FUJITSU

Refrigerant R410A INVERTER

AIR CONDITIONER

Wall mounted type

DESIGN & TECHNICAL MANUAL

INDOOR

ASYG30LMTA
ASYG36LMTA

OUTDOOR

AOYG30LMTA
AOYG36LMTA

FUJITSU GENERAL LIMITED

DR_AS010EF_04
2016.04.05

Notices:

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

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Part 1. INDOOR UNIT

WALL MOUNTED TYPE:
ASYG30LMTA
ASYG36LMTA

1. Product features

Implemented core technology provides easy-to-use product operations that realize a comfortable space.

1-1. Model lineup

ASYG30LMTA
ASYG36LMTA

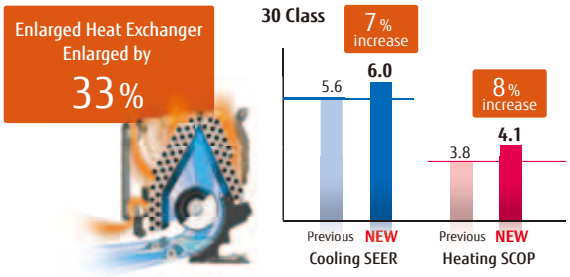
AOYG30LMTA
AOYG36LMTA

1-2. Features

■ Energy efficiency class

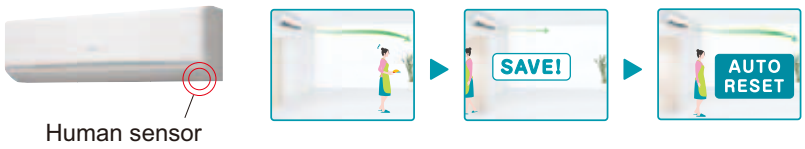
	MODEL	
	ASYG30LMTA	ASYG36LMTA
Cooling	A^{++}	A^{+}
Heating	A^{+}	A^{+}

■ High energy efficiency



■ Energy saving control by using human sensor

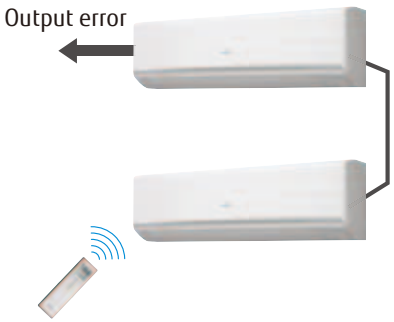
Implemented human sensor detects the presence or absence of human in a room by sensing movement of occupants, and suppress both of the air conditioner operation and energy consumption.



■ Corresponding to server room air conditioning

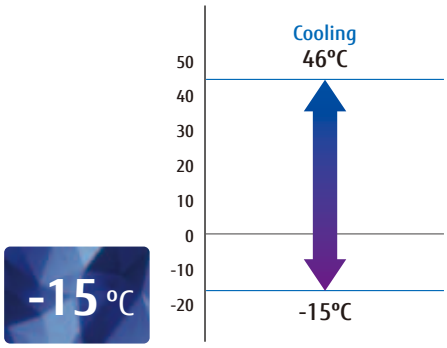
Operation:

Cooling operation can be performed even in the low outdoor temperature and low humidity environment. In addition, the following interlock operation is possible by connecting 2 indoor units with a cable.



- Alternative operation: 2 units operate alternately.
- Backup operation: In case one unit breaks down, the other unit starts operation automatically.
- Supporting operation: Both units operate simultaneously when the loaded capacity is not enough with one unit.

Low ambient operation:



- Stable cooling operation is guaranteed down to -15°C outdoor temperature.
- Keep high sensible cooling performance (approx. 75% capacity of rated condition) at -15ºC outdoor temperature. (Room temperature condition: 27°CWB 19°C).
- Server room control can be set at site.

1-3. Details of server room control

By activating server room control using function setting 96, this product maintains a room at constant temperature.

■ Available operations

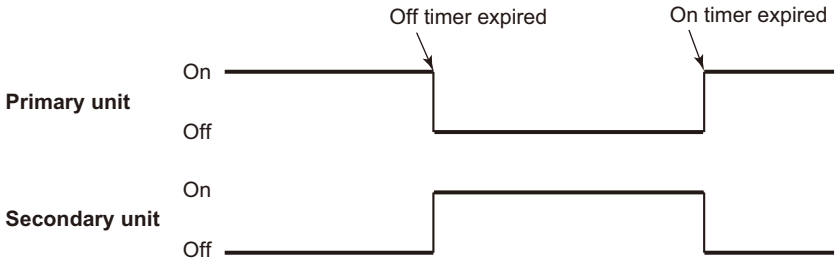
When server room control is activated by changing the setting on function setting 96, this product maintains the room temperature constant by performing 3 types of operations automatically according to the room temperature conditions.

While this function is activated, contents of operation is fixed as follows:

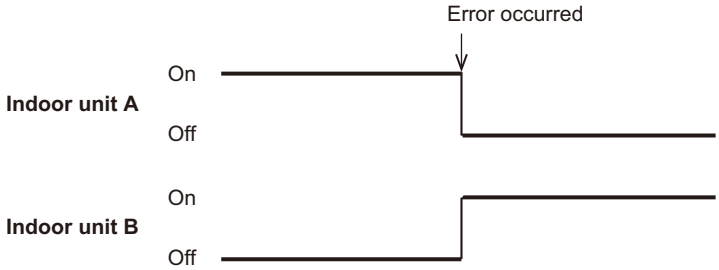
Operation mode	Set temperature	Airflow mode
COOL	24°C*	HIGH

*: Set temperature correction (±4°C) is possible by switching the setting value on function setting 30. For the setting details, refer to “Room temperature control for indoor unit sensor” in “Contents of function setting” on page 39.

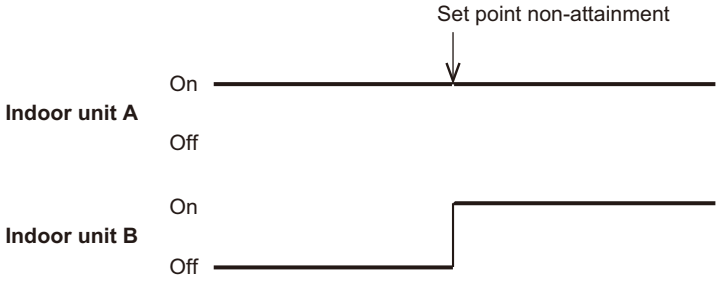
- **Alternative operation**
  Controls the units operations by using the weekly timer of the primary unit.
  When the weekly timer is activated and the primary unit operation is turned off, the secondary unit starts operation simultaneously.
  Also, when the weekly timer is activated and the primary unit operation is turned on, the secondary unit stops operation simultaneously.



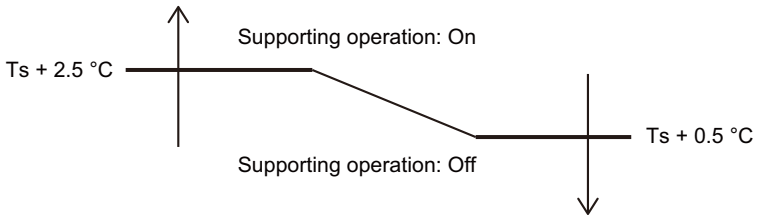
- **Backup operation**
  Regardless of the primary-secondary relation of the unit, if an error occurred on one unit, operation start indication is issued to another unit and the unit starts backup operation.



- **Supporting operation**
  When the room temperature does not reach to the set point after a certain period of time, regardless of the primary-secondary relation of the unit, operation start indication is issued to another unit and both indoor units perform air conditioning simultaneously.



*: Operaion is started even when the unit is stopped by the weekly timer.



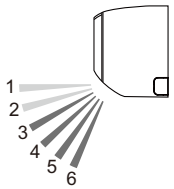
NOTE: While performing this function, following functions cannot be used:
- Operation modes other than cooling
- Airflow modes other than HIGH
- Temperature setting other than 24°C
- POWERFUL mode
- 10 °C HEAT operation
- ECONOMY operation
- On/off timer, program timer, and SLEEP timer
- Weekly timer on secondary unit
- Human sensor function
- Shutdown operation
- Starting operation on secondary unit

To stop the operation, shutdown the power supply.

■ Precautions on unit installation

⚠CAUTION

- Do not place any other electrical products or household belongings under the product. Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.
- In units installation facing each other, the vertical airflow direction louver on each indoor unit should be set at a position from 3 to 6.



- Do not connect any wired remote controller.

To perform server room control, mind the followings:

- Additional cable connecting between 2 indoor units needs to be purchased locally.
- One Communication kit (UTY-XWNX) per indoor unit required.
- For connecting the optional communication kit, refer to the service instruction.
- DIP switch on the indoor unit main PC board needs to be switched to “3WIRE”.
- Setting of function setting 30 “Room temperature control for indoor unit sensor” on each indoor unit needs to be same. For contents of the function setting 30, refer to “Room temperature control for indoor unit sensor” in “Contents of function setting” on page 39.
- Setting change on function setting 96 required. For contents of the function setting 96, refer to “Server room control” in “Contents of function setting” on page 39.

■ Initial setup for server room control

● Function setting procedure

Before activating server room control, assignment of primary unit and secondary unit is required. Change the setting of function setting 96 as follows:

1. Turn on the power source of 2 indoor units.
2. Set one of the indoor unit as “Primary unit” (Setting value: 01) by function setting 96. (For contents of function setting 96, refer to “Server room control” in “Contents of function setting” on page 39.)
   When performing the setting, operate the remote controller close to the signal receiver on the primary unit as possible so that the signal transmission is firmly received by the primary unit only.
3. Set the other unit as “Secondary unit” (Setting value: 02) by function setting 96.
   When performing the setting, operate the remote controller close to the signal receiver on the secondary unit as possible so that the signal transmission is firmly received by the secondary unit only.
4. Turn off the power supply of the 2 indoor units.

● Starting units operation

After the setting change on function setting 96 is completed, do as follows:

1. After 30 seconds or more since the power source is turned off, turn of the power source of the secondary unit.
2. Turn on the power source of the primary unit.
3. Press the MANUAL AUTO button on the primary unit for more than 3 seconds.
   You will hear a short beep, and the primary unit starts operation.

NOTE: While performing these steps, error indications will be lit on the unit. Nevertheless, continue the procedure.

● Starting server room control

Set the weekly timer on the primary unit.

Server room control is activated, and the unit will start the alternative operation.

NOTE: If the alternative operation does not start or error indications on the unit are still lit, reconfirm whether the settings on function setting 96 are set correctly, and perform the setup procedures from the beginning.

As for the display pattern of the error indications of the indoor unit, refer to the installation manual.

2. Remote controller

2-1. Wireless remote controller

■ Features

- 5-mode timer setup (on, off, weekly, program, and sleep) available.
  NOTE: When performing server room control, only the weekly timer is effective.
- Easy operation.
- Easy to change custom code (max. 4 custom code).
- Can be used jointly with wired remote controllers.
  NOTE: When performing server room control, wired remote controller cannot be connected.

● Simple function setting

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

● Weekly timer

Weekly timer can be easily set by wireless remote controller.
On and off can be set up to 4 times in a day, and up to 28 times in a week.

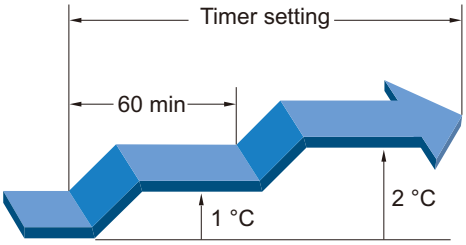
● Program timer

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

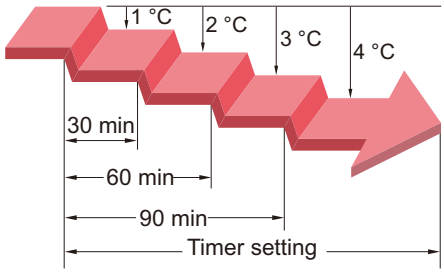
● Sleep timer

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

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

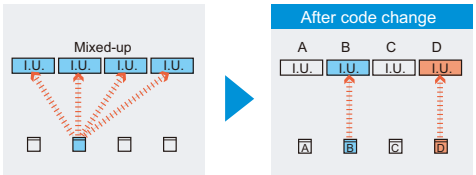


Heating operation
When the sleep timer is set, the set temperature automatically drops 1 °C every 30 minutes. The set temperature can drop to a maximum of 4 °C.



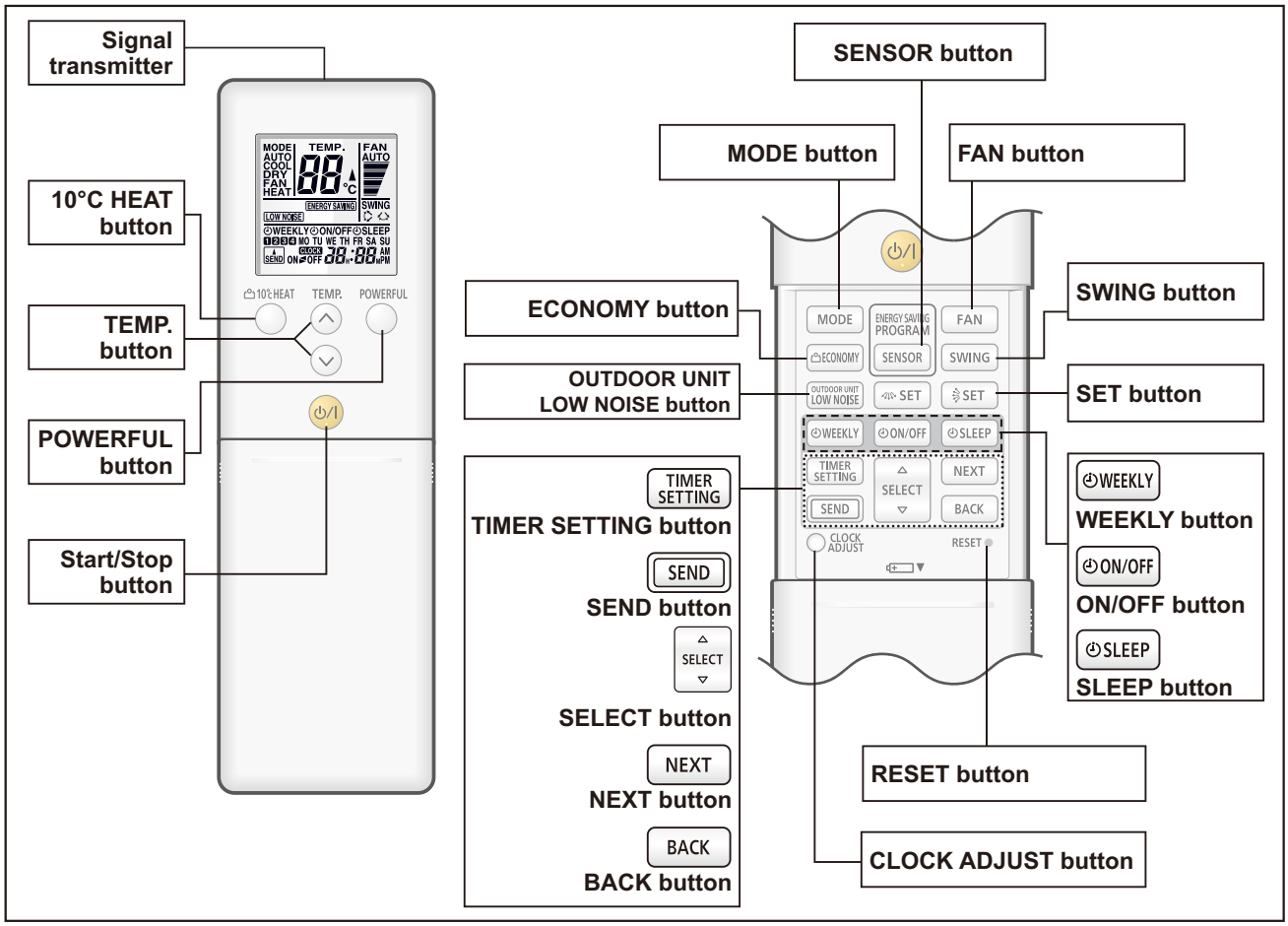
● Switching remote controller custom code

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



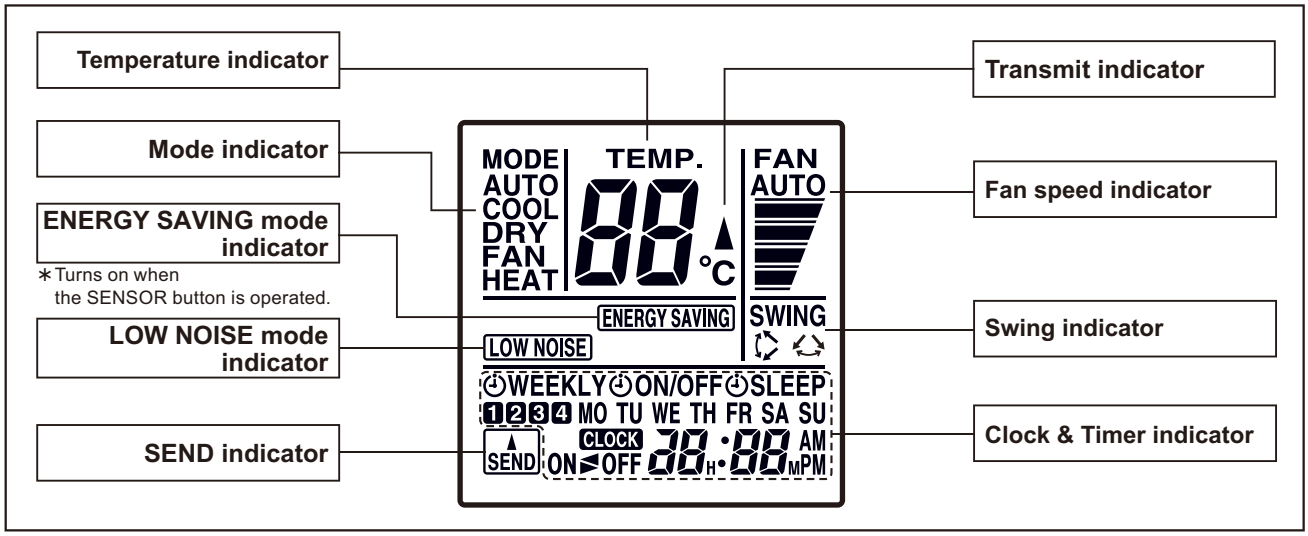
* I.U.: Indoor unit

■ Overview



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

Display panel

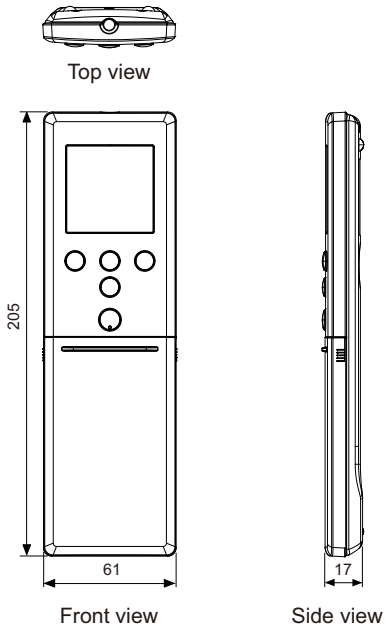


To facilitate explanation, the accompanying illustration has been drawn to show all possible indicators; in actual operation, however, the display will only show those indicators appropriate to the current operation.

