SAMSUNG

SINGLE Technical Data Book

SINGLE RAC for Europe (R410A, HP)

Model : AC100MNT*EH/EU (Indoor Unit)
AC100MXAD*H/EU, AC100JXSC*H/EU (Outdoor Unit)

History

Version	Modification	Date	Remark
Ver.1.0	Release Single RAC TDB for Europe	’17.02.07	
Ver.1.1	Modify the IDU Net Dimensions in Page.8 and the Heat Exchange Fin Treatment type to 'Green Hydrophile' from 'Silica' in Page.7.	’17.05.31	

Nomenclature

Indoor Unit

Model Name

AC	100	M	N	T	D	E	H	/	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC

(2) Capacity

X 1/10 kW (3 digits)

(3) Version

H	2014
J	2015
K	2016
M	2017

(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)
T	RAC

(6) Feature

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

(7) Rating Voltage

E	1Φ, 220~240V, 50Hz

(8) Mode

H	Heat Pump

Nomenclature

Outdoor Unit

Model Name

AC	100	M	X	A	D	K	H	/	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AC	CAC

(2) Capacity

X 1/10 kW (3 digits)

(3) Version

H	2014
J	2015
K	2016
M	2017

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

A	Inv+Side+General Temp
S	Inv+Side+Low Temp.

(6) Feature

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

(7) Rating Voltage

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

(8) Mode

H	Heat Pump

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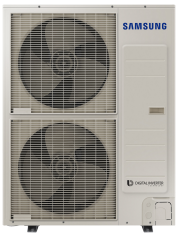
1. Line-up

1-1. Indoor Units

Model	Capacity (kW)	
	9.5	10.0
RAC		

1-2. Outdoor units

Model	Capacity (kW)	
	9.5	10.0
1Φ, 3Φ		

2. Specification

Model Name		Indoor Unit			AC100MNTDEH/EU	AC100MNTDEH/EU	AC100MNTCEH/EU	AC100MNTCEH/EU
		Outdoor Unit			AC100MXADKH/EU	AC100MXADNH/EU	AC100JXSCEH/EU	AC100JXSCGH/EU
System	Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
	Performance	Capacity (Min/Std/Max)	Cooling	kW	3.0/9.5/11.0	3.0/9.5/11.0	3.5/10.0/12.0	3.5/10.0/12.0
				Btu/h	10,200/32,400/37,500	10,200/32,400/37,500	11,900/34,100/40,900	11,900/34,100/40,900
			Heating	kW	2.2/10.8/15.5	2.2/10.8/15.5	3.3/11.2/17.0	3.3/11.2/17.0
				Btu/h	7,500/36,800/52,900	7,500/36,800/52,900	11,300/38,200/58,000	11,300/38,200/58,000
	Power	Power Input (Min/Std/Max)	Cooling	kW	0.6/3.8/5.1	0.6/3.8/5.1	0.85/3.45/4.2	0.85/3.45/4.2
			Heating		0.46/3.75/5.4	0.46/3.75/5.4	0.72/3.64/6.9	0.72/3.64/6.9
		Current Input (Min/Std/Max)	Cooling	A	3.0/16.7/22.5	1.5/5.9/7.7	4.2/15.1/18.5	1.4/5.3/6.4
			Heating		2.5/16.6/23.0	1.2/5.8/8.4	3.6/16.0/30.0	1.3/5.6/11.0
		Current	MCA	A	25.1	17.2	33.1	13.1
			MFA	A	30	17.2	40	15
	Energy Efficiency	EER	Cooling	-	2.50	2.50	2.90	2.90
		COP	Heating	-	2.88	2.88	3.08	3.08
		SEER (Cooling Energy Grade)		-	5.8 (A+)	5.8 (A+)	6.0 (A+)	6.0 (A+)
		SCOP (Heating Energy Grade)		-	4.0 (A+)	4.0 (A+)	4.0 (A+)	4.0 (A+)
		Pdesignh		kW	5.6	5.6	6.5	6.5
	Piping Connections	Liquid Pipe		Type	Flare connection	Flare connection	Flare connection	Flare connection
				Φ,mm(inch)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
		Gas Pipe		Type	Flare connection	Flare connection	Flare connection	Flare connection
				Φ,mm(inch)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
		Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
		Piping length (ODU-IDU)	Standard	m	5	5	5	5
			Max.	m	50	50	75	75
			Elevation	m	30	30	30	30
			Chargeless	m	30	30	5	5
	Wiring Connections	Communication	Min.	mm^2	0.75	0.75	0.75	0.75
			Remark	-	F1, F2	F1, F2	F1, F2	F1, F2
		Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant	Type		-	R410A	R410A	R410A	R410A
		Control Method		-	EEV	EEV	EEV	EEV
		Factory Charging		kg	3.0	3.0	2.9	2.9
				tCO2e	6.3	6.3	6.1	6.1
Indoor Unit	Power Supply			Φ, #, V, Hz	1Φ, 2, 220-240V, 50Hz	1Φ, 2, 220-240V, 50Hz	1Φ, 2, 220-240V, 50Hz	1Φ, 2, 220-240V, 50Hz
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube	Fin & Tube
		Material		-	Al	Al	Al	Al
				-	Cu	Cu	Cu	Cu
		Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile	Green Hydrophile

2. Specification

Model Name		Indoor Unit			AC100MNTDEH/EU	AC100MNTDEH/EU	AC100MNTCEH/EU	AC100MNTCEH/EU
		Outdoor Unit			AC100MXADKH/EU	AC100MXADNH/EU	AC100JXSCEH/EU	AC100JXSCGH/EU
Indoor Unit	Fan	Type		-	Crossflow Fan	Crossflow Fan	Crossflow Fan	Crossflow Fan
		Quantity		EA	1	1	1	1
		Air Flow Rate		CMM	24.0/21.5/19.0	24.0/21.5/19.0	24.0/21.5/19.0	24.0/21.5/19.0
				l/s	400/358/317	400/358/317	400/358/317	400/358/317
		External Static Pressure		mmAq	-	-	-	-
				Pa	-	-	-	-
	Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	BLDC Motor
		Output		W x n	58 x 1	58 x 1	58 x 1	58 x 1
	Drain	Drain Pipe		Φ,mm	ID 18 HOSE	ID 18 HOSE	ID 18 HOSE	ID 18 HOSE
	Sound	Sound Pressure	High/ Mid/Low/ (Silence)	dB(A)	49/46/43/37	49/46/43/37	49/46/43/37	49/46/43/37
		Sound Power	Cooling Std High	dB(A)	65	65	65	65
	External Dimension	Net Weight		kg	18.5	18.5	18.5	18.5
		Shipping Weight		kg	21.5	21.5	21.5	21.5
		Net Dimensions (WxHxD)		mm	1280 x 345 x 253	1280 x 345 x 253	1280 x 345 x 253	1280 x 345 x 253
		Shipping Dimensions (WxHxD)		mm	1352 x 326 x 420	1352 x 326 x 420	1352 x 326 x 420	1352 x 326 x 420
	Casing	Material		-	HIPS	HIPS	HIPS	HIPS
	Control System	Infrared remote control		-	MR-EH00	MR-EH00	MR-EH00	MR-EH00
		Wired remote control		-	MWR-WE10N MWR-WE11N	MWR-WE10N MWR-WE11N	MWR-WE10N MWR-WE11N	MWR-WE10N MWR-WE11N
	Additional Accessories	Drain pump	External Model	-	-	-	-	-
			Internal Model	-	-	-	-	-
			Max. Lifting Height / Displacement	mm/ liter/h	-	-	-	-
		Air Filter		-	-	-	-	-
Outdoor Unit	Power Supply			Φ, #, V, Hz	1Φ, 2, 220-240V, 50Hz	3Φ, 4, 380-415V, 50Hz	1Φ, 2, 220-240V, 50Hz	3Φ, 4, 380-415V, 50Hz
	Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	FMC	FMC
		Material	Fin	-	Al	Al	Al	Al
			Tube	-	Cu	Cu	Al	Al
		Fin Treatment		-	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion	Anti-Corrosion
	Compressor	Model Name		-	UG8T300FUBJU	UG8T300FUCJU	UG5T450FXAJX	UG5T450FXAJX
		Type		-	Twin BLDC	Twin BLDC	Twin BLDC	Twin BLDC
		Output		kW	2.82	2.82	4.01	4.01
		Oil	Type	-	PVE	PVE	PVE	PVE
			Initial Charge	cc	1200	1200	1700	1700

2. Specification

Model Name		Indoor Unit			AC100MNTDEH/EU	AC100MNTDEH/EU	AC100MNTCEH/EU	AC100MNTCEH/EU
		Outdoor Unit			AC100MXADKH/EU	AC100MXADNH/EU	AC100JXSCEH/EU	AC100JXSCGH/EU
Outdoor Unit	Fan	Type		-	Propeller	Propeller	Propeller	Propeller
		Discharge direction		-	Front	Front	Front	Front
		Quantity		EA	1	1	2	2
		Air Flow Rate		m^3/min	78	78	112	112
				l/s	1300	1300	1867	1867
	Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	BLDC Motor
		Output		W x n	125 x 1	125 x 1	125 x 2	125 x 2
	Sound	Sound Pressure	Cooling / Heating	dB(A)	52/54	52/54	50/50	50/50
		Sound Power		dB(A)	69	69	66	66
	External Dimension	Net Weight		kg	72	72	96	96
		Shipping Weight		kg	77	77	106	106
		Net Dimensions (WxHxD)		mm	940 x 998 x 330	940 x 998 x 330	940 x 1420 x 330	940 x 1420 x 330
		Shipping Dimensions (WxHxD)		mm	995 x 1096 x 426	995 x 1096 x 426	995 x 1598 x 426	995 x 1598 x 426
	Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
	Operating Temp. Range	Cooling		℃	-15 ~ 50	-15 ~ 50	-20 ~ 50	-20 ~ 50
		Heating		℃	-20 ~ 24	-20 ~ 24	-25 ~ 24	-25 ~ 24

NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14511.

  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)* Sound power level is an absolute value that a sound source generates.
  - Sound power level is based on cooling operation.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound values are obtained in an anechoic room.
  - Sound values of multi combination are theoretical values based on sound results of individual installed units.

  3)* These products contain R410A(GWP=2,088) 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.

3. Summary Table

Performance characteristics

Indoor Unit

Model Code	Net Weight (kg)	Capacity	Cooling (kW)	Heating (kW)	Fan Speed	Airflow (CMM)	Sound Pressure Level (dBA)	Sound Power Level (dBA)
AC100MNTDEH/EU	18.5	Max.	11.0	15.5	High	24.0	49	65
		Std.	9.5	10.8	Mid.	21.5	46	-
		Min.	3.0	2.2	Low	19.0	43	-
AC100MNTCEH/EU	18.5	Max.	12.0	17.0	High	24.0	49	65
		Std.	10.0	11.2	Mid.	21.5	46	-
		Min.	3.5	3.3	Low	19.0	43	-

Outdoor Unit

Capacity (kW)	Model Code	Net Size (WxHxD , mm)	Net Weight (kg)	Airflow (CMM)	Sound Pressure Level(dBA)		Sound Power Level (dBA)
					Cooling	Heating	
10	AC100MXADKH/EU	940 x 998 x 330	72	78	52	54	69
10	AC100MXADNH/EU	940 x 998 x 330	72	78	52	54	69
10	AC100JXSCEH/EU	940 x 1420 x 330	96	112	50	50	66
10	AC100JXSCGH/EU	940 x 1420 x 330	96	112	50	50	66

NOTE

- Sound date is based on cooling operation.

3. Summary Table

Electrical Characteristics

Model Code		Outdoor Unit				Input Current(Amperes)				Power Supply	
Indoor Unit	Outdoor Unit	Rated	Voltage range			Outdoor Unit		Indoor	Total	MCA	MFA
		Hz	Volts	Min.	Max.	Cooling	Heating	Unit		(A)	(A)
AC100MNTDEH/EU	AC100MXADKH/EU	50	220 to 240	198	264	24	24	1.1	25.1	25.1	30
AC100MNTDEH/EU	AC100MXADNH/EU	50	380 to 415	342	457	16.1	16.1	1.1	17.2	17.2	17.2
AC100MNTCEH/EU	AC100JXSCEH/EU	50	220 to 240	198	264	32	32	1.1	33.1	33.1	40
AC100MNTCEH/EU	AC100JXSCGH/EU	50	380 to 415	342	457	12	12	1.1	13.1	13.1	15

NOTE

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

4. Capacity Table

AC100MNTDEH/AC100MXADKH, AC100MNTDEH/AC100MXADNH

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
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-15	9.3	6.8	2.72	9.8	7.0	2.77	10.2	7.2	2.83	10.5	7.4	2.89	10.7	7.4	2.92	11.2	7.3	2.95	11.8	7.1	3.00
21	8.8	6.5	2.86	9.3	6.7	2.92	9.7	6.9	2.98	10.0	7.1	3.04	10.2	7.0	3.07	10.7	6.9	3.10	11.2	6.8	3.16
35	8.4	6.2	3.58	8.8	6.3	3.65	9.2	6.5	3.72	9.5	6.7	3.80	9.7	6.7	3.84	10.2	6.6	3.88	10.7	6.5	3.95
46	7.1	6.0	3.22	7.5	6.2	3.28	7.8	6.4	3.35	8.1	6.6	3.42	8.2	6.6	3.45	8.6	6.5	3.49	9.1	6.4	3.56
50	5.7	5.1	2.86	6.0	5.2	2.92	6.3	5.4	2.98	6.5	5.6	3.04	6.6	5.5	3.07	6.9	5.4	3.10	7.3	5.3	3.16

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	7.6	4.97	7.5	4.92	7.5	4.88	7.4	4.83	7.3	4.78	7.2	4.73
-15	9.6	5.74	9.5	5.68	9.4	5.63	9.3	5.57	9.2	5.51	9.1	5.46
-5	10.8	5.36	10.7	5.30	10.6	5.25	10.5	5.20	10.4	5.15	10.3	5.09
0	11.2	4.59	11.1	4.55	11.0	4.50	10.9	4.46	10.8	4.41	10.7	4.37
7	11.0	3.83	10.9	3.79	10.8	3.75	10.7	3.71	10.6	3.68	10.5	3.64
24	14.3	4.40	14.2	4.36	14.0	4.31	13.9	4.27	13.8	4.23	13.6	4.18

NOTE

- Capacities are based on following conditions; Refrigerant pipe length : 5m / Level difference : 0m.

4. Capacity Table

AC100MNTCEH/AC100JXSCEH, AC100MNTCEH/AC100JXSCGH

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
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
-20	9.8	7.2	2.47	10.3	7.5	2.52	10.7	7.7	2.57	11.0	7.9	2.62	11.2	7.9	2.65	11.8	7.8	2.67	12.4	7.6	2.73
21	9.3	6.9	2.60	9.8	7.1	2.65	10.2	7.3	2.70	10.5	7.6	2.76	10.7	7.5	2.79	11.2	7.4	2.82	11.8	7.3	2.87
35	8.8	6.6	3.25	9.3	6.8	3.31	9.7	7.0	3.38	10.0	7.2	3.45	10.2	7.1	3.48	10.7	7.1	3.52	11.2	6.9	3.59
46	7.5	6.3	2.92	7.9	6.5	2.98	8.2	6.7	3.04	8.5	6.9	3.11	8.7	6.9	3.14	9.1	6.8	3.17	9.6	6.7	3.23
50	6.1	5.4	2.60	6.4	5.5	2.65	6.7	5.7	2.70	6.9	5.9	2.76	7.0	5.8	2.79	7.4	5.7	2.82	7.8	5.6	2.87

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
-25	8.7	5.95	8.6	5.89	8.5	5.83	8.4	5.77	8.4	5.71	8.3	5.66
-20	10.9	6.70	10.8	6.64	10.7	6.57	10.6	6.50	10.5	6.44	10.4	6.37
-10	12.3	6.92	12.2	6.85	12.1	6.78	12.0	6.71	11.8	6.65	11.7	6.58
0	15.4	7.07	15.3	7.00	15.1	6.93	14.9	6.86	14.8	6.79	14.7	6.72
7	11.4	3.71	11.3	3.68	11.2	3.64	11.1	3.60	11.0	3.57	10.9	3.53
24	14.9	4.27	14.7	4.23	14.6	4.19	14.4	4.14	14.3	4.10	14.1	4.06

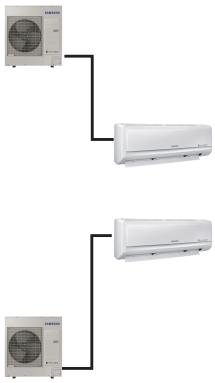
NOTE

- Capacities are based on following conditions; Refrigerant pipe length : 5m / Level difference : 0m.

