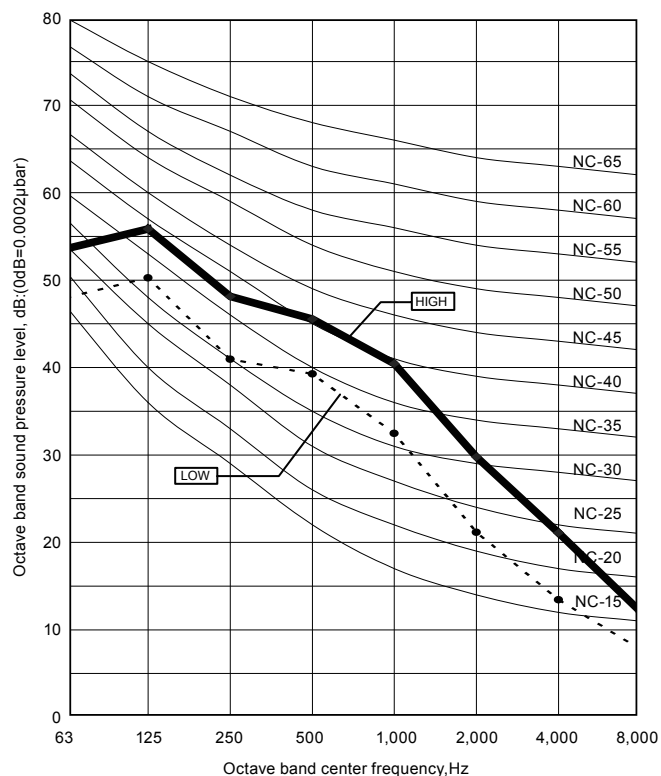
MODEL: AR*G45LHTA

Condition
Static pressure : 100Pa

● Cooling

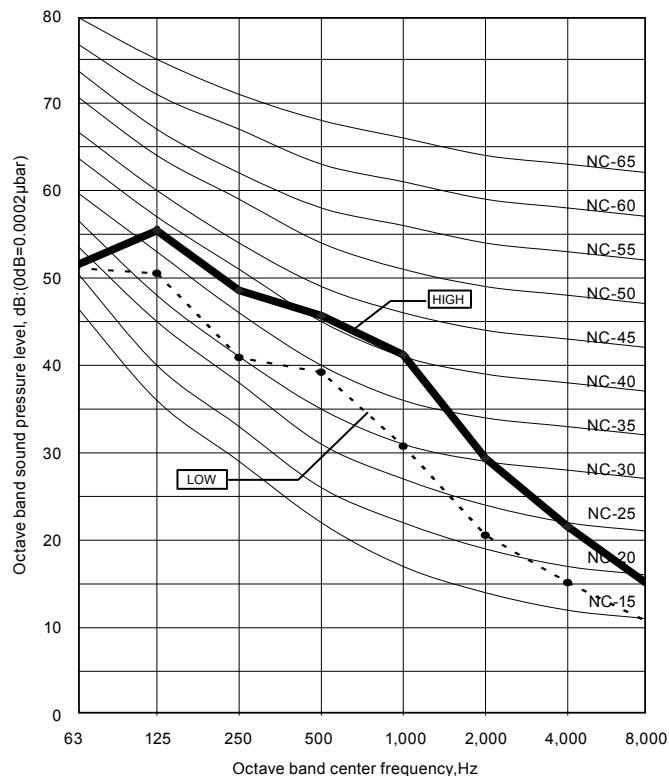


● Heating

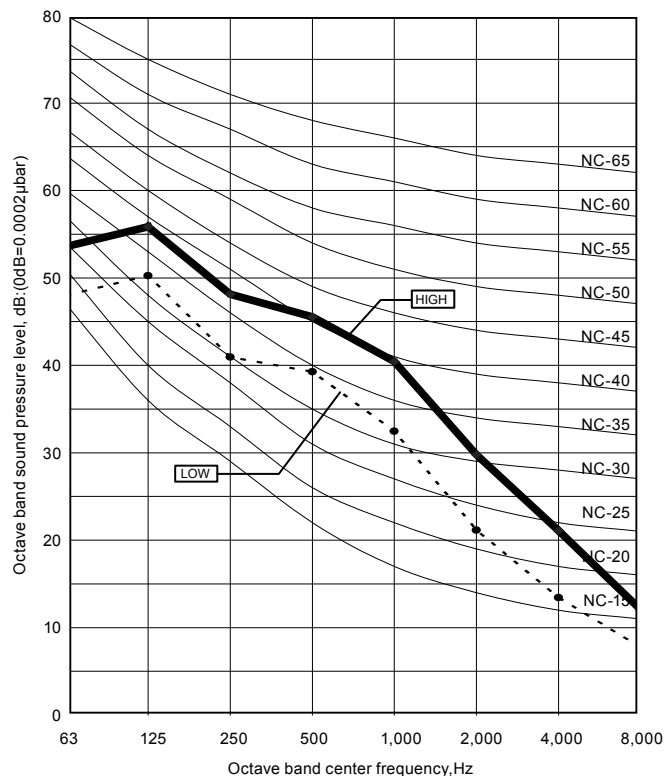


MODEL: AR*G54LHTA

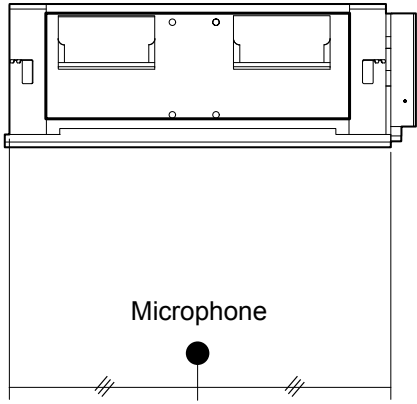
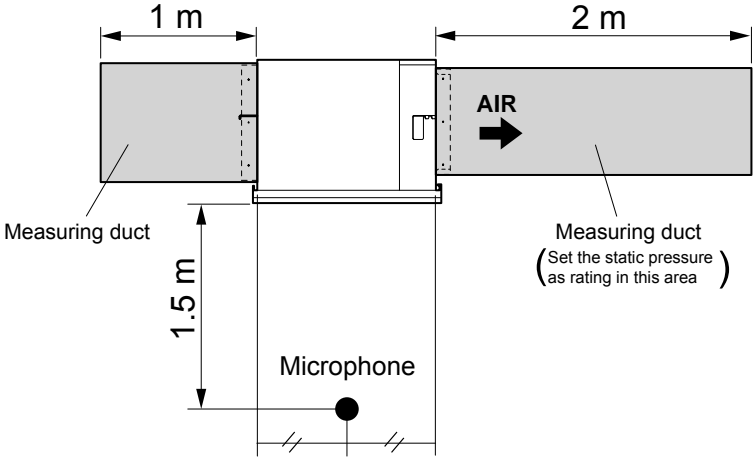
● Cooling



● Heating



8-2. SOUND LEVEL CHECK POINT



9. ELECTRIC CHARACTERISTICS

Model name			AR*G45LHTA AR*G54LHTA
Power supply	Voltage	V	230~
	Frequency	Hz	50
Max Operating Current		A	4.0
Wiring spec.	Connection cable	mm ²	1.5
	Limited wiring length	m	50

Note: Wiring specification

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
		AR*G45LHTA AR*G54LHTA
Circuit protection	Current fuse (PCB)	250V 3.15A
Fan motor protection	Thermal protector	145±5°C OFF

11. EXTERNAL INPUT & OUTPUT

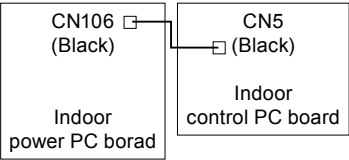
INPUT	OUTPUT	Connector	REMARKS
CONTROL INPUT	—	CN114	See external input / output settings for details.
—	OPERATION STATUS	CN115	
—	FRESH AIR CONTROL	CN14	
—	AUXILIARY HEATER	CN15	

PREPARATION

Before connecting the external input, preparation is necessary using the signal wire in the figure below.



When the external input/output is used, connect the external signal wire as shown in the figure.



11-1. EXTERNAL INPUT

■ CONTROL INPUT (Operation/Stop or Forced stop)

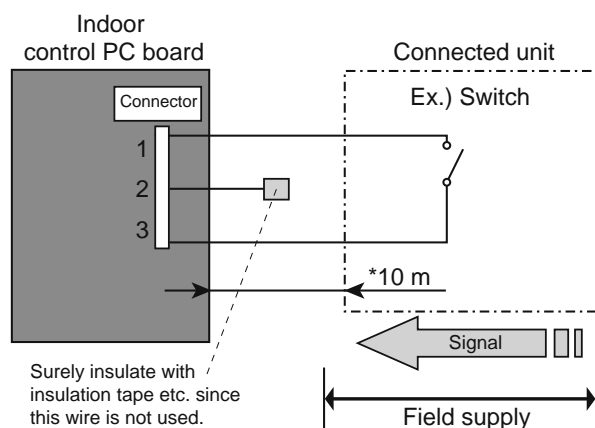
The air conditioner can be remotely operated by means of the following on-site work.

"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.

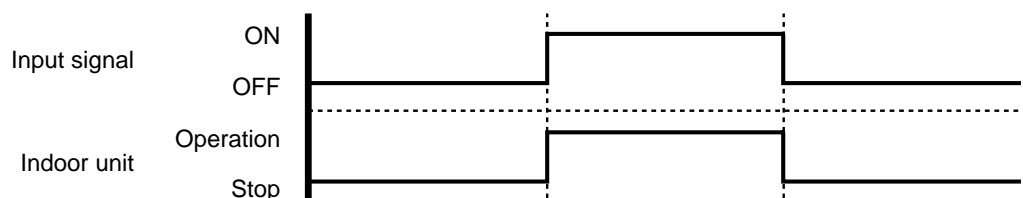
	Initial setting after power is ON	Starting mode other than initial setting
Operation mode	Auto changeover	Mode at previous operation
Set temperature	24°C	Temperature at previous operation
Air flow mode	AUTO	Mode at previous operation

● Circuit diagram example

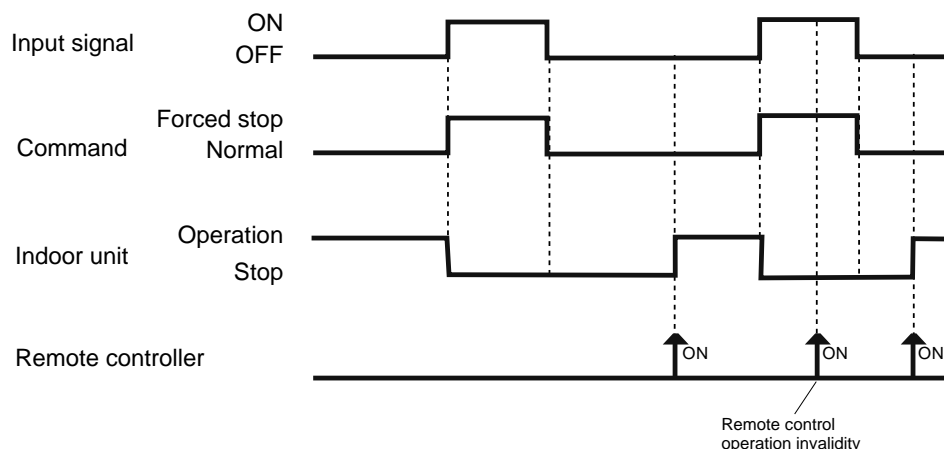


* Make the distance from the PC board to the connected unit within 10 m.
Contact capacity : 5VDC or more, 15mA or more.
Please use non-polar relays and switches.

