SAMSUNG

EHS Technical Data Book

EHS Split for Europe (R32, 50Hz, HP)



Model : Outdoor unit (AE***RXEDEG/EU, AE***RXEDGG/EU, AE***DXEDEG/EU, AE***DEXDGG/EU)
Indoor unit (AE160DNZSPG/EU, AE160DNYSPG/EU, AE200DNXSPG/EU, AE200DNWSPG/EU)

History

Version	Modification	Date	Remark
Ver.1.0	Released 2024 EHS Split including New Hydro Unit for Europe TDB	24. 10. 30	

Nomenclature

Model Name

AE	160	D	X	E	D	E	G	/	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AE	EHS

(2) Capacity

X 1/10 kW (3 digits)

(3) Version

R	2019
D	2024

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Feature 1

E	Split

(6) Feature 2

D	DELUXE

(7) Rating Voltage

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

(8) Mode

G	Heat Pump (R32)

Nomenclature

Model Name

AE	200	D	N	W	S	P	G	/	EU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

(1) Classification

AE	EHS

(2) Capacity

x Liter (3 digits)

(3) Version

D	2024

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

W	ClimateHub
X	ClimateHub, 2 zone
Y	Hydro Unit
Z	Hydro Unit, 2 zone

(6) Feature

S	Split

(7) Rating Voltage

P	220~240V, 50/60Hz, 1Φ 380~415V, 50/60Hz, 3Φ

(8) Mode

G	Heat Pump (R32)

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1.Line-up

1-1. Outdoor unit

Capacity		4 / 6 kW	9.0 kW	12.5 kW	16.0 kW
Image					
Model	1phase	AE040RXEDEG/EU AE060RXEDEG/EU	AE090RXEDEG/EU	AE125DXEDEG/EU	AE160DXEDEG/EU
	3phase	-	AE090RXEDGG/EU	AE125DXEDGG/EU	AE160DXEDGG/EU

1.Line-up

1-2. Indoor units

Capacity / Type	200 L	200 L
Model	AE200DNXSPG/EU	AE200DNWSPG/EU
ClimateHub		
Capacity / Type	5~16 kW	5~16 kW
Model	AE160DNZSPG/EU	AE160DNYSPG/EU
Hydro Unit		

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE125DXEDEG/EU	AE160DXEDEG/EU
Power Supply					Φ, #, V, Hz	1,2,220-240,50	1,2,220-240,50
System	Mode				-	Heat Pump (A2W)	Heat Pump (A2W)
	Performance	Capacity	Heating	A2W condition #1. (A7/W35) 1)*	W	12,500	16,000
					Btu/h	42,700	54,600
				A2W condition #2. (A7/W45) 2)*	W	12,100	15,500
				A2W condition #3. (A7/W55) 3)*		12,100	12,500
				A2W condition (A2/W35) 4)*		12,000	15,000
				A2W condition (A-7/W35) 4)*		12,000	14,000
				Performance (A-10/W35)		12,500	16,000
			Cooling	A2W condition #1. (A35/W18) 1)*	W	12,500	13,500
					Btu/h	42,700	46,100
				A2W condition #2. (A35/W7) 2)*	W	9,500	10,500
	Power	Power Input	Heating	A2W condition #1. (A7/W35) 1)*	W	2,570	3,520
				A2W condition #2. (A7/W45) 2)*		3,270	4,390
				A2W condition #3. (A7/W55) 3)*		4,030	4,240
				A2W condition (A2/W35) 4)*		3,160	4,320
				A2W condition (A-7/W35) 4)*		4,310	5,710
			Cooling	A2W condition #1. (A35/W18) 1)*	W	3,290	3,550
				A2W condition #2. (A35/W7) 2)*		3,220	3,620
		Current Input	Heating	A2W condition #1. (A7/W35) 1)*	A	12.15	16.64
				A2W condition #2. (A7/W45) 2)*		15.45	20.75
			Cooling	A2W condition #1. (A35/W18) 1)*	A	15.55	16.78
				A2W condition #2. (A35/W7) 2)*		15.22	17.11
		Current	MCA		A	32.0	32.0
			MFA		A	35.2	35.2
	Efficiency	COP	Heating	A2W condition #1. (A7/W35) 1)*	W/W	4.86	4.54
				A2W condition #2. (A7/W45) 2)*		3.70	3.53
				A2W condition #3. (A7/W55) 3)*		3.00	2.90
				A2W condition (A2/W35) 4)*		3.95	3.70
				A2W condition (A-7/W35) 4)*		2.90	2.80
		EER	Cooling	A2W condition #1. (A35/W18) 1)*	W/W	3.80	3.80
				A2W condition #2. (A35/W7) 2)*		2.95	2.90
		LWT 35°C	PdesignH		kW	12.5	13.5
			SCOP		W/W	4.73	4.70
			SCOP Class		-	A+++	A+++
		LWT 55°C	PdesignH		W	12.1	12.5
			SCOP		W/W	3.46	3.45
			SCOP Class		-	A++	A++
		SEER			W/W	4.85	4.80
		Tank Efficiency (Only Tank Integrated Hydro Unit)	Heating up time		h /min	0:53	0:53
			Water Heating	Declared load profile	-	L	L
				ηwh (water heating fficiency)	%	148	148
				Energy efficiency Class	-	A+	A+
	Water Flow	Water Flow Rate (Nominal)		Heating	LPM	36.0	46.0
				Cooling	LPM	36.0	39.0
		Water Flow Rate		Min	LPM	7	7
				Max	LPM	58	58
		Water Pressure (Max)			bar	3	3
		Leaving Water Temperature	Heating	Min.	°C	15	15
				Max.	°C	65	65
			Cooling	Min.	°C	5	5
				Max.	°C	25	25
		DHW		Max.	°C	55	55

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE125DXEDEG/EU	AE160DXEDEG/EU
System	Refrigerant Connections	Refrigerant pipe (To outdoor unit)		Type	-	Flare nut	Flare nut
				Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	12.70	12.70
		Installation Limitation		Max Length	m	50	50
				Max Height	m	30	30
		Chargeless Length (Nominal	Heating	Max Length	m	30	30
			Cooling	Max Length	m	15	15
		Connection Direction			-	Right/Rear/Downward	Right/Rear/Downward
	Refrigerant	Type			-	R32	R32
		Factory Charging			kg	1.84	1.84
					tCO_2e	1.24	1.24
		Control Method			-	EEV	EEV
Outdoor Unit	Compressor	Type			-	BLDC Twin Rotary	BLDC Twin Rotary
		Model Name			-	UB5TD8450FJX	UB5TD8450FJX
		Oil		Type	-	PVE	PVE
				Initial Charge	cc	1,500	1,500
		Quantity			EA	1	1
		Output			W	3423	3423
		Starting method			-	Inverter driven	Inverter driven
	Heat exchanger (Condenser)	Type			-	Fin & Tube	Fin & Tube
		Tube type			-	Φ7	Φ7
		Length			mm	1058/1029/1001	1058/1029/1001
		Rows	Quantity		EA	3	3
		Stages	Quantity		EA	38	38
		Fin pitch			mm	1.5	1.5
		Passes	Quantity		EA	18-9	18-9
		Face area			m^2	0.84	0.84
		Fin	Type		-	Corrugate	Corrugate
			Treatment		-	Anti Salt	Anti Salt
	Fan	Type			-	Propeller Fan	Propeller Fan
		Discharge direction				Horizontal	Horizontal
		Air Flow Rate		Heating	m^3/min	87	87
				Cooling	m^3/min	70	81
		Quantity			EA	1	1
	Fan motor	Model			-	SIC-88FWJ-F1122-1	SIC-88FWJ-F1122-1
		Output			W	122	122
		Drive			-	Direct drive	Direct drive
		Speed	Heating		rpm	640	640
			Cooling		rpm	530	600
		Quantity			EA	1	1
	4-Way Valve	Type (Model)			-	SHF-20D-46	SHF-20D-46
	Base Heater	Power Input			W	150	150
	Sound Level	Sound Pressure Level		Heating	dB(A)	48	49
				Cooling	dB(A)	51	55
		Sound Power Level		Heating	dB(A)	61	62
		Sound Pressure (Quiet 35dB(A)) @5m		Heating	dB(A)	35	35
				Cooling	dB(A)	35	35
	Connections	Refrigerant pipe		Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	12.70	12.70
	Casing	Color			-	Shadow Gray	Shadow Gray
		Material			-	GI-SGCC	GI-SGCC
	Packing	Material			-	EPS/BOX	EPS/BOX
		Weight			kg	9.5	9.5
	External Dimension	Net Weight			kg	89.0	89.0
		Shipping Weight			kg	99.0	99.0
		Net Dimensions (WxHxD)			mm	998 x 850 x 500	998 x 850 x 500
		Shipping Dimensions (WxHxD)			mm	1070 x 1018 x 630	1070 x 1018 x 630
	Operating Temp. Range	Heating			℃	-25~43	-25~43
		Cooling			℃	10~46	10~46
		D.Hot Water			℃	-25~43	-25~43

NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB]
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB]
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB]
  4)* A2W Condition : (A2W35) Water In/Out -/35℃, Outdoor Air 2℃[DB]/1℃[WB] / (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- 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
- These products contain R32 (GWP=675)/R410A (GWP=2088) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE125DXEDGG/EU	AE160DXEDGG/EU
Power Supply					Φ, #, V, Hz	3,4,380-415,50	3,4,380-415,50
System	Mode				-	Heat Pump (A2W)	Heat Pump (A2W)
	Performance	Capacity	Heating	A2W condition #1. (A7/W35) 1)*	W	12,500	16,000
					Btu/h	42,700	54,600
				A2W condition #2. (A7/W45) 2)*	W	12,100	15,500
				A2W condition #3. (A7/W55) 3)*		12,100	12,500
				A2W condition (A2/W35) 4)*		12,000	15,000
				A2W condition (A-7/W35) 4)*		12,000	14,000
				Performance (A-10/W35)		12,500	16,000
			Cooling	A2W condition #1. (A35/W18) 1)*	W	12,500	13,500
					Btu/h	42,700	46,100
				A2W condition #2. (A35/W7) 2)*	W	9,500	10,500
	Power	Power Input	Heating	A2W condition #1. (A7/W35) 1)*	W	2,570	3,520
				A2W condition #2. (A7/W45) 2)*		3,270	4,390
				A2W condition #3. (A7/W55) 3)*		4,030	4,240
				A2W condition (A2/W35) 4)*		3,160	4,320
				A2W condition (A-7/W35) 4)*		4,310	5,710
			Cooling	A2W condition #1. (A35/W18) 1)*	W	3,290	3,550
				A2W condition #2. (A35/W7) 2)*		3,220	3,620
		Current Input	Heating	A2W condition #1. (A7/W35) 1)*	A	4.03	5.52
				A2W condition #2. (A7/W45) 2)*		5.13	6.89
			Cooling	A2W condition #1. (A35/W18) 1)*	A	5.16	5.57
				A2W condition #2. (A35/W7) 2)*		5.05	5.68
		Current	MCA		A	16.1	16.1
			MFA		A	17.7	17.7
	Efficiency	COP	Heating	A2W condition #1. (A7/W35) 1)*	W/W	4.85	4.54
				A2W condition #2. (A7/W45) 2)*		3.70	3.53
				A2W condition #3. (A7/W55) 3)*		3.00	2.90
				A2W condition (A2/W35) 4)*		3.95	3.70
				A2W condition (A-7/W35) 4)*		2.90	2.80
		EER	Cooling	A2W condition #1. (A35/W18) 1)*	W/W	3.80	3.80
				A2W condition #2. (A35/W7) 2)*		2.95	2.90
		LWT 35°C	PdesignH		kW	12.5	13.5
			SCOP		W/W	4.73	4.70
			SCOP Class		-	A+++	A+++
		LWT 55°C	PdesignH		W	11.5	12.5
			SCOP		W/W	3.46	3.45
			SCOP Class		-	A++	A++
		SEER			W/W	4.85	4.80
		Tank Efficiency (Only Tank Integrated Hydro Unit)	Heating up time		h /min	0:53	0:53
			Water Heating	Declared load profile	-	L	L
				ηwh (water heating fficiency)	%	148	148
				Energy efficiency Class	-	A+	A+
	Water Flow	Water Flow Rate (Nominal)		Heating	LPM	36.0	46.0
				Cooling	LPM	36.0	39.0
		Water Flow Rate		Min	LPM	7	7
				Max	LPM	58	58
		Water Pressure (Max)			bar	3	3
		Leaving Water Temperature	Heating	Min.	°C	15	15
				Max.	°C	65	65
			Cooling	Min.	°C	5	5
				Max.	°C	25	25
		DHW		Max.	°C	55	55

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE125DXEDGG/EU	AE160DXEDGG/EU
System	Refrigerant Connections	Refrigerant pipe (To outdoor unit)		Type	-	Flare nut	Flare nut
				Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	12.70	12.70
		Installation Limitation		Max Length	m	50	50
				Max Height	m	30	30
		Chargeless Length (Nominal	Heating	Max Length	m	30	30
			Cooling	Max Length	m	15	15
		Connection Direction			-	Right/Rear/Downward	Right/Rear/Downward
	Refrigerant	Type			-	R32	R32
		Factory Charging			kg	1.84	1.84
					tCO_2e	1.24	1.24
		Control Method			-	EEV	EEV
Outdoor Unit	Compressor	Type			-	BLDC Twin Rotary	BLDC Twin Rotary
		Model Name			-	UB5TD8450FJX	UB5TD8450FJX
		Oil		Type	-	PVE	PVE
				Initial Charge	cc	1,500	1,500
		Quantity			EA	1	1
		Output			W	3423	3423
		Starting method			-	Inverter driven	Inverter driven
	Heat exchanger (Condenser)	Type			-	Fin & Tube	Fin & Tube
		Tube type			-	Φ7	Φ7
		Length			mm	1058/1029/1001	1058/1029/1001
		Rows	Quantity		EA	3	3
		Stages	Quantity		EA	38	38
		Fin pitch			mm	1.5	1.5
		Passes	Quantity		EA	18-9	18-9
		Face area			m^2	0.84	0.84
		Fin	Type		-	Corrugate	Corrugate
			Treatment		-	Anti Salt	Anti Salt
	Fan	Type			-	Propeller Fan	Propeller Fan
		Discharge direction				Horizontal	Horizontal
		Air Flow Rate		Heating	m^3/min	87	87
				Cooling	m^3/min	70	81
		Quantity			EA	1	1
	Fan motor	Model			-	SIC-88FWJ-F1122-1	SIC-88FWJ-F1122-1
		Output			W	122	122
		Drive			-	Direct drive	Direct drive
		Speed	Heating		rpm	640	640
			Cooling		rpm	530	600
		Quantity			EA	1	1
	4-Way Valve	Type (Model)			-	SHF-20D-46	SHF-20D-46
	Base Heater	Power Input			W	150	150
	Sound Level	Sound Pressure Level		Heating	dB(A)	48	49
				Cooling	dB(A)	51	55
		Sound Power Level		Heating	dB(A)	61	62
		Sound Pressure (Quiet 35dB(A)) @5m		Heating	dB(A)	35	35
				Cooling	dB(A)	35	35
	Connections	Refrigerant pipe		Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	12.70	12.70
	Casing	Color			-	Shadow Gray	Shadow Gray
		Material			-	GI-SGCC	GI-SGCC
	Packing	Material			-	EPS/BOX	EPS/BOX
		Weight			kg	9.5	9.5
	External Dimension	Net Weight			kg	89.0	89.0
		Shipping Weight			kg	99.0	99.0
		Net Dimensions (WxHxD)			mm	998 x 850 x 500	998 x 850 x 500
		Shipping Dimensions (WxHxD)			mm	1070 x 1018 x 630	1070 x 1018 x 630
	Operating Temp. Range	Heating			℃	-25~43	-25~43
		Cooling			℃	10~46	10~46
		D.Hot Water			℃	-25~43	-25~43

NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB]
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB]
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB]
  4)* A2W Condition : (A2W35) Water In/Out -/35℃, Outdoor Air 2℃[DB]/1℃[WB] / (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- 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
- These products contain R32 (GWP=675)/R410A (GWP=2088) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE040RXEDEG/EU	AE060RXEDEG/EU
Power Supply					Φ, #, V, Hz	1,2,220-240,50	1,2,220-240,50
System	Mode				-	Heat Pump (A2W)	Heat Pump (A2W)
	Performance	Capacity	Heating	A2W condition #1. (A7/W35) [1]*	W	4,400	6,000
					Btu/h	15,000	20,500
				A2W condition #2. (A7/W45) [2]*	W	4,200	5,600
				A2W condition #3. (A7/W55) [3]*		3,900	5,200
				A2W condition (A2/W35) [4]*		4,200	5,200
				A2W condition (A-7/W35) [4]*		4,600	5,500
				Performance (A-10/W35)		-	-
			Cooling	A2W condition #1. (A35/W18) [1]*	W	5,000	6,500
					Btu/h	17,100	22,200
				A2W condition #2. (A35/W7) [2]*	W	3,600	4,700
	Power	Power Input	Heating	A2W condition #1. (A7/W35) [1]*	W	846	1,220
				A2W condition #2. (A7/W45) [2]*		1,090	1,509
				A2W condition #3. (A7/W55) [3]*		1,320	1,812
				A2W condition (A2/W35) [4]*		1,100	1,481
				A2W condition (A-7/W35) [4]*		1,550	2,000
			Cooling	A2W condition #1. (A35/W18) [1]*	W	1,090	1,470
				A2W condition #2. (A35/W7) [2]*		1,110	1,440
		Current Input	Heating	A2W condition #1. (A7/W35) [1]*	A	3.9	5.6
				A2W condition #2. (A7/W45) [2]*		5	6.9
			Cooling	A2W condition #1. (A35/W18) [1]*	A	4.9	6.7
				A2W condition #2. (A35/W7) [2]*		5.1	6.6
		Current	MCA		A	16	16
			MFA		A	20	20
	Efficiency	COP	Heating	A2W condition #1. (A7/W35) [1]*	W/W	5.2	4.92
				A2W condition #2. (A7/W45) [2]*		3.85	3.71
				A2W condition #3. (A7/W55) [3]*		2.95	2.87
				A2W condition (A2/W35) [4]*		3.82	3.51
				A2W condition (A-7/W35) [4]*		2.97	2.75
		EER	Cooling	A2W condition #1. (A35/W18) [1]*	W/W	4.59	4.42
				A2W condition #2. (A35/W7) [2]*		3.24	3.26
		LWT 35℃	PdesignH		kW	5	6
			SCOP		W/W	4.58	4.58
			SCOP Class		-	A+++	A+++
		LWT 55℃	PdesignH		W	5	6
			SCOP		W/W	3.25	3.31
			SCOP Class		-	A++	A++
		SEER			W/W	3.6	4.7
		Tank Efficiency (Only Tank Integrated Hydro Unit)	Heating up time		h /min	2:25	2:25
			Water Heating	Declared load profile	-	L	L
				ηwh (water heating fficiency)	%	148	148
				Energy efficiency Class	-	A+	A+
	Water Flow	Water Flow Rate (Nominal)		Heating	LPM	12.7	17.3
				Cooling	LPM	14.4	18.8
		Water Flow Rate		Min	LPM	7	7
				Max	LPM	48	48
		Water Pressure (Max)			bar	3	3
		Leaving Water Temperature	Heating	Min.	℃	15	15
				Max.	℃	65	65
			Cooling	Min.	℃	5	5
				Max.	℃	25	25
		DHW		Max.	℃	55	55

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE040RXEDEG/EU	AE060RXEDEG/EU
System	Refrigerant Connections	Refrigerant pipe (To outdoor unit)		Type	-	Flare nut	Flare nut
				Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	15.88	15.88
		Installation Limitation		Max Length	m	30	30
				Max Height	m	20	20
		Chargeless Length (Nominal	Heating	Max Length	m	15	15
			Cooling	Max Length	m	15	15
		Connection Direction			-	Front/Right/Rear/Downward	Front/Right/Rear/Downward
	Refrigerant	Type			-	R32	R32
		Factory Charging			kg	1.2	1.2
					tCO_2e	0.81	0.81
		Control Method			-	EEV	EEV
Outdoor Unit	Compressor	Type			-	BLDC Twin Rotary	BLDC Twin Rotary
		Model Name			-	UB4TN8200FE4SS	UB4TN8200FE4SS
		Oil		Type	-	POE	POE
				Initial Charge	cc	650	650
		Quantity			EA	1	1
		Output			W	1,623	1,623
		Starting method			-	Inverter driven	Inverter driven
	Heat exchanger (Condenser)	Type			-	Fin & Tube	Fin & Tube
		Tube type			-	Φ7	Φ7
		Length			mm	906.8	906.8
		Rows	Quantity		EA	2	2
		Stages	Quantity		EA	28	28
		Fin pitch			mm	1.5	1.5
		Passes	Quantity		EA	4	4
		Face area			m^2	0.53	0.53
		Fin	Type		-	Corrugate	Corrugate
			Treatment		-	NGS	NGS
	Fan	Type			-	Propeller Fan	Propeller Fan
		Discharge direction				Horizontal	Horizontal
		Air Flow Rate		Heating	m^3/min	40	43
				Cooling	m^3/min	40	43
		Quantity			EA	1	1
	Fan motor	Model			-	Brushless DC motor	Brushless DC motor
		Output			W	68	68
		Drive			-	Direct drive	Direct drive
		Speed	Heating		rpm	740	800
			Cooling		rpm	740	800
		Quantity			EA	1	1
	4-Way Valve	Type (Model)			-	SHF-7H-34U-P-SS	SHF-7H-34U-P-SS
	Base Heater	Power Input			W	-	-
	Sound Level	Sound Pressure Level		Heating	dB(A)	44	47
				Cooling	dB(A)	46	47
		Sound Power Level		Heating	dB(A)	58	60
		Sound Pressure (Quiet 35dB(A)) @5m		Heating	dB(A)	-	-
				Cooling	dB(A)	-	-
	Connections	Refrigerant pipe		Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	15.88	15.88
	Casing	Color			-	Earth brown	Earth brown
		Material			-	Poweder coated Galvanised steel	Poweder coated Galvanised steel
	Packing	Material			-	EPS/BOX	EPS/BOX
		Weight			kg	3	3
	External Dimension	Net Weight			kg	46.5	46.5
		Shipping Weight			kg	49.5	49.5
		Net Dimensions (WxHxD)			mm	880 x 638 x 310	880 x 638 x 310
		Shipping Dimensions (WxHxD)			mm	1,023 x 725 x 413	1,023 x 725 x 413
	Operating Temp. Range	Heating			℃	-25~35	-25~35
		Cooling			℃	10~46	10~46
		D.Hot Water			℃	-25~43	-25~43

NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB]
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB]
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB]
  4)* A2W Condition : (A2W35) Water In/Out -/35℃, Outdoor Air 2℃[DB]/1℃[WB] / (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- 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
- These products contain R32 (GWP=675)/R410A (GWP=2088) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE090RXEDEG/EU	AE090RXEDGG/EU
Power Supply					Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
System	Mode				-	Heat Pump (A2W)	Heat Pump (A2W)
	Performance	Capacity	Heating	A2W condition #1. (A7/W35) [1)*]	W	9,000	9,000
					Btu/h	30,700	30,700
				A2W condition #2. (A7/W45) [2)*]	W	8,600	8,600
				A2W condition #3. (A7/W55) [3)*]		8,000	8,000
				A2W condition (A2/W35) [4)*]		7,700	7,700
				A2W condition (A-7/W35) [4)*]		7,900	7,900
				Performance (A-10/W35)		-	-
			Cooling	A2W condition #1. (A35/W18) [1)*]	W	8,700	8,700
					Btu/h	29,700	29,700
				A2W condition #2. (A35/W7) [2)*]	W	6,500	6,500
	Power	Power Input	Heating	A2W condition #1. (A7/W35) [1)*]	W	1,870	1,870
				A2W condition #2. (A7/W45) [2)*]		2,331	2,331
				A2W condition #3. (A7/W55) [3)*]		2,730	2,730
				A2W condition (A2/W35) [4)*]		2,258	2,258
				A2W condition (A-7/W35) [4)*]		2,904	2,904
			Cooling	A2W condition #1. (A35/W18) [1)*]	W	2,110	2,110
				A2W condition #2. (A35/W7) [2)*]		1,950	1,950
		Current Input	Heating	A2W condition #1. (A7/W35) [1)*]	A	8.6	3
				A2W condition #2. (A7/W45) [2)*]		10.7	3.7
			Cooling	A2W condition #1. (A35/W18) [1)*]	A	9.7	3.4
				A2W condition #2. (A35/W7) [2)*]		8.9	3.1
		Current	MCA		A	22	10
			MFA		A	27.5	16.1
	Efficiency	COP	Heating	A2W condition #1. (A7/W35) [1)*]	W/W	4.81	4.81
				A2W condition #2. (A7/W45) [2)*]		3.69	3.69
				A2W condition #3. (A7/W55) [3)*]		2.93	2.93
				A2W condition (A2/W35) [4)*]		3.41	3.41
				A2W condition (A-7/W35) [4)*]		2.72	2.72
		EER	Cooling	A2W condition #1. (A35/W18) [1)*]	W/W	4.12	4.12
				A2W condition #2. (A35/W7) [2)*]		3.33	3.33
		LWT 35°C	PdesignH		kW	8.5	8.5
			SCOP		W/W	4.45	4.45
			SCOP Class		-	A+++	A+++
		LWT 55°C	PdesignH		W	8	8
			SCOP		W/W	3.24	3.24
			SCOP Class		-	A++	A++
		SEER			W/W	6.5	6.5
		Tank Efficiency (Only Tank Integrated Hydro Unit)	Heating up time		h /min	1:26	1:26
			Water Heating	Declared load profile	-	L	L
				ηwh (water heating fficiency)	%	148	148
				Energy efficiency Class	-	A+	A+
	Water Flow	Water Flow Rate (Nominal)		Heating	LPM	26	26
				Cooling	LPM	25.1	25.1
		Water Flow Rate		Min	LPM	7	7
				Max	LPM	48	48
		Water Pressure (Max)			bar	3	3
		Leaving Water Temperature	Heating	Min.	°C	15	15
				Max.	°C	65	65
			Cooling	Min.	°C	5	5
				Max.	°C	25	25
		DHW		Max.	°C	55	55

2. Outdoor Units

2-1. Specifications

Model Name	Indoor Unit (Type1 : Tank Integrated Hydro Unit)					AE200DN*SPG/EU	AE200DN*SPG/EU
	Indoor Unit (Type2 : Wall Mounted Hydro Unit)					AE160DN*SPG/EU	AE160DN*SPG/EU
	Outdoor Unit					AE090RXEDEG/EU	AE090RXEDGG/EU
System	Refrigerant Connections	Refrigerant pipe (To outdoor unit)		Type	-	Flare nut	Flare nut
				Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	15.88	15.88
		Installation Limitation		Max Length	m	35	35
				Max Height	m	20	20
		Chargeless Length (Nominal	Heating	Max Length	m	15	15
			Cooling	Max Length	m	15	15
		Connection Direction			-	Front/Right/Rear/Downward	Front/Right/Rear/Downward
	Refrigerant	Type			-	R32	R32
		Factory Charging			kg	1.4	1.4
					tCO_2e	0.95	0.95
		Control Method			-	EEV	EEV
Outdoor Unit	Compressor	Type			-	BLDC Twin Rotary	BLDC Twin Rotary
		Model Name			-	UB8TN8265FJWSG	UB8TN8265FJWSG
		Oil		Type	-	POE	POE
				Initial Charge	cc	700	700
		Quantity			EA	1	1
		Output			W	2,078	2,078
		Starting method			-	Inverter driven	Inverter driven
	Heat exchanger (Condenser)	Type			-	Fin & Tube	Fin & Tube
		Tube type			-	Φ7	Φ7
		Length			mm	950	950
		Rows	Quantity		EA	2	2
		Stages	Quantity		EA	46	46
		Fin pitch			mm	1.5	1.5
		Passes	Quantity		EA	8	8
		Face area			m^2	0.92	0.92
		Fin	Type		-	Corrugate	Wide Louver
			Treatment		-	Anti Salt	Anti Salt
	Fan	Type			-	Propeller Fan	Propeller Fan
		Discharge direction				Horizontal	Horizontal
		Air Flow Rate		Heating	m^3/min	66	66
				Cooling	m^3/min	66	66
		Quantity			EA	1	1
	Fan motor	Model			-	Brushless DC motor	Brushless DC motor
		Output			W	125	125
		Drive			-	Direct drive	Direct drive
		Speed	Heating		rpm	780	780
			Cooling		rpm	780	780
		Quantity			EA	1	1
	4-Way Valve	Type (Model)			-	SHF-11H-34U-P-SS	SHF-11H-34U-P-SS
	Base Heater	Power Input			W	150	150
	Sound Level	Sound Pressure Level		Heating	dB(A)	49	49
				Cooling	dB(A)	49	49
		Sound Power Level		Heating	dB(A)	64	64
		Sound Pressure (Quiet 35dB(A)) @5m		Heating	dB(A)	-	-
				Cooling	dB(A)	-	-
	Connections	Refrigerant pipe		Liquid	Φ, mm	6.35	6.35
				Gas	Φ, mm	15.88	15.88
	Casing	Color			-	Earth brown	Earth brown
		Material			-	Poweder coated Electro galvanized steel	Poweder coated Electro galvanized steel
	Packing	Material			-	EPS/BOX	EPS/BOX
		Weight			kg	8.5	8.5
	External Dimension	Net Weight			kg	73	72
		Shipping Weight			kg	81.5	80.5
		Net Dimensions (WxHxD)			mm	940 x 998 x 330	940 x 998 x 330
		Shipping Dimensions (WxHxD)			mm	995 x 1,178 x 426	995 x 1,178 x 426
	Operating Temp. Range	Heating			℃	-25~35	-25~35
		Cooling			℃	10~46	10~46
		D.Hot Water			℃	-25~43	-25~43

NOTE

- Specifications may be subject to change without prior notice.
  1)* A2W Condition #1 : (Heating) Water In/Out 30℃/35℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 23℃/18℃, Outdoor Air 35℃[DB]
  2)* A2W Condition #2 : (Heating) Water In/Out 40℃/45℃, Outdoor Air 7℃[DB]/6℃[WB] / (Cooling) Water In/Out 12℃/7℃, Outdoor Air 35℃[DB]
  3)* A2W Condition #3 : (Heating) Water In/Out 47℃/55℃, Outdoor Air 7℃[DB]/6℃[WB]
  4)* A2W Condition : (A2W35) Water In/Out -/35℃, Outdoor Air 2℃[DB]/1℃[WB] / (A-7/W35) Water In/Out -/35℃, Outdoor Air -7℃[DB]/-(※ Peak Capacity)
- Select wire size based on the value of MCA
- Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- 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
- These products contain R32 (GWP=675)/R410A (GWP=2088) which is fluorinated greenhouse gas.
- The system is operated in (-25℃ ≤ Outdoor temp. < -20℃) condition, but no guarantee of capacity.
- The system is operated by only Booster Heater in special condition (35 ℃ < Outdoor temp. ≤ 43℃).

2. Outdoor Units

2-2. Electrical characteristics

Capacity [kW]	Model	Power Supply				Voltage Range [V]		Nominal Running Current [A]		Current [A]	
		Φ	#	Hz	Voltage	Min. (-10%)	Max. (+10%)	Cooling	Heating	MCA	MFA
4.4	AE040RXEDEG/EU	1	2	50	220~240	198	264	4.9	3.9	16.0	20.0
6.0	AE060RXEDEG/EU	1	2	50	220~240	198	264	6.7	5.6	16.0	20.0
9.0	AE090RXEDEG/EU	1	2	50	220~240	198	264	9.7	8.6	22.0	27.5
9.0	AE090RXEDGG/EU	3	4	50	380~415	342	456	3.4	3.0	10.0	16.1
12.5	AE125DXEDEG/EU	1	2	50	220~240	198	264	15.55	12.11	32.0	35.2
12.5	AE125DXEDGG/EU	3	4	50	380~415	342	456	5.16	4.04	16.1	17.7
16.0	AE160DXEDEG/EU	1	2	50	220~240	198	264	16.79	16.66	32.0	35.2
16.0	AE160DXEDGG/EU	3	4	50	380~415	342	456	5.57	5.53	16.1	17.7

NOTE

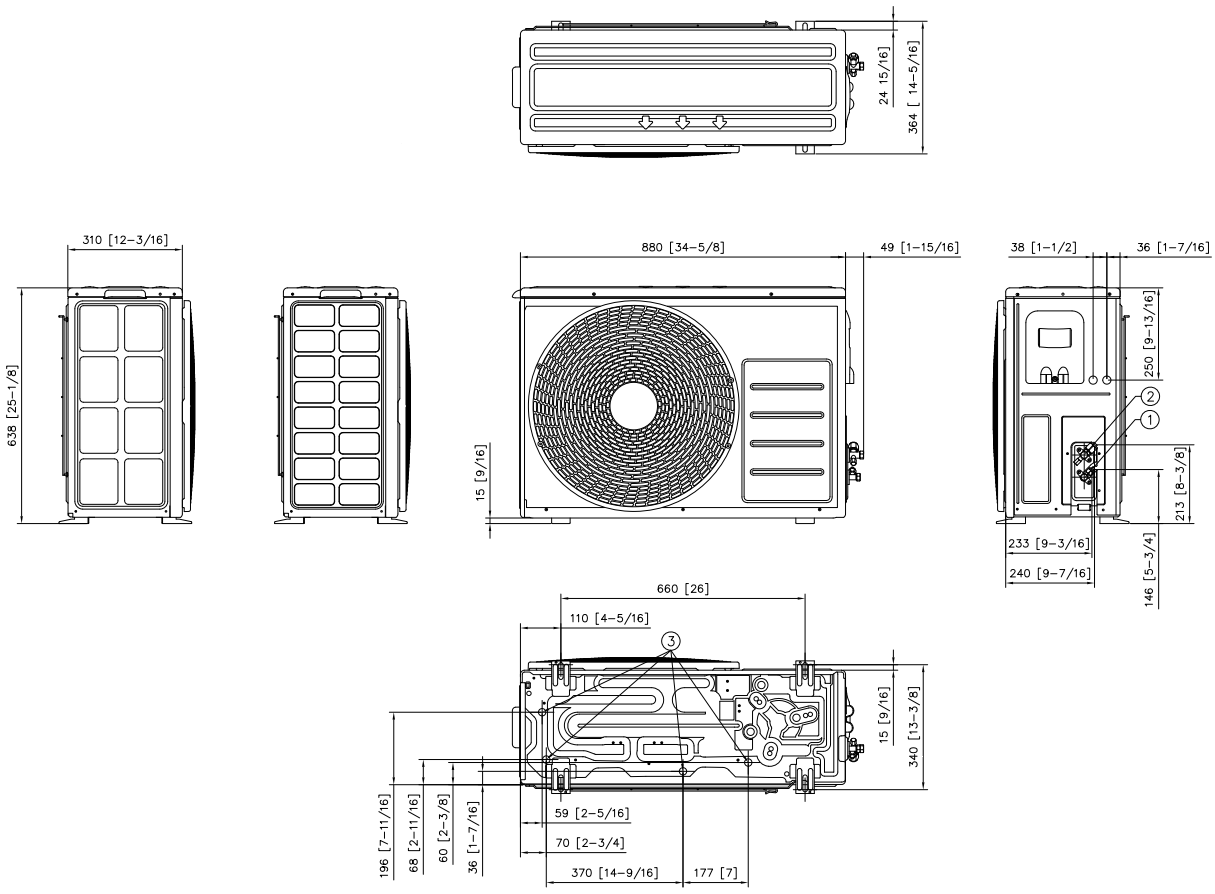
- MCA : Mimium circuit amperes
- MFA : Maximum fuse amperes
- Select wire size based on the value of MCA

2. Outdoor Units

2-3. Dimensional drawing

AE040RXEDEG/EU, AE060RXEDEG/EU

Unit : mm [inch]



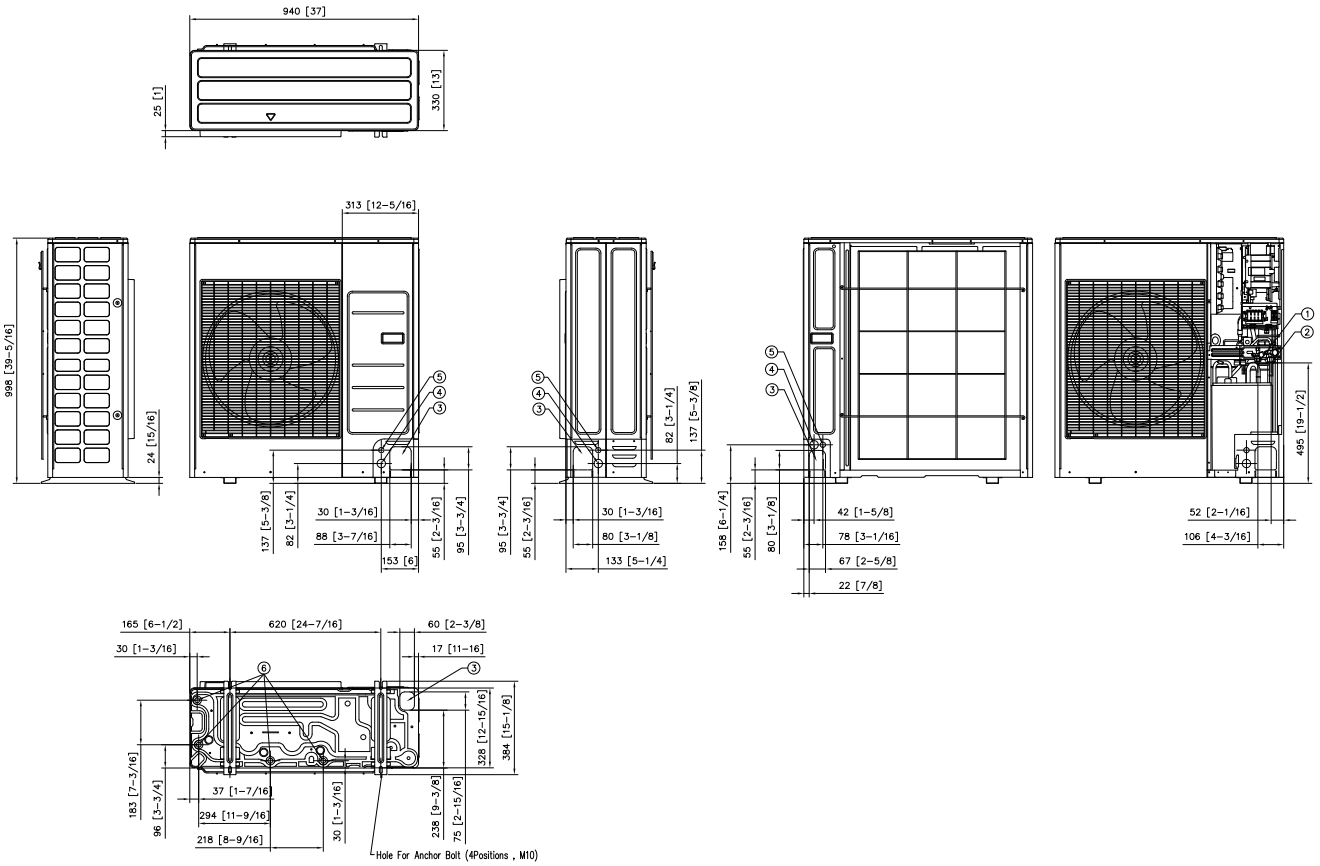
NO	Name	Description
1	Liquid pipe connection	6.35 [1/4]
2	Gas pipe connection	15.88 [5/8]
3	Drain pipe connection	-

2. Outdoor Units

2-3. Dimensional drawing

AE090RXEDEG/EU, AE090RXEDGG/EU

Unit : mm [inch]



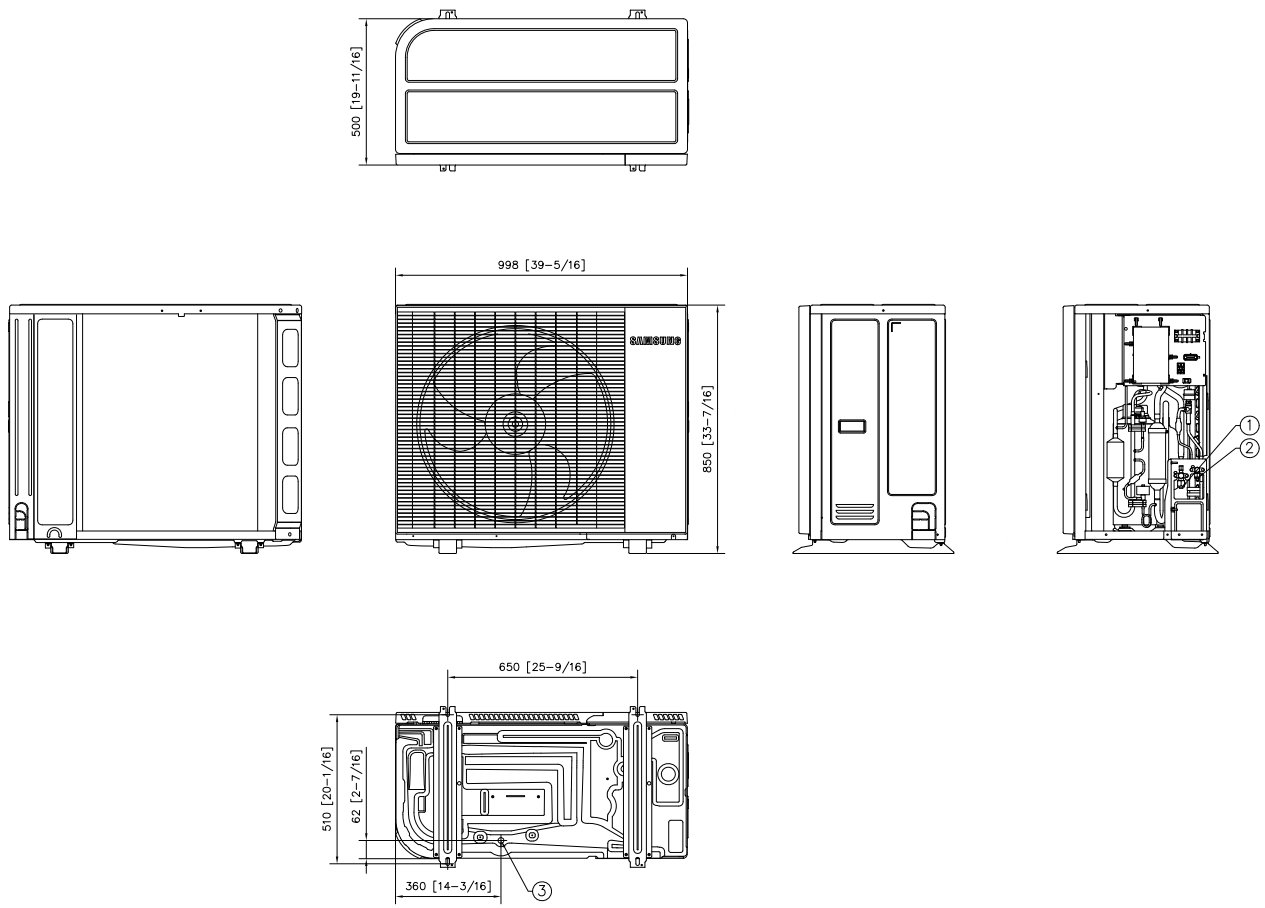
NO	Name	Description
1	Liquid pipe connection	6.35 [1/4]
2	Gas pipe connection	15.88 [5/8]
3	Piping intake knockout hole	Front / Side / Rear / Bottom
4	Power supply wiring conduit	Front / Side / Rear
5	Communication wiring conduit	Front / Side / Rear
6	Drain pipe connection	-

2. Outdoor Units

2-3. Dimensional drawing

AE125DXEDEG/EU, AE125DXEDGG/EU, AE160DXEDEG/EU, AE160DXEDGG/EU

Unit : mm [inch]



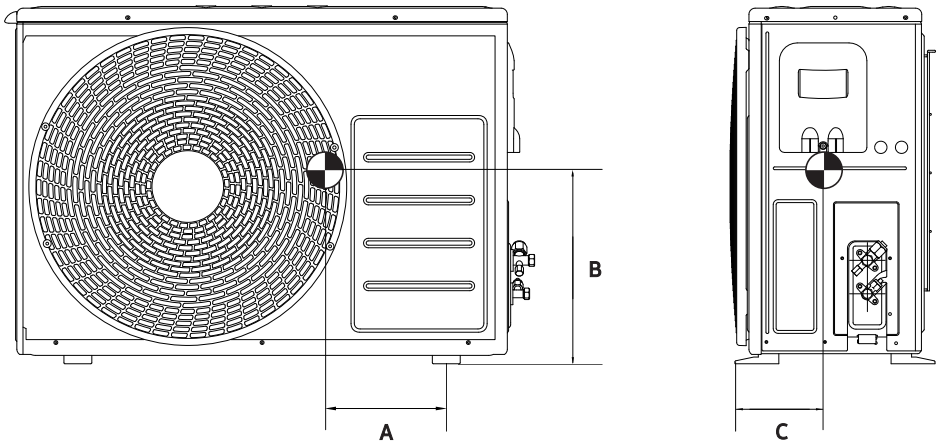
NO	Name	Description
1	Gas pipe connection	12.7 [1/2]
2	Liquid pipe connection	6.35 [1/4]
3	Drain pipe connection	-

2. Outdoor Units

2-4. Center of Gravity

AE040RXEDEG/EU, AE060RXEDEG/EU

Unit : mm [inch]



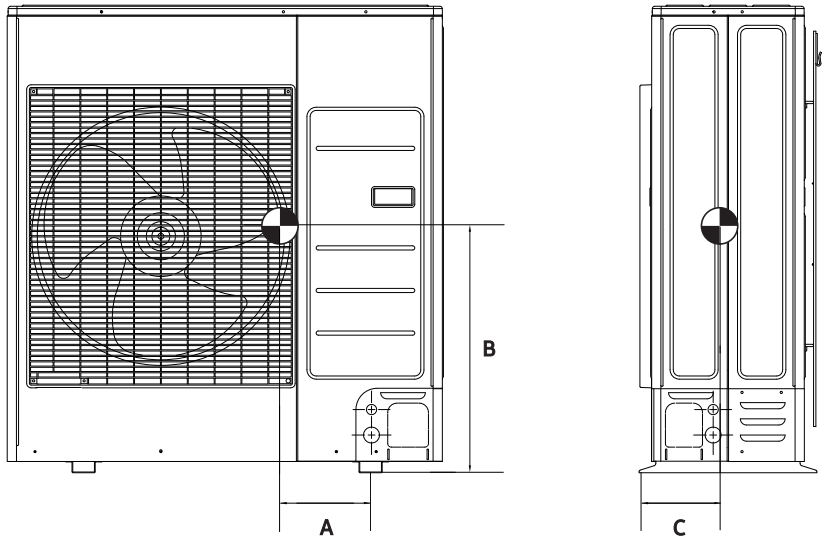
Model	A	B	C
AE040RXEDEG/EU AE060RXEDEG/EU	210 [8 - 1/4]	341 [13 - 7/16]	156 [6 - 1/8]

2. Outdoor Units

2-4. Center of Gravity

AE090RXEDEG/EU, AE090RXEDGG/EU

Unit : mm [inch]



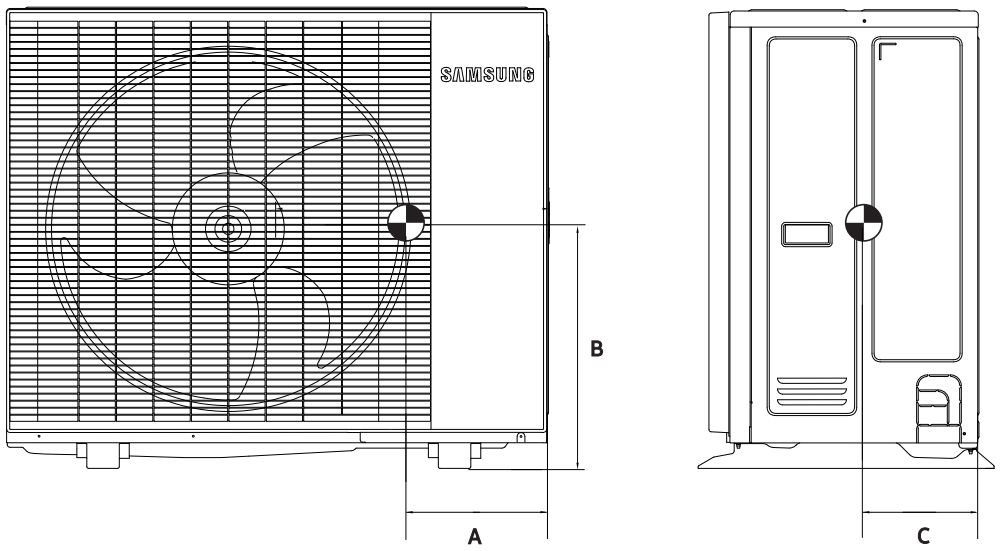
Model	A	B	C
AE090RXEDEG/EU AE090RXEDGG/EU	205 [8 - 1/16]	445 [17 - 1/2]	160 [6 - 5/16]

2. Outdoor Units

2-4. Center of Gravity

AE125DXEDEG/EU, AE125DXEDGG/EU, AE160DXEDEG/EU, AE160DXEDGG/EU

Unit : mm [inch]

