

History

Version	Modification	Date	Remark
Ver.1.0	Released 2021 CAC Slim Duct for North America	21. 12. 28	
Ver.1.1	Modified some error	22. 01. 07	

Features & Benefits

CAC - World-class energy efficiency

Maintain optimal comfort and control with energy and cost-efficient technologies

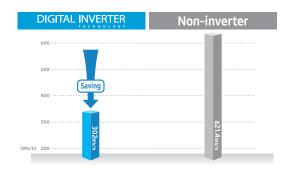
Featuring a suite of energy-optimizing technologies, Samsung CAC Single delivers top-class energy efficiency to support business in saving costs and the environment.

Quick, efficient heating and cooling

Smart inverter technology offers powerful, quick cooling and heating with minimal electricity consumption, which means real cost savings and less energy waste.

Up to 50 percent less energy use

After reaching changes its operation mode to economical. By avoiding inefficient and frequent switching on and off of the compressor, the digital inverter saves up to 50 percent in energy consumption compared to non-inverter air conditioners.



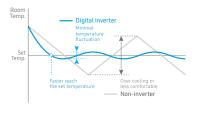


Automatically save energy & money

Digital Inverter Technology

Save money every day with Samsung's highly energy-efficient Digital Inverter technology. Unlike conventional fixed-speed compressors, which frequently shut off and switch on, the compressor automatically adjusts its speed in response to changes in the surrounding room temperature. So it helps to ensure optimum comfort by maintaining the desired temperature, with little fluctuation. And it optimizes power usage, which reduces energy consumption and saves you money.





Features & Benefits

CAC Single - Superior performance

Stabilize the atmosphere with broad temperature allowance and control

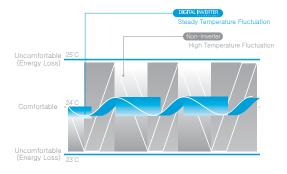
Samsung is dedicated to supporting comfortable living and working environments based on the strength of its technologies. With a single unit, CAC Single delivers reliable comfort and control over multiple areas to ensure a pleasant atmosphere in any climate.

Wide temperature performance

No matter how extreme the temperature, the highperforming CAC Single can handle the conditionwithout the need for an additional unit. Featuring a wide temperature allowance, it can cool in heat of up to 50 and provide warmth in the freezing cold of -20°C to ensure a constant and comfortable home environment.

Ideal comfort in minutes

The CAC Single digital inverter air conditioner works at maximum capacity at startup. As soon as the temperature reaches the desired or set temperature, CAC Single performs fine adjustments to cope with any changes. This means less temperature fluctuation and ideal comfort in a matter of minutes.



Versatile piping installation

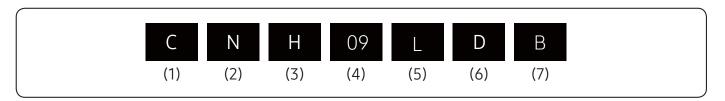
CAC Single outdoor units offer a selection of pipe directions. The internal pipe connection ports allow four different pipe directions, supporting a neater, more organized-looking unit upon installation.



Nomenclature

US Code

Model Name



(1) Classification

С	CAC
	•

(5-2) Feature1 (Outdoor Unit)

Α	Inv+Side+General Temp
S	Inv+Side+Low Temp
Q	Inv+Side+Tropical Temp
F	Inv+Ton+Tronical Temp

(2) Product Type

N	Indoor Unit
X	Outdoor Unit

(6) Feature

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

(3) Mode

Α	Universal
С	Cooling Only
Н	Heat Pump

(4) Capacity

X1,000 Btu/h (2 digits)

(7) Version

В	2022

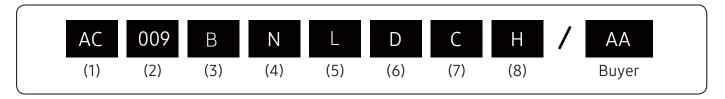
(5-1) Product Notation (Indoor Unit)

1	1 Way Cassette / Wind-Free 1Way Cassette
N	(Wind-Free) 4 Way Cassette (600x600)
4	(Wind-Free) 4 Way Cassette
6	360 Cassette
L	Slim Duct
Н	HSP Duct
С	Ceiling
J	Console
Α	AR9500 (Wall Mounted)
T	MAX4 (Wall Mounted)
Z	Multi-position AHU

Nomenclature

Indoor Unit

Model Name



(1) Classification

AC	CAC
(0) 0	
(2) Capacity	
	X1,000 Btu/h (3 digits)
(3) Version	
В	2022

(5) Product Notation

1	1 Way Cassette / Wind-Free 1Way Cassette
N	(Wind-Free) 4 Way Cassette (600x600)
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Z	Multi-position AHU

(4) Product Type

N	Indoor Unit
Χ	Outdoor Unit

(6) Feature

F	Flagship
S	Standard
D	Deluxe
Р	Premium

(7) Rating Voltage

|--|

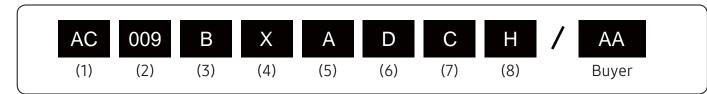
(8) Mode

С	Cooling Only
Н	Heat Pump

Nomenclature

Outdoor Unit

Model Name



(1) Classification

AC	CAC

(5) Feature1

Α	Inv+Side+General Temp	
S	Inv+Side+Low Temp	
Q	Inv+Side+Tropical Temp	
F	Inv+Top+Tropical Temp	

(2) Capacity

x 1000 Btu/h (3 digits)				

(6) Feature2

F	Flagship			
S	Standard			
D	Deluxe			
Р	Premium			
	Deluxe + Low Temp.			

(3) Version

В	2022

(7) Rating Voltage

С	1Ф, 208~230V, 60Hz	
Н	3Ф, 400V, 60Hz	

(4) Product Type

N	Indoor Unit (NASA)
Χ	Outdoor Unit (NASA)

(8) Mode

Н	Heat Pump(R410A)	
С	Cooling Only(R410A)	
E	Heat Pump(R22)	
D	Cooling Only(R22)	

Line-up

Indoor unit

	Capacity (kBtu/h)		
Model	9	12	18
Slim Duct			

Outdoor Unit

		Capacity (kBtu/h)	
Model	9	12	18
1Phase	LOMBOUT TO SERVICE AND ADDRESS OF THE PARTY	IMAGEN I	CO LANDON

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Slim Duct

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Features & Benefits

Slim Duct

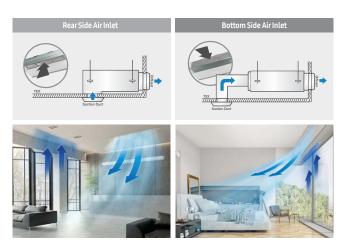


Temper any environment with industry-best lightweight design and optimized airflow

The new Samsung Slim Duct visually blends into the ceiling while providing powerful cool and warm airflow. It's also easy to install and maintain in any interior regardless of the surrounding environment with its compact size and weight—the lightest in the industry.

Flexible setup

The air inlet can be set up either on the bottom or rear of the unit, giving users greater flexibility in installation.



High Lift-Up Drain Pump

Factory imbedded drain pump lifts the condensed water up to 750mm and gives benefit of easy installation.



Easy access, easy maintenance

Slim Duct features a flexible design that enables users to easily access its parts to maintain the unit.



1. Specification

Slim Duct

Madal Na		Indoor Unit			AC009BNLDCH/AA	AC012BNLDCH/AA	AC018BNLDCH/AA
Model Na	iiie	Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09LDB	CNH12LDB	CNH18LDB
03 Code		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
	Mode			-	Heat Pump	Heat Pump	Heat Pump
				kW	0.88 / 2.64 / 3.81	0.94 / 3.52 / 4.10	1.61 / 5.28 / 6.45
			Cooling	Btu/h	3,000 / 9,000 / 13,000	3,200 / 12,000 / 14,000	5,500 / 18,000 / 22,000
	Danfarra	Capacity		US RT	0.25 / 0.75 / 1.08	0.27 / 1.00 / 1.17	0.46 / 1.50 / 1.83
	Performance	(Min/Std/Max)		kW	0.85 / 3.52 / 4.69	0.88 / 4.10 / 4.98	0.88 / 5.86 / 7.33
			Heating	Btu/h	2,900 / 12,000 / 16,000	3,000 / 14,000 / 17,000	3,000 / 20,000 / 25,000
				US RT	0.24 / 1.00 / 1.33	0.25 / 1.17 / 1.42	0.25 / 1.67 / 2.08
		Power Input	Cooling	1.007	0.18 / 0.64 / 1.32	0.19 / 1.00 / 1.34	0.40 / 1.49 / 2.44
		(Min/Std/Max)	Heating	kW	0.16 / 1.00 / 2.02	0.17 / 1.14 / 2.10	0.30 / 1.83 / 3.61
	Davisa	Current Input	Cooling	Δ.	1.2 / 3.3 / 5.9	1.3 / 4.7 / 5.9	2.4 / 6.7 / 10.8
	Power	(Min/Std/Max)	Heating	Α	1.1 / 4.7 / 9.0	1.1 / 5.1 / 9.3	1.8 / 8.2 / 16.0
		Comment	MCA	А	9.8	9.8	19.1
		Current	MOP	А	15	15	25
			Cooling	-	4.10	3.52	3.55
		EER	Cooling(US)	(Btu/h)/W	14.00	12.00	12.10
	Efficiency	COP	Heating	W/W	3.50	3.60	3.20
6 .		SEER		-	21.1	20.7	19.8
System		HSPF		-	11.3	10.8	9.0
				Type	Flare	Flare	Flare
		Liquid Pipe		Φ, mm(inch)	6.35 (1/4)	6.35 (1/4)	6.35 (1/4)
				Type	Flare	Flare	Flare
		Gas Pipe		Φ, mm(inch)	9.52 (3/8)	9.52 (3/8)	12.7 (1/2)
	Pipe	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Connections		Standard	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
		Pipe Length	Max.	m (ft)	20 (65.6)	20 (65.6)	50 (164.0)
		(ODU-IDU)	Elevation	m (ft)	15 (49.2)	15 (49.2)	30 (98.4)
		(020.20)	Chargeless	m (ft)	7.5 (24.6)	7.5 (24.6)	7.5 (24.6)
	Wiring		Min.	mm ²	0.75	0.75	0.75
	Connections	Communication	Remark	111111	F1,F2	F1,F2	F1,F2
	Connections	Туре	Remark	_	R410A	R410A	R410A
	Refrigerant			kg	1.15	1.15	2
	Kerrigerane	Factory Charging		lbs	2.54	2.54	4.41
		Standard		-	01C3FC-1C546B-271A23-370000	01C3FC-1C55F0-272328-370000	01C3FC-1C583D-23343C-370000
	Option Code	Install		_	020010-120000-200000-300000	020010-120000-200000-300000	020010-120000-200000-300000
	Power Supply	motati		Ф,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60
	1 ower suppry	Туре		Ψ,π,ν,ιιζ	Fin & Tube	Fin & Tube	Fin & Tube
	Heat		Fin	_	Al	Al	Al
	Exchanger	Material	Tube	_	Cu	Cu	Cu
	Exchanger	Fin Treatment	Tube	_	Green Hydrophile	Green Hydrophile	Green Hydrophile
		Туре		_	Sirocco	Sirocco	Sirocco
		Quantity		EA	2	2	3
		quarretty			8/6.5/5.5	11.3/10/8.5	17/13/10
	Fan	Air Flow Rate	H/M/L	m³/min			
		, iii i tow itate	/ 1/ 1·1/ L	ft³/min l/s	283/230/194 133/108/92	399/353/300	600/459/353
		External Static				188/167/142	283/217/167
Indoor		Pressure	Min/Std/Max	In Wg	0.01/0.1/0.24	0.01/0.1/0.24	0.01/0.1/0.24
Unit	Fan Matar	Туре		-	BLDC	BLDC	BLDC
	Fan Motor	Output		Wxn	84 x 1	84 x 1	84 x 1
	Drain	Drain Pipe		Φ, mm	OD26.67	OD26.67	OD26.67
		Sound Pressure	11/04/1	4D(A)			
	Sound	Level	H/M/L	dB(A)	33/30/26	34/31/27	35/32/28
		Sound Power Lev	el	dB(A)	50	51	52
		Net Weight		kg(lbs)	18.9 (41.7)	18.9 (41.7)	22.4 (49.4)
		Gross Weight		kg(lbs)	22.2 (48.9)	22.2 (48.9)	25.9 (57.1)
	External		W 11 D)	mm	900 x 199 x 440	900 x 199 x 440	1100 x 199 x 440
		Net Dimensions (WXHXD)	inch	35.43 x 7.83 x 17.32	35.43 x 7.83 x 17.32	43.31 x 7.83 x 17.32
	Dimension						
	Dimension	C D:	() () () ()	mm	1151 x 280 x 544	1151 x 280 x 544	1351 x 280 x 544
	Dimension	Gross Dimensions	(WxHxD)	mm inch	1151 x 280 x 544 45.31 x 11.02 x 21.42	1151 x 280 x 544 45.31 x 11.02 x 21.42	1351 x 280 x 544 53.19 x 11.02 x 21.42

