

SAMSUNG

SINGLE Technical Data Book

**SINGLE MSP Duct for SIL
(R410A, HP)**



Model : AC***RNMPEH/IL (Indoor Unit)
AC***RXAPGH/IL (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single TDB for Israel	19.12.03	
Ver.1.1	Revised Outdoor Compressor Oil type	20.10.29	

Features & Benefits

■ Built-in Duct Type

After installed, the air conditioner can be harmonized with a room interior.

■ High Performance & Energy Saving

With the advanced BLDC inverter technology, it makes a room cool with highly energy saving and arises the efficiency of air conditioner.

■ Long Piping (Length & Height)

It can give the benefit to the installers and arise the reliability of the air conditioner.

■ Long Ambient Operation (In Low Temperature)

It can arise the reliability and the capacity of the air conditioner, especially operated in low temperature.

■ Eco-friendly Product (Lead-Free, RoHS, WEEE)

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1. Nomenclature

Indoor Unit

Model Name

AC	140	R	N	M	P	E	H	/	IL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC
----	-----

(2) Capacity

X 1/10 kW (3 digits)

(3) Version

N	2018
R	2019

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1 Way Cassette
N	4 Way Cassette (600x600)
4	4 Way Cassette, 360 Cassette
L	LSP Duct
M	MSP Duct
C	Ceiling
J	Console
A	A3050 (Wall Mounted)

(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

(7) Rating Voltage

E	1Φ, 220~240V, 50Hz
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(8) Mode

H	Heat Pump
---	-----------

1. Nomenclature

Outdoor Unit

Model Name

AC	140	R	X	A	P	G	H	/	IL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC
----	-----

(2) Capacity

X 1/10 kW (3 digits)

(3) Version

N	2018
R	2019

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

A	Inv+Side+General Temp
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(6) Feature

F	Flagship
S	Standard
D	Deluxe
P	Premium

(7) Rating Voltage

E	1Φ, 220~240V, 50Hz
G	3Φ, 380~415V, 50Hz

(8) Mode

H	Heat Pump
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2. Line-up

Indoor Units

Model	Capacity(kW)		
	10.61	13.17	15.16
Image			
Size [mm]	1,200x360x650	1,200x360x650	1,200x360x650

Outdoor Units

Model	Capacity(kW)		
	10.61	13.17	15.16
Image			
Size [mm]	940x1,420x330	940x1,420x330	940x1,420x330

3. Specification

Model Name			Indoor Unit		AC100RNMPEH/IL	AC120RNMPEH/IL	AC140RNMPEH/IL		
			Outdoor Unit		AC100RXAPGH/IL	AC120RXAPGH/IL	AC140RXAPGH/IL		
System	Mode			-	Heat Pump	Heat Pump	Heat Pump		
	Performance	Capacity	Cooling	kW	4.20 / 10.61 / 14.00	4.30 / 13.17 / 16.50	4.40 / 15.16 / 18.00		
		(Min / Std / Max)		Btu/h	14,331 / 36,203 / 47,770	14,672 / 44,952 / 56,300	15,013 / 51,728 / 61,419		
				Heating	kW	3.80 / 12.14 / 17.00	4.00 / 13.93 / 20.00	4.10 / 16.38 / 21.00	
		Btu/h			12,966 / 41,434 / 58,006	13,649 / 47,514 / 68,243	13,990 / 55,905 / 71,655		
	Power	Power Input	Cooling	kW	0.95 / 2.75 / 5.30	1.00 / 3.37 / 5.90	1.10 / 3.92 / 6.50		
			Heating	kW	0.72 / 2.94 / 6.40	0.84 / 3.46 / 7.70	0.85 / 4.20 / 8.10		
		Current Input	Cooling	A	1.8 / 4.7 / 8.0	1.9 / 5.5 / 9.0	2.0 / 6.5 / 10.0		
			Heating	A	1.4 / 5.0 / 10.0	1.6 / 5.8 / 12.5	1.7 / 6.8 / 13.0		
		Current	MCA	A	18.6	18.6	18.6		
			MFA	A	18.6	18.6	18.6		
	Efficiency	EER	Cooling	W/W	3.86	3.91	3.87		
		COP	Heating	W/W	4.14	4.02	3.90		
		Energy Grade	Cooling	W/W	A	A	A		
			Heating	W/W	-	-	-		
	Pipe Connections	Liquid Pipe			Type	Flare connection	Flare connection	Flare connection	
					Φ, mm (inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	
			Gas Pipe			Type	Flare connection	Flare connection	Flare connection
						Φ, mm (inch)	15.88 (5/8)	19.05 (3/4)	19.05 (3/4)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes		
		Pipe length (ODU - IDU)	Standard	m	7.5	7.5	7.5		
			Max.	m	75	75	75		
			Elevation	m	30	30	30		
			Chareless	m	7.5	7.5	7.5		
Wiring Connections		Communication	Min.	mm	0.75	0.75	0.75		
			Remark	-	F1, F2	F1, F2	F1, F2		
Refrigerant		Type	-		R410A	R410A	R410A		
		Factory Charging	kg		4.0	4.0	4.0		
Indoor Unit		Power Supply			Φ, #, V, Hz	1,220-240,50	1,220-240,50	1,220-240,50	
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube		
		Material	Fin	-	Al	Al	Al		
			Tube	-	Cu	Cu	Cu		
		Fin Treatment		-	Hydrophilic	Hydrophilic	Hydrophilic		
	Fan	Type		-	Sirocco	Sirocco	Sirocco		
		Quantity		EA	2	2	2		
		Air Flow Rate	High/Mid/Low	m³/min	34 / 28 / 23	42 / 35 / 29	46 / 39 / 33		
				l/s	567 / 467 / 383	700 / 583 / 483	767 / 650 / 550		
		External Static Pressure	Min/Std/Max	mmAq	2.5 / 4.0 / 15.0	2.5 / 5.2 / 15.0	2.5 / 5.2 / 15.0		
				Pa	25 / 39 / 147	25 / 51 / 147	25 / 51 / 147		
	Fan Motor	Type		-	BLDC	BLDC	BLDC		
		Output		W x n	200 x 1	350 x 1	350 x 1		
	Drain	Drain Pipe		Φ,mm	VP-25(OD32, ID25)	VP-25(OD32, ID25)	VP-25(OD32, ID25)		
	Sound	Sound Pressure Level	High/Mid/Low	dB(A)	38 / 34 / 30	41 / 37 / 33	43 / 39 / 35		
		Sound Power Level		dB(A)	57	60	63		
	External Dimension	Net Weight		kg	47.6	53.5	53.5		
		Shipping Weight		kg	54.8	60.5	60.5		
		Net Dimensions (WxHxD)		mm	1,200 x 360 x 650	1,200 x 360 x 650	1,200 x 360 x 650		
		Shipping Dimensions (WxHxD)		mm	1,456 x 440 x 778	1,456 x 440 x 778	1,456 x 440 x 778		
	Casing	Material		-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate		
	Control System	Infrared remote control		-	AR-EH03E	AR-EH03E	AR-EH03E		
		Wired remote control		-	MWR-SH11N	MWR-SH11N	MWR-SH11N		
	Drain Pump	Drain Pump		-	Option	Option	Option		
Max.lifting Height / Displacement		mm/ liter/h	750 / 24	750 / 24	750 / 24				
Additional Accessories	Drain Pump	External Model	-	-	-	-			
		Internal Model	-	-	-	-			
		Max.lifting Height / Displacement	-	-	-	-			
		Air Filter	-	Removalble / Washable	Removalble / Washable	Removalble / Washable			
	Ionizer		-	Option	Option	Option			

3. Specification

Model Name			Indoor Unit		AC100RNMPEH/IL	AC120RNMPEH/IL	AC140RNMPEH/IL
			Outdoor Unit		AC100RXAPGH/IL	AC120RXAPGH/IL	AC140RXAPGH/IL
Outdoor Unit	Power Supply			Φ, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
	Heat Exchaner	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
		Material	Fin	-	Al	Al	Al
			Tube	-	Cu	Cu	Cu
	Compressor	Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion
		Model Name		-	UG5TK5450FJX	UG5TK5450FJX	UG5TK5450FJX
		Type		-	TWIN BLDC	TWIN BLDC	TWIN BLDC
		Output		kW	4.12	4.12	4.12
		Oil	Type	-	PVE	PVE	PVE
			Initial charge	cc	1,700	1,700	1,700
		Fan	Type		-	PROPELLER	PROPELLER
	Discharge direction		-	SIDE	SIDE	SIDE	
	Quantity		EA	2	2	2	
	Air Flow Rate		m³/min l/s	120 2,000	120 2,000	120 2,000	
	Fan Motor	Type		-	BLDC	BLDC	BLDC
		Output		W x n	125 x 2	125 x 2	125 x 2
	Sound	Sound Pressure Level	Cooling / Heating	dB(A)	50	53	56
		Sound Power Level	Cooling / Heating	dB(A)	66	68	70
	External Dimension	Net Weight		kg	101.0	103.0	103.0
		Shipping Weight		kg	110.5	112.5	112.5
		Net Dimensions (WxHxD)		mm	940 x 1,420 x 330	940 x 1,420 x 330	940 x 1,420 x 330
		Shipping Dimensions (WxHxD)		mm	995 x 1,598 x 426	995 x 1,598 x 426	995 x 1,598 x 426
	Casing	Material		-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
	Operating Temp. Range	Cooling		°C	-15 ~ 50	-15 ~ 50	-15 ~ 50
		Heating		°C	-20 ~ 24	-20 ~ 24	-20 ~ 24

NOTE

- Specification may be subject to change without prior notice.
 - 1) Capacities are based on (Equivalent refrigerant piping 5m, Level differences 0m);
 - Cooling : Indoor temperature 27°C DB, 19°C WB / Outdoor temperature 35°C DB, 24°C WB
 - Heating : Indoor temperature 20°C DB, 15°C WB / Outdoor temperature 7°C DB, 6°C WB
 - 2) Select wire size based on the value of MCA
 - 3) Sound pressure level is obtained in an anechoic room.
 - Sound pressure level based on T1 condition (Indoor temperature 27°C DB, 19°C WB / Outdoor temperature : 35°C DB, 24°C WB)
 - 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.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on pvi.samsung.com site.