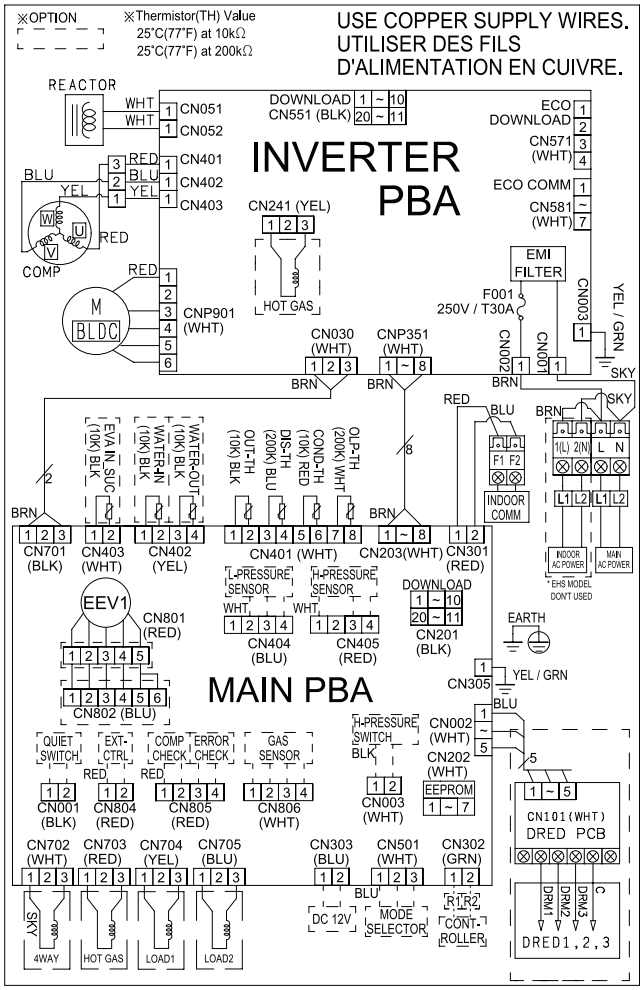


Model	A	B	C
AE125DXED*G/EU AE160DXED*G/EU	340 [13 - 3/8]	396 [15 - 9/16]	227 [8 - 15/16]

2. Outdoor Units

2-5. Electrical wiring diagram

AE040RXEDEG/EU, AE060RXEDEG/EU



M BLDC	BLDC FAN MOTOR	COMP	COMPRESSOR
OUT-TH	Thermistor OUT(10K)	DIS-TH	Thermistor DISCHARGE(200K)
COND-TH	Thermistor COND(10K)	OLP-TH	Thermistor OLP(200K)

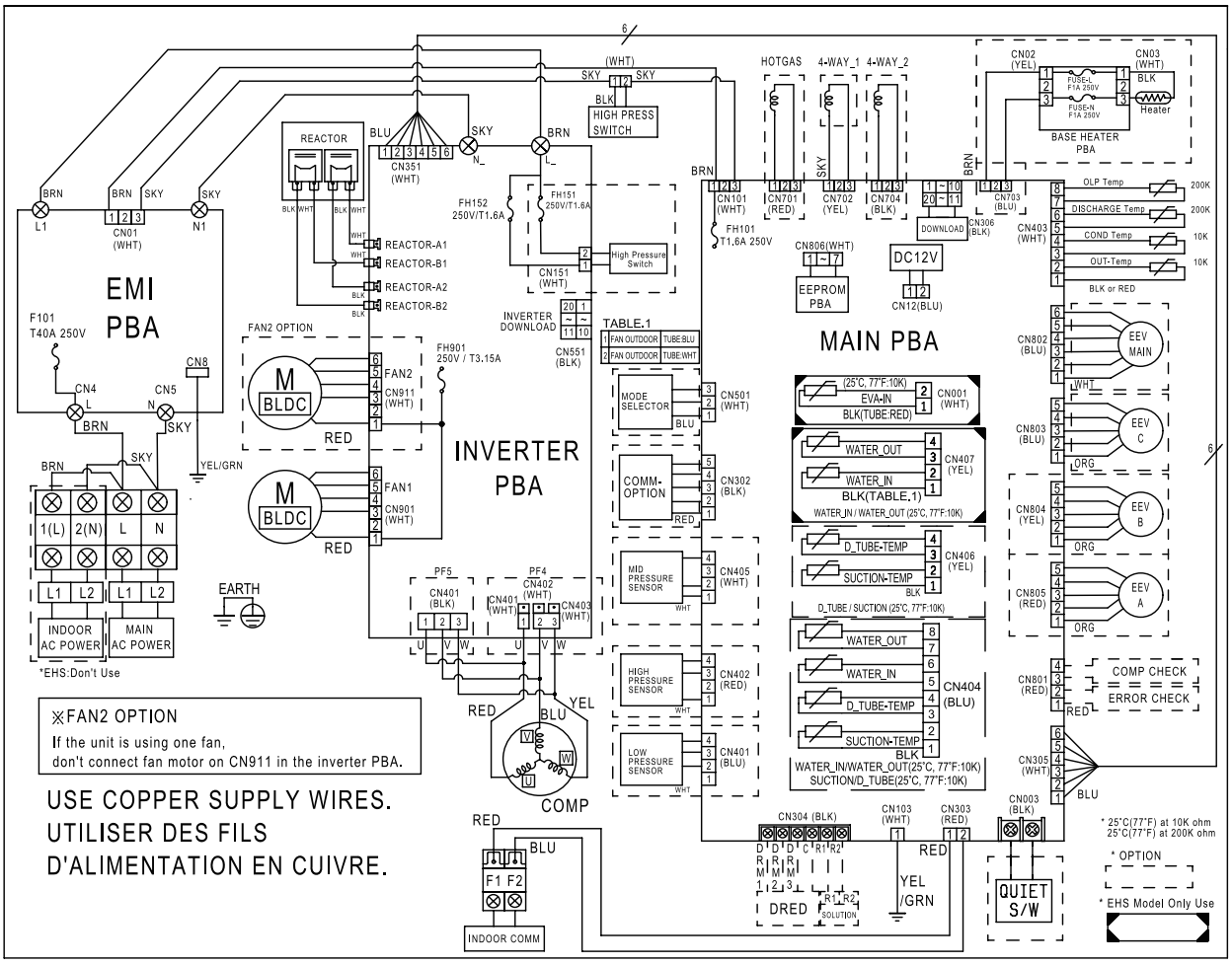
NOTE

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

2. Outdoor Units

2-5. Electrical wiring diagram

AE090RXEDEG/EU



M BLDC	BLDC FAN MOTOR	COMP	COMPRESSOR
Comm	Communication	OUT-Temp	Thermistor OUT(10K)
COND-Temp	Thermistor COND(10K)	DISCHARGE-Temp	Thermistor DISCHARGE(200K)
OLP-Temp	Thermistor OLP(200K)	SUCTION-TEMP	Thermistor SUCTION(10K)

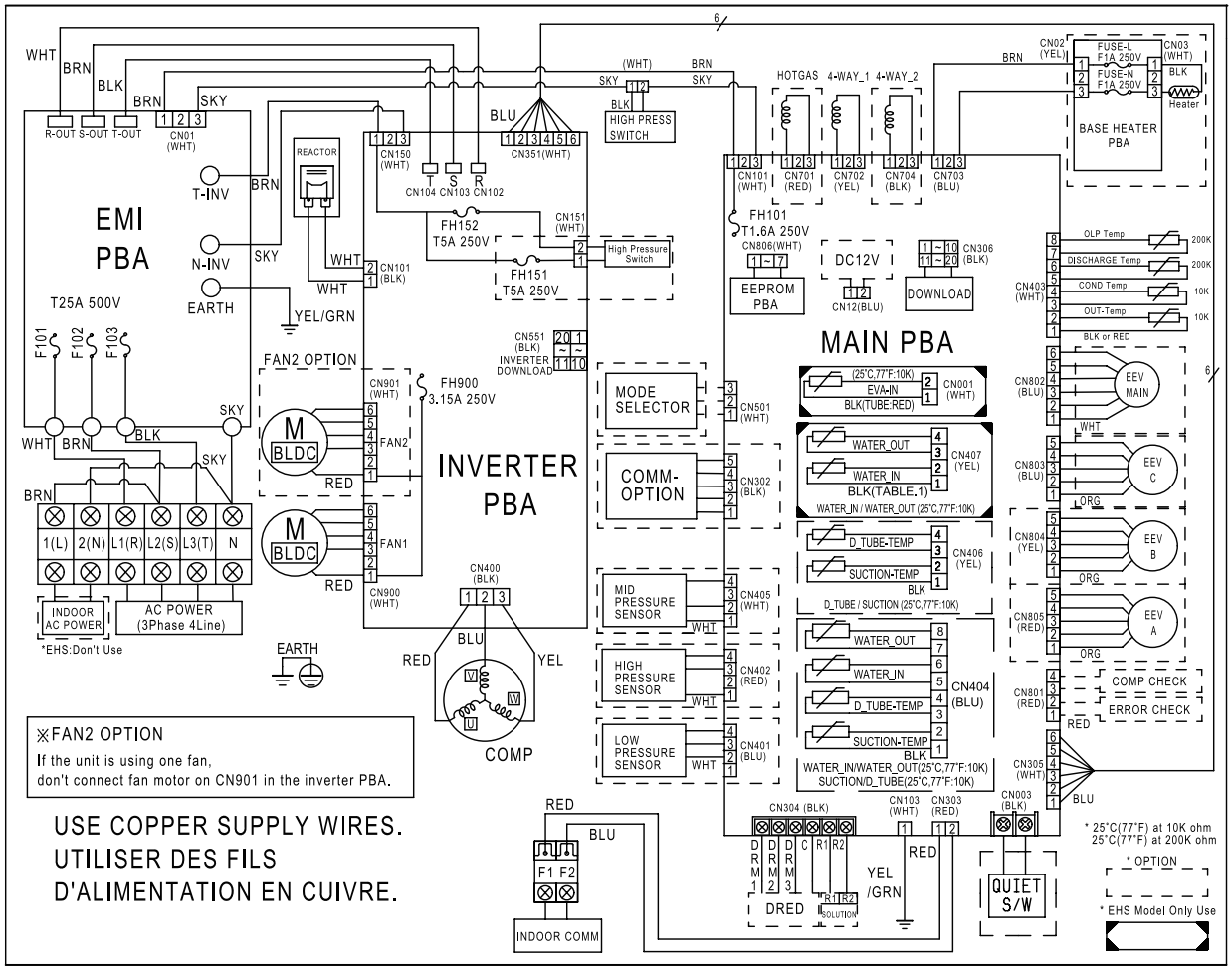
NOTE

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

2. Outdoor Units

2-5. Electrical wiring diagram

AE090RXEDGG/EU



M BLDC	BLDC FAN MOTOR	COMP	COMPRESSOR
Comm	Communication	OUT-Temp	Thermistor OUT(10K)
COND-Temp	Thermistor COND(10K)	DISCHARGE-Temp	Thermistor DISCHARGE(200K)
OLP-Temp	Thermistor OLP(200K)	SUCTION-TEMP	Thermistor SUCTION(10K)

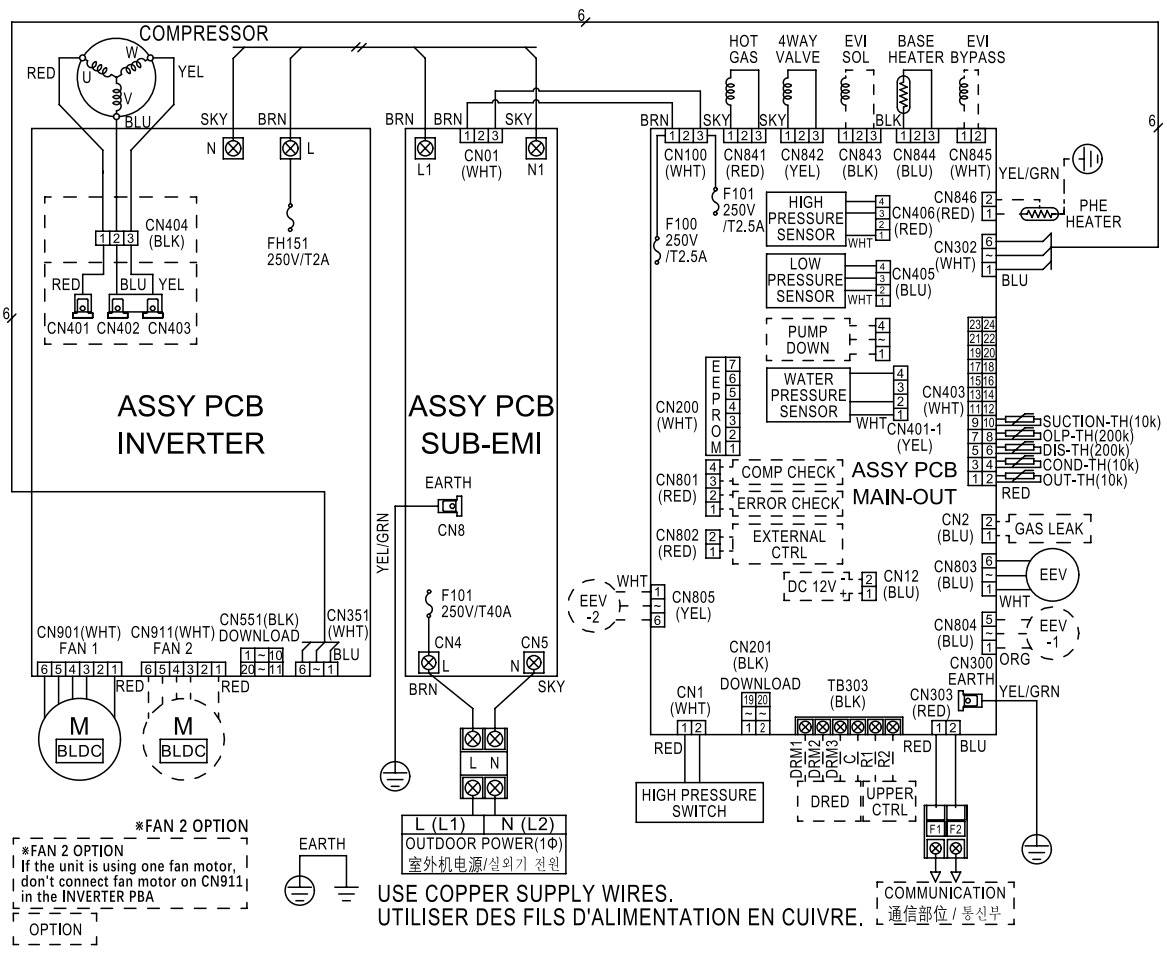
NOTE

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

2. Outdoor Units

2-5. Electrical wiring diagram

AE125DXEDEG/EU, AE160DXEDEG/EU



ASSY PCB MAIN-OUT	Printed circuit board(MAIN)	ASSY PCB INVERTER	Printed circuit board(INVERTER)	ASSY PCB SUB-EMI	Printed circuit board(EMI)
250V T40A	FUSE	250V T2.5A	FUSE	250V T2A	FUSE
M(BLDC)	Outdoor BLDC Fan	OUT-TH	Thermistor - Ambient (10KΩ @25℃)	COND-TH	Thermistor - COND. Out (10KΩ @25℃)
EEV	Electronic Expansion Valve - Main	OLP-TH	Thermistor - Compressor Top (200KΩ @25℃)	SUCTION-TH	Thermistor - Suction pipe (10KΩ @25℃)
DIS-TH	Thermistor - Discharge pipe (200KΩ @25℃)	4WAY VALVE	Solenoid valve - 4Way	EVI SOL	Solenoid valve - Liquid Bypass
HOT GAS	Solenoid valve - Hot Gas Bypass	EVI BYPASS	Solenoid valve - EVI Bypass	F1,F2 (COMMUNICATION)	Communication between Indoor and Outdoor
BASE HEATER	BASE HEATER				

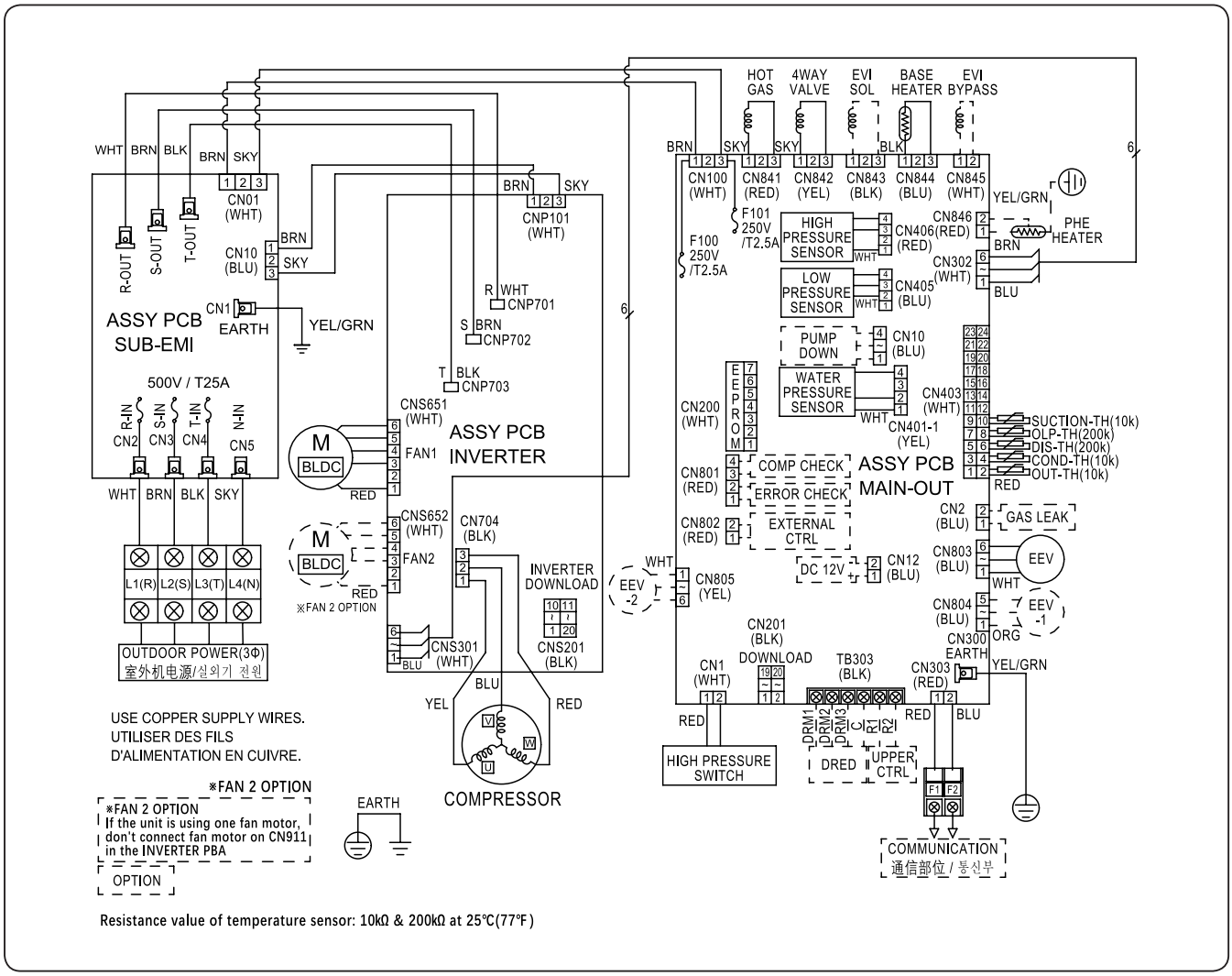
NOTE

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

2. Outdoor Units

2-5. Electrical wiring diagram

AE125DXEDGG/EU, AE160DXEDGG/EU



ASSY PCB MAIN-OUT	Printed circuit board(MAIN)	ASSY PCB INVERTER	Printed circuit board(INVERTER)	ASSY PCB SUB-EMI	Printed circuit board(EMI)
250V T25A	FUSE	250V T2.5A	FUSE	M(BLDC)	Outdoor BLDC Fan
EEV	Electronic Expansion Valve - Main	OUT-TH	Thermistor - Ambient (10KΩ @25℃)	COND-TH	Thermistor - COND. Out (10KΩ @25℃)
DIS-TH	Thermistor - Discharge pipe (200KΩ @25℃)	OLP-TH	Thermistor - Compressor Top (200KΩ @25℃)	SUCTION-TH	Thermistor - Suction pipe (10KΩ @25℃)
HOT GAS	Solenoid valve - Hot Gas Bypass	4WAY VALVE	Solenoid valve - 4Way	EVI SOL	Solenoid valve - Liquid Bypass
BASE HEATER	BASE HEATER	EVI BYPASS	Solenoid valve - EVI Bypass	F1,F2 (COMMUNICATION)	Communication between Indoor and Outdoor

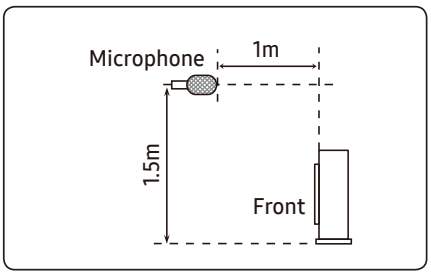
NOTE

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

2. Outdoor Units

2-6. Sound data

Sound Pressure level

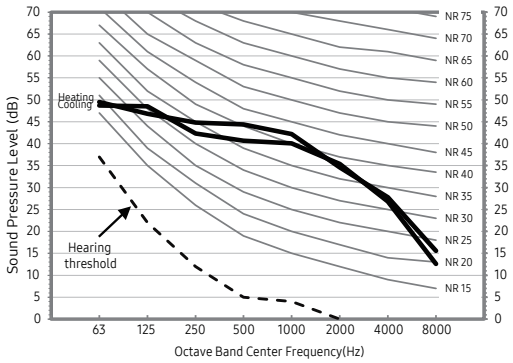


Unit: dB(A)

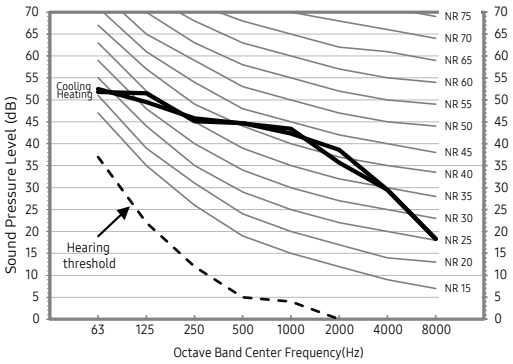
Model	Cooling	Heating
AE040RXEDEG/EU	46	44
AE060RXEDEG/EU	47	47
AE090RXEDEG/EU	49	49
AE090RXEDGG/EU	49	49

- NR Curve

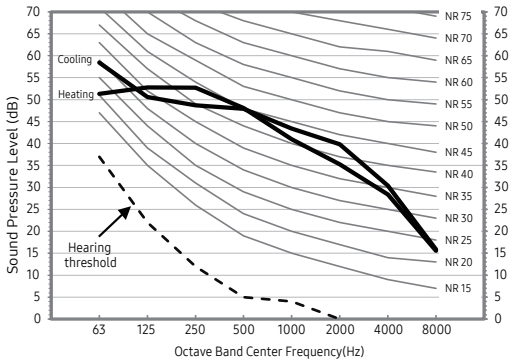
1) AE040RXEDEG/EU



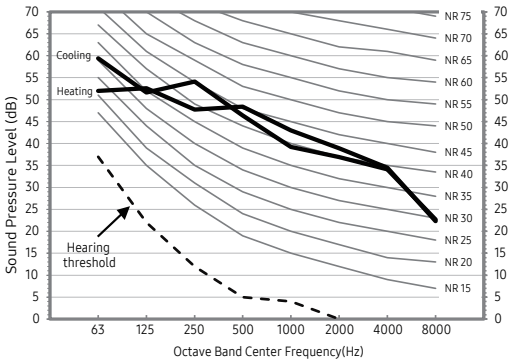
2) AE060RXEDEG/EU



3) AE090RXEDEG/EU



4) AE090RXEDGG/EU



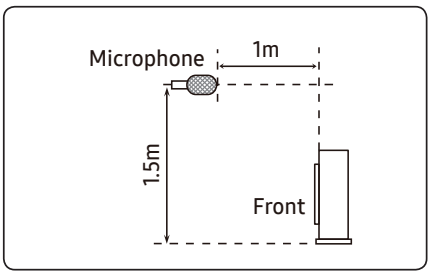
NOTE

- 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

2. Outdoor Units

2-6. Sound data

Sound Pressure level

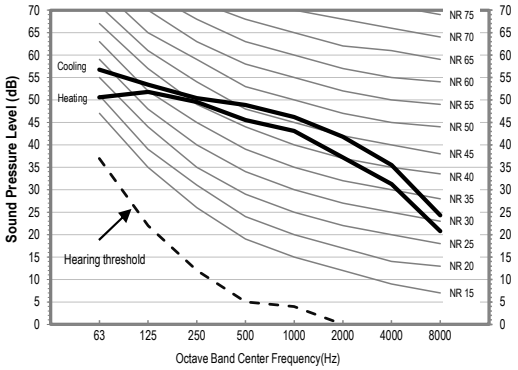


Unit: dB(A)

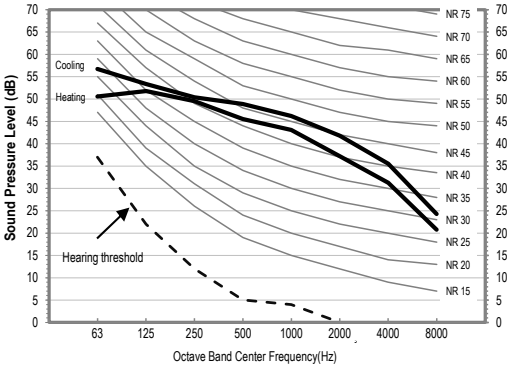
Model	Cooling	Heating
AE125DXEDEG/EU	51	48
AE125DXEDGG/EU	51	48
AE160DXEDEG/EU	55	49
AE160DXEDGG/EU	55	49

- NR Curve

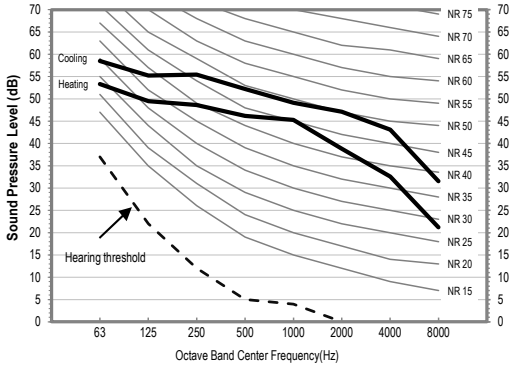
1) AE125DXEDEG/EU



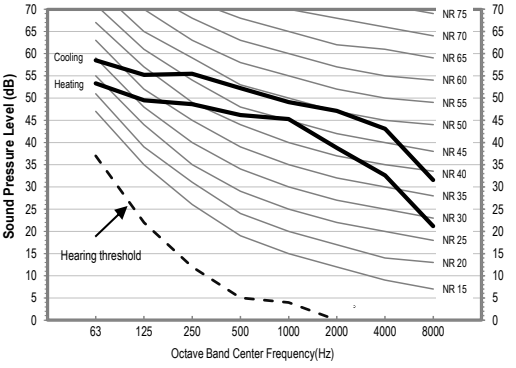
2) AE125DXEDGG/EU



3) AE160DXEDEG/EU



4) AE160DXEDGG/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

2. Outdoor Units

2-6. Sound data

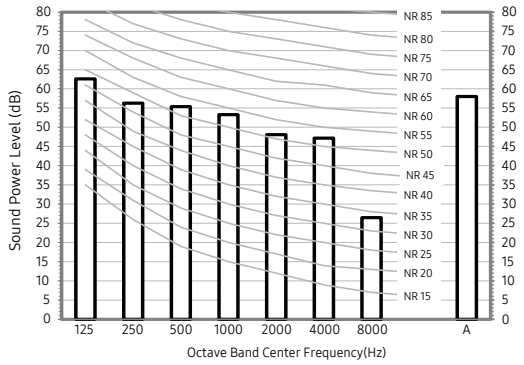
Sound Power level

NOTE

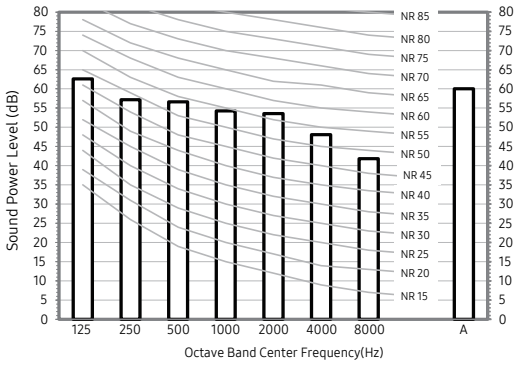
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Model	Power (dBA)
AE040RXEDEG/EU	58
AE060RXEDEG/EU	60
AE090RXEDEG/EU	64
AE090RXEDGG/EU	64

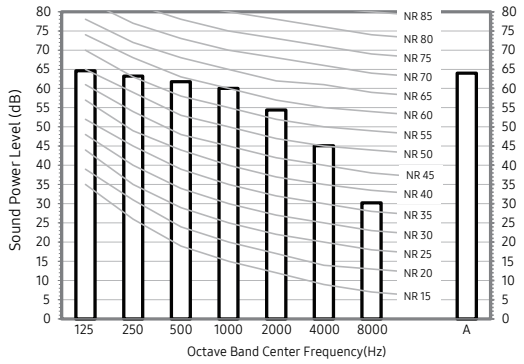
1) AE040RXEDEG/EU



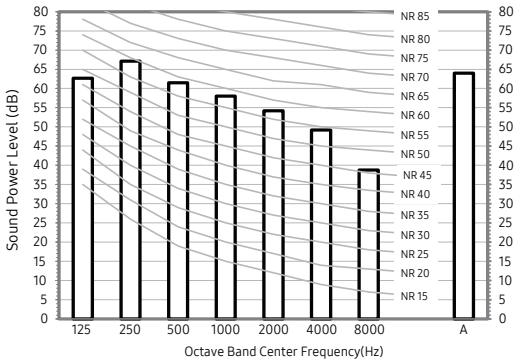
2) AE060RXEDEG/EU



3) AE090RXEDEG/EU



4) AE090RXEDGG/EU



2. Outdoor Units

2-6. Sound data

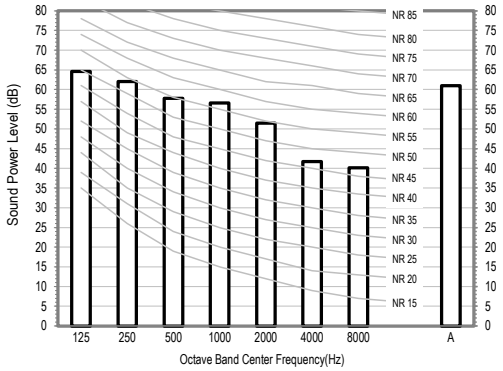
Sound Power level

NOTE

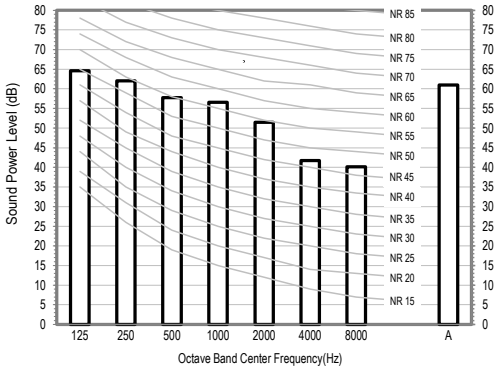
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Model	Power (dBA)
AE125DXEDEG/EU	61
AE125DXEDGG/EU	61
AE160DXEDEG/EU	62
AE160DXEDGG/EU	62

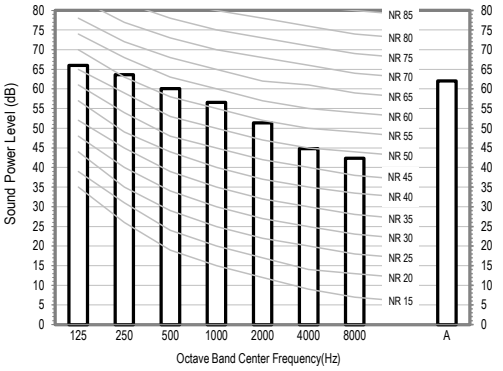
1) AE125DXEDEG/EU



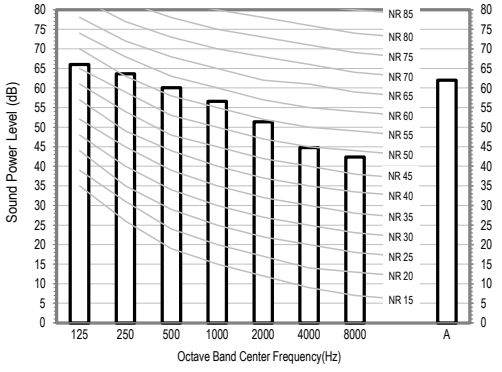
2) AE125DXEDGG/EU



3) AE160DXEDEG/EU



4) AE160DXEDGG/EU

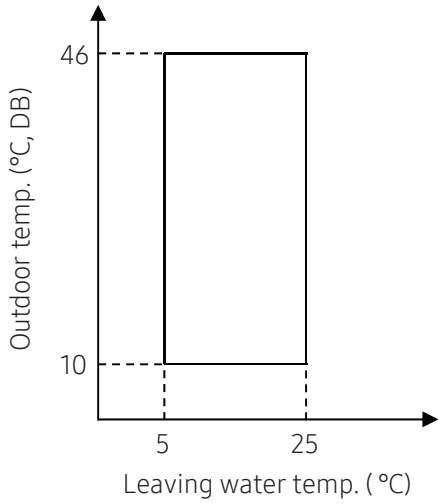


2. Outdoor Units

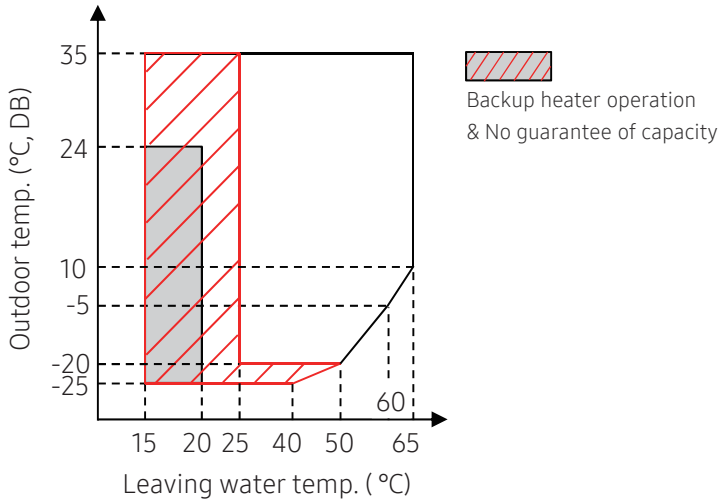
2-7. Operation range

AE***RXED*G/EU

1) Cooling



2) Heating



Split Outdoor Unit		Water Temp. (°C)			Water Flow Rates (LPM)			Air Temp. (°C, DB/WB)		
		Min	Std	Max	Min	Std	Max	Min	Std	Max
Controller	Cooling	5	-	25						
	Heating	15	-	65						
Cooling	Inlet	-	23 (12*2)	30	12 (7*1)	Δ 5°C	58 (48*1)	10/-	35/24	46/28
	Outlet	5	18 (7*2)	25						
Heating	Inlet	5	30 (40*2)	-				-25/-	7/6	35/24
	Outlet	25 (15*3)	35 (45*2)	65						

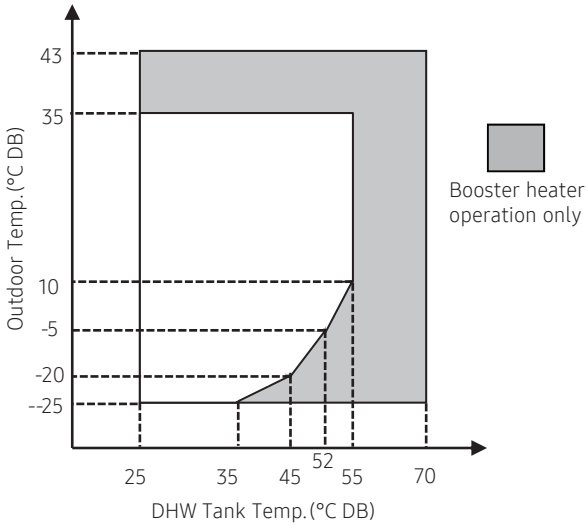
*1) Model : AE040RXEDEG
AE060RXEDEG
AE090RXEDEG
AE090RXEDGG

*2) Eurovent Test Condition #2

*3) Back up heater operation.

※ Backup heater operation — Operation of outdoor unit possible, but no guarantee of capacity in this condition.
(-25°C ≤ Outdoor temp < -20°C)

3) DHW (Domestic Hot Water Tank)



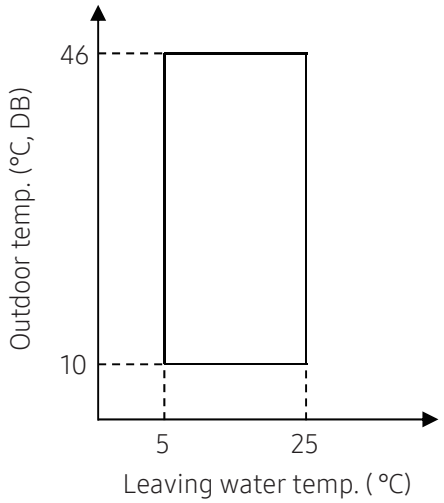
※ Special condition(35°C < Outdoor temp. ≤ 43°C) is operated by only Booster Heater.
SAMSUNG doesn't supply DHW for EHS Split.
Since it is a reference data, you have to check DHW operation range for yours.

2. Outdoor Units

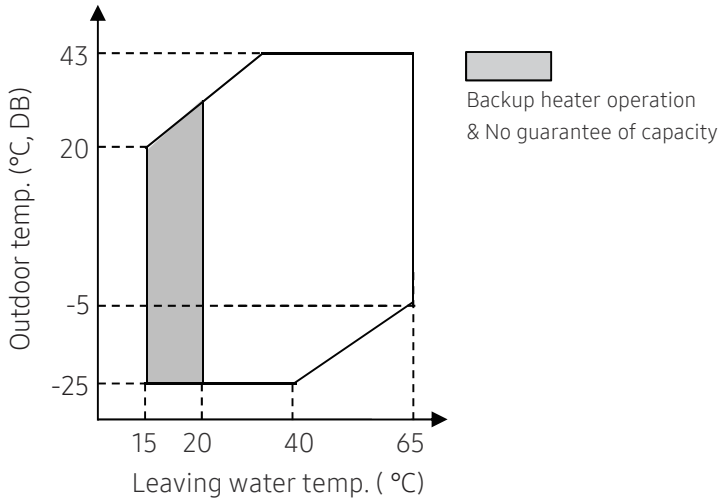
2-7. Operation range

AE***DXED*G/EU

1) Cooling



2) Heating

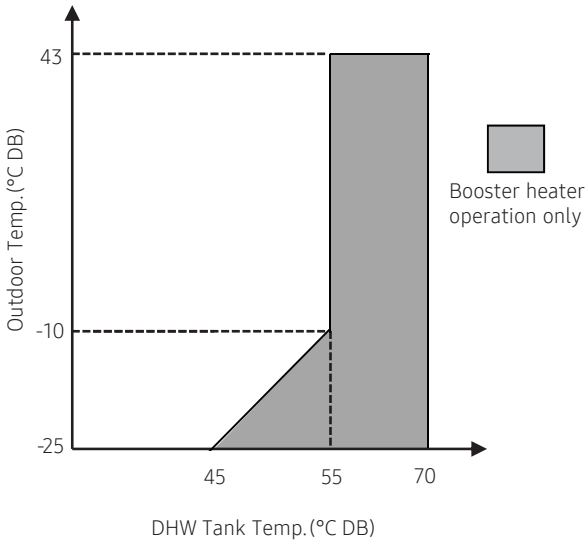


Split Outdoor Unit		Water Temp. (°C)			Water Flow Rates (LPM)			Air Temp. (°C, DB/WB)		
		Min	Std	Max	Min	Std	Max	Min	Std	Max
Controller	Cooling	5	-	25						
	Heating	15	-	65						
Cooling	Inlet	-	23 (12*1)	30	12	Δ 5°C	58	10/-	35/24	46/28
	Outlet	5	18 (7*1)	25						
Heating	Inlet	5	30 (40*1)	-				-25/-	7/6	43/34.5
	Outlet	25 (15*2)	35 (45*1)	65						

*1) Eurovent Test Condition #2

*2) Back up heater operation.

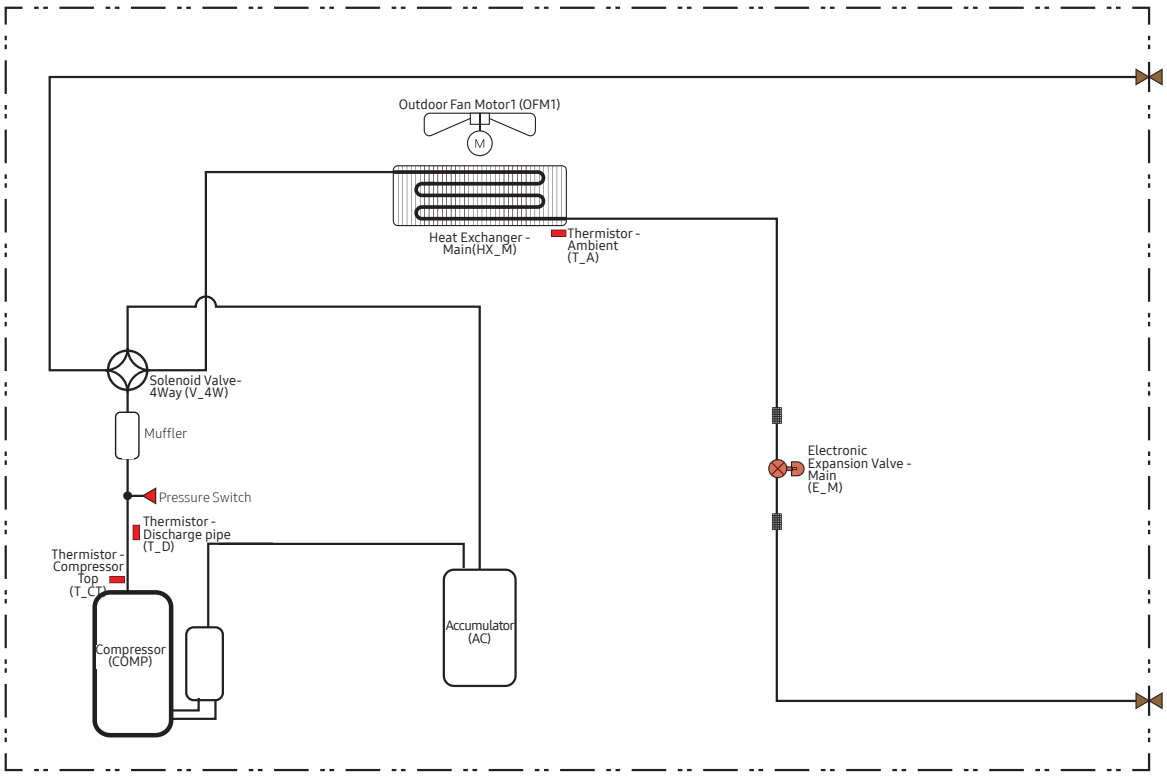
3) DHW (Domestic Hot Water Tank)



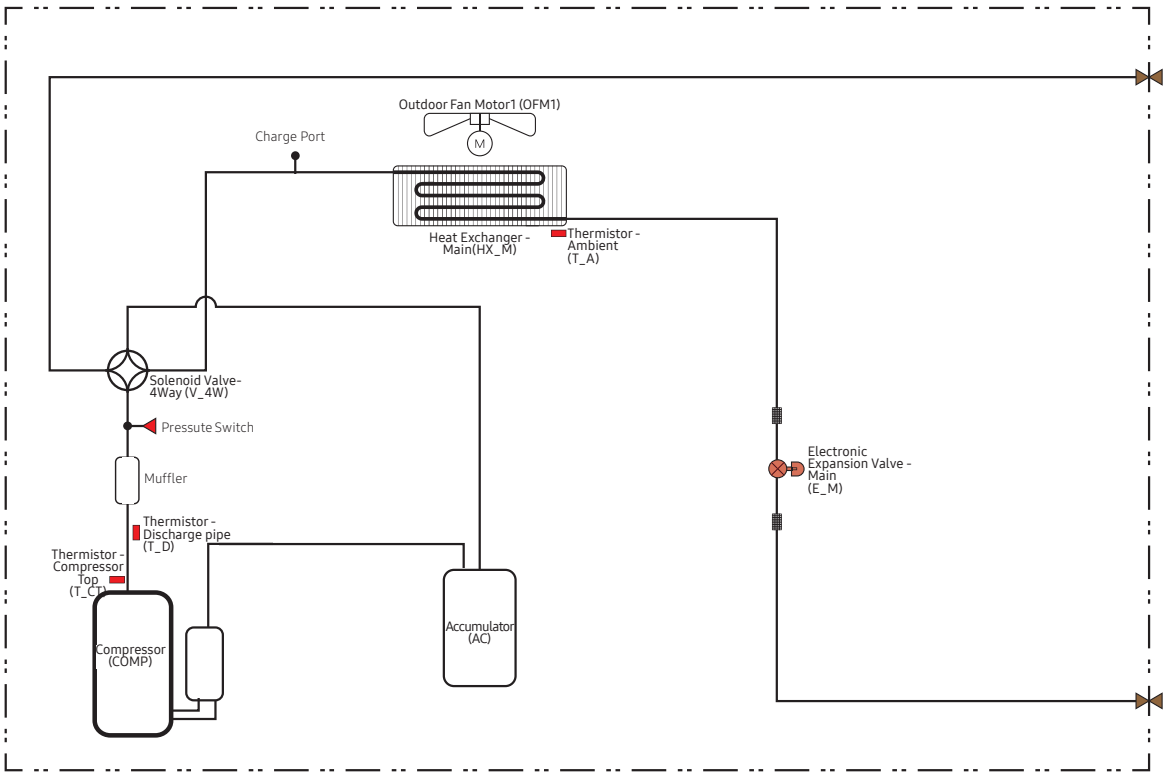
2. Outdoor Units

2-8. Piping diagram

AE040/060RXEDEG/EU



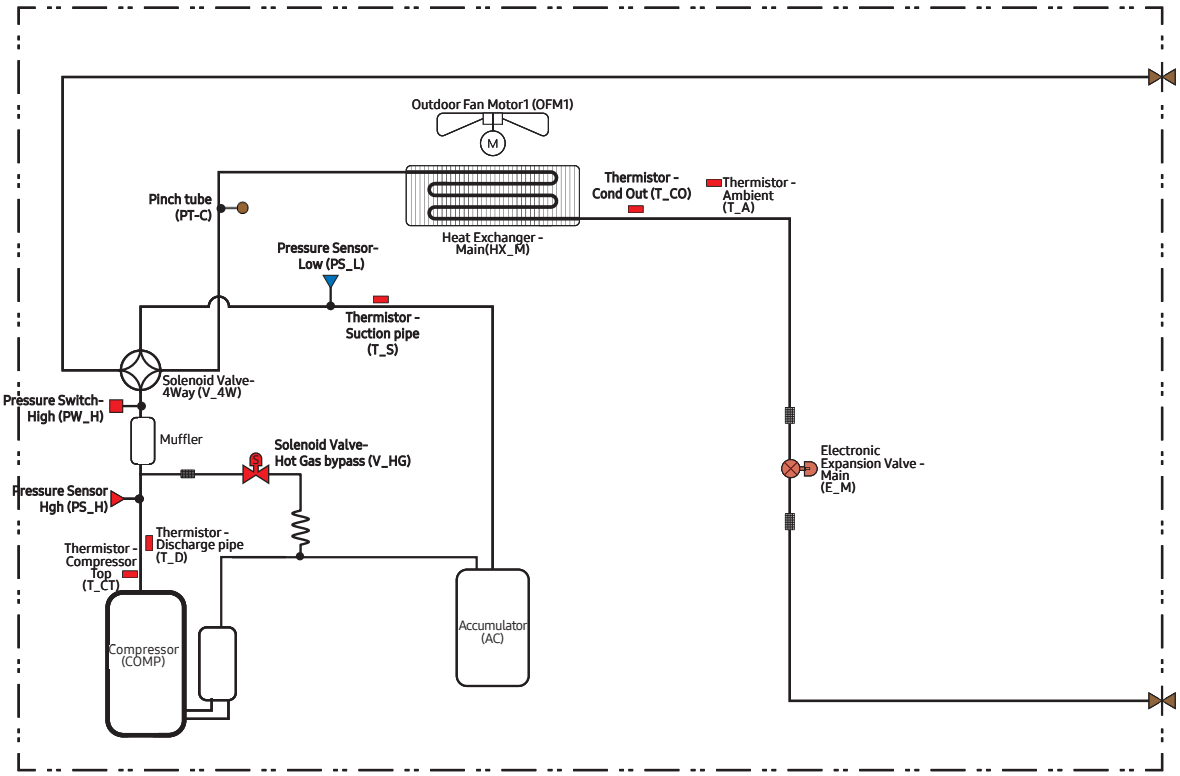
AE090RXED*G/EU



2. Outdoor Units

2-8. Piping diagram

AE125/160DXED*G/EU



2. Outdoor Units

2-9. Capacity table

1) Maximum Heating Capacity (Peak Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input)

Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE040RXEDEG	-20	3.57	1.27	3.65	1.37	3.30	1.51	3.24	1.59	3.21	1.72								
	-15	4.06	1.35	4.16	1.44	3.76	1.60	3.66	1.67	3.74	1.74	3.44	1.82						
	-10	4.97	1.46	4.83	1.55	4.60	1.71	4.46	1.73	4.32	1.84	4.19	1.93	3.89	2.48				
	-7	5.18	1.46	5.03	1.44	4.79	1.61	4.69	1.89	4.59	2.03	4.40	2.11	4.22	2.54				
	-2	5.40	1.25	5.25	1.34	5.00	1.51	4.81	1.65	4.62	1.80	4.39	1.89	4.16	1.98	3.94	2.18		
	2	5.27	1.06	5.13	1.14	4.88	1.28	4.61	1.35	4.34	1.43	4.12	1.60	3.91	1.78	3.70	1.89		
	7	4.75	0.70	4.62	0.75	4.40	0.85	4.30	1.00	4.20	1.09	4.05	1.27	3.90	1.32	3.57	1.45	3.44	1.58
	10	5.09	0.73	4.95	0.78	4.71	0.88	4.61	1.00	4.57	1.15	4.34	1.30	4.11	1.51	3.79	1.55	3.55	1.60
	15	5.68	0.74	5.47	0.81	5.21	0.91	5.12	1.02	5.14	1.18	4.88	1.33	4.72	1.51	4.35	1.56	4.08	1.62
	20	6.32	0.73	6.14	0.84	6.04	0.95	5.89	1.08	5.86	1.12	5.57	1.37	5.22	1.51	4.91	1.54	4.60	1.63
Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE060RXEDEG	-20	4.46	1.71	4.56	1.84	4.13	2.04	4.05	2.14	4.01	2.32								
	-15	5.08	1.81	5.20	1.94	4.70	2.15	4.57	2.25	4.67	2.34	4.30	2.46						
	-10	5.89	1.94	5.72	2.05	5.45	2.19	5.29	2.39	5.12	2.48	4.97	2.75	4.61	3.05				
	-7	6.19	1.83	6.02	1.85	5.73	2.08	5.61	2.45	5.49	2.62	5.27	2.79	5.05	3.06				
	-2	6.57	1.64	6.38	1.76	6.08	1.98	5.85	2.17	5.62	2.37	5.34	2.66	5.06	2.96	4.79	3.29		
	2	6.53	1.43	6.35	1.53	6.05	1.72	5.71	1.82	5.37	1.92	5.11	2.16	4.84	2.40	4.58	2.55		
	7	6.48	1.01	6.30	1.09	6.00	1.22	5.70	1.41	5.40	1.51	5.10	1.74	4.80	1.81	4.31	1.98	4.05	2.15
	10	6.94	1.05	6.74	1.13	6.42	1.27	6.17	1.42	5.98	1.61	5.68	1.81	5.38	2.11	4.96	2.17	4.65	2.24
	15	7.75	1.07	7.46	1.17	7.10	1.31	6.92	1.46	6.89	1.68	6.54	1.89	6.32	2.14	5.83	2.21	5.46	2.30
	20	8.62	1.05	8.38	1.21	8.23	1.37	8.03	1.55	8.00	1.61	7.60	1.98	7.12	2.18	6.70	2.22	6.28	2.35
Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE090RXED*G	-20	6.55	2.39	6.71	2.56	6.07	2.84	5.96	2.99	5.90	3.23								
	-15	7.47	2.53	7.64	2.71	6.91	3.00	6.72	3.14	6.87	3.26	6.33	3.43						
	-10	8.64	2.72	8.40	2.83	8.00	3.29	7.76	3.44	7.52	3.46	7.29	3.93	6.77	4.68				
	-7	8.89	2.65	8.64	2.69	8.23	3.02	8.05	3.51	7.88	3.80	7.56	4.04	7.25	4.89				
	-2	9.57	2.43	9.31	2.61	8.86	2.93	8.53	3.22	8.19	3.50	7.78	3.94	7.37	4.38	6.98	4.87		
	2	9.67	2.18	9.40	2.34	8.95	2.63	8.46	2.78	7.96	2.93	7.56	3.30	7.16	3.66	6.79	3.89		
	7	9.72	1.55	9.45	1.66	9.00	1.87	8.80	2.16	8.60	2.33	8.30	2.66	8.00	2.73	7.33	3.11	7.07	3.52
	10	10.40	1.61	10.12	1.73	9.63	1.94	9.44	2.19	9.35	2.48	8.88	2.79	8.41	3.25	7.75	3.35	7.26	3.45
	15	11.63	1.64	11.19	1.79	10.65	2.01	10.48	2.24	10.51	2.59	9.99	2.91	9.66	3.29	8.90	3.39	8.34	3.53
	20	12.93	1.61	12.57	1.85	12.35	2.10	12.05	2.38	12.00	2.47	11.40	3.03	10.69	3.33	10.05	3.41	9.42	3.61

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range △t = 3~8℃
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range △t = 3~8℃
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.
4. Peak value : Tested without defrost operation in accordance with EN14511

※ The real capacity would be changed according to the install environment.