5. Capacity Correction

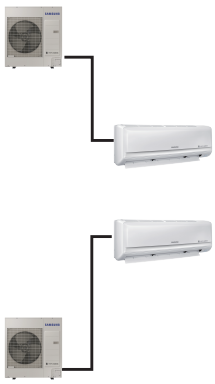
AC100MNTDEH/AC100MXADKH, AC100MNTDEH/AC100MXADNH

Cooling



Level Difference (m)	Pipe Length (ft)									
	5	10	15	20	25	30	35	40	45	50
30	-	-	-	-	-	-	93	92	91	90
25	-	-	-	-	-	94	93	92	91	90
20	-	-	-	-	96	94	93	92	91	90
15	-	-	-	97	96	94	93	92	91	90
10	-	-	98	97	96	94	93	92	91	90
5	-	99	98	97	96	94	93	92	91	90
0	100	99	98	97	96	94	93	92	91	90
-5	-	98	97	96	95	94	93	92	91	89
-10	-	-	97	96	95	94	92	91	90	88
-15	-	-	-	95	95	93	92	91	89	88
-20	-	-	-	-	94	93	92	90	89	87
-25	-	-	-	-	-	92	91	90	88	86
-30	-	-	-	-	-	-	91	89	88	85

Heating

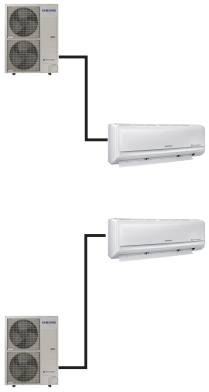


Level Difference (m)	Pipe Length (ft)									
	5	10	15	20	25	30	35	40	45	50
30	-	-	-	-	-	-	95	94	93	92
25	-	-	-	-	-	96	95	94	93	92
20	-	-	-	-	96	96	95	94	93	92
15	-	-	-	97	96	96	95	94	93	92
10	-	-	98	97	96	96	95	94	93	92
5	-	99	98	97	96	96	95	94	93	92
0	100	99	98	97	96	96	95	94	93	92
-5	-	99	98	97	96	96	95	94	93	92
-10	-	-	98	97	96	96	95	94	93	92
-15	-	-	-	97	96	96	95	94	93	92
-20	-	-	-	-	96	96	95	94	93	92
-25	-	-	-	-	-	96	95	94	93	92
-30	-	-	-	-	-	-	95	94	93	92

5. Capacity Correction

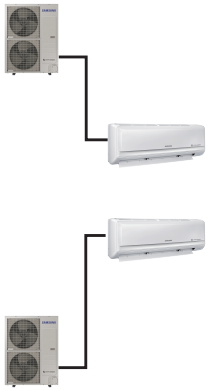
AC100MNTCEH/AC100JXSCEH, AC100MNTCEH/AC100JXSCGH

Cooling



Level Difference (m)	Pipe Length (ft)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	-	95	94	93	92	91	91	90	89	88
25	-	-	-	-	-	96	95	94	93	92	91	91	90	89	88
20	-	-	-	-	97	96	95	94	93	92	91	91	90	89	88
15	-	-	-	97	97	96	95	94	93	92	91	91	90	89	88
10	-	-	98	97	97	96	95	94	93	92	91	91	90	89	88
5	-	99	98	97	97	96	95	94	93	92	91	91	90	89	88
0	100	99	98	97	97	96	95	94	93	92	91	91	90	89	88
-5	-	99	98	97	96	95	95	94	93	92	91	90	89	88	87
-10	-	-	98	97	96	95	94	93	93	92	91	90	89	88	86
-15	-	-	-	97	96	95	94	93	92	91	90	89	88	87	85
-20	-	-	-	-	95	95	94	93	92	91	90	89	88	86	84
-25	-	-	-	-	-	94	93	93	92	91	90	89	87	86	83
-30	-	-	-	-	-	-	93	92	91	90	89	88	87	85	82

Heating



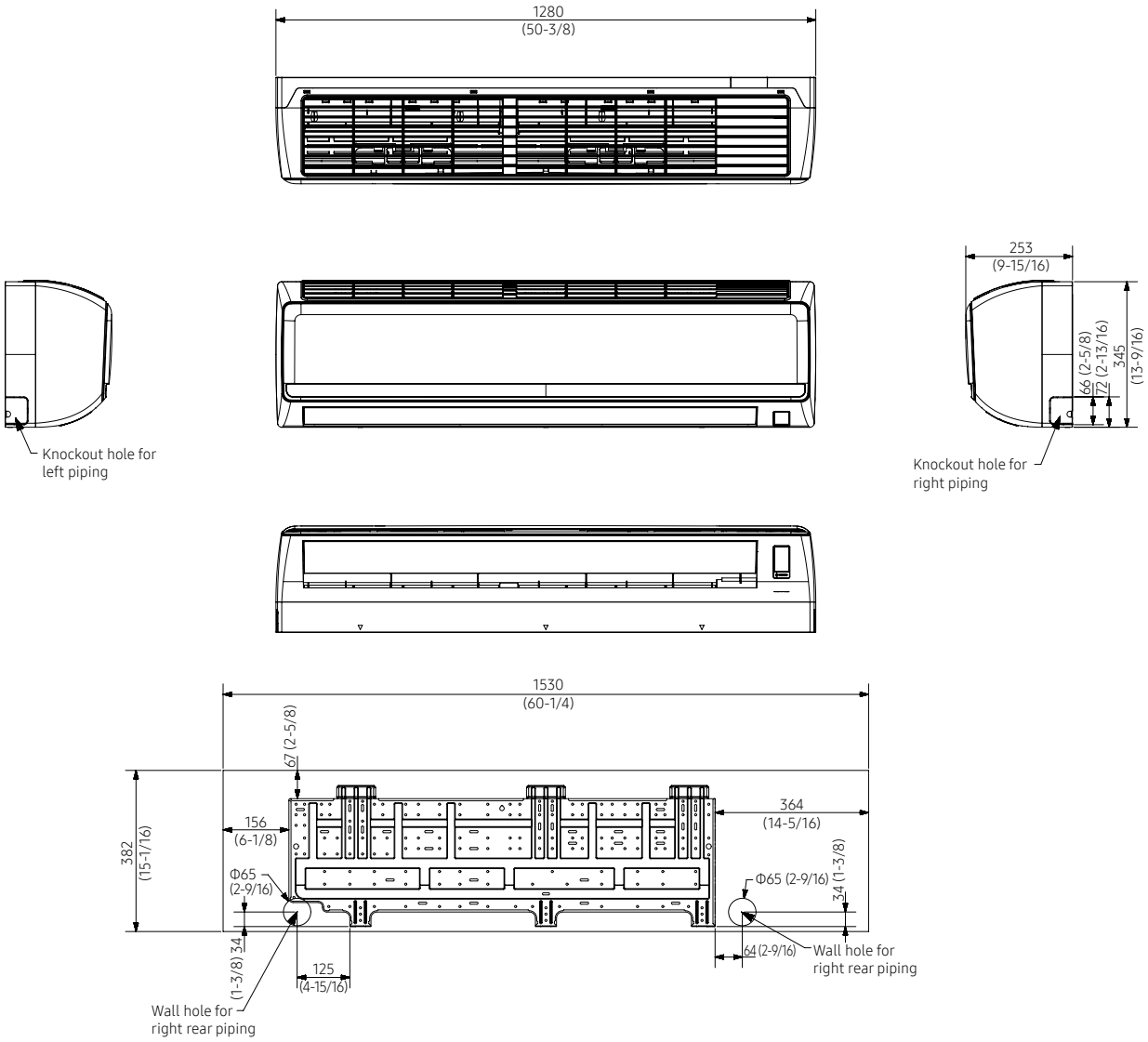
Level Difference (m)	Pipe Length (ft)														
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
30	-	-	-	-	-	-	96	95	94	94	93	92	91	91	90
25	-	-	-	-	-	96	96	95	94	94	93	92	91	91	90
20	-	-	-	-	97	96	96	95	94	94	93	92	91	91	90
15	-	-	-	98	97	96	96	95	94	94	93	92	91	91	90
10	-	-	99	98	97	96	96	95	94	94	93	92	91	91	90
5	-	99	99	98	97	96	96	95	94	94	93	92	91	91	90
0	100	99	99	98	97	96	96	95	94	94	93	92	91	91	90
-5	-	99	99	98	97	96	96	95	94	94	93	92	91	91	90
-10	-	-	99	98	97	96	96	95	94	94	93	92	91	91	90
-15	-	-	-	98	97	96	96	95	94	94	93	92	91	91	90
-20	-	-	-	-	97	96	96	95	94	94	93	92	91	91	90
-25	-	-	-	-	-	96	96	95	94	94	93	92	91	91	90
-30	-	-	-	-	-	-	96	95	94	94	93	92	91	91	90

6. Dimensional Drawing

Indoor Unit

AC100MNT*EH/EU

Unit: mm (inch)



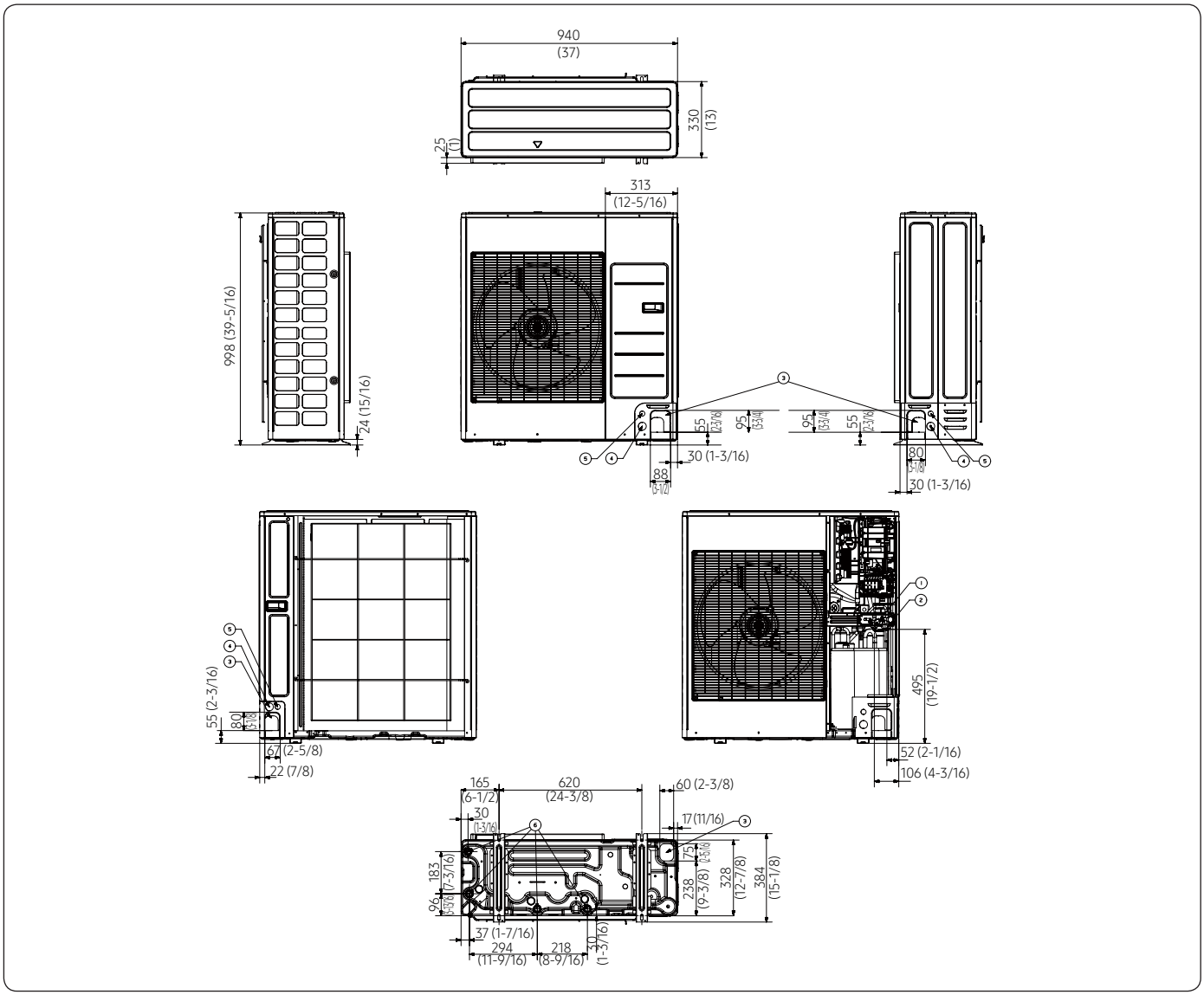
No.	Name	Description
1	Liquid pipe connection	9.52 (3/8")
2	Gas pipe connection	15.88 (5/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

6. Dimensional Drawing

Outdoor unit

AC100MXAD*H/EU

Unit: mm (inch)



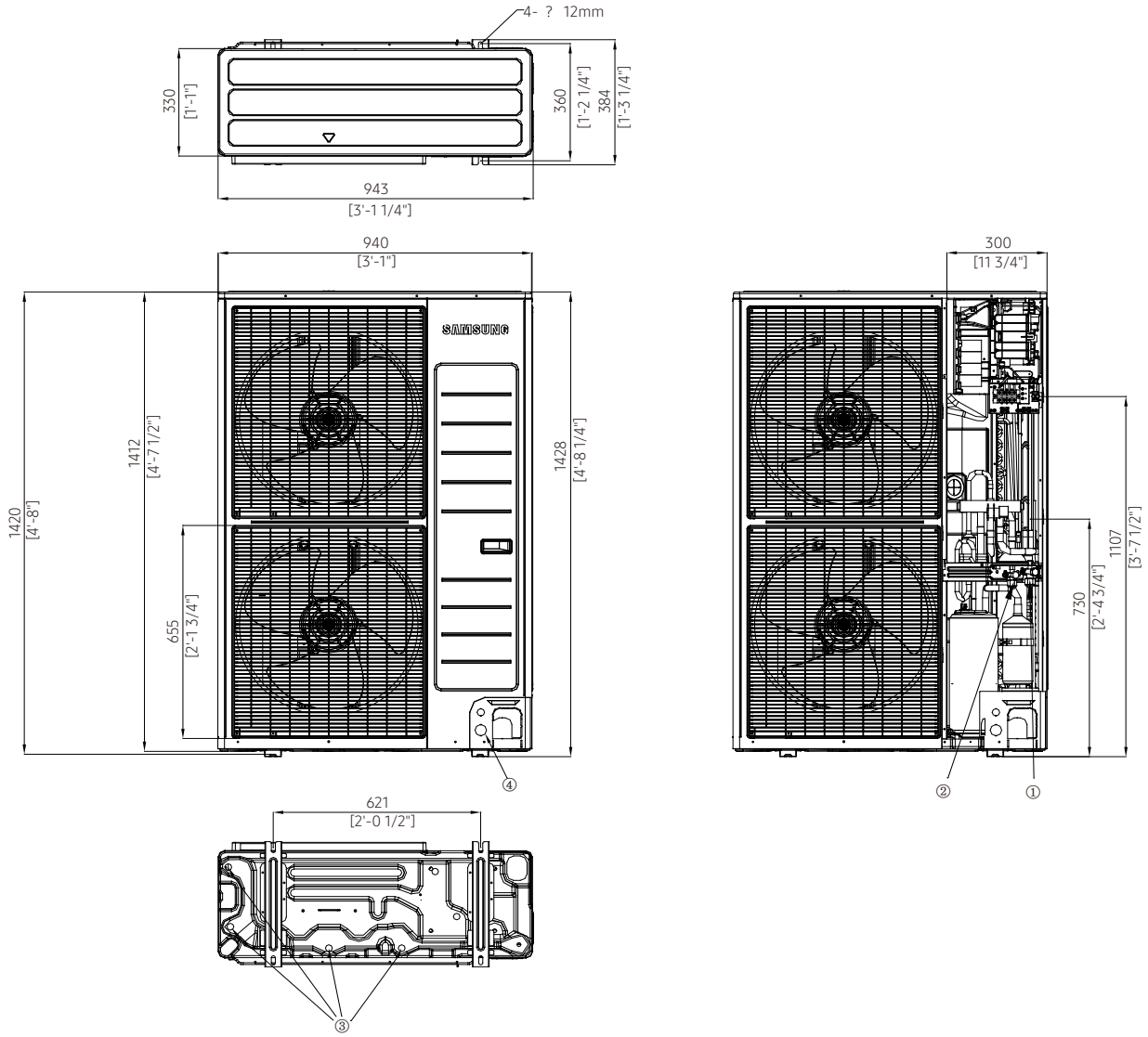
No.	Name	Description
1	Refrigerant liquid pipe	Φ9.52(3/8)
2	Refrigerant gas pipe	Φ15.88(5/8)
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear , Φ34 [1-3/8]
5	Communication wiring conduit	Front / Side / Rear , Φ22 [7/8]
6	Drain Hole	Connect with the provided drain plug