4. Summary Table

Indoor Units

Performance Characteristics

Model Code	Net Weight (kg)	Capacity			Fan Speed	Airflow (CMM)	Sound Pressure Level (dBA)	Sound Power Level (dBA)
			Cooling (kW)	Heating (kW)				
AC100RNMPEH/IL	47.6	Max.	14	17	High	34	38	57
		Std.	10.61	12.14	Mid	28	34	
		Min.	4.2	3.8	Low	23	30	
AC120RNMPEH/IL	53.5	Max.	16.5	20	High	42	41	60
		Std.	13.17	13.93	Mid	35	37	
		Min.	4.3	4	Low	29	33	
AC140RNMPEH/IL	53.5	Max.	18	21	High	46	43	63
		Std.	15.16	16.38	Mid	39	39	
		Min.	4.4	4.1	Low	33	35	

NOTE

- Sound data is based on cooling operation.

Electric Characteristics

Model Code		Outdoor Unit			Input Current (Amperes)					Power Supply	
Indoor Unit	Outdoor Unit	Rated	Voltage range		Outdoor Unit			Indoor Unit	Total	MCA (A)	MFA (A)
		Hz	Volts	Min.	Max	Cooling	Heating				
AC100RNMPEH/IL	AC100RXAPGH/IL	50	380-415	342	456.5	16.1	16.1	2.5	18.6	18.6	18.6
AC120RNMPEH/IL	AC120RXAPGH/IL	50	380-415	342	456.5	16.1	16.1	2.5	18.6	18.6	18.6
AC140RNMPEH/IL	AC140RXAPGH/IL	50	380-415	342	456.5	16.1	16.1	2.5	18.6	18.6	18.6

NOTE

- MCA : Minimum circuit amperes
- MFA : Maximum fuse amperes
- Select wire size based on the value of MCA

4. Summary Table

Outdoor Units

Performance Characteristics

Capacity (kW)	Model Code	Net Size (WxHxD, mm)	Net Weight (kg)	Airflow (CMM)	Sound Pressure Level (dBA)	Sound Power Level (dBA)
10.61	AC100RXAPGH/IL	940 X 1,420 X 330	101	120	50	66
13.17	AC120RXAPGH/IL	940 X 1,420 X 330	103	120	53	68
15.16	AC140RXAPGH/IL	940 X 1,420 X 330	103	120	56	70

NOTE

- Sound power level is based on cooling operation.

5. Capacity Table

AC100RNMPEH/IL + AC100RXAPGH/IL

Cooling

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

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW
-15	13.4	9.8	3.03	14.1	10.1	3.09	14.6	10.4	3.16	15.1	10.8	3.22	15.4	10.7	3.25	16.2	10.6	3.28	17.0	10.3	3.35
21	13.2	9.4	3.28	13.9	9.7	3.34	14.5	10.0	3.41	15.0	10.3	3.48	15.3	10.2	3.51	16.0	10.1	3.55	16.8	9.9	3.62
35	9.4	7.8	2.59	9.9	8.1	2.64	10.3	8.3	2.69	10.612	8.564	2.749	10.8	8.5	2.78	11.4	8.4	2.80	11.9	8.2	2.86
46	11.0	8.4	5.50	11.6	8.7	5.61	12.1	8.9	5.72	12.4	9.2	5.84	12.7	9.1	5.90	13.3	9.0	5.96	14.0	8.8	6.07
50	9.3	7.6	5.05	9.8	7.9	5.16	10.2	8.1	5.26	10.5	8.4	5.37	10.7	8.3	5.42	11.3	8.2	5.48	11.8	8.0	5.59

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	8.4	4.41	8.3	4.37	8.2	4.32	8.1	4.28	8.1	4.24	8.0	4.20
-15	13.0	6.55	12.9	6.49	12.7	6.42	12.6	6.36	12.5	6.29	12.4	6.23
-5	13.4	5.38	13.3	5.32	13.1	5.27	13.0	5.22	12.9	5.17	12.7	5.12
0	13.8	4.92	13.7	4.87	13.5	4.83	13.4	4.78	13.3	4.73	13.1	4.68
7	12.4	3.00	12.3	2.97	12.143	2.936	12.0	2.91	11.9	2.88	11.8	2.85
24	15.7	3.87	15.6	3.83	15.4	3.79	15.3	3.76	15.1	3.72	15.0	3.68

NOTE

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

5. Capacity Table

AC120RNMPEH/IL + AC120RXAPGH/IL

Cooling

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

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW
-15	14.9	10.4	2.93	15.6	10.7	2.99	16.3	11.1	3.05	16.8	11.4	3.11	17.1	11.3	3.14	18.0	11.2	3.17	18.9	11.0	3.23
21	14.7	10.6	3.43	15.4	11.0	3.50	16.1	11.3	3.57	16.6	11.7	3.64	16.9	11.5	3.68	17.7	11.4	3.71	18.6	11.2	3.79
35	11.7	9.8	3.17	12.3	10.1	3.24	12.8	10.5	3.30	13.174	10.774	3.369	13.4	10.7	3.40	14.1	10.6	3.44	14.8	10.3	3.51
46	11.9	9.5	5.52	12.6	9.8	5.64	13.1	10.1	5.75	13.5	10.4	5.87	13.8	10.3	5.93	14.5	10.2	5.99	15.2	10.0	6.11
50	10.1	8.8	5.07	10.7	9.0	5.18	11.1	9.3	5.28	11.5	9.6	5.39	11.7	9.5	5.44	12.3	9.4	5.50	12.9	9.2	5.61

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	8.5	4.08	8.4	4.03	8.4	4.0	8.3	3.95	8.2	3.92	8.1	3.88
-15	13.3	6.40	13.2	6.33	13.0	6.3	12.9	6.21	12.8	6.15	12.6	6.08
-5	18.4	7.85	18.2	7.77	18.0	7.7	17.8	7.62	17.6	7.54	17.5	7.47
0	17.2	6.33	17.0	6.26	16.9	6.2	16.7	6.14	16.5	6.08	16.4	6.02
7	14.2	3.53	14.1	3.50	13.925	3.463	13.8	3.43	13.6	3.39	13.5	3.36
24	20.5	5.72	20.3	5.66	20.1	5.6	19.9	5.55	19.7	5.50	19.5	5.44

NOTE

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

5. Capacity Table

AC140RNMPEH/IL + AC140RXAPGH/IL

Cooling

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

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB / WB)																				
	20 / 14			22 / 16			25 / 18			27 / 19			28 / 20			30 / 22			32 / 24		
	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW	kBtu/h	kBtu/h	kW
-15	15.6	11.3	2.94	16.4	11.7	3.00	17.1	12.1	3.07	17.6	12.4	3.1	18.0	12.3	3.16	18.9	12.2	3.19	19.8	11.9	3.25
21	15.4	11.5	3.49	16.3	11.9	3.56	16.9	12.3	3.63	17.5	12.6	3.7	17.8	12.5	3.74	18.7	12.4	3.78	19.6	12.1	3.85
35	13.4	11.3	3.69	14.1	11.7	3.76	14.7	12.0	3.84	15.160	12.383	3.917	15.5	12.3	3.96	16.2	12.1	4.00	17.0	11.9	4.08
46	11.6	10.0	5.29	12.3	10.3	5.40	12.8	10.6	5.51	13.2	10.9	5.6	13.4	10.8	5.68	14.1	10.7	5.73	14.8	10.5	5.85
50	9.7	9.2	4.93	10.2	9.5	5.03	10.7	9.8	5.13	11.0	10.1	5.2	11.2	10.0	5.29	11.8	9.9	5.34	12.4	9.7	5.45

Heating

TC : Total Capacity, PI : Power Input

Outdoor Temperature (°C, DB)	Indoor Temperature (°C, DB)											
	16		18		20		21		22		24	
	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	9.0	4.29	8.9	4.25	8.8	4.21	8.7	4.16	8.6	4.12	8.5	4.08
-15	13.6	6.25	13.4	6.18	13.3	6.12	13.2	6.06	13.0	6.00	12.9	5.94
-5	19.3	8.26	19.1	8.18	19.0	8.10	18.8	8.02	18.6	7.94	18.4	7.86
0	18.1	6.66	17.9	6.59	17.7	6.53	17.6	6.46	17.4	6.40	17.2	6.34
7	16.7	4.29	16.5	4.24	16.384	4.201	16.2	4.16	16.1	4.12	15.9	4.08
24	21.6	6.02	21.4	5.96	21.2	5.90	20.9	5.84	20.7	5.78	20.5	5.73

