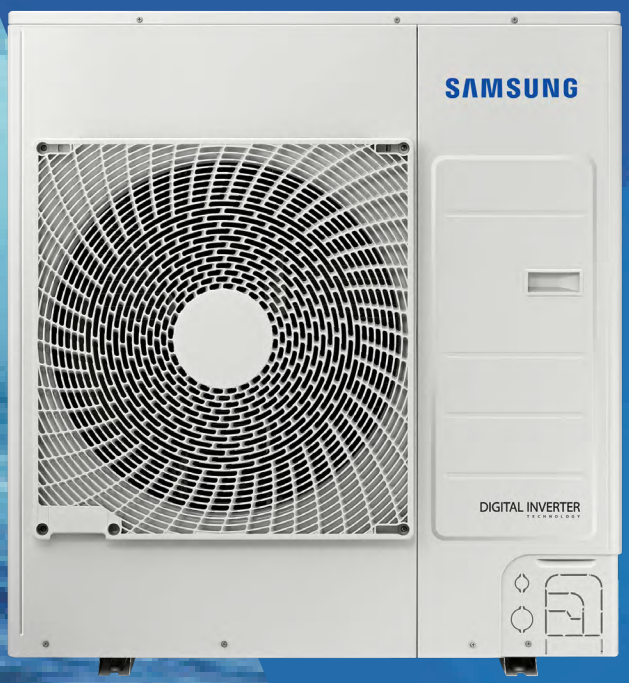
SAMSUNG

SINGLE Technical Data Book

Hylex (Hybrid Flexible Single) for America (R410A, 60Hz, HP)



Model : CXH**UPB (AC***BXUPCH/AA), CXH036UDB (AC036BXUDCH/AA)

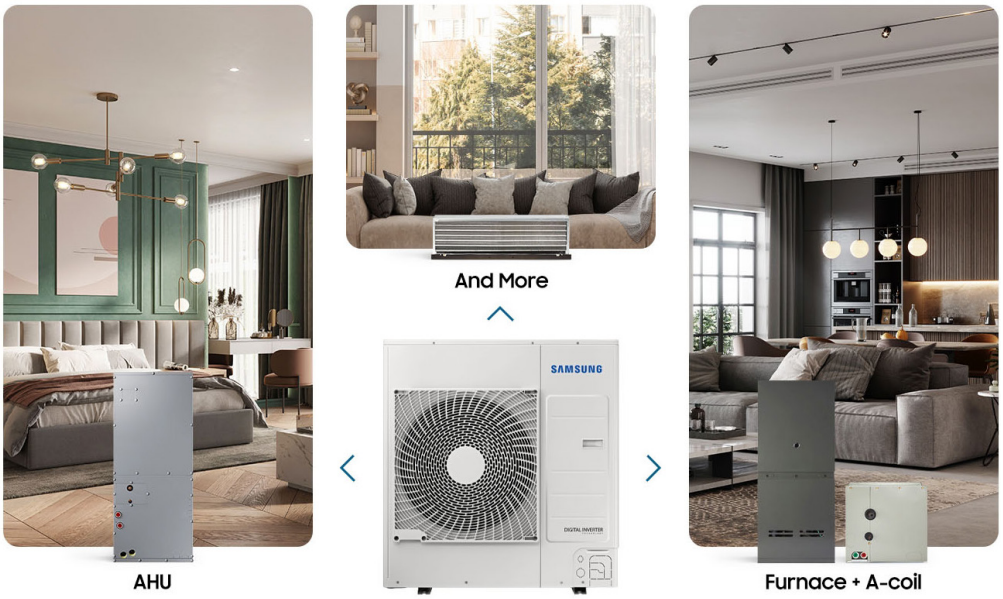
History

Version	Modification	Date	Remark
Ver. 1.0	Released Hylex (Hybrid Flexible Single) for North America	22. 11. 02	
Ver. 1.1	Modified some error and updated product name	23. 01. 06	

Features & Benefits

01. Free Combination

Enjoy the flexibility to freely connect your outdoor unit to any existing or new indoor units.* The Hylex (Hybrid Flexible Single) works reliably and effectively with a wide variety of indoor units*, such as air handling units (AHU) and Furnaces with an A-coil, that have a matching internal volume**.



* Only dry contact indoor units are compatible.
** Based on the manufacturer's operating guidelines.

02. Easy Replacement

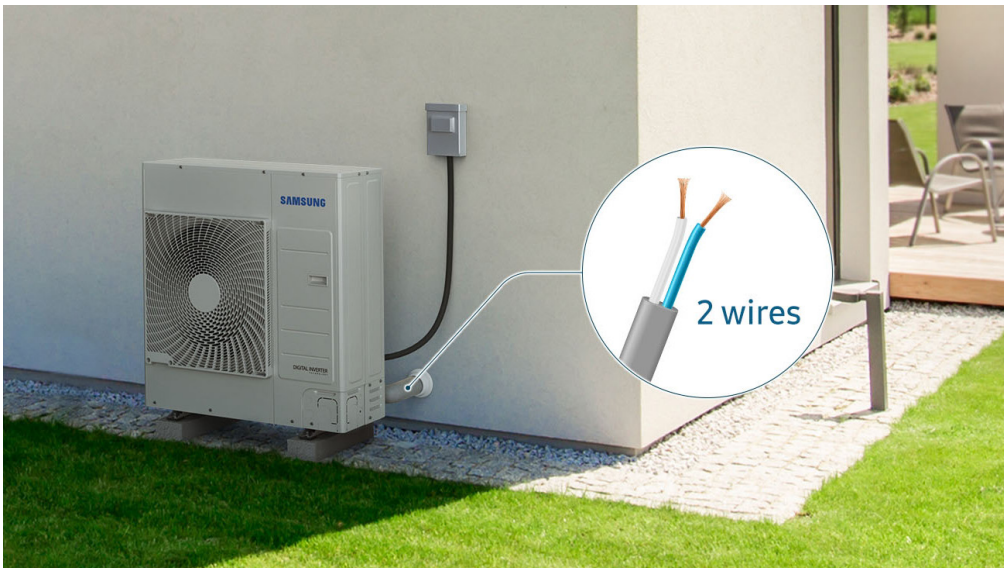
Peplace or upgrade the outdoor unit with minimal disruption. The Hylex (Hybrid Flexible Single) works effectively with various indoor units*. So if your outdoor unit malfunctions or you want to upgrade to an inverter system it can be easily installed without replacing your existing indoor unit* and thermostat.



History

03. 2-wire Connection

Reduce the time and cost of the electrical installation. Only 2 wires are needed to connect the outdoor unit to an indoor unit, which are usually available from previous systems. It simplifies the installation process as no additional wiring is required, so it's quicker and more cost effective.



Nomenclature

US Code

Model Name

C	X	H	48	U	P	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Classification

C	CAC

(2) Product Type

N	Indoor Unit
X	Outdoor Unit

(3) Mode

A	Universal
C	Cooling Only
H	Heat Pump

(4) Capacity

X1,000 Btu/h (2 digits)

(5-1) Product Notation (Indoor Unit)

1	1 Way Cassette / Wind-Free 1 Way Cassette
N	4 Way Cassette (600x600) Wind-Free 4 Way Cassette (600x600)
4	4 Way Cassette / Wind-Free 4 Way Cassette
L	LSP Duct
H	HSP Duct
C	Ceiling
J	Console
A	AR9500 (Wall Mounted)
T	MAX4 (Wall Mounted)
Z	Multi-position AHU

(5-2) Feature1 (Outdoor Unit)

A	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Top+Tropical Temp
U	Inv+Side+**Hylex**

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium
C	Deluxe + Low Temp.

(7) Version

B	2022

Nomenclature

US Code

Model Name

AC	048	B	X	U	P	C	H	/	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC

(2) Capacity

X1,000 Btu/h (3 digits)

(3) Version

B	2022

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1 Way Cassette / Wind-Free 1 Way Cassette
N	4 Way Cassette (600x600) Wind-Free 4 Way Cassette (600x600)
4	4 Way Cassette / Wind-Free 4 Way Cassette
L	LSP Duct
H	HSP Duct
C	Ceiling
J	Console
A	AR9500 (Wall Mounted)
T	MAX4 (Wall Mounted)
U	Inv+Side+**Hylex**
Z	Multi-position AHU

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

(7) Rating Voltage

C	1Φ, 208-230V,60Hz

(8) Mode

C	Cooling Only
H	Heat Pump

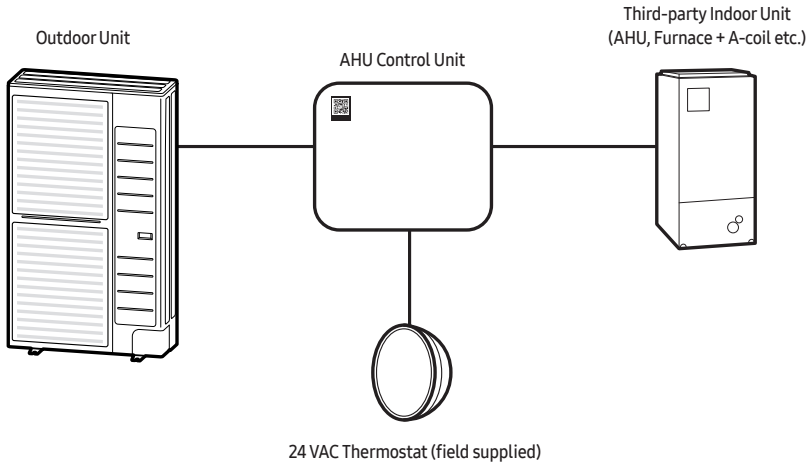
Line-up

Outdoor units

Capacity (kBtu/h)	24	36	36	48	60
Image					
Model	CXH24UPB (AC024BXUPCH/AA)	CXH36UDB (AC036BXUDCH/AA)	CXH36UPB (AC036BXUPCH/AA)	CXH48UPB (AC048BXUPCH/AA)	CXH60UPB (AC060BXUPCH/AA)

ACU kit (AHU Control Unit)

Model	MXD-U000XN
Image	



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1. Specification

Outdoor units

Model Name		Outdoor Unit			AC024BXUPCH/AA	AC036BXUDCH/AA
US CODE		Outdoor Unit			CXH24UPB	CXH36UDB
Outdoor Unit	Mode			-	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling	kW	3.22/7.03/8.79	4.84/10.55/11.72
				Btu/h	11,000/24,000/30,000	16,500/36,000/40,000
				US RT	0.92/2.00/2.50	1.38/3.00/3.33
			Heating	kW	2.20/7.62/10.26	3.08/10.14/10.84
				Btu/h	7,500/26,000/35,000	10,500/34,600/37,000
				US RT	0.63/2.17/2.92	0.88/2.88/3.08
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.91/2.38/3.15	1.05/4.00/4.50
			Heating	kW	0.72/2.44/5.40	0.83/3.19/5.40
		Current Input (Min/Std/Max)	Cooling	A	5.70/11.30/16.20	5.80/18.00/20.00
			Heating	A	4.50/11.50/24.00	4.60/14.50/24.00
		Current	MCA	A	24.1	24.4
			MOP	A	30	35
	Efficiency	EER2	Cooling	W/W	2.960	2.638
			Cooling (US)	(Btu/h)/W	10.1	9.0
		COP2	Heating	W/W	3.12	3.18
		SEER2 (Cooling Energy Grade)		(Btu/h)/W	16.5	17.0
		HSPF2 (Heating Energy Grade)		(Btu/h)/W	8.1	8.1
		Energy Star Certification (Cold)		-	Yes	Yes
	Piping Connections	Liquid Pipe		Type	Brazing	Brazing
				Φ, mm (inch)	9.52 (3/8)	9.52 (3/8)
		Gas Pipe		Type	Brazing	Brazing
				Φ, mm (inch)	19.05 (3/4)	19.05 (3/4)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Wiring connections	Piping length (ODU-IDU)	Standard	m (ft)	7.5 (24.6)	7.5 (24.6)
			Max.	m (ft)	30 (98)	50 (164)
			Elevation	m (ft)	15 (49)	30 (98)
			Chargeless	m (ft)	7.5 (24.6)	7.5 (24.6)
		Communication	Min.	mm²	0.75	0.75
				inch²	0.0012	0.0012
				AWG	18	18
			Remark	-	F1,F2	F1,F2
	Refrigerant	Type		-	R410A	R410A
		Factory Charging		kg (lbs)	3.2 (7.055)	3.6 (7.937)
		Control Method		-	EEV	EEV
	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al
			Tube	-	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name			UG8T300FUBJU	UG5TK1450FJX
		Type		-	Twin BLDC Rotary	Twin BLDC Rotary
		Output		kW	2.82	4.19
		Oil	Type	-	POE	PVE
			Initial charge	cc	1,200	1,700
				fl oz	40.58	57.48

1. Specification

Outdoor units

Model Name		Outdoor Unit			AC024BXUPCH/AA	AC036BXUDCH/AA
US CODE		Outdoor Unit			CXH24UPB	CXH36UDB
Outdoor Unit	Fan	Type		-	Propeller	Propeller
		Discharge direction		-	Side	Side
		Quantity		EA	1	1
		Air Flow Rate		m^3/min	76	76
				ft^3/min	2,684	2,684
				l/s	1,267	1,267
	Fan Motor	Type		-	BLDC	BLDC
		Output		W x n	125 x 1	125 x 1
	Sound	Sound Pressure Level	Cooling	dB(A)	50	53
			Heating	dB(A)	52	55
		Sound Power Level		dB(A)	70	73
	External Dimension	Net Weight		kg (lbs)	74 (163)	78 (172)
		Shipping Weight		kg (lbs)	79 (174)	83 (183)
		Net Dimensions (WxHxD)		mm	940 x 998 x 330	940 x 998 x 330
				inch	37 x 39-5/16 x 13	37 x 39-5/16 x 13
		Shipping Dimensions (WxHxD)		mm	995 x 1,096 x 426	995 x 1,096 x 426
				inch	39-3/16 x 43-1/8 x 16-3/4	39-3/16 x 43-1/8 x 16-3/4
	Casing	Material	Body	-	Steel	Steel
	Operating Temp. Range	Cooling		℃	-20~52	-20~52
				℉	-4~125	-4~125
		Heating		℃	-25~24	-25~24
				℉	-13~75	-13~75

NOTE

- Specifications may be subject to change without prior notice.

1) Performances are based on the following test conditions.
   - Cooling : Indoor temperature : 80°F(26.7°C) DB, 67°F(19.4°C) WB, Outdoor temperature : 95°F(35°C) DB, 75°F(23.9°C) WB
   - Heating : Indoor temperature : 70°F(21.1°C) DB, 60°F(15.6°C) WB, Outdoor temperature : 47°F(8.3°C) DB, 43°F(6.1°C) WB
   - Equivalent refrigerant pipe length 7.5m (24.6ft), Level differences 0m (0ft)
2) Select wire size based on the value of MCA
3) Sound pressure level is obtained in an anechoic room.
   - Sound pressure level is a relative value, depending on the distance and acoustic environment.
   - Sound pressure level may differ depending on operation condition.
   - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
4) Sound power level is an absolute value that a sound source generates.
   - dBA = A-weighted sound power level
   - Reference power : 1pW / Measured according to ISO 3741
5) These products contain R410A which is fluorinated greenhouse gas.