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



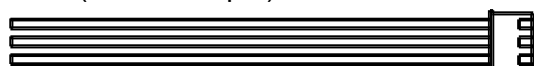
• When function setting is in "Forced stop" mode



● Parts (Optional)

Model name
UTD-ECS5A

Wire (External input)

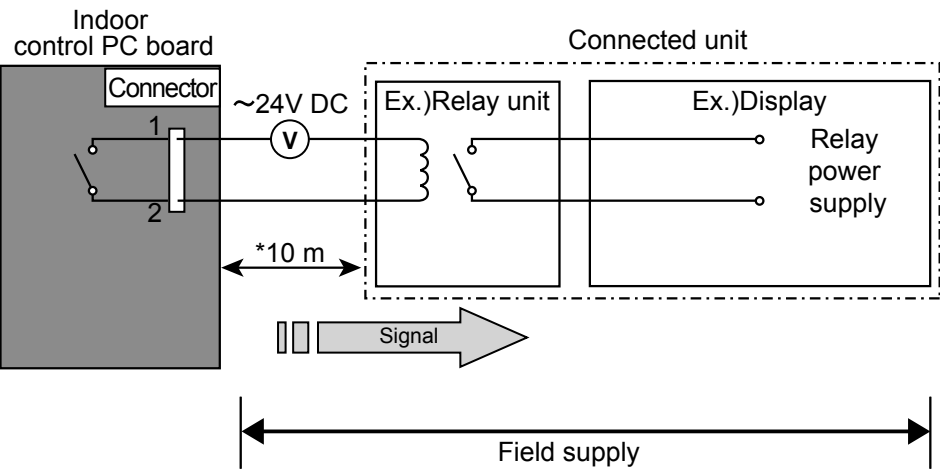


11-2. EXTERNAL OUTPUT

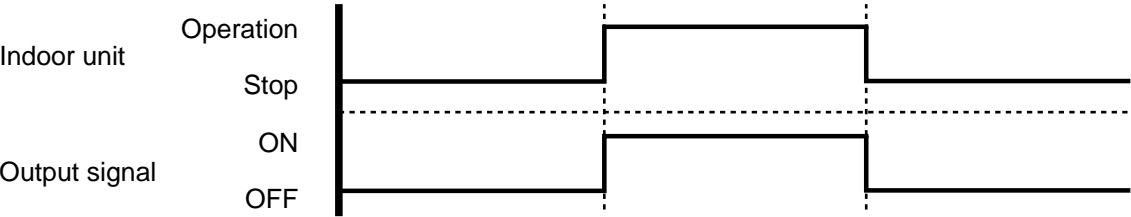
■ OPERATION STATUS OUTPUT

An air conditioner operation status signal can be output.

● Circuit diagram example



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



● Parts (Optional)

Model name
UTD-ECS5A

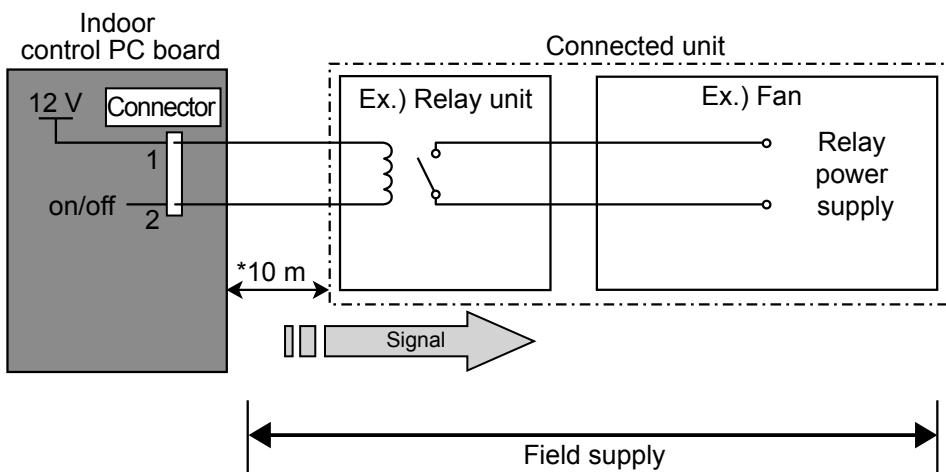
Wire (External output)



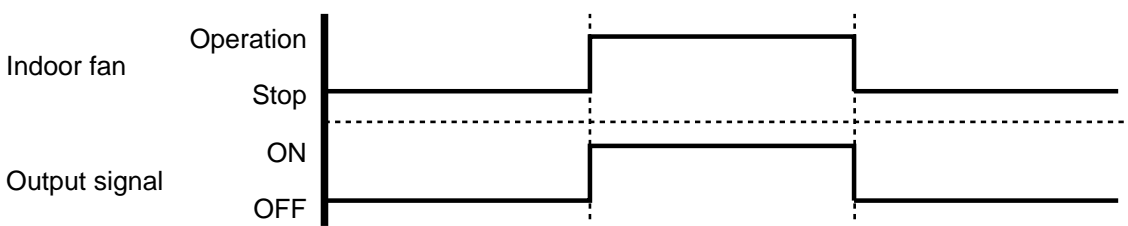
FRESH AIR CONTROL OUTPUT

A signal linked to air conditioner indoor fan ON can be output.
 * However, signal becomes OFF during cold air prevention control operation.

Circuit diagram example



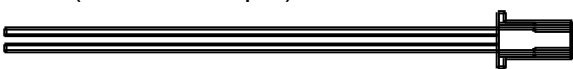
* Make the distance from the PC board to the connected unit within 10m.
 Relay spec. : Rated 12VDC, 50mA or less.



Parts (Optional)

Model name
UTD-ECS5A

Wire (Fresh air output)



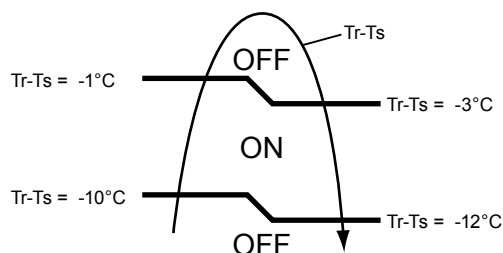
AUXILIARY HEATER OUTPUT

A signal is outputted from Connector when indoor fan and compressor is turned on under heating operation.

*Signal output performance specifications are as shown on the right.

Ex. When Set Temperature(T_s) is 22°C;

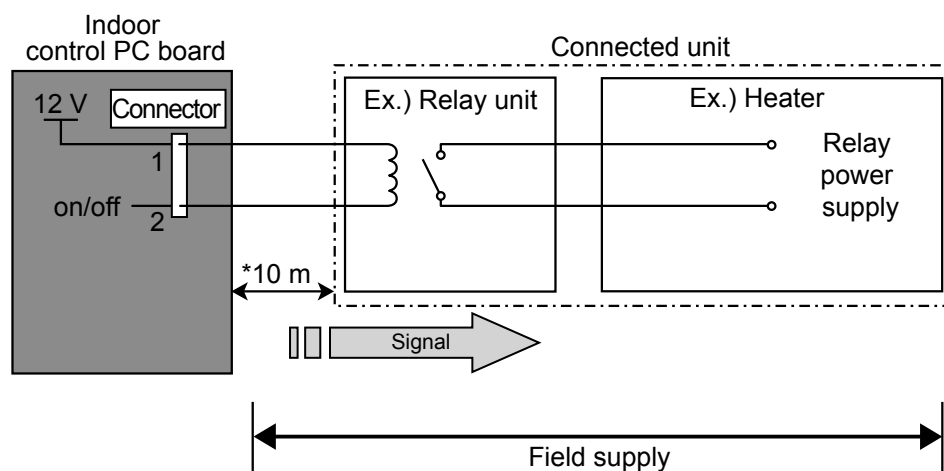
- and Room Temperature(T_r) increase above 12°C, signal output is on.
- and Room Temperature(T_r) increase above 21°C, signal output is off.
- and Room Temperature(T_r) decrease below 19°C, signal output is on.
- and Room Temperature(T_r) decrease below 10°C, signal output is off.



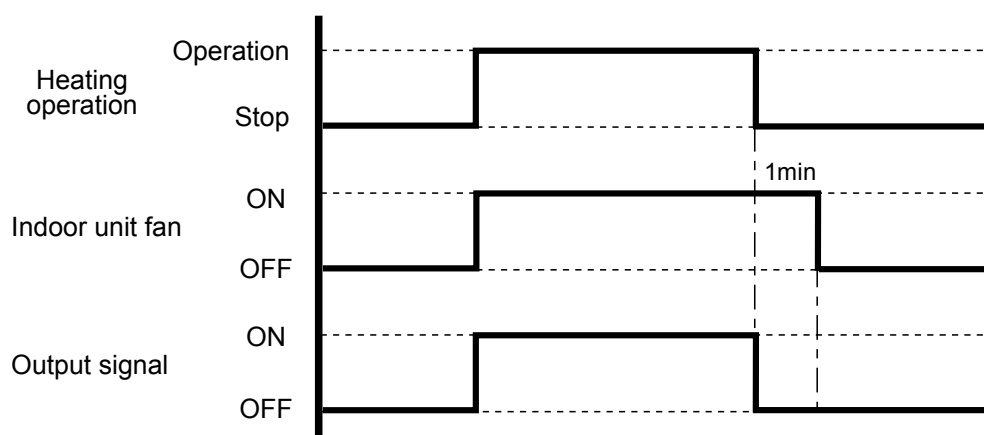
Jumper wire (Indoor Unit)

This is used to continue indoor unit fan operation for 1 minute after thermo OFF in heating mode. 1 minute delay control set by cutting jumper wire on PCB.

Circuit diagram example

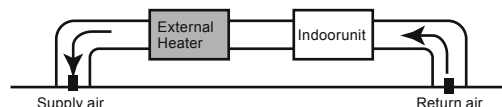


* Make the distance from the PC board to the connected unit within 10m.
Relay spec. : Rated 12VDC, 50mA or less.



CAUTION

Please place an external a heater between the indoor unit and the ductwork.
Please be sure to use delay control of the fan.



● **Parts (Optional)**

Model name
UTD-ECS5A

Wire (Heater output)

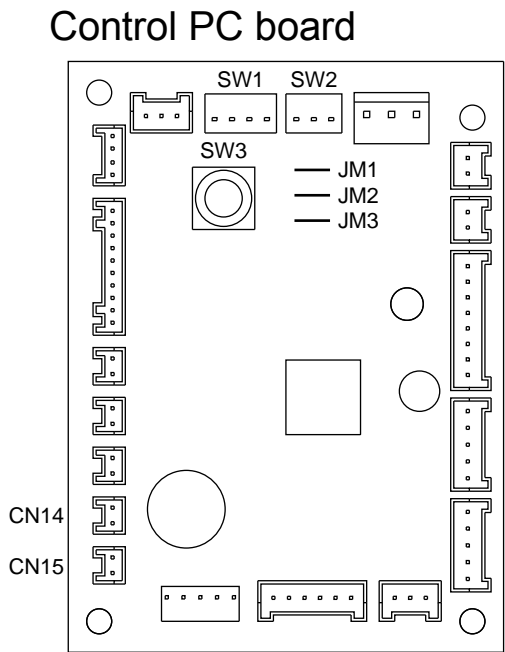


12. FUNCTION SETTINGS

12-1. INDOOR UNIT

INDOOR UNIT			
DIP SW	SW 1	1	Forbidden
		2	
		3	
		4	
	SW 2	1	
		2	
		3	
Rotary SW	SW 3		Remote controller address setting
Jumper Wire		JM 1	Forbidden
		JM 2	
		JM 3	Fan delay setting

■ SWITCH POSITION



■ ROTARY SWITCH SETTING

● Remote controller address setting (SW3)

This switch can be used when group control system. Set the remote controller address in the 1,2,-,15 order.

(◆. . .Factory setting)

SW 3	SW state
0	single
1-15	Remote controller address

■ JUMPER WIRE SETTING

● JM1, 2 setting forbidden

● Fan delay setting (JM3)

When the indoor unit is stopped while operating in conjunction with auxiliary heater, the indoor unit fan operation will continue for one minute.

(◆. . .Factory setting)

	JM state
Connect	Invalid
Disconnect	Valid

12-2. 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 or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

■ PREPARATION

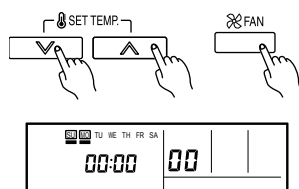
● Turn on the power.

- * Before turning on the power of the indoor units, make sure the piping air-tight test and vacuuming have been conducted.
- * Also check again to make sure no wiring mistakes were made before turning on the power.