■ Specifications

● Controller

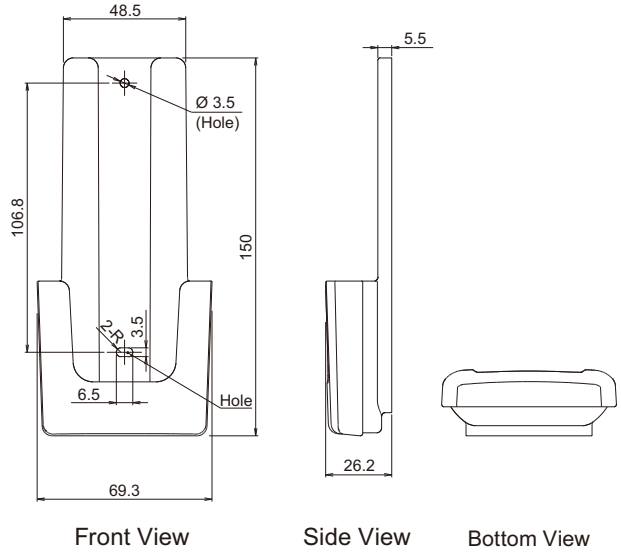
Unit: mm



Size (H × W × D)	mm	205 × 61 × 17
Weight	g	122 (without batteries)

● Holder

Unit: mm



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

3. Specifications

Type					Wall mounted	
					Inverter heat pump	
Model name					ASYG30LMTA	ASYG36LMTA
Power supply					230 V ~ 50 Hz	
Available voltage range					198—264 V	
Capacity		Cooling	Rated	kW	8.00	9.40
				Btu/h	27,300	32,100
			Min.—Max.	kW	2.9—9.0	2.9—10.0
				Btu/h	9,900—30,700	9,900—34,100
		Heating	Rated	kW	8.80	10.10
				Btu/h	30,000	34,500
			Min.—Max.	kW	2.2—11.0	2.7—11.2
				Btu/h	7,500—37,500	9,200—38,200
Input power		Cooling	Rated	kW	2.33	3.16
			Min.—Max.		0.50—3.30	0.50—4.33
		Heating	Rated		2.41	2.96
			Min.—Max.		0.50—3.30	0.50—4.33
		Fan	HIGH	W	60	60
			MED		35	35
			LOW		20	20
			QUIET		11	11
Current		Cooling	Rated	A	10.2	13.9
		Heating			10.5	13.0
EER		Cooling		kW/kW	3.43	2.97
COP		Heating			3.65	3.41
Sensible capacity		Cooling		kW	1.85	2.55
Power factor		Cooling		%	99	99
		Heating			99	99
Moisture removal				L/h (pints/h)	2.7 (4.8)	3.7 (6.5)
Maximum operating current *1		Cooling		A	14.5	19.0
		Heating			14.5	19.0
Fan	Airflow rate	Cooling	HIGH	m^3/h	1,380	1,380
			MED		1,130	1,130
			LOW		910	910
			QUIET		710	710
		Heating	HIGH		1,380	1,380
			MED		1,130	1,130
			LOW		910	910
			QUIET		710	710
	Type × Q'ty				Cross flow fan × 1	
	Motor output			W	61	
Sound pressure level *2		Cooling	HIGH	dB (A)	50	50
			MED		44	44
			LOW		38	38
			QUIET		31	31
		Heating	HIGH		49	49
			MED		44	44
			LOW		39	39
			QUIET		33	33
Heat exchanger type		Dimensions (H × W × D)		mm	Main: 462 × 900 × 26.6 Sub1: 126 × 900 × 13.3 Sub2: 84 × 900 × 13.3	
		Fin pitch			1.2	
		Rows × Stages			Main: 2 × 22, Sub1: 1 × 6, Sub2: 1 × 4	
		Pipe type			Copper tube	
		Fin type			Aluminum	
Enclosure		Material			Polystyrene	
		Color			White Approximate color of Munsell N 9.25/	
Dimensions (H × W × D)		Net		mm	340 × 1,150 × 280	
		Gross			450 × 1,270 × 405	
Weight		Net		kg	18	
		Gross			24	
Connection pipe		Size	Liquid	mm (in)	Ø 9.52 (Ø 3/8)	
			Gas		Ø 15.88 (Ø 5/8)	
		Method			Flare	
Drain hose		Material			PVC	
		Size		mm	Ø 13.8 (I.D.), Ø 15.8 to Ø 16.7 (O.D.)	
Operation range		Cooling		°C	18 to 32	
				%RH	80 or less	
		Heating		°C	16 to 30	
Remote controller type					Wireless (Wired [option])	

NOTES:

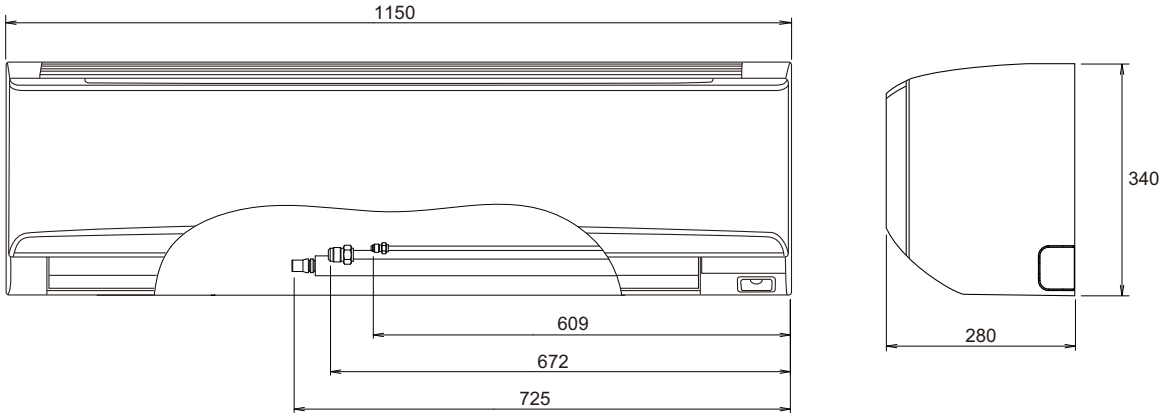
- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- *1: Maximum current is maximum value when operated within the operation range.
- *2: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

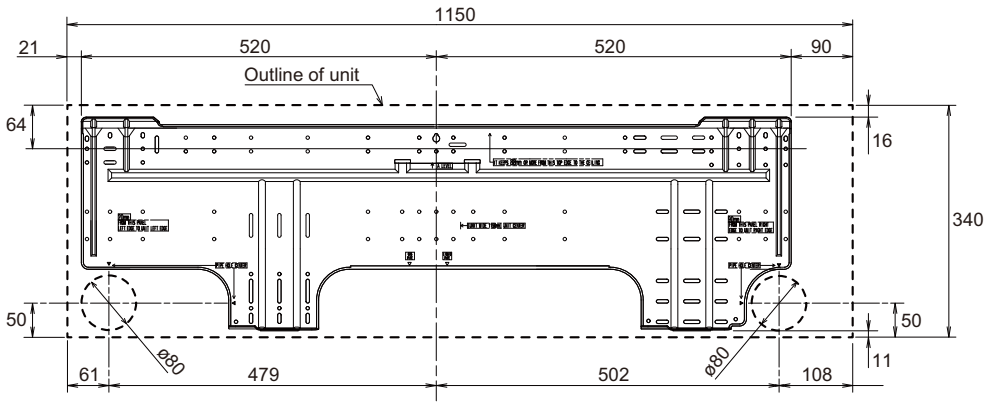
Model name				ASYG30LMTA	ASYG36LMTA
Energy efficiency class	Cooling			A^{++}	A^{+}
	Heating (Average)			A^{+}	A^{+}
Pdesign	Cooling		kW	8.0 (35 °C)	9.4 (35 °C)
	Heating (Average)			6.5 (-10 °C)	7.1 (-10 °C)
SEER	Cooling		kWh/kWh	6.35	5.73
SCOP	Heating (Average)			4.15	4.19
Annual energy consumption	QCE		kWh/a	441	575
	QHE (Average)			2,193	2,373
Sound power level	Cooling	HIGH	dB (A)	65	65
	Heating			65	65

4. Dimensions

4-1. Models: ASYG30LMTA and ASYG36LMTA

Unit: mm

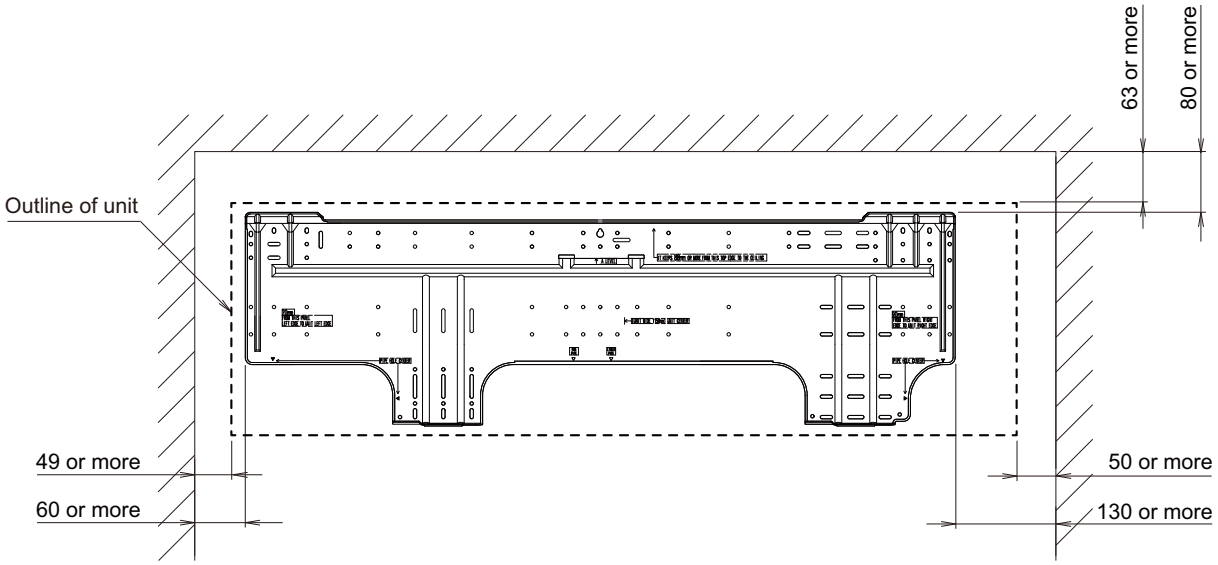


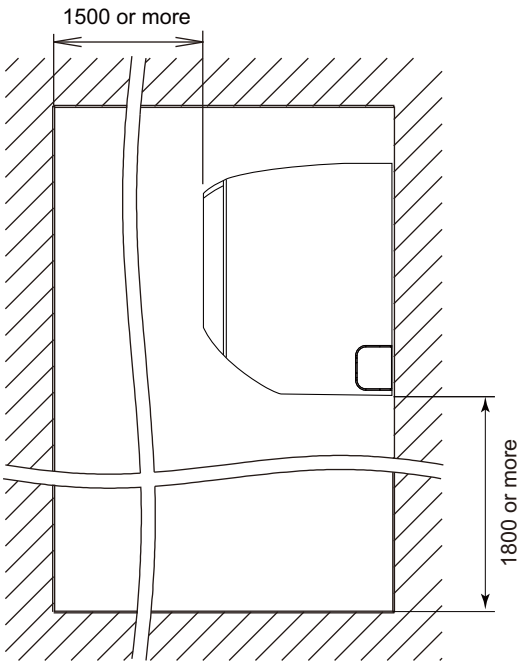


■ Installation space requirement

Provide sufficient installation space for product safety.

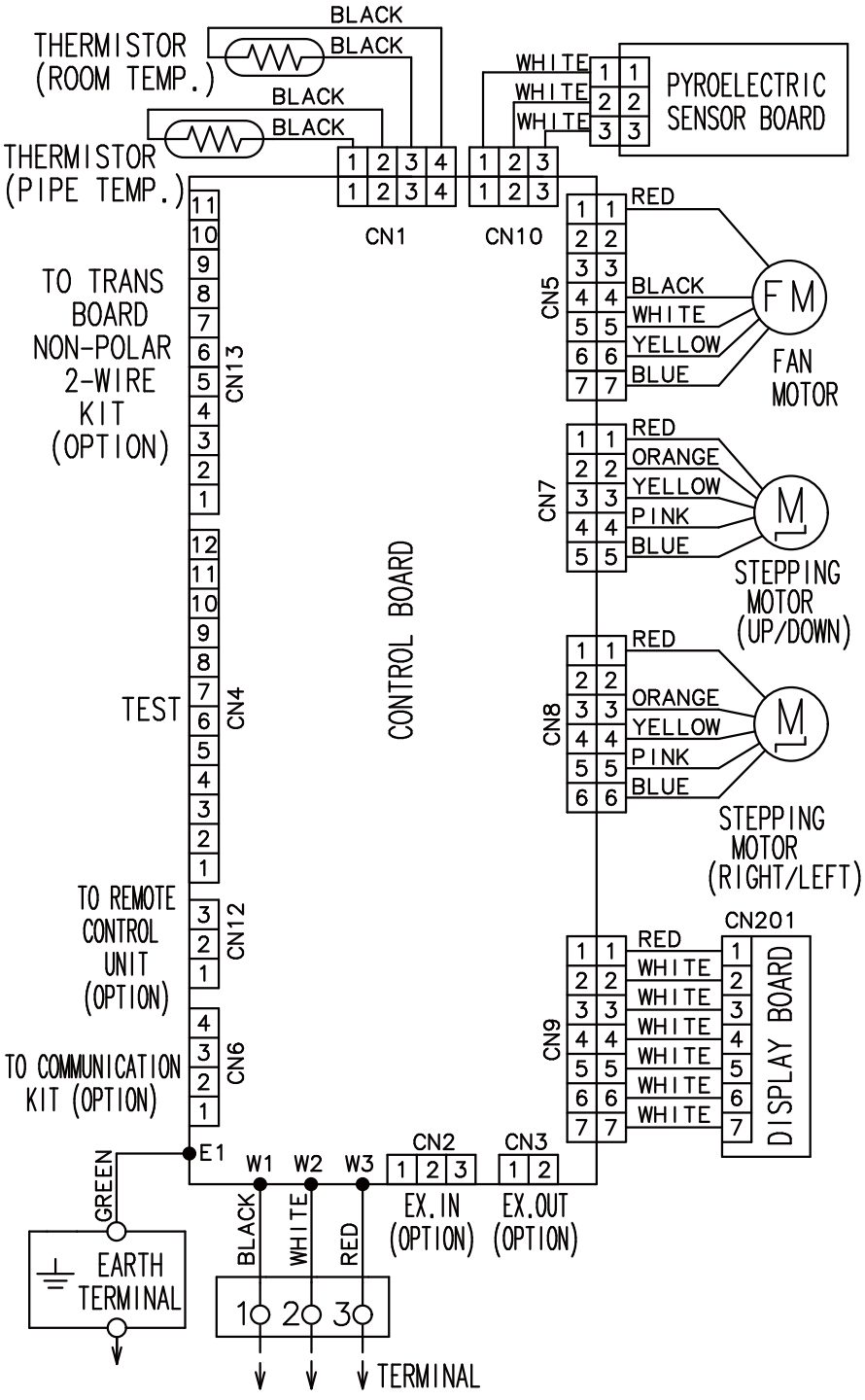
Unit: mm





5. Wiring diagrams

5-1. Models: ASYG30LMTA and ASYG36LMTA



6. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

For cooling capacity: Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

For heating capacity: Total Capacity (TC) and Input Power (IP)