1. Specification

Outdoor units

Model Name		Outdoor Unit			AC036BXUPCH/AA	AC048BXUPCH/AA	AC060BXUPCH/AA
US CODE		Outdoor Unit			CXH36UPB	CXH48UPB	CXH60UPB
Outdoor Unit	Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling	kW	4.84/10.55/13.19	5.13/14.07/16.12	5.19/16.71/17.29
				Btu/h	16,500/36,000/45,000	17,500/48,000/55,000	17,700/57,000/59,000
				US RT	1.38/3.00/3.75	1.46/4.00/4.58	1.48/4.75/4.92
			Heating	kW	3.81/10.14/14.65	4.04/12.90/18.17	4.10/15.53/19.05
				Btu/h	13,000/34,600/50,000	13,800/44,000/62,000	14,000/53,000/65,000
				US RT	1.08/2.88/4.17	1.15/3.67/5.17	1.17/4.42/5.42
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.98/3.43/4.10	1.30/5.58/6.10	1.30/6.71/7.00
			Heating	kW	0.85/3.36/5.40	1.12/4.99/7.20	1.13/5.91/7.20
		Current Input (Min/Std/Max)	Cooling	A	5.40/15.60/18.20	7.10/24.80/27.10	7.10/29.80/31.10
			Heating	A	4.70/15.10/24.00	6.10/22.20/32.00	6.20/26.30/32.00
		Current	MCA	A	25.6	32.7	33.2
			MOP	A	35	40	40
	Efficiency	EER2	Cooling	W/W	3.077	2.521	2.491
			Cooling (US)	(Btu/h)/W	10.5	8.6	8.5
		COP2	Heating	W/W	3.02	2.58	2.64
		SEER2 (Cooling Energy Grade)		(Btu/h)/W	18.5	17.0	17.5
		HSPF2 (Heating Energy Grade)		(Btu/h)/W	8.4	8.5	9.0
		Energy Star Certification (Cold)		-	Yes	Yes	Yes
	Piping Connections	Liquid Pipe		Type	Brazing	Brazing	Brazing
				Φ, mm (inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
		Gas Pipe		Type	Brazing	Brazing	Brazing
				Φ, mm (inch)	22.2 (7/8)	22.2 (7/8)	22.2 (7/8)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Wiring connections	"Piping length (ODU-IDU)"	Standard	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
			Max.	m (ft)	50 (164)	50 (164)	30 (98)
			Elevation	m (ft)	30 (98)	30 (98)	15 (49)
			Chargeless	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
		Communication	Min.	mm²	0.75	0.75	0.75
				inch²	0.0012	0.0012	0.0012
				AWG	18	18	18
			Remark	-	F1,F2	F1,F2	F1,F2
	Refrigerant	Type		-	R410A	R410A	R410A
		Factory Charging		kg (lbs)	4.2 (9.259)	4.2 (9.259)	4.8 (10.582)
		Control Method		-	EEV	EEV	EEV
	Power Supply			Ø, #, V, Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Cu	Cu
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name			UG5TK1450FJX	UG5TK1450FJX	ATQ420D1UNT1
		Type		-	Twin BLDC Rotary	Twin BLDC Rotary	Twin BLDC Rotary
		Output		kW	4.19	4.19	3.44
		Oil	Type	-	PVE	PVE	POE
			Initial charge	cc	1,700	1,700	1,500
				fl oz	57.48	57.48	50.72

1. Specification

Outdoor units

Model Name		Outdoor Unit			AC036BXUPCH/AA	AC048BXUPCH/AA	AC060BXUPCH/AA
US CODE		Outdoor Unit			CXH36UPB	CXH48UPB	CXH60UPB
Outdoor Unit	Fan	Type		-	Propeller	Propeller	Propeller
		Discharge direction		-	Side	Side	Side
		Quantity		EA	2	2	2
		Air Flow Rate		m^3/min	100	100	125
				ft^3/min	3,531	3,531	4,414
				l/s	1,667	1,667	2,083
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	125 x 2	125 x 2	125 x 2
	Sound	Sound Pressure Level	Cooling	dB(A)	52	55	56
			Heating	dB(A)	54	57	58
		Sound Power Level		dB(A)	73	75	75
	External Dimension	Net Weight		kg (lbs)	89 (196)	89 (196)	101 (223)
		Shipping Weight		kg (lbs)	99 (218)	99 (218)	111 (245)
		Net Dimensions (WxHxD)		mm	940 x 1,210 x 330	940 x 1,210 x 330	940 x 1,420 x 330
				inch	37 x 47-5/8 x 13	37 x 47-5/8 x 13	37 x 55-7/8 x 13
		Shipping Dimensions (WxHxD)		mm	995 x 1,388 x 426	995 x 1,388 x 426	995 x 1,598 x 426
				inch	39-3/16 x 54-5/8 x 16-3/4	39-3/16 x 54-5/8 x 16-3/4	39-3/16 x 62-15/16 x 16-3/4
	Casing	Material	Body	-	Steel	Steel	Steel
	Operating Temp. Range	Cooling		℃	-20~52	-20~52	-20~52
				℉	-4~125	-4~125	-4~125
		Heating		℃	-25~24	-25~24	-25~24
				℉	-13~75	-13~75	-13~75

NOTE

- Specifications may be subject to change without prior notice.

1) Performances are based on the following test conditions.
   - Cooling : Indoor temperature : 80°F(26.7°C) DB, 67°F(19.4°C) WB, Outdoor temperature : 95°F(35°C) DB, 75°F(23.9°C) WB
   - Heating : Indoor temperature : 70°F(21.1°C) DB, 60°F(15.6°C) WB, Outdoor temperature : 47°F(8.3°C) DB, 43°F(6.1°C) WB
   - Equivalent refrigerant pipe length 7.5m (24.6ft), Level differences 0m (0ft)
2) Select wire size based on the value of MCA
3) Sound pressure level is obtained in an anechoic room.
   - Sound pressure level is a relative value, depending on the distance and acoustic environment.
   - Sound pressure level may differ depending on operation condition.
   - dBA = A-weighted sound pressure level / Reference acoustic pressure 0 dB = 20uPa
4) Sound power level is an absolute value that a sound source generates.
   - dBA = A-weighted sound power level
   - Reference power : 1pW / Measured according to ISO 3741
5) These products contain R410A which is fluorinated greenhouse gas.

1. Specification

ACU (AHU Control Unit)

TYPE			ACU (AHU Control Unit)
Model Name			MXD-U000XN
Power Supply		Ø, #, V, Hz	24V~, 50 / 60 Hz
Connectable Outdoor		-	AC***BXU*CH/AA
External Dimension	Net Weight	kg (lbs)	0.44 (0.97)
	Shipping Weight	kg (lbs)	0.96 (2.17)
	Net Dimensions (WxHxD)	mm	223.8 x 47.5 x 173.8
		inch	8-13/16 x 1-7/8 x 6-13/16
	Shipping Dimensions (WxHxD)	mm	269 x 100 x 242
		inch	10-9/16 x 3-15/16 x 9-1/2

2. Summary Table

Outdoor units

Performance Characteristics

Capacity (Btu/h)	Model Code	Net Size (WxHxD inch)	Net Weight (lbs)	Airflow (CFM)	Sound Pressure Level (dBA)		Sound Power Level (dBA)
					Cooling	Heating	
30,000	CXH24UPB (AC024BXUPCH/AA)	37 x 39-5/16 x 12-1	163	2,684	50	52	70
40,000	CXH36UDB (AC036BXUDCH/AA)	37 x 39-5/16 x 12-1	172	2,684	53	55	73
45,000	CXH36UPB (AC036BXUPCH/AA)	37 x 47-5/8 x 12-1	196	3,531	52	54	73
55,000	CXH48UPB (AC048BXUPCH/AA)	37 x 47-5/8 x 12-1	196	3,531	55	57	75
59,000	CXH60UPB (AC060BXUPCH/AA)	37 x 55-7/8 x 12-1	223	4,414	56	58	75

NOTE

- Sound data is based on cooling operation.

Electric Characteristics

Model	Outdoor Unit				Input Current (Amperes)		Power Supply	
Outdoor Unit	Rated	Voltage range			Outdoor Unit		MCA(A)	MOP(A)
	Hz	Volts	Min.	Max	Cooling	Heating		
CXH24UPB (AC024BXUPCH/AA)	60	208-230	187	253	11.3	11.5	24.1	30
CXH36UDB (AC036BXUDCH/AA)	60	208-230	187	253	18.0	14.5	24.4	35
CXH36UPB (AC036BXUPCH/AA)	60	208-230	187	253	15.6	15.1	25.6	35
CXH48UPB (AC048BXUPCH/AA)	60	208-230	187	253	24.8	22.2	32.7	40
CXH60UPB (AC060BXUPCH/AA)	60	208-230	187	253	29.8	26.3	33.2	40

NOTE

- MCA : Minimum circuit amperes (A)
- MOP: Maximum Overcurrent Protective Device (A)
- Select wire size based on the value of MCA.

3. Capacity Table

Outdoor units

• CXH24UPB (AC024BXUPCH/AA)

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	16.69	15.40	1.09	21.75	16.99	1.34	25.63	19.83	1.59	29.80	21.16	1.87	32.18	20.79	1.97	33.38	22.04	2.00	35.16	22.72	2.03
70	16.35	14.56	1.14	21.32	16.06	1.41	25.11	18.75	1.67	29.20	20.00	1.98	31.54	19.66	2.09	32.70	20.83	2.12	34.46	21.48	2.15
95	16.38	14.44	1.66	20.70	15.89	2.03	25.96	19.22	2.57	24.00	18.00	2.38	34.61	20.73	3.53	35.54	22.01	3.59	37.39	22.65	3.64
115	18.10	16.03	2.96	22.07	17.17	3.41	23.56	18.87	3.44	24.80	19.10	3.47	26.29	18.22	3.50	27.28	19.75	3.53	28.02	20.29	3.50
126	13.80	12.85	2.72	16.82	13.76	3.14	17.96	15.13	3.16	18.90	15.31	3.19	20.03	14.60	3.22	20.79	15.83	3.24	21.36	16.26	3.22

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	19.67	3.37	19.48	3.42	19.29	3.48	19.10	3.52	18.91	3.56	18.72	3.58
-4	26.37	4.20	26.11	4.27	25.86	4.35	25.60	4.40	25.34	4.45	25.09	4.48
5	26.78	3.82	26.52	3.88	26.26	3.96	26.00	4.00	25.74	4.04	25.48	4.07
14	33.17	4.94	32.84	5.01	32.52	4.97	32.20	5.04	31.88	5.07	31.56	4.97
32	33.68	3.49	33.35	3.64	33.03	3.82	32.70	3.85	32.37	3.86	32.05	3.94
47	33.18	2.77	32.87	2.85	32.55	2.93	26.00	2.44	30.36	2.91	29.74	2.78
75	39.33	2.94	36.73	2.76	34.13	2.54	32.50	2.41	30.55	2.33	28.28	2.21

NOTE

- The performance table shows the average value of each conditions.

3. Capacity Table

Outdoor units

• CXH36UDB (AC036BXUDCH/AA)

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	17.75	17.75	1.77	23.14	19.88	2.30	27.26	23.20	2.79	31.70	24.75	3.38	34.24	24.33	3.59	35.50	25.78	3.64	37.41	26.58	3.70
70	23.35	21.58	1.61	30.44	23.81	2.08	35.86	27.79	2.51	41.70	29.65	3.03	45.04	29.14	3.21	46.70	30.88	3.26	49.21	31.84	3.31
95	22.00	20.55	2.23	27.81	22.61	2.79	34.86	27.35	3.58	36.00	26.28	4.00	46.48	29.50	5.00	47.73	31.31	5.08	50.22	32.23	5.16
115	23.07	21.06	3.55	28.12	22.55	4.11	30.02	24.79	4.14	31.60	25.09	4.18	33.50	23.94	4.22	34.76	25.94	4.25	35.71	26.65	4.22
126	16.21	14.72	2.72	19.76	15.76	3.14	21.09	17.33	3.16	22.20	17.54	3.19	23.53	16.73	3.22	24.42	18.13	3.24	25.09	18.63	3.22

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	19.88	3.31	19.69	3.36	19.49	3.42	19.30	3.46	19.11	3.50	18.91	3.52
-4	28.84	4.31	28.56	4.37	28.28	4.46	28.00	4.51	27.72	4.56	27.44	4.59
5	35.64	5.02	35.29	5.10	34.95	5.20	34.60	5.26	34.25	5.32	33.91	5.36
14	41.10	5.78	40.70	5.87	40.30	5.82	39.90	5.90	39.50	5.94	39.10	5.82
32	42.85	4.30	42.43	4.48	42.02	4.71	41.60	4.75	41.18	4.76	40.77	4.86
47	44.73	3.68	44.31	3.79	43.89	3.91	34.60	3.19	40.93	3.88	40.09	3.70
75	53.72	3.81	50.17	3.57	46.62	3.27	44.40	3.10	41.74	2.99	38.63	2.83

NOTE

- The performance table shows the average value of each conditions.

3. Capacity Table

Outdoor units

• CXH36UPB (AC036BXUPCH/AA)

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	19.60	18.27	1.91	25.55	20.16	2.50	30.10	23.53	3.05	35.00	25.10	3.70	37.80	24.67	3.93	39.20	26.14	3.99	41.30	26.95	4.06
70	26.04	22.28	1.87	33.95	24.57	2.43	39.99	28.68	2.97	46.50	30.60	3.60	50.22	30.07	3.82	52.08	31.87	3.88	54.87	32.86	3.95
95	24.01	21.04	2.09	30.35	23.14	2.60	38.05	28.00	3.33	36.00	27.00	3.43	50.74	30.20	4.64	52.10	32.06	4.71	54.81	33.00	4.78
115	23.73	20.19	3.48	28.93	21.62	4.03	30.88	23.76	4.06	32.50	24.05	4.10	34.45	22.94	4.14	35.75	24.87	4.17	36.73	25.55	4.14
126	17.96	16.11	2.71	21.89	17.25	3.12	23.37	18.96	3.14	24.60	19.19	3.17	26.08	18.31	3.20	27.06	19.84	3.22	27.80	20.38	3.20

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	26.16	3.97	25.91	4.03	25.65	4.12	25.40	4.16	25.15	4.20	24.89	4.23
-4	33.17	4.49	32.84	4.56	32.52	4.65	32.20	4.70	31.88	4.75	31.56	4.79
5	39.04	4.90	38.66	4.97	38.28	5.07	37.90	5.13	37.52	5.19	37.14	5.22
14	41.92	4.77	41.51	4.84	41.11	4.80	40.70	4.87	40.29	4.90	39.89	4.80
32	43.98	3.78	43.55	3.94	43.13	4.14	42.70	4.17	42.27	4.18	41.85	4.27
47	43.57	3.14	43.16	3.24	42.74	3.34	34.60	3.36	39.87	3.31	39.05	3.16
75	55.06	3.46	51.42	3.24	47.78	2.97	45.50	2.82	42.77	2.72	39.59	2.58

NOTE

- The performance table shows the average value of each conditions.

3. Capacity Table

Outdoor units

• CXH48UPB (AC048BXUPCH/AA)

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	27.61	25.99	2.01	35.99	28.67	2.53	42.40	33.47	3.01	49.30	35.70	3.58	53.24	35.09	3.78	55.22	37.19	3.84	58.17	38.33	3.89
70	35.17	30.07	2.76	45.84	33.16	3.58	54.01	38.71	4.35	62.80	41.30	5.25	67.82	40.59	5.57	70.34	43.02	5.66	74.10	44.35	5.75
95	29.20	26.45	3.12	36.92	29.10	3.87	46.28	35.20	4.93	48.00	35.04	5.58	61.71	37.98	6.85	63.37	40.31	6.95	66.67	41.49	7.06
115	26.43	24.31	3.89	32.22	26.03	4.46	34.39	28.61	4.50	36.20	28.96	4.54	38.37	27.63	4.58	39.82	29.94	4.62	40.91	30.76	4.58
126	21.83	20.08	3.36	26.61	21.50	3.84	28.41	23.63	3.87	29.90	23.92	3.90	31.69	22.82	3.93	32.89	24.73	3.96	33.79	25.41	3.93

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	26.16	3.90	25.91	3.96	25.65	4.03	25.40	4.07	25.15	4.11	24.89	4.14
-4	38.01	5.39	37.64	5.47	37.27	5.58	36.90	5.64	36.53	5.70	36.16	5.74
5	45.63	6.46	45.19	6.55	44.74	6.69	44.30	6.76	43.86	6.83	43.41	6.88
14	53.25	7.45	52.73	7.56	52.22	7.50	51.70	7.60	51.18	7.65	50.67	7.50
32	52.94	3.74	52.43	3.88	51.91	4.06	51.40	4.09	50.89	4.10	50.37	4.18
47	54.17	4.22	53.66	4.34	53.14	4.47	44.00	4.99	49.57	4.44	48.55	4.25
75	60.98	4.19	56.95	3.94	52.92	3.63	50.40	3.46	47.38	3.35	43.85	3.18

NOTE

- The performance table shows the average value of each conditions.