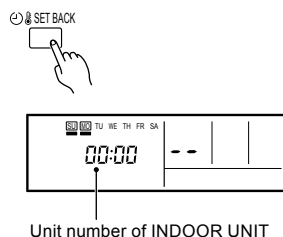
■ FUNCTION SETTING METHOD (for Wired remote controller)

● Setting method

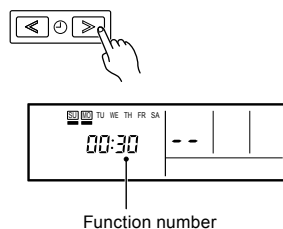
- (1) Press the SET TEMP. buttons (▼) (▲) and FAN button simultaneously for more than 5 seconds to enter the function setting mode.



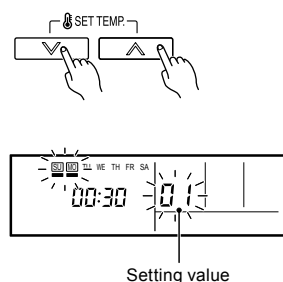
- (2) Press the SET BACK button to select the indoor unit number.



- (3) Press the Set time buttons to select the function number.



- (4) Press the SET TEMP. buttons (▼) (▲) to select the setting value. The display flashes during setting value selection.



- (5) Press the TIMER SET button to confirm the setting. Press the TIMER SET button for a few seconds until the setting value stops flashing. If the setting value display changes or if “-” is displayed when the flashing stops, the setting value has not been set correctly. (An invalid setting value may have been selected for the indoor unit.)
- (6) Repeat steps 2 to 5 to perform additional settings. Press the SET TEMP. buttons (▼) (▲) and FAN control button simultaneously again for more than 5 seconds to cancel the function setting mode. In addition, the function setting mode will be automatically canceled after 1 minute if no operation is performed.
- (7) 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 it on again. The Function Setting will not become active unless the power is turned off then on again.

■ CONTENTS FUNCTION SETTING

- Follow the instructions in the Local Setup Procedure, which is supplied with the remote control, in accordance with the installed condition.

After the power is turned on, perform the Function Setting on the remote control.

- The settings may be selected between the following two: Function Number or Setting Value.
- Settings will not be changed if invalid numbers or setting values are selected.

1)	Filter sign
2)	Cooler room temperature correction
3)	Heater room temperature correction
4)	Auto restart
5)	Indoor room temperature sensor switching function
6)	Cool air prevention
7)	Remote controller signal code
8)	External input control
9)	Room temperature control switching

1) Filter sign

The indoor unit has a sign to inform the user that it is time to clean the filter. Select the time setting for the filter sign display interval in the table below according to the amount of dust or debris in the room. If you do not wish the filter sign to be displayed, select the setting value for "No indication".

(◆... Factory setting)

Setting description	Function number	Setting value
Standard (2500 hours)	11	00
Long interval (5000 hours)		01
Short interval (1250 hours)		02
No indication		03

2) Cooler room temperature correction

Depending on the installed environment, the room temperature sensor may require a correction.

The settings may be selected as shown in the table below.

(◆... Factory setting)

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

3) Heater room temperature correction

Depending on the installed environment, the room temperature sensor may require a correction.

The settings may be changed as shown in the table below.

(◆... Factory setting)

Setting description	Function number	Setting value
◆ Standard	31	00
Warmer control		01
Slightly warmer control		02
Lower control		03

4) Auto restart

Enable or disable automatic system restart after a power outage.

(◆... Factory setting)

Setting description	Function number	Setting value
◆ Yes	40	00
No		01

*Auto restart is an emergency function such as for power failure etc.
Do not start and stop the indoor unit by this function in normal operation.
Be sure to operate by the control unit, or external input device.

5) Indoor room temperature sensor switching function

The following settings are needed when use the control by Wired remote controller temperature sensor.

(◆... Factory setting)

Setting description	Function number	Setting value
◆ No	42	00
Yes		01

*If setting value is "00" :

Room temperature is controlled by the indoor unit temperature sensor.

*If setting value is "01" :

Room temperature is controlled by either indoor unit temperature sensor or remote controller unit sensor.

6) Cool air prevention

This setting is used to set the fan speed when the compressor stops once the room temperature has reached the set temperature during heating operation.

(◆... Factory setting)

Setting description	Function number	Setting value
◆ Super low	43	00
Follow the setting on the remote controller (corresponding to ventilation)		01

7) Remote controller signal code

Change the indoor unit Signal Code, depending on the remote controllers.

(◆... Factory setting)

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

8) 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 forbidden)		01
	Forced stop mode		02

9) Room temperature control switching

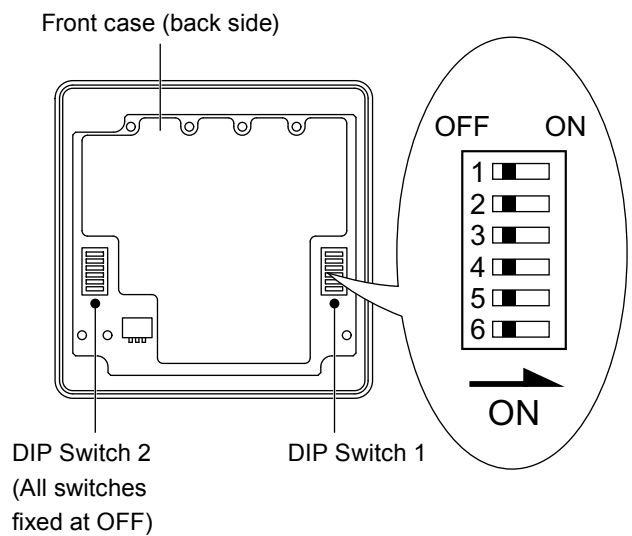
This setting is used to set the room temperature control method when the wired remote controller is selected by the Indoor Room Temperature Sensor Switching Function.

(◆... Factory setting)

	Setting description	Function number	Setting value
◆	Control by the sensors of both the indoor unit and the wired remote controller.	48	00
	Control only by the sensor of the wired remote controller		01

12-3. WIRED REMOTE CONTROLLER

SWITCH POSITION



DIP SWITCH 1 SETTING

DIP Switch 1	SW1	Forbidden*
	SW2	Dual remote controller setting
	SW3	Forbidden*
	SW4	Forbidden*
	SW5	Forbidden*
	SW6	Memory backup setting

*Switches are fixed at OFF.

Dual remote controller setting

Set the remote controller SW2 according to the following table.

(◆... Factory setting)

	Number of remote controller	Primary unit	Secondary unit
		SW2	SW2
◆	1 (Normal)	OFF	—
	2 (Dual)	OFF	ON

Memory backup setting


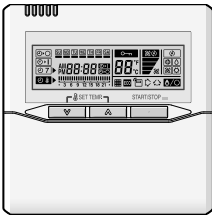

Set to ON to use batteries for the memory backup. If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.

(◆... Factory setting)


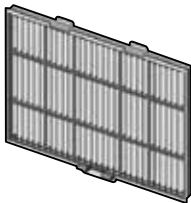




	SW6	Memory backup
◆	OFF	Invalidity
	ON	Validity

13. OPTIONAL PARTS

13-1. CONTROLLER

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.
	Wired remote controller	UTY-RNN*M	The room temperature can be controlled by detecting the temperature accurately with built-in thermo sensor.
	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.

13-2. OTHERS

Exterior	Parts name	Model No.	Summary
	Remote sensor	UTY-XSZX	New amenity space can be offered by installing the Remote sensor in the remote controller.
	Long-life filter	UTD-LF60KA	Long- life filter can be mounted to the indoor unit.
 (x 1)  (x 2)  (x 1)  (x 2)	External control set	UTD-ECS5A	Use to connect with various peripheral devices and air conditioner PC board. (Set of 6)

2. OUTDOOR UNIT

SINGLE TYPE :

AO*G45LETL

AO*G54LETL

CONTENTS

2. OUTDOOR UNIT

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1. FEATURE

■ FEATURES

● Peak cut operation

Peak cut mode

Suppresses maximum capacity to perform energy-saving operation, preventing breaker tripping. This function operates by setting a peak current value and reducing the power consumption.

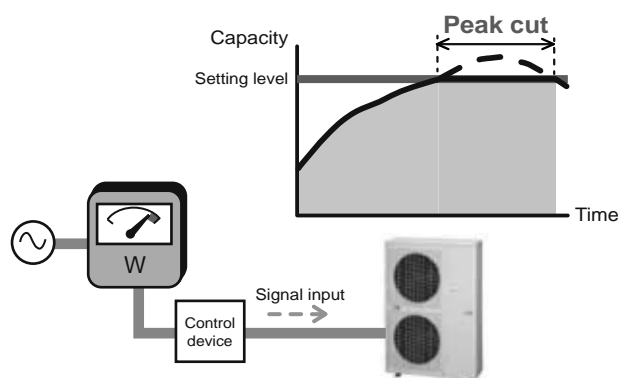
* Performance drops by reducing the power consumption preferentially.

Level 1 ... Suppresses the power consumption to almost 0% by stopping the compressor.

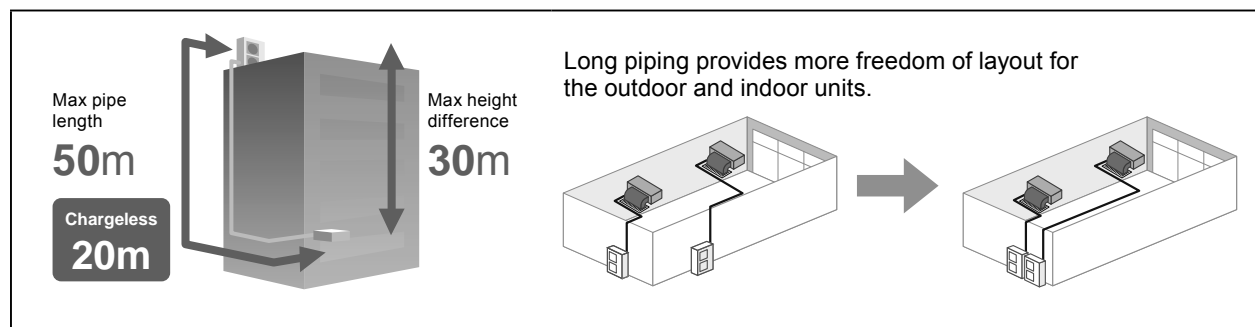
Level 2 ... Suppresses the power consumption to 50% of the rated power consumption value.

Level 3 ... Suppresses the power consumption to 75% of the rated power consumption value.

Level 4 ... Suppresses the power consumption to the rated power consumption value (100%).



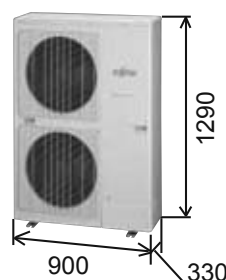
● High installation capability long piping correspondence



● Space saving

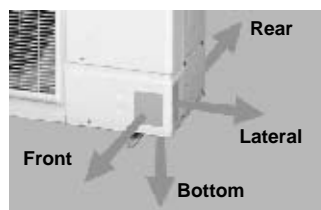
Compact size

High performance has been realized with a compact outdoor unit.
Due to the compact size, the space required for installation has been reduced, allowing a wider selection of installation locations.



● 4-direction piping connection

Piping is connectable in any of the four directions. The perfect route can be selected according to the installation.



● Low outdoor air temperature correspondence

Both cooling and heating operations can be performed when the outdoor air temperature is low.

Cooling

-15 °C

Heating

Dry-bulb -15 °C
Wet-bulb -20 °C

● External output (option)

Compressor status output

This output indicates the outdoor unit compressor status.

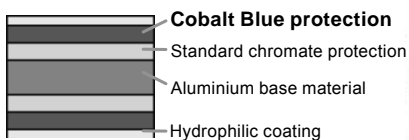
Error status output

This output indicates the Normal / Error status of the outdoor unit and connected indoor unit.

● Blue fin heat exchanger

Corrosion-resistance of the heat exchanger even in coastal areas has been improved by blue fin treatment of the outdoor unit heat exchanger.

Blue fin heat exchanger



● Service, maintenance

- "Error display" and "Operating information" can be explained by LED display.
- Pump down operation can be performed by one button during refrigerant recovery.