6-1. Cooling capacity

■ Model: ASYG30LMTA

AFR	m^3/h	1,380

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
	-15	5.08	4.70	0.96	5.66	4.73	0.98	5.85	5.14	0.98	6.24	5.16	0.99	6.43	5.57	0.99	6.82	5.55	1.00	7.20	5.91	1.01
	-10	5.79	5.09	0.72	6.45	5.12	0.73	6.67	5.57	0.74	7.11	5.58	0.74	7.33	6.03	0.75	7.77	6.01	0.75	8.21	6.40	0.76
	0	5.99	5.19	0.79	6.67	5.22	0.80	6.90	5.68	0.81	7.35	5.69	0.82	7.58	6.15	0.82	8.04	6.13	0.83	8.49	6.53	0.84
	5	5.72	5.06	0.92	6.38	5.09	0.94	6.59	5.53	0.94	7.03	5.55	0.95	7.25	5.99	0.95	7.68	5.97	0.96	8.12	6.36	0.97
	10	6.21	5.29	0.70	6.92	5.32	0.71	7.16	5.78	0.72	7.63	5.80	0.73	7.86	6.26	0.73	8.34	6.24	0.74	8.81	6.64	0.74
	15	5.95	5.12	0.83	6.63	5.15	0.84	6.85	5.60	0.84	7.30	5.62	0.85	7.53	6.07	0.86	7.98	6.04	0.87	8.43	6.44	0.87
	20	6.31	5.01	0.92	7.03	5.04	0.93	7.27	5.48	0.94	7.75	5.50	0.95	7.99	5.94	0.95	8.47	5.92	0.96	8.95	6.30	0.97
	25	6.99	5.45	1.44	7.79	5.48	1.46	8.05	5.96	1.47	8.58	5.98	1.48	8.85	6.46	1.49	9.38	6.43	1.51	9.91	6.85	1.52
	30	6.84	5.36	2.26	7.62	5.39	2.29	7.88	5.86	2.30	8.40	5.88	2.33	8.66	6.35	2.34	9.18	6.32	2.36	9.70	6.73	2.39
	35	6.32	5.19	2.25	7.04	5.22	2.28	7.28	5.68	2.30	7.76	5.69	2.32	8.00	6.15	2.33	8.48	6.13	2.35	8.96	6.53	2.38
	40	5.68	4.75	2.51	6.33	4.78	2.55	6.54	5.19	2.56	6.97	5.21	2.59	7.19	5.63	2.60	7.62	5.60	2.63	8.05	5.97	2.65
	46	5.17	4.22	2.87	5.76	4.25	2.91	5.96	4.62	2.93	6.35	4.63	2.96	6.55	5.00	2.97	6.94	4.98	3.00	7.34	5.31	3.03

■ Model: ASYG36LMTA

AFR	m^3/h	1,380

		Indoor temperature																				
	°CDB	18			21			23			25			27			29			32		
	°CWB	12			15			16			18			19			21			23		
Outdoor temperature	°CDB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kW			kW			kW			kW			kW			kW			kW		
	-15	5.97	5.23	1.30	6.65	5.27	1.32	6.88	5.72	1.33	7.33	5.74	1.34	7.56	6.20	1.35	8.01	6.18	1.36	8.46	6.58	1.38
	-10	6.80	5.67	0.98	7.58	5.70	0.99	7.84	6.20	1.00	8.35	6.22	1.01	8.61	6.72	1.01	9.13	6.69	1.02	9.65	7.13	1.03
	0	7.04	5.78	1.08	7.84	5.82	1.09	8.11	6.32	1.10	8.64	6.34	1.11	8.91	6.85	1.11	9.44	6.82	1.13	9.98	7.27	1.14
	5	6.73	5.63	1.25	7.49	5.67	1.27	7.75	6.16	1.27	8.26	6.18	1.29	8.51	6.67	1.29	9.02	6.65	1.31	9.54	7.08	1.32
	10	7.30	5.89	0.95	8.13	5.92	0.97	8.41	6.44	0.97	8.96	6.46	0.98	9.24	6.98	0.99	9.79	6.95	1.00	10.35	7.40	1.01
	15	6.99	5.71	1.12	7.78	5.74	1.14	8.05	6.24	1.14	8.58	6.26	1.16	8.85	6.76	1.16	9.38	6.73	1.17	9.91	7.17	1.19
	20	7.81	6.06	1.12	8.70	6.10	1.13	9.00	6.63	1.14	9.60	6.65	1.15	9.89	7.19	1.16	10.49	7.16	1.17	11.08	7.62	1.18
	25	8.66	6.60	1.75	9.64	6.63	1.77	9.97	7.21	1.78	10.63	7.24	1.80	10.96	7.81	1.81	11.61	7.78	1.83	12.27	8.29	1.85
	30	7.81	6.06	2.74	8.70	6.10	2.78	9.00	6.63	2.80	9.60	6.65	2.82	9.89	7.19	2.84	10.49	7.16	2.87	11.08	7.62	2.89
	35	7.43	5.78	3.05	8.27	5.82	3.10	8.55	6.32	3.11	9.12	6.34	3.14	9.40	6.85	3.16	9.96	6.82	3.19	10.53	7.27	3.22
	40	6.61	5.54	2.85	7.36	5.58	2.90	7.61	6.06	2.91	8.11	6.08	2.94	8.36	6.57	2.96	8.86	6.54	2.99	9.37	6.97	3.02
	46	5.78	5.17	2.87	6.44	5.20	2.91	6.66	5.65	2.93	7.09	5.67	2.96	7.31	6.13	2.97	7.75	6.10	3.00	8.19	6.50	3.03

6-2. Heating capacity

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

■ Model: ASYG30LMTA

AFR	m^3/h	1,380

			Indoor temperature									
			16		18		20		22		24	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
Outdoor temperature	-15	-16	7.08	3.17	6.91	3.23	6.74	3.30	6.57	3.37	6.40	3.43
	-10	-11	7.67	3.17	7.49	3.23	7.30	3.30	7.12	3.37	6.94	3.43
	-5	-7	8.88	3.17	8.66	3.23	8.45	3.30	8.24	3.37	8.03	3.43
	0	-2	9.83	3.17	9.60	3.23	9.36	3.30	9.13	3.37	8.89	3.43
	5	3	10.63	3.17	10.37	3.23	10.12	3.30	9.87	3.37	9.61	3.43
	7	6	11.55	3.17	11.28	3.23	11.00	3.30	10.73	3.37	10.45	3.43
	10	8	11.90	3.16	11.61	3.22	11.33	3.29	11.05	3.36	10.76	3.42
	15	10	11.03	2.53	10.77	2.59	10.51	2.64	10.25	2.69	9.98	2.73
	20	15	10.95	1.96	10.69	2.00	10.43	2.04	10.17	2.08	9.91	2.11
	24	18	10.87	1.38	10.61	1.41	10.35	1.44	10.09	1.47	9.83	1.49

■ Model: ASYG36LMTA

AFR	m^3/h	1,380

			Indoor temperature									
			16		18		20		22		24	
	°CDB	°CWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
			kW		kW		kW		kW		kW	
Outdoor temperature	-15	-16	8.54	4.13	8.34	4.21	8.13	4.30	7.93	4.39	7.73	4.47
	-10	-11	9.19	4.10	8.97	4.18	8.75	4.27	8.53	4.36	8.31	4.44
	-5	-7	10.58	4.08	10.33	4.17	10.08	4.25	9.83	4.34	9.58	4.42
	0	-2	11.61	4.04	11.34	4.13	11.06	4.21	10.78	4.29	10.51	4.38
	5	3	12.70	4.09	12.40	4.17	12.10	4.26	11.79	4.35	11.49	4.43
	7	6	11.76	3.50	11.48	3.57	11.20	3.64	10.92	3.72	10.64	3.79
	10	8	12.11	3.49	11.82	3.56	11.54	3.63	11.25	3.71	10.96	3.78
	15	10	11.14	2.78	10.88	2.84	10.61	2.90	10.35	2.96	10.08	3.00
	20	15	11.06	2.21	10.80	2.25	10.53	2.30	10.27	2.35	10.01	2.38
	24	18	10.98	1.63	10.71	1.67	10.45	1.70	10.19	1.74	9.93	1.76

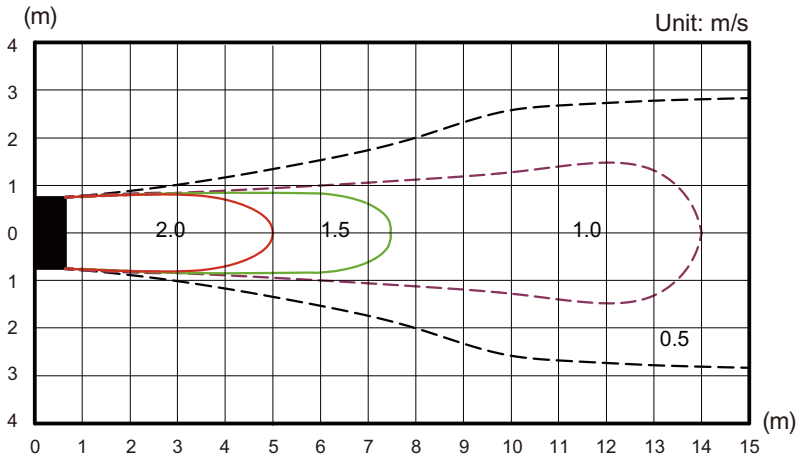
7. Fan performance

7-1. Air velocity distributions

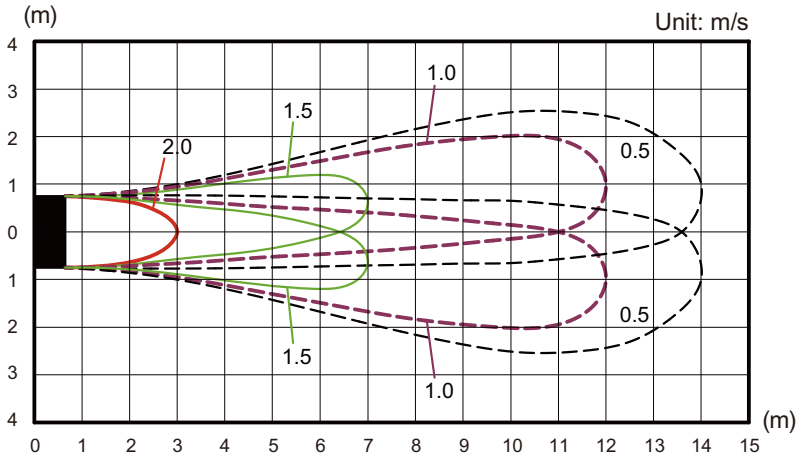
■ Models: ASYG30LMTA and ASYG36LMTA

Measuring conditions	Fan speed	Operation mode
	HIGH	FAN

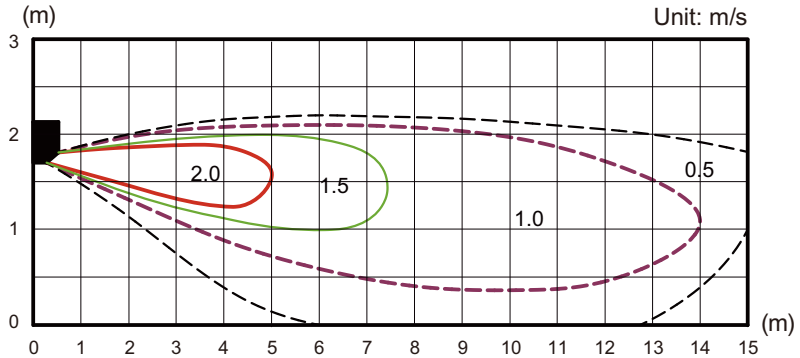
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Center



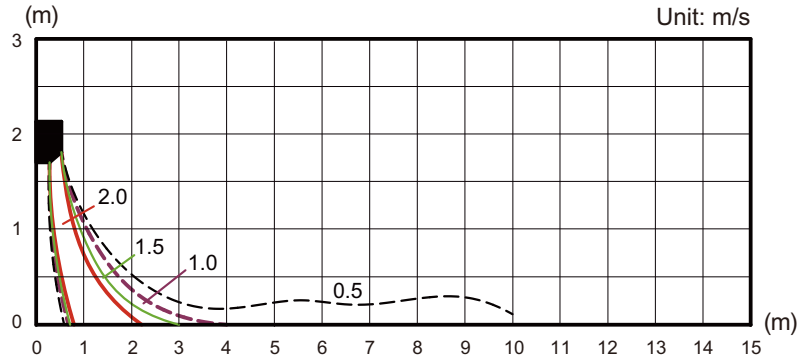
Top view
Vertical airflow direction louver: Up
Horizontal airflow direction louver: Left & Right



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: ASYG30LMTA

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	1,380
	l/s	383
	CFM	812
MED	m^3/h	1,130
	l/s	314
	CFM	665
LOW	m^3/h	910
	l/s	253
	CFM	536
QUIET	m^3/h	710
	l/s	197
	CFM	418

● Heating

Fan speed	Airflow	
HIGH	m^3/h	1,380
	l/s	383
	CFM	812
MED	m^3/h	1,130
	l/s	314
	CFM	665
LOW	m^3/h	910
	l/s	253
	CFM	536
QUIET	m^3/h	710
	l/s	197
	CFM	418

■ Model: ASYG36LMTA

● Cooling

Fan speed	Airflow	
HIGH	m^3/h	1,380
	l/s	383
	CFM	812
MED	m^3/h	1,130
	l/s	314
	CFM	665
LOW	m^3/h	910
	l/s	253
	CFM	536
QUIET	m^3/h	710
	l/s	197
	CFM	418

● Heating

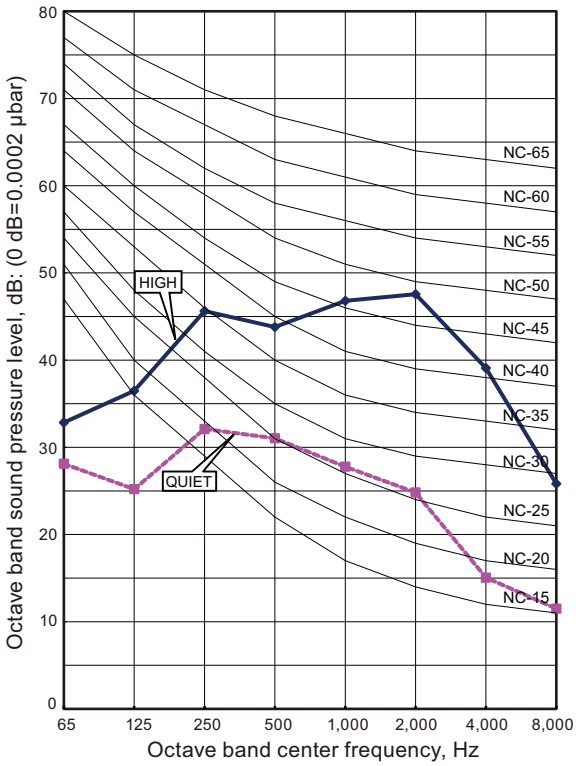
Fan speed	Airflow	
HIGH	m^3/h	1,380
	l/s	383
	CFM	812
MED	m^3/h	1,130
	l/s	314
	CFM	665
LOW	m^3/h	910
	l/s	253
	CFM	536
QUIET	m^3/h	710
	l/s	197
	CFM	418