6. Dimensional Drawing

Outdoor Unit

AC100JXSC*H/EU

Unit: mm (inch)



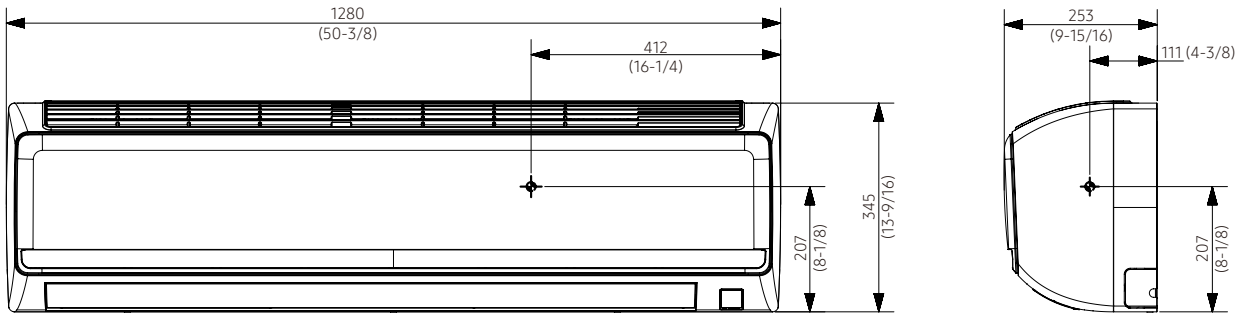
No.	Name	Description
1	Gas pipe connection	15.88 (5/8")
2	Liquid pipe connection	9.52 (3/8")
3	Drain pipe connection	ID 18 HOSE
4	Power supply & Communication wiring conduit	-

7. Center of Gravity

Indoor Unit

AC100MNT*EH/EU

Unit: mm (inch)

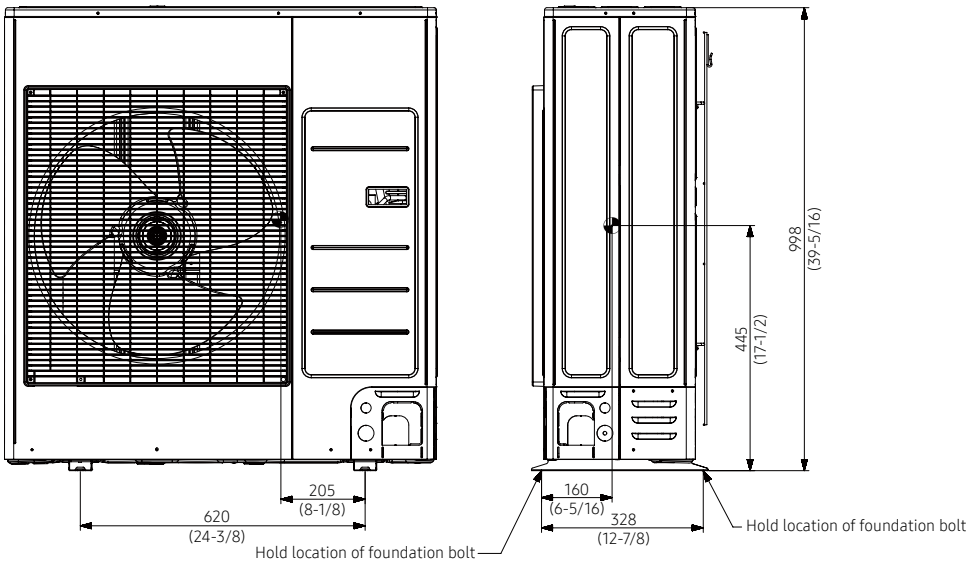


7. Center of Gravity

Outdoor Unit

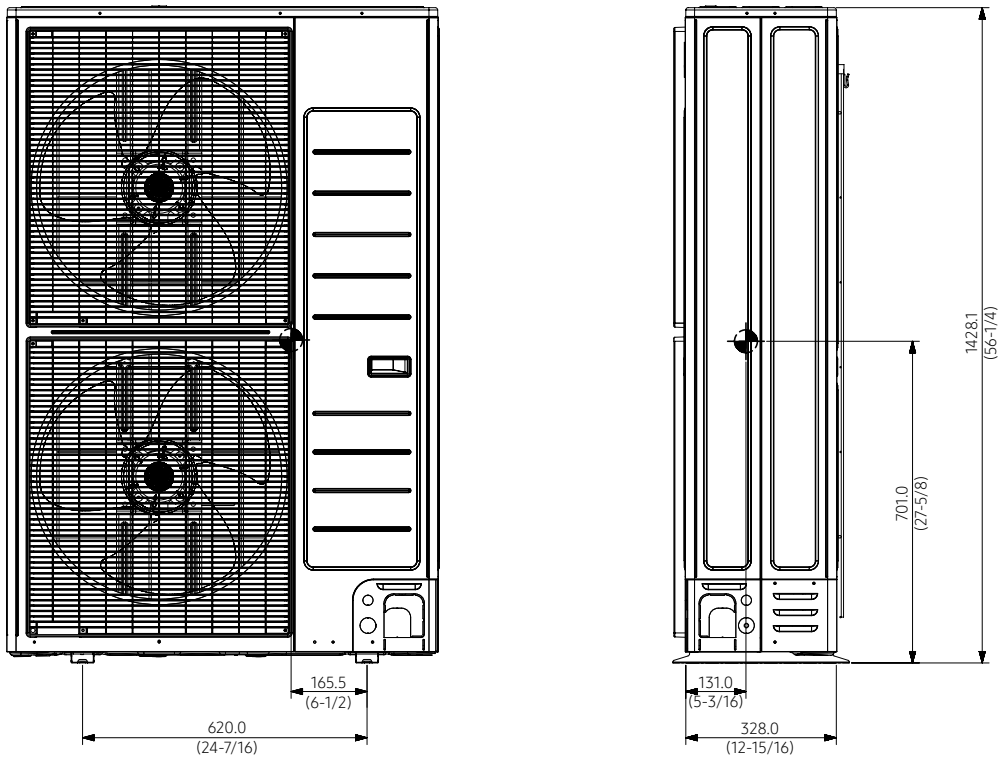
AC100MXAD*H/EU

Unit: mm (inch)



AC100JXSC*H/EU

Unit: mm (inch)

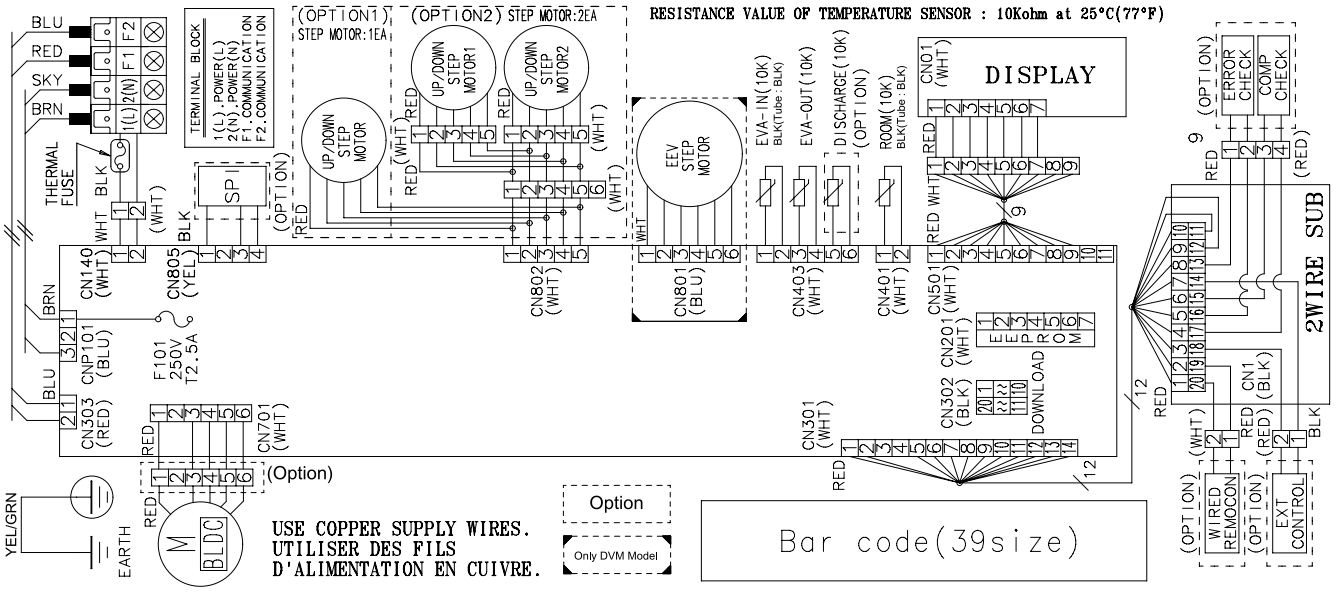


8. Electrical Wiring Diagram

Indoor Unit

AC100MNT*EH/EU

Unit: mm (inch)



LED LAMP DISPLAY			DESCRIPTION
OPERATION	TIMER	TURBO	○:ON ×:OFF ◑:BLINKS
×	◑	×	ROOM TEMPERATURE SENSOR ERROR(OPEN/SHORT)
◑	◑	×	EVA-IN/OUT TEMPERATURE SENSOR ERROR(OPEN/SHORT)
×	×	◑	FAN RPM FEEDBACK ERROR(INDOOR UNIT)
◑	×	◑	TEMPERATURE SENSOR ERROR(OUTDOOR UNIT)
×	◑	◑	COMMUNICATION ERROR(OUTDOOR UNIT↔INDOOR UNIT)
○	◑	◑	SELF-DIAGNOSIS/ERROR OF OUTDOOR UNIT (CHECK ERROR CODE AT OUTDOOR UNIT'S OR SOLUTION DISPLAY)
◑	◑	◑	EEPROM ERROR/EEPROM OPTION ERROR(INDOOR UNIT)
◑	○	◑	NO MATCH BETWEEN OUTDOOR UNIT AND INDOOR UNIT

MAIN PCB	Print circuit board(MAIN)	EEV	Electronics expansion valve	EVA-IN TEMP	Thermistor EVAPORATE
DISPLAY	Print circuit board(DISPLAY)	M-BLDC	BLDC Motor	EVA-OUT TEMP	Thermistor EVAPORATE
2WIRE SUB	Print circuit board(SUB COMM)	ROOM-TEMP	Thermistor AMBIENT		

NOTE

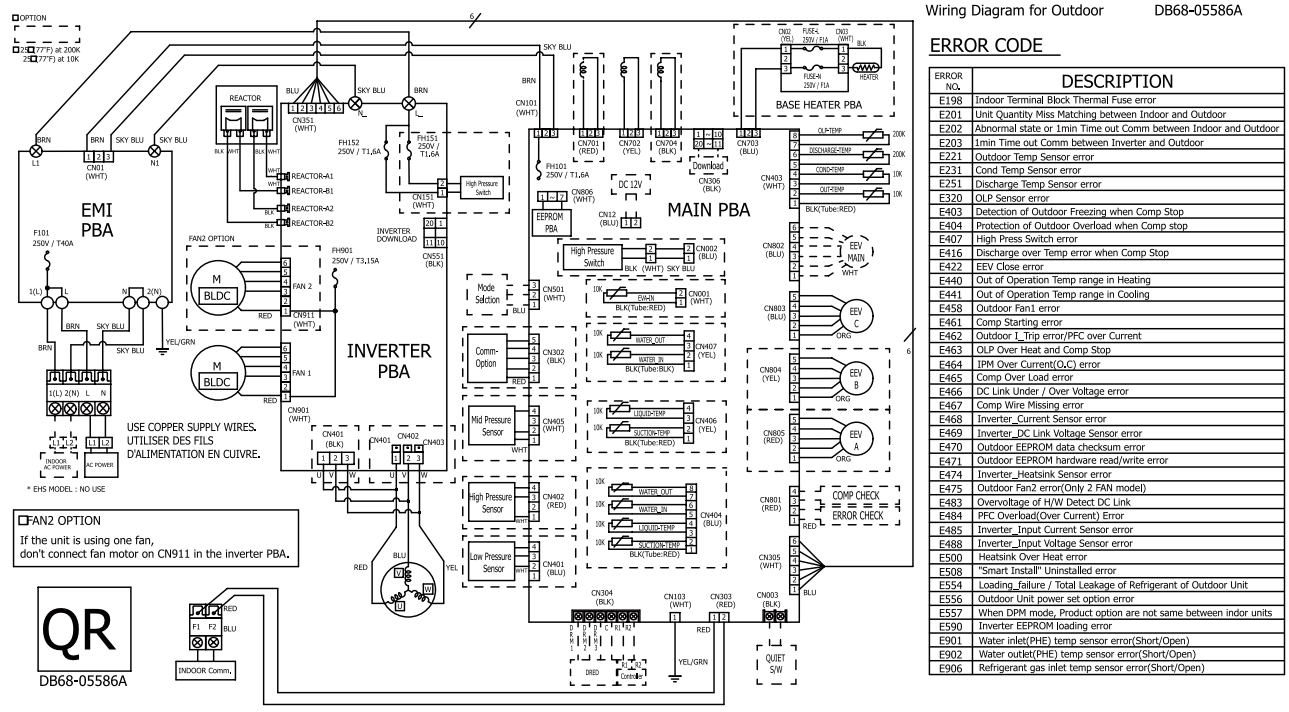
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortciruit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor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

8. Electrical Wiring Diagram

Outdoor Unit

AC100MXADKH/EU

Unit: mm (inch)