● Quiet operation

Low noise mode

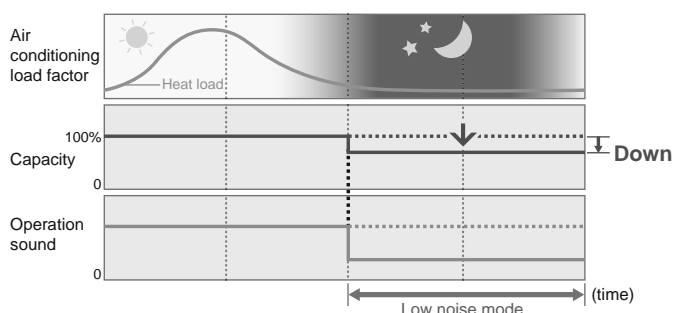
Suppresses operating sound.

This function suppresses the outdoor unit noise value to the following 2 levels.

* Performance may drop depending on the outside air temperature condition, etc.

Level 1 ... Rated noise value -2dB

Level 2 ... Rated noise value -4dB



2. SPECIFICATIONS

Model name				AO*G45LETL		AO*G54LETL	
Power source				1Ø 230V~ 50Hz			
Available voltage range				198-264V~ 50Hz			
Starting current			A	18.9		20.9	
Fan	Airflow rate	Cooling	(m³/h)	6,750		6,750	
		Heating		6,200		6,850	
	Type × Q'ty		Propeller × 2				
	Motor output		W	104		104	
Sound pressure level		Cooling	dB(A)	55		55	
		Heating		55		57	
Heat exchanger type		Dimensions (H × W × D)		mm	1260 × 900 × 36.4		
		Fin pitch			1.30		
		Rows x Stages			2 × 60		
		Pipe type			Copper		
		Fin type	Type (Material)		Corrugate (Aluminium)		
			Surface treatment		Corrosion resistance (Blue fin)		
Compressor	Type × Q'ty		Twin Rotary × 1				
	Motor output						W
Refrigerant		Type (Global Warming Potential)		R410A (1975)			
		Charge	g	3350			
Refrigerant oil		Type		RB68			
Enclosure		Material		Steel sheet			
		Colour		BEIGE (Approximate colour of MUNSELL 10YR 7.5 / 1.0)			
Dimensions (H×W×D)	Net		mm	1290 × 900 × 330			
	Gross			1430 × 1050 × 445			
Weight	Net		kg	86			
	Gross			94			
Connection pipe	Size	Liquid	mm	Ø 9.52 (Ø 3/8 in.)			
		Gas		Ø 15.88 (Ø 5/8 in.)			
	Method			Flare			
	Pre-charge length		m	20			
	Max. length			50			
	Max. height difference			30			
Operation range		Cooling	°C	-15 to 46			
		Heating		-15 to 24			

Note :

Specifications are based on the following conditions.

Cooling : Indoor temperature of 27 °CDB / 19 °CWB and outdoor temperature of 35 °CDB/24 °CWB.

Heating : Indoor temperature of 20 °CDB / 15 °CWB and outdoor temperature of 7 °CDB/6 °CWB.

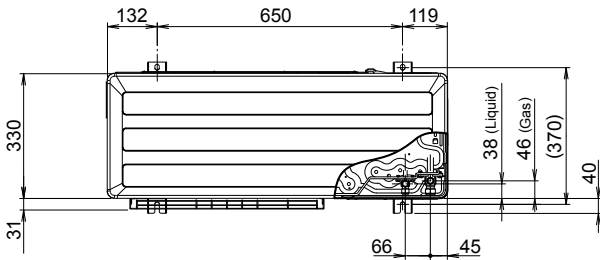
Pipe length : 5 m, Height difference : 0 m.(Outdoor unit - Indoor unit)

The protective function may work when using it outside the operation range.

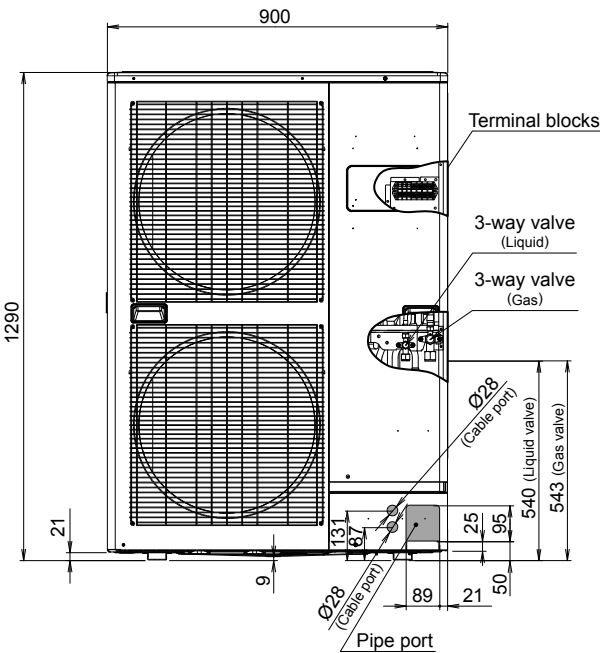
3. DIMENSIONS

■ MODELS: AO*G45LETL, AO*G54LETL

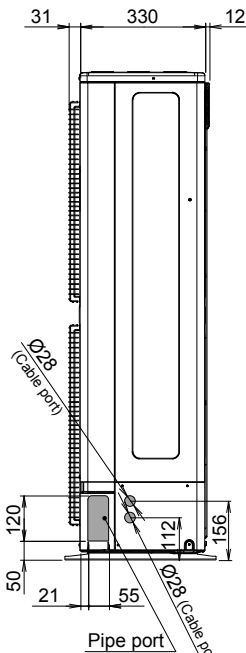
(Unit : mm)



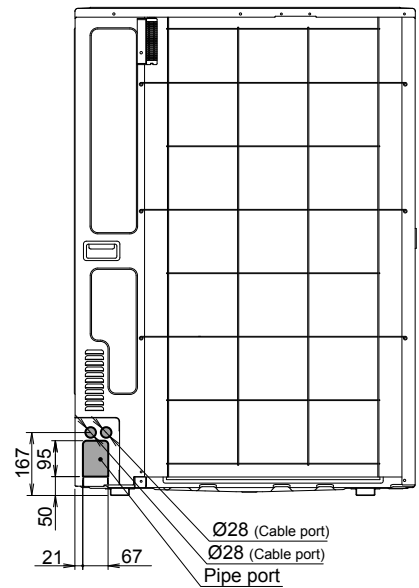
Top view



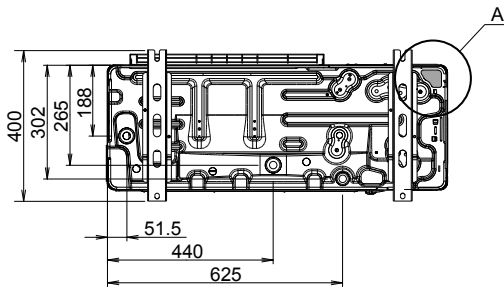
Front view



Side view

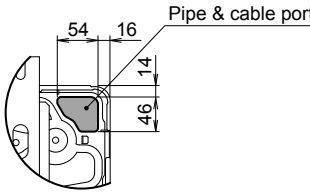


Rear view



Bottom view

Detail A



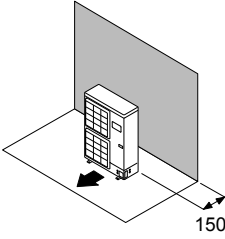
4. INSTALLATION PLACE

4-1. SINGLE OUTDOOR UNIT INSTALLATION

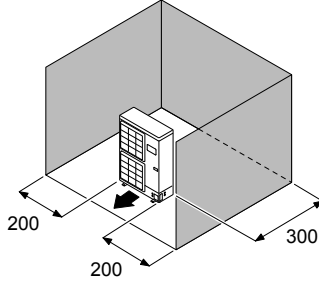
■ WHEN THE UPWARD AREA IS OPEN

(Unit : mm)

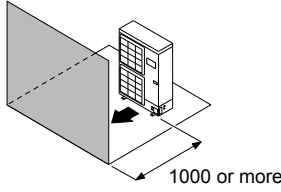
Obstacles at rear only



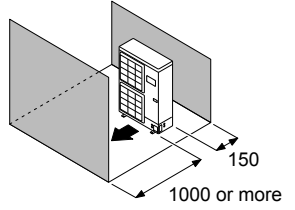
Obstacles at rear and sides only



Obstacles at front only

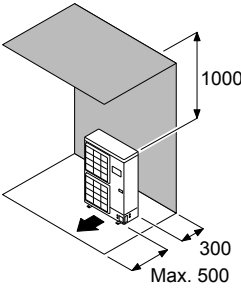


Obstacles at front and rear only

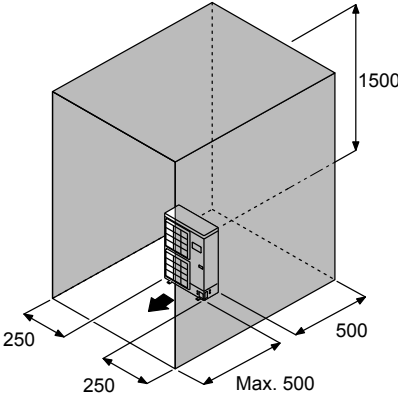


■ WHEN AN OBSTRUCTION IS PRESENT ALSO IN THE UPWARD AREA

Obstacles at rear and above only



Obstacles at rear, sides, and above only



(Unit : mm)

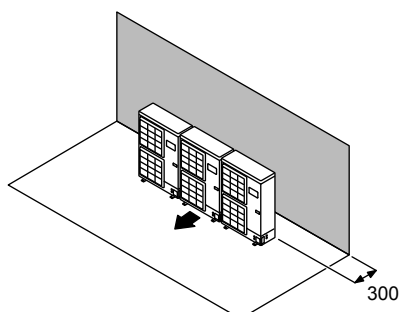
If the space is larger than stated, the condition will be the same as those without any obstacles.

4-2. MULTIPLE OUTDOOR UNIT INSTALLATION

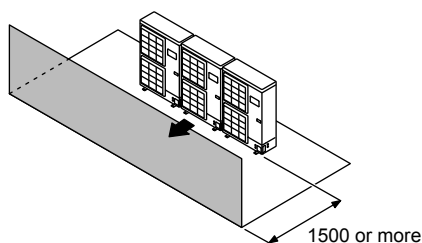
■ WHEN THE UPWARD AREA IS OPEN

(Unit : mm)

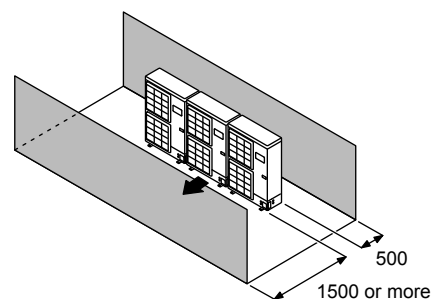
Obstacles at rear only



Obstacles at front only



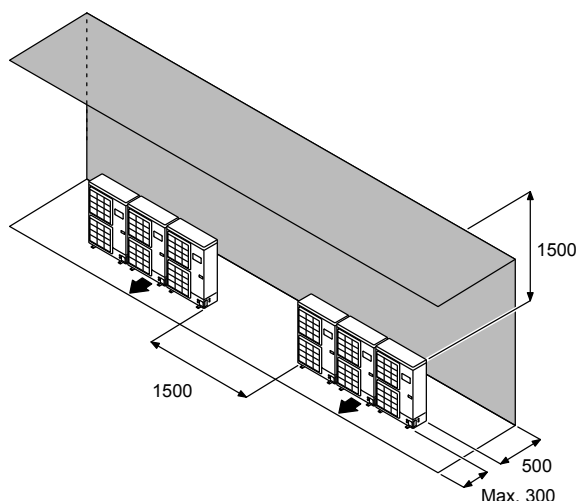
Obstacles at front and rear only



■ WHEN AN OBSTRUCTION IS PRESENT ALSO IN THE UPWARD AREA

(Unit : mm)