1. Specification

Slim Duct

Model Na	ıma	Indoor Unit			AC009BNLDCH/AA	AC012BNLDCH/AA	AC018BNLDCH/AA
Model Na	iiie	Outdoor Unit			AC009BXADCH/AA	AC012BXADCH/AA	AC018BXADCH/AA
US Code		Indoor Unit			CNH09LDB	CNH12LDB	CNH18LDB
O2 Code		Outdoor Unit			CXH09ADB	CXH12ADB	CXH18ADB
	Casing	Material		=	Steel	Steel	Steel
	Control	Infrared remote of	control	-	AR-EH04U	AR-EH04U	AR-EH04U
	System	Wired remote cor	ntrol	-	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN	MWR-WG00UN / MWR-SH11UN
Indoor	D : D	Drain Pump		-	included	included	included
Unit	Drain Pump	Max.lifting Height / D	isplacement	in / gal/h	29.53 / 6.34	29.53 / 6.34	29.53 / 6.34
	Additional Accessories	Air Filter		-	Removal / Washable	Removal / Washable	Removal / Washable
	Power Supply	,		Ф,#,V,Hz	1,2,208-230,60	1,2,208-230,60	1,2,208-230,60
		Туре		-	Fin & Tube	Fin & Tube	Fin & Tube
	Heat	Material	Fin	-	Al	Al	Al
	Exchanger	Material	Tube	-	Cu	Cu	Cu
		Fin Treatment	- 1	-	Green Hydrophile	Green Hydrophile	Anti-Corrosion
	Compressor	Model		-	KTN130D42UFR	KTN130D42UFR	UG8T265FXAEW
	·	Туре		-	BLDC	BLDC	Twin BLDC
		Output		kW	1.04	1.04	2.32
		Oil	Туре	-	POE	POE	POE
			Initial Charge	cc (fl oz)	350	350	700
		Туре		-	Propeller	Propeller	Propeller
		Discharge directi	on	-	Front	Front	Front
	F	Quantity		EA	1	1	1
	Fan			m³/min	30	30	61
Outdoor		Air Flow Rate	H/M/L	ft³/min	1,060	1,060	2,154
Unit				l/s	500	500	1,017
	Fan Motor	Туре		-	BLDC	BLDC	BLDC
	I all Motor	Output		Wxn	40 x 1	40 x 1	125 x 1
		Sound Pressure	Cooling	dB(A)	46	47	48
	Sound	Level	Heating	dB(A)	47	48	48
		Sound Power Lev	el	dB(A)	59	61	62
		Net Weight		kg(lbs)	33.3 (74.3)	33.3 (74.3)	53.7(118.4)
		Gross Weight		kg(lbs)	35.6 (78.5)	35.6 (78.5)	57.7(127.2)
	External	Net Dimensions ((MAHAD)	mm	790 x 548 x 285	790 x 548 x 285	880 x 798 x 310
	Dimension	INEC DIFFICISIONS (VVALIAD)	inch	31.10 x 21.57 x 11.22 31.10 x 21.57 x 11.22		34.65 x 31.42 x 12.20
		Gross Dimension	r (\\\vHvD)	mm	913 x 622 x 371	913 x 622 x 371	1023 x 881 x 413
		GIUSS DITHERISION	> (WXIIXD)	inch	35.94 x 24.49 x 14.61	35.94 x 24.49 x 14.61	40.28 x 34.69 x 16.26
	Casing	Material	Body	=	Steel	Steel	Steel
	Operating	Cooling		°C (°F)	-18~50 (0~122)	-18~50 (0~122)	-18~50 (0~122)
	Temp.	Heating		°C (°F)	-25~24 (-13~75)	-25~24 (-13~75)	-25~24 (-13~75)



- Specification 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 piping length 5m(16.4ft), 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.

2. Summary Table

Slim Duct

Performance Characteristics

	Net		Capac	city		Airflow	Caused Duagassus Laurel	Cound Downson Lovel
Model Code	Weight (lbs)		Cooling (Btu/h)	Heating (Btu/h)	Fan Speed	(Cooling/Heating) (CFM)	Sound Pressure Level (dBA)	(dBA)
		Max.	13,000	16,000	High	283 / 283	33	50
CNH09LDB (AC009BNLDCH/AA)	41.7	Std.	9,100	12,000	Mid	230 / 230	30	-
(ACOO7BINEDCIT/AA)		Min.	3,000	2,900	Low	194 / 194	26	-
		Max.	14,000	17,000	High	399 / 399	34	51
CNH12LDB (AC012BNLDCH/AA)	41.7	Std.	12,000	14,000	Mid	353 / 353	31	-
(ACUIZBINEDCII/AA)		Min.	3,200	3,000	Low	300 / 300	27	-
CALLIANI D.D.		Max.	22,000	25,000	High	600 / 600	35	52
CNH18LDB (AC018BNLDCH/AA)	49.4	Std.	18,000	20,000	Mid	459 / 459	32	-
(/teolobivebell//t/ty		Min.	5,500	3,000	Low	353 / 353	28	-



• Sound data is based on cooling operation.

Electric Characteristics

Мо	del		Outdoor U	nit		Inp	ut Curren	ıt (Ampeı	res)	Power	Supply
Indoorlinit	OutdoorUnit	Rated	Voltage	rang	e	Outdo	or Unit	Indoor	Total	MCA(A)	MOD(A)
Indoor Unit	Outdoor Unit	Hz	Volts	Min.	Max	Cooling	Heating	Unit	Total	MCA(A)	MOP(A)
CNH09LDB (AC009BNLDCH/AA)	CXH09ADB (AC009BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	1.06	9.8	9.8	15
CNH12LDB (AC012BNLDCH/AA)	CXH12ADB (AC012BXADCH/AA)	60	208 to 230	187	253	8.74	8.74	1.06	9.8	9.8	15
CNH18LDB (AC018BNLDCH/AA)	CXH18ADB (AC018BXADCH/AA)	60	208 to 230	187	253	17.94	17.94	1.06	19.0	19.1	25



• MCA: Minimum circuit amperes

• MOP: Maximum Overcurrent Protective Device

• Select wire size based on the value of MCA

3. Capacity Table

Slim Duct

(1) CNH09LDB(AC009BNLDCH/AA) + CXH09ADB (AC009BXADCH/AA)

Cooling

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

Outdoor								I	ndoor	Tempe	rature (°F, DB	/ WB)								
Temp.		68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75	
(°F, DB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
(F, DB)	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	11.5	9.2	0.69	12.2	9.5	0.71	12.7	9.7	0.72	13.1	10.0	0.74	13.3	9.9	0.74	14.0	9.8	0.75	14.7	9.7	0.77
70	11.9	9.2	0.66	12.6	9.5	0.68	13.1	9.8	0.69	13.5	10.1	0.70	13.8	10.0	0.71	14.5	9.9	0.72	15.2	9.7	0.73
95	8.0	5.7	0.60	8.4	5.9	0.61	8.7	6.1	0.63	9.0	6.3	0.64	9.2	6.2	0.65	9.6	6.2	0.65	10.1	6.1	0.67
115	10.4	8.5	1.45	10.9	8.8	1.48	11.3	9.1	1.51	11.7	9.4	1.54	11.9	9.3	1.55	12.5	9.2	1.57	13.2	9.0	1.60
122	8.0	7.4	1.14	8.4	7.6	1.17	8.7	7.9	1.19	9.0	8.1	1.22	9.2	8.0	1.23	9.6	7.9	1.24	10.1	7.8	1.27