3. Capacity Table

Outdoor units

• CXH60UPB (AC060BXUPCH/AA)

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB / WB)																				
	68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
-4	36.18	31.23	2.92	47.16	34.45	3.73	55.56	40.21	4.50	64.60	42.90	5.41	69.77	42.16	5.73	72.35	44.68	5.82	76.23	46.07	5.91
70	36.34	31.89	2.97	47.38	35.17	3.81	55.81	41.06	4.60	64.90	43.80	5.53	70.09	43.05	5.86	72.69	45.62	5.95	76.58	47.03	6.04
95	31.22	28.40	3.63	39.46	31.24	4.48	49.48	37.79	5.70	57.00	41.04	6.71	62.43	38.59	7.35	63.61	40.64	7.29	66.56	41.60	7.35
115	28.98	27.37	4.61	35.33	29.30	5.28	37.72	32.21	5.33	39.70	32.60	5.37	42.08	31.10	5.41	43.67	33.71	5.46	44.86	34.63	5.41
126	22.05	22.05	3.57	26.88	25.25	4.06	28.69	27.75	4.09	30.20	28.09	4.12	32.01	26.79	4.15	33.22	29.04	4.18	34.13	29.83	4.15

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temp. (°F, DB)	Indoor Temperature (°F, DB)											
	61		64		68		70		72		75	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	38.01	5.38	37.64	5.46	37.27	5.56	36.90	5.62	36.53	5.68	36.16	5.71
-4	45.53	6.65	45.08	6.74	44.64	6.88	44.20	6.95	43.76	7.02	43.32	7.07
5	54.69	7.21	54.16	7.31	53.63	7.46	53.10	7.54	52.57	7.62	52.04	7.67
14	57.68	7.34	57.12	7.45	56.56	7.39	56.00	7.49	55.44	7.54	54.88	7.39
32	58.92	5.65	58.34	5.87	57.77	6.16	57.20	6.21	56.63	6.22	56.06	6.35
47	59.36	4.72	58.80	4.85	58.24	5.00	53.00	5.91	54.32	4.96	53.20	4.75
75	66.91	4.48	62.49	4.22	58.07	3.90	55.30	3.72	51.98	3.60	48.11	3.43

NOTE

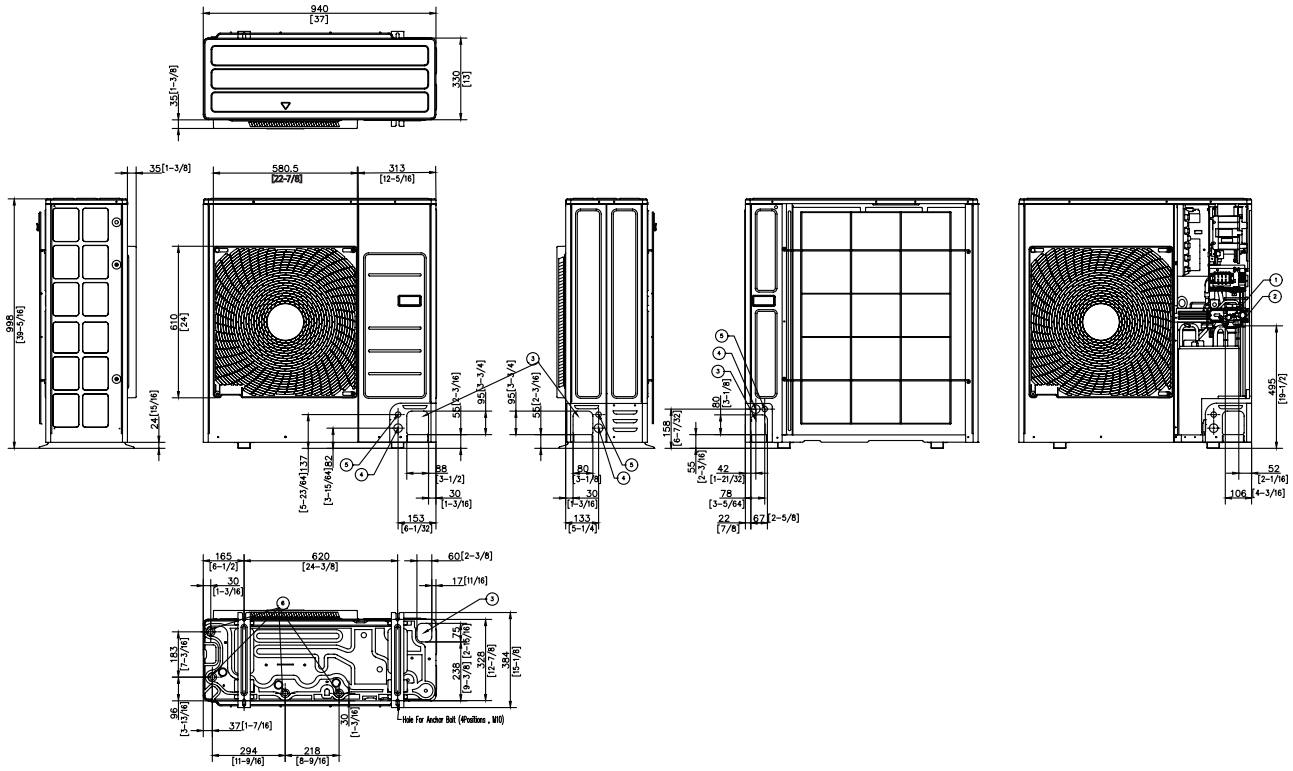
- The performance table shows the average value of each conditions.

4. Dimensional Drawing

Outdoor Units

• CXH24UPB (AC024BXUPCH/AA), CXH36UDB (AC036BXUDCH/AA)

Units : mm [inches]



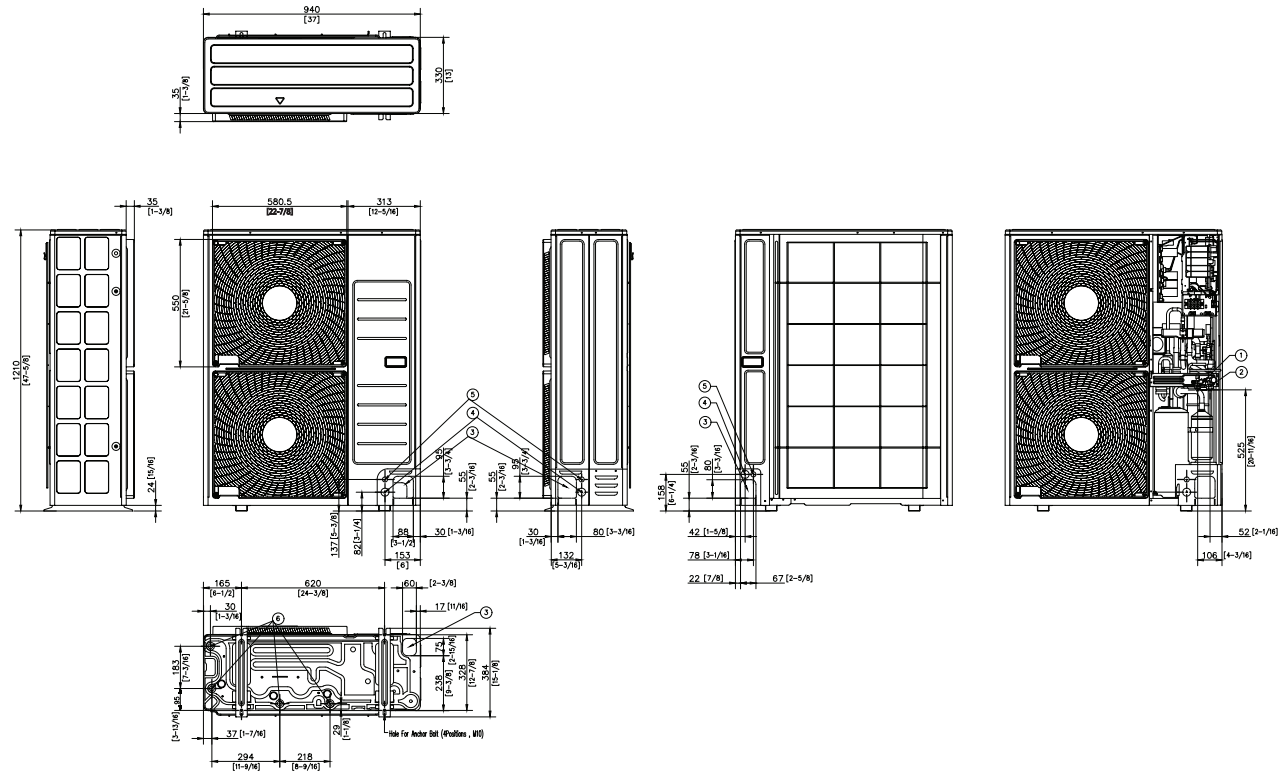
No.	Name	Description
1	Liquid pipe connection	Φ 9.52 [3/8]
2	Gas pipe connection	Φ19.05 [3/4]
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear / Φ34 [1-3/8]
5	Communication wiring conduit	Front / Side / Rear / Φ22 [7/8]
6	Drain hole	-

4. Dimensional Drawing

Outdoor Units

• CXH36UPB (AC036BXUPCH/AA), CXH48UPB (AC048BXUPCH/AA)

Units : mm [inches]



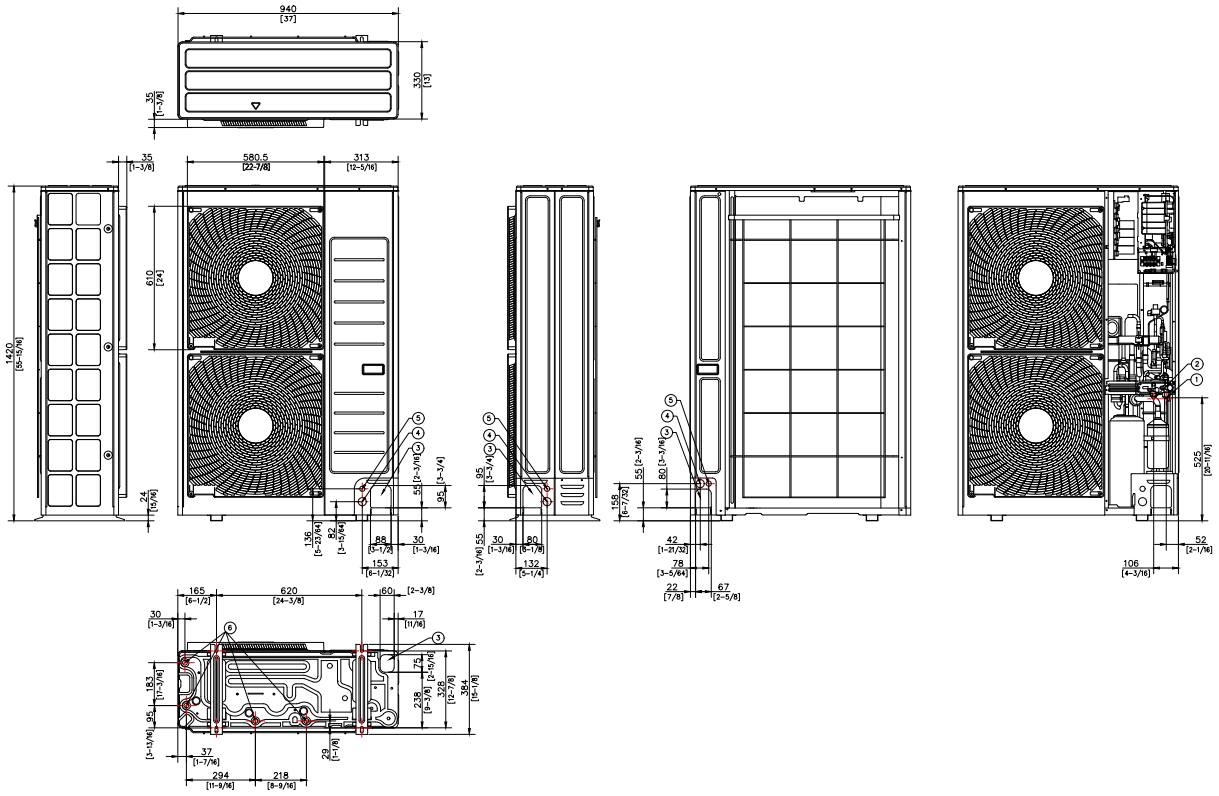
No.	Name	Description
1	Refrigerant liquid pipe	9.52 [3/8]
2	Refrigerant gas pipe	Φ22.2 [7/8]
3	Knockout hole for pipe intake	Front / Side / Rear / Bottom
4	Power wiring conduits	Front / Side / Rear, Φ34 [Φ1-3/8]
5	Communication wiring conduits	Front / Side / Rear, Φ22 [Φ7/8]
6	Drain hole	-

4. Dimensional Drawing

Outdoor Units

• CXH60UPB (AC060BXUPCH/AA)

Units : mm [inches]



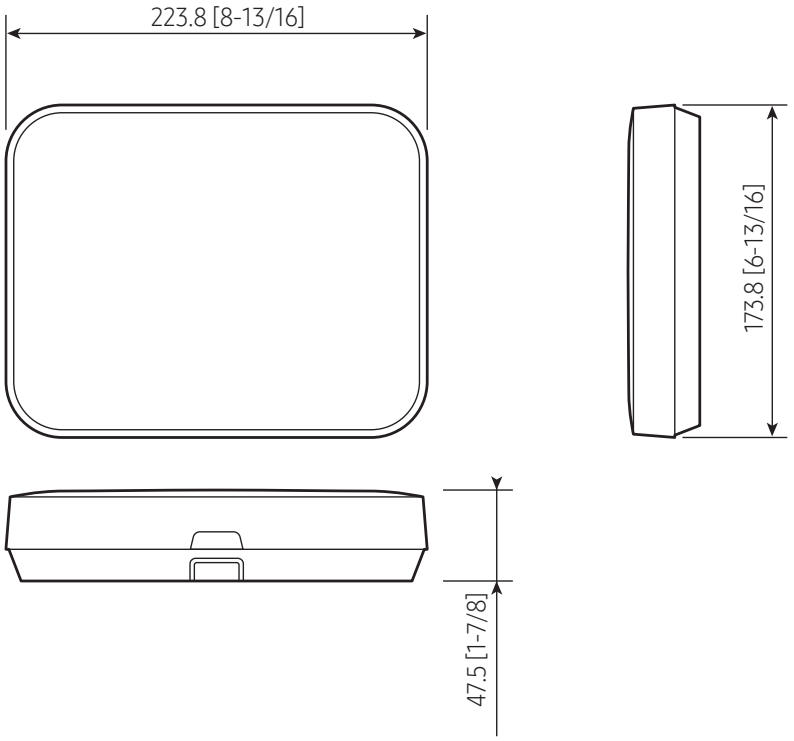
No.	Name	Description
1	Refrigerant liquid pipe	Φ 9.52 [3/8]
2	Refrigerant gas pipe	Φ22.2 [7/8]
3	Knockout hole for pipe intake	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear , Φ34 [1-3/8]
5	Communication wiring conduit	Front / Side / Rear , Φ22 [7/8]
6	Drain hole	-

4. Dimensional Drawing

ACU kit (AHU Control Unit)