8. Operation noise (sound pressure)

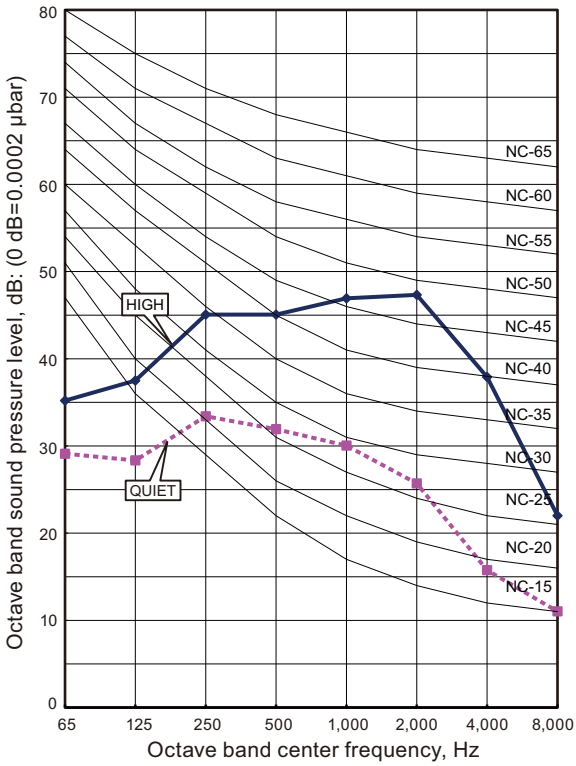
8-1. Noise level curve

■ Model: ASYG30LMTA

● Cooling

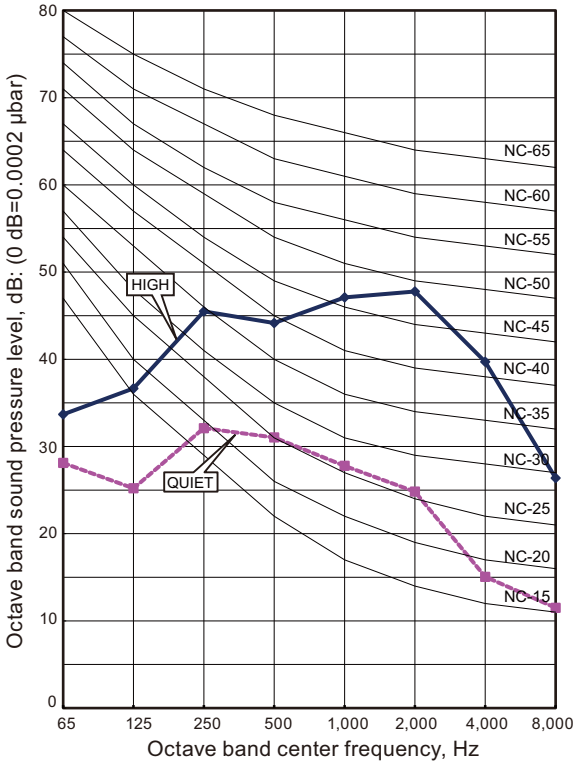


● Heating

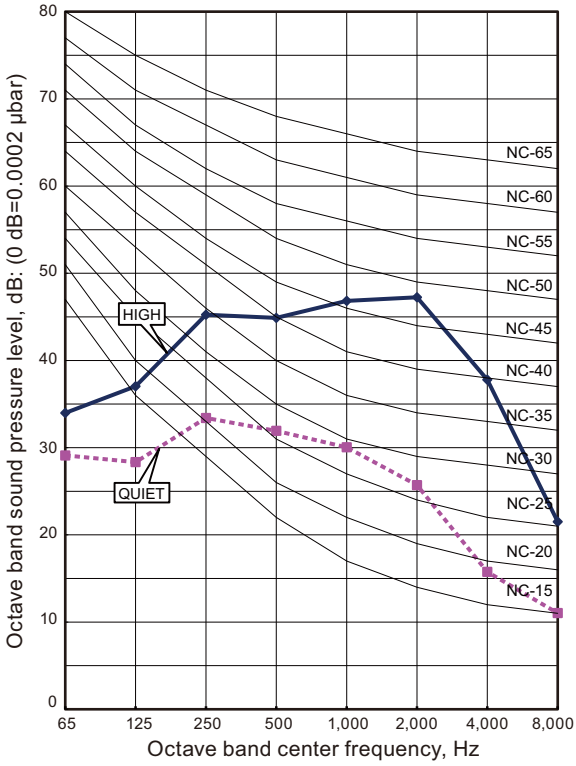


■ Model: ASYG36LMTA

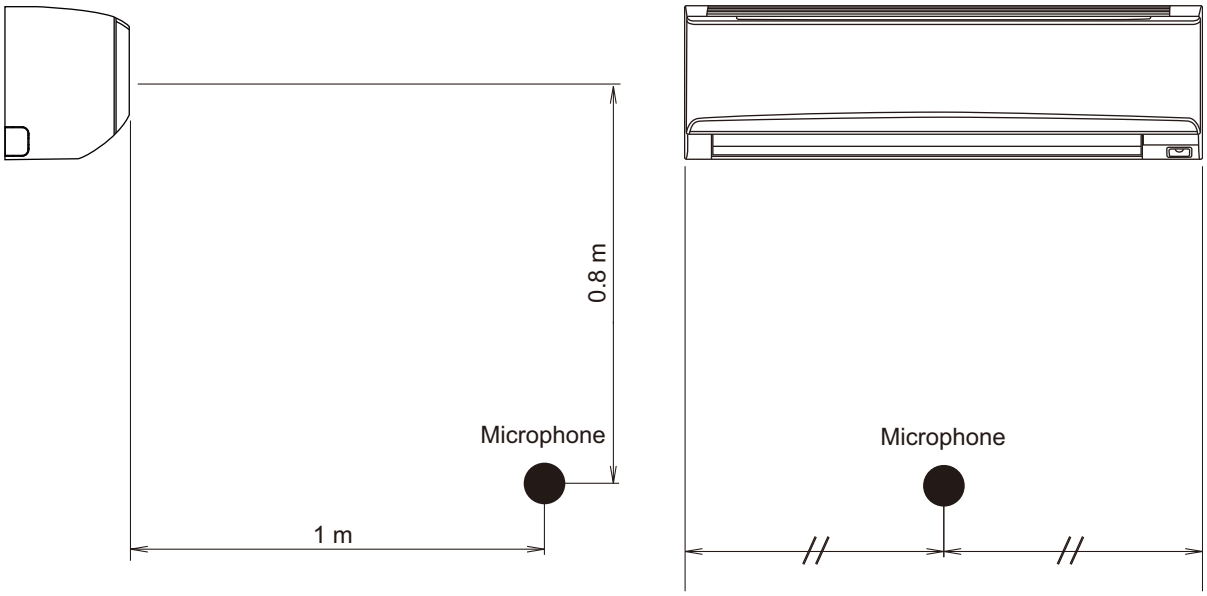
● Cooling



● Heating



8-2. Sound level check point

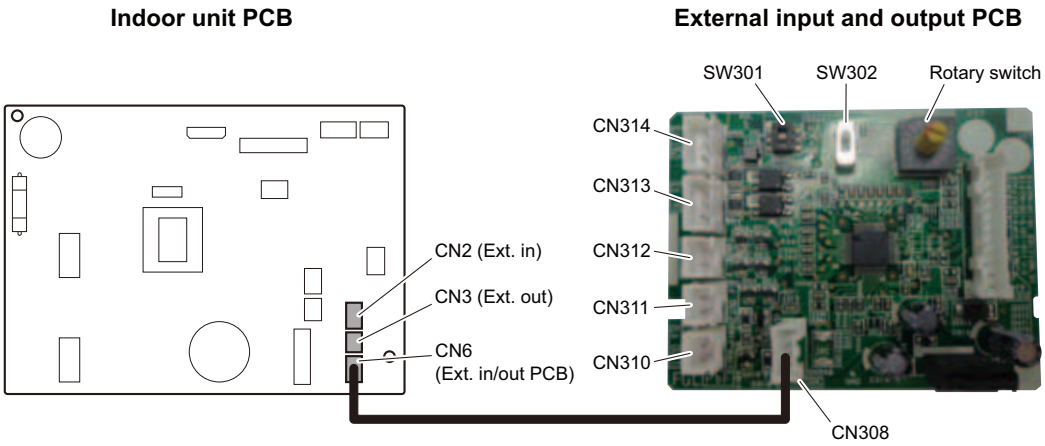


9. Safety devices

Type of protection	Protection form		Model	
			ASYG30LMTA	ASYG36LMTA
Circuit protection	Current fuse (PCB*)		250 V, 3.15 A	
Fan motor protection	Thermistor protection	Activate	More than 85 °C Fan motor speed down	
		Reset	85 °C or less Fan motor speed recover	
	Power IC thermal shutdown protection	Activate	150±15 °C Fan motor stop	
		Reset	Less than 135 °C Fan motor restart	

*PCB: Printed Circuit Board

10. External input and output



PCB	External input	External output	Connector	Input select	Input signal
Indoor unit	Operation/Stop	-	CN2	Dry contact	Edge
	Forced stop				
	-	Operation status	CN3	-	-
		Error status			
		Indoor unit fan operation status			
		Set point attainment status			
External input and output (UTY-XCSXZ1)	Operation/Stop	-	CN313/ CN314	Dry contact/ Apply voltage	Edge/Pulse
	Forced stop				
	Forced thermostat off		CN313		Edge
	-	Operation status	CN310 CN311 CN312	-	-
		Error status			
		Indoor unit fan operation status			

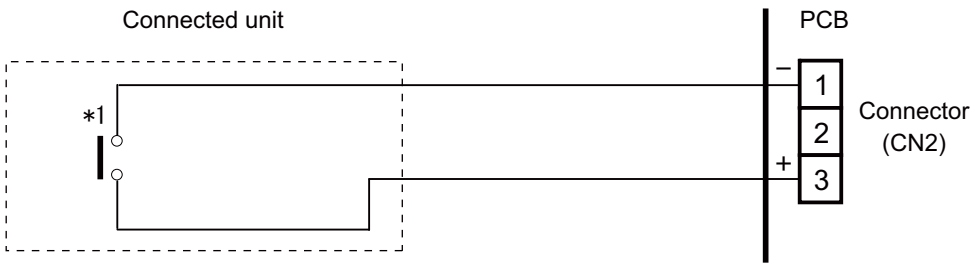
10-1. External input

With using external input function, some functions on this product can be controlled from an external device.

- “Operation/Stop” mode or "Forced stop" mode can be selected with function setting of indoor unit.
- A twisted pair cable should be used. Maximum length of cable is 150 m.
- The wire connection should be separate from the power cable line.

■ Indoor unit

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



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

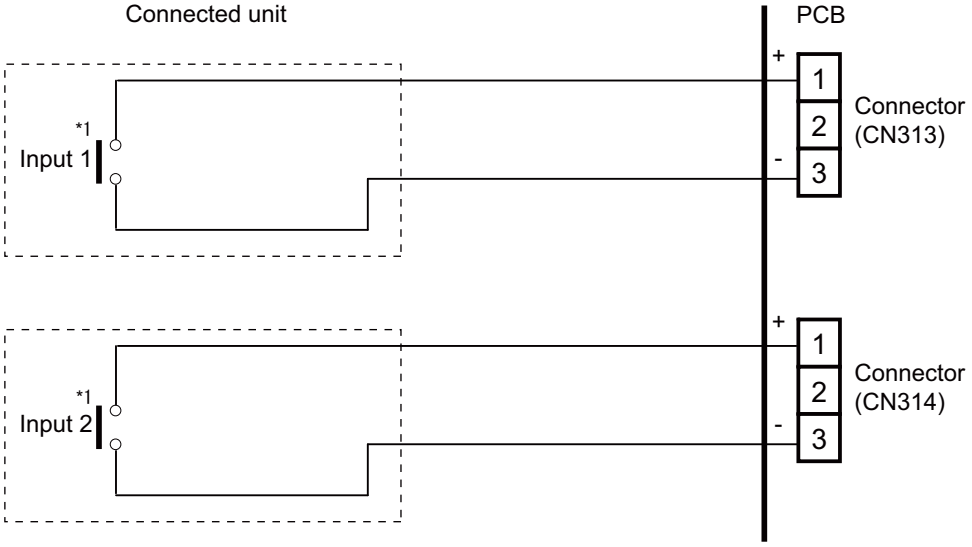
■ External input and output PCB

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

● Input select

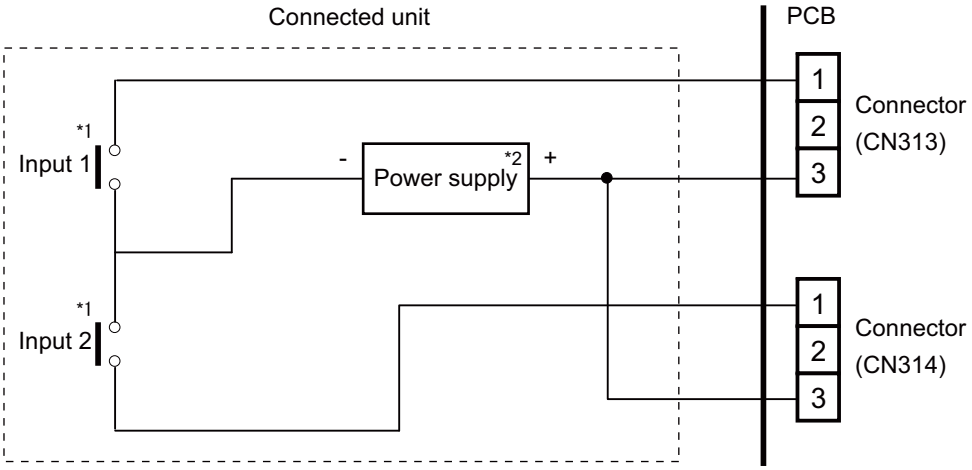
Use either one of these types of connectors according to the application. (Both types of connectors cannot be used simultaneously.)

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



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

- Apply voltage
  In case of external power supply, set the slide switch of SW301 to "VOL" side.



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

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

10-2. External output

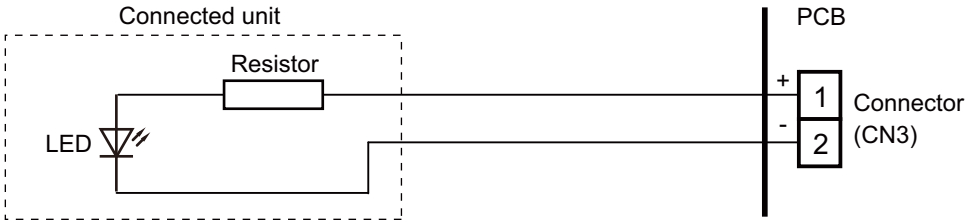
Use an external output cable with appropriate external dimension, depending on the number of cables to be installed.

■ Indoor unit

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V ± 2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to Chapter 10-3. "Combination of external input and output" on page 29.

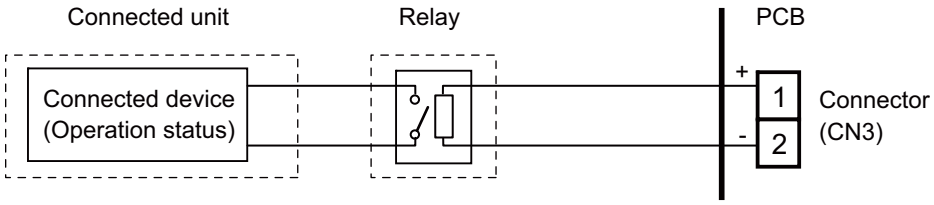
● When indicator or other components are connected directly

Example: Function setting 60 is set to "00"



● When connecting with a device equipped with a power supply

Example: Function setting 60 is set to "00"

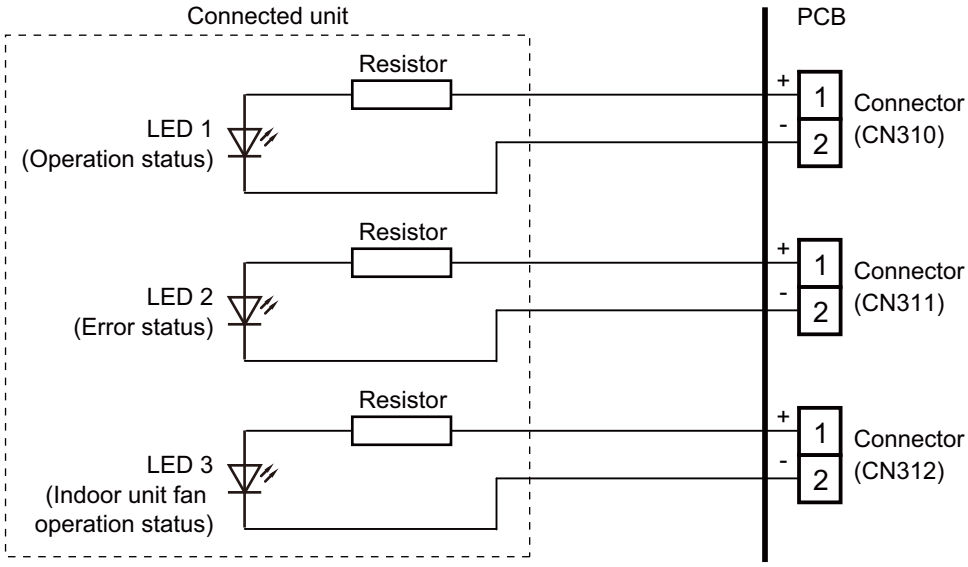


■ External input and output PCB

- A twisted pair cable (22AWG) should be used. Maximum length of cable is 25 m.
- Output voltage: High DC 12 V±2 V, Low 0 V.
- Permissible current: 50 mA
- For details, refer to Chapter 10-3. "Combination of external input and output" on page 29.