Heating

TC : Total Capacity, PI : Power Input

Outdoor					Indo	or Temper	ature (°F, D	B)				
Temperature	6	51	6	4	6	8	7	0	7	2	7	5
(°F, DB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(F, DD)	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	6.9	1.26	6.8	1.25	6.7	1.23	6.7	1.22	6.6	1.21	6.5	1.20
-4	9.8	1.42	9.7	1.41	9.6	1.39	9.5	1.38	9.4	1.37	9.3	1.35
14	13.7	1.86	13.6	1.84	13.4	1.82	13.3	1.80	13.2	1.78	13.0	1.77
32	14.4	1.56	14.2	1.54	14.1	1.53	14.0	1.51	13.8	1.50	13.7	1.48
47	12.4	1.03	12.2	1.02	12.1	1.01	12.0	1.00	11.9	0.99	11.8	0.98
75.2	17.8	1.32	17.6	1.30	17.5	1.29	17.3	1.28	17.1	1.27	16.9	1.25



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

3. Capacity Table

Slim Duct

(2) CNH12LDB(AC012BNLDCH/AA) + CXH12ADB (AC012BXADCH/AA)

Cooling

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

Outdoor								I	ndoor '	Tempe	ature (°F, DB	/WB)								
Temp.		68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75	
(°F, DB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
(F, DB)	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	12.2	9.7	0.75	12.9	10.0	0.77	13.4	10.3	0.78	13.8	10.6	0.80	14.1	10.5	0.81	14.8	10.4	0.82	15.5	10.2	0.83
70	12.7	9.9	0.71	13.4	10.2	0.72	14.0	10.5	0.74	14.4	10.8	0.75	14.7	10.7	0.76	15.4	10.6	0.77	16.2	10.4	0.78
95	10.6	7.7	0.94	11.2	7.9	0.96	11.6	8.1	0.98	12.0	8.4	1.00	12.2	8.3	1.01	12.9	8.2	1.02	13.5	8.1	1.04
115	10.8	8.9	1.51	11.4	9.2	1.54	11.9	9.5	1.57	12.2	9.8	1.60	12.5	9.7	1.62	13.1	9.6	1.63	13.8	9.4	1.66
122	8.5	7.9	1.22	8.9	8.1	1.25	9.3	8.4	1.27	9.6	8.6	1.30	9.8	8.6	1.31	10.3	8.5	1.33	10.8	8.3	1.35

Heating

TC : Total Capacity, PI : Power Input

Outdoor					Indo	or Temper	ature (°F, D	В)				
Temperature	6	51	6	4	6	8	7	0	7	2	7	'5
(°F, DB)	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(F, DB)	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	7.2	1.23	7.1	1.22	7.1	1.21	7.0	1.20	6.9	1.19	6.9	1.17
-4	10.2	1.38	10.1	1.37	10.0	1.35	9.9	1.34	9.8	1.33	9.7	1.31
14	14.4	1.82	14.3	1.80	14.1	1.78	14.0	1.77	13.9	1.75	13.7	1.73
32	15.1	1.53	15.0	1.51	14.8	1.50	14.7	1.48	14.6	1.47	14.4	1.45
47	14.4	1.17	14.3	1.16	14.1	1.15	14.0	1.14	13.9	1.13	13.7	1.12
75.2	18.8	1.29	18.6	1.28	18.4	1.27	18.2	1.25	18.0	1.24	17.8	1.23

NOTE

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

3. Capacity Table

Slim Duct

(3) CNH18LDB(AC018BNLDCH/AA) + CXH18ADB (AC018BXADCH/AA)

Cooling

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

Outdoor								I	ndoor '	Tempe	ature (°F, DB	/ WB)								
Temp.		68 / 57			72 / 61			77 / 64			80 / 67			82 / 70			86 / 72			90 / 75	
(°F, DB)	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
(F, DD)	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW	MBH	MBH	kW
0	15.9	11.5	1.05	16.8	11.9	1.07	17.5	12.2	1.10	18.0	12.6	1.12	18.4	12.5	1.13	19.3	12.3	1.14	20.2	12.1	1.16
70	19.9	14.4	1.19	21.0	14.8	1.22	21.8	15.3	1.24	22.5	15.8	1.27	23.0	15.6	1.28	24.1	15.4	1.29	25.3	15.1	1.32
95	15.9	11.5	1.40	16.8	11.9	1.43	17.5	12.2	1.46	18.0	12.6	1.49	18.4	12.5	1.50	19.3	12.3	1.52	20.2	12.1	1.55
115	17.5	13.9	2.80	18.4	14.3	2.86	19.2	14.8	2.92	19.8	15.2	2.98	20.2	15.1	3.01	21.2	14.9	3.04	22.3	14.6	3.10
122	14.3	11.8	2.45	15.1	12.2	2.50	15.7	12.6	2.56	16.2	13.0	2.61	16.5	12.8	2.63	17.4	12.7	2.66	18.2	12.4	2.71

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°F, DB)	Indoor Temperature (°F, DB)											
	6	51	6	4	6	8	7	0	7	2	7	5
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
(F, DD)	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
-13	14.4	2.73	14.3	2.71	14.1	2.68	14.0	2.65	13.9	2.63	13.7	2.60
-4	17.0	2.98	16.8	2.95	16.7	2.92	16.5	2.89	16.3	2.86	16.2	2.83
14	24.3	3.58	24.1	3.55	23.8	3.51	23.6	3.48	23.4	3.44	23.1	3.41
32	23.9	3.11	23.7	3.08	23.4	3.05	23.2	3.02	23.0	2.99	22.7	2.96
47	20.6	1.89	20.4	1.87	20.2	1.85	20.0	1.83	19.8	1.81	19.6	1.79
75.2	26.8	2.07	26.5	2.05	26.3	2.03	26.0	2.01	25.7	1.99	25.5	1.97

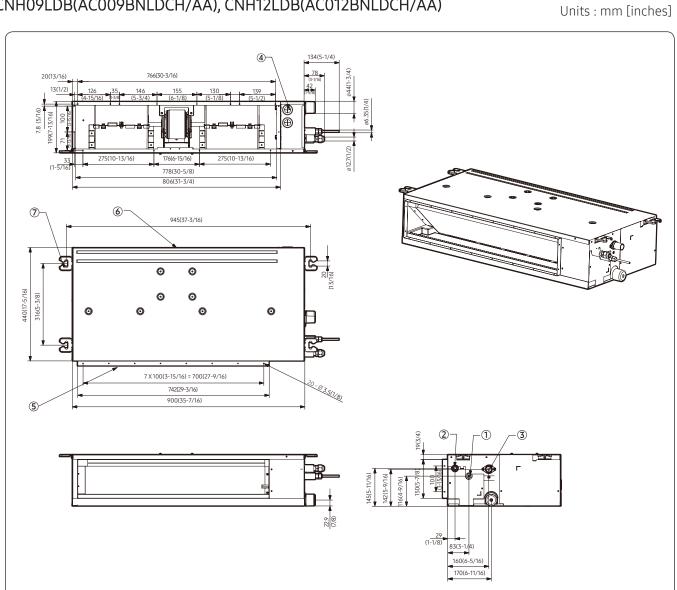


• The performance table shows the average value of each conditions.

4. Dimensional Drawing

Slim Duct

CNH09LDB(AC009BNLDCH/AA), CNH12LDB(AC012BNLDCH/AA)

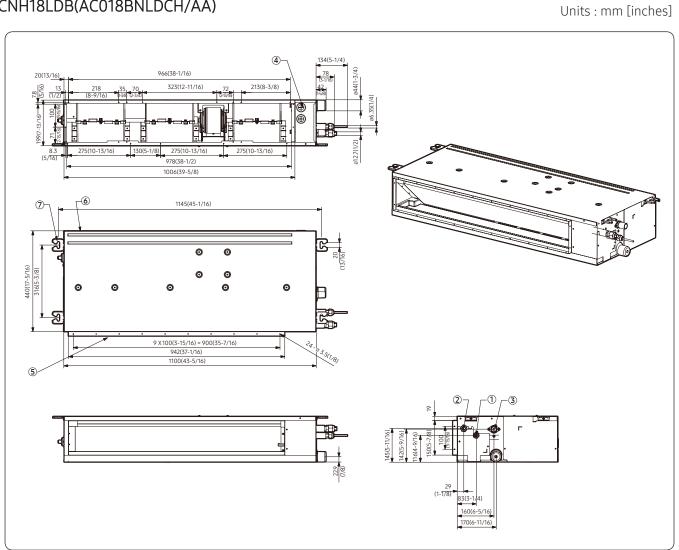


No.	Name	Description				
1	Refrigerant Liquid Pipe	Φ6.35 mm(1/4")				
2	Refrigerant Gas Pipe	Φ9.52 mm(3/8")				
3	Condensate Drain	3/4"[OD26.67mm(1.05")]				
4	Power & Comm. Wiring Conduits	-				
5	Supply Air Flange	-				
6	Return Air Flange	-				
7	Hook	-				

4. Dimensional Drawing

Slim Duct

CNH18LDB(AC018BNLDCH/AA)

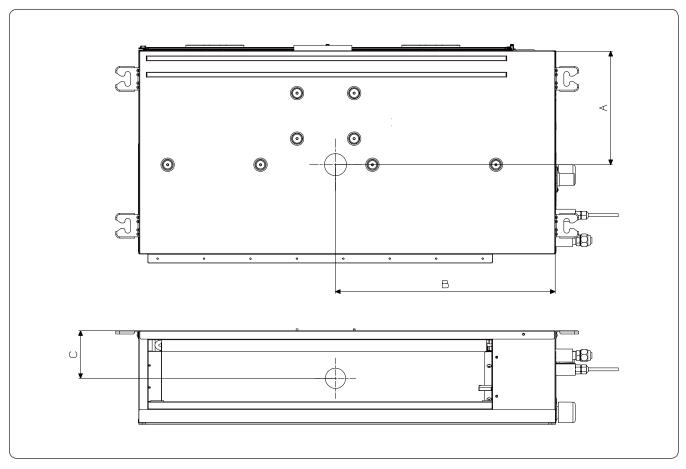


No.	Name	Description				
1	Refrigerant Liquid Pipe	Ф6.35 mm(1/4")				
2	Refrigerant Gas Pipe	Φ12.7 mm(1/2")				
3	Condensate Drain	3/4"[OD26.67mm(1.05")]				
4	Power & Comm. Wiring Conduits	-				
5	Supply Air Flange	-				
6	Return Air Flange	-				
7	Hook	-				