• MXD-U000XN

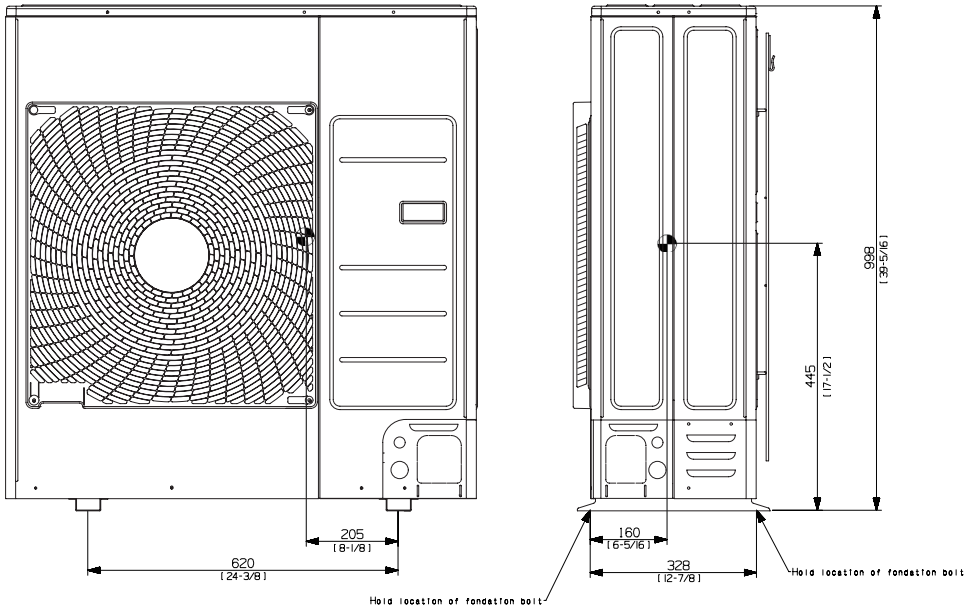
Units : mm [inches]



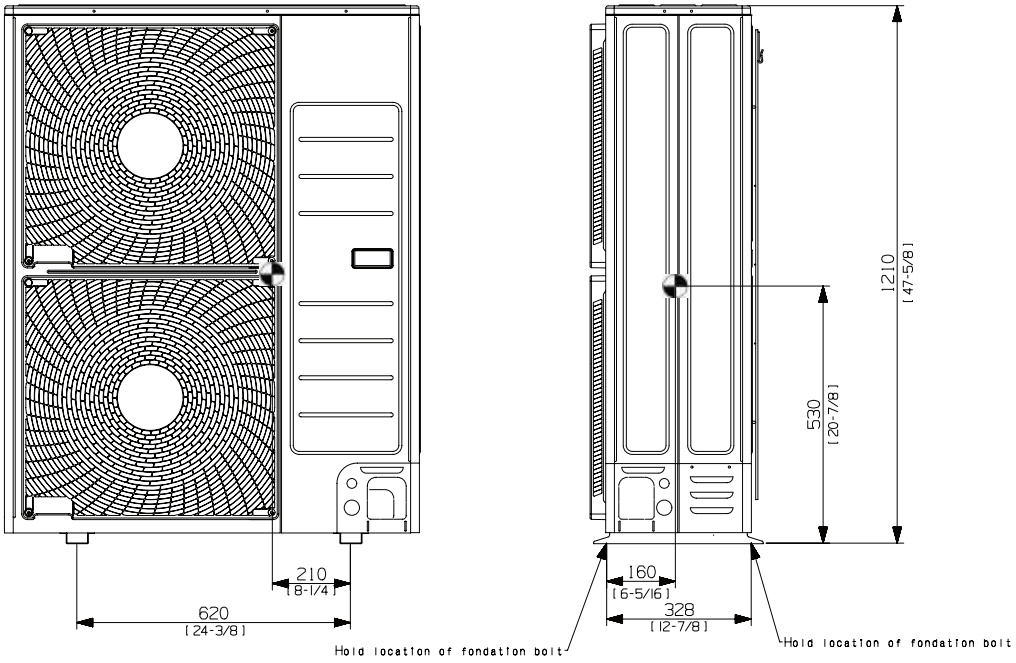
5. Center of Gravity

Outdoor Units

• CXH24UPB (AC024BXUPCH/AA), CXH36UDB (AC036BXUDCH/AA) Units : mm [inches]



• CXH36UPB (AC036BXUPCH/AA), CXH48UPB (AC048BXUPCH/AA) Units : mm [inches]

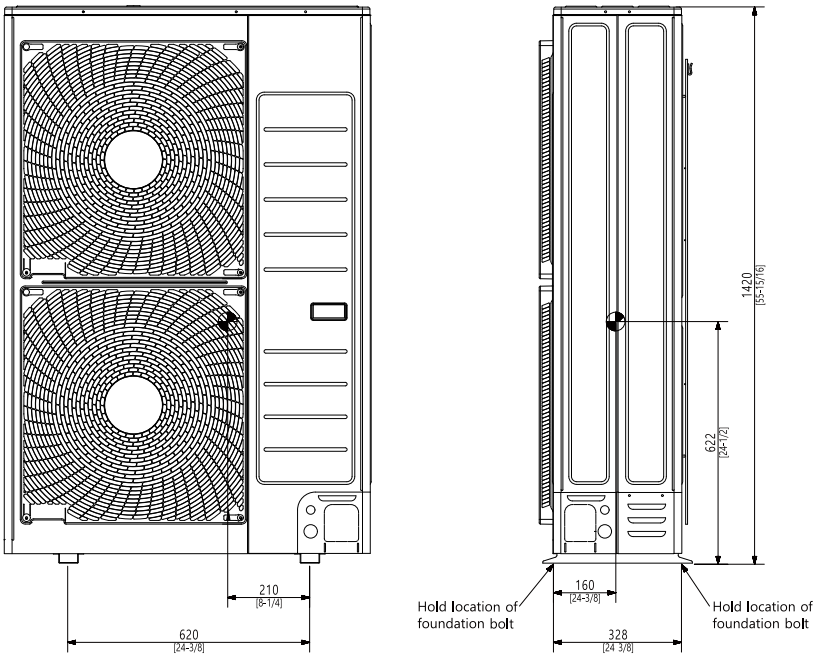


5. Center of Gravity

Outdoor Units

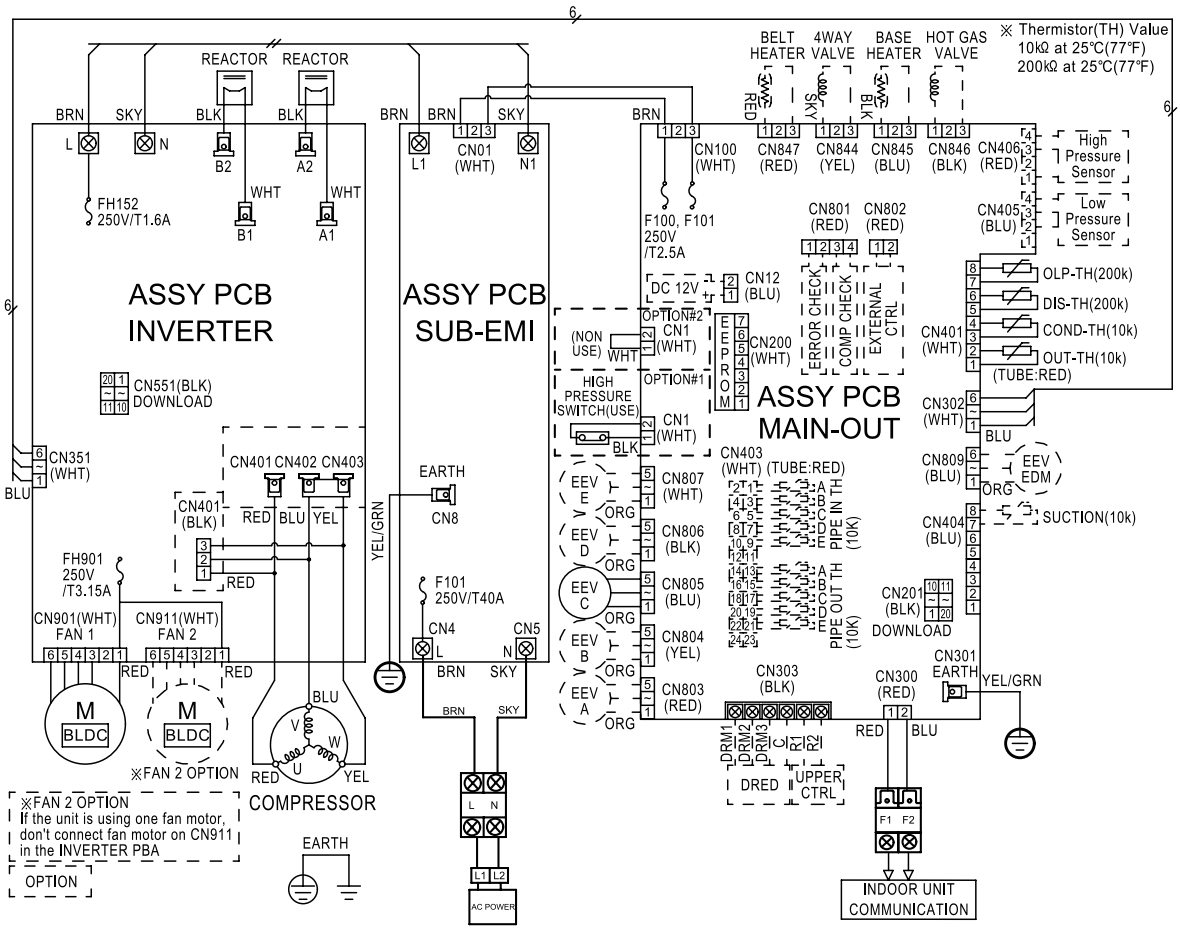
• CXH60UPB (AC060BXUPCH/AA)

Units : mm [inches]



6. Electrical Wiring Diagram

Outdoor Units



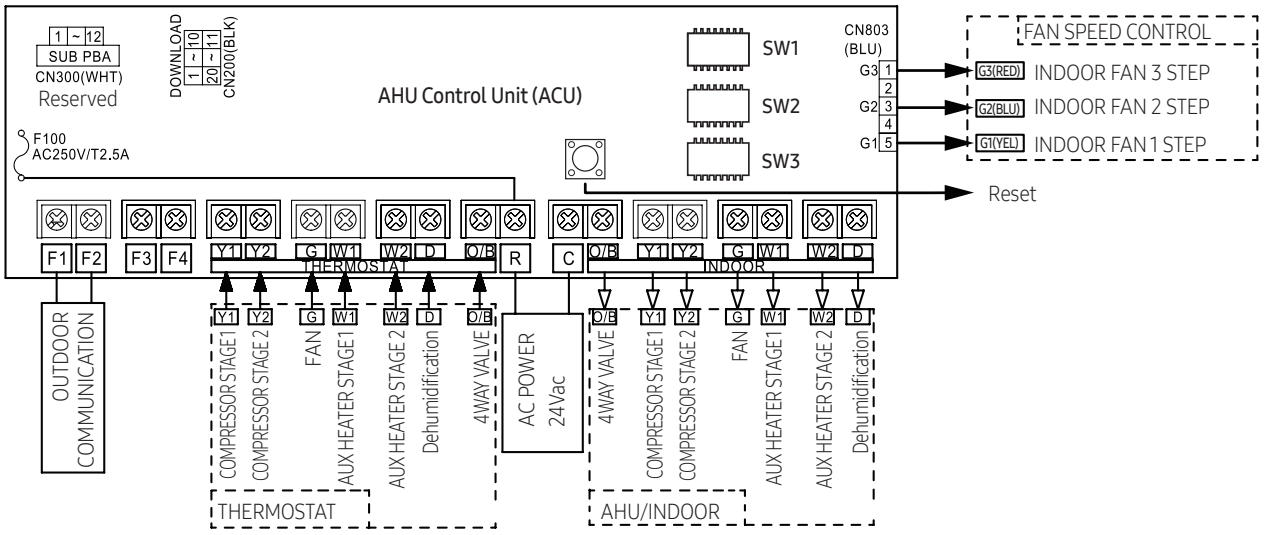
M BLDC	BLDC Motor	**OUT-TH**	Thermistor (Air)
EEV	Electronic Expansion Valve	**COND-TH**	Thermistor (COND.)
COMP	Motor (compressor)	**DIS-TH**	Thermistor (DISCHARGE)
F1/F2	Out To Indoor Communication	**OLP-TH**	Thermistor (COMP TOP)
SUCTION	Thermistor (SUCTION)	**250V / T40A**	FUSE

NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- When operating, don't shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

6. Electrical Wiring Diagram

ACU kit (AHU control kit)



Y1	1-stage operation	**Y2**	2-stage operation
G	Fan signal	**D**	Dehumidifier
W1	Auxiliary heater 1-stage(heat pump) Furnace 1-stage	**W2**	Auxiliary heater 2-stage(heat pump) Furnace 2-stage
O/D	4Way valve (24 VAC : Heating, 0 VAC : Cooling)	**250V / T2.5A**	FUSE

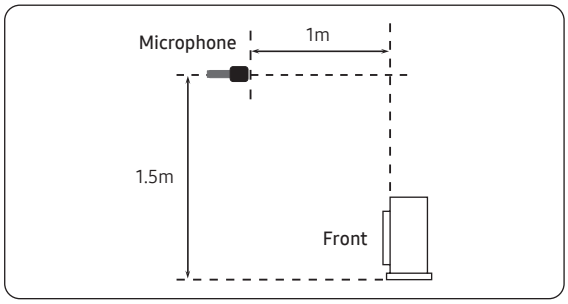
NOTE

- This wiring diagram applies only to the outdoor unit.
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue
- When operating, don't shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2.
- ⏚ Protective earth(screw), ▭▭▭ : connector, N : The wire quantity

7. Sound Data

Sound Pressure level

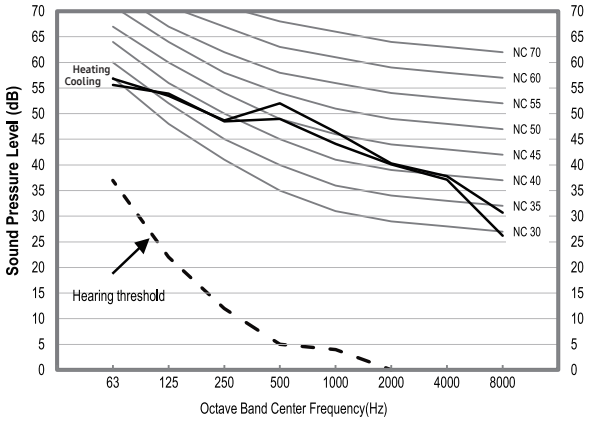
Unit: dB(A)



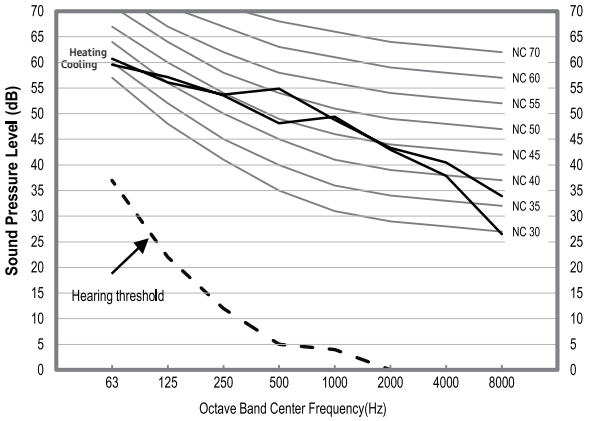
Model	Cooling	Heating
CXH24UPB (AC024BXUPCH/AA)	50	52
CXH36UDB (AC036BXUDCH/AA)	53	55

• NC Curve

1) CXH24UPB (AC024BXUPCH/AA)



2) CXH36UDB (AC036BXUDCH/AA)

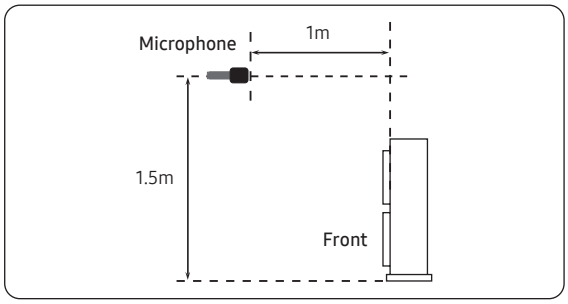


NOTE

- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

7. Sound Data

Sound Pressure level

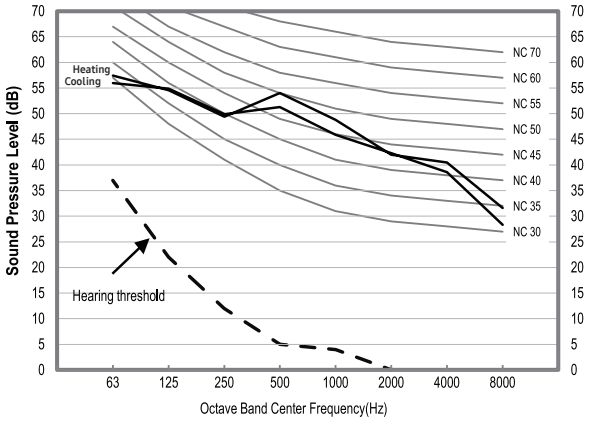


Unit: dB(A)