NOTE

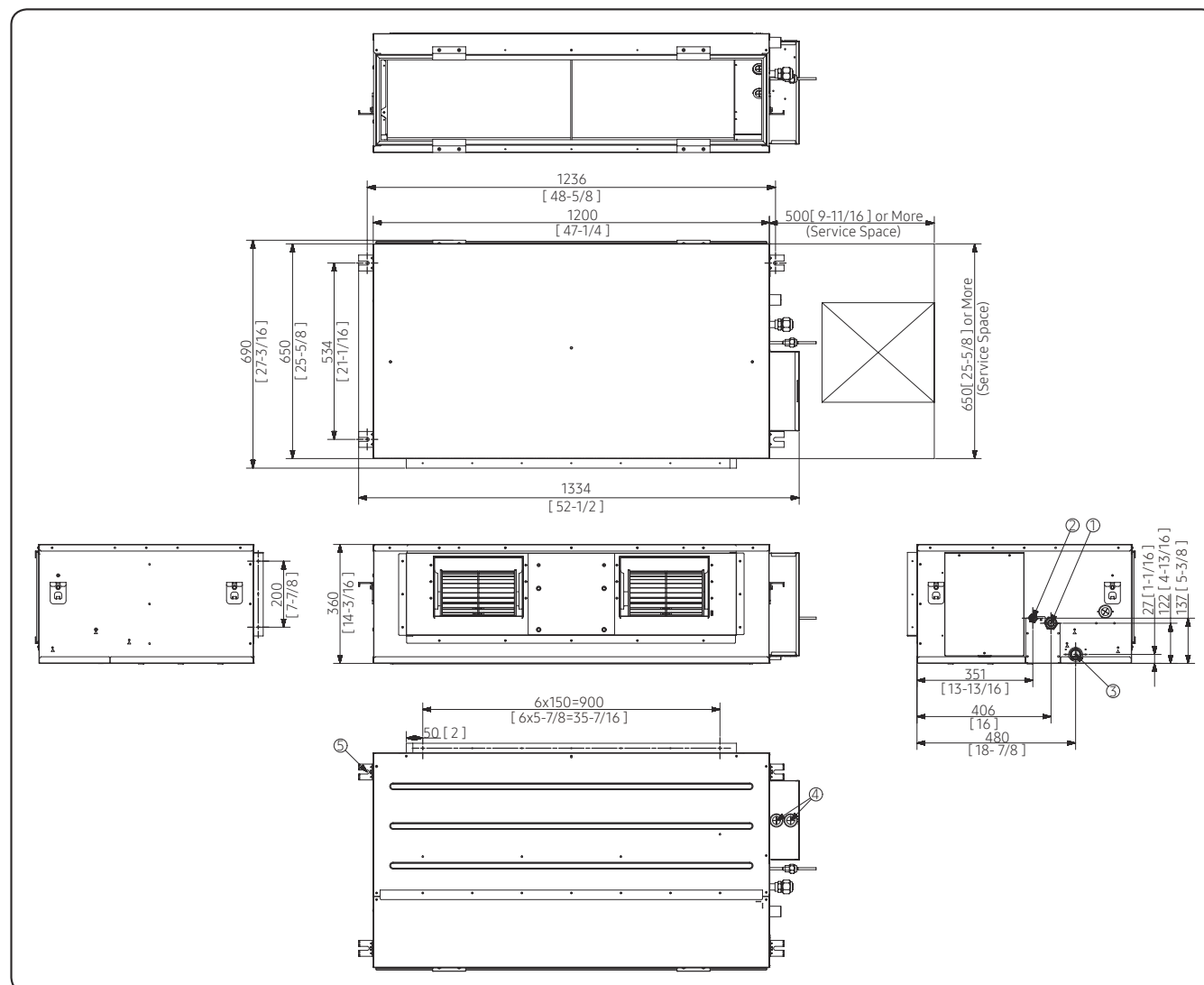
- The performance table shows the average value of each conditions.

6. Dimensional Drawing

Indoor Units

AC100RNMPEH/IL, AC120RNMPEH/IL, AC140RNMPEH/IL

Units : mm [inches]



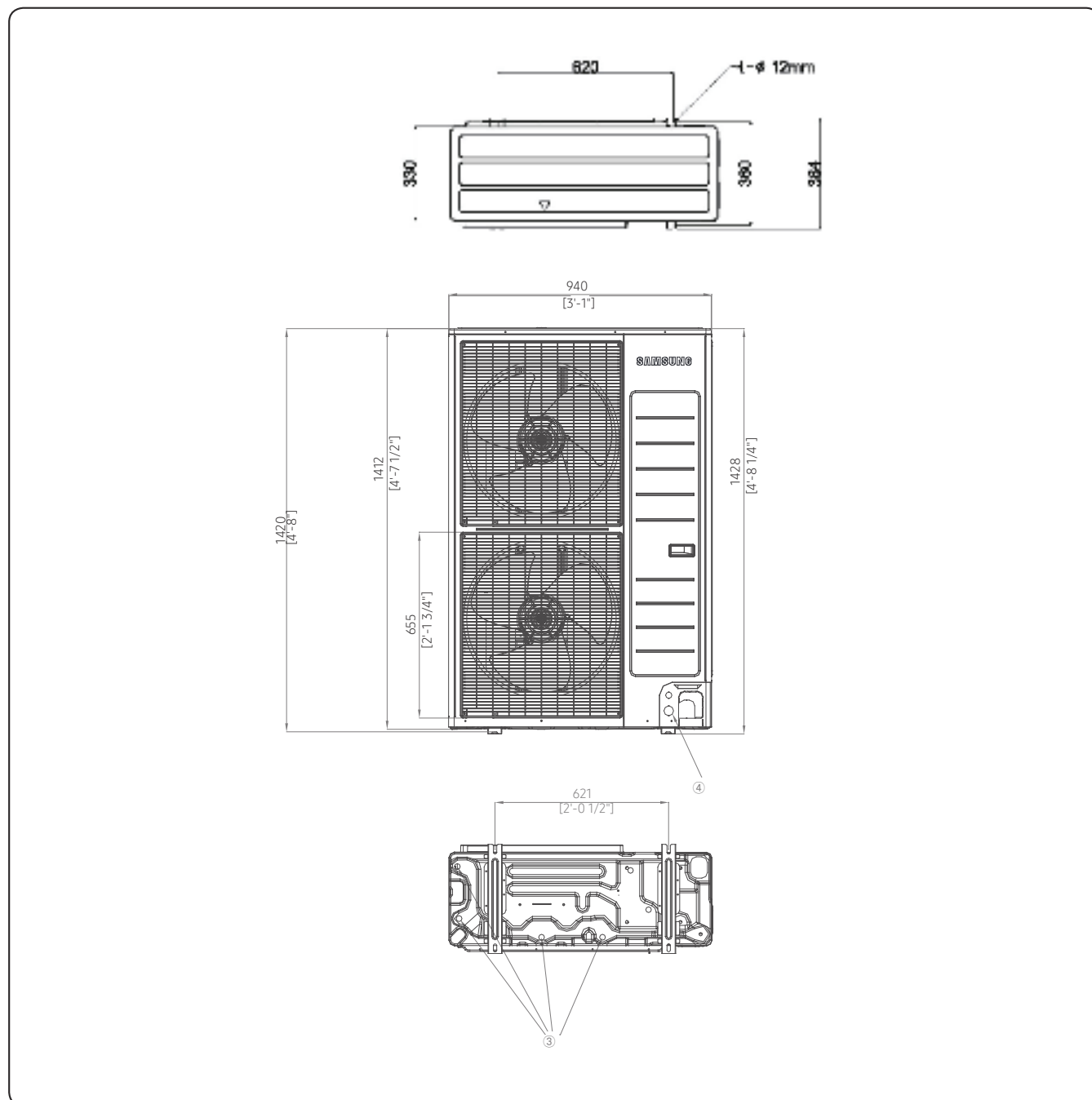
No.	Name	Description	
		AC100RNMPEH	AC120/140RNMPEH
1	Liquid pipe connection	Φ9.52(3/8)	
2	Gas pipe connection	Φ15.88(5/8)	Φ19.05(3/4)
3	Drain pipe connection	VP-25 (OD32, iD25)	
4	Power supply & Communication wiring conduit	-	
5	Hook	Use M8-M10 bolt (4ea)	

6. Dimensional Drawing

Outdoor Units

AC100RXAPGH/IL, AC120RXAPGH/IL, AC140RXAPGH/IL

Units : mm [inches]