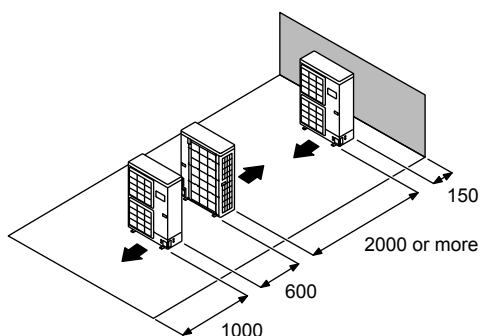
Obstacles at rear and above only



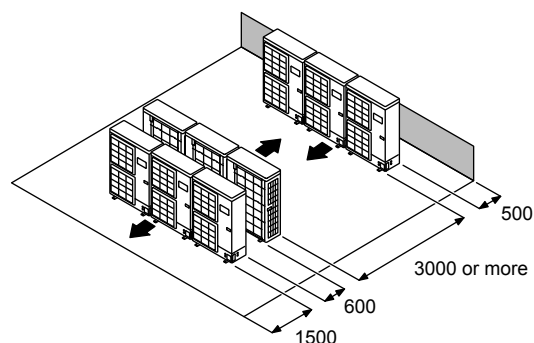
4-3. OUTDOOR UNIT INSTALLATION IN MULTI ROW

(Unit : mm)

Single parallel unit arrangement



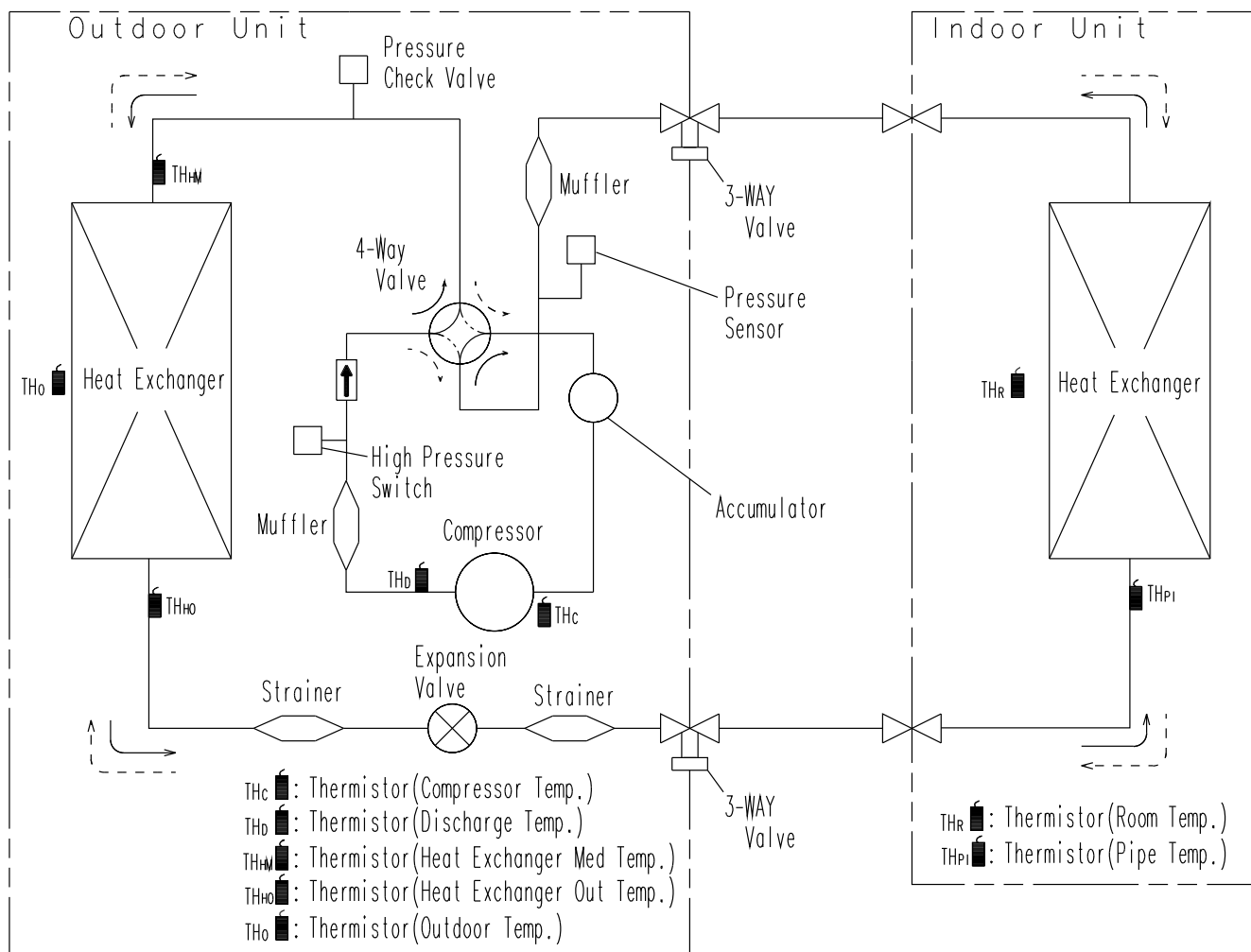
Multiple parallel unit arrangement



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

5. REFRIGERANT CIRCUIT

■ MODELS: AO*G45LETL, AO*G54LETL



Refrigerant direction

- Cooling
- - - -> Heating

Refrigerant pipe diameter

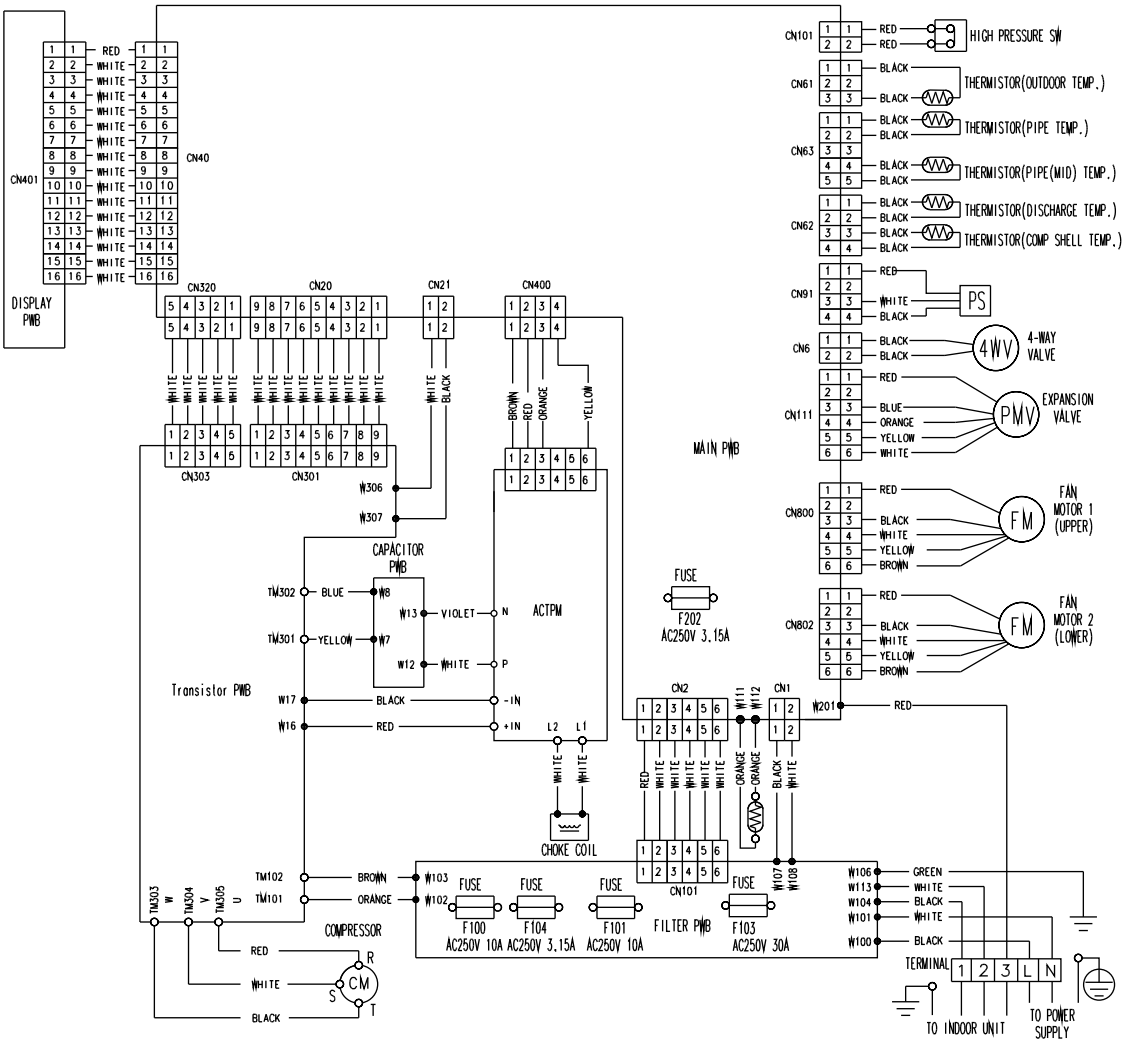
Liquid : 9.52mm (3/8")

Gas : 15.88mm (5/8")

6. WIRING DIAGRAMS

■ MODELS: AO*G45LETL, AO*G54LETL

OUTDOOR UNIT
AO*G45-54LETL



OUTDOOR UNIT
AO*G45-54LETL

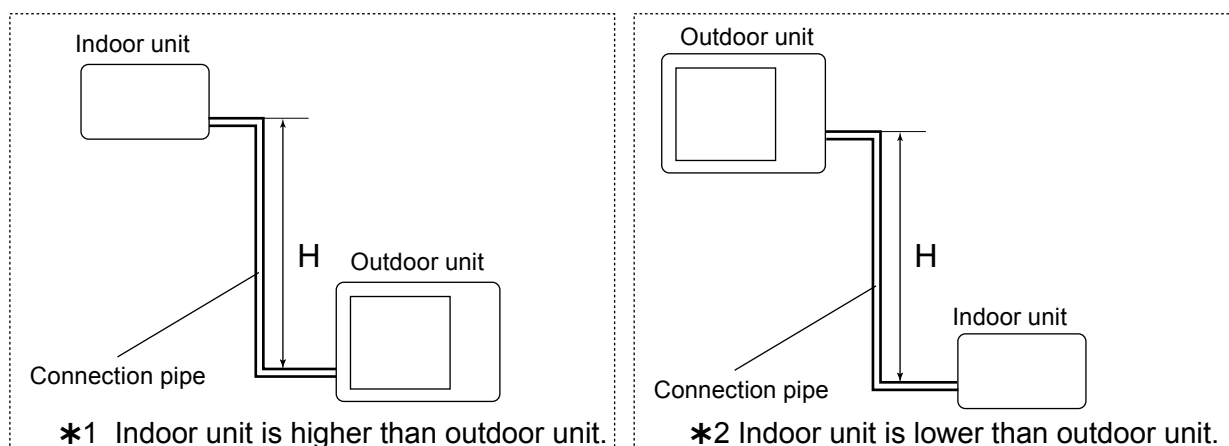
7. CAPACITY COMPENSATION RATE FOR PIPE LENGTH AND HEIGHT DIFFERENCE

■ MODEL: AO*G45LETL

COOLING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	*1 Indoor unit is higher than outdoor unit.	30	-	-	-	-	0.879	0.846	0.814
		20	-	-	-	0.926	0.893	0.861	0.828
		10	-	-	0.975	0.942	0.908	0.875	0.841
		7.5	-	0.988	0.979	0.946	0.912	0.878	0.845
		5	0.992	0.992	0.983	0.949	0.916	0.882	0.848
		0	1.000	1.000	0.991	0.957	0.923	0.889	0.855
	*2 Indoor unit is lower than outdoor unit.	-5	1.000	1.000	0.991	0.957	0.923	0.889	0.855
		-7.5	-	1.000	0.991	0.957	0.923	0.889	0.855
		-10	-	-	0.991	0.957	0.923	0.889	0.855
		-20	-	-	-	0.957	0.923	0.889	0.855
		-30	-	-	-	-	0.923	0.889	0.855

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	*1 Indoor unit is higher than outdoor unit.	30	-	-	-	-	0.978	0.968	0.958
		20	-	-	-	0.988	0.978	0.968	0.958
		10	-	-	0.998	0.988	0.978	0.968	0.958
		7.5	-	1.000	0.998	0.988	0.978	0.968	0.958
		5	1.000	1.000	0.998	0.988	0.978	0.968	0.958
		0	1.000	1.000	0.998	0.988	0.978	0.968	0.958
	*2 Indoor unit is lower than outdoor unit.	-5	0.998	0.995	0.993	0.983	0.973	0.963	0.953
		-7.5	-	0.993	0.991	0.981	0.971	0.961	0.951
		-10	-	-	0.988	0.978	0.968	0.958	0.948
		-20	-	-	-	0.968	0.958	0.949	0.939
		-30	-	-	-	-	0.949	0.939	0.929