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

NOTE

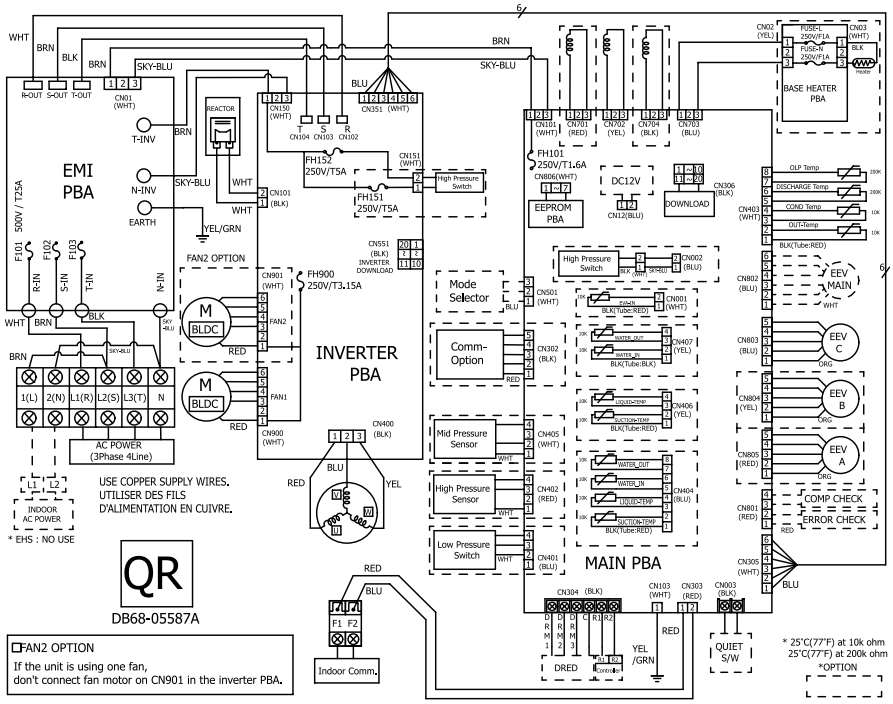
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortciruit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor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

8. Electrical Wiring Diagram

Outdoor Unit

AC100MXADNH/EU

Unit: mm (inch)



Wiring Diagram for Outdoor DB68-05587A

ERROR CODE

ERROR NO.	DESCRIPTION
E198	Indoor Terminal Block Thermal Fuse error
E201	Unit Quantity Miss Matching between Indoor and Outdoor
E202	Abnormal state or 1min Time out Comm between Indoor and Outdoor
E203	1min Time out Comm between Inverter and Outdoor
E221	Outdoor Temp Sensor error
E231	Cond Temp Sensor error
E251	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp stop
E407	High Press Switch error
E416	Discharge over Temp error when Comp Stop
E422	EEV Close error
E425	3Phase Power Source Miss Wiring error
E440	Out of Operation Temp range in Heating
E441	Out of Operation Temp range in Cooling
E458	Outdoor Fan1 error
E461	Comp Starting error
E462	Outdoor I_Trip error/PFC over Current
E463	OLP Over Heat and Comp Stop
E464	IPM Over Current(O.C) error
E465	Comp Over Load error
E466	DC Link Under / Over Voltage error
E467	Comp Wire Missing error
E468	Inverter_Current Sensor error
E469	Inverter_DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Inverter_Heatsink Sensor error
E475	Outdoor Fan2 error(Only 2 FAN model)
E485	Inverter_Input Current Sensor error
E500	Heatsink Over Heat error
E508	"Smart Install" Uninstalled error
E554	Loading_failure / Total Leakage of Refrigerant of Outdoor Unit
E556	Outdoor Unit power set option error
E557	When DPM mode, Product option are not same between indor units
E590	Inverter EEPROM loading error
E901	Water inlet(PHE) temp sensor error(Short/Open)
E902	Water outlet(PHE) temp sensor error(Short/Open)
E906	Refrigerant gas inlet temp sensor error(Short/Open)

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

NOTE

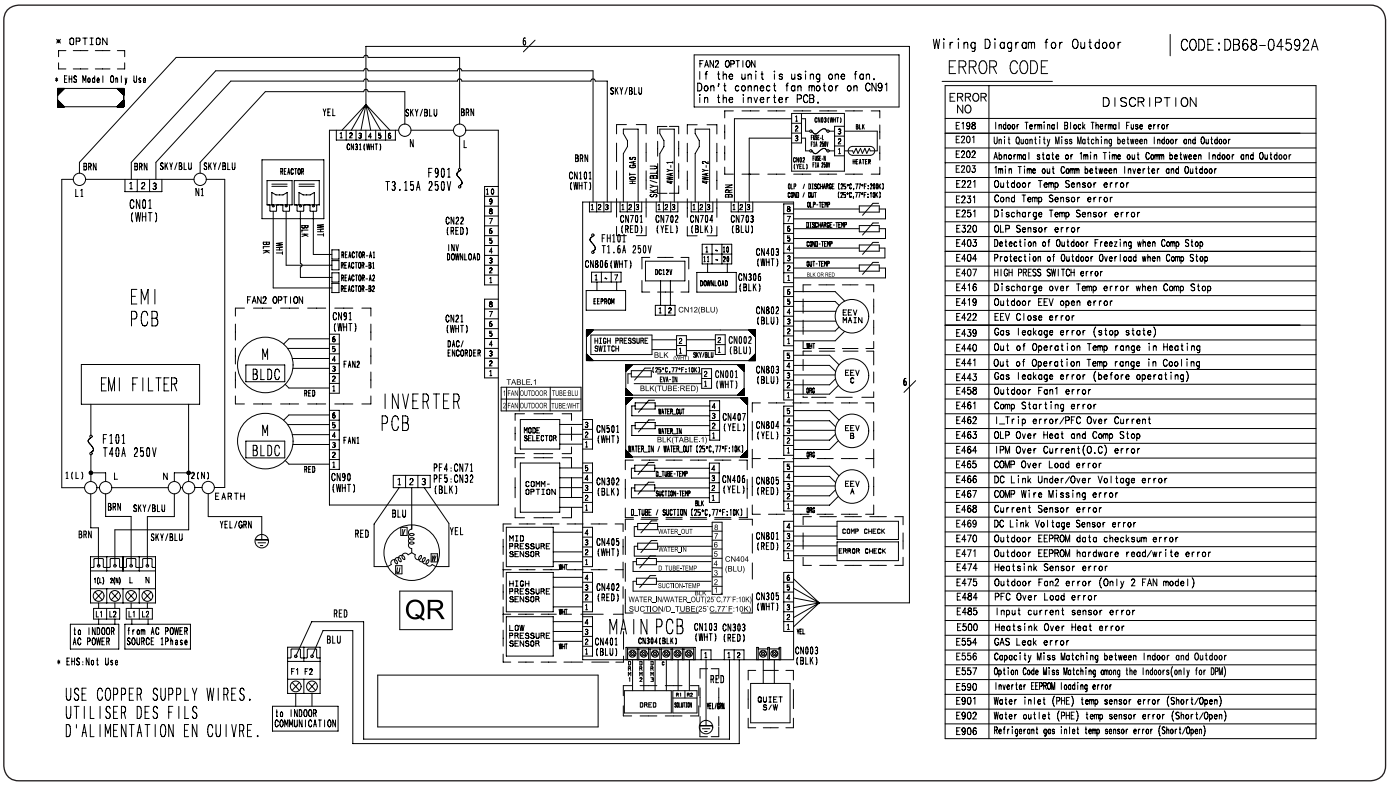
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortciruit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor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

8. Electrical Wiring Diagram

Outdoor Unit

AC100JXSCEH/EU

Unit: mm (inch)



ERROR NO	DISCRIPTION
E198	Indoor Terminal Block Thermal Fuse error
E201	Unit Quantity Miss Matching between Indoor and Outdoor
E202	Abnormal state or 1min Time out Comm between Indoor and Outdoor
E203	1min Time out Comm between Inverter and Outdoor
E221	Outdoor Temp Sensor error
E231	Cond Temp Sensor error
E251	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp Stop
E407	HIGH PRESS SWITCH error
E416	Discharge over Temp error when Comp Stop
E419	Outdoor EEV open error
E422	EEV Close error
E439	Gas leakage error (stop state)
E440	Out of Operation Temp range in Heating
E441	Out of Operation Temp range in Cooling
E443	Gas leakage error (before operating)
E458	Outdoor Fant error
E461	Comp Starting error
E462	I_Trip error/PFC Over Current
E463	OLP Over Heat and Comp Stop
E464	IPM Over Current(O.C) error
E465	COMP Over Load error
E466	DC Link Under/Over Voltage error
E467	COMP Wire Missing error
E468	Current Sensor error
E469	DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Heatsink Sensor error
E475	Outdoor Fan2 error (Only 2 FAN model)
E484	PFC Over Load error
E485	Input current sensor error
E500	Heatsink Over Heat error
E554	GAS Leak error
E556	Capacity Miss Matching between Indoor and Outdoor
E557	Option Code Miss Matching among the Indoors(only for DPM)
E590	Inverter EEPROM loading error
E901	Water inlet (PHE) temp sensor error (Short/Open)
E902	Water outlet (PHE) temp sensor error (Short/Open)
E906	Refrigerant gas inlet temp sensor error (Short/Open)

MAIN PCB	Print circuit board(MAIN)	EEV	Electronics expansion valve	EVA-IN TEMP	Thermistor EVAPORATE
DISPLAY	Print circuit board(DISPLAY)	M-BLDC	BLDC Motor	EVA-OUT TEMP	Thermistor EVAPORATE
2WIRE SUB	Print circuit board(SUB COMM)	ROOM-TEMP	Thermistor AMBIENT		

NOTE

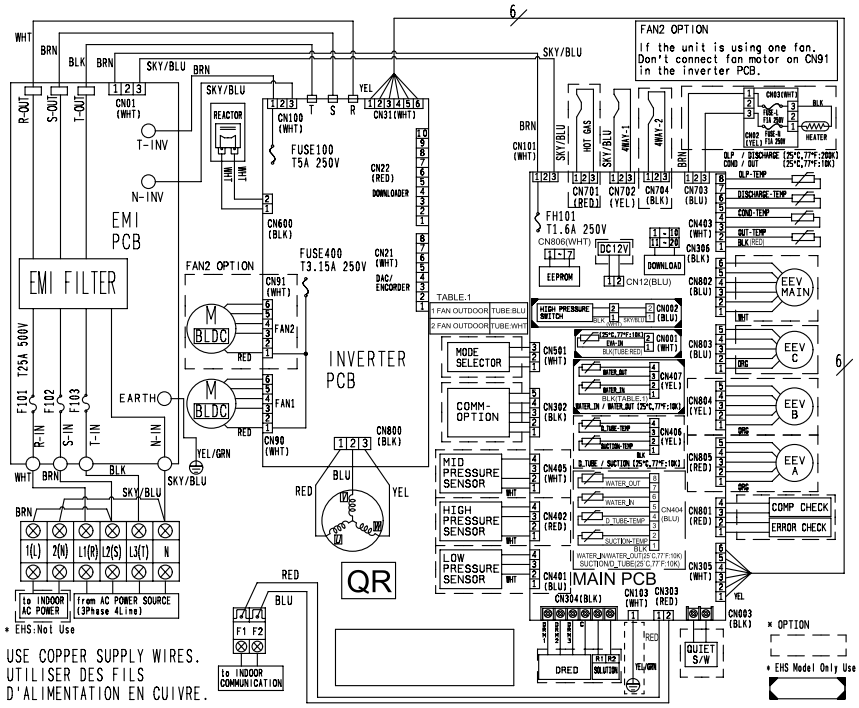
- This wiring diagram applies only to the outdoor unit.
- Colors blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue
- When operating, don't shortciruit the protection device (High Pressure switch)
- For connection wiring indoor-outdoor transmission F1-F2, outdoor-outdoor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

8. Electrical Wiring Diagram

Outdoor Unit

AC100JXSCGH/EU

Unit: mm (inch)



ERROR CODE

ERROR NO	DISCRIPTION
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E201	Unit Quantity Miss Matching between Indoor and Outdoor
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E231	Cond Temp Sensor error
E251	Discharge Temp Sensor error
E320	OLP Sensor error
E403	Detection of Outdoor Freezing when Comp Stop
E404	Protection of Outdoor Overload when Comp Stop
E407	HIGH PRESS SWITCH error
E416	Discharge over Temp error when Comp Stop
E419	Outdoor EEV open error
E422	EEV Close error
E425	3Phase Power Source Miss Wiring error
E439	Gas leakage error (stop state)
E440	Out of Operation Temp range in Heating
E441	Out of Operation Temp range in Cooling
E443	Gas leakage error (before operating)
E458	Outdoor Fan1 error
E461	Comp Starting error
E462	I_Trip error/PFC Over Current
E463	OLP Over Heat and Comp Stop
E464	IPM Over Current(O.C) error
E465	COMP Over Load error
E466	DC Link Under/Over Voltage error
E467	COMP Wire Missing error
E468	Current Sensor error
E469	DC Link Voltage Sensor error
E470	Outdoor EEPROM data checksum error
E471	Outdoor EEPROM hardware read/write error
E474	Heatsink Sensor error
E475	Outdoor Fan2 error (Only 2 FAN model)
E484	PFC Over Load error
E485	Input current sensor error
E500	Heatsink Over Heat error
E554	GAS Leak error
E556	Capacity Miss Matching between Indoor and Outdoor
E557	Option Code Miss Matching among the Indoors(only for DPM)
E590	Inverter EEPROM loading error
E901	Water inlet (PHE) temp sensor error (Short/Open)
E902	Water outlet (PHE) temp sensor error (Short/Open)
E906	Refrigerant gas inlet temp sensor error (Short/Open)

MAIN PCB	Print circuit board(MAIN)	EEV	Electronics expansion valve	EVA-IN TEMP	Thermistor EVAPORATE
DISPLAY	Print circuit board(DISPLAY)	M-BLDC	BLDC Motor	EVA-OUT TEMP	Thermistor EVAPORATE
2WIRE SUB	Print circuit board(SUB COMM)	ROOM-TEMP	Thermistor AMBIENT		

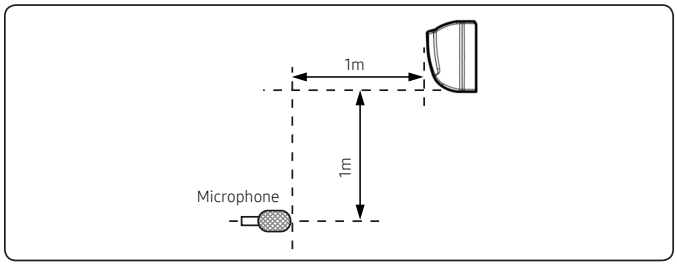
NOTE

- 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 shortciruit 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, N/ : The wire quantity

9. Sound Data

Indoor Unit

Sound Pressure level

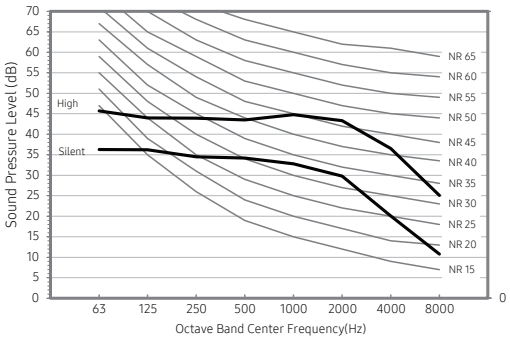


Unit: dB(A)

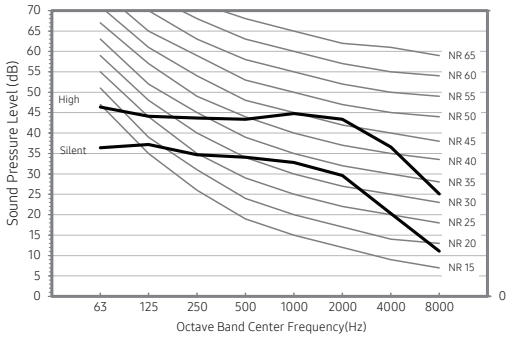
Model	High	Mid	Low
AC100MNTDEH/EU	49	46	43
AC100MNTCEH/EU	49	46	43