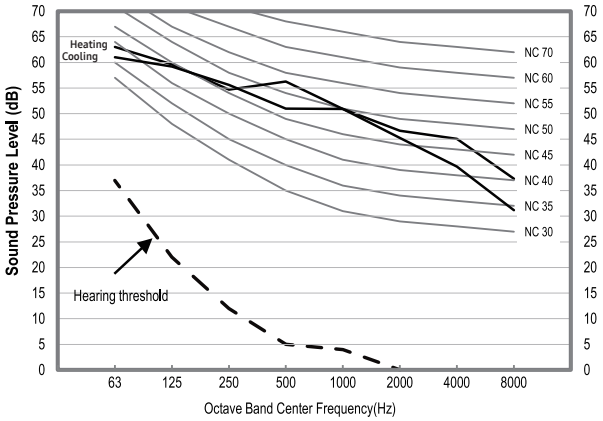
Model	Cooling	Heating
CXH36UPB (AC036BXUPCH/AA)	52	54
CXH48UPB (AC048BXUPCH/AA)	55	57
CXH60UPB (AC060BXUPCH/AA)	56	58

• NC Curve

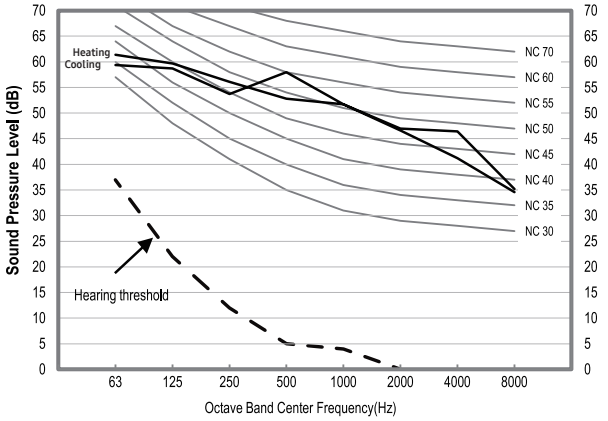
1) CXH36UPB (AC036BXUPCH/AA)



1) CXH48UPB (AC048BXUPCH/AA)



3) CXH60UPB (AC060BXUPCH/AA)



NOTE

- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

7. Sound Data

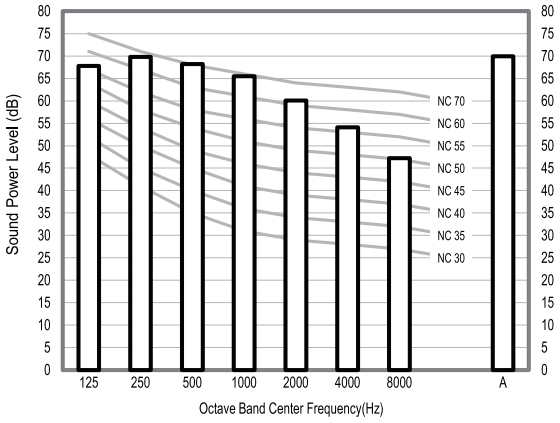
Sound Power level

Unit: dB(A)

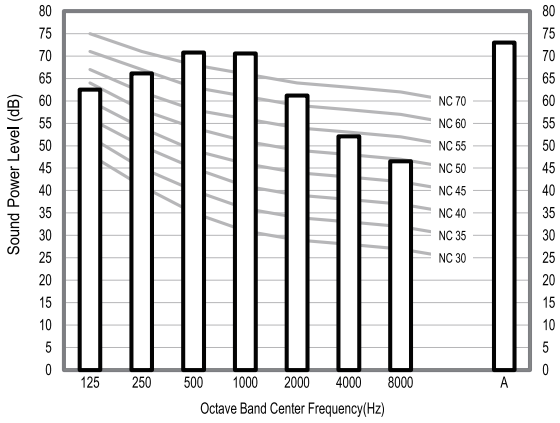
Model	Power
CXH24UPB (AC024BXUPCH/AA)	70
CXH36UDB (AC036BXUDCH/AA)	73

• NC Curve

1) CXH24UPB (AC024BXUPCH/AA)



2) CXH36UDB (AC036BXUDCH/AA)



NOTE

- Specifications may be subject to change without prior notice.
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

7. Sound Data

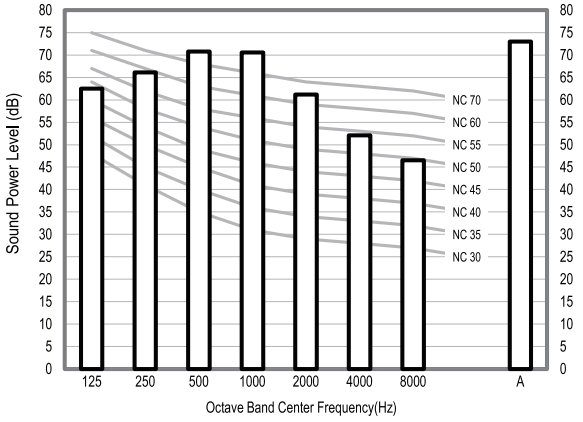
Sound Power level

Unit: dB(A)

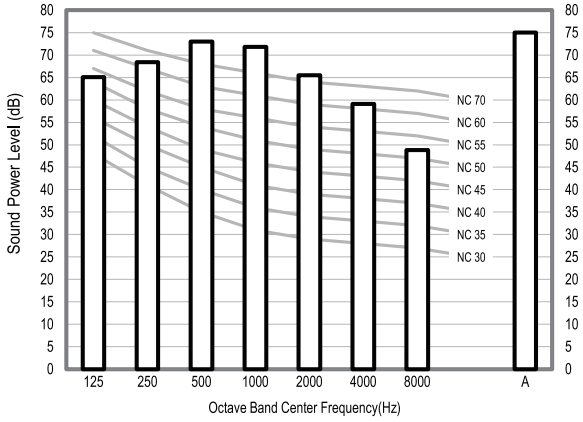
Model	Power
CXH36UPB (AC036BXUPCH/AA)	73
CXH48UPB (AC048BXUPCH/AA)	75
CXH60UPB (AC060BXUPCH/AA)	75

• NC Curve

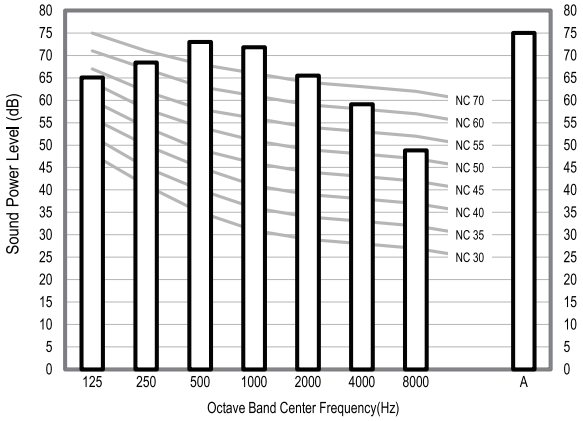
1) CXH36UPB (AC036BXUPCH/AA)



2) CXH48UPB (AC048BXUPCH/AA)



3) CXH60UPB (AC060BXUPCH/AA)



NOTE

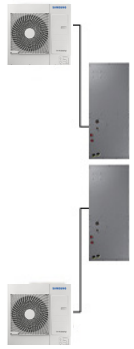
- Specifications may be subject to change without prior notice.
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

8. Capacity Correction

Outdoor Units

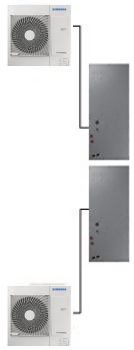
• CXH24UPB (AC024BXUPCH/AA)

Cooling



		Pipe Length (ft)					
		24.60	45	60	75	90	100
Level Difference (ft)	49				0.92	0.92	0.91
	45			0.94	0.93	0.92	0.91
	30		0.96	0.95	0.94	0.94	0.93
	15	0.98	0.97	0.97	0.96	0.95	0.95
	0	1.00	0.99	0.98	0.97	0.97	0.96
	-15	1.00	1.00	1.00	0.99	0.98	0.98
	-30		1.00	1.00	1.00	1.00	0.99
	-45			1.00	1.00	1.00	1.00
	-49				1.00	1.00	1.00

Heating



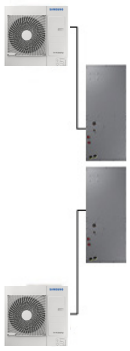
		Pipe Length (ft)					
		24.60	45	60	75	90	100
Level Difference (ft)	49				1.00	1.00	1.00
	45			1.00	1.00	1.00	1.00
	30		1.00	1.00	1.00	1.00	1.00
	15	1.00	1.00	1.00	1.00	1.00	1.00
	0	1.00	1.00	1.00	1.00	1.00	1.00
	-15	0.99	0.99	0.99	0.99	0.99	0.99
	-30		0.99	0.99	0.99	0.99	0.98
	-45			0.98	0.98	0.98	0.98
	-49				0.98	0.98	0.98

8. Capacity Correction

Outdoor Units

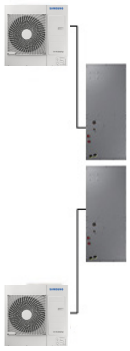
• CXH36UDB (AC036BXUDCH/AA)

Cooling



Level Difference (ft)	Pipe Length (ft)									
	24.6	45	60	75	90	105	120	135	150	164
98						0.88	0.87	0.86	0.85	0.84
80					0.91	0.90	0.89	0.88	0.87	0.86
60				0.93	0.92	0.91	0.90	0.89	0.88	0.87
40		0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89
20	0.99	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90
0	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91
-20	1.00	1.00	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.93
-40		1.00	1.00	1.00	0.99	0.98	0.97	0.96	0.95	0.94
-60				1.00	1.00	0.99	0.98	0.97	0.96	0.95
-80					1.00	1.00	0.99	0.99	0.98	0.97
-98						1.00	1.00	1.00	0.99	0.98

Heating



Level Difference (ft)	Pipe Length (ft)									
	24.6	45	60	75	90	105	120	135	150	164
98						1.00	1.00	1.00	1.00	1.00
80					1.00	1.00	1.00	1.00	1.00	1.00
60				1.00	1.00	1.00	1.00	1.00	1.00	1.00
40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99
-20	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98
-40		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.97
-60				0.97	0.97	0.97	0.97	0.97	0.97	0.97
-80					0.96	0.96	0.96	0.96	0.96	0.96
-98						0.95	0.95	0.95	0.95	0.95

8. Capacity Correction

Outdoor Units

• CXH36UPB (AC036BXUPCH/AA)

Cooling



Level Difference (ft)	Pipe Length (ft)									
	24.6	45	60	75	90	105	120	135	150	164
98						0.89	0.88	0.88	0.87	0.87
80					0.91	0.90	0.90	0.89	0.89	0.89
60				0.93	0.93	0.92	0.92	0.91	0.91	0.91
40		0.96	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.92
20	0.98	0.98	0.97	0.97	0.96	0.96	0.96	0.95	0.95	0.94
0	1.00	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96
-20	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.98
-40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
-60				1.00	1.00	1.00	1.00	1.00	1.00	1.00
-80					1.00	1.00	1.00	1.00	1.00	1.00
-98						1.00	1.00	1.00	1.00	1.00

Heating



Level Difference (ft)	Pipe Length (ft)									
	24.6	45	60	75	90	105	120	135	150	164
98						1.00	1.00	1.00	1.00	1.00
80					1.00	1.00	1.00	1.00	1.00	1.00
60				1.00	1.00	1.00	1.00	1.00	1.00	1.00
40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
-20	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
-40		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
-60				0.98	0.98	0.98	0.98	0.97	0.97	0.97
-80					0.97	0.97	0.97	0.97	0.97	0.97
-98						0.96	0.96	0.96	0.96	0.96

8. Capacity Correction

Outdoor Units

• CXH48UPB (AC048BXUPCH/AA)

Cooling



		Pipe Length (ft)									
		24.6	45	60	75	90	105	120	135	150	164
Level Difference (ft)	98						0.90	0.90	0.89	0.88	0.88
	80					0.92	0.92	0.91	0.90	0.90	0.89
	60				0.94	0.94	0.93	0.92	0.92	0.91	0.91
	40		0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.93	0.92
	20	0.99	0.98	0.97	0.97	0.96	0.96	0.95	0.95	0.94	0.93
	0	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.95
	-20	1.00	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.96
	-40		1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.98	0.97
	-60				1.00	1.00	1.00	1.00	0.99	0.99	0.98
	-80					1.00	1.00	1.00	1.00	1.00	1.00
	-98						1.00	1.00	1.00	1.00	1.00

Heating



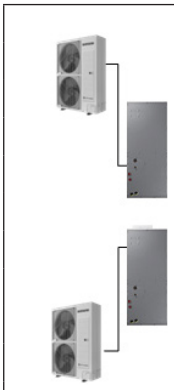
		Pipe Length (ft)									
		24.6	45	60	75	90	105	120	135	150	164
Level Difference (ft)	98						1.00	1.00	1.00	1.00	1.00
	80					1.00	1.00	1.00	1.00	1.00	1.00
	60				1.00	1.00	1.00	1.00	1.00	1.00	1.00
	40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99
	-20	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	-40		0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	-60				0.98	0.98	0.98	0.98	0.98	0.98	0.97
	-80					0.97	0.97	0.97	0.97	0.97	0.97
	-98						0.96	0.96	0.96	0.96	0.96

8. Capacity Correction

Outdoor Units

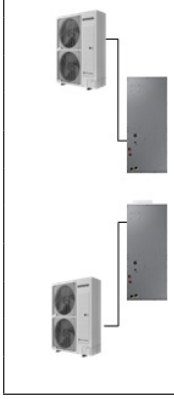
• CXH60UPB (AC060BXUPCH/AA)

Cooling



		Pipe Length (ft)					
		24.6	45	60	75	90	100
Level Difference (ft)	49				0.95	0.94	0.93
	45			0.96	0.95	0.94	0.93
	30		0.97	0.97	0.96	0.95	0.94
	15	0.99	0.98	0.97	0.97	0.96	0.95
	0	1.00	0.99	0.98	0.98	0.97	0.96
	-15	1.00	1.00	0.99	0.98	0.98	0.97
	-30		1.00	1.00	0.99	0.99	0.98
	-45			1.00	1.00	0.99	0.99
	-49				1.00	1.00	0.99

Heating



		Pipe Length (ft)					
		24.6	45	60	75	90	100
Level Difference (ft)	49				1.00	1.00	1.00
	45			1.00	1.00	1.00	1.00
	30		1.00	1.00	1.00	1.00	1.00
	15	1.00	1.00	1.00	1.00	1.00	1.00
	0	1.00	1.00	1.00	1.00	1.00	1.00
	-15	0.99	0.99	0.99	0.99	0.99	0.99
	-30		0.99	0.99	0.99	0.98	0.98
	-45			0.98	0.98	0.98	0.98
	-49				0.98	0.98	0.98