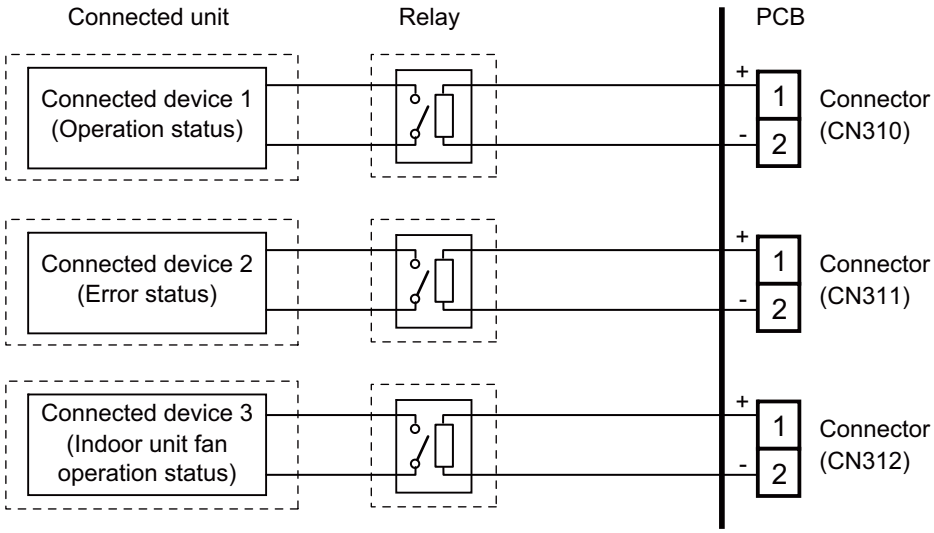
● When indicator or other components are connected directly

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



● When connecting with a device equipped with a power supply

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



10-3. Combination of external input and output

By combining the function setting of the indoor unit and rotary switch setting of the External input and output PCB, you can select various combinations of functions.

Combination examples of external input and output are as follows:

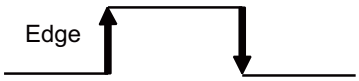
Mode	Function setting	External input and output PCB (Rotary SW)	External input			
			Indoor unit Input	External input and output PCB		
			CN2	CN313	CN314	Signal type
0-1	60-00	1	Operation/Stop	Operation/Stop	Not available	Edge
				Operation	Stop	Pulse
0-2	60-00	2	Operation/Stop	Forced Thermostat OFF	Not available	Edge
1—8	60-01 to 60-08	3 - 9, A	(Setting prohibited)			
9	60-09	B	Operation/Stop	Forced Thermostat OFF	Not available	Edge
10	60-10	C	Operation/Stop	Forced Thermostat OFF	Not available	Edge
11	60-11	D	Operation/Stop	Forced Thermostat OFF	Not available	Edge
12	60-12	D	Operation/Stop	Forced Thermostat OFF	Not available	Edge

Mode	Function setting	External input and output PCB (Rotary SW)	External output			
			Indoor unit Output	External input and output PCB		
			CN3	CN310	CN311	CN312
0-1	60-00	1	Operation/Stop	Operation/Stop	Error status	Indoor unit fan operation status
0-2	60-00	2	Operation/Stop	Error status	Indoor unit fan operation status	Not available
1—8	60-01 to 60-08	3 - 9, A	(Setting prohibited)			
9	60-09	B	Error status	Operation/Stop	Indoor unit fan operation status	Not available
10	60-10	C	Indoor unit fan operation status	Operation/Stop	Error status	Not available
11	60-11	D	Not available	Operation/Stop	Indoor unit fan operation status	Error status
12	60-12	D	Set point attainment status	Operation/Stop	Indoor unit fan operation status	Error status

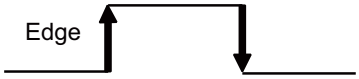
NOTE: Input of Operation/Stop depends on the setting of function setting 46.
00: Operation/Stop mode 1 (R.C. enabled)
01: (Setting prohibited)
02: Forced stop
03: Operation/Stop mode 2 (R.C. disabled)

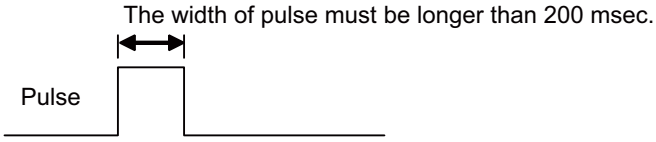
■ Input signal type

- **Indoor unit**
  Input signal type is only "Edge".



- **External input and output PCB**
  The input signal type can be selected.
  Signal type (edge or pulse) can be switched by the DIP switch SW302 on the External input and output PCB.





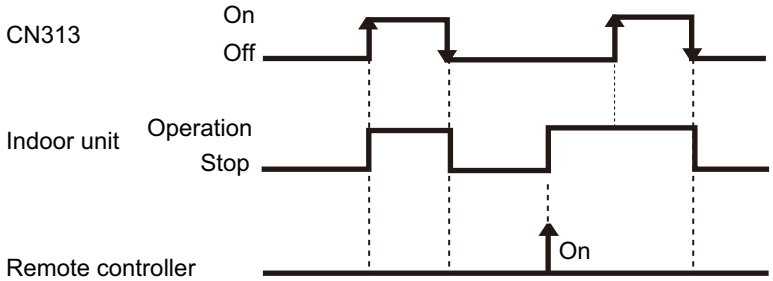
10-4. Details of function

■ Control input function

● When function setting is "Operation/Stop" mode 1

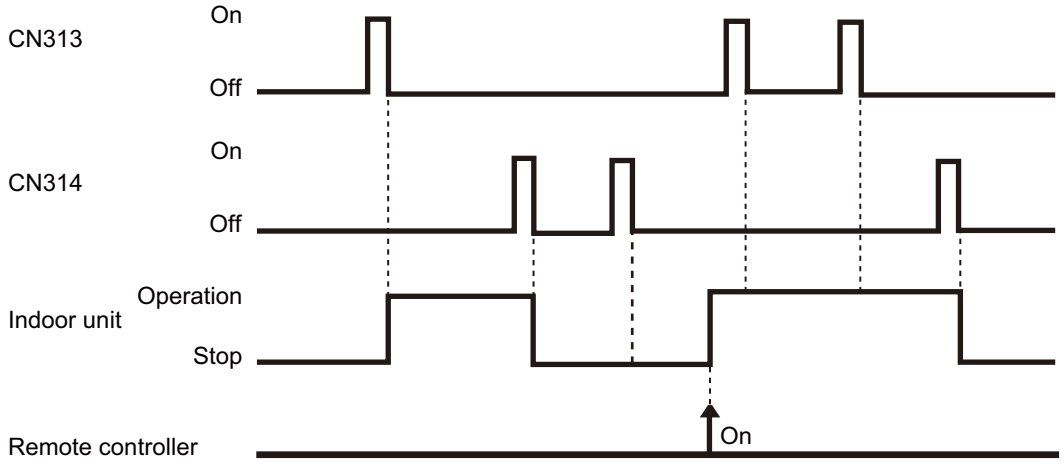
- In the case of "Edge" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-00	-	Input of indoor unit	CN2	Off → On	Operation
				On → Off	Stop
	60-00 / 1	External input and output PCB	CN313	Off → On	Operation
				On → Off	Stop



- In the case of "Pulse" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-00	60-00 / 1	External input and output PCB	CN313	Pulse	Operation
			CN314	Pulse	Stop



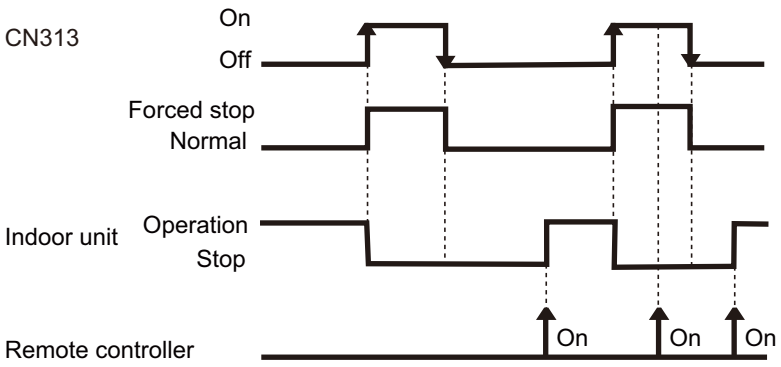
NOTES:

- The last command has priority.
- The indoor units within the same remote controller group operates in the same mode.
- This function is invalid when function setting 96 is set to “02” (Secondary unit).

● When function setting is "Forced stop" mode

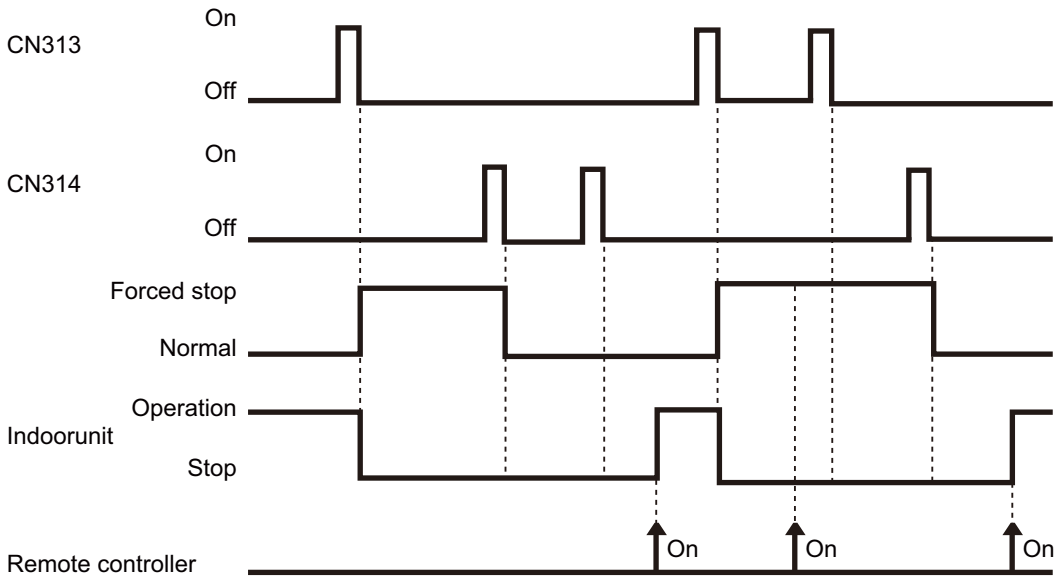
- In the case of "Edge" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-02	-	Input of indoor unit	CN2	Off → On	Forced stop
				On → Off	Normal
	60-00 / 1	External input and output PCB	CN313	Off → On	Forced stop
				On → Off	Normal



- In the case of "Pulse" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-02	60-00 / 1	External input and output PCB	CN313	Pulse	Forced stop
			CN314	Pulse	Normal



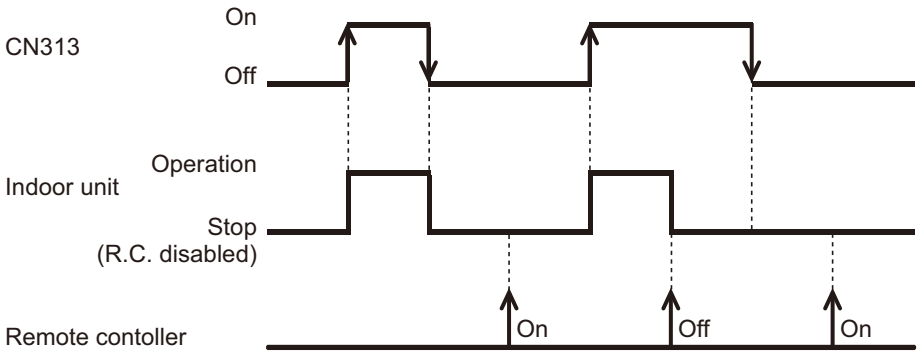
NOTES:

- When the forced stop is triggered, indoor unit stops and Operation/Stop operation by the remote controller is restricted.
- When forced stop function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.
- This function is invalid when function setting 96 is set to “02” (Secondary unit).

● When function setting is "Operation/Stop" mode 2

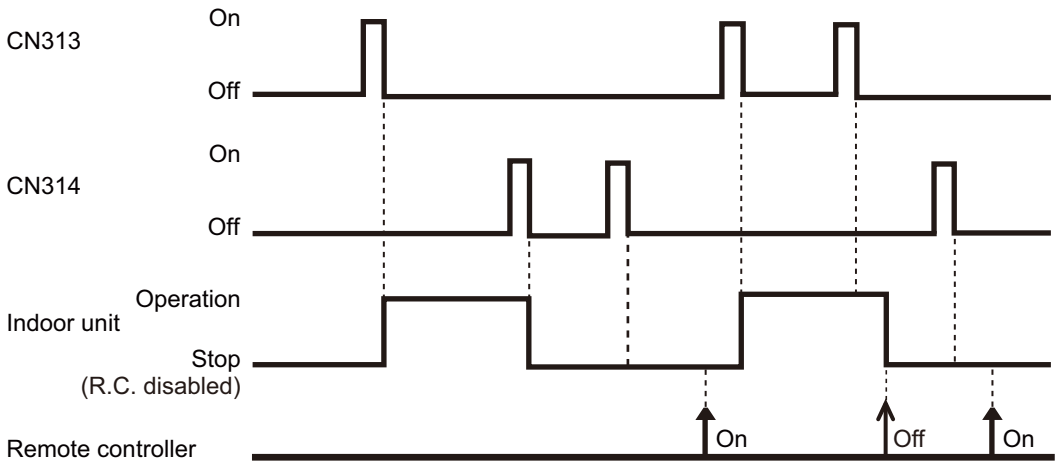
- In the case of "Edge" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-03	-	Input of indoor unit	CN2	Off → On	Operation
				On → Off	Stop (R.C. disabled)
	60-00 / 1	External input and output PCB	CN313	Off → On	Operation
				On → Off	Stop (R.C. disabled)



- In the case of "Pulse" input

Function setting /	Rotary SW on External input and output PCB	External input		Input signal	Command
46-03	60-00 / 1	External input and output PCB	CN313	Pulse	Operation
			CN314	Pulse	Stop (R.C. disabled)

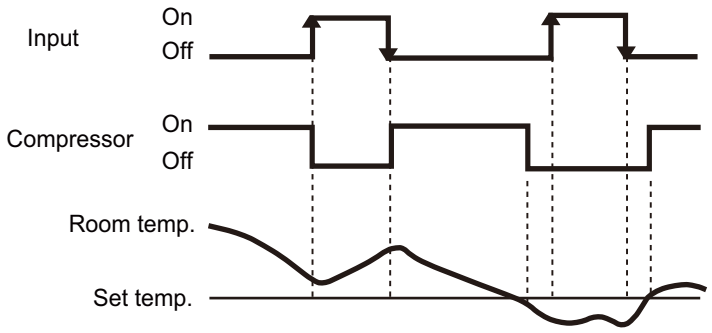


NOTES:

- When "Operation/Stop" mode 2 function is used with forming a remote controller group, connect the same equipment to each indoor unit within the group.
- This function is invalid when function setting 96 is set to “02” (Secondary unit).

● Forced thermostat off function

Function setting / Rotary SW on External input and output PCB	External input		Input signal	Command
60-00 / 2 60-09 / B 60-10 / C	External input and output PCB	CN313	Off → On	Thermostat off
			On → Off	Normal operation

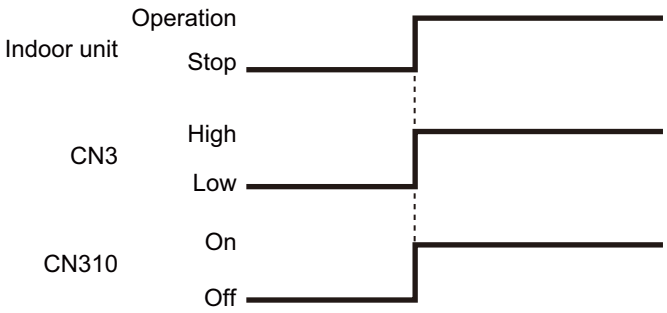


■ Control output function

● Operation/Stop status

Function setting / Rotary SW on External input and output PCB	External output		Output signal	Command
60-00 / 1, 2	Output of indoor unit	CN3	Low → High	Operation
			High → Low	Stop
60-00 / 1	External input and output PCB	CN310	Off → On	Operation
			On → Off	Stop

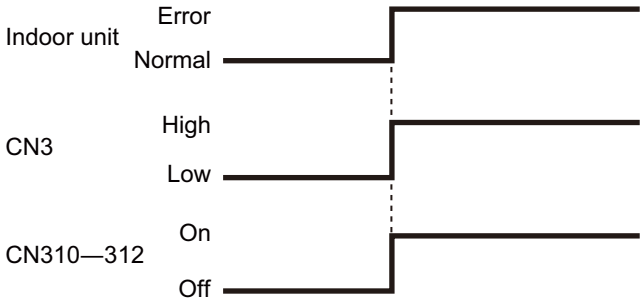
The output is low when the unit is stopped.