2. Outdoor Units

2-9. Capacity table

1) Maximum Heating Capacity (Peak Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input), WF (Water Flow)

Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE125DXED*G	-25	8.84	3.98	25.4	9.15	4.53	26.3	9.31	5.12	26.8	9.23	5.48	26.7															
	-20	11.50	4.70	33.1	11.28	5.14	32.5	11.10	5.44	32.0	10.76	5.80	31.1	10.50	6.17	30.4												
	-15	12.65	4.60	36.4	12.55	5.28	36.1	12.50	5.52	36.0	12.23	5.85	35.3	11.92	6.21	34.5	11.60	6.24	33.6									
	-10	13.20	4.06	38.0	12.80	4.40	36.9	12.50	4.50	36.0	12.30	4.86	35.5	12.10	5.26	35.0	12.10	5.58	35.1	12.10	5.79	21.9						
	-7	13.20	3.79	38.0	12.80	4.26	36.9	12.50	4.31	36.0	12.30	4.58	35.5	12.10	4.94	35.0	12.10	5.26	35.1	12.10	5.52	21.9	11.90	6.54	21.6			
	-2	13.20	3.16	38.0	12.80	3.59	36.9	12.50	3.80	36.0	12.30	3.98	35.5	12.10	4.35	35.0	12.10	4.71	35.1	12.10	4.86	21.9	12.10	5.57	22.0	12.10	6.95	17.6
	2	13.20	2.67	38.0	12.80	2.95	36.9	12.50	3.16	36.0	12.30	3.43	35.5	12.10	3.79	35.0	12.10	4.15	35.1	12.10	4.37	21.9	12.10	4.89	22.0	12.10	5.84	17.6
	7	13.20	2.18	38.0	12.80	2.43	36.9	12.50	2.57	36.0	12.30	2.88	35.5	12.10	3.27	35.0	12.10	3.64	35.1	12.10	4.03	21.9	12.10	4.50	22.0	12.10	5.30	17.6
	12	15.21	2.36	43.7	14.81	2.55	42.6	14.46	2.74	41.7	14.08	3.01	40.7	13.75	3.34	39.8	13.48	3.63	39.1	13.35	3.97	24.2	13.21	4.25	24.0	13.02	4.95	19.0
	15	16.41	2.39	47.2	15.98	2.60	46.0	15.61	2.82	45.0	15.13	3.05	43.7	14.69	3.35	42.5	14.19	3.56	41.1	13.91	3.85	25.2	13.66	4.12	24.8	13.55	4.96	19.7
	20	17.57	2.49	50.5	17.11	2.74	49.3	16.71	2.97	48.2	16.19	3.22	46.8	15.72	3.51	45.5	15.19	3.70	44.0	14.89	4.01	27.0	14.63	4.28	26.6	14.40	5.07	21.0
	25	18.55	2.51	53.3	18.06	2.79	52.0	17.64	3.02	50.9	17.09	3.26	49.4	16.59	3.53	48.0	16.03	3.68	46.5	15.72	4.00	28.5	15.44	4.24	28.1	15.20	4.78	22.1
	30	19.54	2.47	56.2	19.03	2.77	54.8	18.58	2.95	53.6	18.00	3.18	52.0	17.48	3.42	50.6	16.89	3.56	49.0	16.56	3.88	30.0	16.27	4.21	29.6	16.01	4.50	23.3
	35	20.48	2.22	58.0	19.94	2.52	57.4	19.46	2.76	56.1	18.85	2.96	54.4	18.30	3.19	52.9	17.85	3.36	51.8	17.50	3.67	31.7	17.20	4.10	31.3	16.92	4.61	24.6
Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE160DXED*G	-25	8.84	3.98	25.4	9.21	4.61	26.5	9.65	5.36	27.8	9.52	5.77	27.5															
	-20	12.00	5.00	34.5	11.80	5.49	34.0	11.60	5.74	33.4	11.40	6.26	32.9	11.10	6.65	32.1												
	-15	13.62	5.20	39.2	13.43	5.81	38.7	13.21	5.95	38.1	12.98	6.33	37.5	12.75	6.85	36.9	12.50	6.87	36.2									
	-10	16.00	5.16	46.0	16.00	5.88	46.1	16.00	6.04	46.0	15.85	6.58	45.8	15.50	7.08	44.8	14.00	6.64	40.6	12.50	6.10	22.7						
	-7	16.00	4.85	46.0	16.00	5.54	46.1	16.00	5.71	46.0	15.85	6.19	45.8	15.50	6.65	44.8	14.00	6.22	40.6	12.50	5.76	22.7	12.10	6.69	22.0			
	-2	16.10	4.16	46.3	16.05	4.72	46.2	16.00	5.08	46.0	15.85	5.39	45.8	15.50	5.85	44.8	14.00	5.56	40.6	12.50	5.06	22.7	12.30	5.69	22.4	12.12	6.97	17.6
	2	16.20	3.56	46.6	16.10	3.93	46.4	16.00	4.32	46.0	15.85	4.65	45.8	15.50	5.10	44.8	14.00	4.90	40.6	12.50	4.55	22.7	12.40	5.06	22.5	12.30	6.00	17.9
	7	16.30	2.95	46.9	16.15	3.22	46.5	16.00	3.52	46.0	15.85	3.91	45.8	15.50	4.39	44.8	14.00	4.36	40.6	12.50	4.24	22.7	12.40	4.70	22.5	12.30	5.47	17.9
	12	17.52	2.85	50.4	17.27	3.12	49.7	17.02	3.42	49.1	16.81	3.78	48.5	16.46	4.20	47.6	15.10	4.21	43.8	14.12	4.28	25.6	13.75	4.51	25.0	13.64	5.35	19.9
	15	18.26	2.79	52.5	17.94	3.07	51.7	17.63	3.35	50.8	17.39	3.68	50.2	17.04	4.06	49.3	15.76	4.09	45.7	15.29	4.32	27.7	14.75	4.54	26.8	14.33	5.47	20.9
	20	19.48	2.89	56.0	19.06	3.20	54.9	18.65	3.48	53.8	18.36	3.80	53.0	18.00	4.18	52.1	16.86	4.25	48.9	16.48	4.53	29.9	16.15	4.82	29.4	15.70	5.57	22.9
	25	20.70	2.94	58.0	20.18	3.28	58.0	19.66	3.53	56.7	19.32	3.83	55.8	18.97	4.20	54.9	17.95	4.26	52.0	17.55	4.56	31.8	17.24	4.83	31.3	16.70	5.30	24.3
	30	21.93	2.92	58.0	21.30	3.26	58.0	20.68	3.45	58.0	20.29	3.72	58.0	19.93	4.06	57.7	19.05	4.16	55.2	18.40	4.40	33.4	18.02	4.75	32.8	17.60	5.00	25.6
	35	23.15	2.64	58.0	22.42	2.98	58.0	21.70	3.24	58.0	21.25	3.47	58.0	20.89	3.78	58.0	20.15	3.91	58.0	19.42	4.18	35.2	18.50	4.50	33.6	17.60	4.82	25.6

1. Heating capacity
 - Capacity is according to EN14511.
 - Valid for heated water range (ΔT = Leaving water temperature - Entering water temperature)
  : If LWT≤50℃, ΔT=5℃ or 50℃<LWT≤60℃ , ΔT=8℃ or LWT>60℃, ΔT=10℃, within the minimum ~ maximum water flow rate.
2. Cooling capacity
 - Capacity is according to EN14511.
 - Valid for Cooling water range (ΔT =Entering water temperature - Leaving water temperature)
  : ΔT=5℃, within the minimum ~ maximum water flow rate.
3. Power input : Power input is according to EN14511.
4. Peak value : Tested without defrost operation in accordance with EN14511.

※ The real capacity would be changed according to the install environment.

2. Outdoor Units

2-9. Capacity table

2) Maximum Heating Capacity (Integrated Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input)

Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE040RXEDEG	-20	3.57	1.27	3.65	1.37	3.30	1.51	3.24	1.59	3.21	1.72								
	-15	4.06	1.35	4.16	1.44	3.76	1.60	3.66	1.67	3.74	1.74	3.44	1.82						
	-10	4.63	1.38	4.50	1.46	4.28	1.64	4.15	1.73	4.03	1.81	3.82	1.80	3.62	2.39				
	-7	4.72	1.38	4.59	1.42	4.42	1.55	4.32	1.84	4.23	2.03	4.23	2.11	3.85	2.42				
	-2	4.51	1.15	4.39	1.18	4.22	1.33	4.15	1.53	3.95	1.67	3.71	1.75	3.48	1.83	3.30	2.02		
	2	4.31	0.96	4.15	1.01	3.95	1.13	3.81	1.20	3.60	1.29	3.48	1.45	3.33	1.61	3.02	1.79		
	7	4.75	0.70	4.62	0.75	4.40	0.85	4.30	1.00	4.20	1.09	4.05	1.27	3.90	1.32	3.57	1.45	3.44	1.58
	10	5.09	0.73	4.95	0.78	4.71	0.88	4.61	1.00	4.57	1.15	4.34	1.30	4.11	1.51	3.79	1.55	3.55	1.60
	15	5.68	0.74	5.47	0.81	5.21	0.91	5.12	1.02	5.14	1.18	4.88	1.33	4.72	1.51	4.35	1.56	4.08	1.62
	20	6.32	0.73	6.14	0.84	6.04	0.95	5.89	1.08	5.86	1.12	5.57	1.37	5.22	1.51	4.91	1.54	4.60	1.63
Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE060RXEDEG	-20	4.46	1.71	4.56	1.84	4.13	2.04	4.05	2.14	4.01	2.32								
	-15	5.08	1.81	5.20	1.94	4.70	2.15	4.57	2.25	4.67	2.34	4.30	2.46						
	-10	5.48	1.87	5.33	1.97	5.07	2.19	4.92	2.33	4.77	2.43	4.53	2.68	4.29	2.94				
	-7	5.64	1.78	5.49	1.83	5.28	2.00	5.17	2.37	5.06	2.61	5.05	2.78	4.60	2.98				
	-2	5.49	1.52	5.34	1.55	5.14	1.74	5.04	2.01	4.80	2.19	4.51	2.46	4.23	2.73	4.00	3.04		
	2	5.34	1.29	5.13	1.36	4.89	1.52	4.71	1.61	4.46	1.73	4.30	1.95	4.12	2.17	3.74	2.41		
	7	6.48	1.01	6.30	1.09	6.00	1.22	5.70	1.41	5.40	1.51	5.10	1.74	4.80	1.81	4.31	1.98	4.05	2.15
	10	6.94	1.05	6.74	1.13	6.42	1.27	6.17	1.42	5.98	1.61	5.68	1.81	5.38	2.11	4.96	2.17	4.65	2.24
	15	7.75	1.07	7.46	1.17	7.10	1.31	6.92	1.46	6.89	1.68	6.54	1.89	6.32	2.14	5.83	2.21	5.46	2.30
	20	8.62	1.05	8.38	1.21	8.23	1.37	8.03	1.55	8.00	1.61	7.60	1.98	7.12	2.18	6.70	2.22	6.28	2.35
Model	LWT(℃)	25		30		35		40		45		50		55		60		65	
	Tamb(℃)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE090RXED*G	-20	6.55	2.39	6.71	2.56	6.07	2.84	5.96	2.99	5.90	3.23								
	-15	7.47	2.53	7.64	2.71	6.91	3.00	6.72	3.14	6.87	3.26	6.33	3.43						
	-10	8.04	2.65	7.82	2.78	7.45	3.22	7.22	3.38	7.00	3.39	6.79	3.81	6.30	4.52				
	-7	8.11	2.58	7.88	2.66	7.58	2.90	7.42	3.44	7.26	3.79	7.26	4.04	6.61	4.78				
	-2	8.00	2.25	7.78	2.30	7.49	2.58	7.35	2.97	6.99	3.24	6.57	3.64	6.16	4.09	5.84	4.50		
	2	7.90	1.97	7.68	2.09	7.32	2.35	6.98	2.46	6.60	2.65	6.37	2.98	6.10	3.31	5.54	3.68		
	7	9.72	1.55	9.45	1.66	9.00	1.87	8.80	2.16	8.60	2.33	8.30	2.66	8.00	2.73	7.33	3.11	7.07	3.52
	10	10.40	1.61	10.12	1.73	9.63	1.94	9.44	2.19	9.35	2.48	8.88	2.79	8.41	3.25	7.75	3.35	7.26	3.45
	15	11.63	1.64	11.19	1.79	10.65	2.01	10.48	2.24	10.51	2.59	9.99	2.91	9.66	3.29	8.90	3.39	8.34	3.53
	20	12.93	1.61	12.57	1.85	12.35	2.10	12.05	2.38	12.00	2.47	11.40	3.03	10.69	3.33	10.05	3.41	9.42	3.61

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range △t = 3~8°C
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range △t = 3~8°C
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.
4. Integrated value : Tested without defrost operation in accordance with EN14511

※ The real capacity would be changed according to the install environment.

2. Outdoor Units

2-9. Capacity table

2) Maximum Heating Capacity (Integrated Value)

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), HC (Heating Capacity), PI (Power input), WF (Water Flow)

Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE125DXEDEG	-25	8.84	3.98	25.4	9.15	4.53	26.3	9.31	5.12	26.8	9.23	5.48	26.7															
	-20	11.50	4.70	33.1	11.28	5.14	32.5	11.10	5.44	32.0	10.76	5.80	31.1	10.50	6.17	30.4												
	-15	12.65	4.60	36.4	12.55	5.28	36.1	12.50	5.52	36.0	12.23	5.85	35.3	11.92	6.21	34.5	11.60	6.24	33.6									
	-10	12.75	4.27	36.7	12.60	4.66	36.3	12.45	5.08	35.9	12.25	5.34	35.4	12.05	5.71	34.9	12.05	6.18	34.9	12.05	6.85	21.9						
	-7	12.75	4.02	36.7	12.60	4.27	36.3	12.45	4.58	35.9	12.25	4.80	35.4	12.05	5.25	34.9	12.05	5.77	34.9	12.05	6.38	21.9	10.60	6.54	19.3			
	-2	12.05	3.30	34.7	12.20	3.74	35.1	12.45	4.25	35.9	12.25	4.42	35.4	12.05	4.76	34.9	12.05	5.28	34.9	12.05	5.74	21.9	12.05	6.48	21.9	10.55	6.59	15.4
	2	11.40	2.73	32.8	11.90	3.30	34.3	12.45	3.89	35.9	12.25	4.14	35.4	12.05	4.42	34.9	12.05	4.81	34.9	12.05	5.23	21.9	12.05	5.94	21.9	11.22	6.45	16.3
	7	13.20	2.18	38.0	12.80	2.43	36.9	12.50	2.57	36.0	12.30	2.88	35.5	12.10	3.27	35.0	12.10	3.64	35.1	12.10	4.03	21.9	12.10	4.50	22.0	12.10	5.30	17.6
	12	15.21	2.36	43.7	14.81	2.55	42.6	14.46	2.74	41.7	14.08	3.01	40.7	13.75	3.34	39.8	13.48	3.63	39.1	13.35	3.97	24.2	13.21	4.25	24.0	13.02	4.95	19.0
	15	16.41	2.39	47.2	15.98	2.60	46.0	15.61	2.82	45.0	15.13	3.05	43.7	14.69	3.35	42.5	14.19	3.56	41.1	13.91	3.85	25.2	13.66	4.12	24.8	13.55	4.96	19.7
	20	17.57	2.49	50.5	17.11	2.74	49.3	16.71	2.97	48.2	16.19	3.22	46.8	15.72	3.51	45.5	15.19	3.70	44.0	14.89	4.01	27.0	14.63	4.28	26.6	14.40	5.07	21.0
	25	18.55	2.51	53.3	18.06	2.79	52.0	17.64	3.02	50.9	17.09	3.26	49.4	16.59	3.53	48.0	16.03	3.68	46.5	15.72	4.00	28.5	15.44	4.24	28.1	15.20	4.78	22.1
	30	19.54	2.47	56.2	19.03	2.77	54.8	18.58	2.95	53.6	18.00	3.18	52.0	17.48	3.42	50.6	16.89	3.56	49.0	16.56	3.88	30.0	16.27	4.21	29.6	16.01	4.50	23.3
	35	20.48	2.22	58.0	19.94	2.52	57.4	19.46	2.76	56.1	18.85	2.96	54.4	18.30	3.19	52.9	17.85	3.36	51.8	17.50	3.67	31.7	17.20	4.10	31.3	16.92	4.61	24.6
Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE125DXEDGG	-25	8.84	3.98	25.4	9.15	4.53	26.3	9.31	5.12	26.8	9.23	5.48	26.7															
	-20	11.50	4.70	33.1	11.28	5.14	32.5	11.10	5.44	32.0	10.76	5.80	31.1	10.50	6.17	30.4												
	-15	12.65	4.60	36.4	12.55	5.28	36.1	12.50	5.52	36.0	12.23	5.85	35.3	11.92	6.21	34.5	11.60	6.24	33.6									
	-10	12.75	4.27	36.7	12.60	4.66	36.3	12.45	5.08	35.9	12.25	5.34	35.4	12.05	5.71	34.9	12.05	6.18	34.9	12.05	6.85	21.9						
	-7	12.75	4.02	36.7	12.60	4.27	36.3	12.45	4.58	35.9	12.25	4.80	35.4	12.05	5.25	34.9	12.05	5.77	34.9	12.05	6.38	21.9	11.80	7.33	21.4			
	-2	12.05	3.30	34.7	12.20	3.74	35.1	12.45	4.25	35.9	12.25	4.42	35.4	12.05	4.76	34.9	12.05	5.28	34.9	12.05	5.74	21.9	12.05	6.48	21.9	12.05	7.68	17.5
	2	11.40	2.73	32.8	11.90	3.30	34.3	12.45	3.89	35.9	12.25	4.14	35.4	12.05	4.42	34.9	12.05	4.81	34.9	12.05	5.23	21.9	12.05	5.94	21.9	12.05	7.05	17.5
	7	13.20	2.18	38.0	12.80	2.43	36.9	12.50	2.57	36.0	12.30	2.88	35.5	12.10	3.27	35.0	12.10	3.64	35.1	12.10	4.03	21.9	12.10	4.50	22.0	12.10	5.30	17.6
	12	15.21	2.36	43.7	14.81	2.55	42.6	14.46	2.74	41.7	14.08	3.01	40.7	13.75	3.34	39.8	13.48	3.63	39.1	13.35	3.97	24.2	13.21	4.25	24.0	13.02	4.95	19.0
	15	16.41	2.39	47.2	15.98	2.60	46.0	15.61	2.82	45.0	15.13	3.05	43.7	14.69	3.35	42.5	14.19	3.56	41.1	13.91	3.85	25.2	13.66	4.12	24.8	13.55	4.96	19.7
	20	17.57	2.49	50.5	17.11	2.74	49.3	16.71	2.97	48.2	16.19	3.22	46.8	15.72	3.51	45.5	15.19	3.70	44.0	14.89	4.01	27.0	14.63	4.28	26.6	14.40	5.07	21.0
	25	18.55	2.51	53.3	18.06	2.79	52.0	17.64	3.02	50.9	17.09	3.26	49.4	16.59	3.53	48.0	16.03	3.68	46.5	15.72	4.00	28.5	15.44	4.24	28.1	15.20	4.78	22.1
	30	19.54	2.47	56.2	19.03	2.77	54.8	18.58	2.95	53.6	18.00	3.18	52.0	17.48	3.42	50.6	16.89	3.56	49.0	16.56	3.88	30.0	16.27	4.21	29.6	16.01	4.50	23.3
	35	20.48	2.22	58.0	19.94	2.52	57.4	19.46	2.76	56.1	18.85	2.96	54.4	18.30	3.19	52.9	17.85	3.36	51.8	17.50	3.67	31.7	17.20	4.10	31.3	16.92	4.61	24.6
Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE160DXEDEG	-25	8.84	3.98	25.4	9.21	4.61	26.5	9.65	5.36	27.8	9.52	5.77	27.5															
	-20	12.00	5.00	34.5	11.80	5.49	34.0	11.60	5.74	33.4	11.40	6.26	32.9	11.10	6.65	32.1												
	-15	13.62	5.20	39.2	13.43	5.81	38.7	13.21	5.95	38.1	12.98	6.33	37.5	12.75	6.85	36.9	12.50	6.87	36.2									
	-10	13.80	4.81	39.7	13.65	5.17	39.3	13.50	5.58	38.9	13.32	5.95	38.5	13.14	6.38	38.0	12.85	6.66	37.3	12.15	6.75	22.0						
	-7	13.75	4.52	39.5	13.50	4.69	38.9	13.30	5.04	38.3	13.12	5.27	37.9	12.96	5.79	37.5	12.80	6.15	37.1	12.40	6.63	22.5	10.60	6.54	19.3			
	-2	12.70	3.62	36.5	12.82	3.99	36.9	12.95	4.53	37.3	12.83	4.72	37.1	12.71	5.13	36.8	12.60	5.58	36.5	12.30	5.91	22.3	12.20	6.59	22.2	10.55	6.59	15.4
	2	11.70	2.95	33.6	12.30	3.46	35.4	12.70	3.99	36.6	12.60	4.30	36.4	12.50	4.63	36.2	12.40	5.00	35.9	12.30	5.39	22.3	12.35	6.11	22.4	11.22	6.45	16.3
	7	16.30	2.95	46.9	16.15	3.22	46.5	16.00	3.52	46.0	15.85	3.91	45.8	15.50	4.39	44.8	14.00	4.36	40.6	12.50	4.24	22.7	12.40	4.70	22.5	12.30	5.47	17.9
	12	17.52	2.85	50.4	17.27	3.12	49.7	17.02	3.42	49.1	16.81	3.78	48.5	16.46	4.20	47.6	15.10	4.21	43.8	14.12	4.28	25.6	13.75	4.51	25.0	13.64	5.35	19.9
	15	18.26	2.79	52.5	17.94	3.07	51.7	17.63	3.35	50.8	17.39	3.68	50.2	17.04	4.06	49.3	15.76	4.09	45.7	15.29	4.32	27.7	14.75	4.54	26.8	14.33	5.47	20.9
	20	19.48	2.89	56.0	19.06	3.20	54.9	18.65	3.48	53.8	18.36	3.80	53.0	18.00	4.18	52.1	16.86	4.25	48.9	16.48	4.53	29.9	16.15	4.82	29.4	15.70	5.57	22.9
	25	20.70	2.94	58.0	20.18	3.28	58.0	19.66	3.53	56.7	19.32	3.83	55.8	18.97	4.20	54.9	17.95	4.26	52.0	17.55	4.56	31.8	17.24	4.83	31.3	16.70	5.30	24.3
	30	21.93	2.92	58.0	21.30	3.26	58.0	20.68	3.45	58.0	20.29	3.72	58.0	19.93	4.06	57.7	19.05	4.16	55.2	18.40	4.40	33.4	18.02	4.75	32.8	17.60	5.00	25.6
	35	23.15	2.64	58.0	22.42	2.98	58.0	21.70	3.24	58.0	21.25	3.47	58.0	20.89	3.78	58.0	20.15	3.91	58.0	19.42	4.18	35.2	18.50	4.50	33.6	17.60	4.82	25.6
Model	LWT(℃)	25			30			35			40			45			50			55			60			65		
	Tamb(℃)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)	HC(kW)	PI(kW)	WF(LPM)
AE160DXEDGG	-25	8.84	3.98	25.4	9.21	4.61	26.5	9.65	5.36	27.8	9.52	5.77	27.5															
	-20	12.00	5.00	34.5	11.80	5.49	34.0	11.60	5.74	33.4	11.40	6.26	32.9	11.10	6.65	32.1												
	-15	13.62	5.20	39.2	13.43	5.81	38.7	13.21	5.95	38.1	12.98	6.33	37.5	12.75	6.85	36.9	12.50	6.87	36.2									
	-10	13.80	4.81	39.7	13.65	5.17	39.3	13.50	5.58	38.9	13.32	5.95	38.5	13.14	6.38	38.0	12.95	6.74	37.5	12.45	7.11	22.6						
	-7	13.75	4.52	39.5	13.50	4.69	38.9	13.30	5.04	38.3	13.12	5.27	37.9	12.96	5.79	37.5	12.80	6.15	37.1	12.40	6.63	22.5	12.05	7.53	21.9			
	-2	12.70	3.62	36.5	12.82	3.99	36.9	12.95	4.53	37.3	12.83	4.72	37.1	12.71	5.13	36.8	12.60	5.58	36.5	12.30	5.91	22.3	12.25	6.62	22.3	12.07	7.69	17.6
	2	11.70	2.95	33.6	12.30	3.46	35.4	12.70	3.99	36.6	12.60	4.30	36.4	12.50	4.63	36.2	12.40	5.00	35.9	12.30	5.39	22.3	12.35	6.11	22.4	12.25	7.21	17.8
	7	16.30	2.95	46.9	16.15	3.22	46.5	16.00	3.52	46.0	15.85	3.91	45.8	15.50	4.39	44.8	14.00	4.36	40.6	12.50	4.24	22.7	12.40	4.70	22.5	12.30	5.47	17.9
	12	17.52	2.85	50.4	17.27	3.12	49.7	17.02	3.42	49.1	16.81	3.78	48.5	16.46	4.20	47.6	15.10	4.21	43.8	14.12	4.28	25.6	13.75	4.51	25.0	13.64	5.35	19.9
	15	18.26	2.79	52.5	17.94	3.07	51.7	17.63	3.35	50.8	17.39	3.68	50.2	17.04	4.06	49.3	15.76	4.09	45.7	15.29	4.32	27.7	14.75	4.54	26.8	14.33	5.47	20.9
	20	19.48	2.89	56.0	19.06	3.20	54.9	18.65	3.48	53.8	18.36	3.80	53.0	18.00	4.18	52.1	16.86	4.25	48.9	16.48	4.53	29.9	16.15	4.82	29.4	15.70	5.57	22.9
	25	20.70	2.94	58.0	20.18	3.28	58.0	19.66	3.53	56.7	19.32	3.83	55.8	18.97	4.20	54.9	17.95	4.26	52.0	17.55	4.56	31.8	17.24	4.83	31.3	16.70	5.30	24.3
	30	21.93	2.92	58.0	21.30	3.26	58.0	20.68	3.45	58.0	20.29	3.72	58.0	19.93	4.06	57.7	19.05	4.16	55.2	18.40	4.40	33.4	18.02	4.75	32.8	17.60	5.00	25.6
	35	23.15	2.64	58.0	22.42	2.98	58.0	21.70	3.24	58.0	21.25	3.47	58.0	20.89	3.78	58.0	20.15	3.91	58.0	19.42	4.18	35.2	18.50	4.50	33.6	17.60	4.82	25.6

1. Heating capacity
 - Capacity is according to EN14511.
 - Valid for heated water range (ΔT = Leaving water temperature - Entering water temperature)
  : If LWT≤50℃, ΔT=5℃ or 50℃<LWT≤60℃ , ΔT=8℃ or LWT>60℃, ΔT=10℃, within the minimum ~ maximum water flow rate.
2. Cooling capacity
 - Capacity is according to EN14511.
 - Valid for Cooling water range (ΔT =Entering water temperature - Leaving water temperature)
  : ΔT=5℃, within the minimum ~ maximum water flow rate.
3. Power input : Power input is according to EN14511.
4. Peak value : Tested without defrost operation in accordance with EN14511.

※ The real capacity would be changed according to the install environment..

2. Outdoor Units

2-9. Capacity table

3) Cooling Capacity

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), CC (Cooling Capacity), PI (Power input)

	LWT (°C)	7		10		13		15		18		25	
	Tamb (°C)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE040RXEDEG	10	3.99	0.83	4.37	0.82	4.76	0.82	5.15	0.82	5.54	0.81	6.09	0.83
	20	3.83	0.94	4.21	0.93	4.58	0.93	4.95	0.93	5.33	0.92	5.86	0.94
	30	3.68	1.05	4.04	1.04	4.39	1.04	4.75	1.03	5.11	1.03	5.62	1.05
	35	3.60	1.11	3.95	1.11	4.30	1.10	4.65	1.10	5.00	1.09	5.50	1.11
	46	3.43	1.23	3.76	1.22	4.10	1.22	4.43	1.21	4.77	1.20	5.24	1.23
	LWT (°C)	7		10		13		15		18		25	
	Tamb (°C)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE060RXEDEG	10	5.20	1.07	5.70	1.08	6.20	1.08	6.70	1.09	7.20	1.10	7.92	1.12
	20	5.01	1.22	5.48	1.22	5.96	1.23	6.44	1.24	6.92	1.24	7.61	1.27
	30	4.80	1.36	5.26	1.37	5.72	1.37	6.18	1.38	6.64	1.39	7.31	1.42
	35	4.70	1.44	5.15	1.45	5.60	1.46	6.05	1.46	6.50	1.47	7.15	1.50
	46	4.48	1.59	4.91	1.60	5.34	1.61	5.77	1.62	6.19	1.62	6.81	1.66
	LWT (°C)	7		10		13		15		18		25	
	Tamb (°C)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)	HC(kW)	PI(kW)
AE090RXED*G	10	7.20	1.45	7.80	1.48	8.41	1.51	9.02	1.54	9.63	1.57	10.59	1.60
	20	6.92	1.65	7.51	1.68	8.09	1.72	8.68	1.75	9.27	1.78	10.19	1.82
	30	6.64	1.84	7.21	1.88	7.77	1.92	8.33	1.96	8.89	1.99	9.78	2.03
	35	6.50	1.95	7.05	1.99	7.60	2.03	8.15	2.07	8.70	2.11	9.57	2.15
	46	6.19	2.15	6.72	2.20	7.24	2.24	7.77	2.29	8.29	2.33	9.12	2.38

1. Heating capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for heated water range △t = 3~8°C
2. Cooling capacity : Capacity is according to Eurovent rating standard OM-3-2015 and valid for chilled water range △t = 3~8°C
3. Power input : Power input is according to Eurovent rating standard OM-3-2015.

※ The real capacity would be changed according to the install environment.

2. Outdoor Units

2-9. Capacity table

3) Cooling Capacity

LWT (Leaving Water Temp.), Tamb (Ambient Temp.), CC (Cooling Capacity), PI (Power input), WF (Water Flow)

Model	LWT(℃)	7			10			13			15			18			25		
	Tamb(℃)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)
AE125DXED*G	10	10.56	1.84	30.3	10.74	1.81	30.9	11.63	1.91	33.4	12.43	2.00	35.7	13.52	2.12	38.9	14.30	2.14	41.2
	20	10.20	2.08	29.3	10.26	2.02	29.5	11.11	2.12	31.9	11.87	2.23	34.1	13.32	2.43	38.3	14.08	2.41	40.6
	30	9.83	2.68	28.2	10.13	2.62	29.1	10.97	2.71	31.5	11.72	2.81	33.7	13.10	3.00	37.7	13.99	2.92	40.3
	35	9.50	3.22	27.3	9.88	3.10	28.4	10.61	3.09	30.5	11.34	3.15	32.6	12.50	3.29	36.0	13.46	3.03	38.8
	46	7.14	4.14	20.5	7.69	4.00	22.1	8.46	3.99	24.3	8.92	3.96	25.7	9.22	3.77	26.5	11.19	3.85	32.3
Model	LWT(℃)	7			10			13			15			18			25		
	Tamb(℃)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)	CC(kW)	PI(kW)	WF(LPM)
AE160DXED*G	10	11.72	2.08	33.7	12.31	2.13	35.4	13.24	2.24	38.1	14.05	2.33	40.4	15.46	2.50	44.5	16.96	2.61	48.9
	20	11.33	2.35	32.5	11.87	2.39	34.1	12.78	2.50	36.7	13.55	2.61	39.0	14.92	2.79	42.9	16.37	2.87	47.2
	30	10.92	3.03	31.4	11.43	3.02	32.8	12.31	3.10	35.4	13.06	3.19	37.6	14.38	3.36	41.4	15.77	3.36	45.5
	35	10.50	3.62	30.2	10.89	3.46	31.3	11.61	3.43	33.4	12.32	3.47	35.4	13.50	3.55	39.0	14.88	3.41	42.9
	46	7.52	4.42	21.6	8.09	4.27	23.2	8.90	4.26	25.6	9.39	4.24	27.0	9.70	4.02	27.9	11.78	4.11	34.0

1. Heating capacity
 - Capacity is according to EN14511.
 - Valid for heated water range (ΔT = Leaving water temperature - Entering water temperature)
  : If LWT≤50℃, ΔT=5℃ or 50℃<LWT≤60℃ , ΔT=8℃ or LWT>60℃, ΔT=10℃, within the minimum ~ maximum water flow rate.
2. Cooling capacity
 - Capacity is according to EN14511.
 - Valid for Cooling water range (ΔT =Entering water temperature - Leaving water temperature)
  : ΔT=5℃, within the minimum ~ maximum water flow rate.
3. Power input : Power input is according to EN14511.
4. Peak value : Tested without defrost operation in accordance with EN14511.

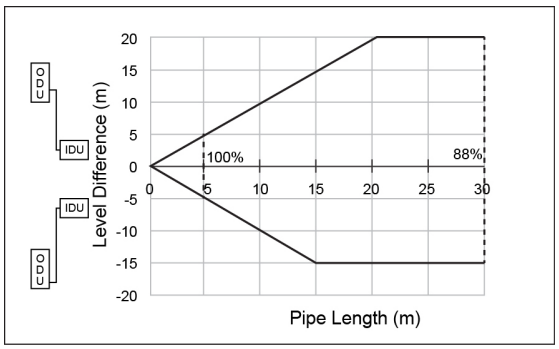
※ The real capacity would be changed according to the install environment..

2. Outdoor Units

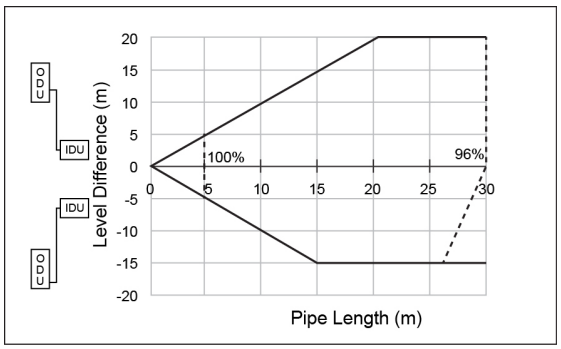
2-10. Capacity correction

AE040/060RXEDEG/EU

1) Heating

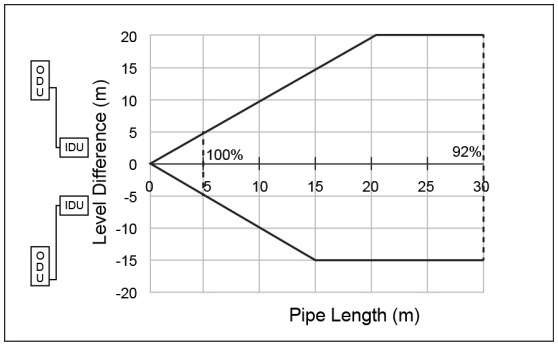


2) Cooling

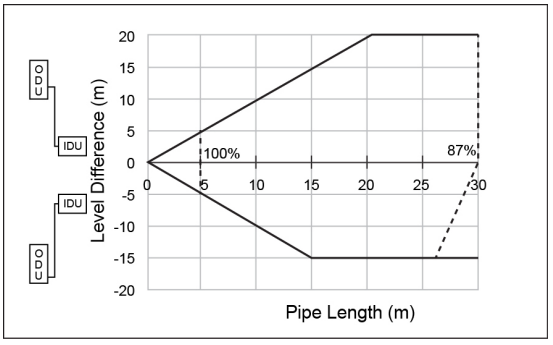


AE090RXED*G/EU

1) Heating

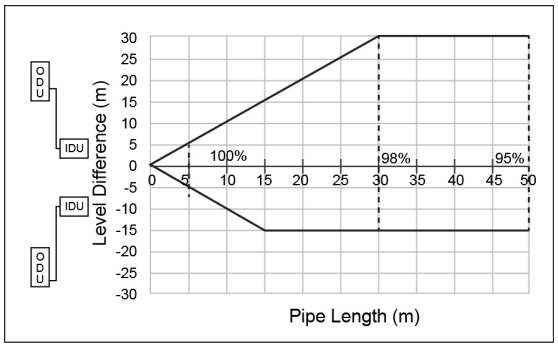


2) Cooling

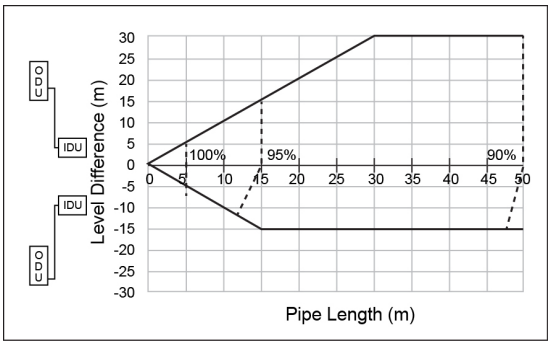


AE125DXED*G/EU, AE160DXED*G/EU

1) Heating



2) Cooling



2. Outdoor Units

2-10. Capacity correction

Silent mode corrections

Heating

Silent Function	Outdoor Air Temperature(°C DB)			
	-15	2	7	15
Level 1	0.92	0.87	0.94	0.94
Level 2	0.82	0.78	0.84	0.84
Level 3	0.68	0.64	0.69	0.69
Low-noise	0.7	0.6	0.69	0.69

Cooling

Silent Function	Outdoor Air Temperature(°C DB)			
	10	20	35	45
Level 1	1	1	0.92	0.92
Level 2	0.98	0.89	0.83	0.83
Level 3	0.81	0.74	0.68	0.68

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNXSPG/EU	AE200DNXSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Cooling (Max)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Max)		kW	4.3	3Φ 6.0/ 1Φ 0.3
Current Input	Cooling (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Cooling (Max)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Max)		A	18.7	3Φ 8.7 / 1Φ 1.3
Field Wiring	MCA		A	18.7	3Φ 8.7 / 1Φ 1.3
	MFA			23.4	3Φ 10.9 / 1Φ 1.6
Water Connections	Water pipe (Space heating)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (DHW)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
	Water pipe (Secondary water return)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
DHW Tank	Nominal Water Volume		liter	200	200
	Net Water Volume		liter	194	194
	Material		-	SUS 316L	SUS 316L
	Max. water pressure		bar	10	10
	Max. water temperature		℃	65	65
	Corrosion protection		-	Anode bar	Anode bar
	Insulation		-	Inner EPP+VIP+Outer EPS	Inner EPP+VIP+Outer EPS
	Coil surface area		㎡	2.09	2.09
	Coil diameter		mm	22.0	22.0
	Coil length		m	29.2	29.2
	Internal coil volume		L	9.5	9.5
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	BLDC Inv(Fixed)	BLDC Inv(Fixed)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	48	48
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		℃	85±4	85±4
	Thermostat (Thermal Fuse)		℃	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure relief		-	10bar, 90℃	10bar, 90℃
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNXSPG/EU	AE200DNXSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				○	○
Mixing valve			-	○	○
Check valve			-	○	○
IP Class			-	IPX1	IPX1
Sound Level	Sound Pressure Level	Heating	dB(A)	28	28
		Cooling	dB(A)	28	28
	Sound Power Level	Heating	dB(A)	42	42
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX/Pallet	EPS/BOX/Pallet
	Packing Weight		kg	12.0	12.0
Pipe Insulation	water		mm	8	8
External Dimension	Net Weight		kg	145.0	145.0
	Shipping Weight		kg	157.5	157.5
	Net Dimensions (WxHxD)		mm	598 x 1,850 x 600	598 x 1,850 x 600
	Shipping Dimensions (WxHxD)		mm	676 x 2,050 x 740	676 x 2,050 x 740
Operating Temp. Range	Hydro unit ambient		°C	4~35	4~35
	Heating		°C	15~65	15~65
	Cooling		°C	5~25	5~25
	D.Hot Water		°C	30~70	30~70
External Control	Back up Boiler		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded		-	○	○
	7 inch Full touch display		-	○	○
	Energy Monitioring		-	○	○
	PV / SG Ready		-	○	○
	2 Zone Control		-	○	○

NOTE

- Specifications may be subject to change without prior notice.
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNXSPG/EU	AE200DNXSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Cooling (Max)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Max)		kW	4.3	3Φ 6.0/ 1Φ 0.3
Current Input	Cooling (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Cooling (Max)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Max)		A	18.7	3Φ 8.7 / 1Φ 1.3
Field Wiring	MCA		A	18.7	3Φ 8.7 / 1Φ 1.3
	MFA			23.4	3Φ 10.9 / 1Φ 1.6
Water Connections	Water pipe (Space heating)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (DHW)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
	Water pipe (Secondary water return)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
DHW Tank	Nominal Water Volume		liter	200	200
	Net Water Volume		liter	194	194
	Material		-	SUS 316L	SUS 316L
	Max. water pressure		bar	10	10
	Max. water temperature		℃	65	65
	Corrosion protection		-	Anode bar	Anode bar
	Insulation		-	Inner EPP+VIP+Outer EPS	Inner EPP+VIP+Outer EPS
	Coil surface area		㎡	2.09	2.09
	Coil diameter		mm	22.0	22.0
	Coil length		m	29.2	29.2
	Internal coil volume		L	9.5	9.5
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	BLDC Inv(Fixed)	BLDC Inv(Fixed)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	58	58
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		℃	85±4	85±4
	Thermostat (Thermal Fuse)		℃	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure relief		-	10bar, 90℃	10bar, 90℃
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNXSPG/EU	AE200DNXSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				○	○
Mixing valve			-	○	○
Check valve			-	○	○
IP Class			-	IPX1	IPX1
Sound Level	Sound Pressure Level	Heating	dB(A)	32	32
		Cooling	dB(A)	32	32
	Sound Power Level	Heating	dB(A)	46	46
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX/Pallet	EPS/BOX/Pallet
	Packing Weight		kg	12.0	12.0
Pipe Insulation	water		mm	8	8
External Dimension	Net Weight		kg	145.0	145.0
	Shipping Weight		kg	157.5	157.5
	Net Dimensions (WxHxD)		mm	598 x 1,850 x 600	598 x 1,850 x 600
	Shipping Dimensions (WxHxD)		mm	676 x 2,050 x 740	676 x 2,050 x 740
Operating Temp. Range	Hydro unit ambient		°C	4~35	4~35
	Heating		°C	15~65	15~65
	Cooling		°C	5~25	5~25
	D.Hot Water		°C	30~70	30~70
External Control	Back up Boiler		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded		-	○	○
	7 inch Full touch display		-	○	○
	Energy Monitioring		-	○	○
	PV / SG Ready		-	○	○
	2 Zone Control		-	○	○

NOTE

- Specifications may be subject to change without prior notice.
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNWSPG/EU	AE200DNWSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Cooling (Max)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Max)		kW	4.2	3Φ 6.0 / 1Φ 0.2
Current Input	Cooling (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Cooling (Max)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Max)		A	18.3	3Φ 8.7 / 1Φ 0.9
Field Wiring	MCA		A	18.3	3Φ 8.7 / 1Φ 0.9
	MFA			22.9	3Φ 10.9 / 1Φ 1.2
Water Connections	Water pipe (Space heating)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (DHW)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
	Water pipe (Secondary water return)	Type	-	N/A	N/A
		Inlet	Φ, mm	N/A	N/A
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
DHW Tank	Nominal Water Volume		liter	200	200
	Net Water Volume		liter	194	194
	Material		-	SUS 316L	SUS 316L
	Max. water pressure		bar	10	10
	Max. water temperature		℃	65	65
	Corrosion protection		-	Anode bar	Anode bar
	Insulation		-	Inner EPP+VIP+Outer EPS	Inner EPP+VIP+Outer EPS
	Coil surface area		㎡	2.09	2.09
	Coil diameter		mm	22.0	22.0
	Coil length		m	29.2	29.2
	Internal coil volume		L	9.5	9.5
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	N/A	N/A
	Motor Input		W	N/A	N/A
	Max static pressure		mAq	N/A	N/A
	Max water flow		LPM	N/A	N/A
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	48	48
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		℃	85±4	85±4
	Thermostat (Thermal Fuse)		℃	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure relief		-	10bar, 90℃	10bar, 90℃
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNWSPG/EU	AE200DNWSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				N/A	N/A
Mixing valve			-	N/A	N/A
Check valve			-	N/A	N/A
IP Class			-	IPX1	IPX1
Sound Level	Sound Pressure Level	Heating	dB(A)	26	26
		Cooling	dB(A)	26	26
	Sound Power Level	Heating	dB(A)	40	40
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX/Pallet	EPS/BOX/Pallet
	Packing Weight		kg	12.0	12.0
Pipe Insulation	water		mm	8	8
External Dimension	Net Weight		kg	136.0	136.0
	Shipping Weight		kg	148.0	148.0
	Net Dimensions (WxHxD)		mm	598 x 1,850 x 600	598 x 1,850 x 600
	Shipping Dimensions (WxHxD)		mm	676 x 2,050 x 740	676 x 2,050 x 740
Operating Temp. Range	Hydro unit ambient		°C	4~35	4~35
	Heating		°C	15~65	15~65
	Cooling		°C	5~25	5~25
	D.Hot Water		°C	30~70	30~70
External Control	Back up Boiler		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded		-	○	○
	7 inch Full touch display		-	○	○
	Energy Monitioring		-	○	○
	PV / SG Ready		-	○	○
	2 Zone Control		-	N/A	N/A