9. Operation Range

Outdoor Units

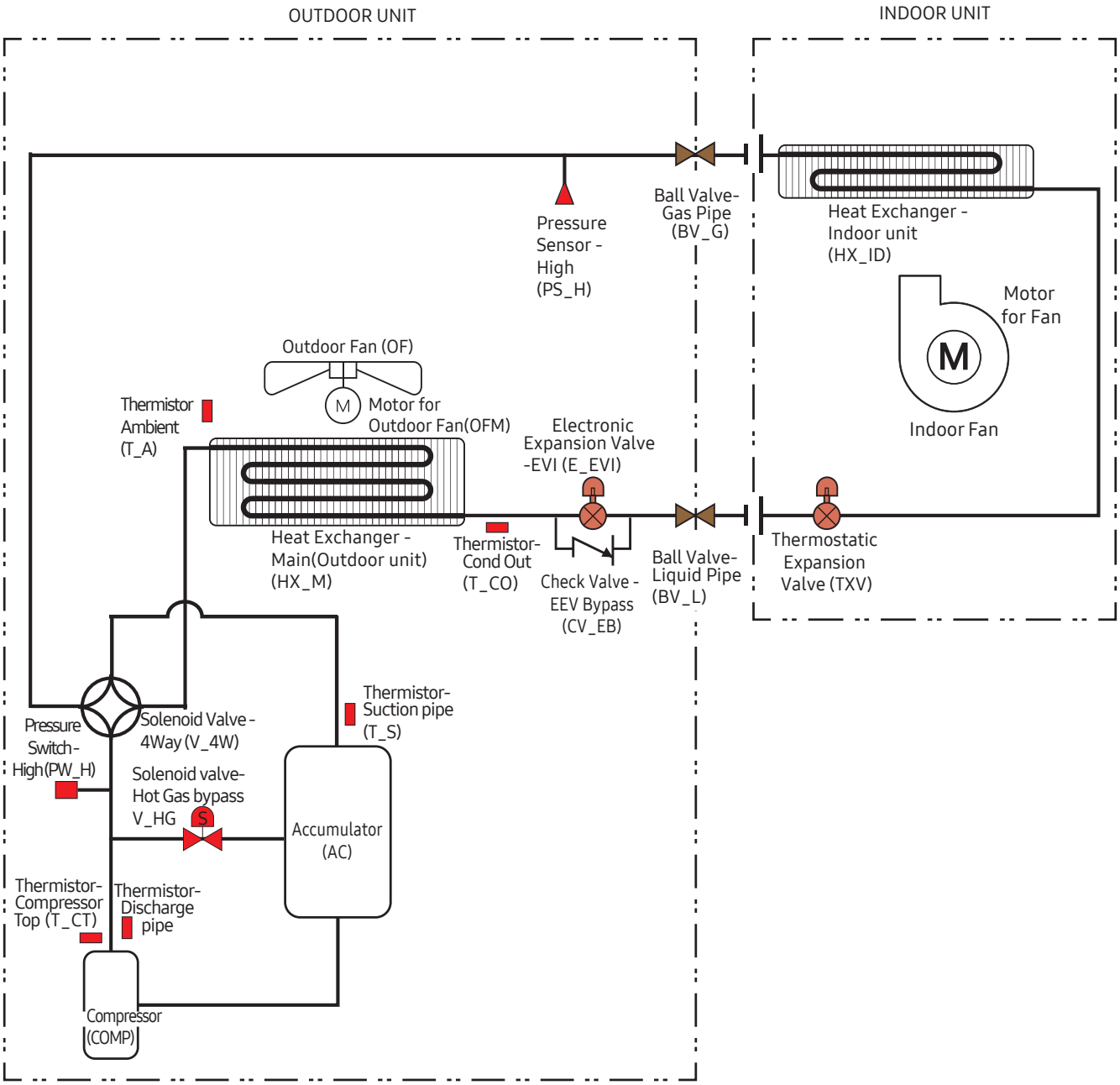
Mode	Indoor temperatue	Outdoor temperature	Indoor humidity
Cooling	64 to 90 °F (18 to 32 °C)	-4 to 125.6 °F (-20 to 52 °C)	80% or less
Heating	86 °F (30 °C) or less	-13 to 75.2 °F (-25 to 24 °C)	-

NOTE

- The assumed installation conditions are follows
  - The pipe length(including elbow) is 7.5m(24.6ft).
  - The level difference is 0 m.

10. Piping Diagram

Outdoor Units



11. Installation

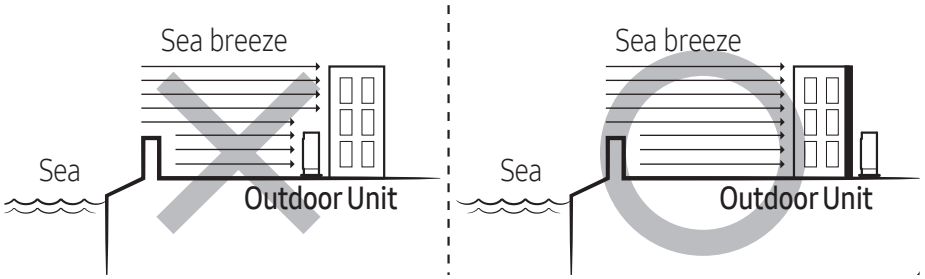
Outdoor Units

Choosing the installation location

- Do not place the outdoor unit on its side or upside down. Failing to do so may cause the compressor lubrication oil to run into the cooling circuit and lead to serious damage to the unit.
- Install the unit in a well-ventilated location away from strong winds.
- Install the unit in a location that would not obstruct any passageways or thoroughfares.
- Install the unit in a location that would not inconvenience or disturb your neighbors, as they could be affected by the noise or the airflow coming from the unit.
- Install the unit in a location where the pipes and the cables can be easily connected to the indoor unit.
- Install the unit on a flat, stable surface that can withstand the weight of the unit. Otherwise, the unit can generate noise and vibration during operation.
- Install the unit so that the air flow has adequate clearance, as noted in the manual.

⚠ CAUTION

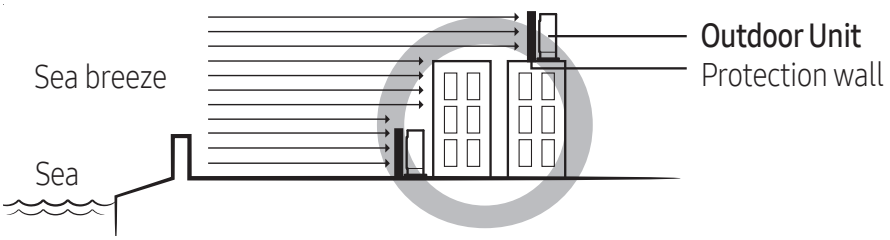
- This device must be installed according to all national, state, and local codes and requirements.
- If your outdoor unit exceeds a net weight of 132.2 lb(60 kg), do not install it on a suspended wall, but stand it on a floor.
- The reliability of our product cannot be guaranteed under conditions of -13 °F (-25 °C) or less.
- When installing the outdoor unit in coastal applications, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
  - Install the outdoor unit in a place (such as near buildings etc.) where it can be screened from sea breeze. Failure to do so may cause a damage to the outdoor unit



11. Installation

Outdoor Units

- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit.
  Also, secure a space larger than 27.6 inch(700mm) between the protection wall and the outdoor unit for exhausted air to ventilate.



⚠ CAUTION

- Depending on the condition of the power supply, unstable power or voltage may cause malfunction of parts or control system (example: on a boat or places using power supplied from electric generator, etc.).
- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Consider that the salinity particles clinging to the external panels should be sufficiently washed out. Be sure to clean sea water and dust from the outdoor unit heat exchanger and apply a corrosion inhibitor on it at least once a year.
- Because the residual water at the bottom of the outdoor unit significantly promotes corrosion, make sure that the slope does not disturb drainage.
  - Keep the floor level so that rain does not accumulate.
  - Be careful not to block the drain hole.
- Check the condition of the product periodically.
  - Check the installation site every 3 months and perform anti-corrosion treatment such as commercial water repellent grease and wax, etc., based on the product condition.
  - When the product is to be shut down for a long period of time, off-season periods, take appropriate measures like covering the product.
- If the product installed within 1640.4 ft (500 m) of seashore, special anti-corrosion treatment is required.

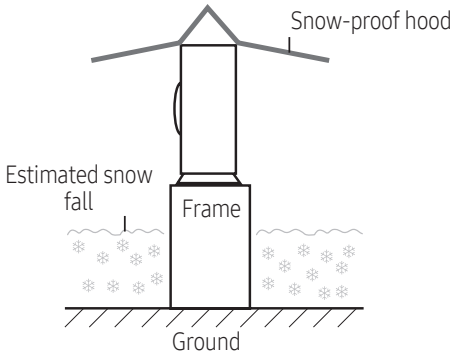
※ Please contact your local SAMSUNG representative for further details.

11. Installation

Outdoor Units

⚠ CAUTION

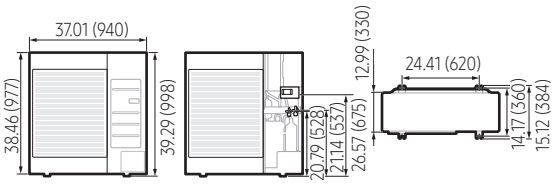
- In areas with heavy snow fall, piled snow could block the air intake. To avoid this incident, install a frame that is higher than estimated snow fall. In addition, install a snow-proof hood to avoid snow from piling on the outdoor unit



Unit : inch (mm)

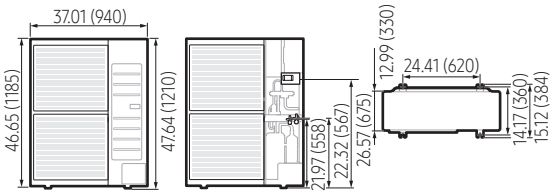
A Type

AC024BXUPCH, AC036BXUDCH



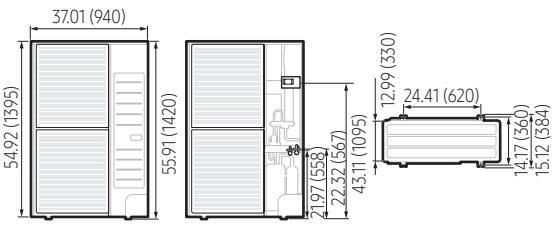
B Type

AC036/048BXUPCH



C Type

AC060BXUPCH



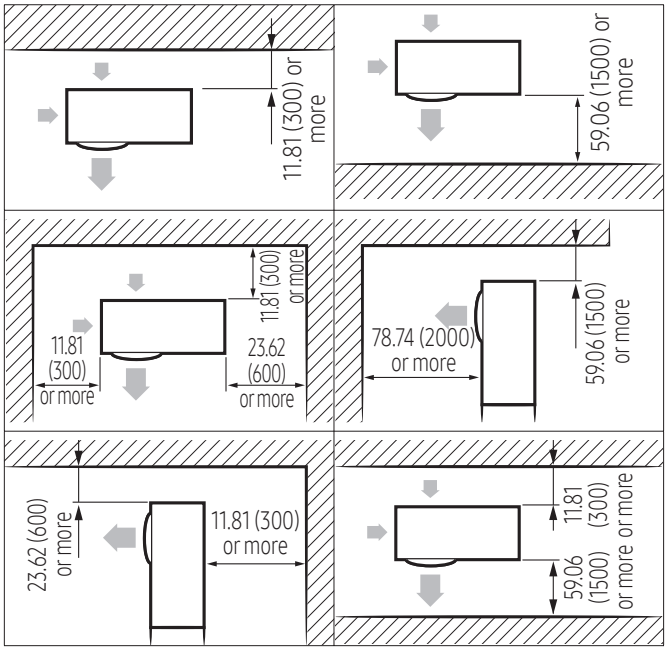
11. Installation

Outdoor Units

Minimum clearances for the outdoor unit

When installing 1 outdoor unit

Unit : inch (mm)

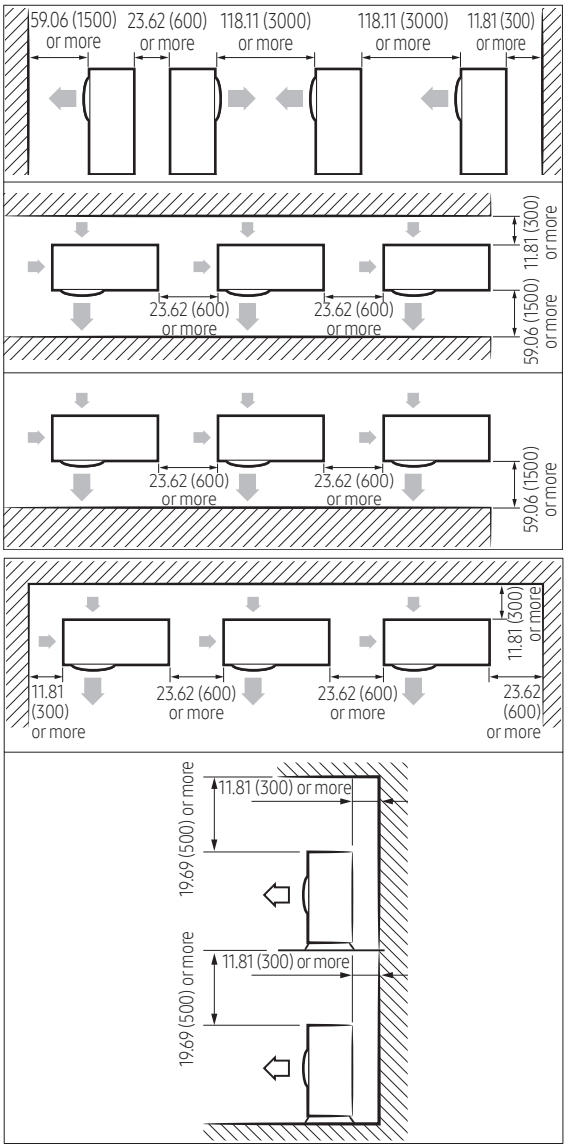


11. Installation

Outdoor Units

When installing more than 1 outdoor unit

Unit : inch (mm)



⚠ CAUTION

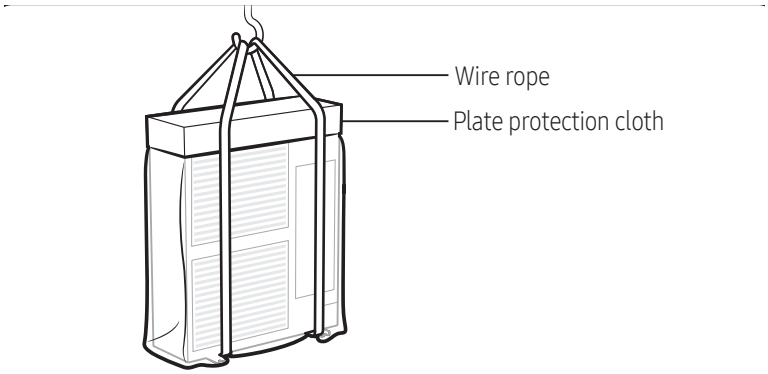
- The outdoor unit must be installed according to the specified distances in order to permit accessibility from each side, to guarantee correct operation, maintenance, and repair of the unit. The components of the outdoor unit must be reachable and removable under safe conditions for people and the unit.

11. Installation

Outdoor Units

Moving the outdoor unit with wire rope

1 Before carrying the outdoor unit, fasten two wire ropes of 26.25 ft (8m) or longer, as shown in the figure.
2 To prevent damages or scratches effectively, insert a piece of cloth between the outdoor unit and the ropes.
3 Move the outdoor unit.



11. Installation

Outdoor Units

Fixing the outdoor unit in place

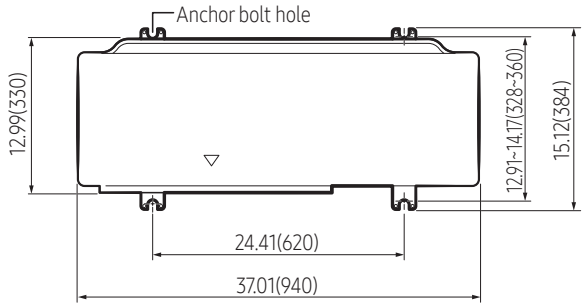
Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit on tall stands or in a location exposed to strong winds, fix the unit securely to the ground or structure.

1 Position the outdoor unit so that the air flow is directed towards the outside, as indicated by the arrows on the top of the unit.
2 Attach the outdoor unit to the appropriate support using anchor bolts.
3 If the outdoor unit is exposed to strong winds, install wind baffles around the outdoor unit, so that the fan can operate correctly.