5. Center of Gravity

Slim Duct

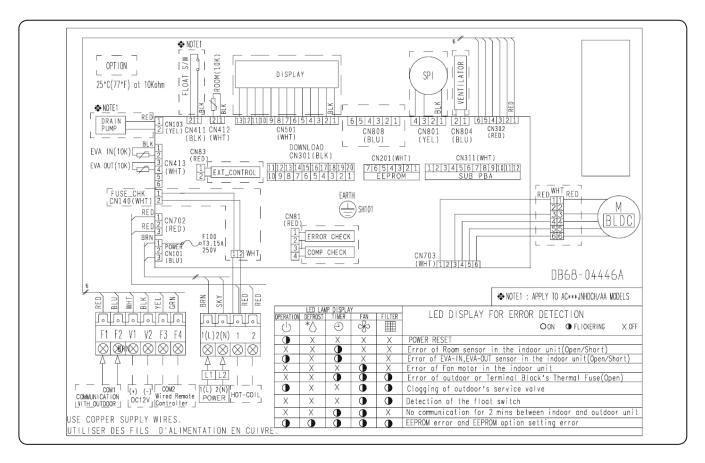
Units : mm [inches]



Model	А	В	С
CNH09/12LDB(AC009/012BNLDCH/AA)	233 [9-3/16]	436 [17-3/16]	100 [3-15/16]
CNH18LDB(AC018BNLDCH/AA)	240 [9-7/16]	540 [21-1/4]	100 [3-15/16]

6. Electrical Wiring Diagram

Slim Duct



MAIN PBA	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	ROOM (10K)	Thermistor ROOM in (10K)
EXT_CONTROL	EXTERNAL CONTROL	EVA-IN (10K)	Thermistor EVA IN(10K)	EVA-OUT (10K)	Thermistor EVA OUT(10K)
M-BLDC	BLDC Motor				

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow: blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- Protective earth(screw)

7. Sound Data

Slim Duct

Sound Pressure level

Unit: dB(A)

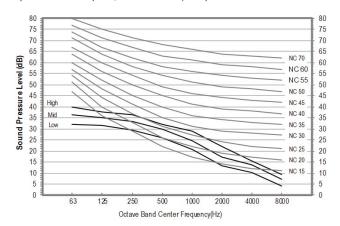
Discharge	Suction
Duct	Duct
<u> </u>	1.5m
	Microphone

Model	High	Mid	Low
CNH09LDB(AC009BNLDCH/AA)	33	30	26
CNH12LDB(AC012BNLDCH/AA)	34	31	27
CNH18LDB(AC018BNLDCH/AA)	35	32	28

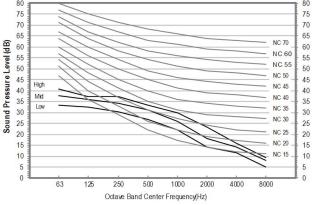
- NC Curve
 - 1) CNH09LDB(AC009BNLDCH/AA)

75 70 65 75 70 65 NC 70 Sound Pressure Level (dB) 60 55 50 60 NC 60 55 NC 55 NC 50 45 40 35 30 25 20 15 35 NC 35 30 NC 30 25 15 NC 15 10 10 500 1000 4000 Octave Band Center Frequency(Hz)

2) CNH12LDB(AC012BNLDCH/AA)



3) CNH18LDB(AC018BNLDCH/AA)



- 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

Slim Duct

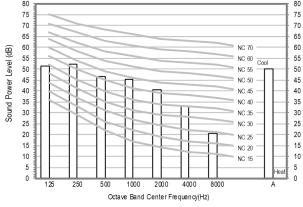
Sound Power level



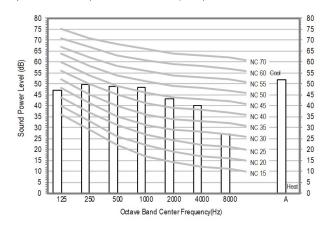
- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power: 1pW.
 - Measured according to ISO 3741.

• NC Curve

1) CNH09LDB(AC009BNLDCH/AA)



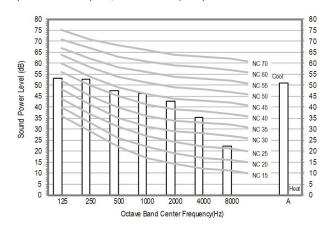
3) CNH18LDB(AC018BNLDCH/AA)



Unit: dB(A)

Model	Cooling
CNH09LDB(AC009BNLDCH/AA)	50
CNH12LDB(AC012BNLDCH/AA)	51
CNH18LDB(AC018BNLDCH/AA)	52

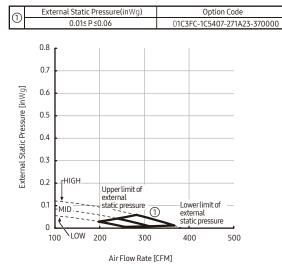
2) CNH12LDB(AC012BNLDCH/AA)

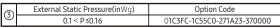


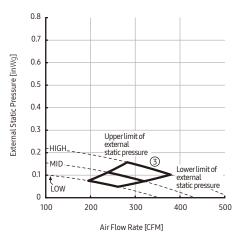
8. Fan Characteristics

Slim Duct

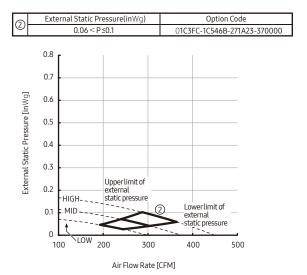
1) AC009BNLDCH

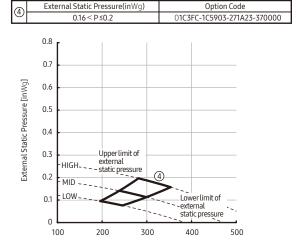






⑤	Exte	ernal Static Pressure(inWg) Option Code	
		0.2 < P ≤0.24 01C3FC-1C5945-271A23-37	0000
	0.8	[
	0.7		
inWg]	0.6		
ssure [0.5		
itic Pre	0.4		
External Static Pressure [inWg]	0.3	Upper limit of HIGH — external static pressure (5)	
Exte	0.2	MID	
	0.1	LOW Lower limit of external static pressure	
		100 200 300 400 500	
		Air Flow Rate [CFM]	



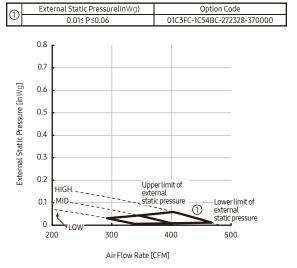


Air Flow Rate [CFM]

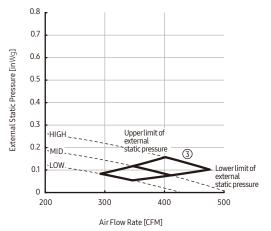
8. Fan Characteristics

Slim Duct

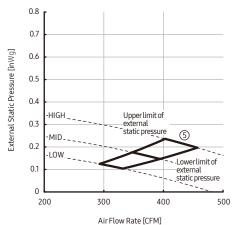
2) AC012BNLDCH

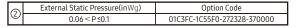


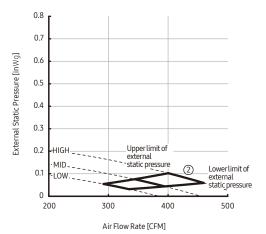




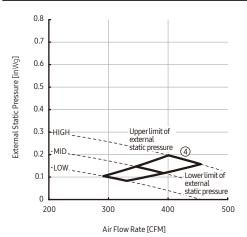








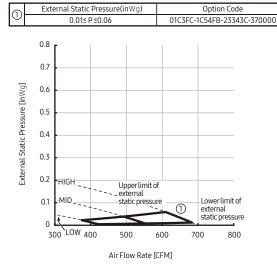
(4) External Static Pressure(inWg) Option Code
0.16 < P ≤ 0.2 01C3FC-1C5986-272328-370000

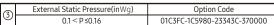


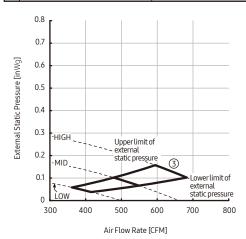
8. Fan Characteristics

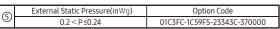
Slim Duct

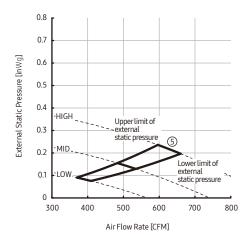
3) AC018BNLDCH

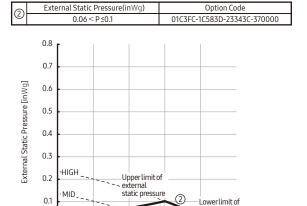












Air Flow Rate [CFM]

500

0

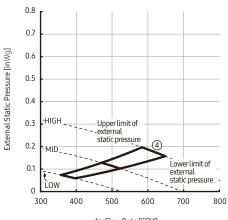
300 LOW 400

	External Static Pressure(inWg)	Option Code
9	0.16 < P≤0.2	01C3FC-1C59B2-23343C-370000

external static pressure

800

700



Air Flow Rate [CFM]

Outdoor Units

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1. Summary Table

Outdoor Units

Performance Characteristics

Capacity	Model Code	Net Size	Net Weight	Airflow	Sound Pressure Level (dBA)		Sound Power
(Btu/h)	Model Code	(WxHxD inch)	(lbs)	(CFM)	Cooling	Heating	Level (dBA)
9,000	CXH09ADB (AC009BXADCH/AA)	31.10 x 21.57 x 11.22	74.3	1,059	46	47	59
12,000	CXH12ADB (AC012BXADCH/AA)	31.10 x 21.57 x 11.22	74.3	1,059	47	48	61
18,000	CXH18ADB (AC018BXADCH/AA)	34.65 x 31.42 x 12.20	118.4	2,154	48	48	62



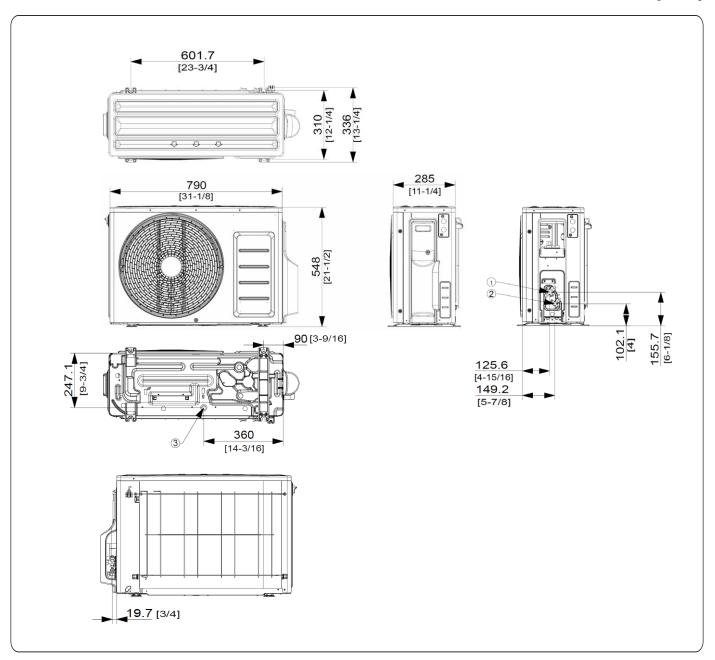
• Sound power level is based on cooling operation.