● Error status

Function setting / Rotary SW on External input and output PCB	External output		Output signal	Command
60-09 / B	Output of indoor unit	CN3	Low → High	Error
			High → Low	Normal
60-00 / 1	External input and output PCB	CN311	Off → On	Error
			On → Off	Normal

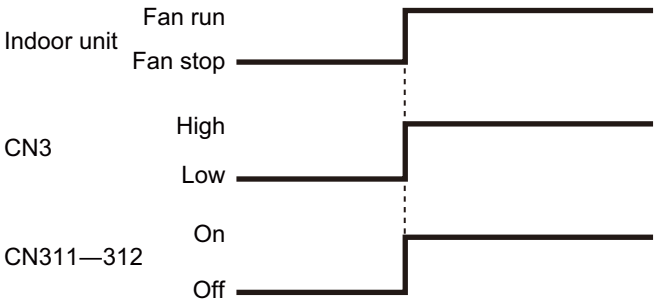
The output is ON when an error is generated for the indoor unit.



● Indoor unit fan operation status

Function setting / Rotary SW on External input and output PCB	External output		Output signal	Command
60-10 / C	Output of indoor unit	CN3	Low → High	Fan run
			High → Low	Fan stop
60-00 / 1	External input and output PCB	CN312	Off → On	Fan run
			On → Off	Fan stop

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



● Set point attainment status

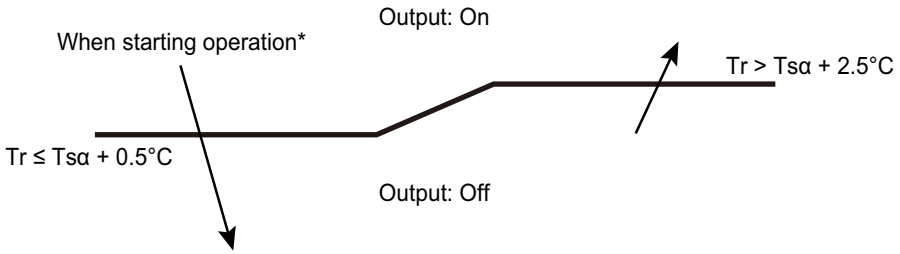
NOTE: This function is valid only when function setting 96 is set to “01” (Primary unit) or “02” (Secondary unit).

When the room temperature does not reach the set point at a room due to the lower cooling performance caused by external factor such as the outdoor temperature change, signal is output to tell the attainment status of set point.

Function setting / Rotary SW on External input and output PCB	External output		Output signal	Command
60-12 / D	Output of indoor unit	CN3	On → Off	Normal
			Off → On	Set point attainment

Output signal	Condition
Off	Reached the set point. (Tr ≤ Tsα+0.5)
On	Unreached the set point. (Tr > Tsα+2.5) However, even if the set point unreached, the signal will not be output for 7 minutes after power is turned on.

When performing the server room control, both of the primary unit and secondary unit output the set point attainment status if any of the unit is outputting alternative operation command.



*: When starting operation or resetting, judges the zone to descending direction.

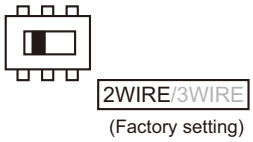
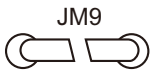
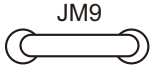
11. Function settings

To adjust the functions of this product according to the installation environment, various types of function settings are available.

NOTE: Incorrect settings can cause a product malfunction.

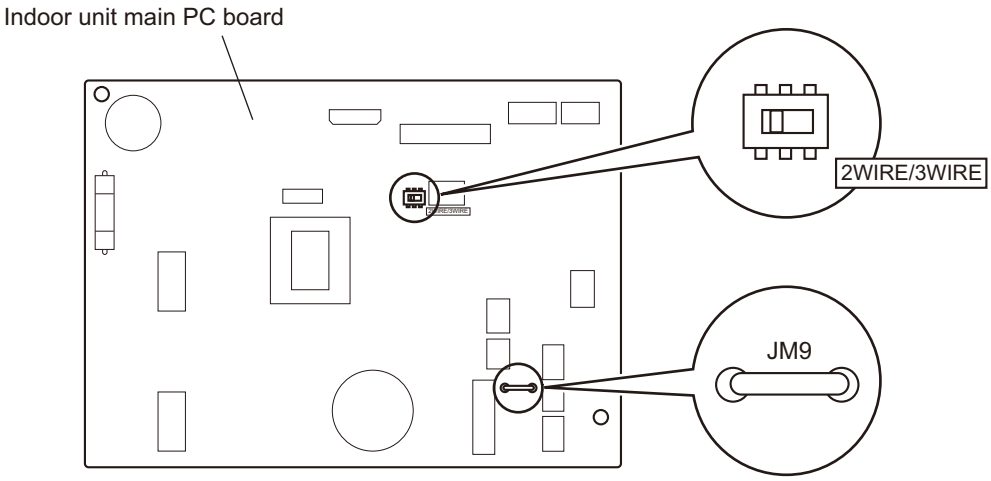
11-1. Function settings on indoor unit

Depending on the connected remote controller type or performing control, following setting is required:

Status	DIP switch	Jumper (JM9)
2-wire-type wired remote controller is connected	 (Factory setting)	 (Disconnected)
3-wire-type wired remote controller is connected or Server room control		 (Connected) (Factory setting)

■ Component location

Component on the indoor unit main PC board used for this setting is located as shown in the following figure.



11-2. Function settings by using remote controller

Some function settings can be changed on the remote controller. After confirming the setting procedure and the content of each function setting, select appropriate functions for your installation environment.

NOTE: Incorrect settings can cause a product malfunction.

■ Setting procedure by using wireless remote controller

The function number and the associated setting value are displayed on the LCD of the remote controller. Follow the instructions written in the local setup procedure supplied with the remote controller, and select appropriate setting according to the installation environment.

Before connecting the power supply of the indoor unit, reconfirm following items:

- Cover for the electrical enclosure on the outdoor unit is in place.
- There is no wiring mistake.
- Piping air tight test and vacuuming have been performed firmly.
- All the necessary wiring work for outdoor unit has been finished.

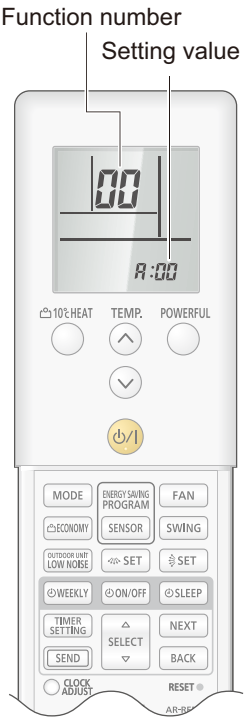
After reconfirming the items listed above, connect the power supply of the indoor unit.

NOTES:

- Settings will not be changed if invalid numbers or setting values are selected.
- When optional wired remote controller is used, refer to the installation manual enclosed with the remote controller.

Entering function setting mode:

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



Selecting the function number and setting value:

1. Press the TEMP. (∧) (∨) buttons to select the function number. To switch between the left and right digits, press the 10 °C HEAT button.
2. Press the POWERFUL button to proceed to value setting. To return the function number selection, press the POWERFUL button again.
3. Press the TEMP. (∧) (∨) buttons to select the setting value. To switch between the left and right digits, press the 10 °C HEAT button.
4. Press the MODE button once to send the function setting information. Confirm that you hear the beep sound.
5. Press the START/STOP button to fix the function setting. Confirm that you hear the beep sound.
6. Press the RESET button to end the function setting mode.
7. After completing the function setting, be sure to disconnect the power supply and then reconnect it.

⚠CAUTION

After disconnecting the power supply, wait 30 seconds or more before reconnecting it. The function setting will not become active unless the power supply is disconnected and then reconnected.

NOTES:

- The air conditioner custom code is set to A prior to shipment.
- 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 that operates the air conditioner.

■ Contents of function setting

Each function setting listed in this section is adjustable in accordance with the installation environment.

NOTE: Setting will not be changed if invalid numbers or setting values are selected.

● Function setting list

	Function no.	Functions
1)	00	Remote controller address setting
2)	11	Filter sign
3)	30/31	Room temperature control for indoor unit sensor
4)	35/36	Room temperature control for wired remote controller sensor
5)	40	Auto restart
6)	42	Room temperature sensor switching
7)	44	Remote controller custom code
8)	46	External input control
9)	48	Room temperature sensor switching (Aux.)
10)	49	Indoor unit fan control for energy saving for cooling
11)	60	Switching functions for external output terminal
12)	96	Server room control

1) Remote controller address setting

NOTE: Because this setting is normally done automatically when 2-wire-type wired remote controller is installed, setting is unnecessary.

Multiple indoor units can be operated by using one wired remote controller.

Set the unit number of each indoor unit.

Function number	Setting value	Setting description	Factory setting
00	00	Unit no. 0	♦
	01	Unit no. 1	
	02	Unit no. 2	
	03	Unit no. 3	
	04	Unit no. 4	
	05	Unit no. 5	
	06	Unit no. 6	
	07	Unit no. 7	
	08	Unit no. 8	
	09	Unit no. 9	
	10	Unit no. 10	
	11	Unit no. 11	
	12	Unit no. 12	
	13	Unit no. 13	
	14	Unit no. 14	
	15	Unit no. 15	

NOTES:

- When connecting Polar 3-core wired remote controller, set the remote controller address in the order of 0, 1, 2, ..., and 15.
- When different type of indoor units (such as wall-mounted type and cassette type, cassette type and duct type, or other combinations) are connected using group control system, some functions may no longer be available.

2) Filter sign

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

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

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

3) Room temperature control for indoor unit sensor

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

The temperature correction values show the difference from the Standard setting "00" (manufacturer's recommended value).

Function number		Setting value	Setting description		Factory setting
30 (For cooling)	31 (For heating)	00	Standard setting		♦
		01	No correction 0.0 °C		
		02	-0.5 °C	More cooling Less heating	
		03	-1.0 °C		
		04	-1.5 °C		
		05	-2.0 °C		
		06	-2.5 °C		
		07	-3.0 °C		
		08	-3.5 °C		
		09	-4.0 °C		
		10	+0.5 °C	Less cooling More heating	
		11	+1.0 °C		
		12	+1.5 °C		
		13	+2.0 °C		
		14	+2.5 °C		
		15	+3.0 °C		
		16	+3.5 °C		
		17	+4.0 °C		

4) Room temperature control for wired remote controller sensor

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

To change this setting, set Function 42 to Both “01”.

Ensure that the Thermo Sensor icon is displayed on the remote controller screen.

Function number		Setting value	Setting description		Factory setting
35 (For cooling)	36 (For heating)	00	No correction		♦
		01	No correction 0.0°C		
		02	-0.5 °C	More cooling Less heating	
		03	-1.0 °C		
		04	-1.5 °C		
		05	-2.0 °C		
		06	-2.5 °C		
		07	-3.0 °C		
		08	-3.5 °C		
		09	-4.0 °C		
		10	+0.5 °C	Less cooling More heating	
		11	+1.0 °C		
		12	+1.5 °C		
		13	+2.0 °C		
		14	+2.5 °C		
		15	+3.0 °C		
		16	+3.5 °C		
		17	+4.0 °C		

5) Auto restart

Enables or disables automatic restart after a power interruption.

Function number	Setting value	Setting description	Factory setting
40	00	Enable	♦
	01	Disable	

NOTE: Auto restart is an emergency function such as for power outage etc. Do not attempt to use this function in normal operation. Be sure to operate the unit by remote controller or external device.

6) Room temperature sensor switching

(Only for wired remote controller)

When using the wired remote controller temperature sensor, change the setting to "Both" (01).

Function number	Setting value	Setting description	Factory setting
42	00	Indoor unit	♦
	01	Both	

00: Sensor on the indoor unit is active.

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

NOTE: Remote controller sensor must be turned on by using the remote controller.

7) Remote controller custom code

(Only for wireless remote controller)

The indoor unit custom code can be changed. Select the appropriate custom code.

Function number	Setting value	Setting description	Factory setting
44	00	A	♦
	01	B	
	02	C	
	03	D	

8) External input control

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

Function number	Setting value	Setting description	Factory setting
46	00	Operation/Stop mode 1	♦
	01	(Setting prohibited)	
	02	Forced stop mode	
	03	Operation/Stop mode 2	

9) Room temperature sensor switching (Aux.)

To use the temperature sensor on the wired remote controller only, change the setting to "Wired remote controller" (01).

This function will only work if the function setting 42 is set at "Both" (01).

When the setting value is set to "Both" (00), more suitable control of the room temperature is possible by setting function setting 30 and 31 too.

Function number	Setting value	Setting description	Factory setting
48	00	Both	♦
	01	Wired remote controller	

10) Indoor unit fan control for energy saving for cooling

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

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

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

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

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

NOTES:

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

11) Switching functions for external output terminal

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

Function number	Setting value	Setting description	Factory setting
60	00	Operation status	♦
	09	Error status	
	10	Indoor unit fan operation status	
	12	Set point attainment status	

12) Server room control

Switches between normal control and server room control.

NOTE: To use this function, address setting of the primary unit and secondary unit needs to be done.

Function number	Setting value	Setting description	Factory setting
96	00	Normal control	♦
	01	Server room control (Primary unit)	
	02	Server room control (Secondary unit)	

When performing server room control, mind the followings:

- Set to “01” on one of the 2 indoor units, and set to “02” on the other indoor unit.
- As for the function details and setup procedure, refer to “Details of server room control” on page 4.

11-3. Custom code setting for wireless remote controller

To interconnect the air conditioner and the wireless remote controller, assignment of the custom code for the wireless remote controller is required.

NOTE: Air conditioner cannot receive a signal if the air conditioner has not been set for the custom code.

When 2 or more air conditioners are installed in a room, and the remote controller is operating an air conditioner other than the one you wish to set, change the custom code of the remote controller to operate only the air conditioner you wish to set. (4 selections possible.)

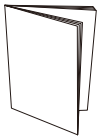
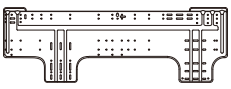
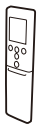
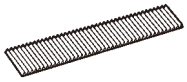
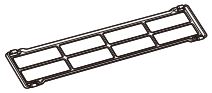
Confirm the setting of the remote controller custom code and the function setting. If these do not match, the remote controller cannot be used to operate for the air conditioner.

1. Press the START/STOP button until only the clock is displayed on the remote controller display.
2. Press the MODE button for at least 5 seconds to display the current custom code. (Initially set to A.)
3. Press the TEMP. (∧) (∨) buttons to change the custom code between A →b →c →d. Match the code on the display to the air conditioner custom code. (Initially set to A.)
4. Press the MODE button again to return to the clock display. The custom code will be changed.

NOTES:

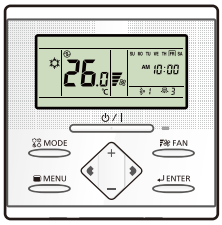
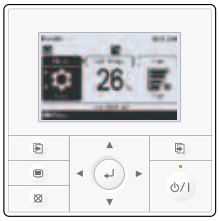
- If no button is pressed within 30 seconds after the custom code is displayed, the system returns to the original clock indicator. In this case, start again from step 1.
- The air conditioner custom code is set to A prior to shipment. To change the custom code, contact your retailer.
- If you do not know the assigned code for the air conditioner, try each of the custom code (A →b →c →d) until you find the code which operates the air conditioner.

12. Accessories

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Drain hose insulation		1
Installation manual		1	Cloth tape		1
Wall hook bracket		1	Tapping screw (large), M4 × 25 mm		8
Remote controller		1	Tapping screw (small), M3 × 12 mm		2
Battery		2	Air cleaning filter		2
Remote controller holder		1	Air cleaning filter frame		2

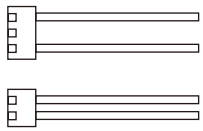
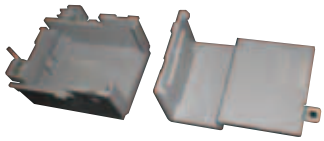
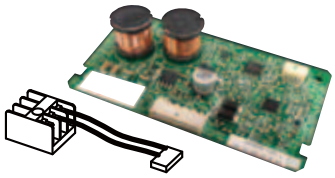
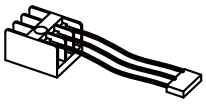
13. Optional parts

13-1. Controllers

Exterior	Part name	Model name	Summary
	Wired remote controller	UTY-RNRYZ1	Easy finger touch operation with LCD panel. Backlit LCD enables easy operation in a dark room. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.
	Wired remote controller	UTY-RLRY	High visibility and easy operation. Room temperature can be accurately controlled using the built-in thermo sensor. Wire type: Non-polar 2-wire Optional communication kit is necessary for installation.
	Wired remote controller	UTY-RVNYM	Large and full-dot liquid crystal screen, wide and large keys easy to press, user-intuitive arrow key. Wire type: Polar 3-wire Optional communication kit is necessary for installation.
	Simple remote controller	UTY-RSNYM	Compact remote controller concentrates on the basic functions such as Start/Stop, fan control, temperature setting, and operation mode. Wire type: Polar 3-wire Optional communication kit is necessary for installation.