NOTE

- Specifications may be subject to change without prior notice.
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNWSPG/EU	AE200DNWSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Cooling (Max)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Max)		kW	4.2	3Φ 6.0 / 1Φ 0.2
Current Input	Cooling (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Cooling (Max)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Max)		A	18.3	3Φ 8.7 / 1Φ 0.9
Field Wiring	MCA		A	18.3	3Φ 8.7 / 1Φ 0.9
	MFA			22.9	3Φ 10.9 / 1Φ 1.2
Water Connections	Water pipe (Space heating)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (DHW)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
	Water pipe (Secondary water return)	Type	-	Straight pipe	Straight pipe
		Inlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
DHW Tank	Nominal Water Volume		liter	200	200
	Net Water Volume		liter	194	194
	Material		-	SUS 316L	SUS 316L
	Max. water pressure		bar	10	10
	Max. water temperature		℃	65	65
	Corrosion protection		-	Anode bar	Anode bar
	Insulation		-	Inner EPP+VIP+Outer EPS	Inner EPP+VIP+Outer EPS
	Coil surface area		㎡	2.09	2.09
	Coil diameter		mm	22.0	22.0
	Coil length		m	29.2	29.2
	Internal coil volume		L	9.5	9.5
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	N/A	N/A
	Motor Input		W	N/A	N/A
	Max static pressure		mAq	N/A	N/A
	Max water flow		LPM	N/A	N/A
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	58	58
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		℃	85±4	85±4
	Thermostat (Thermal Fuse)		℃	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure relief		-	10bar, 90℃	10bar, 90℃
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE200DNWSPG/EU	AE200DNWSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				N/A	N/A
Mixing valve			-	N/A	N/A
Check valve			-	N/A	N/A
IP Class			-	IPX1	IPX1
Sound Level	Sound Pressure Level	Heating	dB(A)	30	30
		Cooling	dB(A)	30	30
	Sound Power Level	Heating	dB(A)	44	44
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX/Pallet	EPS/BOX/Pallet
	Packing Weight		kg	12.0	12.0
Pipe Insulation	water		mm	8	8
External Dimension	Net Weight		kg	136.0	136.0
	Shipping Weight		kg	148.0	148.0
	Net Dimensions (WxHxD)		mm	598 x 1,850 x 600	598 x 1,850 x 600
	Shipping Dimensions (WxHxD)		mm	676 x 2,050 x 740	676 x 2,050 x 740
Operating Temp. Range	Hydro unit ambient		°C	4~35	4~35
	Heating		°C	15~65	15~65
	Cooling		°C	5~25	5~25
	D.Hot Water		°C	30~70	30~70
External Control	Back up Boiler		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump		-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way		-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded		-	○	○
	7 inch Full touch display		-	○	○
	Energy Monitioring		-	○	○
	PV / SG Ready		-	○	○
	2 Zone Control		-	N/A	N/A

NOTE

- Specifications may be subject to change without prior notice.
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE160DNZSPG/EU	AE160DNZSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Cooling (Max)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Max)		kW	4.3	3Φ 6.0/ 1Φ 0.3
Current Input	Cooling (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Cooling (Max)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Max)		A	18.7	3Φ 8.7 / 1Φ 1.3
Field Wiring	MCA		A	18.7	3Φ 8.7 / 1Φ 1.3
	MFA			23.4	3Φ 10.9 / 1Φ 1.6
Water Connections	Water pipe (Space heating)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (Tank)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	BLDC Inv(Fixed)	BLDC Inv(Fixed)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	48	48
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		°C	85±4	85±4
	Thermostat (Thermal Fuse)		°C	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure		-	10bar, 90°C	10bar, 90°C
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				○	○
Mixing valve			-	○	○
Check valve			-	○	○
Sound Level	Sound Pressure Level	Heating	dB(A)	28	28
		Cooling	dB(A)	28	28
	Sound Power Level	Heating	dB(A)	42	42
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX	EPS/BOX
	Packing Weight		kg	3.7	3.7
Pipe Insulation	water		mm	8	8

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit		AE160DNZSPG/EU	AE160DNZSPG/EU
	Outdoor Unit		AE***RXEDEG/EU	AE***RXEDGG/EU
External Dimension	Net Weight	kg	60.0	60.0
	Shipping Weight	kg	68.0	68.0
	Net Dimensions (WxHxD)	mm	530 x 840 x 350	530 x 840 x 350
	Shipping Dimensions	mm	602 x 1,032 x 435	602 x 1,032 x 435
Operating Temp. Range	Hydro unit ambient	°C	4~35	4~35
	Heating	°C	15~65	15~65
	Cooling	°C	5~25	5~25
	D.Hot Water	°C	30~70	30~70
External Control	Booster Heater	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Back up Boiler	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded	-	○	○
	7 inch Full touch display	-	○	○
	Energy Monitioring	-	○	○
	PV / SG Ready	-	○	○
	2 Zone Control	-	○	○

NOTE

- Specifications may be subject to change without prior notice.
  1)* The dimensions inside () correspond to the AE***AXED*H/EU model.
  2)* 65°C : AE***RXED*G/EU, AE***CXED*G/EU model (R32 refrigerant outdoor unit)
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE160DNZSPG/EU	AE160DNZSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Nominal)		kW	0.3	3Φ - / 1Φ 0.3
	Cooling (Max)		kW	0.3	3Φ - / 1Φ 0.3
	Heating (Max)		kW	4.3	3Φ 6.0/ 1Φ 0.3
Current Input	Cooling (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Nominal)		A	1.3	3Φ - / 1Φ 1.3
	Cooling (Max)		A	1.3	3Φ - / 1Φ 1.3
	Heating (Max)		A	18.7	3Φ 8.7 / 1Φ 1.3
Field Wiring	MCA		A	18.7	3Φ 8.7 / 1Φ 1.3
	MFA			23.4	3Φ 10.9 / 1Φ 1.6
Water Connections	Water pipe (Space heating)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (Tank)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	BLDC Inv(Fixed)	BLDC Inv(Fixed)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	58	58
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		°C	85±4	85±4
	Thermostat (Thermal Fuse)		°C	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure		-	10bar, 90°C	10bar, 90°C
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				○	○
Mixing valve			-	○	○
Check valve			-	○	○
Sound Level	Sound Pressure Level	Heating	dB(A)	32	32
		Cooling	dB(A)	32	32
	Sound Power Level	Heating	dB(A)	46	46
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX	EPS/BOX
	Packing Weight		kg	3.7	3.7
Pipe Insulation	water		mm	8	8

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit		AE160DNZSPG/EU	AE160DNZSPG/EU
	Outdoor Unit		AE***DXEDEG/EU	AE***DEXDGG/EU
External Dimension	Net Weight	kg	60.0	60.0
	Shipping Weight	kg	68.0	68.0
	Net Dimensions (WxHxD)	mm	530 x 840 x 350	530 x 840 x 350
	Shipping Dimensions	mm	602 x 1,032 x 435	602 x 1,032 x 435
Operating Temp. Range	Hydro unit ambient	°C	4~35	4~35
	Heating	°C	15~65	15~65
	Cooling	°C	5~25	5~25
	D.Hot Water	°C	30~70	30~70
External Control	Booster Heater	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Back up Boiler	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded	-	○	○
	7 inch Full touch display	-	○	○
	Energy Monitioring	-	○	○
	PV / SG Ready	-	○	○
	2 Zone Control	-	○	○

NOTE

- Specifications may be subject to change without prior notice.
  1)* The dimensions inside () correspond to the AE***AXED*H/EU model.
  2)* 65°C : AE***RXED*G/EU, AE***CXED*G/EU model (R32 refrigerant outdoor unit)
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE160DNYSPG/EU	AE160DNYSPG/EU
	Outdoor Unit			AE***RXEDEG/EU	AE***RXEDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Cooling (Max)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Max)		kW	4.2	3Φ 6.0 / 1Φ 0.2
Current Input	Cooling (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Cooling (Max)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Max)		A	18.3	3Φ 8.7 / 1Φ 0.9
Field Wiring	MCA		A	18.3	3Φ 8.7 / 1Φ 0.9
	MFA			22.9	3Φ 10.9 / 1Φ 1.2
Water Connections	Water pipe (Space heating)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (Tank)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	N/A	N/A
	Motor Input		W	N/A	N/A
	Max static pressure		mAq	N/A	N/A
	Max water flow		LPM	N/A	N/A
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	48	48
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		°C	85±4	85±4
	Thermostat (Thermal Fuse)		°C	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure		-	10bar, 90°C	10bar, 90°C
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"
Manometer			-	O	O
Magnetic filter			-	O	O
Strainer				N/A	N/A
Mixing valve			-	N/A	N/A
Check valve			-	N/A	N/A
Sound Level	Sound Pressure Level	Heating	dB(A)	26	26
		Cooling	dB(A)	26	26
	Sound Power Level	Heating	dB(A)	40	40
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX	EPS/BOX
	Packing Weight		kg	3.7	3.7
Pipe Insulation	water		mm	8	8

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit		AE160DNYSPG/EU	AE160DNYSPG/EU
	Outdoor Unit		AE***RXEDEG/EU	AE***RXEDGG/EU
External Dimension	Net Weight	kg	60.0	60.0
	Shipping Weight	kg	68.0	68.0
	Net Dimensions (WxHxD)	mm	530 x 840 x 350	530 x 840 x 350
	Shipping Dimensions	mm	602 x 1,032 x 435	602 x 1,032 x 435
Operating Temp. Range	Hydro unit ambient	°C	4~35	4~35
	Heating	°C	15~65	15~65
	Cooling	°C	5~25	5~25
	D.Hot Water	°C	30~70	30~70
External Control	Booster Heater	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Back up Boiler	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded	-	○	○
	7 inch Full touch display	-	○	○
	Energy Monitioring	-	○	○
	PV / SG Ready	-	○	○
	2 Zone Control	-	N/A	N/A

NOTE

- Specifications may be subject to change without prior notice.
  1)* The dimensions inside () correspond to the AE***AXED*H/EU model.
  2)* 65°C : AE***RXED*G/EU, AE***CXED*G/EU model (R32 refrigerant outdoor unit)
- Select wire size based on the value of MCA

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit			AE160DNYSPG/EU	AE160DNYSPG/EU
	Outdoor Unit			AE***DXEDEG/EU	AE***DEXDGG/EU
Power Supply			Φ, #, V, Hz	1,2,220-240,50	3,4,380-415,50
Mode			-	Heat Pump (A2W)	Heat Pump (A2W)
Power input	Cooling (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Nominal)		kW	0.2	3Φ - / 1Φ 0.2
	Cooling (Max)		kW	0.2	3Φ - / 1Φ 0.2
	Heating (Max)		kW	4.2	3Φ 6.0 / 1Φ 0.2
Current Input	Cooling (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Nominal)		A	0.9	3Φ - / 1Φ 0.9
	Cooling (Max)		A	0.9	3Φ - / 1Φ 0.9
	Heating (Max)		A	18.3	3Φ 8.7 / 1Φ 0.9
Field Wiring	MCA		A	18.3	3Φ 8.7 / 1Φ 0.9
	MFA			22.9	3Φ 10.9 / 1Φ 1.2
Water Connections	Water pipe (Space heating)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	28	28
		Outlet	Φ, mm	28	28
	Water pipe (Tank)	Type	-	BSPP Female 1 1/4	BSPP Female 1 1/4
		Inlet	Φ, mm	22	22
		Outlet	Φ, mm	22	22
Refrigerant Connections	Refrigerant pipe (To outdoor unit)	Type	-	Flare nut	Flare nut
		Liquid	Φ, mm	6.35	6.35
		Gas	Φ, mm	12.70	12.70
Water Pump (Primary)	Type		-	BLDC Inv(PWM)	BLDC Inv(PWM)
	Motor Input		W	95	95
	Max static pressure		mAq	9.0	9.0
	Max water flow		LPM	75	75
Water Pump (2-zone)	Type		-	N/A	N/A
	Motor Input		W	N/A	N/A
	Max static pressure		mAq	N/A	N/A
	Max water flow		LPM	N/A	N/A
Water Heat Exchanger	Type		-	Brazed Plate Exchager	Brazed Plate Exchager
	Quantity		EA	1	1
	Internal water volume		L	1.01(Water Side) 0.98(Refrigerant Side)	1.01(Water Side) 0.98(Refrigerant Side)
	Insulation material		-	EPP	EPP
Water flow rate		Min.	l/min	7	7
		Max.	l/min	58	58
Backup Heater	Power		-	1Φ 2/4kW	3Φ 6kW
	Thermostat		°C	85±4	85±4
	Thermostat (Thermal Fuse)		°C	98 +0 -5	98 +0 -5
Safety device	Pressure relief valve		bar	2.9	2.9
	Flow Sensor		LPM	5~60	5~60
	Temperature & Pressure		-	10bar, 90°C	10bar, 90°C
Expansion vessel	Internal water volume		liter	10	10
	Max. Working pressure		MPa	0.3	0.3
	Initial Charging Pressure		MPa	0.1	0.1
Air Purge Valve			Φ, inch	BSPP male 3/8"	BSPP male 3/8"
Manometer			-	○	○
Magnetic filter			-	○	○
Strainer				N/A	N/A
Mixing valve			-	N/A	N/A
Check valve			-	N/A	N/A
Sound Level	Sound Pressure Level	Heating	dB(A)	30	30
		Cooling	dB(A)	30	30
	Sound Power Level	Heating	dB(A)	44	44
Casing	Color		-	GREIGE	GREIGE
	Material		-	PCM	PCM
Packing	Material		-	EPS/BOX	EPS/BOX
	Packing Weight		kg	3.7	3.7
Pipe Insulation	water		mm	8	8

3. Indoor units

3-1. Specifications

Model Name	Indoor Unit		AE160DNYSPG/EU	AE160DNYSPG/EU
	Outdoor Unit		AE***DXEDEG/EU	AE***DEXDGG/EU
External Dimension	Net Weight	kg	60.0	60.0
	Shipping Weight	kg	68.0	68.0
	Net Dimensions (WxHxD)	mm	530 x 840 x 350	530 x 840 x 350
	Shipping Dimensions	mm	602 x 1,032 x 435	602 x 1,032 x 435
Operating Temp. Range	Hydro unit ambient	°C	4~35	4~35
	Heating	°C	15~65	15~65
	Cooling	°C	5~25	5~25
	D.Hot Water	°C	30~70	30~70
External Control	Booster Heater	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Back up Boiler	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Room Thermostat	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
	Solar Pump	-	AC 230V (Max 10mA)	AC 230V (Max 10mA)
	Valves, 2 or 3way	-	AC 230V (Max 22mA)	AC 230V (Max 22mA)
Fuction	WiFi Embedded	-	○	○
	7 inch Full touch display	-	○	○
	Energy Monitioring	-	○	○
	PV / SG Ready	-	○	○
	2 Zone Control	-	N/A	N/A

NOTE

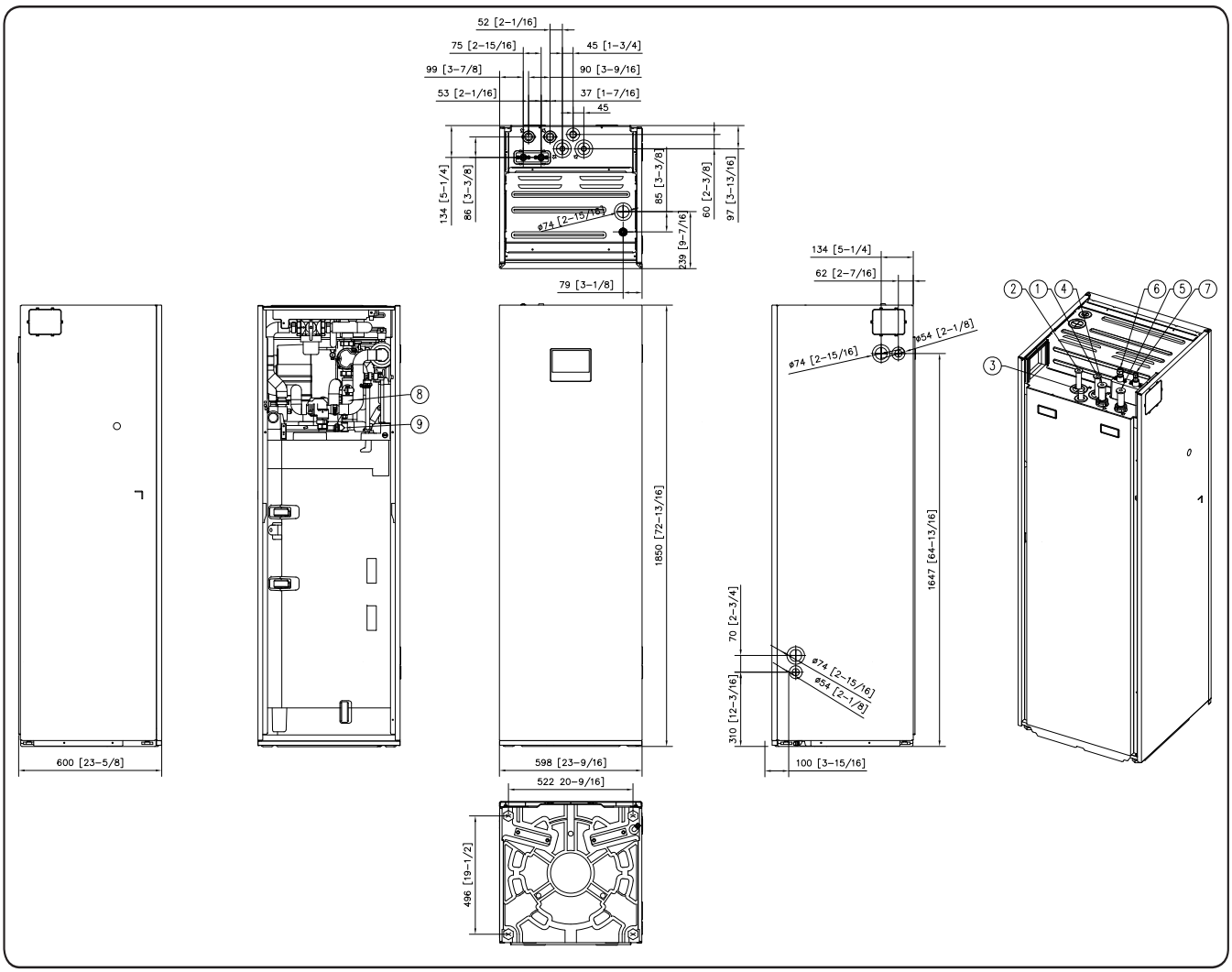
- Specifications may be subject to change without prior notice.
  1)* The dimensions inside () correspond to the AE***AXED*H/EU model.
  2)* 65°C : AE***RXED*G/EU, AE***CXED*G/EU model (R32 refrigerant outdoor unit)
- Select wire size based on the value of MCA

3. Indoor units

3-2. Dimensional drawing

AE200DNWSPG/EU

Unit : mm [inch]



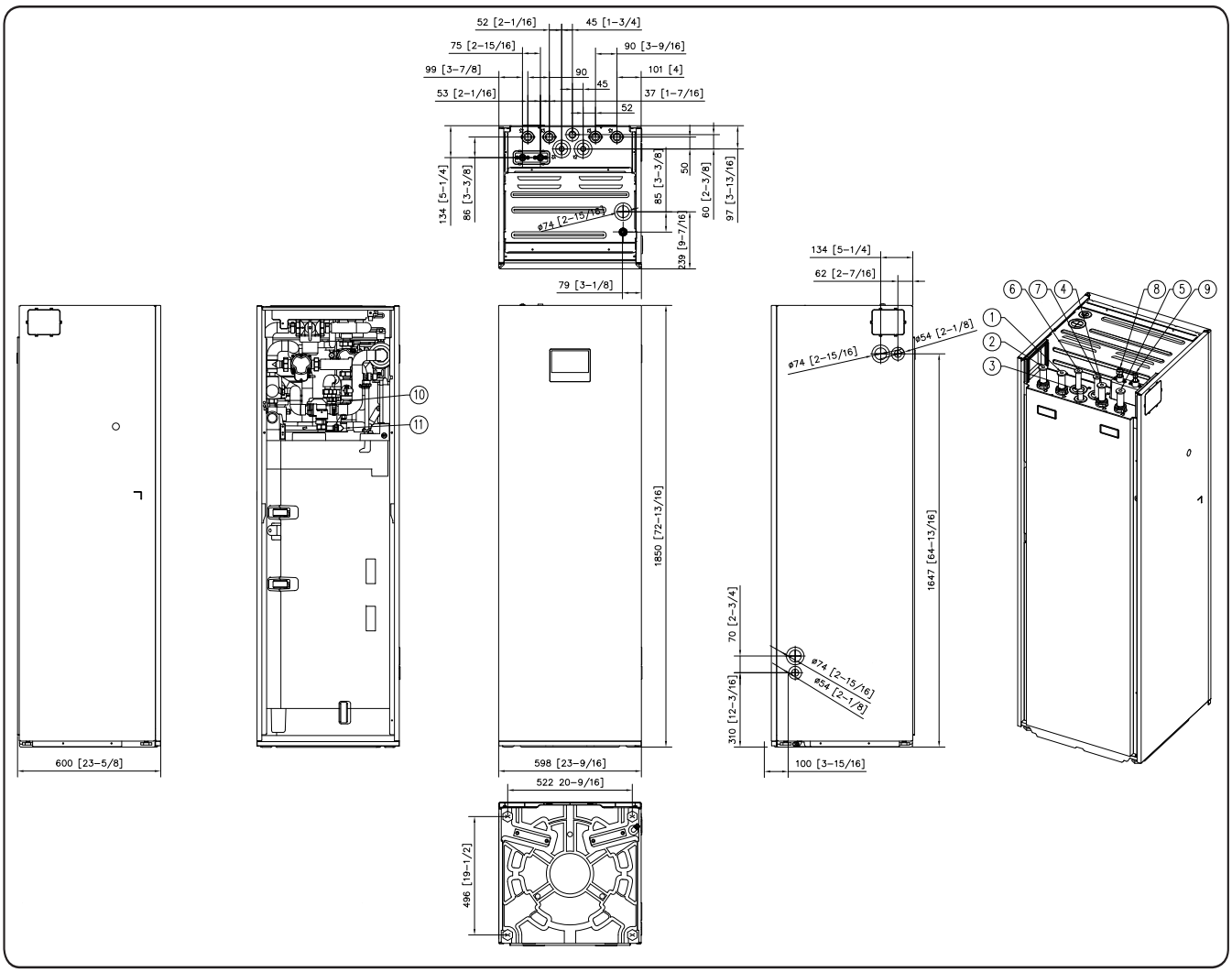
NO	Name	Description
01	Domestic Hot Water Tank Inlet	ø22, Straight pipe
02	Domestic Hot Water Tank Outlet	ø22, Straight pipe
03	Domestic Hot Water Return	ø22, Straight pipe
04	Space Heating Outlet	ø28, Straight pipe
05	Space Heating Inlet	ø28, Straight pipe
06	Refrigerant Gas	ø12.70 (1/2''), Flare Nut
07	Refrigerant Liquid	ø6.35 (1/4''), Flare Nut
08	Secondary return port	ø28, Straight pipe
09	T/P valve	10bar, 90 °C

3. Indoor units

3-2. Dimensional drawing

AE200DNXSPG/EU

Unit : mm [inch]



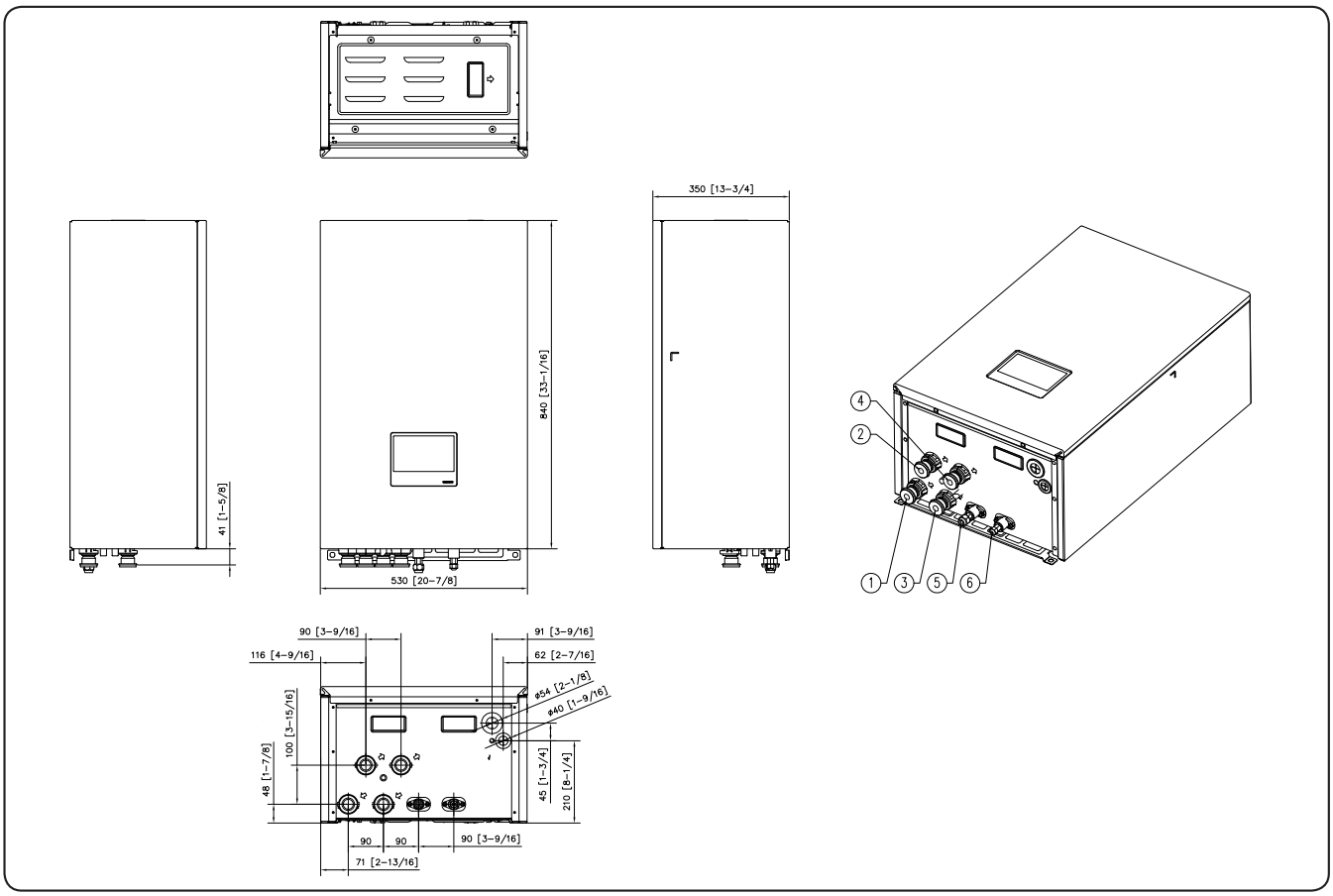
NO	Name	Description
01	Space Heating Outlet (Zone 1)	ø28, Straight pipe
02	Space Heating Inlet (Zone 1)	ø28, Straight pipe
03	Domestic Hot Water Return	ø28, Straight pipe
04	Space Heating Outlet (Zone 2)	ø28, Straight pipe
05	Space Heating Inlet (Zone 2)	ø28, Straight pipe
06	Domestic Hot Water Tank Outlet	ø22, Straight pipe
07	Domestic Hot Water Tank Inlet	ø22, Straight pipe
08	Refrigerant Gas	ø12.70 (1/2''), Flare Nut
09	Refrigerant Liquid	ø6.35 (1/4''), Flare Nut
10	Secondary return port	ø22, Straight pipe
11	T/P valve	10bar, 90 °C

3. Indoor units

3-2. Dimensional drawing

AE160DNYSPG/EU

Unit : mm [inch]



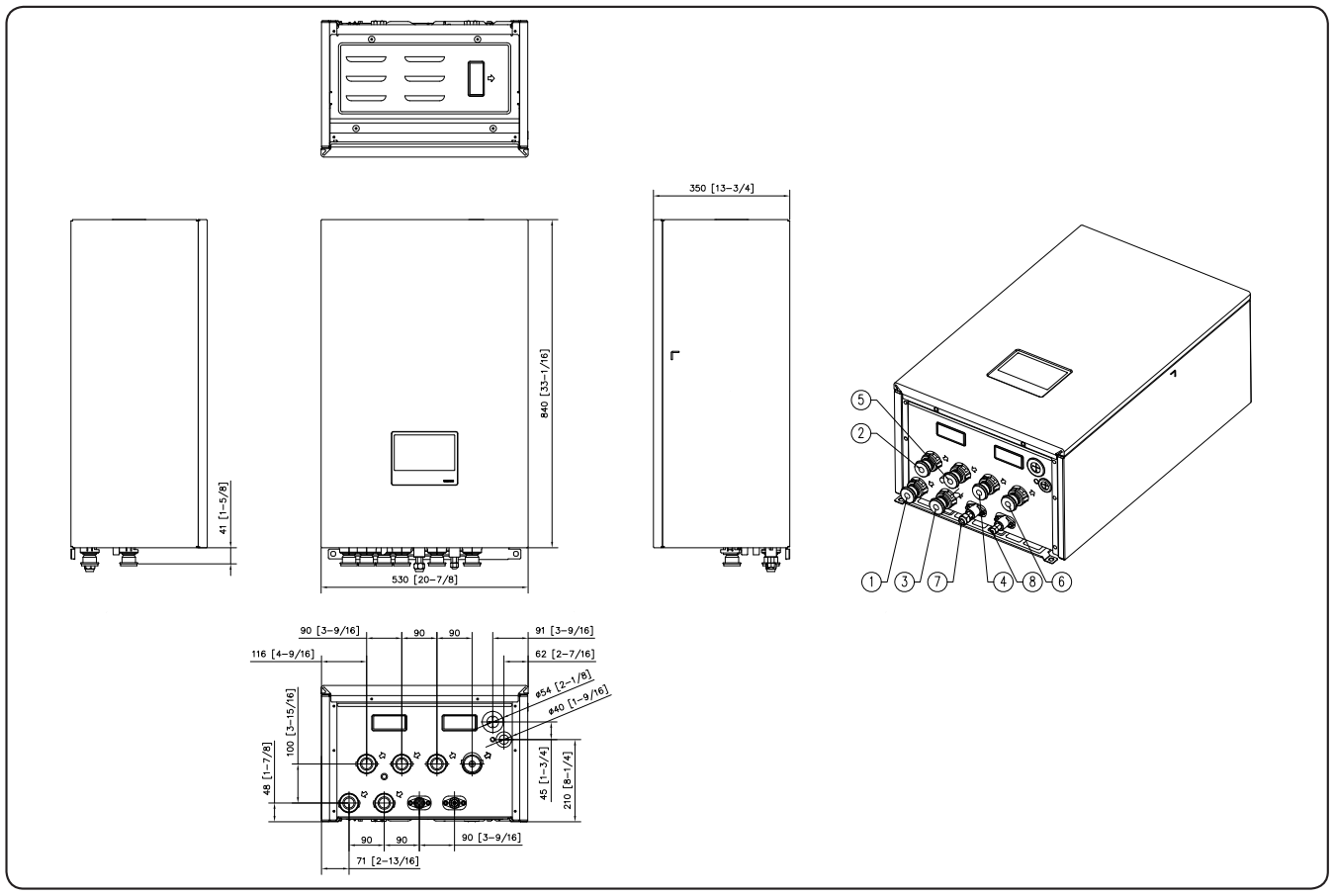
NO	Name	Description
01	Space Heating Inlet	BSPP female, 1-1/4"
02	Space Heating Outlet	BSPP female, 1-1/4"
03	Domestic Hot Water Tank Inlet	BSPP female, 1-1/4"
04	Domestic Hot Water Tank Outlet	BSPP female, 1-1/4"
05	Refrigerant Gas	ø12.70 (1/2"), Flare Nut
06	Refrigerant Liquid	ø6.35 (1/4"), Flare Nut

3. Indoor units

3-2. Dimensional drawing

AE160DNZSPG/EU

Unit : mm [inch]



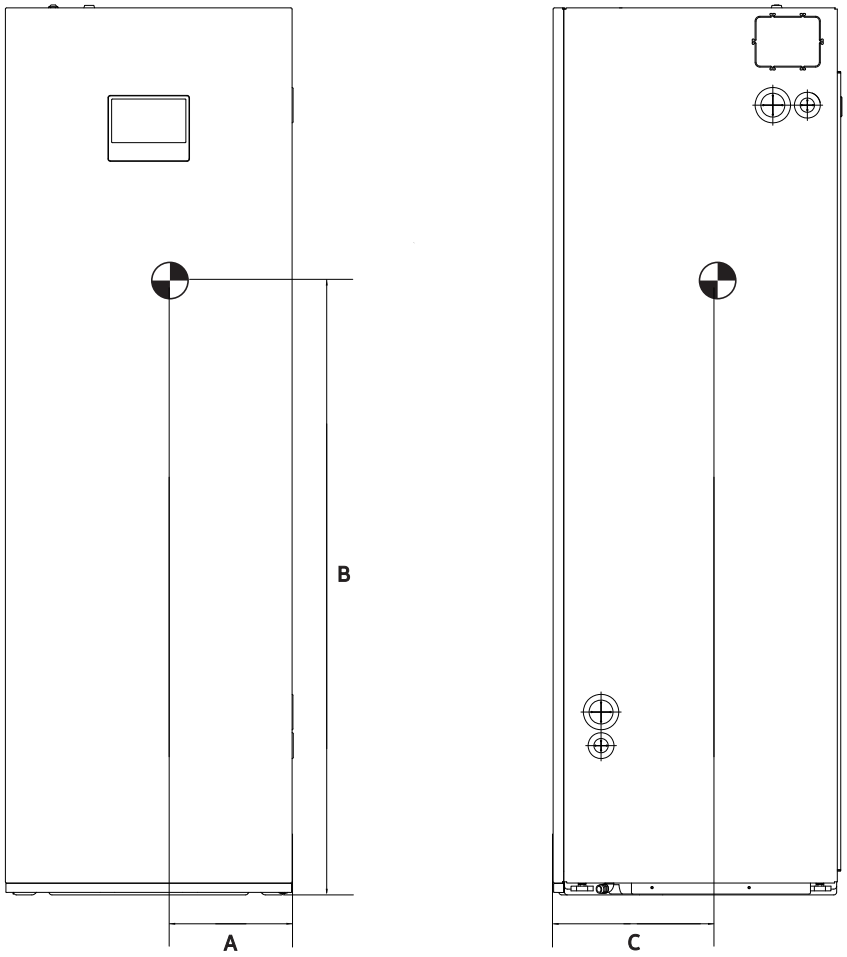
NO	Name	Description
01	Space Heating Outlet (Zone 2)	BSPP female, 1-1/4"
02	Space Heating Inlet (Zone 2)	BSPP female, 1-1/4"
03	Domestic Hot Water Tank Outlet	BSPP female, 1-1/4"
04	Domestic Hot Water Tank Inlet	BSPP female, 1-1/4"
05	Space Heating Outlet (Zone 1)	BSPP female, 1-1/4"
06	Space Heating Inlet (Zone 1)	BSPP female, 1-1/4"
07	Refrigerant Gas	ø12.70 (1/2''), Flare Nut
08	Refrigerant Liquid	ø6.35 (1/4''), Flare Nut

3. Indoor units

3-3. Center of Gravity

ClimateHub

Unit : mm [inch]



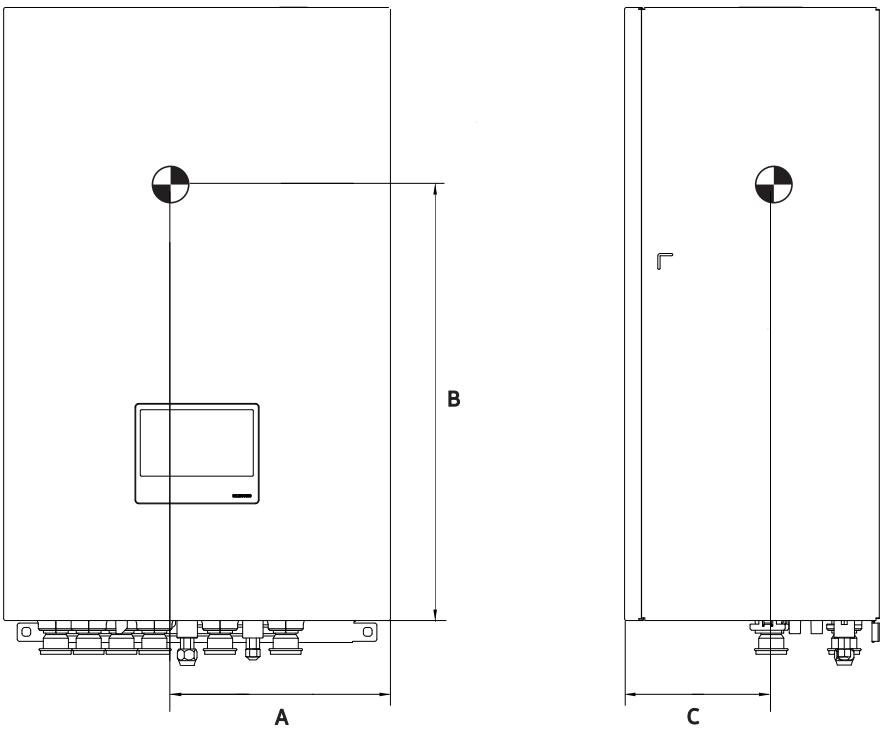
A	B	C
268 [10 - 9/16]	1,210 [47 - 5/8]	367 [14 - 7/16]

3. Indoor units

3-3. Center of Gravity

Hydro Unit

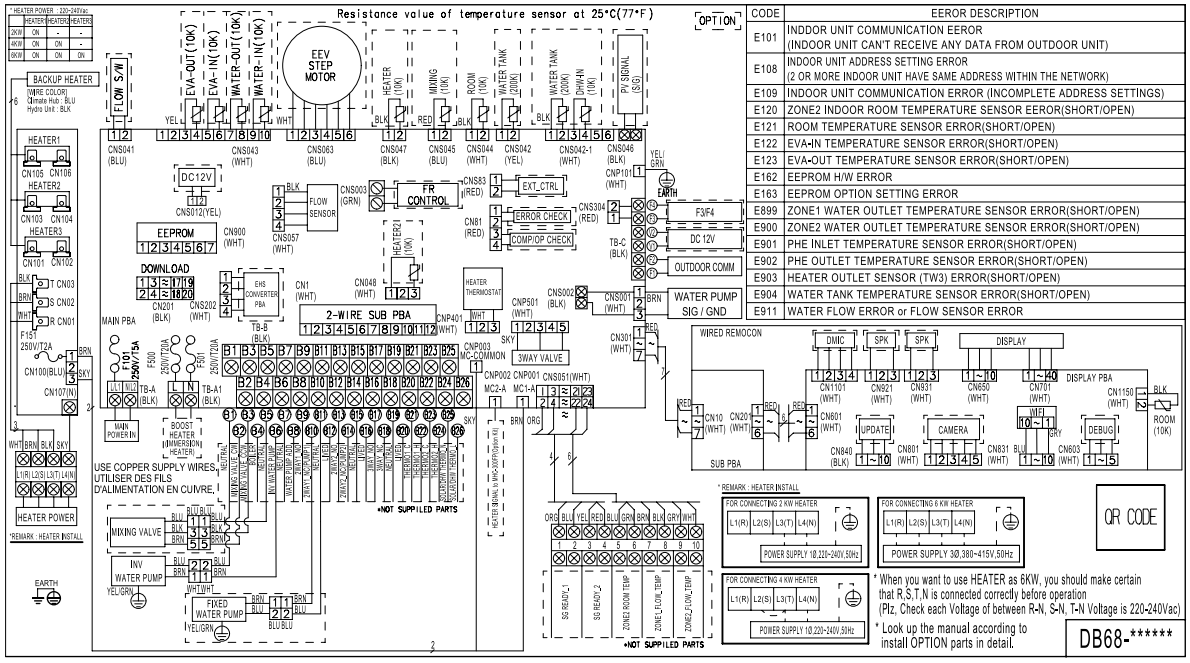
Unit : mm [inch]



A	B	C
339 [13 - 3/8]	605 [23 - 13/16]	130 [5 - 1/8]

3. Indoor units

3-4. Electrical wiring diagram



250V T5A	FUSE of MAIN PBA	250V T20A	FUSE of BOOSTER HEATER	250V T2A	FUSE of HEATER PBA ON/OFF Signal
HEATER(10K)	Thermistor-BACKUP HEATER (10KΩ @25°C)	MIXING(10K)	Thermistor-MIXING (10KΩ @25°C)	ROOM(10K)	Thermistor-ROOM (10KΩ @25°C)
WATER TANK(200K)	Thermistor-WATER TANK (200KΩ @25°C)	DHW-IN(10K)	Thermistor-DHW IN 10KΩ @25°C)	HEATER2(10K)	Thermistor-3KW OPTION HEATER (10KΩ @25°C)
ZONE1_FLOW _TEMP	Thermistor-ZONE1 FLOW (10KΩ @25°C)	ZONE2_FLOW _TEMP	Thermistor-ZONE2 FLOW (10KΩ @25°C)	F1,F2 (COMMUNICATION)	Communication between Indoor and Outdoor

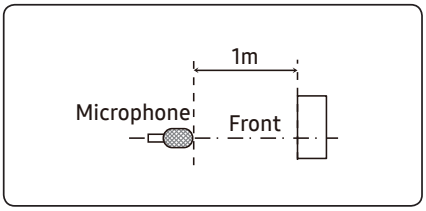
NOTES

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

3. Indoor units

3-5. Sound data

Sound Pressure level

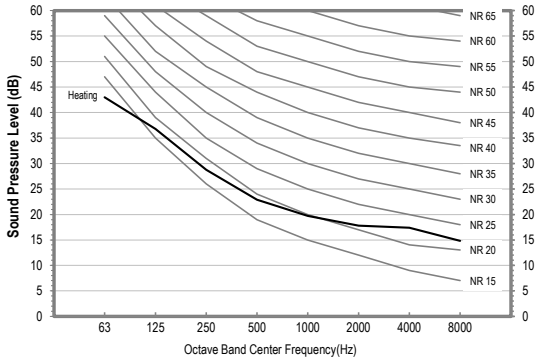


Unit: dB(A)

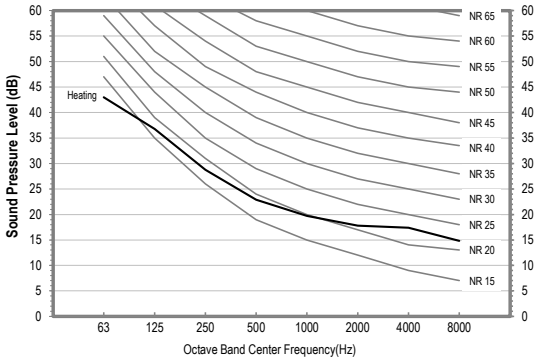
Model	Heating
AE200DNXSPG/EU + AE***RXEDEG/EU	28
AE200DNXSPG/EU + AE***RXEDGG/EU	28
AE200DNXSPG/EU + AE***DXEDEG/EU	32
AE200DNXSPG/EU + AE***DEXDGG/EU	32

- NR Curve

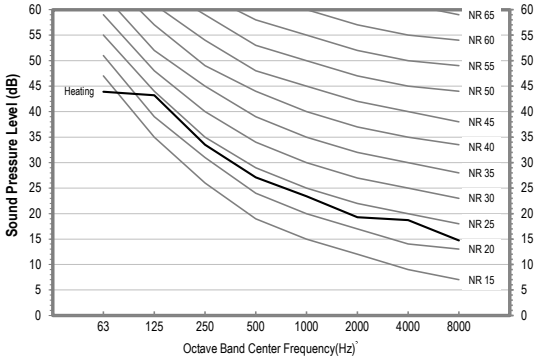
1) AE200DNXSPG/EU + AE***RXEDEG/EU



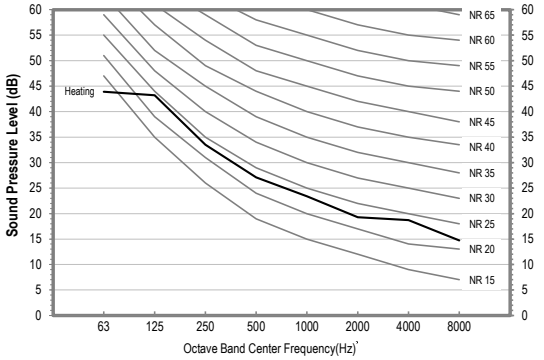
2) AE200DNXSPG/EU + AE***RXEDGG/EU



3) AE200DNXSPG/EU + AE***DXEDEG/EU



4) AE200DNXSPG/EU + AE***DEXDGG/EU



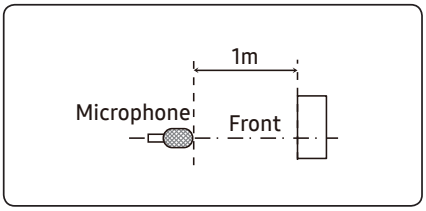
NOTE

- 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

3. Indoor units

3-5. Sound data

Sound Pressure level

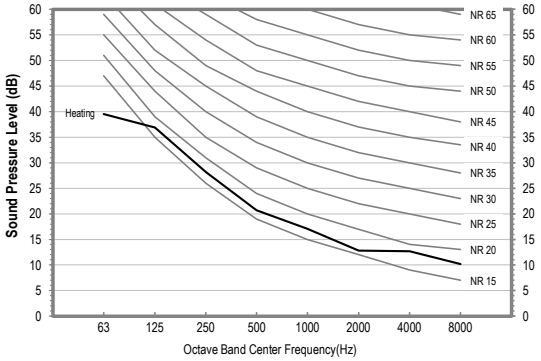


Unit: dB(A)

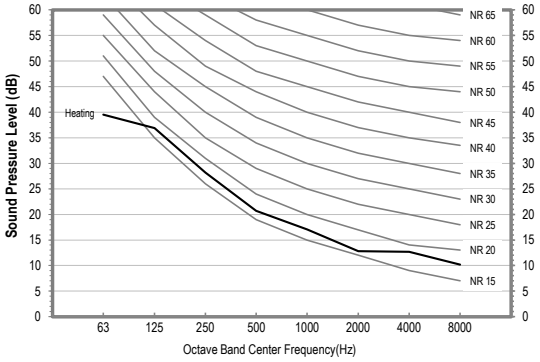
Model	Heating
AE200DNWSPG/EU + AE***RXEDEG/EU	26
AE200DNWSPG/EU + AE***RXEDGG/EU	26
AE200DNWSPG/EU + AE***DXEDEG/EU	30
AE200DNWSPG/EU + AE***DEXDGG/EU	30

- NR Curve

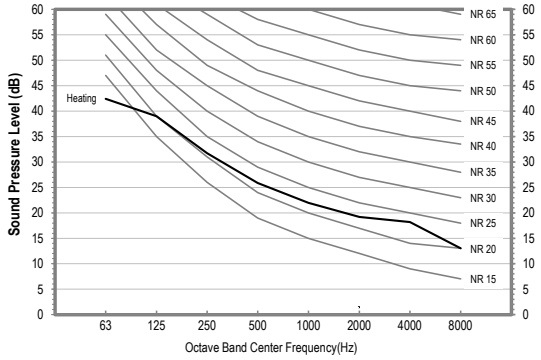
1) AE200DNWSPG/EU + AE***RXEDEG/EU



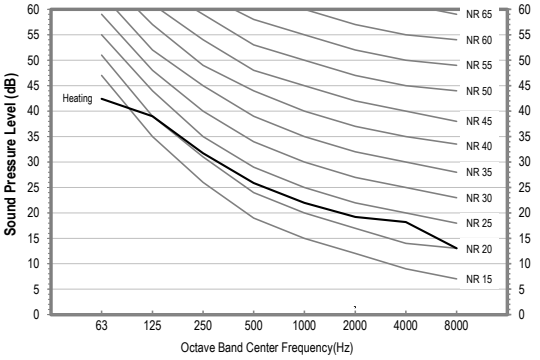
2) AE200DNWSPG/EU + AE***RXEDGG/EU



3) AE200DNWSPG/EU + AE***DXEDEG/EU



4) AE200DNWSPG/EU + AE***DEXDGG/EU



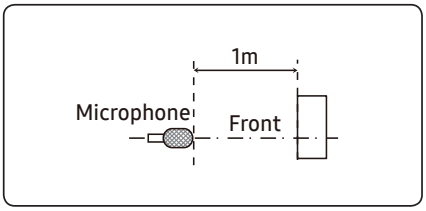
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  - Sound pressure level may differ depending on operation condition.
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

3. Indoor units

3-5. Sound data

Sound Pressure level

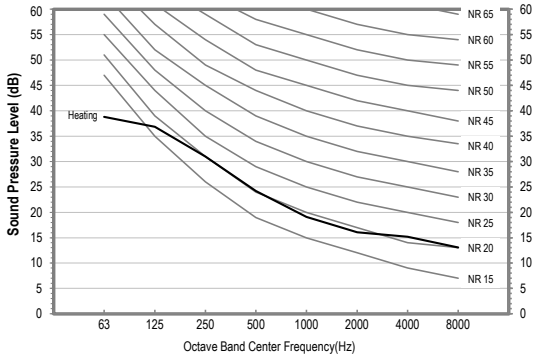


Unit: dB(A)