2. Dimensional Drawing

Outdoor Units

CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units: mm [inches]



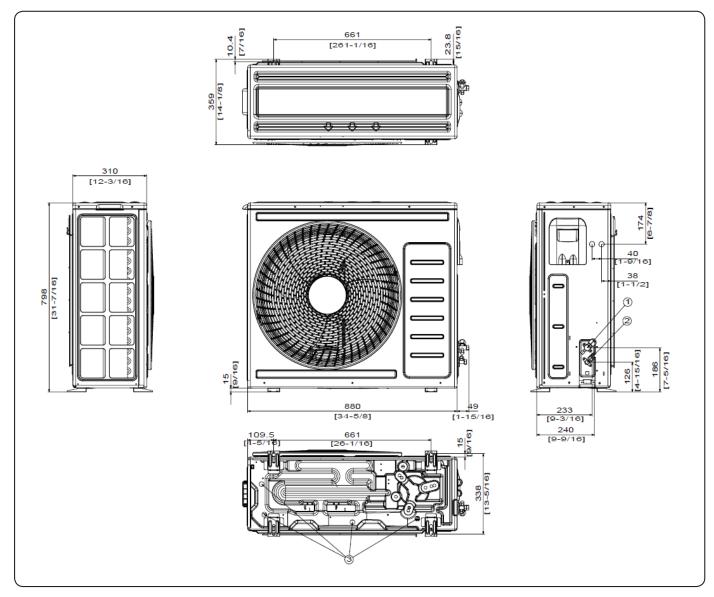
No.	Name	Description	
1	Refrigerant gas pipe	Φ 9.52mm(3/8")	
2	Refrigerant liquid pipe	Φ 6.35mm(1/4")	
3	Drain Hole	-	

2. Dimensional D awing

Outdoor Units

CXH18ADB (AC018BXADCH/AA)

Units: mm [inches]



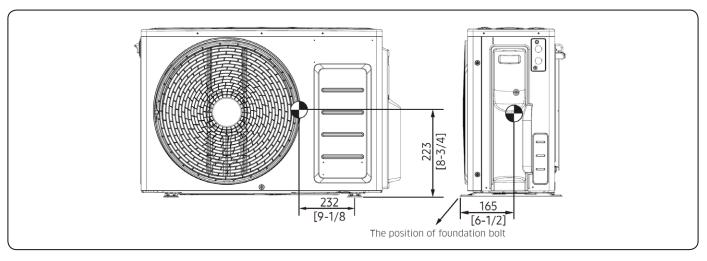
No.	Name	Description	
1	Refrigerant liquid pipe	Φ 12.7mm(1/2")	
2	Refrigerant gas pipe	Φ 6.35mm(1/4")	
3	Drain hole	-	

3. Center of Gravity

Outdoor Units

CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)

Units: mm [inches]



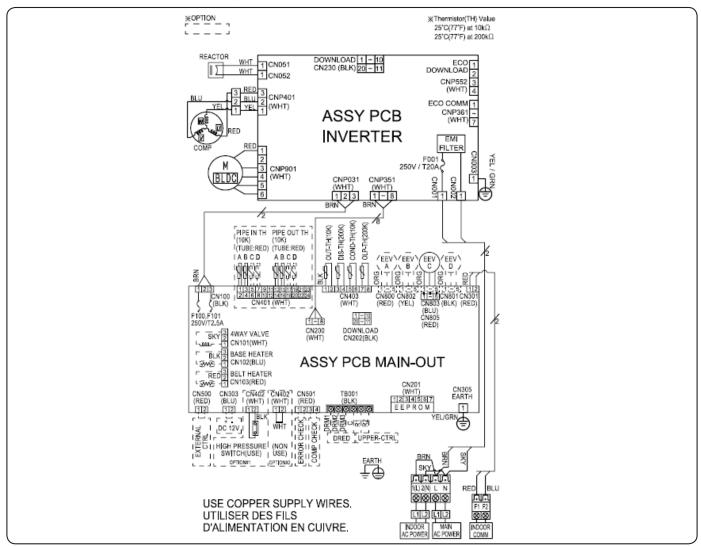
CXH18ADB (AC018BXADCH/AA)

Units: mm [inches]

4. Electrical Wiring Diagram

Outdoor Units

CXH09ADB (AC009BXADCH/AA), CXH12ADB (AC012BXADCH/AA)



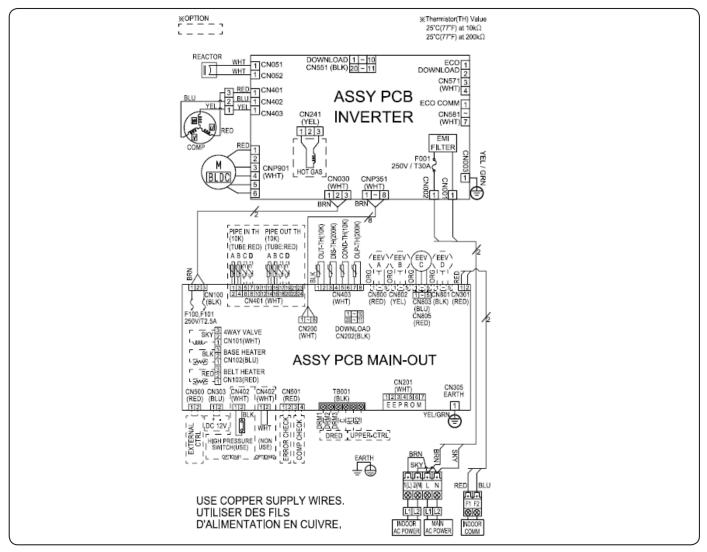
MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP	

- 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 short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- ♣ Protective earth(screw), ☐☐ : connector, ۖ : The wire quantity

4. Electrical Wiring Diagram

Outdoor Units

CXH18ADB (AC018BXADCH/AA)



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP

- 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 short circuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- ♣ Protective earth(screw), ☐☐: connector, ♣ : The wire quantity

5. Sound Data

Outdoor Units

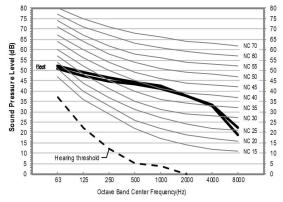
Sound Pressure level

Unit: dB(A)

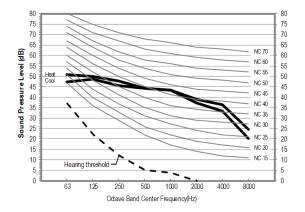
Micro	phone 1 1m
1.5m	Front
_	·

Model	Cooling	Heating
CXH09ADB (AC009BXADCH/AA)	46	47
CXH12ADB (AC012BXADCH/AA)	47	48
CXH18ADB (AC018BXADCH/AA)	48	48

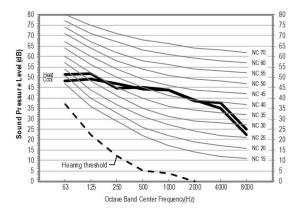
- NC Curve
 - 1) CXH09ADB (AC009BXADCH/AA)







3) CXH18ADB (AC018BXADCH/AA)



- 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

5. Sound Data

Outdoor Units

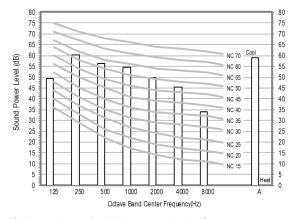
Sound Power level



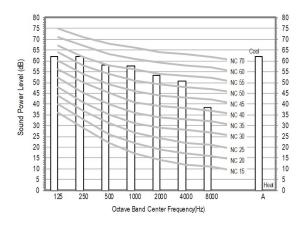
- Specifications may be subject to change without prior notice
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power: 1pW.
 - Measured according to ISO 3741.

• NC Curve

1) CXH09ADB (AC009BXADCH/AA)



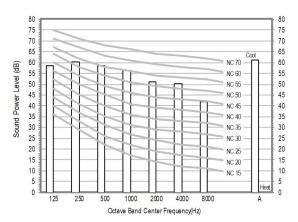
3) CXH18ADB (AC018BXADCH/AA)



Unit: dB(A)

Model	Cooling
CXH09ADB (AC009BXADCH/AA)	59
CXH12ADB (AC012BXADCH/AA)	61
CXH18ADB (AC018BXADCH/AA)	62

2) CXH12ADB (AC012BXADCH/AA)

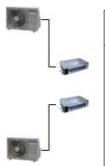


6. Capacity Correction

Outdoor Units

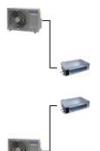
CNH09LDB(AC009BNLDCH/AA)+CXH09ADB(AC009BXADCH/AA) CNH12LDB(AC012BNLDCH/AA)+CXH12ADB(AC012BXADCH/AA)

Cooling



		Pipe Length (ft)			
24.6 32.8 49.2					65.6
	49.2	-	-	0.95	0.93
e (ft	32.8	-	0.98	0.95	0.93
ence	16.4	1.00	0.98	0.95	0.93
Level Difference (ft)	0.0	1.00	0.98	0.95	0.93
	-16.4	1.00	0.97	0.95	0.93
	-32.8	-	0.95	0.94	0.92
	-49.2	-	-	0.93	0.91

Heating



		Pipe Length (ft)			
		24.6	32.8	49.2	65.6
	49.2	-	-	0.94	0.91
e (ft	32.8	-	0.97	0.94	0.91
Suc	16.4	1.00	0.97	0.94	0.91
ffer	0.0	1.00	0.97	0.94	0.91
Level Difference (ft)	-16.4	1.00	0.97	0.94	0.91
	-32.8	-	0.97	0.94	0.91
	-49.2	-	-	0.94	0.91

6. Capacity Correction

Outdoor Units

CNH18LDB(AC018BNLDCH/AA)+CXH18ADB(AC018BXADCH/AA)