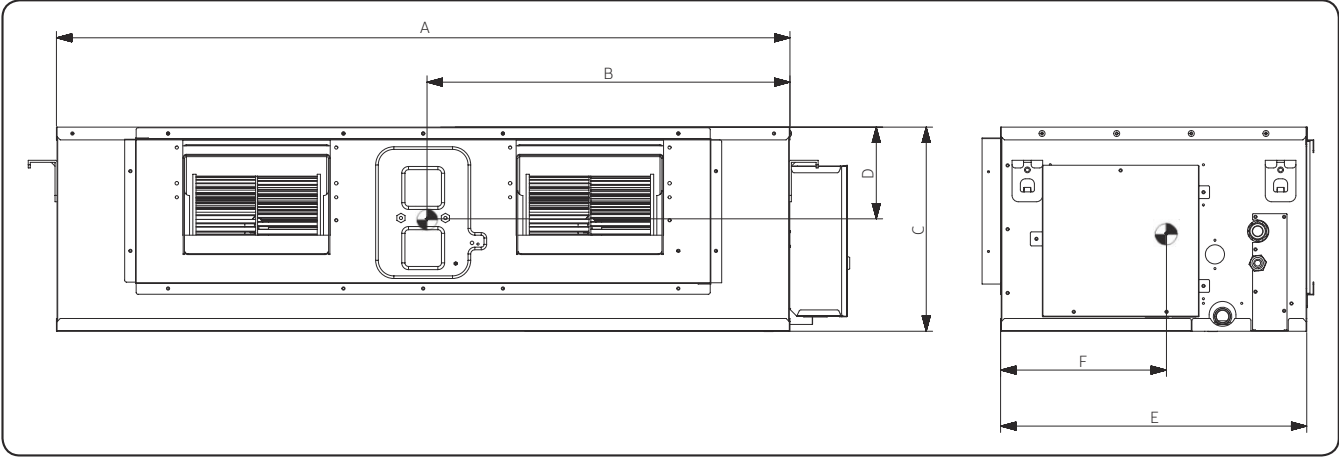


No.	Name	No.	Name
1	Refrigerant gas pipe	3	Drain hose
2	Refrigerant liquid pipe	4	Power & Comm. wiring conduits

7. Center of Gravity

Indoor Units

Units : mm [inches]

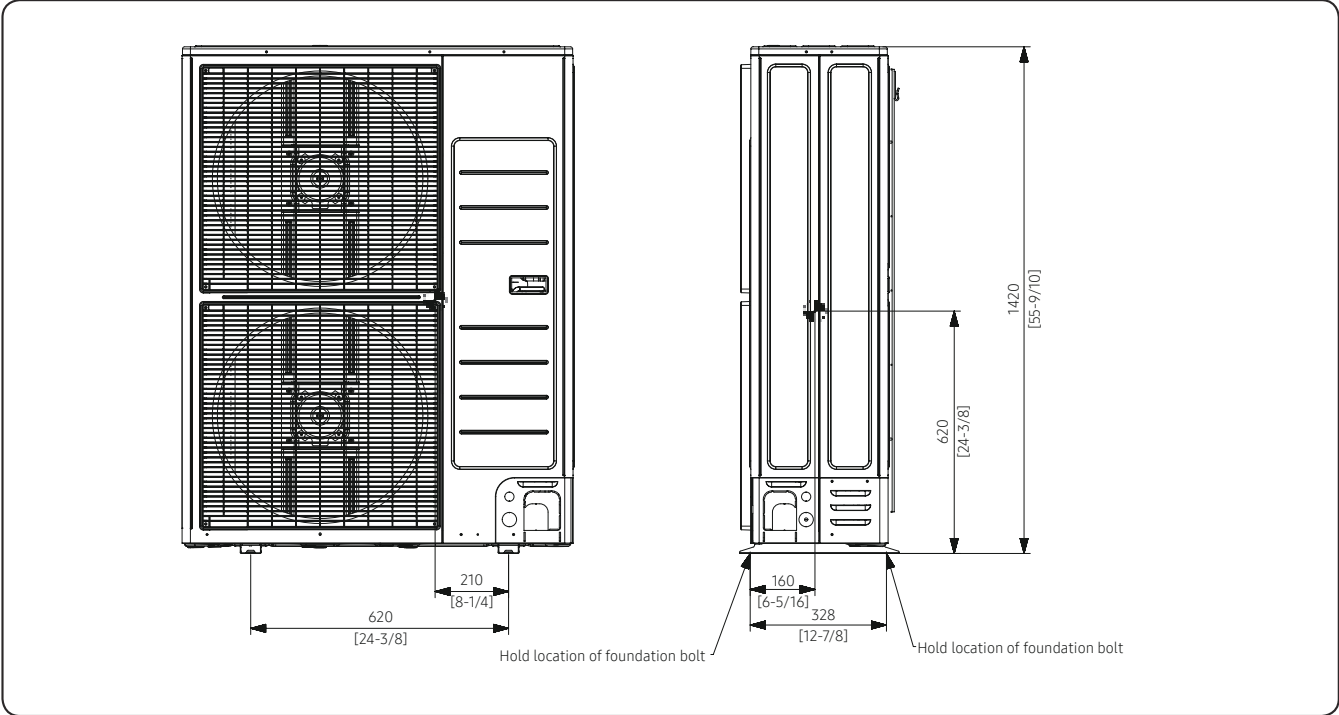


Model	A	B	C	D	E	F
AC100RNMPEH/IL AC120RNMPEH/IL AC140RNMPEH/IL	1200	590	360	190	650	345

Outdoor Units

AC100RXAPGH/IL, AC120RXAPGH/IL, AC140RXAPGH/IL

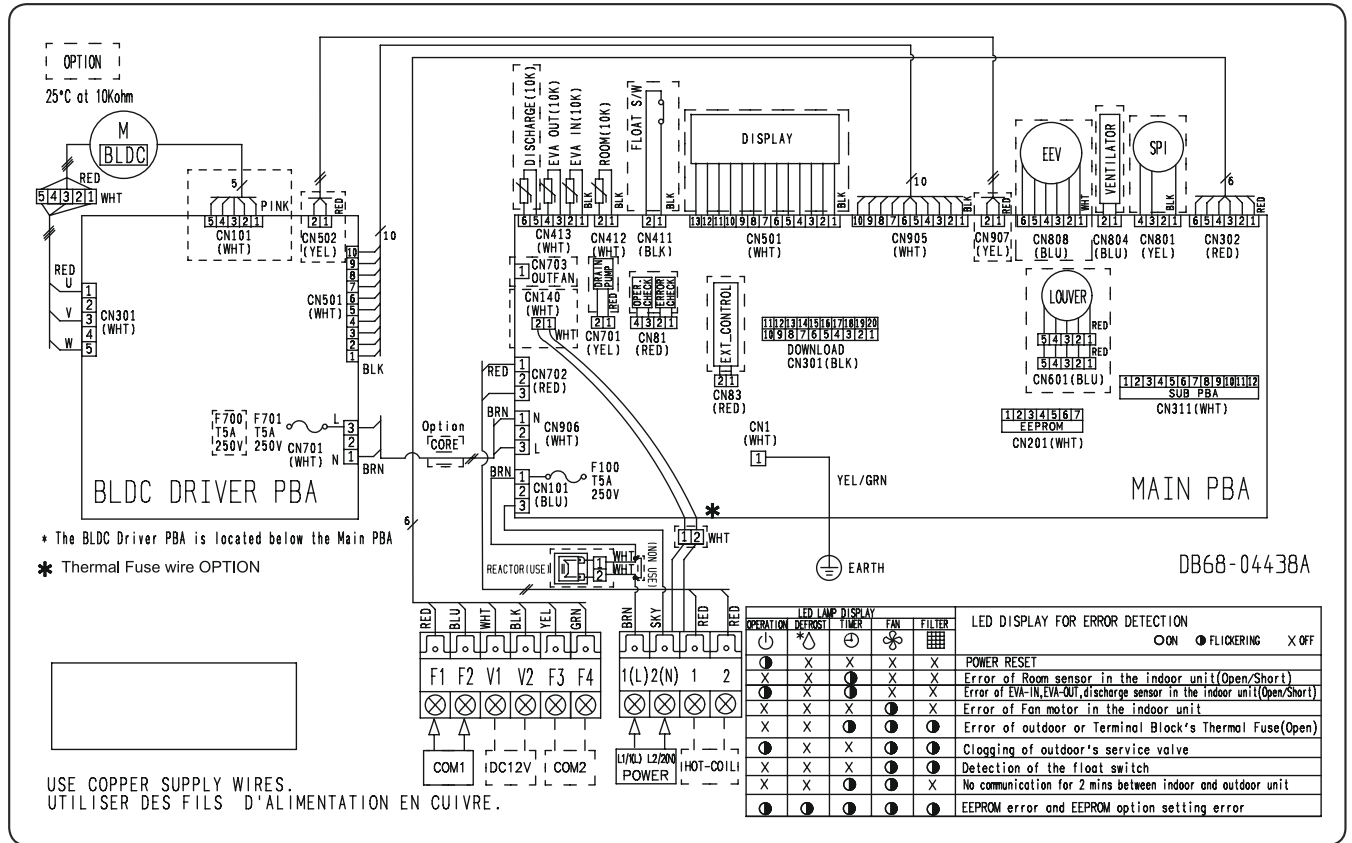
Units : mm [inches]