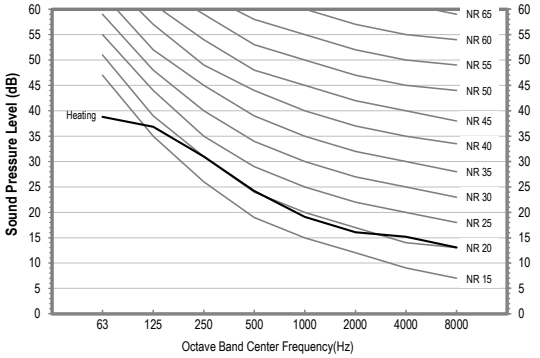
Model	Heating
AE160DNZSPG/EU + AE***RXEDEG/EU	28
AE160DNZSPG/EU + AE***RXEDGG/EU	28
AE160DNZSPG/EU + AE***DXEDEG/EU	32
AE160DNZSPG/EU + AE***DEXDGG/EU	32

- NR Curve

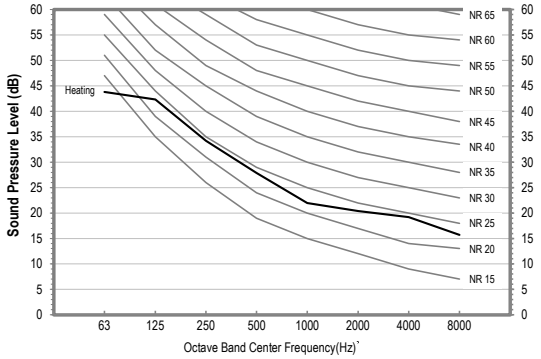
1) AE160DNZSPG/EU + AE***RXEDEG/EU



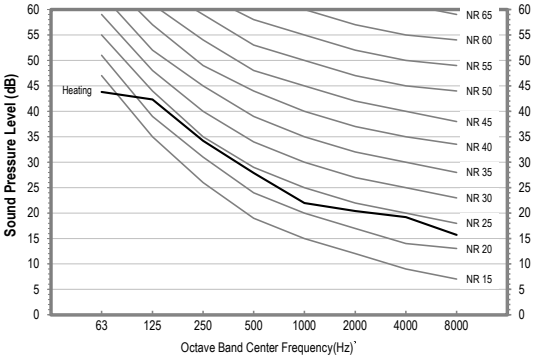
2) AE160DNZSPG/EU + AE***RXEDGG/EU



3) AE160DNZSPG/EU + AE***DXEDEG/EU



4) AE160DNZSPG/EU + AE***DEXDGG/EU



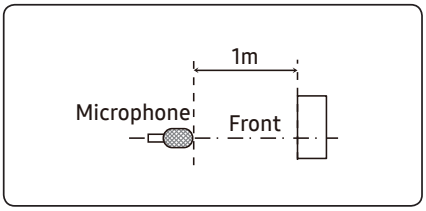
NOTE

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- Sound Pressure Level
  - Sound pressure level is obtained in an anechoic room.
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  - Sound pressure level may differ depending on operation condition.
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

3. Indoor units

3-5. Sound data

Sound Pressure level

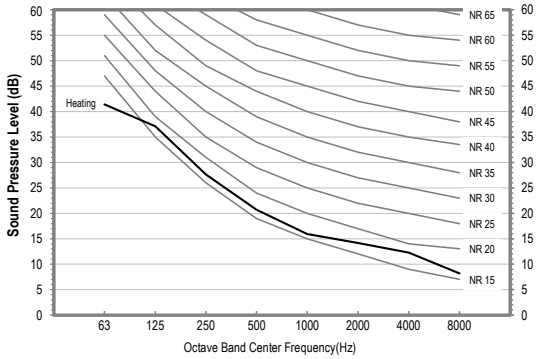


Unit: dB(A)

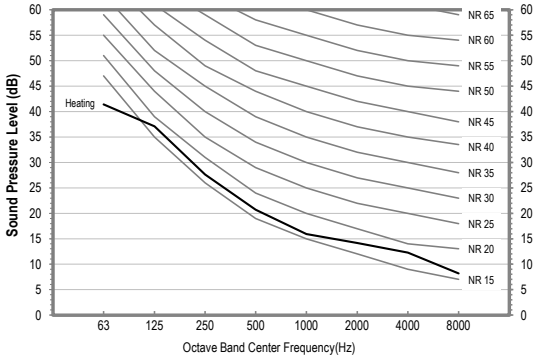
Model	Heating
AE160DNYSPG/EU + AE***RXEDEG/EU	26
AE160DNYSPG/EU + AE***RXEDGG/EU	26
AE160DNYSPG/EU + AE***DXEDEG/EU	30
AE160DNYSPG/EU + AE***DEXDGG/EU	30

- NR Curve

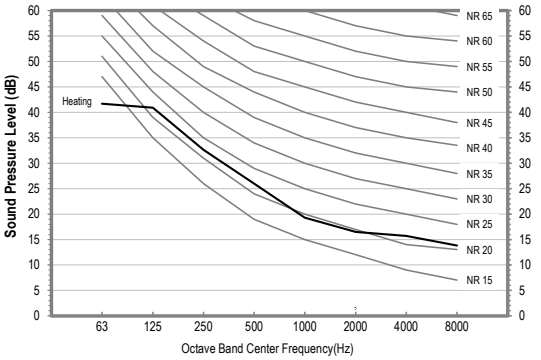
1) AE160DNYSPG/EU + AE***RXEDEG/EU



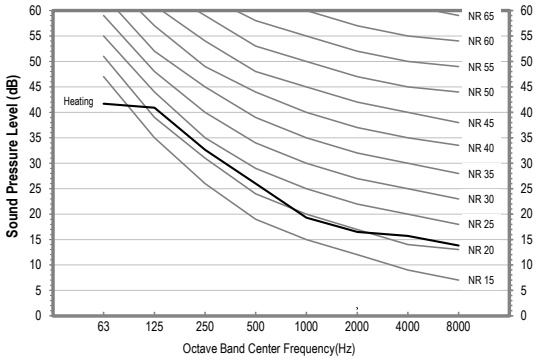
2) AE160DNYSPG/EU + AE***RXEDGG/EU



3) AE160DNYSPG/EU + AE***DXEDEG/EU



4) AE160DNYSPG/EU + AE***DEXDGG/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

3. Indoor units

3-5. Sound data

Sound Power level

NOTE

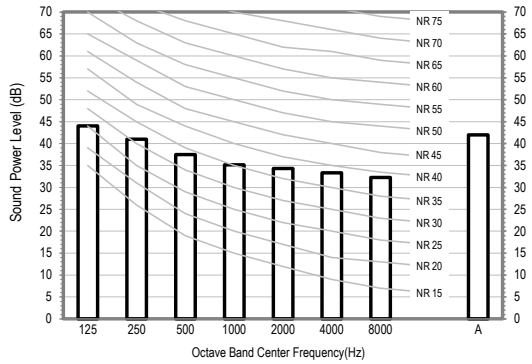
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

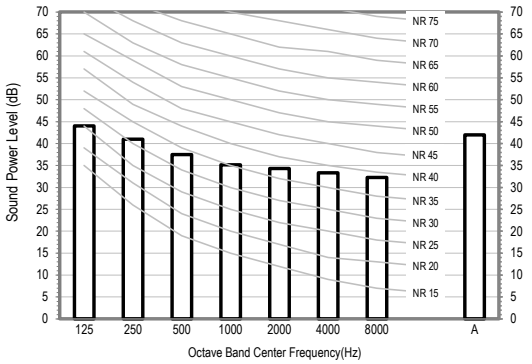
Model	Heating
AE200DNXSPG/EU + AE***RXEDEG/EU	42
AE200DNXSPG/EU + AE***RXEDGG/EU	42
AE200DNXSPG/EU + AE***DXEDEG/EU	46
AE200DNXSPG/EU + AE***DEXDGG/EU	46

- NR Curve

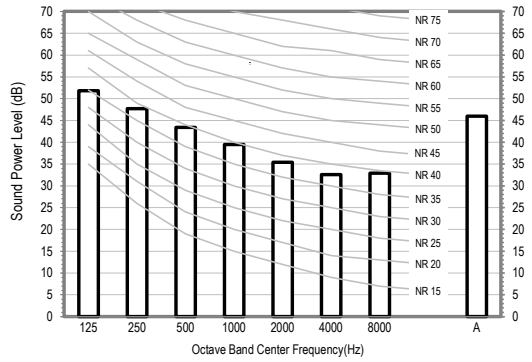
1) AE200DNXSPG/EU + AE***RXEDEG/EU



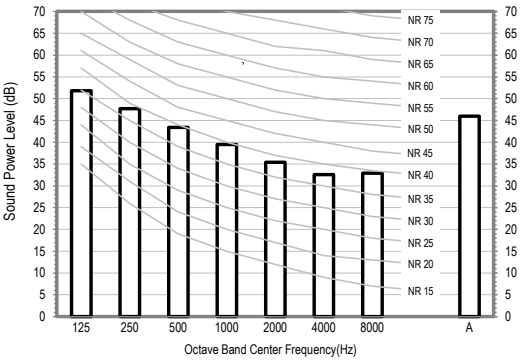
2) AE200DNXSPG/EU + AE***RXEDGG/EU



3) AE200DNXSPG/EU + AE***DXEDEG/EU



4) AE200DNXSPG/EU + AE***DEXDGG/EU



3. Indoor units

3-5. Sound data

Sound Power level

NOTE

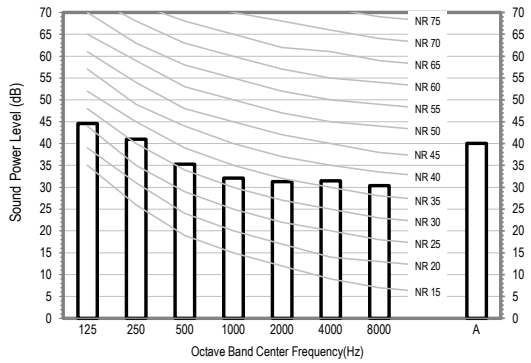
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

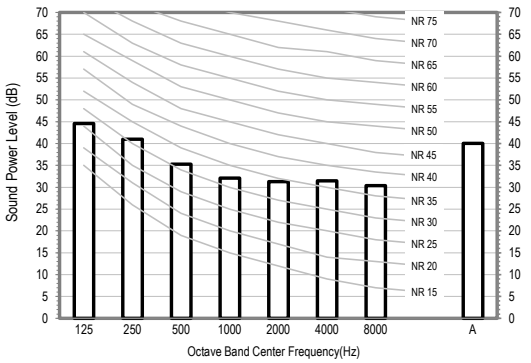
Model	Heating
AE200DNWSPG/EU + AE***RXEDEG/EU	40
AE200DNWSPG/EU + AE***RXEDGG/EU	40
AE200DNWSPG/EU + AE***DXEDEG/EU	44
AE200DNWSPG/EU + AE***DEXDGG/EU	44

- NR Curve

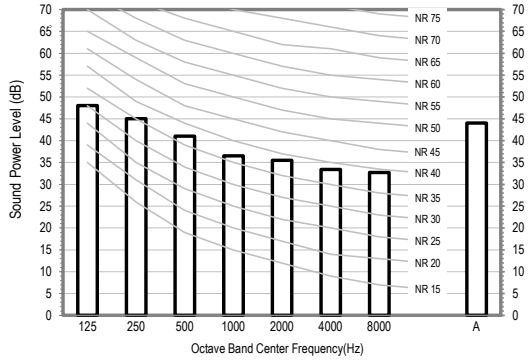
1) AE200DNWSPG/EU + AE***RXEDEG/EU



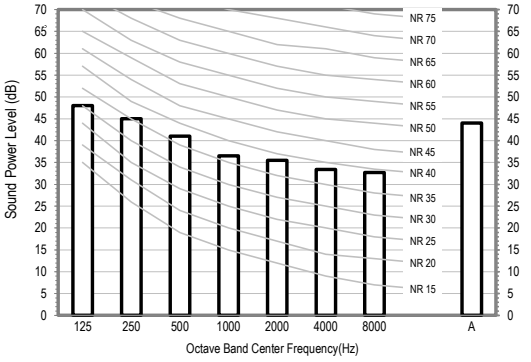
2) AE200DNWSPG/EU + AE***RXEDGG/EU



3) AE200DNWSPG/EU + AE***DXEDEG/EU



4) AE200DNWSPG/EU + AE***DEXDGG/EU



3. Indoor units

3-5. Sound data

Sound Power level

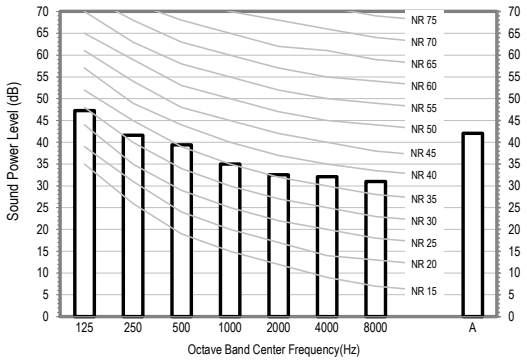
NOTE

Unit: dB(A)

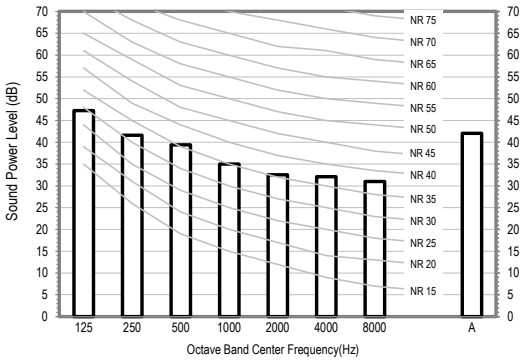
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

- NR Curve

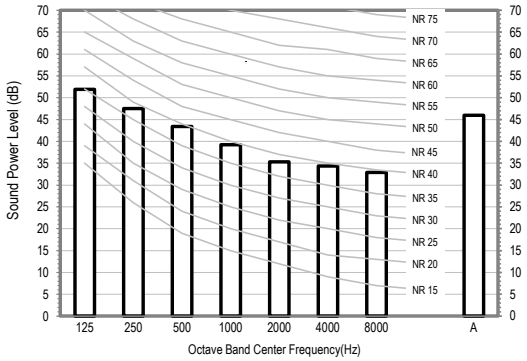
1) AE160DNZSPG/EU + AE***RXEDEG/EU



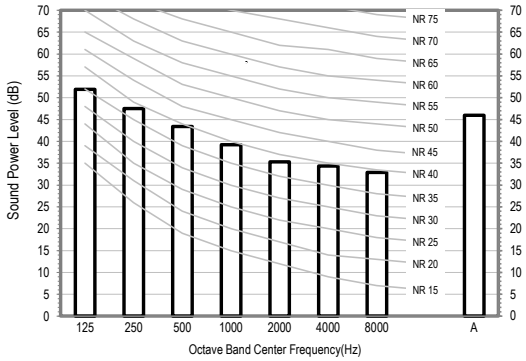
2) AE160DNZSPG/EU + AE***RXEDGG/EU



3) AE160DNZSPG/EU + AE***DXEDEG/EU



4) AE160DNZSPG/EU + AE***DEXDGG/EU



3. Indoor units

3-5. Sound data

Sound Power level

NOTE

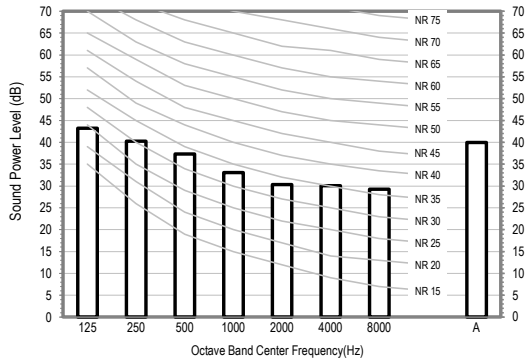
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

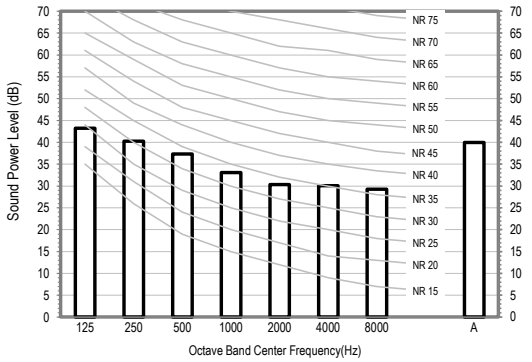
Model	Heating
AE160DNYSPG/EU + AE***RXEDEG/EU	40
AE160DNYSPG/EU + AE***RXEDGG/EU	40
AE160DNYSPG/EU + AE***DXEDEG/EU	44
AE160DNYSPG/EU + AE***DEXDGG/EU	44

- NR Curve

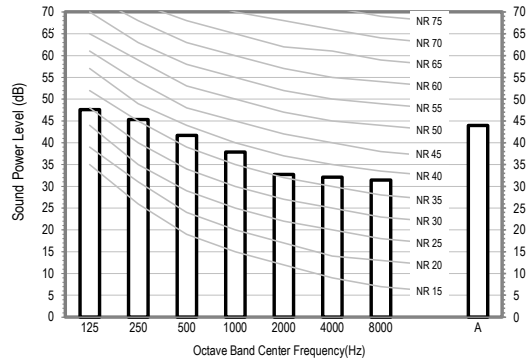
1) AE160DNYSPG/EU + AE***RXEDEG/EU



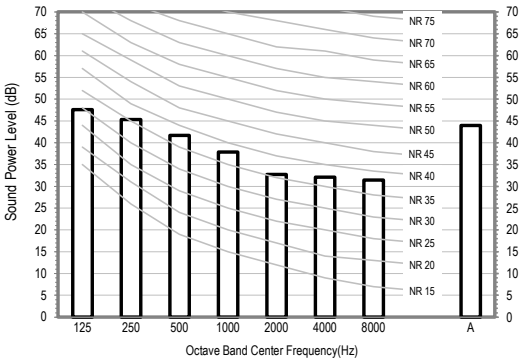
2) AE160DNYSPG/EU + AE***RXEDGG/EU



3) AE160DNYSPG/EU + AE***DXEDEG/EU



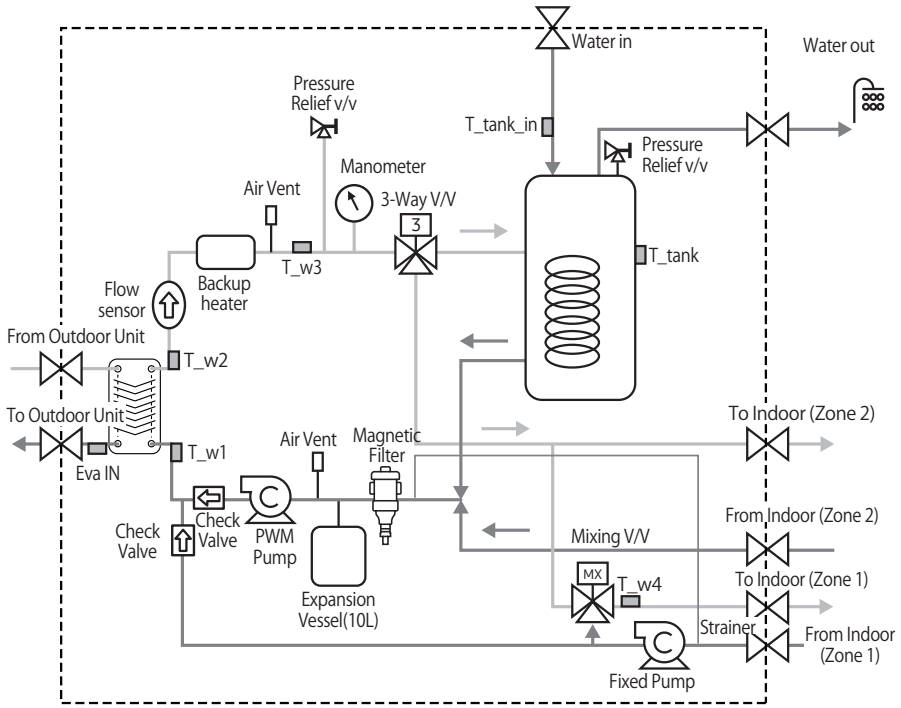
4) AE160DNYSPG/EU + AE***DEXDGG/EU



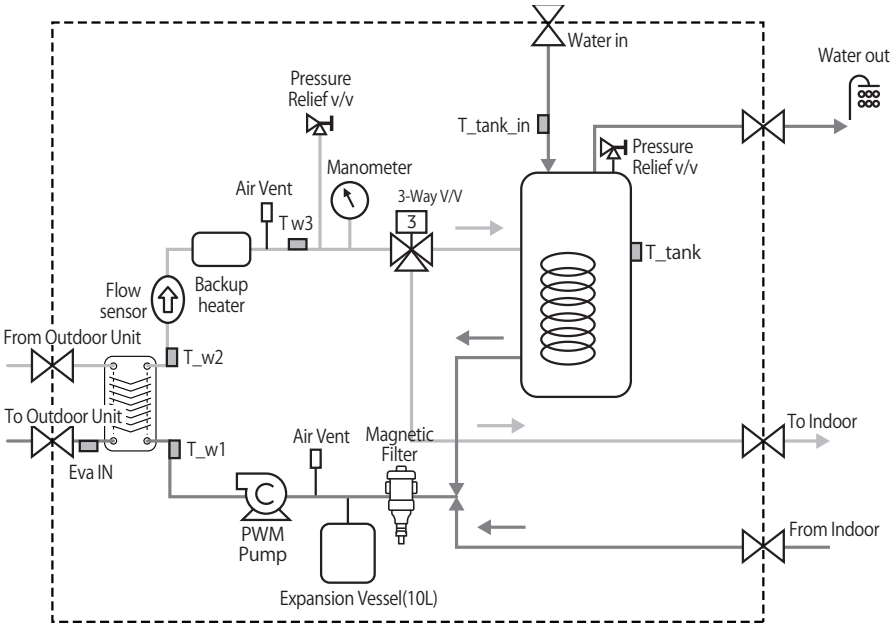
3. Indoor units

3-6. Piping diagram

AE200DNWSPG/EU (Standard)



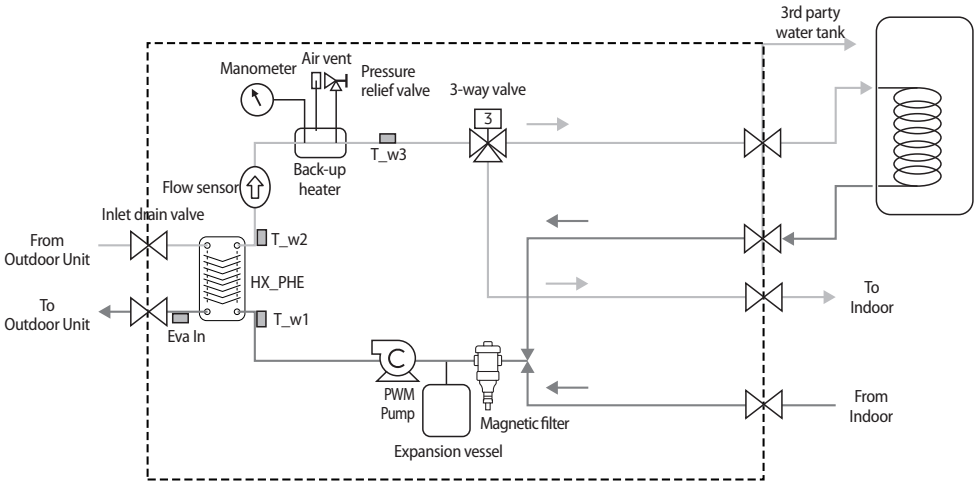
AE200DNXSPG/EU (2 Zone)



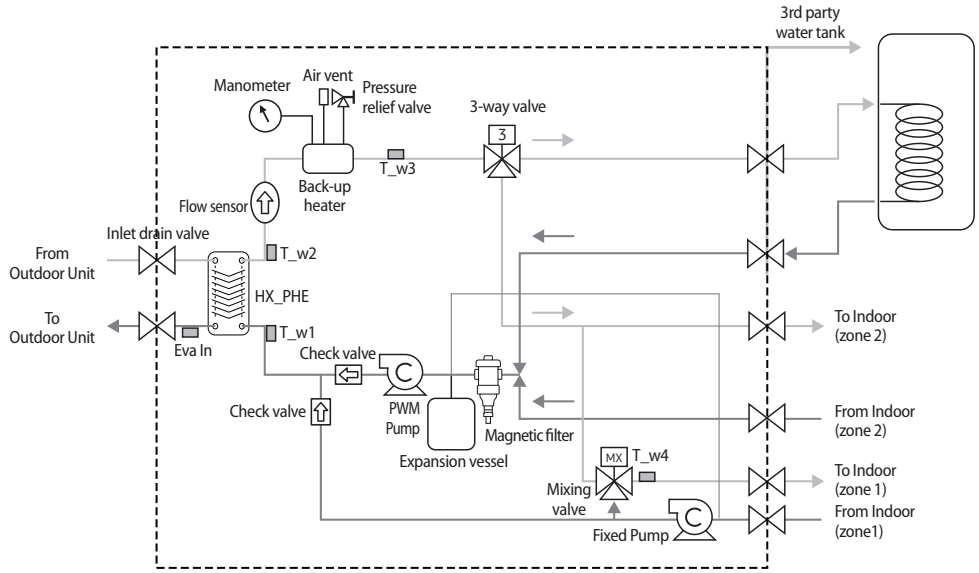
3. Indoor units

3-6. Piping diagram

AE160DNYSPG/EU (Standard)



AE160DNZSPG/EU (2 Zone)



4. Installation

Indoor unit

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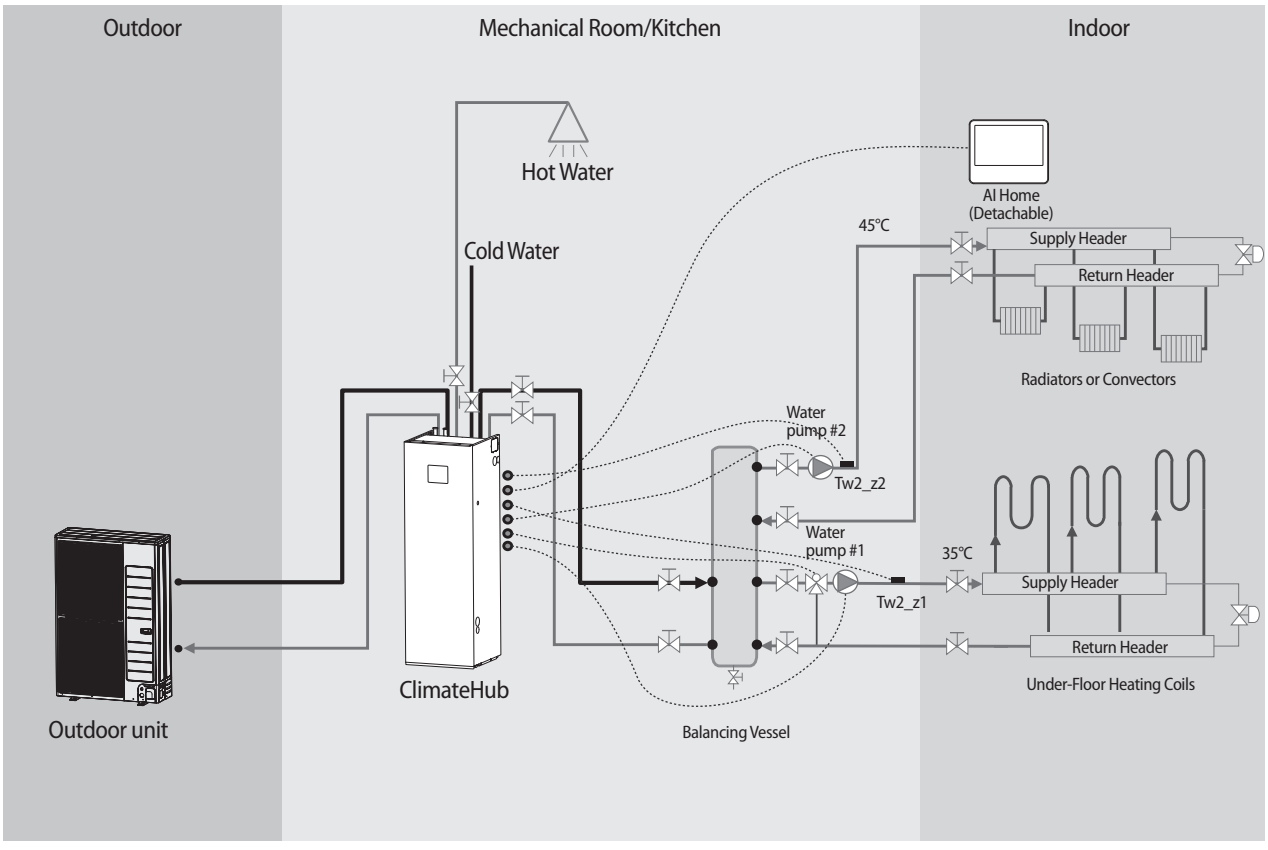
⚠ WARNING

- The application examples given below are for illustration purposes only.
- When the Samsung Air-to-Water Heat Pump system is used in series with another heat source (e.g. gas boiler), ensure that the return water temperature not exceed 65°C.
- The unit is only to be used in a closed water system. Application in an open water circuit can lead to excessive corrosion of the water piping.
- Samsung can not be responsible for incorrect or unsafe situations in the water system. Make sure that the boiler, radiators, convectors, UFHs, FCUs, additional pumps, pipings, and controls in the water system are in accordance with relevant local laws and regulations under the installer's responsibility.
- Samsung shall not be held liable for any damage resulting from not observing this rule.
- Samsung do not provide specific water system components such as Pressure relief valve, Air vent valve, buffer tank and etc. Installers and end-users shall consider how to install the above designated components in overall water system depending on the installation conditions. If the components are not installed in appropriate location, the water system can not be operated as designed.

✻ The below examples are for illustration purposes only.

Application 1: Space heating + water heating

*AE200DNWSPG(Standard)

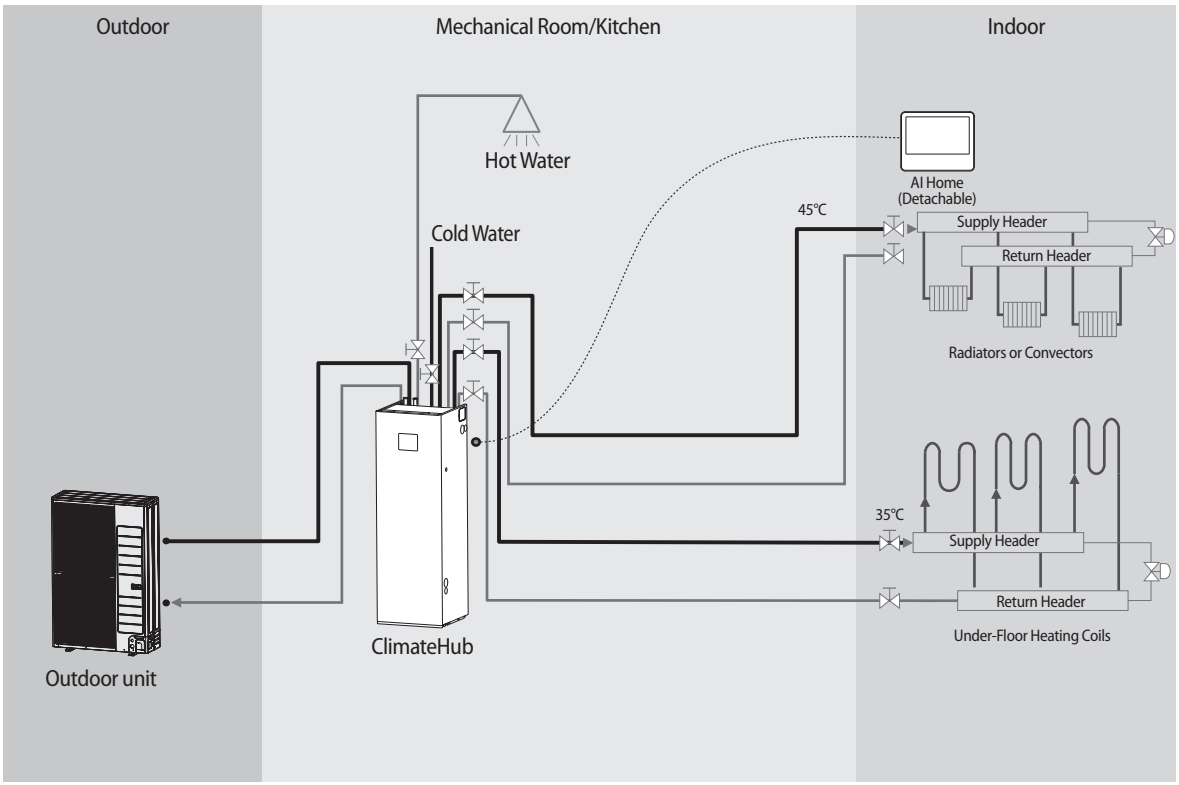


4. Installation

Indoor unit

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* AE200DNXSPG(2 Zone)



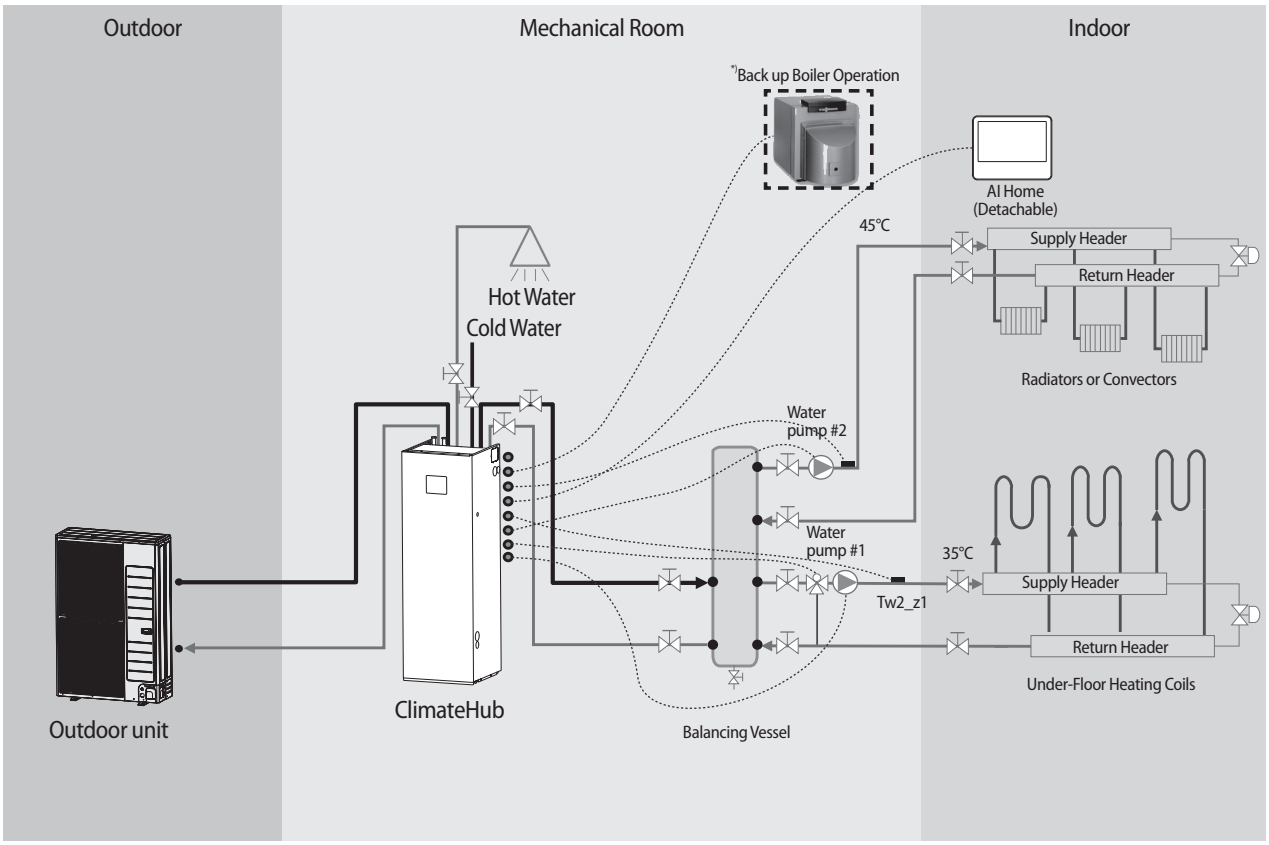
4. Installation

Indoor unit

ClimateHub

Application 2: Hybrid application(backup boiler)

* AE200DNWSPG(Standard)



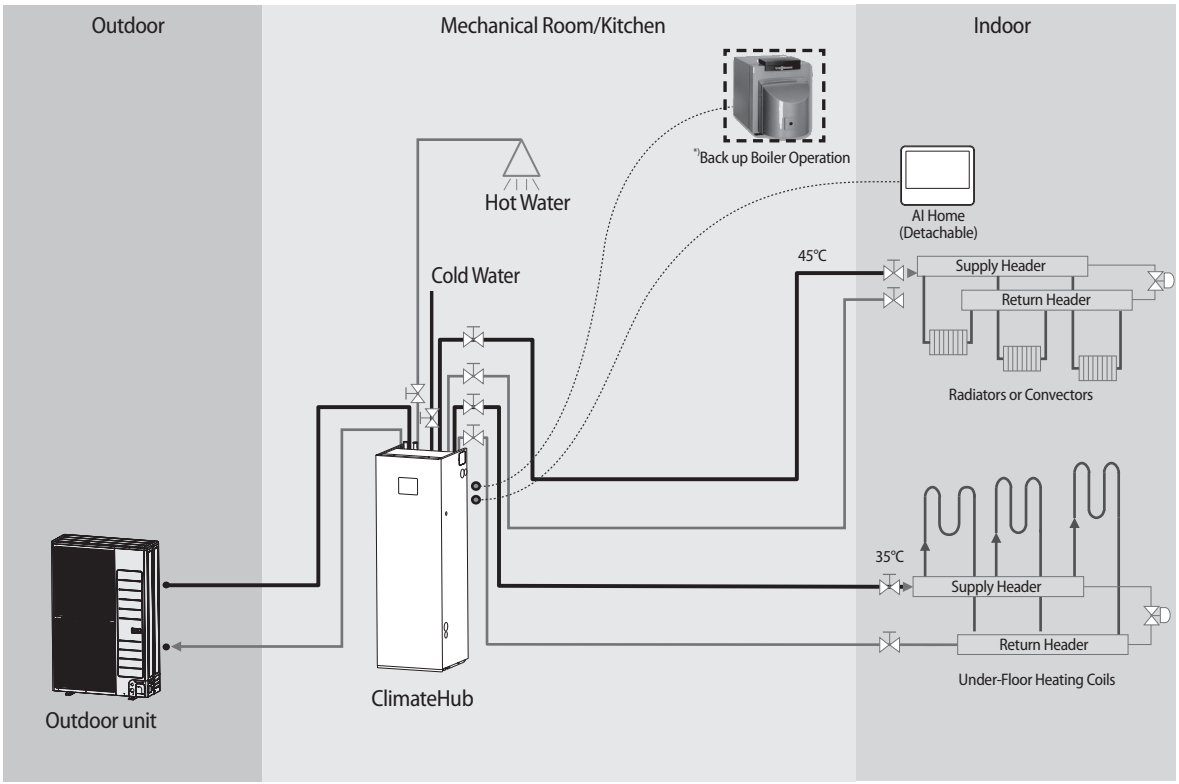
*) We control only the on / off signal of backup boiler according to outdoor temperature.
Backup boiler should be installed with own device according to the field condition.

4. Installation

Indoor unit

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* AE200DNXSPG(2 Zone)



*) We control only the on / off signal of backup boiler according to outdoor temperature.
Backup boiler should be installed with own device according to the field condition.

⚠ CAUTION

- Samsung has not responsible for performance and stability of backup boiler.
- Water quality must be according to Directive (EU) 2020/2184.

4. Installation

Indoor unit

ClimateHub

Water pipe work

The hydro unit is equipped with components listed on the table below.

All entering, leaving water direction is embossed right next to the pipe. Please connect the pipe with attention to the direction of the arrow.

Whole water plumbing system including Hydro unit shall be installed by a qualified technician and must comply with all relevant European and national regulations.

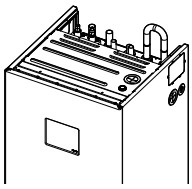
- ▶ Allowable water pressure of hydro unit is maximum 3.0 bar.
- ▶ An air-vent valve is integrated on the hydro unit. Please check that air-vent valve is not overtightened so the air-vent valve can release any air out of the system during system operation.
- ▶ AE200DNX*** (2zone built-in type) is designed to supply water at 2 different temperatures.
  - For heating operations, please connect the Zone 1 supply line to a room that requires a lower water temperature (ex,underfloor heating) and the Zone 2 supply line to a room that requires a higher water temperature (ex,radiators).

NOTE

If you install AE200DNX*** (2zone built-in type) as a single-zone application, then:

Install a bypass line between the water inlet and outlet for Zone 1 and use Zone 2 for space heating.

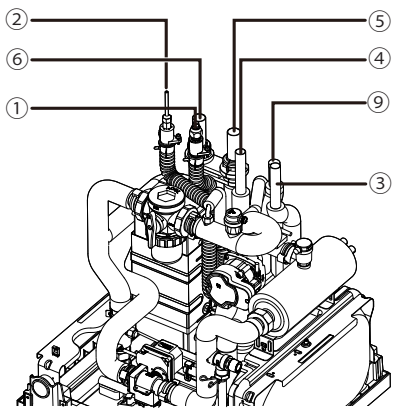
Change FSV Setting #4061=0(Zone control= No), #4041=0 (Mixing V/v control= No)



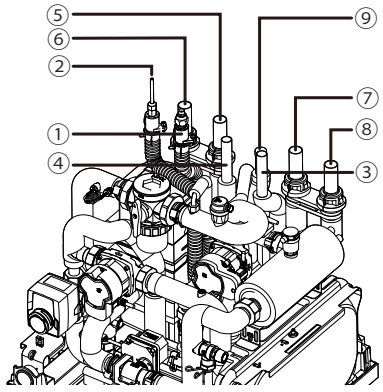
⚠ CAUTION

- In case of the zone 1 is not used, in/out pipe should not be blocked sepalately, and it must be connected to the Bypass line.

✻ AE200DNWSPG



✻ AE200DNXSPG



No	Size	Name		Type
		AE200DNWSPG	AE200DNXSPG	
①	Φ12.7, T0.7, Copper	Outdoor inlet (From Outdoor Unit)		Flare Nut
②	Φ6.35, T0.7, Copper	Outdoor outlet (To Outdoor Unit)		
③	Φ22, T1.0, Copper	DHW outlet (Hot Water)		Straight pipe
④	Φ22, T1.0, Copper	DHW inlet (Cold Water)		
⑤	Φ28, T1.2, Copper	Heating Outlet (Zone 2)(To Zone 2)		
⑥	Φ28, T1.2, Copper	Heating inlet (Zone 2)(From Zone 2)		
⑦	Φ28, T1.2, Copper	N/A	Heating Outlet (Zone 1)(To Zone 1)	
⑧	Φ28, T1.2, Copper	N/A	Heating inlet (Zone 1)(From Zone 1)	
⑨	Φ22, T1 .0, Copper	DHW Return (Recirculation)		straight pipe with cap

4. Installation

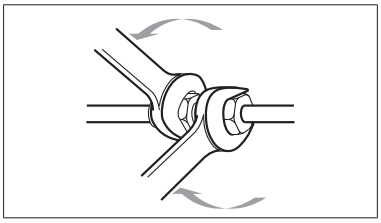
Indoor unit

ClimateHub

Refrigerant pipe work

For all guide lines, specifications regarding refrigerant pipe work between the indoor unit and the outdoor unit, please follow the outdoor unit installation manual.

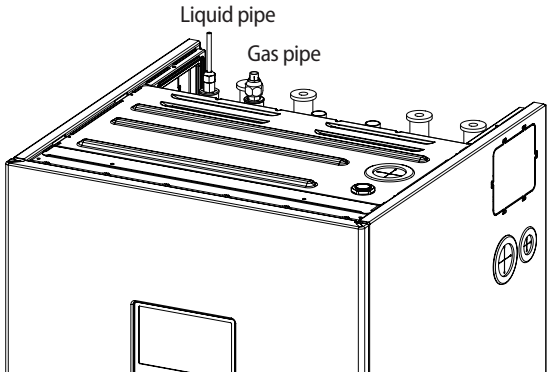
	Gas pipe (O.D.)	Liquid pipe (O.D.)
Indoor unit	12.70 mm (1/2 inch)	6.35 mm (1/4 inch)



Outer diameter [mm(inch)]	Torque (N•m)
ø6.35 (1/4")	14~18
ø9.52 (3/8")	34~42
ø12.70 (1/2")	49~61
ø15.88 (5/8")	68~82
ø19.05 (3/4")	100~120

⚠ CAUTION

- When connecting the refrigerant pipes, always use 2 wrenches/spanners for tightening or loosening nuts. If not, piping connections can be damaged.



Special requirements for R-32 units

The basic refrigerant charge is less than or equal to 1.84 kg, and additional refrigerant should be charged appropriately according to the installation length.
If the total refrigerant charge of the system exceeds 1.84 kg, the space where the indoor unit is installed must be in compliance with the conditions described under 'Installation Case'.

⚠ CAUTION

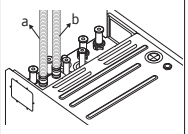
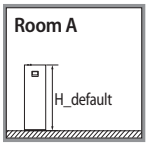
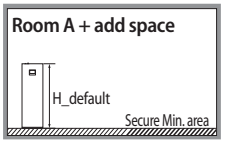
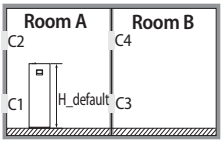
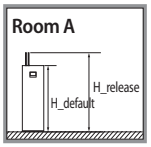
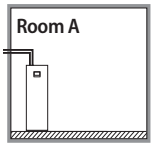
- If the total refrigerant charge of the system is >1.84 kg, the system must comply with the conditions described in the installation case.
- The problem caused by non-compliance with installation cases is not the responsibility of Samsung.

4. Installation

Indoor unit

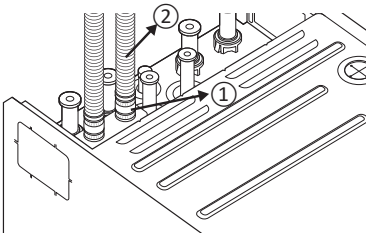
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Installation Case

	Case 1	Case 2	Case 3	Case 4	Case 5
					
Ref. charge	1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg
Ventilation openings	No work needed	No work needed	Between Room A and outside or Between Room A + Room B	No work needed	No work needed
Release point	No work needed	No work needed	No work needed	Raise release point	Release point outside
Min. floor area	No work needed	Min. area[1)]	Min. area[1)]	No work needed	No work needed

[1)] : It does not apply to cases of ventilation to outside.

a, b	Release point . If necessary, you should raise the release point. . Install the release point on the body of the liquid pipe (a) and the gas pipe (b), as shown in the image. . Raise the release point and tighten it use appropriate counterparts.
H_default H_release	The actual height of the relase point 1) H_default → 1.85 m (Height of basic indoor unit) 2) H_release → 1.85 m + added release point
Room A	Room for installing Indoor unit
Room B	Adjacent additional Room
C1, C3	Bottom natural ventilation opening
C2, C4	Top natural ventilation opening



For Parts ① and ②, we recommend the following examples

- ① Pipe connector composed of rubber reducer (It can be fastened with a diameter of 28 ~ 32 mm)
- ② Drain flexible hose (32 mm)

- The pipe connector is a rubber reducer for connecting water pipes, which is composded of a stainless steel tie.
- The pipe connector for this part should be tightened with a torque 20~25 kgf·cm.
- The flexible drain hose is a 32 mm and mainly used for water drainage.
- The parts mentioned can be easily obtained from the market.
- The parts is a recommended part (example), and if there is a separate part that can be air tightness, you may use it.
- The minimum floor area requirement varies depending on the release point height.
- The default release point is at the top of the unit, which is called H_default. To reduce the minimum floor area requirement, should raise the release point.
- In case of installing a ventilation system in adjacent rooms, it is sufficient if the total area of ROOM A and ROOM B exceeds the minimum installation area.
- The room should be protected from frost.
- Natural ventilation (C1, C2) outside of Case 3 is allowed only in technical rooms. (i.e., spaces never occupied by person)

4. Installation

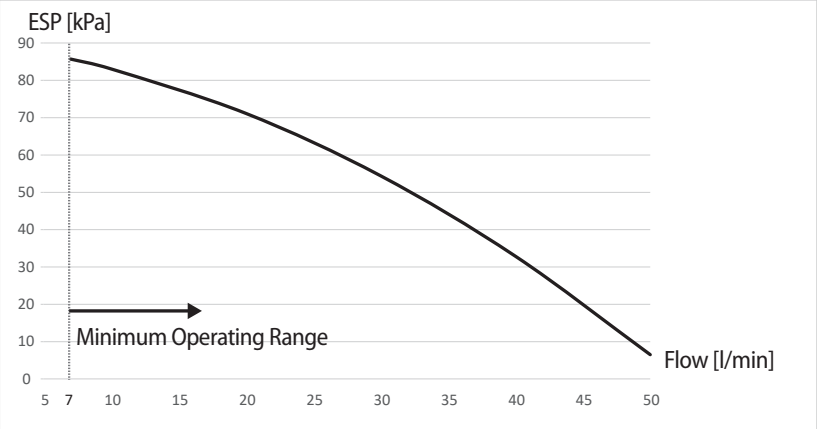
Indoor unit

ClimateHub

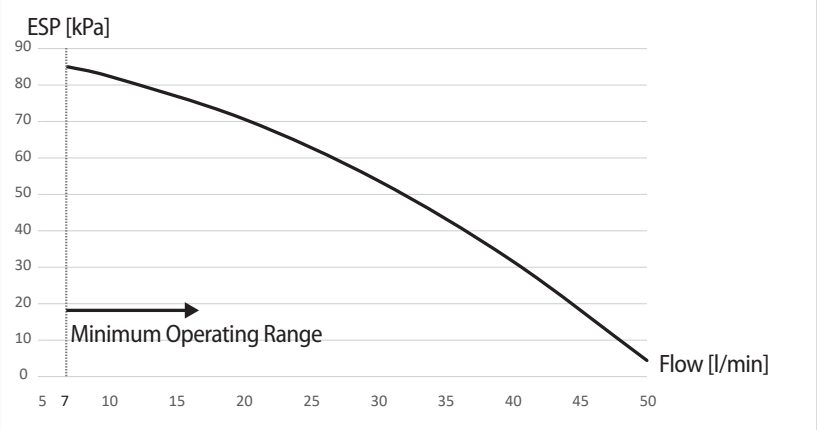
ESP(External Static Pressure) Diagram

The illustration below shows the external static pressure of the unit depending on the water flow and the pump setting.