- NR Curve

1) AC100MNTDEH/EU



2) AC100MNTCEH/EU



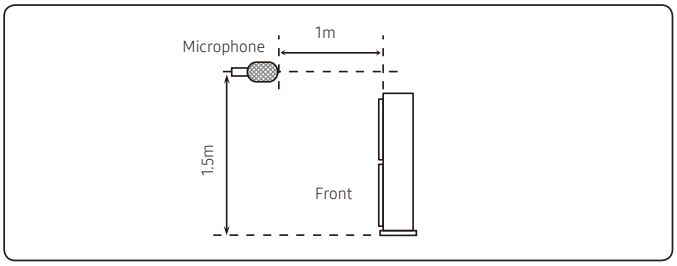
NOTE

- Specifications may be subject to change without prior notice.
- Sound pressure Level
  - 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

Outdoor Unit

Sound Pressure level

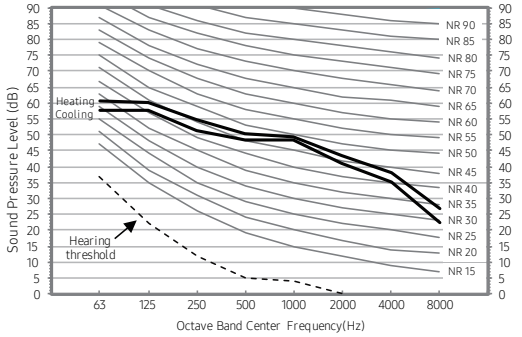


Unit: dB(A)

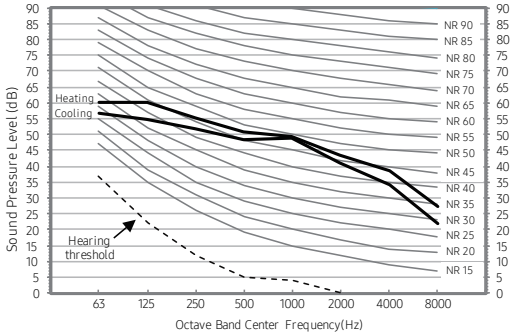
Model	Cooling	Heating
AC100MXADKH/EU	52	54
AC100MXADNH/EU	52	54
AC100JXSCEH/EU	50	50
AC100JXSCGH/EU	50	50

- NR Curve

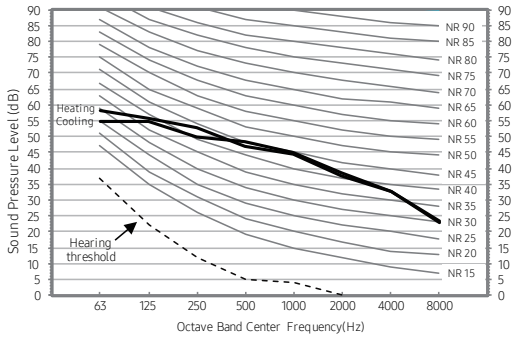
1) AC100MXADKH/EU



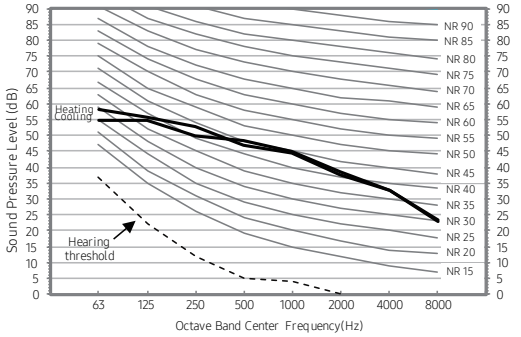
2) AC100MXADNH/EU



3) AC100JXSCEH/EU



4) AC100JXSCGH/EU



NOTE

- Specifications may be subject to change without prior notice.
- Sound pressure Level
  - 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 Unit

Sound Power level

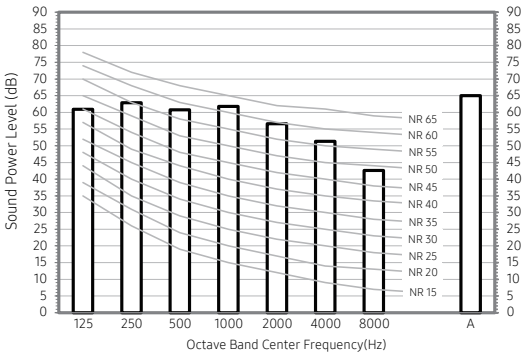
Unit: dB(A)

NOTE

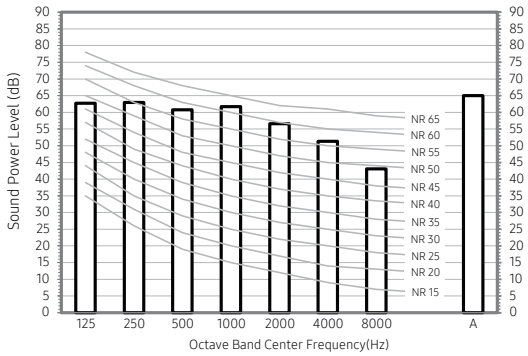
- Specifications may be subject to change without prior notice.
- Sound Power Level
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW
  - Measured according to ISO 3741.

Model	Power
AC100MNTDEH/EU	65
AC100MNTCEH/EU	65

1) AC100MNTDEH/EU



2) AC100MNTCEH/EU



9. Sound Data

Outdoor Unit

Sound Power level

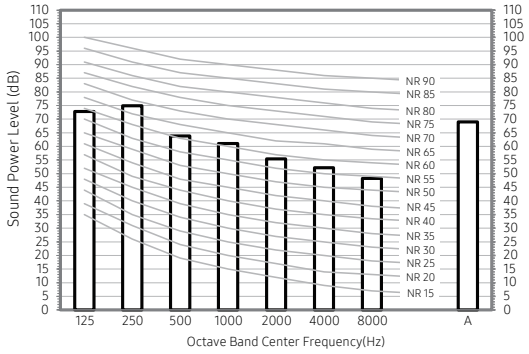
Unit: dB(A)

NOTE

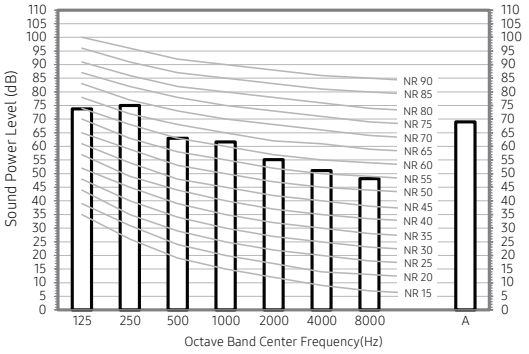
- Specifications may be subject to change without prior notice.
- Sound Power Level
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW
  - Measured according to ISO 3741.

Model	Power
AC100MXADKH/EU	69
AC100MXADNH/EU	69
AC100JXSCEH/EU	66
AC100JXSCGH/EU	66

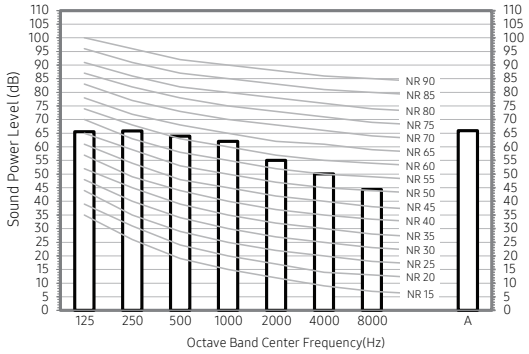
1) AC100MXADKH/EU



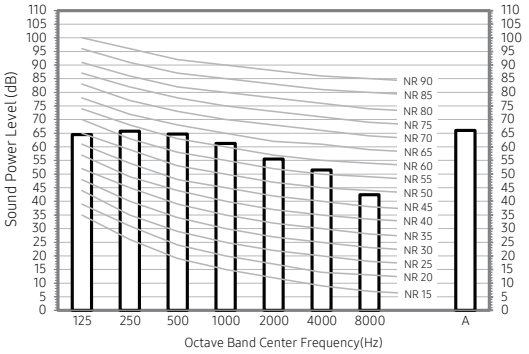
2) AC100MXADNH/EU



3) AC100JXSCEH/EU



4) AC100JXSCGH/EU



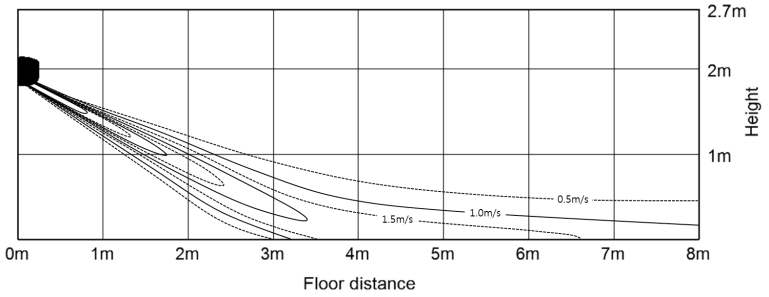
10. Temperature and air flow distribution

Indoor Unit

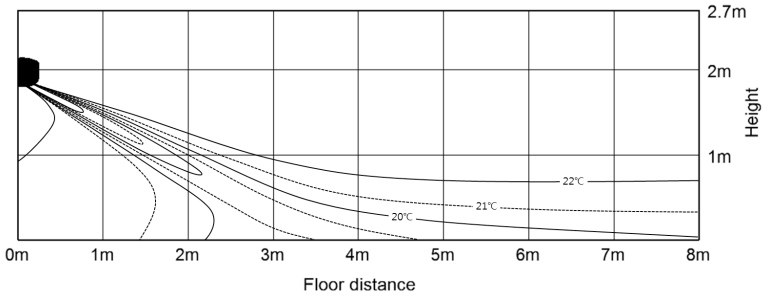
AC100MNTDEH/EU

Discharge angle : 27

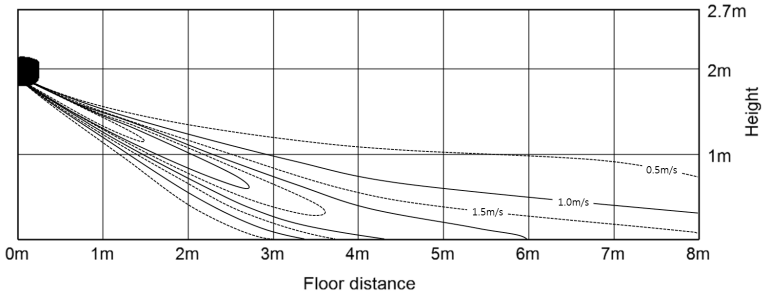
1) Cooling air velocity distribution



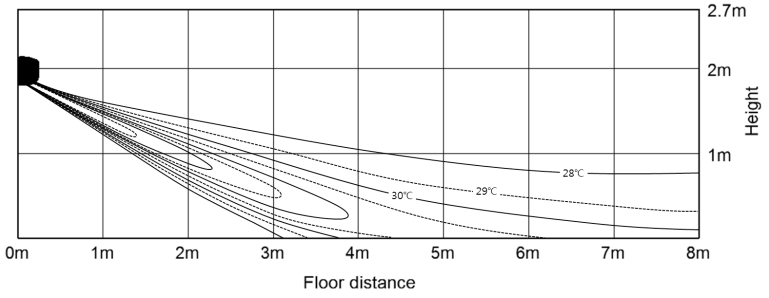
2) Cooling Temperature distribution



3) Heating air velocity distribution



4) Heating Temperature distribution



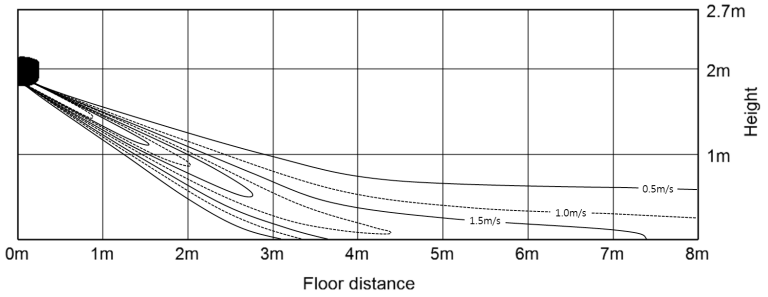
10. Temperature and air flow distribution

Indoor Unit

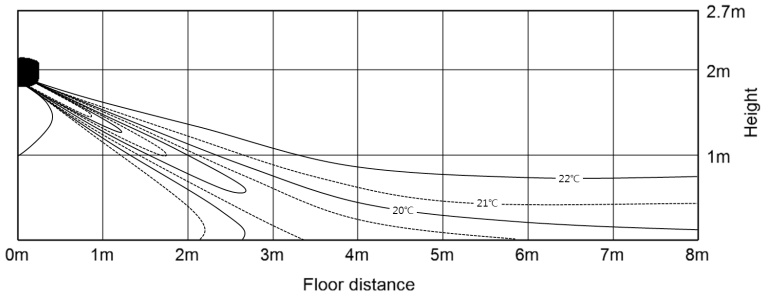
AC100MNTCEH/EU

Discharge angle : 27

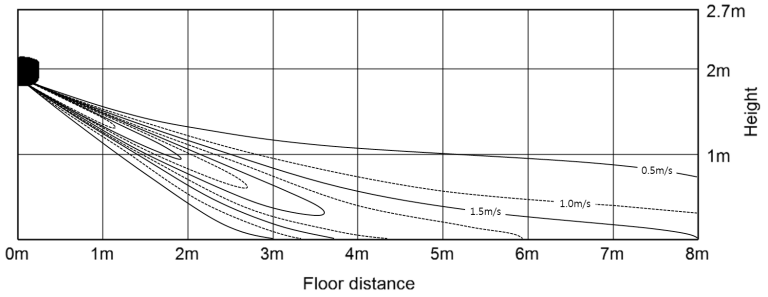
1) Cooling air velocity distribution



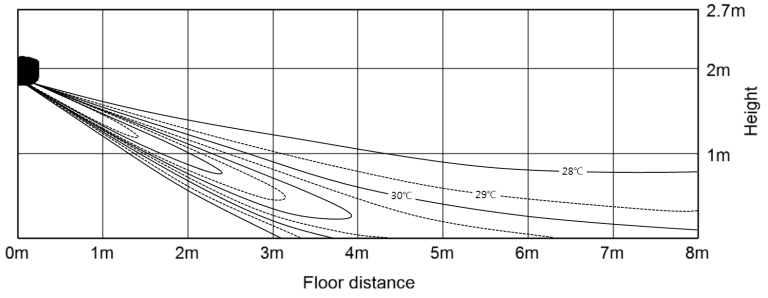
2) Cooling Temperature distribution



3) Heating air velocity distribution



4) Heating Temperature distribution



11. Operation Range

11-1. AC100MNTDEH + AC100MXAD✳H

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

11-2. AC100MNTCEH + AC100JXSC✳H (Low Temp.)