NOTE

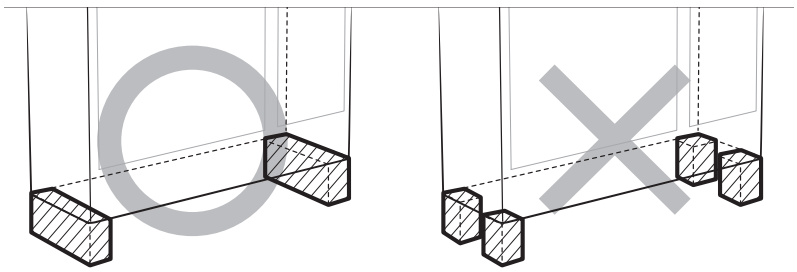
- Install provided rubber legs to prevent vibration and noise.

[Unit : inch(mm)]



CAUTION

- Install a drain outlet at the lowest end around the base for outdoor unit drainage
- When installing the outdoor unit on the roof, waterproof the unit and check the roof structure strength.



11. Installation

Outdoor Units

Connecting the power cables and communication cables.

You must connect the following two sets of electrical cables to the outdoor unit:

- The main power cables between the circuit breaker and the outdoor unit.
- The communication cables between the outdoor unit and ACU(AHU Control Unit) kit.

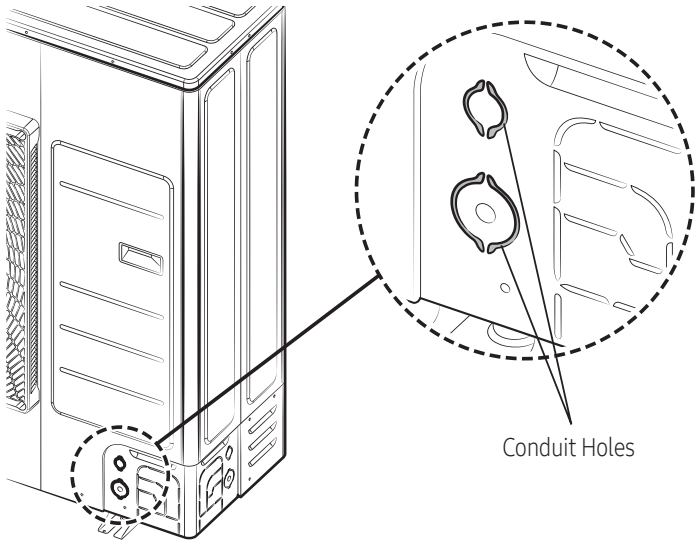
⚠ CAUTION

- During installation, first make the refrigerant connections and then the electrical connections. If the unit is being removed, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to ground before making the electrical connections.

Connecting wire conduits

When connecting cables between the indoor unit and the outdoor unit, use conduits to protect the cables.

1 Drill holes on the conduit plate in accordance with their use and quantity.
   - Use a nipper to remove conduit holes from the lower part of the cabinet.
     (Do not remove it by hammering.)



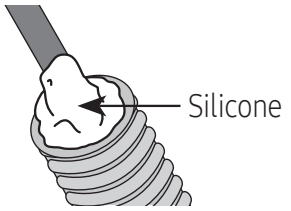
11. Installation

Outdoor Units

2 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.

3 Apply silicone to the end of the hose to prevent rain from entering the hose.

Conduit inserted into the outdoor unit

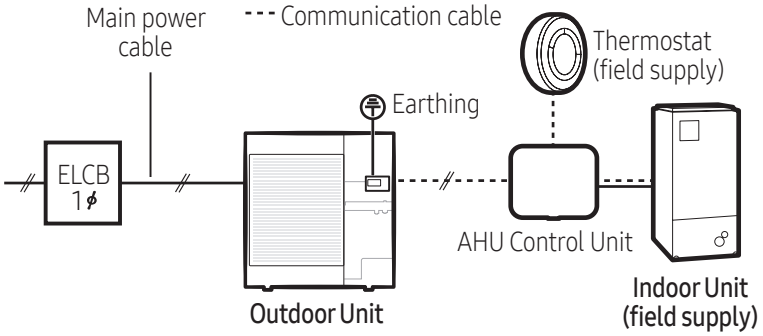


4 Connect the cables to the outdoor units. Refer to the next page for connection details.

5 Attach the conduit plate to the product.

Air conditioning system examples

When using earth leakage circuit breaker (ELCB) for a single phase



※ The appearance of the unit may be different from the picture depending on the model.

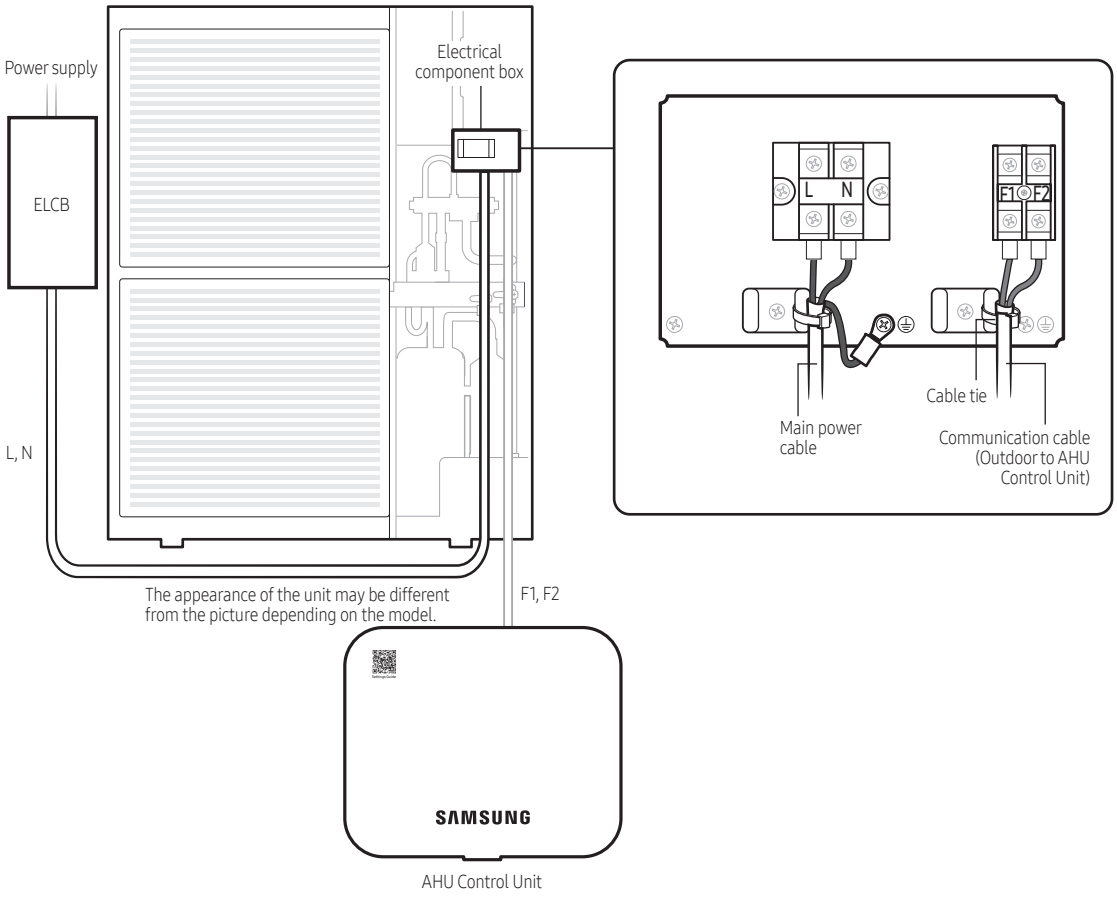
⚠ CAUTION

- ELCB must be installed since this product is equipped with a base heater.

11. Installation

Outdoor Units

Connecting the main power cable



⚠ CAUTION

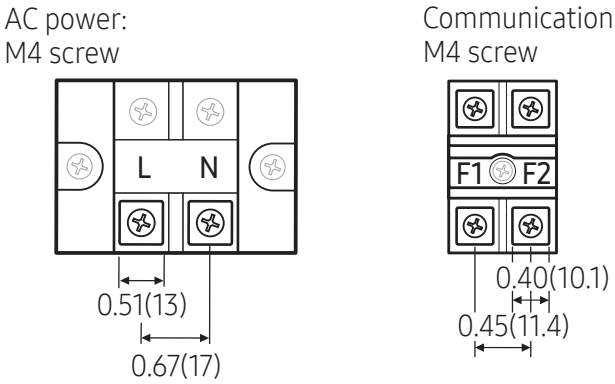
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
- If the power is unbalanced greatly, it may shorten the life of the condenser.
- To protect the product from water and possible shock, run the power cable and the communication cable within the appropriate weatherproof conduit and fittings.
- Ensure that main supply connection is made through a switch that disconnects all poles, with contact gap of a least 0.12 inch(3mm).
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.

11. Installation

Outdoor Units

Main power terminal block specifications

[Unit : inch(mm)]



Main power cable specifications

The power cable is not supplied with air conditioner.

Ensure the power wiring is sizing and specifications comply with all national, state, and local codes and regulations.

Model	Power Source	RLA (A)	MOC		MCA (A)	MOP (A)
Outdoor			FAN1(A)	FAN2(A)		
AC024BXUPCH	208 - 230 V 60 Hz	17.6	1.25	-	24.1	30
AC036BXUDCH		17.8	1.25	-	24.4	35
AC036BXUPCH		17.8	1.25	1.25	25.6	35
AC048BXUPCH		23.5	1.25	1.25	32.7	40
AC060BXUPCH		23.9	1.25	1.25	33.2	40

NOTE

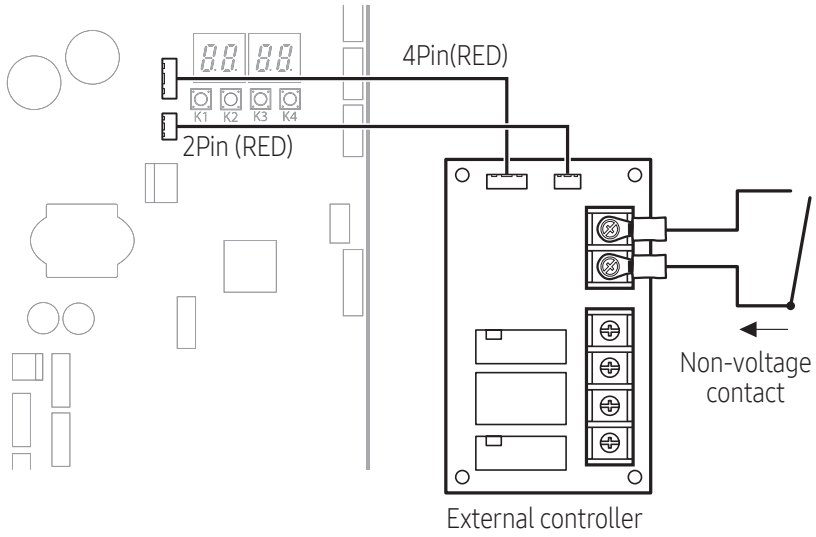
- Outdoor units are installed using different power sources from that of indoor units, and this installation manual only provides the MCA/MOP values for outdoor units.
  For the MCA/MOP values for indoor units, refer to the installation manual for the indoor unit installed.
- RLA is based on AHRI 210/240 cooling standard condition [Indoor temp. : 26.7 °C / 80 °F(DB) / 19.46 °C / 67 °F(WB), Outdoor temp. : 35 °C / 95 °F(DB)]
- Voltage tolerance is ± 10 %.
- Maximum allowable voltage between legs is 2%.

11. Installation

Outdoor Units

- **Symbols**
  - RLA: Rated Load Ampere (A)
  - MOC: Maximum Operating Current (A)
  - MCA: Minimum Circuit Ampere (A)
  - MOP: Maximum Overcurrent Protective Device (A)
- Voltage range
  - Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.
- Wire size & type must comply with the applicable local and national code.

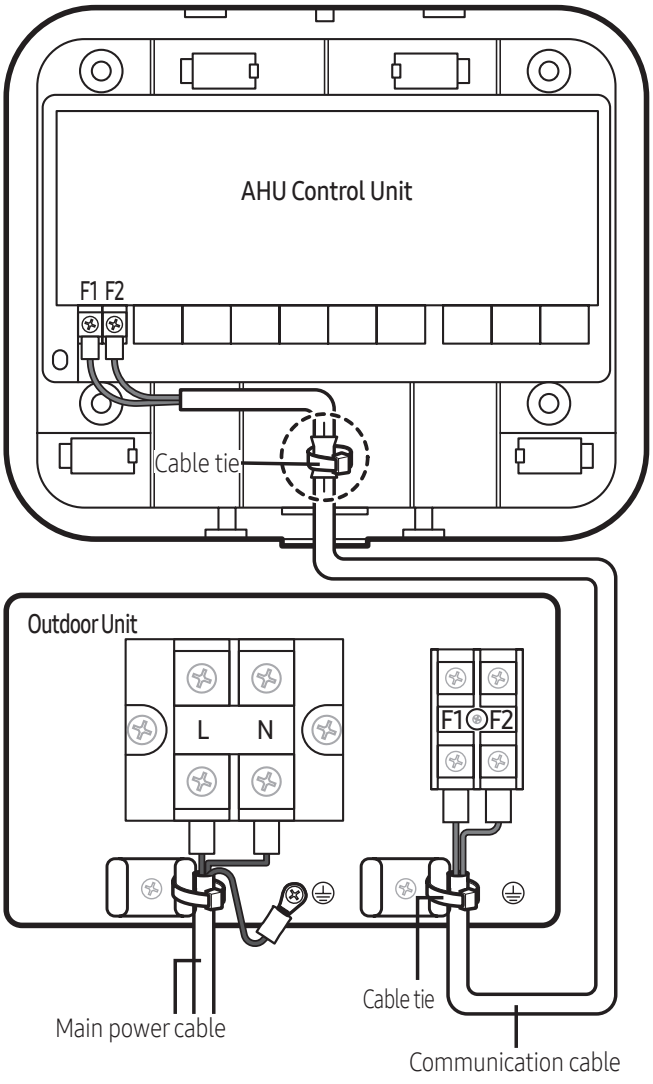
Silence mode controller wiring diagram with External controller



11. Installation

Outdoor Units

Connecting the main power cable and outdoor to-AHU Control Unit communication cable



NOTE

- Lay the electrical wiring so that the front cover does not rise up when doing wiring work and attach the front cover securely.
- Ground wire for the outdoor unit connection cable must be clamped to a soft copper tinplated eyelet terminal.
- The appearance of the unit may be different from the picture depending on the model.

11. Installation

Outdoor Units

- Connect the rated cables only.
- Connect using a driver which is able to apply the rated torque to the screws.
- If the terminal is loose, fire may occur caused by arc. If the terminal is connected too firmly, the terminal may be damaged.

	Tightening torque	
	lbf•ft	N•m
M4	0.87 to 1.30	0.8 to 1.2
M5	1.45 to 2.17	2.0 to 3.0

⚠ CAUTION

- When connecting cables, you can connect the cables to the electrical part or connect them through the holes below depending on the spot.
- Connect the communication cable between the indoor and outdoor units through a conduit to protect against external forces, and feed the conduit through the wall together with refrigerant piping. Remove
- all burrs at the edge of the knock-out hole and secure the cable to the outdoor knock-out using lining and bushing with an electrical insulation such as rubber and so on.
- Must keep the cable in a protection tube.
- Keep distances of 1.97 inch(50mm) or more between power cable and communication cable.
- When the cables are connected through the hole, remove the Plate bottom.