8. Electrical Wiring Diagram

Indoor Units

AC100RNMPEH/IL



MAIN PBA	Printed Circuit Board(MAIN)	M-BLDC	BLDC Motor	ROOM(10K)	Thermistor ROOM OUT(10K)
BLDC DRIVER PBA	Printed Circuit Board(BLDC DRIVER)	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
SUB PBA	Printed Circuit Board(SUB)	EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)
				DISCHARGE(10K)	Thermistor DISCHARGE(10K)

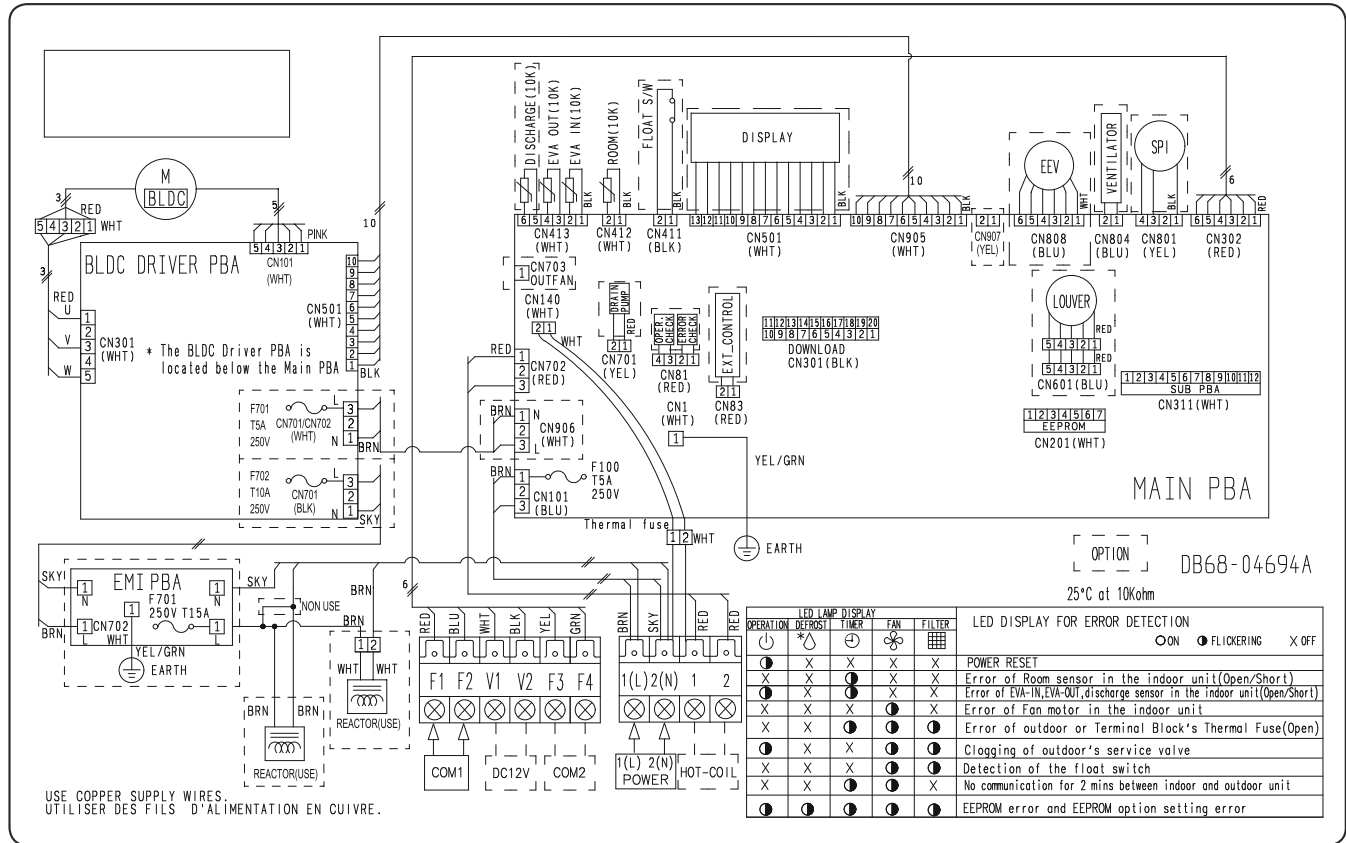
NOTE

- 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), □□□□ : connector, $\frac{1}{2}$: The wire quantity

8. Electrical Wiring Diagram

Indoor Units

AC120RNMPEH/IL, AC140RNMPEH/IL



MAIN PBA	Printed Circuit Board(MAIN)	M-BLDC	BLDC Motor	ROOM(10K)	Thermistor ROOM OUT(10K)
BLDC DRIVER PBA	Printed Circuit Board(BLDC DRIVER)	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
SUB PBA	Printed Circuit Board(SUB)	EXT_CONTROL	EXTERNAL_CONTROL	EVA-OUT(10K)	Thermistor EVA OUT(10K)
EMI PBA	Printed circuit board(EMI)			DISCHARGE(10K)	Thermistor DISCHARGE(10K)

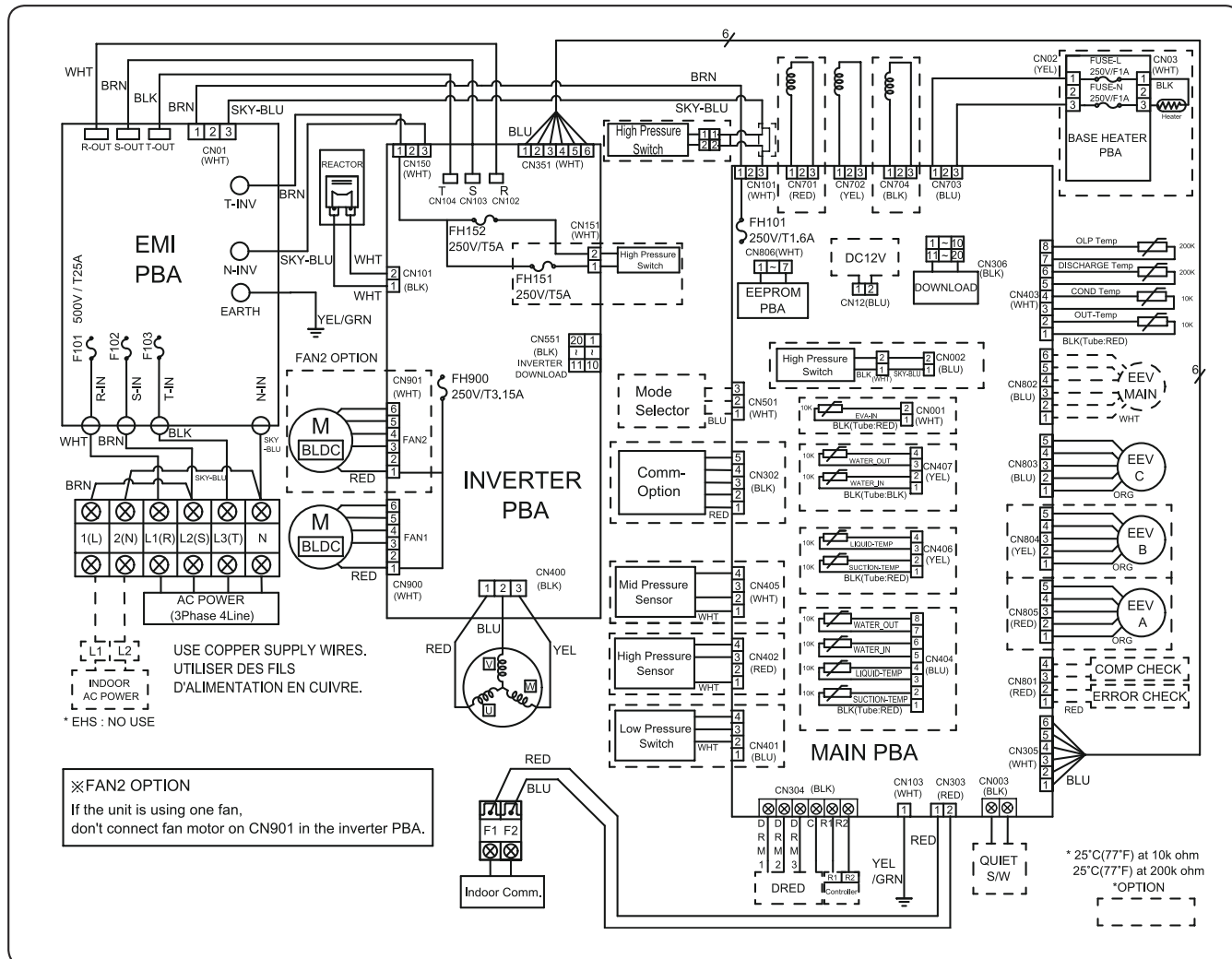
NOTE

- 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), □□□□ : connector, $\frac{1}{2}$: The wire quantity

8. Electrical Wiring Diagram

Outdoor Units

AC100RXAPGH/IL, AC120RXAPGH/IL, AC140RXAPGH/IL



MAIN PCB	Printed circuit board(MAIN)	EEV	Electronic Expansion Valve	DIS-TEMP	Thermistor DISCHARGE
INVERTER PCB	Printed circuit board(INVERTER)	M-BLDC	BLDC Motor	OUT-TEMP	Thermistor AMBIENT
EMI PCB	Printed circuit board(EMI)	OLP-TEMP	Thermistor OLP	COND-TEMP	Thermistor CONDENSOR
D_TUBE_TEMP	Thermistor D_TUBE	SUCTION-TEMP	Thermistor SUCTION		