NOTE: Available functions may differ by the remote controller. For details, refer to the operation manual.

13-2. Others

Exterior	Part name	Model name	Summary
	External connect kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PCB.
	External input and output PCB	UTY-XCSXZ1	Use to connect with external devices and air conditioner PCB.
	External input and output PCB box	UTZ-GXXB	For installing the External input and output PCB.
	Communication kit	UTY-TWRX	Use to connect Non-polar 2-core wired remote controller.
	Communication kit	UTY-XWNX	Use to connect Polar 3-core wired remote controller. Also, used for performing server room control.

Part 2. OUTDOOR UNIT

SINGLE TYPE:
AOYG30LMTA
AOYG36LMTA

1. Specifications

Type				Inverter heat pump	
Model name				**AOYG30LMTA**	**AOYG36LMTA**
Power supply				230 V ~ 50 Hz	
Available voltage range				198—264 V	
Starting current			A	10.5	13.9
Fan	Airflow rate	Cooling	m^3/h	3,600	3,800
		Heating		3,600	3,800
	Type × Q'ty			Propeller fan × 1	
	Motor output		W	100	
Sound pressure level *1		Cooling	dB (A)	52	55
		Heating		55	56
Sound power level		Cooling	dB (A)	67	68
		Heating		68	70
Heat exchanger type		Dimensions (H × W × D)	mm	798 × 900 × 36.4	
		Fin pitch		1.30	
		Rows × Stages		2 × 38	
		Pipe type		Copper	
		Fin type	Type (Material)	Corrugate (Aluminum)	
			Surface treatment	Corrosion resistance (Blue fin)	
Compressor	Type × Q'ty			Hermetic motor compressor × 1	
	Motor output		W	2,100	2,100
Refrigerant		Type (Global warming potential)		R410A (1975)	
		Charge	g	2,100	
Refrigerant oil		Type		POE (RB68)	
		Amount	cm^3	800	
Enclosure		Material		Steel sheet	
		Color		Beige Approximate color of MUNSELL 10YR7.5/1.0	
Dimensions (H × W × D)	Net		mm	830 × 900 × 330	
	Gross			1,000 × 1,050 × 445	
Weight	Net		kg	61	
	Gross			69	
Connection pipe	Size	Liquid	mm	Ø 9.52 (Ø 3/8)	
		Gas		Ø 15.88 (Ø 5/8)	
	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	
Drain hose		Material		LDPE	
		Size	mm	Ø 13.0 (I. D.), Ø 16.0 to Ø 16.7 (O. D.)	

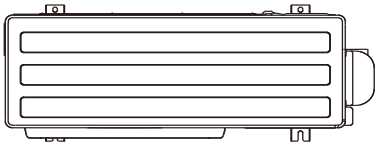
NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB.
  - Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB.
  - Pipe length: 5 m, Height difference: 0 m.
- Protective function might work when using it outside the operation range.
- *1: Sound pressure level
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

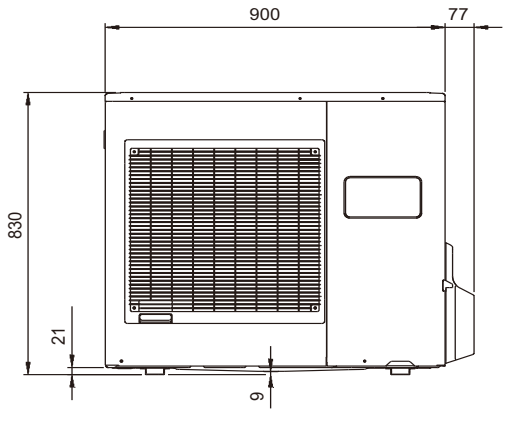
2. Dimensions

2-1. Models: AOYG30LMTA and AOYG36LMTA

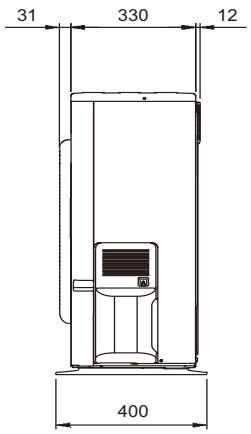
Unit: mm



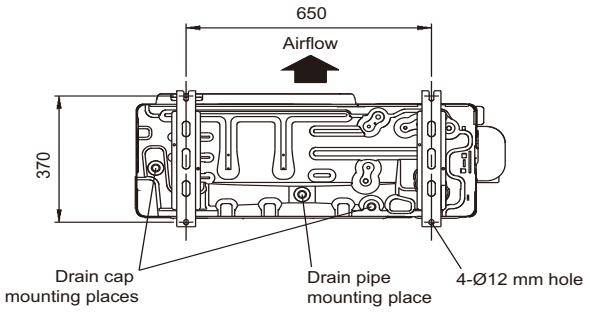
Top view



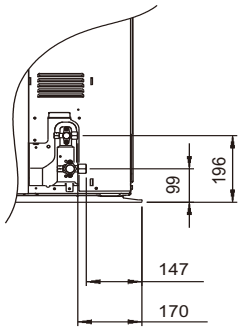
Front view



Side view



Bottom view



3. Installation space

3-1. Models: AOYG30LMTA and AOYG36LMTA

■ Space requirement

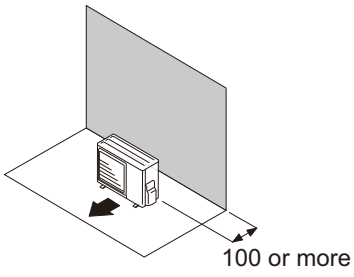
Provide sufficient installation space for product safety.

● Single outdoor unit installation

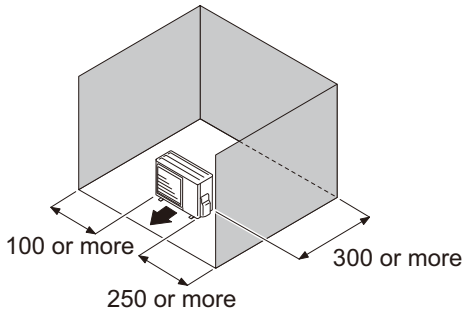
- **When the upper space is open:**

Unit: mm

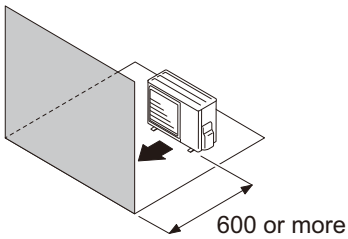
When there are obstacles at the rear only.



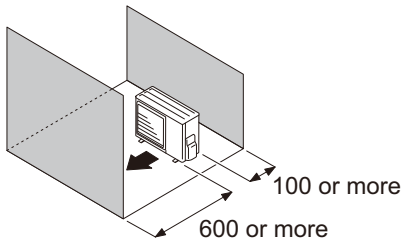
When there are obstacles at the rear and sides.



When there are obstacles at the front only.



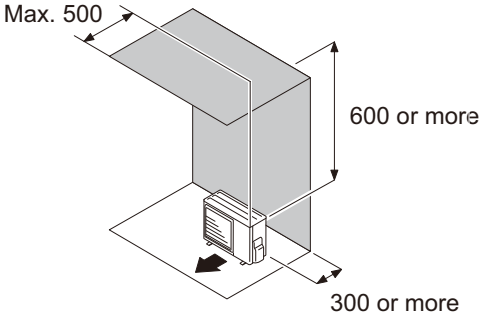
When there are obstacles at the front and rear.



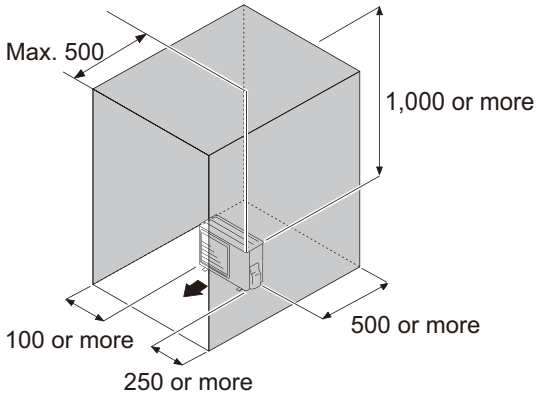
- **When there is an obstruction in the upper space:**

Unit: mm

When there are obstacles at the rear and above.



When there are obstacles at the rear, sides, and above.

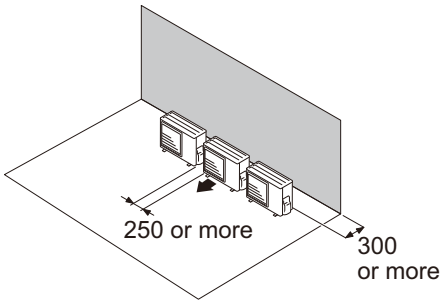


● Multiple outdoor unit installation

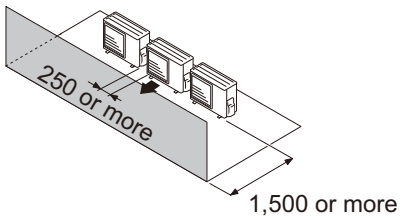
- **When the upper space is open:**

Unit: mm

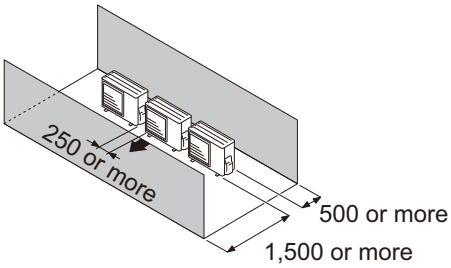
When there are obstacles at the rear only.



When there are obstacles at the front only.



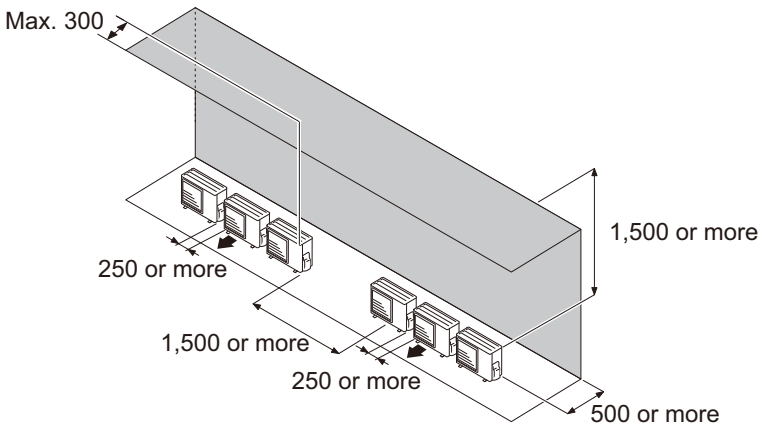
When there are obstacles at the front and rear.



- **When there is an obstruction in the upper space:**

Unit: mm

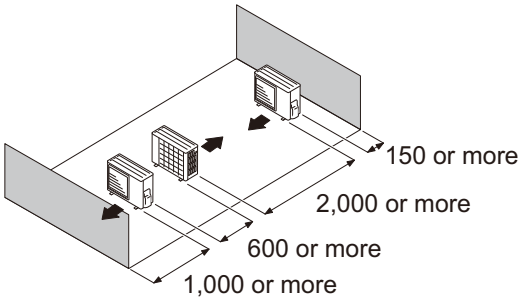
When there are obstacles at the rear and above.



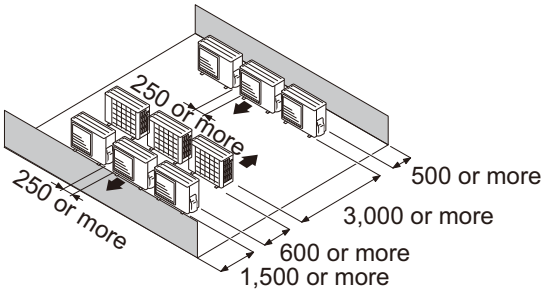
● Outdoor unit installation in multi-row

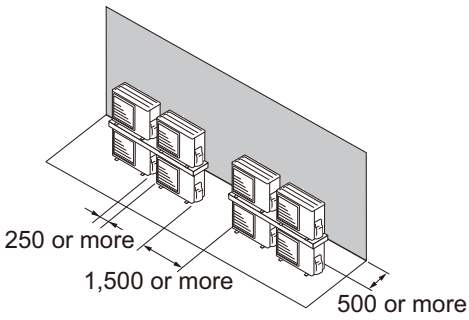
Unit: mm

Single parallel unit arrangement



Multiple parallel unit arrangement



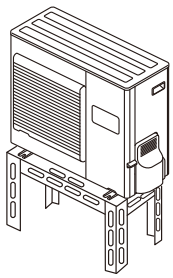


NOTES:

- If the space is larger than stated above, the condition will be the same as when there is no obstacle.
- Height above the floor level should be 50 mm or more.
- When installing the outdoor unit, be sure to open the front and left side to obtain better operation efficiency.

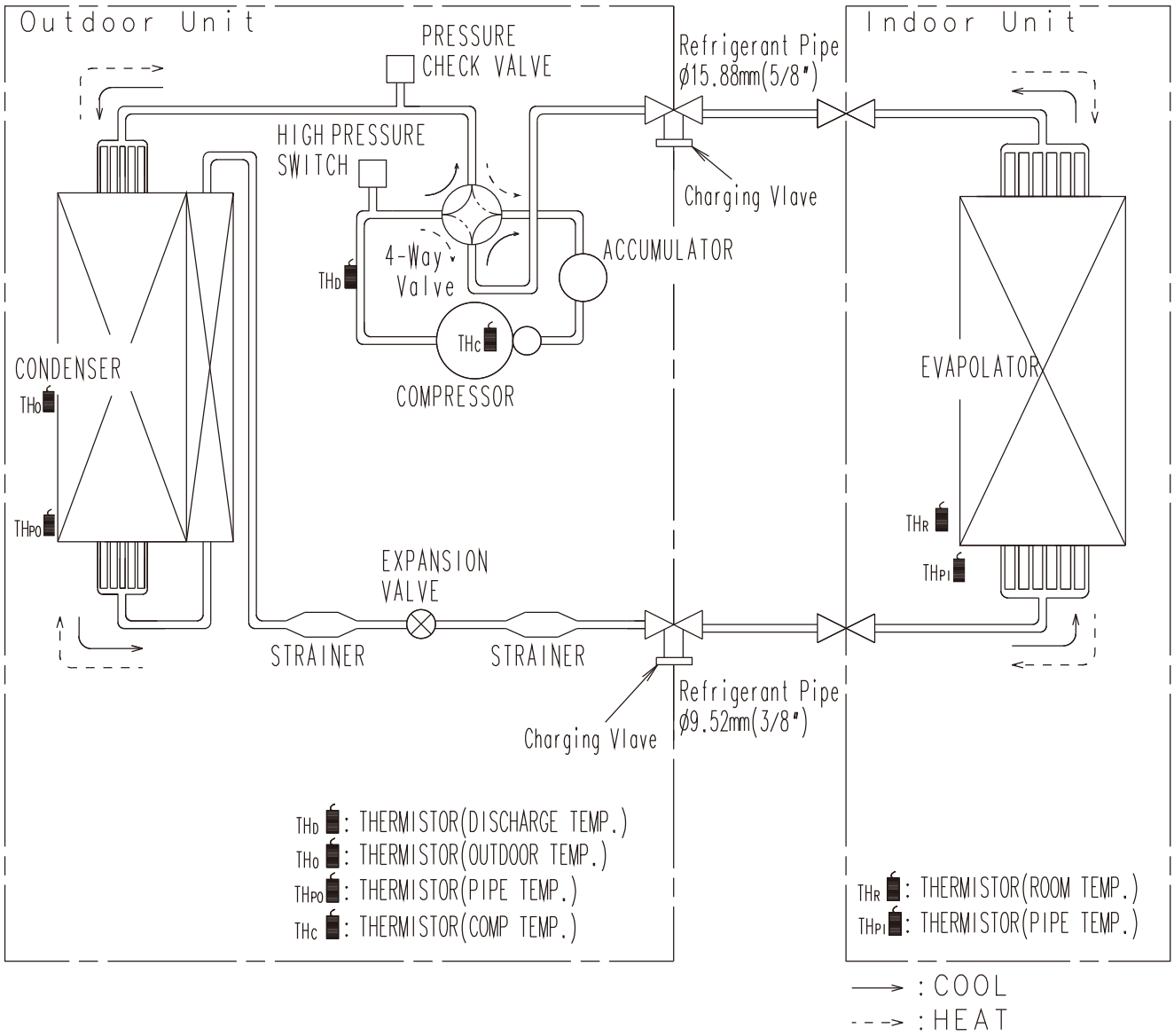
⚠CAUTION

- Do not install the outdoor unit in two-stage where the drain water could freeze. Otherwise the drainage from the upper unit may form ice and cause a malfunction of the lower unit.
- When the outdoor temperature is 0 °C or less, do not use the accessory drain pipe and drain cap. If the drain pipe and drain cap are used, the drain water in the pipe may freeze in extremely cold climate. (For reverse cycle model only.)
- In area with heavy snowfall, if the inlet and outlet of the outdoor unit is blocked with snow, it might become difficult to get warm, and it is likely to cause product malfunction. Construct a canopy and a pedestal, or place the unit on a high stand that is locally installed.