Height difference H

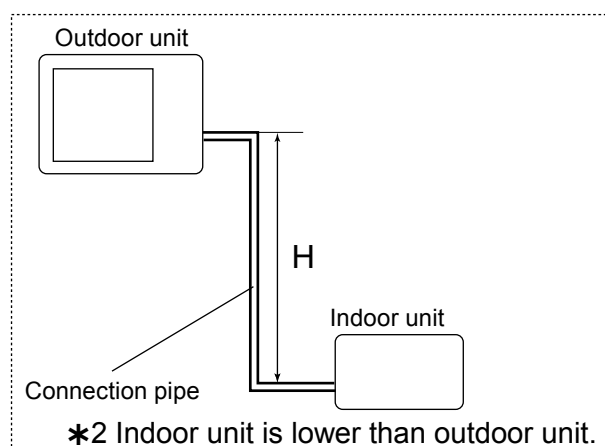
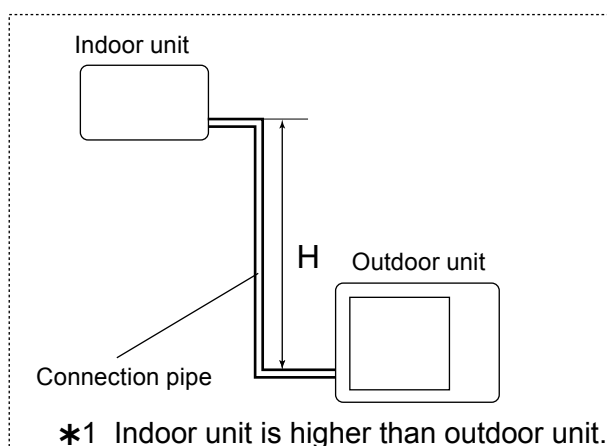


■ MODEL: AO*G54LETL

COOLING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	*1 Indoor unit is higher than outdoor unit.	30	-	-	-	-	0.871	0.837	0.803
		20	-	-	-	0.921	0.886	0.851	0.816
		10	-	-	0.971	0.936	0.900	0.865	0.830
		7.5	-	0.988	0.975	0.940	0.904	0.868	0.833
		5	0.992	0.992	0.979	0.943	0.908	0.872	0.836
		0	1.000	1.000	0.987	0.951	0.915	0.879	0.843
	*2 Indoor unit is lower than outdoor unit.	-5	1.000	1.000	0.987	0.951	0.915	0.879	0.843
		-7.5	-	1.000	0.987	0.951	0.915	0.879	0.843
		-10	-	-	0.987	0.951	0.915	0.879	0.843
		-20	-	-	-	0.951	0.915	0.879	0.843
		-30	-	-	-	-	0.915	0.879	0.843

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	*1 Indoor unit is higher than outdoor unit.	30	-	-	-	-	0.978	0.968	0.958
		20	-	-	-	0.988	0.978	0.968	0.958
		10	-	-	0.998	0.988	0.978	0.968	0.958
		7.5	-	1.000	0.998	0.988	0.978	0.968	0.958
		5	1.000	1.000	0.998	0.988	0.978	0.968	0.958
		0	1.000	1.000	0.998	0.988	0.978	0.968	0.958
	*2 Indoor unit is lower than outdoor unit.	-5	0.998	0.995	0.993	0.983	0.973	0.963	0.953
		-7.5	-	0.993	0.991	0.981	0.971	0.961	0.951
		-10	-	-	0.988	0.978	0.968	0.958	0.948
		-20	-	-	-	0.968	0.958	0.949	0.939
		-30	-	-	-	-	0.949	0.939	0.929

Height difference H



8. ADDITIONAL CHARGE CALCULATION

■ MODELS: AO*G45LETL, AO*G54LETL

Refrigerant type		R410A
Refrigerant amount	g	3350

● Refrigerant Charge

Total pipe length	m	20 or less	30	40	50 (MAX)	40g/m
Additional charge	g	0	400	800	1200	

9. AIRFLOW

■ MODELS: AO*G45LETL, AO*G54LETL

● Cooling

MODEL		Number of rotations (r.p.m.)	Airflow	
AO*G45LETL	Upper fan	850	m ³ /h	6750
	Lower fan	800	l/s	1875
			CFM	3974
AO*G54LETL	Upper fan	850	m ³ /h	6750
	Lower fan	800	l/s	1875
			CFM	3974

● Heating

MODEL		Number of rotations (r.p.m.)	Airflow	
AO*G45LETL	Upper fan	780	m ³ /h	6200
	Lower fan	750	l/s	1722
			CFM	3650
AO*G54LETL	Upper fan	850	m ³ /h	6850
	Lower fan	830	l/s	1903
			CFM	4033

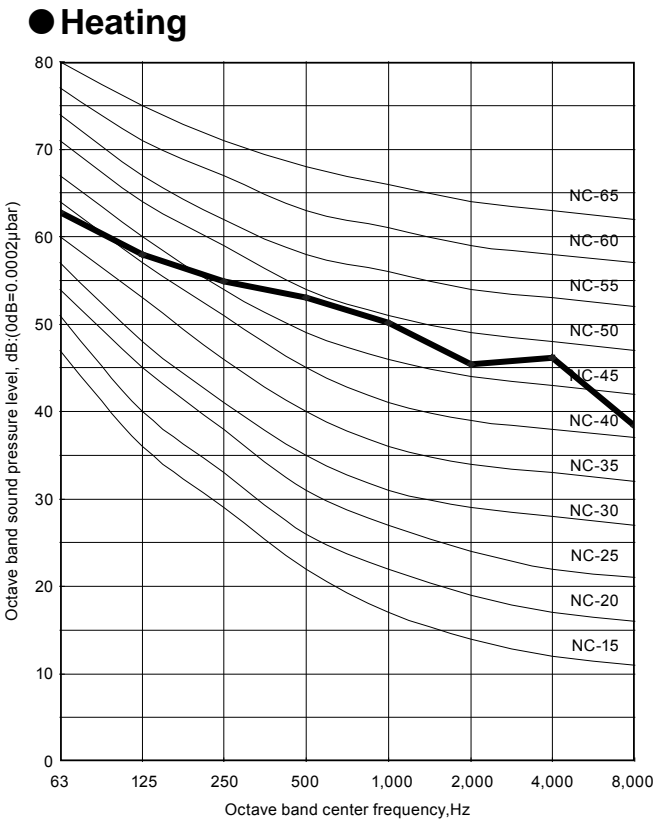
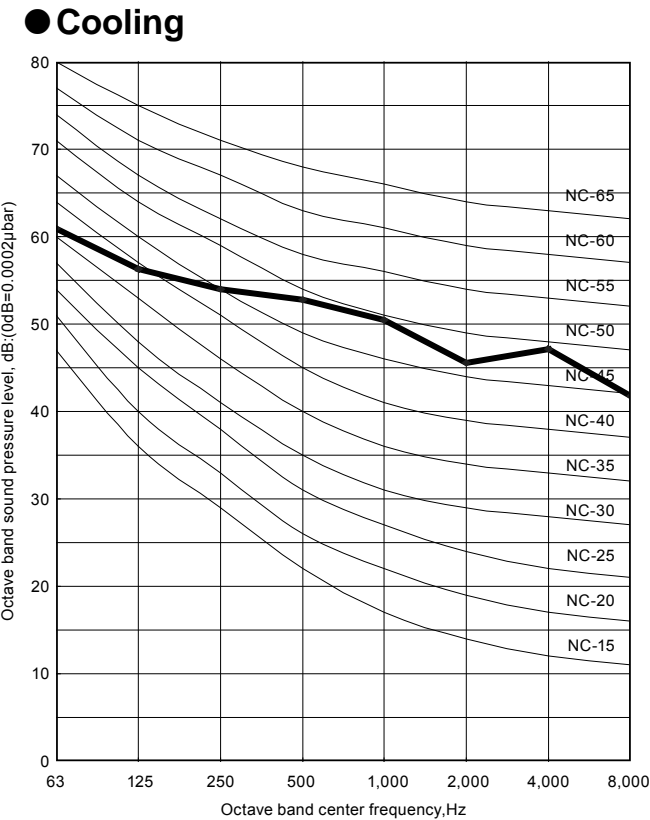
10. OPERATION NOISE (SOUND PRESSURE)

10-1. NOISE LEVEL CURVE

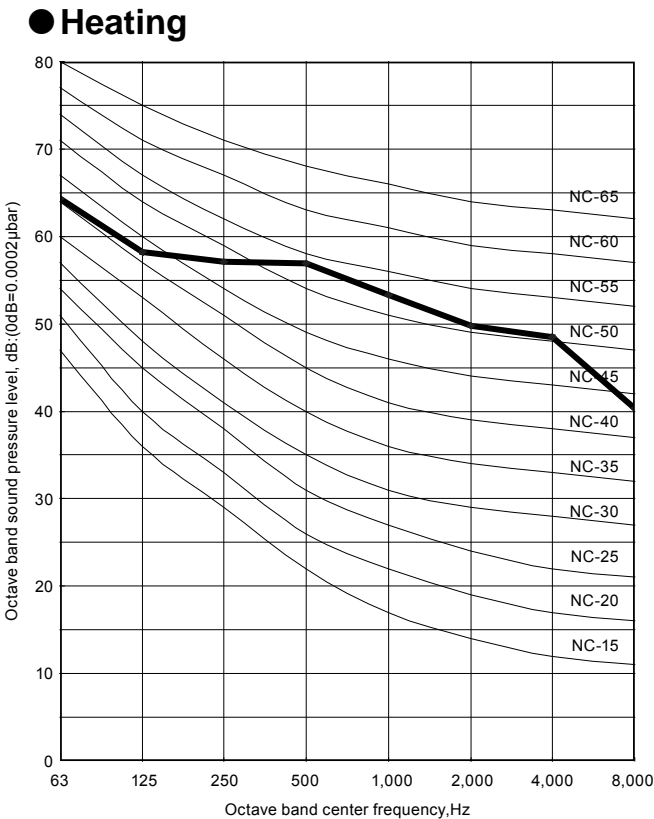
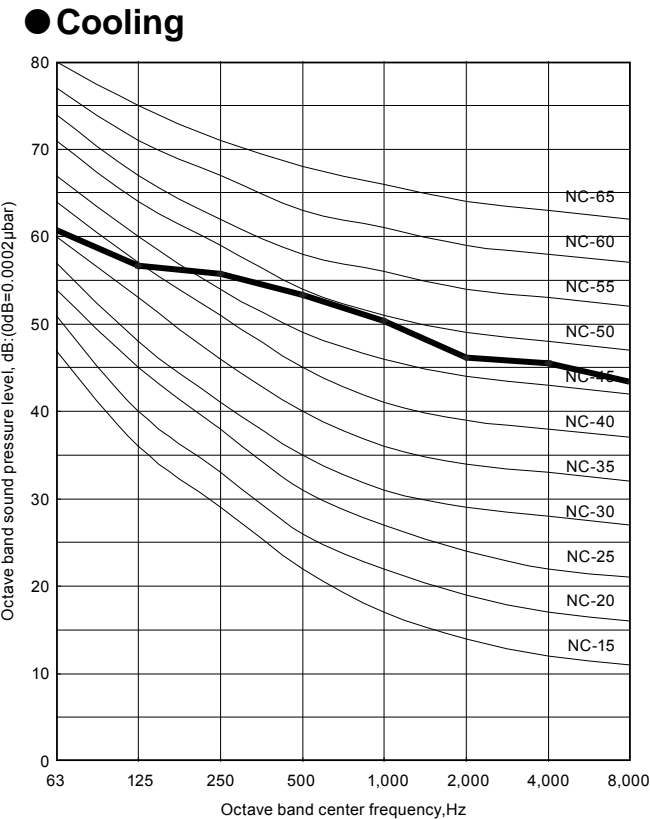
OUTDOOR UNIT
AO*G45-54LETL