Cooling



		Pipe Length (ft)									
		24.6	32.8	49.2	65.6	82.0	98.4	114.8	131.2	147.6	164.0
	98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
(£)	32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
ence	16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
Difference	0.0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
i i	-16.4	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.90	0.88
Level	-32.8	-	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.89	0.87
_	-49.2	-	-	0.97	0.96	0.94	0.93	0.92	0.90	0.88	0.85
	-65.6	-	-	-	0.95	0.94	0.93	0.91	0.89	0.87	0.83
	-82.0	-	-	-	-	0.94	0.92	0.91	0.89	0.86	0.82
	-98.4	-	-	-	-	-	0.92	0.90	0.88	0.85	0.80

Heating



		Pipe Length (ft)									
	24.6 32.8 49.2 65.6 82.0 98.4 114.8 131.							131.2	147.6	164.0	
	98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90
	82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
Level Difference (ft)	32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
ence	16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
ffer	0.0	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
<u> </u>	-16.4	1.00	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
eve.	-32.8	-	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
_	-49.2	-	-	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-65.6	-	-	-	0.97	0.96	0.94	0.93	0.92	0.91	0.90
	-82.0	-	-	-	-	0.96	0.94	0.93	0.92	0.91	0.90
	-98.4	-	-	-	-	-	0.94	0.93	0.92	0.91	0.90

7. Operation Range

Outdoor Units

CXH**ADB(AC***BXADCH/AA)

Mode		Indoor temperature	Outdoor temperature	Indoor humidity	
Cooling		18°C to 32°C (64°F to 90°F)	-18°C to 50°C (0°F to 122°F)	80% or less	
Drying		18°C to 32°C (64°F to 90°F)	-18°C to 50°C (0°F to 122°F)	80% or less	
Heating	~ 24kBtu/h	30°C(86°F) or less	-25°C to 24°C (-13°F to 75°F)	-	
Heating	30 ~ 48kBtu/h	30 C(00 1) 01 tess	-20°C to 24°C (-4°F to 75°F)	-	

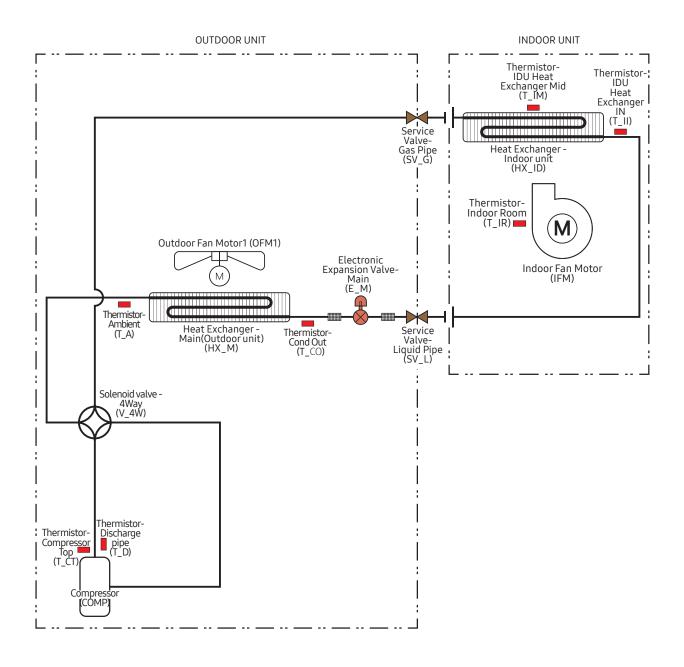
NOTE

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

8. Piping Diagram

Outdoor Units

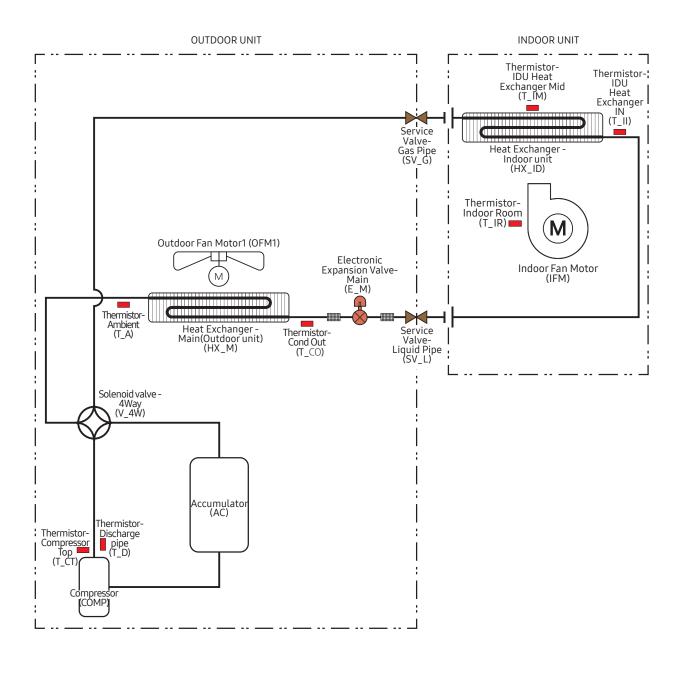
CNH09LDB(AC009BNLDCH/AA)+CXH09ADB(AC009BXADCH/AA)
CNH12LDB(AC012BNLDCH/AA)+CXH12ADB(AC012BXADCH/AA)



8. Piping Diagram

Outdoor Units

CNH18LDB(AC018BNLDCH/AA)+CXH18ADB(AC018BXADCH/AA)



Duct

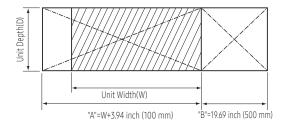
Spacing requirements

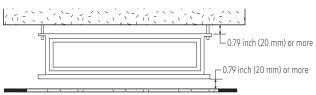
Space requirements for installation & service.

Construction Standard for Inspection opening

An inspection opening is required for service and unit replacement.

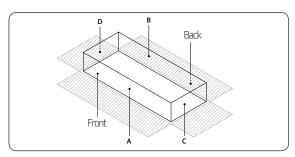
- 1) If the ceiling is a grid type, an inspection opening is not required.
- 2) If the ceiling is plaster board, an inspection opening is required. The size of the opening will vary based on the height inside the ceiling.
 - a. Height is more than 1.64ft (0.5m): Only "B" [Inspection for PBA] is applied.
 - b. Height is less than 1.64ft (0.5m): Both "A"&"B" are applied.
 - c. "A"&"B" are inspection opening.





- You must have 0.79 inch (20 mm) or more space between the ceiling and the bottom of indoor unit to prevent transmission of noise and vibration from the unit into the space.
- It is possible to install the unit at an height of between 7.2~8.2 ft (2.2~2.5m) from the ground, if the unit has a duct with a well defined length [11.81inch (300 mm) or more], to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra 0.39 inch (10mm) of polyethylene foam or other insulation with similar material on the body of the indoor unit.

Optional: Insulating the body of the indoor unit



Thickness: more than 0.39 inch(10mm)

Unit: inch(mm)

Indoor	AC009BNLDCH AC012BNLDCH	AC018BNLDCH				
Unit	35.43X17.32X7.83 (900X440X199)	43.31X17.32X7.83 (1100X440X199)				
А	35.43X7.83 (900X199)	43.31X7.83 (1100X199)				
В	35.43X7.83 (900X199)	43.31X7.83 (1100X199)				
С	17.32X7.83 (440X199)	17.32X7.83 (440X199)				
D	17.32X7.83 (440X199)	17.32X7.83 (440X199)				
Front/ Back Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.						

NOTE

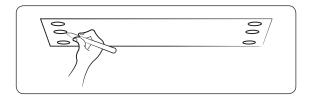
- Insulate the end of the pipe and some curved area by using separate insulator.
- Insulate the discharge and suction part at the same time when you insulate connection duct.

Duct

Installing the indoor unit

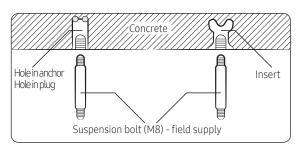
When deciding on the location of the air conditioner with the owner, the following restrictions must be taken into account

1 Place the pattern sheet on the ceiling at the spot where you want to install the indoor unit.

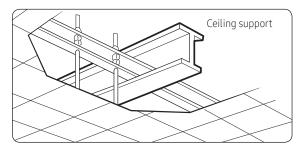


NOTE

- Since the diagram is made of paper, it may shrink or stretch slightly due to temperature or humidity. For this reason, before drilling the holes maintain the correct dimensions between the markings.
- 2 Insert bolt anchors. Use existing ceiling supports or construct a suitable support as shown in figure.



3 Install the suspension bolts depending on the ceiling type.



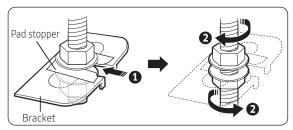
⚠ CAUTION

- Ensure that the ceiling is strong enough to support the weight of the indoor unit. Before hanging the unit, test the strength of each attached suspension bolt.
- If the length of suspension bolt is more than 4.92 ft (1.5m), it is required to prevent vibration.
- If this is not possible, create an opening on the false ceiling in order to be able to use it to perform the required operations on the indoor unit.

4 Screw eight nuts to the suspension bolts making space for hanging the indoor unit.



- You must install all the suspension rods.
- 5 Hang the indoor unit to the suspension bolts between two nuts.

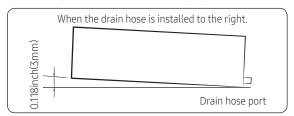


↑ CAUTION

- Piping must be laid and connected inside the ceiling when suspending the unit. If the ceiling is already constructed, lay the piping into position for connection to the unit before placing the unit inside the ceiling.
- 6 Screw the nuts to suspend the unit.
- 7 Adjust level of the unit by using measurement plate for all 4 sides.

⚠ CAUTION

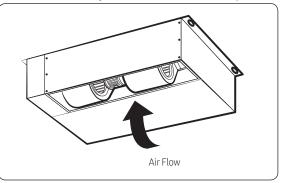
 For proper drainage of condensate, give a 0.118 inch (3mm) slant to the left or right side of the unit which will be connected with the drain hose, as shown in the figure. Make a tilt when you wish to install the drain pump, too.



 When installing the indoor unit, make sure it is not tilted toward front or back side.

↑ CAUTION

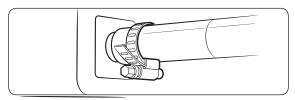
 Noise will increase 3~6 dB(A) when the air flow enters from the bottom side (Only for AC***BNLDCH indoor unit product).