AE200DNW***



AE200DNX***



When ESP is not enough, additional pump should be installed. In this case, install the PWM control external type pump (Heating type) additionally.

4. Installation

Indoor unit

ClimateHub

Connection guide of additional pump

Ensuring proper water flow is an important factor for performance and efficiency.
If the water flow is not adequate, consider installing additional pumps.
When installing an additional pump, the system's maximum allowable water flow rate and maximum water pressure should not be exceeded.

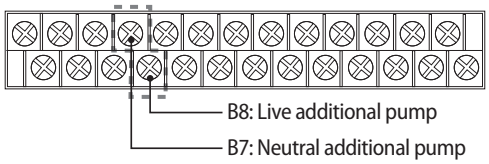
⚠ CAUTION

- Each terminal set (Live+Neutral) for additional pumps can supply ampere up to Max 1.0A.
- If an additional pump is needed, the additional pump should be installed in a designated location according to the installation case below
- [Case I] AE200DNX***: additional pump should be installed in the Zone2 piping line
- [Case II] AE200DNW***: additional pump should be installed in the Zone piping line
- For the above installation cases, refer to wire works cases 1 and 2.
- If an additional pump is needed for Zone1 in AE200DNX***, refer to wire works case 3.
- The maximum number of pumps that can be powered by the terminal block of the hydro unit is two. Therefore, if necessary, be sure to connect pumps other than the two to a separate power source.
- Ex) AE200DNX*** already has 2 pumps (Inverter and fixed pump). In this case, all additional pumps should be connected to a separate power source. For AE200DNW*** including only one main pump, one additional pumps can be drived by the terminal block of the hydro unit without using a separate power source.

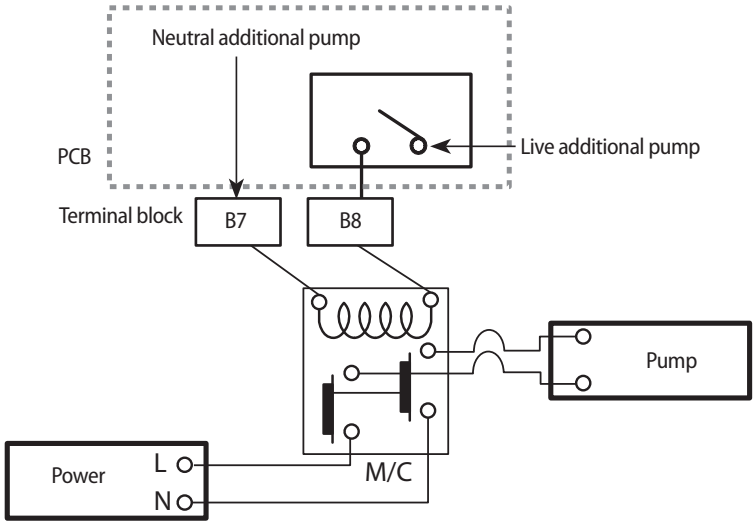
Case 1) AC pump

The terminal set (B8+B7) can supply ampere up to Max 1.0A.

1. Power supply (Pump)



2. If the maximum output of the pump exceeds 1A, please connect it to a separate power source.



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 1.0A.

4. Installation

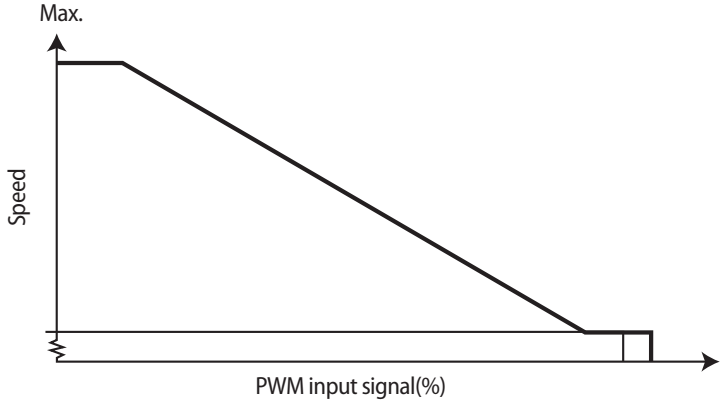
Indoor unit

ClimateHub

Case 2) Inverter pump

Power supply connection is the same as the case1) AC pump

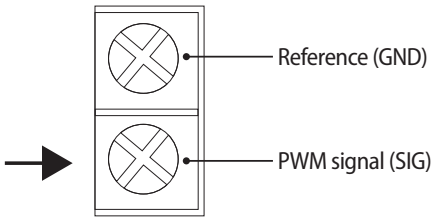
PWM characteristic curve



The additional pump should be the same type of product as the above graph.

Recommendation

Connect the PWM control line to the main control PBA output(CNS002) signal function for PWM control. (Note: Wiring diagram)



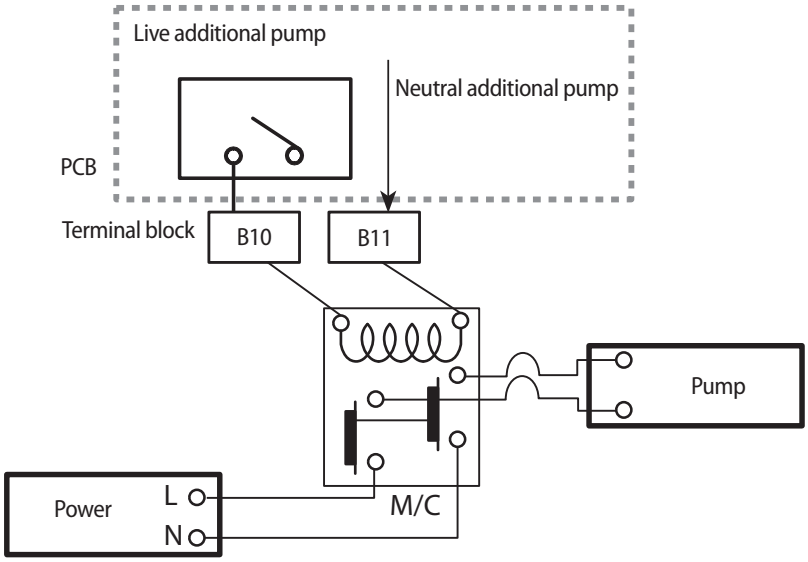
GRUNDFOS UPMM 25-95 (Heating Type), SHINHOO GPA25-9H (Heating Type)

⚠ CAUTION

- If there is wrong wiring between PWM and reference, INV. Water Pump may not work or wrong operation.

Case 3) Additional pump for Zone 1 in AE200DNX***

Only AC pump can be used as an additional pump for Zone 1 in AE200DNX***.
The pump should be installed in piping line of Zone1 and connected to a separate power source as figure shown below.

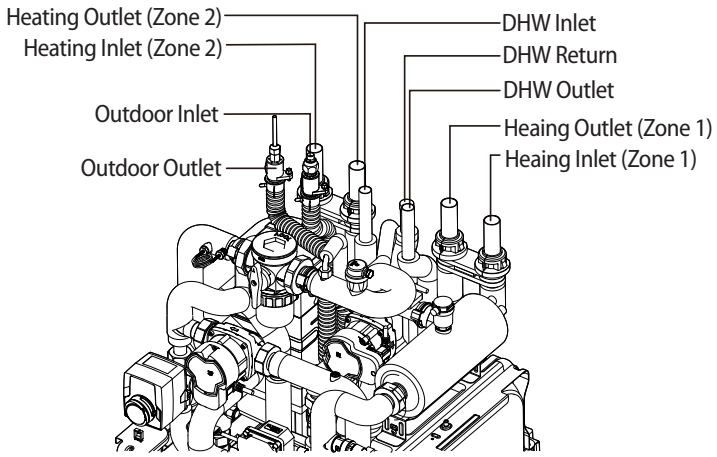


4. Installation

Indoor unit

ClimateHub

Charging water



After installation is completed the following procedures shall be used to charge water into the hydro unit.

- ▶ Connect water lines to water connections of hydro unit.
- ▶ The air-vent valve shall be opened at least 2 turns and drain valves shall be closed.
- ▶ Open the service valve in the water supply connection.
- ▶ Water pressure of supply line shall be over 2.0 bar for good charging work.
- ▶ Stop water supply when the pressure gauge of hydro unit indicates 2.0 bar.

⚠ CAUTION

- Service space should be secured.
- Water pipe and connections must be cleaned using water.
- If internal water pump capacity is not enough, install external water pump.
- Do not connect electric wire while water charging.
- When initial installation or re-installation required, open the cap to prevent air trap in the unit while charging water.
- The back-up heater vessel shall be full of water before heater is turned on. Confirm if the vessel is empty by opening the pressure relief valve of hydro unit. (OK if water is flowing out)
- It is recommended to install the make-up water assembly to feed small quantities of water to the system automatically, replacing the minor water losses and maintaining the system pressure. This assembly usually consists of a pressure-reducing valve, water filter, check-valve and shut-off valves. In this case, Check-valve must be installed to prevent from contaminating city water.

Air vent valve

Air-vent valve is provided in the Hydro unit.

However, provide air vents at all the highest points of the system, so that automatic release of air in the water circuit is possible.

Pressure relief valve

A pressure relief valve is integrated on heater vessel of hydro unit and shall work in abnormal condition for protecting the hydro unit.

⚠ CAUTION

- The pressure relief valve will operate releasing the pressure by flowing out some water through the drain hose.
- Make certain that the discharged water out of drain pan can not contact any electrical parts.

Overpressure bypass valve

Overpressure bypass valve should be installed if the minimum flow rate is not guaranteed in all conditions including defrost or backup heater operations.

4. Installation

Indoor unit

ClimateHub

Piping insulation

The complete water circuit, including all piping must be insulated to prevent condensation forming on the surface of the pipe and heat loss to external environment.

Anode Rod

An anode rod is installed to protect the Water tank from corrosion.

The lifespan of an anode bar can vary depending on the water quality on the site. To ensure optimal protection from corrosion, it is advisable to check the protective anode annually and if necessary, replace it.

NOTE

- It is recommended to replace if the average diameter of the anode bar is approximately less than 30% (Material remaining around 10 mm in diameter)

Flushing and air-purging

When filling water, the following start-up procedure should be followed.

1. All system components and pipes must be tested for the presence of leaks.
2. Make-up water assembly or Flushing unit is recommended for installation and service.
3. Before connecting pipes to the hydro unit, Flush water pipes clean to remove contaminants during 1 hours using a flushing unit or tap water pressure if it is adequate (at 2 to 3 bar)
4. Fill water into the hydro unit by opening service valves.
5. Purge the air. (Fill with a flushing unit with sufficient capacity: avoid aerating the water)
6. Circulate for long enough to ensure that all air has been bled from the complete water piping system.

After installations, Commissioning should be performed by qualified representatives.

Unless flushing and air-purging works are performed adequately, It might result in malfunctions.



Flushing unit (or purging cart)

4. Installation

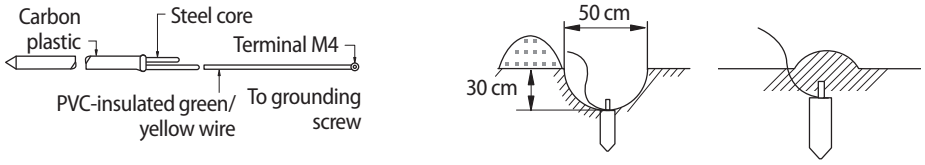
Indoor unit

ClimateHub

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 to Water Heat pump.

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 to Water Heat pump.

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.

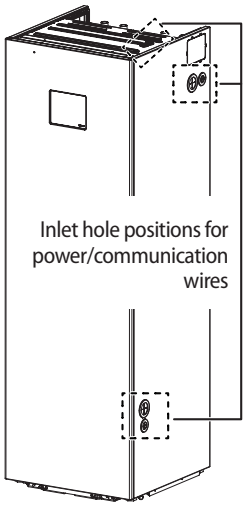
NOTE

- 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.

Connection of the power supply and communication cable

Model	Description		No. of Wires	Max. A	Thickness	Supply Scope
AE200DN****	Main power (1Phase)		2 + ground	5 A	1.5mm² ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
	Heater power	3 Phase heater (6 kW)	4 + ground	9.5 A	2.5mm² ↑ H05RN-F or H07RN-F	Field Supply (380-415Vac, Input)
		1 Phase Heater (4 kW)	2+ ground	19 A	4.0mm2 ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
		1 Phase Heater (2 kW)	2+ ground	9.5 A	2.5mm2 ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
	Communication		2	0.1 A	0.75mm² ↑ H05RN-F or H07RN-F	Field Supply (~Vdc, Data)

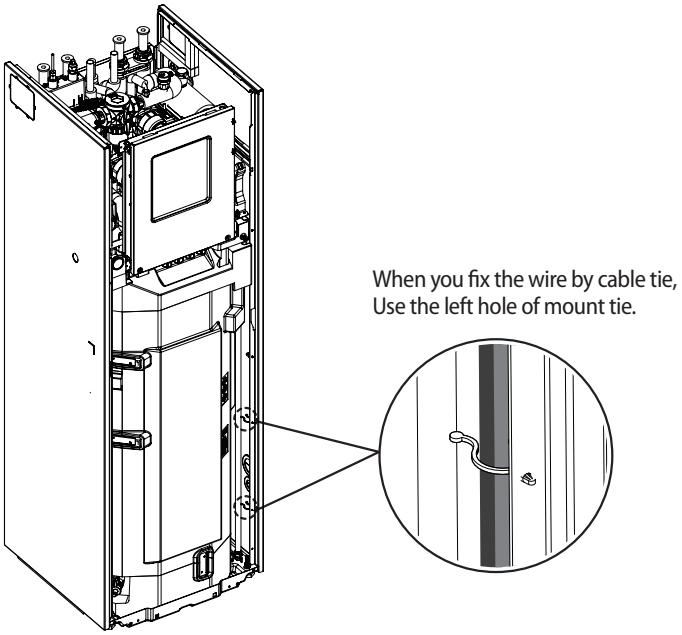


4. Installation

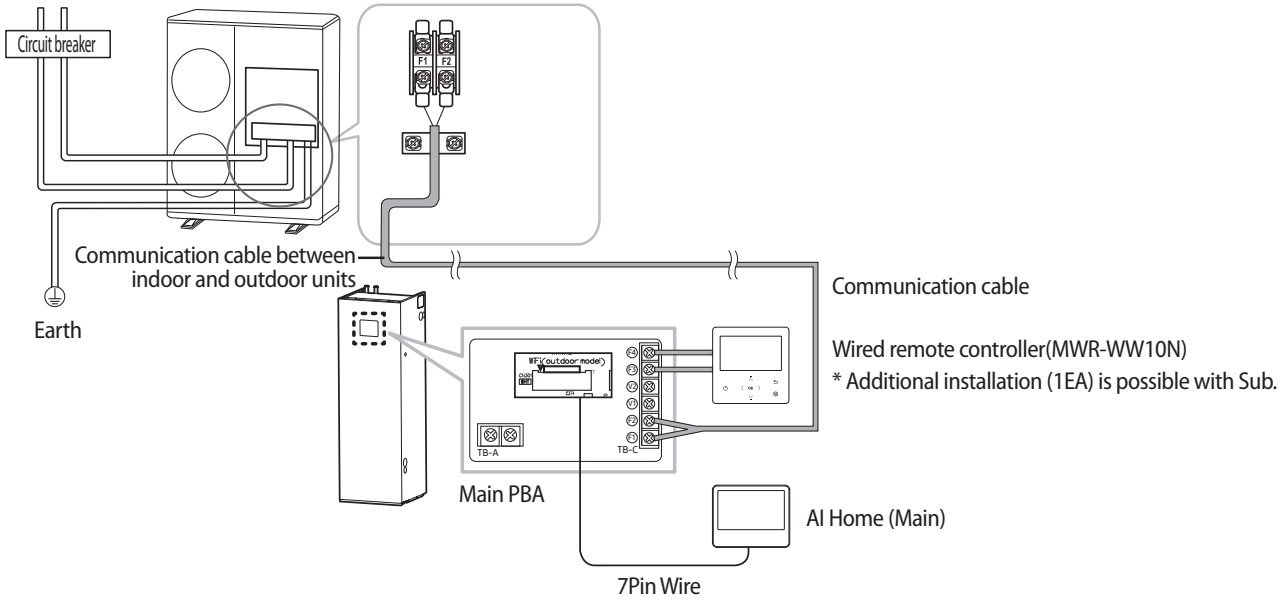
Indoor unit

ClimateHub

* When you use inlet hole through the cabinet top positions for power/communication wires, please fix the wire by using holder of the cabinet right.



Communication cable connection



4. Installation

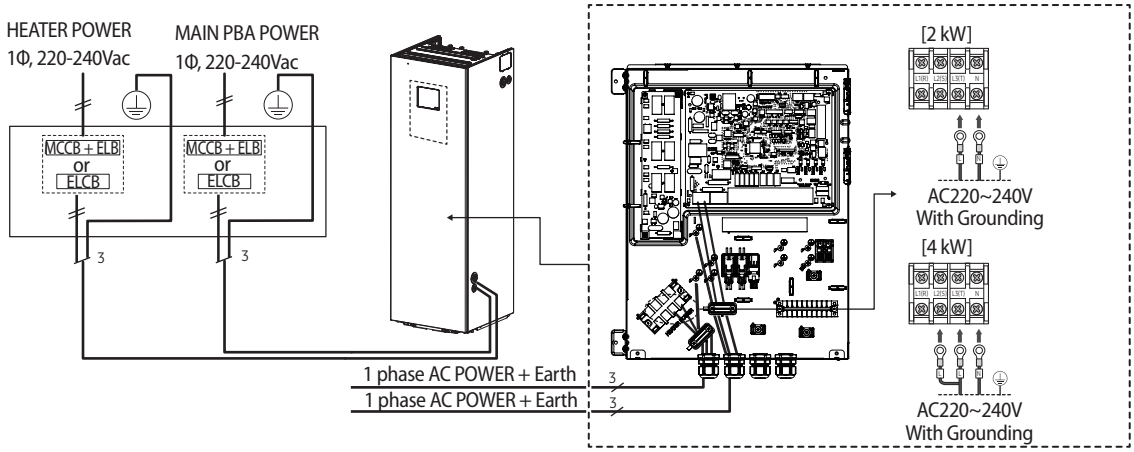
Indoor unit

ClimateHub

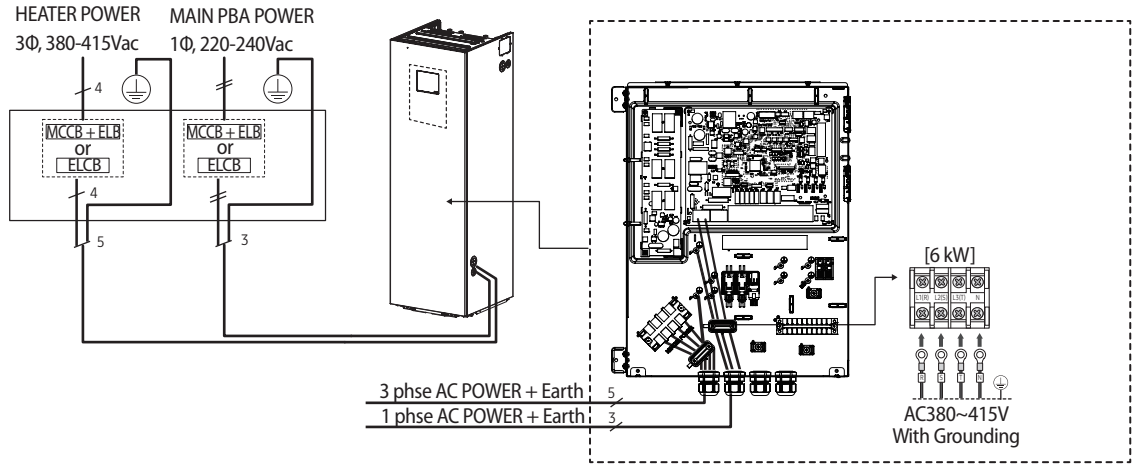
⚠ CAUTION

- Main POWER and Heater POWER must be configured through each RCBO(Residual Current Breaker with Overcurrent protection) or MCB + RCCB.
- Backup heater should use the right power according to the power of the outdoor unit.

1. 1 phase product



2. 3 phase product



⚠ CAUTION

- **Circuit Breaker (RCBO or MCB + RCCB) for outdoor and indoor units shall be installed by installers because they are not sub-parts in the units.**
- If the supply cable is damaged, it must be replaced by a special cable or assembly available from the manufacturer or installer.
- The improper connection of the main and heater may result in damage to the chassis, PCB, and heater.
- When connecting the 3 phases for a 6 kW heater, be sure that the R, S, T, N terminals of the heater are properly connected before turning on the unit.
- Please check that the voltage between R-N, S-N, and T-N on the heater power terminal block is within the range of 220 ~ 240Vac.

✻ ERCBO : Residual current circuit breaker with overcurrent protection
✻ MCB : Miniature Cirtcuit Breaker
✻ RCCB : Residual current circuit Breaker

4. Installation

Indoor unit

ClimateHub

Connection of the backup heater power supply

⚠ CAUTION

- Do not use a power supply shared by other appliances. Each components for Outdoor unit, Indoor Main Power, Indoor Heater Power has the dedicated power supply.

Model	Power (Φ, #, V, Hz)	Backup Heater Capacity (KW)	Max Current	1Phase RCBO (A)	3Phase ELCB (A)
AE200DN****	1, 2, 220-240, 50	2	Max 9.5 A	15 A or below	N/A
		4	Max 19 A	25 A or below	N/A
	3, 4, 380-415, 50	6	Max 9.5 A	N/A	15 A or below

The FSV #3081 setting value must be changed according to the heater capacity
- 2kW: 2(default)
- 4, 6kW: Need to change to 4 or 6 depending on the heater capacity

NOTE

- The power consumption of backup heater is calculated according to the heater signal, so an error may occur with the actual usage.

4. Installation

Indoor unit

ClimateHub

Connection of the thermostat

To use thermostat control, configure FSV #2091/#2092 to "Use."

Please refer to the controller manual for this setting.

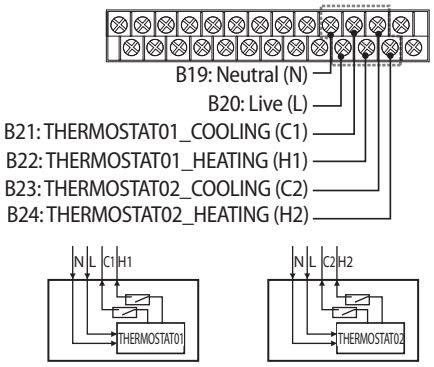
Cooling/Heating operation and water temperature are determined by the Thermostat input signal and Water Law setting.

Please refer to the controller manual for this setting.

NOTE

- For thermostat control, FSV Setting #4061 must be set to "0".

Description	No. of wires	Max. current	Thickness	Supply Scope
Room Thermostat	4	#19, #20 : 50 mA (Output, Thermostat Power) #21, #22, #23, #24 : 22 mA each Pin (Input)	> 0.75 mm², H05RN-F or H07RH-F	Field supply(220~240Vac, Output)



1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Make sure what type is you use.
   - If the operating mode (heating/cooling) of thermostat 1 and thermostat 2 are different, the operating mode is determined based on thermostat 2.

CAUTION
- Product will not operate when signal for cooling and heating mode is inputted at the same time.

When setting up two thermostats;

- ▶ For heating operation, please install Thermostat 01 to a room that requires lower water temperature (ex,underfloor heating) and Thermostat 02 to a room that requires higher water temperature (ex,radiators).
- ▶ For cooling operation, please install Thermostat 02 to a room that requires lower water temperature (ex,radiators) and Thermostat 01 to a room that requires higher water temperature (ex,underfloor heating).
- ▶ In order to properly control the two thermostats with different temperature settings, it is necessary to connect the mixing valve and the mixing temperature sensor(TW4)[Optional parts].
- ▶ When controlling the thermostat in a multi-room(Two thermostat control), please refer to the "Connection of the 2-way valve" wiring works for valve control.
- ▶ Please find additional installation information refer "Connection of the 2-way valve" [Page 51] and "Connection of the mixing valve" [Page 54]

⚠ WARNING

- When using thermostat01 in cooling mode, to prevent floor condensation, if the room water temperature is below 16 ℃, the 2-way valve of thermostat 01 is automatically closed.

NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling. Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 ℃ as described above.

4. Installation

Indoor unit

ClimateHub

Connection of the 2-way valve (2 zone control is not used as FSV Setting #4061="0")

2Way Valve is controlled to open or close according to cooling/heating Thermo On/Off control.

When setting up two thermostats, then;

- 2way valve 1 is controlled according to the input signal of thermostat 1 and 2way valve 2 according to that of thermostat 2.
- If you use the 2way valve output as the output of the Room Water Pump with buffer tank for Thermostat 1 and 2, please connect it to terminal block "normal close" and set FSV Setting #6041 to "1". [Reference: EHS CONTROL KIT Manual]

Description	No. of wires	Max. current	Thickness	Supply Scope
2 Way Valve	2+ground	50 mA	> 0.75 mm², H05RN-F or H07RH-F	Field supply(220~240Vac, Output)

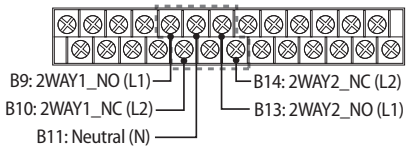
⚠ CAUTION

- When FSV#4041=0 is set without using the mixing valve, if the water outlet temperature is less than 16 degrees, 2way valve 1 is closed to prevent floor condensation.
  - Connect the output of 2way valve 1 for underfloor cooling shutoff.

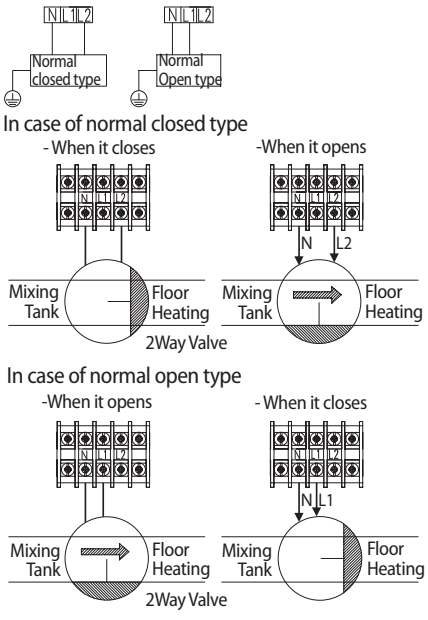
NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling. Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 ℃ as described above.

▶ Connect the output of 2way valve 1 for underfloor cooling shutoff.



* Connection of 2 wires 2-way valve



2-way motorized valve

- ▶ 220 ~ 240 Vac
- ▶ 2 wires(Normal Open or Normal Close)

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Make sure what type is you use.
   - Normal OPEN or Normal CLOSED.

⚠ CAUTION

- There are 2 types of 2-way valve, normal open type and normal closed type. Make sure to connect terminals to right positions of terminal block. As detailed on the wiring diagram and illustrations above.

4. Installation

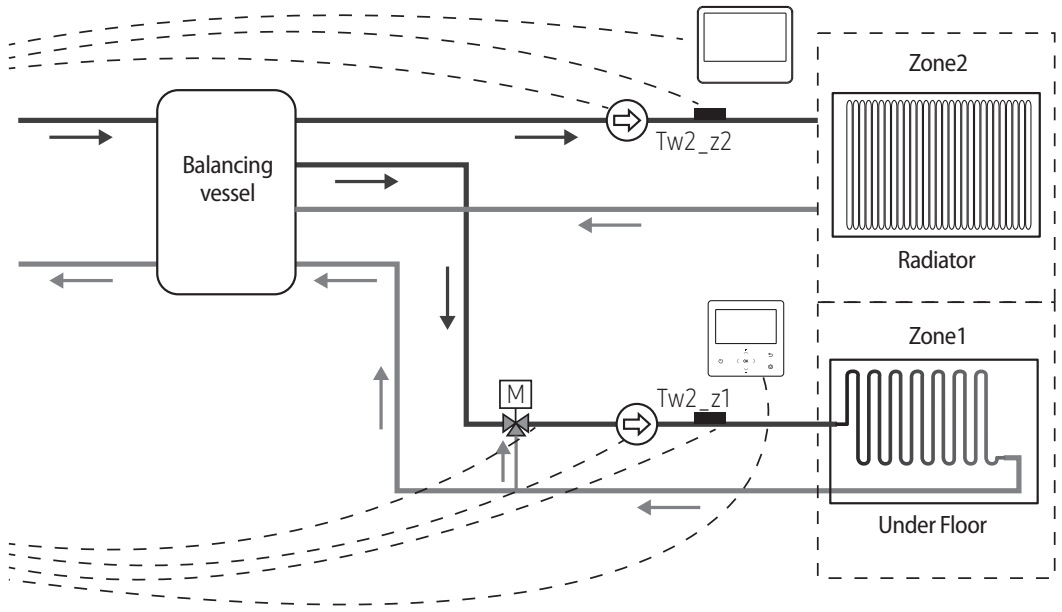
Indoor unit

ClimateHub

Connection of the water pump for 2 Zone control (FSV 4061=1)

When setting up 2 Zone control

- For heating operations, please conncect the Zone1 supply line to a room that requires a lower water temperature (ex,underfloor heating) and the Zone2 supply line to a room that requires a higher water temperature (ex,radiators).
- For cooling operations, please conncect the Zone2 supply line to a room that requires a lower water temperature (ex,radiators) and the Zone1 supply line to a room that requires a higher water temperature (ex,underfloor cooling).
- In order to properly control the 2 Zone with different temperature settings, it is necessary to connect the mixing valve and the Zone1 and Zone2 temperature sensors[Optional parts].
- Please find additional installation information refer "Connection of the mixing valve" [Page 54]
- Zone1 water pump connection: B10(L1) + B11(N)
- Zone2 water pump connection: B14(L1) + B15(N)



⚠ CAUTION

- When using Zone1 in cooling mode, to prevent floor condensation, if the zone1 water temperature is below 16 ℃, the pump of zone 1 is automatically turned off.

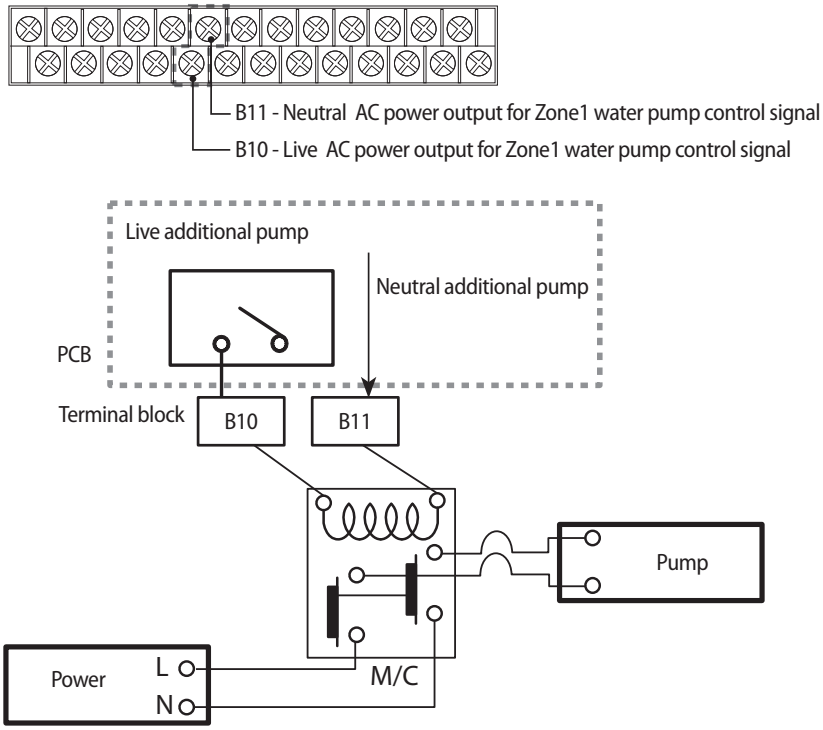
NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling.
  Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 ℃ as described above.

4. Installation

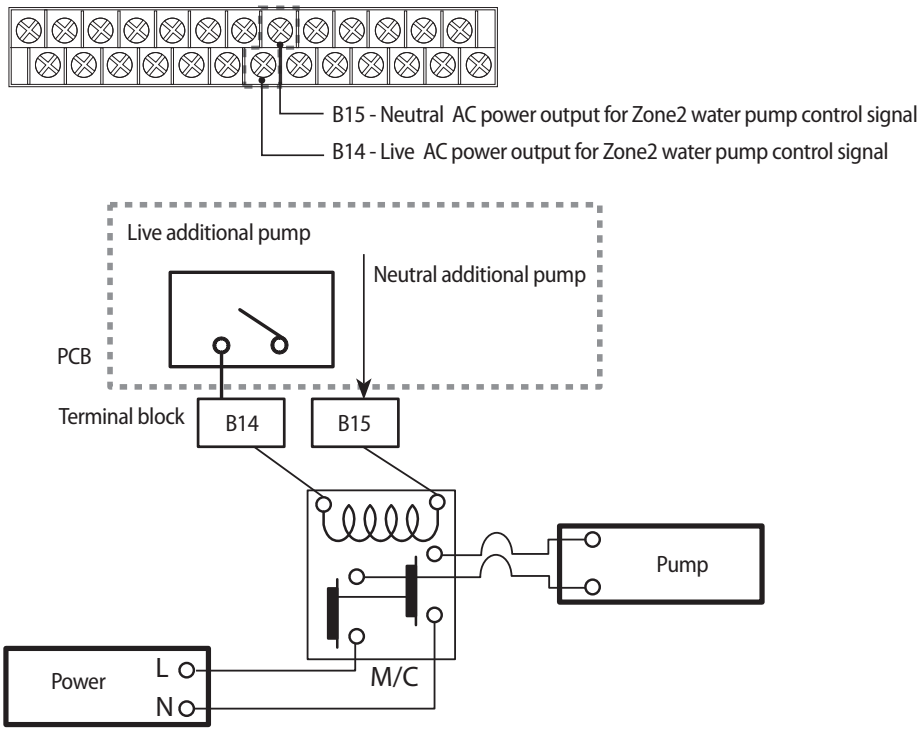
Indoor unit

ClimateHub



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 50mA.
- When using external power of 50 mA or more, make sure to connect using relay and separate power source.



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 50mA.
- When using external power of 50 mA or more, make sure to connect using relay and separate power source.

4. Installation

Indoor unit

ClimateHub

Connection of the mixing valve

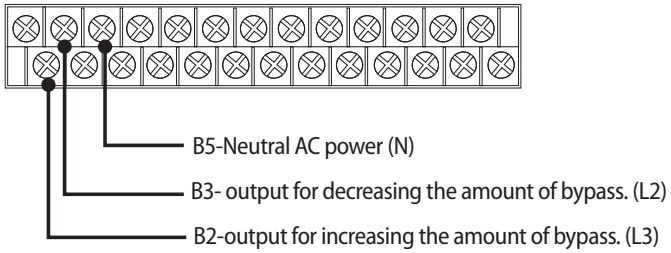
NOTE

- In order to install mixing valve for standard model(AE200DNWMPK), please purchase 2 Zone Thermistor Kit (MOS-T1).

In order to properly control the 2 Zone or two thermostat with different temperature settings,
it is necessary to connect the mixing valve.
The mixing valve controls the amount of bypass water that is mixed with the supply water to provide water at a pre-set temperature.

Description	No. of wires	Max. current	Thickness	Supply Scope
Mixing valve	3	50 mA	> 0.75 mm^2, H05RN-F or H07RH-F	Field supply(220~240Vac, Output)

1. Before the installation, control kit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.



B2- output for increasing the amount of bypass: The amount of return water that is mixed with supply water through mixing valve is increased.

B3- output for decreasing the amount of bypass: The amount of return water that is mixed with supply water through mixing valve is decreased.

NOTE

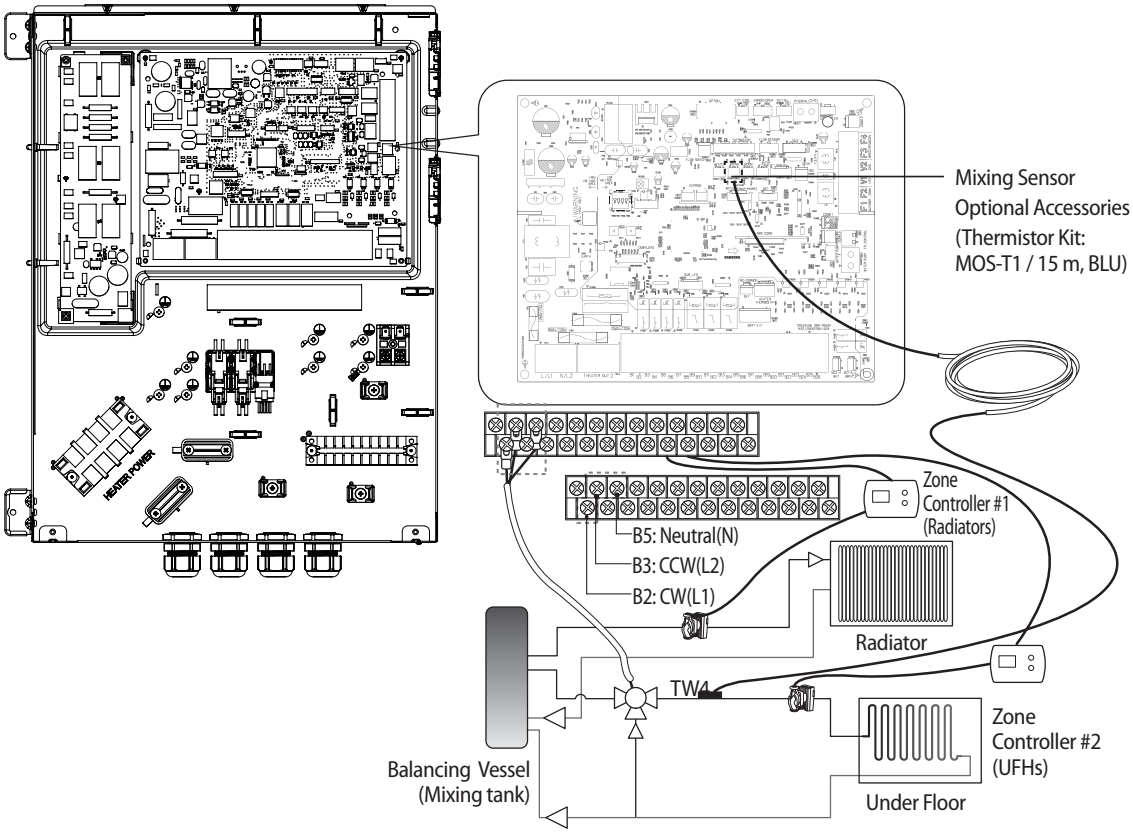
- AE200DNX*** (2zone built-in type) is designed to supply water at 2 different temperatures.
  Therefore, it is not necessary to connect or configure the Mixing Valve.

4. Installation

Indoor unit

ClimateHub

2 Zone with Two thermostat control



1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Install the supplied Mixing temperature sensor (TW4) on the mixed water side within 1 m from the Mixing Valve, as shown in the figure above.
4. Set the FSV value #4041~ #4046. Please refer to the controller manual for this setting.

⚠ CAUTION

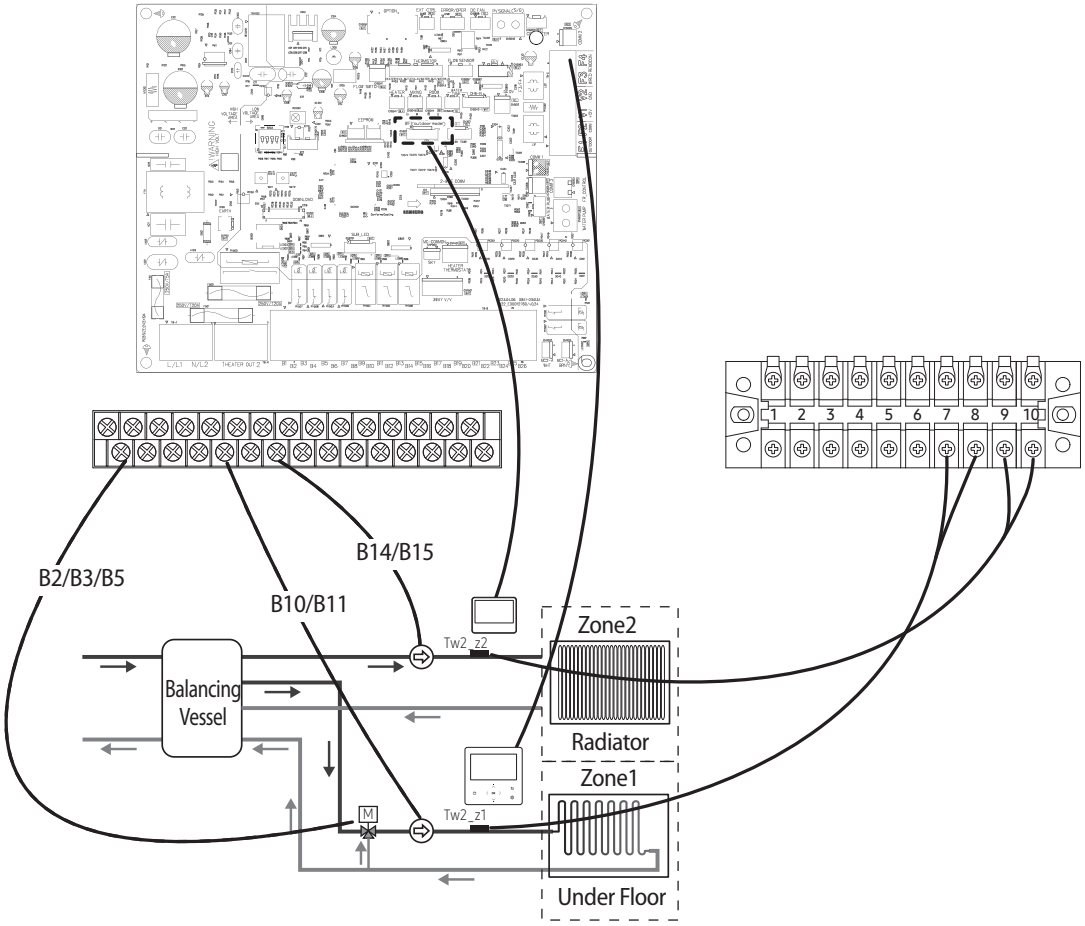
- When using Zone control (FSV 4061 = 1), ignore Thermostat signal.

4. Installation

Indoor unit

ClimateHub

2 Zone Control [FSV #4061 =1]



You can operate the 2 Zone control using a mixing value, water-out temperature sensors, and built-in or external room temperature sensors installed in a wired remote controller.
When both zones are simultaneously Thermo on, the operation is performed based on Zone2. Therefore, set the zone that you want to have the higher set temperature to Zone2.
(The mixing valve must be installed in the zone that you want to have the lower set temperature.)

1. Install the mixing valve. (See "Installation of mixing valve.")
2. Install the water-out temperature sensors (Tw2_z1, Tw2_z2) for all zones.
3. Unlike the zone control with a thermostat, connect the water pump signal lines to the product.

► Zone1 water pump connection: B10 (L1) + B11 (N)
► Zone2 water pump connection: B14 (L1) + B15 (N)

4. FSV 4061 = 1: Enable the 2 Zone control using the wired remote controller.

* If you want to operate the 2 Zone control by using water-out temperatures, you have only to complete steps 1 to 4 above.
* If you want to operate the 2 Zone control by using room temperatures and built-in temperature sensors in wired remote controllers, you must install two wired remote controllers in each room.
(If you use external room temperature sensors, you can control each room temperature with only one wired remote controller.)

Select a mixing valve from the manufacturers as below (recommended)

Maker		BELIMO	SIEMENS	HONEYWELL
Model code	3 Way Valve	R3020-6P3-S2	VXP45.20-4 (kvs 4)	V5011E1213
	Actuator	LR230A(-S)	SSB31	ML6420A3015
Running time		90 sec.	150 sec.	60 sec.
FSV(#4046) setting		9	15	6

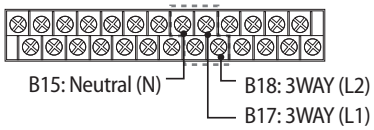
4. Installation

Indoor unit

ClimateHub

Connection of the 3-way valve

Description	No. of wires	Max. current	Thickness	Supply Scope
Diverting type 3way valve	4	50 mA	> 0.75 mm², H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



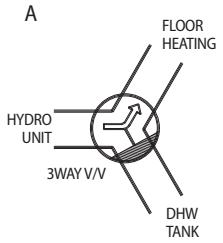
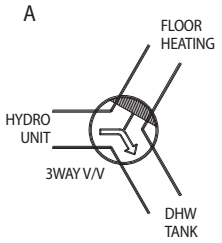
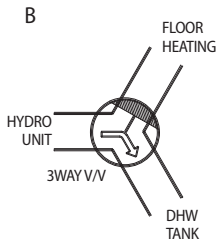
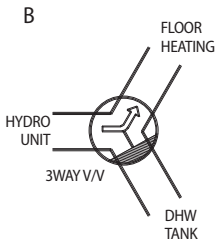
Status	L1	L2
A (Initial)	OFF	ON
B	ON	OFF

3-way diverting valve for water tank

▶ When cooling operating mode, floor heating loops will be closed.

▶ 220 ~ 240 Vac

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3 Make sure what type of 3 way V/V you use.

Field Setting Valve (#3071) "0" Floor heating as default	Field Setting Valve (#3071) "1" DHW tank as default
A 	A 
B 	B 

4. Installation

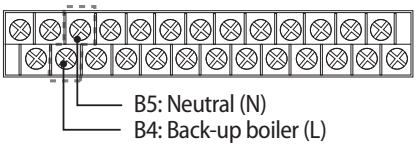
Indoor unit

ClimateHub

Connection of the back-up boiler

- ▶ This function is to determine which heating source can/will provide the space heating, either the heat pump system or the back-up boiler.
- ▶ To control the back-up boiler , configure FSV #4031~ #4033. Please refer to the controller manual for this setting.

Description	No. of wires	Max. current	Thickness	Supply Scope
Back-up Boiler	2	50 mA	0.75mm² H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



When it set back up boiler on the hydro unit (relay off)

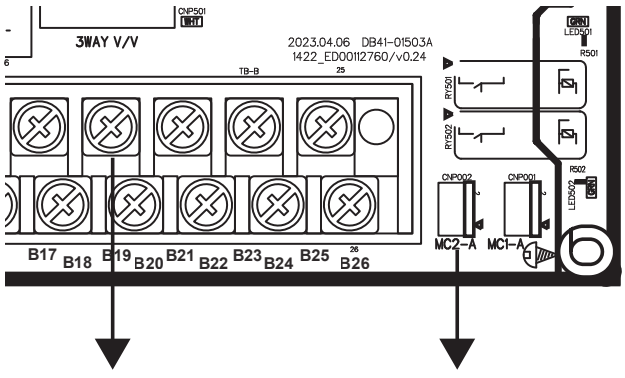
When it order to back up boiler operates (relay on)

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.

✻ Heat pump does not work when the Back-up boiler operates.

Connection of the external back-up heater

Description	No. of wires	Max. current	Thickness	Supply Scope
Back-up Heater	2	0.3 A	0.75mm² H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



B19: N

MC2-A: RELAY_OUT(L)

- ▶ If you need an additional heater, it can be installed as an option.

NOTE

- AE200DNX*** (2 Zone built-in type) is strictly prohibited from installing external back-up heaters.
- An additional back-up heater for AE200DNW*** should be installed on the Zone piping line.

⚠ WARNING

- The N phase of the HEATER signal can be connected to B5,B7,B11,B15 instead of B19. (Maximum 2 wires can be connected 1 Screw)
- For the external Back-up heater connection, Only Samsung Heater kit(MHC-300FP) is compatible.

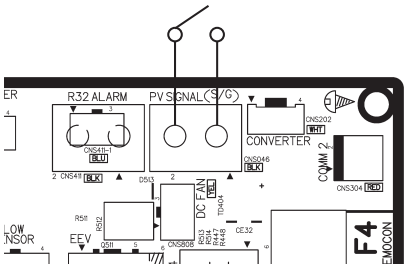
4. Installation

Indoor unit

ClimateHub

Connection of the Peak Power Control or PV control(Photovoltaics control)

Description	No. of wires	Max. current	Thickness	Supply Scope
Peak Power Control or PV control (Photovoltaics control)	2	-	-	Field supply



❋ Function 1 (Peak Power Control)

- ▶ This is a function that allows you to disable the backup heater, and compressor operation of the outdoor unit depending on the power input contact.
- ▶ If users make contracts with local electric power company for limiting the amount of power consumption when a surge in power usage, users can set FSV of "Forced off".
- ▶ To control the Power Peak , configure FSV #5041~ #5043. Please refer to the controller manual for this setting.