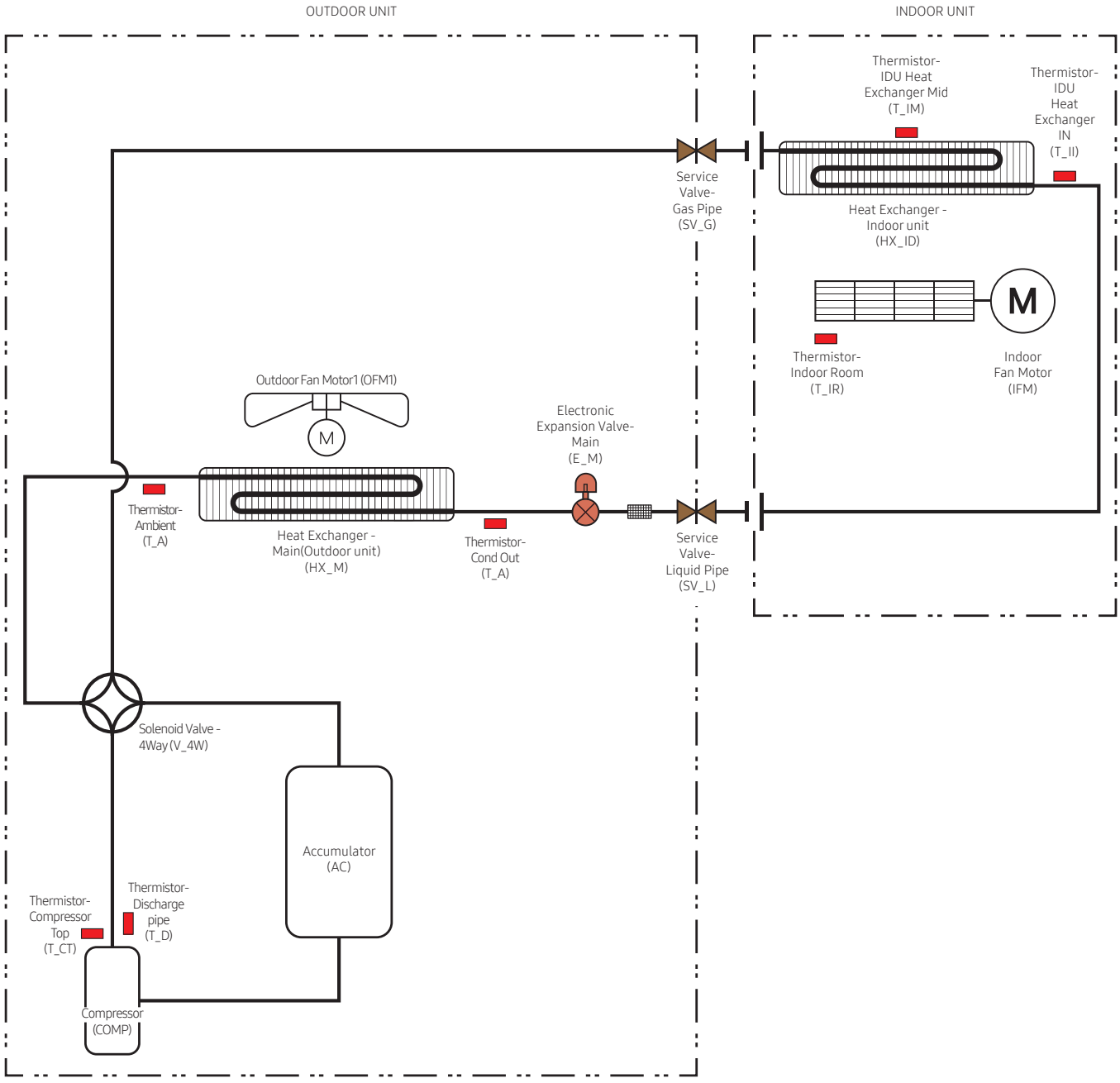
Mode	Outdoor Unit	Indoor Unit	Indoor Unit
	Temperature(DB)	Temperature(DB)	Humidity(RH)
Cooling	-20 °C ~ 50 °C	18 °C ~ 32 °C	80% or less
Heating	-25 °C ~ 24 °C	30 °C or less	-
Drying	-20 °C ~ 50 °C	18 °C ~ 32 °C	80% or less

NOTE

- The assumed installation conditions are follows.
  - The pipe length(including elbow) is 5 m.
  - The level difference is 0 m.

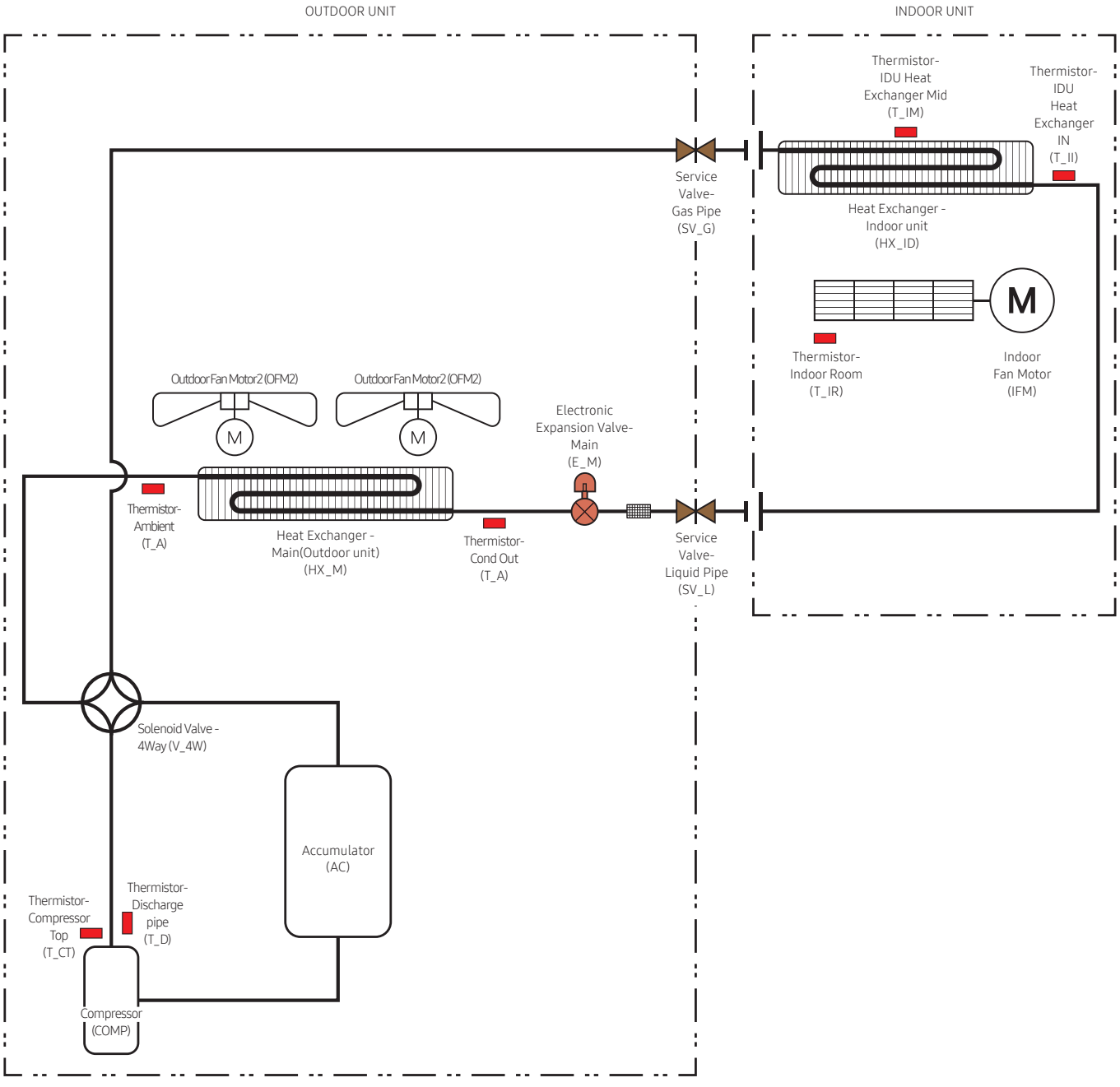
12. Piping Diagram

AC100MNTCEH+AC100MXADKH, AC100MNTCEH+AC100MXADNH



12. Piping Diagram

AC100MNTCEH+AC100JXSCEH, AC100MNTCEH+AC100JXSCGH

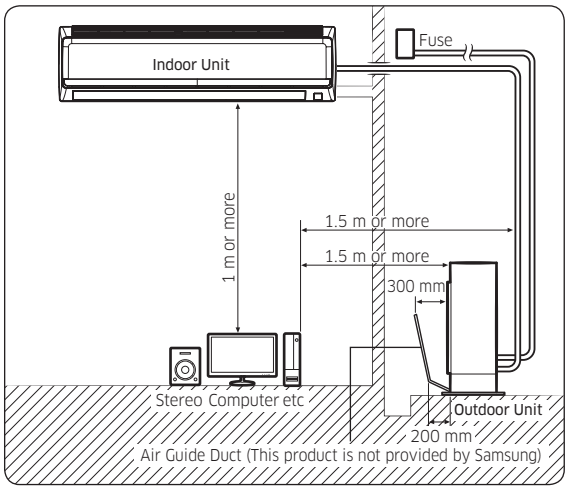


13. Installation

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 a 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.



- Install the unit at a height where its base can be firmly fixed in place.
- Make sure that the water dripping from the drain hose runs away correctly and safely.

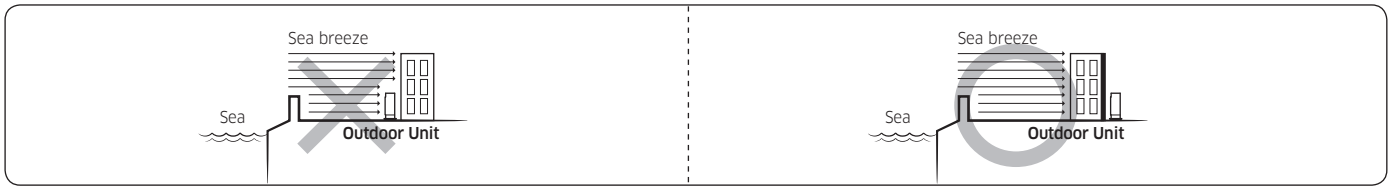
⚠ CAUTION

- 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 60 kg, do not install it on a suspended wall, but stand it on a floor.

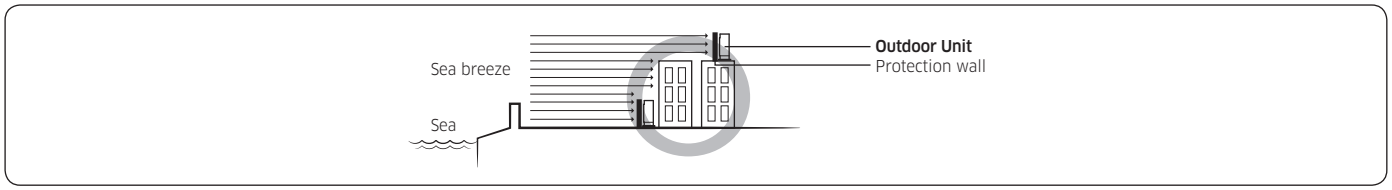
- When installing the outdoor unit at the seaside, make sure that it is not directly exposed to sea breeze. If you cannot find an adequate place free from direct sea breeze, construct a protection wall or a protective fence.
  - Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze. Failure to do so may cause a damage to the outdoor unit.

13. Installation

Choosing the installation location



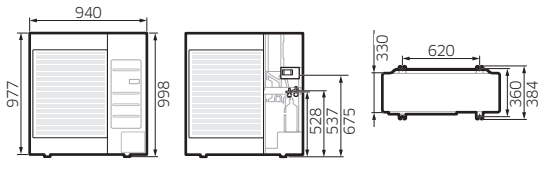
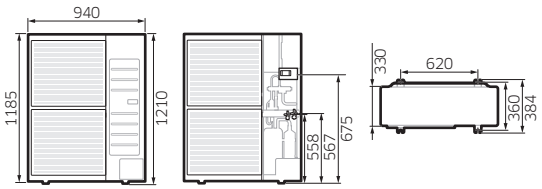
- If you cannot avoid installing the outdoor unit at the seaside, construct a protection wall around to block the sea breeze.
- Construct a protection wall with a solid material such as concrete to block the sea breeze. Make sure that the height and the width of the wall are 1.5 times larger than the size of the outdoor unit. Also, secure a space larger than 700 mm between the protection wall and the outdoor unit for exhausted air to ventilate.



CAUTION

- Depending on the condition of power supply, unstable power or voltage may cause malfunction of the parts or control system. (At the ship or places using power supply from electric generator...etc)
- Install the unit in a place where water can drain smoothly.
- If you have any difficulty finding installation location as prescribed above, contact your manufacturer for details.
- Be sure to clean the sea water and the dust on the heat exchanger of the outdoor unit and apply a corrosion inhibitor on it. (At least once in a year.)

Outdoor unit dimensions

A Type	B Type
AC090MXADKH/AC090MXADNH/AC100MXADKH/AC100MXADNH/ AC120MXADKH/AC120MXADNH/AC120MXASEH	AC140MXADKH/AC140MXADNH
	

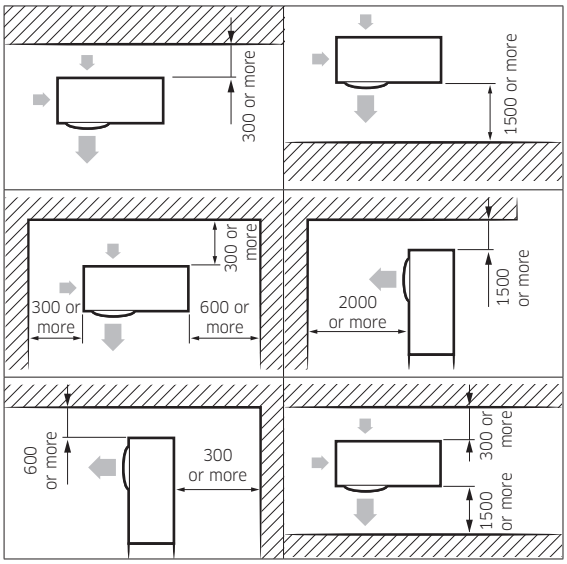
13. Installation

Choosing the installation location

Minimum clearances for the outdoor unit

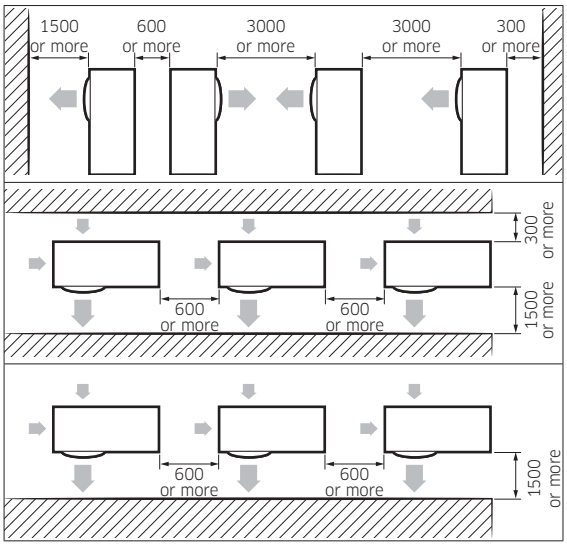
When installing 1 outdoor unit

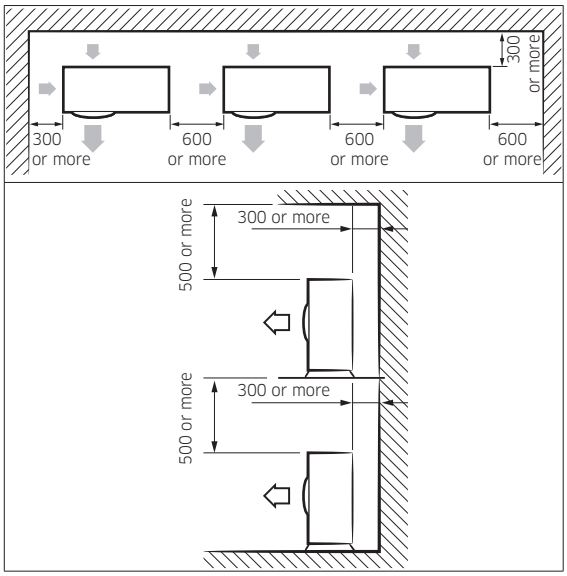
(Unit: mm)



When installing more than 1 outdoor unit

(Unit: mm)





13. Installation

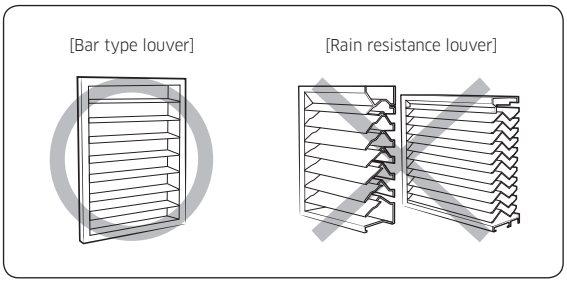
Choosing the installation location

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.