OUTDOOR UNIT
AO*G45-54LETL

MODEL: AO*G45LETL



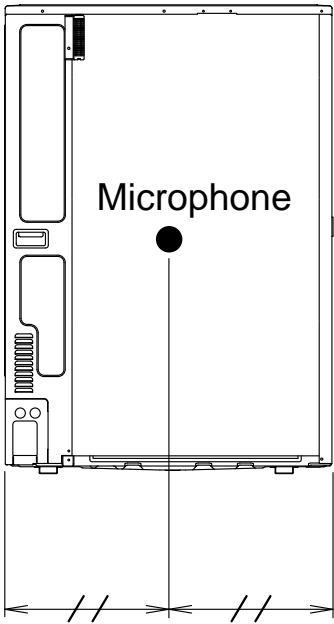
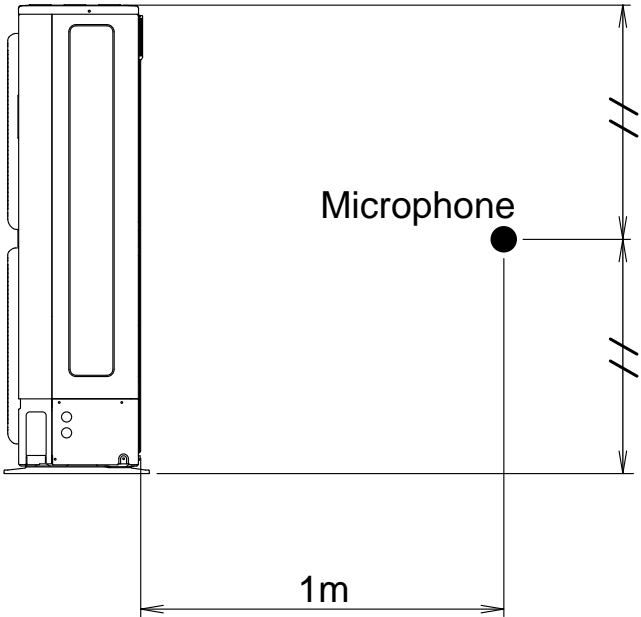
MODEL: AO*G54LETL



10-2. SOUND LEVEL CHECK POINT

OUTDOOR UNIT
AO*G45-54LET/L

Airflow
←



OUTDOOR UNIT
AO*G45-54LET/L

11. ELECTRIC CHARACTERISTICS

Model name			AO*G45LETL	AO*G54LETL
Power supply	Voltage	V	230 ~	
	Frequency	Hz	50	
*1) Max. operating current		A	22.5	23.5
*2) Wiring spec.	Main fuse (Circuit breaker)	A	30	
	Current			
	Power cable	mm ²	6.0	

*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)

12. SAFETY DEVICES

	Protection form	Model	
		AO*G45LETL	AO*G54LETL
Circuit protection	Current fuse (Filter printed circuit board)	250V 30A, 250V 10A x2, 250V 3.15A	
	Current fuse (Main printed circuit board)	250V 3.15A	
Fan motor protector	Thermal protector	OFF : 150±15°C ON : 120±15°C	
Compressor protection	Thermal protection program (Compressor temp.)	OFF : 108°C ON : 80°C	
	Thermal protection program (Discharge temp.)	OFF : 110°C ON : After 7 minutes	
High pressure protection	Pressure switch	OFF : 4.2±0.1MPa ON : 3.2±0.15MPa	
Low pressure protection	Pressure sensor	OFF : 0.12MPa ON : 0.15MPa	

13. EXTERNAL INPUT & OUTPUT

Input	Output	Connector	Remarks
Low noise mode	—	CN10	See external input/output settings for details.
Peak cut mode	—	CN11	
—	Error status	CN12	
—	Compressor status	CN13	

13-1. EXTERNAL INPUT

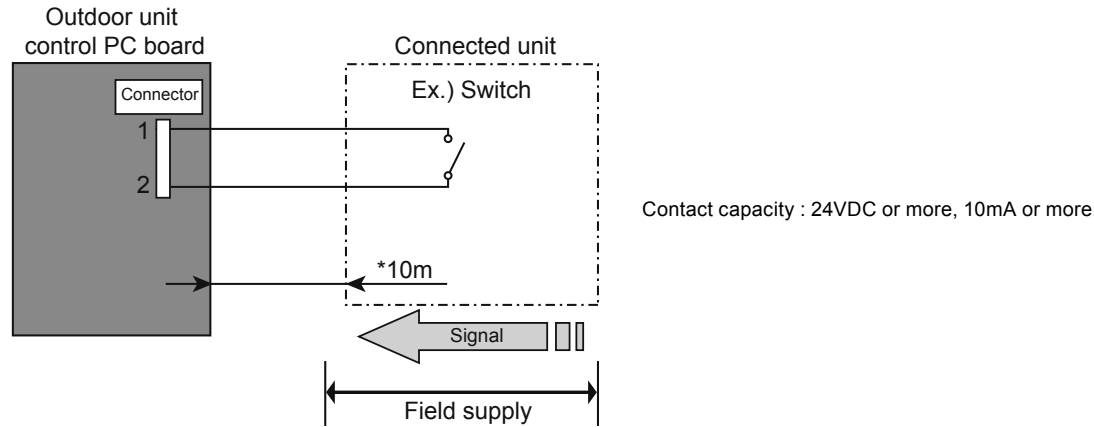
ON/OFF of the "Low noise mode" and "Peak cut mode" functions can be specified by external signal.

LOW NOISE MODE

- The following reduces the operating sound of the outdoor unit from the normal sound. The air conditioner is set to the "Low noise mode" when closing the contact input of a commercial timer or ON/OFF switch to a connector on the outdoor control PC board.

* Performance may drop depending on the outside air temperature condition, etc.

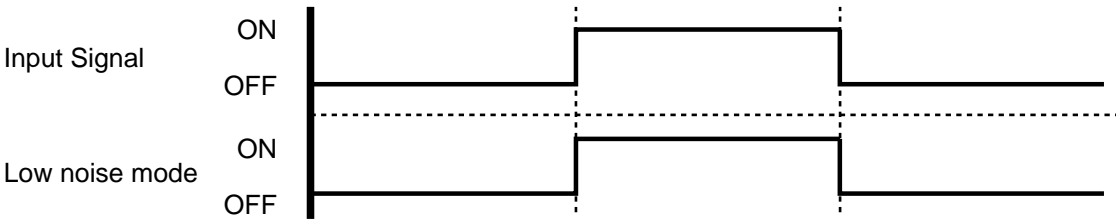
Circuit diagram example



* Make the distance from the PC board to the connected unit within 10m.

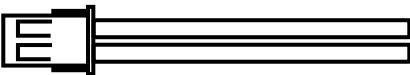
- Use the following parts and construct a circuit as shown above.
- Input Signal···ON : Low noise mode, Input Signal···OFF : Normal operation

*To set the "Low noise mode" level, refer to "13.FUNCTION SETTINGS".



Parts (Optional)

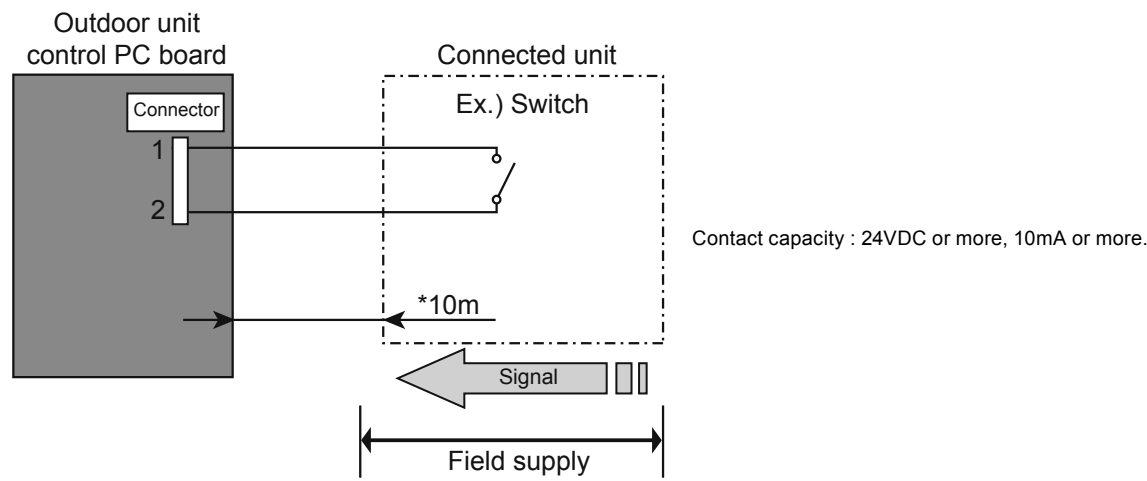
Parts name	External connect kit
Model name	UTY-XWZXZ3



PEAK CUT MODE

- Operation that suppressed the current value can be performed by means of the following on-site work. The air conditioner is set to the Peak cut mode when closing the contact input of a commercial ON/OFF switch to a connector on the outdoor control PC board.

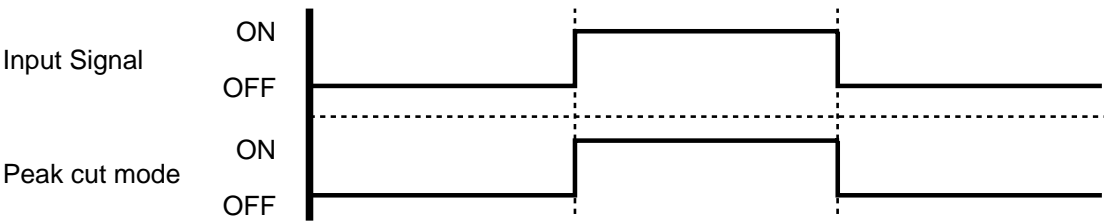
Circuit diagram example



* Make the distance from the PC board to the connected unit within 10m.

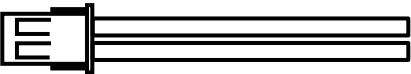
- Use the following parts and construct a circuit as shown above.
- Input Signal...ON : Peak cut mode, Input Signal...OFF : Normal operation

*To set the "Peak cut mode" level, refer to "13.FUNCTION SETTINGS".



Parts (Optional)

Parts name	External connect kit
Model name	UTY-XWZXZ3

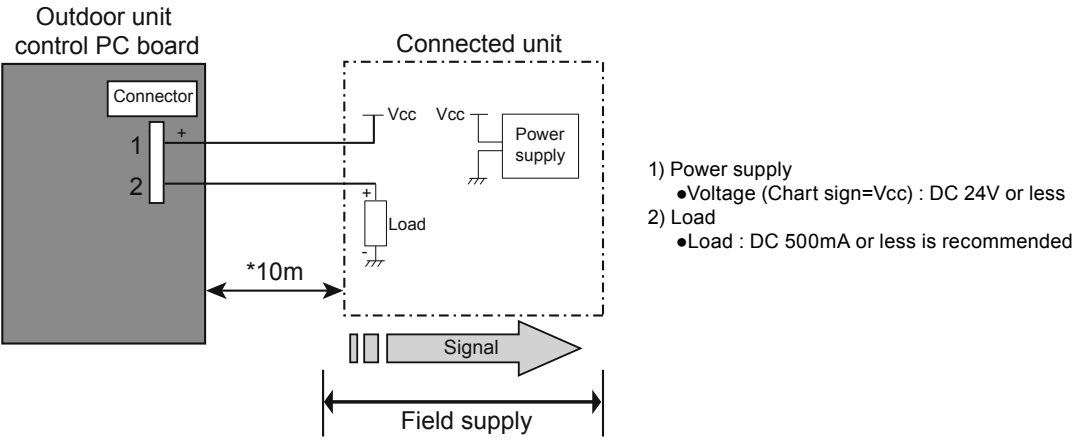


13-2. EXTERNAL OUTPUT

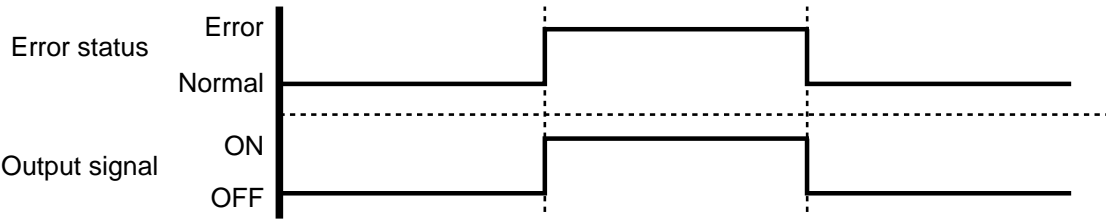
■ ERROR STATUS OUTPUT

• An air conditioner error status signal is produced when a malfunction occurs.