Outdoor-to-AHU Control Unit communication cable specifications

Power supply		
Power supply	**Max/Min (V)**	**Power cable**
1Φ, 208-230V~, 60Hz	±10%	0.0039 inch² ↑ (2.5mm² ↑), 3 wires
Communication cable		
18 AWG, 2 wires		

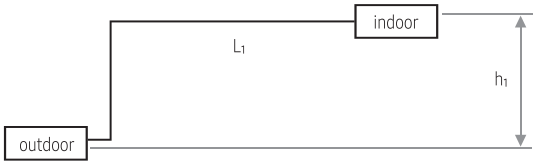
11. Installation

Outdoor Units

Connecting the refrigerant pipe

Maximum allowable pipe length [ft(m)]

	Model Name	Max pipe length (L1)	Max pipe height difference between outdoor and indoor unit (h1)
2Ton	AC024BXUPCH	98 (30)	49 (15)
3Ton (single fan)	AC036BXUDCH	164 (50)	98 (30)
3Ton (dual fan)	AC036BXUPCH	164 (50)	98 (30)
4Ton	AC048BXUPCH	164 (50)	98 (30)
5Ton	AC060BXUPCH	98 (30)	49 (15)



Recommended liquid and gas pipe diameters [inch(mm)]

	Model Name	Liquid Pipe Diameter	Gas Pipe Diameter		
			Rated	Min	Max
2Ton	AC024BXUPCH	Φ3/8 (9.52)	Φ3/4 (19.05)	Φ5/8 (15.88)	Φ7/8 (22.23)
3 Ton (single fan)	AC036BXUDCH	Φ3/8 (9.52)	Φ3/4 (19.05)	Φ5/8 (15.88)	Φ7/8 (22.23)
3 Ton (dual fan)	AC036BXUPCH	Φ3/8 (9.52)	Φ7/8 (22.23)	Φ3/4 (19.05)	Φ1-1/8 (28.58)
4Ton	AC048BXUPCH	Φ3/8 (9.52)	Φ7/8 (22.23)	Φ3/4 (19.05)	Φ1-1/8 (28.58)
5Ton	AC060BXUPCH	Φ3/8 (9.52)	Φ7/8 (22.23)	Φ3/4 (19.05)	Φ1-1/8 (28.58)

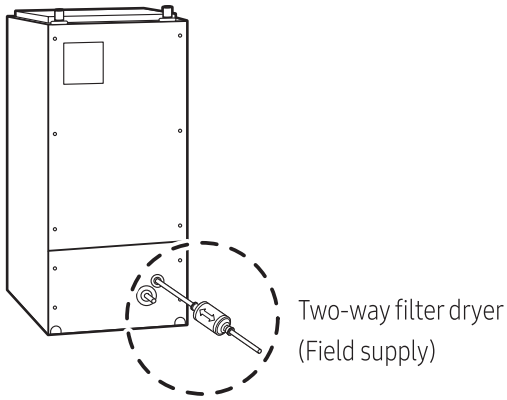
11. Installation

Outdoor Units

Reuse existing refrigerant lines

To retrofit the outdoor unit by using the existing piping, be sure to:

- Confirm that the existing pipe diameter, length, and height difference between outdoor and indoor unit meet the requirements listed above.
- Confirm that the maximum pressure for the indoor unit is equal or higher than the maximum pressure for the outdoor unit.
- Confirm that the indoor unit is compatible with R410A, and utilizes a Thermostatic Expansion Valve (TXV). If existing indoor unit utilizes an orifice plate, replace the orifice plate with a R410A TXV.
- Flush the inside of the piping to remove moisture, oil and any other foreign matter.
- Make sure to install a two-way filter dryer on the liquid pipe referring to the figure below.



NOTE

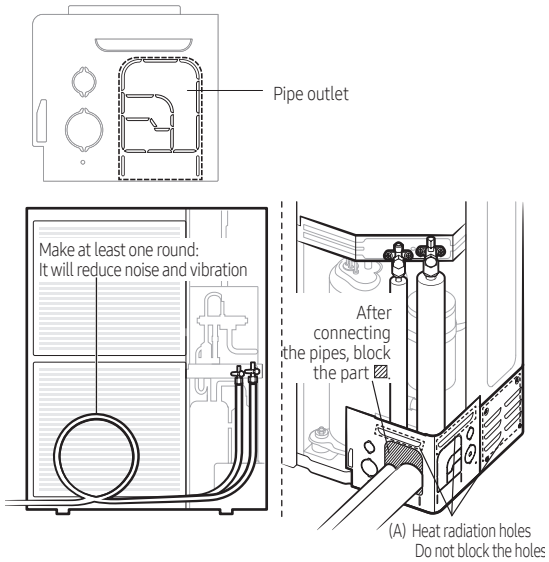
- Make sure to remove the transparent covers at the edge of the pipes before connecting the pipes.

11. Installation

Outdoor Units

⚠ CAUTION

- While on site and prior to installation, protect or enclose refrigerant tubing to avoid mechanical damage.
- Be sure to use hard drawn ACR tubing for all piping Ø3/4"(19.05mm) or greater. If you use annealed copper for 3/4" (19.05mm), the pipe may break, which can result in an injury.



The designs and shape are subject to change according to the model.

- The refrigerant pipe can be pulled out from front, side rear and bottom side, so install it depending on the installation site requirments.

⚠ CAUTION

- Cut the pipe outlet to the exact pipe size. In addition, remove foreign substances and burr around the outlet.
- Make sure not to damage the exterior of the outdoor unit.
- Perform cutting with only a cutter (ex. nipper) and never tap with a hammer near the pipe outlet. Otherwise, it may cause product damage such as warping of the cabinet.
- After connecting the pipes with Pipe outlet, plug the space around the pipes.
- After connecting the pipes, proceed exactly as directed in the guide to prevent interference with the internal parts.
- After installing pipes, block the unused knock outs to prevent small animals from entering. However, the radiant heat hole(A) should be able to intake air.

11. Installation

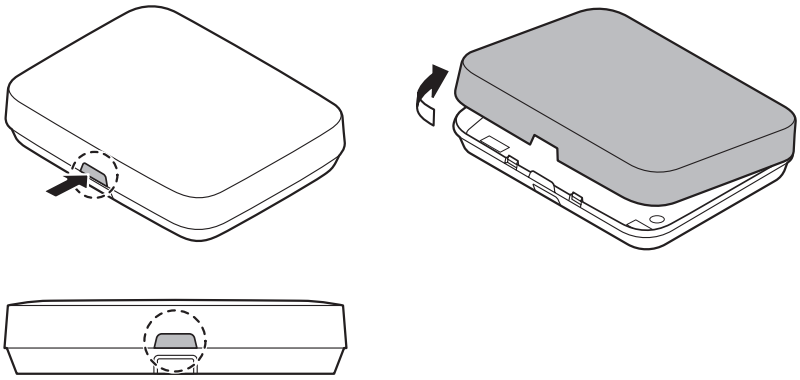
AHU Control Unit

Selecting the installation location

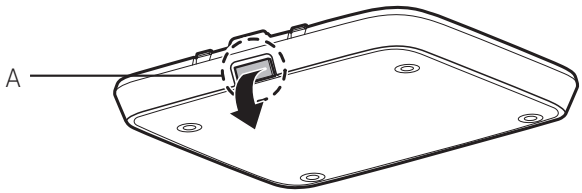
⚠ CAUTION

- The AHU Control Unit (ACU) should be installed by a qualified person, according to the relevant local wiring regulations and this installation manual.
- Turn off the power before connecting the terminals.
- Install wires according to the relevant electrical wiring regulations. Ensure that the wires are installed inside the indoor unit or on a wall near the indoor unit, to prevent access by users.
- Do not install the AHU Control Unit (ACU) outdoors.
- Do not install the AHU Control Unit (ACU) in a location with direct sunlight or a location with a risk that the AHU Control Unit (ACU) may come into contact with liquid or may be impacted.
- Close the AHU Control Unit (ACU) securely.

1 Push the middle area of the AHU Control Unit (ACU) to separate the front cover, as shown in the figure.



2 Before affixing the AHU Control Unit (ACU), remove area A on the rear cover as shown in the figure below. Insert wires into this opening.

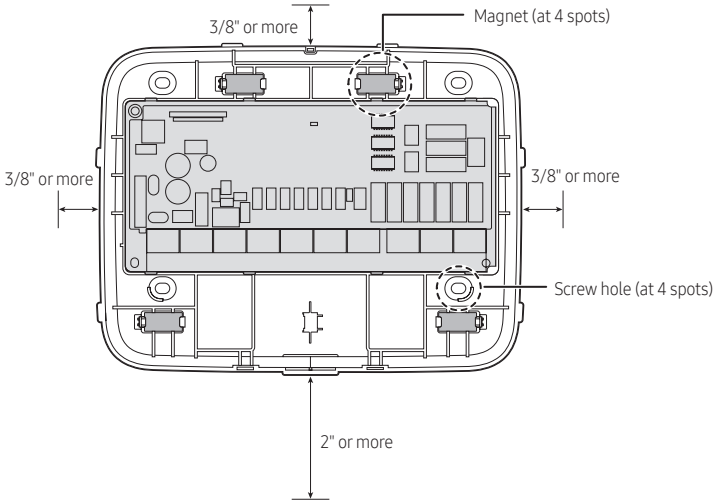


11. Installation

AHU Control Unit

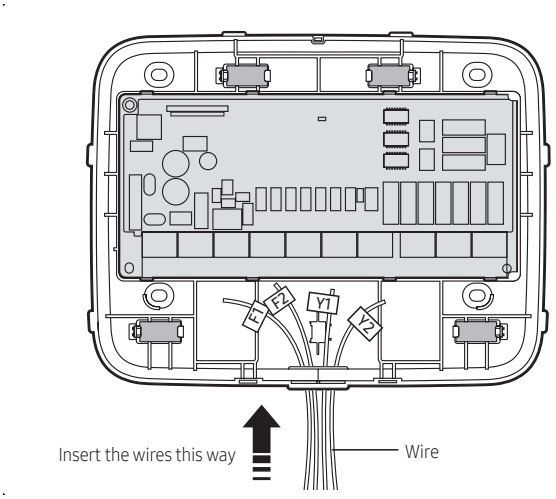
3 The magnets attached to the rear cover can be used to fix the device to the indoor unit. If the device cannot be fixed properly with the magnets, use the supplied screws to fix to the unit or a nearby structure.

- Before attaching the rear cover, ensure there are gaps of at least 3/8" along the top and the left and right sides of the device and a gap of at least 2" along the bottom.



4 Insert the wires into the device by passing them through the opening created in step 2.

5 Use the supplied labels to label the wires before connecting to the corresponding terminals.



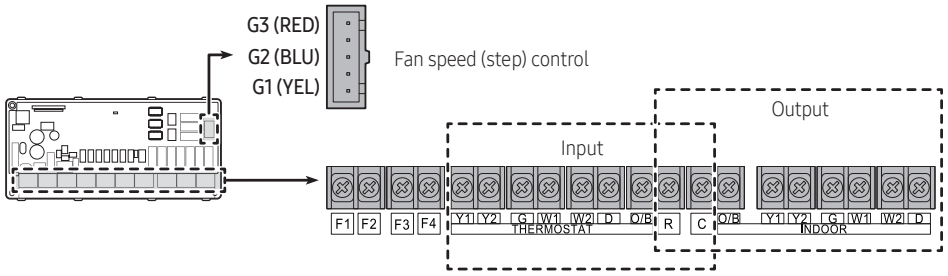
Label the wires at your AHU Control Unit.
Etiquete los cables de la unidad de control de la AHU.
Étiquetez les câbles sur votre unité de commande AHU.

Outdoor		Thermostat		Indoor	
F1	F1	Y1	Y1	Y1	Y1
F2	F2	Y2	Y2	Y2	Y2
F3	F3	G	G	G	G
F4	F4	W1	W1	W1	W1
		W2	W2	W2	W2
		D	D	D	D
		O/B	O/B	O/B	O/B
		R	R	R	R
		C	C	C	C

11. Installation

AHU Control Unit

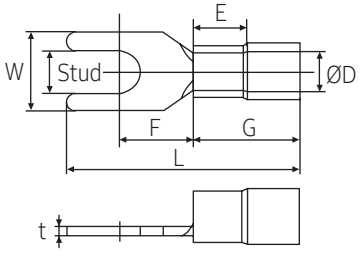
6 Connect the wires to the corresponding terminal blocks.



Name	Description	
Terminal Block	**F1**	Outdoor unit communication
	F2	Outdoor unit communication
	F3	Reserved
	F4	Reserved
	Y1	Compressor Stage 1
	Y2	Compressor Stage 2
	G	Indoor fan
	W1	Auxiliary heater Stage 1
	W2	Auxiliary heater Stage 2
	D	Dehumidification
	D/B	4-way reversing valve
	R	AC Power 24 V
	C	AC Power 24 V
Connector	**G1**	Fan speed (step) control, YEL
	G2	Fan speed (step) control, BLU
	G3	Fan speed (step) control, RED

Compression ring terminal specifications for connection to the AHU Control Unit (ACU) PCB.





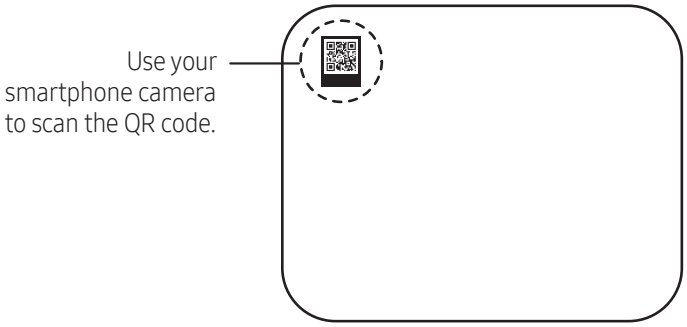
11. Installation

AHU Control Unit

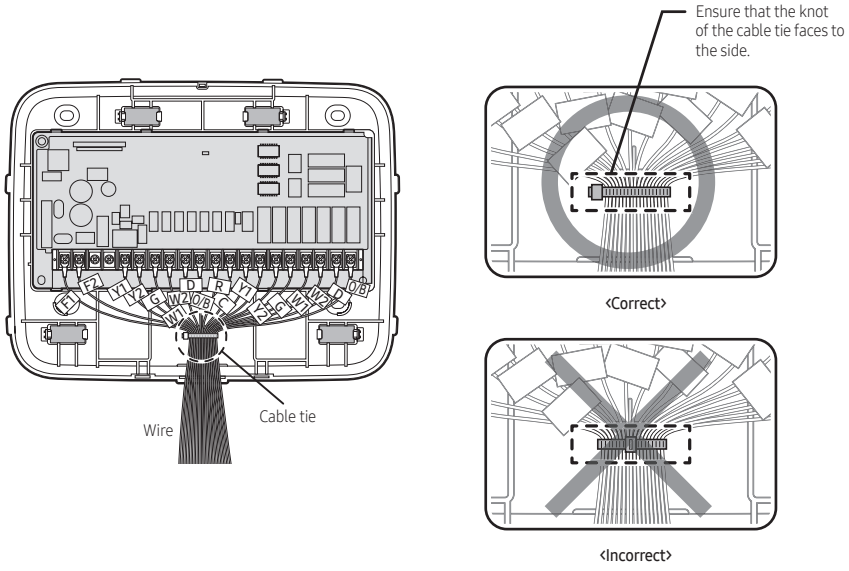
Range of Permitted Wires		Rated Size	Stud Size	Basic Size [mm (inch)]						
AWG	mm² (inch²)	mm² (inch²)	mm (inch)	t	ØD	G	E	F	W	L
22 to 16	0.25 to 1.65 (0.0003 to 0.0025)	1.5 (0.0023)	3 (0.1181)	0.7 (0.0275)	3.8 (0.1496)	10.0 (0.3937)	4.5 (0.1771)	6.5 (0.2559)	6.0 (0.2362)	21.2 (0.8346)

- F1, F2 communication wire: Maximum distance from outdoor unit to the ACU: 100m (328 ft)
- F1, F2 communication wires: 18 AWG solid core

7 Set the DIP switches to fit the application requirements. Scan the QR code attached to the front cover of the AHU Control Unit (ACU) using a smartphone camera to use an on-line system configuration wizard.



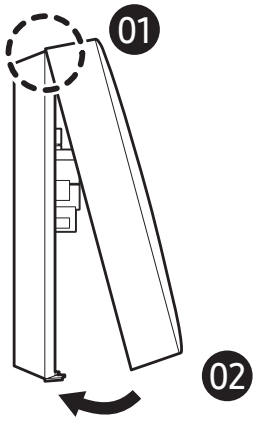
8 Pass the supplied cable tie through the wire organizer loop, secure the wires connected to the terminal blocks. Ensure that the knot of the cable tie faces the side.



11. Installation

AHU Control Unit

9 Align the front cover with the top of the AHU Control Unit (ACU) body, and then close the front cover.



NOTE

- After assembly, make sure that no wires are caught in the gap between the front and rear covers.

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