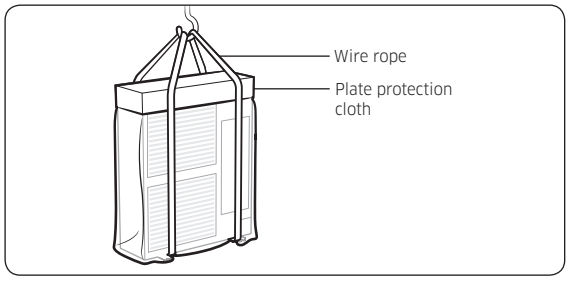
- Louver specifications.
  - Angle criteria : less than 20°
  - Opening ratio criteria : greater than 80%

Moving the outdoor unit with wire rope

(1) Before carrying the outdoor unit, fasten two wire ropes of 8 m 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.



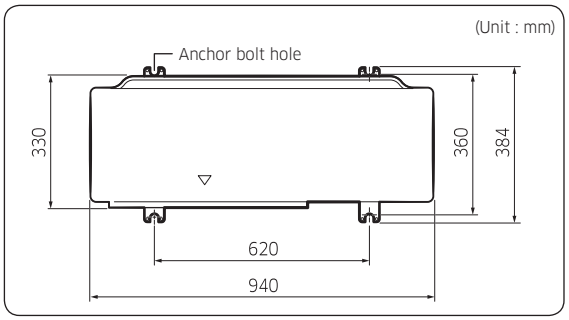
13. Installation

Fixing the outdoor unit in place

Fixing the outdoor unit in place

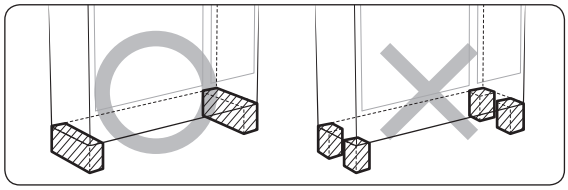
Install the outdoor unit on a rigid and stable base to prevent disturbance from any noise caused by vibration. When installing the unit at a height or in a location exposed to strong winds, fix the unit securely to a support (i.e., a wall or a ground).

Fix the outdoor unit with anchor bolts. Make sure that the anchor bolts are 20 mm or higher from the base surface.



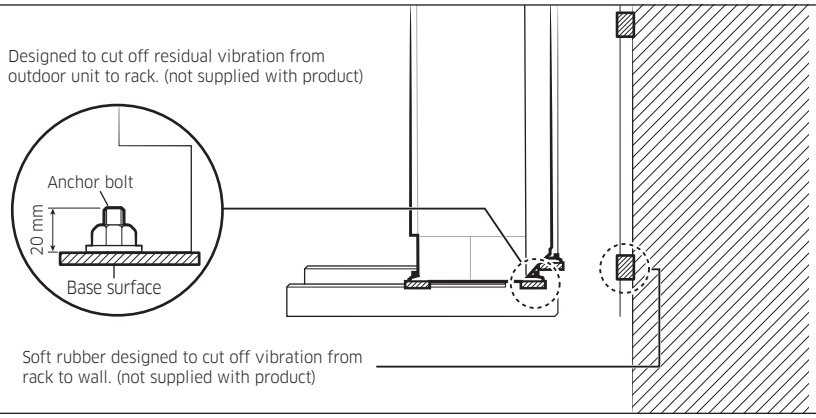
CAUTION

- 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.



- 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.

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.

CAUTION

- 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.

13. Installation

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

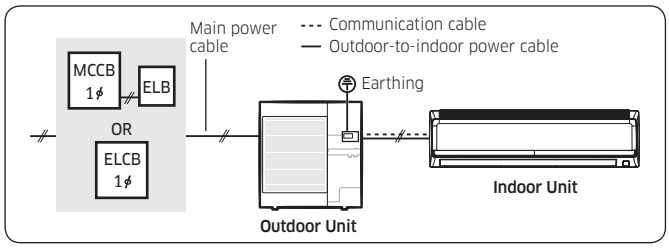
- During installation, make first the refrigerant connections and then the electrical connections. If the unit is uninstalled, first disconnect the electrical cables and then the refrigerant connections.
- Connect the air conditioner to the earthing system before making the electrical connections.

NOTE

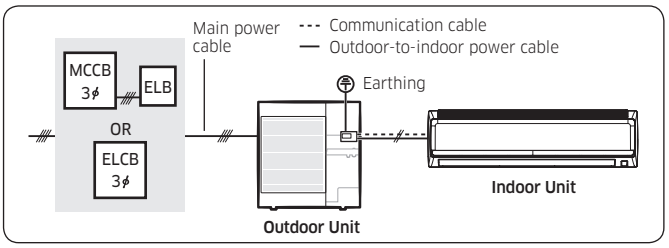
- Especially, if your outdoor unit is the one designed for Russian and European markets, consult the supply authority, if necessary, to estimate and reduce the supply system impedance before installation.

Air conditioning system examples

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



When using earth leakage circuit breaker (ELCB) for a 3-phase, 4-wire system (3P4W)



CAUTION

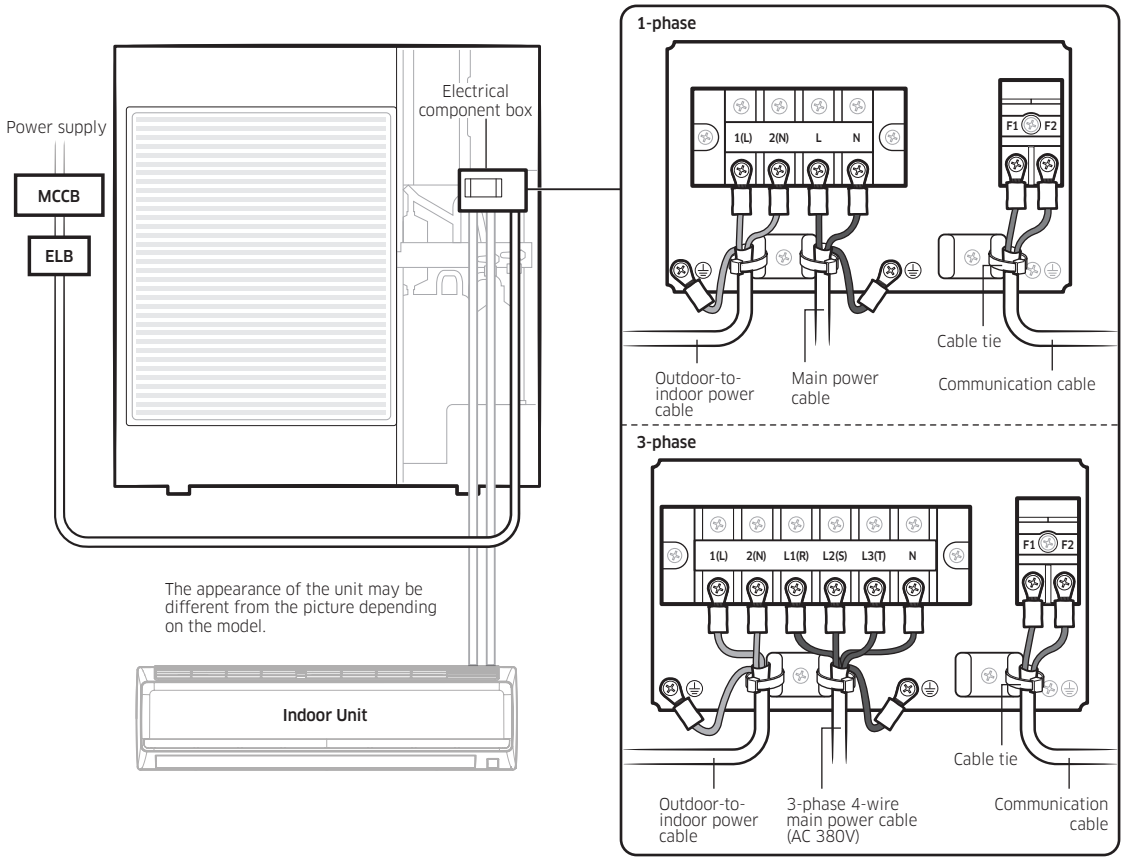
- If the outdoor unit is installed in a location vulnerable to an electric leak or submergence, make sure to install an ELCB.

13. Installation

Connecting the power cables, communication cable, and controllers

Connecting the main power cable

When using ELB for1 phase and 3 phase



CAUTION

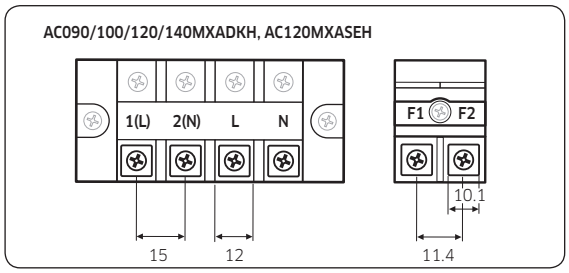
- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of supply rating.
- If the power is unbalanced greatly, it may shorten the life of the condenser. If the unbalanced power is exceeded over 4% of supply rating, 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 3 mm.
- Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
- Keep distances of 50 mm or more between power cable and communication cable.

13. Installation

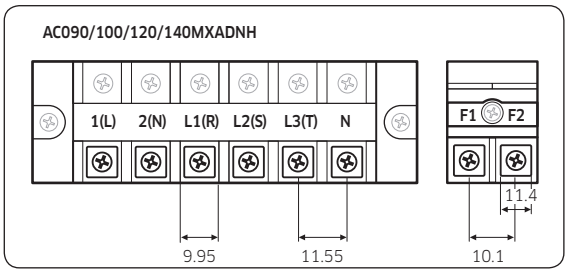
Connecting the power cables, communication cable, and controllers

Main power terminal block specifications

- 1-phase terminal block specifications



- 3-phase terminal block specifications



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.

Single phase

Indoor Unit	Outdoor unit	Hz	Volts	Min.	Max.	Cooling	Heating	Indoor Unit	Total	MCA	MFA
AC100MNTDEH	AC100MXADKH	50	220 to 240	198	264	24.0	24.0	1.1	25.1	25.1	30.0
AC100JXSCEH	AC100MNTCEH	50	220 to 240	198	264	32.0	32.0	1.1	33.1	33.1	40.0

13. Installation

Connecting the power cables, communication cable, and controllers

3-phase

Indoor Unit	Outdoor unit	Hz	Volts	Min.	Max.	Cooling	Heating	Indoor Unit	Total	MCA	MFA
AC100MNTDEH	AC100MXADNH	50	380 to 415	342	456.5	16.1	16.1	1.1	17.2	17.2	17.2
AC100JXSCGH	AC100MNTCEH	50	380 to 415	342	456.5	12.0	12.0	1.1	13.1	13.1	15.0

NOTE

(1) Voltage range
- Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits

(2) Maximum allowable voltage variation between phases is 2%.

(3) Wire size & type must comply with the applicable local and national code.
- Wire size: Based on the value of MCA.
- Wire type: 60245 IEC57(IEC) or H05RN-F(CENELEC) grade or more.

(4) MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker).

(5) MCA represents maximum input current.
- MFA represents capacity which may accept MCA
- Abbreviations

  MCA: Min. Circuit Amps. (A)

  MFA: Max. Fuse Amps. (A)

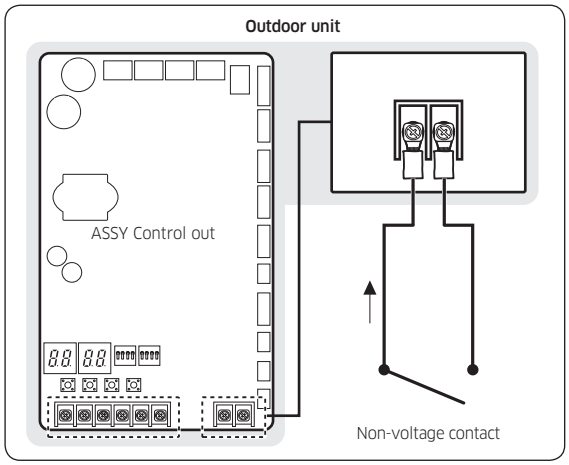
(6) This equipment complies with IEC 61000-3-12 provided that the short-circuit power Ssc is greater than or equal to Ssc (*2) at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power Ssc greater than or equal to Ssc(*2).

Model	Ssc[MVA]
AC100MXADKH	2.7
AC100MXADNH	1.4
AC100JXSCEH/EU	0.46
AC100JXSCGH/EU	2.98

13. Installation

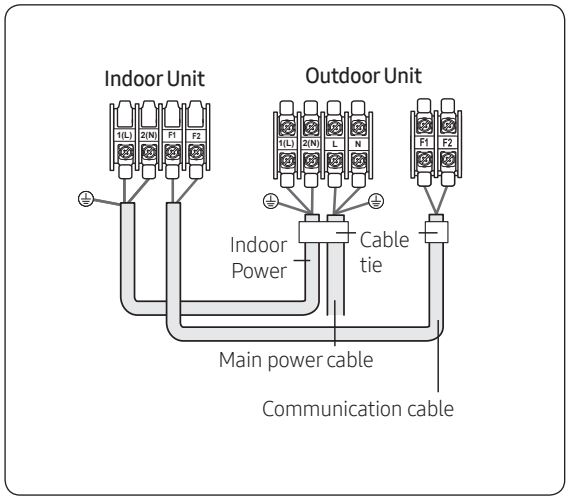
Connecting the power cables, communication cable, and controllers

Silence mode controller wiring diagram (AC090/100/120/140MXA✳✳H)

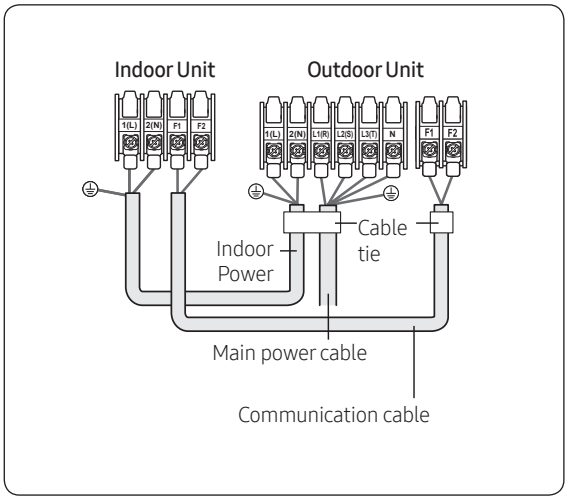


Connecting the outdoor-to-indoor power cable and the communication cable

1 phase (Wall mounted Type)



3 phase (Wall mounted Type)

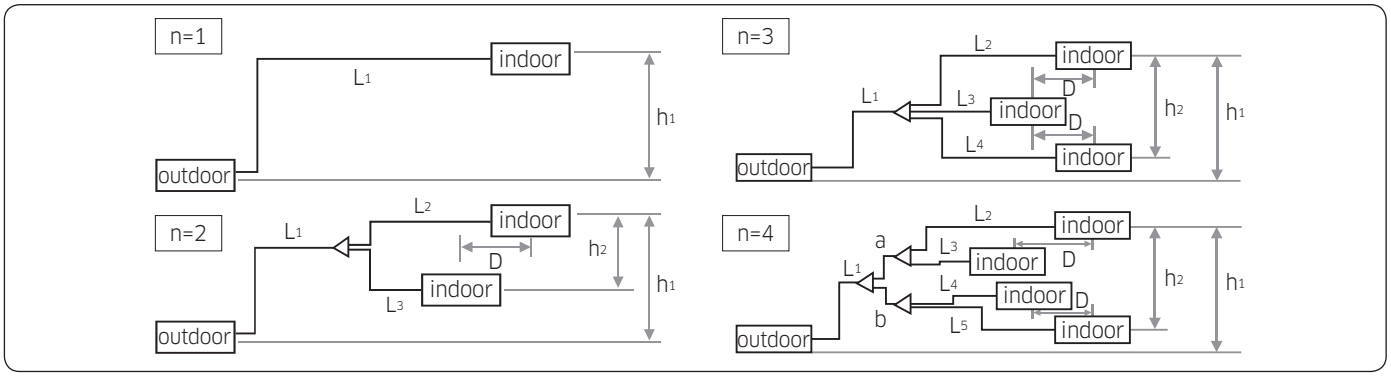


13. Installation

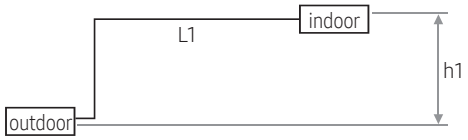
Connecting the refrigerant pipe

Items	Maximum allowable length	
	Single installation	DPM installation
Applicable outdoor unit models	AC100MXAD✳H	AC100MXAD✳H
Total pipe length (L1+...+Ln+1+a+b)	-	50 m
Main pipe (L1)	50 m	30 m
Max. distance among indoor units (D)	-	10 m
Max. length after branch	-	15 m
Max. height difference between outdoor and indoor units (h1)	30 m	30 m
Max. height difference among indoor units(h2)	-	0.5 m
Max Pipe length difference among indoor units after branch [L2-L3 or L2-L4 or L2-L5 or a-b or (a+L2)-(b+L4) or (a+L3)-(b+L5)]	-	5 m

- "n" means the number of indoor unit connection of DPM.