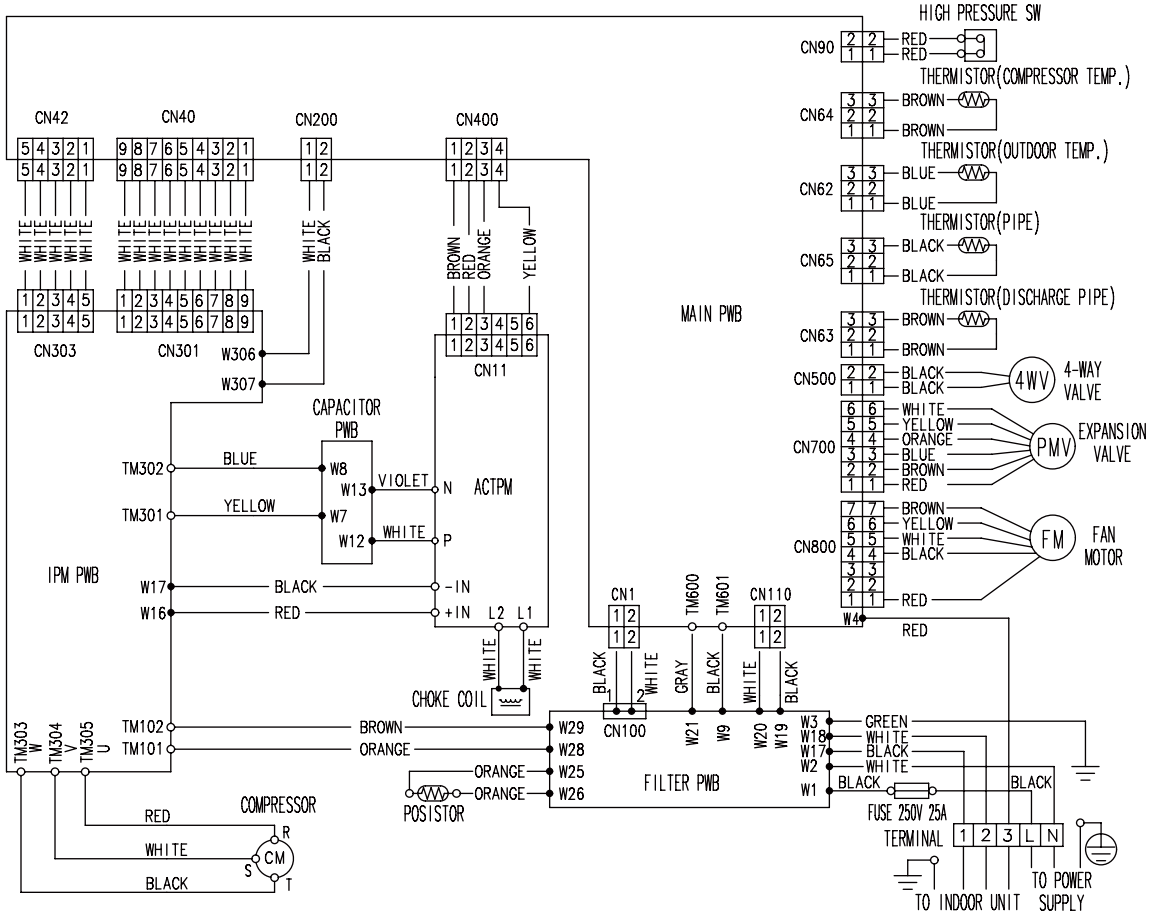
4. Refrigerant circuit

4-1. Models: AOYG30LMTA and AOYG36LMTA

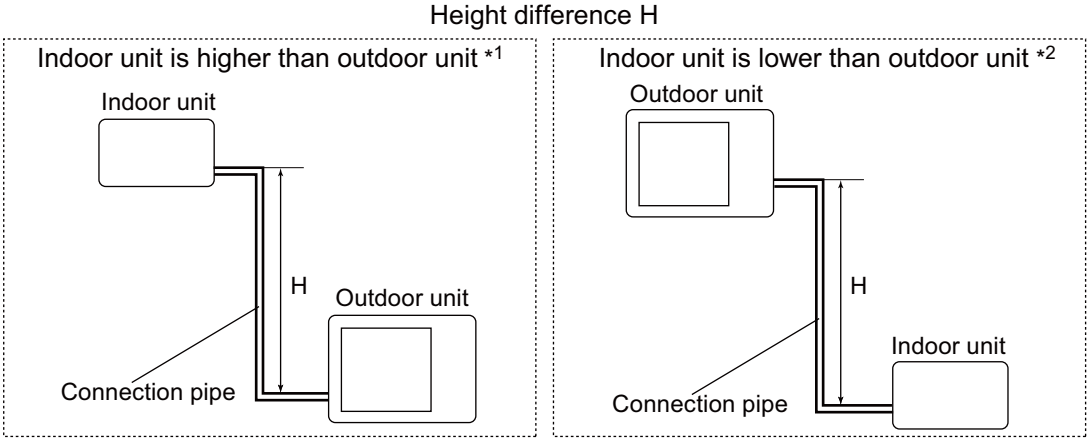


5. Wiring diagrams

5-1. Models: AOYG30LMTA and AOYG36LMTA



6. Capacity compensation rate for pipe length and height difference



6-1. Models: AOYG30LMTA and AOYG36LMTA

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

COOLING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	-	-	-	-	0.932	0.929	0.924
		20	-	-	-	0.945	0.947	0.945	0.940
		10	-	-	0.984	0.961	0.963	0.960	0.956
		7.5	-	0.988	0.988	0.965	0.967	0.964	0.959
		5	0.992	0.992	0.992	0.968	0.971	0.968	0.963
		0	1.000	1.000	1.000	0.976	0.979	0.976	0.971
	Indoor unit is lower than outdoor unit *2	-5	1.000	1.000	1.000	0.976	0.979	0.976	0.971
		-7.5	-	1.000	1.000	0.976	0.979	0.976	0.971
		-10	-	-	1.000	0.976	0.979	0.976	0.971
		-20	-	-	-	0.976	0.979	0.976	0.971
		-30	-	-	-	-	0.979	0.976	0.971

HEATING			Pipe length (m)						
			5	7.5	10	20	30	40	50
Height difference H (m)	Indoor unit is higher than outdoor unit *1	30	-	-	-	-	0.816	0.756	0.686
		20	-	-	-	0.872	0.816	0.756	0.686
		10	-	-	0.991	0.872	0.816	0.756	0.686
		7.5	-	1.000	0.991	0.872	0.816	0.756	0.686
		5	1.000	1.000	0.991	0.872	0.816	0.756	0.686
		0	1.000	1.000	0.991	0.872	0.816	0.756	0.686
	Indoor unit is lower than outdoor unit *2	-5	0.995	0.995	0.986	0.868	0.812	0.752	0.683
		-7.5	-	0.993	0.983	0.866	0.810	0.750	0.681
		-10	-	-	0.981	0.864	0.808	0.748	0.679
		-20	-	-	-	0.855	0.799	0.740	0.672
		-30	-	-	-	-	0.791	0.733	0.665

7. Additional charge calculation

7-1. Model: AOYG30LMTA

Refrigerant type		R410A
Refrigerant amount	g	2,100

■ Refrigerant charge

Total pipe length	m	20 or less	30	40	50 (Max.)	40 g/m
Additional charge	g	0	400	800	1,200	

7-2. Model: AOYG36LMTA

Refrigerant type		R410A
Refrigerant amount	g	2,100

■ Refrigerant charge

Total pipe length	m	20 or less	30	40	50 (Max.)	40 g/m
Additional charge	g	0	400	800	1,200	

8. Airflow

8-1. Model: AOYG30LMTA

● Cooling

m^3/h	3,600
l/s	1,000
CFM	2,119

● Heating

m^3/h	3,600
l/s	1,000
CFM	2,119

8-2. Model: AOYG36LMTA

● Cooling

m^3/h	3,800
l/s	1,056
CFM	2,237

● Heating

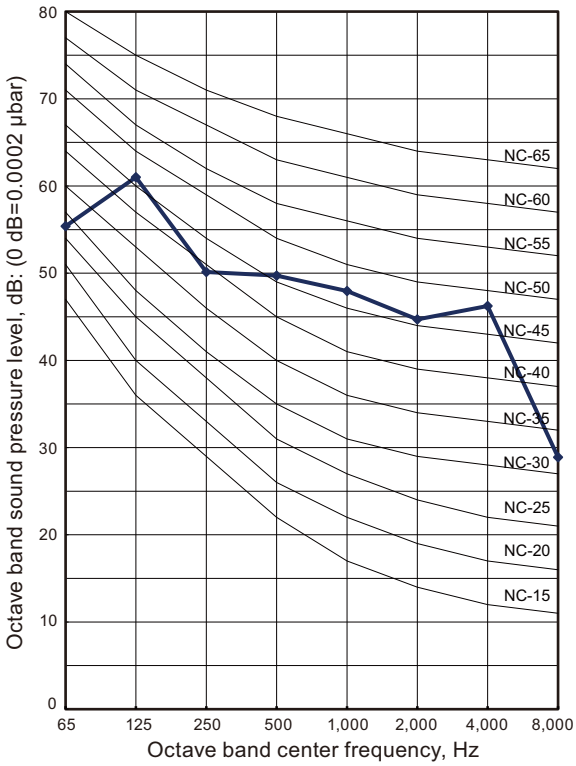
m^3/h	3,800
l/s	1,056
CFM	2,237

9. Operation noise (sound pressure)

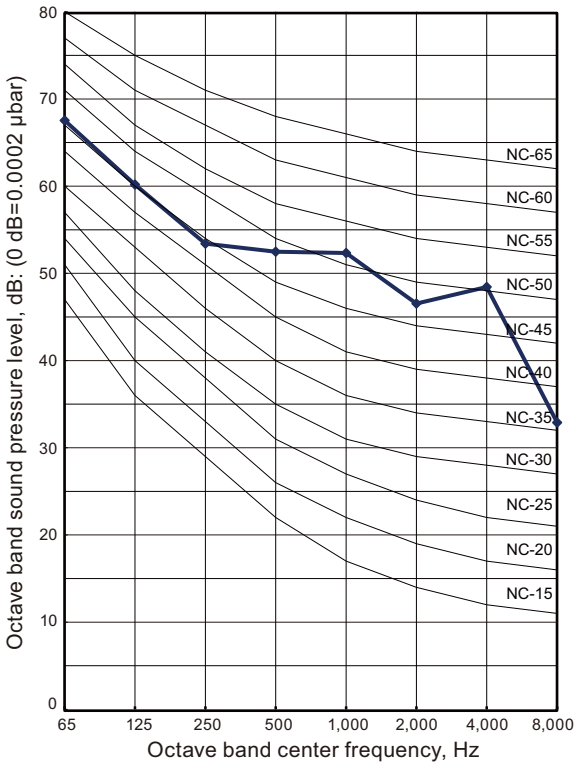
9-1. Noise level curve

■ Model: AOYG30LMTA

● Cooling

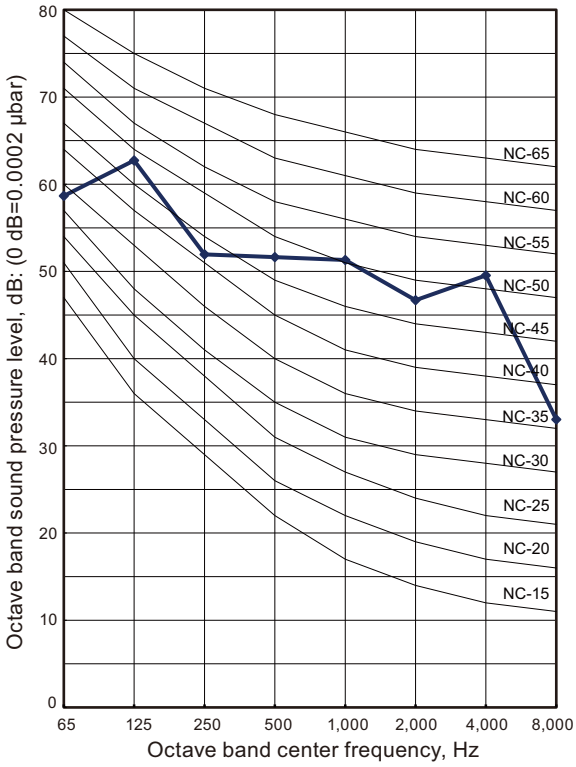


● Heating

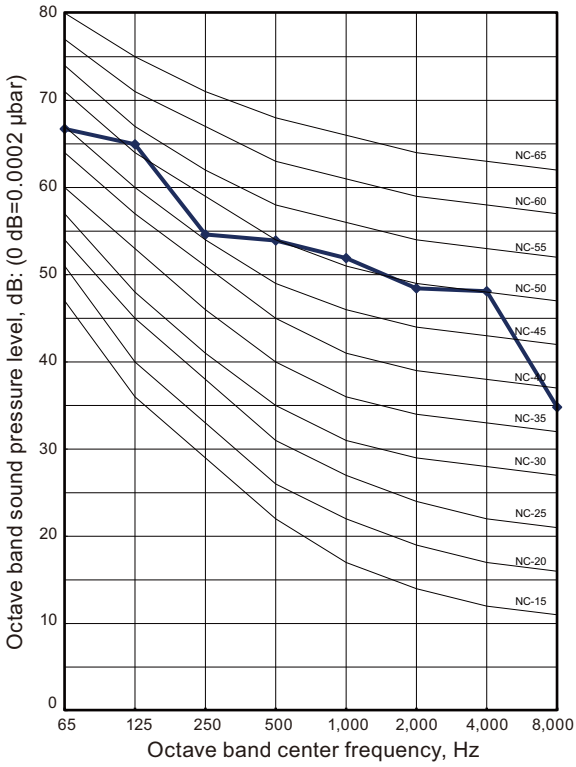


■ Model: AOYG36LMTA

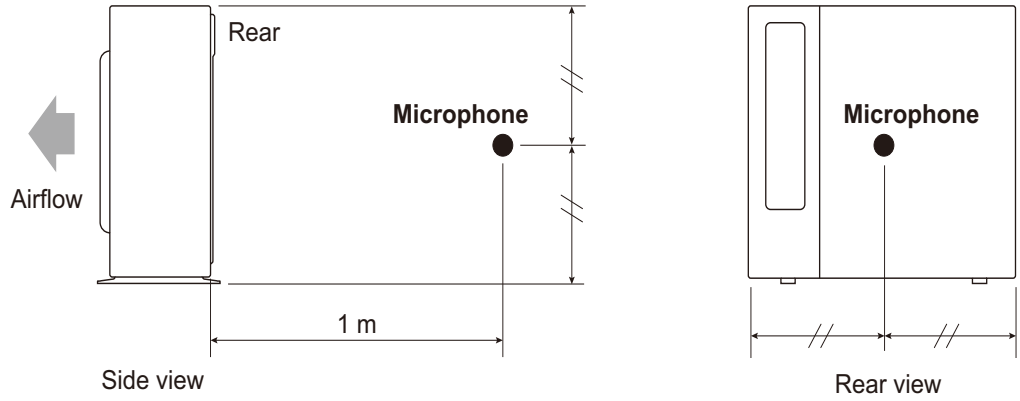
● Cooling



● Heating



9-2. Sound level check point



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

10. Electrical characteristics

Model name			AOYG30LMTA	AOYG36LMTA
Power supply	Voltage	V	230 ~	
	Frequency	Hz	50	
Max operating current *1		A	14.5	19.0
Starting current		A	10.5	13.9
Wiring spec. *2	Circuit breaker current	A	30	
	Power cable	mm^2	2.5	4.0
	Connection cable *3	mm^2	1.5—2.5	
	Limited wiring length	m	51	

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

*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

*3: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

11. Safety devices

Type of protection	Protection form		Model	
			AOYG30LMTA	AOYG36LMTA
Circuit protection	Current fuse (Near the terminal)		250 V, 25 A	
	Current fuse (Filter PCB)		250 V, 10 A	
	Current fuse (Main PCB)		250 V, 3.15 A	
Fan motor protection	Thermal protection program	Activate	150±15 °C Fan motor stop	
		Reset	120±15 °C Fan motor restart	
Compressor protection	Terminal protection program (Compressor temp.)	Activate	108 °C Compressor stop	
		Reset	After 40 minutes Compressor restart	
	Thermal protection program (Discharge temp.)	Activate	110°C Compressor stop	
		Reset	After 7 minutes Compressor restart	
High pressure protection	Pressure switch	Activate	4.2±0.1 MPa Compressor stop	
		Reset	3.2±0.15 MPa Compressor restart	

12. Accessories

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain cap		2
Drain pipe		1			