❋ Function 2 (PV[Photovoltaics] control)

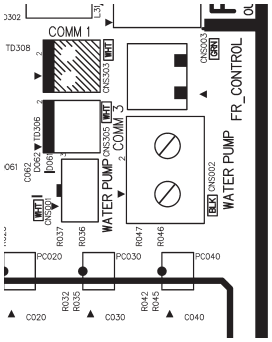
- ▶ This is for energy saving by using the solar energy.
- ▶ To control PV, configure FSV #5081~ #5083. Please refer to the controller manual for this setting.
- ▶ Cooling/heating operation: Enables the FSV value that is set only when the PV signal is in out mode.
  Hot water operation: Activate immediately with the set FSV value.

NOTE

- It operates according to the setting of FSV, and both functions can not be used at the same time. (PV Control / Peak power control)
- Except for domestic hot water mode, this function is activated only for the outing mode.

Connection of the FR Control(Frequency ratio control)

Description	No. of wires	Max. current	Thickness	Supply Scope
FR Control	2	-	-	Field supply



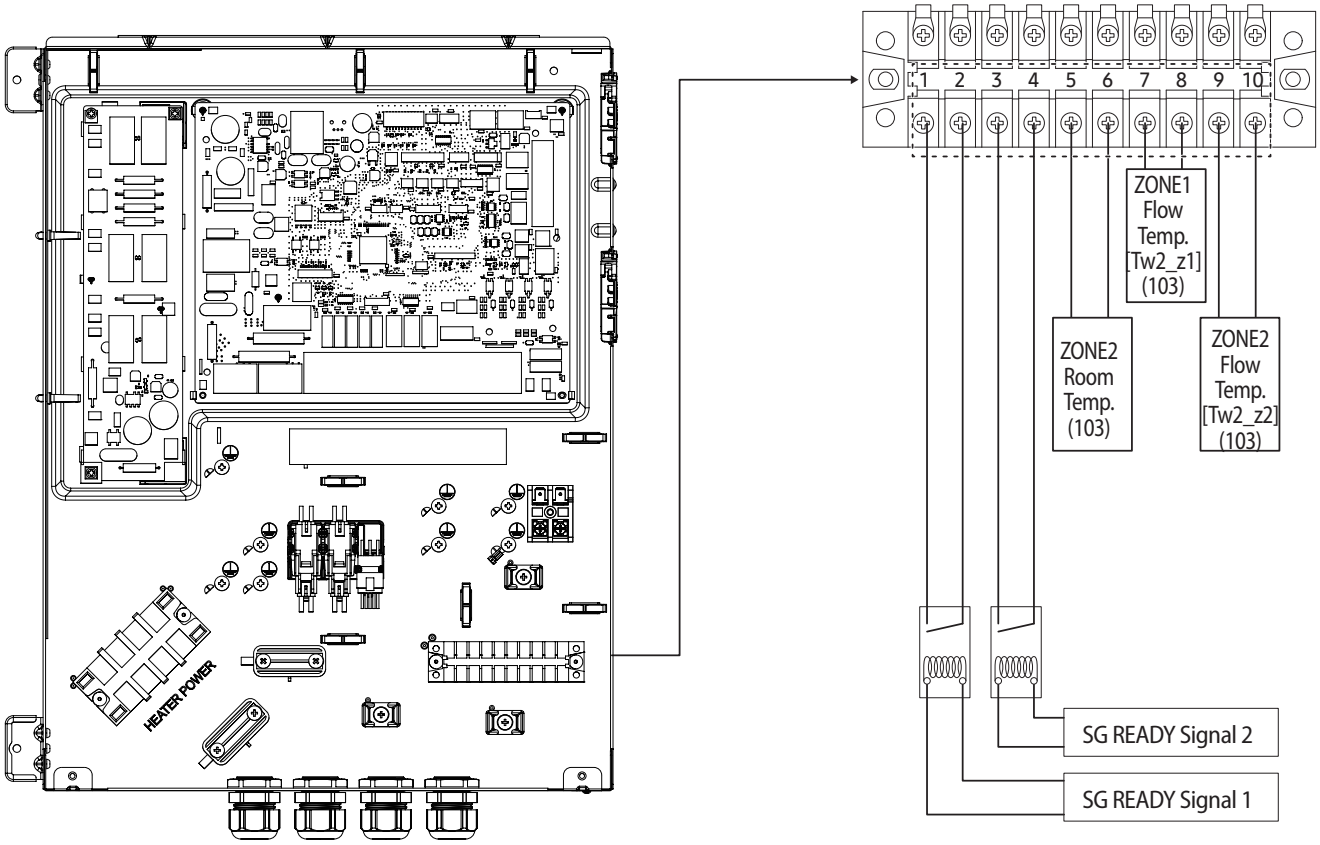
- ▶ The FR control function application is to limit the maximum frequency of the outdoor unit compressor. (if FSV #5051 = 1 "use")
- ▶ Method 1: External DC signal Control uses a DC voltage of 0 ~ 10V (0v = 50%, ~ 10v = 150%)
- ▶ Method 2: Demand ratio (DR) control through Modbus communication

4. Installation

Indoor unit

ClimateHub

Connecting for smart grid ready control



SG READY Signal 1	SG READY Signal 2	Product operation
Short	Open	Forced thermo off operation
Open	Open	Normal operation
Open	Short	Heating / DHW setting temperature 1step-up operation
Short	Short	Heating / DHW setting temperature 2step-up operation

⚠ CAUTION

- These parts are optional and not included with the product.
- Maker sure to connect to non-power on/off contacts.

4. Installation

Indoor unit

Hydro Unit

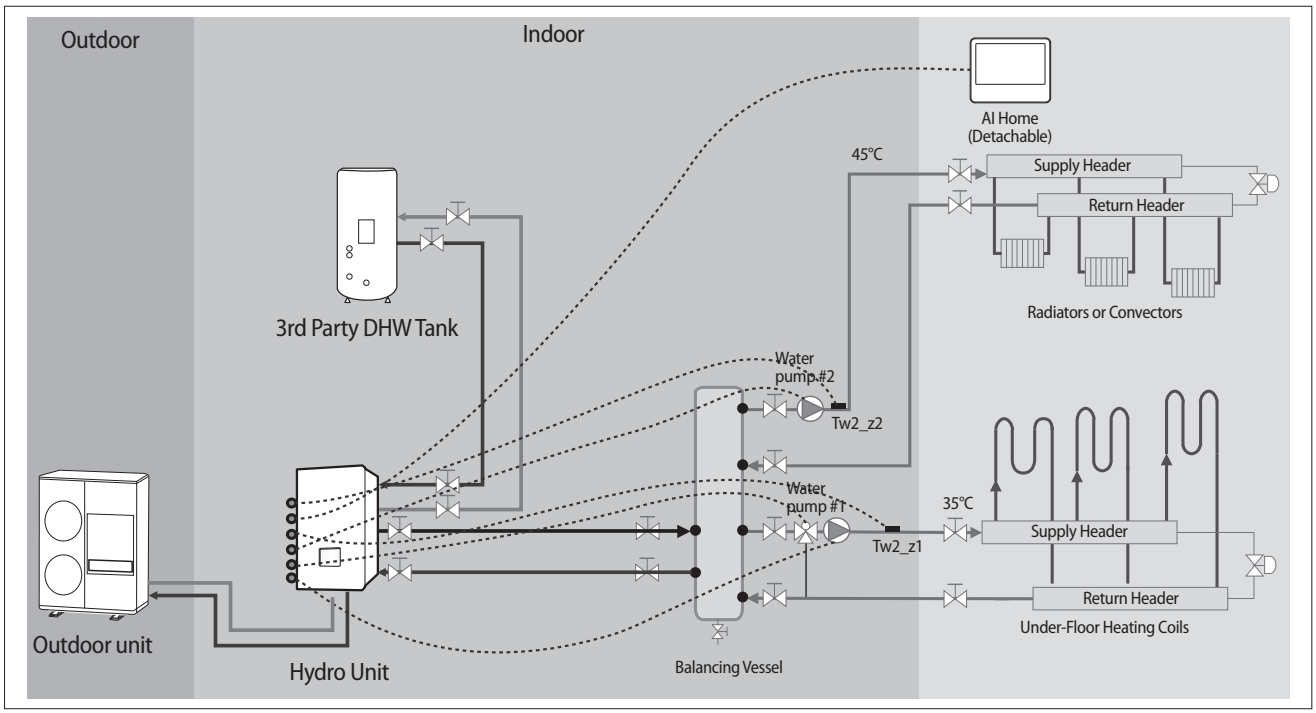
⚠ WARNING

- The application examples given below are for illustration purposes only.
- When the Samsung Air-to-Water Heat Pump system is used in series with another heat source (e.g. gas boiler), ensure that the return water temperature not exceed the maximum water temperature of the outdoor unit (Max water temperature is determined according to the type of outdoor unit model).
- The unit is only to be used in a closed water system. Application in an open water circuit can lead to excessive corrosion of the water piping.
- Samsung can not be responsible for incorrect or unsafe situations in the water system. Make sure that the boiler, radiators, convectors, solar collectors, UFHs, FCUs, additional pumps, pipings, and controls in the water system are in accordance with relevant local laws and regulations under the installer's responsibility.
- Samsung shall not be held liable for any damage resulting from not observing this rule.
- Samsung do not provide specific water system components such as Pressure relief valve, Air vent valve, buffer tank and etc. Installers and end-users shall consider how to install the above designated components in overall water system depending on the installation conditions. If the components are not installed in appropriate location, the water system can not be operated as designed.

✳ The below examples are for illustration purposes only.

Application 1: Space heating + water heating

✳ AE160DNYSPG(Standard)

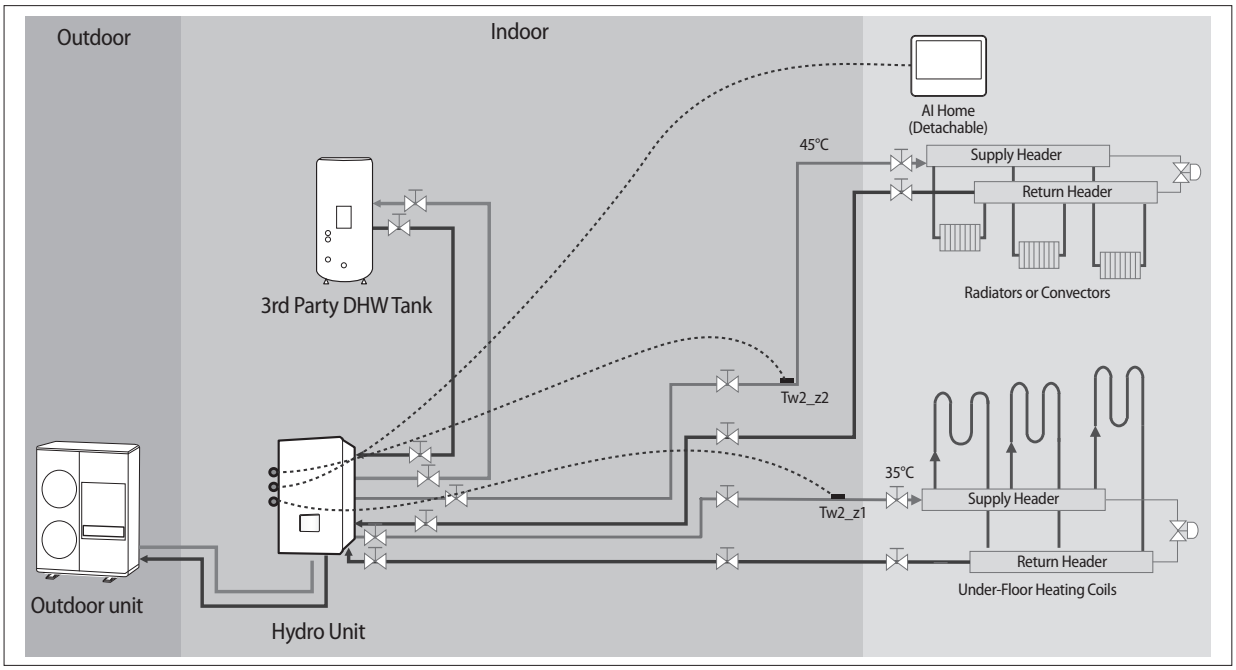


4. Installation

Indoor unit

Hydro Unit

✻ AE160DNZSPG(2 Zone)



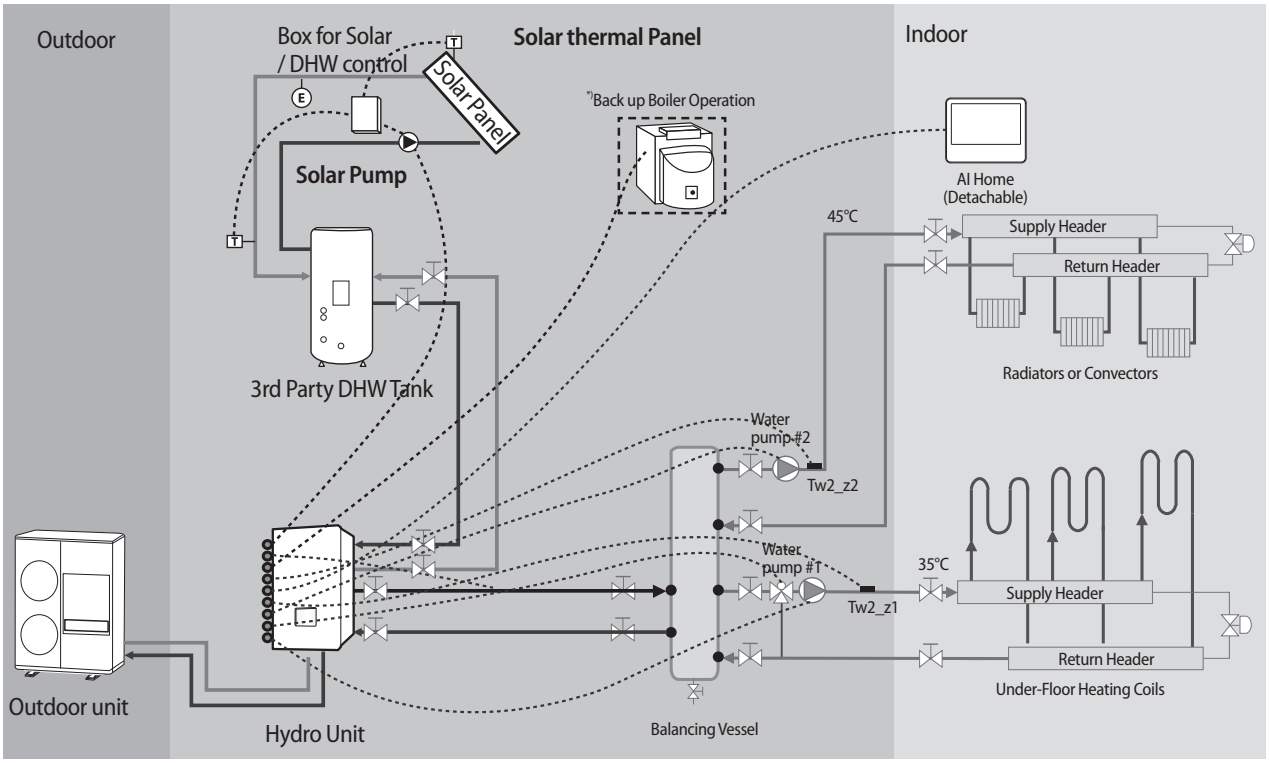
4. Installation

Indoor unit

Hydro Unit

Application 2: Hybrid application(backup boiler and solar panel connected)

✻ AE160DNYSPG(Standard)



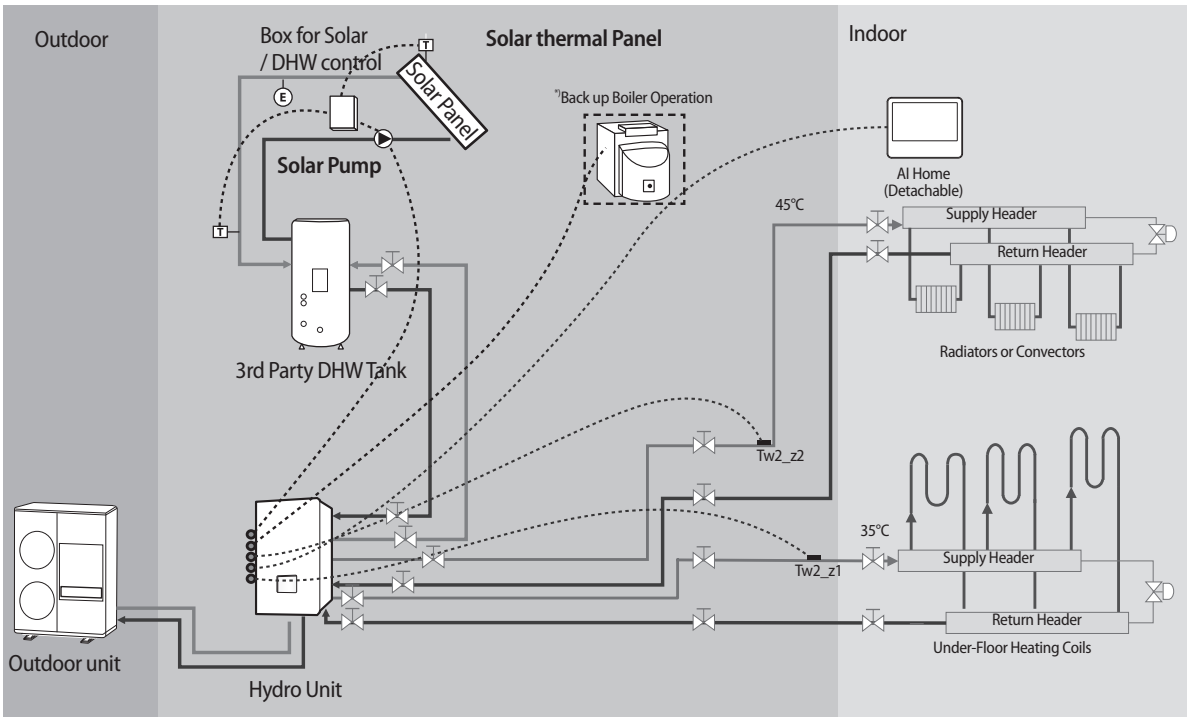
*) We control only the on / off signal of backup boiler according to outdoor temperature.
Backup boiler should be installed with own device according to the field condition.

4. Installation

Indoor unit

Hydro Unit

✻ AE160DNZSPG(2 Zone)



*) We control only the on / off signal of backup boiler according to outdoor temperature.
Backup boiler should be installed with own device according to the field condition.

⚠ CAUTION

- Samsung has not responsible for performance and stability of backup boiler.
- Water quality must be according to Directive (EU) 2020/2184.

4. Installation

Indoor unit

Hydro Unit

Water pipe work

The hydro unit is equipped with components listed on the table below.

All entering, leaving water direction is embossed right next to the pipe. Please connect the pipe with attention to the direction of the arrow

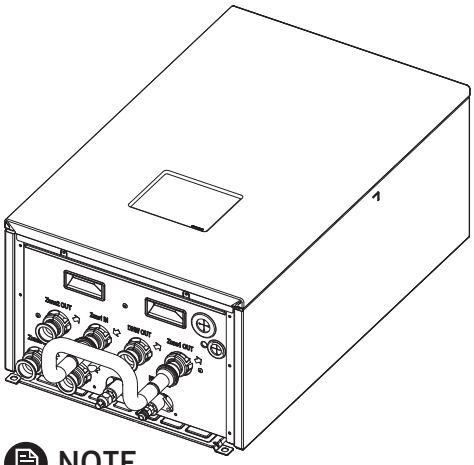
Whole water plumbing system including Hydro unit shall be installed by a qualified technician and must comply with all relevant European and national regulations.

- ▶ Allowable water pressure of hydro unit is maximum 3.0bar.
- ▶ An air-vent valve is integrated on the hydro unit. Please check that air-vent valve is not overtightened so the air-vent valve can release any air out of the system during system operation.
- ▶ AE160DNZ*** (2zone built-in type) is designed to supply water at 2 different temperatures
  - For heating operations, please connect the Zone1 supply line to a room that requires a lower water temperature (ex,underfloor heating) and the Zone2 supply line to a room that requires a higher water temperature (ex,radiators).

NOTE

If you install AE160DNZ*** (2zone built-in type) as a single-zone application, then:

- Install a bypass pipe between the water inlet and outlet for Zone 1 and use Zone 2 for space heating.
- Change FSV Setting #4061=0(Zone control= No), #4041=0 (Mixing V/Vcontrol= No)

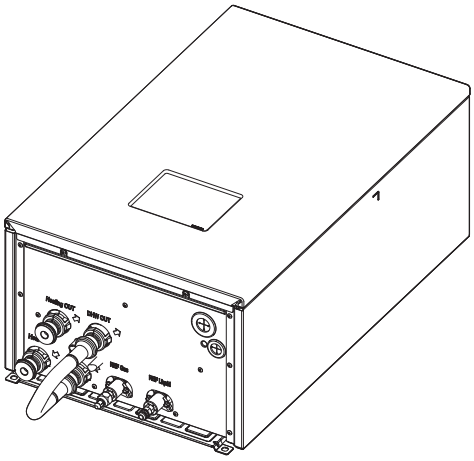


NOTE

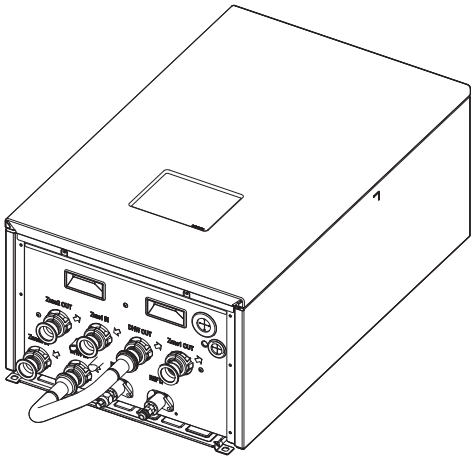
If you install AE160DN**** with no 3rd party tank then:

- Install a bypass pipe between the water inlet and outlet for DHW.
- Please check FSV Setting #3011=0(DHW= No)

✻ AE160DNYSPG



✻ AE160DNZSPG



4. Installation

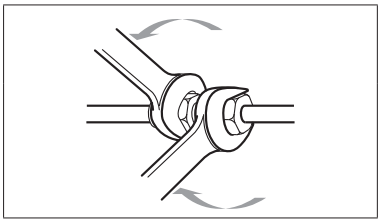
Indoor unit

Hydro Unit

Refrigerant pipe work

For all guide lines, specifications regarding refrigerant pipe work between the indoor unit and the outdoor unit, please follow the outdoor unit installation manual.

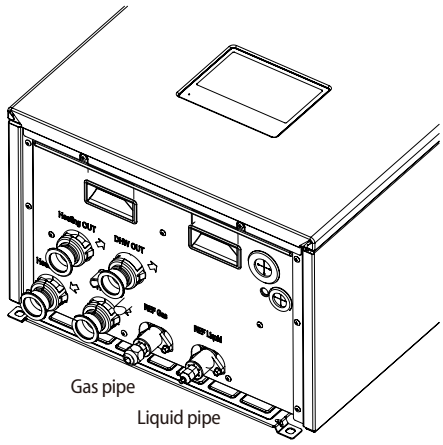
	Gas pipe (O.D.)	Liquid pipe (O.D.)
Indoor unit	12.70 mm (1/2 inch)	6.35 mm (1/4 inch)



Outer diameter [mm(inch)]	Torque (N•m)
ø6.35 (1/4")	14~18
ø9.52 (3/8")	34~42
ø12.70 (1/2")	49~61
ø15.88 (5/8")	68~82
ø19.05 (3/4")	100~120

⚠ CAUTION

- When connecting the refrigerant pipes, always use 2 wrenches/spanners for tightening or loosening nuts. If not, piping connections can be damaged.



Special requirements for R-32 units

The basic refrigerant charge is less than or equal to 1.84 kg, and additional refrigerant should be charged appropriately according to the installation length.

If the total refrigerant charge of the system exceeds 1.84 kg, the space where the indoor unit is installed must be in compliance with the conditions described under 'Installation Case'.

⚠ CAUTION

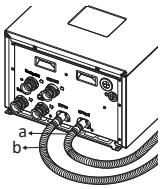
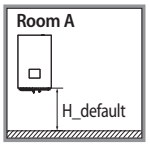
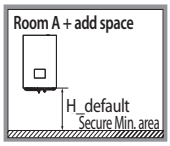
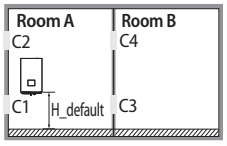
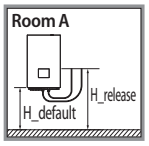
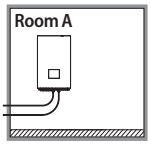
- If the total refrigerant charge of the system is >1.84 kg, the system must comply with the conditions described in the installation case.
- The problem caused by non-compliance with installation cases is not the responsibility of Samsung.

4. Installation

Indoor unit

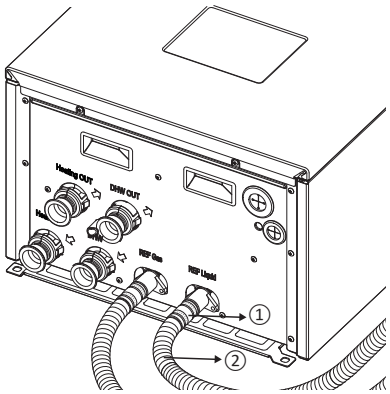
Hydro Unit

Installation Case

	Case 1	Case 2	Case 3	Case 4	Case 5
					
Ref. charge	1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg	Exceeds 1.84 kg
Ventilation openings	No work needed	No work needed	Between Room A and outside or Between Room A + Room B	No work needed	No work needed
Release point	No work needed	No work needed	No work needed	Raise release point	Release point outside
Min. floor area	No work needed	Min. area[1)]	Min. area[1)]	No work needed	No work needed

[1)] : It does not apply to cases of ventilation to outside.

a, b	Release point . If necessary, you should raise the release point. . Install the release point on the body of the liquid pipe (a) and the gas pipe (b), as shown in the image. . Raise the release point and tighten it use appropriate counterparts.
H_default H_release	The actual height of the relase point 1) H_default → 1.20 m (Height of basic indoor unit) 2) H_release → 1.20 m + added release point
Room A	Room for installing Indoor unit
Room B	Adjacent additional Room
C1, C3	Bottom natural ventilation opening
C2, C4	Top natural ventilation opening



For Parts ① and ②, we recommend the following examples

- ① Pipe connector composed of rubber reducer (It can be fastened with a diameter of 28 ~ 32 mm)
- ② Drain flexible hose (32 mm)

- The pipe connector is a rubber reducer for connecting water pipes, which is composded of a stainless steel tie.
- The pipe connector for this part should be tightened with a torque 20~25 kgf•cm.
- The flexible drain hose is a 32 mm and mainly used for water drainage.
- The parts mentioned can be easily obtained from the market.
- The parts is a recommended part (example), and if there is a separate part that can be air tightness, you may use it.
- The minimum floor area requirement varies depending on the release point height.
- The default release point is at the top of the unit, which is called H_default. To reduce the minimum floor area requirement, should raise the release point.
- In case of installing a ventilation system in adjacent rooms, it is sufficient if the total area of ROOM A and ROOM B exceeds the minimum installation area.
- The room should be protected from frost.
- Natural ventilation (C1, C2) outside of Case 3 is allowed only in technical rooms. (i.e., spaces never occupied by person)

4. Installation

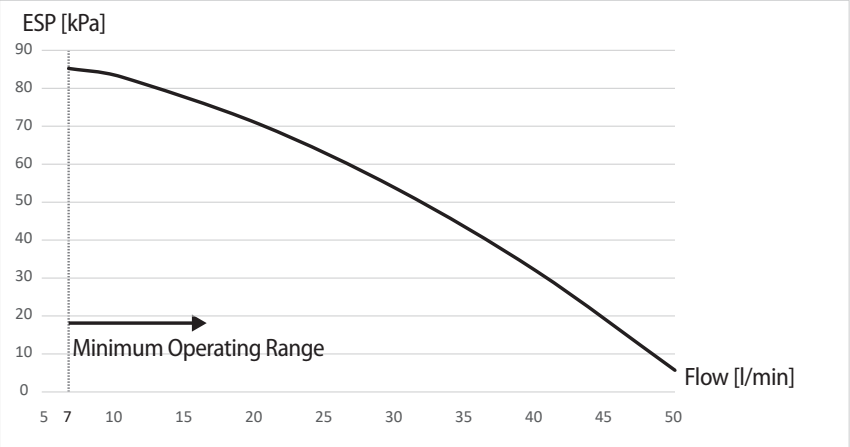
Indoor unit

Hydro Unit

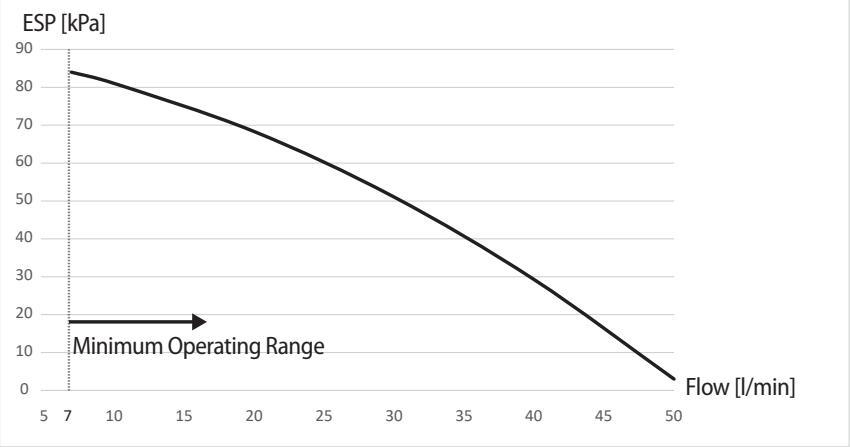
ESP(External Static Pressure) Diagram

The illustration below shows the external static pressure of the unit depending on the water flow and the pump setting.

AE160DNY***



AE160DNZ***



When ESP is not enough, additional pump should be installed. In this case, install the PWM control external type pump (Heating type) additionally.

4. Installation

Indoor unit

Hydro Unit

Connection guide of additional pump

Ensuring proper water flow is an important factor for performance and efficiency.

If the water flow is not adequate, consider installing additional pumps.

When installing an additional pump, the system's maximum allowable water flow rate and maximum water pressure should not be exceeded.

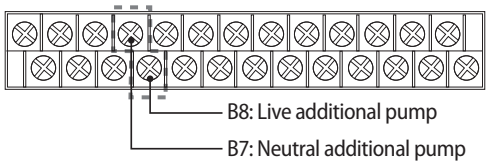
⚠ CAUTION

- Each terminal set (Live+Neutral) for additional pumps can supply ampere up to Max 1.0A.
- If an additional pump is needed, the additional pump should be installed in a designated location according to the installation case below
- [Case I] AE160DNZ*** without connection to DHW tank : additional pump should be installed in the Zone2 piping line
- [Case II] AE160DNZ*** with connection to DHW tank : additional pump should be installed in the Zone2 piping line
- [Case III] AE160DNY*** without connection to DHW tank : additional pump should be installed in the piping lines of Zone or outdoor unit
- [Case IV] AE160DNY*** with connection to DHW tank : additional pump should be installed in the Zone piping line
- For installation cases I to IV, refer to wire works cases 1 and 2.
- If an additional pump is needed for Zone1 in AE160DNZ***, refer to wire works case 3.
- The maximum number of pumps that can be powered by the terminal block of the hydro unit is two. Therefore, if necessary, be sure to connect pumps other than the two to a separate power source.
- Ex) AE160DNZ*** already has 2 pumps (Inverter and fixed pump). In this case, all additional pumps should be connected to a separate power source. For AE160DNY*** including only one main pump, one additional pumps can be driven by the terminal block of the hydro unit without using a separate power source.

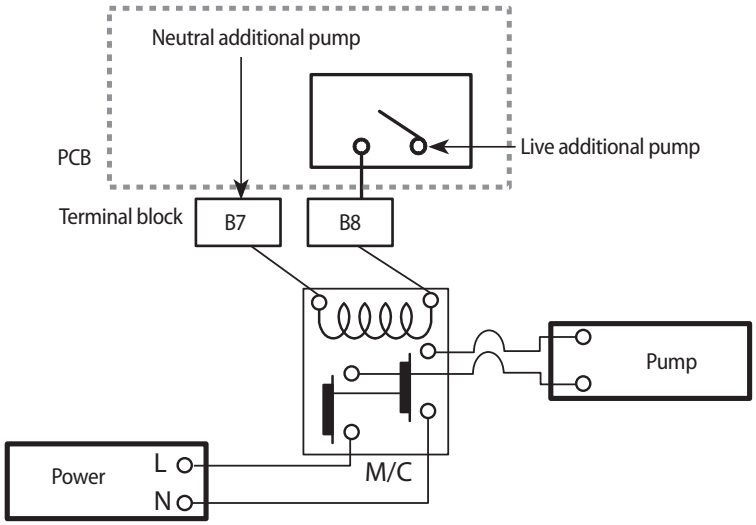
Case 1) AC pump

The terminal set (B8+B7) can supply ampere up to Max 1.0A.

1. Power supply (Pump)



2. If the maximum output of the pump exceeds 1A, please connect it to a separate power source.



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 1.0A.

4. Installation

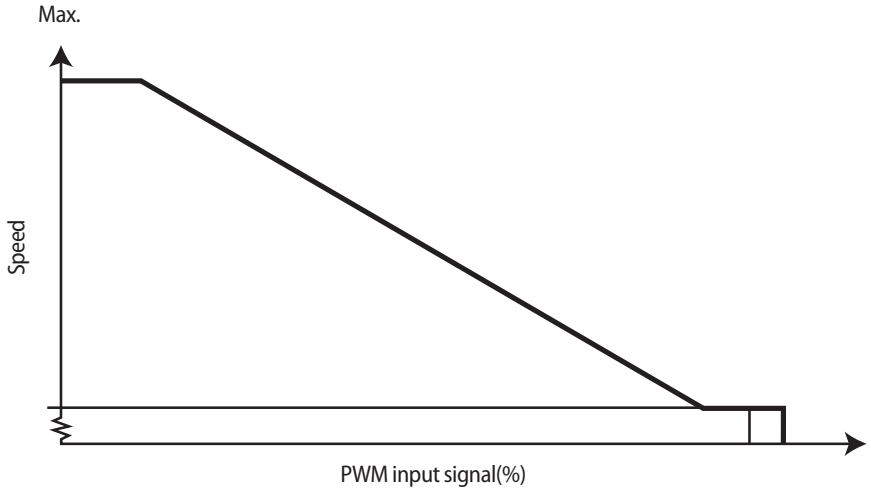
Indoor unit

Hydro Unit

Case 2) Inverter pump

Power supply connection is the same as the case1) AC pump

PWM characteristic curve

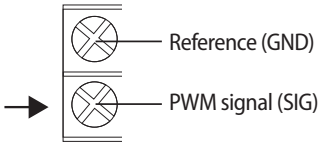


The additional pump should be the same type of product as the above graph.

Recommendation

Connect the PWM control line to the main control PBA output(CNS002) signal function for PWM control.

(Note: Wiring diagram)



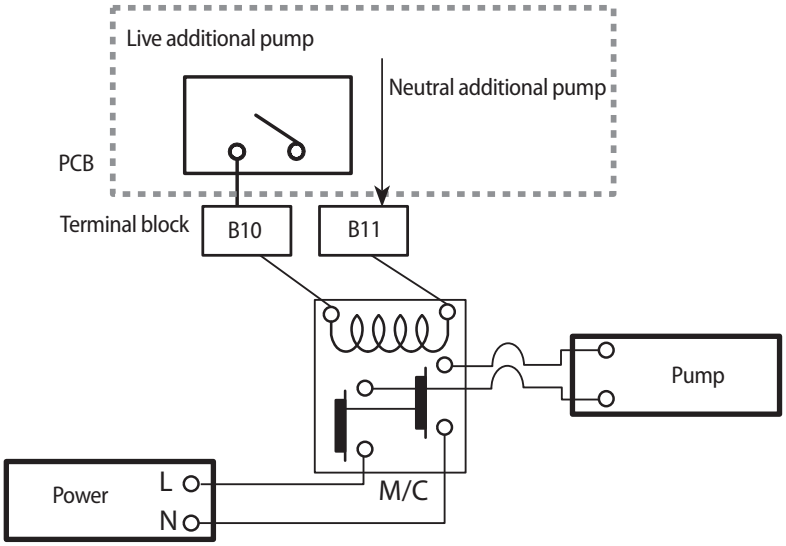
GRUNDFOS UPMM 25-95 (Heating Type), SHINHOO GPA25-9H (Heating Type)

⚠ CAUTION

- If there is wrong wiring between PWM and reference, INV. Water Pump may not work or wrong operation.

Case3) Additional pump for Zone 1 in AE160DNZ***

Only AC pump can be used as an additional pump for Zone 1 in AE160DNZ***. The pump should be installed in piping line of Zone1 and connected to a separate power source as figure shown below.

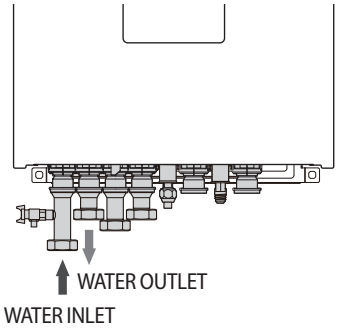


4. Installation

Indoor unit

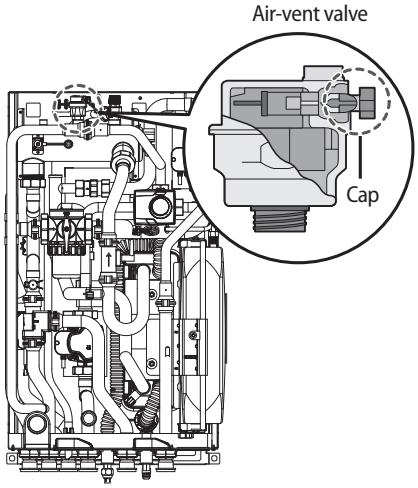
Hydro Unit

Charging water



After installation is completed the following procedures shall be used to charge water into the hydro unit.

- ▶ Connect water lines to water connections of hydro unit.
- ▶ The air-vent valve shall be opened at least 2 turns and drain valves shall be closed.
- ▶ Open the service valve in the water supply connection.
- ▶ Water pressure of supply line shall be over 2.0 bar for good charging work.
- ▶ Stop water supply when the pressure gauge of hydro unit indicates 2.0 bar.



⚠ CAUTION

- Service space should be secured.
- Water pipe and connections must be cleaned using water.
- If internal water pump capacity is not enough, install external water pump.
- Do not connect electric wire while water charging.
- When initial installation or re-installation required, open the cap to prevent air trap in the unit while charging water.
- The back-up heater vessel shall be full of water before heater is turned on. Confirm if the vessel is empty by opening the pressure relief valve of hydro unit. (OK if water is flowing out)
- It is recommended to install the make-up water assembly to feed small quantities of water to the system automatically, replacing the minor water losses and maintaining the system pressure. This assembly usually consists of a pressure-reducing valve, water filter, check-valve and shut-off valves. In this case, Check-valve must be installed to prevent from contaminating city water.

Air vent valve

Air-vent valve is provided in the Hydro unit.
However, provide air vents at all the highest points of the system, so that automatic release of air in the water circuit is possible.

Pressure relief valve

A pressure relief valve is integrated on heater vessel of hydro unit and shall work in abnormal condition for protecting the hydro unit.

⚠ CAUTION

- The pressure relief valve will operate releasing the pressure by flowing out some water through the drain hose.
- Make certain that the discharged water out of drain pan can not contact any electrical parts.

Overpressure bypass valve

Overpressure bypass valve should be installed if the minimum flow rate is not guaranteed in all conditions including defrost or backup heater operations.

Piping insulation

The complete water circuit, including all piping must be insulated to prevent condensation forming on the surface of the pipe and heat loss to external environment.

4. Installation

Indoor unit

Hydro Unit

Flushing and air-purging

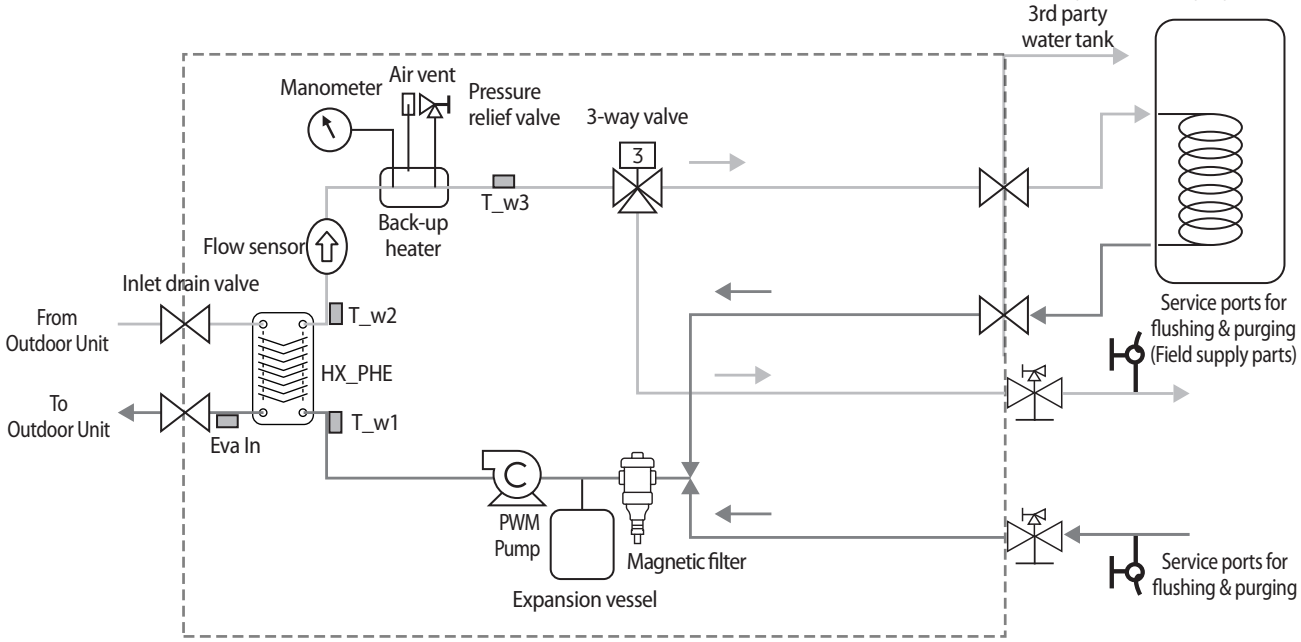
When filling water, the following start-up procedure should be followed.

1. All system components and pipes must be tested for the presence of leaks.
2. Make-up water assembly or Flushing unit is recommended for installation and service.
3. Before connecting pipes to the hydro unit, Flush water pipes clean to remove contaminants during 1 hours using a flushing unit or tap water pressure if it is adequate (at 2 to 3 bar)
4. Fill water into the hydro unit by opening service valves.
5. Purge the air. (Fill with a flushing unit with sufficient capacity: avoid aerating the water)
6. Circulate for long enough to ensure that all air has been bled from the complete water piping system.

After installations, Commissioning should be performed by qualified representatives. Unless flushing and air-purging works are performed adequately, It might result in malfunctions.



Flushing unit (or purging cart)



⚠ CAUTION

- Check and clean Magnetic Filter periodically using the filter opener (Note: Accessories)
- Replace Magnetic Filter when necessary
- Its recommended that you flush the system for 4 hours minimum once a year.
- Use chemical cleaning agents(Begin with acid , finish with alkali).
- Install Air vents on the top of the system
- Pressure of entering water(over 2.0 bar)

4. Installation

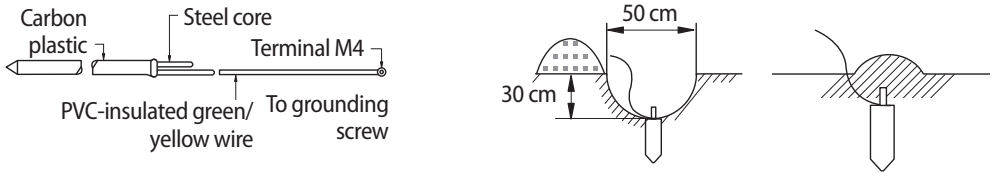
Indoor unit

Hydro Unit

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 to Water Heat pump.

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 to Water Heat pump.

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.

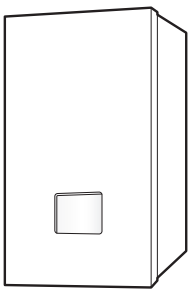
NOTE

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.

Connection of the power supply and communication cable

Model	Description		No. of Wires	Max. A	Thickness	Supply Scope
AE160DN****	Main Power (1 Phase)	In case of not connecting a booster heater	2 + ground	5 A	1.5mm² ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
		In case of connecting a booster heater	2+ ground	18.7A	4.0mm² ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
	Heater Power	3 Phase Heater (6 kW)	4 + ground	9.5A	2.5mm² ↑ H05RN-F or H07RN-F	Field Supply (380-415Vac, Input)
		1 Phase Heater (4 kW)	2 + ground	19A	4.0mm² ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
		1 Phase Heater (2 kW)	2+ ground	9.5A	2.5mm² ↑ H05RN-F or H07RN-F	Field Supply (220-240Vac, Input)
	Communication		2	0.1 A	0.75mm² ↑ H05RN-F or H07RN-F	Field Supply (~Vdc, Data)

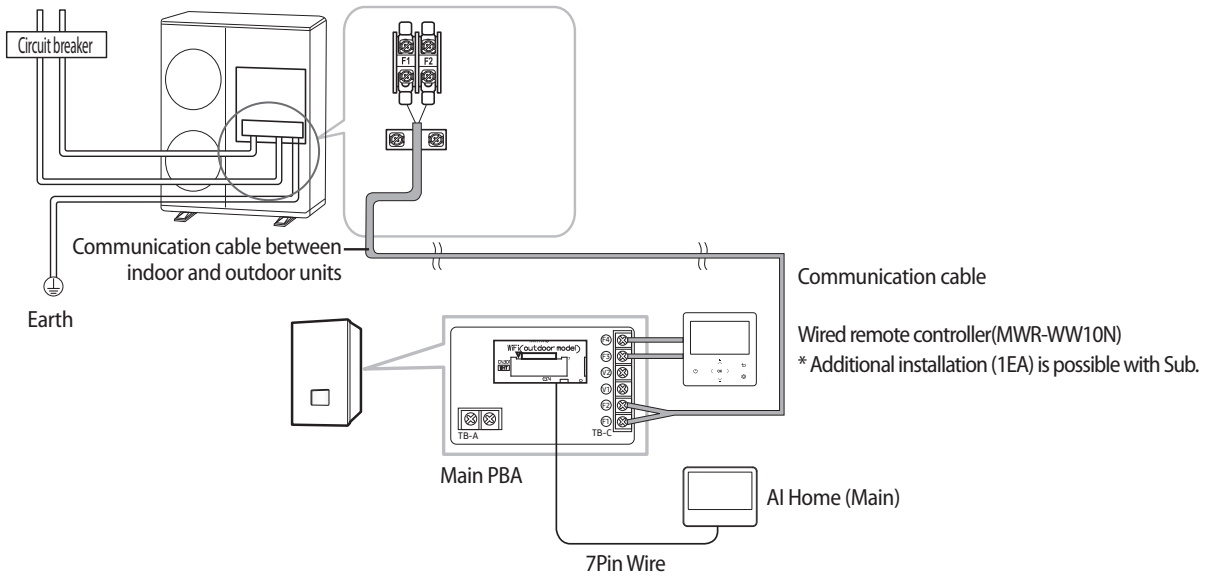


4. Installation

Indoor unit

Hydro Unit

Communication cable connection



4. Installation

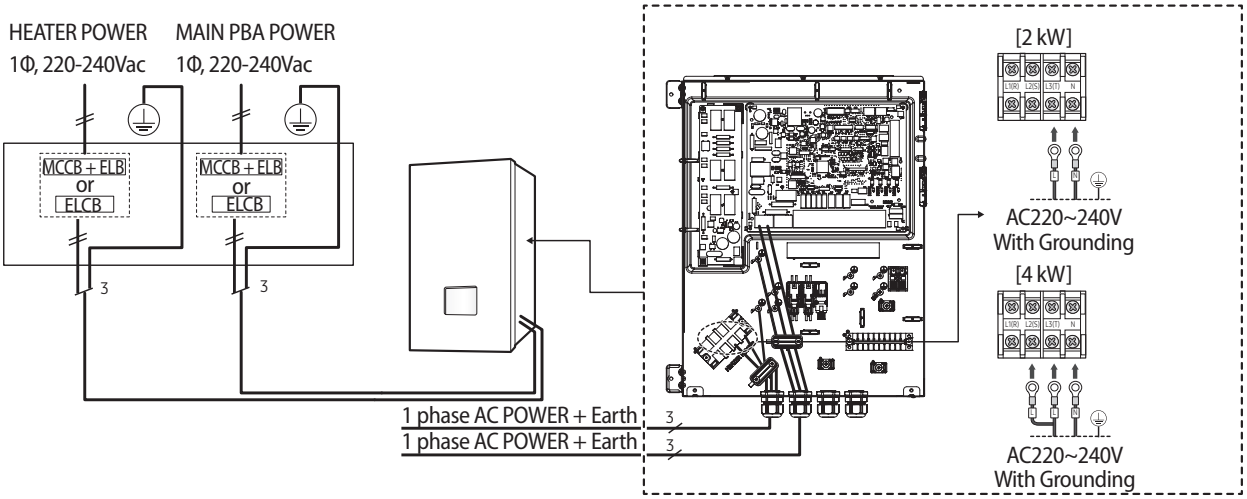
Indoor unit

Hydro Unit

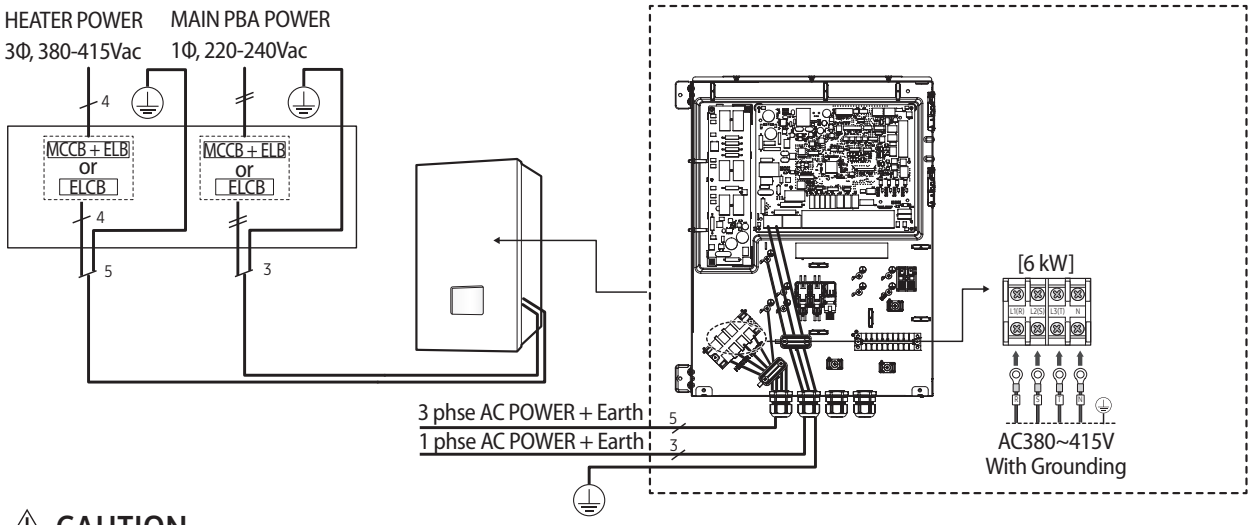
⚠ CAUTION

- Main POWER and Heater POWER must be configured through each RCBO(Residual Current Breaker with Overcurrent protection) or MCB + RCCB.
- Backup heater should use the right power according to the power of the outdoor unit.