Items	Maximum allowable length
	Single installation
Applicable outdoor unit models	AC✳✳✳JXSC✳H
Main pipe (L1)	75 m
Max. height difference between outdoor and indoor units (h1)	30 m



- Use a joint kit that is only for DPM.
- Temper grade and minimum thickness of the refrigerant pipe

13. Installation

Connecting the refrigerant pipe

Outer diameter [mm]	Minimum thickness [mm]	Temper grade
ø6.35	0.7	C1220T-O
ø9.52	0.7	
ø12.70	0.8	
ø15.88	1.0	
ø15.88	0.8	C1220T-1/2H OR C1220T-H
ø19.05	0.9	
ø22.23	0.9	

13. Installation

Adding refrigerant (R-410A)

Installing DPM

DPM allowable Outdoor and indoor unit models

DPM allowable Outdoor and indoor unit models		
Outdoor unit	2 IDUs connection	3 IDUs connection
	Indoor Unit	Indoor Unit
AC100MXAD✳H	AC052MN✳DKH	AC035MN✳DKH

- Installation of multiple indoor units should consist of units that have the same capacity.
  e.g. When you install the AC100MXADKH outdoor unit as DPM combination such as 2 or 3 indoor units connection, only the combination of two AC035MN✳DKH or three AC052MN✳DKH is available.

Space requirements for indoor and outdoor units and piping installation

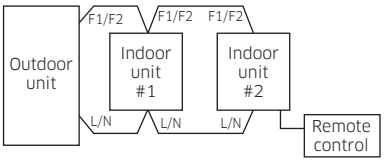
(Refer to page 35~38 installation specification.)

- Two indoor units should be installed in one area which is not divided by a wall.
- The distance between two indoor units should be within a straight-line of 10m.
- After branching, the distance between the piping connected to the two indoor units should be within 1m.
- The height difference between two units should be within 0.5m.
- Use the joint KIT that is only for DPM. (Please refer to the table below)

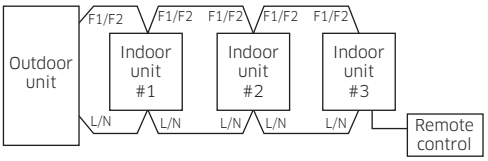
DPM KIT	2-Indoor Units connection	3-Indoor Units connection	4-Indoor Units connection
	MXJ-2D2509K	MXJ-3D2509K	MXJ-4D2509K

Connecting communication line and wired remote controller

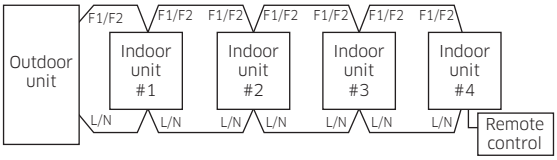
- In case of 2 indoor units connection



- In case of 3 indoor units connection



- In case of 4 indoor units connection



- The wired remote controller can be used with any of the DPM indoor units.

13. Installation

Connecting the refrigerant pipe

Operation and specification

- The two, the three, or the four sets of the indoor units with DPM installation which are controlled by wired and wireless remote controller work equally. (All controls such as ON/OFF, cooling/heating/dehumidification/ ventilation, high/ medium/low wind, fixing louver angle/swing are equally applied.)
- Thermo OFF which stops when indoor temperature reaches set temperature works by the average sensor value of the indoor temperature of the all indoor units.
- When one of the several indoor units has a problem, they protect operation or stop working.

Instruction for installation and operation

- You should install the DPM according to the above installation specification and eliminate the factors that give electrical load to the both indoor units when installing and operating. (Heater / window / front door / ventilation / partition that divides space)
- You should provide sufficient instructions about the operation method and specification features to users and fill in caution phrases on wired remote controller when necessary.
  - <The air-conditioners in this area are special type to be controlled simultaneously.>

Set up indoor quantity by key switch(K1, K2)

- Press and hold K1 switch to enter the setting mode on the number of the installed indoor unit : Check “A0” sign on 7-segment
  - Press K2 switch to set the number of the installed indoor unit :
    Ex) If there are two indoor units, press K2 switch twice, and check "A2" sign on 7-segment.
    If there are three indoor units, press K3 switch three times, and check "A3" sign on 7-segment.
    If there are four indoor units, press K4 switch four times, and check "A4" sign on 7-segment.
  - Press K1 switch to complete setting the number of the installed indoor unit : Check "AA" sign on 7-segment.

13. Installation

Connecting the drain hose to the outdoor unit

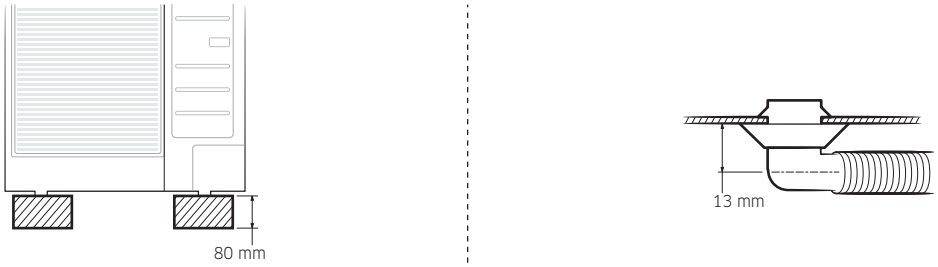
When using the air conditioner in the heating mode, ice may accumulate . During de-icing (defrost operation), the condensed water must be drained off safely. Consequently, you must install a drain hose on the outdoor unit, following the instructions below.

(1) Make space more than 80 mm between the bottom of the outdoor unit and the ground for installation of the drain hose, as shown in figure.

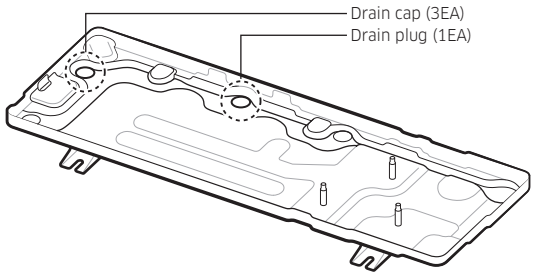
(2) Insert the drain plug into the hole on the underside of the outdoor unit.

(3) Connect the drain hose to the drain plug.

(4) Ensure that the drained water runs off correctly and safely.



(5) Be sure to plug the rest of drain holes not connected with drain plugs using drain caps.



- When installing the product, make sure that the rack is not placed under the drain hole.
- If the product is installed in a region of heavy snow, allow enough separation distance between the product and the ground.

13. Installation

Checking the earthing

If the power distribution circuit does not have a earthing or the earthing does not comply with specifications, an earthing electrode must be installed. The corresponding accessories are not supplied with the air conditioner.

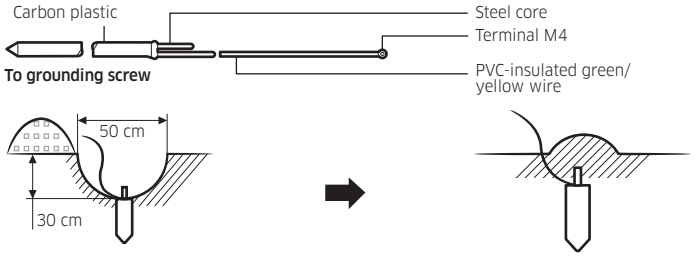
(1) Select an earthing electrode that complies with the specifications given in the illustration.

(2) Connect the flexible hose to the flexible hose port.

- In damp hard soil rather than loose sandy or gravel soil that has a higher earthing resistance.
- Away from underground structures or facilities, such as gas pipes, water pipes, telephone lines and underground cables.
- At least two metres away from a lightening conductor earthing electrode and its cable.

NOTE

- The earthing wire for the telephone line cannot be used to ground the air conditioner.



(3) Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.

(4) Install a green/yellow coloured earthing wire:

- If the earthing wire is too short, connect an extension lead in a mechanical way and wrap it with insulating tape (do not bury the connection).
- Secure the earthing wire in position with staples.

NOTE

- If the earthing electrode is installed in an area with heavy traffic, its wire must be connected securely.

(5) Carefully check the installation by measuring the earthing resistance with a earth resistance tester. If the resistance is above the required level, drive the electrode deeper into the ground or increase the number of earthing electrodes.

(6) Connect the earthing wire to the electrical component box inside of the outdoor unit.

13. Installation

Relocating the indoor and outdoor units

(1) Pump down refrigerant.

(2) Remove the power cord.

(3) Disconnect the assembly cable from the indoor and outdoor units.

(4) Remove the flare nuts connecting the indoor units and the pipes. At this time, cover the pipes of the indoor unit and the other pipes using a cap or vinyl plug to avoid foreign material entering.

(5) Disconnect the pipes connected to the outdoor units. At this time, cover the valve of the outdoor units and the other pipes using a cap or vinyl plug to avoid foreign material entering.

(6) Note: Make sure you do not bend the connection pipes in the middle and store together with the cables.

(7) Move the indoor and outdoor units to a new location.

(8) Remove the mounting plate for the indoor unit and move it to a new location.

Technical specifications

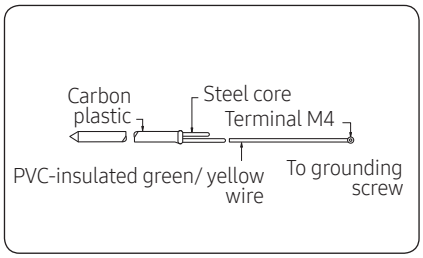
Model	Net weight	Net dimension (W × D × H)
AC100MXADKH	72.0 kg	940 mm × 330 mm × 998 mm
AC100MXADNH	72.0 kg	940 mm × 330 mm × 998 mm
AC100JXSCEH	96.0 kg	940 mm × 330 mm ×1420 mm
AC100JXSCGH	96.0 kg	940 mm × 330 mm ×1420 mm

13. Installation

Checking correct grounding

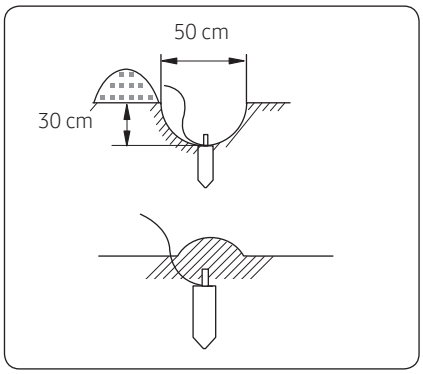
If the power distribution circuit does not have a grounding or the grounding does not comply with specifications, an grounding electrode must be installed. The corresponding accessories are not supplied with the air conditioner.

(1) Select an grounding electrode that complies with the specifications given in the illustration.



(2) Connect the flexible hose to the flexible hose port.

- In damp hard soil rather than loose sandy or gravel soil that has a higher grounding resistance.
- Away from underground structures or facilities, such as gas pipes, water pipes, telephone lines and underground cables.
- At least two metres away from a lightening conductor grounding electrode and its cable.



NOTE

- The grounding wire for the telephone line cannot be used to ground the air conditioner.

(3) Finish wrapping insulating tape around the rest of the pipes leading to the outdoor unit.

(4) Install a green/yellow coloured grounding wire :

- If the grounding wire is too short, connect an extension lead, in a mechanical way and wrapping it with insulating tape (do not bury the connection).
- Secure the grounding wire in position with staples.

NOTE

- If the grounding electrode is installed in an area of heavy traffic, its wire must be connected securely.

(5) Carefully check the installation, by measuring the grounding resistance with a ground resistance tester. If the resistance is above required level, drive the electrode deeper into the ground or increase the number of grounding electrodes.

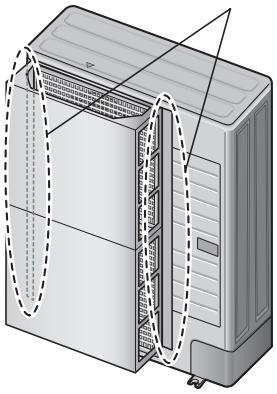
(6) Connect the grounding wire to the electrical component box inside of the outdoor unit.

13. Installation

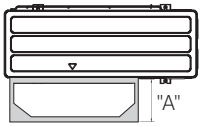
Installing the wind baffle

If you operate the cooling operation of air conditioner in the condition where ambient temperature is lower than -5 °C DB(Dry bulb), or the outdoor unit might be faced with strong wind directly, the wind baffle should be installed to prevent the outdoor unit fan from operating in reverse way.

Make holes on both sides and attach the wind baffle using screws.

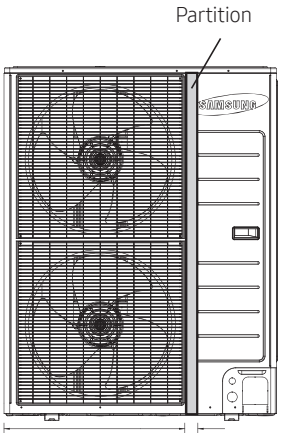


<Front View>



<Top Down View>

"A" – Should be 200 mm or longer



CAUTION

- When attaching the wind baffle using screws, be careful that the screws do not damage the partition.

NOTE

- Install outdoor units with the back surface facing wall side to eliminate the effects of external wind.

14. Accessory

Controller

Classification	Product	Image	Model	Remark
Intergrated Management System	DMS 2.0		MIM-D00AN	
	DMS 2.5		MIM-D01AN	
	S-NET 3		MST-P3P	
Buiding Management System	BACnet G/W		MIM-B17N	
			MIM-B17BN	
	LONWORKS G/W		MIM-B18N	
			MIM-B18BN	
	SIM (Signal Interface Module)		MIM-B12N	
Centralized Control System	On/Off Controller		MCM-A202DN	
	Touch Controller		MCM-A300N	
	Wi-Fi Kit		MIM-H03N	

14. Accessory

Controller

Classification	Product	Image	Model	Remark
Individual Control System	Wireless remote Controller		MR-EH00	Except for 360 Cassette
	Wired remote Controller		MWR-WE10N	
			MWR-WE11N	Include 360 Cassette Airflow Control function
			MWR-SH00N	Simple Type
			MWR-SH10N	Touch Simple Type
Zone Control System	Zone Controller (Master controller +Damper controller)		MWR-ZS00N	
	Zone Controller (Master controller)		MWR-ZS10N	
	External room sensor		MRW-TS	
Others	External room sensor		MRW-TA	
	Compatible interface module		MIM-N01	
	External contact interface module		MIM-B14	
	S-Converter		MIM-C02N	
	Wireless signal receiver		MRK-A10N	Duct type only

- In case you want more information about the accessories, please refer to the control and accessories TDB on pvi.samsung.com site.

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