NOTE

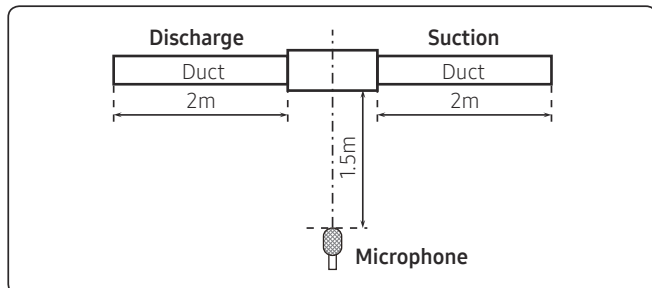
- This wiring diagram applies only to the outdoor Unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortcircuit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor transmission OF1-OF2, refer to the installation manual.
- ⚡ Protective earth(screw), □ : connector, ✂ : The wire quantity

9. Sound Data

Indoor units

Sound Pressure level

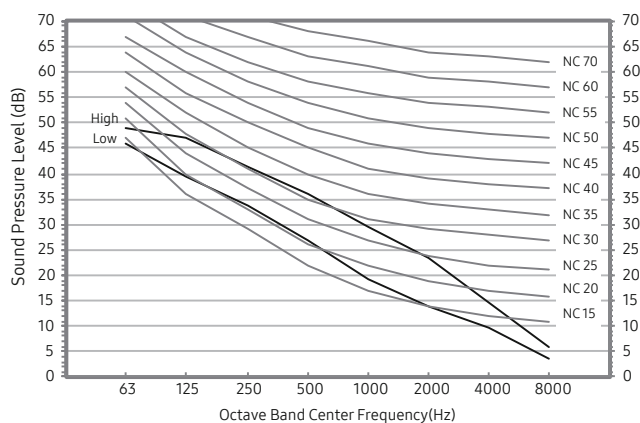
Unit: dB(A)



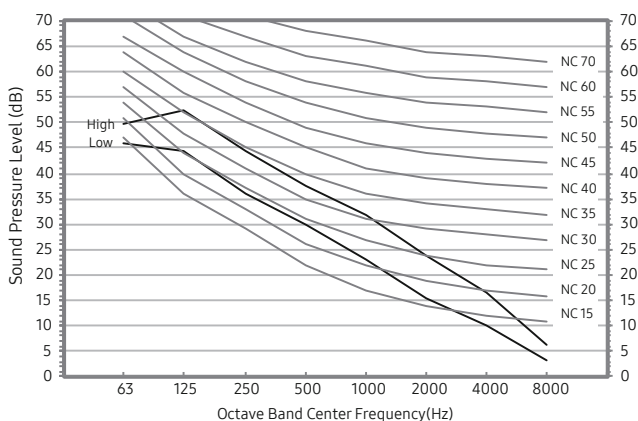
MODEL	HIGH	MID	LOW
AC100RNMPEH/IL	38	34	30
AC120RNMPEH/IL	41	37	33
AC140RNMPEH/IL	43	39	35

• NR Curve

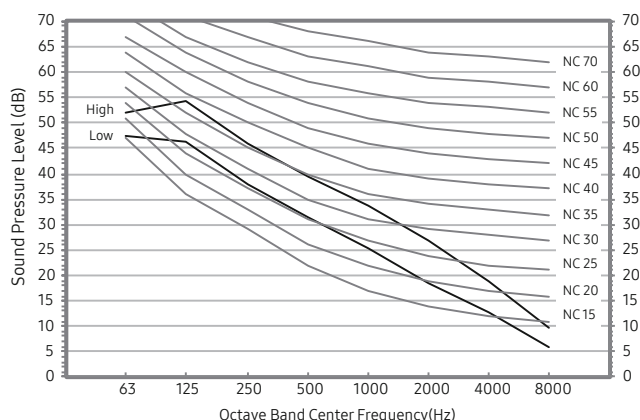
1) AC100RNMPEH/IL



2) AC120RNMPEH/IL



3) AC140RNMPEH/IL



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

9. Sound Data

Indoor units

Sound Power level

 NOTE

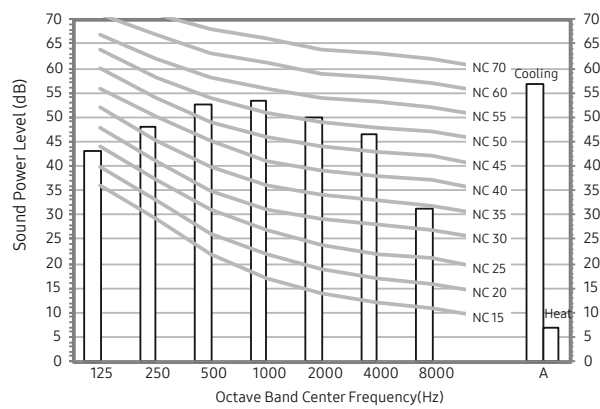
- Specifications may be subject to change without prior notice.
 - Sound power level is an absolute value that a sound source generates.
 - dBA = A-weighted sound power level.
 - Reference power : 1pW.
 - Measured according to ISO 3741.

Unit: dB(A)

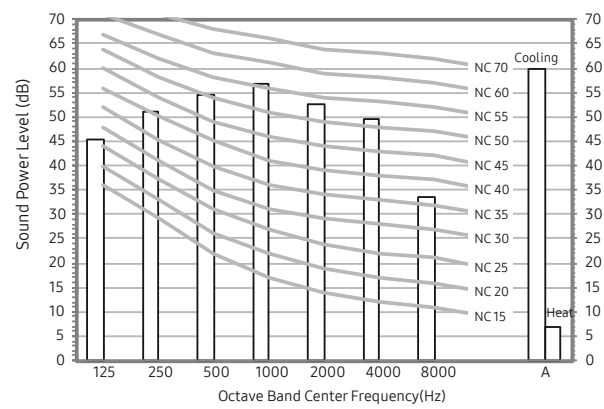
MODEL	Power
AC100RNMPEH/IL	57
AC120RNMPEH/IL	60
AC140RNMPEH/IL	63

• NR Curve

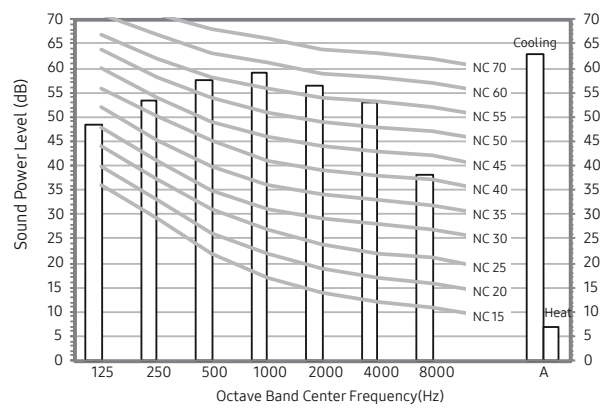
1) AC100RNMPEH/IL



2) AC120RNMPEH



3) AC140RNMPEH/IL

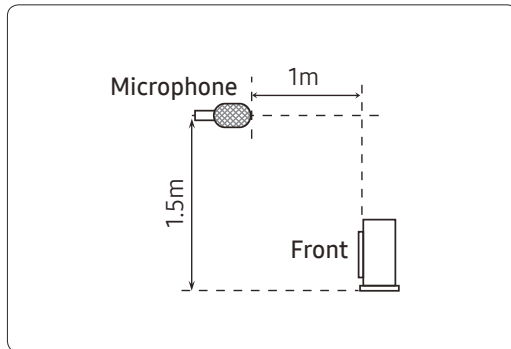


9. Sound Data

Outdoor Units

Sound Pressure level

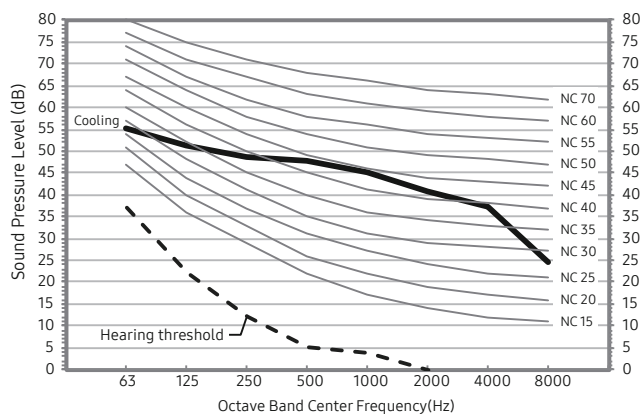
Unit: dB(A)