● Circuit diagram example

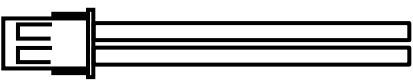


* Make the distance from the PC board to the connected unit within 10m.



● Parts (Optional)

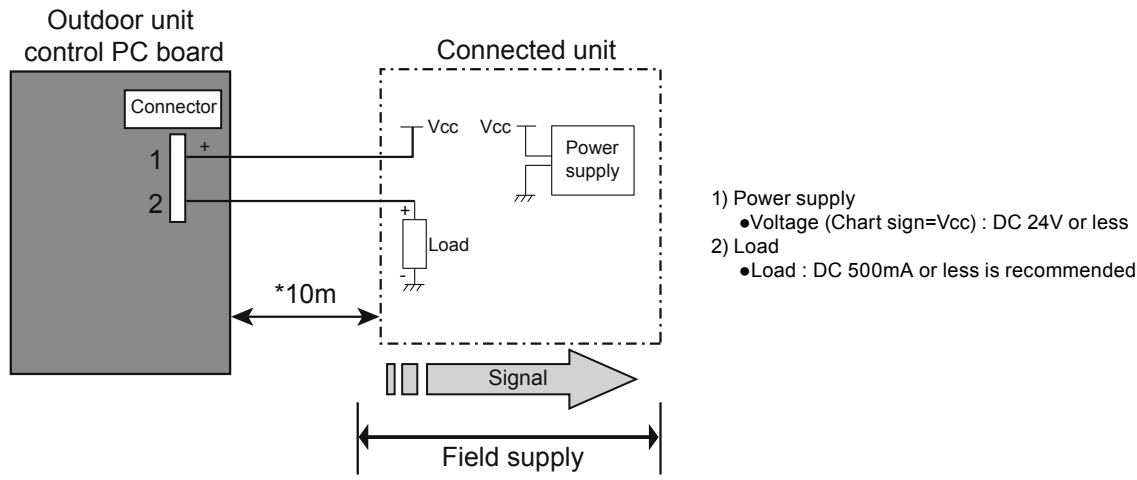
Parts name	External connect kit
Model name	UTY-XWZXZ3



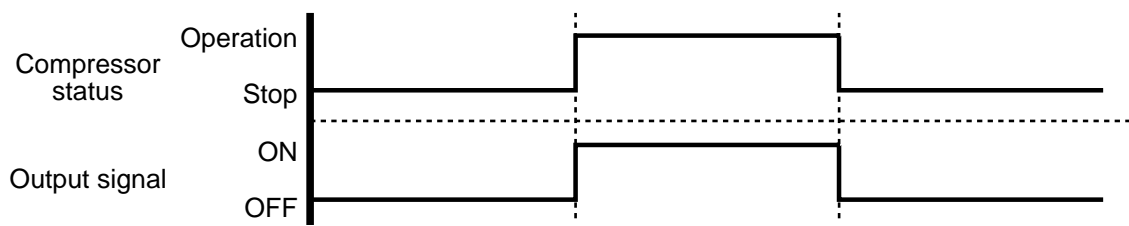
COMPRESSOR STATUS OUTPUT

• Compressor operation status signal is produced when the compressor is running.

Circuit diagram example

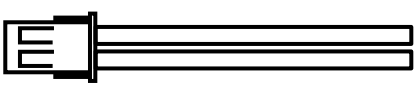


* Make the distance from the PC board to the connected unit within 10m.



Parts (Optional)

Parts name	External connect kit
Model name	UTY-XWZXZ3



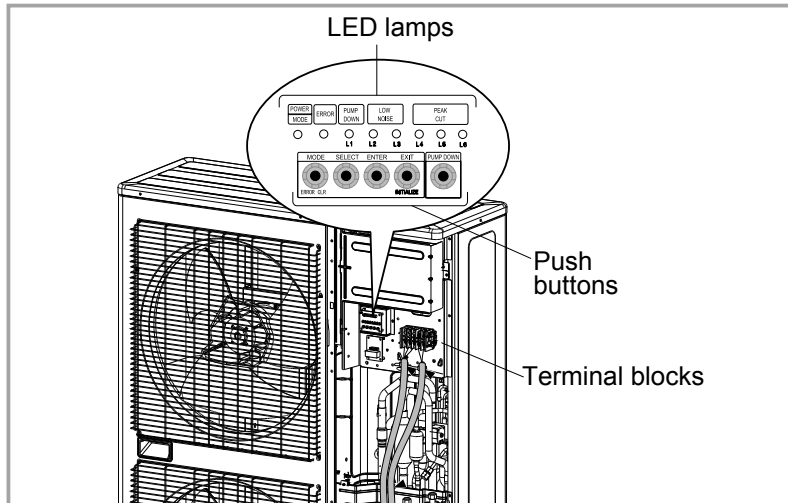
14. FUNCTION SETTINGS

⚠ Caution

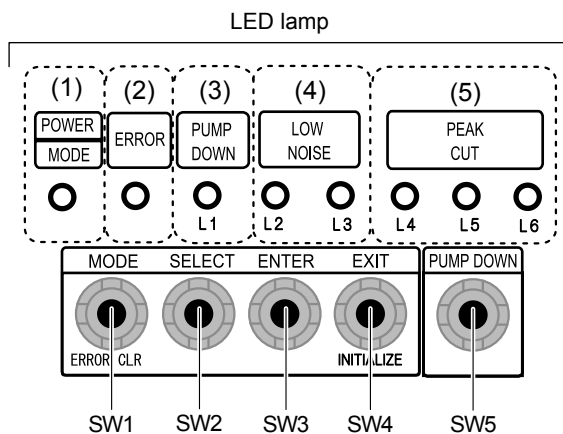
Discharge the static electricity from your body before setting up the push buttons.
Never touch the terminals or the patterns on the parts that are mounted on the board.

14-1. FIELD SETTING SWITCHES

The positions of the switches on the outdoor unit control board are shown in the figure below.



FUNCTIONS



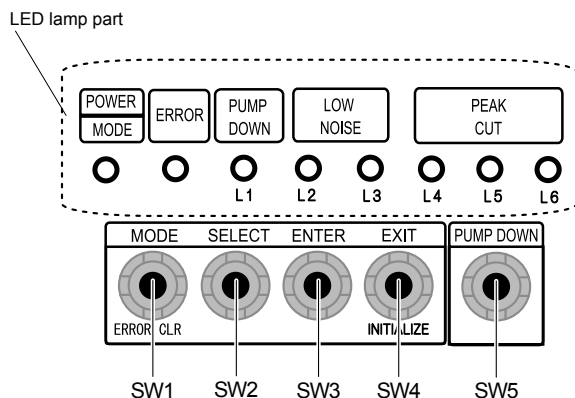
Display lamp	Function or operation method
(1) POWER / MODE	Green Lights on while power on. Local setting in outdoor unit or error code is displayed with blink.
(2) ERROR	Red Blinks during abnormal operation.
(3) PUMP DOWN (L1)	Orange Lights on during pump down operation.
(4) LOW NOISE MODE (L2,L3)	Orange Lights on during "Low noise" mode when local setting is activated. (Lighting pattern of L2 and L3 indicates low noise level)
(5) PEAK CUT MODE (L4,L5,L6)	Orange Lights on during "Peak cut" mode when local setting is activated. (Lighting pattern of L4, L5 and L6 indicates peak cut level)

Button	Function or operation method
SW1	MODE To switch between "Local setting" and "Error code display".
SW2	SELECT To switch between the individual "Local settings" and the "Error code displays".
SW3	ENTER To fix between the individual "Local settings" and the "Error code displays".
SW4	EXIT To return to "Operation status display".
SW5	PUMP DOWN To start the pump down operation.

14-2. SETTING METHOD

※ Stop the operation of air conditioner before this setting.

14-2-1. LOW NOISE MODE



(1) Switch to "Local setting mode" by pressing [MODE] button (SW1) for 3 seconds or more.

(2) Confirm that the (POWER / MODE) blinks 9 times, then press [ENTER] button (SW3).

POWER MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)	PEAK CUT (L4) (L5) (L6)
Blinks (9 times)	○	○	○	○

Sign "○" : Lights off

(3) Press [SELECT] button (SW2), and adjust LED lamp as shown below. (Current setting is displayed)

	LOW NOISE
LOW NOISE MODE	(L2) (L3) ○ Blink

(4) Press [ENTER] button (SW3).

	LOW NOISE
LOW NOISE MODE	(L2) (L3) ○ ●

Sign "●" : Lights on

(5) Press [SELECT] button (SW2), and adjust LED lamp as shown in below figure.

	PEAK CUT
	(L4) (L5) (L6)
MODE 1: Rated noise value -2dB	○ ○ Blink
MODE 2: Rated noise value -4dB	○ Blink ○

The noise of MODE2 is lower than that of MODE1.

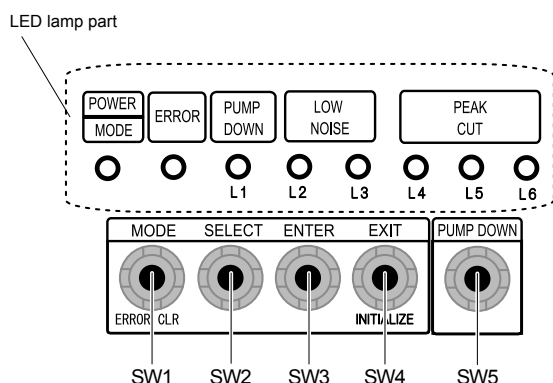
(6) Press [ENTER] button (SW3) to fix it.

	PEAK CUT
	(L4) (L5) (L6)
MODE 1: Rated noise value -2dB	○ ○ ●
MODE 2: Rated noise value -4dB	○ ● ○

(7) Return to "Operating status display (Normal operation)" by pressing [EXIT] button (SW4).

- To restart the setting during the process, return to "Operating status display (Normal operation)" by pressing the [EXIT] button once.

14-2-2. PEAK CUT MODE



- (1) Switch to "Local setting mode" by pressing [MODE] button (SW1) for 3 seconds or more.
- (2) Confirm that the (POWER / MODE) blinks 9 times, then press [ENTER] button (SW3).

POWER MODE	ERROR	PUMP DOWN (L1)	LOW NOISE (L2) (L3)	PEAK CUT (L4) (L5) (L6)
Blinks (9 times)	○	○	○	○

Sign "○" : Lights off

- (3) Press [SELECT] button (SW2), and adjust LED lamp as shown below. (Current setting is displayed)

	LOW NOISE
	(L2) (L3)
PEAK CUT MODE	Blink ○

- (4) Press [ENTER] button (SW3).

	LOW NOISE
	(L2) (L3)
PEAK CUT MODE	● ○

Sign "●" : Lights on

- (5) Press [SELECT] button (SW2), and adjust LED lamp as shown in below figure.

	PEAK CUT
	(L4) (L5) (L6)
0% of rated input ratio	○ ○ Blink
50% of rated input ratio	○ Blink ○
75% of rated input ratio	○ Blink Blink
100% of rated input ratio	Blink ○ ○

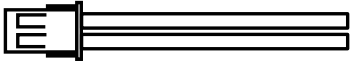
- (6) Press [ENTER] button (SW3) to fix it.

	PEAK CUT
	(L4) (L5) (L6)
0% of rated input ratio	○ ○ ●
50% of rated input ratio	○ ● ○
75% of rated input ratio	○ ● ●
100% of rated input ratio	● ○ ○

- (7) Return to "Operating status display (Normal operation)" by pressing [EXIT] button (SW4).

- To restart the setting during the process, return to "Operating status display (Normal operation)" by pressing the [EXIT] button once.

15. OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	External connect kit	UTY-XWZXZ3	Use to operate the External input and output function of Outdoor unit.

OUTDOOR UNIT
AO*G45-54LETL

OUTDOOR UNIT
AO*G45-54LETL