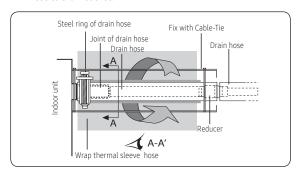
Duct

Installing the drain hose and drain pipe

- 1 Push the supplied drain hose as far as possible over the drain
- 2 Tighten the metal clamp as shown in the picture.

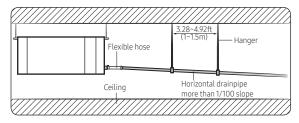


- Wrap the supplied large sealing pad over the metal clamp and drain hose to insulate and fix it with clamps.
- 4 Insulate the complete drain piping inside the building (field supply). If the drain hose cannot be sufficiently set on a slope, fit the hose with drain raising piping (field supply).
- Push the drain hose up to insulation when connecting the drain hose to drain socket.



Without the drain pump

- 1 Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).
- 2 Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.
- Do not install the drainpipe to upward position. It may cause water flow back to the unit.



With the drain pump

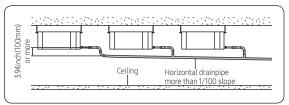
- The drain pipe should be installed within 11.81inch(300mm) to 21.65inch(550mm) from the flexible hose and then lift down 0.79inch(20mm) or more.
- Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).
- 3 Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.



- You may not need to install it if there were proper slope in the horizontal drainpipe.
- The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.

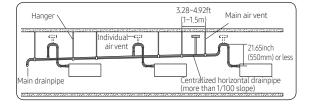
Centralized drainage without the drain pump

- Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 3.28~4.92ft(1~1.5m).
- Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



Centralized drainage with the drain pump

- Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.
- You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



Duct

Connecting the power and communication cables

A CAUTION

Always remember to connect the refrigerant pipes before performing the electric connections. When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes.

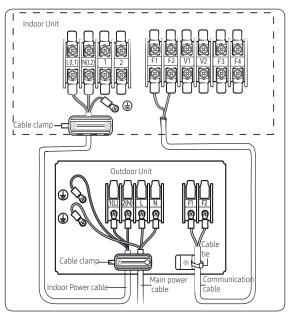
⚠ CAUTION

Always remember to connect the air conditioner to the grounding system before performing the electric connections. Use a crimp ring terminal at the end of each wire.

The indoor unit is powered through the outdoor unit by means of a H05 RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

- 1 Remove the screw on the electrical component box and remove the cover plate.
- 2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.
- 3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.
- 4 Reassemble the electrical component box cover, carefully tightening the screw.

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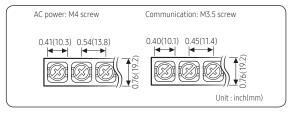
NOTE

Terminal Block of the outdoor unit may be different from the diagram depending on the model. Refer to the manual of the outdoor unit for the configuration of the terminal block of the outdoor unit.

Indoorpowersupply							
Power supply	Max/Min(V)	Indoorpowercable					
208 to 230V, 60 Hz	±10%	0.0023 inch² ↑ (1.5mm² ↑), 3 wires					
Communication cable							
0.0012 inch²↑ (0.75mm² ↑), 2 wires							

Duct

AC***BNLDCH



Tightening torque lbf-ft (kgf • cm)						
M3.5	0.58 to 0.87 (8.0 to 12.0)					
M4	0.87 to 1.30 (12.0 to 18.0)					

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord
 - -Code designation

[1-phase] IEC: 60245 IEC 57 / CENELEC: H05RN-F grade or more

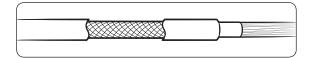
Be sure to run the power supply cable and the communication cable through electrical conduit as seen in the picture.

AC***BNLDCH



A CAUTION

- Be sure not to put your finger into the conduit.
- Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.



A CAUTION

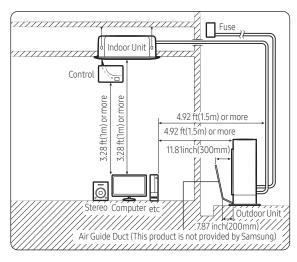
 When installing the indoor unit in a computer room or a server room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R type.

Outdoor Units

Choosing the installation location

Installation location requirements

- 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 direct sunlight or 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 is directed towards the open area.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, stereo system, etc.

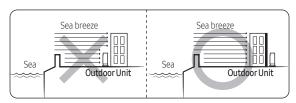


! CAUTION

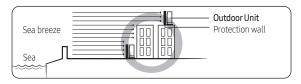
- You have just purchased a system air conditioner and it has been installed by your installation specialist.
- This device must be installed according to the national electrical rules.
- If your outdoor unit exceeds a net weight of 132.2 lb(60 kg), do not install it on a suspended wall, but stand it on a floor.
- The reliability of our product cannot be guaranteed under conditions of "A" or less.

Outdoor Model	"A"
AC009/012/018BXADCH	-13°F(-25°C)

- When installing the outdoor unit at the seaside, 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 prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.



- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze.
- 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

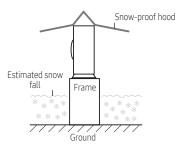
• Depending on the condition of the power supply, unstable power or voltage may cause malfunction of parts or control system (example: on a boat or places using power supplied from electric generator, etc.).

Outdoor Units

- 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 due to foreign substance.
- Check the condition of the product periodically.
 - Check the installation site every 3 months and perform anti-corrosion treatment such as R-Pro supplied by SAMSUNG (Code: MOK-220SA) or 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, such as off-peak hours, take appropriate measures like covering the product.
- If the product installed within 1640.4 ft of seashore, special anti-corrosion treatment is required.
 - * Please contact your local SAMSUNG representative for further details.

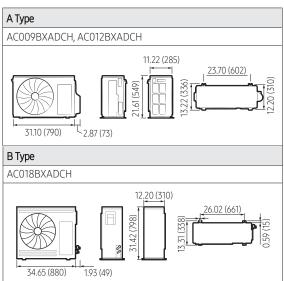
A CAUTION

 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.



Outdoor unit dimensions

Unit: inch (mm)

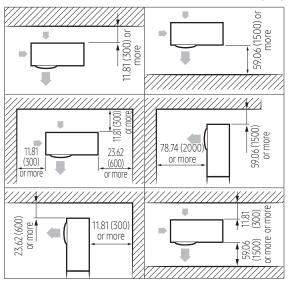


Outdoor Units

Minimum clearances for the outdoor unit

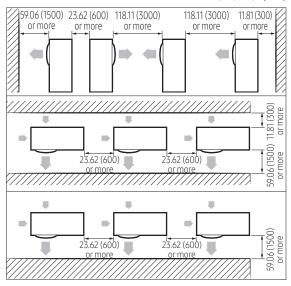
When installing 1 outdoor unit

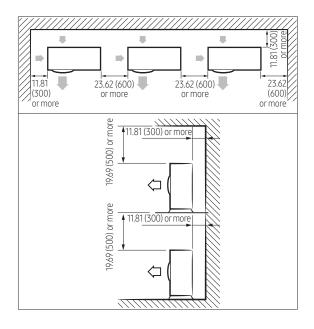
Unit: inch (mm)



When installing more than 1 outdoor unit

Unit: inch (mm)



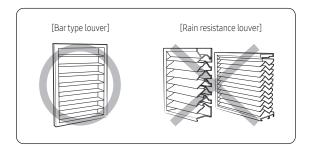


⚠ CAUTION

 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.

⚠ WARNING

• Should adopt bar type louver. Don't use a type of rain resistance louver.

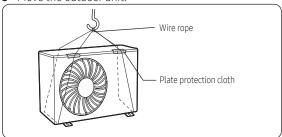


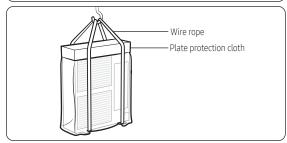
- Louver specifications.
 - Angle criteria: less than 20°
 - Opening ratio criteria: greater than 80%

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.





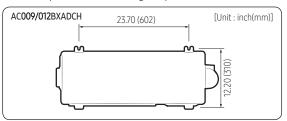
Fixing the outdoor unit in place

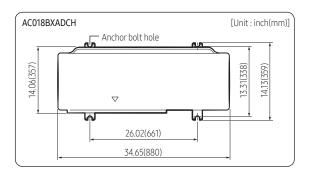
Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit on tall stands or in a location exposed to strong winds, fix the unit securely to the ground or structure.

- 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.
 - The ground wire for the telephone line cannot be used to ground the air conditioner.
- **3** Dif the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.



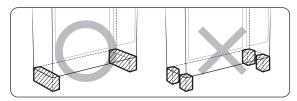
• Install provided rubber legs to prevent vibration and noise.



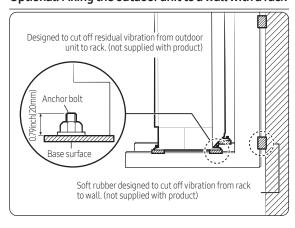


⚠ CAUTION

- 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 ceiling strength.



Optional: Fixing the outdoor unit to a wall with a rack



• Install a proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.

Outdoor Units

A CAUTION

- Make sure that the wall can support the weights of the rack and the outdoor unit.
- Install the rack close to the column as much as possible.
- When installing an air guide duct, be sure to check the following:
 - The screws do not damage the copper pipe.
 - The air guide duct is fixed firmly on the guard fan.

Connecting the power cables, communication cable, and controllers

You must connect the following three electrical cables to the outdoor unit:

- The main power cable between the auxiliary circuit breaker and the outdoor unit.
- The outdoor-to-indoor power cable between the outdoor unit and the indoor unit.
- The communication cable between the outdoor unit and the indoor unit.

∴ CAUTION

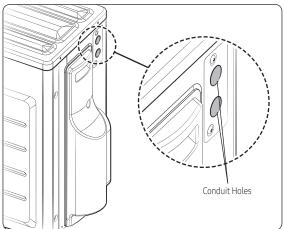
- During installation, make first the refrigerant connections and then the electrical connections. If the unit is being removed, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to the earthing system before making the electrical connections.

Connecting wire conduits

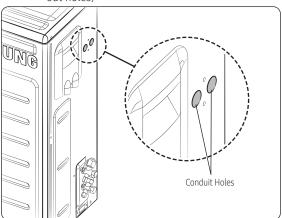
When connecting cables between the indoor unit and the outdoor unit, use conduits to protect the cables.