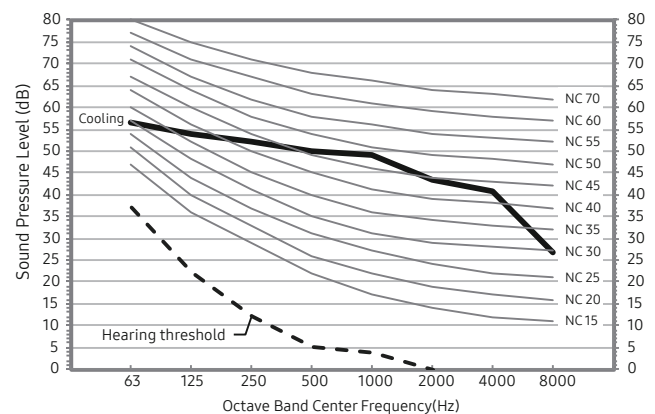
MODEL	Cooling
AC100RNMPEH/IL	50
AC120RNMPEH/IL	53
AC140RNMPEH/IL	56

NR Curve

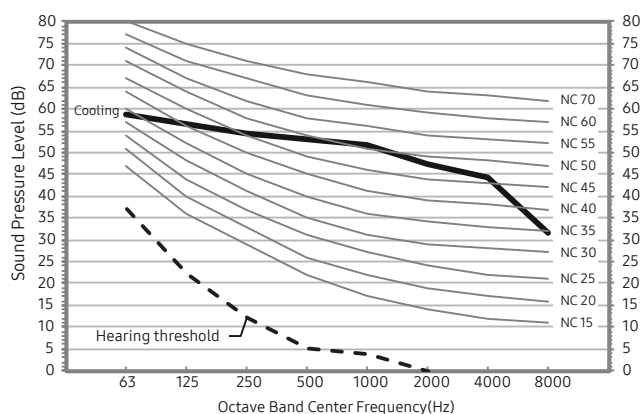
1) AC100RNMPEH/IL



2) AC120RNMPEH/IL



3) AC140RNMPEH/IL



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.
 - dB(A) = A-weighted sound pressure level
 - Reference acoustic pressure 0 dB = 20μPa

9. Sound Data

Outdoor Units

Sound Power level



NOTE

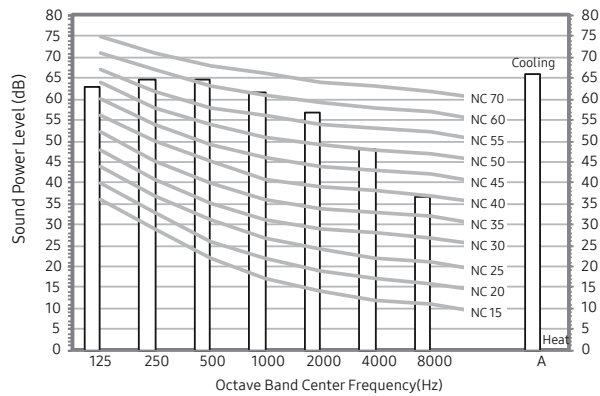
Unit: dB(A)

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

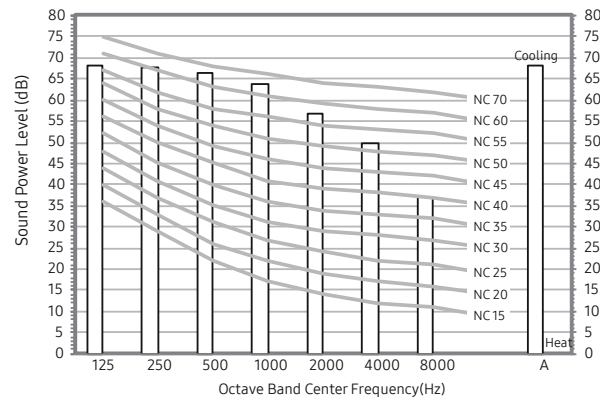
MODEL	Power
AC100RNMPEH/IL	66
AC120RNMPEH/IL	68
AC140RNMPEH/IL	70

NR Curve

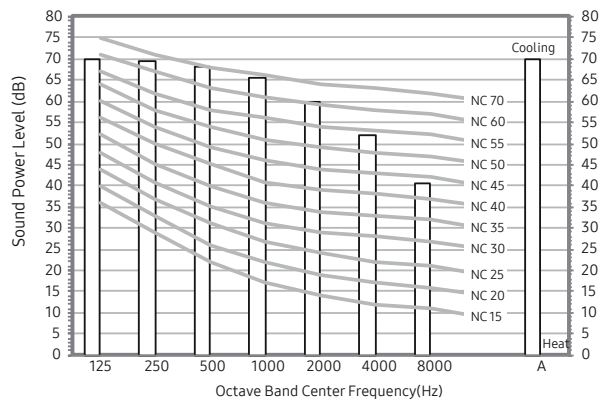
1) AC100RNMPEH/IL



2) AC120RNMPEH/IL



3) AC140RNMPEH/IL

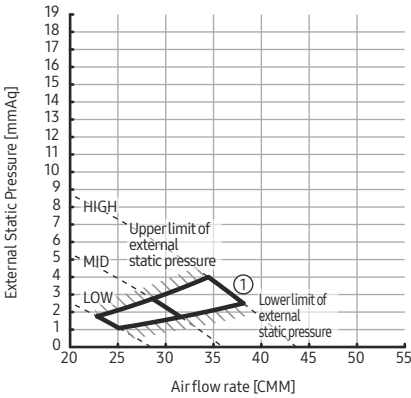


10. Fan Characteristics

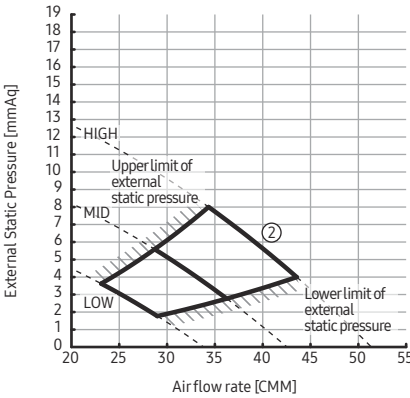
Indoor Units

1) AC100RNMPEH/IL

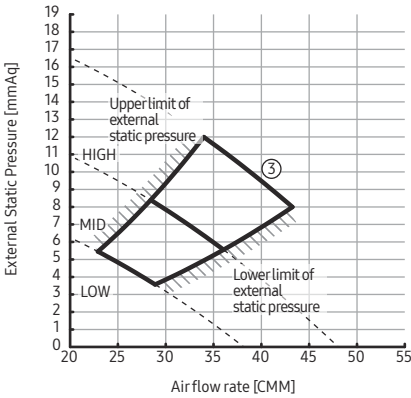
①	External Static Pressure(mmAq)	Option Code
	$2.5 \leq SP \leq 4.0$	01B07C-1D5446-276470-370040



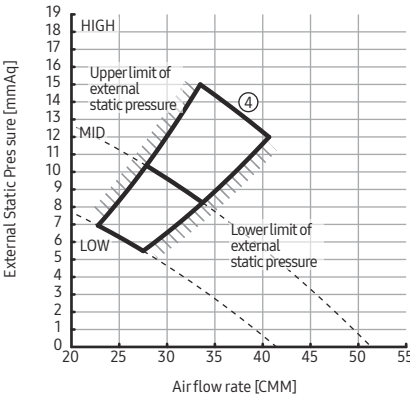
②	External Static Pressure(mmAq)	Option Code
	$4.0 < SP \leq 8.0$	01B07C-1D549B-276470-370040



③	External Static Pressure(mmAq)	Option Code
	$8.0 < SP \leq 12.0$	01B07C-1D580F-276470-370040



④	External Static Pressure(mmAq)	Option Code
	$12.0 < SP \leq 15.0$	01B07C-1D5951-276470-370040

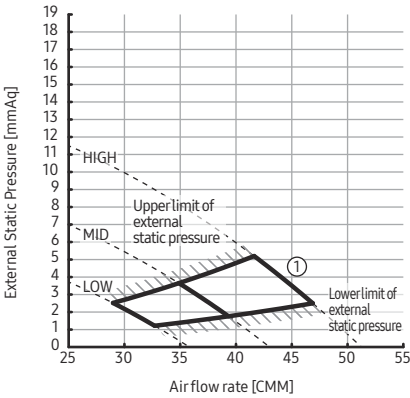


10. Fan Characteristics

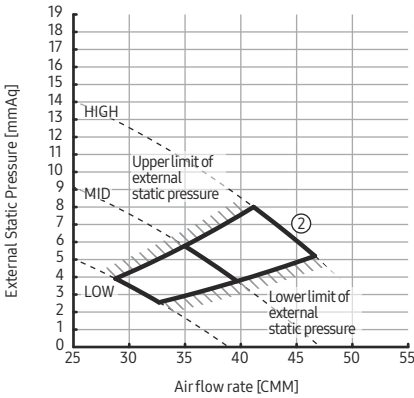
Indoor Units

2) AC120RNMPEH/IL

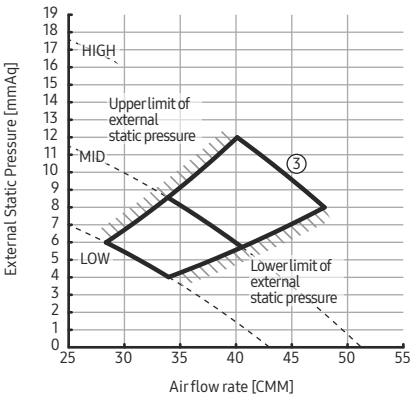
①	External Static Pressure(mmAq)	Option Code
	$2.5 \leq SP \leq 5.2$	01B06C-1C54AC-277882-370040