1. 1 phase product



2. 3 phase product



⚠ CAUTION

- **Circuit Breaker (RCBO or MCB + RCCB) for outdoor and indoor units shall be installed by installers because they are not sub-parts in the units.**
- If the supply cable is damaged, it must be replaced by a special cable or assembly available from the manufacturer or installer.
- The improper connection of the main and heater may result in damage to the chassis, PCB, and heater.
- When connecting the 3 phases for a 6 kW heater, be sure that the R, S, T, N terminals of the heater are properly connected before turning on the unit.
- Please check that the voltage between R-N, S-N, and T-N on the heater power terminal block is within the range of 220 to 240Vac.

✻ RCBO : Residual current circuit breaker with overcurrent protection
MCB : Miniature Cirtcuit Breaker
RCCB : Residual current circuit Breaker

4. Installation

Indoor unit

Hydro Unit

Connection of the backup heater power supply

⚠ CAUTION

- Do not use a power supply shared by other appliances. Each components for Outdoor unit, Indoor Main Power, Indoor Heater Power and booster heater has the dedicated power supply.

Model	Outdoor unit Power (Φ, #, V, Hz)	Backup Heater Capacity (kW)	Max Current	1 Phase RCBO (A)	3 Phase ELCB (A)
AE160DN****	1,2,220-240,50	2	Max 9.5A	15A or below	N/A
		4	Max 19A	25A or below	N/A
	3,4,380-415,50	6	Max 9.5A	N/A	15A or below

The FSV #3081 setting value must be changed according to the heater capacity

- 2kW: 2(default)
- 4, 6kW: Need to change to 4 or 6 depending on the heater capacity

NOTE

- The power consumption of backup heater is calculated according to the heater signal, so an error may occur with the actual usage.

4. Installation

Indoor unit

Hydro Unit

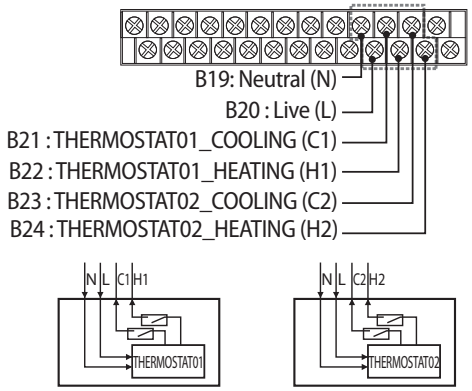
Connection of the thermostat

To use thermostat control, configure FSV #2091/#2092 to "Use." Please refer to the controller manual for this setting.
Cooling/Heating operation and water temperature are determined by the Thermostat input signal and Water Law setting. Please refer to the controller manual for this setting.

NOTE

- For thermostat control, FSV Setting #4061 must be set to "0".

Description	No. of wires	Max. current	Thickness	Supply Scope
Room Thermostat	4	#19, #20 : 50 mA(Output, Thermostat Power) #21, #22, #23, #24 : 22 mA each Pin(Input)	> 0.75 mm², H05RN-F or H07RH-F	Field supply(220~240Vac, Output)



1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Make sure what type is you use.
   - If the operating mode (heating/cooling) of thermostat 1 and thermostat 2 are different, the operating mode is determined based on thermostat 2.

CAUTION

- Product will not operate when signal for cooling and heating mode is inputted at the same time.

When setting up two thermostats;

- ▶ For heating operation, please install Thermostat 01 to a room that requires lower water temperature (ex,underfloor heating) and Thermostat 02 to a room that requires higher water temperature (ex,radiators).
- ▶ For cooling operation, please install Thermostat 02 to a room that requires lower water temperature (ex,radiators) and Thermostat 01 to a room that requires higher water temperature (ex,underfloor heating).
- ▶ In order to properly control the two thermostats with different temperature settings, it is necessary to connect the mixing valve and the mixing temperature sensor(TW4)[Optional parts].
- ▶ When controlling the thermostat in a multi-room(Two thermostat control), please refer to the "Connection of the 2-way valve" wiring works for valve control.
- ▶ Please find additional installation information refer "Connection of the 2-way valve " [Page 50] and "Connection of the mixing valve" [Page 53]

CAUTION

When using thermostat01 in cooling mode, to prevent floor condensation, if the room water temperature is below 16 °C, the 2-way valve of thermostat 01 is automatically closed.

NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling. Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 °C as described above.

4. Installation

Indoor unit

Hydro Unit

Connection of the 2-way valve (2zone control is not used as FSV Setting #4061="0")

1. 2Way Valve performs open/close operations according to cooling/heating Thermo On/Off control.
2. When setting up two thermostats, then;
   - 2way valve 1 operates according to the input signal of thermostat 1 and 2way valve 2 according to that of thermostat 2.
   - If you use the 2way valve output as the output of the Room Water Pump with buffer tank for Thermostat 1 and 2, please connect it to terminal block "normal close" and set FSV Setting #6041 to "0". [Reference: EHS CONTROL KIT Manual]

Description	No. of wires	Max. current	Thickness	Supply Scope
2 Way Valve	2+ground	50 mA	> 0.75 mm², H05RN-F or H07RH-F	Field supply(220~240Vac, Output)

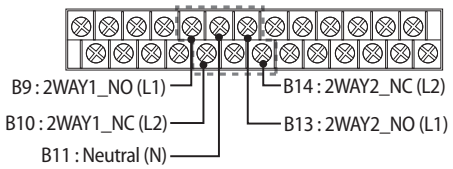
⚠ CAUTION

- When FSV#4041=0 is set without using the mixing valve, if the water outlet temperature is less than 16 degrees, 2way valve 1 is closed to prevent floor condensation.
  - Connect the output of 2way valve 1 for underfloor cooling shutoff.

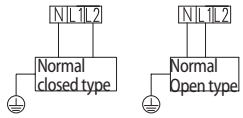
NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling. Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 ℃ as described above.

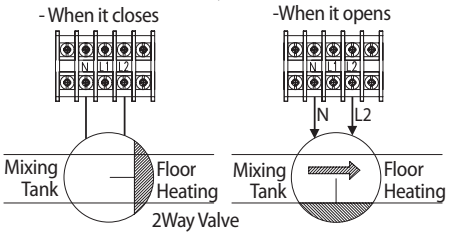
▶ Connect the output of 2way valve 1 for underfloor cooling shutoff.



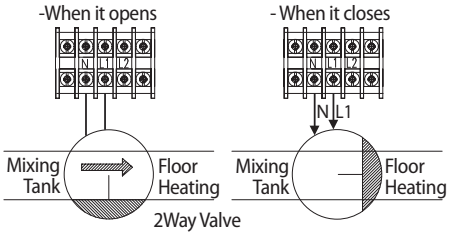
* Connection of 2 wires 2-way valve



In case of normal closed type



In case of normal open type



2-way motorized valve

- ▶ 220 ~ 240 Vac
- ▶ 2 wires(Normal Open or Normal Close)

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Make sure what type is you use.
   - Normal OPEN or Normal CLOSED.

⚠ CAUTION

- There are 2 types of 2-way valve, normal open type and normal closed type. Make sure to connect terminals to right positions of terminal block. As detailed on the wiring diagram and illustrations above.

4. Installation

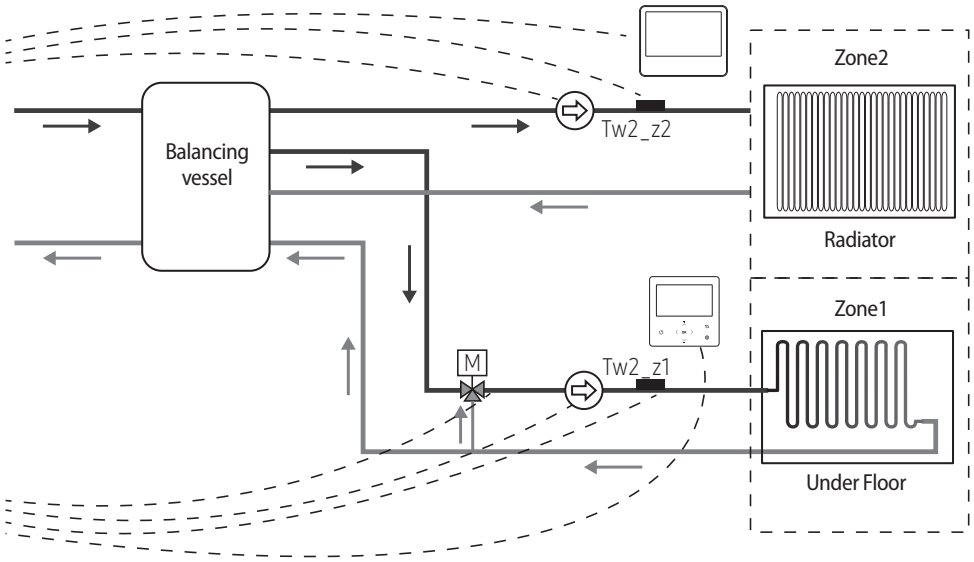
Indoor unit

Hydro Unit

Connection of the water pump for 2 Zone control (FSV 4061=1)

When setting up 2 Zone control;

- For heating operations, please conncect the Zone1 supply line to a room that requires a lower water temperature (ex,underfloor heating) and the Zone2 supply line to a room that requires a higher water temperature (ex,radiators).
- For cooling operations, please conncect the Zone2 supply line to a room that requires a lower water temperature (ex,radiators) and the Zone1 supply line to a room that requires a higher water temperature (ex,underfloor cooling).
- In order to properly control the 2 Zone with different temperature settings, it is necessary to connect the mixing valve and the Zone1 and Zone2 temp. sensors[Optional parts].
- Please find additional installation information refer "Connection of the mixing valve" [Page 53]
- Zone1 water pump connection: B10(L1) + B11(N)
- Zone2 water pump connection: B14(L1) + B15(N)



⚠ CAUTION

- When using Zone1 in cooling mode, to prevent floor condensation, if the zone1 water temperature is below 16 ℃, the pump of zone 1 is automatically turned off.

NOTE

- The supply line for Zone 1 of the hydro unit is designed to be used for floor heating/cooling. Therefore, if the Zone 1 is connected to a radiator, insufficient cooling can be made because the 2-way valve of Zone 1 is closed when the room water temperature is below 16 ℃ as described above.

NOTE

- AE160DNZ*** (2zone built-in type) is designed to supply water at 2 different temperatures. Therefore, it is not necessary to connect or configure the Zone1 and Zone2 water pumps.

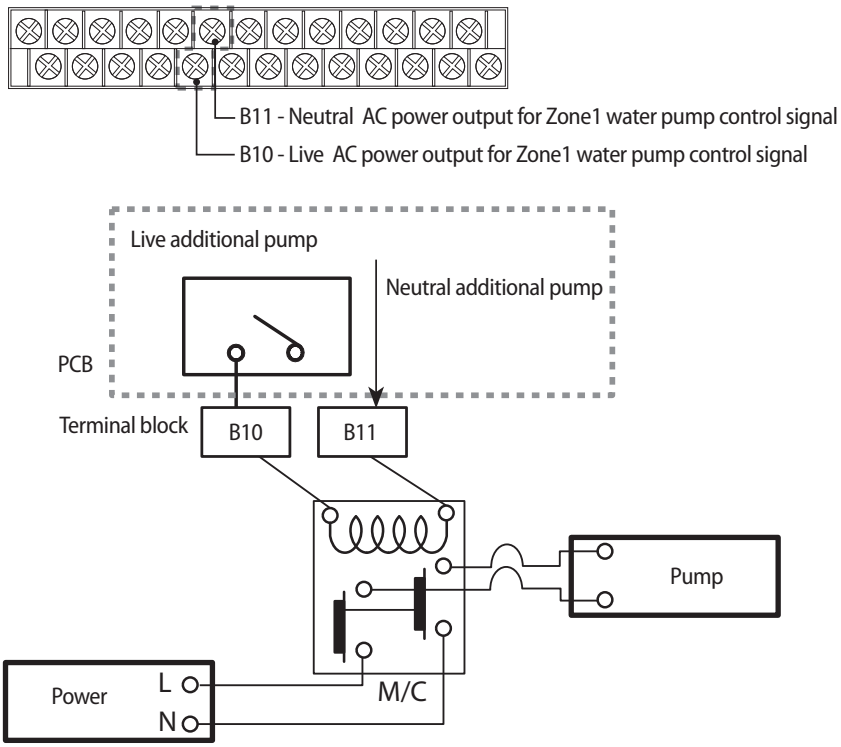
⚠ CAUTION

- There are 2 types of 2-way valve, normal open type and normal closed type. Make sure to connect terminals to right positions of terminal block. As detailed on the wiring diagram and illustrations above.
- To use the zone control (FSV #4061=1), set the thermostat control option (FSV #2091 & #2092) to "0" for disabling it.

4. Installation

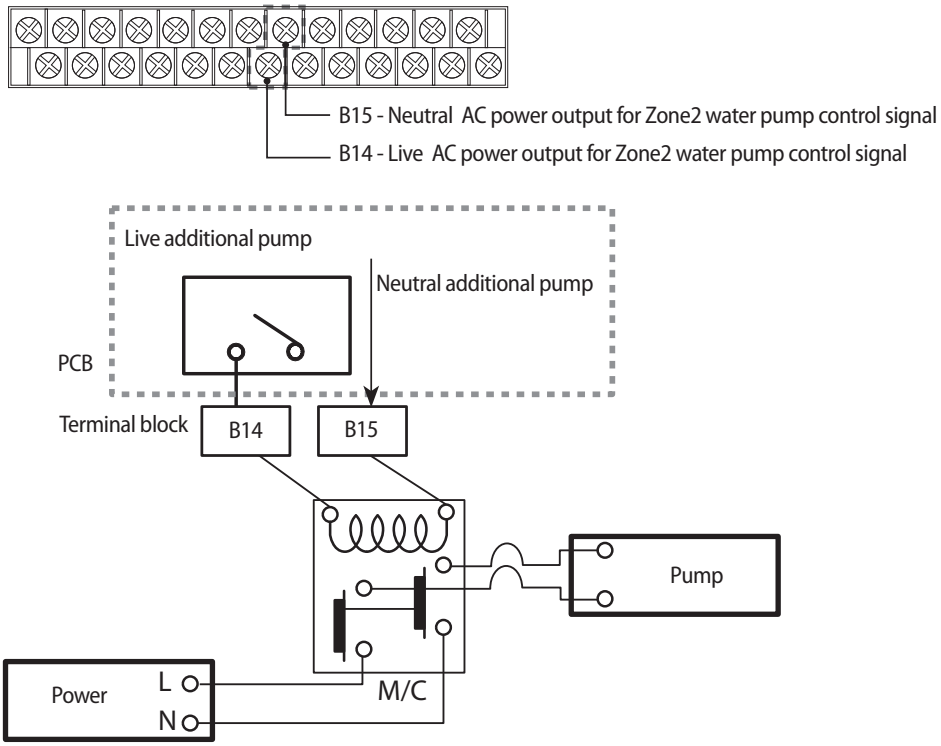
Indoor unit

Hydro Unit



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 50mA.
- When using external power of 50 mA or more, make sure to connect using relay and separate power source.



⚠ CAUTION

- The maximum allowable current that this terminal block can supply for the additional water pump is 50mA.
- When using external power of 50 mA or more, make sure to connect using relay and separate power source.

4. Installation

Indoor unit

Hydro Unit

Connection of the mixing valve

NOTE

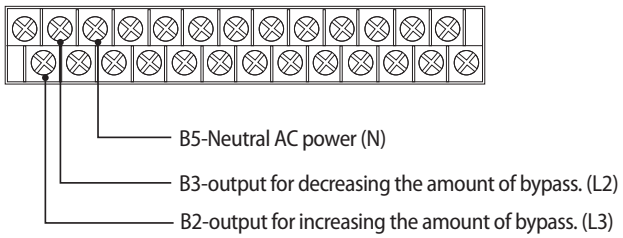
- In order to install mixing valve for standard model(AE160DNYMPK), please purchase 2 Zone Thermistor Kit (MOS-T1).

In order to properly control the 2 Zone or two thermostat with different temperature settings,
it is necessary to connect the mixing valve.

The mixing valve controls the amount of bypass water that is mixed with the supply water to provide water at a pre-set temperature.

Description	No. of wires	Max. current	Thickness	Supply Scope
Mixing valve	3	50mA	> 0.75 mm^2, H05RN-F or H07RH-F	Field supply(220~240Vac, Output)

1. Before the installation, control kit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.



B2- output for increasing the amount of bypass : The amount of return water that is mixed with supply water through mixing valve is increased.

B3- output for decreasing the amount of bypass. : The amount of return water that is mixed with supply water through mixing valve is decreased.

NOTE

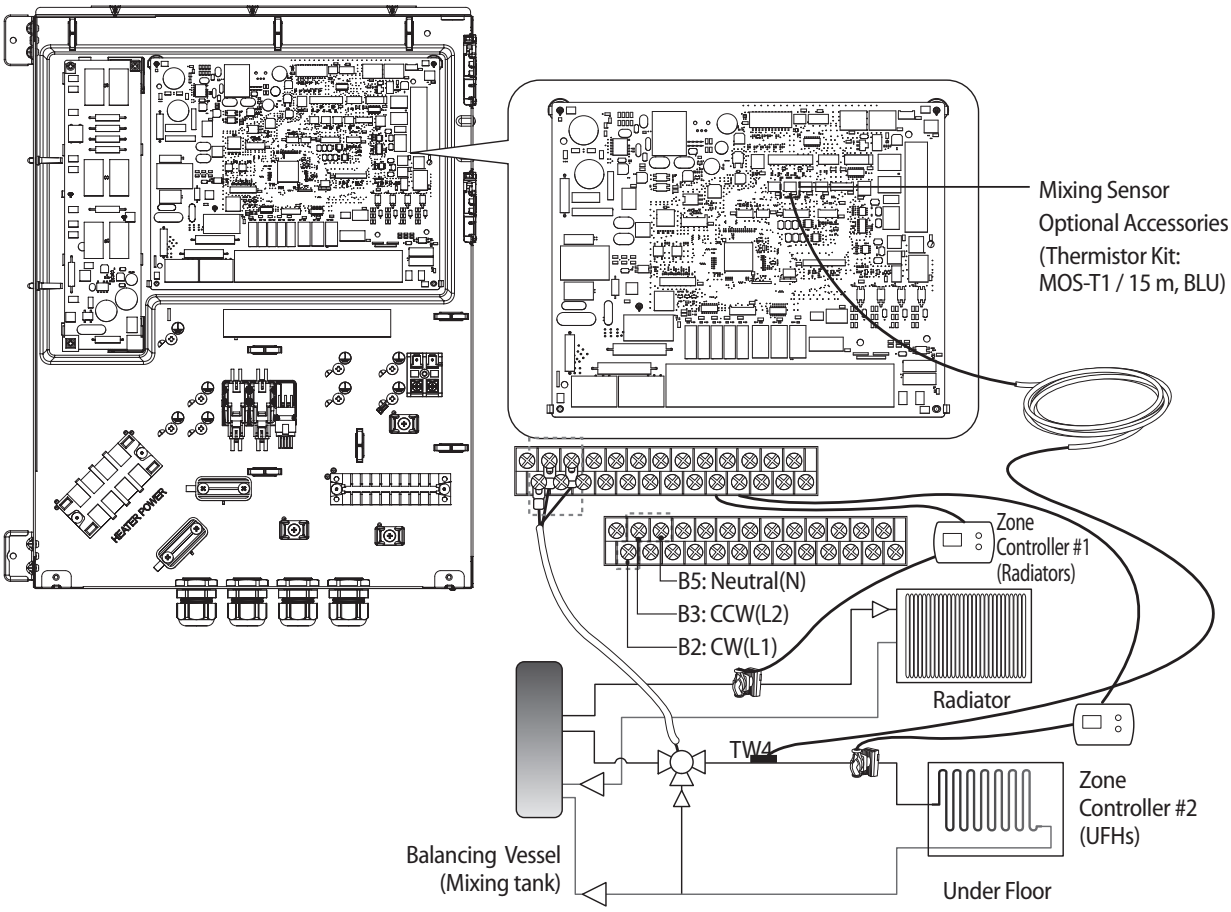
- AE160DNZ*** (2zone built-in type) is designed to supply water at 2 different temperatures. Therefore, it is not necessary to connect or configure the Mixing Valve.

4. Installation

Indoor unit

Hydro Unit

2 Zone with Two thermostat control



1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position on the terminal block as shown on the diagram.
3. Install the supplied Mixing temperature sensor (TW4) on the mixed water side within 1 m from the Mixing Valve, as shown in the figure above.
4. Set the FSV value #4041~ #4046. Please refer to the controller manual for this setting.

⚠ CAUTION

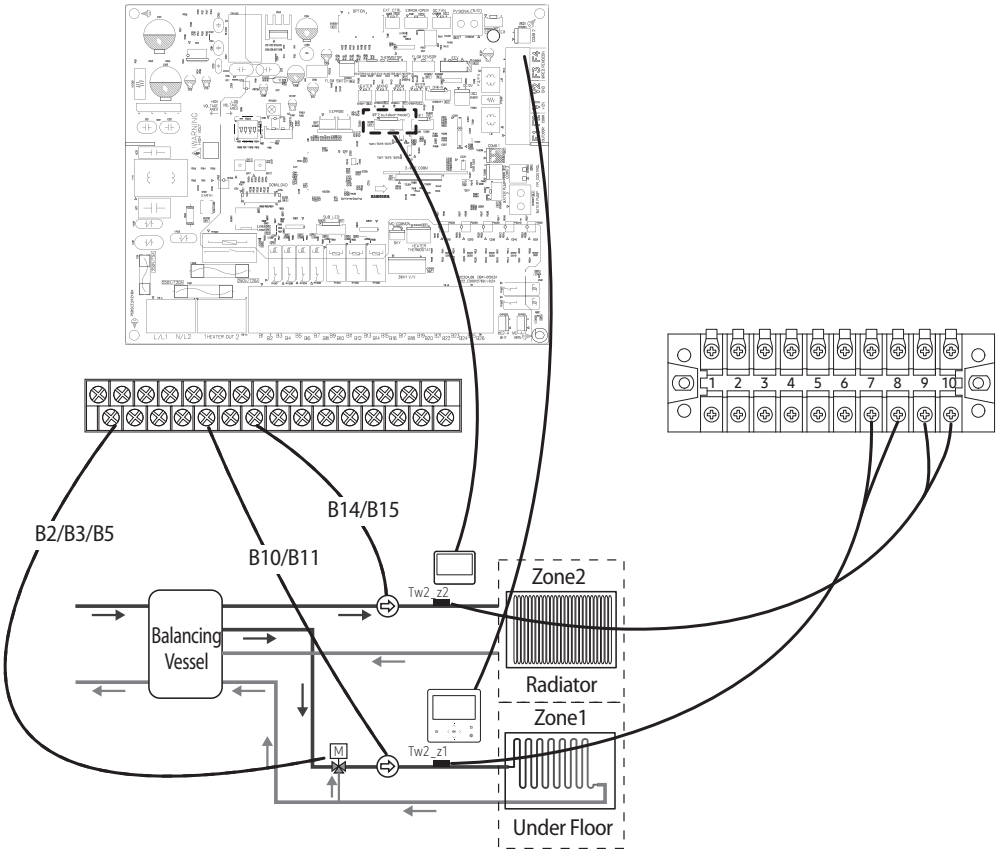
- When using Zone control (FSV 4061 =1), Ignore Thermostat signal.

4. Installation

Indoor unit

Hydro Unit

2 Zone Control [FSV #4061 =1]



You can operate the 2 Zone control using a mixing value, water-out temperature sensors, and built-in or external room temperature sensors installed in a wired remote controller.
When both zones are simultaneously Thermo on, the operation is performed based on Zone2. Therefore, set the zone that you want to have the higher set temperature to Zone2.
(The mixing valve must be installed in the zone that you want to have the lower set temperature.)

1. Install the mixing valve. (See "Installation of mixing valve.")
2. Install the water-out temperature sensors (Tw2_z1, Tw2_z2) for all zones.
3. Unlike the zone control with a thermostat, connect the water pump signal lines to the product.

▶ Zone1 water pump connection: B10 (L1) + B11 (N)
▶ Zone2 water pump connection: B14 (L1) + B15 (N)

4. FSV 4061 = 1: Enable the 2 Zone control using the wired remote controller.

* If you want to operate the 2 Zone control by using water-out temperatures, you have only to complete steps 1 to 4 above.
* If you want to operate the 2 Zone control by using room temperatures and built-in temperature sensors in wired remote controllers, you must install two wired remote controllers in each room.
(If you use external room temperature sensors, you can control each room temperature with only one wired remote controller.)

Select a mixing valve from the manufacturers as below (recommended)

Maker		BELIMO	SIEMENS	HONEYWELL
Model code	3 Way Valve	R3020-6P3-S2	VXP45.20-4 (kvs 4)	V5011E1213
	Actuator	LR230A(-S)	SSB31	ML6420A3015
Running time		90 sec.	150 sec.	60 sec.
FSV(#4046) setting		9	15	6

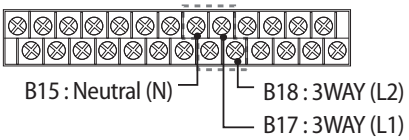
4. Installation

Indoor unit

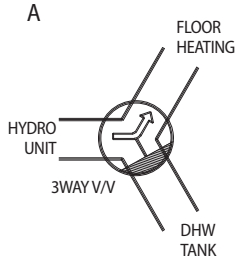
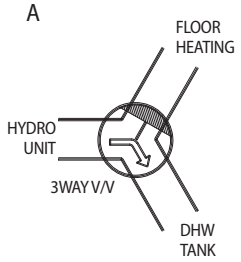
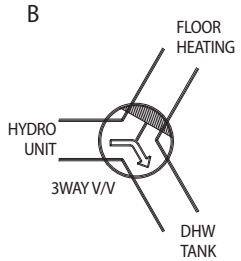
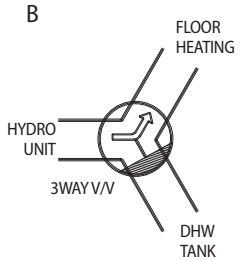
Hydro Unit

Connection of the 3-way valve

Description	No. of wires	Max. current	Thickness	Supply Scope
Diverting type 3way valve	4	50 mA	> 0.75 mm², H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



Status	L1	L2
A (Initial)	OFF	ON
B	ON	OFF

Field Setting Valve (#3071) "0" Floor heating as default	Field Setting Valve (#3071) "1" DHW tank as default
A 	A 
B 	B 

3-way diverting valve for water tank

- ▶ When cooling operating mode, floor heating loops will be closed.
- ▶ 220 ~ 240 Vac

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. Make sure what type of 3 way V/V you use.

4. Installation

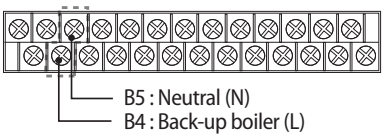
Indoor unit

Hydro Unit

Connection of the back-up boiler

- ▶ This function is to determine which heating source can/will provide the space heating, either the heat pump system or the back-up boiler.
- ▶ To control the back-up boiler , configure FSV #4031~ #4033. Please refer to the controller manual for this setting.

Description	No. of wires	Max. current	Thickness	Supply Scope
Back-up Boiler	2	50 mA	0.75mm² H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



When it set back up boiler on the hydro unit (relay off)

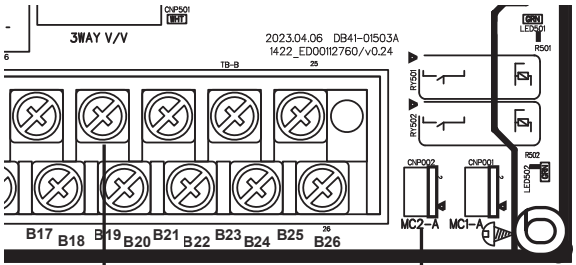
When it order to back up boiler operates (relay on)

1. Before the installation, hydro unit should be turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.

✻ Heat pump does not work when the Back-up boiler operates.

Connection of the external back-up heater

Description	No. of wires	Max. current	Thickness	Supply Scope
Back-up Heater	2	0.3 A	0.75mm² H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



- ▶ If you need an additional heater, it can be installed as an option.

NOTE

- AE160DNZ*** (2 Zone built-in type) is strictly prohibited from installing external back-up heaters.
- An additional back-up heater for AE160DNY*** should be installed on the Zone piping line.

⚠ WARNING

- The N phase of the HEATER signal can be connected to B5,B7,B11,B15 instead of B19 (Maximum 2 wires can be connected 1 Screw)
- For the external Back-up heater connection, Only Samsung Heater kit(MHC-300FP) is compatible.

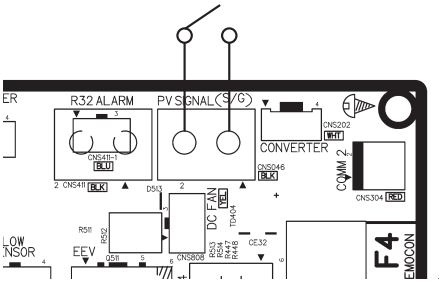
4. Installation

Indoor unit

Hydro Unit

Connection of the Peak Power Control or PV control(Photovoltaics control)

Description	No. of wires	Max. current	Thickness	Supply Scope
Peak Power Control or PV control (Photovoltaics control)	2	-	-	Field supply



✻ Function 1 (Peak Power Control)

- ▶ This is a function that allows you to disable the booster heater, backup heater, and compressor operation of the outdoor unit depending on the power input contact.
- ▶ If users make contracts with local electric power company for limiting the amount of power consumption when a surge in power usage, users can set FSV of "Forced off".
- ▶ To control the Power Peak , configure FSV #5041~ #5043. Please refer to the controller manual for this setting.

✻ Function 2 (PV[Photovoltaics] control)

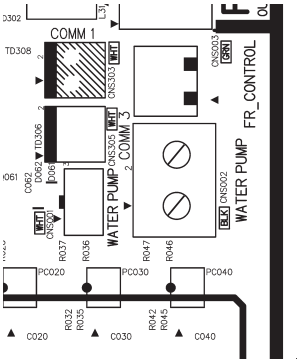
- ▶ This is for energy saving by using the solar energy.
- ▶ To control PV, configure FSV #5081~ #5083. Please refer to the controller manual for this setting.
- ▶ Cooling/heating operation: Enables the FSV value that is set only when the PV signal is in out mode.
  Hot water operation: Activate immediately with the set FSV value

NOTE

- It operates according to the setting of FSV, and both functions can not be used at the same time.(PV Control / Peak power control)
- Except for domestic hot water mode, this function is activated only for the outing mode.

Connection of the FR Control(Frequency ratio control)

Description	No. of wires	Max. current	Thickness	Supply Scope
FR Control	2	-	-	Field supply



- ▶ The FR control function application is to limit the maximum frequency of the outdoor unit compressor. (if FSV #5051 = 1 "use")
- ▶ Method 1 : External DC signal Control uses a DC voltage of 0 ~ 10V (0v = 50%, ~ 10v = 150%)
- ▶ Method 2 : Demand ratio (DR) control through Modbus communication

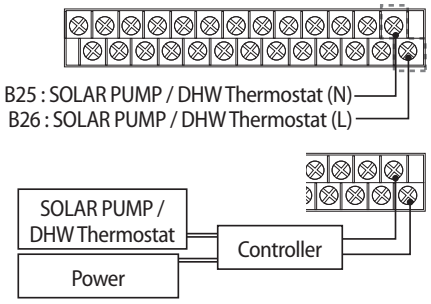
4. Installation

Indoor unit

Hydro Unit

Connection of the Solar Pump / DHW thermostat

Description	No. of wires	Max. current	Thickness	Supply Scope
Solar pump / DHW Thermostat	2	22mA	0.75mm² H05RN-F or H07RN-F	Field supply(220~240Vac, Output)



1. Before connecting the external control kit, make sure it is turned off.
2. Using the appropriate equipment to correct position of terminal block as shown on the diagram.
3. The external control kit must provide an output signal when Solar pump/ DHW Thermostat is operating.
4. It is the installers responsibility to connect the output of the control kit to the Solar Pump/ DHW Thermostat input terminal (B25-26). In operating mode, signal shall be around 230VAC (N-L). In non-operating mode, signal shall be around 0VAC (N-L).

When solar pump signal is On, Hydro unit DHW mode will be turned off.

If a solar pump for DHW is used, the signal input line from the solar pump can be connected as shown above

▶ if a solar pump is used, FSV#3061 should be set to 1

If DHW thermostat is used, the signal input line from the DHW thermostat can be connected as shown above

▶ if DHW thermostat is used, FSV#3061 should be set to 2

NOTE

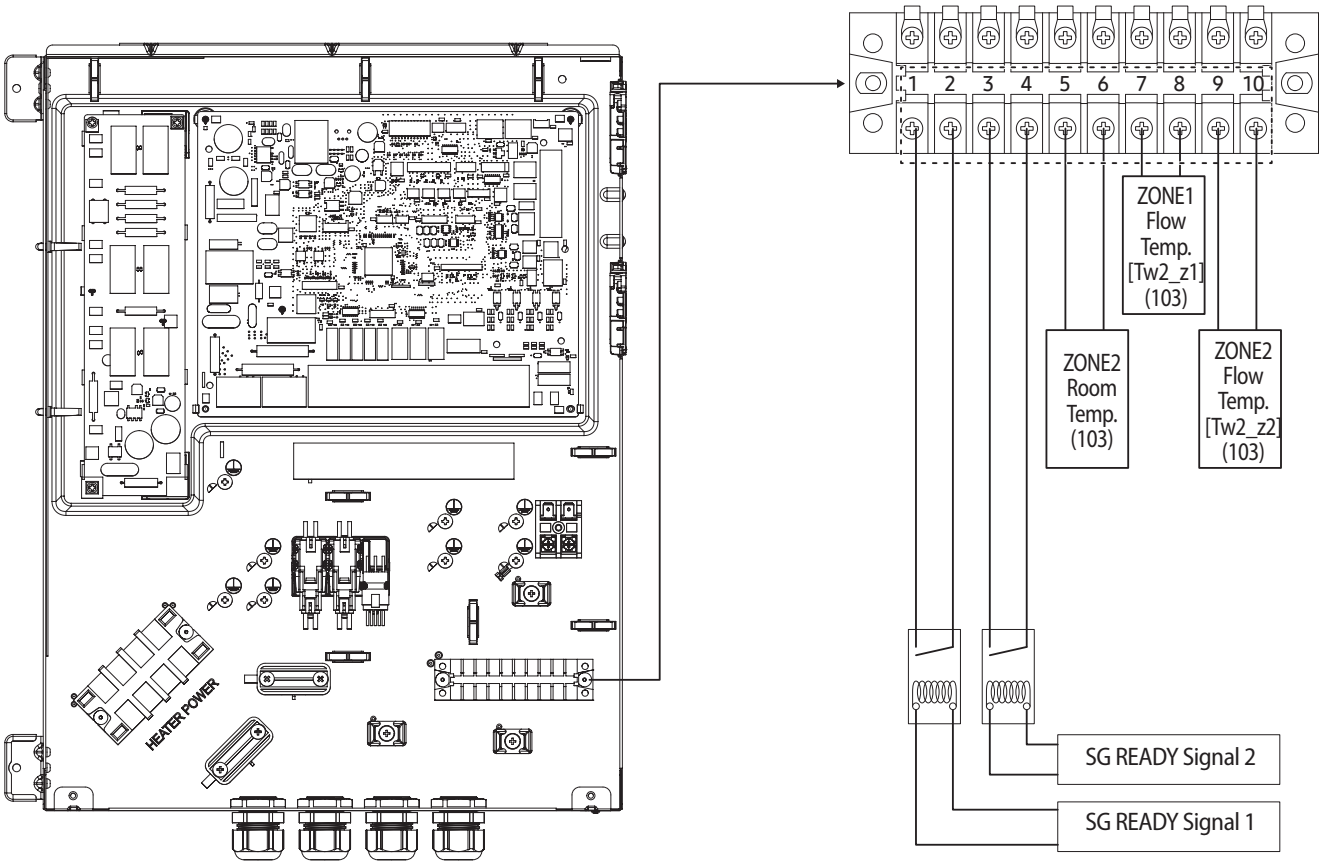
Solar pump and DHW thermostat cannot be used simultaneously

4. Installation

Indoor unit

Hydro Unit

Connecting for smart grid ready control



SG READY Signal 1	SG READY Signal 2	Product operation
Short	Open	Forced thermo off operation
Open	Open	Normal operation
Open	Short	Heating / DHW setting temperature 1step-up operation
Short	Short	Heating / DHW setting temperature 2step-up operation

⚠ CAUTION

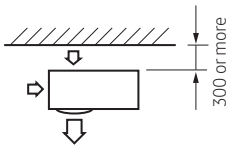
- These parts are optional and not included with the product.
- Maker sure to connect to non-power on/off contacts.

4. Installation

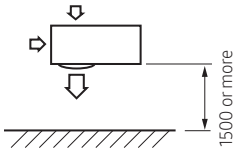
Outdoor unit

When installing 1 outdoor unit

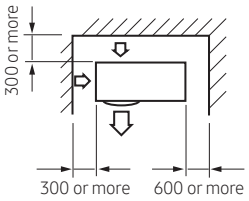
(Unit : mm)



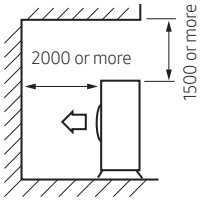
- When the air outlet is opposite the wall



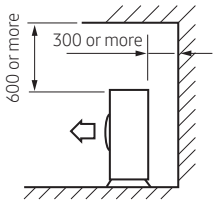
- When the air outlet is towards the wall



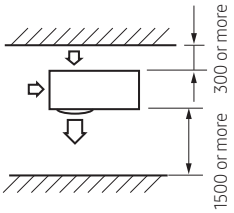
- When 3 sides of the outdoor unit are blocked by the wall



- The upper part of the outdoor unit and the air outlet is towards the wall



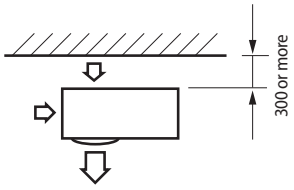
- The upper part of the outdoor unit and the air outlet is opposite the wall



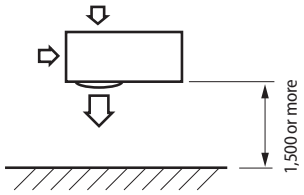
- When front and rear side of the outdoor unit is towards the wall

When installing more than 1 outdoor unit

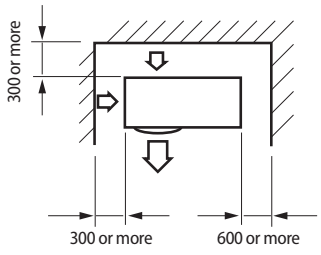
(Unit : mm)



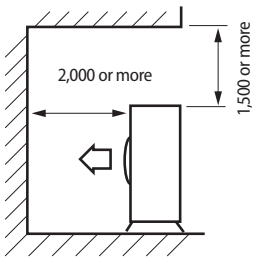
- When the air outlet is opposite the wall



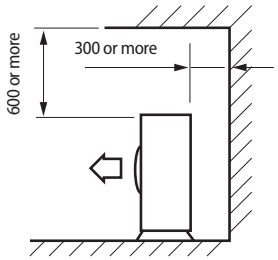
- When the air outlet is towards the wall



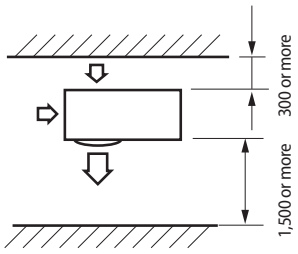
- When 3 sides of the outdoor unit are blocked by the wall



- The upper part of the outdoor unit and the air outlet is towards the wall



- The upper part of the outdoor unit and the air outlet is opposite the wall

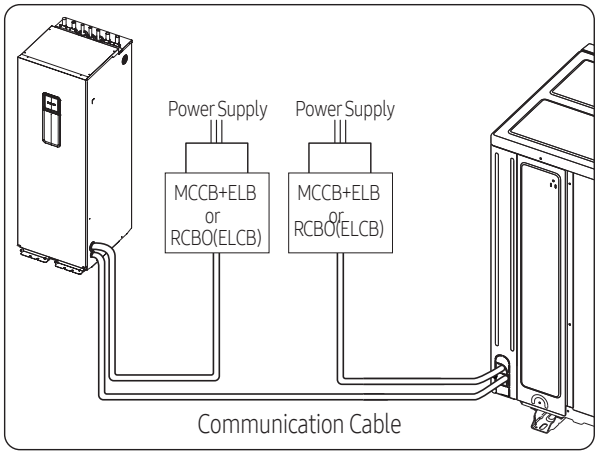


- When front and rear side of the outdoor unit is towards the wall

4. Installation

Outdoor unit

Electrical wiring diagram



Specification of power cable

- 1 Phase
  - The power cables are not supplied with the air to water heat pump.
  - Power supply cords of parts of appliances for outdoor use shall not be thinner than polychloroprene sheathed flexible cord (Code designation IEC:60245 IEC 57 / CENELEC:H05RN-F)
  - This equipment complies with IEC 61000-3-12.

Outdoor unit	Rated		Voltage Range		MCA	MFA
	Hz	Volts	Min	Max	Min Circuit Amps.	Max Fuse Amps.
AE125DXEDEG	50	220-240	198	264	32.0	35.2
AE160DXEDEG	50	220-240	198	264	32.0	35.2

- 3 Phase
  - The power cables are not supplied with the air to water heat pump.
  - Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord (Code designation IEC:60245 IEC 66 / CENELEC:H07RN-F)
  - This equipment complies with IEC 61000-3-12 provided that the short-circuit power (SSC) is greater than or equal to 3.3[MVA] at the interface point between the user's supply and the public system. It is the responsibility of the installer to ensure, by consultation with the energy company if necessary, that the equipment is connected only to a supply with a short-circuit power (SSC) greater than or equal to 3.3[MVA].

Outdoor unit	Rated		Voltage Range		MCA	MFA
	Hz	Volts	Min	Max	Min Circuit Amps.	Max Fuse Amps.
AE125DXEDGG	50	380-415	342	457	16.1	17.7
AE160DXEDGG	50	380-415	342	457	16.1	17.7

4. Installation

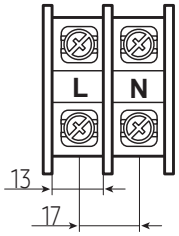
Outdoor unit

Terminal block specification

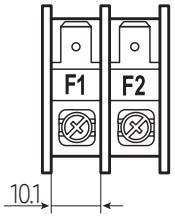
- 1 Phase

(Unit: mm)

AC power: M5 screw



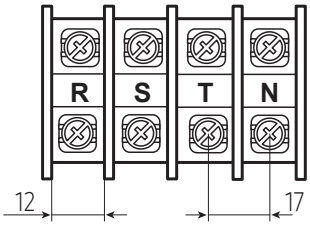
Communication: M4 screw



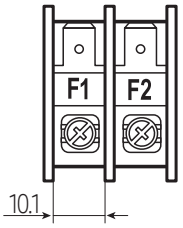
- 3 Phase

(Unit: mm)

AC power: M5 screw



Communication: M4 screw



Connecting the power terminal

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

Tightening Torque (kgf.cm)	
M4	12~18
M5	20~30

⚠ CAUTION

- For the product that uses the R-32 refrigerant, be cautious not to generate a spark by keeping the following ÏЧÈÏ¯ÏЧPЧŸиР]

  - Do not remove the fuses with power on.
  - Do not disconnect the power plug from the wall outlet with power on.
  - It is recommended to locate the outlet in a high position. Place the cords so that they are not tangled.

4. Installation

Outdoor unit

To connect the power supply

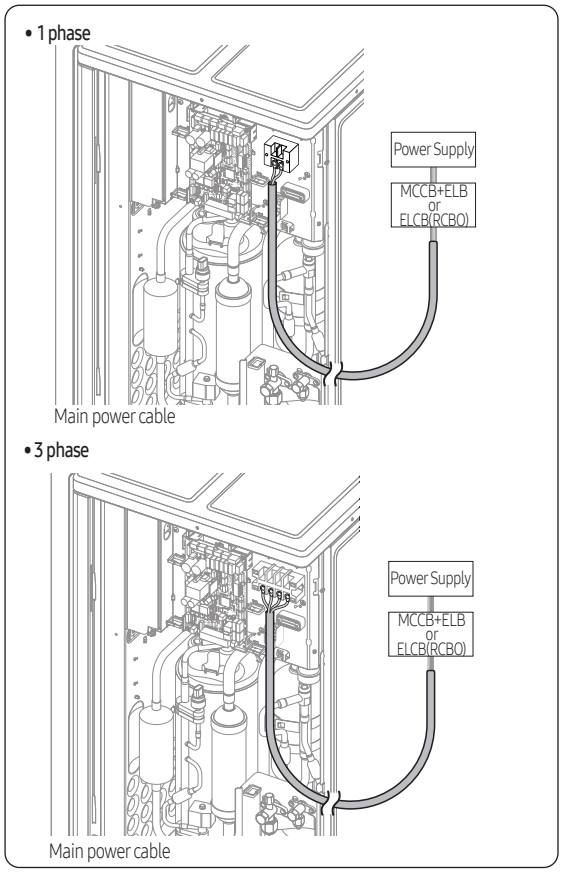
- Two cables must be connected to the outdoor unit
  - The communication cable between the indoor and outdoor unit.
  - The power cable between the outdoor unit and the auxiliary breaker.
- Especially for the Russian and European market, before installation, the supply authority should be consulted to determine the supply system impedance to ensure compliance.

⚠ 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 the supply rating.
  - If the power is unbalanced greatly, it may shorten the life of the electrical components.
- To protect the product from water and possible shock, keep the power cable and the connection cord of outdoor units within ducts (with appropriate IP rating and material selection for your application).
- Ensure that the main supply connection is made through a disconnection switch within your arm's reach, that disconnects all poles, with contact gap of a least 3 mm.

Route the cable through the frame

- Connect the wires to the terminal block and fix the cable with the cable tie.



4. Installation

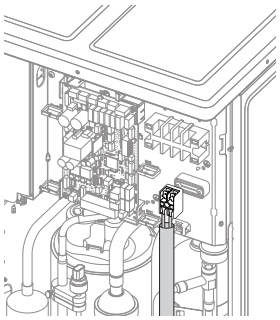
Outdoor unit

- When installing electrical wiring: tension on the cable(s) must be avoided.
- Earth wire for the indoor unit and outdoor unit cables must be clamped to a suitable ring terminal clamp (not supplied)
- For the power cable, use the grade H07RN-F or H05RN-F materials.
- Power supply cords of parts of appliances for outdoor unit use shall not be thinner than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)

To connect the communication cable

- The communication cable between the indoor and outdoor unit.
- Route the cable through the frame.
- Connect the wires to the terminal block and the earth screw (single side, the other end of the protective shield is not again connected to earth).
- Fix the cable with a cable tie.

•1 phase & 3 phase



- Specification of communication cable

Communication cable	Specifications
0.75 mm², 2 wires shielded	LiYCY

2024. 12
Ver.1.0

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