1 Drill holes on the conduit plate in accordance with their use and quantity.

- AC009/012BXADCH
 - Drill conduit holes on the side cabinet. (knock out holes)



- AC018BXADCH
 - Drill conduit holes on the side cabinet. (knock out holes)



Outdoor Units

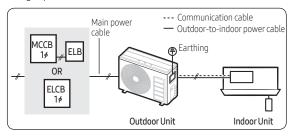
- 2 Insert the cables through the conduits, and then fix the conduits to the conduit plate with the lock nuts.
- **3** Apply silicone to the end of the hose to prevent rain from entering the hose.

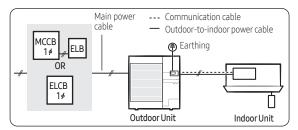


- **4** Connect the cables to the outdoor units. For how to connect the cables, refer to the next page.
- **5** Attach the conduit plate to the product.

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.

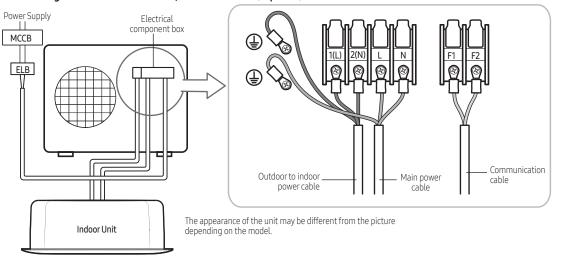
↑ CAUTION

- If the outdoor unit is installed in a location vulnerable to an electric leak or submergence, make sure to install an ELCB.
- AC009/012/018 : ELCB must be installed since this product is equipped with a base heater.

Outdoor Units

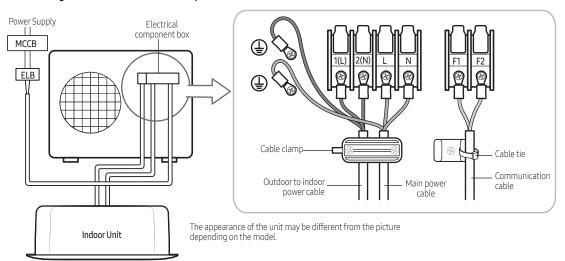
Connecting the main power cable

When using ELB for AC009BXADCH, AC012BXADCH (1-phase)



Connecting the main power cable

When using ELB for AC018BXADCH (1-phase)



Outdoor Units

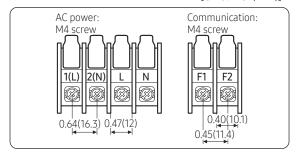
⚠ CAUTION

- 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. If the unbalanced power is exceeded over 4% of supply rating, the indoor unit is protected, stopped and the error mode indicates.
- To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units within ducts. (with appropriate IP rating and material selection for your application)
- 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.

Main power terminal block specifications

AC009/012/018BXADCH (1-phase)

[Unit:inch(mm)]



Main power cable specifications

The power cable is not supplied with air conditioner.

- Select the power supply cable in accordance with relevant local and national regulations.
- Wire size must comply with the applicable local and national code.
- Specifications for local wiring power cord and branch wiring are in compliance with local cord.

Outdoor Units

Single phase

Single phase Mod			Out	door	Indoor			
Outdoor	Indoor	PowerSource	RLA (A)	MOC		Rated input current of the power conversion equipment	MCA (A)	MOP (A)
				FAN1(A)	FAN2(A)	FAN(A)		
	AC009BN1DCH					0.26	9.0	15.0
	AC009BNHDCH			0.42	-	2.10	10.9	15.0
AC009BXADCH	AC009BNJDCH		6.0			0.49	9.3	15.0
	AC009BNLDCH					1.06	9.8	15.0
	AC009BNNDCH					0.30	9.1	15.0
	AC012BN1DCH		6.0			0.26	9.0	15.0
	AC012BNHDCH					2.10	10.9	15.0
AC012BXADCH	AC012BNJDCH			0.42	-	0.49	9.3	15.0
	AC012BNLDCH					1.06	9.8	15.0
	AC012BNNDCH					0.30	9.1	15.0
	AC018BN1DCH	208~230V/60Hz				0.42	18.4	25.0
	AC018BN4DCH					0.79	18.8	25.0
	AC018BN6DCH					0.79	18.8	25.0
	AC018BNADCH					0.42	18.4	25.0
AC018BXADCH	AC018BNHDCH		12.7	1.25	-	2.10	20.1	25.0
	AC018BNJDCH					0.49	18.5	25.0
	AC018BNLDCH					1.06	19.1	25.0
	AC018BNNDCH					0.30	18.3	25.0
	AC018BNZDCH					1.50	19.5	25.0

Outdoor Units

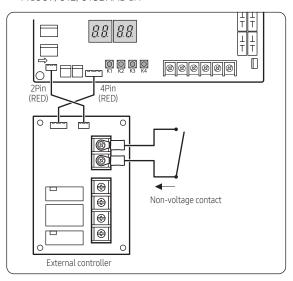


NOTE

- 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 phases is 2 %.
- 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.
- Maximum allowable voltage variation between phases is 2%.
- Wire size & type must comply with the applicable local and national code.
 - Wire size: Based on the value of MCA.
 - Wire type:
 1-phase: 60245 IEC57(IEC) or H05RN-F(CENELEC)
 grade or more

Silence mode controller wiring diagram with External controller

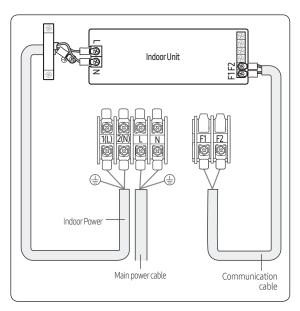
• AC009/012/018BXADCH



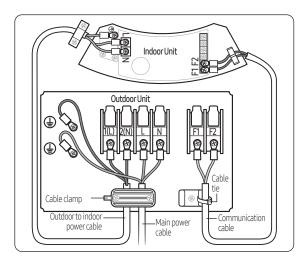
Outdoor Units

Connecting the outdoor-to-indoor power cable and the communication cable

AC009/012BXADCH



AC018BXADCH

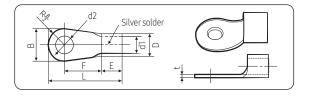


NOTE

- 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 indoor unit and outdoor unit connection cable must be clamped to a soft copper tin-plated eyelet terminal with M4 screw hole(NOT SUPPLIED WITH UNIT ACCESSORIES).
- The appearance of the unit may be different from the picture depending on the model.

Outdoor-to-indoor power terminal specifications

- Connect the cables to the terminal board using the compressed ring terminal.
- Cover a solderless ring terminal and a connector part of the power cable and then connect it.



Outdoor Units

Nominal Nominal		В		D		d1		Ε	F	L	(d2	t
dimensions for cable [mm2(inch2)]	dimensions for screw [mm(inch)]	dimension	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [mm (inch)]	Min. [mm (inch)]	Max. [mm (inch)]	Standard dimension [mm(inch)]	Allowance [mm(inch)]	Min. [mm (inch)]
4/6	4(3/8)	9.5(3/8)	±0.2	E 4/1/A\	+0.3(+0.011) -0.2(-0.007)	011)	±0.2 (±0.007)	6 (1/4)	5 (3/16)	20 (3/4)	4.3 (3/16)	+0.2 (+0.007) 0(0)	0.9
(0.006/ 0.009)	8(3/16)	15(9/16)	(±0.007)	5.6(1/4)		3.4(1/0)			9 (3/8)	28.5 (1-1/8)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	(0.03)
10(0.01)	8(3/16)	15(9/16)	±0.2 (±0.007)	7.1(1/4)	+0.3(+0.011) -0.2(-0.007)	4.5(3/16)	±0.2 (±0.007)	7.9 (5/16)	9 (3/8)	30 (1-3/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.15 (0.04)
16(0.02)	8(3/16)	16(10/16)	±0.2 (±0.007)	9(3/8)	+0.3(+0.011) -0.2(-0.007)	5.8(1/4)	±0.2 (±0.007)	9.5 (5/16)	13 (1/2)	33 (1-5/16)	8.4 (1-3/16)	+0.4 (+0.015) 0(0)	1.45 (0.05)
25(0.03)	8(3/16)	12(1/2)	±0.3	11.5(7/16)	+0.5(+0.019)		±0.2	11 (3/8)	15 (5/8)	34 (1-	8.4 (1-3/16)	+0.4 (+0.015)	1.7
25(0.03)	8(3/16)	16.5(10/16)	(±0.011)	11.5(7/10)	-0.2(-0.007)	7.7 (5) 10)	(±0.007)	11 (5/ 6/	13 (1/2)	3/8)	8.4 (1-3/16)	0(0)	(0.06)
75/0.05)	8(3/16)	16(10/16)	±0.3	17 7/1 /2)	+0.5(+0.019)	0.4/7.(0)	±0.2	12.5	13 (1/2)	38 (1-1/2)	8.4 (1-3/16)	+0.4 (+0.015)	1.8
35(0.05)	8(3/16)	22(7/8)	(±0.011)	13.3(1/2)	-0.2(-0.007)	9.4(3/8)	(±0.007)	(1/2)	13 (1/2) 43 (⁷ 11/10		8.4 (1-3/16)	0(0)	(0.07)
50(0.07)	8(3/16)	22(7/8)	±0.3 (±0.011)	13.5(1/2)	+0.5(+0.019) -0.2(-0.007)	11.4(7/16)	±0.3 (±0.011)	17.5 (11/16)	14 (9/16)	50 (2)	8.4 (1-3/16)	+ 0.4(+0.015) 0(0)	1.8 (0.07)
70(0.10)	8(3/16)	24(1)	±0.4 (±0.015)	17.5(11/16)	+0.5(+0.019) -0.4(-0.015)	13.3(1/2)	±0.4 (±0.015)	18.5 (3/4)	20 (3/4)	51 (2)	8.4 (1-3/16)	+ 0.4(+0.015) 0(0)	2.0 (0.078)

- 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.

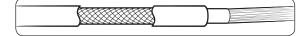
Outdoor Units

Outdoor-to-indoor power and communication cables specifications

• Indoor unit : Duct(AC***BNL***, AC***BNH***)

Indoorpowersupply							
Powersupply	Max/Min (V)	Indoor power cable					
1Ф, 208-230V~, 60Hz	±10%	0.0023 inch² ↑ (1.5mm² ↑), 3 wires					
Communication cable							
0.0012 inch ² ↑ (0.75mm ² ↑), 2 wires							

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F)
- When installing the indoor unit in a computer room or network room, use the double shielded (tape aluminum / polyester braid + copper) cable of FROHH2R type.





Images and data in this book may subject to change without prior notice.