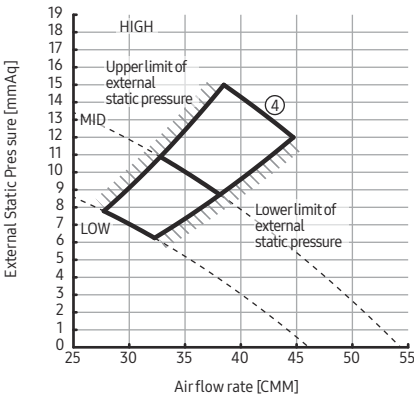
②	External Static Pressure(mmAq)	Option Code
	$5.2 < SP \leq 8.0$	01B06C-1C54EF-277882-370040



③	External Static Pressure(mmAq)	Option Code
	$8.0 < SP \leq 12.0$	01B06C-1C5932-277882-370040



④	External Static Pressure(mmAq)	Option Code
	$12.0 < SP \leq 15.0$	01B06C-1C5975-277882-370040

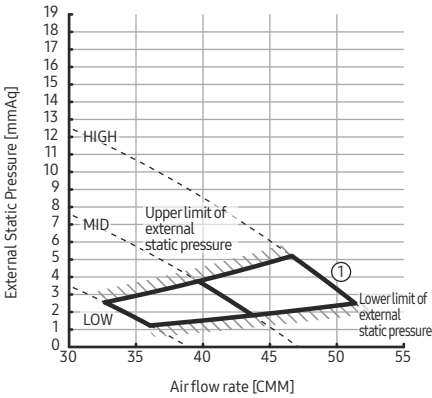


10. Fan Characteristics

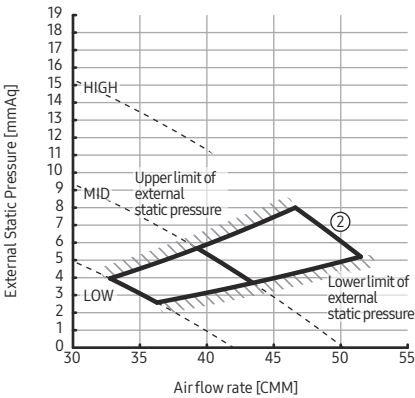
Indoor Units

3) AC140RNMPEH/IL

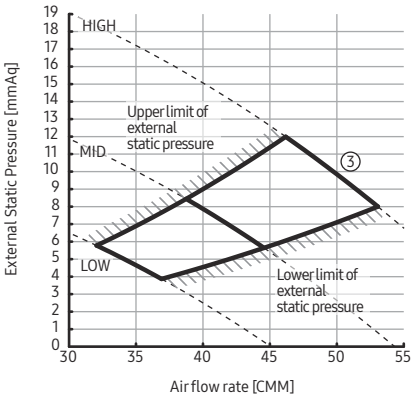
①	External Static Pressure(mmAq)	Option Code
	$2.5 \leq SP \leq 5.2$	01B06C-1C54FF-278CA0-370040



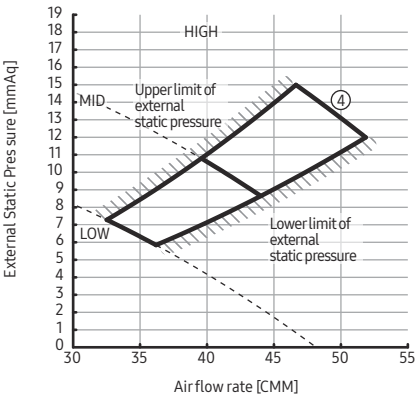
②	External Static Pressure(mmAq)	Option Code
	$5.2 < SP \leq 8.0$	01B06C-1C5932-278CA0-370040



③	External Static Pressure(mmAq)	Option Code
	$8.0 < SP \leq 12.0$	01B06C-1C5985-278CA0-370040



④	External Static Pressure(mmAq)	Option Code
	$12.0 < SP \leq 15.0$	01B06C-1C59C8-278CA0-370040



11. Capacity Correction

(1) Cooling

			Pipe Length (m)														
			5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	Level Difference (m)	30	-	-	-	-	-	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		25	-	-	-	-	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		20	-	-	-	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		15	-	-	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		10	-	0.989	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		5	1	0.989	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		0	1	0.989	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-5	1	0.989	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-10	-	0.989	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-15	-	-	0.98	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-20	-	-	-	0.97	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-25	-	-	-	-	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85
		-30	-	-	-	-	-	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85

(2) Heating

		Pipe Length (m)														
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	Level Difference (m)	30	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		25	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		20	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		15	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		5	1	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		0	1	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-5	1	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-10	-	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-15	-	0.98	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-20	-	-	0.97	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-25	-	-	-	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88
		-30	-	-	-	-	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.90	0.89	0.88

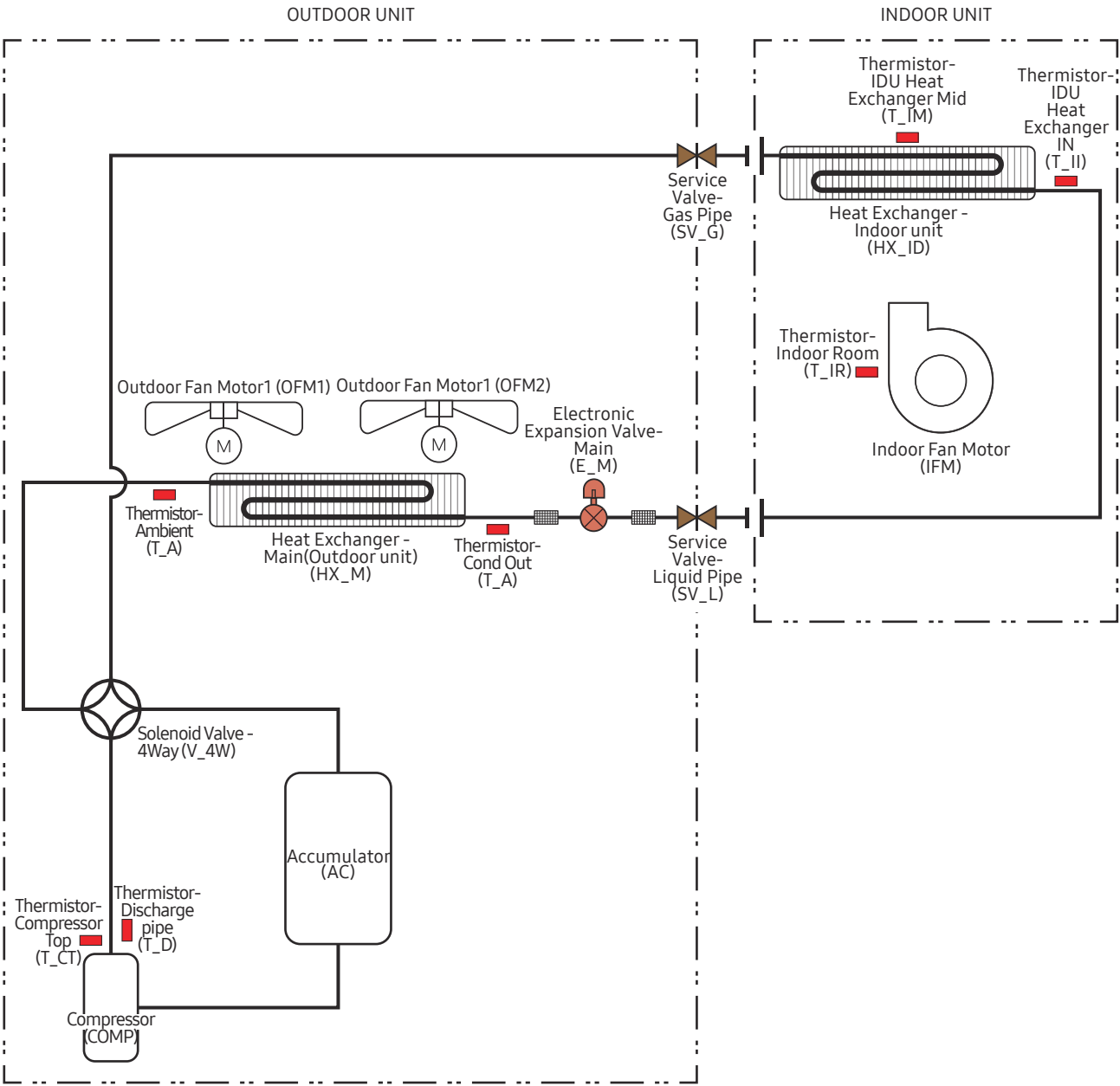
12. Operation Range

Mode	Outdoor Unit	Indoor Unit	Indoor Unit
	Temperature(DB)	Temperature(DB)	Humidity(RH)
Cooling	-15°C ~ 50°C	18°C ~ 32°C	Relative humidity 80% or less
Heating	-20°C ~ 24°C	30°C or less	-
Drying	-15°C ~ 50°C	18°C ~ 32°C	Relative humidity 80% or less

NOTE

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

13. Piping Diagram



2020.10
Ver.1.1

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